

Draft Initial Project Proposal/Final Design Report

December 2025

Abbott Road (CR4) Fisher Road to City of Buffalo Line
Project Identification Number (PIN): 5764.15
Bridge Identification Number (BIN): 3327420
City of Lackawanna
Erie County



**Department of
Transportation**



**U.S. Department of Transportation
Federal Highway Administration**

Appendix C

Traffic Information

Chapter 18, Appendix A - CAPITAL PROJECTS COMPLETE STREETS CHECKLIST (18A-4)

PIN:	5764.15	Project Location:	Abbott Road, City of Lackawanna, Erie County
Context:	☒ Urban / Village ☐ Suburban ☐ Rural		
Project Title:	Abbott Road (CR4) from Fisher Road (TH) to City of Buffalo Line		
STEP 1- APPLICABILITY OF CHECKLIST			
1.1	Is the project located entirely on a facility where bicyclists and pedestrians are prohibited by law and the project does not involve a shared use path or pedestrian/bicycle structure? <i>If no, continue to question 1.2. If yes, <u>stop here</u>.</i>		☐ Yes ☒ No
1.2	a. Is this project a 1R* Maintenance project? <i>If no, continue to question 1.3. If yes, go to part b of this question.</i>		☐ Yes ☒ No
1.2	b. Are there opportunities on the 1R project to improve safety for bicyclists and pedestrians with the following Complete Street features? - Sidewalk curb ramps and crosswalks - Shoulder condition and width - Pavement markings - Signing <i>Document opportunities or deficiencies in the IPP and <u>stop here</u>.</i> * Refer to Highway Design Manual (HDM) Chapter 7, Exhibit 7-1 "Resurfacing ADA and Safety Assessment Form" under ADA, Pavement Markings and Shoulder Resurfacing for guidance.		☐ Yes ☐ No
1.3	Is this project a Cyclical Pavement Marking project? <i>If no, continue to question 1.4. If yes, review EI 13-021* and identify opportunities to improve safety for bicyclists and pedestrians with the following Complete Streets features:</i> - Travel lane width - Shoulder width - Markings for pedestrians and bicyclists <i>Document opportunities or deficiencies in the IPP and <u>stop here</u>.</i> * EI 13-021, "Requirements and Guidance for Pavement Marking Operations - Required Installation of CARDS and Travel Lane and Shoulder Width Adjustments".		☐ Yes ☒ No
1.4	Is this a Maintenance project (as described in the "Definitions" section of this checklist) and different from 1.2 and 1.3 projects? <i>If no, continue to Step 2. If yes, the Project Development Team should continue to look for opportunities during the Design Approval process to improve existing bicycle and pedestrian facilities within the scope of project. Identify the project type in the space below and <u>stop here</u>.</i> Existing sidewalk curb ramps will be evaluated and upgraded to meet current ADA and PROWAG guidance as necessary.		☐ Yes ☒ No
STEP 1 prepared by:		Courtney Bentley, PE	Date: 10/28/2025
STEP 2 - IPP LEVEL QUESTIONS (At Initiation)			Comment / Action

Chapter 18, Appendix A - CAPITAL PROJECTS COMPLETE STREETS CHECKLIST (18A-5)

2.1	Are there public policies or approved known development plans (e.g., community Complete Streets policy, Comprehensive Plan, MPO Long Range and/or Bike/Ped plan, Corridor Study, etc.) that call for consideration of pedestrian, bicycle or transit facilities in, or linking to, the project area? <i>Contact municipal planning office, Regional Planning Group and Regional Bicycle/Pedestrian Coordinator.</i>	☐ Yes ☒ No	This part of Abbott Road is not included on the GBNRTC Regional Bicycle Master Plan
2.2	Is there an existing or planned sidewalk, shared use path, bicycle facility, pedestrian-crossing facility or transit stop in the project area?	☒ Yes ☐ No	Existing sidewalks are located along both sides of the road, for the full length of the project.
2.3	a. Is the highway part of an existing or planned State, regional or local bicycle route? <i>If no, proceed to question 2.4. If yes, go to part b of this question.</i> b. Do the existing bicycle accommodations meet the minimum standard guidelines of HDM Chapter 17 or the AASHTO "Guide for the Development of Bicycle Facilities"? * <i>Contact Regional Bicycle/Pedestrian Coordinator</i> * Per HDM Chapter 17- Section 17.4.3, Minimum Standards and Guidelines.	☐ Yes ☒ No ☐ Yes ☐ No	This part of Abbott Road is not included in the GBNRTC Regional Bicycle Master Plan.
2.4	Is the highway considered important to bicycle tourism by the municipality or region?	☐ Yes ☒ No	
2.5	Is the highway affected by special events (e.g., fairs, triathlons, festivals) that might influence bicycle, pedestrian or transit users? <i>Contact Regional Traffic and Safety</i>	☐ Yes ☒ No	
2.6	Are there existing or proposed generators within the project area (<i>refer to the "Guidance" section</i>) that have the potential to generate pedestrian or bicycle traffic or improved transit accommodations? <i>Contact the municipal planning office, Regional Planning Group, and refer to the CAMCI Viewer, described in the "Definitions" section.</i>	☒ Yes ☐ No	The corridor is along an NFTA Bus Route.
2.7	Is the highway an undivided 4 lane section in an urban or suburban setting, with narrow shoulders, no center turn lanes, and existing Annual Average Daily Traffic (AADT) < 15,000 vehicles per day? <i>If yes, consider a road diet evaluation for the scoping/design phase. Refer to the "Definitions" section for more information on road diets.</i>	☒ Yes ☐ No	A road diet was evaluated as documented in the IPP/FDR, and a road diet for a portion of the project corridor is recommended in the preferred alternative.

Chapter 18, Appendix A - CAPITAL PROJECTS COMPLETE STREETS CHECKLIST (18A-6)

2.8	Is there evidence of pedestrian activity (e.g., a worn path) and no or limited pedestrian infrastructure?	☐ Yes ☒ No	Sidewalks are present for the full length of the project.
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STEP 2 prepared by: Date:

Bicycle/Pedestrian Coordinator has been provided an opportunity to comment: ☒ Yes ☐ No

ATTACH TO IPP AND INCLUDE RECOMMENDATIONS FOR SCOPING/DESIGN.

STEP 3 - PROJECT DEVELOPMENT LEVEL QUESTIONS (Scoping/Design Stage)			Comment / Action
3.1	Is there an identified need for bicycle/pedestrian/transit or "way finding" signs that could be incorporated into the project?	☐ Yes ☒ No	
3.2	Is there history of bicycle or pedestrian crashes in the project area for which improvements have not yet been made?	☐ Yes ☒ No	
3.3	Are there existing curb ramps, crosswalks, pedestrian traffic signal features, or sidewalks that don't meet ADA standards per HDM Chapter 18 ?	☒ Yes ☐ No	Existing sidewalk curb ramps will be upgraded to meet current ADA and PROWAG guidance as necessary.
3.4	Is the posted speed limit is 40 mph or more and the paved shoulder width less than 4' (1.2 m) (6' in the Adirondack or other State Park)? Refer to EI 13-021 .	☐ Yes ☒ No	
3.5	Is there a perceived pedestrian safety or access concern that could be addressed by the use of traffic calming tools (e.g., bulb outs, raised pedestrian refuge medians, corner islands, raised crosswalks, mid-block crossings)?	☐ Yes ☒ No	
3.6	Are there conflicts among vehicles (moving or parked) and bike, pedestrian or transit users which could be addressed by the project?	☐ Yes ☒ No	
3.7	Are there opportunities (or has the community expressed a desire) for new/improved pedestrian-level lighting, to create a more inviting or safer environment?	☐ Yes ☒ No	
3.8	Does the community have an existing street furniture program or a desire for street appurtenances (e.g., bike racks, benches)?	☐ Yes ☒ No	

Chapter 18, Appendix A - CAPITAL PROJECTS COMPLETE STREETS CHECKLIST (18A-7)

3.9	Are there gaps in the bike/pedestrian connections between existing/planned generators? <i>Consider locations within and in close proximity of the project area. (Within 0.5 mi (800 m) for pedestrian facilities and within 1.0 mi (1600 m) for bicycle facilities.)</i>	☐ Yes ☒ No	
3.10	Are existing transit route facilities (bus stops, shelters, pullouts) inadequate or in inconvenient locations? (e.g., not near crosswalks) <i>Consult with Traffic and Safety and transit operator, as appropriate</i>	☐ Yes ☒ No	
3.11	Are there opportunities to improve vehicle parking patterns or to consolidate driveways, (which would benefit transit, pedestrians and bicyclists) as part of this project?	☐ Yes ☒ No	
3.12	Is the project on a "local delivery" route and/or do area businesses rely upon truck deliveries that need to be considered in design?	☐ Yes ☒ No	
3.13	Are there opportunities to include green infrastructure which may help reduce stormwater runoff and/or create a more inviting pedestrian environment?	☐ Yes ☒ No	
3.14	Are there opportunities to improve bicyclist operation through intersections and interchanges such as with the use of bicycle lane width and/or signing?	☐ Yes ☒ No	

STEP 3 prepared by: Courtney Bentley, PE Date: 10/28/2025

Additional comments, supporting documentation and clarifications for answers in step 1, 2 or 3:

RESURFACING, RESTORATION, AND REHABILITATION

Exhibit 7-1 Resurfacing ADA and Safety Assessment Form (Page 1 of 2)

PIN:	Date:	High Crash Locations?	ADT:	Posted Speed:	mph
Safety Assessment performed by:					
✓	Element	Guidance	Comments		
Elements for All Single and Multicourse Resurfacing Projects (1R):					
	Dept of Justice and Title 6 (Consult Landscape Architect as needed)	ADA Curb Ramps - Curb ramps and crosswalks that were built or altered before March 15, 2012 must meet the standards of the 1991 ADA Accessibility Guidelines (ADAAG). Curb ramps built or altered on or after March 15, 2012, are required to meet the 2011 Proposed Accessibility Guidelines for Pedestrian Facilities in Public Rights-of-Way (PROWAG). A list of applicable values from the ADAAG and PROWAG is provided in the Critical Elements for the Design, Layout and Acceptance of Pedestrian Facilities table. Exceptions on 1R projects must be justified per HDM Ch 2, Section 2.8. Note that sidewalks and pedestrian signal upgrades are not required unless they are altered as part of the project.			
	National MUTCD – Federal Regulation (Consult Traffic Engineer as needed)	Signing - Regulatory and warning signs should be installed as needed, in accordance with the National MUTCD and NYS Supplement. Review signs for condition (obvious fading or graffiti), location, post type (breakaway or rigid), appropriateness (need). - Identify where the advisory speed, ball bank indicator, accelerometer, or record plans reveal superelevation that is less than recommended for the posted speed (using AASHTO Method 2 noted in HDM §5.7.3). - Immediately notify the Resident Engineer of any missing regulatory or warning signs. - Identify regulatory and warning signs obscured by vegetation for clearing and grubbing. Pavement markings should be installed in accordance with the MUTCD. The adequacy of existing passing zones should be evaluated. Current EIs and specifications must be followed. Coordinate with the Traffic and Safety group to determine if a change to lane or shoulder widths are appropriate. Allowable Lane and Shoulder Width Changes See EI 13-021 to restripe 9' & 10' lane widths on high-speed highways to 11' where a 4' minimum shoulder can be retained for non-motorized traffic, or to restripe 12' and greater lane widths on low-speed highways with shoulders less than 4' to widen the shoulder for non-motorized traffic. Delineation - Install per the National MUTCD and NYS Supplement.			
	Rumble Strips	Include CARDS as required by EI 13-021 , and SHARDS in accordance with EI 16-014 .			
	Roadside Safety	Sight Distance - Consult HDM Chapters 2 and 5 to identify the standard sight distances for the posted speed. Consider clearing and grubbing vegetation to improve clear zone and the following sight distances: Intersection sight distance for right on red at signalized intersections and for left, through and right turns at unsignalized intersections and major driveways. - Sag vertical curve SSD obscured by overhead trees. - Horizontal SSD. Consider intersection warning signs for segments with sight distances that are observed to be substantially less than the standard and will not be improved. Fixed Objects Address obvious objects that are within the prevailing clear area and within the ROW based on engineering judgment from a field visit (e.g., tree removal on the outside of a curve or installation of traversable driveway culvert end sections within the prevailing clear zone). Poles, guy wires, sign posts, trees, and other obstructions should be 18" or more from the face of curb. In uncurbed areas, they should be 48" or more from the edge line. Review the guide rail for: - Nonfunctioning or severely deteriorated rail (HDM §10.3.1.2 B) - Guide rail height (HDM Table 10-7 and current EIs) considering the proposed overlay thickness. - Deflection distance (HDM §10.2.2.3 and Table 10-3). - Point of need if the end section will be replaced (HDM §10.2.2.1). - Barrier Terminals/End Sections (HDM §10.2.5). Install median barrier per HDM §10.2.4. (72' criteria for interstates) Bridge Rail Transitions - The Regional Structures Group, Regional Design Group, Main Office Structures, and Design Quality Assurance Bureau should be contacted, as needed, to help identify substandard connections to bridge rail and for the recommended treatment.			

RESURFACING, RESTORATION, AND REHABILITATION

Exhibit 7-1 Resurfacing ADA and Safety Assessment Form (Page 2 of 2)

✓	Element	Guidance	Comments
	NYS Railroad Law	Railroad Crossing - Contact Regional Rail Coordinator. Contact Office of Design if replacing crossing surface as required per HDM Ch 23.11.	
	Paving	Edge drop-offs are not permitted between the traveled way and shoulder. Shoulder edge drop offs >2" are to be addressed via the safety edge (EI 10-012) in the §402 items or shoulder backup material. Shoulders - Unpaved, stabilized shoulders should be paved a minimum of 2' beyond the travelled way in uncurbed sections to reinforce the traveled way, for occasional bicyclists, and to improve safety. Design criteria for 2R/3R may require a wider width. A 1:10 pavement slope may be used to transition between the travel way paving and a paved shoulder that will not be resurfaced. Requires milling a longitudinal rebate and cannot exceed max rollover rate of 10% for ≤ 4' shoulders and 8% for wider shoulders. Compare current shoulder and lane width to record plans to determine if shoulder width has been reduced due to previous paving. Consider reestablishing original shoulder width to improve bike and/or pedestrian accommodation. Super-elevation - Improve superelevation (up to the maximum rate as necessary using AASHTO Superelevation Distribution Method 2) to have the recommended speed equal to the posted speed. Where the maximum rate is insufficient, install advisory speed signs as needed and consider additional treatments (e.g., chevrons, roadside clearing), as needed. Note that transition lengths should be <½ the standard value before reducing superelevation. Vertical drop-offs - Manholes, valves, frames and grates are to be adjusted in accordance with Sections 655 and 663 of the Standard Specifications. Vertical drops at grates or frames should be addressed if they exceed 1" and horizontal gaps parallel to the direction of traffic should be addressed if they exceed 5/8".	
Additional Elements for 2R and 3R Projects:			
	Sidewalks and Bicycle Facilities	2R Projects: all pedestrian facilities within the existing highway boundary must be in conformance with the acceptable values in the Critical Elements for the Design, Layout and Acceptance of Pedestrian Facilities table. 3R projects: all pedestrian facilities must be in conformance with the acceptable values in the Critical Elements for the Design, Layout and Acceptance of Pedestrian Facilities table. 2R/ 3R projects New or replacement pedestrian signals must be accessible. Separate bike facilities should be considered when along highways exceeding 2,000 vehicles/day with a speed limit of 30 mph or more. Minimum shoulder width of 4' if no curbing. Exceptions on 2R/3R projects must be justified per HDM Ch 2, Section 2.8.	
	Super-elevation	For Freeway projects, the superelevation is to be improved to meet the values in HDM Ch 2, Exhibits 2-13a or 2-14a (which utilizes AASHTO Superelevation Distribution Method 5).	
	Speed Δ Lanes	Speed change lanes should meet AASHTO "Green Book" Ch 10 standards. Shoulders for speed change lanes should meet HDM §2.7.5.2 and §2.7.5.3	
	Clear Zone(s)	Establish based on HDM §10.3.2.2 A for non-freeway and HDM §10.2.1 for freeways. Check all barrier points of need (HDM §10.2.2.1).	
	Fixed Objects	Reestablish the clear zone and remove, relocate, modify to make crash worthy, shield by guide rail/crash cushion, or delineate any fixed objects. For guidance on identifying fixed objects, refer to HDM §10.3.1.2 B.	
	Traffic Signals	Signal heads should be upgraded to meet current requirements per Regional Traffic and Safety, including backing plates, as needed. Detection systems should be evaluated for actuated signals and considered for fixed-time signals. New traffic signals that meet the signal warrants may be included.	
	Shoulder Widening	Shoulders should be widened to 2' min on local rural roads and low speed collectors. 4' min is used for other nonfreeway rural facilities with design speeds ≥40 mph for crash avoidance, bicyclists, and pedestrians. Shoulders width should be restored where the existing width is reduced from previous paving operations.	
	Lane Width	Non-freeway lanes may be widened or narrowed per HDM Exhibits 7-5 and 7-9. New through travel lanes are not permitted.	
	Design Vehicle	Intersections should accommodate the design vehicle w/o encroachment into other travel lanes or turning lanes. See HDM 5.7.1.	
	Driveways	Driveways shall meet the spirit and intent of the most recent "Policy and Standards for the Design of Entrances to State Highways" in HDM Chapter 5, Appendix 5A.	
	Turn Lanes	Turn lanes should meet the requirements of HDM §5.9.8.2	
	Curbing	Curbing must meet the requirements of HDM §10.2.2.4. For freeways, curbing that cannot be eliminated should be replaced with the 1:3 slope, 4" high traversable curb.	
	Drainage	Closed drainage work may include new closed drainage structures, culverts, and the cleaning and repair of existing systems. Subsurface utility exploration should be considered for closed drainage system modifications.	

**Abbott Road (CR 4) from Fisher Road to City of Buffalo Line
Resurfacing ADA and Safety Assessment
PIN 5764.15**

The following information was prepared to address the items identified on the Resurfacing ADA and Safety Assessment Form (Exhibit 7-1) from Chapter 7 of the Highway Design Manual (HDM).

Dept of Justice and Title 6

- **ADA Curb Ramps:** All sidewalk curb ramps/landings located within the project limits that do not conform to the requirements of HDM Chapter 18 will be replaced as necessary to comply with current ADA and PROWAG standards or be justified as non-standard features, if necessary.

National MUTCD - Federal Regulation

- **Signing:** Advanced warning signs will be installed in accordance with the National MUTCD and the NYS Supplement to accommodate the proposed lane configuration and existing emergency signals. No other concerns or deficiencies were identified. Erie County will continue to maintain existing signs.
- **Pavement Markings:** Abbott Road has 4-inch double yellow centerlines, 4-inch broken white lane lines, and stop bars that conform with the National MUTCD and NYS Supplement. Generally, stop bars do not exist on the City streets intersecting Abbott Road. Stop bars are installed at all four approaches at the intersection of Abbott Road and Ridge Road and all four approaches of Abbott Road and Dorrance Avenue, both signalized intersections. There are no existing edge lines. Existing lane widths vary from 10 to 13 ft. New pavement markings would be installed subsequent to resurfacing. Travel lane widths will be increased to 12 ft where possible. Locations where consistent or minimum lane widths cannot be maintained will be justified as non-standard features.
- **Delineation:** There is no existing delineation. The existing runs of bridge rail at BIN 3327420 lack snowplow markers. Full roadway delineation is not necessary to comply with the National MUTCD and New York State Supplement requirements; however, snowplow markers would be installed along any new and/or replacement runs of guiderail.

Rumble Strips

- The posted speed limit within the project limit is 35-40 mph and therefore does not meet the warrants for rumble strips (CARDS or SHARDS).

Roadside Safety

- **Sight Distance:** The sight distances (intersection, vertical & horizontal) within the project corridor were evaluated during site visits and were not observed to be substantially less than the standard. Minor tree trimming over the sidewalks and edge line of road may be necessary.
- **Fixed Objects:** The observed clear zone varies throughout the project corridor. The clear zone on the west side of the corridor is generally defined by utility poles in the snow storage area behind the curb. The clear zone on the east side of the corridor is defined by utility poles, fire hydrants and adjacent buildings. There are utility poles identified in the review that are at or near the minimum distance behind the face of curb; all instances are located on tangent sections of the corridor. This project is not anticipated to affect any overhead utility lines. Refer to the Traffic Data Memorandum for additional information on the crash experience. Mainline collisions with a fixed object, indicative of roadway departure, accounted for less than 1% of the total. Providing a wider clear zone would enhance safety along the project corridor, but would be infeasible due to close proximity of adjacent buildings and is beyond the scope of this project.
- **Guide Rail:** There is one run of bridge rail within the project limits. Based on a cursory review, the guiderail appears to be functioning, and no deficiencies were identified.
- **Bridge Rail Transitions:** There are bridge rail transitions at BIN 3327420. The existing bridge rail transitions are acceptable and will be retained for this project.

NYS Railroad Law

- **Railroad Crossing:** There are no at grade railroad crossings within the project limits.

Paving

- **Edge Drop-Offs:** Abbott Road is curbed within the project limits. There is no edge drop off to consider.
- **Shoulders:** Existing shoulders would be resurfaced in conjunction with resurfacing of the travel lanes.
- **Superelevation:** Abbott Road is generally straight with a normal crown cross section. There are two standard horizontal curves in the project limits with negligible superelevation and no attributed crash history, and the city speed limit of 30 mph is retained throughout. As such, the curves will be retained.
- **Vertical Drop-Offs:** All utility manholes, drainage inlets and valves within the pavement will be adjusted to grade as necessary.

Additional Elements for 2R & 3R Projects

Sidewalks and Bicycle Facilities: There are several non-compliant curb ramps within the project limits which will be removed and replaced. All pedestrian facilities located within the project limits will conform to the Critical Elements of Pedestrian Facilities or will be justified as non-standard features, if necessary.

Superelevation: Abbott Road is generally straight with a normal crown cross section. There are two standard horizontal curves in the project limits with negligible superelevation and no attributed crash history, and the city speed limit of 30 mph is retained throughout. As such, the curves will be retained.

Speed Change Lanes: There are no speed change lanes within the project limits.

Clear Zone: Generally, the existing clear zone will be maintained. Where a partial road diet is proposed, the clear zone will be widened to include an additional 2 ft. shoulder on each side of the road.

Fixed Objects: The existing character of the corridor and clear zone will generally be maintained throughout. Refer to the Traffic Data Memorandum for additional information on the crash experience. Mainline collisions with a fixed object, indicative of roadway departure, accounted for less than 1% of the total.

Traffic Signals: Traffic data were collected within the project limits in July 2024. Traffic data models were performed to improve traffic operations at major intersections and throughout the corridor. ECDPW will coordinate with the traffic signal owners to implement timing and phasing improvements, and intersection geometry will be adjusted to address traffic and safety needs.

Shoulder Widening: Existing and proposed shoulders meet the required minimums per NYSDOT HDM Chapter 2. Locations where a road diet is used will see shoulders widened to 2 ft.

Lane Width: Generally, the through lanes will match existing to maintain the corridor cross section. Locations that do not comply with NYSDOT Chapter 2 will be justified as nonstandard features. Lanes within the road diet will be widened to 12 ft travel lanes and 12 ft. two way left turn lanes.

Design Vehicle: The design vehicle selected is WB-62 for Abbott Road and WB-67 for Ridge Road. These design vehicles meet the minimum per NYSDOT Chapter 5. The intersection has been designed to accommodate these vehicles to the extent possible without encroaching into other travel lanes or turn lanes.

Driveways: Generally, driveways entering Abbott Road conform to NSYDOT Chapter 5 appendix 5A with one driveway per property confined to the frontage and spaced

appropriately. Locations determined to be non-compliant will be replaced as necessary to comply with current standards or be justified as non-standard features, if necessary.

Turn Lanes: Existing turning lanes generally comply with NYSDOT requirements. Locations determined to be non-compliant will be replaced as necessary to comply with current standards or be justified as non-standard features, if necessary.

Curbing: All curbing within the project limits is compliant with NYSDOT Chapter 10. There is one location within the corridor that a curb is adjacent to a roadside barrier at BIN 3327420. There is no concern for vaulting or clotheslining at this location.

Drainage: Drainage repairs would include replacement of all drainage inlet structures along Abbott Road, as well as rehabilitation or replacement of some of the storm sewer manholes where necessary. The storm sewer pipes that are in poor to fair condition would be restored with slip lining or replaced where slip lining is not a feasible solution. All corrugated steel and clay tile storm sewer laterals would be removed and replaced.

To: Gina Wilkolaski, P.E.
Erie County DPW Project Manager

From: Jessica Ross, P.E.
Bergmann Project Manager

Date: December 5, 2025

CC: Courtney Bentley, P.E., Bergmann

Abbott Road (CR 4) PIN 5764.15
Fisher Road to Buffalo City Line
City of Lackawanna, Erie County, NY

Traffic Data & Analysis Memorandum

The design alternatives being evaluated for this project include the null alternative, 1) a corridor-wide road diet on Abbott Road (i.e., reducing the number of through lanes in each direction from two to one with the addition of a center two-way left-turn lane), and 2) widening the approaches to add turn lanes for the Abbott Road (County Route (CR) 4) and Ridge Road (CR 137) intersection.

Traffic data was collected along Abbott Road between the City of Buffalo line (Dorrance Avenue) and Fisher Road. A capacity analysis was performed for all signalized intersections and one non-signalized intersection in the project corridor, in accordance with NYSDOT Highway Design Manual Chapter 5. The existing and no build conditions were analyzed for the Estimated Time of Completion (ETC) and design year (ETC+20). The build concept conditions at the study intersections were analyzed for the design year to determine the feasibility of each concept.

A crash analysis was performed in accordance with NYS Highway Design Manual Chapter 5. Crash data was collected along the entire project corridor plus 0.1 miles north and south of the project limits from March 2021 to March 2024. The data collected was then analyzed to determine crash patterns and identify potential safety issues, particularly in the vicinity of the intersection of Abbott Road and Ridge Road.

A summary of the traffic and crash data collection and analysis, including recommendations for the preferred design alternative, are presented in this memorandum.

Crash Summary and Analysis

The crash data was collected and analyzed to determine corridor-wide patterns and patterns at the intersection of Abbott Road and Ridge Road, identify potential deficiencies in the existing conditions, and recommend countermeasures to improve safety. Crash diagrams, a summary table, and crash rate calculations can be found in **Appendix B**.

Abbott Road and Ridge Road Intersection

The intersection of Abbott Road and Ridge Road had an average of 25.00 crashes per year during the study period, with an overall crash rate of 2.30 crashes per million entering vehicles. This is above the statewide expected crash rate for similar facilities, which is 0.24 crashes per million entering vehicles. The crash types at this intersection are summarized in **Table 1** below.

**Table 1 - Abbott Road & Ridge Road Crash Summary**

Type of Crash	Number	Percentage
Rear-End	22	29.3%
Right-Angle	18	24.0%
Left-Turn	18	24.0%
Overtaking	15	20.0%
Right-Turn	1	1.3%
Ped/Bike	1	1.3%

The most frequent crash type located at the intersection of Abbott Road and Ridge Road during the study period was rear-end. The majority of the rear-end crashes occurred east of the intersection on Ridge Road with vehicles traveling westbound. Many of these crashes occurred while the light was red and had apparent contributing factors of driver inattention/distraction or following too closely. Some of the northbound/southbound rear-end crashes at the intersection involved cars slowing down to turn onto Ridge Road. These crashes could be reduced by reconfiguring the lanes to add designated turning lanes and reduce the number of shared through/turn lanes.

Following rear-end crashes, right-angle were also frequently occurring at this intersection. Based on the crash reports, several of the right-angle crashes dealt with drivers failing to obey the traffic signal due to a glare from the sun. During the study period in February 2023, backplates were installed on the signal heads which is a proven countermeasure per FHWA to increase the visibility of traffic signals. There is not a sufficient amount of data yet available for a conclusive before and after study, however a decrease in right angle crashes was observed with an average of 15 crashes per year in the first two years of the study period and 8 crashes in the last year after the backplates were installed.

Another crash pattern that occurred near this intersection involved vehicles making left-hand turns into adjacent commercial driveways. In multiple instances, vehicles in the inner lane traveling in the opposite direction would wave through the left-turning vehicles, obstructing the view of the vehicles traveling in the outer opposing lane and causing a crash. This pattern could be mitigated with the proposed road diet by reducing the number of through lanes/conflict points for the turning vehicles, as well as the addition of dedicated left turn lanes and signal phases to separate left-turning traffic from oncoming traffic.

Corridor-Wide

The project corridor on Abbott Road, from Dorrance Avenue to Fisher Road, had an average of 56.67 crashes per year during the study period, with an overall crash rate of 10.61 crashes per million vehicle miles. This is above the statewide expected crash rate for similar facilities, which is 6.11 crashes per million vehicle miles. The crash types for the entire corridor are summarized in **Table 2** below.

Table 2 - Abbott Road Corridor Crash Summary

Type of Crash	Number	Percentage
Right-Angle	38	22.3%
Left-Turn	36	21.2%
Overtaking	35	20.6%
Rear-End	35	20.6%
Animal	6	3.5%
Sideswipe	6	3.5%
Right-Turn	4	2.3%
Pedestrian	3	1.8%

**Table 2 - Abbott Road Corridor Crash Summary**

Type of Crash	Number	Percentage
Head On	2	1.2%
Fixed Object	2	1.2%
Other	2	1.2%
Bicyclist	1	0.6%

One of the most frequent crash types along the corridor was overtaking crashes. Around half of the overtaking crashes involved vehicles switching lanes on Abbott Road. With a road diet, the occurrence of overtaking crashes could be reduced due to the reduction of through lanes, eliminating lane weaving.

Another common crash type along the corridor was left-turn crashes. Two primary contributing factors appeared to be failure to yield the right-of-way and limited or obstructed visibility. Many crashes were related to vehicles turning left to or from Abbott Road onto side streets and driveways. A road diet with a center two-way left-turn lane is a proven safety countermeasure that can reduce left-turn and rear-end crashes per the FHWA, as it provides a center lane for left turning vehicles to decelerate and less lanes to cross.

Lastly, there were a few crashes along the corridor involving legally parked vehicles on Abbott Road. Two (2) of the thirty-eight (38) rear-end and one (1) of the thirty-eight (38) overtaking crashes involved legally parked vehicles on Abbott Road. Two (2) of these crashes involved vehicles directly hitting a car that was parked along Abbott Road. The other crash was caused by a vehicle attempting to avoid a parked car, resulting in a crash with another vehicle in the adjacent lane. With the current lane configuration and parking regulations, vehicles in the outermost lanes often need to make sudden lane changes to avoid the parked cars. A road diet on Abbott Road (Alternative 1) would not provide adequate space for a designated parking lane outside of the travel-way, which would eliminate crashes involving legally parked vehicles. If two travel lanes are retained in both directions, it is recommended to change the parking regulations so that parking is not allowed in a lane that is typically used for travel.

Traffic Volumes

Traffic data were collected within the project limits in July 2024. Continuous 24-hour traffic volume counts were collected at two locations on Abbott Road (i.e., north and south of Ridge Road) and Annual Average Daily Traffic (AADT) volumes were calculated for an average weekday. The Estimated Time of Completion (ETC) is 2030, with a design year of 2050 (ETC+20). This was selected per Chapter 5 of the NYSDOT [Highway Design Manual](#). Traffic volume projections were completed for ETC (2030) and the design year of ETC+20 (2050). Based on review of the historic AADT data available from NYSDOT's Traffic Data Viewer and the counts collected in July 2024, it was determined that a growth rate of 0.5% was applicable for this project. This growth factor (annually compounded) was applied to forecast AADT volumes for the ETC (2030) and ETC+20 (2050). The existing and forecasted AADT volumes are summarized in **Table 3** below.

Table 3 – Existing and Forecast Traffic Volumes

COUNTY ROAD 4 – ABBOTT ROAD				
	North of Ridge Road		South of Ridge Road	
Year	AADT	DHV	AADT	DHV
Existing (2024)	11,493	966	11,825	980
ETC (2030)	11,850	1,000	12,190	1,010



ETC+10 (2040)	12,450	1,050	12,810	1,070
ETC+20 (2050)	13,090	1,100	13,470	1,120
COUNTY ROAD 137 – RIDGE ROAD*				
	West of Abbott Road		East of Abbott Road	
Year	AADT	DHV	AADT	DHV
Existing (2023)	13,179	1,186	24,233	1,939
ETC (2030)	13,650	1,230	25,100	2,010
ETC+10 (2040)	14,350	1,300	26,380	2,120
ETC+20 (2050)	15,080	1,360	27,730	2,220

**The Existing (2023) AADT volumes on Ridge Road were obtained from the NYSDOT Traffic Data Viewer.*

Weekday morning and evening peak period turning movement counts were conducted for five intersections along Abbott Road – Dorrance Avenue, Julian Avenue/Plaza Driveway, Ridge Road, Fernald Avenue, and Elmview Avenue. The weekday traffic counts were collected on Thursday, July 25, 2024 from 7:00 AM to 10:00 AM and 3:00 PM to 6:00 PM, except for the intersection with Ridge Road where the evening peak period counts were collected from 1:30 PM to 7:00 PM to ensure that the peak hour at that intersection was captured. All data were recorded in 15-minute increments to allow for identification of one peak hour within each peak period. Passenger cars, trucks, buses, bicycles, and pedestrians were counted. The traffic counts were collected during the summer when school was not in session, therefore historic intersection counts were reviewed to account for students walking and biking to the nearby Lackawanna Middle/High School. Pedestrian and bicyclist volumes were adjusted in the capacity analysis to conservatively account for students during the school year to ensure that the signal operations can accommodate pedestrians crossing the street. Peak hour volume movements for the existing (2024) and forecast ETC+20 (2050) peak hour turning movement volumes are available in **Appendix C**.

Corridor-Wide Road Diet Evaluation

One objective of the design year traffic analysis was to determine the feasibility of a road diet on Abbott Road. A road diet is a lane reduction, lane re-channelization, or lane width reduction with the intention of systematic improvements including capacity and safety for all users (i.e. pedestrians, bicyclists, and motorists). Road diets may reduce speeds and improve traffic flow. The road diet alternative for Abbott Road (Alternative 1) is a reduction from two lanes in each direction to one lane in each direction with a center two-way left-turn lane. Alternative 2 maintains two lanes in each direction and widens the approaches at the Ridge Road intersection to add dedicated left turn lanes. The alternative treatments at the intersection of Abbott Road and Ridge Road are described below:

1. Alternative 1 – Reduce the number of through lanes in the north and south directions from two lanes to one, with dedicated left and right turn lanes (i.e., continue road diet through intersection) on Abbott Road
2. Alternative 2 – Retain two through lanes in the north and south directions and add left turn lanes on the Abbott Road approaches (5-lane section through intersection in addition to a northbound right turn lane)

Preliminary design plans for both alternatives at the intersection are shown in **Appendix A**.

The road diet alternative for the Abbott Road project is expected to accommodate traffic volumes based on the volume thresholds provided in the Road Diet Informational Guide by the U.S. Department of Transportation Federal Highway Administration. The guide references studies that suggest an ADT of between 15,000 and 17,500 vehicles per day (vpd) can be accommodated by a road diet with a roadway section of three lanes. The AADT of Abbott Road



is currently less than 12,000 and is expected to be less than 14,000 vpd in 2050 based on the study area compound annual growth rate of 0.5%.

The informational guide also references peak hour volume thresholds by direction (vphpd) of 750 or below characterized as “probably feasible” (page 17). The segments of Abbott Road within the study area are currently less than 610 vehicles per hour per direction and are projected to be less than 700 vphpd during the design year of 2050.

Based on the Road Diet Informational Guide volume thresholds and initial indications from the capacity analysis for the intersections along the Abbott Road corridor, the proposed road diet of Abbott Road is feasible. The decision of whether to continue the road diet through the Ridge Road intersection, however, is more complex when considering the data for Alternatives 1 and 2, and is studied in greater detail below.

Synchro 11 was used to complete an Arterial LOS analysis to evaluate the through capacity along the corridor. Results from the analysis are summarized in the table below.

Table 4 – Arterial Level of Service Summary								
Direction	2024 Existing		2050 No Build		2050 Build Alt 1		2050 Build Alt 2	
	AM	PM	AM	PM	AM	PM	AM	PM
Northbound	C	C	C	C	D	D	C	D
Southbound	C	C	C	C	C	C	C	C

Intersection Traffic Analyses

Level of Service (LOS) is a qualitative measure describing motorist satisfaction with various factors influencing traffic congestion including travel time, speed maneuverability, and delay. The methodology for performing capacity analyses and determining LOS for the vehicular mode of travel is documented in the Highway Capacity Manual, 7th Edition: A guide for Multimodal Mobility Analysis (HCM) (Transportation Research Board, 2022). Levels of Service range from A to F. LOS A describes conditions with free-flow operations at expected travel speeds and little or no delay. LOS F denotes highly congested conditions with stop and go traffic, lower than expected speeds, significant congestion, and substantial delays. LOS D or better is generally considered acceptable for peak hours of traffic in urban areas on streets and at intersections, although LOS C is desirable. Per the New York State Department of Transportation (NYSDOT) Highway Design Manual (HDM), the minimum LOS for the design year in urban areas of LOS D.

A combination of Synchro 11 and SimTraffic were used to model the existing year and ETC+20 for the no build and build conditions at the following Abbott Road intersections: Dorrance Avenue, Abbott Road Plaza, Ridge Road, Fernald Avenue, and Elmview Avenue. Copies of all the Synchro and SimTraffic reports are provided in **Appendix D**. Findings from the intersection analyses are presented in the following sections.

Existing and Future No Build Level of Service and Mobility

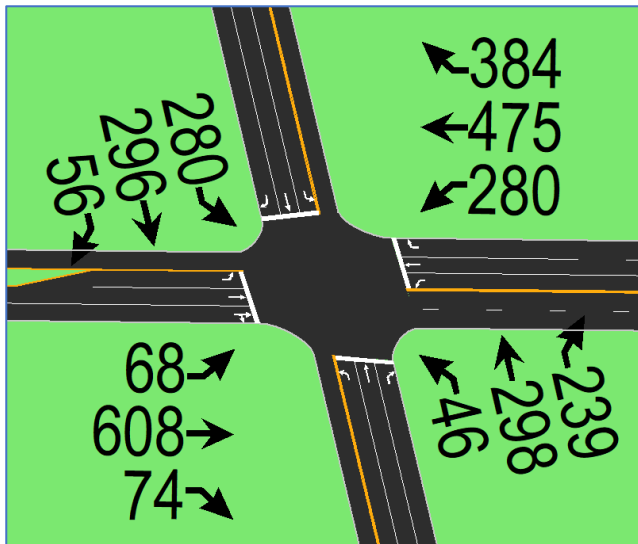
The tabulated results of the LOS and capacity analysis of the existing and ETC+20 (2050) no build conditions are summarized in **Table 5**. This analysis was completed using signal data collected on-site, information provided by the City of Lackawanna, and observation of the turning movement count videos. The existing signal phasing and timing for the Ridge Road intersection was collected via on-site observation on August 24, 2025 between 2:30 and 3:30 PM. The count videos were used to confirm existing signal timing for the additional intersections mentioned above. As shown, the 2024 existing traffic operations during the AM and PM weekday peak hours range from LOS A to C for all intersections. Between the existing year (2024) and ETC+20 (2050), all movements experience marginal (i.e., less than 20 seconds/vehicle) increases in delay. All movements remain at LOS C or better operations except



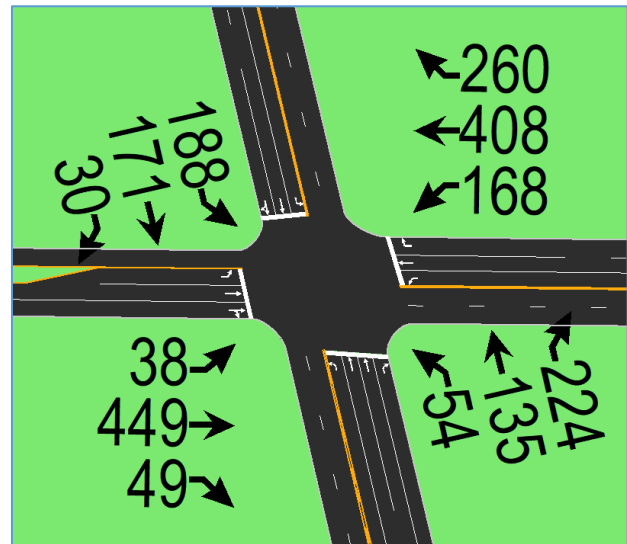
for the westbound left turning movement at the Abbott Road and Ridge Road intersection, which is projected to operate at LOS D during the PM peak hour. The results indicate that each intersection is projected to have adequate capacity to meet the anticipated demand with acceptable levels of service throughout the design year (2050).

Future Build Level of Service and Mobility

The figures below show the lane configuration for each alternative at the intersection of Abbott Road and Ridge Road. The level of service was calculated using optimized signal timing, based on the existing data collected for the no build analysis. The signal phasing for both alternatives includes dedicated left turn lanes and phases for northbound and southbound Abbott Road, where left turns are permitted during the green phase for through movements. The existing signal phasing does not have a left turn phase for the northbound movement, and the implementation of phases for both approaches from dedicated turn lanes can improve safety by reducing the number of conflict points during the separate phase.



Alternative 1 lane configuration and 2050 PM Volumes



Alternative 2 lane configuration and 2050 AM Volumes

The level of service for the other study intersections was also calculated using optimized signal timing, where applicable, based on data collected from the count videos.

The 2050 Build traffic operations during the AM and PM weekday peak hours are expected to range from LOS A to D for both alternatives, as shown in Table 5.

Table 5 – Intersection Level of Service and Delay Summary																	
Approach & Lane Group		2024 Existing				2050 No Build				2050 Build Alt 1				2050 Build Alt 2			
		AM		PM		AM		PM		AM		PM		AM		PM	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Abbott Road & Dorrance Avenue																	
Eastbound	LT TR	B	13.3	B	14.8	B	13.3	B	15.2	B	14.3	B	17.1	B	16.0	B	13.9
	Approach	B	13.3	B	14.8	B	13.3	B	15.2	B	14.3	B	17.1	B	16.0	B	13.9
Westbound	LT TR	B	18.6	B	18.5	B	18.6	B	19.1	B	19.8	C	21.3	C	22.3	B	17.9
	Approach	B	18.6	B	18.5	B	18.6	B	19.1	B	19.8	C	21.3	C	22.3	B	17.9
Northbound	LT TR	B	12.8	B	16.3	B	13.5	B	18.1	-	-	-	-	A	4.6	C	30.5



Table 5 – Intersection Level of Service and Delay Summary

Approach & Lane Group		2024 Existing				2050 No Build				2050 Build Alt 1				2050 Build Alt 2			
		AM		PM		AM		PM		AM		PM		AM		PM	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Southbound	Left	-	-	-	-	-	-	-	-	A	5.5	A	6.4	-	-	-	-
	TR	-	-	-	-	-	-	-	-	A	9.2	B	10.8	-	-	-	-
	Approach	B	12.8	B	16.3	B	13.5	B	18.1	A	8.0	A	9.4	A	4.6	C	30.5
	LT TR	A	4.7	A	4.9	A	4.8	A	5.1	-	-	-	-	A	4.3	A	8.3
	Left	-	-	-	-	-	-	-	-	A	5.7	A	6.2	-	-	-	-
	TR	-	-	-	-	-	-	-	-	B	12.7	B	16.9	-	-	-	-
	Approach	A	4.7	A	4.9	A	4.8	A	5.1	B	11.9	B	16.2	A	4.3	A	8.3
Overall		B	11.5	B	13.5	B	11.8	B	14.4	B	12.1	B	14.5	A	9.3	B	19.6
Abbott Road & Abbott Road Plaza Driveway																	
Westbound	Left	C	29.3	C	30.3	C	29.4	C	30.6	C	30.1	C	30.8	C	30.0	C	30.7
	Right	B	17.2	B	16.0	B	16.4	B	15.7	B	15.8	B	15.0	B	15.8	B	15.0
	Approach	C	28.4	C	29.9	C	28.3	C	30.2	C	28.9	C	30.4	C	28.9	C	30.0
Northbound	T TR	A	2.1	A	3.5	A	2.3	A	3.9	-	-	-	-	A	3.3	A	4.8
	TR	-	-	-	-	-	-	-	-	A	4.9	A	8.1	-	-	-	-
	Approach	A	2.1	A	3.5	A	2.3	A	3.9	A	4.9	A	8.1	A	3.3	A	4.8
Southbound	LT T	A	2.3	A	3.6	A	2.4	A	3.9	-	-	-	-	A	3.5	A	4.8
	Left	-	-	-	-	-	-	-	-	A	5.0	A	5.6	-	-	-	-
	Through	-	-	-	-	-	-	-	-	A	4.4	A	6.5	-	-	-	-
	Approach	A	2.3	A	3.6	A	2.4	A	3.9	A	4.4	A	6.5	A	3.5	A	4.8
Overall		A	3.9	A	5.8	A	4.1	A	6.1	A	6.3	A	9.4	A	5.1	A	7.0
Abbott Road & Ridge Road																	
Eastbound	Left	A	9.9	B	11.7	A	9.9	B	13.6	B	15.3	B	18.9	B	14.6	B	16.7
	T TR	C	21.6	C	22.9	C	22.1	C	25.9	C	26.7	D	37.0	C	25.6	C	33.3
	Approach	C	20.8	C	21.9	C	21.2	C	24.8	C	25.8	D	35.4	C	24.8	C	31.8
Westbound	Left	B	12.5	C	23.6	B	13.6	D	44.6	B	17.2	D	40.4	B	16.3	C	31.5
	Through	C	23.2	C	26.8	C	24.7	C	32.7	C	29.7	D	37.6	C	26.5	C	32.8
	Right	A	2.5	A	2.8	A	2.5	A	4.2	A	2.6	A	2.9	A	2.4	A	2.7
	Approach	B	14.6	B	18.0	B	15.5	C	26.0	B	18.8	C	26.6	B	16.9	C	22.3
Northbound	LT T	C	28.4	C	33.4	C	30.4	C	33.3	-	-	-	-	-	-	-	-
	Left	-	-	-	-	-	-	-	-	C	20.3	B	19.7	C	21.1	C	21.2
	Through	-	-	-	-	-	-	-	-	D	39.4	D	49.9	-	-	-	-
	T T	-	-	-	-	-	-	-	-	-	-	-	-	D	35.3	D	40.4
	Right	A	4.7	A	7.0	A	4.9	B	10.8	A	6.2	B	15.5	A	6.7	B	15.0
	Approach	B	15.5	C	22.6	B	16.6	C	24.0	B	18.9	C	33.4	B	18.0	C	28.5
Southbound	LT T	B	17.2	C	23.9	B	19.0	C	26.1	-	-	-	-	-	-	-	-
	Left	-	-	-	-	-	-	-	-	C	24.3	D	39.3	C	25.5	D	36.6
	Through	-	-	-	-	-	-	-	-	C	32.5	C	34.4	-	-	-	-
	T TR	-	-	-	-	-	-	-	-	-	-	-	-	C	27.7	C	28.6
	Right	A	4.2	A	3.2	A	4.1	A	3.0	A	0.5	A	3.7	-	-	-	-
	Approach	B	16.3	C	22.1	B	17.8	C	24.1	C	26.1	C	34.1	C	26.7	C	32.1
Overall		B	16.6	C	20.6	B	17.5	C	24.9	C	21.8	C	31.5	C	20.8	C	27.8
Abbott Road & Fernald Avenue																	
Eastbound	LTR	A	9.3	C	17.8	A	9.5	C	20.6	B	10.5	D	27.8	A	9.5	C	20.6
	Approach	A	9.3	C	17.8	A	9.5	C	20.6	B	10.5	D	27.8	A	9.5	C	20.6
Westbound	LTR	B	12.7	C	16.8	B	13.6	C	19.8	C	15.9	D	27.7	B	13.6	C	19.8
	Approach	B	12.7	C	16.8	B	13.6	C	19.8	C	15.9	D	27.7	B	13.6	C	19.8
Northbound	Left	A	8.0	A	0.0	A	8.1	A	0.0	A	8.1	A	0.0	A	8.1	A	0.0
	Through	A	0.0	-	-	A	0.0	-	-	-	-	-	-	A	0.0	-	-

**Table 5 – Intersection Level of Service and Delay Summary**

Approach & Lane Group		2024 Existing				2050 No Build				2050 Build Alt 1				2050 Build Alt 2			
		AM		PM		AM		PM		AM		PM		AM		PM	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Southbound	Approach	A	0.1	A	0.0	A	0.1	A	0.0	A	0.1	A	0.0	A	9.5	A	0.0
	Left	A	8.0	A	8.7	A	8.2	A	8.9	A	8.2	A	8.9	A	8.2	A	8.9
	Through	A	0.0	A	0.1	A	0.0	A	0.2	-	-	-	-	A	0.0	A	0.2
	Approach	A	0.1	A	0.4	A	0.1	A	0.5	A	0.1	A	0.3	A	0.1	A	0.5
	Overall	A	0.5	A	0.6	A	0.5	A	0.7	A	0.6	A	0.8	A	0.5	A	0.7
Abbott Road & Elmview Avenue																	
Eastbound	LTR	B	17.9	B	17.0	B	17.2	B	16.8	C	21.2	C	20.3	C	21.2	C	20.2
	Approach	B	17.9	B	17.0	B	17.2	B	16.8	C	21.2	C	20.3	C	21.2	C	20.2
Westbound	LTR	A	0.1	B	14.2	A	0.2	B	14.1	A	0.2	B	16.0	A	0.2	B	16.0
	Approach	A	0.1	B	14.2	A	0.3	B	14.1	A	0.3	B	16.0	A	0.3	B	16.0
Northbound	LT TR	A	1.5	A	1.5	A	1.5	A	1.6	-	-	-	-	A	3.2	A	3.5
	Left	-	-	-	-	-	-	-	-	A	4.7	A	4.9	-	-	-	-
	TR	-	-	-	-	-	-	-	-	A	4.0	A	5.0	-	-	-	-
	Approach	A	1.5	A	1.5	A	1.5	A	1.6	A	4.0	A	5.0	A	3.2	A	3.5
Southbound	LT TR	A	1.4	A	1.6	A	1.5	A	1.7	-	-	-	-	A	3.1	A	3.6
	Left	-	-	-	-	-	-	-	-	A	4.7	A	4.6	-	-	-	-
	TR	-	-	-	-	-	-	-	-	A	3.9	A	5.3	-	-	-	-
	Approach	A	1.4	A	1.6	A	1.5	A	1.7	A	3.9	A	5.3	A	3.1	A	3.6
Overall		A	2.0	A	2.1	A	2.0	A	2.2	A	4.5	A	5.7	A	3.7	A	4.1

Note: "T TR" denotes a lane group with a through and shared through/right lane, "LT T" denotes a lane group with a shared left/through and through lane, and "T T" denotes a lane group with two through lanes.

Abbott Road & Ridge Road

For the no build and both build alternatives, the projected operations of the signalized intersection of Abbott Road and Ridge Road would be acceptable through the ETC+20 design year, 2050. Both alternatives are projected to operate with slightly more delay than no build due to longer cycle lengths to add dedicated left turn phases for both directions of Abbott Road, with an increase of 2.6 to 7.4 seconds per vehicle for the entire intersection. The critical highest volume intersection movements (i.e., Ridge Road), with or without the through lane reduction on Abbott Road, would operate at LOS D or better during the AM and PM peak hours. In both alternatives, the overall intersection is projected to operate at LOS C with 20.8 to 31.5 seconds of delay per vehicle, depending on the weekday peak hour.

Alternative 2 is projected to operate slightly better than Alternative 1 overall, where the most significant impacts to delay (up to 10 seconds per vehicle less than Alternative 1) occur at the westbound Ridge Road approach. Alternative 2 maximizes the capacity of the Abbott Road intersection approaches, thereby reducing queue lengths and green time required to clear those approaches and allocating more green time on Ridge Road, where approach volumes are greater (i.e. the controlling movements of the intersection). This results in a slight increase to delay times (up to 10 seconds per vehicle) on the Abbott Road approaches; however, it yields a slightly better overall delay (approximately 4 seconds per vehicle) for the entire intersection.

As discussed above, the intersection of Abbott Road and Ridge was analyzed both with and without a road diet on Abbott Road through the intersection to see if there was a significant impact of reducing through lanes while adding dedicated left turn lanes. The road diet alternative, Alternative 1, is expected to result in less delay on the Abbott Road approaches but more delay on the Ridge Road approaches compared to Alternative 2, due to the balancing of signal green time. When comparing the results of the two analyses for the overall intersection, there is an



approximately fifteen percent decrease in average delay, approximately 4 seconds, when two through lanes are preserved on both Abbott Road approaches. Therefore, there is not a significant operational benefit to the retention of two through lanes on Abbott Road.

Other Intersections

The other intersections studied in the analysis also showed acceptable operations projected through the design year, 2050, for the no build and both build alternatives. There are no significant changes to the projected overall operations or delay between the no build and two build alternatives.

Future No Build and Build Queue Lengths

Vehicle queue lengths on the Ridge Road approaches at Abbott Road are not expected to change significantly compared to no build conditions (i.e. no more than 135 feet, or approximately 7 vehicles per cycle) as shown in **Table 6**. Given Synchro's limitations in determining queue lengths especially with closely spaced intersections and multi-lane approaches, SimTraffic simulations were used to determine 50th and 95th percentile queue values indicated in **Table 6** below.

Table 6 - Queue Summary for Abbott and Ridge Intersection (Average and 95 th Percentile Queue Lengths, in ft)													
Approach & Lane Group		2050 No Build				2050 Build Alt 1				2050 Build Alt 2			
		AM		PM		AM		PM		AM		PM	
		Avg	95 th	Avg	95 th	Avg	95 th	Avg	95 th	Avg	95 th	Avg	95 th
Eastbound	Left	24	75	51	126	40	123	75	169	36	109	63	148
	Storage	90		90		90		90		90		90	
	T TR	119	189	169	241	173	279	226	333	165	272	213	310
Westbound	Left	55	113	148	283	69	141	147	267	63	131	138	263
	Storage	200		200		200		200		200		200	
	Through	124	223	211	396	145	270	223	395	147	276	220	403
	Right	33	66	78	219	33	73	76	166	30	66	51	144
Northbound	LT T	50	93	73	129	-	-	-	-	-	-	-	-
	Left	-	-	-	-	28	66	22	56	26	57	19	48
	Storage	-		-		300*		300*		170*		170*	
	Through	-	-	-	-	78	135	176	283	-	-	-	-
	T T	-	-	-	-	-	-	-	-	43	83	87	139
	Right	53	87	53	103	55	94	58	102	57	98	64	115
	Storage	130		130		300*		300*		170*		170*	
Southbound	LT T	90	146	169	253	-	-	-	-	-	-	-	-
	Left	-	-	-	-	89	159	153	259	89	156	132	223
	Storage	-		-		300*		300*		250*		250*	
	Through	-	-	-	-	91	163	150	249	-	-	-	-
	T TR	-	-	-	-	-	-	-	-	58	108	91	146
	Right	14	49	26	78	16	43	23	52	-	-	-	-
	Storage	140		140		300*		300*		-		-	
Notes:													
1. "T TR" denotes a lane group with a through and shared through/right lane, "LT T" denotes a lane group with a shared left/through and through lane, and "T T" denotes a lane group with two through lanes.													
2. * Indicates that the design storage length listed in the table cannot be accommodated within the existing intersection geometry. At least the average turning vehicle queues can fit in the feasible turn lane length; however, the turn lanes are expected to be blocked by queued vehicles in the through lane during peak hours and some storage lanes exceed capacity with the 95th percentile queues.													

The critical vehicle queuing lengths (i.e., the maximum turning or adjacent through queue length that governs the turn lane lengths) on Abbott Road and on Ridge Road are slightly less when two through lanes in each direction are retained on Abbott Road (Alternative 2). The largest impact to queues is on the eastbound Ridge Road approach



when a road diet is implemented on Abbott Road (Alternative 1), with an increase in 95th percentile length of 90 feet in the AM peak hour compared to No Build. The queue length differences between the two alternatives in the other lane groups are within 20-50 feet, which is about the length of one to two vehicles. Therefore, there is not a significant impact to vehicle queues for the overall intersection with a road diet on Abbott Road.

Other Considerations

Other considerations for evaluating both alternatives at Abbott Road and Ridge Road include impacts to existing infrastructure, utilities, and right-of-way. Due to the northbound Abbott Road right turn volumes, a dedicated right turn lane needs to be maintained in all alternatives. In Alternative 2, the addition of a dedicated left turn lane and maintaining the existing two through lanes and right turn lane means that the south leg would be widened from 5 lanes to 6 lanes. Therefore, right-of-way acquisitions would be necessary. Widening the curb-to-curb width would also impact the utility poles along the west side of Abbott Road that carry a substantial number of overhead utilities including power and communications. There would be insufficient space for consistent 5-foot sidewalks along the entire Abbott Road approach due to adjacent building faces, utility poles, and roadway signs. In Alternative 1, no right-of-way impacts are anticipated because the existing 5 lanes on the Abbott Road approaches would be reduced to 4 lanes and the existing utility poles would not require relocation.

Conclusion and Recommendations

A road diet on Abbott Road between Fisher Road and the City of Buffalo line (Dorrance Avenue) can improve safety, especially for vehicles turning left at unsignalized intersections and driveways along the corridor. The addition of a two-way left-turn lane can reduce rear-end crashes because vehicles aren't waiting to turn in the through lane, and right-angle crashes can be reduced as there are less lanes to cross when turning on or off Abbott Road. Based on the forecasted design year (2050) traffic volumes, the capacity is adequate to accommodate the reduction of through lanes in each direction from two to one, with a center two-way left-turn lane. Therefore, a road diet on Abbott Road is recommended.

At the intersection of Abbott Road and Ridge Road, the addition of dedicated left turn lanes and corresponding dedicated signal phases can improve safety and operations for the signalized intersection. If the road diet is carried through the intersection, the total number of lanes can be reduced from five to four on the north and south legs. Therefore, no right-of-way impacts would be anticipated with Alternative 1. In Alternative 2, right-of-way acquisitions are anticipated along the south leg due to the addition of a dedicated left turn lane with two through lanes and a northbound right turn lane.

However, there are impacts to vehicle delays and queuing with a lane reduction, particularly at the Ridge Road intersection, due to the reassignment of signal green time to accommodate one through lane on Abbott Road and extended cycle length for dedicated left turn phases. In Alternative 2, the southbound approach of Abbott Road can remain a three-lane section by turning the existing right-turn lane into a shared right/through lane and the existing shared left/through lane to a dedicated left turn lane. The south leg would need to be widened to a six-lane section because of the high volume of right turns, so right-of-way acquisitions would be necessary.

When evaluating overall intersection operations for Alternatives 1 and 2, the vehicle delays and queue lengths are comparable. The intersection of Abbott Road and Ridge Road is expected to operate acceptably in the 2050 design year with LOS D or better for both alternatives. The other study intersections in the corridor are also expected to operate acceptably with LOS C or better for both alternatives. Due to the right-of-way and utility impacts of Alternative 2 and the minor impacts to delays and queuing with Alternative 1, the road diet on Abbott Road continued through the Ridge Road intersection is recommended; however, introducing a lane drop at the southern end of the project raises safety concerns due to the abundance of driveways and side-street intersections.

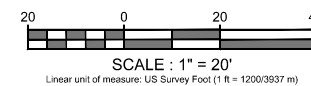
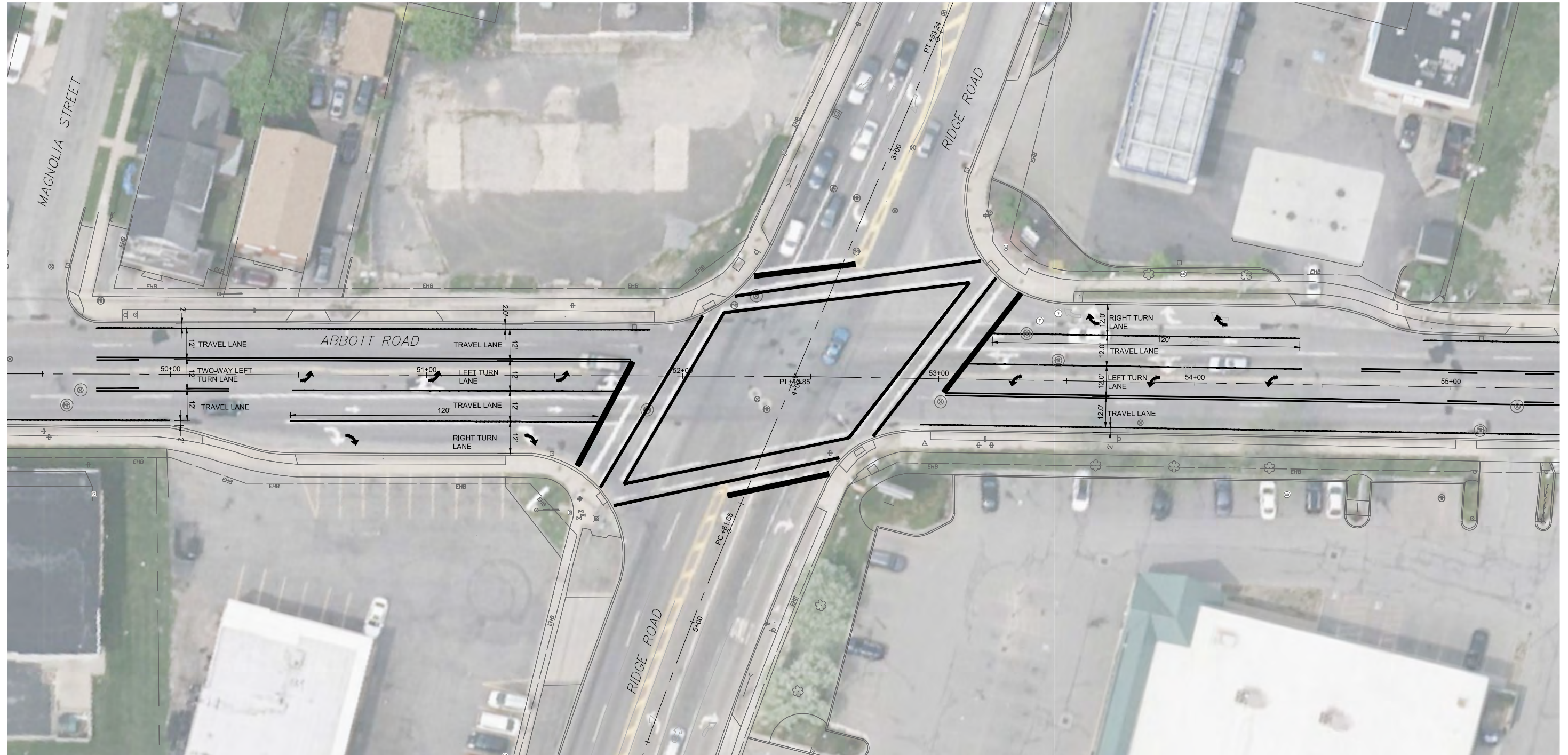
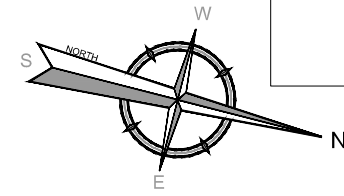


A partial road diet, Alternative 3, was developed to address the safety concerns while still meeting the project needs. Alternative 3 implements the 3-lane section north of Smoke Creek to Dorrance Avenue and transitions to a 4-lane section south of Smoke Creek, tying into the existing configuration. By removing the safety concerns, a partial road diet is the recommended alternative for the project corridor.

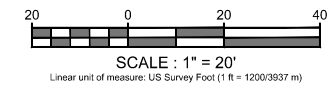
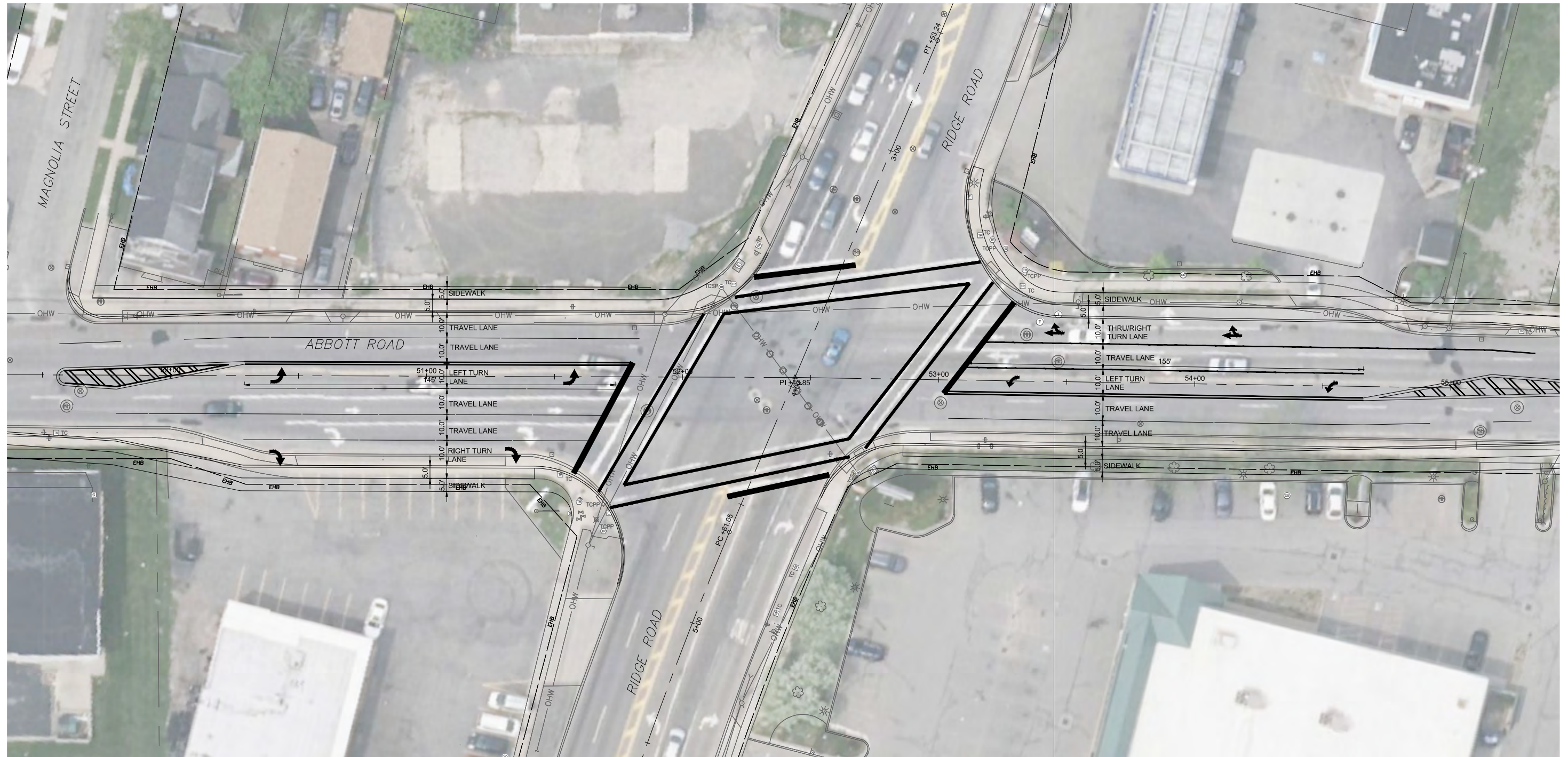
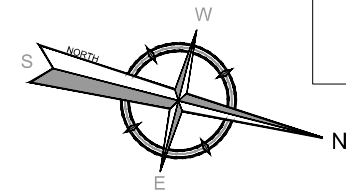


Appendix A

Preliminary Plans



 Engineering & Design	BUFFALO (BA) 40 LaRiviere Drive Suite 200 Buffalo, NY 14202 Phone: 716.852.3211 COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING CT, P.C. www.colliersengineering.com		PRELIMINARY NOT FOR CONSTRUCTION	
	ERIE COUNTY DEPT. OF PUBLIC WORKS DIVISION OF HIGHWAYS			SHEET NO. 1 OF 2
	95 FRANKLIN ST. BUFFALO, N.Y.			DATE June 2025
	ABBOTT ROAD, C.R. 4			SCALE AS SHOWN
RIDGE ROAD INTERSECTION - ALTERNATIVE 1			FIG-01	

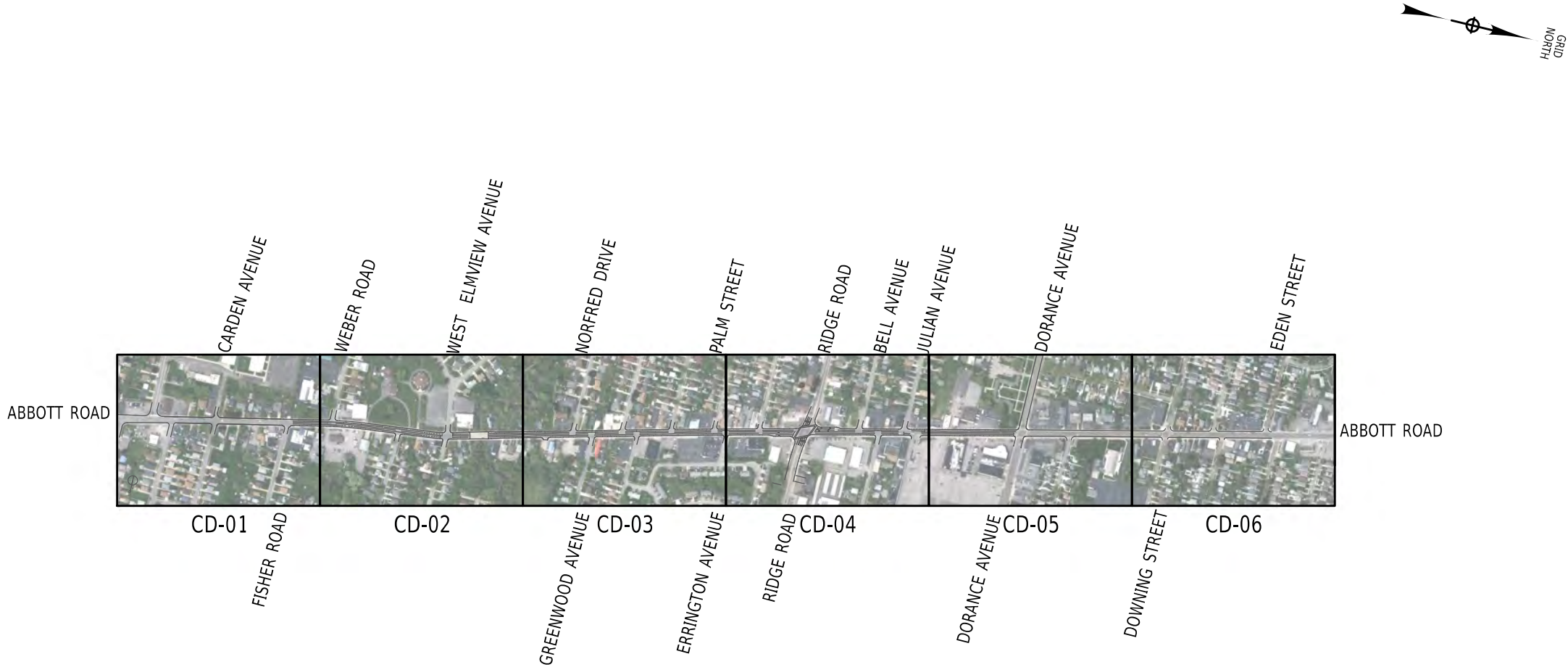


 Engineering & Design	BUFFALO (BA) 40 LaRiviere Drive Suite 200 Buffalo, NY 14202 Phone: 716.852.3211 COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING CT, P.C. www.colliersengineering.com		PRELIMINARY NOT FOR CONSTRUCTION
	ERIE COUNTY DEPT. OF PUBLIC WORKS DIVISION OF HIGHWAYS		
	95 FRANKLIN ST. BUFFALO, N.Y.		
	ABBOTT ROAD, C.R. 4		
RIDGE ROAD INTERSECTION - ALTERNATIVE 2			SHEET NO. 2 OF 2 DATE June 2025 SCALE AS SHOWN FIG-02



Appendix B

Crash Summary



Abbott Road (CR 4)
Fisher Road to the
City of Buffalo Line

City of Lackawanna
Erie County
PIN 5764.15

Erie County Department
of Public Works
95 Franklin Street
Room 1400
Buffalo, NY 14202



40 La Riviere Drive
Suite 200
Buffalo, New York 14202

office: 585.232.5135
fax: 585.232.4652

www.bergmannpc.com

REVISIONS				
NO.	DATE	DESCRIPTION	REV.	CKD

Date

KEY PLAN

Unauthorized alteration or addition to this drawing is a violation of the New York State Education Law Article 145, Section 7209.

Project Manager:

XXX

Designed By:

BLM

Drawn By:

EFH

Checked By:

CEB

Project Number:

5764.15

Date Issued:

SEPTEMBER 2024

Scale:

1" = 900'

Drawing Number:

KEY-01 ?? of ##



Abbott Road (CR 4) Fisher Road to the City of Buffalo Line

City of Lackawanna
Erie County
PIN 5764.15
Erie County Department
of Public Works
95 Franklin Street
Room 1400
Buffalo, NY 14202

B BERGMANN
ARCHITECTS ENGINEERS PLANNERS

40 La Riviere Drive
Suite 200
Buffalo, New York 14202
office: 585.232.5135
fax: 585.232.4652
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MATCH TO DWG NO. CD-02

Date

CRASH DIAGRAMS

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Project Manager:
XXX
Designed By:
BLM
Drawn By:
EFH
Checked By:
CEB
Project Number:
5764.15
Date Issued:
SEPTEMBER 2024
Scale:
1" = 100'

Drawing Number:

CD-01 ?? of ##

Print Date: 4-DEC-2025 11:06
File Name: 576415_ORD_STU_TRF_ACC_CD_02.dgn

MATCH TO DWG NO. CD-01



MATCH TO DWG NO. CD-03

Abbott Road (CR 4) Fisher Road to the City of Buffalo Line

City of Lackawanna
Erie County
PIN 5764.15
Erie County Department
of Public Works
95 Franklin Street
Room 1400
Buffalo, NY 14202



40 La Riviere Drive
Suite 200
Buffalo, New York 14202
office: 585.232.5135
fax: 585.232.4652
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Date

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Project Manager:
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BLM

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Checked By:
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Project Number:
5764.15

Date Issued:
SEPTEMBER 2024

Scale:
1" = 100'

Drawing Number:

CD-02

?? of ##



Abbott Road (CR 4)
Fisher Road to the
City of Buffalo Line

City of Lackawanna
Erie County
PIN 5764.15
Erie County Department
of Public Works
95 Franklin Street
Room 1400
Buffalo, NY 14202



40 La Riviere Drive
Suite 200
Buffalo, New York 14202
office: 585.232.5135
fax: 585.232.4652
www.bergmannpc.com

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NO.	DATE	DESCRIPTION	REV. CKD

Date

CRASH
DIAGRAMS

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Education Law Article 145, Section 7209.

Project Manager:
XXX

Designed By:
BLM

Drawn By:
EFH

Checked By:
CEB

Drawing Number:

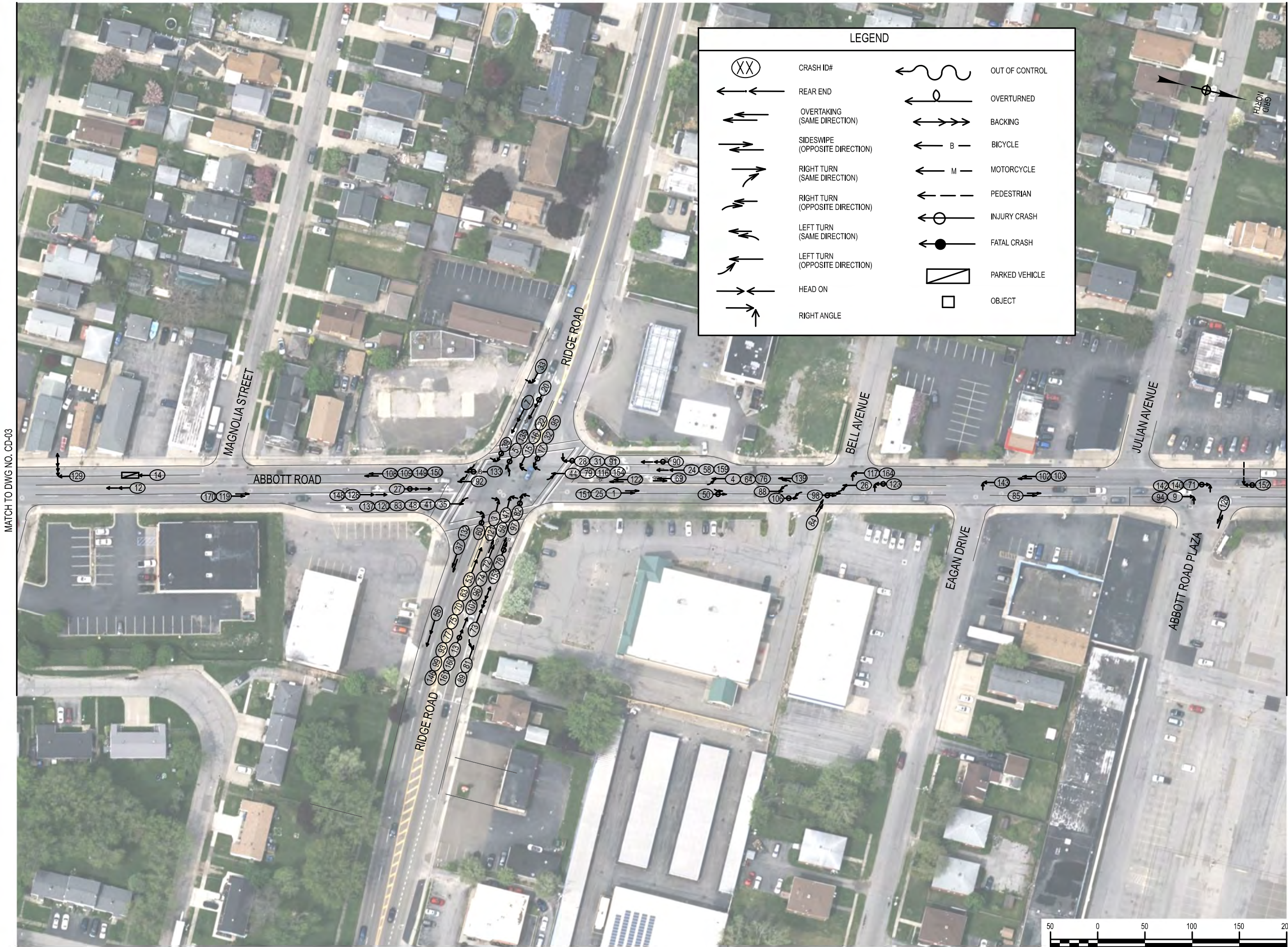
Project Number:
5764.15

Date Issued:
SEPTEMBER 2024

Scale:
1" = 100'

CD-03

?? of ##



Abbott Road (CR 4) Fisher Road to the City of Buffalo Line

City of Lackawanna
Erie County
PIN 5764.15

Erie County Department
of Public Works
95 Franklin Street
Room 1400
Buffalo, NY 14202

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Checked By:

CEB

Project Number:

5764.15

Date Issued:

SEPTEMBER 2024

Scale:

1" = 100'

Drawing Number:

CD-04

?? of ##

Abbott Road (CR 4)
Fisher Road to the
City of Buffalo Line

City of Lackawanna
Erie County
PIN 5764.15
Erie County Department
of Public Works
95 Franklin Street
Room 1400
Buffalo, NY 14202



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NO.	DATE	DESCRIPTION	REV. CKD

MATCH TO DWG NO. CD-04

MATCH TO DWG NO. CD-06

LEGEND

XX

CRASH ID#

←

←

REAR END

←

←

OVERTAKING
(SAME DIRECTION)

←

→

SIDESWIPE
(OPPOSITE DIRECTION)

←

↘

RIGHT TURN
(SAME DIRECTION)

←

↗

RIGHT TURN
(OPPOSITE DIRECTION)

←

↖

LEFT TURN
(SAME DIRECTION)

←

↗

LEFT TURN
(OPPOSITE DIRECTION)

→

→

HEAD ON

→

↘

RIGHT ANGLE

~~~~~

OUT OF CONTROL

←

○

OVERTURNED

←

→

BACKING

←

B

BICYCLE

←

M

MOTORCYCLE

←

—

PEDESTRIAN

←

○

INJURY CRASH

←

●

FATAL CRASH

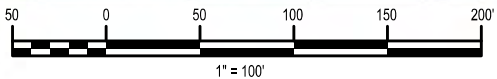
▢

PARKED VEHICLE

□

OBJECT

EXACT LOCATION AND DETAILS  
OF CRASH ARE UNKNOWN



Date

CRASH  
DIAGRAMS

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Project Manager:  
XXX  
Designed By:  
BLM  
Drawn By:  
EFH  
Checked By:  
CEB  
Project Number:  
5764.15  
Date Issued:  
SEPTEMBER 2024  
Scale:  
1" = 100'

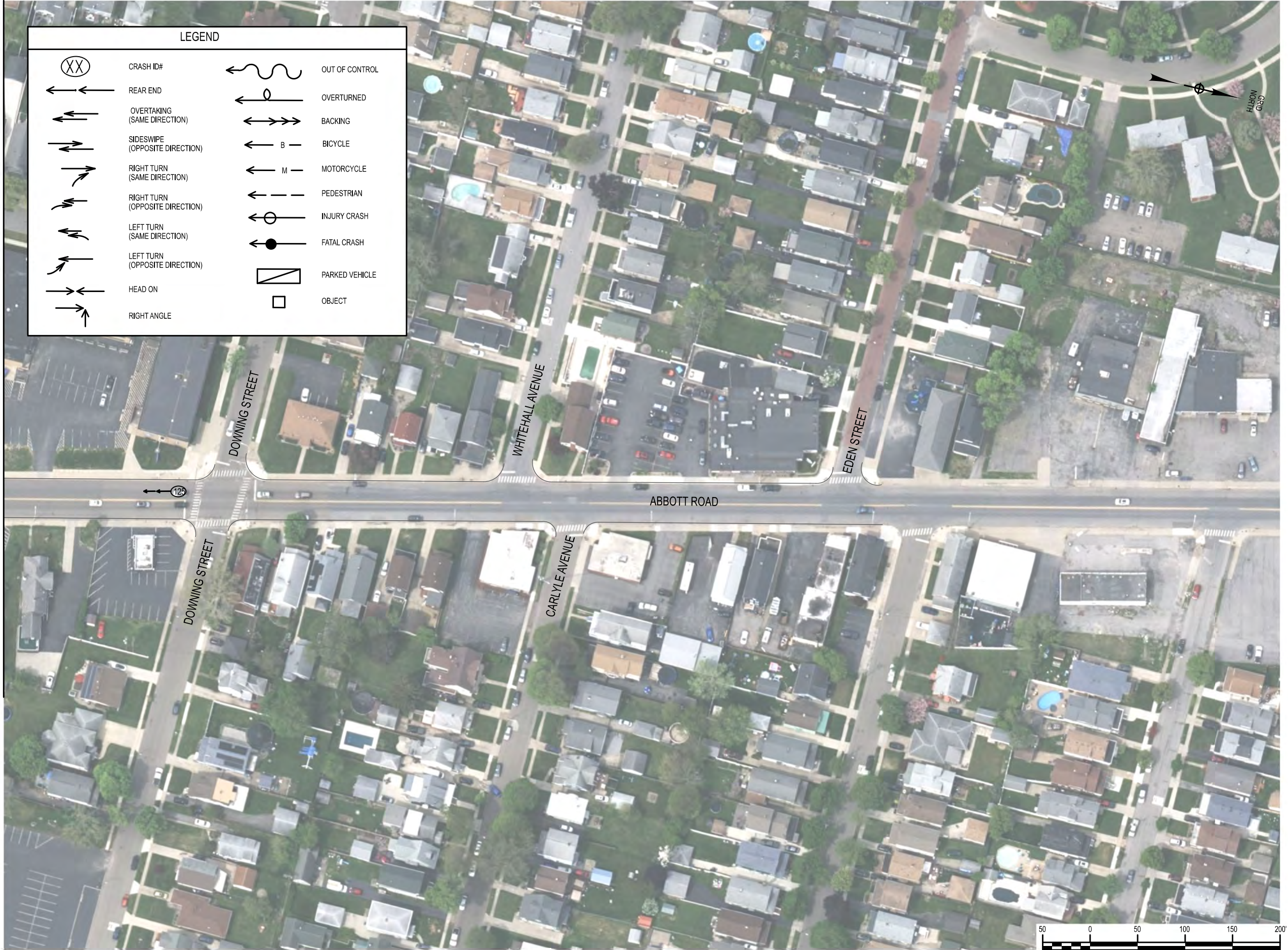
Drawing Number:

CD-05

?? of ##



MATCH TO DWG NO. CD-05



## Abbott Road (CR 4) Fisher Road to the City of Buffalo Line

City of Lackawanna  
Erie County  
PIN 5764.15  
Erie County Department  
of Public Works  
95 Franklin Street  
Room 1400  
Buffalo, NY 14202

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|-----------|------|-------------|----------|
| NO.       | DATE | DESCRIPTION | REV. CKD |

Date

### CRASH DIAGRAMS

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Education Law Article 145, Section 7209.

Project Manager:  
XXX

Designed By:  
BLM

Drawn By:  
EFH

Checked By:  
CEB

Project Number:  
5764.15

Date Issued:  
SEPTEMBER 2024

Scale:  
1" = 100'

Drawing Number:

# CD-06

?? of ##



DIAGRAM No.:

|                                                                                                          |                 |             |             |                                                                                                                                               |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                          |                                  |                |                                      |                  |                                                                                              |                                                                                                                                                                                                                            |              |                                  |
|----------------------------------------------------------------------------------------------------------|-----------------|-------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------|----------------|--------------------------------------|------------------|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------------------------|
| <b>COUNTY:</b> ERIE <b>P.I.N.:</b> 5764.15<br><b>TOWN:</b> LACKAWANNA<br><b>CITY:</b> <b>VILLAGE OF:</b> |                 |             |             | <b>ROUTE NO. OR STREET NAME:</b><br>COUNTY ROAD 4 (ABBOTT ROAD)<br><b>AT INTERSECTION WITH/OR BETWEEN:</b><br>DORRANCE AVENUE AND FISHER ROAD |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                          |                                  |                |                                      |                  | <b>CASE No.:</b> _____<br><b>FILE:</b> _____<br><b>BY:</b> BERGMANN<br><b>DATE:</b> 11/06/25 |                                                                                                                                                                                                                            |              |                                  |
| <b>TIME PERIOD</b><br><b>FROM:</b> 3/1/2021 <b>TO:</b> 2/29/2024                                         |                 |             |             | <b>No. of VEHICLES</b>                                                                                                                        | <b>SEVERITY</b> | <b>ENVIRONMENTAL:</b><br>Use Codes from MV 104 (shown at right) for these categories<br><br><b>Light Conditions:</b><br>1. Daylight<br>2. Dawn<br>3. Dusk<br>4. Dark Road Lighted<br>5. Dark Road Unlighted<br><br><b>Roadway Character:</b><br>1. Straight & Level<br>2. Straight & Grade<br>3. Straight & Hillcrest<br>4. Curve & Level<br>5. Curve & Grade<br>6. Curve & Hillcrest<br><br><b>Roadway Surface Condition:</b><br>1. Dry<br>2. Wet<br>3. Muddy<br>4. Snow/Ice<br>5. Slush<br>10. Other<br><br><b>Weather:</b><br>1. Clear<br>2. Cloudy<br>3. Rain<br>4. Snow<br>5. Sleet/Hail/Freezing Rain<br>6. Fog/Smog/Smoke<br>10. Other |                          |                                  |                |                                      |                  |                                                                                              |                                                                                                                                                                                                                            |              |                                  |
| <b>No. OF MONTHS:</b> 36                                                                                 |                 |             |             |                                                                                                                                               |                 | <b>LIGHT CONDITIONS</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>ROADWAY CHARACTER</b> | <b>ROADWAY SURFACE CONDITION</b> | <b>WEATHER</b> | <b>APPARENT CONTRIBUTING FACTORS</b> | <b>DIRECTION</b> | <b>TYPE<sup>1</sup></b>                                                                      | <b>DESCRIPTION</b>                                                                                                                                                                                                         | <b>ROUTE</b> | <b>NEAREST INTERSECTING ROAD</b> |
| <b>CRASH No.</b>                                                                                         | <b>CASE No.</b> | <b>DATE</b> | <b>TIME</b> |                                                                                                                                               |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                          |                                  |                |                                      |                  |                                                                                              |                                                                                                                                                                                                                            |              |                                  |
| 1                                                                                                        | 38772317        | 03/06/21    | 12:01 AM    | 2                                                                                                                                             | PDO             | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1                        | 2                                | 4              | 19,28                                | 1/1              | OVERTAKING                                                                                   | V1 TRAVELING AT A HIGH RATE OF SPEED STRUCK V2 WHILE ATTEMPTING TO PASS.                                                                                                                                                   | ABBOTT ROAD  | RIDGE ROAD                       |
| 2                                                                                                        | 38777658        | 03/15/21    | 6:45 AM     | 1                                                                                                                                             | PDO             | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1                        | 1                                | 1              | 61                                   | 1                | ANIMAL                                                                                       | V1 STRUCK DEER THAT ENTERED ROADWAY.                                                                                                                                                                                       | ABBOTT ROAD  | ELMVVIEW AVENUE                  |
| 3                                                                                                        | 38786704        | 03/21/21    | 11:05 AM    | 2                                                                                                                                             | PDO             | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1                        | 1                                | 1              | 4/4,15                               | 7/1              | RIGHT ANGLE                                                                                  | V2 RAN RED LIGHT AND STRUCK V1.                                                                                                                                                                                            | ABBOTT ROAD  | RIDGE ROAD                       |
| 4                                                                                                        | 38798750        | 03/30/21    | 8:23 PM     | 2                                                                                                                                             | PDO             | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1                        | 1                                | 2              | 7/69                                 | 1/5              | LEFT TURN (AGAINST OTHER CAR)                                                                | V1 STRUCK V2 WHILE ATTEMPTING TO MAKE A LEFT TURN INTO GAS STATION PARKING LOT. UNINVOLVED VEHICLE WAVED V1 INTO PARKING LOT.                                                                                              | ABBOTT ROAD  | RIDGE ROAD                       |
| 5                                                                                                        | 38808514        | 04/08/21    | 2:39 PM     | 2                                                                                                                                             | I               | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1                        | 1                                | 1              | 7                                    | 6/3              | LEFT TURN (AGAINST OTHER CAR)                                                                | V1 STRUCK V2 WHILE MAKING A LEFT TURN ONTO ABBOTT ROAD.                                                                                                                                                                    | ABBOTT ROAD  | FISHER ROAD                      |
| 6                                                                                                        | 38815836        | 04/10/21    | 12:29 PM    | 2                                                                                                                                             | PDO             | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1                        | 1                                | 1              | 21/18                                | 1/7              | RIGHT TURN (WITH OTHER CAR)                                                                  | V1 STRUCK V 2 WHILE TURNING RIGHT ONTO ABBOTT ROAD OUT OF A PARKING LOT.                                                                                                                                                   | ABBOTT ROAD  | DORRANCE AVENUE                  |
| 7                                                                                                        | 38820834        | 04/15/21    | 4:28 PM     | 2                                                                                                                                             | PDO             | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1                        | 1                                | 2              | 9                                    | 3/3              | REAR END                                                                                     | V1 WAS STRUCK BY V2 WHILE STOPPED AT A RED LIGHT.                                                                                                                                                                          | RIDGE ROAD   | ABBOTT ROAD                      |
| 8                                                                                                        | 38831559        | 04/16/21    | 4:06 PM     | 2                                                                                                                                             | PDO             | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1                        | 1                                | 2              | 20                                   | 5/5              | OVERTAKING                                                                                   | V1 STRUCK V2 WHILE ATTEMPTING TO PASS AN UNINVOLVED VEHICLE.                                                                                                                                                               | ABBOTT ROAD  | DORRANCE AVENUE                  |
| 9                                                                                                        | 38836922        | 05/02/21    | 5:23 PM     | 2                                                                                                                                             | PDO             | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1                        | 1                                | 1              | 4/5                                  | 1/6              | RIGHT ANGLE                                                                                  | V2 STRUCK V 1 WHILE TURNING LEFT ONTO ABBOTT ROAD OUT OF A PARKING LOT.                                                                                                                                                    | ABBOTT ROAD  | JULIAN AVE                       |
| 10                                                                                                       | 38846515        | 05/10/21    | 3:44 PM     | 2                                                                                                                                             | PDO             | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1                        | 1                                | 1              | 4,13                                 | 1/1              | OVERTAKING                                                                                   | V1 STRUCK V 2 WHILE ATTEMPTING TO TURN LEFT INTO A DRIVEWAY.                                                                                                                                                               | ABBOTT ROAD  | DORRANCE AVENUE                  |
| 11                                                                                                       | 38923779        | 05/11/21    | 8:30 PM     | 2                                                                                                                                             | PDO             | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1                        | 1                                | 1              | 7                                    | 1/5              | LEFT TURN (AGAINST OTHER CAR)                                                                | V1 STRUCK V2 WHILE MAKING A LEFT TURN ONTO DORRANCE AVENUE.                                                                                                                                                                | ABBOTT ROAD  | DORRANCE AVENUE                  |
| 12                                                                                                       | 38851357        | 05/13/21    | 1:43 PM     | 2                                                                                                                                             | PDO             | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1                        | 1                                | 1              | 12                                   | 5/5              | REAR END                                                                                     | V1 WAS STRUCK BY V2 WHILE STOPPED IN THE LEFT TRAVEL LANE WAITING TO MAKE A LEFT HAND TURN. PRIOR TO THE COLLISION, V2 HAD QUICKLY MOVED INTO THE LEFT LANE TO AVOID LEGALLY PARKED CARS ON THE RIGHT SIDE OF THE ROADWAY. | ABBOTT ROAD  | PALM STREET                      |
| 13                                                                                                       | 38879916        | 06/03/21    | 3:29 PM     | 3                                                                                                                                             | I               | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1                        | 1                                | 2              | 9                                    | 7/7/7            | REAR END                                                                                     | V1 REAR ENDED V2, CAUSING V2 TO THEN STRIKE V3.                                                                                                                                                                            | RIDGE ROAD   | ABBOTT ROAD                      |
| 14                                                                                                       | 38882153        | 06/07/21    | 1:45 PM     | 2                                                                                                                                             | PDO             | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1                        | 1                                | 1              | 4/9                                  | 5/5              | REAR END                                                                                     | V2 WAS STRUCK BY V1 WHILE PARKED ON ABBOTT ROAD.                                                                                                                                                                           | ABBOTT ROAD  | PALM STREET                      |
| 15                                                                                                       | 38886686        | 06/10/21    | 7:37 PM     | 2                                                                                                                                             | PDO             | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1                        | 1                                | 1              | 62,17                                | 3/4              | RIGHT ANGLE                                                                                  | V1 RAN RED LIGHT DUE TO GLARE FROM SUN AND STRUCK V2.                                                                                                                                                                      | ABBOTT ROAD  | RIDGE ROAD                       |
| 16                                                                                                       | 38889488        | 06/11/21    | 7:03 PM     | 2                                                                                                                                             | PDO             | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1                        | 1                                | 1              | 62,17                                | 3/5              | RIGHT ANGLE                                                                                  | V1 RAN RED LIGHT DUE TO GLARE FROM SUN AND STRUCK V2.                                                                                                                                                                      | ABBOTT ROAD  | RIDGE ROAD                       |
| 17                                                                                                       | 38889511        | 06/12/21    | 7:13 PM     | 2                                                                                                                                             | I               | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1                        | 1                                | 1              | 7,62                                 | 3/5              | RIGHT ANGLE                                                                                  | V1 RAN RED LIGHT DUE TO GLARE FROM SUN AND STRUCK V2.                                                                                                                                                                      | ABBOTT ROAD  | RIDGE ROAD                       |

DIAGRAM No.:

|                   |  |            |  |                 |  |          |  |                                                             |  |                                                                                     |  |                                                                                                                                       |                |                                                                      |  |                                                                                                              |  |           |  |                                      |  |                   |  |                               |  |                                                                                                                                                        |  |                           |  |                 |  |
|-------------------|--|------------|--|-----------------|--|----------|--|-------------------------------------------------------------|--|-------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------|--|-----------|--|--------------------------------------|--|-------------------|--|-------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------|--|-----------------|--|
| COUNTY:           |  | ERIE       |  | P.I.N.:         |  | 5764.15  |  | ROUTE NO. OR STREET NAME:                                   |  |                                                                                     |  |                                                                                                                                       | CASE No.:      |                                                                      |  |                                                                                                              |  |           |  |                                      |  |                   |  |                               |  |                                                                                                                                                        |  |                           |  |                 |  |
|                   |  | TOWN       |  |                 |  |          |  | COUNTY ROAD 4 (ABBOTT ROAD)                                 |  |                                                                                     |  |                                                                                                                                       | FILE:          |                                                                      |  |                                                                                                              |  |           |  |                                      |  |                   |  |                               |  |                                                                                                                                                        |  |                           |  |                 |  |
|                   |  | CITY       |  | LACKAWANNA      |  |          |  | AT INTERSECTION WITH/OR BETWEEN:                            |  |                                                                                     |  |                                                                                                                                       | BY: BERGMANN   |                                                                      |  |                                                                                                              |  |           |  |                                      |  |                   |  |                               |  |                                                                                                                                                        |  |                           |  |                 |  |
|                   |  | VILLAGE OF |  |                 |  |          |  | DORRANCE AVENUE AND FISHER ROAD                             |  |                                                                                     |  |                                                                                                                                       | DATE: 11/06/25 |                                                                      |  |                                                                                                              |  |           |  |                                      |  |                   |  |                               |  |                                                                                                                                                        |  |                           |  |                 |  |
| TIME PERIOD       |  | FROM:      |  | TO:             |  |          |  | ENVIRONMENTAL:                                              |  | Light Conditions:                                                                   |  | Roadway Character:                                                                                                                    |                | Roadway Surface Condition:                                           |  | Weather:                                                                                                     |  |           |  |                                      |  |                   |  |                               |  |                                                                                                                                                        |  |                           |  |                 |  |
|                   |  | 3/1/2021   |  | 2/29/2024       |  |          |  | Use Codes from MV 104 (shown at right) for these categories |  | 1. Daylight<br>2. Dawn<br>3. Dusk<br>4. Dark Road Lighted<br>5. Dark Road Unlighted |  | 1. Straight & Level<br>2. Straight & Grade<br>3. Straight & Hillcrest<br>4. Curve & Level<br>5. Curve & Grade<br>6. Curve & Hillcrest |                | 1. Dry<br>2. Wet<br>3. Muddy<br>4. Snow/Ice<br>5. Slush<br>10. Other |  | 1. Clear<br>2. Cloudy<br>3. Rain<br>4. Snow<br>5. Sleet/Hail/Freezing Rain<br>6. Fog/Smog/Smoke<br>10. Other |  |           |  |                                      |  |                   |  |                               |  |                                                                                                                                                        |  |                           |  |                 |  |
| No. OF MONTHS: 36 |  |            |  | No. of VEHICLES |  | SEVERITY |  | LIGHT CONDITIONS                                            |  | ROADWAY CHARACTER                                                                   |  | ROADWAY SURFACE CONDITION                                                                                                             |                | WEATHER                                                              |  | APPARENT CONTRIBUTING FACTORS                                                                                |  | DIRECTION |  | *Use Codes from MV 104 Police Report |  | TYPE <sup>1</sup> |  | DESCRIPTION                   |  | ROUTE                                                                                                                                                  |  | NEAREST INTERSECTING ROAD |  |                 |  |
| CRASH No.         |  | CASE No.   |  |                 |  |          |  |                                                             |  |                                                                                     |  |                                                                                                                                       |                |                                                                      |  |                                                                                                              |  |           |  |                                      |  |                   |  |                               |  |                                                                                                                                                        |  |                           |  | DATE            |  |
| 18                |  | 38899916   |  | 06/20/21        |  | 3:15 PM  |  | 2                                                           |  | I                                                                                   |  | 1                                                                                                                                     |                | 1                                                                    |  | 1                                                                                                            |  | 1         |  | 28,9                                 |  | 1/1               |  | REAR END                      |  | V2 WAS REAR ENDED BY V1 WHILE SLOWING DOWN TO TURN RIGHT ONTO FISHER ROAD.                                                                             |  | ABBOTT ROAD               |  | FISHER ROAD     |  |
| 19                |  | 38940937   |  | 06/21/21        |  | 11:37 AM |  | 2                                                           |  | PDO                                                                                 |  | 1                                                                                                                                     |                | 1                                                                    |  | 1                                                                                                            |  | 1         |  | 4/18                                 |  | 5/1               |  | LEFT TURN (AGAINST OTHER CAR) |  | V2 WAS STRUCK BY V1 WHILE ATTEMPTING TO MAKE A LEFT TURN INTO PARKING LOT. V1 THEN LOST CONTROL AND STRUCK A BUILDING.                                 |  | ABBOTT ROAD               |  | TURNER AVENUE   |  |
| 20                |  | 38908757   |  | 06/25/21        |  | 2:54 PM  |  | 2                                                           |  | I                                                                                   |  | 1                                                                                                                                     |                | 1                                                                    |  | 1                                                                                                            |  | 1         |  | 9,4                                  |  | 7/7               |  | REAR END                      |  | V1 STRUCK V2 WHILE TURNING LEFT ONTO ABBOTT ROAD.                                                                                                      |  | RIDGE ROAD                |  | ABBOTT ROAD     |  |
| 21                |  | 38910107   |  | 06/28/21        |  | 12:54 PM |  | 2                                                           |  | PDO                                                                                 |  | 1                                                                                                                                     |                | 1                                                                    |  | 1                                                                                                            |  | 1         |  | 64/64                                |  | 5/1               |  | FIXED OBJECT                  |  | V1 LOST CONTROL AND STRUCK A SIGNAL POLE, CAUSING SIGNALS TO FALL INTO THE ROADWAY. V2 STRUCK DEBRIS FROM SIGNALS AND SIGNAL POLE IN THE INTERSECTION. |  | ABBOTT ROAD               |  | ELMVIEW AVENUE  |  |
| 22                |  | 38939771   |  | 07/15/21        |  | 8:51 AM  |  | 2                                                           |  | PDO                                                                                 |  | 1                                                                                                                                     |                | 1                                                                    |  | 1                                                                                                            |  | 1         |  | 62,5                                 |  | 7/5               |  | RIGHT ANGLE                   |  | V1 RAN RED LIGHT DUE TO GLARE FROM SUN AND STRUCK V2.                                                                                                  |  | ABBOTT ROAD               |  | RIDGE ROAD      |  |
| 23                |  | 38938632   |  | 07/17/21        |  | 8:32 PM  |  | 2                                                           |  | I                                                                                   |  | 3                                                                                                                                     |                | 1                                                                    |  | 2                                                                                                            |  | 3         |  | 4,5                                  |  | 3/1               |  | RIGHT ANGLE                   |  | V1 RAN RED LIGHT AND STRUCK V2.                                                                                                                        |  | ABBOTT ROAD               |  | DORRANCE AVENUE |  |
| 24                |  | 38946508   |  | 07/20/21        |  | 8:28 AM  |  | 2                                                           |  | NR                                                                                  |  | 1                                                                                                                                     |                | 1                                                                    |  | 1                                                                                                            |  | 1         |  | 4,9                                  |  | 5/5               |  | REAR END                      |  | V1 WAS REAR ENDED BY VEHICLE 2 WHILE WAITING TO TURN LEFT ONTO RIDGE ROAD.                                                                             |  | ABBOTT ROAD               |  | RIDGE ROAD      |  |
| 25                |  | 38957455   |  | 07/27/21        |  | 1:15 PM  |  | 2                                                           |  | PDO                                                                                 |  | 1                                                                                                                                     |                | 1                                                                    |  | 2                                                                                                            |  | 3         |  | 17,69                                |  | 1/1               |  | OVERTAKING                    |  | V1 MADE A LEFT TURN ONTO NB ABBOTT ROAD AND WAS STRUCK BY V2 AFTER V2 RAN RED LIGHT.                                                                   |  | ABBOTT ROAD               |  | RIDGE ROAD      |  |
| 26                |  | 38957464   |  | 07/30/21        |  | 3:12 PM  |  | 2                                                           |  | PDO                                                                                 |  | 1                                                                                                                                     |                | 1                                                                    |  | 1                                                                                                            |  | 1         |  | 69/69                                |  | 5/7               |  | LEFT TURN (AGAINST OTHER CAR) |  | V2 WAS STRUCK BY V1 WHILE TURNING LEFT ONTO BELL AVE. UNINVOLVED VEHICLE IN THE SB LEFT LANE STOPPED FOR V2 AND WAIVED THEM THROUGH.                   |  | ABBOTT ROAD               |  | BELL AVENUE     |  |
| 27                |  | 38969996   |  | 08/09/21        |  | 12:10 PM |  | 3                                                           |  | I                                                                                   |  | 1                                                                                                                                     |                | 1                                                                    |  | 1                                                                                                            |  | 1         |  | 9/60/60                              |  | 1/1/1             |  | REAR END                      |  | V1 REAR ENDED V2, CAUSING V2 TO REAR END V3.                                                                                                           |  | ABBOTT ROAD               |  | RIDGE ROAD      |  |
| 28                |  | 38969971   |  | 08/10/21        |  | 6:11 AM  |  | 2                                                           |  | I                                                                                   |  | 2                                                                                                                                     |                | 1                                                                    |  | 1                                                                                                            |  | 1         |  | 7,17                                 |  | 5/7               |  | RIGHT ANGLE                   |  | V1 RAN RED LIGHT AND STRUCK V2.                                                                                                                        |  | ABBOTT ROAD               |  | RIDGE ROAD      |  |
| 29                |  | 38970989   |  | 08/10/21        |  | 11:32 AM |  | 2                                                           |  | PDO                                                                                 |  | 1                                                                                                                                     |                | 1                                                                    |  | 1                                                                                                            |  | 2         |  | 7                                    |  | 1/7               |  | RIGHT ANGLE                   |  | V1 STRUCK V2 WHILE MAKING A LEFT TURN OUT OF PARKING LOT.                                                                                              |  | DORRANCE AVENUE           |  | ABBOTT ROAD     |  |
| 30                |  | 39011214   |  | 08/10/21        |  | 1:57 PM  |  | 3                                                           |  | I                                                                                   |  | 1                                                                                                                                     |                | 1                                                                    |  | 1                                                                                                            |  | 2         |  | UNKNOWN                              |  | 5                 |  | OTHER                         |  | EXACT LOCATIONS AND DETAILS ARE UNKNOWN.                                                                                                               |  | ABBOTT ROAD               |  | DORRANCE AVENUE |  |
| 31                |  | 38973595   |  | 08/13/21        |  | 2:35 PM  |  | 2                                                           |  | I                                                                                   |  | 1                                                                                                                                     |                | 1                                                                    |  | 1                                                                                                            |  | 2         |  | 7,18                                 |  | 8/5               |  | RIGHT ANGLE                   |  | V1 STRUCK V2 WHILE ATTEMPTING TO TURN LEFT ONTO RIDGE ROAD.                                                                                            |  | ABBOTT ROAD               |  | RIDGE ROAD      |  |
| 32                |  | 38979912   |  | 08/20/21        |  | 10:18 AM |  | 2                                                           |  | I                                                                                   |  | 1                                                                                                                                     |                | 1                                                                    |  | 1                                                                                                            |  | 1         |  | 17,4                                 |  | 3/5               |  | RIGHT ANGLE                   |  | V1 RAN RED LIGHT AND STRUCK V2.                                                                                                                        |  | ABBOTT ROAD               |  | RIDGE ROAD      |  |
| 33                |  | 39062760   |  | 08/24/21        |  | 6:22 PM  |  | 2                                                           |  | PDO                                                                                 |  | 1                                                                                                                                     |                | 1                                                                    |  | 1                                                                                                            |  | 1         |  | 5/18                                 |  | 2/3               |  | RIGHT ANGLE                   |  | V1 STRUCK V2 WHILE EXITING PARKING LOT ONTO RIDGE ROAD.                                                                                                |  | RIDGE ROAD                |  | ABBOTT ROAD     |  |
| 34                |  | 39058643   |  | 08/28/21        |  | 3:30 PM  |  | 2                                                           |  | I                                                                                   |  | 1                                                                                                                                     |                | 1                                                                    |  | 1                                                                                                            |  | 1         |  | 3                                    |  | 1/7               |  | RIGHT ANGLE                   |  | V2 BACKED INTO V1 OUT OF PARKING LOT.                                                                                                                  |  | LEONARD STREET            |  | ABBOTT ROAD     |  |
| 35                |  | 38992240   |  | 08/30/21        |  | 8:27 PM  |  | 3                                                           |  | PDO                                                                                 |  | 4                                                                                                                                     |                | 1                                                                    |  | 1                                                                                                            |  | 1         |  | 7,18                                 |  | 8/1/7             |  | LEFT TURN (AGAINST OTHER CAR) |  | V1 STRUCK V2 WHILE ATTEMPTING TO MAKE A LEFT TURN ONTO RIDGE ROAD. V1 THEN STRUCK V3.                                                                  |  | ABBOTT ROAD               |  | RIDGE ROAD      |  |
| 36                |  | 38993831   |  | 08/30/21        |  | 7:47 PM  |  | 2                                                           |  | PDO                                                                                 |  | 3                                                                                                                                     |                | 1                                                                    |  | 1                                                                                                            |  | 1         |  | 4,9                                  |  | 5/5               |  | REAR END                      |  | V2 WAS REAR ENDED BY V1 WHILE WAITING TO MAKE A LEFT TURN ONTO FERNALD AVENUE.                                                                         |  | ABBOTT ROAD               |  | FERNALD AVENUE  |  |
| 37                |  | 38997731   |  | 09/01/21        |  | 10:35 AM |  | 2                                                           |  | PDO                                                                                 |  | 1                                                                                                                                     |                | 1                                                                    |  | 1                                                                                                            |  | 1         |  | 13                                   |  | 3/3               |  | OVERTAKING                    |  | V1 STRUCK V2 WHILE SWITCHING LANES.                                                                                                                    |  | RIDGE ROAD                |  | ABBOTT ROAD     |  |
| 38                |  | 39022340   |  | 09/04/21        |  | 7:38 AM  |  | 1                                                           |  | PDO                                                                                 |  | 1                                                                                                                                     |                | 1                                                                    |  | 1                                                                                                            |  | 1         |  | 61                                   |  | 1                 |  | ANIMAL                        |  | V1 STRUCK A DEER THAT ENTERED THE ROADWAY.                                                                                                             |  | ABBOTT ROAD               |  | NORFRED DRIVE   |  |
| 39                |  | 39005235   |  | 09/08/21        |  | 5:23 PM  |  | 3                                                           |  | I                                                                                   |  | 1                                                                                                                                     |                | 1                                                                    |  | 1                                                                                                            |  | 1         |  | 17,62/4                              |  | 3/1/7             |  | RIGHT ANGLE                   |  | V1 RAN RED LIGHT AND STRUCK V2. V2 THEN STRUCK V3.                                                                                                     |  | ABBOTT ROAD               |  | RIDGE ROAD      |  |
| 40                |  | 39137280   |  | 09/09/21        |  | 7:45 AM  |  | 2                                                           |  | PDO                                                                                 |  | 1                                                                                                                                     |                | 1                                                                    |  | 1                                                                                                            |  | 2         |  | 13                                   |  | 5/5               |  | OVERTAKING                    |  | V1 STRUCK PARKED V2 ON ABBOTT ROAD.                                                                                                                    |  | ABBOTT ROAD               |  | TURNER AVENUE   |  |
| 41                |  | 39044080   |  | 10/05/21        |  | 12:45 PM |  | 2                                                           |  | PDO                                                                                 |  | 1                                                                                                                                     |                | 1                                                                    |  | 1                                                                                                            |  | 2         |  | 7/19                                 |  | 4/1               |  | LEFT TURN (AGAINST OTHER CAR) |  | V1 STRUCK V2 WHILE ATTEMPTING TO MAKE A LEFT TURN ONTO RIDGE ROAD.                                                                                     |  | ABBOTT ROAD               |  | RIDGE ROAD      |  |
| 42                |  | 39049100   |  | 10/09/21        |  | 11:48 AM |  | 2                                                           |  | PDO                                                                                 |  | 1                                                                                                                                     |                | 1                                                                    |  | 1                                                                                                            |  | 2         |  | 7                                    |  | 6/5               |  | LEFT TURN (WITH OTHER CAR)    |  | V1 STRUCK V2 WHILE MAKING A LEFT TURN ONTO ABBOTT ROAD.                                                                                                |  | ABBOTT ROAD               |  | ELMVIEW AVENUE  |  |
| 43                |  | 39066088   |  | 10/21/21        |  | 2:13 PM  |  | 2                                                           |  | PDO                                                                                 |  | 1                                                                                                                                     |                | 1                                                                    |  | 1                                                                                                            |  | 2         |  | 7/7                                  |  | 5/1               |  | LEFT TURN (WITH OTHER CAR)    |  | V1 STRUCK V2 WHILE MAKING A U-TURN ON ABBOTT ROAD.                                                                                                     |  | ABBOTT ROAD               |  | PALM STREET     |  |



DIAGRAM No.:

|                                                                                                          |                 |             |             |                                                                                                                                                   |                 |                                                                                      |                          |                                                                                              |                |                                                                                                                 |                  |                                                                                                                                                                    |                                                                                                                   |                                                                                                           |                                  |                                                                                                                                 |  |
|----------------------------------------------------------------------------------------------------------|-----------------|-------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------------------------------------------------------------------------|--------------------------|----------------------------------------------------------------------------------------------|----------------|-----------------------------------------------------------------------------------------------------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------|--|
| <b>COUNTY:</b> ERIE <b>P.I.N.:</b> 5764.15<br><b>TOWN:</b> LACKAWANNA<br><b>CITY:</b> <b>VILLAGE OF:</b> |                 |             |             | <b>ROUTE NO. OR STREET NAME:</b><br>COUNTY ROAD 4 (ABBOTT ROAD)<br><br><b>AT INTERSECTION WITH/OR BETWEEN:</b><br>DORRANCE AVENUE AND FISHER ROAD |                 |                                                                                      |                          | <b>CASE No.:</b> _____<br><b>FILE:</b> _____<br><b>BY:</b> BERGMANN<br><b>DATE:</b> 11/06/25 |                |                                                                                                                 |                  |                                                                                                                                                                    |                                                                                                                   |                                                                                                           |                                  |                                                                                                                                 |  |
| <b>TIME PERIOD</b> <b>FROM:</b> 3/1/2021 <b>TO:</b> 2/29/2024                                            |                 |             |             | <b>No. of VEHICLES</b>                                                                                                                            | <b>SEVERITY</b> | <b>ENVIRONMENTAL:</b><br>Use Codes from MV 104 (shown at right) for these categories |                          |                                                                                              |                | <b>Light Conditions:</b><br>1. Daylight<br>2. Dawn<br>3. Dusk<br>4. Dark Road Lighted<br>5. Dark Road Unlighted |                  | <b>Roadway Character:</b><br>1. Straight & Level<br>2. Straight & Grade<br>3. Straight & Hillcrest<br>4. Curve & Level<br>5. Curve & Grade<br>6. Curve & Hillcrest |                                                                                                                   | <b>Roadway Surface Condition:</b><br>1. Dry<br>2. Wet<br>3. Muddy<br>4. Snow/Ice<br>5. Slush<br>10. Other |                                  | <b>Weather:</b><br>1. Clear<br>2. Cloudy<br>3. Rain<br>4. Snow<br>5. Sleet/Hail/Freezing Rain<br>6. Fog/Smog/Smoke<br>10. Other |  |
| <b>No. OF MONTHS:</b> 36                                                                                 |                 |             |             |                                                                                                                                                   |                 | <b>LIGHT CONDITIONS</b>                                                              | <b>ROADWAY CHARACTER</b> | <b>ROADWAY SURFACE CONDITION</b>                                                             | <b>WEATHER</b> | <b>APPARENT CONTRIBUTING FACTORS</b>                                                                            | <b>DIRECTION</b> | <b>TYPE<sup>1</sup></b>                                                                                                                                            | <b>DESCRIPTION</b>                                                                                                | <b>ROUTE</b>                                                                                              | <b>NEAREST INTERSECTING ROAD</b> |                                                                                                                                 |  |
| <b>CRASH No.</b>                                                                                         | <b>CASE No.</b> | <b>DATE</b> | <b>TIME</b> |                                                                                                                                                   |                 |                                                                                      |                          |                                                                                              |                |                                                                                                                 |                  |                                                                                                                                                                    |                                                                                                                   |                                                                                                           |                                  |                                                                                                                                 |  |
| 44                                                                                                       | 39067416        | 10/21/21    | 2:21 PM     | 2                                                                                                                                                 | PDO             | 1                                                                                    | 1                        | 1                                                                                            | 2              | 18                                                                                                              | 7/5              | LEFT TURN (AGAINST OTHER CAR)                                                                                                                                      | V1 (BUS) STRUCK V2 WHILE TURNING LEFT INTO PARKING LOT.                                                           | ABBOTT ROAD                                                                                               | RIDGE ROAD                       |                                                                                                                                 |  |
| 45                                                                                                       | 39091962        | 11/06/21    | 5:32 PM     | 2                                                                                                                                                 | PDO             | 1                                                                                    | 1                        | 1                                                                                            | 1              | 69                                                                                                              | 3/1              | LEFT TURN (AGAINST OTHER CAR)                                                                                                                                      | V1 STRUCK V2 WHILE ATTEMPTING TO MAKE A LEFT TURN ONTO DORRANCE AVENUE.                                           | ABBOTT ROAD                                                                                               | DORRANCE AVENUE                  |                                                                                                                                 |  |
| 46                                                                                                       | 39105001        | 11/12/21    | 4:58 PM     | 2                                                                                                                                                 | PDO             | 3                                                                                    | 1                        | 1                                                                                            | 1              | 3                                                                                                               | 3/5              | RIGHT ANGLE                                                                                                                                                        | V1 STRUCK V2 WHILE BACKING ONTO ABBOTT ROAD FROM DRIVEWAY.                                                        | ABBOTT ROAD                                                                                               | FERNALD AVENUE                   |                                                                                                                                 |  |
| 47                                                                                                       | 39113594        | 11/19/21    | 4:14 PM     | 2                                                                                                                                                 | PDO             | 1                                                                                    | 1                        | 1                                                                                            | 1              | 26.62                                                                                                           | 7/5              | RIGHT ANGLE                                                                                                                                                        | V1 RAN RED LIGHT DUE TO GLARE FROM SUN AND STRUCK V2.                                                             | ABBOTT ROAD                                                                                               | RIDGE ROAD                       |                                                                                                                                 |  |
| 48                                                                                                       | 39135845        | 12/06/21    | 6:03 PM     | 2                                                                                                                                                 | PDO             | 4                                                                                    | 1                        | 2                                                                                            | 3              | 7                                                                                                               | 5/1              | RIGHT ANGLE                                                                                                                                                        | V1 STRUCK V2 WHILE ATTEMPTING TO MAKE A LEFT TURN ONTO RIDGE ROAD.                                                | ABBOTT ROAD                                                                                               | RIDGE ROAD                       |                                                                                                                                 |  |
| 49                                                                                                       | 39138357        | 12/07/21    | 5:58 PM     | 4                                                                                                                                                 | PDO             | 4                                                                                    | 1                        | 4                                                                                            | 4              | 16.66                                                                                                           | 5/1/1/5          | HEAD ON                                                                                                                                                            | V1 SLID OUT OF LANE AND STRUCK V2 HEAD-ON. V1 THEN REAR-ENDED VEHICLE 4 AND V2 STRUCK V3.                         | ABBOTT ROAD                                                                                               | DORRANCE AVENUE                  |                                                                                                                                 |  |
| 50                                                                                                       | 39166607        | 12/11/21    | 1:49 PM     | 2                                                                                                                                                 | I               | UNKNOWN                                                                              | UNKNOWN                  | UNKNOWN                                                                                      | UNKNOWN        | 7                                                                                                               | 1/2              | LEFT TURN (WITH OTHER CAR)                                                                                                                                         | V2 STRUCK V1 WHILE ATTEMPTING TO MAKE A LEFT TURN ONTO ABBOTT ROAD FROM PARKING LOT.                              | ABBOTT ROAD                                                                                               | RIDGE ROAD                       |                                                                                                                                 |  |
| 51                                                                                                       | 39151852        | 12/17/21    | 7:20 AM     | 1                                                                                                                                                 | NR              | 1                                                                                    | 1                        | 1                                                                                            | 1              | 61                                                                                                              | 1                | ANIMAL                                                                                                                                                             | V1 STRUCK A DEER THAT ENTERED THE ROADWAY.                                                                        | ABBOTT ROAD                                                                                               | FISHER ROAD                      |                                                                                                                                 |  |
| 52                                                                                                       | 39158323        | 12/19/21    | 5:58 AM     | 2                                                                                                                                                 | PDO             | 4                                                                                    | 1                        | 4                                                                                            | 4              | 13                                                                                                              | 1/5              | SIDESWIPE                                                                                                                                                          | V2 CROSSED DOUBLE YELLOW LINE AND STRUCK V1.                                                                      | ABBOTT ROAD                                                                                               | NORFRED DRIVE                    |                                                                                                                                 |  |
| 53                                                                                                       | 39162008        | 12/22/21    | 8:19 AM     | 2                                                                                                                                                 | PDO             | 1                                                                                    | 1                        | 1                                                                                            | 2              | 9                                                                                                               | 7/7              | REAR END                                                                                                                                                           | V1 REAR ENDED V2 AT A RED LIGHT.                                                                                  | ABBOTT ROAD                                                                                               | RIDGE ROAD                       |                                                                                                                                 |  |
| 54                                                                                                       | 39190835        | 01/13/22    | 11:19 PM    | 2                                                                                                                                                 | PDO             | 4                                                                                    | 1                        | 2                                                                                            | 2              | 18                                                                                                              | 4/3              | OVERTAKING                                                                                                                                                         | V1 (LARGE TRUCK) STRUCK V2 WHILE ATTEMPTING TO MAKE A WIDE RIGHT TURN ONTO ABBOTT ROAD.                           | DORRANCE AVENUE                                                                                           | ABBOTT ROAD                      |                                                                                                                                 |  |
| 55                                                                                                       | 39199397        | 01/20/22    | 12:35 PM    | 2                                                                                                                                                 | PDO             | 1                                                                                    | 1                        | 1                                                                                            | 1              | 4,7/4                                                                                                           | 3/5              | RIGHT ANGLE                                                                                                                                                        | V1 STRUCK V2 WHILE ATTEMPTING TO MAKE A LEFT TURN ONTO ABBOTT ROAD.                                               | ABBOTT ROAD                                                                                               | PALM STREET                      |                                                                                                                                 |  |
| 56                                                                                                       | 39203443        | 01/24/22    | 12:04 PM    | 2                                                                                                                                                 | PDO             | 1                                                                                    | 1                        | 2                                                                                            | 2              | 9                                                                                                               | 3/3              | REAR END                                                                                                                                                           | V1 REAR ENDED V2 WHILE SLOWING DOWN FOR TRAFFIC ON RIDGE ROAD.                                                    | RIDGE ROAD                                                                                                | ABBOTT ROAD                      |                                                                                                                                 |  |
| 57                                                                                                       | 39231978        | 02/11/22    | 4:16 PM     | 1                                                                                                                                                 | PDO             | 1                                                                                    | 1                        | 1                                                                                            | 2              | 61                                                                                                              | 1                | ANIMAL                                                                                                                                                             | V1 STRUCK A DEER THAT ENTERED THE ROADWAY.                                                                        | ABBOTT ROAD                                                                                               | GREENWOOD AVENUE                 |                                                                                                                                 |  |
| 58                                                                                                       | 39241526        | 02/18/22    | 8:35 AM     | 2                                                                                                                                                 | NR              | 1                                                                                    | 1                        | 4                                                                                            | 4              | 66/18                                                                                                           | 5/5              | REAR END                                                                                                                                                           | V2 WAS REAR ENDED BY V1 WHILE SLOWING DOWN TO MAKE A TURN WITHOUT USING SIGNAL.                                   | ABBOTT ROAD                                                                                               | RIDGE ROAD                       |                                                                                                                                 |  |
| 59                                                                                                       | 39244707        | 02/22/22    | 4:07 PM     | 2                                                                                                                                                 | PDO             | 1                                                                                    | 1                        | 2                                                                                            | 3              | 17                                                                                                              | 7/3              | RIGHT ANGLE                                                                                                                                                        | V1 RAN RED LIGHT AND STRUCK V2.                                                                                   | ABBOTT ROAD                                                                                               | RIDGE ROAD                       |                                                                                                                                 |  |
| 60                                                                                                       | 39250749        | 02/28/22    | 3:11 PM     | 2                                                                                                                                                 | I               | 1                                                                                    | 1                        | 1                                                                                            | 1              | 7/4                                                                                                             | 7/1              | RIGHT ANGLE                                                                                                                                                        | V1 DID NOT YIELD TO V2 (AMBULANCE) AND STRUCK V2.                                                                 | ABBOTT ROAD                                                                                               | RIDGE ROAD                       |                                                                                                                                 |  |
| 61                                                                                                       | 39254811        | 03/02/22    | 3:32 PM     | 2                                                                                                                                                 | PDO             | 1                                                                                    | 1                        | 1                                                                                            | 2              | 4,18                                                                                                            | 3/8              | HEAD ON                                                                                                                                                            | V2 STRUCK V1 WHILE ATTEMPTING TO MAKE A LEFT TURN ONTO WEBER ROAD.                                                | WEBER ROAD                                                                                                | ABBOTT ROAD                      |                                                                                                                                 |  |
| 62                                                                                                       | 39258802        | 03/05/22    | 6:09 PM     | 1                                                                                                                                                 | PDO             | 1                                                                                    | 1                        | 1                                                                                            | 1              | 61                                                                                                              | 1                | ANIMAL                                                                                                                                                             | V1 STRUCK A DEER THAT ENTERED THE ROADWAY.                                                                        | ABBOTT ROAD                                                                                               | WIESNER ROAD                     |                                                                                                                                 |  |
| 63                                                                                                       | 39264228        | 03/08/22    | 1:18 PM     | 2                                                                                                                                                 | PDO             | 1                                                                                    | 1                        | 1                                                                                            | 1              | 4,9                                                                                                             | 7/7              | REAR END                                                                                                                                                           | V1 REAR ENDED V2 AT A RED LIGHT.                                                                                  | RIDGE ROAD                                                                                                | ABBOTT ROAD                      |                                                                                                                                 |  |
| 64                                                                                                       | 39272914        | 03/16/22    | 2:49 PM     | 2                                                                                                                                                 | PDO             | 1                                                                                    | 1                        | 1                                                                                            | 1              | 7,4/4                                                                                                           | 7/5              | LEFT TURN (AGAINST OTHER CAR)                                                                                                                                      | V1 STRUCK V2 WHILE ATTEMPTING TO MAKE A LEFT TURN INTO PARKING LOT. UNINVOLVED VEHICLE WAVED V1 INTO PARKING LOT. | ABBOTT ROAD                                                                                               | RIDGE ROAD                       |                                                                                                                                 |  |
| 65                                                                                                       | 39272916        | 03/16/22    | 9:11 AM     | 2                                                                                                                                                 | PDO             | 1                                                                                    | 1                        | 1                                                                                            | 6              | 3/9                                                                                                             | 5/5              | REAR END                                                                                                                                                           | V1 WAS REAR ENDED BY V2 WHILE SLOWING DOWN TO TURN LEFT ONTO WEISNER ROAD.                                        | ABBOTT ROAD                                                                                               | WEISNER ROAD                     |                                                                                                                                 |  |
| 66                                                                                                       | 39298306        | 03/18/22    | 2:00 PM     | 2                                                                                                                                                 | I               | UNKNOWN                                                                              | UNKNOWN                  | UNKNOWN                                                                                      | UNKNOWN        | 7,18                                                                                                            | 5/1              | RIGHT ANGLE                                                                                                                                                        | V2 STRUCK V1 WHILE MAKING A LEFT TURN ONTO ABBOTT ROAD.                                                           | ABBOTT ROAD                                                                                               | DORRANCE AVENUE                  |                                                                                                                                 |  |
| 67                                                                                                       | 39278520        | 03/21/22    | 8:12 PM     | 2                                                                                                                                                 | I               | 4                                                                                    | 1                        | 2                                                                                            | 3              | 7/4                                                                                                             | 2/1              | LEFT TURN (WITH OTHER CAR)                                                                                                                                         | V1 STRUCK V2 WHILE ATTEMPTING TO MAKE A LEFT TURN ONTO ABBOTT ROAD.                                               | ABBOTT ROAD                                                                                               | NORFRED DRIVE                    |                                                                                                                                 |  |
| 68                                                                                                       | 39295258        | 04/01/22    | 4:32 PM     | 2                                                                                                                                                 | I               | 1                                                                                    | 1                        | 1                                                                                            | 1              | 2/9                                                                                                             | 5/5              | REAR END                                                                                                                                                           | V2 WAS REAR ENDED BY V1 WHILE STOPPED WAITING TO MAKE A LEFT TURN INTO A PARKING LOT.                             | ABBOTT ROAD                                                                                               | ELMVIEW AVENUE                   |                                                                                                                                 |  |

DIAGRAM No.:

|            |  |      |  |         |  |            |  |                                  |  |  |  |  |                |  |  |  |  |
|------------|--|------|--|---------|--|------------|--|----------------------------------|--|--|--|--|----------------|--|--|--|--|
| COUNTY:    |  | ERIE |  | P.I.N.: |  | 5764.15    |  | ROUTE NO. OR STREET NAME:        |  |  |  |  | CASE No.:      |  |  |  |  |
| TOWN       |  |      |  | CITY    |  | LACKAWANNA |  | COUNTY ROAD 4 (ABBOTT ROAD)      |  |  |  |  | FILE:          |  |  |  |  |
| VILLAGE OF |  |      |  |         |  |            |  | AT INTERSECTION WITH/OR BETWEEN: |  |  |  |  | BY: BERGMANN   |  |  |  |  |
|            |  |      |  |         |  |            |  | DORRANCE AVENUE AND FISHER ROAD  |  |  |  |  | DATE: 11/06/25 |  |  |  |  |

| TIME PERIOD       |          |          |          | FROM: 3/1/2021  |          | TO: 2/29/2024                                               |                   | No. of VEHICLES           | SEVERITY | ENVIRONMENTAL:                                                                      |           | Light Conditions:                                                                                                                     |                                                                                                                   | Roadway Character:                                                   |                           | Roadway Surface Condition:                                                                                   |  | Weather: |  |
|-------------------|----------|----------|----------|-----------------|----------|-------------------------------------------------------------|-------------------|---------------------------|----------|-------------------------------------------------------------------------------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|---------------------------|--------------------------------------------------------------------------------------------------------------|--|----------|--|
|                   |          |          |          |                 |          | Use Codes from MV 104 (shown at right) for these categories |                   |                           |          | 1. Daylight<br>2. Dawn<br>3. Dusk<br>4. Dark Road Lighted<br>5. Dark Road Unlighted |           | 1. Straight & Level<br>2. Straight & Grade<br>3. Straight & Hillcrest<br>4. Curve & Level<br>5. Curve & Grade<br>6. Curve & Hillcrest |                                                                                                                   | 1. Dry<br>2. Wet<br>3. Muddy<br>4. Snow/Ice<br>5. Slush<br>10. Other |                           | 1. Clear<br>2. Cloudy<br>3. Rain<br>4. Snow<br>5. Sleet/Hail/Freezing Rain<br>6. Fog/Smog/Smoke<br>10. Other |  |          |  |
| No. OF MONTHS: 36 |          |          |          |                 |          |                                                             |                   |                           |          |                                                                                     |           |                                                                                                                                       |                                                                                                                   |                                                                      |                           |                                                                                                              |  |          |  |
| CRASH No.         | CASE No. | DATE     | TIME     | No. of VEHICLES | SEVERITY | LIGHT CONDITIONS                                            | ROADWAY CHARACTER | ROADWAY SURFACE CONDITION | WEATHER  | APPARENT CONTRIBUTING FACTORS                                                       | DIRECTION | TYPE <sup>1</sup>                                                                                                                     | DESCRIPTION                                                                                                       | ROUTE                                                                | NEAREST INTERSECTING ROAD |                                                                                                              |  |          |  |
| 69                | 39302540 | 04/04/22 | 3:54 PM  | 2               | PDO      | 1                                                           | 1                 | 1                         | 1        | 18                                                                                  | 1/5       | LEFT TURN (AGAINST OTHER CAR)                                                                                                         | V1 STRUCK V2 WHILE ATTEMPTING TO MAKE A LEFT TURN ONTO ABBOTT ROAD.                                               | ABBOTT ROAD                                                          | RIDGE ROAD                |                                                                                                              |  |          |  |
| 70                | 39301374 | 04/06/22 | 8:56 AM  | 2               | PDO      | 1                                                           | 1                 | 1                         | 1        | 4,9                                                                                 | 7/7       | REAR END                                                                                                                              | V2 REAR ENDED V1.                                                                                                 | RIDGE ROAD                                                           | ABBOTT ROAD               |                                                                                                              |  |          |  |
| 71                | 39304334 | 04/10/22 | 2:43 PM  | 2               | I        | 1                                                           | 1                 | 1                         | 1        | 4                                                                                   | 1/6       | RIGHT ANGLE                                                                                                                           | V1 RAN RED LIGHT AND STRUCK V2.                                                                                   | ABBOTT ROAD                                                          | JULIAN AVE                |                                                                                                              |  |          |  |
| 72                | 39339055 | 04/25/22 | 3:15 PM  | 2               | PDO      | 1                                                           | 1                 | 1                         | 1        | 13                                                                                  | 7/7       | OVERTAKING                                                                                                                            | V2 STRUCK V1 WHILE PASSING IN ADJACENT LANE.                                                                      | RIDGE ROAD                                                           | ABBOTT ROAD               |                                                                                                              |  |          |  |
| 73                | 39331212 | 05/01/22 | 6:08 PM  | 2               | PDO      | 1                                                           | 1                 | 2                         | 3        | 3,20                                                                                | 3/7       | REAR END                                                                                                                              | V1 BACKED INTO V2 WHILE ATTEMPTING TO CHANGE LANES AT A RED LIGHT.                                                | RIDGE ROAD                                                           | ABBOTT ROAD               |                                                                                                              |  |          |  |
| 74                | 39329667 | 05/02/22 | 11:54 AM | 2               | PDO      | 1                                                           | 1                 | 1                         | 1        | 20                                                                                  | 7/7       | OVERTAKING                                                                                                                            | V2 STRUCK V1 WHILE CHANGING LANES.                                                                                | RIDGE ROAD                                                           | ABBOTT ROAD               |                                                                                                              |  |          |  |
| 75                | 39334204 | 05/03/22 | 3:05 PM  | 2               | PDO      | 1                                                           | 1                 | 1                         | 1        | 9                                                                                   | 7/7       | REAR END                                                                                                                              | V1 STRUCK V2 WHILE ACCELERATING AT A RED LIGHT.                                                                   | RIDGE ROAD                                                           | ABBOTT ROAD               |                                                                                                              |  |          |  |
| 76                | 39347430 | 05/14/22 | 9:18 PM  | 2               | PDO      | 4                                                           | 1                 | 1                         | 1        | 7,69                                                                                | 1/5       | LEFT TURN (AGAINST OTHER CAR)                                                                                                         | V1 STRUCK V2 WHILE ATTEMPTING TO MAKE A LEFT TURN INTO PARKING LOT. UNINVOLVED VEHICLE WAVED V1 INTO PARKING LOT. | ABBOTT ROAD                                                          | RIDGE ROAD                |                                                                                                              |  |          |  |
| 77                | 39358901 | 05/23/22 | 11:53 PM | 2               | PDO      | 4                                                           | 1                 | 1                         | 1        | 4,9                                                                                 | 7/7       | REAR END                                                                                                                              | V2 WAS REAR ENDED BY V1 WHILE STOPPED AT A RED LIGHT.                                                             | RIDGE ROAD                                                           | ABBOTT ROAD               |                                                                                                              |  |          |  |
| 78                | 39365556 | 05/27/22 | 2:02 PM  | 2               | I        | 1                                                           | 1                 | 1                         | 1        | 18                                                                                  | 8/7       | OVERTAKING                                                                                                                            | V1 STRUCK V2 WHILE ATTEMPTING TO MAKE A RIGHT TURN ONTO ABBOTT ROAD.                                              | RIDGE ROAD                                                           | ABBOTT ROAD               |                                                                                                              |  |          |  |
| 79                | 39385362 | 06/10/22 | 12:16 PM | 2               | PDO      | 1                                                           | 1                 | 1                         | 1        | 7                                                                                   | 1/5       | LEFT TURN (AGAINST OTHER CAR)                                                                                                         | V2 STRUCK V1 WHILE ATTEMPTING TO MAKE A LEFT TURN ONTO RIDGE ROAD.                                                | ABBOTT ROAD                                                          | RIDGE ROAD                |                                                                                                              |  |          |  |
| 80                | 39429746 | 06/11/22 | 6:44 PM  | 2               | PDO      | 1                                                           | 1                 | 1                         | 1        | 26/9                                                                                | 1/1       | REAR END                                                                                                                              | V2 WAS REAR ENDED BY V1 WHILE STOPPED FOR AN UNINVOLVED VEHICLE THAT RAN A RED LIGHT.                             | ABBOTT ROAD                                                          | DORRANCE AVENUE           |                                                                                                              |  |          |  |
| 81                | 39386972 | 06/14/22 | 8:40 AM  | 2               | I        | 1                                                           | 1                 | 1                         | 1        | 7                                                                                   | 3/7       | LEFT TURN (AGAINST OTHER CAR)                                                                                                         | V1 STRUCK V2 WHILE ATTEMPTING TO TURN LEFT INTO PARKING LOT.                                                      | RIDGE ROAD                                                           | ABBOTT ROAD               |                                                                                                              |  |          |  |
| 82                | 39386973 | 06/15/22 | 9:13 AM  | 2               | I        | 1                                                           | 1                 | 1                         | 1        | 4                                                                                   | 7/5       | RIGHT ANGLE                                                                                                                           | V1 RAN RED LIGHT DUE TO GLARE FROM SUN AND STRUCK V2.                                                             | RIDGE ROAD                                                           | ABBOTT ROAD               |                                                                                                              |  |          |  |
| 83                | 39403022 | 06/23/22 | 3:11 PM  | 2               | PDO      | 1                                                           | 1                 | 1                         | 1        | 5                                                                                   | 4/1       | LEFT TURN (AGAINST OTHER CAR)                                                                                                         | V1 STRUCK V2 WHILE ATTEMPTING TO TURN LEFT ONTO RIDGE ROAD.                                                       | ABBOTT ROAD                                                          | RIDGE ROAD                |                                                                                                              |  |          |  |
| 84                | 39403018 | 06/24/22 | 11:51 AM | 2               | PDO      | 1                                                           | 1                 | 1                         | 1        | 13,18                                                                               | 8/8       | OVERTAKING                                                                                                                            | V2 STRUCK V1 WHILE ATTEMPTING TO TURN RIGHT ONTO ABBOTT ROAD FROM PARKING LOT.                                    | ABBOTT ROAD                                                          | BELL AVENUE               |                                                                                                              |  |          |  |
| 85                | 39416353 | 07/01/22 | 1:13 PM  | 2               | PDO      | 1                                                           | 1                 | 1                         | 1        | 13                                                                                  | 1/1       | OVERTAKING                                                                                                                            | V1 STRUCK V2 WHILE DRIFTING OUT OF LANE.                                                                          | ABBOTT ROAD                                                          | EAGAN DRIVE               |                                                                                                              |  |          |  |
| 87                | 39441278 | 07/11/22 | 4:31 PM  | 2               | I        | 1                                                           | 1                 | 1                         | 1        | 7                                                                                   | 4/1       | LEFT TURN (AGAINST OTHER CAR)                                                                                                         | V1 STRUCK V 2 WHILE ATTEMPTING TO TURN LEFT ONTO DORRANCE AVENUE.                                                 | ABBOTT ROAD                                                          | DORRANCE AVENUE           |                                                                                                              |  |          |  |
| 88                | 39432906 | 07/19/22 | 5:37 PM  | 2               | PDO      | 1                                                           | 1                 | 1                         | 1        | 7                                                                                   | 5/1       | LEFT TURN (AGAINST OTHER CAR)                                                                                                         | V1 STRUCK V2 WHILE ATTEMPTING TO MAKE A LEFT TURN INTO PARKING LOT.                                               | ABBOTT ROAD                                                          | BELL AVENUE               |                                                                                                              |  |          |  |
| 89                | 39449802 | 07/26/22 | 5:32 PM  | 2               | PDO      | 1                                                           | 1                 | 1                         | 1        | 69,4/4                                                                              | 1/7       | LEFT TURN (AGAINST OTHER CAR)                                                                                                         | V1 STRUCK V2 WHILE ATTEMPTING TO MAKE A LEFT TURN INTO PARKING LOT. UNINVOLVED VEHICLE WAVED V1 INTO PARKING LOT. | RIDGE ROAD                                                           | ABBOTT ROAD               |                                                                                                              |  |          |  |
| 90                | 39449799 | 07/30/22 | 7:55 PM  | 2               | I        | 1                                                           | 1                 | 1                         | 1        | 9                                                                                   | 5/5       | REAR END                                                                                                                              | V2 WAS REAR ENDED BY V1 WHILE STOPPED IN TRAFFIC.                                                                 | ABBOTT ROAD                                                          | RIDGE ROAD                |                                                                                                              |  |          |  |
| 91                | 39471581 | 08/11/22 | 7:55 AM  | 2               | I        | 1                                                           | 1                 | 1                         | 1        | 17,4                                                                                | 5/7       | RIGHT ANGLE                                                                                                                           | V1 RAN RED LIGHT AND STRUCK V2.                                                                                   | ABBOTT ROAD                                                          | DORRANCE AVENUE           |                                                                                                              |  |          |  |

DIAGRAM No.:

|                                                                                                          |                 |             |             |                                                                                                                                               |                 |                                                                                      |                          |                                  |                |                                                                                                                 |                  |                                                                                                                                                                    |                                                                                                                   |                                                                                                           |                                  |                                                                                                                                 |  |
|----------------------------------------------------------------------------------------------------------|-----------------|-------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------------------------------------------------------------------------|--------------------------|----------------------------------|----------------|-----------------------------------------------------------------------------------------------------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------|--|
| <b>COUNTY:</b> ERIE <b>P.I.N.:</b> 5764.15<br><b>TOWN:</b> <b>CITY:</b> LACKAWANNA<br><b>VILLAGE OF:</b> |                 |             |             | <b>ROUTE NO. OR STREET NAME:</b><br>COUNTY ROAD 4 (ABBOTT ROAD)<br><b>AT INTERSECTION WITH/OR BETWEEN:</b><br>DORRANCE AVENUE AND FISHER ROAD |                 |                                                                                      |                          |                                  |                |                                                                                                                 |                  | <b>CASE No.:</b> _____<br><b>FILE:</b> _____<br><b>BY:</b> BERGMANN<br><b>DATE:</b> 11/06/25                                                                       |                                                                                                                   |                                                                                                           |                                  |                                                                                                                                 |  |
| <b>TIME PERIOD</b><br><b>FROM:</b> 3/1/2021 <b>TO:</b> 2/29/2024                                         |                 |             |             | <b>No. of VEHICLES</b>                                                                                                                        | <b>SEVERITY</b> | <b>ENVIRONMENTAL:</b><br>Use Codes from MV 104 (shown at right) for these categories |                          |                                  |                | <b>Light Conditions:</b><br>1. Daylight<br>2. Dawn<br>3. Dusk<br>4. Dark Road Lighted<br>5. Dark Road Unlighted |                  | <b>Roadway Character:</b><br>1. Straight & Level<br>2. Straight & Grade<br>3. Straight & Hillcrest<br>4. Curve & Level<br>5. Curve & Grade<br>6. Curve & Hillcrest |                                                                                                                   | <b>Roadway Surface Condition:</b><br>1. Dry<br>2. Wet<br>3. Muddy<br>4. Snow/Ice<br>5. Slush<br>10. Other |                                  | <b>Weather:</b><br>1. Clear<br>2. Cloudy<br>3. Rain<br>4. Snow<br>5. Sleet/Hail/Freezing Rain<br>6. Fog/Smog/Smoke<br>10. Other |  |
| <b>No. OF MONTHS: 36</b>                                                                                 |                 |             |             |                                                                                                                                               |                 | <b>LIGHT CONDITIONS</b>                                                              | <b>ROADWAY CHARACTER</b> | <b>ROADWAY SURFACE CONDITION</b> | <b>WEATHER</b> | <b>APPARENT CONTRIBUTING FACTORS</b>                                                                            | <b>DIRECTION</b> | <b>TYPE<sup>1</sup></b>                                                                                                                                            | <b>DESCRIPTION</b>                                                                                                | <b>ROUTE</b>                                                                                              | <b>NEAREST INTERSECTING ROAD</b> |                                                                                                                                 |  |
| <b>CRASH No.</b>                                                                                         | <b>CASE No.</b> | <b>DATE</b> | <b>TIME</b> |                                                                                                                                               |                 |                                                                                      |                          |                                  |                |                                                                                                                 |                  |                                                                                                                                                                    |                                                                                                                   |                                                                                                           |                                  |                                                                                                                                 |  |
| 92                                                                                                       | 39466959        | 08/12/22    | 8:52 AM     | 2                                                                                                                                             | PDO             | 1                                                                                    | 1                        | 1                                | 1              | 18                                                                                                              | 1/7              | RIGHT TURN (WITH OTHER CAR)                                                                                                                                        | V2 STRUCK V1 WHILE ATTEMPTING TO MAKE A RIGHT TURN ONTO ABBOTT ROAD.                                              | ABBOTT ROAD                                                                                               | RIDGE ROAD                       |                                                                                                                                 |  |
| 93                                                                                                       | 39473879        | 08/19/22    | 12:31 PM    | 2                                                                                                                                             | PDO             | 1                                                                                    | 1                        | 1                                | 1              | 4                                                                                                               | 7/7              | REAR END                                                                                                                                                           | V2 WAS REAR ENDED BY V1 WHILE STOPPED AT A RED LIGHT.                                                             | RIDGE ROAD                                                                                                | ABBOTT ROAD                      |                                                                                                                                 |  |
| 94                                                                                                       | 39478500        | 08/22/22    | 9:21 AM     | 2                                                                                                                                             | PDO             | 1                                                                                    | 1                        | 1                                | 1              | 7                                                                                                               | 1/7              | RIGHT ANGLE                                                                                                                                                        | V2 STRUCK V1 WHILE ATTEMPTING TO TURN ONTO ABBOTT ROAD FROM PARKING LOT.                                          | ABBOTT ROAD                                                                                               | JULIAN AVE                       |                                                                                                                                 |  |
| 95                                                                                                       | 39482211        | 08/26/22    | 8:44 AM     | 2                                                                                                                                             | I               | 1                                                                                    | 1                        | 2                                | 2              | 17,4                                                                                                            | 3/1              | RIGHT ANGLE                                                                                                                                                        | V1 RAN RED LIGHT AND STRUCK V2.                                                                                   | ABBOTT ROAD                                                                                               | RIDGE ROAD                       |                                                                                                                                 |  |
| 96                                                                                                       | 39484324        | 08/26/22    | 3:43 PM     | 2                                                                                                                                             | PDO             | 1                                                                                    | 1                        | 1                                | 1              | 20                                                                                                              | 7/7              | OVERTAKING                                                                                                                                                         | V1 STRUCK V2 WHILE CHANGING LANES.                                                                                | RIDGE ROAD                                                                                                | ABBOTT ROAD                      |                                                                                                                                 |  |
| 97                                                                                                       | 39490279        | 09/01/22    | 9:02 AM     | 2                                                                                                                                             | I               | 1                                                                                    | 1                        | 1                                | 1              | 4,17/4,17                                                                                                       | 7/5              | RIGHT ANGLE                                                                                                                                                        | V1 RAN RED LIGHT AND STRUCK V2.                                                                                   | ABBOTT ROAD                                                                                               | RIDGE ROAD                       |                                                                                                                                 |  |
| 98                                                                                                       | 39493086        | 09/02/22    | 6:15 PM     | 2                                                                                                                                             | I               | 1                                                                                    | 1                        | 1                                | 1              | 5/5                                                                                                             | 1/1              | OVERTAKING                                                                                                                                                         | V1 STRUCK V2 WHILE ATTEMPTING TO MAKE A LEFT TURN ONTO BELL AVENUE.                                               | ABBOTT ROAD                                                                                               | BELL AVENUE                      |                                                                                                                                 |  |
| 99                                                                                                       | 39556995        | 09/16/22    | 5:26 PM     | 2                                                                                                                                             | PDO             | 1                                                                                    | 1                        | 1                                | 1              | 9,17                                                                                                            | 7/7              | REAR END                                                                                                                                                           | V2 WAS REAR ENDED BY V1 WHILE STOPPED AT A RED LIGHT.                                                             | RIDGE ROAD                                                                                                | ABBOTT ROAD                      |                                                                                                                                 |  |
| 100                                                                                                      | 39512979        | 09/18/22    | 11:12 AM    | 2                                                                                                                                             | I               | 1                                                                                    | 1                        | 1                                | 2              | 4,6                                                                                                             | 5/1              | SIDESWIPE                                                                                                                                                          | V1 CROSSED DOUBLE YELLOW LINE AND STRUCK V2.                                                                      | ABBOTT ROAD                                                                                               | GREENWOOD AVENUE                 |                                                                                                                                 |  |
| 101                                                                                                      | 39521443        | 09/22/22    | 5:04 PM     | 2                                                                                                                                             | PDO             | 1                                                                                    | 1                        | 1                                | 1              | 18                                                                                                              | 5/5              | LEFT TURN (WITH OTHER CAR)                                                                                                                                         | V1 STRUCK V2 WHILE ATTEMPTING TO MAKE A LEFT TURN OUT OF PARKING LOT.                                             | ABBOTT ROAD                                                                                               | JULIAN AVE                       |                                                                                                                                 |  |
| 102                                                                                                      | 39535426        | 10/04/22    | 11:26 AM    | 2                                                                                                                                             | PDO             | 1                                                                                    | 1                        | 1                                | 1              | 20                                                                                                              | 5/5              | OVERTAKING                                                                                                                                                         | V1 STRUCK V2 WHILE CHANGING LANES.                                                                                | ABBOTT ROAD                                                                                               | BELL AVENUE                      |                                                                                                                                 |  |
| 103                                                                                                      | 39549539        | 10/13/22    | 3:41 PM     | 2                                                                                                                                             | PDO             | 1                                                                                    | 1                        | 2                                | 3              | 4                                                                                                               | 5/5              | OVERTAKING                                                                                                                                                         | V1 STRUCK V2 WHILE CHANGING LANES.                                                                                | ABBOTT ROAD                                                                                               | JULIAN AVE                       |                                                                                                                                 |  |
| 104                                                                                                      | 39549541        | 10/14/22    | 11:43 AM    | 2                                                                                                                                             | PDO             | 1                                                                                    | 1                        | 1                                | 1              | 7,4                                                                                                             | 1/4              | LEFT TURN (AGAINST OTHER CAR)                                                                                                                                      | V2 STRUCK V1 WHILE ATTEMPTING TO MAKE A LEFT TURN INTO A PARKING LOT.                                             | ABBOTT ROAD                                                                                               | JULIAN AVE                       |                                                                                                                                 |  |
| 105                                                                                                      | 39566334        | 10/26/22    | 5:38 PM     | 2                                                                                                                                             | PDO             | 1                                                                                    | 1                        | 2                                | 1              | 9                                                                                                               | 5/5              | REAR END                                                                                                                                                           | V2 WAS STRUCK BY V1 WHILE STOPPED FOR UNINVOLVED TURNING VEHICLE.                                                 | ABBOTT ROAD                                                                                               | ELMVIEW AVENUE                   |                                                                                                                                 |  |
| 106                                                                                                      | 39574073        | 11/02/22    | 5:30 PM     | 2                                                                                                                                             | I               | 1                                                                                    | 1                        | 1                                | 1              | 69,26                                                                                                           | 1/7              | LEFT TURN (AGAINST OTHER CAR)                                                                                                                                      | V1 STRUCK V2 WHILE ATTEMPTING TO MAKE A LEFT TURN INTO PARKING LOT. UNINVOLVED VEHICLE WAVED V1 INTO PARKING LOT. | ABBOTT ROAD                                                                                               | JULIAN AVE                       |                                                                                                                                 |  |
| 107                                                                                                      | 39604714        | 11/19/22    | 5:53 PM     | 2                                                                                                                                             | PDO             | 4                                                                                    | 1                        | 4                                | 4              | 20,66                                                                                                           | 7/7              | OVERTAKING                                                                                                                                                         | V1 STRUCK V2 WHILE CHANGING LANES.                                                                                | ABBOTT ROAD                                                                                               | RIDGE ROAD                       |                                                                                                                                 |  |
| 108                                                                                                      | 39603464        | 11/22/22    | 7:17 PM     | 2                                                                                                                                             | PDO             | 4                                                                                    | 1                        | 5                                | 1              | 4,17                                                                                                            | 5/5              | OVERTAKING                                                                                                                                                         | V1 STRUCK V2 WHILE CHANGING LANES.                                                                                | ABBOTT ROAD                                                                                               | RIDGE ROAD                       |                                                                                                                                 |  |
| 109                                                                                                      | 39619088        | 12/03/22    | 6:07 PM     | 2                                                                                                                                             | PDO             | 4                                                                                    | 1                        | 1                                | 1              | 20                                                                                                              | 5/5              | OVERTAKING                                                                                                                                                         | V1 STRUCK V2 WHILE CHANGING LANES.                                                                                | ABBOTT ROAD                                                                                               | RIDGE ROAD                       |                                                                                                                                 |  |
| 110                                                                                                      | 39622792        | 12/07/22    | 6:50 AM     | 2                                                                                                                                             | PDO             | 4                                                                                    | 1                        | 2                                | 3              | 4                                                                                                               | 1/1              | OVERTAKING                                                                                                                                                         | V1 STRUCK V2 WHILE CHANGING LANES.                                                                                | ABBOTT ROAD                                                                                               | NORFRED DRIVE                    |                                                                                                                                 |  |
| 111                                                                                                      | 39643383        | 12/14/22    | 4:29 PM     | 2                                                                                                                                             | NR              | 1                                                                                    | 1                        | 1                                | 1              | 4                                                                                                               | 1/1              | OVERTAKING                                                                                                                                                         | V1 STRUCK V2 WHILE CHANGING LANES.                                                                                | ABBOTT ROAD                                                                                               | NORFRED DRIVE                    |                                                                                                                                 |  |
| 112                                                                                                      | 39646053        | 12/16/22    | 5:22 PM     | 2                                                                                                                                             | PDO             | 4                                                                                    | 1                        | 2                                | 3              | 7                                                                                                               | 3/1              | RIGHT TURN (WITH OTHER CAR)                                                                                                                                        | V1 STRUCK V2 WHILE PULLING OUT OF PARKING LOT ONTO ABBOTT ROAD.                                                   | ABBOTT ROAD                                                                                               | JULIAN AVE                       |                                                                                                                                 |  |
| 113                                                                                                      | 39646078        | 12/16/22    | 2:33 PM     | 2                                                                                                                                             | PDO             | 1                                                                                    | 1                        | 1                                | 1              | 2,18                                                                                                            | 6/3              | SIDESWIPE                                                                                                                                                          | V1 STRUCK V2 WHILE ATTEMPTING TO MAKE A RIGHT TURN ONTO MEADOWBROOK DRIVE.                                        | ABBOTT ROAD                                                                                               | MEADOWBROOK DRIVE                |                                                                                                                                 |  |
| 114                                                                                                      | 39646209        | 12/17/22    | 1:17 PM     | 2                                                                                                                                             | PDO             | 1                                                                                    | 1                        | 4                                | 4              | 66/66,47                                                                                                        | 5/1              | SIDESWIPE                                                                                                                                                          | V1 WAS STRUCK BY V2 WHILE ATTEMPTING TO MAKE A LEFT TURN INTO A DRIVEWAY.                                         | ABBOTT ROAD                                                                                               | FISHER ROAD                      |                                                                                                                                 |  |
| 115                                                                                                      | 39647300        | 12/21/22    | 12:58 PM    | 2                                                                                                                                             | PDO             | 1                                                                                    | 1                        | 1                                | 2              | 9                                                                                                               | 3/3              | REAR END                                                                                                                                                           | V2 WAS REAR ENDED BY V1 WHILE STOPPING AT A RED LIGHT.                                                            | DORRANCE AVENUE                                                                                           | ABBOTT ROAD                      |                                                                                                                                 |  |
| 116                                                                                                      | 39655806        | 12/22/22    | 10:44 AM    | 2                                                                                                                                             | PDO             | 1                                                                                    | 1                        | 1                                | 1              | 5,18                                                                                                            | 8/5              | LEFT TURN (AGAINST OTHER CAR)                                                                                                                                      | V1 STRUCK V2 WHILE ATTEMPTING TO MAKE A LEFT TURN ONTO RIDGE ROAD.                                                | ABBOTT ROAD                                                                                               | RIDGE ROAD                       |                                                                                                                                 |  |
| 117                                                                                                      | 39655820        | 12/22/22    | 5:56 PM     | 2                                                                                                                                             | PDO             | 4                                                                                    | 1                        | 2                                | 3              | 20                                                                                                              | 7/7              | RIGHT ANGLE                                                                                                                                                        | V1 STRUCK V2 ATTEMPTING TO CROSS ABBOTT ROAD FROM PARKING LOT TO BELL AVE.                                        | ABBOTT ROAD                                                                                               | BELL AVENUE                      |                                                                                                                                 |  |
| 118                                                                                                      | 39656687        | 12/27/22    | 2:22 PM     | 2                                                                                                                                             | PDO             | 1                                                                                    | 1                        | 4                                | 4              | 13,66/66                                                                                                        | 5/5              | OVERTAKING                                                                                                                                                         | V1 STRUCK V2 WHILE CHANGING LANES.                                                                                | ABBOTT ROAD                                                                                               | JULIAN AVE                       |                                                                                                                                 |  |
| 119                                                                                                      | 39704735        | 02/02/23    | 3:56 PM     | 2                                                                                                                                             | PDO             | 1                                                                                    | 1                        | 1                                | 1              | 20                                                                                                              | 1/1              | OVERTAKING                                                                                                                                                         | V1 STRUCK V2 WHILE CHANGING LANES.                                                                                | ABBOTT ROAD                                                                                               | MAGNOLIA STREET                  |                                                                                                                                 |  |



DIAGRAM No.:

|            |  |      |  |         |  |            |  |                                  |  |  |  |  |                |  |  |  |  |
|------------|--|------|--|---------|--|------------|--|----------------------------------|--|--|--|--|----------------|--|--|--|--|
| COUNTY:    |  | ERIE |  | P.I.N.: |  | 5764.15    |  | ROUTE NO. OR STREET NAME:        |  |  |  |  | CASE No.:      |  |  |  |  |
| TOWN       |  |      |  | CITY    |  | LACKAWANNA |  | COUNTY ROAD 4 (ABBOTT ROAD)      |  |  |  |  | FILE:          |  |  |  |  |
| VILLAGE OF |  |      |  |         |  |            |  | AT INTERSECTION WITH/OR BETWEEN: |  |  |  |  | BY: BERGMANN   |  |  |  |  |
|            |  |      |  |         |  |            |  | DORRANCE AVENUE AND FISHER ROAD  |  |  |  |  | DATE: 11/06/25 |  |  |  |  |

| TIME PERIOD       |          |          |          | FROM: 3/1/2021  |          | TO: 2/29/2024                                               |                   | No. of VEHICLES           | SEVERITY | ENVIRONMENTAL:                                                                      |           | Light Conditions:                                                                                                                     |                                                                                                                   | Roadway Character:                                                   |                           | Roadway Surface Condition:                                                                                   |  | Weather: |  |
|-------------------|----------|----------|----------|-----------------|----------|-------------------------------------------------------------|-------------------|---------------------------|----------|-------------------------------------------------------------------------------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|---------------------------|--------------------------------------------------------------------------------------------------------------|--|----------|--|
|                   |          |          |          |                 |          | Use Codes from MV 104 (shown at right) for these categories |                   |                           |          | 1. Daylight<br>2. Dawn<br>3. Dusk<br>4. Dark Road Lighted<br>5. Dark Road Unlighted |           | 1. Straight & Level<br>2. Straight & Grade<br>3. Straight & Hillcrest<br>4. Curve & Level<br>5. Curve & Grade<br>6. Curve & Hillcrest |                                                                                                                   | 1. Dry<br>2. Wet<br>3. Muddy<br>4. Snow/Ice<br>5. Slush<br>10. Other |                           | 1. Clear<br>2. Cloudy<br>3. Rain<br>4. Snow<br>5. Sleet/Hail/Freezing Rain<br>6. Fog/Smog/Smoke<br>10. Other |  |          |  |
| No. OF MONTHS: 36 |          |          |          |                 |          |                                                             |                   |                           |          |                                                                                     |           |                                                                                                                                       |                                                                                                                   |                                                                      |                           |                                                                                                              |  |          |  |
| CRASH No.         | CASE No. | DATE     | TIME     | No. of VEHICLES | SEVERITY | LIGHT CONDITIONS                                            | ROADWAY CHARACTER | ROADWAY SURFACE CONDITION | WEATHER  | APPARENT CONTRIBUTING FACTORS                                                       | DIRECTION | TYPE <sup>1</sup>                                                                                                                     | DESCRIPTION                                                                                                       | ROUTE                                                                | NEAREST INTERSECTING ROAD |                                                                                                              |  |          |  |
| 120               | 39709919 | 02/06/23 | 10:21 AM | 2               | PDO      | 1                                                           | 1                 | 2                         | 2        | 4,7                                                                                 | 1/4       | LEFT TURN (AGAINST OTHER CAR)                                                                                                         | V2 STRUCK V1 WHILE ATTEMPTING TO MAKE A LEFT TURN ONTO RIDGE ROAD.                                                | ABBOTT ROAD                                                          | RIDGE ROAD                |                                                                                                              |  |          |  |
| 121               | 39716584 | 02/09/23 | 2:11 PM  | 2               | PDO      | 1                                                           | 1                 | 2                         | 3        | 66                                                                                  | 5/1       | RIGHT ANGLE                                                                                                                           | V1 STRUCK V2 WHILE ATTEMPTING TO MAKE A LEFT TURN ONTO ABBOTT ROAD.                                               | ABBOTT ROAD                                                          | RIDGE ROAD                |                                                                                                              |  |          |  |
| 122               | 39719578 | 02/13/23 | 8:45 PM  | 2               | PDO      | 4                                                           | 1                 | 1                         | 1        | 18,7                                                                                | 5/5       | LEFT TURN (WITH OTHER CAR)                                                                                                            | V1 PASSED V2 IN THE RIGHT LANE TO ATTEMPT TO MAKE A LEFT HAND TURN IN FRONT OF V2 DURING A GREEN LEFT TURN ARROW. | ABBOTT ROAD                                                          | RIDGE ROAD                |                                                                                                              |  |          |  |
| 123               | 39720749 | 02/14/23 | 4:14 PM  | 2               | I        | 1                                                           | 1                 | 1                         | 1        | 7,26                                                                                | 7/5       | RIGHT ANGLE                                                                                                                           | V1 STRUCK V2 WHILE ATTEMPTING TO TURN                                                                             | ABBOTT ROAD                                                          | BELL AVENUE               |                                                                                                              |  |          |  |
| 124               | 39799902 | 04/03/23 | 5:26 PM  | 2               | I        | 1                                                           | 1                 | 1                         | 1        | 7,17                                                                                | 1/7       | RIGHT ANGLE                                                                                                                           | V2 STRUCK V1 WHILE ATTEMPTING TO CROSS ABBOTT ROAD FROM PARKING LOT TO BELL AVE.                                  | ABBOTT ROAD                                                          | DORRANCE AVENUE           |                                                                                                              |  |          |  |
| 125               | 39799934 | 04/04/23 | 11:38 AM | 2               | PDO      | 1                                                           | 1                 | 1                         | 1        | 9                                                                                   | 5/5       | REAR END                                                                                                                              | V2 WAS REAR ENDED BY V1 WHILE STOPPING FOR UNINVOLVED TURNING VEHICLE.                                            | ABBOTT ROAD                                                          | TURNER AVENUE             |                                                                                                              |  |          |  |
| 126               | 39789731 | 04/10/23 | 2:36 PM  | 2               | PDO      | 1                                                           | 1                 | 1                         | 1        | 18,4                                                                                | 3/7       | SIDESWIPE                                                                                                                             | V1 STRUCK V2 WHILE ATTEMPTING TO TURN RIGHT INTO PARKING LOT.                                                     | ABBOTT ROAD                                                          | JULIAN AVE                |                                                                                                              |  |          |  |
| 127               | 39808313 | 04/25/23 | 4:24 PM  | 2               | PDO      | 1                                                           | 1                 | 1                         | 1        | 4,29/4                                                                              | 1/1       | OVERTAKING                                                                                                                            | V1 STRUCK V2 WHILE ATTEMPTING TO PASS.                                                                            | ABBOTT ROAD                                                          | WEISNER ROAD              |                                                                                                              |  |          |  |
| 128               | 39813154 | 04/27/23 | 8:42 AM  | 2               | PDO      | 1                                                           | 1                 | 1                         | 1        | 4                                                                                   | 2/2       | REAR END                                                                                                                              | V2 WAS REAR ENDED BY V1 WHILE STOPPED AT A RED LIGHT.                                                             | ABBOTT ROAD                                                          | RIDGE ROAD                |                                                                                                              |  |          |  |
| 129               | 39834222 | 05/17/23 | 12:03 PM | 2               | PDO      | 1                                                           | 1                 | 1                         | 1        | 4,7/4,3                                                                             | 6/4       | RIGHT ANGLE                                                                                                                           | V2 STRUCK V1 WHILE BACKING OUT OF DRIVEWAY.                                                                       | ABBOTT ROAD                                                          | ERRINGTON AVENUE          |                                                                                                              |  |          |  |
| 130               | 39848185 | 05/28/23 | 7:29 PM  | 2               | I        | 1                                                           | 1                 | 1                         | 1        | 7                                                                                   | 5/5       | LEFT TURN (WITH OTHER CAR)                                                                                                            | V1 STRUCK V2 WHILE ATTEMPTING TO MAKE A LEFT TURN ONTO ABBOTT ROAD.                                               | ABBOTT ROAD                                                          | FISHER ROAD               |                                                                                                              |  |          |  |
| 131               | 39893285 | 05/29/23 | 7:12 AM  | 2               | PDO      | 1                                                           | 1                 | 1                         | 1        | 7                                                                                   | 1/5       | LEFT TURN (AGAINST OTHER CAR)                                                                                                         | V2 STRUCK V1 WHILE ATTEMPTING TO MAKE A LEFT TURN ONTO DORRANCE AVENUE.                                           | ABBOTT ROAD                                                          | DORRANCE AVENUE           |                                                                                                              |  |          |  |
| 132               | 39870412 | 06/12/23 | 2:44 PM  | 2               | PDO      | 1                                                           | 1                 | 2                         | 3        | 13,4                                                                                | 3/3       | OVERTAKING                                                                                                                            | V1 STRUCK V2 WHILE ATTEMPTING TO PASS.                                                                            | RIDGE ROAD                                                           | ABBOTT ROAD               |                                                                                                              |  |          |  |
| 133               | 39903933 | 07/01/23 | 8:50 AM  | 1               | I        | 1                                                           | 1                 | 1                         | 1        | 7                                                                                   | 7/5       | BICYCLE                                                                                                                               | BICYCLE RAN RED LIGHT AND WAS STRUCK BY V1.                                                                       | RIDGE ROAD                                                           | ABBOTT ROAD               |                                                                                                              |  |          |  |
| 134               | 39931479 | 07/30/23 | 4:23 PM  | 3               | I        | 1                                                           | 1                 | 1                         | 1        | 17,4/4/4                                                                            | 1/3/7     | RIGHT ANGLE                                                                                                                           | V1 RAN RED LIGHT AND STRUCK V2. V2 THEN STRUCK V3.                                                                | ABBOTT ROAD                                                          | DORRANCE AVENUE           |                                                                                                              |  |          |  |
| 135               | 39942682 | 08/08/23 | 10:02 AM | 2               | I        | 1                                                           | 1                 | 2                         | 2        | 7                                                                                   | 6/3       | LEFT TURN (AGAINST OTHER CAR)                                                                                                         | V1 STRUCK V2 WHILE ATTEMPTING TO TURN LEFT ONTO ABBOTT ROAD.                                                      | ABBOTT ROAD                                                          | RIDGE ROAD                |                                                                                                              |  |          |  |
| 136               | 39953241 | 08/15/23 | 8:10 PM  | 2               | I        | 4                                                           | 1                 | 2                         | 3        | 9                                                                                   | 5/5       | REAR END                                                                                                                              | V1 REAR ENDED VEHICLE 2.                                                                                          | ABBOTT ROAD                                                          | LEONARD STREET            |                                                                                                              |  |          |  |
| 137               | 39953232 | 08/17/23 | 2:46 PM  | 2               | PDO      | 1                                                           | 1                 | 1                         | 1        | 4/4                                                                                 | 2/4       | LEFT TURN (AGAINST OTHER CAR)                                                                                                         | V2 FAILED TO YIELD TO TRAFFIC AND STRUCK V1 WHILE TURNING LEFT ONTO RIDGE ROAD.                                   | ABBOTT ROAD                                                          | RIDGE ROAD                |                                                                                                              |  |          |  |
| 138               | 39994614 | 08/20/23 | 6:00 AM  | 1               | PDO      | 4                                                           | 1                 | 1                         | 1        | UNKNOWN                                                                             | 5         | OTHER                                                                                                                                 | V1 STRUCK AN ARROW BOARD IN THE LEFT LANE.                                                                        | ABBOTT ROAD                                                          | WEBER ROAD                |                                                                                                              |  |          |  |
| 139               | 39957428 | 08/21/23 | 11:55 AM | 2               | PDO      | 1                                                           | 1                 | 1                         | 1        | 4                                                                                   | 6/5       | LEFT TURN (AGAINST OTHER CAR)                                                                                                         | V1 STRUCK V2 WHILE ATTEMPTING TO MAKE A LEFT TURN OUT OF PARKING LOT ONTO ABBOTT ROAD.                            | ABBOTT ROAD                                                          | BELL AVENUE               |                                                                                                              |  |          |  |
| 140               | 39961462 | 08/22/23 | 5:27 PM  | 2               | I        | 1                                                           | 1                 | 1                         | 1        | 17                                                                                  | 1/5       | RIGHT ANGLE                                                                                                                           | V1 RAN RED LIGHT AND STRUCK V2.                                                                                   | ABBOTT ROAD                                                          | JULIAN AVE                |                                                                                                              |  |          |  |
| 141               | 39964891 | 08/25/23 | 1:55 PM  | 1               | I        | 1                                                           | 1                 | 2                         | 2        | 17                                                                                  | 5         | PEDESTRIAN                                                                                                                            | V1 STRUCK CONSTRUCTION FLAGGER IN CONSTRUCTION WORK ZONE.                                                         | ABBOTT ROAD                                                          | BEDFORD AVENUE            |                                                                                                              |  |          |  |
| 142               | 39968917 | 08/27/23 | 2:29 PM  | 3               | I        | 1                                                           | 1                 | 1                         | 1        | 16,18                                                                               | 6/1/1     | RIGHT ANGLE                                                                                                                           | V1 STRUCK V2 WHILE ATTEMPTING TO MAKE A LEFT TURN ONTO ABBOTT ROAD. V2 THEN STRUCK V3.                            | ABBOTT ROAD                                                          | JULIAN AVE                |                                                                                                              |  |          |  |
| 143               | 39976561 | 09/05/23 | 8:48 PM  | 2               | PDO      | 4                                                           | 1                 | 1                         | 1        | 7                                                                                   | 6/4       | RIGHT ANGLE                                                                                                                           | V1 RAN A STOP SIGN AND STRUCK V2.                                                                                 | ABBOTT ROAD                                                          | EAGAN DRIVE               |                                                                                                              |  |          |  |
| 144               | 39977251 | 09/06/23 | 2:17 PM  | 2               | PDO      | 1                                                           | 1                 | 1                         | 1        | 4,9                                                                                 | 1/1       | REAR END                                                                                                                              | V2 REAR ENDED V1.                                                                                                 | ABBOTT ROAD                                                          | CARDEN AVENUE             |                                                                                                              |  |          |  |

DIAGRAM No.:

|         |  |            |  |            |  |         |  |                                  |  |  |  |  |                |  |  |  |  |
|---------|--|------------|--|------------|--|---------|--|----------------------------------|--|--|--|--|----------------|--|--|--|--|
| COUNTY: |  | ERIE       |  | P.I.N.:    |  | 5764.15 |  | ROUTE NO. OR STREET NAME:        |  |  |  |  | CASE No.:      |  |  |  |  |
|         |  | TOWN       |  |            |  |         |  | COUNTY ROAD 4 (ABBOTT ROAD)      |  |  |  |  | FILE:          |  |  |  |  |
|         |  | CITY       |  | LACKAWANNA |  |         |  | AT INTERSECTION WITH/OR BETWEEN: |  |  |  |  | BY: BERGMANN   |  |  |  |  |
|         |  | VILLAGE OF |  |            |  |         |  | DORRANCE AVENUE AND FISHER ROAD  |  |  |  |  | DATE: 11/06/25 |  |  |  |  |

| TIME PERIOD       |          |          |          | FROM:    | TO:       | No. of VEHICLES  | SEVERITY          | ENVIRONMENTAL:                                              |         |                               |           | Light Conditions:                                                                   |                                                                                                                                                                                                                   | Roadway Character:                                                                                                                    |                           | Roadway Surface Condition:                                           |  | Weather:                                                                                                     |  |
|-------------------|----------|----------|----------|----------|-----------|------------------|-------------------|-------------------------------------------------------------|---------|-------------------------------|-----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------|----------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------|--|
|                   |          |          |          | 3/1/2021 | 2/29/2024 |                  |                   | Use Codes from MV 104 (shown at right) for these categories |         |                               |           | 1. Daylight<br>2. Dawn<br>3. Dusk<br>4. Dark Road Lighted<br>5. Dark Road Unlighted |                                                                                                                                                                                                                   | 1. Straight & Level<br>2. Straight & Grade<br>3. Straight & Hillcrest<br>4. Curve & Level<br>5. Curve & Grade<br>6. Curve & Hillcrest |                           | 1. Dry<br>2. Wet<br>3. Muddy<br>4. Snow/Ice<br>5. Slush<br>10. Other |  | 1. Clear<br>2. Cloudy<br>3. Rain<br>4. Snow<br>5. Sleet/Hail/Freezing Rain<br>6. Fog/Smog/Smoke<br>10. Other |  |
| No. OF MONTHS: 36 |          |          |          |          |           |                  |                   |                                                             |         |                               |           |                                                                                     |                                                                                                                                                                                                                   |                                                                                                                                       |                           |                                                                      |  |                                                                                                              |  |
| CRASH No.         | CASE No. | DATE     | TIME     |          |           | LIGHT CONDITIONS | ROADWAY CHARACTER | ROADWAY SURFACE CONDITION                                   | WEATHER | APPARENT CONTRIBUTING FACTORS | DIRECTION | TYPE <sup>1</sup>                                                                   | DESCRIPTION                                                                                                                                                                                                       | ROUTE                                                                                                                                 | NEAREST INTERSECTING ROAD |                                                                      |  |                                                                                                              |  |
| 145               | 39982607 | 09/10/23 | 5:21 PM  | 4        | I         | 1                | 1                 | 1                                                           | 1       | 7,18                          | 7/1/3     | RIGHT ANGLE                                                                         | V1 STRUCK V2 WHILE ATTEMPTING TO TURN ONTO ABBOTT ROAD FROM PARKING LOT. V2 OVERTURNED AND STRUCK A PARKING SIGN. V1 STRUCK A STEEL FENCE AND V3 AFTER INITIAL COLLISION. V4 STRUCK DEBRIS FROM THE COLLISION(S). | ABBOTT ROAD                                                                                                                           | LEONARD STREET            |                                                                      |  |                                                                                                              |  |
| 146               | 40182509 | 09/13/23 | 5:45 AM  | 2        | PDO       | 2                | 1                 | 1                                                           | 1       | 4,9                           | 7/7       | REAR END                                                                            | V1 WAS REAR ENDED BY V2 WHILE STOPPED AT A RED LIGHT.                                                                                                                                                             | RIDGE ROAD                                                                                                                            | ABBOTT ROAD               |                                                                      |  |                                                                                                              |  |
| 147               | 40124818 | 09/15/23 | 4:03 PM  | 1        | I         | 1                | 1                 | 1                                                           | 1       | 4                             | 1         | FIXED OBJECT                                                                        | V1 LEFT ROADWAY AND STRUCK METAL POLE.                                                                                                                                                                            | ABBOTT ROAD                                                                                                                           | TURNER AVENUE             |                                                                      |  |                                                                                                              |  |
| 148               | 40028191 | 10/11/23 | 4:21 PM  | 2        | PDO       | 1                | 1                 | 2                                                           | 3       | 9                             | 1/1       | REAR END                                                                            | V2 WAS YIELDING TO A PEDESTRIAN CROSSING AND WAS REAR ENDED BY V2.                                                                                                                                                | ABBOTT ROAD                                                                                                                           | RIDGE ROAD                |                                                                      |  |                                                                                                              |  |
| 149               | 40028063 | 10/12/23 | 12:36 PM | 2        | PDO       | 1                | 1                 | 1                                                           | 2       | 20                            | 5/5       | OVERTAKING                                                                          | V1 STRUCK V2 WHILE CHANGING LANES.                                                                                                                                                                                | ABBOTT ROAD                                                                                                                           | RIDGE ROAD                |                                                                      |  |                                                                                                              |  |
| 150               | 40034328 | 10/13/23 | 5:23 PM  | 3        | PDO       | 1                | 1                 | 1                                                           | 2       | 13,4                          | 5/5/5     | OVERTAKING                                                                          | V1 STRUCK V2 WHILE CHANGING LANES. V2 THEN STRUCK V3.                                                                                                                                                             | ABBOTT ROAD                                                                                                                           | RIDGE ROAD                |                                                                      |  |                                                                                                              |  |
| 151               | 40095832 | 11/26/23 | 6:33 PM  | 2        | PDO       | 4                | 1                 | 2                                                           | 3       | 7,4/4                         | 1/1       | OVERTAKING                                                                          | V2 WAS STRUCK BY V1 WHILE TURNING LEFT ONTO NB ABBOTT ROAD FROM EB RIDGE ROAD. V1 WAS TRAVELING WB TURNING RIGHT ONTO NB ABBOTT ROAD.                                                                             | ABBOTT ROAD                                                                                                                           | RIDGE ROAD                |                                                                      |  |                                                                                                              |  |
| 152               | 40103245 | 12/01/23 | 4:54 PM  | 1        | I         | 4                | 1                 | 2                                                           | 3       | 4                             | 5         | PEDESTRIAN                                                                          | V1 STRUCK PEDESTRIAN THAT WAS CROSSING ABBOTT ROAD.                                                                                                                                                               | ABBOTT ROAD                                                                                                                           | JULIAN AVE                |                                                                      |  |                                                                                                              |  |
| 153               | 40103247 | 12/02/23 | 4:25 PM  | 4        | I         | 1                | 1                 | 2                                                           | 3       | 10,20                         | 7/7/7/7   | OVERTAKING                                                                          | V1 STRUCK V2 AND V3. V1 THEN REAR ENDED V4.                                                                                                                                                                       | RIDGE ROAD                                                                                                                            | ABBOTT ROAD               |                                                                      |  |                                                                                                              |  |
| 154               | 40106585 | 12/04/23 | 6:13 PM  | 2        | PDO       | 4                | 1                 | 1                                                           | 1       | 22,4                          | 1/5       | LEFT TURN (AGAINST OTHER CAR)                                                       | V1 STRUCK V2 WHILE ATTEMPTING TO MAKE A LEFT TURN ONTO RIDGE ROAD.                                                                                                                                                | ABBOTT ROAD                                                                                                                           | RIDGE ROAD                |                                                                      |  |                                                                                                              |  |
| 155               | 40146764 | 12/05/23 | 6:00 PM  | 2        | PDO       | 4                | 1                 | 2                                                           | 2       | 18                            | 3/7       | SIDESWIPE                                                                           | V1 STRUCK V2 WHILE ATTEMPTING TO TURN RIGHT ONTO ABBOTT ROAD.                                                                                                                                                     | ABBOTT ROAD                                                                                                                           | DORRANCE AVENUE           |                                                                      |  |                                                                                                              |  |
| 156               | 40110730 | 12/07/23 | 8:11 AM  | 2        | I         | 1                | 1                 | 2                                                           | 4       | 29                            | 5/5       | OVERTAKING                                                                          | V2 WAS STRUCK BY V1 WHILE MAKING A RIGHT TURN ONTO MEADOWBROOK ROAD.                                                                                                                                              | ABBOTT ROAD                                                                                                                           | MEADOWBROOK DRIVE         |                                                                      |  |                                                                                                              |  |
| 157               | 40127301 | 12/17/23 | 1:09 AM  | 1        | PDO       | 4                | 1                 | 1                                                           | 1       | 61                            | 5         | ANIMAL                                                                              | V1 STRUCK A DEER THAT ENTERED THE ROADWAY.                                                                                                                                                                        | ABBOTT ROAD                                                                                                                           | CARDEN AVENUE             |                                                                      |  |                                                                                                              |  |
| 158               | 40127352 | 12/19/23 | 8:35 AM  | 2        | I         | 1                | 1                 | 4                                                           | 2       | 66/66                         | 5/5       | OVERTAKING                                                                          | V1 SLID ON PAVEMENT AND STRUCK V2.                                                                                                                                                                                | ABBOTT ROAD                                                                                                                           | ELMVIEW AVENUE            |                                                                      |  |                                                                                                              |  |
| 159               | 40136686 | 12/22/23 | 4:05 PM  | 3        | PDO       | 1                | 1                 | 1                                                           | 1       | 20,9                          | 5/5/5     | REAR END                                                                            | V2 REAR ENDED V1. V1 THEN REAR ENDED V3.                                                                                                                                                                          | ABBOTT ROAD                                                                                                                           | RIDGE ROAD                |                                                                      |  |                                                                                                              |  |
| 160               | 40135856 | 12/26/23 | 10:46 AM | 2        | I         | 1                | 1                 | 2                                                           | 3       | 4                             | 7/7       | REAR END                                                                            | V2 WAS REAR ENDED BY V1 WHILE STOPPED FOR TRAFFIC.                                                                                                                                                                | RIDGE ROAD                                                                                                                            | ABBOTT ROAD               |                                                                      |  |                                                                                                              |  |
| 161               | 40145140 | 12/29/23 | 3:31 PM  | 2        | I         | 1                | 1                 | 1                                                           | 1       | 9                             | 7/7       | REAR END                                                                            | V2 WAS REAR ENDED BY V1 WHILE STOPPED AT RED LIGHT.                                                                                                                                                               | RIDGE ROAD                                                                                                                            | ABBOTT ROAD               |                                                                      |  |                                                                                                              |  |
| 162               | 40185021 | 12/30/23 | 9:41 AM  | 2        | I         | 1                | 1                 | 3                                                           | 2       | 18                            | 6/5       | OVERTAKING                                                                          | V1 STRUCK V2 WHILE ATTEMPTING TO MAKE A RIGHT TURN ONTO DORRANCE AVENUE FROM THE LEFT LANE.                                                                                                                       | ABBOTT ROAD                                                                                                                           | DORRANCE AVENUE           |                                                                      |  |                                                                                                              |  |
| 163               | 40185020 | 12/31/23 | 5:52 PM  | 2        | PDO       | 3                | 1                 | 2                                                           | 3       | 19/17                         | 1/4       | LEFT TURN (AGAINST OTHER CAR)                                                       | V2 STRUCK V1 WHILE ATTEMPTING TO MAKE A LEFT TURN ONTO DORRANCE AVENUE.                                                                                                                                           | ABBOTT ROAD                                                                                                                           | DORRANCE AVENUE           |                                                                      |  |                                                                                                              |  |
| 164               | 40175609 | 01/12/24 | 4:11 PM  | 2        | PDO       | 2                | 1                 | 1                                                           | 1       | 4                             | 7/5       | RIGHT ANGLE                                                                         | V1 STRUCK V2 WHILE ATTEMPTING TO TURN LEFT ONTO ABBOTT ROAD OUT OF PARKING LOT.                                                                                                                                   | ABBOTT ROAD                                                                                                                           | BELL AVENUE               |                                                                      |  |                                                                                                              |  |
| 165               | 40168208 | 01/15/24 | 8:16 AM  | 2        | I         | 4                | 1                 | 4                                                           | 4       | 2,9                           | 1/1       | REAR END                                                                            | VEHICLE 2 WAS REAR ENDED BY V1 WHILE STOPPED AT A RED LIGHT.                                                                                                                                                      | ABBOTT ROAD                                                                                                                           | ELMVIEW AVENUE            |                                                                      |  |                                                                                                              |  |
| 166               | 40183367 | 01/17/24 | 12:00 AM | 2        | I         | 5                | 2                 | 4                                                           | 4       | 20                            | 1/2       | OVERTAKING                                                                          | V2 STRUCK V1 WHILE CHANGING LANES.                                                                                                                                                                                | ABBOTT ROAD                                                                                                                           | FISHER ROAD               |                                                                      |  |                                                                                                              |  |
| 167               | 40175082 | 01/21/24 | 10:59 AM | 3        | I         | 1                | 1                 | 2                                                           | 1       | 4,17                          | 5/5/1     | RIGHT TURN (WITH OTHER CAR)                                                         | V1 RAN RED LIGHT AND STRUCK V2. V1 THEN STRUCK V3.                                                                                                                                                                | ABBOTT ROAD                                                                                                                           | DORRANCE AVENUE           |                                                                      |  |                                                                                                              |  |
| 168               | 40263259 | 01/23/24 | 5:57 PM  | 1        | I         | 4                | 1                 | 2                                                           | 3       | 4                             | 5         | PEDESTRIAN                                                                          | V1 STRUCK PEDESTRIAN THAT WAS WALKING NB ALONG ABBOTT ROAD.                                                                                                                                                       | ABBOTT ROAD                                                                                                                           | TURNER AVENUE             |                                                                      |  |                                                                                                              |  |
| 169               | 40184010 | 01/26/24 | 10:45 AM | 2        | PDO       | 1                | 1                 | 2                                                           | 3       | 61,4/61,4                     | 1/1       | OVERTAKING                                                                          | V1 STRUCK V2 WHILE CHANGING LANES TO AVOID LOOSE DOG.                                                                                                                                                             | ABBOTT ROAD                                                                                                                           | WEBER ROAD                |                                                                      |  |                                                                                                              |  |
| 170               | 40219843 | 02/15/24 | 3:52 PM  | 2        | PDO       | 1                | 1                 | 2                                                           | 5       | 20,26/26,4                    | 1/1       | OVERTAKING                                                                          | V1 STRUCK V2 WHILE CHANGING LANES TO AVOID AMBULANCE.                                                                                                                                                             | ABBOTT ROAD                                                                                                                           | MAGNOLIA STREET           |                                                                      |  |                                                                                                              |  |
| 171               | 40303719 | 02/18/24 | 1:07 PM  | 2        | I         | 1                | 1                 | 2                                                           | 4       | 7                             | 4/1       | LEFT TURN (AGAINST OTHER CAR)                                                       | V1 STRUCK V2 WHILE ATTEMPTING TO MAKE A LEFT TURN ONTO DORRANCE AVENUE.                                                                                                                                           | ABBOTT ROAD                                                                                                                           | DORRANCE AVENUE           |                                                                      |  |                                                                                                              |  |

| County Road 4 (Abbott Road) - Full Corridor   |                      |                       |                       |                       |
|-----------------------------------------------|----------------------|-----------------------|-----------------------|-----------------------|
| Crash Summary                                 |                      |                       |                       |                       |
| Crash CATEGORY                                | Abbott Road Corridor |                       |                       |                       |
| FREE, URBAN, UNDIVIDED, 4 LANES - ALL CRASHES |                      |                       |                       |                       |
|                                               | 3 Years              | March 2021-March 2022 | March 2022-March 2023 | March 2023-March 2024 |
| SEVERITY                                      |                      |                       |                       |                       |
| FATALITY CRASHES                              | 0                    | 0                     | 0                     | 0                     |
| INJURY CRASHES                                | 54                   | 15                    | 16                    | 23                    |
| PROPERTY DAMAGE (PDO)                         | 112                  | 42                    | 45                    | 25                    |
| NON-REPORTABLE (NR)                           | 4                    | 3                     | 1                     | 0                     |
| TYPE                                          |                      |                       |                       |                       |
| RIGHT-ANGLE                                   | 38                   | 20                    | 10                    | 8                     |
| RIGHT-TURN                                    | 4                    | 1                     | 2                     | 1                     |
| LEFT-TURN                                     | 36                   | 12                    | 16                    | 8                     |
| OVERTAKING                                    | 35                   | 7                     | 16                    | 12                    |
| SIDESWIPE                                     | 6                    | 1                     | 3                     | 2                     |
| HEAD ON                                       | 2                    | 1                     | 1                     | 0                     |
| REAR-END                                      | 35                   | 12                    | 13                    | 10                    |
| FIXED OBJECT                                  | 2                    | 1                     | 0                     | 1                     |
| PEDESTRIAN                                    | 3                    | 0                     | 0                     | 3                     |
| BICYCLIST                                     | 1                    | 0                     | 0                     | 1                     |
| ANIMAL                                        | 6                    | 4                     | 1                     | 1                     |
| OTHER                                         | 2                    | 1                     | 0                     | 1                     |
| CAUSE                                         |                      |                       |                       |                       |
| HUMAN                                         |                      |                       |                       |                       |
| ALCOHOL INVOLVEMENT                           | 3                    | 0                     | 2                     | 1                     |
| BACKING UNSAFELY                              | 4                    | 2                     | 2                     | 0                     |
| DRIVER INATTENTION                            | 36                   | 9                     | 14                    | 13                    |
| DRIVER INEXPERIENCE                           | 4                    | 1                     | 3                     | 0                     |
| FAILURE TO YIELD ROW                          | 35                   | 14                    | 12                    | 9                     |
| FOLLOWING TOO CLOSE                           | 15                   | 6                     | 5                     | 4                     |
| ILLNESS                                       | 1                    | 0                     | 0                     | 1                     |
| PASSENGER DISTRACTION                         | 1                    | 1                     | 0                     | 0                     |
| IMPROPER PASSING/LANE USE                     | 9                    | 3                     | 4                     | 2                     |
| PRESCRIPTION MEDICATION                       | 2                    | 1                     | 0                     | 1                     |
| DISREGARD TRAFFIC CONTROL                     | 9                    | 4                     | 2                     | 3                     |
| IMPROPER TURNING                              | 10                   | 2                     | 5                     | 3                     |
| UNSAFE SPEED                                  | 2                    | 1                     | 0                     | 1                     |
| UNSAFE LANE CHANGE                            | 12                   | 1                     | 7                     | 4                     |
| FATIGUED/DROWSY                               | 1                    | 1                     | 0                     | 0                     |
| CELL PHONE (HAND-HELD)                        | 1                    | 0                     | 0                     | 1                     |
| REACTION TO UNINVOLVED VEH.                   | 2                    | 1                     | 1                     | 0                     |
| AGGRESSIVE DRIVING                            | 1                    | 1                     | 0                     | 0                     |
| PASSING TOO CLOSELY                           | 1                    | 0                     | 0                     | 1                     |
| ENVIRONMENTAL                                 |                      |                       |                       |                       |
| ANIMAL'S ACTION                               | 7                    | 4                     | 1                     | 2                     |
| GLARE                                         | 3                    | 3                     | 0                     | 0                     |
| OBSTRUCTION/DEBRIS                            | 1                    | 1                     | 0                     | 0                     |
| PAVEMENT SLIPPERY                             | 4                    | 1                     | 2                     | 1                     |
| VIEW OBSTRUCTED/LIMITED                       | 4                    | 2                     | 2                     | 0                     |
| NOT STATED                                    | 2                    | 1                     | 0                     | 1                     |
| PAVEMENT COND.                                |                      |                       |                       |                       |



|                               |        |        |        |        |
|-------------------------------|--------|--------|--------|--------|
| DRY                           | 123    | 49     | 47     | 27     |
| WET                           | 34     | 7      | 10     | 17     |
| MUDDY                         | 1      | 0      | 0      | 1      |
| SNOW/ICE                      | 9      | 3      | 3      | 3      |
| SLUSH                         | 1      | 0      | 1      | 0      |
| NOT STATED                    | 2      | 1      | 1      | 0      |
| TIME OF DAY                   |        |        |        |        |
| 0600-1000                     | 28     | 9      | 10     | 9      |
| 1000-1600                     | 74     | 30     | 28     | 16     |
| 1600-1900                     | 45     | 10     | 18     | 17     |
| 1900-2400                     | 19     | 9      | 6      | 4      |
| 2400-0600                     | 4      | 2      | 0      | 2      |
| DAY OF THE WEEK               |        |        |        |        |
| SUNDAY                        | 17     | 4      | 3      | 10     |
| MONDAY                        | 27     | 11     | 9      | 7      |
| TUESDAY                       | 30     | 11     | 9      | 10     |
| WEDNESDAY                     | 18     | 3      | 10     | 5      |
| THURSDAY                      | 25     | 11     | 9      | 5      |
| FRIDAY                        | 34     | 11     | 15     | 8      |
| SATURDAY                      | 19     | 9      | 7      | 3      |
| MONTH                         |        |        |        |        |
| JANUARY                       | 9      | 3      | 0      | 6      |
| FEBRUARY                      | 11     | 4      | 5      | 2      |
| MARCH                         | 11     | 4      | 7      | 0      |
| APRIL                         | 14     | 4      | 5      | 5      |
| MAY                           | 13     | 4      | 6      | 3      |
| JUNE                          | 16     | 9      | 6      | 1      |
| JULY                          | 12     | 5      | 5      | 2      |
| AUGUST                        | 24     | 10     | 6      | 8      |
| SEPTEMBER                     | 14     | 4      | 5      | 5      |
| OCTOBER                       | 11     | 4      | 4      | 3      |
| NOVEMBER                      | 7      | 3      | 3      | 1      |
| DECEMBER                      | 28     | 6      | 10     | 12     |
| TOTAL                         | 170    | 60     | 62     | 48     |
| crashes/Year - Overall        | 56.67  | 60     | 62     | 48     |
| crashes/Year - Injury types   | 18.00  | 15     | 16     | 23     |
| crashes/Year - PDO types      | 37.33  | 42     | 45     | 25     |
| crashes/Year - NR types       | 1.33   | 3      | 1      | 0      |
| crashes/Year - Right-Angle    | 12.67  | 20     | 10     | 8      |
| crashes/Year - Right-Turn     | 1.33   | 1      | 2      | 1      |
| crashes/Year - Left-Turn      | 12.00  | 12     | 9      | 8      |
| crashes/Year - Overtaking     | 11.67  | 7      | 16     | 12     |
| crashes/Year - Sideswipe      | 2.00   | 1      | 7      | 2      |
| crashes/Year - Head On        | 0.67   | 1      | 8      | 0      |
| crashes/Year - Rear End       | 11.67  | 12     | 13     | 10     |
| crashes/Year - Pedestrian     | 1.00   | 0      | 0      | 3      |
| crashes/Year - Bicyclist      | 0.33   | 0      | 0      | 1      |
| crashes/Year - Animal         | 2.00   | 4      | 1      | 1      |
| crashes/Year - Dry Road       | 41.00  | 49     | 47     | 27     |
| crashes/Year - Wet Road       | 11.33  | 7      | 10     | 17     |
| crashes/Year - Snow/Ice/Slush | 3.33   | 3      | 3      | 4      |
| AADTs                         | 13,180 | 13,798 | 13,117 | 12,626 |
| Rate (crashes/mvm) - Overall  | 10.61  | 10.73  | 11.67  | 9.38   |

|                                         |      |                                                        |      |      |
|-----------------------------------------|------|--------------------------------------------------------|------|------|
| Rate (crashes/mvm) – Injury types       | 3.37 | 2.68                                                   | 3.01 | 4.50 |
| Rate (crashes/mvm) – PDO types          | 6.99 | 7.51                                                   | 8.47 | 4.89 |
| Rate (crashes/mvm) – NR types           | 0.25 | 0.54                                                   | 0.19 | 0.00 |
| Rate (crashes/mvm) – Right-Angle        | 2.37 | 3.58                                                   | 1.88 | 1.56 |
| Rate (crashes/mvm) – Right-Turn         | 0.25 | 0.18                                                   | 0.38 | 0.20 |
| Rate (crashes/mvm) – Left-Turn          | 2.25 | 2.15                                                   | 1.69 | 1.56 |
| Rate (crashes/mvm) – Overtaking         | 2.18 | 1.25                                                   | 3.01 | 2.35 |
| Rate (crashes/mvm) – Sideswipe          | 0.37 | 0.18                                                   | 1.32 | 0.39 |
| Rate (crashes/mvm) – Head On            | 0.12 | 0.18                                                   | 1.51 | 0.00 |
| Rate (crashes/mvm) – Rear End           | 2.18 | 2.15                                                   | 2.45 | 1.95 |
| Rate (crashes/mvm) – Pedestrian         | 0.19 | 0.00                                                   | 0.00 | 0.59 |
| Rate (crashes/mvm) – Bicyclist          | 0.06 | 0.00                                                   | 0.00 | 0.20 |
| Rate (crashes/mvm) – Animal             | 0.37 | 0.72                                                   | 0.19 | 0.20 |
| Rate (crashes/mvm) – Dry Road           | 7.68 | 8.77                                                   | 8.84 | 5.28 |
| Rate (crashes/mvm) – Wet Road           | 2.12 | 1.25                                                   | 1.88 | 3.32 |
| Rate (crashes/mvm) – Snow/Ice/Slush Rd. | 0.62 | 0.54                                                   | 0.56 | 0.78 |
| <b>State Average Crash Rates:</b>       |      |                                                        |      |      |
| Rate (crashes/mvm) – Overall            | 6.11 |                                                        |      |      |
| Rate (crashes/mvm) – Injury types       | 1.31 |                                                        |      |      |
| Rate (crashes/mvm) – PDO types          | 4.79 |                                                        |      |      |
| Rate (crashes/mvm) – NR types           | 0.00 |                                                        |      |      |
| Rate (crashes/mvm) – Right-Angle        | 0.92 |                                                        |      |      |
| Rate (crashes/mvm) – Right-Turn         | 0.14 |                                                        |      |      |
| Rate (crashes/mvm) – Left-Turn          | 0.42 |                                                        |      |      |
| Rate (crashes/mvm) – Overtaking         | 1.11 |                                                        |      |      |
| Rate (crashes/mvm) – Sideswipe          | 0.12 |                                                        |      |      |
| Rate (crashes/mvm) – Head On            | 0.07 |                                                        |      |      |
| Rate (crashes/mvm) – Rear End           | 2.03 |                                                        |      |      |
| Rate (crashes/mvm) – Pedestrian         | 0.09 |                                                        |      |      |
| Rate (crashes/mvm) – Bicyclist          | 0.05 |                                                        |      |      |
| Rate (crashes/mvm) – Animal             | 0.18 |                                                        |      |      |
| Rate (crashes/mvm) – Dry Road           | 4.53 |                                                        |      |      |
| Rate (crashes/mvm) – Wet Road           | 1.13 |                                                        |      |      |
| Rate (crashes/mvm) – Snow/Ice/Slush Rd. | 0.35 |                                                        |      |      |
|                                         | 4.50 | Overall Crash rate above statewide average             |      |      |
|                                         | 2.06 | Injury type Crash rate above statewide average         |      |      |
|                                         | 2.20 | PDO type Crash rate above statewide average            |      |      |
|                                         | 0.25 | NR type Crash rate above statewide average             |      |      |
|                                         | 1.45 | Right-Angle Crash rate above statewide average         |      |      |
|                                         | 0.11 | Right-Turn Crash rate above statewide average          |      |      |
|                                         | 1.83 | Left-Turn Crash rate above statewide average           |      |      |
|                                         | 1.07 | Overtaking Crash rate above statewide average          |      |      |
|                                         | 0.25 | Sideswipe Crash rate above statewide average           |      |      |
|                                         | 0.05 | Head On Crash rate above statewide average             |      |      |
|                                         | 0.15 | Rear End Crash rate above statewide average            |      |      |
|                                         | 0.10 | Pedestrian Crash rate above statewide average          |      |      |
|                                         | 0.01 | Bicyclist Crash rate above statewide average           |      |      |
|                                         | 0.19 | Animal Crash rate above statewide average              |      |      |
|                                         | 3.15 | Dry Road Crash rate above statewide average            |      |      |
|                                         | 0.99 | Wet Road Crash rate above statewide average            |      |      |
|                                         | 0.27 | Snow/Ice/Slush Road Crash rate above statewide average |      |      |

| Abbott Road and Ridge Road Intersection           |                                         |                       |                       |                       |
|---------------------------------------------------|-----------------------------------------|-----------------------|-----------------------|-----------------------|
| Crash Summary                                     |                                         |                       |                       |                       |
| CRASH CATEGORY                                    | Abbott Road and Ridge Road Intersection |                       |                       |                       |
| 4 & > LEGS, URBAN, LEFT TURN, SIGNAL, 5 & > LANES |                                         |                       |                       |                       |
|                                                   | 3 Years                                 | March 2021-March 2022 | March 2022-March 2023 | March 2023-March 2024 |
| SEVERITY                                          |                                         |                       |                       |                       |
| FATALITY CRASHES                                  | 0                                       | 0                     | 0                     | 0                     |
| INJURY CRASHES                                    | 21                                      | 10                    | 6                     | 5                     |
| PROPERTY DAMAGE (PDO)                             | 52                                      | 18                    | 24                    | 10                    |
| NON-REPORTABLE (NR)                               | 2                                       | 2                     | 0                     | 0                     |
| TYPE                                              |                                         |                       |                       |                       |
| RIGHT-ANGLE                                       | 18                                      | 14                    | 4                     | 0                     |
| RIGHT-TURN                                        | 1                                       | 0                     | 1                     | 0                     |
| LEFT-TURN                                         | 18                                      | 5                     | 10                    | 3                     |
| OVERTAKING                                        | 15                                      | 3                     | 7                     | 5                     |
| SIDESWIPE                                         | 0                                       | 0                     | 0                     | 0                     |
| REAR-END                                          | 22                                      | 8                     | 8                     | 6                     |
| PEDESTRIAN                                        | 0                                       | 0                     | 0                     | 0                     |
| BICYCLIST                                         | 1                                       | 0                     | 0                     | 1                     |
| CAUSE                                             |                                         |                       |                       |                       |
| HUMAN                                             |                                         |                       |                       |                       |
| BACKING UNSAFELY                                  | 1                                       | 0                     | 1                     | 0                     |
| DRIVER INATTENTION                                | 14                                      | 2                     | 8                     | 4                     |
| DRIVER INEXPERIENCE                               | 3                                       | 1                     | 2                     |                       |
| FAILURE TO YIELD ROW                              | 16                                      | 9                     | 4                     | 3                     |
| FOLLOWING TOO CLOSE                               | 11                                      | 6                     | 3                     | 2                     |
| ILLNESS                                           | 1                                       | 0                     | 0                     | 1                     |
| IMPROPER PASSING                                  | 4                                       | 1                     | 1                     | 2                     |
| IGNORE TRAFFIC CONTROL                            | 5                                       | 4                     | 1                     | 0                     |
| IMPROPER TURNING                                  | 5                                       | 1                     | 4                     | 0                     |
| UNSAFE SPEED                                      | 1                                       | 1                     | 0                     | 0                     |
| UNSAFE LANE CHANGE                                | 6                                       | 0                     | 4                     | 2                     |
| CELL PHONE (HAND-HELD)                            | 1                                       | 0                     | 0                     | 1                     |
| REACTION TO UNINVOLVED VEH.                       | 1                                       | 1                     | 0                     | 0                     |
| ENVIRONMENTAL                                     |                                         |                       |                       |                       |
| GLARE                                             | 3                                       | 3                     | 0                     | 0                     |
| PAVEMENT SLIPPERY                                 | 2                                       | 1                     | 1                     | 0                     |
| VIEW OBSTRUCTED/LIMITED                           | 1                                       | 0                     | 1                     | 0                     |
| PAVEMENT COND.                                    |                                         |                       |                       |                       |
| DRY                                               | 56                                      | 23                    | 24                    | 9                     |
| WET                                               | 15                                      | 5                     | 4                     | 6                     |
| SNOW/ICE                                          | 2                                       | 1                     | 1                     | 0                     |
| SLUSH                                             | 1                                       | 0                     | 0                     | 1                     |
| NOT STATED                                        | 1                                       | 1                     | 0                     | 0                     |
| TIME OF DAY                                       |                                         |                       |                       |                       |
| 0600-1000                                         | 14                                      | 6                     | 6                     | 2                     |
| 1000-1600                                         | 32                                      | 12                    | 14                    | 6                     |
| 1600-1900                                         | 17                                      | 6                     | 5                     | 6                     |
| 1900-2400                                         | 10                                      | 5                     | 5                     | 0                     |
| 2400-0600                                         | 2                                       | 1                     | 0                     | 1                     |
| DAY OF THE WEEK                                   |                                         |                       |                       |                       |



|                                    |        |        |        |        |
|------------------------------------|--------|--------|--------|--------|
| SUNDAY                             | 3      | 1      | 1      | 1      |
| MONDAY                             | 13     | 5      | 6      | 2      |
| TUESDAY                            | 14     | 7      | 5      | 2      |
| WEDNESDAY                          | 8      | 3      | 3      | 2      |
| THURSDAY                           | 12     | 5      | 4      | 3      |
| FRIDAY                             | 16     | 6      | 7      | 3      |
| SATURDAY                           | 9      | 3      | 4      | 2      |
| MONTH                              |        |        |        |        |
| JANUARY                            | 1      | 1      | 0      | 0      |
| FEBRUARY                           | 6      | 3      | 3      | 0      |
| MARCH                              | 5      | 3      | 2      | 0      |
| APRIL                              | 5      | 1      | 3      | 1      |
| MAY                                | 6      |        | 6      | 0      |
| JUNE                               | 10     | 5      | 4      | 1      |
| JULY                               | 6      | 3      | 2      | 1      |
| AUGUST                             | 12     | 6      | 4      | 2      |
| SEPTEMBER                          | 5      | 2      | 2      | 1      |
| OCTOBER                            | 5      | 2      | 0      | 3      |
| NOVEMBER                           | 4      | 1      | 2      | 1      |
| DECEMBER                           | 10     | 3      | 2      | 5      |
| TOTAL                              | 75     | 30     | 30     | 15     |
| crashes/Year - Overall             | 25.00  | 30     | 30     | 15     |
| crashes/Year - Injury types        | 7.00   | 10     | 6      | 5      |
| crashes/Year - PDO types           | 17.33  | 18     | 24     | 10     |
| crashes/Year - NR types            | 0.67   | 2      | 0      | 0      |
| crashes/Year - Right-Angle         | 6.00   | 14     | 4      | 0      |
| crashes/Year - Right-Turn          | 0.33   | 0      | 1      | 0      |
| crashes/Year - Left-Turn           | 6.00   | 5      | 9      | 3      |
| crashes/Year - Overtaking          | 5.00   | 3      | 7      | 5      |
| crashes/Year - Sideswipe           | 0.00   | 0      | 7      | 0      |
| crashes/Year - Rear-End            | 7.33   | 8      | 8      | 6      |
| crashes/Year - Pedestrian          | 0.00   | 0      | 0      | 0      |
| crashes/Year - Bicyclist           | 0.33   | 0      | 0      | 1      |
| crashes/Year - Dry Road            | 18.67  | 23     | 24     | 9      |
| crashes/Year - Wet Road            | 5.00   | 5      | 4      | 6      |
| crashes/Year - Snow/Ice/Slush Road | 1.00   | 1      | 1      | 1      |
| NB AADT (Abbott Road)              | 5782   | 5738   | 5782   | 5826   |
| SB AADT (Abbott Road)              | 6584   | 6534   | 6584   | 6634   |
| EB AADT (Ridge Road)               | 6098   | 6052   | 6098   | 6144   |
| WB AADT (Ridge Road)               | 11276  | 11191  | 11276  | 11362  |
| Sum of Directional AADTs           | 29,740 | 29,516 | 29,740 | 29,966 |
| Rate (crashes/mev) - Overall       | 2.30   | 2.78   | 2.76   | 1.37   |
| Rate (crashes/mev) - Injury types  | 0.64   | 0.93   | 0.55   | 0.46   |
| Rate (crashes/mev) - PDO types     | 1.60   | 1.67   | 2.21   | 0.91   |
| Rate (crashes/mev) - NR types      | 0.06   | 0.19   | 0.00   | 0.00   |
| Rate (crashes/mev) - Right-Angle   | 0.55   | 1.30   | 0.37   | 0.00   |
| Rate (crashes/mev) - Right-Turn    | 0.03   | 0.00   | 0.09   | 0.00   |
| Rate (crashes/mev) - Left-Turn     | 0.55   | 0.46   | 0.83   | 0.27   |
| Rate (crashes/mev) - Overtaking    | 0.46   | 0.28   | 0.64   | 0.46   |
| Rate (crashes/mev) - Sideswipe     | 0.00   | 0.00   | 0.64   | 0.00   |
| Rate (crashes/mev) - Rear End      | 0.68   | 0.74   | 0.74   | 0.55   |
| Rate (crashes/mev) - Pedestrian    | 0.00   | 0.00   | 0.00   | 0.00   |
| Rate (crashes/mev) - Bicyclist     | 0.03   | 0.00   | 0.00   | 0.09   |
| Rate (crashes/mev) - Dry Road      | 1.72   | 2.13   | 2.21   | 0.82   |

|                                         |      |                                                        |      |      |
|-----------------------------------------|------|--------------------------------------------------------|------|------|
| Rate (crashes/mev) - Wet Road           | 0.46 | 0.46                                                   | 0.37 | 0.55 |
| Rate (crashes/mev) - Snow/Ice/Slush Rd. | 0.09 | 0.09                                                   | 0.09 | 0.09 |
| <b>State Average Crash Rates:</b>       |      |                                                        |      |      |
| Rate (crashes/mev) - Overall            | 0.24 |                                                        |      |      |
| Rate (crashes/mev) - Injury types       | 0.06 |                                                        |      |      |
| Rate (crashes/mev) - PDO types          | 0.18 |                                                        |      |      |
| Rate (crashes/mev) - NR types           | 0.00 |                                                        |      |      |
| Rate (crashes/mev) - Right-Angle        | 0.03 |                                                        |      |      |
| Rate (crashes/mev) - Right-Turn         | 0.01 |                                                        |      |      |
| Rate (crashes/mev) - Left-Turn          | 0.01 |                                                        |      |      |
| Rate (crashes/mev) - Overtaking         | 0.04 |                                                        |      |      |
| Rate (crashes/mev) - Sideswipe          | 0.00 |                                                        |      |      |
| Rate (crashes/mev) - Rear End           | 0.11 |                                                        |      |      |
| Rate (crashes/mev) - Pedestrian         | 0.00 |                                                        |      |      |
| Rate (crashes/mev) - Bicyclist          | 0.00 |                                                        |      |      |
| Rate (crashes/mev) - Dry Road           | 0.19 |                                                        |      |      |
| Rate (crashes/mev) - Wet Road           | 0.04 |                                                        |      |      |
| Rate (crashes/mev) - Snow/Ice/Slush Rd. | 0.01 |                                                        |      |      |
|                                         | 2.06 | Overall Crash rate above statewide average             |      |      |
|                                         | 0.58 | Injury type Crash rate above statewide average         |      |      |
|                                         | 1.42 | PDO type Crash rate above statewide average            |      |      |
|                                         | 0.06 | NR type Crash rate above statewide average             |      |      |
|                                         | 0.52 | Right-Angle Crash rate above statewide average         |      |      |
|                                         | 0.02 | Right-Turn Crash rate above statewide average          |      |      |
|                                         | 0.54 | Left-Turn Crash rate above statewide average           |      |      |
|                                         | 0.42 | Overtaking Crash rate above statewide average          |      |      |
|                                         | 0.00 | Sideswipe Crash rate above statewide average           |      |      |
|                                         | 0.57 | Rear-End Crash rate above statewide average            |      |      |
|                                         | 0.00 | Pedestrian Crash rate above statewide average          |      |      |
|                                         | 0.03 | Bicyclist Crash rate above statewide average           |      |      |
|                                         | 1.53 | Dry Road Crash rate above statewide average            |      |      |
|                                         | 0.42 | Wet Road Crash rate above statewide average            |      |      |
|                                         | 0.08 | Snow/Ice/Slush Road Crash rate above statewide average |      |      |



# Appendix C

## Turning Movement Forecast



**Abbott Road (CR 4) - Fisher Road to Buffalo City Line**  
City of Lackawanna, Erie County NY

| Growth Rate Per Year: 0.50%    |       | Weekday AM Peak |             |                |                | Weekday PM Peak |             |                |                |
|--------------------------------|-------|-----------------|-------------|----------------|----------------|-----------------|-------------|----------------|----------------|
| Abbott Road at Dorrance Avenue |       | 2024<br>Count   | 2030<br>ETC | 2040<br>ETC+10 | 2050<br>ETC+20 | 2024<br>Count   | 2030<br>ETC | 2040<br>ETC+10 | 2050<br>ETC+20 |
| Eastbound                      | Left  | 12              | 12          | 13             | 14             | 30              | 31          | 32             | 34             |
|                                | Thru  | 66              | 68          | 71             | 75             | 115             | 118         | 125            | 131            |
|                                | Right | 78              | 80          | 84             | 89             | 121             | 125         | 131            | 138            |
| Westbound                      | Left  | 39              | 40          | 42             | 44             | 52              | 54          | 56             | 59             |
|                                | Thru  | 54              | 56          | 58             | 61             | 96              | 99          | 104            | 109            |
|                                | Right | 27              | 28          | 29             | 31             | 57              | 59          | 62             | 65             |
| Northbound                     | Left  | 95              | 98          | 103            | 108            | 158             | 163         | 171            | 180            |
|                                | Thru  | 173             | 178         | 187            | 197            | 296             | 305         | 321            | 337            |
|                                | Right | 39              | 40          | 42             | 44             | 61              | 63          | 66             | 69             |
| Southbound                     | Left  | 24              | 25          | 26             | 27             | 23              | 24          | 25             | 26             |
|                                | Thru  | 188             | 194         | 204            | 214            | 285             | 294         | 309            | 324            |
|                                | Right | 14              | 14          | 15             | 16             | 26              | 27          | 28             | 30             |

| Abbott Road at Plaza Driveway / Julian Avenue |       | 2024<br>Count | 2030<br>ETC | 2040<br>ETC+10 | 2050<br>ETC+20 | 2024<br>Count | 2030<br>ETC | 2040<br>ETC+10 | 2050<br>ETC+20 |
|-----------------------------------------------|-------|---------------|-------------|----------------|----------------|---------------|-------------|----------------|----------------|
| Eastbound                                     | Left  | 1             | 1           | 1              | 1              | 3             | 3           | 3              | 3              |
|                                               | Thru  | 0             | 0           | 0              | 0              | 0             | 0           | 0              | 0              |
|                                               | Right | 8             | 8           | 9              | 9              | 8             | 8           | 9              | 9              |
| Westbound                                     | Left  | 42            | 43          | 45             | 48             | 93            | 96          | 101            | 106            |
|                                               | Thru  | 3             | 3           | 3              | 3              | 4             | 4           | 4              | 5              |
|                                               | Right | 4             | 4           | 4              | 5              | 3             | 3           | 3              | 3              |
| Northbound                                    | Left  | 2             | 2           | 2              | 2              | 8             | 8           | 9              | 9              |
|                                               | Thru  | 322           | 332         | 349            | 367            | 511           | 527         | 553            | 582            |
|                                               | Right | 72            | 74          | 78             | 82             | 87            | 90          | 94             | 99             |
| Southbound                                    | Left  | 2             | 2           | 2              | 2              | 4             | 4           | 4              | 5              |
|                                               | Thru  | 284           | 293         | 308            | 323            | 450           | 464         | 487            | 512            |
|                                               | Right | 6             | 6           | 6              | 7              | 6             | 6           | 6              | 7              |

| Abbott Road at Ridge Road |       | 2024<br>Count | 2030<br>ETC | 2040<br>ETC+10 | 2050<br>ETC+20 | 2024<br>Count | 2030<br>ETC | 2040<br>ETC+10 | 2050<br>ETC+20 |
|---------------------------|-------|---------------|-------------|----------------|----------------|---------------|-------------|----------------|----------------|
| Eastbound                 | Left  | 33            | 34          | 36             | 38             | 60            | 62          | 65             | 68             |
|                           | Thru  | 394           | 406         | 427            | 449            | 534           | 550         | 578            | 608            |
|                           | Right | 43            | 44          | 47             | 49             | 65            | 67          | 70             | 74             |
| Westbound                 | Left  | 148           | 152         | 160            | 168            | 246           | 253         | 266            | 280            |
|                           | Thru  | 358           | 369         | 388            | 408            | 417           | 430         | 452            | 475            |
|                           | Right | 228           | 235         | 247            | 260            | 337           | 347         | 365            | 384            |
| Northbound                | Left  | 47            | 48          | 51             | 54             | 40            | 41          | 43             | 46             |
|                           | Thru  | 119           | 123         | 129            | 135            | 262           | 270         | 284            | 298            |
|                           | Right | 197           | 203         | 213            | 224            | 210           | 216         | 227            | 239            |
| Southbound                | Left  | 165           | 170         | 179            | 188            | 246           | 253         | 266            | 280            |
|                           | Thru  | 150           | 155         | 162            | 171            | 260           | 268         | 282            | 296            |
|                           | Right | 26            | 27          | 28             | 30             | 49            | 50          | 53             | 56             |

| Abbott Road at Fernald Avenue |       | 2024<br>Count | 2030<br>ETC | 2040<br>ETC+10 | 2050<br>ETC+20 | 2024<br>Count | 2030<br>ETC | 2040<br>ETC+10 | 2050<br>ETC+20 |
|-------------------------------|-------|---------------|-------------|----------------|----------------|---------------|-------------|----------------|----------------|
| Eastbound                     | Left  | 0             | 0           | 0              | 0              | 2             | 2           | 2              | 2              |
|                               | Thru  | 0             | 0           | 0              | 0              | 0             | 0           | 0              | 0              |
|                               | Right | 1             | 1           | 1              | 1              | 1             | 1           | 1              | 1              |
| Westbound                     | Left  | 14            | 14          | 15             | 16             | 13            | 13          | 14             | 15             |
|                               | Thru  | 0             | 0           | 0              | 0              | 0             | 0           | 0              | 0              |
|                               | Right | 6             | 6           | 6              | 7              | 10            | 10          | 11             | 11             |
| Northbound                    | Left  | 3             | 3           | 3              | 3              | 0             | 0           | 0              | 0              |
|                               | Thru  | 348           | 359         | 377            | 396            | 489           | 504         | 530            | 557            |
|                               | Right | 4             | 4           | 4              | 5              | 32            | 33          | 35             | 36             |
| Southbound                    | Left  | 3             | 3           | 3              | 3              | 21            | 22          | 23             | 24             |
|                               | Thru  | 319           | 329         | 345            | 363            | 552           | 569         | 598            | 628            |
|                               | Right | 2             | 2           | 2              | 2              | 0             | 0           | 0              | 0              |

| Abbott Road at Elmview Avenue |       | 2024<br>Count | 2030<br>ETC | 2040<br>ETC+10 | 2050<br>ETC+20 | 2024<br>Count | 2030<br>ETC | 2040<br>ETC+10 | 2050<br>ETC+20 |
|-------------------------------|-------|---------------|-------------|----------------|----------------|---------------|-------------|----------------|----------------|
| Eastbound                     | Left  | 17            | 18          | 18             | 19             | 17            | 18          | 18             | 19             |
|                               | Thru  | 1             | 1           | 1              | 1              | 1             | 1           | 1              | 1              |
|                               | Right | 6             | 6           | 6              | 7              | 6             | 6           | 6              | 7              |
| Westbound                     | Left  | 4             | 4           | 4              | 5              | 6             | 6           | 6              | 7              |
|                               | Thru  | 0             | 0           | 0              | 0              | 1             | 1           | 1              | 1              |
|                               | Right | 3             | 3           | 3              | 3              | 10            | 10          | 11             | 11             |
| Northbound                    | Left  | 3             | 3           | 3              | 3              | 7             | 7           | 8              | 8              |
|                               | Thru  | 319           | 329         | 345            | 363            | 477           | 491         | 517            | 543            |
|                               | Right | 2             | 2           | 2              | 2              | 8             | 8           | 9              | 9              |
| Southbound                    | Left  | 3             | 3           | 3              | 3              | 19            | 20          | 21             | 22             |
|                               | Thru  | 320           | 330         | 347            | 364            | 516           | 532         | 559            | 587            |
|                               | Right | 9             | 9           | 10             | 10             | 17            | 18          | 18             | 19             |



# Appendix D

## Traffic Analysis

**2024 Existing**



## Lanes, Volumes, Timings

## Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

## 1: Abbott Road &amp; Dorrance Avenue

10/11/2024

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                    |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)       | 12                                                                                | 66                                                                                | 78                                                                                | 39                                                                                | 54                                                                                | 27                                                                                | 95                                                                                 | 173                                                                                 | 39                                                                                  | 24                                                                                  | 188                                                                                 | 14                                                                                  |
| Future Volume (vph)        | 12                                                                                | 66                                                                                | 78                                                                                | 39                                                                                | 54                                                                                | 27                                                                                | 95                                                                                 | 173                                                                                 | 39                                                                                  | 24                                                                                  | 188                                                                                 | 14                                                                                  |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                               | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Lane Width (ft)            | 10                                                                                | 10                                                                                | 10                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 10                                                                                 | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  |
| Lane Util. Factor          | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                               | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                |
| Ped Bike Factor            |                                                                                   | 0.99                                                                              |                                                                                   |                                                                                   | 0.99                                                                              |                                                                                   |                                                                                    | 1.00                                                                                |                                                                                     |                                                                                     | 1.00                                                                                |                                                                                     |
| Frt                        |                                                                                   | 0.925                                                                             |                                                                                   |                                                                                   | 0.966                                                                             |                                                                                   |                                                                                    | 0.981                                                                               |                                                                                     |                                                                                     | 0.991                                                                               |                                                                                     |
| Flt Protected              |                                                                                   | 0.996                                                                             |                                                                                   |                                                                                   | 0.984                                                                             |                                                                                   |                                                                                    | 0.985                                                                               |                                                                                     |                                                                                     | 0.995                                                                               |                                                                                     |
| Satd. Flow (prot)          | 0                                                                                 | 3011                                                                              | 0                                                                                 | 0                                                                                 | 3348                                                                              | 0                                                                                 | 0                                                                                  | 3150                                                                                | 0                                                                                   | 0                                                                                   | 3176                                                                                | 0                                                                                   |
| Flt Permitted              |                                                                                   | 0.930                                                                             |                                                                                   |                                                                                   | 0.824                                                                             |                                                                                   |                                                                                    | 0.784                                                                               |                                                                                     |                                                                                     | 0.920                                                                               |                                                                                     |
| Satd. Flow (perm)          | 0                                                                                 | 2811                                                                              | 0                                                                                 | 0                                                                                 | 2799                                                                              | 0                                                                                 | 0                                                                                  | 2504                                                                                | 0                                                                                   | 0                                                                                   | 2936                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                    |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 83                                                                                |                                                                                   |                                                                                   | 29                                                                                |                                                                                   |                                                                                    | 28                                                                                  |                                                                                     |                                                                                     | 15                                                                                  |                                                                                     |
| Link Speed (mph)           |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                    | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 300                                                                               |                                                                                   |                                                                                   | 300                                                                               |                                                                                   |                                                                                    | 688                                                                                 |                                                                                     |                                                                                     | 452                                                                                 |                                                                                     |
| Travel Time (s)            |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                    | 15.6                                                                                |                                                                                     |                                                                                     | 10.3                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                  |                                                                                     | 5                                                                                   | 5                                                                                   |                                                                                     | 5                                                                                   |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                    |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |
| Peak Hour Factor           | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                               | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                 | 4%                                                                                  | 2%                                                                                  | 2%                                                                                  | 5%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 13                                                                                | 70                                                                                | 83                                                                                | 41                                                                                | 57                                                                                | 29                                                                                | 101                                                                                | 184                                                                                 | 41                                                                                  | 26                                                                                  | 200                                                                                 | 15                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 0                                                                                 | 166                                                                               | 0                                                                                 | 0                                                                                 | 127                                                                               | 0                                                                                 | 0                                                                                  | 326                                                                                 | 0                                                                                   | 0                                                                                   | 241                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |                                                                                   |                                                                                    | 16                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.09                                                                              | 1.09                                                                              | 1.09                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.09                                                                               | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                |
| Turning Speed (mph)        | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                 |                                                                                     | 60                                                                                  | 60                                                                                  |                                                                                     | 60                                                                                  |
| Turn Type                  | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                               | NA                                                                                  |                                                                                     | pm+pt                                                                               | NA                                                                                  |                                                                                     |
| Protected Phases           |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   |                                                                                    | 2                                                                                   |                                                                                     | 1                                                                                   | 6                                                                                   |                                                                                     |
| Permitted Phases           | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 2                                                                                  |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |                                                                                     |
| Minimum Split (s)          | 20.0                                                                              | 20.0                                                                              |                                                                                   | 20.0                                                                              | 20.0                                                                              |                                                                                   | 27.0                                                                               | 27.0                                                                                |                                                                                     | 10.0                                                                                | 27.0                                                                                |                                                                                     |
| Total Split (s)            | 20.0                                                                              | 20.0                                                                              |                                                                                   | 20.0                                                                              | 20.0                                                                              |                                                                                   | 35.0                                                                               | 35.0                                                                                |                                                                                     | 15.0                                                                                | 50.0                                                                                |                                                                                     |
| Total Split (%)            | 28.6%                                                                             | 28.6%                                                                             |                                                                                   | 28.6%                                                                             | 28.6%                                                                             |                                                                                   | 50.0%                                                                              | 50.0%                                                                               |                                                                                     | 21.4%                                                                               | 71.4%                                                                               |                                                                                     |
| Maximum Green (s)          | 15.0                                                                              | 15.0                                                                              |                                                                                   | 15.0                                                                              | 15.0                                                                              |                                                                                   | 30.0                                                                               | 30.0                                                                                |                                                                                     | 10.0                                                                                | 45.0                                                                                |                                                                                     |
| Yellow Time (s)            | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                                | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| All-Red Time (s)           | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                                | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Lost Time Adjust (s)       |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)        |                                                                                   | 5.0                                                                               |                                                                                   |                                                                                   | 5.0                                                                               |                                                                                   |                                                                                    | 5.0                                                                                 |                                                                                     |                                                                                     | 5.0                                                                                 |                                                                                     |
| Lead/Lag                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Lag                                                                                | Lag                                                                                 |                                                                                     | Lead                                                                                |                                                                                     |                                                                                     |
| Lead-Lag Optimize?         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Walk Time (s)              | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                                | 7.0                                                                                 |                                                                                     |                                                                                     | 7.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)        | 8.0                                                                               | 8.0                                                                               |                                                                                   | 8.0                                                                               | 8.0                                                                               |                                                                                   | 15.0                                                                               | 15.0                                                                                |                                                                                     |                                                                                     | 15.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr)    | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                  | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |
| Act Effect Green (s)       |                                                                                   | 15.0                                                                              |                                                                                   |                                                                                   | 15.0                                                                              |                                                                                   |                                                                                    | 30.0                                                                                |                                                                                     |                                                                                     | 45.0                                                                                |                                                                                     |

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Actuated g/C Ratio      |                                                                                   | 0.21                                                                              |                                                                                   |                                                                                   | 0.21                                                                              |                                                                                   |                                                                                    | 0.43                                                                                |                                                                                     |                                                                                     | 0.64                                                                                |                                                                                     |
| v/c Ratio               |                                                                                   | 0.25                                                                              |                                                                                   |                                                                                   | 0.20                                                                              |                                                                                   |                                                                                    | 0.30                                                                                |                                                                                     |                                                                                     | 0.13                                                                                |                                                                                     |
| Control Delay           |                                                                                   | 13.3                                                                              |                                                                                   |                                                                                   | 18.6                                                                              |                                                                                   |                                                                                    | 12.8                                                                                |                                                                                     |                                                                                     | 4.7                                                                                 |                                                                                     |
| Queue Delay             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Total Delay             |                                                                                   | 13.3                                                                              |                                                                                   |                                                                                   | 18.6                                                                              |                                                                                   |                                                                                    | 12.8                                                                                |                                                                                     |                                                                                     | 4.7                                                                                 |                                                                                     |
| LOS                     |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                    | B                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 13.3                                                                              |                                                                                   |                                                                                   | 18.6                                                                              |                                                                                   |                                                                                    | 12.8                                                                                |                                                                                     |                                                                                     | 4.7                                                                                 |                                                                                     |
| Approach LOS            |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                    | B                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |
| Queue Length 50th (ft)  |                                                                                   | 15                                                                                |                                                                                   |                                                                                   | 18                                                                                |                                                                                   |                                                                                    | 42                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Queue Length 95th (ft)  |                                                                                   | 39                                                                                |                                                                                   |                                                                                   | 39                                                                                |                                                                                   |                                                                                    | 70                                                                                  |                                                                                     |                                                                                     | 28                                                                                  |                                                                                     |
| Internal Link Dist (ft) |                                                                                   | 220                                                                               |                                                                                   |                                                                                   | 220                                                                               |                                                                                   |                                                                                    | 608                                                                                 |                                                                                     |                                                                                     | 372                                                                                 |                                                                                     |
| Turn Bay Length (ft)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Base Capacity (vph)     |                                                                                   | 667                                                                               |                                                                                   |                                                                                   | 622                                                                               |                                                                                   |                                                                                    | 1089                                                                                |                                                                                     |                                                                                     | 1927                                                                                |                                                                                     |
| Starvation Cap Reductn  |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Spillback Cap Reductn   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Storage Cap Reductn     |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Reduced v/c Ratio       |                                                                                   | 0.25                                                                              |                                                                                   |                                                                                   | 0.20                                                                              |                                                                                   |                                                                                    | 0.30                                                                                |                                                                                     |                                                                                     | 0.13                                                                                |                                                                                     |

## Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 0.30

Intersection Signal Delay: 11.5

Intersection LOS: B

Intersection Capacity Utilization 78.3%

ICU Level of Service D

Analysis Period (min) 15

## Splits and Phases: 1: Abbott Road &amp; Dorrance Avenue



Lanes, Volumes, Timings  
2: Abbott Road & Plaza Driveway

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

10/11/2024

|                            |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                 | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations        |  |  |  |                                                                                   |                                                                                   |  |
| Traffic Volume (vph)       | 45                                                                                | 4                                                                                 | 323                                                                               | 72                                                                                | 2                                                                                 | 290                                                                               |
| Future Volume (vph)        | 45                                                                                | 4                                                                                 | 323                                                                               | 72                                                                                | 2                                                                                 | 290                                                                               |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              |
| Ped Bike Factor            | 1.00                                                                              | 0.98                                                                              | 1.00                                                                              |                                                                                   |                                                                                   | 1.00                                                                              |
| Frt                        |                                                                                   | 0.850                                                                             | 0.973                                                                             |                                                                                   |                                                                                   |                                                                                   |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (prot)          | 1770                                                                              | 1583                                                                              | 3295                                                                              | 0                                                                                 | 0                                                                                 | 3439                                                                              |
| Flt Permitted              | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.954                                                                             |
| Satd. Flow (perm)          | 1761                                                                              | 1555                                                                              | 3295                                                                              | 0                                                                                 | 0                                                                                 | 3280                                                                              |
| Right Turn on Red          |                                                                                   | Yes                                                                               |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   |
| Satd. Flow (RTOR)          |                                                                                   | 4                                                                                 | 62                                                                                |                                                                                   |                                                                                   |                                                                                   |
| Link Speed (mph)           | 30                                                                                |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |
| Link Distance (ft)         | 300                                                                               |                                                                                   | 748                                                                               |                                                                                   |                                                                                   | 688                                                                               |
| Travel Time (s)            | 6.8                                                                               |                                                                                   | 17.0                                                                              |                                                                                   |                                                                                   | 15.6                                                                              |
| Confl. Peds. (#/hr)        | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   |
| Confl. Bikes (#/hr)        |                                                                                   | 2                                                                                 |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   |
| Peak Hour Factor           | 0.91                                                                              | 0.91                                                                              | 0.91                                                                              | 0.91                                                                              | 0.91                                                                              | 0.91                                                                              |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 7%                                                                                | 2%                                                                                | 2%                                                                                | 5%                                                                                |
| Adj. Flow (vph)            | 49                                                                                | 4                                                                                 | 355                                                                               | 79                                                                                | 2                                                                                 | 319                                                                               |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)      | 49                                                                                | 4                                                                                 | 434                                                                               | 0                                                                                 | 0                                                                                 | 321                                                                               |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment             | Left                                                                              | Right                                                                             | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              |
| Median Width(ft)           | 12                                                                                |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |
| Link Offset(ft)            | 0                                                                                 |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |
| Crosswalk Width(ft)        | 16                                                                                |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Headway Factor             | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |
| Turning Speed (mph)        | 60                                                                                | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                |                                                                                   |
| Number of Detectors        | 1                                                                                 | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |
| Detector Template          | Left                                                                              | Right                                                                             | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              |
| Leading Detector (ft)      | 50                                                                                | 50                                                                                | 50                                                                                |                                                                                   | 20                                                                                | 50                                                                                |
| Trailing Detector (ft)     | 0                                                                                 | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |
| Detector 1 Position(ft)    | 0                                                                                 | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |
| Detector 1 Size(ft)        | 50                                                                                | 50                                                                                | 50                                                                                |                                                                                   | 20                                                                                | 50                                                                                |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |
| Turn Type                  | Perm                                                                              | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |
| Protected Phases           |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |
| Permitted Phases           | 8                                                                                 | 8                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |
| Detector Phase             | 8                                                                                 | 8                                                                                 | 2                                                                                 |                                                                                   | 6                                                                                 | 6                                                                                 |
| Switch Phase               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Minimum Initial (s)        | 6.0                                                                               | 6.0                                                                               | 6.0                                                                               |                                                                                   | 6.0                                                                               | 6.0                                                                               |
| Minimum Split (s)          | 11.0                                                                              | 11.0                                                                              | 11.0                                                                              |                                                                                   | 11.0                                                                              | 11.0                                                                              |



Lanes, Volumes, Timings  
2: Abbott Road & Plaza Driveway

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

10/11/2024

|                         | ↖     | ↗     | ↑     | ↘   | ↙     | ↓     |
|-------------------------|-------|-------|-------|-----|-------|-------|
| Lane Group              | WBL   | WBR   | NBT   | NBR | SBL   | SBT   |
| Total Split (s)         | 26.0  | 26.0  | 40.0  |     | 40.0  | 40.0  |
| Total Split (%)         | 39.4% | 39.4% | 60.6% |     | 60.6% | 60.6% |
| Maximum Green (s)       | 21.0  | 21.0  | 35.0  |     | 35.0  | 35.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   |     | 3.0   | 3.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   |     | 2.0   | 2.0   |
| Lost Time Adjust (s)    | 0.0   | 0.0   | 0.0   |     |       | 0.0   |
| Total Lost Time (s)     | 5.0   | 5.0   | 5.0   |     |       | 5.0   |
| Lead/Lag                |       |       |       |     |       |       |
| Lead-Lag Optimize?      |       |       |       |     |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   |     | 3.0   | 3.0   |
| Recall Mode             | None  | None  | C-Max |     | C-Max | C-Max |
| Act Effect Green (s)    | 7.4   | 7.4   | 55.0  |     |       | 55.0  |
| Actuated g/C Ratio      | 0.11  | 0.11  | 0.83  |     |       | 0.83  |
| v/c Ratio               | 0.25  | 0.02  | 0.16  |     |       | 0.12  |
| Control Delay           | 29.3  | 17.2  | 2.1   |     |       | 2.3   |
| Queue Delay             | 0.0   | 0.0   | 0.0   |     |       | 0.0   |
| Total Delay             | 29.3  | 17.2  | 2.1   |     |       | 2.3   |
| LOS                     | C     | B     | A     |     |       | A     |
| Approach Delay          | 28.4  |       | 2.1   |     |       | 2.3   |
| Approach LOS            | C     |       | A     |     |       | A     |
| Queue Length 50th (ft)  | 18    | 0     | 17    |     |       | 14    |
| Queue Length 95th (ft)  | 46    | 8     | 33    |     |       | 28    |
| Internal Link Dist (ft) | 220   |       | 668   |     |       | 608   |
| Turn Bay Length (ft)    |       |       |       |     |       |       |
| Base Capacity (vph)     | 560   | 497   | 2756  |     |       | 2733  |
| Starvation Cap Reductn  | 0     | 0     | 0     |     |       | 0     |
| Spillback Cap Reductn   | 0     | 0     | 0     |     |       | 0     |
| Storage Cap Reductn     | 0     | 0     | 0     |     |       | 0     |
| Reduced v/c Ratio       | 0.09  | 0.01  | 0.16  |     |       | 0.12  |

Intersection Summary

Area Type: Other

Cycle Length: 66

Actuated Cycle Length: 66

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.25

Intersection Signal Delay: 3.9

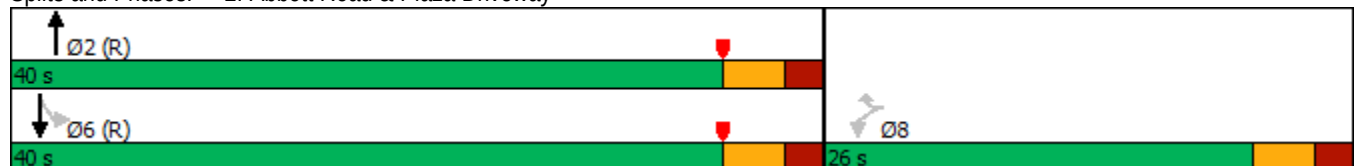
Intersection LOS: A

Intersection Capacity Utilization 24.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: Abbott Road & Plaza Driveway



## Lanes, Volumes, Timings

## Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

## 3: Abbott Road/Abbott Road &amp; Ridge Road

10/11/2024

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |  |                                                                                    |  |  |                                                                                     |  |  |
| Traffic Volume (vph)       | 33                                                                                | 394                                                                               | 43                                                                                | 148                                                                               | 358                                                                               | 228                                                                               | 47                                                                                 | 119                                                                                 | 197                                                                                 | 165                                                                                 | 150                                                                                 | 26                                                                                  |
| Future Volume (vph)        | 33                                                                                | 394                                                                               | 43                                                                                | 148                                                                               | 358                                                                               | 228                                                                               | 47                                                                                 | 119                                                                                 | 197                                                                                 | 165                                                                                 | 150                                                                                 | 26                                                                                  |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                               | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Lane Width (ft)            | 11                                                                                | 11                                                                                | 11                                                                                | 10                                                                                | 10                                                                                | 12                                                                                | 10                                                                                 | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  |
| Storage Length (ft)        | 90                                                                                |                                                                                   | 250                                                                               | 200                                                                               |                                                                                   | 0                                                                                 | 0                                                                                  |                                                                                     | 125                                                                                 | 0                                                                                   |                                                                                     | 150                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                  |                                                                                     | 1                                                                                   | 0                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (ft)          | 50                                                                                |                                                                                   |                                                                                   | 100                                                                               |                                                                                   |                                                                                   | 25                                                                                 |                                                                                     |                                                                                     | 25                                                                                  |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                               | 0.95                                                                                | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              |                                                                                   | 0.98                                                                              |                                                                                    | 1.00                                                                                | 0.98                                                                                |                                                                                     | 1.00                                                                                | 0.97                                                                                |
| Frt                        |                                                                                   | 0.985                                                                             |                                                                                   |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                    |                                                                                     | 0.850                                                                               |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                    | 0.986                                                                               |                                                                                     |                                                                                     | 0.974                                                                               |                                                                                     |
| Satd. Flow (prot)          | 1646                                                                              | 3194                                                                              | 0                                                                                 | 1652                                                                              | 1657                                                                              | 1583                                                                              | 0                                                                                  | 3234                                                                                | 1463                                                                                | 0                                                                                   | 3202                                                                                | 1449                                                                                |
| Flt Permitted              | 0.500                                                                             |                                                                                   |                                                                                   | 0.354                                                                             |                                                                                   |                                                                                   |                                                                                    | 0.772                                                                               |                                                                                     |                                                                                     | 0.638                                                                               |                                                                                     |
| Satd. Flow (perm)          | 864                                                                               | 3194                                                                              | 0                                                                                 | 614                                                                               | 1657                                                                              | 1551                                                                              | 0                                                                                  | 2528                                                                                | 1433                                                                                | 0                                                                                   | 2092                                                                                | 1405                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                    |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 13                                                                                |                                                                                   |                                                                                   |                                                                                   | 238                                                                               |                                                                                    |                                                                                     | 205                                                                                 |                                                                                     |                                                                                     | 27                                                                                  |
| Link Speed (mph)           |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                    | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 808                                                                               |                                                                                   |                                                                                   | 782                                                                               |                                                                                   |                                                                                    | 1105                                                                                |                                                                                     |                                                                                     | 748                                                                                 |                                                                                     |
| Travel Time (s)            |                                                                                   | 18.4                                                                              |                                                                                   |                                                                                   | 17.8                                                                              |                                                                                   |                                                                                    | 25.1                                                                                |                                                                                     |                                                                                     | 17.0                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                  |                                                                                     | 5                                                                                   | 5                                                                                   |                                                                                     | 5                                                                                   |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                    |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |
| Peak Hour Factor           | 0.96                                                                              | 0.96                                                                              | 0.96                                                                              | 0.96                                                                              | 0.96                                                                              | 0.96                                                                              | 0.96                                                                               | 0.96                                                                                | 0.96                                                                                | 0.96                                                                                | 0.96                                                                                | 0.96                                                                                |
| Heavy Vehicles (%)         | 6%                                                                                | 8%                                                                                | 2%                                                                                | 2%                                                                                | 7%                                                                                | 2%                                                                                | 2%                                                                                 | 3%                                                                                  | 3%                                                                                  | 2%                                                                                  | 3%                                                                                  | 4%                                                                                  |
| Adj. Flow (vph)            | 34                                                                                | 410                                                                               | 45                                                                                | 154                                                                               | 373                                                                               | 238                                                                               | 49                                                                                 | 124                                                                                 | 205                                                                                 | 172                                                                                 | 156                                                                                 | 27                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 34                                                                                | 455                                                                               | 0                                                                                 | 154                                                                               | 373                                                                               | 238                                                                               | 0                                                                                  | 173                                                                                 | 205                                                                                 | 0                                                                                   | 328                                                                                 | 27                                                                                  |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 11                                                                                |                                                                                   |                                                                                   | 11                                                                                |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |                                                                                   |                                                                                    | 16                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.04                                                                              | 1.04                                                                              | 1.04                                                                              | 1.09                                                                              | 1.09                                                                              | 1.00                                                                              | 1.09                                                                               | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                |
| Turning Speed (mph)        | 15                                                                                |                                                                                   | 9                                                                                 | 15                                                                                |                                                                                   | 9                                                                                 | 15                                                                                 |                                                                                     | 9                                                                                   | 15                                                                                  |                                                                                     | 9                                                                                   |
| Number of Detectors        | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 | 1                                                                                 | 1                                                                                  | 1                                                                                   | 1                                                                                   | 1                                                                                   | 1                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                               | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (ft)      | 50                                                                                | 50                                                                                |                                                                                   | 50                                                                                | 50                                                                                | 50                                                                                | 20                                                                                 | 50                                                                                  | 50                                                                                  | 20                                                                                  | 50                                                                                  | 50                                                                                  |
| Trailing Detector (ft)     | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Detector 1 Position(ft)    | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Detector 1 Size(ft)        | 50                                                                                | 50                                                                                |                                                                                   | 50                                                                                | 50                                                                                | 50                                                                                | 20                                                                                 | 50                                                                                  | 50                                                                                  | 20                                                                                  | 50                                                                                  | 50                                                                                  |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                              | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Turn Type                  | pm+pt                                                                             | NA                                                                                |                                                                                   | pm+pt                                                                             | NA                                                                                | pm+ov                                                                             | Perm                                                                               | NA                                                                                  | pm+ov                                                                               | pm+pt                                                                               | NA                                                                                  | pm+ov                                                                               |
| Protected Phases           | 5                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 6                                                                                 | 7                                                                                 |                                                                                    | 8                                                                                   | 1                                                                                   | 7                                                                                   | 4                                                                                   | 5                                                                                   |
| Permitted Phases           | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   | 6                                                                                 | 8                                                                                  |                                                                                     | 8                                                                                   | 4                                                                                   |                                                                                     | 4                                                                                   |

# Lanes, Volumes, Timings

# Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

## 3: Abbott Road/Abbott Road & Ridge Road

10/11/2024



| Lane Group              | EBL   | EBT   | EBR | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Detector Phase          | 5     | 2     |     | 1     | 6     | 7     | 8     | 8     | 1     | 7     | 4     | 5     |
| Switch Phase            |       |       |     |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)     | 7.0   | 7.0   |     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Minimum Split (s)       | 12.0  | 29.0  |     | 12.0  | 23.0  | 12.0  | 23.0  | 23.0  | 12.0  | 12.0  | 29.0  | 12.0  |
| Total Split (s)         | 14.0  | 35.0  |     | 14.0  | 35.0  | 14.0  | 30.0  | 30.0  | 14.0  | 14.0  | 44.0  | 14.0  |
| Total Split (%)         | 15.1% | 37.6% |     | 15.1% | 37.6% | 15.1% | 32.3% | 32.3% | 15.1% | 15.1% | 47.3% | 15.1% |
| Maximum Green (s)       | 9.0   | 30.0  |     | 9.0   | 30.0  | 9.0   | 25.0  | 25.0  | 9.0   | 9.0   | 39.0  | 9.0   |
| Yellow Time (s)         | 4.0   | 4.0   |     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 1.0   | 1.0   |     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s)    | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |
| Total Lost Time (s)     | 5.0   | 5.0   |     | 5.0   | 5.0   | 5.0   |       | 5.0   | 5.0   |       | 5.0   | 5.0   |
| Lead/Lag                | Lead  | Lag   |     | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lead  |       | Lead  |
| Lead-Lag Optimize?      |       |       |     |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Recall Mode             | None  | None  |     | None  | None  | None  | None  | None  | None  | None  | None  | None  |
| Walk Time (s)           |       | 7.0   |     |       | 7.0   |       | 7.0   | 7.0   |       |       | 7.0   |       |
| Flash Dont Walk (s)     |       | 17.0  |     |       | 11.0  |       | 11.0  | 11.0  |       |       | 17.0  |       |
| Pedestrian Calls (#/hr) |       | 5     |     |       | 5     |       | 5     | 5     |       |       | 5     |       |
| Act Effect Green (s)    | 24.3  | 17.0  |     | 28.8  | 23.9  | 31.1  |       | 10.6  | 19.0  |       | 22.9  | 30.3  |
| Actuated g/C Ratio      | 0.38  | 0.27  |     | 0.45  | 0.37  | 0.49  |       | 0.17  | 0.30  |       | 0.36  | 0.47  |
| v/c Ratio               | 0.08  | 0.53  |     | 0.37  | 0.60  | 0.27  |       | 0.41  | 0.36  |       | 0.37  | 0.04  |
| Control Delay           | 9.9   | 21.6  |     | 12.5  | 23.2  | 2.5   |       | 28.4  | 4.7   |       | 17.2  | 4.2   |
| Queue Delay             | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |
| Total Delay             | 9.9   | 21.6  |     | 12.5  | 23.2  | 2.5   |       | 28.4  | 4.7   |       | 17.2  | 4.2   |
| LOS                     | A     | C     |     | B     | C     | A     |       | C     | A     |       | B     | A     |
| Approach Delay          |       | 20.8  |     |       | 14.6  |       |       | 15.5  |       |       | 16.3  |       |
| Approach LOS            |       | C     |     |       | B     |       |       | B     |       |       | B     |       |
| Queue Length 50th (ft)  | 6     | 74    |     | 30    | 127   | 0     |       | 32    | 0     |       | 46    | 0     |
| Queue Length 95th (ft)  | 22    | 131   |     | 73    | 249   | 33    |       | 68    | 40    |       | 94    | 12    |
| Internal Link Dist (ft) |       | 728   |     |       | 702   |       |       | 1025  |       |       | 668   |       |
| Turn Bay Length (ft)    | 90    |       |     | 200   |       |       |       |       | 125   |       |       | 150   |
| Base Capacity (vph)     | 469   | 1552  |     | 428   | 802   | 925   |       | 1019  | 591   |       | 1441  | 728   |
| Starvation Cap Reductn  | 0     | 0     |     | 0     | 0     | 0     |       | 0     | 0     |       | 0     | 0     |
| Spillback Cap Reductn   | 0     | 0     |     | 0     | 0     | 0     |       | 0     | 0     |       | 0     | 0     |
| Storage Cap Reductn     | 0     | 0     |     | 0     | 0     | 0     |       | 0     | 0     |       | 0     | 0     |
| Reduced v/c Ratio       | 0.07  | 0.29  |     | 0.36  | 0.47  | 0.26  |       | 0.17  | 0.35  |       | 0.23  | 0.04  |

### Intersection Summary

Area Type: Other

Cycle Length: 93

Actuated Cycle Length: 63.8

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 16.6

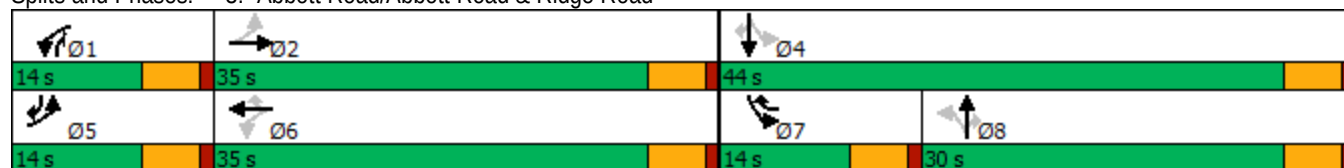
Intersection LOS: B

Intersection Capacity Utilization 59.4%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: Abbott Road/Abbott Road & Ridge Road





Lanes, Volumes, Timings  
4: Abbott Road & Fernald Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

10/11/2024

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                        | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                    |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)              | 0                                                                                 | 0                                                                                 | 1                                                                                 | 14                                                                                | 0                                                                                 | 6                                                                                 | 3                                                                                  | 348                                                                                 | 4                                                                                   | 3                                                                                   | 319                                                                                 | 2                                                                                   |
| Future Volume (vph)               | 0                                                                                 | 0                                                                                 | 1                                                                                 | 14                                                                                | 0                                                                                 | 6                                                                                 | 3                                                                                  | 348                                                                                 | 4                                                                                   | 3                                                                                   | 319                                                                                 | 2                                                                                   |
| Ideal Flow (vphpl)                | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                               | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Lane Width (ft)                   | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                 | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 12                                                                                  |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                               | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                |
| Ped Bike Factor                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Frt                               |                                                                                   | 0.865                                                                             |                                                                                   |                                                                                   | 0.959                                                                             |                                                                                   |                                                                                    | 0.998                                                                               |                                                                                     |                                                                                     | 0.999                                                                               |                                                                                     |
| Flt Protected                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.966                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)                 | 0                                                                                 | 1611                                                                              | 0                                                                                 | 0                                                                                 | 1726                                                                              | 0                                                                                 | 0                                                                                  | 3145                                                                                | 0                                                                                   | 0                                                                                   | 3207                                                                                | 0                                                                                   |
| Flt Permitted                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.966                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)                 | 0                                                                                 | 1611                                                                              | 0                                                                                 | 0                                                                                 | 1726                                                                              | 0                                                                                 | 0                                                                                  | 3145                                                                                | 0                                                                                   | 0                                                                                   | 3207                                                                                | 0                                                                                   |
| Link Speed (mph)                  |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                    | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)                |                                                                                   | 100                                                                               |                                                                                   |                                                                                   | 300                                                                               |                                                                                   |                                                                                    | 1266                                                                                |                                                                                     |                                                                                     | 1105                                                                                |                                                                                     |
| Travel Time (s)                   |                                                                                   | 2.3                                                                               |                                                                                   |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                    | 28.8                                                                                |                                                                                     |                                                                                     | 25.1                                                                                |                                                                                     |
| Confl. Peds. (#/hr)               | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                  |                                                                                     | 5                                                                                   | 5                                                                                   |                                                                                     | 5                                                                                   |
| Confl. Bikes (#/hr)               |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                    |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |
| Peak Hour Factor                  | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                               | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                |
| Heavy Vehicles (%)                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                 | 7%                                                                                  | 2%                                                                                  | 2%                                                                                  | 5%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)                   | 0                                                                                 | 0                                                                                 | 1                                                                                 | 14                                                                                | 0                                                                                 | 6                                                                                 | 3                                                                                  | 355                                                                                 | 4                                                                                   | 3                                                                                   | 326                                                                                 | 2                                                                                   |
| Shared Lane Traffic (%)           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)             | 0                                                                                 | 1                                                                                 | 0                                                                                 | 0                                                                                 | 20                                                                                | 0                                                                                 | 0                                                                                  | 362                                                                                 | 0                                                                                   | 0                                                                                   | 331                                                                                 | 0                                                                                   |
| Enter Blocked Intersection        | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment                    | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)                  |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Link Offset(ft)                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)               |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |                                                                                   |                                                                                    | 16                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Two way Left Turn Lane            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor                    | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.00                                                                                |
| Turning Speed (mph)               | 15                                                                                |                                                                                   | 9                                                                                 | 15                                                                                |                                                                                   | 9                                                                                 | 15                                                                                 |                                                                                     | 9                                                                                   | 15                                                                                  |                                                                                     | 9                                                                                   |
| Sign Control                      |                                                                                   | Stop                                                                              |                                                                                   |                                                                                   | Stop                                                                              |                                                                                   |                                                                                    | Free                                                                                |                                                                                     |                                                                                     | Free                                                                                |                                                                                     |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                        | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:                     | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization | 27.5%                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min)             | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| ICU Level of Service A            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

Lanes, Volumes, Timings  
5: Abbott Road & Elmview Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

10/11/2024

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                    |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)       | 17                                                                                | 1                                                                                 | 6                                                                                 | 4                                                                                 | 0                                                                                 | 3                                                                                 | 3                                                                                  | 319                                                                                 | 2                                                                                   | 3                                                                                   | 320                                                                                 | 9                                                                                   |
| Future Volume (vph)        | 17                                                                                | 1                                                                                 | 6                                                                                 | 4                                                                                 | 0                                                                                 | 3                                                                                 | 3                                                                                  | 319                                                                                 | 2                                                                                   | 3                                                                                   | 320                                                                                 | 9                                                                                   |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                               | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Lane Width (ft)            | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 10                                                                                 | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                               | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                |
| Ped Bike Factor            |                                                                                   | 0.99                                                                              |                                                                                   |                                                                                   | 0.99                                                                              |                                                                                   |                                                                                    | 1.00                                                                                |                                                                                     |                                                                                     | 1.00                                                                                |                                                                                     |
| Frt                        |                                                                                   | 0.966                                                                             |                                                                                   |                                                                                   | 0.942                                                                             |                                                                                   |                                                                                    | 0.999                                                                               |                                                                                     |                                                                                     | 0.996                                                                               |                                                                                     |
| Flt Protected              |                                                                                   | 0.966                                                                             |                                                                                   |                                                                                   | 0.972                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 0                                                                                 | 1730                                                                              | 0                                                                                 | 0                                                                                 | 1692                                                                              | 0                                                                                 | 0                                                                                  | 3091                                                                                | 0                                                                                   | 0                                                                                   | 3168                                                                                | 0                                                                                   |
| Flt Permitted              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.953                                                                               |                                                                                     |                                                                                     | 0.953                                                                               |                                                                                     |
| Satd. Flow (perm)          | 0                                                                                 | 1785                                                                              | 0                                                                                 | 0                                                                                 | 1736                                                                              | 0                                                                                 | 0                                                                                  | 2945                                                                                | 0                                                                                   | 0                                                                                   | 3019                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                    |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 6                                                                                 |                                                                                   |                                                                                   | 50                                                                                |                                                                                   |                                                                                    | 1                                                                                   |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |
| Link Speed (mph)           |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                    | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 300                                                                               |                                                                                   |                                                                                   | 300                                                                               |                                                                                   |                                                                                    | 457                                                                                 |                                                                                     |                                                                                     | 1266                                                                                |                                                                                     |
| Travel Time (s)            |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                    | 10.4                                                                                |                                                                                     |                                                                                     | 28.8                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                  |                                                                                     | 5                                                                                   | 5                                                                                   |                                                                                     | 5                                                                                   |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                    |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |
| Peak Hour Factor           | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                               | 0.99                                                                                | 0.99                                                                                | 0.99                                                                                | 0.99                                                                                | 0.99                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                 | 9%                                                                                  | 2%                                                                                  | 2%                                                                                  | 6%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 17                                                                                | 1                                                                                 | 6                                                                                 | 4                                                                                 | 0                                                                                 | 3                                                                                 | 3                                                                                  | 322                                                                                 | 2                                                                                   | 3                                                                                   | 323                                                                                 | 9                                                                                   |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 0                                                                                 | 24                                                                                | 0                                                                                 | 0                                                                                 | 7                                                                                 | 0                                                                                 | 0                                                                                  | 327                                                                                 | 0                                                                                   | 0                                                                                   | 335                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |                                                                                   |                                                                                    | 16                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.09                                                                               | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                |
| Turning Speed (mph)        | 15                                                                                |                                                                                   | 9                                                                                 | 15                                                                                |                                                                                   | 9                                                                                 | 15                                                                                 |                                                                                     | 9                                                                                   | 15                                                                                  |                                                                                     | 9                                                                                   |
| Number of Detectors        | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                  | 1                                                                                   |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     |
| Detector Template          | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                               | Thru                                                                                |                                                                                     | Left                                                                                | Thru                                                                                |                                                                                     |
| Leading Detector (ft)      | 20                                                                                | 50                                                                                |                                                                                   | 20                                                                                | 50                                                                                |                                                                                   | 20                                                                                 | 50                                                                                  |                                                                                     | 20                                                                                  | 50                                                                                  |                                                                                     |
| Trailing Detector (ft)     | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Detector 1 Position(ft)    | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Detector 1 Size(ft)        | 20                                                                                | 50                                                                                |                                                                                   | 20                                                                                | 50                                                                                |                                                                                   | 20                                                                                 | 50                                                                                  |                                                                                     | 20                                                                                  | 50                                                                                  |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                              | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Turn Type                  | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                               | NA                                                                                  |                                                                                     | Perm                                                                                | NA                                                                                  |                                                                                     |
| Protected Phases           |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   |                                                                                    | 2                                                                                   |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |
| Permitted Phases           | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 2                                                                                  |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |                                                                                     |
| Detector Phase             | 4                                                                                 | 4                                                                                 |                                                                                   | 8                                                                                 | 8                                                                                 |                                                                                   | 2                                                                                  | 2                                                                                   |                                                                                     | 6                                                                                   | 6                                                                                   |                                                                                     |
| Switch Phase               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)        | 6.0                                                                               | 6.0                                                                               |                                                                                   | 6.0                                                                               | 6.0                                                                               |                                                                                   | 20.0                                                                               | 20.0                                                                                |                                                                                     | 20.0                                                                                | 20.0                                                                                |                                                                                     |

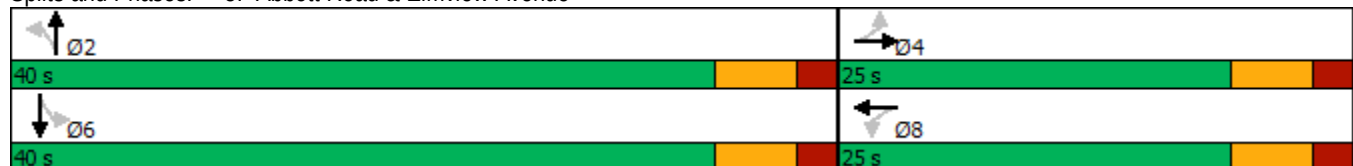
Lanes, Volumes, Timings  
5: Abbott Road & Elmview Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

10/11/2024

|                                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Minimum Split (s)                       | 12.0                                                                              | 12.0                                                                              |                                                                                   | 12.0                                                                              | 12.0                                                                              |                                                                                   | 26.0                                                                               | 26.0                                                                                |                                                                                     | 26.0                                                                                | 26.0                                                                                |                                                                                     |
| Total Split (s)                         | 25.0                                                                              | 25.0                                                                              |                                                                                   | 25.0                                                                              | 25.0                                                                              |                                                                                   | 40.0                                                                               | 40.0                                                                                |                                                                                     | 40.0                                                                                | 40.0                                                                                |                                                                                     |
| Total Split (%)                         | 38.5%                                                                             | 38.5%                                                                             |                                                                                   | 38.5%                                                                             | 38.5%                                                                             |                                                                                   | 61.5%                                                                              | 61.5%                                                                               |                                                                                     | 61.5%                                                                               | 61.5%                                                                               |                                                                                     |
| Maximum Green (s)                       | 19.0                                                                              | 19.0                                                                              |                                                                                   | 19.0                                                                              | 19.0                                                                              |                                                                                   | 34.0                                                                               | 34.0                                                                                |                                                                                     | 34.0                                                                                | 34.0                                                                                |                                                                                     |
| Yellow Time (s)                         | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                                | 4.0                                                                                 |                                                                                     | 4.0                                                                                 | 4.0                                                                                 |                                                                                     |
| All-Red Time (s)                        | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                                | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Lost Time Adjust (s)                    |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)                     |                                                                                   | 6.0                                                                               |                                                                                   |                                                                                   | 6.0                                                                               |                                                                                   |                                                                                    | 6.0                                                                                 |                                                                                     |                                                                                     | 6.0                                                                                 |                                                                                     |
| Lead/Lag                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lead-Lag Optimize?                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Vehicle Extension (s)                   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                                | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| Recall Mode                             | None                                                                              | None                                                                              |                                                                                   | None                                                                              | None                                                                              |                                                                                   | Max                                                                                | Max                                                                                 |                                                                                     | Max                                                                                 | Max                                                                                 |                                                                                     |
| Act Effct Green (s)                     |                                                                                   | 6.5                                                                               |                                                                                   |                                                                                   | 6.3                                                                               |                                                                                   |                                                                                    | 49.1                                                                                |                                                                                     |                                                                                     | 49.1                                                                                |                                                                                     |
| Actuated g/C Ratio                      |                                                                                   | 0.12                                                                              |                                                                                   |                                                                                   | 0.12                                                                              |                                                                                   |                                                                                    | 0.93                                                                                |                                                                                     |                                                                                     | 0.93                                                                                |                                                                                     |
| v/c Ratio                               |                                                                                   | 0.11                                                                              |                                                                                   |                                                                                   | 0.03                                                                              |                                                                                   |                                                                                    | 0.12                                                                                |                                                                                     |                                                                                     | 0.12                                                                                |                                                                                     |
| Control Delay                           |                                                                                   | 17.9                                                                              |                                                                                   |                                                                                   | 0.1                                                                               |                                                                                   |                                                                                    | 1.5                                                                                 |                                                                                     |                                                                                     | 1.4                                                                                 |                                                                                     |
| Queue Delay                             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Total Delay                             |                                                                                   | 17.9                                                                              |                                                                                   |                                                                                   | 0.1                                                                               |                                                                                   |                                                                                    | 1.5                                                                                 |                                                                                     |                                                                                     | 1.4                                                                                 |                                                                                     |
| LOS                                     |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | A                                                                                 |                                                                                   |                                                                                    | A                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |
| Approach Delay                          |                                                                                   | 17.9                                                                              |                                                                                   |                                                                                   | 0.1                                                                               |                                                                                   |                                                                                    | 1.5                                                                                 |                                                                                     |                                                                                     | 1.4                                                                                 |                                                                                     |
| Approach LOS                            |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | A                                                                                 |                                                                                   |                                                                                    | A                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |
| Queue Length 50th (ft)                  |                                                                                   | 5                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Queue Length 95th (ft)                  |                                                                                   | 22                                                                                |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 31                                                                                  |                                                                                     |                                                                                     | 31                                                                                  |                                                                                     |
| Internal Link Dist (ft)                 |                                                                                   | 220                                                                               |                                                                                   |                                                                                   | 220                                                                               |                                                                                   |                                                                                    | 377                                                                                 |                                                                                     |                                                                                     | 1186                                                                                |                                                                                     |
| Turn Bay Length (ft)                    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Base Capacity (vph)                     |                                                                                   | 646                                                                               |                                                                                   |                                                                                   | 657                                                                               |                                                                                   |                                                                                    | 2730                                                                                |                                                                                     |                                                                                     | 2799                                                                                |                                                                                     |
| Starvation Cap Reductn                  |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Spillback Cap Reductn                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Storage Cap Reductn                     |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Reduced v/c Ratio                       |                                                                                   | 0.04                                                                              |                                                                                   |                                                                                   | 0.01                                                                              |                                                                                   |                                                                                    | 0.12                                                                                |                                                                                     |                                                                                     | 0.12                                                                                |                                                                                     |
| Intersection Summary                    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                              | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Cycle Length: 65                        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Actuated Cycle Length: 53               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Natural Cycle: 40                       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type: Actuated-Uncoordinated    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Maximum v/c Ratio: 0.12                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Signal Delay: 2.0          |                                                                                   |                                                                                   |                                                                                   | Intersection LOS: A                                                               |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization 31.7% |                                                                                   |                                                                                   |                                                                                   | ICU Level of Service A                                                            |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min) 15                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

Splits and Phases: 5: Abbott Road & Elmview Avenue



| Intersection             |        |      |        |            |        |       |        |      |      |      |      |      |
|--------------------------|--------|------|--------|------------|--------|-------|--------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5    |      |        |            |        |       |        |      |      |      |      |      |
| Movement                 | EBL    | EBT  | EBR    | WBL        | WBT    | WBR   | NBL    | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |        | ↕    |        |            | ↕      |       |        | ↕↕   |      |      | ↕↕   |      |
| Traffic Vol, veh/h       | 0      | 0    | 1      | 14         | 0      | 6     | 3      | 348  | 4    | 3    | 319  | 2    |
| Future Vol, veh/h        | 0      | 0    | 1      | 14         | 0      | 6     | 3      | 348  | 4    | 3    | 319  | 2    |
| Conflicting Peds, #/hr   | 5      | 0    | 5      | 5          | 0      | 5     | 5      | 0    | 5    | 5    | 0    | 5    |
| Sign Control             | Stop   | Stop | Stop   | Stop       | Stop   | Stop  | Free   | Free | Free | Free | Free | Free |
| RT Channelized           | -      | -    | None   | -          | -      | None  | -      | -    | None | -    | -    | None |
| Storage Length           | -      | -    | -      | -          | -      | -     | -      | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -      | 0    | -      | -          | 0      | -     | -      | 0    | -    | -    | 0    | -    |
| Grade, %                 | -      | 0    | -      | -          | 0      | -     | -      | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 98     | 98   | 98     | 98         | 98     | 98    | 98     | 98   | 98   | 98   | 98   | 98   |
| Heavy Vehicles, %        | 2      | 2    | 2      | 2          | 2      | 2     | 2      | 7    | 2    | 2    | 5    | 2    |
| Mvmt Flow                | 0      | 0    | 1      | 14         | 0      | 6     | 3      | 355  | 4    | 3    | 326  | 2    |
|                          |        |      |        |            |        |       |        |      |      |      |      |      |
| Major/Minor              | Minor2 |      | Minor1 |            | Major1 |       | Major2 |      |      |      |      |      |
| Conflicting Flow All     | 527    | 708  | 174    | 542        | 707    | 190   | 333    | 0    | 0    | 364  | 0    | 0    |
| Stage 1                  | 338    | 338  | -      | 368        | 368    | -     | -      | -    | -    | -    | -    | -    |
| Stage 2                  | 189    | 370  | -      | 174        | 339    | -     | -      | -    | -    | -    | -    | -    |
| Critical Hdwy            | 7.54   | 6.54 | 6.94   | 7.54       | 6.54   | 6.94  | 4.14   | -    | -    | 4.14 | -    | -    |
| Critical Hdwy Stg 1      | 6.54   | 5.54 | -      | 6.54       | 5.54   | -     | -      | -    | -    | -    | -    | -    |
| Critical Hdwy Stg 2      | 6.54   | 5.54 | -      | 6.54       | 5.54   | -     | -      | -    | -    | -    | -    | -    |
| Follow-up Hdwy           | 3.52   | 4.02 | 3.32   | 3.52       | 4.02   | 3.32  | 2.22   | -    | -    | 2.22 | -    | -    |
| Pot Cap-1 Maneuver       | 434    | 358  | 839    | 423        | 359    | 820   | 1223   | -    | -    | 1191 | -    | -    |
| Stage 1                  | 650    | 639  | -      | 624        | 620    | -     | -      | -    | -    | -    | -    | -    |
| Stage 2                  | 795    | 619  | -      | 811        | 638    | -     | -      | -    | -    | -    | -    | -    |
| Platoon blocked, %       |        |      |        |            |        |       |        | -    | -    |      | -    | -    |
| Mov Cap-1 Maneuver       | 425    | 352  | 832    | 417        | 353    | 813   | 1217   | -    | -    | 1185 | -    | -    |
| Mov Cap-2 Maneuver       | 425    | 352  | -      | 417        | 353    | -     | -      | -    | -    | -    | -    | -    |
| Stage 1                  | 645    | 634  | -      | 619        | 615    | -     | -      | -    | -    | -    | -    | -    |
| Stage 2                  | 784    | 614  | -      | 804        | 633    | -     | -      | -    | -    | -    | -    | -    |
|                          |        |      |        |            |        |       |        |      |      |      |      |      |
|                          |        |      |        |            |        |       |        |      |      |      |      |      |
| Approach                 | EB     |      | WB     |            | NB     |       | SB     |      |      |      |      |      |
| HCM Control Delay, s     | 9.3    |      | 12.7   |            | 0.1    |       | 0.1    |      |      |      |      |      |
| HCM LOS                  | A      |      | B      |            |        |       |        |      |      |      |      |      |
|                          |        |      |        |            |        |       |        |      |      |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT  | NBR    | EBLn1WBLn1 | SBL    | SBT   | SBR    |      |      |      |      |      |
| Capacity (veh/h)         | 1217   | -    | -      | 832        | 488    | 1185  | -      | -    |      |      |      |      |
| HCM Lane V/C Ratio       | 0.003  | -    | -      | 0.001      | 0.042  | 0.003 | -      | -    |      |      |      |      |
| HCM Control Delay (s)    | 8      | 0    | -      | 9.3        | 12.7   | 8     | 0      | -    |      |      |      |      |
| HCM Lane LOS             | A      | A    | -      | A          | B      | A     | A      | -    |      |      |      |      |
| HCM 95th %tile Q(veh)    | 0      | -    | -      | 0          | 0.1    | 0     | -      | -    |      |      |      |      |



## Summary of All Intervals

| Run Number              | 1    | 2    | 3    | 4    | 5    | Avg  |
|-------------------------|------|------|------|------|------|------|
| Start Time              | 7:50 | 7:50 | 7:50 | 7:50 | 7:50 | 7:50 |
| End Time                | 9:00 | 9:00 | 9:00 | 9:00 | 9:00 | 9:00 |
| Total Time (min)        | 70   | 70   | 70   | 70   | 70   | 70   |
| Time Recorded (min)     | 60   | 60   | 60   | 60   | 60   | 60   |
| # of Intervals          | 2    | 2    | 2    | 2    | 2    | 2    |
| # of Recorded Intervals | 1    | 1    | 1    | 1    | 1    | 1    |
| Vehs Entered            | 2227 | 2245 | 2178 | 2176 | 2202 | 2206 |
| Vehs Exited             | 2241 | 2255 | 2180 | 2181 | 2200 | 2211 |
| Starting Vehs           | 55   | 57   | 44   | 52   | 43   | 50   |
| Ending Vehs             | 41   | 47   | 42   | 47   | 45   | 41   |
| Denied Entry Before     | 0    | 0    | 0    | 0    | 0    | 0    |
| Denied Entry After      | 1    | 0    | 0    | 0    | 0    | 0    |
| Travel Distance (mi)    | 982  | 982  | 966  | 941  | 977  | 970  |
| Travel Time (hr)        | 47.0 | 47.0 | 45.6 | 44.7 | 46.2 | 46.1 |
| Total Delay (hr)        | 12.5 | 12.6 | 11.7 | 11.6 | 11.7 | 12.0 |
| Total Stops             | 1872 | 1878 | 1766 | 1830 | 1787 | 1822 |
| Fuel Used (gal)         | 36.5 | 36.5 | 35.5 | 35.0 | 35.9 | 35.9 |

## Interval #0 Information Seeding

|                                     |      |
|-------------------------------------|------|
| Start Time                          | 7:50 |
| End Time                            | 8:00 |
| Total Time (min)                    | 10   |
| Volumes adjusted by Growth Factors. |      |
| No data recorded this interval.     |      |

## Interval #1 Information Recording

|                                     |      |
|-------------------------------------|------|
| Start Time                          | 8:00 |
| End Time                            | 9:00 |
| Total Time (min)                    | 60   |
| Volumes adjusted by Growth Factors. |      |

| Run Number           | 1    | 2    | 3    | 4    | 5    | Avg  |
|----------------------|------|------|------|------|------|------|
| Vehs Entered         | 2227 | 2245 | 2178 | 2176 | 2202 | 2206 |
| Vehs Exited          | 2241 | 2255 | 2180 | 2181 | 2200 | 2211 |
| Starting Vehs        | 55   | 57   | 44   | 52   | 43   | 50   |
| Ending Vehs          | 41   | 47   | 42   | 47   | 45   | 41   |
| Denied Entry Before  | 0    | 0    | 0    | 0    | 0    | 0    |
| Denied Entry After   | 1    | 0    | 0    | 0    | 0    | 0    |
| Travel Distance (mi) | 982  | 982  | 966  | 941  | 977  | 970  |
| Travel Time (hr)     | 47.0 | 47.0 | 45.6 | 44.7 | 46.2 | 46.1 |
| Total Delay (hr)     | 12.5 | 12.6 | 11.7 | 11.6 | 11.7 | 12.0 |
| Total Stops          | 1872 | 1878 | 1766 | 1830 | 1787 | 1822 |
| Fuel Used (gal)      | 36.5 | 36.5 | 35.5 | 35.0 | 35.9 | 35.9 |

## 1: Abbott Road &amp; Dorrance Avenue Performance by movement

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Denied Del/Veh (s)  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.0  | 0.0  | 0.0  | 0.2  | 0.1  | 0.1  |
| Total Delay (hr)    | 0.1  | 0.4  | 0.1  | 0.3  | 0.3  | 0.0  | 0.4  | 0.6  | 0.1  | 0.0  | 0.2  | 0.0  |
| Total Del/Veh (s)   | 26.2 | 22.0 | 5.7  | 23.8 | 22.2 | 6.4  | 15.2 | 10.5 | 8.5  | 7.6  | 4.8  | 2.0  |
| Stop Delay (hr)     | 0.1  | 0.3  | 0.1  | 0.2  | 0.3  | 0.0  | 0.3  | 0.4  | 0.1  | 0.0  | 0.2  | 0.0  |
| Stop Del/Veh (s)    | 23.0 | 18.9 | 3.1  | 20.0 | 19.0 | 3.9  | 11.1 | 8.1  | 5.7  | 4.3  | 3.1  | 1.0  |
| Total Stops         | 8    | 48   | 56   | 30   | 39   | 20   | 59   | 90   | 17   | 10   | 52   | 3    |
| Stop/Veh            | 0.80 | 0.73 | 0.70 | 0.73 | 0.72 | 0.77 | 0.61 | 0.45 | 0.45 | 0.43 | 0.28 | 0.20 |
| Travel Dist (mi)    | 0.5  | 3.3  | 4.0  | 2.0  | 2.7  | 1.3  | 12.4 | 24.4 | 4.9  | 1.8  | 14.1 | 1.1  |
| Travel Time (hr)    | 0.1  | 0.5  | 0.3  | 0.3  | 0.4  | 0.1  | 0.8  | 1.4  | 0.3  | 0.1  | 0.7  | 0.0  |
| Avg Speed (mph)     | 5    | 6    | 15   | 6    | 6    | 14   | 15   | 17   | 19   | 16   | 20   | 24   |
| Fuel Used (gal)     | 0.0  | 0.2  | 0.1  | 0.1  | 0.2  | 0.0  | 0.4  | 0.8  | 0.2  | 0.1  | 0.5  | 0.0  |
| Fuel Eff. (mpg)     | 17.4 | 16.8 | 34.1 | 17.1 | 16.7 | 36.3 | 29.6 | 29.5 | 29.8 | 29.3 | 28.1 | 33.9 |
| HC Emissions (g)    | 0    | 1    | 1    | 1    | 1    | 0    | 4    | 21   | 2    | 0    | 9    | 0    |
| CO Emissions (g)    | 5    | 48   | 31   | 33   | 45   | 10   | 94   | 401  | 44   | 16   | 223  | 5    |
| NOx Emissions (g)   | 0    | 4    | 3    | 4    | 5    | 1    | 11   | 58   | 5    | 1    | 27   | 1    |
| Vehicles Entered    | 10   | 66   | 80   | 41   | 54   | 26   | 95   | 197  | 38   | 23   | 183  | 15   |
| Vehicles Exited     | 10   | 65   | 80   | 40   | 54   | 26   | 97   | 198  | 38   | 23   | 183  | 15   |
| Hourly Exit Rate    | 10   | 65   | 80   | 40   | 54   | 26   | 97   | 198  | 38   | 23   | 183  | 15   |
| Input Volume        | 12   | 66   | 78   | 39   | 54   | 27   | 95   | 193  | 39   | 24   | 188  | 14   |
| % of Volume         | 83   | 98   | 103  | 103  | 100  | 96   | 102  | 103  | 97   | 96   | 97   | 107  |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Density (ft/veh)    |      |      |      |      |      |      |      |      |      |      |      |      |
| Occupancy (veh)     | 0    | 1    | 0    | 0    | 0    | 0    | 1    | 1    | 0    | 0    | 1    | 0    |

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1: Abbott Road & Dorrance Avenue Performance by movement

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| Movement            | All  |
|---------------------|------|
| Denied Delay (hr)   | 0.0  |
| Denied Del/Veh (s)  | 0.1  |
| Total Delay (hr)    | 2.6  |
| Total Del/Veh (s)   | 11.4 |
| Stop Delay (hr)     | 2.0  |
| Stop Del/Veh (s)    | 8.7  |
| Total Stops         | 432  |
| Stop/Veh            | 0.52 |
| Travel Dist (mi)    | 72.4 |
| Travel Time (hr)    | 5.1  |
| Avg Speed (mph)     | 14   |
| Fuel Used (gal)     | 2.7  |
| Fuel Eff. (mpg)     | 27.3 |
| HC Emissions (g)    | 41   |
| CO Emissions (g)    | 956  |
| NOx Emissions (g)   | 121  |
| Vehicles Entered    | 828  |
| Vehicles Exited     | 829  |
| Hourly Exit Rate    | 829  |
| Input Volume        | 829  |
| % of Volume         | 100  |
| Denied Entry Before | 0    |
| Denied Entry After  | 0    |
| Density (ft/veh)    | 623  |
| Occupancy (veh)     | 5    |

## 2: Abbott Road &amp; Plaza Driveway Performance by movement

| Movement            | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  | All  |
|---------------------|------|------|------|------|------|------|------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Denied Del/Veh (s)  | 0.1  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay (hr)    | 0.4  | 0.0  | 0.2  | 0.0  | 0.0  | 0.2  | 0.9  |
| Total Del/Veh (s)   | 34.3 | 7.7  | 2.3  | 1.9  | 6.6  | 2.8  | 4.4  |
| Stop Delay (hr)     | 0.4  | 0.0  | 0.1  | 0.0  | 0.0  | 0.1  | 0.6  |
| Stop Del/Veh (s)    | 30.7 | 4.7  | 1.1  | 0.7  | 2.9  | 1.1  | 2.9  |
| Total Stops         | 43   | 4    | 34   | 6    | 1    | 34   | 122  |
| Stop/Veh            | 0.93 | 0.80 | 0.10 | 0.08 | 0.50 | 0.11 | 0.16 |
| Travel Dist (mi)    | 2.2  | 0.3  | 43.6 | 10.0 | 0.2  | 38.4 | 94.7 |
| Travel Time (hr)    | 0.5  | 0.0  | 1.9  | 0.4  | 0.0  | 1.5  | 4.4  |
| Avg Speed (mph)     | 4    | 14   | 23   | 24   | 20   | 25   | 22   |
| Fuel Used (gal)     | 0.2  | 0.0  | 2.1  | 0.5  | 0.0  | 1.5  | 4.2  |
| Fuel Eff. (mpg)     | 14.6 | 38.4 | 21.1 | 21.3 | 29.9 | 24.9 | 22.3 |
| HC Emissions (g)    | 1    | 0    | 45   | 5    | 0    | 28   | 79   |
| CO Emissions (g)    | 27   | 1    | 1256 | 200  | 2    | 749  | 2236 |
| NOx Emissions (g)   | 3    | 0    | 134  | 17   | 0    | 87   | 241  |
| Vehicles Entered    | 45   | 5    | 325  | 74   | 2    | 304  | 755  |
| Vehicles Exited     | 45   | 5    | 325  | 74   | 2    | 305  | 756  |
| Hourly Exit Rate    | 45   | 5    | 325  | 74   | 2    | 305  | 756  |
| Input Volume        | 45   | 4    | 323  | 72   | 2    | 306  | 752  |
| % of Volume         | 100  | 125  | 101  | 103  | 100  | 100  | 101  |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Density (ft/veh)    |      |      |      |      |      |      | 768  |
| Occupancy (veh)     | 1    | 0    | 2    | 0    | 0    | 2    | 4    |



## 3: Abbott Road/Abbott Road &amp; Ridge Road Performance by movement

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.1  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Denied Del/Veh (s)  | 3.2  | 0.1  | 0.2  | 3.1  | 0.6  | 0.3  | 0.0  | 0.0  | 0.2  | 0.0  | 0.0  | 0.1  |
| Total Delay (hr)    | 0.1  | 1.9  | 0.1  | 0.5  | 1.3  | 0.2  | 0.2  | 0.6  | 0.3  | 0.9  | 0.6  | 0.0  |
| Total Del/Veh (s)   | 14.8 | 17.0 | 6.4  | 13.5 | 12.9 | 3.0  | 19.5 | 16.5 | 4.6  | 19.4 | 13.9 | 4.7  |
| Stop Delay (hr)     | 0.1  | 1.4  | 0.1  | 0.4  | 0.9  | 0.1  | 0.2  | 0.5  | 0.2  | 0.7  | 0.5  | 0.0  |
| Stop Del/Veh (s)    | 11.7 | 13.1 | 5.4  | 10.7 | 8.7  | 2.0  | 17.2 | 13.8 | 3.3  | 16.1 | 10.8 | 3.7  |
| Total Stops         | 29   | 251  | 25   | 108  | 191  | 102  | 36   | 80   | 111  | 129  | 90   | 12   |
| Stop/Veh            | 0.91 | 0.63 | 0.64 | 0.76 | 0.51 | 0.42 | 0.78 | 0.61 | 0.57 | 0.79 | 0.56 | 0.50 |
| Travel Dist (mi)    | 4.6  | 56.8 | 5.6  | 19.5 | 51.5 | 33.4 | 9.2  | 24.8 | 38.6 | 21.8 | 21.1 | 3.2  |
| Travel Time (hr)    | 0.3  | 3.8  | 0.3  | 1.4  | 3.1  | 1.6  | 0.6  | 1.4  | 1.7  | 1.7  | 1.3  | 0.2  |
| Avg Speed (mph)     | 15   | 15   | 19   | 16   | 17   | 22   | 16   | 17   | 23   | 13   | 16   | 20   |
| Fuel Used (gal)     | 0.2  | 2.1  | 0.2  | 0.7  | 1.9  | 1.0  | 0.3  | 0.8  | 1.1  | 0.8  | 0.8  | 0.1  |
| Fuel Eff. (mpg)     | 28.0 | 27.3 | 32.2 | 27.1 | 27.8 | 35.0 | 32.4 | 31.0 | 36.2 | 26.4 | 26.7 | 31.7 |
| HC Emissions (g)    | 2    | 57   | 2    | 6    | 37   | 13   | 2    | 22   | 11   | 6    | 16   | 1    |
| CO Emissions (g)    | 64   | 1191 | 64   | 214  | 803  | 352  | 43   | 380  | 220  | 187  | 362  | 36   |
| NOx Emissions (g)   | 7    | 147  | 7    | 18   | 101  | 36   | 6    | 60   | 32   | 20   | 46   | 4    |
| Vehicles Entered    | 32   | 392  | 39   | 141  | 369  | 239  | 46   | 131  | 194  | 161  | 159  | 24   |
| Vehicles Exited     | 32   | 393  | 39   | 142  | 370  | 238  | 45   | 130  | 194  | 162  | 160  | 24   |
| Hourly Exit Rate    | 32   | 393  | 39   | 142  | 370  | 238  | 45   | 130  | 194  | 162  | 160  | 24   |
| Input Volume        | 33   | 394  | 43   | 148  | 358  | 228  | 47   | 132  | 197  | 165  | 157  | 26   |
| % of Volume         | 97   | 100  | 91   | 96   | 103  | 104  | 96   | 98   | 98   | 98   | 102  | 92   |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Density (ft/veh)    |      |      |      |      |      |      |      |      |      |      |      |      |
| Occupancy (veh)     | 0    | 4    | 0    | 1    | 3    | 2    | 1    | 1    | 2    | 2    | 1    | 0    |

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3: Abbott Road/Abbott Road & Ridge Road Performance by movement

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| Movement            | All   |
|---------------------|-------|
| Denied Delay (hr)   | 0.3   |
| Denied Del/Veh (s)  | 0.5   |
| Total Delay (hr)    | 6.8   |
| Total Del/Veh (s)   | 12.5  |
| Stop Delay (hr)     | 5.2   |
| Stop Del/Veh (s)    | 9.6   |
| Total Stops         | 1164  |
| Stop/Veh            | 0.60  |
| Travel Dist (mi)    | 290.2 |
| Travel Time (hr)    | 17.4  |
| Avg Speed (mph)     | 17    |
| Fuel Used (gal)     | 9.8   |
| Fuel Eff. (mpg)     | 29.6  |
| HC Emissions (g)    | 176   |
| CO Emissions (g)    | 3916  |
| NOx Emissions (g)   | 484   |
| Vehicles Entered    | 1927  |
| Vehicles Exited     | 1929  |
| Hourly Exit Rate    | 1929  |
| Input Volume        | 1928  |
| % of Volume         | 100   |
| Denied Entry Before | 0     |
| Denied Entry After  | 0     |
| Density (ft/veh)    | 568   |
| Occupancy (veh)     | 17    |

## 4: Abbott Road &amp; Fernald Avenue Performance by movement

| Movement            | EBR  | WBL  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  | All   |
|---------------------|------|------|------|------|------|------|------|------|------|-------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   |
| Denied Del/Veh (s)  |      | 0.1  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   |
| Total Delay (hr)    | 0.0  | 0.0  | 0.0  | 0.0  | 0.1  | 0.0  | 0.0  | 0.1  | 0.0  | 0.2   |
| Total Del/Veh (s)   |      | 6.2  | 2.1  | 3.4  | 0.7  | 0.5  | 6.0  | 1.3  | 1.4  | 1.1   |
| Stop Delay (hr)     | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.1   |
| Stop Del/Veh (s)    |      | 4.5  | 2.3  | 1.7  | 0.1  | 0.1  | 2.1  | 0.3  | 0.5  | 0.3   |
| Total Stops         | 0    | 11   | 8    | 1    | 2    | 0    | 1    | 1    | 0    | 24    |
| Stop/Veh            |      | 1.00 | 1.00 | 0.50 | 0.01 | 0.00 | 0.50 | 0.00 | 0.00 | 0.03  |
| Travel Dist (mi)    | 0.0  | 0.6  | 0.4  | 0.5  | 80.9 | 0.9  | 0.5  | 66.1 | 0.3  | 150.1 |
| Travel Time (hr)    | 0.0  | 0.0  | 0.0  | 0.0  | 2.8  | 0.0  | 0.0  | 2.5  | 0.0  | 5.5   |
| Avg Speed (mph)     | 8    | 13   | 16   | 25   | 29   | 26   | 23   | 26   | 24   | 28    |
| Fuel Used (gal)     | 0.0  | 0.0  | 0.0  | 0.0  | 2.4  | 0.0  | 0.0  | 2.6  | 0.0  | 5.1   |
| Fuel Eff. (mpg)     | 27.4 | 45.1 | 45.3 | 34.6 | 33.7 | 35.3 | 24.8 | 25.6 | 25.4 | 29.6  |
| HC Emissions (g)    | 0    | 0    | 0    | 0    | 64   | 0    | 0    | 37   | 0    | 102   |
| CO Emissions (g)    | 0    | 1    | 2    | 2    | 1082 | 3    | 6    | 1035 | 3    | 2134  |
| NOx Emissions (g)   | 0    | 0    | 0    | 0    | 178  | 0    | 1    | 118  | 0    | 298   |
| Vehicles Entered    | 0    | 11   | 8    | 2    | 351  | 4    | 2    | 333  | 1    | 712   |
| Vehicles Exited     | 0    | 11   | 8    | 2    | 352  | 4    | 2    | 333  | 1    | 713   |
| Hourly Exit Rate    | 0    | 11   | 8    | 2    | 352  | 4    | 2    | 333  | 1    | 713   |
| Input Volume        | 1    | 14   | 6    | 3    | 353  | 4    | 3    | 343  | 2    | 729   |
| % of Volume         | 0    | 79   | 133  | 67   | 100  | 100  | 67   | 97   | 50   | 98    |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Density (ft/veh)    |      |      |      |      |      |      |      |      |      | 924   |
| Occupancy (veh)     | 0    | 0    | 0    | 0    | 3    | 0    | 0    | 2    | 0    | 5     |

## 5: Abbott Road &amp; Elmview Avenue Performance by movement

| Movement            | EBL  | EBT  | EBR  | WBL  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  | All   |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   |
| Denied Del/Veh (s)  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.4  | 0.1  | 0.1  | 0.0  | 0.0  | 0.0  | 0.1   |
| Total Delay (hr)    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.1  | 0.0  | 0.0  | 0.2  | 0.0  | 0.3   |
| Total Del/Veh (s)   | 12.1 | 7.0  | 4.6  | 10.4 | 3.7  | 7.5  | 1.2  | 0.8  | 3.3  | 1.8  | 0.9  | 1.8   |
| Stop Delay (hr)     | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.1  | 0.0  | 0.0  | 0.1  | 0.0  | 0.2   |
| Stop Del/Veh (s)    | 10.3 | 4.6  | 4.6  | 9.0  | 3.8  | 5.5  | 0.6  | 0.7  | 1.5  | 0.8  | 0.4  | 1.0   |
| Total Stops         | 11   | 2    | 6    | 3    | 3    | 1    | 24   | 0    | 0    | 29   | 1    | 80    |
| Stop/Veh            | 0.92 | 1.00 | 1.00 | 1.00 | 1.00 | 0.50 | 0.08 | 0.00 | 0.00 | 0.09 | 0.12 | 0.12  |
| Travel Dist (mi)    | 0.6  | 0.1  | 0.3  | 0.1  | 0.1  | 0.1  | 25.6 | 0.1  | 0.4  | 74.1 | 1.8  | 103.5 |
| Travel Time (hr)    | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.0  | 0.0  | 0.0  | 2.7  | 0.1  | 3.9   |
| Avg Speed (mph)     | 9    | 12   | 14   | 10   | 14   | 15   | 27   | 23   | 24   | 28   | 26   | 27    |
| Fuel Used (gal)     | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.8  | 0.0  | 0.0  | 2.1  | 0.0  | 3.0   |
| Fuel Eff. (mpg)     | 32.5 | 45.9 | 40.4 | 35.9 | 40.9 | 32.9 | 33.2 | 57.7 | 34.0 | 35.3 | 37.6 | 34.8  |
| HC Emissions (g)    | 0    | 0    | 0    | 0    | 0    | 0    | 24   | 0    | 0    | 36   | 0    | 61    |
| CO Emissions (g)    | 2    | 0    | 2    | 0    | 1    | 1    | 440  | 0    | 1    | 576  | 4    | 1028  |
| NOx Emissions (g)   | 0    | 0    | 0    | 0    | 0    | 0    | 67   | 0    | 0    | 100  | 1    | 168   |
| Vehicles Entered    | 12   | 2    | 6    | 3    | 3    | 2    | 319  | 1    | 2    | 313  | 8    | 671   |
| Vehicles Exited     | 12   | 2    | 6    | 3    | 3    | 2    | 319  | 1    | 2    | 313  | 8    | 671   |
| Hourly Exit Rate    | 12   | 2    | 6    | 3    | 3    | 2    | 319  | 1    | 2    | 313  | 8    | 671   |
| Input Volume        | 17   | 1    | 6    | 4    | 3    | 3    | 319  | 2    | 3    | 325  | 9    | 692   |
| % of Volume         | 71   | 200  | 100  | 75   | 100  | 67   | 100  | 50   | 67   | 96   | 89   | 97    |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Density (ft/veh)    |      |      |      |      |      |      |      |      |      |      |      | 1008  |
| Occupancy (veh)     | 0    | 0    | 0    | 0    | 0    | 0    | 1    | 0    | 0    | 3    | 0    | 4     |



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Total Network Performance

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|                     |       |
|---------------------|-------|
| Denied Delay (hr)   | 0.3   |
| Denied Del/Veh (s)  | 0.5   |
| Total Delay (hr)    | 11.7  |
| Total Del/Veh (s)   | 18.7  |
| Stop Delay (hr)     | 8.2   |
| Stop Del/Veh (s)    | 13.1  |
| Total Stops         | 1822  |
| Stop/Veh            | 0.81  |
| Travel Dist (mi)    | 969.5 |
| Travel Time (hr)    | 46.1  |
| Avg Speed (mph)     | 21    |
| Fuel Used (gal)     | 35.9  |
| Fuel Eff. (mpg)     | 27.0  |
| HC Emissions (g)    | 688   |
| CO Emissions (g)    | 16240 |
| NOx Emissions (g)   | 2011  |
| Vehicles Entered    | 2206  |
| Vehicles Exited     | 2211  |
| Hourly Exit Rate    | 2211  |
| Input Volume        | 7055  |
| % of Volume         | 31    |
| Denied Entry Before | 0     |
| Denied Entry After  | 0     |
| Density (ft/veh)    | 549   |
| Occupancy (veh)     | 46    |

## Intersection: 1: Abbott Road &amp; Dorrance Avenue

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | LT  | TR  | LT  | TR  | LT  | TR  | LT  | TR  |
| Maximum Queue (ft)    | 85  | 67  | 84  | 50  | 116 | 102 | 85  | 63  |
| Average Queue (ft)    | 36  | 23  | 41  | 13  | 50  | 51  | 36  | 10  |
| 95th Queue (ft)       | 73  | 48  | 77  | 36  | 91  | 87  | 73  | 38  |
| Link Distance (ft)    | 254 | 254 | 254 | 254 | 608 | 608 | 402 | 402 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |

## Intersection: 2: Abbott Road &amp; Plaza Driveway

| Movement              | WB  | WB  | NB  | NB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | R   | T   | TR  | LT  | T   |
| Maximum Queue (ft)    | 82  | 21  | 69  | 78  | 81  | 64  |
| Average Queue (ft)    | 30  | 2   | 14  | 22  | 20  | 12  |
| 95th Queue (ft)       | 64  | 13  | 48  | 61  | 61  | 45  |
| Link Distance (ft)    | 250 | 250 | 659 | 659 | 608 | 608 |
| Upstream Blk Time (%) |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |

## Intersection: 3: Abbott Road/Abbott Road &amp; Ridge Road

| Movement              | EB | EB  | EB  | WB  | WB  | WB  | NB   | NB   | NB  | SB  | SB  | SB  |
|-----------------------|----|-----|-----|-----|-----|-----|------|------|-----|-----|-----|-----|
| Directions Served     | L  | T   | TR  | L   | T   | R   | LT   | T    | R   | LT  | T   | R   |
| Maximum Queue (ft)    | 92 | 212 | 163 | 107 | 204 | 83  | 84   | 66   | 90  | 156 | 106 | 39  |
| Average Queue (ft)    | 21 | 100 | 53  | 46  | 100 | 30  | 44   | 26   | 45  | 77  | 44  | 11  |
| 95th Queue (ft)       | 61 | 172 | 120 | 89  | 178 | 62  | 76   | 59   | 78  | 126 | 85  | 36  |
| Link Distance (ft)    |    | 752 | 752 |     | 724 | 724 | 1010 | 1010 |     | 659 | 659 |     |
| Upstream Blk Time (%) |    |     |     |     |     |     |      |      |     |     |     |     |
| Queuing Penalty (veh) |    |     |     |     |     |     |      |      |     |     |     |     |
| Storage Bay Dist (ft) | 90 |     |     | 200 |     |     |      |      | 125 |     |     | 150 |
| Storage Blk Time (%)  | 0  | 11  |     |     | 0   |     |      |      | 0   |     | 0   |     |
| Queuing Penalty (veh) | 0  | 4   |     |     | 0   |     |      |      | 0   |     | 0   |     |

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**Intersection: 4: Abbott Road & Fernald Avenue**

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| Movement              | EB  | WB  | NB   | NB   | SB   | SB   |
|-----------------------|-----|-----|------|------|------|------|
| Directions Served     | LTR | LTR | LT   | TR   | LT   | TR   |
| Maximum Queue (ft)    | 9   | 24  | 16   | 32   | 21   | 23   |
| Average Queue (ft)    | 0   | 11  | 1    | 2    | 1    | 1    |
| 95th Queue (ft)       | 5   | 30  | 10   | 16   | 9    | 11   |
| Link Distance (ft)    | 56  | 256 | 1193 | 1193 | 1010 | 1010 |
| Upstream Blk Time (%) |     |     |      |      |      |      |
| Queuing Penalty (veh) |     |     |      |      |      |      |
| Storage Bay Dist (ft) |     |     |      |      |      |      |
| Storage Blk Time (%)  |     |     |      |      |      |      |
| Queuing Penalty (veh) |     |     |      |      |      |      |

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**Intersection: 5: Abbott Road & Elmview Avenue**

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| Movement              | EB  | WB  | NB  | NB  | SB   | SB   |
|-----------------------|-----|-----|-----|-----|------|------|
| Directions Served     | LTR | LTR | LT  | TR  | LT   | TR   |
| Maximum Queue (ft)    | 37  | 24  | 69  | 68  | 57   | 66   |
| Average Queue (ft)    | 14  | 4   | 11  | 12  | 11   | 15   |
| 95th Queue (ft)       | 37  | 18  | 41  | 43  | 36   | 52   |
| Link Distance (ft)    | 258 | 256 | 419 | 419 | 1193 | 1193 |
| Upstream Blk Time (%) |     |     |     |     |      |      |
| Queuing Penalty (veh) |     |     |     |     |      |      |
| Storage Bay Dist (ft) |     |     |     |     |      |      |
| Storage Blk Time (%)  |     |     |     |     |      |      |
| Queuing Penalty (veh) |     |     |     |     |      |      |

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**Network Summary**

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|                                 |
|---------------------------------|
| Network wide Queuing Penalty: 4 |
|---------------------------------|

## Intersection: 2: Abbott Road &amp; Plaza Driveway

| Phase                | 2     | 6     | 8     |
|----------------------|-------|-------|-------|
| Movement(s) Served   | NBT   | SBTL  | WBL   |
| Maximum Green (s)    | 35.0  | 35.0  | 21.0  |
| Minimum Green (s)    | 6.0   | 6.0   | 6.0   |
| Recall               | C-Max | C-Max | None  |
| Avg. Green (s)       | 102.3 | 102.3 | 7.9   |
| g/C Ratio            | -0.01 | -0.01 | -0.01 |
| Cycles Skipped (%)   | 44    | 44    | 43    |
| Cycles @ Minimum (%) | 0     | 0     | 32    |
| Cycles Maxed Out (%) | 56    | 56    | 0     |
| Cycles with Peds (%) | 0     | 0     | 0     |

## Controller Summary

Average Cycle Length (s): NA

Number of Complete Cycles : 0

## Intersection: 3: Abbott Road/Abbott Road &amp; Ridge Road

| Phase                | 1     | 2     | 4    | 5     | 6    | 7     | 8     |
|----------------------|-------|-------|------|-------|------|-------|-------|
| Movement(s) Served   | WBL   | EBTL  | SBTL | EBL   | WBTL | SBL   | NBTL  |
| Maximum Green (s)    | 9.0   | 30.0  | 39.0 | 9.0   | 30.0 | 9.0   | 25.0  |
| Minimum Green (s)    | 7.0   | 7.0   | 7.0  | 7.0   | 7.0  | 7.0   | 7.0   |
| Recall               | None  | None  | None | None  | None | None  | None  |
| Avg. Green (s)       | 8.6   | 18.7  | 19.1 | 7.8   | 25.0 | 8.8   | 15.8  |
| g/C Ratio            | -0.01 | -0.01 | NA   | -0.01 | NA   | -0.01 | -0.01 |
| Cycles Skipped (%)   | 24    | 2     | 0    | 72    | 0    | 69    | 5     |
| Cycles @ Minimum (%) | 19    | 2     | 2    | 18    | 0    | 10    | 8     |
| Cycles Maxed Out (%) | 44    | 8     | 2    | 2     | 31   | 16    | 10    |
| Cycles with Peds (%) | 0     | 8     | 8    | 0     | 6    | 0     | 10    |

## Controller Summary

Average Cycle Length (s): NA

Number of Complete Cycles : 0



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Intersection: 5: Abbott Road & Elmview Avenue

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| Phase                | 2     | 4    | 6     | 8    |
|----------------------|-------|------|-------|------|
| Movement(s) Served   | NBTL  | EBTL | SBTL  | WBTL |
| Maximum Green (s)    | 34.0  | 19.0 | 34.0  | 19.0 |
| Minimum Green (s)    | 20.0  | 6.0  | 20.0  | 6.0  |
| Recall               | Max   | None | Max   | None |
| Avg. Green (s)       | 143.1 | 6.7  | 143.1 | 6.7  |
| g/C Ratio            | NA    | NA   | NA    | NA   |
| Cycles Skipped (%)   | 0     | 0    | 0     | 0    |
| Cycles @ Minimum (%) | 0     | 77   | 0     | 77   |
| Cycles Maxed Out (%) | 100   | 0    | 100   | 0    |
| Cycles with Peds (%) | 0     | 0    | 0     | 0    |

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Controller Summary

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Average Cycle Length (s): NA

Number of Complete Cycles : 0

## Lanes, Volumes, Timings

## Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

## 1: Abbott Road &amp; Dorrance Avenue

10/11/2024

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                     |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)       | 30                                                                                | 115                                                                               | 121                                                                               | 52                                                                                | 96                                                                                | 57                                                                                | 158                                                                                 | 296                                                                                 | 61                                                                                  | 23                                                                                  | 285                                                                                 | 26                                                                                  |
| Future Volume (vph)        | 30                                                                                | 115                                                                               | 121                                                                               | 52                                                                                | 96                                                                                | 57                                                                                | 158                                                                                 | 296                                                                                 | 61                                                                                  | 23                                                                                  | 285                                                                                 | 26                                                                                  |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Lane Width (ft)            | 10                                                                                | 10                                                                                | 10                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  |
| Lane Util. Factor          | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                |
| Ped Bike Factor            |                                                                                   | 0.99                                                                              |                                                                                   |                                                                                   | 0.99                                                                              |                                                                                   |                                                                                     | 1.00                                                                                |                                                                                     |                                                                                     | 1.00                                                                                |                                                                                     |
| Frt                        |                                                                                   | 0.932                                                                             |                                                                                   |                                                                                   | 0.958                                                                             |                                                                                   |                                                                                     | 0.982                                                                               |                                                                                     |                                                                                     | 0.988                                                                               |                                                                                     |
| Flt Protected              |                                                                                   | 0.994                                                                             |                                                                                   |                                                                                   | 0.987                                                                             |                                                                                   |                                                                                     | 0.985                                                                               |                                                                                     |                                                                                     | 0.997                                                                               |                                                                                     |
| Satd. Flow (prot)          | 0                                                                                 | 3031                                                                              | 0                                                                                 | 0                                                                                 | 3327                                                                              | 0                                                                                 | 0                                                                                   | 3171                                                                                | 0                                                                                   | 0                                                                                   | 3170                                                                                | 0                                                                                   |
| Flt Permitted              |                                                                                   | 0.895                                                                             |                                                                                   |                                                                                   | 0.802                                                                             |                                                                                   |                                                                                     | 0.732                                                                               |                                                                                     |                                                                                     | 0.923                                                                               |                                                                                     |
| Satd. Flow (perm)          | 0                                                                                 | 2728                                                                              | 0                                                                                 | 0                                                                                 | 2700                                                                              | 0                                                                                 | 0                                                                                   | 2354                                                                                | 0                                                                                   | 0                                                                                   | 2934                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 127                                                                               |                                                                                   |                                                                                   | 60                                                                                |                                                                                   |                                                                                     | 26                                                                                  |                                                                                     |                                                                                     | 25                                                                                  |                                                                                     |
| Link Speed (mph)           |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                     | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 300                                                                               |                                                                                   |                                                                                   | 300                                                                               |                                                                                   |                                                                                     | 688                                                                                 |                                                                                     |                                                                                     | 452                                                                                 |                                                                                     |
| Travel Time (s)            |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                     | 15.6                                                                                |                                                                                     |                                                                                     | 10.3                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                   |                                                                                     | 5                                                                                   | 5                                                                                   |                                                                                     | 5                                                                                   |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |
| Peak Hour Factor           | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                  | 3%                                                                                  | 2%                                                                                  | 2%                                                                                  | 5%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 32                                                                                | 121                                                                               | 127                                                                               | 55                                                                                | 101                                                                               | 60                                                                                | 166                                                                                 | 312                                                                                 | 64                                                                                  | 24                                                                                  | 300                                                                                 | 27                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 0                                                                                 | 280                                                                               | 0                                                                                 | 0                                                                                 | 216                                                                               | 0                                                                                 | 0                                                                                   | 542                                                                                 | 0                                                                                   | 0                                                                                   | 351                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |                                                                                   |                                                                                     | 16                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.09                                                                              | 1.09                                                                              | 1.09                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                |
| Turning Speed (mph)        | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                  |                                                                                     | 60                                                                                  | 60                                                                                  |                                                                                     | 60                                                                                  |
| Turn Type                  | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                                | NA                                                                                  |                                                                                     | pm+pt                                                                               | NA                                                                                  |                                                                                     |
| Protected Phases           |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   |                                                                                     | 2                                                                                   |                                                                                     | 1                                                                                   | 6                                                                                   |                                                                                     |
| Permitted Phases           | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 2                                                                                   |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |                                                                                     |
| Minimum Split (s)          | 20.0                                                                              | 20.0                                                                              |                                                                                   | 20.0                                                                              | 20.0                                                                              |                                                                                   | 27.0                                                                                | 27.0                                                                                |                                                                                     | 10.0                                                                                | 27.0                                                                                |                                                                                     |
| Total Split (s)            | 20.0                                                                              | 20.0                                                                              |                                                                                   | 20.0                                                                              | 20.0                                                                              |                                                                                   | 35.0                                                                                | 35.0                                                                                |                                                                                     | 15.0                                                                                | 50.0                                                                                |                                                                                     |
| Total Split (%)            | 28.6%                                                                             | 28.6%                                                                             |                                                                                   | 28.6%                                                                             | 28.6%                                                                             |                                                                                   | 50.0%                                                                               | 50.0%                                                                               |                                                                                     | 21.4%                                                                               | 71.4%                                                                               |                                                                                     |
| Maximum Green (s)          | 15.0                                                                              | 15.0                                                                              |                                                                                   | 15.0                                                                              | 15.0                                                                              |                                                                                   | 30.0                                                                                | 30.0                                                                                |                                                                                     | 10.0                                                                                | 45.0                                                                                |                                                                                     |
| Yellow Time (s)            | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                                 | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| All-Red Time (s)           | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                                 | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Lost Time Adjust (s)       |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)        |                                                                                   | 5.0                                                                               |                                                                                   |                                                                                   | 5.0                                                                               |                                                                                   |                                                                                     | 5.0                                                                                 |                                                                                     |                                                                                     | 5.0                                                                                 |                                                                                     |
| Lead/Lag                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Lag                                                                                 | Lag                                                                                 |                                                                                     | Lead                                                                                |                                                                                     |                                                                                     |
| Lead-Lag Optimize?         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Walk Time (s)              | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                                 | 7.0                                                                                 |                                                                                     |                                                                                     | 7.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)        | 8.0                                                                               | 8.0                                                                               |                                                                                   | 8.0                                                                               | 8.0                                                                               |                                                                                   | 15.0                                                                                | 15.0                                                                                |                                                                                     |                                                                                     | 15.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr)    | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |
| Act Effect Green (s)       |                                                                                   | 15.0                                                                              |                                                                                   |                                                                                   | 15.0                                                                              |                                                                                   |                                                                                     | 30.0                                                                                |                                                                                     |                                                                                     | 45.0                                                                                |                                                                                     |

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Actuated g/C Ratio      |                                                                                   | 0.21                                                                              |                                                                                   |                                                                                   | 0.21                                                                              |                                                                                   |                                                                                    | 0.43                                                                                |                                                                                     |                                                                                     | 0.64                                                                                |                                                                                     |
| v/c Ratio               |                                                                                   | 0.41                                                                              |                                                                                   |                                                                                   | 0.35                                                                              |                                                                                   |                                                                                    | 0.53                                                                                |                                                                                     |                                                                                     | 0.18                                                                                |                                                                                     |
| Control Delay           |                                                                                   | 14.8                                                                              |                                                                                   |                                                                                   | 18.5                                                                              |                                                                                   |                                                                                    | 16.3                                                                                |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Queue Delay             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Total Delay             |                                                                                   | 14.8                                                                              |                                                                                   |                                                                                   | 18.5                                                                              |                                                                                   |                                                                                    | 16.3                                                                                |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| LOS                     |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                    | B                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 14.8                                                                              |                                                                                   |                                                                                   | 18.5                                                                              |                                                                                   |                                                                                    | 16.3                                                                                |                                                                                     |                                                                                     | 4.9                                                                                 |                                                                                     |
| Approach LOS            |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                    | B                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |
| Queue Length 50th (ft)  |                                                                                   | 28                                                                                |                                                                                   |                                                                                   | 29                                                                                |                                                                                   |                                                                                    | 82                                                                                  |                                                                                     |                                                                                     | 25                                                                                  |                                                                                     |
| Queue Length 95th (ft)  |                                                                                   | 61                                                                                |                                                                                   |                                                                                   | 58                                                                                |                                                                                   |                                                                                    | 127                                                                                 |                                                                                     |                                                                                     | 40                                                                                  |                                                                                     |
| Internal Link Dist (ft) |                                                                                   | 220                                                                               |                                                                                   |                                                                                   | 220                                                                               |                                                                                   |                                                                                    | 608                                                                                 |                                                                                     |                                                                                     | 372                                                                                 |                                                                                     |
| Turn Bay Length (ft)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Base Capacity (vph)     |                                                                                   | 684                                                                               |                                                                                   |                                                                                   | 625                                                                               |                                                                                   |                                                                                    | 1023                                                                                |                                                                                     |                                                                                     | 1928                                                                                |                                                                                     |
| Starvation Cap Reductn  |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Spillback Cap Reductn   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Storage Cap Reductn     |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Reduced v/c Ratio       |                                                                                   | 0.41                                                                              |                                                                                   |                                                                                   | 0.35                                                                              |                                                                                   |                                                                                    | 0.53                                                                                |                                                                                     |                                                                                     | 0.18                                                                                |                                                                                     |

## Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 0.53

Intersection Signal Delay: 13.5

Intersection LOS: B

Intersection Capacity Utilization 78.3%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1: Abbott Road &amp; Dorrance Avenue



Lanes, Volumes, Timings  
2: Abbott Road & Plaza Driveway

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

10/11/2024

|                            |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                 | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations        |  |  |  |                                                                                   |                                                                                   |  |
| Traffic Volume (vph)       | 97                                                                                | 3                                                                                 | 514                                                                               | 87                                                                                | 4                                                                                 | 456                                                                               |
| Future Volume (vph)        | 97                                                                                | 3                                                                                 | 514                                                                               | 87                                                                                | 4                                                                                 | 456                                                                               |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              |
| Ped Bike Factor            | 1.00                                                                              | 0.98                                                                              | 1.00                                                                              |                                                                                   |                                                                                   | 1.00                                                                              |
| Frt                        |                                                                                   | 0.850                                                                             | 0.978                                                                             |                                                                                   |                                                                                   |                                                                                   |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (prot)          | 1770                                                                              | 1583                                                                              | 3446                                                                              | 0                                                                                 | 0                                                                                 | 3539                                                                              |
| Flt Permitted              | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.952                                                                             |
| Satd. Flow (perm)          | 1761                                                                              | 1550                                                                              | 3446                                                                              | 0                                                                                 | 0                                                                                 | 3369                                                                              |
| Right Turn on Red          |                                                                                   | Yes                                                                               |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   |
| Satd. Flow (RTOR)          |                                                                                   | 3                                                                                 | 44                                                                                |                                                                                   |                                                                                   |                                                                                   |
| Link Speed (mph)           | 30                                                                                |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |
| Link Distance (ft)         | 300                                                                               |                                                                                   | 748                                                                               |                                                                                   |                                                                                   | 688                                                                               |
| Travel Time (s)            | 6.8                                                                               |                                                                                   | 17.0                                                                              |                                                                                   |                                                                                   | 15.6                                                                              |
| Confl. Peds. (#/hr)        | 5                                                                                 | 8                                                                                 |                                                                                   | 9                                                                                 | 5                                                                                 |                                                                                   |
| Confl. Bikes (#/hr)        |                                                                                   | 2                                                                                 |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   |
| Peak Hour Factor           | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              |
| Adj. Flow (vph)            | 102                                                                               | 3                                                                                 | 541                                                                               | 92                                                                                | 4                                                                                 | 480                                                                               |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)      | 102                                                                               | 3                                                                                 | 633                                                                               | 0                                                                                 | 0                                                                                 | 484                                                                               |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment             | Left                                                                              | Right                                                                             | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              |
| Median Width(ft)           | 12                                                                                |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |
| Link Offset(ft)            | 0                                                                                 |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |
| Crosswalk Width(ft)        | 16                                                                                |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Headway Factor             | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |
| Turning Speed (mph)        | 15                                                                                | 9                                                                                 |                                                                                   | 9                                                                                 | 15                                                                                |                                                                                   |
| Number of Detectors        | 1                                                                                 | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |
| Detector Template          | Left                                                                              | Right                                                                             | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              |
| Leading Detector (ft)      | 50                                                                                | 50                                                                                | 50                                                                                |                                                                                   | 20                                                                                | 50                                                                                |
| Trailing Detector (ft)     | 0                                                                                 | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |
| Detector 1 Position(ft)    | 0                                                                                 | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |
| Detector 1 Size(ft)        | 50                                                                                | 50                                                                                | 50                                                                                |                                                                                   | 20                                                                                | 50                                                                                |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |
| Turn Type                  | Perm                                                                              | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |
| Protected Phases           |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |
| Permitted Phases           | 8                                                                                 | 8                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |
| Detector Phase             | 8                                                                                 | 8                                                                                 | 2                                                                                 |                                                                                   | 6                                                                                 | 6                                                                                 |
| Switch Phase               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Minimum Initial (s)        | 6.0                                                                               | 6.0                                                                               | 6.0                                                                               |                                                                                   | 6.0                                                                               | 6.0                                                                               |
| Minimum Split (s)          | 11.0                                                                              | 11.0                                                                              | 11.0                                                                              |                                                                                   | 11.0                                                                              | 11.0                                                                              |
| Total Split (s)            | 26.0                                                                              | 26.0                                                                              | 40.0                                                                              |                                                                                   | 40.0                                                                              | 40.0                                                                              |

Lanes, Volumes, Timings  
2: Abbott Road & Plaza Driveway

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

10/11/2024

|                         |  |       |       |     |       |       |
|-------------------------|-----------------------------------------------------------------------------------|-------|-------|-----|-------|-------|
| Lane Group              | WBL                                                                               | WBR   | NBT   | NBR | SBL   | SBT   |
| Total Split (%)         | 39.4%                                                                             | 39.4% | 60.6% |     | 60.6% | 60.6% |
| Maximum Green (s)       | 21.0                                                                              | 21.0  | 35.0  |     | 35.0  | 35.0  |
| Yellow Time (s)         | 3.0                                                                               | 3.0   | 3.0   |     | 3.0   | 3.0   |
| All-Red Time (s)        | 2.0                                                                               | 2.0   | 2.0   |     | 2.0   | 2.0   |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0   | 0.0   |     |       | 0.0   |
| Total Lost Time (s)     | 5.0                                                                               | 5.0   | 5.0   |     |       | 5.0   |
| Lead/Lag                |                                                                                   |       |       |     |       |       |
| Lead-Lag Optimize?      |                                                                                   |       |       |     |       |       |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0   | 3.0   |     | 3.0   | 3.0   |
| Recall Mode             | None                                                                              | None  | C-Max |     | C-Max | C-Max |
| Act Effect Green (s)    | 9.2                                                                               | 9.2   | 50.0  |     |       | 50.0  |
| Actuated g/C Ratio      | 0.14                                                                              | 0.14  | 0.76  |     |       | 0.76  |
| v/c Ratio               | 0.42                                                                              | 0.01  | 0.24  |     |       | 0.19  |
| Control Delay           | 30.3                                                                              | 16.0  | 3.5   |     |       | 3.6   |
| Queue Delay             | 0.0                                                                               | 0.0   | 0.0   |     |       | 0.0   |
| Total Delay             | 30.3                                                                              | 16.0  | 3.5   |     |       | 3.6   |
| LOS                     | C                                                                                 | B     | A     |     |       | A     |
| Approach Delay          | 29.9                                                                              |       | 3.5   |     |       | 3.6   |
| Approach LOS            | C                                                                                 |       | A     |     |       | A     |
| Queue Length 50th (ft)  | 38                                                                                | 0     | 33    |     |       | 27    |
| Queue Length 95th (ft)  | 75                                                                                | 6     | 63    |     |       | 51    |
| Internal Link Dist (ft) | 220                                                                               |       | 668   |     |       | 608   |
| Turn Bay Length (ft)    |                                                                                   |       |       |     |       |       |
| Base Capacity (vph)     | 560                                                                               | 495   | 2620  |     |       | 2551  |
| Starvation Cap Reductn  | 0                                                                                 | 0     | 0     |     |       | 0     |
| Spillback Cap Reductn   | 0                                                                                 | 0     | 0     |     |       | 0     |
| Storage Cap Reductn     | 0                                                                                 | 0     | 0     |     |       | 0     |
| Reduced v/c Ratio       | 0.18                                                                              | 0.01  | 0.24  |     |       | 0.19  |

Intersection Summary

Area Type: Other

Cycle Length: 66

Actuated Cycle Length: 66

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.42

Intersection Signal Delay: 5.8

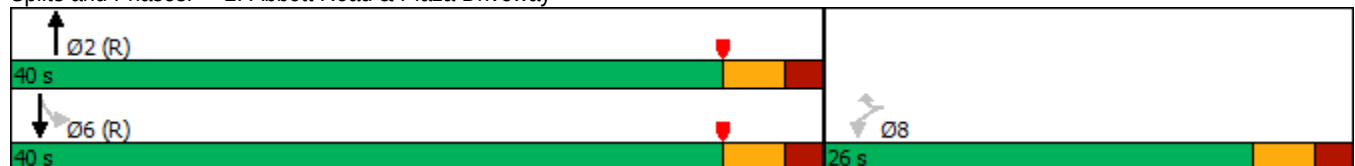
Intersection LOS: A

Intersection Capacity Utilization 30.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: Abbott Road & Plaza Driveway





## Lanes, Volumes, Timings

## Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

## 3: Abbott Road/Abbott Road &amp; Ridge Road

10/11/2024

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |  |                                                                                     |  |  |                                                                                     |  |  |
| Traffic Volume (vph)       | 60                                                                                | 534                                                                               | 65                                                                                | 246                                                                               | 417                                                                               | 337                                                                               | 40                                                                                  | 262                                                                                 | 210                                                                                 | 246                                                                                 | 260                                                                                 | 49                                                                                  |
| Future Volume (vph)        | 60                                                                                | 534                                                                               | 65                                                                                | 246                                                                               | 417                                                                               | 337                                                                               | 40                                                                                  | 262                                                                                 | 210                                                                                 | 246                                                                                 | 260                                                                                 | 49                                                                                  |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Lane Width (ft)            | 11                                                                                | 11                                                                                | 11                                                                                | 10                                                                                | 10                                                                                | 12                                                                                | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  |
| Storage Length (ft)        | 90                                                                                |                                                                                   | 250                                                                               | 200                                                                               |                                                                                   | 0                                                                                 | 0                                                                                   |                                                                                     | 125                                                                                 | 0                                                                                   |                                                                                     | 150                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                   |                                                                                     | 1                                                                                   | 0                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (ft)          | 50                                                                                |                                                                                   |                                                                                   | 100                                                                               |                                                                                   |                                                                                   | 25                                                                                  |                                                                                     |                                                                                     | 25                                                                                  |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                                | 0.95                                                                                | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              |                                                                                   | 0.98                                                                              |                                                                                     | 1.00                                                                                | 0.98                                                                                |                                                                                     | 1.00                                                                                | 0.97                                                                                |
| Frt                        |                                                                                   | 0.984                                                                             |                                                                                   |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                     |                                                                                     | 0.850                                                                               |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                     | 0.993                                                                               |                                                                                     |                                                                                     | 0.976                                                                               |                                                                                     |
| Satd. Flow (prot)          | 1711                                                                              | 3360                                                                              | 0                                                                                 | 1652                                                                              | 1739                                                                              | 1583                                                                              | 0                                                                                   | 3276                                                                                | 1478                                                                                | 0                                                                                   | 3224                                                                                | 1478                                                                                |
| Flt Permitted              | 0.380                                                                             |                                                                                   |                                                                                   | 0.287                                                                             |                                                                                   |                                                                                   |                                                                                     | 0.820                                                                               |                                                                                     |                                                                                     | 0.606                                                                               |                                                                                     |
| Satd. Flow (perm)          | 683                                                                               | 3360                                                                              | 0                                                                                 | 498                                                                               | 1739                                                                              | 1551                                                                              | 0                                                                                   | 2704                                                                                | 1447                                                                                | 0                                                                                   | 1998                                                                                | 1432                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 15                                                                                |                                                                                   |                                                                                   |                                                                                   | 347                                                                               |                                                                                     |                                                                                     | 167                                                                                 |                                                                                     |                                                                                     | 51                                                                                  |
| Link Speed (mph)           |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                     | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 808                                                                               |                                                                                   |                                                                                   | 782                                                                               |                                                                                   |                                                                                     | 1105                                                                                |                                                                                     |                                                                                     | 748                                                                                 |                                                                                     |
| Travel Time (s)            |                                                                                   | 18.4                                                                              |                                                                                   |                                                                                   | 17.8                                                                              |                                                                                   |                                                                                     | 25.1                                                                                |                                                                                     |                                                                                     | 17.0                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                   |                                                                                     | 5                                                                                   | 5                                                                                   |                                                                                     | 5                                                                                   |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |
| Peak Hour Factor           | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 3%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 62                                                                                | 551                                                                               | 67                                                                                | 254                                                                               | 430                                                                               | 347                                                                               | 41                                                                                  | 270                                                                                 | 216                                                                                 | 254                                                                                 | 268                                                                                 | 51                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 62                                                                                | 618                                                                               | 0                                                                                 | 254                                                                               | 430                                                                               | 347                                                                               | 0                                                                                   | 311                                                                                 | 216                                                                                 | 0                                                                                   | 522                                                                                 | 51                                                                                  |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 11                                                                                |                                                                                   |                                                                                   | 11                                                                                |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |                                                                                   |                                                                                     | 16                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.04                                                                              | 1.04                                                                              | 1.04                                                                              | 1.09                                                                              | 1.09                                                                              | 1.00                                                                              | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                |
| Turning Speed (mph)        | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                  |                                                                                     | 60                                                                                  | 60                                                                                  |                                                                                     | 60                                                                                  |
| Number of Detectors        | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 | 1                                                                                 | 1                                                                                   | 1                                                                                   | 1                                                                                   | 1                                                                                   | 1                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                                | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (ft)      | 50                                                                                | 50                                                                                |                                                                                   | 50                                                                                | 50                                                                                | 50                                                                                | 20                                                                                  | 50                                                                                  | 50                                                                                  | 20                                                                                  | 50                                                                                  | 50                                                                                  |
| Trailing Detector (ft)     | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Detector 1 Position(ft)    | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Detector 1 Size(ft)        | 50                                                                                | 50                                                                                |                                                                                   | 50                                                                                | 50                                                                                | 50                                                                                | 20                                                                                  | 50                                                                                  | 50                                                                                  | 20                                                                                  | 50                                                                                  | 50                                                                                  |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Turn Type                  | pm+pt                                                                             | NA                                                                                |                                                                                   | pm+pt                                                                             | NA                                                                                | pm+ov                                                                             | Perm                                                                                | NA                                                                                  | pm+ov                                                                               | pm+pt                                                                               | NA                                                                                  | pm+ov                                                                               |
| Protected Phases           | 5                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 6                                                                                 | 7                                                                                 |                                                                                     | 8                                                                                   | 1                                                                                   | 7                                                                                   | 4                                                                                   | 5                                                                                   |
| Permitted Phases           | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   | 6                                                                                 | 8                                                                                   |                                                                                     | 8                                                                                   | 4                                                                                   |                                                                                     | 4                                                                                   |

# Lanes, Volumes, Timings

# Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

## 3: Abbott Road/Abbott Road & Ridge Road

10/11/2024



| Lane Group              | EBL   | EBT   | EBR | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Detector Phase          | 5     | 2     |     | 1     | 6     | 7     | 8     | 8     | 1     | 7     | 4     | 5     |
| Switch Phase            |       |       |     |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)     | 7.0   | 7.0   |     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Minimum Split (s)       | 12.0  | 29.0  |     | 12.0  | 23.0  | 12.0  | 23.0  | 23.0  | 12.0  | 12.0  | 29.0  | 12.0  |
| Total Split (s)         | 14.0  | 35.0  |     | 14.0  | 35.0  | 14.0  | 30.0  | 30.0  | 14.0  | 14.0  | 44.0  | 14.0  |
| Total Split (%)         | 15.1% | 37.6% |     | 15.1% | 37.6% | 15.1% | 32.3% | 32.3% | 15.1% | 15.1% | 47.3% | 15.1% |
| Maximum Green (s)       | 9.0   | 30.0  |     | 9.0   | 30.0  | 9.0   | 25.0  | 25.0  | 9.0   | 9.0   | 39.0  | 9.0   |
| Yellow Time (s)         | 4.0   | 4.0   |     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 1.0   | 1.0   |     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s)    | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |
| Total Lost Time (s)     | 5.0   | 5.0   |     | 5.0   | 5.0   | 5.0   |       | 5.0   | 5.0   |       | 5.0   | 5.0   |
| Lead/Lag                | Lead  | Lag   |     | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lead  |       | Lead  |
| Lead-Lag Optimize?      |       |       |     |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Recall Mode             | None  | Ped   |     | None  | Ped   | None  | None  | None  | None  | None  | None  | None  |
| Walk Time (s)           |       | 7.0   |     |       | 7.0   |       | 7.0   | 7.0   |       |       | 7.0   |       |
| Flash Dont Walk (s)     |       | 17.0  |     |       | 11.0  |       | 11.0  | 11.0  |       |       | 17.0  |       |
| Pedestrian Calls (#/hr) |       | 5     |     |       | 5     |       | 5     | 5     |       |       | 5     |       |
| Act Effect Green (s)    | 33.3  | 25.8  |     | 37.0  | 29.9  | 37.0  |       | 14.7  | 23.8  |       | 26.8  | 34.4  |
| Actuated g/C Ratio      | 0.43  | 0.34  |     | 0.48  | 0.39  | 0.48  |       | 0.19  | 0.31  |       | 0.35  | 0.45  |
| v/c Ratio               | 0.16  | 0.54  |     | 0.68  | 0.64  | 0.37  |       | 0.60  | 0.38  |       | 0.64  | 0.08  |
| Control Delay           | 11.7  | 22.9  |     | 23.6  | 26.8  | 2.8   |       | 33.4  | 7.0   |       | 23.9  | 3.2   |
| Queue Delay             | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |
| Total Delay             | 11.7  | 22.9  |     | 23.6  | 26.8  | 2.8   |       | 33.4  | 7.0   |       | 23.9  | 3.2   |
| LOS                     | B     | C     |     | C     | C     | A     |       | C     | A     |       | C     | A     |
| Approach Delay          |       | 21.9  |     |       | 18.0  |       |       | 22.6  |       |       | 22.1  |       |
| Approach LOS            |       | C     |     |       | B     |       |       | C     |       |       | C     |       |
| Queue Length 50th (ft)  | 13    | 117   |     | 62    | 166   | 0     |       | 69    | 14    |       | 95    | 0     |
| Queue Length 95th (ft)  | 39    | 198   |     | #169  | #327  | 45    |       | 117   | 59    |       | 152   | 15    |
| Internal Link Dist (ft) |       | 728   |     |       | 702   |       |       | 1025  |       |       | 668   |       |
| Turn Bay Length (ft)    | 90    |       |     | 200   |       |       |       |       | 125   |       |       | 150   |
| Base Capacity (vph)     | 431   | 1332  |     | 376   | 725   | 962   |       | 887   | 567   |       | 1135  | 702   |
| Starvation Cap Reductn  | 0     | 0     |     | 0     | 0     | 0     |       | 0     | 0     |       | 0     | 0     |
| Spillback Cap Reductn   | 0     | 0     |     | 0     | 0     | 0     |       | 0     | 0     |       | 0     | 0     |
| Storage Cap Reductn     | 0     | 0     |     | 0     | 0     | 0     |       | 0     | 0     |       | 0     | 0     |
| Reduced v/c Ratio       | 0.14  | 0.46  |     | 0.68  | 0.59  | 0.36  |       | 0.35  | 0.38  |       | 0.46  | 0.07  |

### Intersection Summary

Area Type: Other

Cycle Length: 93

Actuated Cycle Length: 76.8

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 20.6

Intersection LOS: C

Intersection Capacity Utilization 74.9%

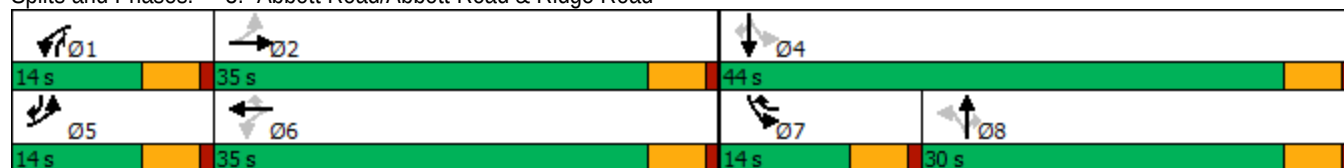
ICU Level of Service D

Analysis Period (min) 15

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Abbott Road/Abbott Road & Ridge Road



Lanes, Volumes, Timings  
4: Abbott Road & Fernald Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

10/11/2024

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                        | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                    |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)              | 2                                                                                 | 0                                                                                 | 1                                                                                 | 13                                                                                | 0                                                                                 | 10                                                                                | 0                                                                                  | 489                                                                                 | 32                                                                                  | 21                                                                                  | 552                                                                                 | 0                                                                                   |
| Future Volume (vph)               | 2                                                                                 | 0                                                                                 | 1                                                                                 | 13                                                                                | 0                                                                                 | 10                                                                                | 0                                                                                  | 489                                                                                 | 32                                                                                  | 21                                                                                  | 552                                                                                 | 0                                                                                   |
| Ideal Flow (vphpl)                | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                               | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Lane Width (ft)                   | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                 | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 12                                                                                  |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                               | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                |
| Ped Bike Factor                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Frt                               |                                                                                   | 0.955                                                                             |                                                                                   |                                                                                   | 0.941                                                                             |                                                                                   |                                                                                    | 0.991                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Flt Protected                     |                                                                                   | 0.968                                                                             |                                                                                   |                                                                                   | 0.973                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     | 0.998                                                                               |                                                                                     |
| Satd. Flow (prot)                 | 0                                                                                 | 1722                                                                              | 0                                                                                 | 0                                                                                 | 1706                                                                              | 0                                                                                 | 0                                                                                  | 3244                                                                                | 0                                                                                   | 0                                                                                   | 3266                                                                                | 0                                                                                   |
| Flt Permitted                     |                                                                                   | 0.968                                                                             |                                                                                   |                                                                                   | 0.973                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     | 0.998                                                                               |                                                                                     |
| Satd. Flow (perm)                 | 0                                                                                 | 1722                                                                              | 0                                                                                 | 0                                                                                 | 1706                                                                              | 0                                                                                 | 0                                                                                  | 3244                                                                                | 0                                                                                   | 0                                                                                   | 3266                                                                                | 0                                                                                   |
| Link Speed (mph)                  |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                    | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)                |                                                                                   | 100                                                                               |                                                                                   |                                                                                   | 300                                                                               |                                                                                   |                                                                                    | 1266                                                                                |                                                                                     |                                                                                     | 1105                                                                                |                                                                                     |
| Travel Time (s)                   |                                                                                   | 2.3                                                                               |                                                                                   |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                    | 28.8                                                                                |                                                                                     |                                                                                     | 25.1                                                                                |                                                                                     |
| Confl. Peds. (#/hr)               | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 13                                                                                 |                                                                                     | 7                                                                                   | 7                                                                                   |                                                                                     | 13                                                                                  |
| Confl. Bikes (#/hr)               |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                    |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |
| Peak Hour Factor                  | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                               | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                |
| Heavy Vehicles (%)                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                 | 3%                                                                                  | 2%                                                                                  | 2%                                                                                  | 3%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)                   | 2                                                                                 | 0                                                                                 | 1                                                                                 | 14                                                                                | 0                                                                                 | 11                                                                                | 0                                                                                  | 515                                                                                 | 34                                                                                  | 22                                                                                  | 581                                                                                 | 0                                                                                   |
| Shared Lane Traffic (%)           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)             | 0                                                                                 | 3                                                                                 | 0                                                                                 | 0                                                                                 | 25                                                                                | 0                                                                                 | 0                                                                                  | 549                                                                                 | 0                                                                                   | 0                                                                                   | 603                                                                                 | 0                                                                                   |
| Enter Blocked Intersection        | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment                    | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)                  |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Link Offset(ft)                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)               |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |                                                                                   |                                                                                    | 16                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Two way Left Turn Lane            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor                    | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.00                                                                                |
| Turning Speed (mph)               | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                 |                                                                                     | 60                                                                                  | 60                                                                                  |                                                                                     | 60                                                                                  |
| Sign Control                      |                                                                                   | Stop                                                                              |                                                                                   |                                                                                   | Stop                                                                              |                                                                                   |                                                                                    | Free                                                                                |                                                                                     |                                                                                     | Free                                                                                |                                                                                     |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                        | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:                     | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization | 42.1%                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min)             | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| ICU Level of Service A            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

Lanes, Volumes, Timings  
5: Abbott Road & Elmview Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

10/11/2024

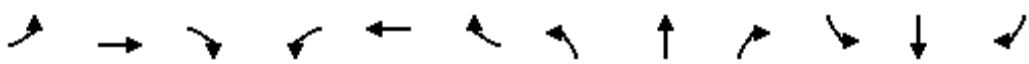
|                            |  |       |       |       |       |       |       |       |       |       |       |       |
|----------------------------|------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Group                 | EBL                                                                                | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |                                                                                    | ↕     |       |       | ↕     |       |       | ↕     |       |       | ↕     |       |
| Traffic Volume (vph)       | 17                                                                                 | 1     | 6     | 6     | 1     | 10    | 7     | 477   | 8     | 19    | 516   | 17    |
| Future Volume (vph)        | 17                                                                                 | 1     | 6     | 6     | 1     | 10    | 7     | 477   | 8     | 19    | 516   | 17    |
| Ideal Flow (vphpl)         | 1900                                                                               | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 12                                                                                 | 12    | 12    | 12    | 12    | 12    | 10    | 10    | 10    | 10    | 10    | 10    |
| Lane Util. Factor          | 1.00                                                                               | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  |
| Ped Bike Factor            |                                                                                    | 0.99  |       |       | 0.99  |       |       | 1.00  |       |       | 1.00  |       |
| Frt                        |                                                                                    | 0.968 |       |       | 0.917 |       |       | 0.997 |       |       | 0.995 |       |
| Flt Protected              |                                                                                    | 0.965 |       |       | 0.984 |       |       | 0.999 |       |       | 0.998 |       |
| Satd. Flow (prot)          | 0                                                                                  | 1732  | 0     | 0     | 1662  | 0     | 0     | 3227  | 0     | 0     | 3248  | 0     |
| Flt Permitted              |                                                                                    |       |       |       |       |       |       | 0.949 |       |       | 0.933 |       |
| Satd. Flow (perm)          | 0                                                                                  | 1789  | 0     | 0     | 1686  | 0     | 0     | 3066  | 0     | 0     | 3036  | 0     |
| Right Turn on Red          |                                                                                    |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |                                                                                    | 6     |       |       | 11    |       |       | 4     |       |       | 7     |       |
| Link Speed (mph)           |                                                                                    | 30    |       |       | 30    |       |       | 30    |       |       | 30    |       |
| Link Distance (ft)         |                                                                                    | 300   |       |       | 300   |       |       | 457   |       |       | 1266  |       |
| Travel Time (s)            |                                                                                    | 6.8   |       |       | 6.8   |       |       | 10.4  |       |       | 28.8  |       |
| Confl. Peds. (#/hr)        | 5                                                                                  |       | 5     | 5     |       | 5     | 6     |       | 5     | 5     |       | 6     |
| Confl. Bikes (#/hr)        |                                                                                    |       | 2     |       |       | 2     |       |       | 2     |       |       | 2     |
| Peak Hour Factor           | 0.94                                                                               | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  |
| Heavy Vehicles (%)         | 2%                                                                                 | 2%    | 2%    | 2%    | 2%    | 2%    | 2%    | 4%    | 2%    | 2%    | 3%    | 2%    |
| Adj. Flow (vph)            | 18                                                                                 | 1     | 6     | 6     | 1     | 11    | 7     | 507   | 9     | 20    | 549   | 18    |
| Shared Lane Traffic (%)    |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 0                                                                                  | 25    | 0     | 0     | 18    | 0     | 0     | 523   | 0     | 0     | 587   | 0     |
| Enter Blocked Intersection | No                                                                                 | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left                                                                               | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |                                                                                    | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Link Offset(ft)            |                                                                                    | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Crosswalk Width(ft)        |                                                                                    | 16    |       |       | 16    |       |       | 16    |       |       | 16    |       |
| Two way Left Turn Lane     |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Headway Factor             | 1.00                                                                               | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.09  | 1.09  | 1.09  | 1.09  | 1.09  | 1.09  |
| Turning Speed (mph)        | 60                                                                                 |       | 60    | 60    |       | 60    | 60    |       | 60    | 60    |       | 60    |
| Number of Detectors        | 1                                                                                  | 1     |       | 1     | 1     |       | 1     | 1     |       | 1     | 1     |       |
| Detector Template          | Left                                                                               | Thru  |       | Left  | Thru  |       | Left  | Thru  |       | Left  | Thru  |       |
| Leading Detector (ft)      | 20                                                                                 | 50    |       | 20    | 50    |       | 20    | 50    |       | 20    | 50    |       |
| Trailing Detector (ft)     | 0                                                                                  | 0     |       | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       |
| Detector 1 Position(ft)    | 0                                                                                  | 0     |       | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       |
| Detector 1 Size(ft)        | 20                                                                                 | 50    |       | 20    | 50    |       | 20    | 50    |       | 20    | 50    |       |
| Detector 1 Type            | Cl+Ex                                                                              | Cl+Ex |       | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex |       |
| Detector 1 Channel         |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Detector 1 Extend (s)      | 0.0                                                                                | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Detector 1 Queue (s)       | 0.0                                                                                | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Detector 1 Delay (s)       | 0.0                                                                                | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Turn Type                  | Perm                                                                               | NA    |       | Perm  | NA    |       | Perm  | NA    |       | Perm  | NA    |       |
| Protected Phases           |                                                                                    | 4     |       |       | 8     |       |       | 2     |       |       | 6     |       |
| Permitted Phases           | 4                                                                                  |       |       | 8     |       |       | 2     |       |       | 6     |       |       |
| Detector Phase             | 4                                                                                  | 4     |       | 8     | 8     |       | 2     | 2     |       | 6     | 6     |       |
| Switch Phase               |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)        | 6.0                                                                                | 6.0   |       | 6.0   | 6.0   |       | 20.0  | 20.0  |       | 20.0  | 20.0  |       |



Lanes, Volumes, Timings  
5: Abbott Road & Elmview Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

10/11/2024

|                         |  |       |     |       |       |     |       |       |     |       |       |     |
|-------------------------|------------------------------------------------------------------------------------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Lane Group              | EBL                                                                                | EBT   | EBR | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
| Minimum Split (s)       | 12.0                                                                               | 12.0  |     | 12.0  | 12.0  |     | 26.0  | 26.0  |     | 26.0  | 26.0  |     |
| Total Split (s)         | 25.0                                                                               | 25.0  |     | 25.0  | 25.0  |     | 40.0  | 40.0  |     | 40.0  | 40.0  |     |
| Total Split (%)         | 38.5%                                                                              | 38.5% |     | 38.5% | 38.5% |     | 61.5% | 61.5% |     | 61.5% | 61.5% |     |
| Maximum Green (s)       | 19.0                                                                               | 19.0  |     | 19.0  | 19.0  |     | 34.0  | 34.0  |     | 34.0  | 34.0  |     |
| Yellow Time (s)         | 4.0                                                                                | 4.0   |     | 4.0   | 4.0   |     | 4.0   | 4.0   |     | 4.0   | 4.0   |     |
| All-Red Time (s)        | 2.0                                                                                | 2.0   |     | 2.0   | 2.0   |     | 2.0   | 2.0   |     | 2.0   | 2.0   |     |
| Lost Time Adjust (s)    |                                                                                    | 0.0   |     |       | 0.0   |     |       | 0.0   |     |       | 0.0   |     |
| Total Lost Time (s)     |                                                                                    | 6.0   |     |       | 6.0   |     |       | 6.0   |     |       | 6.0   |     |
| Lead/Lag                |                                                                                    |       |     |       |       |     |       |       |     |       |       |     |
| Lead-Lag Optimize?      |                                                                                    |       |     |       |       |     |       |       |     |       |       |     |
| Vehicle Extension (s)   | 3.0                                                                                | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 3.0   |     |
| Recall Mode             | None                                                                               | None  |     | None  | None  |     | Max   | Max   |     | Max   | Max   |     |
| Act Effect Green (s)    |                                                                                    | 6.5   |     |       | 6.4   |     |       | 47.9  |     |       | 47.9  |     |
| Actuated g/C Ratio      |                                                                                    | 0.13  |     |       | 0.12  |     |       | 0.93  |     |       | 0.93  |     |
| v/c Ratio               |                                                                                    | 0.11  |     |       | 0.08  |     |       | 0.18  |     |       | 0.21  |     |
| Control Delay           |                                                                                    | 17.0  |     |       | 14.2  |     |       | 1.5   |     |       | 1.6   |     |
| Queue Delay             |                                                                                    | 0.0   |     |       | 0.0   |     |       | 0.0   |     |       | 0.0   |     |
| Total Delay             |                                                                                    | 17.0  |     |       | 14.2  |     |       | 1.5   |     |       | 1.6   |     |
| LOS                     |                                                                                    | B     |     |       | B     |     |       | A     |     |       | A     |     |
| Approach Delay          |                                                                                    | 17.0  |     |       | 14.2  |     |       | 1.5   |     |       | 1.6   |     |
| Approach LOS            |                                                                                    | B     |     |       | B     |     |       | A     |     |       | A     |     |
| Queue Length 50th (ft)  |                                                                                    | 6     |     |       | 2     |     |       | 0     |     |       | 0     |     |
| Queue Length 95th (ft)  |                                                                                    | 22    |     |       | 16    |     |       | 49    |     |       | 55    |     |
| Internal Link Dist (ft) |                                                                                    | 220   |     |       | 220   |     |       | 377   |     |       | 1186  |     |
| Turn Bay Length (ft)    |                                                                                    |       |     |       |       |     |       |       |     |       |       |     |
| Base Capacity (vph)     |                                                                                    | 670   |     |       | 635   |     |       | 2841  |     |       | 2814  |     |
| Starvation Cap Reductn  |                                                                                    | 0     |     |       | 0     |     |       | 0     |     |       | 0     |     |
| Spillback Cap Reductn   |                                                                                    | 0     |     |       | 0     |     |       | 0     |     |       | 0     |     |
| Storage Cap Reductn     |                                                                                    | 0     |     |       | 0     |     |       | 0     |     |       | 0     |     |
| Reduced v/c Ratio       |                                                                                    | 0.04  |     |       | 0.03  |     |       | 0.18  |     |       | 0.21  |     |

Intersection Summary

Area Type: Other

Cycle Length: 65

Actuated Cycle Length: 51.7

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.21

Intersection Signal Delay: 2.1

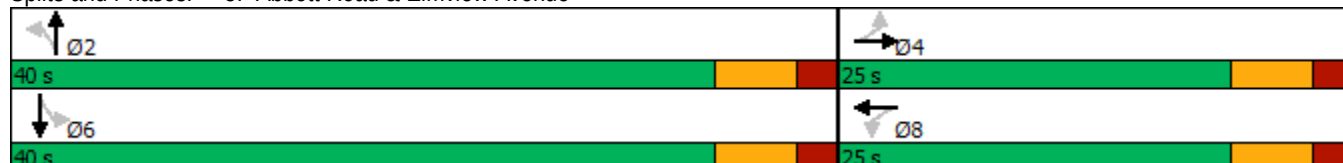
Intersection LOS: A

Intersection Capacity Utilization 43.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: Abbott Road & Elmview Avenue



**Intersection**

Int Delay, s/veh 0.6

| Movement                 | EBL  | EBT                                                                               | EBR  | WBL  | WBT                                                                               | WBR  | NBL  | NBT                                                                               | NBR  | SBL  | SBT                                                                                 | SBR  |
|--------------------------|------|-----------------------------------------------------------------------------------|------|------|-----------------------------------------------------------------------------------|------|------|-----------------------------------------------------------------------------------|------|------|-------------------------------------------------------------------------------------|------|
| Lane Configurations      |      |  |      |      |  |      |      |  |      |      |  |      |
| Traffic Vol, veh/h       | 2    | 0                                                                                 | 1    | 13   | 0                                                                                 | 10   | 0    | 489                                                                               | 32   | 21   | 552                                                                                 | 0    |
| Future Vol, veh/h        | 2    | 0                                                                                 | 1    | 13   | 0                                                                                 | 10   | 0    | 489                                                                               | 32   | 21   | 552                                                                                 | 0    |
| Conflicting Peds, #/hr   | 5    | 0                                                                                 | 5    | 5    | 0                                                                                 | 5    | 13   | 0                                                                                 | 7    | 7    | 0                                                                                   | 13   |
| Sign Control             | Stop | Stop                                                                              | Stop | Stop | Stop                                                                              | Stop | Free | Free                                                                              | Free | Free | Free                                                                                | Free |
| RT Channelized           | -    | -                                                                                 | None | -    | -                                                                                 | None | -    | -                                                                                 | None | -    | -                                                                                   | None |
| Storage Length           | -    | -                                                                                 | -    | -    | -                                                                                 | -    | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| Veh in Median Storage, # | -    | 0                                                                                 | -    | -    | 0                                                                                 | -    | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Grade, %                 | -    | 0                                                                                 | -    | -    | 0                                                                                 | -    | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Peak Hour Factor         | 95   | 95                                                                                | 95   | 95   | 95                                                                                | 95   | 95   | 95                                                                                | 95   | 95   | 95                                                                                  | 95   |
| Heavy Vehicles, %        | 2    | 2                                                                                 | 2    | 2    | 2                                                                                 | 2    | 2    | 3                                                                                 | 2    | 2    | 3                                                                                   | 2    |
| Mvmt Flow                | 2    | 0                                                                                 | 1    | 14   | 0                                                                                 | 11   | 0    | 515                                                                               | 34   | 22   | 581                                                                                 | 0    |

| Major/Minor          | Minor2 |      | Minor1 |      | Major1 |      | Major2 |   |   |      |   |   |
|----------------------|--------|------|--------|------|--------|------|--------|---|---|------|---|---|
| Conflicting Flow All | 901    | 1194 | 309    | 879  | 1177   | 287  | 594    | 0 | 0 | 556  | 0 | 0 |
| Stage 1              | 638    | 638  | -      | 539  | 539    | -    | -      | - | - | -    | - | - |
| Stage 2              | 263    | 556  | -      | 340  | 638    | -    | -      | - | - | -    | - | - |
| Critical Hdwy        | 7.54   | 6.54 | 6.94   | 7.54 | 6.54   | 6.94 | 4.14   | - | - | 4.14 | - | - |
| Critical Hdwy Stg 1  | 6.54   | 5.54 | -      | 6.54 | 5.54   | -    | -      | - | - | -    | - | - |
| Critical Hdwy Stg 2  | 6.54   | 5.54 | -      | 6.54 | 5.54   | -    | -      | - | - | -    | - | - |
| Follow-up Hdwy       | 3.52   | 4.02 | 3.32   | 3.52 | 4.02   | 3.32 | 2.22   | - | - | 2.22 | - | - |
| Pot Cap-1 Maneuver   | 233    | 185  | 687    | 242  | 190    | 710  | 978    | - | - | 1011 | - | - |
| Stage 1              | 431    | 469  | -      | 494  | 520    | -    | -      | - | - | -    | - | - |
| Stage 2              | 719    | 511  | -      | 648  | 469    | -    | -      | - | - | -    | - | - |
| Platoon blocked, %   |        |      |        |      |        |      |        | - | - | -    | - | - |
| Mov Cap-1 Maneuver   | 220    | 176  | 676    | 233  | 181    | 702  | 966    | - | - | 1004 | - | - |
| Mov Cap-2 Maneuver   | 220    | 176  | -      | 233  | 181    | -    | -      | - | - | -    | - | - |
| Stage 1              | 426    | 448  | -      | 491  | 516    | -    | -      | - | - | -    | - | - |
| Stage 2              | 705    | 507  | -      | 624  | 448    | -    | -      | - | - | -    | - | - |

| Approach             | EB   |  | WB   |  | NB |  | SB  |  |
|----------------------|------|--|------|--|----|--|-----|--|
| HCM Control Delay, s | 17.8 |  | 16.8 |  | 0  |  | 0.4 |  |
| HCM LOS              | C    |  | C    |  |    |  |     |  |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL   | SBT   | SBR |
|-----------------------|-----|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h)      | 966 | -   | -   | 284        | 328   | 1004  | -   |
| HCM Lane V/C Ratio    | -   | -   | -   | 0.011      | 0.074 | 0.022 | -   |
| HCM Control Delay (s) | 0   | -   | -   | 17.8       | 16.8  | 8.7   | 0.1 |
| HCM Lane LOS          | A   | -   | -   | C          | C     | A     | A   |
| HCM 95th %tile Q(veh) | 0   | -   | -   | 0          | 0.2   | 0.1   | -   |

## Summary of All Intervals

| Run Number              | 1    | 2    | 3    | 4    | 5    | Avg  |
|-------------------------|------|------|------|------|------|------|
| Start Time              | 4:50 | 4:50 | 4:50 | 4:50 | 4:50 | 4:50 |
| End Time                | 6:00 | 6:00 | 6:00 | 6:00 | 6:00 | 6:00 |
| Total Time (min)        | 70   | 70   | 70   | 70   | 70   | 70   |
| Time Recorded (min)     | 60   | 60   | 60   | 60   | 60   | 60   |
| # of Intervals          | 2    | 2    | 2    | 2    | 2    | 2    |
| # of Recorded Intervals | 1    | 1    | 1    | 1    | 1    | 1    |
| Vehs Entered            | 3116 | 3187 | 3141 | 3207 | 3143 | 3160 |
| Vehs Exited             | 3108 | 3194 | 3128 | 3208 | 3152 | 3158 |
| Starting Vehs           | 59   | 84   | 61   | 74   | 72   | 68   |
| Ending Vehs             | 67   | 77   | 74   | 73   | 63   | 68   |
| Denied Entry Before     | 0    | 0    | 0    | 2    | 0    | 0    |
| Denied Entry After      | 0    | 1    | 1    | 0    | 0    | 0    |
| Travel Distance (mi)    | 1439 | 1441 | 1449 | 1465 | 1444 | 1448 |
| Travel Time (hr)        | 71.7 | 74.5 | 74.2 | 74.7 | 73.7 | 73.8 |
| Total Delay (hr)        | 23.1 | 25.8 | 25.2 | 25.1 | 25.0 | 24.9 |
| Total Stops             | 2864 | 3095 | 3019 | 3034 | 2991 | 3000 |
| Fuel Used (gal)         | 54.2 | 55.4 | 55.1 | 55.9 | 55.5 | 55.2 |

## Interval #0 Information Seeding

|                                     |      |
|-------------------------------------|------|
| Start Time                          | 4:50 |
| End Time                            | 5:00 |
| Total Time (min)                    | 10   |
| Volumes adjusted by Growth Factors. |      |
| No data recorded this interval.     |      |

## Interval #1 Information Recording

|                                     |      |
|-------------------------------------|------|
| Start Time                          | 5:00 |
| End Time                            | 6:00 |
| Total Time (min)                    | 60   |
| Volumes adjusted by Growth Factors. |      |

| Run Number           | 1    | 2    | 3    | 4    | 5    | Avg  |
|----------------------|------|------|------|------|------|------|
| Vehs Entered         | 3116 | 3187 | 3141 | 3207 | 3143 | 3160 |
| Vehs Exited          | 3108 | 3194 | 3128 | 3208 | 3152 | 3158 |
| Starting Vehs        | 59   | 84   | 61   | 74   | 72   | 68   |
| Ending Vehs          | 67   | 77   | 74   | 73   | 63   | 68   |
| Denied Entry Before  | 0    | 0    | 0    | 2    | 0    | 0    |
| Denied Entry After   | 0    | 1    | 1    | 0    | 0    | 0    |
| Travel Distance (mi) | 1439 | 1441 | 1449 | 1465 | 1444 | 1448 |
| Travel Time (hr)     | 71.7 | 74.5 | 74.2 | 74.7 | 73.7 | 73.8 |
| Total Delay (hr)     | 23.1 | 25.8 | 25.2 | 25.1 | 25.0 | 24.9 |
| Total Stops          | 2864 | 3095 | 3019 | 3034 | 2991 | 3000 |
| Fuel Used (gal)      | 54.2 | 55.4 | 55.1 | 55.9 | 55.5 | 55.2 |

## 1: Abbott Road &amp; Dorrance Avenue Performance by movement

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Denied Del/Veh (s)  | 0.2  | 0.1  | 0.2  | 0.2  | 0.1  | 0.1  | 0.0  | 0.0  | 0.0  | 0.3  | 0.1  | 0.1  |
| Total Delay (hr)    | 0.2  | 0.8  | 0.2  | 0.4  | 0.7  | 0.1  | 0.8  | 1.1  | 0.2  | 0.1  | 0.4  | 0.0  |
| Total Del/Veh (s)   | 29.3 | 23.7 | 6.5  | 28.3 | 25.4 | 7.2  | 17.7 | 13.2 | 10.4 | 9.0  | 5.2  | 2.3  |
| Stop Delay (hr)     | 0.2  | 0.7  | 0.1  | 0.3  | 0.6  | 0.1  | 0.6  | 0.8  | 0.1  | 0.0  | 0.3  | 0.0  |
| Stop Del/Veh (s)    | 25.3 | 20.0 | 3.6  | 24.0 | 21.5 | 4.5  | 12.8 | 9.7  | 6.9  | 5.7  | 3.2  | 1.0  |
| Total Stops         | 24   | 88   | 88   | 43   | 78   | 43   | 111  | 153  | 31   | 12   | 84   | 7    |
| Stop/Veh            | 0.83 | 0.74 | 0.71 | 0.83 | 0.78 | 0.73 | 0.68 | 0.51 | 0.52 | 0.50 | 0.29 | 0.30 |
| Travel Dist (mi)    | 1.4  | 5.9  | 6.2  | 2.5  | 5.0  | 3.0  | 21.0 | 38.1 | 7.8  | 1.8  | 21.9 | 1.8  |
| Travel Time (hr)    | 0.3  | 1.0  | 0.4  | 0.5  | 0.9  | 0.2  | 1.5  | 2.4  | 0.4  | 0.1  | 1.2  | 0.1  |
| Avg Speed (mph)     | 5    | 6    | 14   | 5    | 6    | 14   | 14   | 16   | 18   | 15   | 19   | 24   |
| Fuel Used (gal)     | 0.1  | 0.4  | 0.2  | 0.2  | 0.3  | 0.1  | 0.8  | 1.4  | 0.3  | 0.1  | 0.8  | 0.1  |
| Fuel Eff. (mpg)     | 14.8 | 15.1 | 30.5 | 13.9 | 14.3 | 31.7 | 27.3 | 27.3 | 27.4 | 25.7 | 27.3 | 33.1 |
| HC Emissions (g)    | 0    | 2    | 2    | 1    | 3    | 0    | 7    | 13   | 2    | 0    | 15   | 1    |
| CO Emissions (g)    | 16   | 92   | 60   | 33   | 96   | 22   | 183  | 368  | 69   | 21   | 377  | 21   |
| NOx Emissions (g)   | 1    | 9    | 6    | 3    | 11   | 2    | 22   | 42   | 7    | 2    | 43   | 3    |
| Vehicles Entered    | 29   | 119  | 124  | 51   | 100  | 59   | 162  | 297  | 60   | 24   | 284  | 23   |
| Vehicles Exited     | 29   | 118  | 123  | 51   | 99   | 59   | 162  | 298  | 60   | 24   | 285  | 23   |
| Hourly Exit Rate    | 29   | 118  | 123  | 51   | 99   | 59   | 162  | 298  | 60   | 24   | 285  | 23   |
| Input Volume        | 30   | 115  | 121  | 52   | 96   | 57   | 158  | 301  | 61   | 23   | 285  | 26   |
| % of Volume         | 97   | 103  | 102  | 98   | 103  | 104  | 103  | 99   | 98   | 104  | 100  | 88   |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Density (ft/veh)    |      |      |      |      |      |      |      |      |      |      |      |      |
| Occupancy (veh)     | 0    | 1    | 0    | 0    | 1    | 0    | 2    | 2    | 0    | 0    | 1    | 0    |

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1: Abbott Road & Dorrance Avenue Performance by movement

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| Movement            | All   |
|---------------------|-------|
| Denied Delay (hr)   | 0.0   |
| Denied Del/Veh (s)  | 0.1   |
| Total Delay (hr)    | 5.0   |
| Total Del/Veh (s)   | 13.6  |
| Stop Delay (hr)     | 3.8   |
| Stop Del/Veh (s)    | 10.2  |
| Total Stops         | 762   |
| Stop/Veh            | 0.57  |
| Travel Dist (mi)    | 116.3 |
| Travel Time (hr)    | 9.0   |
| Avg Speed (mph)     | 13    |
| Fuel Used (gal)     | 4.7   |
| Fuel Eff. (mpg)     | 24.8  |
| HC Emissions (g)    | 46    |
| CO Emissions (g)    | 1357  |
| NOx Emissions (g)   | 151   |
| Vehicles Entered    | 1332  |
| Vehicles Exited     | 1331  |
| Hourly Exit Rate    | 1331  |
| Input Volume        | 1325  |
| % of Volume         | 100   |
| Denied Entry Before | 0     |
| Denied Entry After  | 0     |
| Density (ft/veh)    | 353   |
| Occupancy (veh)     | 9     |



## 2: Abbott Road &amp; Plaza Driveway Performance by movement

| Movement            | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  | All   |
|---------------------|------|------|------|------|------|------|-------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   |
| Denied Del/Veh (s)  | 0.2  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   |
| Total Delay (hr)    | 0.8  | 0.0  | 0.7  | 0.1  | 0.0  | 0.5  | 2.0   |
| Total Del/Veh (s)   | 30.9 | 3.8  | 4.1  | 3.6  | 14.0 | 3.7  | 5.9   |
| Stop Delay (hr)     | 0.7  | 0.0  | 0.2  | 0.0  | 0.0  | 0.2  | 1.2   |
| Stop Del/Veh (s)    | 28.2 | 4.2  | 1.6  | 1.6  | 11.4 | 1.6  | 3.6   |
| Total Stops         | 82   | 3    | 85   | 20   | 1    | 73   | 264   |
| Stop/Veh            | 0.89 | 0.75 | 0.15 | 0.24 | 0.50 | 0.15 | 0.22  |
| Travel Dist (mi)    | 4.4  | 0.2  | 75.0 | 11.3 | 0.2  | 59.9 | 151.0 |
| Travel Time (hr)    | 1.0  | 0.0  | 3.2  | 0.5  | 0.0  | 2.5  | 7.2   |
| Avg Speed (mph)     | 5    | 13   | 24   | 22   | 13   | 24   | 21    |
| Fuel Used (gal)     | 0.3  | 0.0  | 3.2  | 0.4  | 0.0  | 2.4  | 6.3   |
| Fuel Eff. (mpg)     | 13.7 | 41.9 | 23.5 | 26.6 | 24.6 | 25.0 | 23.8  |
| HC Emissions (g)    | 1    | 0    | 37   | 6    | 0    | 34   | 78    |
| CO Emissions (g)    | 56   | 1    | 1295 | 187  | 2    | 1004 | 2545  |
| NOx Emissions (g)   | 5    | 0    | 128  | 19   | 0    | 109  | 261   |
| Vehicles Entered    | 91   | 4    | 570  | 82   | 2    | 468  | 1217  |
| Vehicles Exited     | 91   | 4    | 570  | 82   | 2    | 468  | 1217  |
| Hourly Exit Rate    | 91   | 4    | 570  | 82   | 2    | 468  | 1217  |
| Input Volume        | 97   | 3    | 572  | 87   | 4    | 464  | 1227  |
| % of Volume         | 94   | 133  | 100  | 94   | 50   | 101  | 99    |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Density (ft/veh)    |      |      |      |      |      |      | 468   |
| Occupancy (veh)     | 1    | 0    | 3    | 1    | 0    | 2    | 7     |

## 3: Abbott Road/Abbott Road &amp; Ridge Road Performance by movement

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.2  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Denied Del/Veh (s)  | 3.1  | 0.2  | 0.3  | 2.8  | 0.8  | 0.5  | 0.0  | 0.0  | 0.2  | 0.0  | 0.0  | 0.0  |
| Total Delay (hr)    | 0.3  | 3.4  | 0.3  | 1.6  | 2.4  | 0.6  | 0.2  | 1.4  | 0.4  | 2.5  | 1.3  | 0.1  |
| Total Del/Veh (s)   | 19.1 | 23.2 | 15.8 | 22.9 | 20.8 | 6.0  | 24.2 | 19.6 | 6.2  | 35.3 | 18.2 | 8.0  |
| Stop Delay (hr)     | 0.2  | 2.7  | 0.2  | 1.2  | 1.8  | 0.3  | 0.2  | 1.2  | 0.2  | 2.1  | 1.0  | 0.1  |
| Stop Del/Veh (s)    | 14.0 | 18.6 | 11.6 | 17.4 | 15.3 | 3.1  | 20.0 | 16.0 | 3.0  | 29.6 | 14.1 | 5.1  |
| Total Stops         | 53   | 356  | 47   | 223  | 254  | 155  | 27   | 165  | 89   | 240  | 158  | 24   |
| Stop/Veh            | 0.90 | 0.67 | 0.70 | 0.87 | 0.61 | 0.46 | 0.77 | 0.63 | 0.43 | 0.94 | 0.62 | 0.51 |
| Travel Dist (mi)    | 8.4  | 75.8 | 9.6  | 35.2 | 57.7 | 47.2 | 7.0  | 51.7 | 41.8 | 35.0 | 35.1 | 6.5  |
| Travel Time (hr)    | 0.6  | 6.0  | 0.6  | 3.0  | 4.5  | 2.2  | 0.5  | 3.2  | 1.8  | 3.7  | 2.5  | 0.3  |
| Avg Speed (mph)     | 14   | 13   | 16   | 12   | 13   | 22   | 15   | 16   | 24   | 9    | 14   | 20   |
| Fuel Used (gal)     | 0.3  | 3.0  | 0.4  | 1.5  | 2.3  | 1.5  | 0.2  | 1.7  | 1.3  | 1.6  | 1.4  | 0.2  |
| Fuel Eff. (mpg)     | 26.1 | 24.9 | 26.7 | 23.9 | 24.8 | 30.6 | 30.6 | 30.0 | 32.2 | 21.8 | 24.3 | 28.0 |
| HC Emissions (g)    | 2    | 24   | 3    | 12   | 19   | 15   | 1    | 19   | 11   | 10   | 11   | 3    |
| CO Emissions (g)    | 86   | 803  | 94   | 434  | 565  | 459  | 21   | 403  | 308  | 332  | 391  | 101  |
| NOx Emissions (g)   | 7    | 77   | 9    | 40   | 62   | 46   | 3    | 55   | 37   | 36   | 39   | 11   |
| Vehicles Entered    | 58   | 523  | 66   | 254  | 414  | 337  | 34   | 259  | 207  | 252  | 253  | 47   |
| Vehicles Exited     | 58   | 527  | 67   | 252  | 414  | 337  | 34   | 261  | 208  | 252  | 253  | 47   |
| Hourly Exit Rate    | 58   | 527  | 67   | 252  | 414  | 337  | 34   | 261  | 208  | 252  | 253  | 47   |
| Input Volume        | 60   | 534  | 65   | 246  | 417  | 337  | 40   | 267  | 210  | 246  | 260  | 49   |
| % of Volume         | 97   | 99   | 103  | 102  | 99   | 100  | 85   | 98   | 99   | 102  | 97   | 96   |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Density (ft/veh)    |      |      |      |      |      |      |      |      |      |      |      |      |
| Occupancy (veh)     | 1    | 6    | 1    | 3    | 4    | 2    | 0    | 3    | 2    | 4    | 3    | 0    |

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3: Abbott Road/Abbott Road & Ridge Road Performance by movement

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| Movement            | All   |
|---------------------|-------|
| Denied Delay (hr)   | 0.4   |
| Denied Del/Veh (s)  | 0.6   |
| Total Delay (hr)    | 14.6  |
| Total Del/Veh (s)   | 19.2  |
| Stop Delay (hr)     | 11.2  |
| Stop Del/Veh (s)    | 14.7  |
| Total Stops         | 1791  |
| Stop/Veh            | 0.65  |
| Travel Dist (mi)    | 410.8 |
| Travel Time (hr)    | 28.9  |
| Avg Speed (mph)     | 14    |
| Fuel Used (gal)     | 15.6  |
| Fuel Eff. (mpg)     | 26.4  |
| HC Emissions (g)    | 131   |
| CO Emissions (g)    | 3996  |
| NOx Emissions (g)   | 421   |
| Vehicles Entered    | 2704  |
| Vehicles Exited     | 2710  |
| Hourly Exit Rate    | 2710  |
| Input Volume        | 2731  |
| % of Volume         | 99    |
| Denied Entry Before | 0     |
| Denied Entry After  | 0     |
| Density (ft/veh)    | 342   |
| Occupancy (veh)     | 28    |

## 4: Abbott Road &amp; Fernald Avenue Performance by movement

| Movement            | EBL  | EBR  | WBL  | WBR  | NBT   | NBR  | SBL  | SBT   | All   |
|---------------------|------|------|------|------|-------|------|------|-------|-------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0   |
| Denied Del/Veh (s)  | 0.1  | 0.1  | 0.1  | 0.1  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0   |
| Total Delay (hr)    | 0.0  | 0.0  | 0.0  | 0.0  | 0.1   | 0.0  | 0.0  | 0.4   | 0.6   |
| Total Del/Veh (s)   | 6.5  | 3.0  | 10.2 | 6.7  | 1.0   | 0.8  | 7.1  | 2.4   | 2.0   |
| Stop Delay (hr)     | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.1   |
| Stop Del/Veh (s)    | 5.1  | 2.0  | 7.1  | 3.7  | 0.1   | 0.1  | 2.1  | 0.2   | 0.3   |
| Total Stops         | 2    | 1    | 13   | 11   | 2     | 0    | 9    | 2     | 40    |
| Stop/Veh            | 1.00 | 1.00 | 1.00 | 1.00 | 0.00  | 0.00 | 0.43 | 0.00  | 0.04  |
| Travel Dist (mi)    | 0.0  | 0.0  | 0.6  | 0.5  | 110.4 | 7.7  | 4.4  | 115.3 | 238.9 |
| Travel Time (hr)    | 0.0  | 0.0  | 0.1  | 0.0  | 3.8   | 0.3  | 0.2  | 4.2   | 8.6   |
| Avg Speed (mph)     | 5    | 7    | 11   | 14   | 29    | 29   | 23   | 27    | 28    |
| Fuel Used (gal)     | 0.0  | 0.0  | 0.0  | 0.0  | 3.3   | 0.2  | 0.2  | 4.4   | 8.1   |
| Fuel Eff. (mpg)     | 17.8 | 22.9 | 36.9 | 46.0 | 33.1  | 32.9 | 25.7 | 26.5  | 29.4  |
| HC Emissions (g)    | 0    | 0    | 0    | 0    | 45    | 2    | 1    | 50    | 98    |
| CO Emissions (g)    | 0    | 0    | 2    | 1    | 863   | 48   | 50   | 1405  | 2369  |
| NOx Emissions (g)   | 0    | 0    | 0    | 0    | 129   | 8    | 4    | 166   | 308   |
| Vehicles Entered    | 2    | 1    | 13   | 11   | 473   | 33   | 21   | 557   | 1111  |
| Vehicles Exited     | 2    | 1    | 13   | 11   | 472   | 33   | 21   | 558   | 1111  |
| Hourly Exit Rate    | 2    | 1    | 13   | 11   | 472   | 33   | 21   | 558   | 1111  |
| Input Volume        | 2    | 1    | 13   | 10   | 492   | 32   | 21   | 556   | 1127  |
| % of Volume         | 100  | 100  | 100  | 110  | 96    | 103  | 100  | 100   | 99    |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0     | 0     |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0     | 0     |
| Density (ft/veh)    |      |      |      |      |       |      |      |       | 583   |
| Occupancy (veh)     | 0    | 0    | 0    | 0    | 4     | 0    | 0    | 4     | 9     |

## 5: Abbott Road &amp; Elmview Avenue Performance by movement

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT   | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|-------|------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  |
| Denied Del/Veh (s)  | 0.1  | 0.3  | 0.1  | 0.1  | 0.1  | 0.1  | 0.3  | 0.1  | 0.2  | 0.0  | 0.0   | 0.0  |
| Total Delay (hr)    | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.2  | 0.0  | 0.0  | 0.4   | 0.0  |
| Total Del/Veh (s)   | 13.1 | 26.8 | 7.1  | 8.4  | 15.3 | 7.0  | 7.2  | 1.5  | 0.7  | 6.3  | 2.4   | 2.9  |
| Stop Delay (hr)     | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.1  | 0.0  | 0.0  | 0.1   | 0.0  |
| Stop Del/Veh (s)    | 9.8  | 21.8 | 4.1  | 5.3  | 11.6 | 4.0  | 3.8  | 0.8  | 0.1  | 2.6  | 0.8   | 0.7  |
| Total Stops         | 13   | 1    | 4    | 5    | 1    | 9    | 4    | 44   | 0    | 7    | 53    | 2    |
| Stop/Veh            | 0.93 | 1.00 | 0.80 | 0.83 | 1.00 | 0.82 | 0.67 | 0.10 | 0.00 | 0.39 | 0.10  | 0.11 |
| Travel Dist (mi)    | 0.7  | 0.1  | 0.3  | 0.3  | 0.1  | 0.5  | 0.5  | 36.9 | 0.7  | 4.2  | 125.5 | 4.1  |
| Travel Time (hr)    | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.5  | 0.0  | 0.2  | 4.6   | 0.2  |
| Avg Speed (mph)     | 9    | 7    | 14   | 12   | 10   | 13   | 17   | 26   | 28   | 24   | 27    | 27   |
| Fuel Used (gal)     | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.2  | 0.0  | 0.1  | 3.6   | 0.1  |
| Fuel Eff. (mpg)     | 31.3 | 19.0 | 34.1 | 38.6 | 32.0 | 37.6 | 34.2 | 31.3 | 30.6 | 34.6 | 35.3  | 35.8 |
| HC Emissions (g)    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 18   | 0    | 1    | 38    | 1    |
| CO Emissions (g)    | 3    | 1    | 2    | 1    | 0    | 3    | 3    | 416  | 5    | 16   | 642   | 14   |
| NOx Emissions (g)   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 52   | 0    | 2    | 107   | 2    |
| Vehicles Entered    | 14   | 1    | 5    | 5    | 1    | 11   | 6    | 459  | 9    | 18   | 530   | 18   |
| Vehicles Exited     | 14   | 1    | 5    | 6    | 1    | 11   | 6    | 460  | 9    | 18   | 531   | 17   |
| Hourly Exit Rate    | 14   | 1    | 5    | 6    | 1    | 11   | 6    | 460  | 9    | 18   | 531   | 17   |
| Input Volume        | 17   | 1    | 6    | 6    | 1    | 10   | 7    | 477  | 8    | 19   | 530   | 17   |
| % of Volume         | 82   | 100  | 83   | 100  | 100  | 110  | 86   | 96   | 112  | 95   | 100   | 100  |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0    |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0    |
| Density (ft/veh)    |      |      |      |      |      |      |      |      |      |      |       |      |
| Occupancy (veh)     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 1    | 0    | 0    | 5     | 0    |



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5: Abbott Road & Elmview Avenue Performance by movement

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| Movement            | All   |
|---------------------|-------|
| Denied Delay (hr)   | 0.0   |
| Denied Del/Veh (s)  | 0.1   |
| Total Delay (hr)    | 0.7   |
| Total Del/Veh (s)   | 2.4   |
| Stop Delay (hr)     | 0.3   |
| Stop Del/Veh (s)    | 1.1   |
| Total Stops         | 143   |
| Stop/Veh            | 0.13  |
| Travel Dist (mi)    | 173.9 |
| Travel Time (hr)    | 6.6   |
| Avg Speed (mph)     | 26    |
| Fuel Used (gal)     | 5.1   |
| Fuel Eff. (mpg)     | 34.3  |
| HC Emissions (g)    | 58    |
| CO Emissions (g)    | 1106  |
| NOx Emissions (g)   | 164   |
| Vehicles Entered    | 1077  |
| Vehicles Exited     | 1079  |
| Hourly Exit Rate    | 1079  |
| Input Volume        | 1099  |
| % of Volume         | 98    |
| Denied Entry Before | 0     |
| Denied Entry After  | 0     |
| Density (ft/veh)    | 590   |
| Occupancy (veh)     | 7     |

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Total Network Performance

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|                     |        |
|---------------------|--------|
| Denied Delay (hr)   | 0.5    |
| Denied Del/Veh (s)  | 0.6    |
| Total Delay (hr)    | 24.4   |
| Total Del/Veh (s)   | 27.2   |
| Stop Delay (hr)     | 16.8   |
| Stop Del/Veh (s)    | 18.7   |
| Total Stops         | 3000   |
| Stop/Veh            | 0.93   |
| Travel Dist (mi)    | 1447.6 |
| Travel Time (hr)    | 73.8   |
| Avg Speed (mph)     | 20     |
| Fuel Used (gal)     | 55.2   |
| Fuel Eff. (mpg)     | 26.2   |
| HC Emissions (g)    | 590    |
| CO Emissions (g)    | 17452  |
| NOx Emissions (g)   | 1934   |
| Vehicles Entered    | 3160   |
| Vehicles Exited     | 3158   |
| Hourly Exit Rate    | 3158   |
| Input Volume        | 10592  |
| % of Volume         | 30     |
| Denied Entry Before | 0      |
| Denied Entry After  | 0      |
| Density (ft/veh)    | 343    |
| Occupancy (veh)     | 73     |

## Intersection: 1: Abbott Road &amp; Dorrance Avenue

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | LT  | TR  | LT  | TR  | LT  | TR  | LT  | TR  |
| Maximum Queue (ft)    | 132 | 70  | 128 | 72  | 169 | 159 | 108 | 75  |
| Average Queue (ft)    | 65  | 32  | 67  | 22  | 82  | 79  | 50  | 17  |
| 95th Queue (ft)       | 112 | 59  | 116 | 50  | 138 | 139 | 92  | 49  |
| Link Distance (ft)    | 254 | 254 | 254 | 254 | 608 | 608 | 402 | 402 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |

## Intersection: 2: Abbott Road &amp; Plaza Driveway

| Movement              | WB  | WB  | NB  | NB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | R   | T   | TR  | LT  | T   |
| Maximum Queue (ft)    | 121 | 21  | 98  | 109 | 106 | 86  |
| Average Queue (ft)    | 53  | 2   | 35  | 41  | 36  | 24  |
| 95th Queue (ft)       | 99  | 12  | 84  | 86  | 86  | 66  |
| Link Distance (ft)    | 250 | 250 | 659 | 659 | 608 | 608 |
| Upstream Blk Time (%) |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |

## Intersection: 3: Abbott Road/Abbott Road &amp; Ridge Road

| Movement              | EB  | EB  | EB  | WB  | WB  | WB  | NB   | NB   | NB  | SB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|------|------|-----|-----|-----|-----|
| Directions Served     | L   | T   | TR  | L   | T   | R   | LT   | T    | R   | LT  | T   | R   |
| Maximum Queue (ft)    | 140 | 228 | 194 | 249 | 336 | 139 | 122  | 121  | 94  | 261 | 203 | 72  |
| Average Queue (ft)    | 37  | 135 | 100 | 98  | 148 | 44  | 62   | 58   | 43  | 142 | 89  | 21  |
| 95th Queue (ft)       | 92  | 207 | 174 | 180 | 261 | 100 | 106  | 103  | 80  | 233 | 172 | 55  |
| Link Distance (ft)    |     | 752 | 752 |     | 724 | 724 | 1010 | 1010 |     | 659 | 659 |     |
| Upstream Blk Time (%) |     |     |     |     |     |     |      |      |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |      |      |     |     |     |     |
| Storage Bay Dist (ft) | 90  |     |     | 200 |     |     |      |      | 125 |     |     | 150 |
| Storage Blk Time (%)  |     | 25  |     | 0   | 3   |     |      | 0    | 0   |     | 0   |     |
| Queuing Penalty (veh) |     | 15  |     | 1   | 8   |     |      | 0    | 0   |     | 0   |     |

**Intersection: 4: Abbott Road & Fernald Avenue**

| Movement              | EB  | WB  | NB   | NB   | SB   | SB   |
|-----------------------|-----|-----|------|------|------|------|
| Directions Served     | LTR | LTR | LT   | TR   | LT   | TR   |
| Maximum Queue (ft)    | 19  | 37  | 15   | 23   | 31   | 34   |
| Average Queue (ft)    | 2   | 14  | 0    | 1    | 7    | 2    |
| 95th Queue (ft)       | 12  | 34  | 8    | 10   | 26   | 13   |
| Link Distance (ft)    | 56  | 256 | 1193 | 1193 | 1010 | 1010 |
| Upstream Blk Time (%) |     |     |      |      |      |      |
| Queuing Penalty (veh) |     |     |      |      |      |      |
| Storage Bay Dist (ft) |     |     |      |      |      |      |
| Storage Blk Time (%)  |     |     |      |      |      |      |
| Queuing Penalty (veh) |     |     |      |      |      |      |

**Intersection: 5: Abbott Road & Elmview Avenue**

| Movement              | EB  | WB  | NB  | NB  | SB   | SB   |
|-----------------------|-----|-----|-----|-----|------|------|
| Directions Served     | LTR | LTR | LT  | TR  | LT   | TR   |
| Maximum Queue (ft)    | 54  | 36  | 74  | 75  | 82   | 92   |
| Average Queue (ft)    | 14  | 10  | 21  | 18  | 23   | 26   |
| 95th Queue (ft)       | 42  | 30  | 59  | 56  | 64   | 71   |
| Link Distance (ft)    | 258 | 256 | 419 | 419 | 1193 | 1193 |
| Upstream Blk Time (%) |     |     |     |     |      |      |
| Queuing Penalty (veh) |     |     |     |     |      |      |
| Storage Bay Dist (ft) |     |     |     |     |      |      |
| Storage Blk Time (%)  |     |     |     |     |      |      |
| Queuing Penalty (veh) |     |     |     |     |      |      |

**Network Summary**

Network wide Queuing Penalty: 24

**Intersection: 2: Abbott Road & Plaza Driveway**

| Phase                | 2     | 6     | 8     |
|----------------------|-------|-------|-------|
| Movement(s) Served   | NBT   | SBTL  | WBL   |
| Maximum Green (s)    | 35.0  | 35.0  | 21.0  |
| Minimum Green (s)    | 6.0   | 6.0   | 6.0   |
| Recall               | C-Max | C-Max | None  |
| Avg. Green (s)       | 72.3  | 72.3  | 9.8   |
| g/C Ratio            | -0.01 | -0.01 | -0.01 |
| Cycles Skipped (%)   | 27    | 27    | 26    |
| Cycles @ Minimum (%) | 0     | 0     | 21    |
| Cycles Maxed Out (%) | 73    | 73    | 0     |
| Cycles with Peds (%) | 0     | 0     | 0     |

**Controller Summary**

Average Cycle Length (s): NA

Number of Complete Cycles : 0

**Intersection: 3: Abbott Road/Abbott Road & Ridge Road**

| Phase                | 1     | 2    | 4    | 5     | 6    | 7     | 8    |
|----------------------|-------|------|------|-------|------|-------|------|
| Movement(s) Served   | WBL   | EBTL | SBTL | EBL   | WBTL | SBL   | NBTL |
| Maximum Green (s)    | 9.0   | 30.0 | 39.0 | 9.0   | 30.0 | 9.0   | 25.0 |
| Minimum Green (s)    | 7.0   | 7.0  | 7.0  | 7.0   | 7.0  | 7.0   | 7.0  |
| Recall               | None  | Ped  | None | None  | Ped  | None  | None |
| Avg. Green (s)       | 8.9   | 26.7 | 31.0 | 7.9   | 33.4 | 8.5   | 28.2 |
| g/C Ratio            | -0.01 | NA   | NA   | -0.01 | NA   | -0.01 | NA   |
| Cycles Skipped (%)   | 5     | 0    | 0    | 49    | 0    | 79    | 0    |
| Cycles @ Minimum (%) | 5     | 0    | 0    | 28    | 0    | 7     | 0    |
| Cycles Maxed Out (%) | 80    | 18   | 32   | 9     | 64   | 9     | 61   |
| Cycles with Peds (%) | 0     | 100  | 9    | 0     | 100  | 0     | 9    |

**Controller Summary**

Average Cycle Length (s): NA

Number of Complete Cycles : 0



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Intersection: 5: Abbott Road & Elmview Avenue

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| Phase                | 2     | 4    | 6     | 8    |
|----------------------|-------|------|-------|------|
| Movement(s) Served   | NBTL  | EBTL | SBTL  | WBTL |
| Maximum Green (s)    | 34.0  | 19.0 | 34.0  | 19.0 |
| Minimum Green (s)    | 20.0  | 6.0  | 20.0  | 6.0  |
| Recall               | Max   | None | Max   | None |
| Avg. Green (s)       | 115.9 | 6.6  | 115.9 | 6.6  |
| g/C Ratio            | NA    | NA   | NA    | NA   |
| Cycles Skipped (%)   | 0     | 0    | 0     | 0    |
| Cycles @ Minimum (%) | 0     | 78   | 0     | 78   |
| Cycles Maxed Out (%) | 100   | 0    | 100   | 0    |
| Cycles with Peds (%) | 0     | 0    | 0     | 0    |

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Controller Summary

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Average Cycle Length (s): NA

Number of Complete Cycles : 0

## **2050 No Build**

## Lanes, Volumes, Timings

## Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

## 1: Abbott Road &amp; Dorrance Avenue

10/18/2024

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                     |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)       | 14                                                                                | 75                                                                                | 89                                                                                | 44                                                                                | 61                                                                                | 31                                                                                | 108                                                                                 | 197                                                                                 | 44                                                                                  | 27                                                                                  | 214                                                                                 | 16                                                                                  |
| Future Volume (vph)        | 14                                                                                | 75                                                                                | 89                                                                                | 44                                                                                | 61                                                                                | 31                                                                                | 108                                                                                 | 197                                                                                 | 44                                                                                  | 27                                                                                  | 214                                                                                 | 16                                                                                  |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Lane Width (ft)            | 10                                                                                | 10                                                                                | 10                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  |
| Lane Util. Factor          | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                |
| Ped Bike Factor            |                                                                                   | 0.99                                                                              |                                                                                   |                                                                                   | 0.99                                                                              |                                                                                   |                                                                                     | 1.00                                                                                |                                                                                     |                                                                                     | 1.00                                                                                |                                                                                     |
| Frt                        |                                                                                   | 0.925                                                                             |                                                                                   |                                                                                   | 0.966                                                                             |                                                                                   |                                                                                     | 0.981                                                                               |                                                                                     |                                                                                     | 0.991                                                                               |                                                                                     |
| Flt Protected              |                                                                                   | 0.996                                                                             |                                                                                   |                                                                                   | 0.984                                                                             |                                                                                   |                                                                                     | 0.985                                                                               |                                                                                     |                                                                                     | 0.995                                                                               |                                                                                     |
| Satd. Flow (prot)          | 0                                                                                 | 3011                                                                              | 0                                                                                 | 0                                                                                 | 3348                                                                              | 0                                                                                 | 0                                                                                   | 3150                                                                                | 0                                                                                   | 0                                                                                   | 3176                                                                                | 0                                                                                   |
| Flt Permitted              |                                                                                   | 0.927                                                                             |                                                                                   |                                                                                   | 0.811                                                                             |                                                                                   |                                                                                     | 0.767                                                                               |                                                                                     |                                                                                     | 0.914                                                                               |                                                                                     |
| Satd. Flow (perm)          | 0                                                                                 | 2802                                                                              | 0                                                                                 | 0                                                                                 | 2755                                                                              | 0                                                                                 | 0                                                                                   | 2450                                                                                | 0                                                                                   | 0                                                                                   | 2917                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 95                                                                                |                                                                                   |                                                                                   | 33                                                                                |                                                                                   |                                                                                     | 28                                                                                  |                                                                                     |                                                                                     | 17                                                                                  |                                                                                     |
| Link Speed (mph)           |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                     | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 300                                                                               |                                                                                   |                                                                                   | 300                                                                               |                                                                                   |                                                                                     | 688                                                                                 |                                                                                     |                                                                                     | 452                                                                                 |                                                                                     |
| Travel Time (s)            |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                     | 15.6                                                                                |                                                                                     |                                                                                     | 10.3                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                   |                                                                                     | 5                                                                                   | 5                                                                                   |                                                                                     | 5                                                                                   |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |
| Peak Hour Factor           | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                  | 4%                                                                                  | 2%                                                                                  | 2%                                                                                  | 5%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 15                                                                                | 80                                                                                | 95                                                                                | 47                                                                                | 65                                                                                | 33                                                                                | 115                                                                                 | 210                                                                                 | 47                                                                                  | 29                                                                                  | 228                                                                                 | 17                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 0                                                                                 | 190                                                                               | 0                                                                                 | 0                                                                                 | 145                                                                               | 0                                                                                 | 0                                                                                   | 372                                                                                 | 0                                                                                   | 0                                                                                   | 274                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |                                                                                   |                                                                                     | 16                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.09                                                                              | 1.09                                                                              | 1.09                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                |
| Turning Speed (mph)        | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                  |                                                                                     | 60                                                                                  | 60                                                                                  |                                                                                     | 60                                                                                  |
| Turn Type                  | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                                | NA                                                                                  |                                                                                     | pm+pt                                                                               | NA                                                                                  |                                                                                     |
| Protected Phases           |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   |                                                                                     | 2                                                                                   |                                                                                     | 1                                                                                   | 6                                                                                   |                                                                                     |
| Permitted Phases           | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 2                                                                                   |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |                                                                                     |
| Minimum Split (s)          | 20.0                                                                              | 20.0                                                                              |                                                                                   | 20.0                                                                              | 20.0                                                                              |                                                                                   | 27.0                                                                                | 27.0                                                                                |                                                                                     | 10.0                                                                                | 27.0                                                                                |                                                                                     |
| Total Split (s)            | 20.0                                                                              | 20.0                                                                              |                                                                                   | 20.0                                                                              | 20.0                                                                              |                                                                                   | 35.0                                                                                | 35.0                                                                                |                                                                                     | 15.0                                                                                | 50.0                                                                                |                                                                                     |
| Total Split (%)            | 28.6%                                                                             | 28.6%                                                                             |                                                                                   | 28.6%                                                                             | 28.6%                                                                             |                                                                                   | 50.0%                                                                               | 50.0%                                                                               |                                                                                     | 21.4%                                                                               | 71.4%                                                                               |                                                                                     |
| Maximum Green (s)          | 15.0                                                                              | 15.0                                                                              |                                                                                   | 15.0                                                                              | 15.0                                                                              |                                                                                   | 30.0                                                                                | 30.0                                                                                |                                                                                     | 10.0                                                                                | 45.0                                                                                |                                                                                     |
| Yellow Time (s)            | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                                 | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| All-Red Time (s)           | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                                 | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Lost Time Adjust (s)       |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)        |                                                                                   | 5.0                                                                               |                                                                                   |                                                                                   | 5.0                                                                               |                                                                                   |                                                                                     | 5.0                                                                                 |                                                                                     |                                                                                     | 5.0                                                                                 |                                                                                     |
| Lead/Lag                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Lag                                                                                 | Lag                                                                                 |                                                                                     | Lead                                                                                |                                                                                     |                                                                                     |
| Lead-Lag Optimize?         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Walk Time (s)              | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                                 | 7.0                                                                                 |                                                                                     |                                                                                     | 7.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)        | 8.0                                                                               | 8.0                                                                               |                                                                                   | 8.0                                                                               | 8.0                                                                               |                                                                                   | 15.0                                                                                | 15.0                                                                                |                                                                                     |                                                                                     | 15.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr)    | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |
| Act Effect Green (s)       |                                                                                   | 15.0                                                                              |                                                                                   |                                                                                   | 15.0                                                                              |                                                                                   |                                                                                     | 30.0                                                                                |                                                                                     |                                                                                     | 45.0                                                                                |                                                                                     |

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Actuated g/C Ratio      |                                                                                   | 0.21                                                                              |                                                                                   |                                                                                   | 0.21                                                                              |                                                                                   |                                                                                    | 0.43                                                                                |                                                                                     |                                                                                     | 0.64                                                                                |                                                                                     |
| v/c Ratio               |                                                                                   | 0.28                                                                              |                                                                                   |                                                                                   | 0.24                                                                              |                                                                                   |                                                                                    | 0.35                                                                                |                                                                                     |                                                                                     | 0.14                                                                                |                                                                                     |
| Control Delay           |                                                                                   | 13.3                                                                              |                                                                                   |                                                                                   | 18.6                                                                              |                                                                                   |                                                                                    | 13.5                                                                                |                                                                                     |                                                                                     | 4.8                                                                                 |                                                                                     |
| Queue Delay             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Total Delay             |                                                                                   | 13.3                                                                              |                                                                                   |                                                                                   | 18.6                                                                              |                                                                                   |                                                                                    | 13.5                                                                                |                                                                                     |                                                                                     | 4.8                                                                                 |                                                                                     |
| LOS                     |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                    | B                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 13.3                                                                              |                                                                                   |                                                                                   | 18.6                                                                              |                                                                                   |                                                                                    | 13.5                                                                                |                                                                                     |                                                                                     | 4.8                                                                                 |                                                                                     |
| Approach LOS            |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                    | B                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |
| Queue Length 50th (ft)  |                                                                                   | 17                                                                                |                                                                                   |                                                                                   | 21                                                                                |                                                                                   |                                                                                    | 50                                                                                  |                                                                                     |                                                                                     | 19                                                                                  |                                                                                     |
| Queue Length 95th (ft)  |                                                                                   | 43                                                                                |                                                                                   |                                                                                   | 43                                                                                |                                                                                   |                                                                                    | 81                                                                                  |                                                                                     |                                                                                     | 32                                                                                  |                                                                                     |
| Internal Link Dist (ft) |                                                                                   | 220                                                                               |                                                                                   |                                                                                   | 220                                                                               |                                                                                   |                                                                                    | 608                                                                                 |                                                                                     |                                                                                     | 372                                                                                 |                                                                                     |
| Turn Bay Length (ft)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Base Capacity (vph)     |                                                                                   | 675                                                                               |                                                                                   |                                                                                   | 616                                                                               |                                                                                   |                                                                                    | 1066                                                                                |                                                                                     |                                                                                     | 1918                                                                                |                                                                                     |
| Starvation Cap Reductn  |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Spillback Cap Reductn   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Storage Cap Reductn     |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Reduced v/c Ratio       |                                                                                   | 0.28                                                                              |                                                                                   |                                                                                   | 0.24                                                                              |                                                                                   |                                                                                    | 0.35                                                                                |                                                                                     |                                                                                     | 0.14                                                                                |                                                                                     |

## Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 0.35

Intersection Signal Delay: 11.8

Intersection LOS: B

Intersection Capacity Utilization 78.3%

ICU Level of Service D

Analysis Period (min) 15

## Splits and Phases: 1: Abbott Road &amp; Dorrance Avenue



Lanes, Volumes, Timings  
2: Abbott Road & Plaza Driveway

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

10/18/2024

|                            |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                 | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations        |  |  |  |                                                                                   |                                                                                   |  |
| Traffic Volume (vph)       | 51                                                                                | 5                                                                                 | 368                                                                               | 82                                                                                | 2                                                                                 | 330                                                                               |
| Future Volume (vph)        | 51                                                                                | 5                                                                                 | 368                                                                               | 82                                                                                | 2                                                                                 | 330                                                                               |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              |
| Ped Bike Factor            | 1.00                                                                              | 0.98                                                                              | 1.00                                                                              |                                                                                   |                                                                                   | 1.00                                                                              |
| Frt                        |                                                                                   | 0.850                                                                             | 0.973                                                                             |                                                                                   |                                                                                   |                                                                                   |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (prot)          | 1770                                                                              | 1583                                                                              | 3295                                                                              | 0                                                                                 | 0                                                                                 | 3439                                                                              |
| Flt Permitted              | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.954                                                                             |
| Satd. Flow (perm)          | 1761                                                                              | 1555                                                                              | 3295                                                                              | 0                                                                                 | 0                                                                                 | 3280                                                                              |
| Right Turn on Red          |                                                                                   | Yes                                                                               |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   |
| Satd. Flow (RTOR)          |                                                                                   | 5                                                                                 | 61                                                                                |                                                                                   |                                                                                   |                                                                                   |
| Link Speed (mph)           | 30                                                                                |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |
| Link Distance (ft)         | 300                                                                               |                                                                                   | 748                                                                               |                                                                                   |                                                                                   | 688                                                                               |
| Travel Time (s)            | 6.8                                                                               |                                                                                   | 17.0                                                                              |                                                                                   |                                                                                   | 15.6                                                                              |
| Confl. Peds. (#/hr)        | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   |
| Confl. Bikes (#/hr)        |                                                                                   | 2                                                                                 |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   |
| Peak Hour Factor           | 0.91                                                                              | 0.91                                                                              | 0.91                                                                              | 0.91                                                                              | 0.91                                                                              | 0.91                                                                              |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 7%                                                                                | 2%                                                                                | 2%                                                                                | 5%                                                                                |
| Adj. Flow (vph)            | 56                                                                                | 5                                                                                 | 404                                                                               | 90                                                                                | 2                                                                                 | 363                                                                               |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)      | 56                                                                                | 5                                                                                 | 494                                                                               | 0                                                                                 | 0                                                                                 | 365                                                                               |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment             | Left                                                                              | Right                                                                             | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              |
| Median Width(ft)           | 12                                                                                |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |
| Link Offset(ft)            | 0                                                                                 |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |
| Crosswalk Width(ft)        | 16                                                                                |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Headway Factor             | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |
| Turning Speed (mph)        | 60                                                                                | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                |                                                                                   |
| Number of Detectors        | 1                                                                                 | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |
| Detector Template          | Left                                                                              | Right                                                                             | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              |
| Leading Detector (ft)      | 50                                                                                | 50                                                                                | 50                                                                                |                                                                                   | 20                                                                                | 50                                                                                |
| Trailing Detector (ft)     | 0                                                                                 | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |
| Detector 1 Position(ft)    | 0                                                                                 | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |
| Detector 1 Size(ft)        | 50                                                                                | 50                                                                                | 50                                                                                |                                                                                   | 20                                                                                | 50                                                                                |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |
| Turn Type                  | Perm                                                                              | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |
| Protected Phases           |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |
| Permitted Phases           | 8                                                                                 | 8                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |
| Detector Phase             | 8                                                                                 | 8                                                                                 | 2                                                                                 |                                                                                   | 6                                                                                 | 6                                                                                 |
| Switch Phase               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Minimum Initial (s)        | 6.0                                                                               | 6.0                                                                               | 6.0                                                                               |                                                                                   | 6.0                                                                               | 6.0                                                                               |
| Minimum Split (s)          | 11.0                                                                              | 11.0                                                                              | 11.0                                                                              |                                                                                   | 11.0                                                                              | 11.0                                                                              |



Lanes, Volumes, Timings  
2: Abbott Road & Plaza Driveway

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

10/18/2024

|                         | ↖     | ↗     | ↑     | ↘   | ↙     | ↓     |
|-------------------------|-------|-------|-------|-----|-------|-------|
| Lane Group              | WBL   | WBR   | NBT   | NBR | SBL   | SBT   |
| Total Split (s)         | 26.0  | 26.0  | 40.0  |     | 40.0  | 40.0  |
| Total Split (%)         | 39.4% | 39.4% | 60.6% |     | 60.6% | 60.6% |
| Maximum Green (s)       | 21.0  | 21.0  | 35.0  |     | 35.0  | 35.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   |     | 3.0   | 3.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   |     | 2.0   | 2.0   |
| Lost Time Adjust (s)    | 0.0   | 0.0   | 0.0   |     |       | 0.0   |
| Total Lost Time (s)     | 5.0   | 5.0   | 5.0   |     |       | 5.0   |
| Lead/Lag                |       |       |       |     |       |       |
| Lead-Lag Optimize?      |       |       |       |     |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   |     | 3.0   | 3.0   |
| Recall Mode             | None  | None  | C-Max |     | C-Max | C-Max |
| Act Effect Green (s)    | 7.7   | 7.7   | 54.8  |     |       | 54.8  |
| Actuated g/C Ratio      | 0.12  | 0.12  | 0.83  |     |       | 0.83  |
| v/c Ratio               | 0.27  | 0.03  | 0.18  |     |       | 0.13  |
| Control Delay           | 29.4  | 16.4  | 2.3   |     |       | 2.4   |
| Queue Delay             | 0.0   | 0.0   | 0.0   |     |       | 0.0   |
| Total Delay             | 29.4  | 16.4  | 2.3   |     |       | 2.4   |
| LOS                     | C     | B     | A     |     |       | A     |
| Approach Delay          | 28.3  |       | 2.3   |     |       | 2.4   |
| Approach LOS            | C     |       | A     |     |       | A     |
| Queue Length 50th (ft)  | 21    | 0     | 21    |     |       | 17    |
| Queue Length 95th (ft)  | 49    | 8     | 40    |     |       | 33    |
| Internal Link Dist (ft) | 220   |       | 668   |     |       | 608   |
| Turn Bay Length (ft)    |       |       |       |     |       |       |
| Base Capacity (vph)     | 560   | 498   | 2745  |     |       | 2722  |
| Starvation Cap Reductn  | 0     | 0     | 0     |     |       | 0     |
| Spillback Cap Reductn   | 0     | 0     | 0     |     |       | 0     |
| Storage Cap Reductn     | 0     | 0     | 0     |     |       | 0     |
| Reduced v/c Ratio       | 0.10  | 0.01  | 0.18  |     |       | 0.13  |

Intersection Summary

Area Type: Other

Cycle Length: 66

Actuated Cycle Length: 66

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.27

Intersection Signal Delay: 4.1

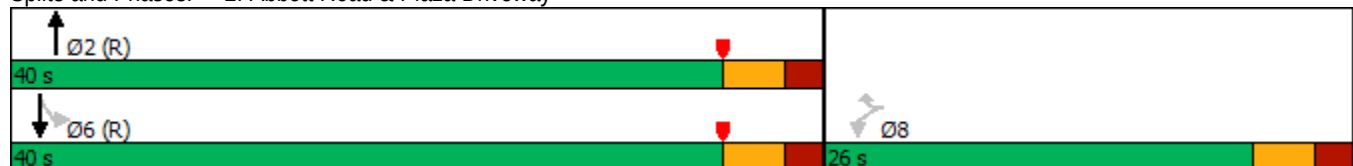
Intersection LOS: A

Intersection Capacity Utilization 26.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: Abbott Road & Plaza Driveway



# Lanes, Volumes, Timings

# Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

## 3: Abbott Road/Abbott Road & Ridge Road

10/18/2024

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |  |                                                                                     |  |  |  |  |  |
| Traffic Volume (vph)       | 38                                                                                | 449                                                                               | 49                                                                                | 168                                                                               | 408                                                                               | 260                                                                               | 54                                                                                  | 135                                                                                 | 224                                                                                 | 188                                                                                 | 171                                                                                 | 30                                                                                  |
| Future Volume (vph)        | 38                                                                                | 449                                                                               | 49                                                                                | 168                                                                               | 408                                                                               | 260                                                                               | 54                                                                                  | 135                                                                                 | 224                                                                                 | 188                                                                                 | 171                                                                                 | 30                                                                                  |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Lane Width (ft)            | 11                                                                                | 11                                                                                | 11                                                                                | 10                                                                                | 10                                                                                | 12                                                                                | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  |
| Storage Length (ft)        | 90                                                                                |                                                                                   | 250                                                                               | 200                                                                               |                                                                                   | 0                                                                                 | 0                                                                                   |                                                                                     | 125                                                                                 | 0                                                                                   |                                                                                     | 150                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                   |                                                                                     | 1                                                                                   | 0                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (ft)          | 50                                                                                |                                                                                   |                                                                                   | 100                                                                               |                                                                                   |                                                                                   | 25                                                                                  |                                                                                     |                                                                                     | 25                                                                                  |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                                | 0.95                                                                                | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              |                                                                                   | 0.98                                                                              |                                                                                     | 1.00                                                                                | 0.98                                                                                |                                                                                     | 1.00                                                                                | 0.97                                                                                |
| Frt                        |                                                                                   | 0.985                                                                             |                                                                                   |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                     |                                                                                     | 0.850                                                                               |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                     | 0.986                                                                               |                                                                                     |                                                                                     | 0.974                                                                               |                                                                                     |
| Satd. Flow (prot)          | 1646                                                                              | 3194                                                                              | 0                                                                                 | 1652                                                                              | 1657                                                                              | 1583                                                                              | 0                                                                                   | 3234                                                                                | 1463                                                                                | 0                                                                                   | 3202                                                                                | 1449                                                                                |
| Flt Permitted              | 0.429                                                                             |                                                                                   |                                                                                   | 0.319                                                                             |                                                                                   |                                                                                   |                                                                                     | 0.756                                                                               |                                                                                     |                                                                                     | 0.635                                                                               |                                                                                     |
| Satd. Flow (perm)          | 741                                                                               | 3194                                                                              | 0                                                                                 | 553                                                                               | 1657                                                                              | 1551                                                                              | 0                                                                                   | 2476                                                                                | 1433                                                                                | 0                                                                                   | 2082                                                                                | 1405                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 13                                                                                |                                                                                   |                                                                                   |                                                                                   | 271                                                                               |                                                                                     |                                                                                     | 230                                                                                 |                                                                                     |                                                                                     | 31                                                                                  |
| Link Speed (mph)           |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                     | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 808                                                                               |                                                                                   |                                                                                   | 782                                                                               |                                                                                   |                                                                                     | 1105                                                                                |                                                                                     |                                                                                     | 748                                                                                 |                                                                                     |
| Travel Time (s)            |                                                                                   | 18.4                                                                              |                                                                                   |                                                                                   | 17.8                                                                              |                                                                                   |                                                                                     | 25.1                                                                                |                                                                                     |                                                                                     | 17.0                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                   |                                                                                     | 5                                                                                   | 5                                                                                   |                                                                                     | 5                                                                                   |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |
| Peak Hour Factor           | 0.96                                                                              | 0.96                                                                              | 0.96                                                                              | 0.96                                                                              | 0.96                                                                              | 0.96                                                                              | 0.96                                                                                | 0.96                                                                                | 0.96                                                                                | 0.96                                                                                | 0.96                                                                                | 0.96                                                                                |
| Heavy Vehicles (%)         | 6%                                                                                | 8%                                                                                | 2%                                                                                | 2%                                                                                | 7%                                                                                | 2%                                                                                | 2%                                                                                  | 3%                                                                                  | 3%                                                                                  | 2%                                                                                  | 3%                                                                                  | 4%                                                                                  |
| Adj. Flow (vph)            | 40                                                                                | 468                                                                               | 51                                                                                | 175                                                                               | 425                                                                               | 271                                                                               | 56                                                                                  | 141                                                                                 | 233                                                                                 | 196                                                                                 | 178                                                                                 | 31                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 40                                                                                | 519                                                                               | 0                                                                                 | 175                                                                               | 425                                                                               | 271                                                                               | 0                                                                                   | 197                                                                                 | 233                                                                                 | 0                                                                                   | 374                                                                                 | 31                                                                                  |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 11                                                                                |                                                                                   |                                                                                   | 11                                                                                |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |                                                                                   |                                                                                     | 16                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.04                                                                              | 1.04                                                                              | 1.04                                                                              | 1.09                                                                              | 1.09                                                                              | 1.00                                                                              | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                |
| Turning Speed (mph)        | 15                                                                                |                                                                                   | 9                                                                                 | 15                                                                                |                                                                                   | 9                                                                                 | 15                                                                                  |                                                                                     | 9                                                                                   | 15                                                                                  |                                                                                     | 9                                                                                   |
| Number of Detectors        | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 | 1                                                                                 | 1                                                                                   | 1                                                                                   | 1                                                                                   | 1                                                                                   | 1                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                                | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (ft)      | 50                                                                                | 50                                                                                |                                                                                   | 50                                                                                | 50                                                                                | 50                                                                                | 20                                                                                  | 50                                                                                  | 50                                                                                  | 20                                                                                  | 50                                                                                  | 50                                                                                  |
| Trailing Detector (ft)     | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Detector 1 Position(ft)    | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Detector 1 Size(ft)        | 50                                                                                | 50                                                                                |                                                                                   | 50                                                                                | 50                                                                                | 50                                                                                | 20                                                                                  | 50                                                                                  | 50                                                                                  | 20                                                                                  | 50                                                                                  | 50                                                                                  |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Turn Type                  | pm+pt                                                                             | NA                                                                                |                                                                                   | pm+pt                                                                             | NA                                                                                | pm+ov                                                                             | Perm                                                                                | NA                                                                                  | pm+ov                                                                               | pm+pt                                                                               | NA                                                                                  | pm+ov                                                                               |
| Protected Phases           | 5                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 6                                                                                 | 7                                                                                 |                                                                                     | 8                                                                                   | 1                                                                                   | 7                                                                                   | 4                                                                                   | 5                                                                                   |
| Permitted Phases           | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   | 6                                                                                 | 8                                                                                   |                                                                                     | 8                                                                                   | 4                                                                                   |                                                                                     | 4                                                                                   |

# Lanes, Volumes, Timings

# Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

## 3: Abbott Road/Abbott Road & Ridge Road

10/18/2024



| Lane Group              | EBL   | EBT   | EBR | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Detector Phase          | 5     | 2     |     | 1     | 6     | 7     | 8     | 8     | 1     | 7     | 4     | 5     |
| Switch Phase            |       |       |     |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)     | 7.0   | 7.0   |     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Minimum Split (s)       | 12.0  | 29.0  |     | 12.0  | 23.0  | 12.0  | 23.0  | 23.0  | 12.0  | 12.0  | 29.0  | 12.0  |
| Total Split (s)         | 14.0  | 35.0  |     | 14.0  | 35.0  | 14.0  | 30.0  | 30.0  | 14.0  | 14.0  | 44.0  | 14.0  |
| Total Split (%)         | 15.1% | 37.6% |     | 15.1% | 37.6% | 15.1% | 32.3% | 32.3% | 15.1% | 15.1% | 47.3% | 15.1% |
| Maximum Green (s)       | 9.0   | 30.0  |     | 9.0   | 30.0  | 9.0   | 25.0  | 25.0  | 9.0   | 9.0   | 39.0  | 9.0   |
| Yellow Time (s)         | 4.0   | 4.0   |     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 1.0   | 1.0   |     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s)    | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |
| Total Lost Time (s)     | 5.0   | 5.0   |     | 5.0   | 5.0   | 5.0   |       | 5.0   | 5.0   |       | 5.0   | 5.0   |
| Lead/Lag                | Lead  | Lag   |     | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lead  |       | Lead  |
| Lead-Lag Optimize?      |       |       |     |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Recall Mode             | None  | None  |     | None  | None  | None  | None  | None  | None  | None  | None  | None  |
| Walk Time (s)           |       | 7.0   |     |       | 7.0   |       | 7.0   | 7.0   |       |       | 7.0   |       |
| Flash Dont Walk (s)     |       | 17.0  |     |       | 11.0  |       | 11.0  | 11.0  |       |       | 17.0  |       |
| Pedestrian Calls (#/hr) |       | 5     |     |       | 5     |       | 5     | 5     |       |       | 5     |       |
| Act Effect Green (s)    | 26.7  | 19.3  |     | 31.2  | 26.3  | 33.5  |       | 11.4  | 19.9  |       | 23.7  | 31.1  |
| Actuated g/C Ratio      | 0.40  | 0.29  |     | 0.47  | 0.39  | 0.50  |       | 0.17  | 0.30  |       | 0.35  | 0.46  |
| v/c Ratio               | 0.10  | 0.56  |     | 0.44  | 0.65  | 0.30  |       | 0.47  | 0.39  |       | 0.44  | 0.05  |
| Control Delay           | 9.9   | 22.1  |     | 13.6  | 24.7  | 2.5   |       | 30.4  | 4.9   |       | 19.0  | 4.1   |
| Queue Delay             | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |
| Total Delay             | 9.9   | 22.1  |     | 13.6  | 24.7  | 2.5   |       | 30.4  | 4.9   |       | 19.0  | 4.1   |
| LOS                     | A     | C     |     | B     | C     | A     |       | C     | A     |       | B     | A     |
| Approach Delay          |       | 21.2  |     |       | 15.5  |       |       | 16.6  |       |       | 17.8  |       |
| Approach LOS            |       | C     |     |       | B     |       |       | B     |       |       | B     |       |
| Queue Length 50th (ft)  | 8     | 90    |     | 37    | 155   | 0     |       | 40    | 1     |       | 60    | 0     |
| Queue Length 95th (ft)  | 24    | 151   |     | 82    | 295   | 35    |       | 77    | 44    |       | 107   | 13    |
| Internal Link Dist (ft) |       | 728   |     |       | 702   |       |       | 1025  |       |       | 668   |       |
| Turn Bay Length (ft)    | 90    |       |     | 200   |       |       |       |       | 125   |       |       | 150   |
| Base Capacity (vph)     | 440   | 1479  |     | 409   | 764   | 955   |       | 951   | 604   |       | 1368  | 713   |
| Starvation Cap Reductn  | 0     | 0     |     | 0     | 0     | 0     |       | 0     | 0     |       | 0     | 0     |
| Spillback Cap Reductn   | 0     | 0     |     | 0     | 0     | 0     |       | 0     | 0     |       | 0     | 0     |
| Storage Cap Reductn     | 0     | 0     |     | 0     | 0     | 0     |       | 0     | 0     |       | 0     | 0     |
| Reduced v/c Ratio       | 0.09  | 0.35  |     | 0.43  | 0.56  | 0.28  |       | 0.21  | 0.39  |       | 0.27  | 0.04  |

### Intersection Summary

Area Type: Other

Cycle Length: 93

Actuated Cycle Length: 67

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 17.5

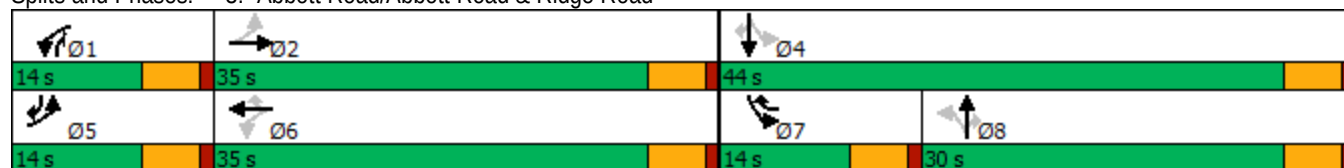
Intersection LOS: B

Intersection Capacity Utilization 63.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: Abbott Road/Abbott Road & Ridge Road



Lanes, Volumes, Timings  
4: Abbott Road & Fernald Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

10/18/2024

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                        | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                    |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)              | 0                                                                                 | 0                                                                                 | 1                                                                                 | 16                                                                                | 0                                                                                 | 7                                                                                 | 3                                                                                  | 396                                                                                 | 5                                                                                   | 3                                                                                   | 363                                                                                 | 2                                                                                   |
| Future Volume (vph)               | 0                                                                                 | 0                                                                                 | 1                                                                                 | 16                                                                                | 0                                                                                 | 7                                                                                 | 3                                                                                  | 396                                                                                 | 5                                                                                   | 3                                                                                   | 363                                                                                 | 2                                                                                   |
| Ideal Flow (vphpl)                | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                               | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Lane Width (ft)                   | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                 | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 12                                                                                  |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                               | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                |
| Ped Bike Factor                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Frt                               |                                                                                   | 0.865                                                                             |                                                                                   |                                                                                   | 0.959                                                                             |                                                                                   |                                                                                    | 0.998                                                                               |                                                                                     |                                                                                     | 0.999                                                                               |                                                                                     |
| Flt Protected                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.966                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)                 | 0                                                                                 | 1611                                                                              | 0                                                                                 | 0                                                                                 | 1726                                                                              | 0                                                                                 | 0                                                                                  | 3145                                                                                | 0                                                                                   | 0                                                                                   | 3207                                                                                | 0                                                                                   |
| Flt Permitted                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.966                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)                 | 0                                                                                 | 1611                                                                              | 0                                                                                 | 0                                                                                 | 1726                                                                              | 0                                                                                 | 0                                                                                  | 3145                                                                                | 0                                                                                   | 0                                                                                   | 3207                                                                                | 0                                                                                   |
| Link Speed (mph)                  |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                    | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)                |                                                                                   | 100                                                                               |                                                                                   |                                                                                   | 300                                                                               |                                                                                   |                                                                                    | 1266                                                                                |                                                                                     |                                                                                     | 1105                                                                                |                                                                                     |
| Travel Time (s)                   |                                                                                   | 2.3                                                                               |                                                                                   |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                    | 28.8                                                                                |                                                                                     |                                                                                     | 25.1                                                                                |                                                                                     |
| Confl. Peds. (#/hr)               | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                  |                                                                                     | 5                                                                                   | 5                                                                                   |                                                                                     | 5                                                                                   |
| Confl. Bikes (#/hr)               |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                    |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |
| Peak Hour Factor                  | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                               | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                |
| Heavy Vehicles (%)                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                 | 7%                                                                                  | 2%                                                                                  | 2%                                                                                  | 5%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)                   | 0                                                                                 | 0                                                                                 | 1                                                                                 | 16                                                                                | 0                                                                                 | 7                                                                                 | 3                                                                                  | 404                                                                                 | 5                                                                                   | 3                                                                                   | 370                                                                                 | 2                                                                                   |
| Shared Lane Traffic (%)           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)             | 0                                                                                 | 1                                                                                 | 0                                                                                 | 0                                                                                 | 23                                                                                | 0                                                                                 | 0                                                                                  | 412                                                                                 | 0                                                                                   | 0                                                                                   | 375                                                                                 | 0                                                                                   |
| Enter Blocked Intersection        | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment                    | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)                  |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Link Offset(ft)                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)               |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |                                                                                   |                                                                                    | 16                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Two way Left Turn Lane            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor                    | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.00                                                                                |
| Turning Speed (mph)               | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                 |                                                                                     | 60                                                                                  | 60                                                                                  |                                                                                     | 60                                                                                  |
| Sign Control                      |                                                                                   | Stop                                                                              |                                                                                   |                                                                                   | Stop                                                                              |                                                                                   |                                                                                    | Free                                                                                |                                                                                     |                                                                                     | Free                                                                                |                                                                                     |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                        | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:                     | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization | 28.8%                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | ICU Level of Service A                                                             |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min)             | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

Lanes, Volumes, Timings  
5: Abbott Road & Elmview Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

10/18/2024

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                    |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)       | 19                                                                                | 1                                                                                 | 7                                                                                 | 5                                                                                 | 0                                                                                 | 3                                                                                 | 3                                                                                  | 363                                                                                 | 2                                                                                   | 3                                                                                   | 364                                                                                 | 10                                                                                  |
| Future Volume (vph)        | 19                                                                                | 1                                                                                 | 7                                                                                 | 5                                                                                 | 0                                                                                 | 3                                                                                 | 3                                                                                  | 363                                                                                 | 2                                                                                   | 3                                                                                   | 364                                                                                 | 10                                                                                  |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                               | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Lane Width (ft)            | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 10                                                                                 | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                               | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                |
| Ped Bike Factor            |                                                                                   | 0.99                                                                              |                                                                                   |                                                                                   | 0.99                                                                              |                                                                                   |                                                                                    | 1.00                                                                                |                                                                                     |                                                                                     | 1.00                                                                                |                                                                                     |
| Frt                        |                                                                                   | 0.965                                                                             |                                                                                   |                                                                                   | 0.949                                                                             |                                                                                   |                                                                                    | 0.999                                                                               |                                                                                     |                                                                                     | 0.996                                                                               |                                                                                     |
| Flt Protected              |                                                                                   | 0.966                                                                             |                                                                                   |                                                                                   | 0.970                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 0                                                                                 | 1728                                                                              | 0                                                                                 | 0                                                                                 | 1703                                                                              | 0                                                                                 | 0                                                                                  | 3090                                                                                | 0                                                                                   | 0                                                                                   | 3168                                                                                | 0                                                                                   |
| Flt Permitted              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.953                                                                               |                                                                                     |                                                                                     | 0.953                                                                               |                                                                                     |
| Satd. Flow (perm)          | 0                                                                                 | 1783                                                                              | 0                                                                                 | 0                                                                                 | 1750                                                                              | 0                                                                                 | 0                                                                                  | 2945                                                                                | 0                                                                                   | 0                                                                                   | 3019                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                    |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 7                                                                                 |                                                                                   |                                                                                   | 50                                                                                |                                                                                   |                                                                                    | 1                                                                                   |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |
| Link Speed (mph)           |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                    | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 300                                                                               |                                                                                   |                                                                                   | 300                                                                               |                                                                                   |                                                                                    | 457                                                                                 |                                                                                     |                                                                                     | 1266                                                                                |                                                                                     |
| Travel Time (s)            |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                    | 10.4                                                                                |                                                                                     |                                                                                     | 28.8                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                  |                                                                                     | 5                                                                                   | 5                                                                                   |                                                                                     | 5                                                                                   |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                    |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |
| Peak Hour Factor           | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                               | 0.99                                                                                | 0.99                                                                                | 0.99                                                                                | 0.99                                                                                | 0.99                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                 | 9%                                                                                  | 2%                                                                                  | 2%                                                                                  | 6%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 19                                                                                | 1                                                                                 | 7                                                                                 | 5                                                                                 | 0                                                                                 | 3                                                                                 | 3                                                                                  | 367                                                                                 | 2                                                                                   | 3                                                                                   | 368                                                                                 | 10                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 0                                                                                 | 27                                                                                | 0                                                                                 | 0                                                                                 | 8                                                                                 | 0                                                                                 | 0                                                                                  | 372                                                                                 | 0                                                                                   | 0                                                                                   | 381                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |                                                                                   |                                                                                    | 16                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.09                                                                               | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                |
| Turning Speed (mph)        | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                 |                                                                                     | 60                                                                                  | 60                                                                                  |                                                                                     | 60                                                                                  |
| Number of Detectors        | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                  | 1                                                                                   |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     |
| Detector Template          | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                               | Thru                                                                                |                                                                                     | Left                                                                                | Thru                                                                                |                                                                                     |
| Leading Detector (ft)      | 20                                                                                | 50                                                                                |                                                                                   | 20                                                                                | 50                                                                                |                                                                                   | 20                                                                                 | 50                                                                                  |                                                                                     | 20                                                                                  | 50                                                                                  |                                                                                     |
| Trailing Detector (ft)     | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Detector 1 Position(ft)    | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Detector 1 Size(ft)        | 20                                                                                | 50                                                                                |                                                                                   | 20                                                                                | 50                                                                                |                                                                                   | 20                                                                                 | 50                                                                                  |                                                                                     | 20                                                                                  | 50                                                                                  |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                              | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Turn Type                  | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                               | NA                                                                                  |                                                                                     | Perm                                                                                | NA                                                                                  |                                                                                     |
| Protected Phases           |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   |                                                                                    | 2                                                                                   |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |
| Permitted Phases           | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 2                                                                                  |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |                                                                                     |
| Detector Phase             | 4                                                                                 | 4                                                                                 |                                                                                   | 8                                                                                 | 8                                                                                 |                                                                                   | 2                                                                                  | 2                                                                                   |                                                                                     | 6                                                                                   | 6                                                                                   |                                                                                     |
| Switch Phase               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)        | 6.0                                                                               | 6.0                                                                               |                                                                                   | 6.0                                                                               | 6.0                                                                               |                                                                                   | 20.0                                                                               | 20.0                                                                                |                                                                                     | 20.0                                                                                | 20.0                                                                                |                                                                                     |



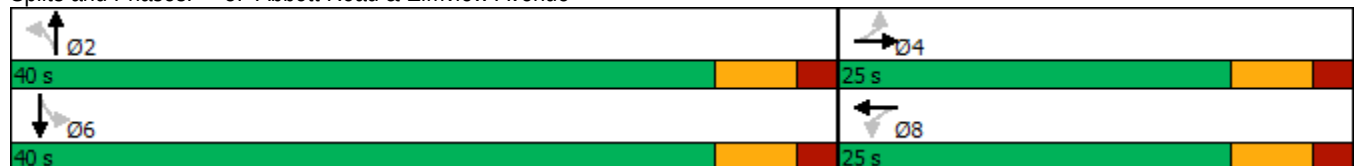
Lanes, Volumes, Timings  
5: Abbott Road & Elmview Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

10/18/2024

|                                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Minimum Split (s)                       | 12.0                                                                              | 12.0                                                                              |                                                                                   | 12.0                                                                              | 12.0                                                                              |                                                                                   | 26.0                                                                               | 26.0                                                                                |                                                                                     | 26.0                                                                                | 26.0                                                                                |                                                                                     |
| Total Split (s)                         | 25.0                                                                              | 25.0                                                                              |                                                                                   | 25.0                                                                              | 25.0                                                                              |                                                                                   | 40.0                                                                               | 40.0                                                                                |                                                                                     | 40.0                                                                                | 40.0                                                                                |                                                                                     |
| Total Split (%)                         | 38.5%                                                                             | 38.5%                                                                             |                                                                                   | 38.5%                                                                             | 38.5%                                                                             |                                                                                   | 61.5%                                                                              | 61.5%                                                                               |                                                                                     | 61.5%                                                                               | 61.5%                                                                               |                                                                                     |
| Maximum Green (s)                       | 19.0                                                                              | 19.0                                                                              |                                                                                   | 19.0                                                                              | 19.0                                                                              |                                                                                   | 34.0                                                                               | 34.0                                                                                |                                                                                     | 34.0                                                                                | 34.0                                                                                |                                                                                     |
| Yellow Time (s)                         | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                                | 4.0                                                                                 |                                                                                     | 4.0                                                                                 | 4.0                                                                                 |                                                                                     |
| All-Red Time (s)                        | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                                | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Lost Time Adjust (s)                    |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)                     |                                                                                   | 6.0                                                                               |                                                                                   |                                                                                   | 6.0                                                                               |                                                                                   |                                                                                    | 6.0                                                                                 |                                                                                     |                                                                                     | 6.0                                                                                 |                                                                                     |
| Lead/Lag                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lead-Lag Optimize?                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Vehicle Extension (s)                   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                                | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| Recall Mode                             | None                                                                              | None                                                                              |                                                                                   | None                                                                              | None                                                                              |                                                                                   | Max                                                                                | Max                                                                                 |                                                                                     | Max                                                                                 | Max                                                                                 |                                                                                     |
| Act Effct Green (s)                     |                                                                                   | 6.6                                                                               |                                                                                   |                                                                                   | 6.4                                                                               |                                                                                   |                                                                                    | 48.5                                                                                |                                                                                     |                                                                                     | 48.5                                                                                |                                                                                     |
| Actuated g/C Ratio                      |                                                                                   | 0.13                                                                              |                                                                                   |                                                                                   | 0.12                                                                              |                                                                                   |                                                                                    | 0.93                                                                                |                                                                                     |                                                                                     | 0.93                                                                                |                                                                                     |
| v/c Ratio                               |                                                                                   | 0.12                                                                              |                                                                                   |                                                                                   | 0.03                                                                              |                                                                                   |                                                                                    | 0.14                                                                                |                                                                                     |                                                                                     | 0.14                                                                                |                                                                                     |
| Control Delay                           |                                                                                   | 17.2                                                                              |                                                                                   |                                                                                   | 0.2                                                                               |                                                                                   |                                                                                    | 1.5                                                                                 |                                                                                     |                                                                                     | 1.5                                                                                 |                                                                                     |
| Queue Delay                             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Total Delay                             |                                                                                   | 17.2                                                                              |                                                                                   |                                                                                   | 0.2                                                                               |                                                                                   |                                                                                    | 1.5                                                                                 |                                                                                     |                                                                                     | 1.5                                                                                 |                                                                                     |
| LOS                                     |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | A                                                                                 |                                                                                   |                                                                                    | A                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |
| Approach Delay                          |                                                                                   | 17.2                                                                              |                                                                                   |                                                                                   | 0.3                                                                               |                                                                                   |                                                                                    | 1.5                                                                                 |                                                                                     |                                                                                     | 1.5                                                                                 |                                                                                     |
| Approach LOS                            |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | A                                                                                 |                                                                                   |                                                                                    | A                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |
| Queue Length 50th (ft)                  |                                                                                   | 6                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Queue Length 95th (ft)                  |                                                                                   | 23                                                                                |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 35                                                                                  |                                                                                     |                                                                                     | 35                                                                                  |                                                                                     |
| Internal Link Dist (ft)                 |                                                                                   | 220                                                                               |                                                                                   |                                                                                   | 220                                                                               |                                                                                   |                                                                                    | 377                                                                                 |                                                                                     |                                                                                     | 1186                                                                                |                                                                                     |
| Turn Bay Length (ft)                    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Base Capacity (vph)                     |                                                                                   | 659                                                                               |                                                                                   |                                                                                   | 674                                                                               |                                                                                   |                                                                                    | 2728                                                                                |                                                                                     |                                                                                     | 2797                                                                                |                                                                                     |
| Starvation Cap Reductn                  |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Spillback Cap Reductn                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Storage Cap Reductn                     |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Reduced v/c Ratio                       |                                                                                   | 0.04                                                                              |                                                                                   |                                                                                   | 0.01                                                                              |                                                                                   |                                                                                    | 0.14                                                                                |                                                                                     |                                                                                     | 0.14                                                                                |                                                                                     |
| Intersection Summary                    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                              | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Cycle Length: 65                        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Actuated Cycle Length: 52.3             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Natural Cycle: 40                       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type: Actuated-Uncoordinated    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Maximum v/c Ratio: 0.14                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Signal Delay: 2.0          |                                                                                   |                                                                                   |                                                                                   | Intersection LOS: A                                                               |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization 31.7% |                                                                                   |                                                                                   |                                                                                   | ICU Level of Service A                                                            |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min) 15                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

Splits and Phases: 5: Abbott Road & Elmview Avenue



HCM 6th TWSC  
4: Abbott Road & Fernald Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

10/18/2024

| Intersection             |        |      |        |       |       |        |      |      |        |      |      |      |
|--------------------------|--------|------|--------|-------|-------|--------|------|------|--------|------|------|------|
| Int Delay, s/veh         | 0.5    |      |        |       |       |        |      |      |        |      |      |      |
| Movement                 | EBL    | EBT  | EBR    | WBL   | WBT   | WBR    | NBL  | NBT  | NBR    | SBL  | SBT  | SBR  |
| Lane Configurations      |        | ↕    |        |       | ↕     |        |      | ↕    |        |      | ↕    |      |
| Traffic Vol, veh/h       | 0      | 0    | 1      | 16    | 0     | 7      | 3    | 396  | 5      | 3    | 363  | 2    |
| Future Vol, veh/h        | 0      | 0    | 1      | 16    | 0     | 7      | 3    | 396  | 5      | 3    | 363  | 2    |
| Conflicting Peds, #/hr   | 5      | 0    | 5      | 5     | 0     | 5      | 5    | 0    | 5      | 5    | 0    | 5    |
| Sign Control             | Stop   | Stop | Stop   | Stop  | Stop  | Stop   | Free | Free | Free   | Free | Free | Free |
| RT Channelized           | -      | -    | None   | -     | -     | None   | -    | -    | None   | -    | -    | None |
| Storage Length           | -      | -    | -      | -     | -     | -      | -    | -    | -      | -    | -    | -    |
| Veh in Median Storage, # | -      | 0    | -      | -     | 0     | -      | -    | 0    | -      | -    | 0    | -    |
| Grade, %                 | -      | 0    | -      | -     | 0     | -      | -    | 0    | -      | -    | 0    | -    |
| Peak Hour Factor         | 98     | 98   | 98     | 98    | 98    | 98     | 98   | 98   | 98     | 98   | 98   | 98   |
| Heavy Vehicles, %        | 2      | 2    | 2      | 2     | 2     | 2      | 2    | 7    | 2      | 2    | 5    | 2    |
| Mvmt Flow                | 0      | 0    | 1      | 16    | 0     | 7      | 3    | 404  | 5      | 3    | 370  | 2    |
|                          |        |      |        |       |       |        |      |      |        |      |      |      |
| Major/Minor              | Minor2 |      | Minor1 |       |       | Major1 |      |      | Major2 |      |      |      |
| Conflicting Flow All     | 595    | 802  | 196    | 614   | 801   | 215    | 377  | 0    | 0      | 414  | 0    | 0    |
| Stage 1                  | 382    | 382  | -      | 418   | 418   | -      | -    | -    | -      | -    | -    | -    |
| Stage 2                  | 213    | 420  | -      | 196   | 383   | -      | -    | -    | -      | -    | -    | -    |
| Critical Hdwy            | 7.54   | 6.54 | 6.94   | 7.54  | 6.54  | 6.94   | 4.14 | -    | -      | 4.14 | -    | -    |
| Critical Hdwy Stg 1      | 6.54   | 5.54 | -      | 6.54  | 5.54  | -      | -    | -    | -      | -    | -    | -    |
| Critical Hdwy Stg 2      | 6.54   | 5.54 | -      | 6.54  | 5.54  | -      | -    | -    | -      | -    | -    | -    |
| Follow-up Hdwy           | 3.52   | 4.02 | 3.32   | 3.52  | 4.02  | 3.32   | 2.22 | -    | -      | 2.22 | -    | -    |
| Pot Cap-1 Maneuver       | 388    | 316  | 812    | 376   | 316   | 790    | 1178 | -    | -      | 1141 | -    | -    |
| Stage 1                  | 612    | 611  | -      | 583   | 589   | -      | -    | -    | -      | -    | -    | -    |
| Stage 2                  | 769    | 588  | -      | 787   | 610   | -      | -    | -    | -      | -    | -    | -    |
| Platoon blocked, %       |        |      |        |       |       |        |      | -    | -      |      | -    | -    |
| Mov Cap-1 Maneuver       | 379    | 311  | 805    | 371   | 311   | 783    | 1172 | -    | -      | 1136 | -    | -    |
| Mov Cap-2 Maneuver       | 379    | 311  | -      | 371   | 311   | -      | -    | -    | -      | -    | -    | -    |
| Stage 1                  | 607    | 606  | -      | 578   | 584   | -      | -    | -    | -      | -    | -    | -    |
| Stage 2                  | 757    | 583  | -      | 781   | 605   | -      | -    | -    | -      | -    | -    | -    |
|                          |        |      |        |       |       |        |      |      |        |      |      |      |
| Approach                 | EB     |      | WB     |       |       | NB     |      |      | SB     |      |      |      |
| HCM Control Delay, s     | 9.5    |      | 13.6   |       |       | 0.1    |      |      | 0.1    |      |      |      |
| HCM LOS                  | A      |      | B      |       |       |        |      |      |        |      |      |      |
|                          |        |      |        |       |       |        |      |      |        |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT  | NBR    | EBLn1 | WBLn1 | SBL    | SBT  | SBR  |        |      |      |      |
| Capacity (veh/h)         | 1172   | -    | -      | 805   | 442   | 1136   | -    | -    |        |      |      |      |
| HCM Lane V/C Ratio       | 0.003  | -    | -      | 0.001 | 0.053 | 0.003  | -    | -    |        |      |      |      |
| HCM Control Delay (s)    | 8.1    | 0    | -      | 9.5   | 13.6  | 8.2    | 0    | -    |        |      |      |      |
| HCM Lane LOS             | A      | A    | -      | A     | B     | A      | A    | -    |        |      |      |      |
| HCM 95th %tile Q(veh)    | 0      | -    | -      | 0     | 0.2   | 0      | -    | -    |        |      |      |      |

## Summary of All Intervals

| Run Number              | 1    | 2    | 3    | 4    | 5    | Avg  |
|-------------------------|------|------|------|------|------|------|
| Start Time              | 7:50 | 7:50 | 7:50 | 7:50 | 7:50 | 7:50 |
| End Time                | 9:00 | 9:00 | 9:00 | 9:00 | 9:00 | 9:00 |
| Total Time (min)        | 70   | 70   | 70   | 70   | 70   | 70   |
| Time Recorded (min)     | 60   | 60   | 60   | 60   | 60   | 60   |
| # of Intervals          | 2    | 2    | 2    | 2    | 2    | 2    |
| # of Recorded Intervals | 1    | 1    | 1    | 1    | 1    | 1    |
| Vehs Entered            | 2558 | 2478 | 2534 | 2504 | 2526 | 2519 |
| Vehs Exited             | 2551 | 2488 | 2540 | 2502 | 2525 | 2520 |
| Starting Vehs           | 49   | 56   | 65   | 50   | 49   | 52   |
| Ending Vehs             | 56   | 46   | 59   | 52   | 50   | 53   |
| Denied Entry Before     | 0    | 0    | 1    | 0    | 0    | 0    |
| Denied Entry After      | 0    | 0    | 0    | 0    | 0    | 0    |
| Travel Distance (mi)    | 1124 | 1099 | 1135 | 1092 | 1125 | 1115 |
| Travel Time (hr)        | 54.3 | 53.2 | 55.4 | 52.9 | 54.7 | 54.1 |
| Total Delay (hr)        | 14.9 | 14.7 | 15.6 | 14.6 | 15.3 | 15.0 |
| Total Stops             | 2147 | 2156 | 2288 | 2143 | 2188 | 2180 |
| Fuel Used (gal)         | 42.2 | 41.3 | 42.7 | 41.1 | 41.8 | 41.8 |

## Interval #0 Information Seeding

|                                     |      |
|-------------------------------------|------|
| Start Time                          | 7:50 |
| End Time                            | 8:00 |
| Total Time (min)                    | 10   |
| Volumes adjusted by Growth Factors. |      |
| No data recorded this interval.     |      |

## Interval #1 Information Recording

|                                     |      |
|-------------------------------------|------|
| Start Time                          | 8:00 |
| End Time                            | 9:00 |
| Total Time (min)                    | 60   |
| Volumes adjusted by Growth Factors. |      |

| Run Number           | 1    | 2    | 3    | 4    | 5    | Avg  |
|----------------------|------|------|------|------|------|------|
| Vehs Entered         | 2558 | 2478 | 2534 | 2504 | 2526 | 2519 |
| Vehs Exited          | 2551 | 2488 | 2540 | 2502 | 2525 | 2520 |
| Starting Vehs        | 49   | 56   | 65   | 50   | 49   | 52   |
| Ending Vehs          | 56   | 46   | 59   | 52   | 50   | 53   |
| Denied Entry Before  | 0    | 0    | 1    | 0    | 0    | 0    |
| Denied Entry After   | 0    | 0    | 0    | 0    | 0    | 0    |
| Travel Distance (mi) | 1124 | 1099 | 1135 | 1092 | 1125 | 1115 |
| Travel Time (hr)     | 54.3 | 53.2 | 55.4 | 52.9 | 54.7 | 54.1 |
| Total Delay (hr)     | 14.9 | 14.7 | 15.6 | 14.6 | 15.3 | 15.0 |
| Total Stops          | 2147 | 2156 | 2288 | 2143 | 2188 | 2180 |
| Fuel Used (gal)      | 42.2 | 41.3 | 42.7 | 41.1 | 41.8 | 41.8 |

## 1: Abbott Road &amp; Dorrance Avenue Performance by movement

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Denied Del/Veh (s)  | 0.2  | 0.1  | 0.1  | 0.2  | 0.1  | 0.1  | 0.0  | 0.0  | 0.0  | 0.2  | 0.1  | 0.1  |
| Total Delay (hr)    | 0.1  | 0.4  | 0.2  | 0.4  | 0.4  | 0.1  | 0.5  | 0.7  | 0.1  | 0.1  | 0.3  | 0.0  |
| Total Del/Veh (s)   | 26.7 | 20.0 | 5.9  | 28.1 | 21.4 | 6.7  | 15.1 | 10.8 | 8.1  | 8.2  | 4.7  | 2.2  |
| Stop Delay (hr)     | 0.1  | 0.3  | 0.1  | 0.3  | 0.3  | 0.0  | 0.3  | 0.5  | 0.1  | 0.0  | 0.2  | 0.0  |
| Stop Del/Veh (s)    | 22.8 | 16.9 | 3.2  | 24.1 | 18.2 | 4.2  | 11.0 | 8.2  | 5.2  | 5.3  | 3.0  | 1.0  |
| Total Stops         | 8    | 46   | 65   | 36   | 43   | 21   | 70   | 104  | 23   | 13   | 54   | 4    |
| Stop/Veh            | 0.80 | 0.69 | 0.68 | 0.80 | 0.69 | 0.70 | 0.64 | 0.45 | 0.52 | 0.46 | 0.27 | 0.27 |
| Travel Dist (mi)    | 0.5  | 3.3  | 4.8  | 2.2  | 3.0  | 1.5  | 14.0 | 27.8 | 5.7  | 2.1  | 15.5 | 1.1  |
| Travel Time (hr)    | 0.1  | 0.5  | 0.3  | 0.4  | 0.5  | 0.1  | 0.9  | 1.6  | 0.3  | 0.1  | 0.8  | 0.0  |
| Avg Speed (mph)     | 6    | 7    | 15   | 5    | 6    | 14   | 15   | 17   | 20   | 16   | 20   | 24   |
| Fuel Used (gal)     | 0.0  | 0.2  | 0.1  | 0.1  | 0.2  | 0.0  | 0.5  | 1.0  | 0.2  | 0.1  | 0.6  | 0.0  |
| Fuel Eff. (mpg)     | 16.9 | 17.7 | 31.8 | 15.8 | 16.2 | 33.7 | 29.6 | 28.9 | 29.3 | 29.1 | 28.1 | 35.7 |
| HC Emissions (g)    | 0    | 1    | 1    | 1    | 2    | 0    | 3    | 22   | 2    | 0    | 11   | 0    |
| CO Emissions (g)    | 5    | 47   | 46   | 29   | 58   | 12   | 88   | 440  | 56   | 19   | 256  | 6    |
| NOx Emissions (g)   | 0    | 5    | 4    | 3    | 6    | 1    | 10   | 61   | 7    | 2    | 31   | 1    |
| Vehicles Entered    | 10   | 66   | 95   | 45   | 61   | 30   | 108  | 227  | 44   | 28   | 201  | 15   |
| Vehicles Exited     | 10   | 66   | 95   | 44   | 60   | 29   | 109  | 227  | 44   | 28   | 201  | 15   |
| Hourly Exit Rate    | 10   | 66   | 95   | 44   | 60   | 29   | 109  | 227  | 44   | 28   | 201  | 15   |
| Input Volume        | 14   | 75   | 89   | 44   | 61   | 31   | 108  | 221  | 44   | 27   | 214  | 16   |
| % of Volume         | 71   | 88   | 107  | 100  | 98   | 94   | 101  | 103  | 100  | 104  | 94   | 94   |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Density (ft/veh)    |      |      |      |      |      |      |      |      |      |      |      |      |
| Occupancy (veh)     | 0    | 0    | 0    | 0    | 0    | 0    | 1    | 2    | 0    | 0    | 1    | 0    |

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1: Abbott Road & Dorrance Avenue Performance by movement

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| Movement            | All  |
|---------------------|------|
| Denied Delay (hr)   | 0.0  |
| Denied Del/Veh (s)  | 0.1  |
| Total Delay (hr)    | 3.0  |
| Total Del/Veh (s)   | 11.4 |
| Stop Delay (hr)     | 2.2  |
| Stop Del/Veh (s)    | 8.6  |
| Total Stops         | 487  |
| Stop/Veh            | 0.52 |
| Travel Dist (mi)    | 81.5 |
| Travel Time (hr)    | 5.7  |
| Avg Speed (mph)     | 14   |
| Fuel Used (gal)     | 3.0  |
| Fuel Eff. (mpg)     | 27.0 |
| HC Emissions (g)    | 44   |
| CO Emissions (g)    | 1064 |
| NOx Emissions (g)   | 130  |
| Vehicles Entered    | 930  |
| Vehicles Exited     | 928  |
| Hourly Exit Rate    | 928  |
| Input Volume        | 944  |
| % of Volume         | 98   |
| Denied Entry Before | 0    |
| Denied Entry After  | 0    |
| Density (ft/veh)    | 554  |
| Occupancy (veh)     | 6    |

## 2: Abbott Road &amp; Plaza Driveway Performance by movement

| Movement            | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  | All   |
|---------------------|------|------|------|------|------|------|-------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   |
| Denied Del/Veh (s)  | 0.1  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   |
| Total Delay (hr)    | 0.5  | 0.0  | 0.3  | 0.1  | 0.0  | 0.3  | 1.1   |
| Total Del/Veh (s)   | 34.8 | 7.1  | 2.5  | 2.3  | 6.5  | 2.9  | 4.6   |
| Stop Delay (hr)     | 0.5  | 0.0  | 0.1  | 0.0  | 0.0  | 0.1  | 0.7   |
| Stop Del/Veh (s)    | 31.0 | 4.3  | 1.2  | 0.9  | 3.0  | 1.2  | 3.0   |
| Total Stops         | 49   | 4    | 45   | 10   | 0    | 41   | 149   |
| Stop/Veh            | 0.92 | 0.80 | 0.12 | 0.12 | 0.00 | 0.12 | 0.17  |
| Travel Dist (mi)    | 2.6  | 0.2  | 50.2 | 11.3 | 0.1  | 43.5 | 107.9 |
| Travel Time (hr)    | 0.6  | 0.0  | 2.2  | 0.5  | 0.0  | 1.7  | 5.0   |
| Avg Speed (mph)     | 4    | 13   | 23   | 23   | 20   | 25   | 21    |
| Fuel Used (gal)     | 0.2  | 0.0  | 2.4  | 0.5  | 0.0  | 1.7  | 4.8   |
| Fuel Eff. (mpg)     | 14.0 | 47.4 | 21.2 | 21.0 | 37.7 | 25.1 | 22.3  |
| HC Emissions (g)    | 1    | 0    | 41   | 7    | 0    | 35   | 84    |
| CO Emissions (g)    | 34   | 0    | 1266 | 246  | 2    | 888  | 2435  |
| NOx Emissions (g)   | 3    | 0    | 131  | 22   | 0    | 103  | 260   |
| Vehicles Entered    | 52   | 5    | 373  | 82   | 1    | 342  | 855   |
| Vehicles Exited     | 53   | 5    | 374  | 83   | 1    | 343  | 859   |
| Hourly Exit Rate    | 53   | 5    | 374  | 83   | 1    | 343  | 859   |
| Input Volume        | 51   | 5    | 368  | 82   | 2    | 348  | 856   |
| % of Volume         | 104  | 100  | 102  | 101  | 50   | 99   | 100   |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Density (ft/veh)    |      |      |      |      |      |      | 669   |
| Occupancy (veh)     | 1    | 0    | 2    | 0    | 0    | 2    | 5     |



## 3: Abbott Road/Abbott Road &amp; Ridge Road Performance by movement

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.1  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Denied Del/Veh (s)  | 3.2  | 0.1  | 0.2  | 2.9  | 0.7  | 0.4  | 0.0  | 0.0  | 0.3  | 0.0  | 0.0  | 0.2  |
| Total Delay (hr)    | 0.2  | 2.4  | 0.1  | 0.7  | 1.8  | 0.2  | 0.3  | 0.7  | 0.3  | 1.2  | 0.7  | 0.0  |
| Total Del/Veh (s)   | 15.1 | 19.2 | 8.7  | 14.6 | 15.8 | 3.3  | 22.0 | 17.2 | 5.4  | 22.1 | 14.5 | 4.6  |
| Stop Delay (hr)     | 0.1  | 1.9  | 0.1  | 0.5  | 1.2  | 0.2  | 0.3  | 0.6  | 0.2  | 1.0  | 0.6  | 0.0  |
| Stop Del/Veh (s)    | 12.0 | 15.0 | 7.5  | 11.5 | 10.9 | 2.2  | 19.4 | 14.1 | 3.7  | 18.6 | 11.2 | 3.6  |
| Total Stops         | 34   | 304  | 34   | 129  | 235  | 117  | 43   | 96   | 133  | 155  | 104  | 15   |
| Stop/Veh            | 0.87 | 0.67 | 0.65 | 0.78 | 0.57 | 0.44 | 0.80 | 0.62 | 0.57 | 0.82 | 0.58 | 0.50 |
| Travel Dist (mi)    | 5.5  | 65.2 | 7.5  | 22.8 | 56.7 | 37.0 | 10.8 | 29.2 | 45.7 | 25.1 | 23.4 | 4.0  |
| Travel Time (hr)    | 0.4  | 4.6  | 0.4  | 1.6  | 3.8  | 1.7  | 0.7  | 1.7  | 2.1  | 2.1  | 1.5  | 0.2  |
| Avg Speed (mph)     | 15   | 14   | 18   | 15   | 15   | 22   | 15   | 17   | 22   | 12   | 15   | 21   |
| Fuel Used (gal)     | 0.2  | 2.5  | 0.3  | 0.9  | 2.1  | 1.1  | 0.3  | 1.0  | 1.3  | 1.0  | 0.9  | 0.1  |
| Fuel Eff. (mpg)     | 27.8 | 26.4 | 29.8 | 26.4 | 27.0 | 34.6 | 31.0 | 30.7 | 35.9 | 25.4 | 26.6 | 33.4 |
| HC Emissions (g)    | 2    | 51   | 3    | 6    | 47   | 10   | 2    | 22   | 13   | 8    | 17   | 2    |
| CO Emissions (g)    | 62   | 1149 | 83   | 243  | 974  | 329  | 40   | 404  | 256  | 225  | 383  | 43   |
| NOx Emissions (g)   | 6    | 134  | 9    | 20   | 126  | 31   | 5    | 61   | 38   | 25   | 47   | 5    |
| Vehicles Entered    | 38   | 450  | 52   | 163  | 406  | 263  | 54   | 155  | 230  | 186  | 178  | 30   |
| Vehicles Exited     | 38   | 453  | 51   | 164  | 407  | 264  | 53   | 153  | 231  | 185  | 176  | 29   |
| Hourly Exit Rate    | 38   | 453  | 51   | 164  | 407  | 264  | 53   | 153  | 231  | 185  | 176  | 29   |
| Input Volume        | 38   | 449  | 49   | 168  | 408  | 260  | 54   | 151  | 224  | 188  | 179  | 30   |
| % of Volume         | 100  | 101  | 104  | 98   | 100  | 102  | 98   | 101  | 103  | 98   | 98   | 97   |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Density (ft/veh)    |      |      |      |      |      |      |      |      |      |      |      |      |
| Occupancy (veh)     | 0    | 5    | 0    | 2    | 4    | 2    | 1    | 2    | 2    | 2    | 2    | 0    |

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3: Abbott Road/Abbott Road & Ridge Road Performance by movement

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| Movement            | All   |
|---------------------|-------|
| Denied Delay (hr)   | 0.3   |
| Denied Del/Veh (s)  | 0.5   |
| Total Delay (hr)    | 8.8   |
| Total Del/Veh (s)   | 14.2  |
| Stop Delay (hr)     | 6.8   |
| Stop Del/Veh (s)    | 10.9  |
| Total Stops         | 1399  |
| Stop/Veh            | 0.63  |
| Travel Dist (mi)    | 332.7 |
| Travel Time (hr)    | 20.9  |
| Avg Speed (mph)     | 16    |
| Fuel Used (gal)     | 11.5  |
| Fuel Eff. (mpg)     | 28.9  |
| HC Emissions (g)    | 182   |
| CO Emissions (g)    | 4191  |
| NOx Emissions (g)   | 507   |
| Vehicles Entered    | 2205  |
| Vehicles Exited     | 2204  |
| Hourly Exit Rate    | 2204  |
| Input Volume        | 2198  |
| % of Volume         | 100   |
| Denied Entry Before | 0     |
| Denied Entry After  | 0     |
| Density (ft/veh)    | 471   |
| Occupancy (veh)     | 21    |

## 4: Abbott Road &amp; Fernald Avenue Performance by movement

| Movement            | EBR  | WBL  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  | All   |
|---------------------|------|------|------|------|------|------|------|------|------|-------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   |
| Denied Del/Veh (s)  |      | 0.1  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   |
| Total Delay (hr)    | 0.0  | 0.0  | 0.0  | 0.0  | 0.1  | 0.0  | 0.0  | 0.2  | 0.0  | 0.3   |
| Total Del/Veh (s)   |      | 8.4  | 6.6  | 4.0  | 0.9  | 0.7  | 4.6  | 1.5  | 0.8  | 1.4   |
| Stop Delay (hr)     | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.1   |
| Stop Del/Veh (s)    |      | 5.2  | 3.4  | 1.1  | 0.1  | 0.0  | 0.9  | 0.3  | 0.1  | 0.3   |
| Total Stops         | 0    | 17   | 8    | 1    | 3    | 0    | 0    | 2    | 0    | 31    |
| Stop/Veh            |      | 0.94 | 1.00 | 0.33 | 0.01 | 0.00 | 0.00 | 0.01 | 0.00 | 0.04  |
| Travel Dist (mi)    | 0.0  | 0.9  | 0.4  | 0.6  | 94.8 | 1.8  | 0.5  | 76.6 | 0.5  | 176.1 |
| Travel Time (hr)    | 0.0  | 0.1  | 0.0  | 0.0  | 3.3  | 0.1  | 0.0  | 2.9  | 0.0  | 6.4   |
| Avg Speed (mph)     | 7    | 12   | 14   | 25   | 29   | 29   | 23   | 26   | 26   | 27    |
| Fuel Used (gal)     | 0.0  | 0.0  | 0.0  | 0.0  | 2.9  | 0.1  | 0.0  | 3.1  | 0.0  | 6.1   |
| Fuel Eff. (mpg)     | 23.3 | 41.4 | 42.2 | 34.1 | 33.2 | 33.4 | 23.1 | 25.0 | 28.6 | 29.0  |
| HC Emissions (g)    | 0    | 0    | 0    | 0    | 67   | 0    | 0    | 47   | 0    | 114   |
| CO Emissions (g)    | 0    | 2    | 1    | 2    | 1173 | 6    | 7    | 1256 | 5    | 2451  |
| NOx Emissions (g)   | 0    | 0    | 0    | 0    | 186  | 1    | 1    | 147  | 0    | 336   |
| Vehicles Entered    | 0    | 18   | 8    | 3    | 409  | 7    | 3    | 386  | 3    | 837   |
| Vehicles Exited     | 0    | 17   | 8    | 3    | 410  | 8    | 3    | 385  | 3    | 837   |
| Hourly Exit Rate    | 0    | 17   | 8    | 3    | 410  | 8    | 3    | 385  | 3    | 837   |
| Input Volume        | 1    | 16   | 7    | 3    | 401  | 5    | 3    | 392  | 2    | 830   |
| % of Volume         | 0    | 106  | 114  | 100  | 102  | 160  | 100  | 98   | 150  | 101   |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Density (ft/veh)    |      |      |      |      |      |      |      |      |      | 784   |
| Occupancy (veh)     | 0    | 0    | 0    | 0    | 3    | 0    | 0    | 3    | 0    | 6     |

## 5: Abbott Road &amp; Elmview Avenue Performance by movement

| Movement            | EBL  | EBT  | EBR  | WBL  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  | All   |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   |
| Denied Del/Veh (s)  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.4  | 0.1  | 0.2  | 0.0  | 0.0  | 0.0  | 0.1   |
| Total Delay (hr)    | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.1  | 0.0  | 0.0  | 0.2  | 0.0  | 0.5   |
| Total Del/Veh (s)   | 13.2 | 13.3 | 7.2  | 13.4 | 6.3  | 7.5  | 1.4  | 1.0  | 6.9  | 2.2  | 2.2  | 2.3   |
| Stop Delay (hr)     | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.1  | 0.0  | 0.0  | 0.1  | 0.0  | 0.3   |
| Stop Del/Veh (s)    | 9.9  | 10.6 | 4.4  | 10.4 | 3.6  | 4.2  | 0.8  | 0.3  | 2.9  | 0.8  | 1.1  | 1.2   |
| Total Stops         | 16   | 1    | 6    | 6    | 4    | 1    | 37   | 0    | 1    | 40   | 2    | 114   |
| Stop/Veh            | 0.94 | 1.00 | 0.75 | 0.86 | 0.80 | 0.50 | 0.10 | 0.00 | 0.50 | 0.11 | 0.20 | 0.14  |
| Travel Dist (mi)    | 0.9  | 0.0  | 0.4  | 0.3  | 0.2  | 0.2  | 30.0 | 0.3  | 0.5  | 86.1 | 2.4  | 121.3 |
| Travel Time (hr)    | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.2  | 0.0  | 0.0  | 3.1  | 0.1  | 4.6   |
| Avg Speed (mph)     | 9    | 9    | 13   | 9    | 14   | 17   | 26   | 28   | 24   | 28   | 27   | 27    |
| Fuel Used (gal)     | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.9  | 0.0  | 0.0  | 2.5  | 0.1  | 3.6   |
| Fuel Eff. (mpg)     | 30.9 | 35.5 | 32.8 | 29.8 | 44.5 | 34.7 | 32.3 | 29.9 | 35.8 | 34.6 | 35.5 | 34.0  |
| HC Emissions (g)    | 0    | 0    | 0    | 0    | 0    | 0    | 23   | 0    | 0    | 45   | 0    | 68    |
| CO Emissions (g)    | 3    | 0    | 2    | 1    | 1    | 1    | 453  | 2    | 2    | 726  | 7    | 1197  |
| NOx Emissions (g)   | 0    | 0    | 0    | 0    | 0    | 0    | 64   | 0    | 0    | 122  | 1    | 189   |
| Vehicles Entered    | 17   | 1    | 8    | 7    | 5    | 2    | 373  | 3    | 2    | 364  | 10   | 792   |
| Vehicles Exited     | 17   | 1    | 8    | 7    | 5    | 2    | 374  | 3    | 2    | 365  | 10   | 794   |
| Hourly Exit Rate    | 17   | 1    | 8    | 7    | 5    | 2    | 374  | 3    | 2    | 365  | 10   | 794   |
| Input Volume        | 19   | 1    | 7    | 5    | 3    | 3    | 363  | 2    | 3    | 371  | 10   | 787   |
| % of Volume         | 89   | 100  | 114  | 140  | 167  | 67   | 103  | 150  | 67   | 98   | 100  | 101   |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Density (ft/veh)    |      |      |      |      |      |      |      |      |      |      |      | 848   |
| Occupancy (veh)     | 0    | 0    | 0    | 0    | 0    | 0    | 1    | 0    | 0    | 3    | 0    | 5     |

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Total Network Performance

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|                     |        |
|---------------------|--------|
| Denied Delay (hr)   | 0.4    |
| Denied Del/Veh (s)  | 0.5    |
| Total Delay (hr)    | 14.7   |
| Total Del/Veh (s)   | 20.5   |
| Stop Delay (hr)     | 10.2   |
| Stop Del/Veh (s)    | 14.2   |
| Total Stops         | 2180   |
| Stop/Veh            | 0.85   |
| Travel Dist (mi)    | 1114.9 |
| Travel Time (hr)    | 54.1   |
| Avg Speed (mph)     | 21     |
| Fuel Used (gal)     | 41.8   |
| Fuel Eff. (mpg)     | 26.7   |
| HC Emissions (g)    | 749    |
| CO Emissions (g)    | 18069  |
| NOx Emissions (g)   | 2214   |
| Vehicles Entered    | 2519   |
| Vehicles Exited     | 2520   |
| Hourly Exit Rate    | 2520   |
| Input Volume        | 8033   |
| % of Volume         | 31     |
| Denied Entry Before | 0      |
| Denied Entry After  | 0      |
| Density (ft/veh)    | 468    |
| Occupancy (veh)     | 54     |

## Intersection: 1: Abbott Road &amp; Dorrance Avenue

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | LT  | TR  | LT  | TR  | LT  | TR  | LT  | TR  |
| Maximum Queue (ft)    | 83  | 67  | 108 | 54  | 119 | 112 | 104 | 42  |
| Average Queue (ft)    | 36  | 26  | 47  | 13  | 60  | 61  | 38  | 10  |
| 95th Queue (ft)       | 70  | 51  | 89  | 37  | 106 | 104 | 77  | 33  |
| Link Distance (ft)    | 254 | 254 | 254 | 254 | 608 | 608 | 402 | 402 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |

## Intersection: 2: Abbott Road &amp; Plaza Driveway

| Movement              | WB  | WB  | NB  | NB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | R   | T   | TR  | LT  | T   |
| Maximum Queue (ft)    | 94  | 21  | 79  | 83  | 85  | 69  |
| Average Queue (ft)    | 34  | 3   | 20  | 27  | 23  | 14  |
| 95th Queue (ft)       | 71  | 15  | 59  | 68  | 65  | 49  |
| Link Distance (ft)    | 250 | 250 | 659 | 659 | 608 | 608 |
| Upstream Blk Time (%) |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |

## Intersection: 3: Abbott Road/Abbott Road &amp; Ridge Road

| Movement              | EB  | EB  | EB  | WB  | WB  | WB  | NB   | NB   | NB  | SB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|------|------|-----|-----|-----|-----|
| Directions Served     | L   | T   | TR  | L   | T   | R   | LT   | T    | R   | LT  | T   | R   |
| Maximum Queue (ft)    | 106 | 222 | 180 | 155 | 286 | 86  | 109  | 91   | 103 | 172 | 150 | 76  |
| Average Queue (ft)    | 24  | 119 | 77  | 55  | 124 | 33  | 50   | 34   | 53  | 90  | 54  | 14  |
| 95th Queue (ft)       | 75  | 189 | 151 | 113 | 223 | 66  | 93   | 72   | 87  | 146 | 108 | 49  |
| Link Distance (ft)    |     | 752 | 752 |     | 724 | 724 | 1010 | 1010 |     | 659 | 659 |     |
| Upstream Blk Time (%) |     |     |     |     |     |     |      |      |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |      |      |     |     |     |     |
| Storage Bay Dist (ft) | 90  |     |     | 200 |     |     |      |      | 125 |     |     | 150 |
| Storage Blk Time (%)  |     | 17  |     |     | 2   |     |      | 0    | 0   |     | 0   |     |
| Queuing Penalty (veh) |     | 6   |     |     | 3   |     |      | 0    | 0   |     | 0   |     |



**Intersection: 4: Abbott Road & Fernald Avenue**

| Movement              | EB  | WB  | NB   | NB   | SB   | SB   |
|-----------------------|-----|-----|------|------|------|------|
| Directions Served     | LTR | LTR | LT   | TR   | LT   | TR   |
| Maximum Queue (ft)    | 5   | 32  | 31   | 32   | 20   | 38   |
| Average Queue (ft)    | 0   | 15  | 1    | 2    | 1    | 2    |
| 95th Queue (ft)       | 5   | 34  | 12   | 17   | 12   | 18   |
| Link Distance (ft)    | 56  | 256 | 1193 | 1193 | 1010 | 1010 |
| Upstream Blk Time (%) |     |     |      |      |      |      |
| Queuing Penalty (veh) |     |     |      |      |      |      |
| Storage Bay Dist (ft) |     |     |      |      |      |      |
| Storage Blk Time (%)  |     |     |      |      |      |      |
| Queuing Penalty (veh) |     |     |      |      |      |      |

**Intersection: 5: Abbott Road & Elmview Avenue**

| Movement              | EB  | WB  | NB  | NB  | SB   | SB   |
|-----------------------|-----|-----|-----|-----|------|------|
| Directions Served     | LTR | LTR | LT  | TR  | LT   | TR   |
| Maximum Queue (ft)    | 46  | 32  | 68  | 74  | 58   | 84   |
| Average Queue (ft)    | 17  | 7   | 16  | 16  | 14   | 20   |
| 95th Queue (ft)       | 42  | 26  | 49  | 53  | 45   | 63   |
| Link Distance (ft)    | 258 | 256 | 419 | 419 | 1193 | 1193 |
| Upstream Blk Time (%) |     |     |     |     |      |      |
| Queuing Penalty (veh) |     |     |     |     |      |      |
| Storage Bay Dist (ft) |     |     |     |     |      |      |
| Storage Blk Time (%)  |     |     |     |     |      |      |
| Queuing Penalty (veh) |     |     |     |     |      |      |

**Network Summary**

Network wide Queuing Penalty: 10

**Intersection: 2: Abbott Road & Plaza Driveway**

| Phase                | 2     | 6     | 8     |
|----------------------|-------|-------|-------|
| Movement(s) Served   | NBT   | SBTL  | WBL   |
| Maximum Green (s)    | 35.0  | 35.0  | 21.0  |
| Minimum Green (s)    | 6.0   | 6.0   | 6.0   |
| Recall               | C-Max | C-Max | None  |
| Avg. Green (s)       | 95.6  | 95.6  | 8.2   |
| g/C Ratio            | -0.01 | -0.01 | -0.01 |
| Cycles Skipped (%)   | 42    | 42    | 41    |
| Cycles @ Minimum (%) | 0     | 0     | 28    |
| Cycles Maxed Out (%) | 58    | 58    | 0     |
| Cycles with Peds (%) | 0     | 0     | 0     |

**Controller Summary**

Average Cycle Length (s): NA

Number of Complete Cycles : 0

**Intersection: 3: Abbott Road/Abbott Road & Ridge Road**

| Phase                | 1     | 2     | 4     | 5     | 6     | 7     | 8     |
|----------------------|-------|-------|-------|-------|-------|-------|-------|
| Movement(s) Served   | WBL   | EBTL  | SBTL  | EBL   | WBTL  | SBL   | NBTL  |
| Maximum Green (s)    | 9.0   | 30.0  | 39.0  | 9.0   | 30.0  | 9.0   | 25.0  |
| Minimum Green (s)    | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Recall               | None  | None  | None  | None  | None  | None  | None  |
| Avg. Green (s)       | 8.6   | 20.5  | 22.1  | 8.4   | 27.5  | 8.8   | 18.8  |
| g/C Ratio            | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 |
| Cycles Skipped (%)   | 19    | 2     | 2     | 69    | 2     | 70    | 4     |
| Cycles @ Minimum (%) | 12    | 0     | 0     | 20    | 0     | 11    | 4     |
| Cycles Maxed Out (%) | 51    | 11    | 4     | 5     | 39    | 14    | 20    |
| Cycles with Peds (%) | 0     | 7     | 9     | 0     | 11    | 0     | 9     |

**Controller Summary**

Average Cycle Length (s): NA

Number of Complete Cycles : 0

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Intersection: 5: Abbott Road & Elmview Avenue

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| Phase                | 2     | 4    | 6     | 8    |
|----------------------|-------|------|-------|------|
| Movement(s) Served   | NBTL  | EBTL | SBTL  | WBTL |
| Maximum Green (s)    | 34.0  | 19.0 | 34.0  | 19.0 |
| Minimum Green (s)    | 20.0  | 6.0  | 20.0  | 6.0  |
| Recall               | Max   | None | Max   | None |
| Avg. Green (s)       | 108.1 | 6.7  | 108.1 | 6.7  |
| g/C Ratio            | NA    | NA   | NA    | NA   |
| Cycles Skipped (%)   | 0     | 0    | 0     | 0    |
| Cycles @ Minimum (%) | 0     | 86   | 0     | 86   |
| Cycles Maxed Out (%) | 100   | 0    | 100   | 0    |
| Cycles with Peds (%) | 0     | 0    | 0     | 0    |

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Controller Summary

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Average Cycle Length (s): NA

Number of Complete Cycles : 0

## Lanes, Volumes, Timings

## Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

## 1: Abbott Road &amp; Dorrance Avenue

10/18/2024

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                    |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)       | 34                                                                                | 131                                                                               | 138                                                                               | 59                                                                                | 109                                                                               | 65                                                                                | 180                                                                                | 337                                                                                 | 69                                                                                  | 26                                                                                  | 324                                                                                 | 30                                                                                  |
| Future Volume (vph)        | 34                                                                                | 131                                                                               | 138                                                                               | 59                                                                                | 109                                                                               | 65                                                                                | 180                                                                                | 337                                                                                 | 69                                                                                  | 26                                                                                  | 324                                                                                 | 30                                                                                  |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                               | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Lane Width (ft)            | 10                                                                                | 10                                                                                | 10                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 10                                                                                 | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  |
| Lane Util. Factor          | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                               | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                |
| Ped Bike Factor            |                                                                                   | 0.99                                                                              |                                                                                   |                                                                                   | 0.99                                                                              |                                                                                   |                                                                                    | 1.00                                                                                |                                                                                     |                                                                                     | 1.00                                                                                |                                                                                     |
| Frt                        |                                                                                   | 0.932                                                                             |                                                                                   |                                                                                   | 0.958                                                                             |                                                                                   |                                                                                    | 0.982                                                                               |                                                                                     |                                                                                     | 0.988                                                                               |                                                                                     |
| Flt Protected              |                                                                                   | 0.994                                                                             |                                                                                   |                                                                                   | 0.988                                                                             |                                                                                   |                                                                                    | 0.985                                                                               |                                                                                     |                                                                                     | 0.997                                                                               |                                                                                     |
| Satd. Flow (prot)          | 0                                                                                 | 3031                                                                              | 0                                                                                 | 0                                                                                 | 3330                                                                              | 0                                                                                 | 0                                                                                  | 3171                                                                                | 0                                                                                   | 0                                                                                   | 3170                                                                                | 0                                                                                   |
| Flt Permitted              |                                                                                   | 0.889                                                                             |                                                                                   |                                                                                   | 0.781                                                                             |                                                                                   |                                                                                    | 0.717                                                                               |                                                                                     |                                                                                     | 0.916                                                                               |                                                                                     |
| Satd. Flow (perm)          | 0                                                                                 | 2709                                                                              | 0                                                                                 | 0                                                                                 | 2630                                                                              | 0                                                                                 | 0                                                                                  | 2306                                                                                | 0                                                                                   | 0                                                                                   | 2912                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                    |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 145                                                                               |                                                                                   |                                                                                   | 68                                                                                |                                                                                   |                                                                                    | 26                                                                                  |                                                                                     |                                                                                     | 26                                                                                  |                                                                                     |
| Link Speed (mph)           |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                    | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 300                                                                               |                                                                                   |                                                                                   | 300                                                                               |                                                                                   |                                                                                    | 688                                                                                 |                                                                                     |                                                                                     | 452                                                                                 |                                                                                     |
| Travel Time (s)            |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                    | 15.6                                                                                |                                                                                     |                                                                                     | 10.3                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                  |                                                                                     | 5                                                                                   | 5                                                                                   |                                                                                     | 5                                                                                   |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                    |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |
| Peak Hour Factor           | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                               | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                 | 3%                                                                                  | 2%                                                                                  | 2%                                                                                  | 5%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 36                                                                                | 138                                                                               | 145                                                                               | 62                                                                                | 115                                                                               | 68                                                                                | 189                                                                                | 355                                                                                 | 73                                                                                  | 27                                                                                  | 341                                                                                 | 32                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 0                                                                                 | 319                                                                               | 0                                                                                 | 0                                                                                 | 245                                                                               | 0                                                                                 | 0                                                                                  | 617                                                                                 | 0                                                                                   | 0                                                                                   | 400                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |                                                                                   |                                                                                    | 16                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.09                                                                              | 1.09                                                                              | 1.09                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.09                                                                               | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                |
| Turning Speed (mph)        | 15                                                                                |                                                                                   | 9                                                                                 | 15                                                                                |                                                                                   | 9                                                                                 | 15                                                                                 |                                                                                     | 9                                                                                   | 15                                                                                  |                                                                                     | 9                                                                                   |
| Turn Type                  | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                               | NA                                                                                  |                                                                                     | pm+pt                                                                               | NA                                                                                  |                                                                                     |
| Protected Phases           |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   |                                                                                    | 2                                                                                   |                                                                                     | 1                                                                                   | 6                                                                                   |                                                                                     |
| Permitted Phases           | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 2                                                                                  |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |                                                                                     |
| Minimum Split (s)          | 20.0                                                                              | 20.0                                                                              |                                                                                   | 20.0                                                                              | 20.0                                                                              |                                                                                   | 27.0                                                                               | 27.0                                                                                |                                                                                     | 10.0                                                                                | 27.0                                                                                |                                                                                     |
| Total Split (s)            | 20.0                                                                              | 20.0                                                                              |                                                                                   | 20.0                                                                              | 20.0                                                                              |                                                                                   | 35.0                                                                               | 35.0                                                                                |                                                                                     | 15.0                                                                                | 50.0                                                                                |                                                                                     |
| Total Split (%)            | 28.6%                                                                             | 28.6%                                                                             |                                                                                   | 28.6%                                                                             | 28.6%                                                                             |                                                                                   | 50.0%                                                                              | 50.0%                                                                               |                                                                                     | 21.4%                                                                               | 71.4%                                                                               |                                                                                     |
| Maximum Green (s)          | 15.0                                                                              | 15.0                                                                              |                                                                                   | 15.0                                                                              | 15.0                                                                              |                                                                                   | 30.0                                                                               | 30.0                                                                                |                                                                                     | 10.0                                                                                | 45.0                                                                                |                                                                                     |
| Yellow Time (s)            | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                                | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| All-Red Time (s)           | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                                | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Lost Time Adjust (s)       |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)        |                                                                                   | 5.0                                                                               |                                                                                   |                                                                                   | 5.0                                                                               |                                                                                   |                                                                                    | 5.0                                                                                 |                                                                                     |                                                                                     | 5.0                                                                                 |                                                                                     |
| Lead/Lag                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Lag                                                                                | Lag                                                                                 |                                                                                     | Lead                                                                                |                                                                                     |                                                                                     |
| Lead-Lag Optimize?         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Walk Time (s)              | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                                | 7.0                                                                                 |                                                                                     |                                                                                     | 7.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)        | 8.0                                                                               | 8.0                                                                               |                                                                                   | 8.0                                                                               | 8.0                                                                               |                                                                                   | 15.0                                                                               | 15.0                                                                                |                                                                                     |                                                                                     | 15.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr)    | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                  | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |
| Act Effect Green (s)       |                                                                                   | 15.0                                                                              |                                                                                   |                                                                                   | 15.0                                                                              |                                                                                   |                                                                                    | 30.0                                                                                |                                                                                     |                                                                                     | 45.0                                                                                |                                                                                     |

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Actuated g/C Ratio      |                                                                                   | 0.21                                                                              |                                                                                   |                                                                                   | 0.21                                                                              |                                                                                   |                                                                                    | 0.43                                                                                |                                                                                     |                                                                                     | 0.64                                                                                |                                                                                     |
| v/c Ratio               |                                                                                   | 0.46                                                                              |                                                                                   |                                                                                   | 0.40                                                                              |                                                                                   |                                                                                    | 0.62                                                                                |                                                                                     |                                                                                     | 0.21                                                                                |                                                                                     |
| Control Delay           |                                                                                   | 15.2                                                                              |                                                                                   |                                                                                   | 19.1                                                                              |                                                                                   |                                                                                    | 18.1                                                                                |                                                                                     |                                                                                     | 5.1                                                                                 |                                                                                     |
| Queue Delay             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Total Delay             |                                                                                   | 15.2                                                                              |                                                                                   |                                                                                   | 19.1                                                                              |                                                                                   |                                                                                    | 18.1                                                                                |                                                                                     |                                                                                     | 5.1                                                                                 |                                                                                     |
| LOS                     |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                    | B                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 15.2                                                                              |                                                                                   |                                                                                   | 19.1                                                                              |                                                                                   |                                                                                    | 18.1                                                                                |                                                                                     |                                                                                     | 5.1                                                                                 |                                                                                     |
| Approach LOS            |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                    | B                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |
| Queue Length 50th (ft)  |                                                                                   | 33                                                                                |                                                                                   |                                                                                   | 34                                                                                |                                                                                   |                                                                                    | 99                                                                                  |                                                                                     |                                                                                     | 29                                                                                  |                                                                                     |
| Queue Length 95th (ft)  |                                                                                   | 68                                                                                |                                                                                   |                                                                                   | 65                                                                                |                                                                                   |                                                                                    | 152                                                                                 |                                                                                     |                                                                                     | 45                                                                                  |                                                                                     |
| Internal Link Dist (ft) |                                                                                   | 220                                                                               |                                                                                   |                                                                                   | 220                                                                               |                                                                                   |                                                                                    | 608                                                                                 |                                                                                     |                                                                                     | 372                                                                                 |                                                                                     |
| Turn Bay Length (ft)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Base Capacity (vph)     |                                                                                   | 694                                                                               |                                                                                   |                                                                                   | 617                                                                               |                                                                                   |                                                                                    | 1003                                                                                |                                                                                     |                                                                                     | 1918                                                                                |                                                                                     |
| Starvation Cap Reductn  |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Spillback Cap Reductn   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Storage Cap Reductn     |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Reduced v/c Ratio       |                                                                                   | 0.46                                                                              |                                                                                   |                                                                                   | 0.40                                                                              |                                                                                   |                                                                                    | 0.62                                                                                |                                                                                     |                                                                                     | 0.21                                                                                |                                                                                     |

## Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 0.62

Intersection Signal Delay: 14.4

Intersection LOS: B

Intersection Capacity Utilization 78.3%

ICU Level of Service D

Analysis Period (min) 15

## Splits and Phases: 1: Abbott Road &amp; Dorrance Avenue



Lanes, Volumes, Timings  
2: Abbott Road & Plaza Driveway

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

10/18/2024

|                            |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                 | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations        |  |  |  |                                                                                   |                                                                                   |  |
| Traffic Volume (vph)       | 111                                                                               | 3                                                                                 | 585                                                                               | 99                                                                                | 5                                                                                 | 519                                                                               |
| Future Volume (vph)        | 111                                                                               | 3                                                                                 | 585                                                                               | 99                                                                                | 5                                                                                 | 519                                                                               |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              |
| Ped Bike Factor            | 1.00                                                                              | 0.98                                                                              | 1.00                                                                              |                                                                                   |                                                                                   | 1.00                                                                              |
| Frt                        |                                                                                   | 0.850                                                                             | 0.978                                                                             |                                                                                   |                                                                                   |                                                                                   |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (prot)          | 1770                                                                              | 1583                                                                              | 3447                                                                              | 0                                                                                 | 0                                                                                 | 3539                                                                              |
| Flt Permitted              | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.950                                                                             |
| Satd. Flow (perm)          | 1761                                                                              | 1550                                                                              | 3447                                                                              | 0                                                                                 | 0                                                                                 | 3362                                                                              |
| Right Turn on Red          |                                                                                   | Yes                                                                               |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   |
| Satd. Flow (RTOR)          |                                                                                   | 3                                                                                 | 44                                                                                |                                                                                   |                                                                                   |                                                                                   |
| Link Speed (mph)           | 30                                                                                |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |
| Link Distance (ft)         | 300                                                                               |                                                                                   | 748                                                                               |                                                                                   |                                                                                   | 688                                                                               |
| Travel Time (s)            | 6.8                                                                               |                                                                                   | 17.0                                                                              |                                                                                   |                                                                                   | 15.6                                                                              |
| Confl. Peds. (#/hr)        | 5                                                                                 | 8                                                                                 |                                                                                   | 9                                                                                 | 5                                                                                 |                                                                                   |
| Confl. Bikes (#/hr)        |                                                                                   | 2                                                                                 |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   |
| Peak Hour Factor           | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              |
| Adj. Flow (vph)            | 117                                                                               | 3                                                                                 | 616                                                                               | 104                                                                               | 5                                                                                 | 546                                                                               |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)      | 117                                                                               | 3                                                                                 | 720                                                                               | 0                                                                                 | 0                                                                                 | 551                                                                               |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment             | Left                                                                              | Right                                                                             | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              |
| Median Width(ft)           | 12                                                                                |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |
| Link Offset(ft)            | 0                                                                                 |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |
| Crosswalk Width(ft)        | 16                                                                                |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Headway Factor             | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |
| Turning Speed (mph)        | 60                                                                                | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                |                                                                                   |
| Number of Detectors        | 1                                                                                 | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |
| Detector Template          | Left                                                                              | Right                                                                             | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              |
| Leading Detector (ft)      | 50                                                                                | 50                                                                                | 50                                                                                |                                                                                   | 20                                                                                | 50                                                                                |
| Trailing Detector (ft)     | 0                                                                                 | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |
| Detector 1 Position(ft)    | 0                                                                                 | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |
| Detector 1 Size(ft)        | 50                                                                                | 50                                                                                | 50                                                                                |                                                                                   | 20                                                                                | 50                                                                                |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |
| Turn Type                  | Perm                                                                              | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |
| Protected Phases           |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |
| Permitted Phases           | 8                                                                                 | 8                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |
| Detector Phase             | 8                                                                                 | 8                                                                                 | 2                                                                                 |                                                                                   | 6                                                                                 | 6                                                                                 |
| Switch Phase               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Minimum Initial (s)        | 6.0                                                                               | 6.0                                                                               | 6.0                                                                               |                                                                                   | 6.0                                                                               | 6.0                                                                               |
| Minimum Split (s)          | 11.0                                                                              | 11.0                                                                              | 11.0                                                                              |                                                                                   | 11.0                                                                              | 11.0                                                                              |
| Total Split (s)            | 26.0                                                                              | 26.0                                                                              | 40.0                                                                              |                                                                                   | 40.0                                                                              | 40.0                                                                              |



Lanes, Volumes, Timings  
2: Abbott Road & Plaza Driveway

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

10/18/2024

|                         | ↖     | ↗     | ↑     | ↘   | ↙     | ↓     |
|-------------------------|-------|-------|-------|-----|-------|-------|
| Lane Group              | WBL   | WBR   | NBT   | NBR | SBL   | SBT   |
| Total Split (%)         | 39.4% | 39.4% | 60.6% |     | 60.6% | 60.6% |
| Maximum Green (s)       | 21.0  | 21.0  | 35.0  |     | 35.0  | 35.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   |     | 3.0   | 3.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   |     | 2.0   | 2.0   |
| Lost Time Adjust (s)    | 0.0   | 0.0   | 0.0   |     |       | 0.0   |
| Total Lost Time (s)     | 5.0   | 5.0   | 5.0   |     |       | 5.0   |
| Lead/Lag                |       |       |       |     |       |       |
| Lead-Lag Optimize?      |       |       |       |     |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   |     | 3.0   | 3.0   |
| Recall Mode             | None  | None  | C-Max |     | C-Max | C-Max |
| Act Effect Green (s)    | 9.7   | 9.7   | 49.5  |     |       | 49.5  |
| Actuated g/C Ratio      | 0.15  | 0.15  | 0.75  |     |       | 0.75  |
| v/c Ratio               | 0.45  | 0.01  | 0.28  |     |       | 0.22  |
| Control Delay           | 30.6  | 15.7  | 3.9   |     |       | 3.9   |
| Queue Delay             | 0.0   | 0.0   | 0.0   |     |       | 0.0   |
| Total Delay             | 30.6  | 15.7  | 3.9   |     |       | 3.9   |
| LOS                     | C     | B     | A     |     |       | A     |
| Approach Delay          | 30.2  |       | 3.9   |     |       | 3.9   |
| Approach LOS            | C     |       | A     |     |       | A     |
| Queue Length 50th (ft)  | 44    | 0     | 42    |     |       | 33    |
| Queue Length 95th (ft)  | 83    | 6     | 77    |     |       | 61    |
| Internal Link Dist (ft) | 220   |       | 668   |     |       | 608   |
| Turn Bay Length (ft)    |       |       |       |     |       |       |
| Base Capacity (vph)     | 560   | 495   | 2596  |     |       | 2521  |
| Starvation Cap Reductn  | 0     | 0     | 0     |     |       | 0     |
| Spillback Cap Reductn   | 0     | 0     | 0     |     |       | 0     |
| Storage Cap Reductn     | 0     | 0     | 0     |     |       | 0     |
| Reduced v/c Ratio       | 0.21  | 0.01  | 0.28  |     |       | 0.22  |

Intersection Summary

Area Type: Other

Cycle Length: 66

Actuated Cycle Length: 66

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.45

Intersection Signal Delay: 6.1

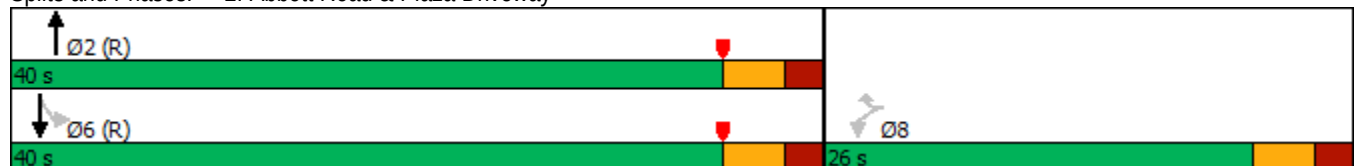
Intersection LOS: A

Intersection Capacity Utilization 33.9%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: Abbott Road & Plaza Driveway



# Lanes, Volumes, Timings

# Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

## 3: Abbott Road/Abbott Road & Ridge Road

10/18/2024

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |  |                                                                                     |  |  |                                                                                     |  |  |
| Traffic Volume (vph)       | 68                                                                                | 608                                                                               | 74                                                                                | 280                                                                               | 475                                                                               | 384                                                                               | 46                                                                                  | 298                                                                                 | 239                                                                                 | 280                                                                                 | 296                                                                                 | 56                                                                                  |
| Future Volume (vph)        | 68                                                                                | 608                                                                               | 74                                                                                | 280                                                                               | 475                                                                               | 384                                                                               | 46                                                                                  | 298                                                                                 | 239                                                                                 | 280                                                                                 | 296                                                                                 | 56                                                                                  |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Lane Width (ft)            | 11                                                                                | 11                                                                                | 11                                                                                | 10                                                                                | 10                                                                                | 12                                                                                | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  |
| Storage Length (ft)        | 90                                                                                |                                                                                   | 250                                                                               | 200                                                                               |                                                                                   | 0                                                                                 | 0                                                                                   |                                                                                     | 125                                                                                 | 0                                                                                   |                                                                                     | 150                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                   |                                                                                     | 1                                                                                   | 0                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (ft)          | 50                                                                                |                                                                                   |                                                                                   | 100                                                                               |                                                                                   |                                                                                   | 25                                                                                  |                                                                                     |                                                                                     | 25                                                                                  |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                                | 0.95                                                                                | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                | 1.00                                                                                |
| Ped Bike Factor            |                                                                                   | 1.00                                                                              |                                                                                   | 1.00                                                                              |                                                                                   | 0.98                                                                              |                                                                                     | 1.00                                                                                | 0.98                                                                                |                                                                                     | 1.00                                                                                | 0.97                                                                                |
| Frt                        |                                                                                   | 0.984                                                                             |                                                                                   |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                     |                                                                                     | 0.850                                                                               |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                     | 0.993                                                                               |                                                                                     |                                                                                     | 0.976                                                                               |                                                                                     |
| Satd. Flow (prot)          | 1711                                                                              | 3360                                                                              | 0                                                                                 | 1652                                                                              | 1739                                                                              | 1583                                                                              | 0                                                                                   | 3276                                                                                | 1478                                                                                | 0                                                                                   | 3224                                                                                | 1478                                                                                |
| Flt Permitted              | 0.294                                                                             |                                                                                   |                                                                                   | 0.237                                                                             |                                                                                   |                                                                                   |                                                                                     | 0.804                                                                               |                                                                                     |                                                                                     | 0.592                                                                               |                                                                                     |
| Satd. Flow (perm)          | 529                                                                               | 3360                                                                              | 0                                                                                 | 411                                                                               | 1739                                                                              | 1551                                                                              | 0                                                                                   | 2651                                                                                | 1447                                                                                | 0                                                                                   | 1952                                                                                | 1432                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 15                                                                                |                                                                                   |                                                                                   |                                                                                   | 355                                                                               |                                                                                     |                                                                                     | 130                                                                                 |                                                                                     |                                                                                     | 58                                                                                  |
| Link Speed (mph)           |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                     | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 808                                                                               |                                                                                   |                                                                                   | 782                                                                               |                                                                                   |                                                                                     | 1105                                                                                |                                                                                     |                                                                                     | 748                                                                                 |                                                                                     |
| Travel Time (s)            |                                                                                   | 18.4                                                                              |                                                                                   |                                                                                   | 17.8                                                                              |                                                                                   |                                                                                     | 25.1                                                                                |                                                                                     |                                                                                     | 17.0                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                   |                                                                                     | 5                                                                                   | 5                                                                                   |                                                                                     | 5                                                                                   |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |
| Peak Hour Factor           | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 3%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 70                                                                                | 627                                                                               | 76                                                                                | 289                                                                               | 490                                                                               | 396                                                                               | 47                                                                                  | 307                                                                                 | 246                                                                                 | 289                                                                                 | 305                                                                                 | 58                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 70                                                                                | 703                                                                               | 0                                                                                 | 289                                                                               | 490                                                                               | 396                                                                               | 0                                                                                   | 354                                                                                 | 246                                                                                 | 0                                                                                   | 594                                                                                 | 58                                                                                  |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 11                                                                                |                                                                                   |                                                                                   | 11                                                                                |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |                                                                                   |                                                                                     | 16                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.04                                                                              | 1.04                                                                              | 1.04                                                                              | 1.09                                                                              | 1.09                                                                              | 1.00                                                                              | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                |
| Turning Speed (mph)        | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                  |                                                                                     | 60                                                                                  | 60                                                                                  |                                                                                     | 60                                                                                  |
| Number of Detectors        | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 | 1                                                                                 | 1                                                                                   | 1                                                                                   | 1                                                                                   | 1                                                                                   | 1                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                                | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (ft)      | 50                                                                                | 50                                                                                |                                                                                   | 50                                                                                | 50                                                                                | 50                                                                                | 20                                                                                  | 50                                                                                  | 50                                                                                  | 20                                                                                  | 50                                                                                  | 50                                                                                  |
| Trailing Detector (ft)     | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Detector 1 Position(ft)    | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Detector 1 Size(ft)        | 50                                                                                | 50                                                                                |                                                                                   | 50                                                                                | 50                                                                                | 50                                                                                | 20                                                                                  | 50                                                                                  | 50                                                                                  | 20                                                                                  | 50                                                                                  | 50                                                                                  |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Turn Type                  | pm+pt                                                                             | NA                                                                                |                                                                                   | pm+pt                                                                             | NA                                                                                | pm+ov                                                                             | Perm                                                                                | NA                                                                                  | pm+ov                                                                               | pm+pt                                                                               | NA                                                                                  | pm+ov                                                                               |
| Protected Phases           | 5                                                                                 | 2                                                                                 |                                                                                   | 1                                                                                 | 6                                                                                 | 7                                                                                 |                                                                                     | 8                                                                                   | 1                                                                                   | 7                                                                                   | 4                                                                                   | 5                                                                                   |
| Permitted Phases           | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   | 6                                                                                 | 8                                                                                   |                                                                                     | 8                                                                                   | 4                                                                                   |                                                                                     | 4                                                                                   |

## Lanes, Volumes, Timings

## Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

## 3: Abbott Road/Abbott Road &amp; Ridge Road

10/18/2024



| Lane Group              | EBL   | EBT   | EBR | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT    | SBR   |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-------|-------|--------|-------|
| Detector Phase          | 5     | 2     |     | 1     | 6     | 7     | 8     | 8     | 1     | 7     | 4      | 5     |
| Switch Phase            |       |       |     |       |       |       |       |       |       |       |        |       |
| Minimum Initial (s)     | 7.0   | 7.0   |     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0    | 7.0   |
| Minimum Split (s)       | 12.0  | 29.0  |     | 12.0  | 23.0  | 12.0  | 23.0  | 23.0  | 12.0  | 12.0  | 29.0   | 12.0  |
| Total Split (s)         | 14.0  | 35.0  |     | 14.0  | 35.0  | 14.0  | 30.0  | 30.0  | 14.0  | 14.0  | 44.0   | 14.0  |
| Total Split (%)         | 15.1% | 37.6% |     | 15.1% | 37.6% | 15.1% | 32.3% | 32.3% | 15.1% | 15.1% | 47.3%  | 15.1% |
| Maximum Green (s)       | 9.0   | 30.0  |     | 9.0   | 30.0  | 9.0   | 25.0  | 25.0  | 9.0   | 9.0   | 39.0   | 9.0   |
| Yellow Time (s)         | 4.0   | 4.0   |     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0    | 4.0   |
| All-Red Time (s)        | 1.0   | 1.0   |     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0    | 1.0   |
| Lost Time Adjust (s)    | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0    | 0.0   |
| Total Lost Time (s)     | 5.0   | 5.0   |     | 5.0   | 5.0   | 5.0   |       | 5.0   | 5.0   |       | 5.0    | 5.0   |
| Lead/Lag                | Lead  | Lag   |     | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lead  |        | Lead  |
| Lead-Lag Optimize?      |       |       |     |       |       |       |       |       |       |       |        |       |
| Vehicle Extension (s)   | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0    | 3.0   |
| Recall Mode             | None  | Ped   |     | None  | Ped   | None  | None  | None  | None  | None  | None   | None  |
| Walk Time (s)           |       | 7.0   |     |       | 7.0   |       | 7.0   | 7.0   |       |       | 7.0    |       |
| Flash Dont Walk (s)     |       | 17.0  |     |       | 11.0  |       | 11.0  | 11.0  |       |       | 17.0   |       |
| Pedestrian Calls (#/hr) |       | 5     |     |       | 5     |       | 5     | 5     |       |       | 5      |       |
| Act Effect Green (s)    | 34.8  | 27.1  |     | 38.2  | 31.2  | 38.3  |       | 17.7  | 26.8  |       | 29.9   | 37.6  |
| Actuated g/C Ratio      | 0.43  | 0.33  |     | 0.47  | 0.38  | 0.47  |       | 0.22  | 0.33  |       | 0.37   | 0.46  |
| v/c Ratio               | 0.21  | 0.62  |     | 0.87  | 0.73  | 0.43  |       | 0.61  | 0.43  |       | 0.90dl | 0.08  |
| Control Delay           | 13.6  | 25.9  |     | 44.6  | 32.7  | 4.2   |       | 33.3  | 10.8  |       | 26.1   | 3.0   |
| Queue Delay             | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0    | 0.0   |
| Total Delay             | 13.6  | 25.9  |     | 44.6  | 32.7  | 4.2   |       | 33.3  | 10.8  |       | 26.1   | 3.0   |
| LOS                     | B     | C     |     | D     | C     | A     |       | C     | B     |       | C      | A     |
| Approach Delay          |       | 24.8  |     |       | 26.0  |       |       | 24.0  |       |       | 24.1   |       |
| Approach LOS            |       | C     |     |       | C     |       |       | C     |       |       | C      |       |
| Queue Length 50th (ft)  | 17    | 148   |     | 80    | 214   | 10    |       | 86    | 38    |       | 122    | 0     |
| Queue Length 95th (ft)  | 46    | 242   |     | #253  | #451  | 66    |       | 132   | 93    |       | 174    | 16    |
| Internal Link Dist (ft) |       | 728   |     |       | 702   |       |       | 1025  |       |       | 668    |       |
| Turn Bay Length (ft)    | 90    |       |     | 200   |       |       |       |       | 125   |       |        | 150   |
| Base Capacity (vph)     | 368   | 1264  |     | 332   | 688   | 951   |       | 836   | 568   |       | 1058   | 722   |
| Starvation Cap Reductn  | 0     | 0     |     | 0     | 0     | 0     |       | 0     | 0     |       | 0      | 0     |
| Spillback Cap Reductn   | 0     | 0     |     | 0     | 0     | 0     |       | 0     | 0     |       | 0      | 0     |
| Storage Cap Reductn     | 0     | 0     |     | 0     | 0     | 0     |       | 0     | 0     |       | 0      | 0     |
| Reduced v/c Ratio       | 0.19  | 0.56  |     | 0.87  | 0.71  | 0.42  |       | 0.42  | 0.43  |       | 0.56   | 0.08  |

## Intersection Summary

Area Type: Other

Cycle Length: 93

Actuated Cycle Length: 81.2

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 24.9

Intersection LOS: C

Intersection Capacity Utilization 79.5%

ICU Level of Service D

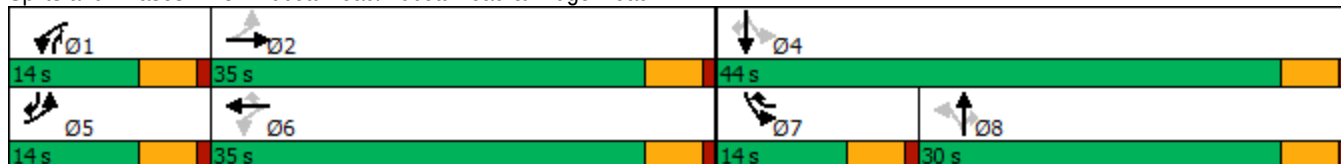
Analysis Period (min) 15

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 3: Abbott Road/Abbott Road & Ridge Road



Lanes, Volumes, Timings  
4: Abbott Road & Fernald Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

10/18/2024

|                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group                        | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                    |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)              | 2                                                                                 | 0                                                                                 | 1                                                                                 | 15                                                                                | 0                                                                                 | 11                                                                                | 0                                                                                  | 557                                                                                 | 36                                                                                  | 24                                                                                  | 628                                                                                 | 0                                                                                   |
| Future Volume (vph)               | 2                                                                                 | 0                                                                                 | 1                                                                                 | 15                                                                                | 0                                                                                 | 11                                                                                | 0                                                                                  | 557                                                                                 | 36                                                                                  | 24                                                                                  | 628                                                                                 | 0                                                                                   |
| Ideal Flow (vphpl)                | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                               | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Lane Width (ft)                   | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                 | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 12                                                                                  |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                               | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                |
| Ped Bike Factor                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Frt                               |                                                                                   | 0.955                                                                             |                                                                                   |                                                                                   | 0.942                                                                             |                                                                                   |                                                                                    | 0.991                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Flt Protected                     |                                                                                   | 0.968                                                                             |                                                                                   |                                                                                   | 0.972                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     | 0.998                                                                               |                                                                                     |
| Satd. Flow (prot)                 | 0                                                                                 | 1722                                                                              | 0                                                                                 | 0                                                                                 | 1706                                                                              | 0                                                                                 | 0                                                                                  | 3244                                                                                | 0                                                                                   | 0                                                                                   | 3266                                                                                | 0                                                                                   |
| Flt Permitted                     |                                                                                   | 0.968                                                                             |                                                                                   |                                                                                   | 0.972                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     | 0.998                                                                               |                                                                                     |
| Satd. Flow (perm)                 | 0                                                                                 | 1722                                                                              | 0                                                                                 | 0                                                                                 | 1706                                                                              | 0                                                                                 | 0                                                                                  | 3244                                                                                | 0                                                                                   | 0                                                                                   | 3266                                                                                | 0                                                                                   |
| Link Speed (mph)                  |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                    | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)                |                                                                                   | 100                                                                               |                                                                                   |                                                                                   | 300                                                                               |                                                                                   |                                                                                    | 1266                                                                                |                                                                                     |                                                                                     | 1105                                                                                |                                                                                     |
| Travel Time (s)                   |                                                                                   | 2.3                                                                               |                                                                                   |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                    | 28.8                                                                                |                                                                                     |                                                                                     | 25.1                                                                                |                                                                                     |
| Confl. Peds. (#/hr)               | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 13                                                                                 |                                                                                     | 7                                                                                   | 7                                                                                   |                                                                                     | 13                                                                                  |
| Confl. Bikes (#/hr)               |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                    |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |
| Peak Hour Factor                  | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                               | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                |
| Heavy Vehicles (%)                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                 | 3%                                                                                  | 2%                                                                                  | 2%                                                                                  | 3%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)                   | 2                                                                                 | 0                                                                                 | 1                                                                                 | 16                                                                                | 0                                                                                 | 12                                                                                | 0                                                                                  | 586                                                                                 | 38                                                                                  | 25                                                                                  | 661                                                                                 | 0                                                                                   |
| Shared Lane Traffic (%)           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)             | 0                                                                                 | 3                                                                                 | 0                                                                                 | 0                                                                                 | 28                                                                                | 0                                                                                 | 0                                                                                  | 624                                                                                 | 0                                                                                   | 0                                                                                   | 686                                                                                 | 0                                                                                   |
| Enter Blocked Intersection        | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment                    | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)                  |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Link Offset(ft)                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)               |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |                                                                                   |                                                                                    | 16                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Two way Left Turn Lane            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor                    | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.00                                                                                |
| Turning Speed (mph)               | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                 |                                                                                     | 60                                                                                  | 60                                                                                  |                                                                                     | 60                                                                                  |
| Sign Control                      |                                                                                   | Stop                                                                              |                                                                                   |                                                                                   | Stop                                                                              |                                                                                   |                                                                                    | Free                                                                                |                                                                                     |                                                                                     | Free                                                                                |                                                                                     |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                        | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:                     | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization | 46.4%                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min)             | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

Lanes, Volumes, Timings  
5: Abbott Road & Elmview Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

10/18/2024

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                    |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)       | 19                                                                                | 1                                                                                 | 7                                                                                 | 7                                                                                 | 1                                                                                 | 11                                                                                | 8                                                                                  | 543                                                                                 | 9                                                                                   | 22                                                                                  | 587                                                                                 | 19                                                                                  |
| Future Volume (vph)        | 19                                                                                | 1                                                                                 | 7                                                                                 | 7                                                                                 | 1                                                                                 | 11                                                                                | 8                                                                                  | 543                                                                                 | 9                                                                                   | 22                                                                                  | 587                                                                                 | 19                                                                                  |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                               | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Lane Width (ft)            | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 10                                                                                 | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                               | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                |
| Ped Bike Factor            |                                                                                   | 0.99                                                                              |                                                                                   |                                                                                   | 0.99                                                                              |                                                                                   |                                                                                    | 1.00                                                                                |                                                                                     |                                                                                     | 1.00                                                                                |                                                                                     |
| Frt                        |                                                                                   | 0.966                                                                             |                                                                                   |                                                                                   | 0.919                                                                             |                                                                                   |                                                                                    | 0.997                                                                               |                                                                                     |                                                                                     | 0.996                                                                               |                                                                                     |
| Flt Protected              |                                                                                   | 0.966                                                                             |                                                                                   |                                                                                   | 0.983                                                                             |                                                                                   |                                                                                    | 0.999                                                                               |                                                                                     |                                                                                     | 0.998                                                                               |                                                                                     |
| Satd. Flow (prot)          | 0                                                                                 | 1730                                                                              | 0                                                                                 | 0                                                                                 | 1664                                                                              | 0                                                                                 | 0                                                                                  | 3227                                                                                | 0                                                                                   | 0                                                                                   | 3251                                                                                | 0                                                                                   |
| Flt Permitted              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.946                                                                               |                                                                                     |                                                                                     | 0.928                                                                               |                                                                                     |
| Satd. Flow (perm)          | 0                                                                                 | 1785                                                                              | 0                                                                                 | 0                                                                                 | 1690                                                                              | 0                                                                                 | 0                                                                                  | 3056                                                                                | 0                                                                                   | 0                                                                                   | 3023                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                    |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 7                                                                                 |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                    | 4                                                                                   |                                                                                     |                                                                                     | 7                                                                                   |                                                                                     |
| Link Speed (mph)           |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                    | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 300                                                                               |                                                                                   |                                                                                   | 300                                                                               |                                                                                   |                                                                                    | 457                                                                                 |                                                                                     |                                                                                     | 1266                                                                                |                                                                                     |
| Travel Time (s)            |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                    | 10.4                                                                                |                                                                                     |                                                                                     | 28.8                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 6                                                                                  |                                                                                     | 5                                                                                   | 5                                                                                   |                                                                                     | 6                                                                                   |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                    |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |
| Peak Hour Factor           | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                               | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                 | 4%                                                                                  | 2%                                                                                  | 2%                                                                                  | 3%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 20                                                                                | 1                                                                                 | 7                                                                                 | 7                                                                                 | 1                                                                                 | 12                                                                                | 9                                                                                  | 578                                                                                 | 10                                                                                  | 23                                                                                  | 624                                                                                 | 20                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 0                                                                                 | 28                                                                                | 0                                                                                 | 0                                                                                 | 20                                                                                | 0                                                                                 | 0                                                                                  | 597                                                                                 | 0                                                                                   | 0                                                                                   | 667                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |                                                                                   |                                                                                    | 16                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.09                                                                               | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                |
| Turning Speed (mph)        | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                 |                                                                                     | 60                                                                                  | 60                                                                                  |                                                                                     | 60                                                                                  |
| Number of Detectors        | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                  | 1                                                                                   |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     |
| Detector Template          | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                               | Thru                                                                                |                                                                                     | Left                                                                                | Thru                                                                                |                                                                                     |
| Leading Detector (ft)      | 20                                                                                | 50                                                                                |                                                                                   | 20                                                                                | 50                                                                                |                                                                                   | 20                                                                                 | 50                                                                                  |                                                                                     | 20                                                                                  | 50                                                                                  |                                                                                     |
| Trailing Detector (ft)     | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Detector 1 Position(ft)    | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Detector 1 Size(ft)        | 20                                                                                | 50                                                                                |                                                                                   | 20                                                                                | 50                                                                                |                                                                                   | 20                                                                                 | 50                                                                                  |                                                                                     | 20                                                                                  | 50                                                                                  |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                              | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Turn Type                  | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                               | NA                                                                                  |                                                                                     | Perm                                                                                | NA                                                                                  |                                                                                     |
| Protected Phases           |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   |                                                                                    | 2                                                                                   |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |
| Permitted Phases           | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 2                                                                                  |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |                                                                                     |
| Detector Phase             | 4                                                                                 | 4                                                                                 |                                                                                   | 8                                                                                 | 8                                                                                 |                                                                                   | 2                                                                                  | 2                                                                                   |                                                                                     | 6                                                                                   | 6                                                                                   |                                                                                     |
| Switch Phase               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)        | 6.0                                                                               | 6.0                                                                               |                                                                                   | 6.0                                                                               | 6.0                                                                               |                                                                                   | 20.0                                                                               | 20.0                                                                                |                                                                                     | 20.0                                                                                | 20.0                                                                                |                                                                                     |



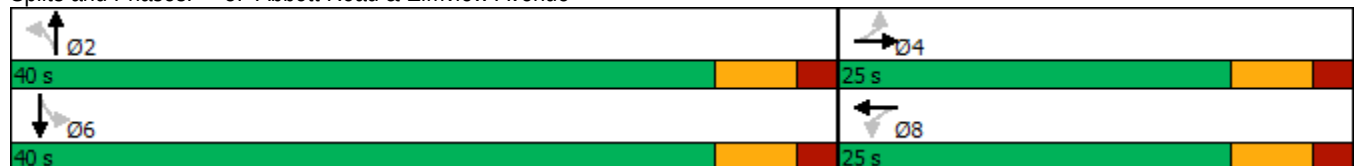
Lanes, Volumes, Timings  
5: Abbott Road & Elmview Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

10/18/2024

|                                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Minimum Split (s)                       | 12.0                                                                              | 12.0                                                                              |                                                                                   | 12.0                                                                              | 12.0                                                                              |                                                                                   | 26.0                                                                               | 26.0                                                                                |                                                                                     | 26.0                                                                                | 26.0                                                                                |                                                                                     |
| Total Split (s)                         | 25.0                                                                              | 25.0                                                                              |                                                                                   | 25.0                                                                              | 25.0                                                                              |                                                                                   | 40.0                                                                               | 40.0                                                                                |                                                                                     | 40.0                                                                                | 40.0                                                                                |                                                                                     |
| Total Split (%)                         | 38.5%                                                                             | 38.5%                                                                             |                                                                                   | 38.5%                                                                             | 38.5%                                                                             |                                                                                   | 61.5%                                                                              | 61.5%                                                                               |                                                                                     | 61.5%                                                                               | 61.5%                                                                               |                                                                                     |
| Maximum Green (s)                       | 19.0                                                                              | 19.0                                                                              |                                                                                   | 19.0                                                                              | 19.0                                                                              |                                                                                   | 34.0                                                                               | 34.0                                                                                |                                                                                     | 34.0                                                                                | 34.0                                                                                |                                                                                     |
| Yellow Time (s)                         | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                                | 4.0                                                                                 |                                                                                     | 4.0                                                                                 | 4.0                                                                                 |                                                                                     |
| All-Red Time (s)                        | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                                | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Lost Time Adjust (s)                    |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)                     |                                                                                   | 6.0                                                                               |                                                                                   |                                                                                   | 6.0                                                                               |                                                                                   |                                                                                    | 6.0                                                                                 |                                                                                     |                                                                                     | 6.0                                                                                 |                                                                                     |
| Lead/Lag                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lead-Lag Optimize?                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Vehicle Extension (s)                   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                                | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| Recall Mode                             | None                                                                              | None                                                                              |                                                                                   | None                                                                              | None                                                                              |                                                                                   | Max                                                                                | Max                                                                                 |                                                                                     | Max                                                                                 | Max                                                                                 |                                                                                     |
| Act Effct Green (s)                     |                                                                                   | 6.6                                                                               |                                                                                   |                                                                                   | 6.5                                                                               |                                                                                   |                                                                                    | 48.0                                                                                |                                                                                     |                                                                                     | 48.0                                                                                |                                                                                     |
| Actuated g/C Ratio                      |                                                                                   | 0.13                                                                              |                                                                                   |                                                                                   | 0.13                                                                              |                                                                                   |                                                                                    | 0.93                                                                                |                                                                                     |                                                                                     | 0.93                                                                                |                                                                                     |
| v/c Ratio                               |                                                                                   | 0.12                                                                              |                                                                                   |                                                                                   | 0.09                                                                              |                                                                                   |                                                                                    | 0.21                                                                                |                                                                                     |                                                                                     | 0.24                                                                                |                                                                                     |
| Control Delay                           |                                                                                   | 16.8                                                                              |                                                                                   |                                                                                   | 14.1                                                                              |                                                                                   |                                                                                    | 1.6                                                                                 |                                                                                     |                                                                                     | 1.7                                                                                 |                                                                                     |
| Queue Delay                             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Total Delay                             |                                                                                   | 16.8                                                                              |                                                                                   |                                                                                   | 14.1                                                                              |                                                                                   |                                                                                    | 1.6                                                                                 |                                                                                     |                                                                                     | 1.7                                                                                 |                                                                                     |
| LOS                                     |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                    | A                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |
| Approach Delay                          |                                                                                   | 16.8                                                                              |                                                                                   |                                                                                   | 14.1                                                                              |                                                                                   |                                                                                    | 1.6                                                                                 |                                                                                     |                                                                                     | 1.7                                                                                 |                                                                                     |
| Approach LOS                            |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                    | A                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |
| Queue Length 50th (ft)                  |                                                                                   | 6                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Queue Length 95th (ft)                  |                                                                                   | 24                                                                                |                                                                                   |                                                                                   | 17                                                                                |                                                                                   |                                                                                    | 57                                                                                  |                                                                                     |                                                                                     | 65                                                                                  |                                                                                     |
| Internal Link Dist (ft)                 |                                                                                   | 220                                                                               |                                                                                   |                                                                                   | 220                                                                               |                                                                                   |                                                                                    | 377                                                                                 |                                                                                     |                                                                                     | 1186                                                                                |                                                                                     |
| Turn Bay Length (ft)                    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Base Capacity (vph)                     |                                                                                   | 669                                                                               |                                                                                   |                                                                                   | 637                                                                               |                                                                                   |                                                                                    | 2831                                                                                |                                                                                     |                                                                                     | 2800                                                                                |                                                                                     |
| Starvation Cap Reductn                  |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Spillback Cap Reductn                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Storage Cap Reductn                     |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Reduced v/c Ratio                       |                                                                                   | 0.04                                                                              |                                                                                   |                                                                                   | 0.03                                                                              |                                                                                   |                                                                                    | 0.21                                                                                |                                                                                     |                                                                                     | 0.24                                                                                |                                                                                     |
| Intersection Summary                    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                              | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Cycle Length: 65                        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Actuated Cycle Length: 51.8             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Natural Cycle: 40                       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type: Actuated-Uncoordinated    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Maximum v/c Ratio: 0.24                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Signal Delay: 2.2          |                                                                                   |                                                                                   |                                                                                   | Intersection LOS: A                                                               |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization 47.9% |                                                                                   |                                                                                   |                                                                                   | ICU Level of Service A                                                            |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min) 15                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

Splits and Phases: 5: Abbott Road & Elmview Avenue



HCM 6th TWSC  
4: Abbott Road & Fernald Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

10/18/2024

| Intersection             |        |      |        |       |       |        |      |      |        |      |      |      |
|--------------------------|--------|------|--------|-------|-------|--------|------|------|--------|------|------|------|
| Int Delay, s/veh         | 0.7    |      |        |       |       |        |      |      |        |      |      |      |
| Movement                 | EBL    | EBT  | EBR    | WBL   | WBT   | WBR    | NBL  | NBT  | NBR    | SBL  | SBT  | SBR  |
| Lane Configurations      |        | ↕    |        |       | ↕     |        |      | ↕    |        |      | ↕    |      |
| Traffic Vol, veh/h       | 2      | 0    | 1      | 15    | 0     | 11     | 0    | 557  | 36     | 24   | 628  | 0    |
| Future Vol, veh/h        | 2      | 0    | 1      | 15    | 0     | 11     | 0    | 557  | 36     | 24   | 628  | 0    |
| Conflicting Peds, #/hr   | 5      | 0    | 5      | 5     | 0     | 5      | 13   | 0    | 7      | 7    | 0    | 13   |
| Sign Control             | Stop   | Stop | Stop   | Stop  | Stop  | Stop   | Free | Free | Free   | Free | Free | Free |
| RT Channelized           | -      | -    | None   | -     | -     | None   | -    | -    | None   | -    | -    | None |
| Storage Length           | -      | -    | -      | -     | -     | -      | -    | -    | -      | -    | -    | -    |
| Veh in Median Storage, # | -      | 0    | -      | -     | 0     | -      | -    | 0    | -      | -    | 0    | -    |
| Grade, %                 | -      | 0    | -      | -     | 0     | -      | -    | 0    | -      | -    | 0    | -    |
| Peak Hour Factor         | 95     | 95   | 95     | 95    | 95    | 95     | 95   | 95   | 95     | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2      | 2    | 2      | 2     | 2     | 2      | 2    | 3    | 2      | 2    | 3    | 2    |
| Mvmt Flow                | 2      | 0    | 1      | 16    | 0     | 12     | 0    | 586  | 38     | 25   | 661  | 0    |
|                          |        |      |        |       |       |        |      |      |        |      |      |      |
| Major/Minor              | Minor2 |      | Minor1 |       |       | Major1 |      |      | Major2 |      |      |      |
| Conflicting Flow All     | 1022   | 1355 | 349    | 998   | 1336  | 324    | 674  | 0    | 0      | 631  | 0    | 0    |
| Stage 1                  | 724    | 724  | -      | 612   | 612   | -      | -    | -    | -      | -    | -    | -    |
| Stage 2                  | 298    | 631  | -      | 386   | 724   | -      | -    | -    | -      | -    | -    | -    |
| Critical Hdwy            | 7.54   | 6.54 | 6.94   | 7.54  | 6.54  | 6.94   | 4.14 | -    | -      | 4.14 | -    | -    |
| Critical Hdwy Stg 1      | 6.54   | 5.54 | -      | 6.54  | 5.54  | -      | -    | -    | -      | -    | -    | -    |
| Critical Hdwy Stg 2      | 6.54   | 5.54 | -      | 6.54  | 5.54  | -      | -    | -    | -      | -    | -    | -    |
| Follow-up Hdwy           | 3.52   | 4.02 | 3.32   | 3.52  | 4.02  | 3.32   | 2.22 | -    | -      | 2.22 | -    | -    |
| Pot Cap-1 Maneuver       | 190    | 148  | 647    | 198   | 152   | 672    | 913  | -    | -      | 947  | -    | -    |
| Stage 1                  | 383    | 429  | -      | 447   | 482   | -      | -    | -    | -      | -    | -    | -    |
| Stage 2                  | 686    | 473  | -      | 609   | 429   | -      | -    | -    | -      | -    | -    | -    |
| Platoon blocked, %       |        |      |        |       |       |        |      | -    | -      |      | -    | -    |
| Mov Cap-1 Maneuver       | 178    | 139  | 636    | 189   | 143   | 665    | 902  | -    | -      | 941  | -    | -    |
| Mov Cap-2 Maneuver       | 178    | 139  | -      | 189   | 143   | -      | -    | -    | -      | -    | -    | -    |
| Stage 1                  | 378    | 406  | -      | 444   | 479   | -      | -    | -    | -      | -    | -    | -    |
| Stage 2                  | 671    | 470  | -      | 580   | 406   | -      | -    | -    | -      | -    | -    | -    |
|                          |        |      |        |       |       |        |      |      |        |      |      |      |
|                          |        |      |        |       |       |        |      |      |        |      |      |      |
| Approach                 | EB     |      | WB     |       |       | NB     |      |      | SB     |      |      |      |
| HCM Control Delay, s     | 20.6   |      | 19.8   |       |       | 0      |      |      | 0.5    |      |      |      |
| HCM LOS                  | C      |      | C      |       |       |        |      |      |        |      |      |      |
|                          |        |      |        |       |       |        |      |      |        |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT  | NBR    | EBLn1 | WBLn1 | SBL    | SBT  | SBR  |        |      |      |      |
| Capacity (veh/h)         | 902    | -    | -      | 234   | 271   | 941    | -    | -    |        |      |      |      |
| HCM Lane V/C Ratio       | -      | -    | -      | 0.013 | 0.101 | 0.027  | -    | -    |        |      |      |      |
| HCM Control Delay (s)    | 0      | -    | -      | 20.6  | 19.8  | 8.9    | 0.2  | -    |        |      |      |      |
| HCM Lane LOS             | A      | -    | -      | C     | C     | A      | A    | -    |        |      |      |      |
| HCM 95th %tile Q(veh)    | 0      | -    | -      | 0     | 0.3   | 0.1    | -    | -    |        |      |      |      |

## Summary of All Intervals

| Run Number              | 1    | 2    | 3    | 4    | 5    | Avg  |
|-------------------------|------|------|------|------|------|------|
| Start Time              | 4:50 | 4:50 | 4:50 | 4:50 | 4:50 | 4:50 |
| End Time                | 6:00 | 6:00 | 6:00 | 6:00 | 6:00 | 6:00 |
| Total Time (min)        | 70   | 70   | 70   | 70   | 70   | 70   |
| Time Recorded (min)     | 60   | 60   | 60   | 60   | 60   | 60   |
| # of Intervals          | 2    | 2    | 2    | 2    | 2    | 2    |
| # of Recorded Intervals | 1    | 1    | 1    | 1    | 1    | 1    |
| Vehs Entered            | 3603 | 3636 | 3599 | 3665 | 3602 | 3620 |
| Vehs Exited             | 3594 | 3613 | 3575 | 3629 | 3599 | 3600 |
| Starting Vehs           | 85   | 88   | 71   | 87   | 103  | 85   |
| Ending Vehs             | 94   | 111  | 95   | 123  | 106  | 105  |
| Denied Entry Before     | 1    | 0    | 0    | 1    | 0    | 0    |
| Denied Entry After      | 1    | 0    | 1    | 0    | 1    | 1    |
| Travel Distance (mi)    | 1644 | 1674 | 1685 | 1665 | 1628 | 1659 |
| Travel Time (hr)        | 89.4 | 92.1 | 89.1 | 91.5 | 87.4 | 89.9 |
| Total Delay (hr)        | 33.2 | 34.9 | 31.7 | 34.5 | 31.7 | 33.2 |
| Total Stops             | 3697 | 3817 | 3669 | 3749 | 3661 | 3716 |
| Fuel Used (gal)         | 64.8 | 65.7 | 65.0 | 65.4 | 63.7 | 64.9 |

## Interval #0 Information Seeding

|                                     |      |
|-------------------------------------|------|
| Start Time                          | 4:50 |
| End Time                            | 5:00 |
| Total Time (min)                    | 10   |
| Volumes adjusted by Growth Factors. |      |
| No data recorded this interval.     |      |

## Interval #1 Information Recording

|                                     |      |
|-------------------------------------|------|
| Start Time                          | 5:00 |
| End Time                            | 6:00 |
| Total Time (min)                    | 60   |
| Volumes adjusted by Growth Factors. |      |

| Run Number           | 1    | 2    | 3    | 4    | 5    | Avg  |
|----------------------|------|------|------|------|------|------|
| Vehs Entered         | 3603 | 3636 | 3599 | 3665 | 3602 | 3620 |
| Vehs Exited          | 3594 | 3613 | 3575 | 3629 | 3599 | 3600 |
| Starting Vehs        | 85   | 88   | 71   | 87   | 103  | 85   |
| Ending Vehs          | 94   | 111  | 95   | 123  | 106  | 105  |
| Denied Entry Before  | 1    | 0    | 0    | 1    | 0    | 0    |
| Denied Entry After   | 1    | 0    | 1    | 0    | 1    | 1    |
| Travel Distance (mi) | 1644 | 1674 | 1685 | 1665 | 1628 | 1659 |
| Travel Time (hr)     | 89.4 | 92.1 | 89.1 | 91.5 | 87.4 | 89.9 |
| Total Delay (hr)     | 33.2 | 34.9 | 31.7 | 34.5 | 31.7 | 33.2 |
| Total Stops          | 3697 | 3817 | 3669 | 3749 | 3661 | 3716 |
| Fuel Used (gal)      | 64.8 | 65.7 | 65.0 | 65.4 | 63.7 | 64.9 |

## 1: Abbott Road &amp; Dorrance Avenue Performance by movement

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Denied Del/Veh (s)  | 0.2  | 0.1  | 0.2  | 0.2  | 0.1  | 0.1  | 0.0  | 0.0  | 0.0  | 0.2  | 0.2  | 0.2  |
| Total Delay (hr)    | 0.2  | 1.0  | 0.2  | 0.5  | 0.8  | 0.1  | 0.9  | 1.4  | 0.2  | 0.1  | 0.5  | 0.0  |
| Total Del/Veh (s)   | 27.0 | 25.8 | 5.3  | 30.6 | 27.9 | 5.2  | 18.6 | 14.5 | 9.3  | 8.6  | 5.5  | 1.9  |
| Stop Delay (hr)     | 0.2  | 0.8  | 0.2  | 0.5  | 0.7  | 0.1  | 0.8  | 1.0  | 0.1  | 0.0  | 0.3  | 0.0  |
| Stop Del/Veh (s)    | 24.3 | 22.0 | 4.7  | 27.8 | 24.0 | 5.0  | 14.8 | 10.4 | 6.7  | 6.4  | 3.4  | 1.4  |
| Total Stops         | 27   | 106  | 105  | 56   | 86   | 47   | 142  | 187  | 37   | 15   | 95   | 10   |
| Stop/Veh            | 0.84 | 0.80 | 0.77 | 0.89 | 0.80 | 0.72 | 0.78 | 0.54 | 0.56 | 0.62 | 0.30 | 0.30 |
| Travel Dist (mi)    | 1.6  | 6.5  | 6.7  | 3.1  | 5.3  | 3.2  | 23.6 | 44.5 | 8.5  | 1.8  | 24.6 | 2.5  |
| Travel Time (hr)    | 0.3  | 1.2  | 0.5  | 0.7  | 1.0  | 0.3  | 1.8  | 2.9  | 0.5  | 0.1  | 1.3  | 0.1  |
| Avg Speed (mph)     | 5    | 6    | 12   | 5    | 5    | 12   | 13   | 15   | 17   | 14   | 19   | 20   |
| Fuel Used (gal)     | 0.1  | 0.4  | 0.2  | 0.2  | 0.4  | 0.1  | 0.9  | 1.6  | 0.3  | 0.1  | 0.9  | 0.1  |
| Fuel Eff. (mpg)     | 14.7 | 14.8 | 31.0 | 13.2 | 13.7 | 33.0 | 27.2 | 27.2 | 30.6 | 27.4 | 26.9 | 39.5 |
| HC Emissions (g)    | 1    | 4    | 1    | 1    | 2    | 1    | 8    | 17   | 2    | 1    | 13   | 1    |
| CO Emissions (g)    | 21   | 129  | 62   | 40   | 84   | 26   | 205  | 443  | 55   | 29   | 394  | 21   |
| NOx Emissions (g)   | 2    | 13   | 5    | 4    | 8    | 2    | 26   | 53   | 6    | 3    | 40   | 2    |
| Vehicles Entered    | 32   | 133  | 135  | 63   | 107  | 64   | 183  | 347  | 66   | 23   | 318  | 33   |
| Vehicles Exited     | 32   | 131  | 135  | 62   | 106  | 64   | 182  | 347  | 66   | 24   | 319  | 33   |
| Hourly Exit Rate    | 32   | 131  | 135  | 62   | 106  | 64   | 182  | 347  | 66   | 24   | 319  | 33   |
| Input Volume        | 34   | 131  | 138  | 59   | 109  | 65   | 180  | 342  | 69   | 26   | 324  | 30   |
| % of Volume         | 94   | 100  | 98   | 105  | 97   | 98   | 101  | 101  | 96   | 92   | 98   | 110  |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Density (ft/veh)    |      |      |      |      |      |      |      |      |      |      |      |      |
| Occupancy (veh)     | 0    | 1    | 1    | 1    | 1    | 0    | 2    | 3    | 1    | 0    | 1    | 0    |

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1: Abbott Road & Dorrance Avenue Performance by movement

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| Movement            | All   |
|---------------------|-------|
| Denied Delay (hr)   | 0.0   |
| Denied Del/Veh (s)  | 0.1   |
| Total Delay (hr)    | 6.0   |
| Total Del/Veh (s)   | 14.2  |
| Stop Delay (hr)     | 4.7   |
| Stop Del/Veh (s)    | 11.3  |
| Total Stops         | 913   |
| Stop/Veh            | 0.60  |
| Travel Dist (mi)    | 131.9 |
| Travel Time (hr)    | 10.8  |
| Avg Speed (mph)     | 12    |
| Fuel Used (gal)     | 5.3   |
| Fuel Eff. (mpg)     | 24.8  |
| HC Emissions (g)    | 51    |
| CO Emissions (g)    | 1508  |
| NOx Emissions (g)   | 166   |
| Vehicles Entered    | 1504  |
| Vehicles Exited     | 1501  |
| Hourly Exit Rate    | 1501  |
| Input Volume        | 1507  |
| % of Volume         | 100   |
| Denied Entry Before | 0     |
| Denied Entry After  | 0     |
| Density (ft/veh)    | 294   |
| Occupancy (veh)     | 11    |

## 2: Abbott Road &amp; Plaza Driveway Performance by movement

| Movement            | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  | All   |
|---------------------|------|------|------|------|------|------|-------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   |
| Denied Del/Veh (s)  | 0.2  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   |
| Total Delay (hr)    | 1.1  | 0.0  | 0.8  | 0.1  | 0.0  | 0.5  | 2.5   |
| Total Del/Veh (s)   | 33.3 | 6.8  | 4.2  | 4.9  | 7.6  | 3.7  | 6.5   |
| Stop Delay (hr)     | 0.9  | 0.0  | 0.3  | 0.1  | 0.0  | 0.3  | 1.6   |
| Stop Del/Veh (s)    | 28.9 | 3.8  | 1.7  | 1.8  | 3.8  | 1.9  | 4.0   |
| Total Stops         | 108  | 2    | 102  | 22   | 2    | 99   | 335   |
| Stop/Veh            | 0.92 | 0.67 | 0.15 | 0.22 | 0.50 | 0.19 | 0.24  |
| Travel Dist (mi)    | 5.7  | 0.2  | 86.3 | 13.8 | 0.5  | 67.4 | 173.9 |
| Travel Time (hr)    | 1.3  | 0.0  | 3.7  | 0.6  | 0.0  | 3.0  | 8.6   |
| Avg Speed (mph)     | 4    | 15   | 24   | 23   | 19   | 23   | 20    |
| Fuel Used (gal)     | 0.4  | 0.0  | 3.7  | 0.6  | 0.0  | 2.8  | 7.6   |
| Fuel Eff. (mpg)     | 13.1 | 39.1 | 23.2 | 23.4 | 25.1 | 23.9 | 22.9  |
| HC Emissions (g)    | 3    | 0    | 43   | 7    | 0    | 36   | 90    |
| CO Emissions (g)    | 90   | 1    | 1478 | 241  | 4    | 1164 | 2978  |
| NOx Emissions (g)   | 10   | 0    | 151  | 26   | 0    | 121  | 308   |
| Vehicles Entered    | 117  | 3    | 656  | 100  | 4    | 527  | 1407  |
| Vehicles Exited     | 117  | 3    | 660  | 101  | 4    | 528  | 1413  |
| Hourly Exit Rate    | 117  | 3    | 660  | 101  | 4    | 528  | 1413  |
| Input Volume        | 111  | 3    | 651  | 99   | 5    | 529  | 1398  |
| % of Volume         | 105  | 100  | 101  | 102  | 80   | 100  | 101   |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Density (ft/veh)    |      |      |      |      |      |      | 393   |
| Occupancy (veh)     | 1    | 0    | 4    | 1    | 0    | 3    | 9     |



## 3: Abbott Road/Abbott Road &amp; Ridge Road Performance by movement

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Denied Delay (hr)   | 0.1  | 0.0  | 0.0  | 0.2  | 0.1  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Denied Del/Veh (s)  | 2.9  | 0.2  | 0.2  | 2.7  | 0.9  | 0.6  | 0.0  | 0.0  | 0.1  | 0.0  | 0.0  | 0.1  |
| Total Delay (hr)    | 0.4  | 4.6  | 0.4  | 3.0  | 3.7  | 1.0  | 0.3  | 1.8  | 0.5  | 3.2  | 1.7  | 0.2  |
| Total Del/Veh (s)   | 22.6 | 26.7 | 17.7 | 39.3 | 28.4 | 9.2  | 25.9 | 20.2 | 7.5  | 40.6 | 20.9 | 9.3  |
| Stop Delay (hr)     | 0.3  | 3.7  | 0.3  | 2.5  | 2.8  | 0.6  | 0.2  | 1.4  | 0.3  | 2.7  | 1.4  | 0.1  |
| Stop Del/Veh (s)    | 16.8 | 21.5 | 13.4 | 32.4 | 21.2 | 5.7  | 21.4 | 16.4 | 4.0  | 34.2 | 16.3 | 5.7  |
| Total Stops         | 68   | 451  | 48   | 285  | 332  | 208  | 32   | 200  | 103  | 281  | 194  | 30   |
| Stop/Veh            | 1.05 | 0.72 | 0.64 | 1.03 | 0.70 | 0.53 | 0.80 | 0.64 | 0.44 | 0.99 | 0.65 | 0.49 |
| Travel Dist (mi)    | 9.2  | 89.1 | 10.7 | 37.9 | 65.5 | 54.8 | 8.0  | 62.2 | 47.5 | 39.0 | 41.0 | 8.4  |
| Travel Time (hr)    | 0.8  | 7.6  | 0.7  | 4.5  | 6.1  | 2.9  | 0.6  | 3.9  | 2.1  | 4.5  | 3.1  | 0.4  |
| Avg Speed (mph)     | 13   | 12   | 15   | 9    | 11   | 19   | 14   | 16   | 23   | 9    | 13   | 19   |
| Fuel Used (gal)     | 0.4  | 3.7  | 0.4  | 1.9  | 2.9  | 1.9  | 0.3  | 2.1  | 1.5  | 1.9  | 1.8  | 0.3  |
| Fuel Eff. (mpg)     | 25.0 | 24.0 | 25.6 | 20.2 | 22.7 | 29.1 | 29.3 | 29.5 | 32.2 | 20.6 | 23.4 | 25.7 |
| HC Emissions (g)    | 3    | 30   | 3    | 13   | 26   | 17   | 2    | 26   | 14   | 11   | 16   | 4    |
| CO Emissions (g)    | 103  | 980  | 110  | 472  | 734  | 540  | 39   | 529  | 358  | 384  | 523  | 136  |
| NOx Emissions (g)   | 9    | 92   | 10   | 43   | 83   | 55   | 6    | 72   | 43   | 40   | 55   | 13   |
| Vehicles Entered    | 64   | 616  | 74   | 274  | 470  | 391  | 40   | 311  | 234  | 282  | 296  | 60   |
| Vehicles Exited     | 64   | 615  | 74   | 271  | 465  | 391  | 39   | 308  | 234  | 280  | 295  | 60   |
| Hourly Exit Rate    | 64   | 615  | 74   | 271  | 465  | 391  | 39   | 308  | 234  | 280  | 295  | 60   |
| Input Volume        | 68   | 608  | 74   | 280  | 475  | 384  | 46   | 303  | 239  | 280  | 296  | 56   |
| % of Volume         | 94   | 101  | 100  | 97   | 98   | 102  | 85   | 102  | 98   | 100  | 100  | 107  |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Denied Entry After  | 0    | 0    | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Density (ft/veh)    |      |      |      |      |      |      |      |      |      |      |      |      |
| Occupancy (veh)     | 1    | 8    | 1    | 4    | 6    | 3    | 1    | 4    | 2    | 5    | 3    | 0    |

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3: Abbott Road/Abbott Road & Ridge Road Performance by movement

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| Movement            | All   |
|---------------------|-------|
| Denied Delay (hr)   | 0.5   |
| Denied Del/Veh (s)  | 0.6   |
| Total Delay (hr)    | 20.8  |
| Total Del/Veh (s)   | 23.9  |
| Stop Delay (hr)     | 16.3  |
| Stop Del/Veh (s)    | 18.7  |
| Total Stops         | 2232  |
| Stop/Veh            | 0.71  |
| Travel Dist (mi)    | 473.2 |
| Travel Time (hr)    | 37.2  |
| Avg Speed (mph)     | 13    |
| Fuel Used (gal)     | 19.0  |
| Fuel Eff. (mpg)     | 25.0  |
| HC Emissions (g)    | 163   |
| CO Emissions (g)    | 4908  |
| NOx Emissions (g)   | 521   |
| Vehicles Entered    | 3112  |
| Vehicles Exited     | 3096  |
| Hourly Exit Rate    | 3096  |
| Input Volume        | 3109  |
| % of Volume         | 100   |
| Denied Entry Before | 0     |
| Denied Entry After  | 1     |
| Density (ft/veh)    | 265   |
| Occupancy (veh)     | 37    |

## 4: Abbott Road &amp; Fernald Avenue Performance by movement

| Movement            | EBL  | EBR  | WBL  | WBR  | NBT   | NBR  | SBL  | SBT   | All   |
|---------------------|------|------|------|------|-------|------|------|-------|-------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0   |
| Denied Del/Veh (s)  | 0.1  | 0.1  | 0.1  | 0.1  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0   |
| Total Delay (hr)    | 0.0  | 0.0  | 0.0  | 0.0  | 0.2   | 0.0  | 0.1  | 0.4   | 0.8   |
| Total Del/Veh (s)   | 7.8  | 7.9  | 10.7 | 8.1  | 1.2   | 1.4  | 7.2  | 2.5   | 2.1   |
| Stop Delay (hr)     | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.1   |
| Stop Del/Veh (s)    | 6.3  | 5.9  | 7.4  | 4.8  | 0.1   | 0.1  | 2.2  | 0.2   | 0.3   |
| Total Stops         | 2    | 1    | 16   | 10   | 4     | 0    | 12   | 5     | 50    |
| Stop/Veh            | 1.00 | 1.00 | 1.00 | 1.00 | 0.01  | 0.00 | 0.48 | 0.01  | 0.04  |
| Travel Dist (mi)    | 0.0  | 0.0  | 0.8  | 0.5  | 131.1 | 9.6  | 5.1  | 128.4 | 275.6 |
| Travel Time (hr)    | 0.0  | 0.0  | 0.1  | 0.0  | 4.6   | 0.3  | 0.2  | 4.7   | 10.0  |
| Avg Speed (mph)     | 4    | 5    | 11   | 13   | 28    | 28   | 23   | 27    | 27    |
| Fuel Used (gal)     | 0.0  | 0.0  | 0.0  | 0.0  | 4.0   | 0.3  | 0.2  | 4.9   | 9.4   |
| Fuel Eff. (mpg)     | 17.3 | 19.7 | 36.8 | 43.8 | 32.9  | 32.5 | 26.4 | 26.3  | 29.4  |
| HC Emissions (g)    | 0    | 0    | 0    | 0    | 60    | 5    | 1    | 58    | 124   |
| CO Emissions (g)    | 0    | 0    | 2    | 1    | 1125  | 94   | 56   | 1597  | 2876  |
| NOx Emissions (g)   | 0    | 0    | 0    | 0    | 171   | 14   | 5    | 194   | 384   |
| Vehicles Entered    | 2    | 1    | 16   | 10   | 563   | 41   | 25   | 621   | 1279  |
| Vehicles Exited     | 2    | 1    | 16   | 10   | 563   | 41   | 25   | 621   | 1279  |
| Hourly Exit Rate    | 2    | 1    | 16   | 10   | 563   | 41   | 25   | 621   | 1279  |
| Input Volume        | 2    | 1    | 15   | 11   | 561   | 36   | 24   | 632   | 1282  |
| % of Volume         | 100  | 100  | 107  | 91   | 100   | 114  | 104  | 98    | 100   |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0     | 0     |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0     | 0     |
| Density (ft/veh)    |      |      |      |      |       |      |      |       | 502   |
| Occupancy (veh)     | 0    | 0    | 0    | 0    | 5     | 0    | 0    | 5     | 10    |

## 5: Abbott Road &amp; Elmview Avenue Performance by movement

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT   | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|-------|------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  |
| Denied Del/Veh (s)  | 0.1  | 0.1  | 0.1  | 0.2  |      | 0.1  | 0.2  | 0.2  | 0.2  | 0.0  | 0.0   | 0.0  |
| Total Delay (hr)    | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.3  | 0.0  | 0.0  | 0.5   | 0.0  |
| Total Del/Veh (s)   | 13.3 | 15.3 | 7.8  | 12.3 |      | 7.5  | 7.7  | 1.8  | 1.7  | 7.3  | 2.8   | 2.8  |
| Stop Delay (hr)     | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.1  | 0.0  | 0.0  | 0.2   | 0.0  |
| Stop Del/Veh (s)    | 10.2 | 11.5 | 4.7  | 9.0  |      | 4.5  | 3.9  | 0.9  | 0.7  | 3.6  | 0.9   | 0.8  |
| Total Stops         | 15   | 1    | 7    | 4    | 0    | 10   | 3    | 62   | 2    | 12   | 67    | 3    |
| Stop/Veh            | 0.83 | 1.00 | 1.00 | 0.80 |      | 0.91 | 0.50 | 0.11 | 0.18 | 0.57 | 0.11  | 0.16 |
| Travel Dist (mi)    | 0.9  | 0.1  | 0.4  | 0.2  | 0.0  | 0.5  | 0.5  | 44.0 | 0.8  | 4.8  | 140.9 | 4.4  |
| Travel Time (hr)    | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.8  | 0.0  | 0.2  | 5.2   | 0.2  |
| Avg Speed (mph)     | 9    | 9    | 13   | 10   | 7    | 13   | 17   | 25   | 25   | 24   | 27    | 27   |
| Fuel Used (gal)     | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.4  | 0.0  | 0.1  | 4.0   | 0.1  |
| Fuel Eff. (mpg)     | 29.4 | 33.1 | 42.7 | 35.6 | 28.4 | 43.3 | 31.5 | 30.9 | 30.4 | 35.0 | 35.1  | 35.3 |
| HC Emissions (g)    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 23   | 0    | 1    | 45    | 1    |
| CO Emissions (g)    | 4    | 0    | 1    | 1    | 0    | 2    | 4    | 534  | 6    | 18   | 768   | 13   |
| NOx Emissions (g)   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 68   | 1    | 2    | 125   | 2    |
| Vehicles Entered    | 18   | 1    | 7    | 5    | 0    | 11   | 6    | 548  | 11   | 21   | 594   | 19   |
| Vehicles Exited     | 18   | 1    | 7    | 5    | 0    | 11   | 6    | 548  | 11   | 20   | 593   | 19   |
| Hourly Exit Rate    | 18   | 1    | 7    | 5    | 0    | 11   | 6    | 548  | 11   | 20   | 593   | 19   |
| Input Volume        | 19   | 1    | 7    | 7    | 1    | 11   | 8    | 543  | 9    | 22   | 603   | 19   |
| % of Volume         | 95   | 100  | 100  | 71   | 0    | 100  | 75   | 101  | 122  | 91   | 98    | 100  |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0    |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0    |
| Density (ft/veh)    |      |      |      |      |      |      |      |      |      |      |       |      |
| Occupancy (veh)     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 2    | 0    | 0    | 5     | 0    |

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5: Abbott Road & Elmview Avenue Performance by movement

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| Movement            | All   |
|---------------------|-------|
| Denied Delay (hr)   | 0.0   |
| Denied Del/Veh (s)  | 0.1   |
| Total Delay (hr)    | 0.9   |
| Total Del/Veh (s)   | 2.7   |
| Stop Delay (hr)     | 0.4   |
| Stop Del/Veh (s)    | 1.2   |
| Total Stops         | 186   |
| Stop/Veh            | 0.15  |
| Travel Dist (mi)    | 197.7 |
| Travel Time (hr)    | 7.6   |
| Avg Speed (mph)     | 26    |
| Fuel Used (gal)     | 5.8   |
| Fuel Eff. (mpg)     | 34.0  |
| HC Emissions (g)    | 70    |
| CO Emissions (g)    | 1351  |
| NOx Emissions (g)   | 199   |
| Vehicles Entered    | 1241  |
| Vehicles Exited     | 1239  |
| Hourly Exit Rate    | 1239  |
| Input Volume        | 1250  |
| % of Volume         | 99    |
| Denied Entry Before | 0     |
| Denied Entry After  | 0     |
| Density (ft/veh)    | 511   |
| Occupancy (veh)     | 8     |

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Total Network Performance

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|                     |        |
|---------------------|--------|
| Denied Delay (hr)   | 0.6    |
| Denied Del/Veh (s)  | 0.6    |
| Total Delay (hr)    | 32.6   |
| Total Del/Veh (s)   | 31.7   |
| Stop Delay (hr)     | 23.3   |
| Stop Del/Veh (s)    | 22.7   |
| Total Stops         | 3716   |
| Stop/Veh            | 1.00   |
| Travel Dist (mi)    | 1659.1 |
| Travel Time (hr)    | 89.9   |
| Avg Speed (mph)     | 19     |
| Fuel Used (gal)     | 64.9   |
| Fuel Eff. (mpg)     | 25.6   |
| HC Emissions (g)    | 720    |
| CO Emissions (g)    | 20882  |
| NOx Emissions (g)   | 2345   |
| Vehicles Entered    | 3620   |
| Vehicles Exited     | 3600   |
| Hourly Exit Rate    | 3600   |
| Input Volume        | 12056  |
| % of Volume         | 30     |
| Denied Entry Before | 0      |
| Denied Entry After  | 1      |
| Density (ft/veh)    | 282    |
| Occupancy (veh)     | 89     |



## Intersection: 1: Abbott Road &amp; Dorrance Avenue

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | LT  | TR  | LT  | TR  | LT  | TR  | LT  | TR  |
| Maximum Queue (ft)    | 132 | 100 | 156 | 95  | 185 | 190 | 116 | 67  |
| Average Queue (ft)    | 69  | 39  | 77  | 23  | 98  | 90  | 53  | 23  |
| 95th Queue (ft)       | 121 | 79  | 137 | 59  | 166 | 154 | 98  | 56  |
| Link Distance (ft)    | 254 | 254 | 254 | 254 | 608 | 608 | 402 | 402 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |

## Intersection: 2: Abbott Road &amp; Plaza Driveway

| Movement              | WB  | WB  | NB  | NB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | R   | T   | TR  | LT  | T   |
| Maximum Queue (ft)    | 149 | 21  | 108 | 132 | 115 | 82  |
| Average Queue (ft)    | 68  | 2   | 37  | 51  | 48  | 29  |
| 95th Queue (ft)       | 125 | 11  | 84  | 102 | 99  | 69  |
| Link Distance (ft)    | 250 | 250 | 659 | 659 | 608 | 608 |
| Upstream Blk Time (%) |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |

## Intersection: 3: Abbott Road/Abbott Road &amp; Ridge Road

| Movement              | EB  | EB  | EB  | WB  | WB  | WB  | NB   | NB   | NB  | SB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|------|------|-----|-----|-----|-----|
| Directions Served     | L   | T   | TR  | L   | T   | R   | LT   | T    | R   | LT  | T   | R   |
| Maximum Queue (ft)    | 140 | 275 | 247 | 299 | 499 | 309 | 160  | 166  | 137 | 266 | 233 | 141 |
| Average Queue (ft)    | 51  | 169 | 134 | 148 | 211 | 78  | 73   | 68   | 53  | 169 | 115 | 26  |
| 95th Queue (ft)       | 126 | 241 | 215 | 283 | 396 | 219 | 129  | 126  | 103 | 253 | 196 | 78  |
| Link Distance (ft)    |     | 752 | 752 |     | 724 | 724 | 1010 | 1010 |     | 659 | 659 |     |
| Upstream Blk Time (%) |     |     |     |     |     |     |      |      |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |      |      |     |     |     |     |
| Storage Bay Dist (ft) | 90  |     |     | 200 |     |     |      |      | 125 |     |     | 150 |
| Storage Blk Time (%)  | 0   | 35  |     | 6   | 10  |     |      | 1    | 0   |     | 2   | 0   |
| Queuing Penalty (veh) | 1   | 24  |     | 26  | 28  |     |      | 1    | 0   |     | 1   | 0   |

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Intersection: 4: Abbott Road & Fernald Avenue

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| Movement              | EB  | WB  | NB   | NB   | SB   | SB   |
|-----------------------|-----|-----|------|------|------|------|
| Directions Served     | LTR | LTR | LT   | TR   | LT   | TR   |
| Maximum Queue (ft)    | 23  | 33  | 15   | 55   | 45   | 37   |
| Average Queue (ft)    | 2   | 14  | 1    | 4    | 10   | 2    |
| 95th Queue (ft)       | 14  | 35  | 7    | 26   | 35   | 17   |
| Link Distance (ft)    | 56  | 256 | 1193 | 1193 | 1010 | 1010 |
| Upstream Blk Time (%) |     |     |      |      |      |      |
| Queuing Penalty (veh) |     |     |      |      |      |      |
| Storage Bay Dist (ft) |     |     |      |      |      |      |
| Storage Blk Time (%)  |     |     |      |      |      |      |
| Queuing Penalty (veh) |     |     |      |      |      |      |

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Intersection: 5: Abbott Road & Elmview Avenue

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| Movement              | EB  | WB  | NB  | NB  | SB   | SB   |
|-----------------------|-----|-----|-----|-----|------|------|
| Directions Served     | LTR | LTR | LT  | TR  | LT   | TR   |
| Maximum Queue (ft)    | 43  | 33  | 90  | 102 | 74   | 86   |
| Average Queue (ft)    | 16  | 10  | 24  | 24  | 26   | 31   |
| 95th Queue (ft)       | 41  | 30  | 67  | 70  | 59   | 77   |
| Link Distance (ft)    | 258 | 256 | 419 | 419 | 1193 | 1193 |
| Upstream Blk Time (%) |     |     |     |     |      |      |
| Queuing Penalty (veh) |     |     |     |     |      |      |
| Storage Bay Dist (ft) |     |     |     |     |      |      |
| Storage Blk Time (%)  |     |     |     |     |      |      |
| Queuing Penalty (veh) |     |     |     |     |      |      |

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Network Summary

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|                                  |
|----------------------------------|
| Network wide Queuing Penalty: 81 |
|----------------------------------|

**Intersection: 2: Abbott Road & Plaza Driveway**

| Phase                | 2     | 6     | 8     |
|----------------------|-------|-------|-------|
| Movement(s) Served   | NBT   | SBTL  | WBL   |
| Maximum Green (s)    | 35.0  | 35.0  | 21.0  |
| Minimum Green (s)    | 6.0   | 6.0   | 6.0   |
| Recall               | C-Max | C-Max | None  |
| Avg. Green (s)       | 60.2  | 60.2  | 10.3  |
| g/C Ratio            | -0.01 | -0.01 | -0.01 |
| Cycles Skipped (%)   | 17    | 17    | 17    |
| Cycles @ Minimum (%) | 0     | 0     | 21    |
| Cycles Maxed Out (%) | 83    | 83    | 0     |
| Cycles with Peds (%) | 0     | 0     | 0     |

**Controller Summary**

Average Cycle Length (s): NA

Number of Complete Cycles : 0

**Intersection: 3: Abbott Road/Abbott Road & Ridge Road**

| Phase                | 1     | 2    | 4    | 5     | 6    | 7     | 8    |
|----------------------|-------|------|------|-------|------|-------|------|
| Movement(s) Served   | WBL   | EBTL | SBTL | EBL   | WBTL | SBL   | NBTL |
| Maximum Green (s)    | 9.0   | 30.0 | 39.0 | 9.0   | 30.0 | 9.0   | 25.0 |
| Minimum Green (s)    | 7.0   | 7.0  | 7.0  | 7.0   | 7.0  | 7.0   | 7.0  |
| Recall               | None  | Ped  | None | None  | Ped  | None  | None |
| Avg. Green (s)       | 9.0   | 28.1 | 35.2 | 7.8   | 35.2 | 8.4   | 32.9 |
| g/C Ratio            | -0.01 | NA   | NA   | -0.01 | NA   | -0.01 | NA   |
| Cycles Skipped (%)   | 2     | 0    | 0    | 49    | 0    | 83    | 0    |
| Cycles @ Minimum (%) | 2     | 0    | 0    | 24    | 0    | 5     | 0    |
| Cycles Maxed Out (%) | 88    | 41   | 59   | 10    | 83   | 8     | 80   |
| Cycles with Peds (%) | 0     | 100  | 7    | 0     | 100  | 0     | 10   |

**Controller Summary**

Average Cycle Length (s): NA

Number of Complete Cycles : 0

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Intersection: 5: Abbott Road & Elmview Avenue

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| Phase                | 2    | 4    | 6    | 8    |
|----------------------|------|------|------|------|
| Movement(s) Served   | NBTL | EBTL | SBTL | WBTL |
| Maximum Green (s)    | 34.0 | 19.0 | 34.0 | 19.0 |
| Minimum Green (s)    | 20.0 | 6.0  | 20.0 | 6.0  |
| Recall               | Max  | None | Max  | None |
| Avg. Green (s)       | 98.9 | 6.6  | 98.9 | 6.6  |
| g/C Ratio            | NA   | NA   | NA   | NA   |
| Cycles Skipped (%)   | 0    | 0    | 0    | 0    |
| Cycles @ Minimum (%) | 0    | 83   | 0    | 83   |
| Cycles Maxed Out (%) | 100  | 0    | 100  | 0    |
| Cycles with Peds (%) | 0    | 0    | 0    | 0    |

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Controller Summary

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Average Cycle Length (s): NA

Number of Complete Cycles : 0

# **2050 Build Alternative 1**

Lanes, Volumes, Timings  
1: Abbott Road & Dorrance Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |  |  |                                                                                     |  |  |                                                                                     |
| Traffic Volume (vph)       | 14                                                                                | 75                                                                                | 89                                                                                | 44                                                                                | 61                                                                                | 31                                                                                | 108                                                                                | 197                                                                                 | 44                                                                                  | 27                                                                                  | 214                                                                                 | 16                                                                                  |
| Future Volume (vph)        | 14                                                                                | 75                                                                                | 89                                                                                | 44                                                                                | 61                                                                                | 31                                                                                | 108                                                                                | 197                                                                                 | 44                                                                                  | 27                                                                                  | 214                                                                                 | 16                                                                                  |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                               | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Lane Width (ft)            | 10                                                                                | 10                                                                                | 10                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                 | 12                                                                                  | 12                                                                                  | 12                                                                                  | 12                                                                                  | 12                                                                                  |
| Storage Length (ft)        | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 200                                                                                |                                                                                     | 0                                                                                   | 200                                                                                 |                                                                                     | 0                                                                                   |
| Storage Lanes              | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                  |                                                                                     | 0                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)          | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                |                                                                                   |                                                                                   | 100                                                                                |                                                                                     |                                                                                     | 100                                                                                 |                                                                                     |                                                                                     |
| Lane Util. Factor          | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            |                                                                                   | 0.98                                                                              |                                                                                   |                                                                                   | 0.99                                                                              |                                                                                   | 1.00                                                                               | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     |
| Frt                        |                                                                                   | 0.925                                                                             |                                                                                   |                                                                                   | 0.966                                                                             |                                                                                   |                                                                                    | 0.973                                                                               |                                                                                     |                                                                                     | 0.990                                                                               |                                                                                     |
| Flt Protected              |                                                                                   | 0.996                                                                             |                                                                                   |                                                                                   | 0.984                                                                             |                                                                                   | 0.950                                                                              |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 0                                                                                 | 2996                                                                              | 0                                                                                 | 0                                                                                 | 3340                                                                              | 0                                                                                 | 1770                                                                               | 1778                                                                                | 0                                                                                   | 1770                                                                                | 1793                                                                                | 0                                                                                   |
| Flt Permitted              |                                                                                   | 0.921                                                                             |                                                                                   |                                                                                   | 0.800                                                                             |                                                                                   | 0.545                                                                              |                                                                                     |                                                                                     | 0.600                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 0                                                                                 | 2769                                                                              | 0                                                                                 | 0                                                                                 | 2710                                                                              | 0                                                                                 | 1012                                                                               | 1778                                                                                | 0                                                                                   | 1114                                                                                | 1793                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                    |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 95                                                                                |                                                                                   |                                                                                   | 33                                                                                |                                                                                   |                                                                                    | 15                                                                                  |                                                                                     |                                                                                     | 5                                                                                   |                                                                                     |
| Link Speed (mph)           |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                    | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 300                                                                               |                                                                                   |                                                                                   | 300                                                                               |                                                                                   |                                                                                    | 688                                                                                 |                                                                                     |                                                                                     | 452                                                                                 |                                                                                     |
| Travel Time (s)            |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                    | 15.6                                                                                |                                                                                     |                                                                                     | 10.3                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                  |                                                                                     | 5                                                                                   | 5                                                                                   |                                                                                     | 5                                                                                   |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                    |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |
| Peak Hour Factor           | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                               | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                 | 4%                                                                                  | 2%                                                                                  | 2%                                                                                  | 5%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 15                                                                                | 80                                                                                | 95                                                                                | 47                                                                                | 65                                                                                | 33                                                                                | 115                                                                                | 210                                                                                 | 47                                                                                  | 29                                                                                  | 228                                                                                 | 17                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 0                                                                                 | 190                                                                               | 0                                                                                 | 0                                                                                 | 145                                                                               | 0                                                                                 | 115                                                                                | 257                                                                                 | 0                                                                                   | 29                                                                                  | 245                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |                                                                                   |                                                                                    | 16                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |
| Headway Factor             | 1.09                                                                              | 1.09                                                                              | 1.09                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Turning Speed (mph)        | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                 |                                                                                     | 60                                                                                  | 60                                                                                  |                                                                                     | 60                                                                                  |
| Number of Detectors        | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                  | 1                                                                                   |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     |
| Detector Template          | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                               | Thru                                                                                |                                                                                     | Left                                                                                | Thru                                                                                |                                                                                     |
| Leading Detector (ft)      | 20                                                                                | 50                                                                                |                                                                                   | 20                                                                                | 50                                                                                |                                                                                   | 50                                                                                 | 50                                                                                  |                                                                                     | 50                                                                                  | 50                                                                                  |                                                                                     |
| Trailing Detector (ft)     | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Detector 1 Position(ft)    | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Detector 1 Size(ft)        | 20                                                                                | 50                                                                                |                                                                                   | 20                                                                                | 50                                                                                |                                                                                   | 50                                                                                 | 50                                                                                  |                                                                                     | 50                                                                                  | 50                                                                                  |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                              | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Turn Type                  | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | pm+pt                                                                              | NA                                                                                  |                                                                                     | pm+pt                                                                               | NA                                                                                  |                                                                                     |
| Protected Phases           |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   | 5                                                                                  | 2                                                                                   |                                                                                     | 1                                                                                   | 6                                                                                   |                                                                                     |
| Permitted Phases           | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 2                                                                                  |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |                                                                                     |

Lanes, Volumes, Timings  
1: Abbott Road & Dorrance Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Detector Phase          | 4                                                                                 | 4                                                                                 |                                                                                   | 8                                                                                 | 8                                                                                 |                                                                                   | 5                                                                                  | 2                                                                                   |                                                                                     | 1                                                                                   | 6                                                                                   |                                                                                     |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 5.0                                                                               | 5.0                                                                               |                                                                                   | 5.0                                                                               | 5.0                                                                               |                                                                                   | 5.0                                                                                | 5.0                                                                                 |                                                                                     | 5.0                                                                                 | 5.0                                                                                 |                                                                                     |
| Minimum Split (s)       | 29.2                                                                              | 29.2                                                                              |                                                                                   | 29.2                                                                              | 29.2                                                                              |                                                                                   | 10.2                                                                               | 29.2                                                                                |                                                                                     | 10.2                                                                                | 29.2                                                                                |                                                                                     |
| Total Split (s)         | 30.0                                                                              | 30.0                                                                              |                                                                                   | 30.0                                                                              | 30.0                                                                              |                                                                                   | 20.0                                                                               | 35.0                                                                                |                                                                                     | 20.0                                                                                | 35.0                                                                                |                                                                                     |
| Total Split (%)         | 35.3%                                                                             | 35.3%                                                                             |                                                                                   | 35.3%                                                                             | 35.3%                                                                             |                                                                                   | 23.5%                                                                              | 41.2%                                                                               |                                                                                     | 23.5%                                                                               | 41.2%                                                                               |                                                                                     |
| Maximum Green (s)       | 24.8                                                                              | 24.8                                                                              |                                                                                   | 24.8                                                                              | 24.8                                                                              |                                                                                   | 14.8                                                                               | 29.8                                                                                |                                                                                     | 14.8                                                                                | 29.8                                                                                |                                                                                     |
| Yellow Time (s)         | 3.2                                                                               | 3.2                                                                               |                                                                                   | 3.2                                                                               | 3.2                                                                               |                                                                                   | 3.2                                                                                | 3.2                                                                                 |                                                                                     | 3.2                                                                                 | 3.2                                                                                 |                                                                                     |
| All-Red Time (s)        | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                                | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Lost Time Adjust (s)    |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)     |                                                                                   | 5.2                                                                               |                                                                                   |                                                                                   | 5.2                                                                               |                                                                                   | 5.2                                                                                | 5.2                                                                                 |                                                                                     | 5.2                                                                                 | 5.2                                                                                 |                                                                                     |
| Lead/Lag                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Lead                                                                               | Lag                                                                                 |                                                                                     | Lead                                                                                | Lag                                                                                 |                                                                                     |
| Lead-Lag Optimize?      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                                | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| Recall Mode             | None                                                                              | None                                                                              |                                                                                   | None                                                                              | None                                                                              |                                                                                   | None                                                                               | Max                                                                                 |                                                                                     | None                                                                                | Max                                                                                 |                                                                                     |
| Walk Time (s)           | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0                                                                               |                                                                                   |                                                                                    | 7.0                                                                                 |                                                                                     |                                                                                     | 7.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)     | 17.0                                                                              | 17.0                                                                              |                                                                                   | 17.0                                                                              | 17.0                                                                              |                                                                                   |                                                                                    | 17.0                                                                                |                                                                                     |                                                                                     | 17.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   |                                                                                    | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |
| Act Effect Green (s)    |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                   | 10.0                                                                              |                                                                                   | 40.7                                                                               | 37.6                                                                                |                                                                                     | 36.3                                                                                | 31.6                                                                                |                                                                                     |
| Actuated g/C Ratio      |                                                                                   | 0.16                                                                              |                                                                                   |                                                                                   | 0.16                                                                              |                                                                                   | 0.65                                                                               | 0.60                                                                                |                                                                                     | 0.58                                                                                | 0.51                                                                                |                                                                                     |
| v/c Ratio               |                                                                                   | 0.36                                                                              |                                                                                   |                                                                                   | 0.31                                                                              |                                                                                   | 0.15                                                                               | 0.24                                                                                |                                                                                     | 0.04                                                                                | 0.27                                                                                |                                                                                     |
| Control Delay           |                                                                                   | 14.3                                                                              |                                                                                   |                                                                                   | 19.8                                                                              |                                                                                   | 5.5                                                                                | 9.2                                                                                 |                                                                                     | 5.7                                                                                 | 12.7                                                                                |                                                                                     |
| Queue Delay             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Delay             |                                                                                   | 14.3                                                                              |                                                                                   |                                                                                   | 19.8                                                                              |                                                                                   | 5.5                                                                                | 9.2                                                                                 |                                                                                     | 5.7                                                                                 | 12.7                                                                                |                                                                                     |
| LOS                     |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   | A                                                                                  | A                                                                                   |                                                                                     | A                                                                                   | B                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 14.3                                                                              |                                                                                   |                                                                                   | 19.8                                                                              |                                                                                   |                                                                                    | 8.0                                                                                 |                                                                                     |                                                                                     | 11.9                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                    | A                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |
| 90th %ile Green (s)     | 24.0                                                                              | 24.0                                                                              |                                                                                   | 24.0                                                                              | 24.0                                                                              |                                                                                   | 10.3                                                                               | 33.1                                                                                |                                                                                     | 7.0                                                                                 | 29.8                                                                                |                                                                                     |
| 90th %ile Term Code     | Ped                                                                               | Ped                                                                               |                                                                                   | Ped                                                                               | Ped                                                                               |                                                                                   | Gap                                                                                | Hold                                                                                |                                                                                     | Gap                                                                                 | MaxR                                                                                |                                                                                     |
| 70th %ile Green (s)     | 8.8                                                                               | 8.8                                                                               |                                                                                   | 8.8                                                                               | 8.8                                                                               |                                                                                   | 7.6                                                                                | 31.4                                                                                |                                                                                     | 6.0                                                                                 | 29.8                                                                                |                                                                                     |
| 70th %ile Term Code     | Hold                                                                              | Hold                                                                              |                                                                                   | Gap                                                                               | Gap                                                                               |                                                                                   | Gap                                                                                | Hold                                                                                |                                                                                     | Gap                                                                                 | MaxR                                                                                |                                                                                     |
| 50th %ile Green (s)     | 7.8                                                                               | 7.8                                                                               |                                                                                   | 7.8                                                                               | 7.8                                                                               |                                                                                   | 7.6                                                                                | 42.6                                                                                |                                                                                     | 0.0                                                                                 | 29.8                                                                                |                                                                                     |
| 50th %ile Term Code     | Hold                                                                              | Hold                                                                              |                                                                                   | Gap                                                                               | Gap                                                                               |                                                                                   | Gap                                                                                | Hold                                                                                |                                                                                     | Skip                                                                                | MaxR                                                                                |                                                                                     |
| 30th %ile Green (s)     | 6.9                                                                               | 6.9                                                                               |                                                                                   | 6.9                                                                               | 6.9                                                                               |                                                                                   | 6.8                                                                                | 41.8                                                                                |                                                                                     | 0.0                                                                                 | 29.8                                                                                |                                                                                     |
| 30th %ile Term Code     | Hold                                                                              | Hold                                                                              |                                                                                   | Gap                                                                               | Gap                                                                               |                                                                                   | Gap                                                                                | Hold                                                                                |                                                                                     | Skip                                                                                | MaxR                                                                                |                                                                                     |
| 10th %ile Green (s)     | 5.7                                                                               | 5.7                                                                               |                                                                                   | 5.7                                                                               | 5.7                                                                               |                                                                                   | 0.0                                                                                | 34.4                                                                                |                                                                                     | 0.0                                                                                 | 34.4                                                                                |                                                                                     |
| 10th %ile Term Code     | Hold                                                                              | Hold                                                                              |                                                                                   | Hold                                                                              | Hold                                                                              |                                                                                   | Skip                                                                               | Dwell                                                                               |                                                                                     | Skip                                                                                | Dwell                                                                               |                                                                                     |
| Stops (vph)             |                                                                                   | 75                                                                                |                                                                                   |                                                                                   | 83                                                                                |                                                                                   | 37                                                                                 | 107                                                                                 |                                                                                     | 11                                                                                  | 129                                                                                 |                                                                                     |
| Fuel Used(gal)          |                                                                                   | 1                                                                                 |                                                                                   |                                                                                   | 1                                                                                 |                                                                                   | 1                                                                                  | 2                                                                                   |                                                                                     | 0                                                                                   | 2                                                                                   |                                                                                     |
| CO Emissions (g/hr)     |                                                                                   | 95                                                                                |                                                                                   |                                                                                   | 93                                                                                |                                                                                   | 63                                                                                 | 164                                                                                 |                                                                                     | 13                                                                                  | 148                                                                                 |                                                                                     |
| NOx Emissions (g/hr)    |                                                                                   | 18                                                                                |                                                                                   |                                                                                   | 18                                                                                |                                                                                   | 12                                                                                 | 32                                                                                  |                                                                                     | 3                                                                                   | 29                                                                                  |                                                                                     |
| VOC Emissions (g/hr)    |                                                                                   | 22                                                                                |                                                                                   |                                                                                   | 21                                                                                |                                                                                   | 15                                                                                 | 38                                                                                  |                                                                                     | 3                                                                                   | 34                                                                                  |                                                                                     |
| Dilemma Vehicles (#)    |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Queue Length 50th (ft)  |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 20                                                                                |                                                                                   | 10                                                                                 | 24                                                                                  |                                                                                     | 3                                                                                   | 48                                                                                  |                                                                                     |
| Queue Length 95th (ft)  |                                                                                   | 42                                                                                |                                                                                   |                                                                                   | 42                                                                                |                                                                                   | 47                                                                                 | 135                                                                                 |                                                                                     | 17                                                                                  | 143                                                                                 |                                                                                     |
| Internal Link Dist (ft) |                                                                                   | 220                                                                               |                                                                                   |                                                                                   | 220                                                                               |                                                                                   |                                                                                    | 608                                                                                 |                                                                                     |                                                                                     | 372                                                                                 |                                                                                     |
| Turn Bay Length (ft)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 200                                                                                |                                                                                     |                                                                                     | 200                                                                                 |                                                                                     |                                                                                     |
| Base Capacity (vph)     |                                                                                   | 1181                                                                              |                                                                                   |                                                                                   | 1120                                                                              |                                                                                   | 861                                                                                | 1077                                                                                |                                                                                     | 903                                                                                 | 910                                                                                 |                                                                                     |
| Starvation Cap Reductn  |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |



Lanes, Volumes, Timings  
1: Abbott Road & Dorrance Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

|                       |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group            | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Spillback Cap Reductn |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Storage Cap Reductn   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Reduced v/c Ratio     |                                                                                   | 0.16                                                                              |                                                                                   |                                                                                   | 0.13                                                                              |                                                                                   | 0.13                                                                               | 0.24                                                                                |                                                                                     | 0.03                                                                                | 0.27                                                                                |                                                                                     |

Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 62.4

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.36

Intersection Signal Delay: 12.1

Intersection LOS: B

Intersection Capacity Utilization 57.7%

ICU Level of Service B

Analysis Period (min) 15

90th %ile Actuated Cycle: 79.7

70th %ile Actuated Cycle: 61.8

50th %ile Actuated Cycle: 60.8

30th %ile Actuated Cycle: 59.1

10th %ile Actuated Cycle: 50.5

Splits and Phases: 1: Abbott Road & Dorrance Avenue

|                                                                                        |                                                                                        |                                                                                          |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
|  Ø1   |  Ø2   |  Ø4   |
| 20 s                                                                                   | 35 s                                                                                   | 30 s                                                                                     |
|  Ø5 |  Ø6 |  Ø8 |
| 20 s                                                                                   | 35 s                                                                                   | 30 s                                                                                     |

Lanes, Volumes, Timings  
2: Abbott Road & Plaza Driveway

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

|                            |  |                                                                                   |                                                                                   |       |                                                                                   |                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                 | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR   | SBL                                                                               | SBT                                                                               |
| Lane Configurations        |  |  |  |       |  |  |
| Traffic Volume (vph)       | 51                                                                                | 5                                                                                 | 368                                                                               | 82    | 2                                                                                 | 330                                                                               |
| Future Volume (vph)        | 51                                                                                | 5                                                                                 | 368                                                                               | 82    | 2                                                                                 | 330                                                                               |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900  | 1900                                                                              | 1900                                                                              |
| Storage Length (ft)        | 0                                                                                 | 0                                                                                 |                                                                                   | 0     | 100                                                                               |                                                                                   |
| Storage Lanes              | 1                                                                                 | 1                                                                                 |                                                                                   | 0     | 1                                                                                 |                                                                                   |
| Taper Length (ft)          | 25                                                                                |                                                                                   |                                                                                   |       | 100                                                                               |                                                                                   |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00  | 1.00                                                                              | 1.00                                                                              |
| Ped Bike Factor            | 0.99                                                                              | 0.97                                                                              | 0.99                                                                              |       | 1.00                                                                              |                                                                                   |
| Frt                        |                                                                                   | 0.850                                                                             | 0.975                                                                             |       |                                                                                   |                                                                                   |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   |       | 0.950                                                                             |                                                                                   |
| Satd. Flow (prot)          | 1770                                                                              | 1583                                                                              | 1737                                                                              | 0     | 1770                                                                              | 1810                                                                              |
| Flt Permitted              | 0.950                                                                             |                                                                                   |                                                                                   |       | 0.471                                                                             |                                                                                   |
| Satd. Flow (perm)          | 1754                                                                              | 1534                                                                              | 1737                                                                              | 0     | 875                                                                               | 1810                                                                              |
| Right Turn on Red          |                                                                                   | Yes                                                                               |                                                                                   | Yes   |                                                                                   |                                                                                   |
| Satd. Flow (RTOR)          |                                                                                   | 5                                                                                 | 23                                                                                |       |                                                                                   |                                                                                   |
| Link Speed (mph)           | 30                                                                                |                                                                                   | 30                                                                                |       |                                                                                   | 30                                                                                |
| Link Distance (ft)         | 300                                                                               |                                                                                   | 748                                                                               |       |                                                                                   | 688                                                                               |
| Travel Time (s)            | 6.8                                                                               |                                                                                   | 17.0                                                                              |       |                                                                                   | 15.6                                                                              |
| Confl. Peds. (#/hr)        | 5                                                                                 | 5                                                                                 |                                                                                   | 5     | 5                                                                                 |                                                                                   |
| Confl. Bikes (#/hr)        |                                                                                   | 2                                                                                 |                                                                                   | 2     |                                                                                   |                                                                                   |
| Peak Hour Factor           | 0.91                                                                              | 0.91                                                                              | 0.91                                                                              | 0.91  | 0.91                                                                              | 0.91                                                                              |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 7%                                                                                | 2%    | 2%                                                                                | 5%                                                                                |
| Adj. Flow (vph)            | 56                                                                                | 5                                                                                 | 404                                                                               | 90    | 2                                                                                 | 363                                                                               |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |       |                                                                                   |                                                                                   |
| Lane Group Flow (vph)      | 56                                                                                | 5                                                                                 | 494                                                                               | 0     | 2                                                                                 | 363                                                                               |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No    | No                                                                                | No                                                                                |
| Lane Alignment             | Left                                                                              | Right                                                                             | Left                                                                              | Right | Left                                                                              | Left                                                                              |
| Median Width(ft)           | 12                                                                                |                                                                                   | 12                                                                                |       |                                                                                   | 12                                                                                |
| Link Offset(ft)            | 0                                                                                 |                                                                                   | 0                                                                                 |       |                                                                                   | 0                                                                                 |
| Crosswalk Width(ft)        | 16                                                                                |                                                                                   | 16                                                                                |       |                                                                                   | 16                                                                                |
| Two way Left Turn Lane     |                                                                                   |                                                                                   | Yes                                                                               |       |                                                                                   | Yes                                                                               |
| Headway Factor             | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00  | 1.00                                                                              | 1.00                                                                              |
| Turning Speed (mph)        | 60                                                                                | 60                                                                                |                                                                                   | 60    | 60                                                                                |                                                                                   |
| Number of Detectors        | 1                                                                                 | 1                                                                                 | 1                                                                                 |       | 1                                                                                 | 1                                                                                 |
| Detector Template          | Left                                                                              | Right                                                                             | Thru                                                                              |       | Left                                                                              | Thru                                                                              |
| Leading Detector (ft)      | 50                                                                                | 50                                                                                | 50                                                                                |       | 50                                                                                | 50                                                                                |
| Trailing Detector (ft)     | 0                                                                                 | 0                                                                                 | 0                                                                                 |       | 0                                                                                 | 0                                                                                 |
| Detector 1 Position(ft)    | 0                                                                                 | 0                                                                                 | 0                                                                                 |       | 0                                                                                 | 0                                                                                 |
| Detector 1 Size(ft)        | 50                                                                                | 50                                                                                | 50                                                                                |       | 50                                                                                | 50                                                                                |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             |       | Cl+Ex                                                                             | Cl+Ex                                                                             |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |       |                                                                                   |                                                                                   |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |       | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |       | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |       | 0.0                                                                               | 0.0                                                                               |
| Turn Type                  | Perm                                                                              | Perm                                                                              | NA                                                                                |       | Perm                                                                              | NA                                                                                |
| Protected Phases           |                                                                                   |                                                                                   | 2                                                                                 |       |                                                                                   | 6                                                                                 |
| Permitted Phases           | 8                                                                                 | 8                                                                                 |                                                                                   |       | 6                                                                                 |                                                                                   |
| Detector Phase             | 8                                                                                 | 8                                                                                 | 2                                                                                 |       | 6                                                                                 | 6                                                                                 |

Lanes, Volumes, Timings  
2: Abbott Road & Plaza Driveway

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

|                         |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group              | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Minimum Initial (s)     | 6.0                                                                               | 6.0                                                                               | 6.0                                                                               |                                                                                   | 6.0                                                                               | 6.0                                                                               |
| Minimum Split (s)       | 27.2                                                                              | 27.2                                                                              | 32.2                                                                              |                                                                                   | 32.2                                                                              | 32.2                                                                              |
| Total Split (s)         | 30.0                                                                              | 30.0                                                                              | 50.0                                                                              |                                                                                   | 50.0                                                                              | 50.0                                                                              |
| Total Split (%)         | 37.5%                                                                             | 37.5%                                                                             | 62.5%                                                                             |                                                                                   | 62.5%                                                                             | 62.5%                                                                             |
| Maximum Green (s)       | 24.8                                                                              | 24.8                                                                              | 44.8                                                                              |                                                                                   | 44.8                                                                              | 44.8                                                                              |
| Yellow Time (s)         | 3.2                                                                               | 3.2                                                                               | 3.2                                                                               |                                                                                   | 3.2                                                                               | 3.2                                                                               |
| All-Red Time (s)        | 2.0                                                                               | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                               | 2.0                                                                               |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |
| Total Lost Time (s)     | 5.2                                                                               | 5.2                                                                               | 5.2                                                                               |                                                                                   | 5.2                                                                               | 5.2                                                                               |
| Lead/Lag                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lead-Lag Optimize?      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                               | 3.0                                                                               |
| Recall Mode             | None                                                                              | None                                                                              | Max                                                                               |                                                                                   | Max                                                                               | Max                                                                               |
| Walk Time (s)           | 7.0                                                                               | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0                                                                               |
| Flash Dont Walk (s)     | 15.0                                                                              | 15.0                                                                              | 20.0                                                                              |                                                                                   | 20.0                                                                              | 20.0                                                                              |
| Pedestrian Calls (#/hr) | 2                                                                                 | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |
| Act Effct Green (s)     | 9.9                                                                               | 9.9                                                                               | 60.3                                                                              |                                                                                   | 60.3                                                                              | 60.3                                                                              |
| Actuated g/C Ratio      | 0.14                                                                              | 0.14                                                                              | 0.82                                                                              |                                                                                   | 0.82                                                                              | 0.82                                                                              |
| v/c Ratio               | 0.24                                                                              | 0.02                                                                              | 0.34                                                                              |                                                                                   | 0.00                                                                              | 0.24                                                                              |
| Control Delay           | 30.1                                                                              | 15.8                                                                              | 4.9                                                                               |                                                                                   | 5.0                                                                               | 4.4                                                                               |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |
| Total Delay             | 30.1                                                                              | 15.8                                                                              | 4.9                                                                               |                                                                                   | 5.0                                                                               | 4.4                                                                               |
| LOS                     | C                                                                                 | B                                                                                 | A                                                                                 |                                                                                   | A                                                                                 | A                                                                                 |
| Approach Delay          | 28.9                                                                              |                                                                                   | 4.9                                                                               |                                                                                   |                                                                                   | 4.4                                                                               |
| Approach LOS            | C                                                                                 |                                                                                   | A                                                                                 |                                                                                   |                                                                                   | A                                                                                 |
| 90th %ile Green (s)     | 22.0                                                                              | 22.0                                                                              | 48.7                                                                              |                                                                                   | 48.7                                                                              | 48.7                                                                              |
| 90th %ile Term Code     | Ped                                                                               | Ped                                                                               | Dwell                                                                             |                                                                                   | Dwell                                                                             | Dwell                                                                             |
| 70th %ile Green (s)     | 8.9                                                                               | 8.9                                                                               | 57.6                                                                              |                                                                                   | 57.6                                                                              | 57.6                                                                              |
| 70th %ile Term Code     | Gap                                                                               | Gap                                                                               | Dwell                                                                             |                                                                                   | Dwell                                                                             | Dwell                                                                             |
| 50th %ile Green (s)     | 7.8                                                                               | 7.8                                                                               | 59.8                                                                              |                                                                                   | 59.8                                                                              | 59.8                                                                              |
| 50th %ile Term Code     | Gap                                                                               | Gap                                                                               | Dwell                                                                             |                                                                                   | Dwell                                                                             | Dwell                                                                             |
| 30th %ile Green (s)     | 0.0                                                                               | 0.0                                                                               | 59.8                                                                              |                                                                                   | 59.8                                                                              | 59.8                                                                              |
| 30th %ile Term Code     | Skip                                                                              | Skip                                                                              | Dwell                                                                             |                                                                                   | Dwell                                                                             | Dwell                                                                             |
| 10th %ile Green (s)     | 0.0                                                                               | 0.0                                                                               | 59.8                                                                              |                                                                                   | 59.8                                                                              | 59.8                                                                              |
| 10th %ile Term Code     | Skip                                                                              | Skip                                                                              | Dwell                                                                             |                                                                                   | Dwell                                                                             | Dwell                                                                             |
| Stops (vph)             | 44                                                                                | 4                                                                                 | 128                                                                               |                                                                                   | 1                                                                                 | 87                                                                                |
| Fuel Used(gal)          | 1                                                                                 | 0                                                                                 | 4                                                                                 |                                                                                   | 0                                                                                 | 3                                                                                 |
| CO Emissions (g/hr)     | 47                                                                                | 3                                                                                 | 264                                                                               |                                                                                   | 1                                                                                 | 178                                                                               |
| NOx Emissions (g/hr)    | 9                                                                                 | 1                                                                                 | 51                                                                                |                                                                                   | 0                                                                                 | 35                                                                                |
| VOC Emissions (g/hr)    | 11                                                                                | 1                                                                                 | 61                                                                                |                                                                                   | 0                                                                                 | 41                                                                                |
| Dilemma Vehicles (#)    | 0                                                                                 | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |
| Queue Length 50th (ft)  | 26                                                                                | 0                                                                                 | 55                                                                                |                                                                                   | 0                                                                                 | 38                                                                                |
| Queue Length 95th (ft)  | 49                                                                                | 8                                                                                 | 189                                                                               |                                                                                   | 3                                                                                 | 132                                                                               |
| Internal Link Dist (ft) | 220                                                                               |                                                                                   | 668                                                                               |                                                                                   |                                                                                   | 608                                                                               |
| Turn Bay Length (ft)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 100                                                                               |                                                                                   |
| Base Capacity (vph)     | 599                                                                               | 527                                                                               | 1434                                                                              |                                                                                   | 720                                                                               | 1490                                                                              |
| Starvation Cap Reductn  | 0                                                                                 | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |
| Spillback Cap Reductn   | 0                                                                                 | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |

Lanes, Volumes, Timings  
2: Abbott Road & Plaza Driveway

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025



| Lane Group          | WBL  | WBR  | NBT  | NBR | SBL  | SBT  |
|---------------------|------|------|------|-----|------|------|
| Storage Cap Reductn | 0    | 0    | 0    |     | 0    | 0    |
| Reduced v/c Ratio   | 0.09 | 0.01 | 0.34 |     | 0.00 | 0.24 |

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 73.2

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.34

Intersection Signal Delay: 6.3

Intersection LOS: A

Intersection Capacity Utilization 40.2%

ICU Level of Service A

Analysis Period (min) 15

90th %ile Actuated Cycle: 81.1

70th %ile Actuated Cycle: 76.9

50th %ile Actuated Cycle: 78

30th %ile Actuated Cycle: 65

10th %ile Actuated Cycle: 65

Splits and Phases: 2: Abbott Road & Plaza Driveway



# Lanes, Volumes, Timings

# Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

## 3: Abbott Road/Abbott Road & Ridge Road

12/04/2025

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |  |   |  |  |  |  |  |
| Traffic Volume (vph)       | 38                                                                                | 449                                                                               | 49                                                                                | 168                                                                               | 408                                                                               | 260                                                                               | 54                                                                                  | 135                                                                                 | 224                                                                                 | 188                                                                                 | 171                                                                                 | 30                                                                                  |
| Future Volume (vph)        | 38                                                                                | 449                                                                               | 49                                                                                | 168                                                                               | 408                                                                               | 260                                                                               | 54                                                                                  | 135                                                                                 | 224                                                                                 | 188                                                                                 | 171                                                                                 | 30                                                                                  |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Lane Width (ft)            | 11                                                                                | 11                                                                                | 11                                                                                | 10                                                                                | 10                                                                                | 12                                                                                | 12                                                                                  | 12                                                                                  | 12                                                                                  | 12                                                                                  | 12                                                                                  | 12                                                                                  |
| Storage Length (ft)        | 90                                                                                |                                                                                   | 250                                                                               | 200                                                                               |                                                                                   | 0                                                                                 | 300                                                                                 |                                                                                     | 300                                                                                 | 300                                                                                 |                                                                                     | 300                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                   |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (ft)          | 50                                                                                |                                                                                   |                                                                                   | 100                                                                               |                                                                                   |                                                                                   | 100                                                                                 |                                                                                     |                                                                                     | 100                                                                                 |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              |                                                                                   | 0.97                                                                              | 0.99                                                                                |                                                                                     | 0.98                                                                                | 1.00                                                                                |                                                                                     | 0.97                                                                                |
| Frt                        |                                                                                   | 0.985                                                                             |                                                                                   |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                     |                                                                                     | 0.850                                                                               |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1646                                                                              | 3190                                                                              | 0                                                                                 | 1652                                                                              | 1657                                                                              | 1583                                                                              | 1770                                                                                | 1845                                                                                | 1568                                                                                | 1770                                                                                | 1845                                                                                | 1553                                                                                |
| Flt Permitted              | 0.404                                                                             |                                                                                   |                                                                                   | 0.339                                                                             |                                                                                   |                                                                                   | 0.645                                                                               |                                                                                     |                                                                                     | 0.464                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 698                                                                               | 3190                                                                              | 0                                                                                 | 587                                                                               | 1657                                                                              | 1534                                                                              | 1194                                                                                | 1845                                                                                | 1540                                                                                | 861                                                                                 | 1845                                                                                | 1507                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 9                                                                                 |                                                                                   |                                                                                   |                                                                                   | 271                                                                               |                                                                                     |                                                                                     | 207                                                                                 |                                                                                     |                                                                                     | 67                                                                                  |
| Link Speed (mph)           |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                     | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 808                                                                               |                                                                                   |                                                                                   | 782                                                                               |                                                                                   |                                                                                     | 1105                                                                                |                                                                                     |                                                                                     | 748                                                                                 |                                                                                     |
| Travel Time (s)            |                                                                                   | 18.4                                                                              |                                                                                   |                                                                                   | 17.8                                                                              |                                                                                   |                                                                                     | 25.1                                                                                |                                                                                     |                                                                                     | 17.0                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                   |                                                                                     | 5                                                                                   | 5                                                                                   |                                                                                     | 5                                                                                   |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |
| Peak Hour Factor           | 0.96                                                                              | 0.96                                                                              | 0.96                                                                              | 0.96                                                                              | 0.96                                                                              | 0.96                                                                              | 0.96                                                                                | 0.96                                                                                | 0.96                                                                                | 0.96                                                                                | 0.96                                                                                | 0.96                                                                                |
| Heavy Vehicles (%)         | 6%                                                                                | 8%                                                                                | 2%                                                                                | 2%                                                                                | 7%                                                                                | 2%                                                                                | 2%                                                                                  | 3%                                                                                  | 3%                                                                                  | 2%                                                                                  | 3%                                                                                  | 4%                                                                                  |
| Adj. Flow (vph)            | 40                                                                                | 468                                                                               | 51                                                                                | 175                                                                               | 425                                                                               | 271                                                                               | 56                                                                                  | 141                                                                                 | 233                                                                                 | 196                                                                                 | 178                                                                                 | 31                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 40                                                                                | 519                                                                               | 0                                                                                 | 175                                                                               | 425                                                                               | 271                                                                               | 56                                                                                  | 141                                                                                 | 233                                                                                 | 196                                                                                 | 178                                                                                 | 31                                                                                  |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 11                                                                                |                                                                                   |                                                                                   | 11                                                                                |                                                                                   |                                                                                     | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |                                                                                   |                                                                                     | 16                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |
| Headway Factor             | 1.04                                                                              | 1.04                                                                              | 1.04                                                                              | 1.09                                                                              | 1.09                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Turning Speed (mph)        | 15                                                                                |                                                                                   | 9                                                                                 | 15                                                                                |                                                                                   | 9                                                                                 | 15                                                                                  |                                                                                     | 9                                                                                   | 15                                                                                  |                                                                                     | 9                                                                                   |
| Number of Detectors        | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 | 1                                                                                 | 1                                                                                   | 1                                                                                   | 1                                                                                   | 1                                                                                   | 1                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                                | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (ft)      | 50                                                                                | 50                                                                                |                                                                                   | 50                                                                                | 50                                                                                | 50                                                                                | 50                                                                                  | 50                                                                                  | 50                                                                                  | 50                                                                                  | 50                                                                                  | 50                                                                                  |
| Trailing Detector (ft)     | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Detector 1 Position(ft)    | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Detector 1 Size(ft)        | 50                                                                                | 50                                                                                |                                                                                   | 50                                                                                | 50                                                                                | 50                                                                                | 50                                                                                  | 50                                                                                  | 50                                                                                  | 50                                                                                  | 50                                                                                  | 50                                                                                  |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Turn Type                  | pm+pt                                                                             | NA                                                                                |                                                                                   | pm+pt                                                                             | NA                                                                                | pm+ov                                                                             | pm+pt                                                                               | NA                                                                                  | pm+ov                                                                               | pm+pt                                                                               | NA                                                                                  | pm+ov                                                                               |
| Protected Phases           | 7                                                                                 | 4                                                                                 |                                                                                   | 3                                                                                 | 8                                                                                 | 1                                                                                 | 5                                                                                   | 2                                                                                   | 3                                                                                   | 1                                                                                   | 6                                                                                   | 7                                                                                   |
| Permitted Phases           | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   | 8                                                                                 | 2                                                                                   |                                                                                     | 2                                                                                   | 6                                                                                   |                                                                                     | 6                                                                                   |

## Lanes, Volumes, Timings

## Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

## 3: Abbott Road/Abbott Road &amp; Ridge Road

12/04/2025

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Detector Phase          | 7                                                                                 | 4                                                                                 |                                                                                   | 3                                                                                 | 8                                                                                 | 1                                                                                 | 5                                                                                  | 2                                                                                   | 3                                                                                   | 1                                                                                   | 6                                                                                   | 7                                                                                   |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0                                                                               | 7.0                                                                               | 7.0                                                                                | 7.0                                                                                 | 7.0                                                                                 | 7.0                                                                                 | 7.0                                                                                 | 7.0                                                                                 |
| Minimum Split (s)       | 12.2                                                                              | 36.2                                                                              |                                                                                   | 12.2                                                                              | 36.2                                                                              | 12.2                                                                              | 12.2                                                                               | 42.2                                                                                | 12.2                                                                                | 12.2                                                                                | 42.2                                                                                | 12.2                                                                                |
| Total Split (s)         | 20.0                                                                              | 37.0                                                                              |                                                                                   | 20.0                                                                              | 37.0                                                                              | 20.0                                                                              | 20.0                                                                               | 43.0                                                                                | 20.0                                                                                | 20.0                                                                                | 43.0                                                                                | 20.0                                                                                |
| Total Split (%)         | 16.7%                                                                             | 30.8%                                                                             |                                                                                   | 16.7%                                                                             | 30.8%                                                                             | 16.7%                                                                             | 16.7%                                                                              | 35.8%                                                                               | 16.7%                                                                               | 16.7%                                                                               | 35.8%                                                                               | 16.7%                                                                               |
| Maximum Green (s)       | 14.8                                                                              | 31.8                                                                              |                                                                                   | 14.8                                                                              | 31.8                                                                              | 14.8                                                                              | 14.8                                                                               | 37.8                                                                                | 14.8                                                                                | 14.8                                                                                | 37.8                                                                                | 14.8                                                                                |
| Yellow Time (s)         | 3.2                                                                               | 3.2                                                                               |                                                                                   | 3.2                                                                               | 3.2                                                                               | 3.2                                                                               | 3.2                                                                                | 3.2                                                                                 | 3.2                                                                                 | 3.2                                                                                 | 3.2                                                                                 | 3.2                                                                                 |
| All-Red Time (s)        | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                               | 2.0                                                                               | 2.0                                                                               | 2.0                                                                                | 2.0                                                                                 | 2.0                                                                                 | 2.0                                                                                 | 2.0                                                                                 | 2.0                                                                                 |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Total Lost Time (s)     | 5.2                                                                               | 5.2                                                                               |                                                                                   | 5.2                                                                               | 5.2                                                                               | 5.2                                                                               | 5.2                                                                                | 5.2                                                                                 | 5.2                                                                                 | 5.2                                                                                 | 5.2                                                                                 | 5.2                                                                                 |
| Lead/Lag                | Lead                                                                              | Lag                                                                               |                                                                                   | Lead                                                                              | Lag                                                                               | Lead                                                                              | Lead                                                                               | Lag                                                                                 | Lead                                                                                | Lead                                                                                | Lag                                                                                 | Lead                                                                                |
| Lead-Lag Optimize?      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                                | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 |
| Recall Mode             | None                                                                              | Max                                                                               |                                                                                   | None                                                                              | Max                                                                               | None                                                                              | None                                                                               | None                                                                                | None                                                                                | None                                                                                | None                                                                                | None                                                                                |
| Walk Time (s)           |                                                                                   | 7.0                                                                               |                                                                                   |                                                                                   | 7.0                                                                               |                                                                                   |                                                                                    | 7.0                                                                                 |                                                                                     |                                                                                     | 7.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)     |                                                                                   | 24.0                                                                              |                                                                                   |                                                                                   | 24.0                                                                              |                                                                                   |                                                                                    | 30.0                                                                                |                                                                                     |                                                                                     | 30.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) |                                                                                   | 5                                                                                 |                                                                                   |                                                                                   | 5                                                                                 |                                                                                   |                                                                                    | 5                                                                                   |                                                                                     |                                                                                     | 5                                                                                   |                                                                                     |
| Act Effect Green (s)    | 40.1                                                                              | 32.6                                                                              |                                                                                   | 47.1                                                                              | 38.4                                                                              | 50.7                                                                              | 23.0                                                                               | 15.1                                                                                | 25.5                                                                                | 32.4                                                                                | 22.5                                                                                | 30.0                                                                                |
| Actuated g/C Ratio      | 0.44                                                                              | 0.36                                                                              |                                                                                   | 0.51                                                                              | 0.42                                                                              | 0.55                                                                              | 0.25                                                                               | 0.16                                                                                | 0.28                                                                                | 0.35                                                                                | 0.25                                                                                | 0.33                                                                                |
| v/c Ratio               | 0.10                                                                              | 0.46                                                                              |                                                                                   | 0.41                                                                              | 0.61                                                                              | 0.28                                                                              | 0.16                                                                               | 0.47                                                                                | 0.40                                                                                | 0.46                                                                                | 0.39                                                                                | 0.06                                                                                |
| Control Delay           | 15.3                                                                              | 26.7                                                                              |                                                                                   | 17.2                                                                              | 29.7                                                                              | 2.6                                                                               | 20.3                                                                               | 39.4                                                                                | 6.2                                                                                 | 24.3                                                                                | 32.5                                                                                | 0.5                                                                                 |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Total Delay             | 15.3                                                                              | 26.7                                                                              |                                                                                   | 17.2                                                                              | 29.7                                                                              | 2.6                                                                               | 20.3                                                                               | 39.4                                                                                | 6.2                                                                                 | 24.3                                                                                | 32.5                                                                                | 0.5                                                                                 |
| LOS                     | B                                                                                 | C                                                                                 |                                                                                   | B                                                                                 | C                                                                                 | A                                                                                 | C                                                                                  | D                                                                                   | A                                                                                   | C                                                                                   | C                                                                                   | A                                                                                   |
| Approach Delay          |                                                                                   | 25.8                                                                              |                                                                                   |                                                                                   | 18.8                                                                              |                                                                                   |                                                                                    | 18.9                                                                                |                                                                                     |                                                                                     | 26.1                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                    | B                                                                                   |                                                                                     |                                                                                     | C                                                                                   |                                                                                     |
| 90th %ile Green (s)     | 9.1                                                                               | 31.8                                                                              |                                                                                   | 14.8                                                                              | 37.5                                                                              | 14.8                                                                              | 9.5                                                                                | 37.0                                                                                | 14.8                                                                                | 14.8                                                                                | 42.3                                                                                | 9.1                                                                                 |
| 90th %ile Term Code     | Gap                                                                               | MaxR                                                                              |                                                                                   | Max                                                                               | Hold                                                                              | Max                                                                               | Gap                                                                                | Ped                                                                                 | Max                                                                                 | Max                                                                                 | Hold                                                                                | Gap                                                                                 |
| 70th %ile Green (s)     | 7.1                                                                               | 31.8                                                                              |                                                                                   | 12.0                                                                              | 36.7                                                                              | 14.6                                                                              | 8.2                                                                                | 14.0                                                                                | 12.0                                                                                | 14.6                                                                                | 20.4                                                                                | 7.1                                                                                 |
| 70th %ile Term Code     | Gap                                                                               | MaxR                                                                              |                                                                                   | Gap                                                                               | Hold                                                                              | Gap                                                                               | Gap                                                                                | Gap                                                                                 | Gap                                                                                 | Gap                                                                                 | Hold                                                                                | Gap                                                                                 |
| 50th %ile Green (s)     | 7.0                                                                               | 31.8                                                                              |                                                                                   | 10.2                                                                              | 35.0                                                                              | 12.6                                                                              | 7.4                                                                                | 12.0                                                                                | 10.2                                                                                | 12.6                                                                                | 17.2                                                                                | 7.0                                                                                 |
| 50th %ile Term Code     | Min                                                                               | MaxR                                                                              |                                                                                   | Gap                                                                               | Hold                                                                              | Gap                                                                               | Gap                                                                                | Gap                                                                                 | Gap                                                                                 | Gap                                                                                 | Hold                                                                                | Min                                                                                 |
| 30th %ile Green (s)     | 7.0                                                                               | 31.8                                                                              |                                                                                   | 8.8                                                                               | 33.6                                                                              | 10.9                                                                              | 7.0                                                                                | 10.1                                                                                | 8.8                                                                                 | 10.9                                                                                | 14.0                                                                                | 7.0                                                                                 |
| 30th %ile Term Code     | Min                                                                               | MaxR                                                                              |                                                                                   | Gap                                                                               | Hold                                                                              | Gap                                                                               | Min                                                                                | Gap                                                                                 | Gap                                                                                 | Gap                                                                                 | Hold                                                                                | Min                                                                                 |
| 10th %ile Green (s)     | 0.0                                                                               | 31.8                                                                              |                                                                                   | 7.1                                                                               | 44.1                                                                              | 8.7                                                                               | 0.0                                                                                | 7.8                                                                                 | 7.1                                                                                 | 8.7                                                                                 | 21.7                                                                                | 0.0                                                                                 |
| 10th %ile Term Code     | Skip                                                                              | MaxR                                                                              |                                                                                   | Gap                                                                               | Hold                                                                              | Gap                                                                               | Skip                                                                               | Gap                                                                                 | Gap                                                                                 | Gap                                                                                 | Hold                                                                                | Skip                                                                                |
| Stops (vph)             | 23                                                                                | 364                                                                               |                                                                                   | 87                                                                                | 306                                                                               | 17                                                                                | 36                                                                                 | 111                                                                                 | 31                                                                                  | 123                                                                                 | 134                                                                                 | 0                                                                                   |
| Fuel Used(gal)          | 0                                                                                 | 8                                                                                 |                                                                                   | 2                                                                                 | 7                                                                                 | 2                                                                                 | 1                                                                                  | 3                                                                                   | 2                                                                                   | 3                                                                                   | 3                                                                                   | 0                                                                                   |
| CO Emissions (g/hr)     | 34                                                                                | 549                                                                               |                                                                                   | 146                                                                               | 465                                                                               | 127                                                                               | 62                                                                                 | 200                                                                                 | 167                                                                                 | 189                                                                                 | 201                                                                                 | 12                                                                                  |
| NOx Emissions (g/hr)    | 7                                                                                 | 107                                                                               |                                                                                   | 28                                                                                | 90                                                                                | 25                                                                                | 12                                                                                 | 39                                                                                  | 32                                                                                  | 37                                                                                  | 39                                                                                  | 2                                                                                   |
| VOC Emissions (g/hr)    | 8                                                                                 | 127                                                                               |                                                                                   | 34                                                                                | 108                                                                               | 29                                                                                | 14                                                                                 | 46                                                                                  | 39                                                                                  | 44                                                                                  | 46                                                                                  | 3                                                                                   |
| Dilemma Vehicles (#)    | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Queue Length 50th (ft)  | 10                                                                                | 110                                                                               |                                                                                   | 47                                                                                | 184                                                                               | 0                                                                                 | 21                                                                                 | 74                                                                                  | 10                                                                                  | 79                                                                                  | 88                                                                                  | 0                                                                                   |
| Queue Length 95th (ft)  | 39                                                                                | 240                                                                               |                                                                                   | 135                                                                               | #463                                                                              | 44                                                                                | 47                                                                                 | 134                                                                                 | 54                                                                                  | 136                                                                                 | 155                                                                                 | 2                                                                                   |
| Internal Link Dist (ft) |                                                                                   | 728                                                                               |                                                                                   |                                                                                   | 702                                                                               |                                                                                   |                                                                                    | 1025                                                                                |                                                                                     |                                                                                     | 668                                                                                 |                                                                                     |
| Turn Bay Length (ft)    | 90                                                                                |                                                                                   |                                                                                   | 200                                                                               |                                                                                   |                                                                                   | 300                                                                                |                                                                                     | 300                                                                                 | 300                                                                                 |                                                                                     | 300                                                                                 |
| Base Capacity (vph)     | 513                                                                               | 1138                                                                              |                                                                                   | 485                                                                               | 694                                                                               | 1016                                                                              | 486                                                                                | 778                                                                                 | 651                                                                                 | 457                                                                                 | 792                                                                                 | 665                                                                                 |
| Starvation Cap Reductn  | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |

|                       |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group            | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Spillback Cap Reductn | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Storage Cap Reductn   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Reduced v/c Ratio     | 0.08                                                                              | 0.46                                                                              |                                                                                   | 0.36                                                                              | 0.61                                                                              | 0.27                                                                              | 0.12                                                                               | 0.18                                                                                | 0.36                                                                                | 0.43                                                                                | 0.22                                                                                | 0.05                                                                                |

## Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 91.7

Natural Cycle: 105

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.61

Intersection Signal Delay: 21.8

Intersection LOS: C

Intersection Capacity Utilization 73.6%

ICU Level of Service D

Analysis Period (min) 15

90th %ile Actuated Cycle: 119.2

70th %ile Actuated Cycle: 93.2

50th %ile Actuated Cycle: 87.4

30th %ile Actuated Cycle: 82.4

10th %ile Actuated Cycle: 76.2

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Abbott Road/Abbott Road &amp; Ridge Road

|                                                                                        |                                                                                        |                                                                                        |                                                                                          |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
|  Ø1 |  Ø2 |  Ø3 |  Ø4 |
| 20 s                                                                                   | 43 s                                                                                   | 20 s                                                                                   | 37 s                                                                                     |
|  Ø5 |  Ø6 |  Ø7 |  Ø8 |
| 20 s                                                                                   | 43 s                                                                                   | 20 s                                                                                   | 37 s                                                                                     |



Lanes, Volumes, Timings  
4: Abbott Road & Fernald Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

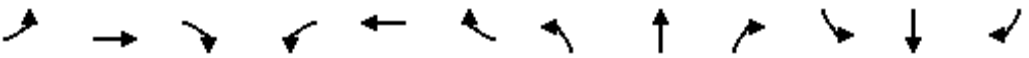
12/04/2025

|                                   |  |  |  |  |  |  |   |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                        | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |  |  |                                                                                     |  |  |  |
| Traffic Volume (vph)              | 0                                                                                 | 0                                                                                 | 1                                                                                 | 16                                                                                | 0                                                                                 | 7                                                                                 | 3                                                                                   | 396                                                                                 | 5                                                                                   | 3                                                                                   | 363                                                                                 | 2                                                                                   |
| Future Volume (vph)               | 0                                                                                 | 0                                                                                 | 1                                                                                 | 16                                                                                | 0                                                                                 | 7                                                                                 | 3                                                                                   | 396                                                                                 | 5                                                                                   | 3                                                                                   | 363                                                                                 | 2                                                                                   |
| Ideal Flow (vphpl)                | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Storage Length (ft)               | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 100                                                                                 |                                                                                     | 0                                                                                   | 100                                                                                 |                                                                                     | 0                                                                                   |
| Storage Lanes                     | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)                 | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                |                                                                                   |                                                                                   | 100                                                                                 |                                                                                     |                                                                                     | 100                                                                                 |                                                                                     |                                                                                     |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Frt                               |                                                                                   | 0.865                                                                             |                                                                                   |                                                                                   | 0.959                                                                             |                                                                                   |                                                                                     | 0.998                                                                               |                                                                                     |                                                                                     | 0.999                                                                               |                                                                                     |
| Flt Protected                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.966                                                                             |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)                 | 0                                                                                 | 1611                                                                              | 0                                                                                 | 0                                                                                 | 1726                                                                              | 0                                                                                 | 1770                                                                                | 1773                                                                                | 0                                                                                   | 1770                                                                                | 1808                                                                                | 0                                                                                   |
| Flt Permitted                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.966                                                                             |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)                 | 0                                                                                 | 1611                                                                              | 0                                                                                 | 0                                                                                 | 1726                                                                              | 0                                                                                 | 1770                                                                                | 1773                                                                                | 0                                                                                   | 1770                                                                                | 1808                                                                                | 0                                                                                   |
| Link Speed (mph)                  |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                     | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)                |                                                                                   | 100                                                                               |                                                                                   |                                                                                   | 300                                                                               |                                                                                   |                                                                                     | 1266                                                                                |                                                                                     |                                                                                     | 1105                                                                                |                                                                                     |
| Travel Time (s)                   |                                                                                   | 2.3                                                                               |                                                                                   |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                     | 28.8                                                                                |                                                                                     |                                                                                     | 25.1                                                                                |                                                                                     |
| Confl. Peds. (#/hr)               | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                   |                                                                                     | 5                                                                                   | 5                                                                                   |                                                                                     | 5                                                                                   |
| Confl. Bikes (#/hr)               |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |
| Peak Hour Factor                  | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                |
| Heavy Vehicles (%)                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                  | 7%                                                                                  | 2%                                                                                  | 2%                                                                                  | 5%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)                   | 0                                                                                 | 0                                                                                 | 1                                                                                 | 16                                                                                | 0                                                                                 | 7                                                                                 | 3                                                                                   | 404                                                                                 | 5                                                                                   | 3                                                                                   | 370                                                                                 | 2                                                                                   |
| Shared Lane Traffic (%)           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)             | 0                                                                                 | 1                                                                                 | 0                                                                                 | 0                                                                                 | 23                                                                                | 0                                                                                 | 3                                                                                   | 409                                                                                 | 0                                                                                   | 3                                                                                   | 372                                                                                 | 0                                                                                   |
| Enter Blocked Intersection        | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment                    | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)                  |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                     | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Link Offset(ft)                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)               |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |                                                                                   |                                                                                     | 16                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Two way Left Turn Lane            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |
| Headway Factor                    | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Turning Speed (mph)               | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                  |                                                                                     | 60                                                                                  | 60                                                                                  |                                                                                     | 60                                                                                  |
| Sign Control                      |                                                                                   | Stop                                                                              |                                                                                   |                                                                                   | Stop                                                                              |                                                                                   |                                                                                     | Free                                                                                |                                                                                     |                                                                                     | Free                                                                                |                                                                                     |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                        | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:                     | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization | 36.8%                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min)             | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| ICU Level of Service A            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

Lanes, Volumes, Timings  
5: Abbott Road & Elmview Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

|                            |  |                                                                                   |       |       |                                                                                   |       |                                                                                     |                                                                                     |       |                                                                                     |                                                                                     |       |
|----------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------|-------|-----------------------------------------------------------------------------------|-------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------|
| Lane Group                 | EBL                                                                                | EBT                                                                               | EBR   | WBL   | WBT                                                                               | WBR   | NBL                                                                                 | NBT                                                                                 | NBR   | SBL                                                                                 | SBT                                                                                 | SBR   |
| Lane Configurations        |                                                                                    |  |       |       |  |       |  |  |       |  |  |       |
| Traffic Volume (vph)       | 19                                                                                 | 1                                                                                 | 7     | 5     | 0                                                                                 | 3     | 3                                                                                   | 363                                                                                 | 2     | 3                                                                                   | 364                                                                                 | 10    |
| Future Volume (vph)        | 19                                                                                 | 1                                                                                 | 7     | 5     | 0                                                                                 | 3     | 3                                                                                   | 363                                                                                 | 2     | 3                                                                                   | 364                                                                                 | 10    |
| Ideal Flow (vphpl)         | 1900                                                                               | 1900                                                                              | 1900  | 1900  | 1900                                                                              | 1900  | 1900                                                                                | 1900                                                                                | 1900  | 1900                                                                                | 1900                                                                                | 1900  |
| Storage Length (ft)        | 0                                                                                  |                                                                                   | 0     | 0     |                                                                                   | 0     | 100                                                                                 |                                                                                     | 0     | 100                                                                                 |                                                                                     | 0     |
| Storage Lanes              | 0                                                                                  |                                                                                   | 0     | 0     |                                                                                   | 0     | 1                                                                                   |                                                                                     | 0     | 1                                                                                   |                                                                                     | 0     |
| Taper Length (ft)          | 25                                                                                 |                                                                                   |       | 25    |                                                                                   |       | 100                                                                                 |                                                                                     |       | 100                                                                                 |                                                                                     |       |
| Lane Util. Factor          | 1.00                                                                               | 1.00                                                                              | 1.00  | 1.00  | 1.00                                                                              | 1.00  | 1.00                                                                                | 1.00                                                                                | 1.00  | 1.00                                                                                | 1.00                                                                                | 1.00  |
| Ped Bike Factor            |                                                                                    | 0.99                                                                              |       |       | 0.98                                                                              |       | 1.00                                                                                | 1.00                                                                                |       | 1.00                                                                                | 1.00                                                                                |       |
| Frt                        |                                                                                    | 0.965                                                                             |       |       | 0.949                                                                             |       |                                                                                     | 0.999                                                                               |       |                                                                                     | 0.996                                                                               |       |
| Flt Protected              |                                                                                    | 0.966                                                                             |       |       | 0.970                                                                             |       | 0.950                                                                               |                                                                                     |       | 0.950                                                                               |                                                                                     |       |
| Satd. Flow (prot)          | 0                                                                                  | 1723                                                                              | 0     | 0     | 1695                                                                              | 0     | 1770                                                                                | 1742                                                                                | 0     | 1770                                                                                | 1786                                                                                | 0     |
| Flt Permitted              |                                                                                    | 0.786                                                                             |       |       | 0.794                                                                             |       | 0.537                                                                               |                                                                                     |       | 0.542                                                                               |                                                                                     |       |
| Satd. Flow (perm)          | 0                                                                                  | 1394                                                                              | 0     | 0     | 1381                                                                              | 0     | 996                                                                                 | 1742                                                                                | 0     | 1005                                                                                | 1786                                                                                | 0     |
| Right Turn on Red          |                                                                                    |                                                                                   | Yes   |       |                                                                                   | Yes   |                                                                                     |                                                                                     | Yes   |                                                                                     |                                                                                     | Yes   |
| Satd. Flow (RTOR)          |                                                                                    | 7                                                                                 |       |       | 34                                                                                |       |                                                                                     | 1                                                                                   |       |                                                                                     | 3                                                                                   |       |
| Link Speed (mph)           |                                                                                    | 30                                                                                |       |       | 30                                                                                |       |                                                                                     | 30                                                                                  |       |                                                                                     | 30                                                                                  |       |
| Link Distance (ft)         |                                                                                    | 300                                                                               |       |       | 300                                                                               |       |                                                                                     | 457                                                                                 |       |                                                                                     | 1266                                                                                |       |
| Travel Time (s)            |                                                                                    | 6.8                                                                               |       |       | 6.8                                                                               |       |                                                                                     | 10.4                                                                                |       |                                                                                     | 28.8                                                                                |       |
| Confl. Peds. (#/hr)        | 5                                                                                  |                                                                                   | 5     | 5     |                                                                                   | 5     | 5                                                                                   |                                                                                     | 5     | 5                                                                                   |                                                                                     | 5     |
| Confl. Bikes (#/hr)        |                                                                                    |                                                                                   | 2     |       |                                                                                   | 2     |                                                                                     |                                                                                     | 2     |                                                                                     |                                                                                     | 2     |
| Peak Hour Factor           | 0.99                                                                               | 0.99                                                                              | 0.99  | 0.99  | 0.99                                                                              | 0.99  | 0.99                                                                                | 0.99                                                                                | 0.99  | 0.99                                                                                | 0.99                                                                                | 0.99  |
| Heavy Vehicles (%)         | 2%                                                                                 | 2%                                                                                | 2%    | 2%    | 2%                                                                                | 2%    | 2%                                                                                  | 9%                                                                                  | 2%    | 2%                                                                                  | 6%                                                                                  | 2%    |
| Adj. Flow (vph)            | 19                                                                                 | 1                                                                                 | 7     | 5     | 0                                                                                 | 3     | 3                                                                                   | 367                                                                                 | 2     | 3                                                                                   | 368                                                                                 | 10    |
| Shared Lane Traffic (%)    |                                                                                    |                                                                                   |       |       |                                                                                   |       |                                                                                     |                                                                                     |       |                                                                                     |                                                                                     |       |
| Lane Group Flow (vph)      | 0                                                                                  | 27                                                                                | 0     | 0     | 8                                                                                 | 0     | 3                                                                                   | 369                                                                                 | 0     | 3                                                                                   | 378                                                                                 | 0     |
| Enter Blocked Intersection | No                                                                                 | No                                                                                | No    | No    | No                                                                                | No    | No                                                                                  | No                                                                                  | No    | No                                                                                  | No                                                                                  | No    |
| Lane Alignment             | Left                                                                               | Left                                                                              | Right | Left  | Left                                                                              | Right | Left                                                                                | Left                                                                                | Right | Left                                                                                | Left                                                                                | Right |
| Median Width(ft)           |                                                                                    | 0                                                                                 |       |       | 0                                                                                 |       |                                                                                     | 12                                                                                  |       |                                                                                     | 12                                                                                  |       |
| Link Offset(ft)            |                                                                                    | 0                                                                                 |       |       | 0                                                                                 |       |                                                                                     | 0                                                                                   |       |                                                                                     | 0                                                                                   |       |
| Crosswalk Width(ft)        |                                                                                    | 16                                                                                |       |       | 16                                                                                |       |                                                                                     | 16                                                                                  |       |                                                                                     | 16                                                                                  |       |
| Two way Left Turn Lane     |                                                                                    |                                                                                   |       |       |                                                                                   |       |                                                                                     | Yes                                                                                 |       |                                                                                     | Yes                                                                                 |       |
| Headway Factor             | 1.00                                                                               | 1.00                                                                              | 1.00  | 1.00  | 1.00                                                                              | 1.00  | 1.00                                                                                | 1.00                                                                                | 1.00  | 1.00                                                                                | 1.00                                                                                | 1.00  |
| Turning Speed (mph)        | 60                                                                                 |                                                                                   | 60    | 60    |                                                                                   | 60    | 60                                                                                  |                                                                                     | 60    | 60                                                                                  |                                                                                     | 60    |
| Number of Detectors        | 1                                                                                  | 1                                                                                 |       | 1     | 1                                                                                 |       | 1                                                                                   | 1                                                                                   |       | 1                                                                                   | 1                                                                                   |       |
| Detector Template          | Left                                                                               | Thru                                                                              |       | Left  | Thru                                                                              |       | Left                                                                                | Thru                                                                                |       | Left                                                                                | Thru                                                                                |       |
| Leading Detector (ft)      | 20                                                                                 | 50                                                                                |       | 20    | 50                                                                                |       | 50                                                                                  | 50                                                                                  |       | 50                                                                                  | 50                                                                                  |       |
| Trailing Detector (ft)     | 0                                                                                  | 0                                                                                 |       | 0     | 0                                                                                 |       | 0                                                                                   | 0                                                                                   |       | 0                                                                                   | 0                                                                                   |       |
| Detector 1 Position(ft)    | 0                                                                                  | 0                                                                                 |       | 0     | 0                                                                                 |       | 0                                                                                   | 0                                                                                   |       | 0                                                                                   | 0                                                                                   |       |
| Detector 1 Size(ft)        | 20                                                                                 | 50                                                                                |       | 20    | 50                                                                                |       | 50                                                                                  | 50                                                                                  |       | 50                                                                                  | 50                                                                                  |       |
| Detector 1 Type            | Cl+Ex                                                                              | Cl+Ex                                                                             |       | Cl+Ex | Cl+Ex                                                                             |       | Cl+Ex                                                                               | Cl+Ex                                                                               |       | Cl+Ex                                                                               | Cl+Ex                                                                               |       |
| Detector 1 Channel         |                                                                                    |                                                                                   |       |       |                                                                                   |       |                                                                                     |                                                                                     |       |                                                                                     |                                                                                     |       |
| Detector 1 Extend (s)      | 0.0                                                                                | 0.0                                                                               |       | 0.0   | 0.0                                                                               |       | 0.0                                                                                 | 0.0                                                                                 |       | 0.0                                                                                 | 0.0                                                                                 |       |
| Detector 1 Queue (s)       | 0.0                                                                                | 0.0                                                                               |       | 0.0   | 0.0                                                                               |       | 0.0                                                                                 | 0.0                                                                                 |       | 0.0                                                                                 | 0.0                                                                                 |       |
| Detector 1 Delay (s)       | 0.0                                                                                | 0.0                                                                               |       | 0.0   | 0.0                                                                               |       | 0.0                                                                                 | 0.0                                                                                 |       | 0.0                                                                                 | 0.0                                                                                 |       |
| Turn Type                  | Perm                                                                               | NA                                                                                |       | Perm  | NA                                                                                |       | Perm                                                                                | NA                                                                                  |       | Perm                                                                                | NA                                                                                  |       |
| Protected Phases           |                                                                                    | 4                                                                                 |       |       | 8                                                                                 |       |                                                                                     | 2                                                                                   |       |                                                                                     | 6                                                                                   |       |
| Permitted Phases           | 4                                                                                  |                                                                                   |       | 8     |                                                                                   |       | 2                                                                                   |                                                                                     |       | 6                                                                                   |                                                                                     |       |
| Detector Phase             | 4                                                                                  | 4                                                                                 |       | 8     | 8                                                                                 |       | 2                                                                                   | 2                                                                                   |       | 6                                                                                   | 6                                                                                   |       |

Lanes, Volumes, Timings  
5: Abbott Road & Elmview Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 6.0                                                                               | 6.0                                                                               |                                                                                   | 6.0                                                                               | 6.0                                                                               |                                                                                   | 20.0                                                                               | 20.0                                                                                |                                                                                     | 20.0                                                                                | 20.0                                                                                |                                                                                     |
| Minimum Split (s)       | 27.2                                                                              | 27.2                                                                              |                                                                                   | 27.2                                                                              | 27.2                                                                              |                                                                                   | 27.2                                                                               | 27.2                                                                                |                                                                                     | 27.2                                                                                | 27.2                                                                                |                                                                                     |
| Total Split (s)         | 28.0                                                                              | 28.0                                                                              |                                                                                   | 28.0                                                                              | 28.0                                                                              |                                                                                   | 42.0                                                                               | 42.0                                                                                |                                                                                     | 42.0                                                                                | 42.0                                                                                |                                                                                     |
| Total Split (%)         | 40.0%                                                                             | 40.0%                                                                             |                                                                                   | 40.0%                                                                             | 40.0%                                                                             |                                                                                   | 60.0%                                                                              | 60.0%                                                                               |                                                                                     | 60.0%                                                                               | 60.0%                                                                               |                                                                                     |
| Maximum Green (s)       | 22.8                                                                              | 22.8                                                                              |                                                                                   | 22.8                                                                              | 22.8                                                                              |                                                                                   | 36.8                                                                               | 36.8                                                                                |                                                                                     | 36.8                                                                                | 36.8                                                                                |                                                                                     |
| Yellow Time (s)         | 3.2                                                                               | 3.2                                                                               |                                                                                   | 3.2                                                                               | 3.2                                                                               |                                                                                   | 3.2                                                                                | 3.2                                                                                 |                                                                                     | 3.2                                                                                 | 3.2                                                                                 |                                                                                     |
| All-Red Time (s)        | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                                | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Lost Time Adjust (s)    |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)     |                                                                                   | 5.2                                                                               |                                                                                   |                                                                                   | 5.2                                                                               |                                                                                   | 5.2                                                                                | 5.2                                                                                 |                                                                                     | 5.2                                                                                 | 5.2                                                                                 |                                                                                     |
| Lead/Lag                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lead-Lag Optimize?      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                                | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| Recall Mode             | None                                                                              | None                                                                              |                                                                                   | None                                                                              | None                                                                              |                                                                                   | Max                                                                                | Max                                                                                 |                                                                                     | Max                                                                                 | Max                                                                                 |                                                                                     |
| Walk Time (s)           | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                                | 7.0                                                                                 |                                                                                     | 7.0                                                                                 | 7.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)     | 15.0                                                                              | 15.0                                                                              |                                                                                   | 15.0                                                                              | 15.0                                                                              |                                                                                   | 15.0                                                                               | 15.0                                                                                |                                                                                     | 15.0                                                                                | 15.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                  | 2                                                                                   |                                                                                     | 2                                                                                   | 2                                                                                   |                                                                                     |
| Act Effct Green (s)     |                                                                                   | 9.0                                                                               |                                                                                   |                                                                                   | 8.9                                                                               |                                                                                   | 55.3                                                                               | 55.3                                                                                |                                                                                     | 55.3                                                                                | 55.3                                                                                |                                                                                     |
| Actuated g/C Ratio      |                                                                                   | 0.14                                                                              |                                                                                   |                                                                                   | 0.14                                                                              |                                                                                   | 0.87                                                                               | 0.87                                                                                |                                                                                     | 0.87                                                                                | 0.87                                                                                |                                                                                     |
| v/c Ratio               |                                                                                   | 0.13                                                                              |                                                                                   |                                                                                   | 0.04                                                                              |                                                                                   | 0.00                                                                               | 0.24                                                                                |                                                                                     | 0.00                                                                                | 0.24                                                                                |                                                                                     |
| Control Delay           |                                                                                   | 21.2                                                                              |                                                                                   |                                                                                   | 0.2                                                                               |                                                                                   | 4.7                                                                                | 4.0                                                                                 |                                                                                     | 4.7                                                                                 | 3.9                                                                                 |                                                                                     |
| Queue Delay             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Delay             |                                                                                   | 21.2                                                                              |                                                                                   |                                                                                   | 0.2                                                                               |                                                                                   | 4.7                                                                                | 4.0                                                                                 |                                                                                     | 4.7                                                                                 | 3.9                                                                                 |                                                                                     |
| LOS                     |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | A                                                                                 |                                                                                   | A                                                                                  | A                                                                                   |                                                                                     | A                                                                                   | A                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 21.2                                                                              |                                                                                   |                                                                                   | 0.3                                                                               |                                                                                   |                                                                                    | 4.0                                                                                 |                                                                                     |                                                                                     | 3.9                                                                                 |                                                                                     |
| Approach LOS            |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | A                                                                                 |                                                                                   |                                                                                    | A                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |
| 90th %ile Green (s)     | 22.0                                                                              | 22.0                                                                              |                                                                                   | 22.0                                                                              | 22.0                                                                              |                                                                                   | 46.2                                                                               | 46.2                                                                                |                                                                                     | 46.2                                                                                | 46.2                                                                                |                                                                                     |
| 90th %ile Term Code     | Ped                                                                               | Ped                                                                               |                                                                                   | Ped                                                                               | Ped                                                                               |                                                                                   | Dwell                                                                              | Dwell                                                                               |                                                                                     | Dwell                                                                               | Dwell                                                                               |                                                                                     |
| 70th %ile Green (s)     | 7.2                                                                               | 7.2                                                                               |                                                                                   | 7.2                                                                               | 7.2                                                                               |                                                                                   | 51.8                                                                               | 51.8                                                                                |                                                                                     | 51.8                                                                                | 51.8                                                                                |                                                                                     |
| 70th %ile Term Code     | Gap                                                                               | Gap                                                                               |                                                                                   | Hold                                                                              | Hold                                                                              |                                                                                   | Dwell                                                                              | Dwell                                                                               |                                                                                     | Dwell                                                                               | Dwell                                                                               |                                                                                     |
| 50th %ile Green (s)     | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 51.8                                                                               | 51.8                                                                                |                                                                                     | 51.8                                                                                | 51.8                                                                                |                                                                                     |
| 50th %ile Term Code     | Skip                                                                              | Skip                                                                              |                                                                                   | Skip                                                                              | Skip                                                                              |                                                                                   | Dwell                                                                              | Dwell                                                                               |                                                                                     | Dwell                                                                               | Dwell                                                                               |                                                                                     |
| 30th %ile Green (s)     | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 51.8                                                                               | 51.8                                                                                |                                                                                     | 51.8                                                                                | 51.8                                                                                |                                                                                     |
| 30th %ile Term Code     | Skip                                                                              | Skip                                                                              |                                                                                   | Skip                                                                              | Skip                                                                              |                                                                                   | Dwell                                                                              | Dwell                                                                               |                                                                                     | Dwell                                                                               | Dwell                                                                               |                                                                                     |
| 10th %ile Green (s)     | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 51.8                                                                               | 51.8                                                                                |                                                                                     | 51.8                                                                                | 51.8                                                                                |                                                                                     |
| 10th %ile Term Code     | Skip                                                                              | Skip                                                                              |                                                                                   | Skip                                                                              | Skip                                                                              |                                                                                   | Dwell                                                                              | Dwell                                                                               |                                                                                     | Dwell                                                                               | Dwell                                                                               |                                                                                     |
| Stops (vph)             |                                                                                   | 19                                                                                |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   | 1                                                                                  | 82                                                                                  |                                                                                     | 1                                                                                   | 83                                                                                  |                                                                                     |
| Fuel Used(gal)          |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   | 0                                                                                  | 2                                                                                   |                                                                                     | 0                                                                                   | 4                                                                                   |                                                                                     |
| CO Emissions (g/hr)     |                                                                                   | 20                                                                                |                                                                                   |                                                                                   | 1                                                                                 |                                                                                   | 1                                                                                  | 143                                                                                 |                                                                                     | 3                                                                                   | 311                                                                                 |                                                                                     |
| NOx Emissions (g/hr)    |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   | 0                                                                                  | 28                                                                                  |                                                                                     | 1                                                                                   | 60                                                                                  |                                                                                     |
| VOC Emissions (g/hr)    |                                                                                   | 5                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   | 0                                                                                  | 33                                                                                  |                                                                                     | 1                                                                                   | 72                                                                                  |                                                                                     |
| Dilemma Vehicles (#)    |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Queue Length 50th (ft)  |                                                                                   | 6                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Queue Length 95th (ft)  |                                                                                   | 26                                                                                |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   | 4                                                                                  | 138                                                                                 |                                                                                     | 4                                                                                   | 139                                                                                 |                                                                                     |
| Internal Link Dist (ft) |                                                                                   | 220                                                                               |                                                                                   |                                                                                   | 220                                                                               |                                                                                   |                                                                                    | 377                                                                                 |                                                                                     |                                                                                     | 1186                                                                                |                                                                                     |
| Turn Bay Length (ft)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 100                                                                                |                                                                                     |                                                                                     | 100                                                                                 |                                                                                     |                                                                                     |
| Base Capacity (vph)     |                                                                                   | 511                                                                               |                                                                                   |                                                                                   | 523                                                                               |                                                                                   | 863                                                                                | 1510                                                                                |                                                                                     | 871                                                                                 | 1548                                                                                |                                                                                     |
| Starvation Cap Reductn  |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Spillback Cap Reductn   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |

Lanes, Volumes, Timings  
5: Abbott Road & Elmview Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

|                     |  |  |  |  |  |  |  |  |  |  |  |  |
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| Lane Group          | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Storage Cap Reductn |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Reduced v/c Ratio   |                                                                                   | 0.05                                                                              |                                                                                   |                                                                                   | 0.02                                                                              |                                                                                   | 0.00                                                                               | 0.24                                                                                |                                                                                     | 0.00                                                                                | 0.24                                                                                |                                                                                     |

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 63.8

Natural Cycle: 55

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.24

Intersection Signal Delay: 4.5

Intersection LOS: A

Intersection Capacity Utilization 35.5%

ICU Level of Service A

Analysis Period (min) 15

90th %ile Actuated Cycle: 78.6

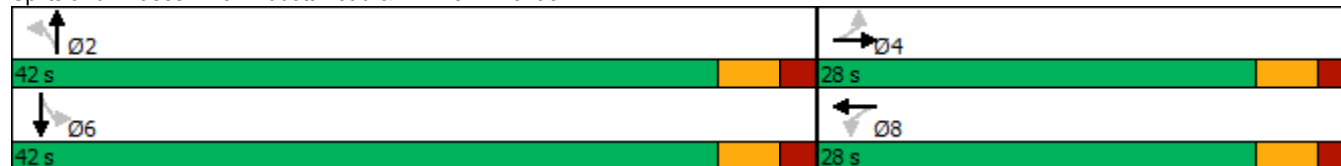
70th %ile Actuated Cycle: 69.4

50th %ile Actuated Cycle: 57

30th %ile Actuated Cycle: 57

10th %ile Actuated Cycle: 57

Splits and Phases: 5: Abbott Road & Elmview Avenue



HCM 6th TWSC  
4: Abbott Road & Fernald Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      | ↕    | ↕    |      | ↕    | ↕    |      |
| Traffic Vol, veh/h       | 0    | 0    | 1    | 16   | 0    | 7    | 3    | 396  | 5    | 3    | 363  | 2    |
| Future Vol, veh/h        | 0    | 0    | 1    | 16   | 0    | 7    | 3    | 396  | 5    | 3    | 363  | 2    |
| Conflicting Peds, #/hr   | 5    | 0    | 5    | 5    | 0    | 5    | 5    | 0    | 5    | 5    | 0    | 5    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 100  | -    | -    | 100  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 98   | 98   | 98   | 98   | 98   | 98   | 98   | 98   | 98   | 98   | 98   | 98   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 7    | 2    | 2    | 5    | 2    |
| Mvmt Flow                | 0    | 0    | 1    | 16   | 0    | 7    | 3    | 404  | 5    | 3    | 370  | 2    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 803    | 802   | 381    | 801   | 801    | 417   | 377    | 0 | 0 | 414   | 0 | 0 |
| Stage 1              | 382    | 382   | -      | 418   | 418    | -     | -      | - | - | -     | - | - |
| Stage 2              | 421    | 420   | -      | 383   | 383    | -     | -      | - | - | -     | - | - |
| Critical Hdwy        | 7.12   | 6.52  | 6.22   | 7.12  | 6.52   | 6.22  | 4.12   | - | - | 4.12  | - | - |
| Critical Hdwy Stg 1  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Critical Hdwy Stg 2  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Follow-up Hdwy       | 3.518  | 4.018 | 3.318  | 3.518 | 4.018  | 3.318 | 2.218  | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver   | 302    | 317   | 666    | 303   | 318    | 636   | 1181   | - | - | 1145  | - | - |
| Stage 1              | 640    | 613   | -      | 612   | 591    | -     | -      | - | - | -     | - | - |
| Stage 2              | 610    | 589   | -      | 640   | 612    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |       |        | - | - | -     | - | - |
| Mov Cap-1 Maneuver   | 294    | 312   | 660    | 298   | 313    | 630   | 1175   | - | - | 1140  | - | - |
| Mov Cap-2 Maneuver   | 294    | 312   | -      | 298   | 313    | -     | -      | - | - | -     | - | - |
| Stage 1              | 636    | 608   | -      | 608   | 586    | -     | -      | - | - | -     | - | - |
| Stage 2              | 599    | 584   | -      | 634   | 607    | -     | -      | - | - | -     | - | - |

| Approach             | EB   |  | WB   |  | NB  |  | SB  |  |
|----------------------|------|--|------|--|-----|--|-----|--|
| HCM Control Delay, s | 10.5 |  | 15.9 |  | 0.1 |  | 0.1 |  |
| HCM LOS              | B    |  | C    |  |     |  |     |  |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1WBLn1 | SBL   | SBT   | SBR |
|-----------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h)      | 1175  | -   | -   | 660        | 355   | 1140  | -   |
| HCM Lane V/C Ratio    | 0.003 | -   | -   | 0.002      | 0.066 | 0.003 | -   |
| HCM Control Delay (s) | 8.1   | -   | -   | 10.5       | 15.9  | 8.2   | -   |
| HCM Lane LOS          | A     | -   | -   | B          | C     | A     | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0          | 0.2   | 0     | -   |

## Summary of All Intervals

| Run Number              | 1    | 2    | 3    | 4    | 5    | Avg  |
|-------------------------|------|------|------|------|------|------|
| Start Time              | 7:50 | 7:50 | 7:50 | 7:50 | 7:50 | 7:50 |
| End Time                | 9:00 | 9:00 | 9:00 | 9:00 | 9:00 | 9:00 |
| Total Time (min)        | 70   | 70   | 70   | 70   | 70   | 70   |
| Time Recorded (min)     | 60   | 60   | 60   | 60   | 60   | 60   |
| # of Intervals          | 2    | 2    | 2    | 2    | 2    | 2    |
| # of Recorded Intervals | 1    | 1    | 1    | 1    | 1    | 1    |
| Vehs Entered            | 2525 | 2561 | 2513 | 2562 | 2504 | 2533 |
| Vehs Exited             | 2515 | 2557 | 2512 | 2566 | 2499 | 2531 |
| Starting Vehs           | 57   | 60   | 58   | 67   | 52   | 57   |
| Ending Vehs             | 67   | 64   | 59   | 63   | 57   | 58   |
| Denied Entry Before     | 1    | 0    | 0    | 1    | 0    | 0    |
| Denied Entry After      | 0    | 1    | 0    | 0    | 0    | 0    |
| Travel Distance (mi)    | 1143 | 1112 | 1110 | 1119 | 1098 | 1117 |
| Travel Time (hr)        | 58.9 | 58.5 | 57.2 | 59.3 | 56.9 | 58.2 |
| Total Delay (hr)        | 18.8 | 19.5 | 18.4 | 19.9 | 18.2 | 19.0 |
| Total Stops             | 2256 | 2315 | 2262 | 2328 | 2170 | 2267 |
| Fuel Used (gal)         | 43.8 | 43.1 | 42.6 | 43.3 | 42.1 | 43.0 |

## Interval #0 Information Seeding

|                                     |      |
|-------------------------------------|------|
| Start Time                          | 7:50 |
| End Time                            | 8:00 |
| Total Time (min)                    | 10   |
| Volumes adjusted by Growth Factors. |      |
| No data recorded this interval.     |      |

## Interval #1 Information Recording

|                                     |      |      |      |      |      |      |
|-------------------------------------|------|------|------|------|------|------|
| Start Time                          | 8:00 |      |      |      |      |      |
| End Time                            | 9:00 |      |      |      |      |      |
| Total Time (min)                    | 60   |      |      |      |      |      |
| Volumes adjusted by Growth Factors. |      |      |      |      |      |      |
| Run Number                          | 1    | 2    | 3    | 4    | 5    | Avg  |
| Vehs Entered                        | 2525 | 2561 | 2513 | 2562 | 2504 | 2533 |
| Vehs Exited                         | 2515 | 2557 | 2512 | 2566 | 2499 | 2531 |
| Starting Vehs                       | 57   | 60   | 58   | 67   | 52   | 57   |
| Ending Vehs                         | 67   | 64   | 59   | 63   | 57   | 58   |
| Denied Entry Before                 | 1    | 0    | 0    | 1    | 0    | 0    |
| Denied Entry After                  | 0    | 1    | 0    | 0    | 0    | 0    |
| Travel Distance (mi)                | 1143 | 1112 | 1110 | 1119 | 1098 | 1117 |
| Travel Time (hr)                    | 58.9 | 58.5 | 57.2 | 59.3 | 56.9 | 58.2 |
| Total Delay (hr)                    | 18.8 | 19.5 | 18.4 | 19.9 | 18.2 | 19.0 |
| Total Stops                         | 2256 | 2315 | 2262 | 2328 | 2170 | 2267 |
| Fuel Used (gal)                     | 43.8 | 43.1 | 42.6 | 43.3 | 42.1 | 43.0 |

1: Abbott Road & Dorrance Avenue Performance by movement

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Denied Del/Veh (s)  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.0  | 0.0  | 0.0  | 3.8  | 0.3  | 0.3  |
| Total Delay (hr)    | 0.1  | 0.4  | 0.2  | 0.3  | 0.3  | 0.1  | 0.3  | 0.4  | 0.1  | 0.1  | 0.5  | 0.0  |
| Total Del/Veh (s)   | 20.6 | 18.6 | 7.3  | 24.7 | 19.6 | 5.9  | 10.1 | 6.7  | 5.1  | 8.4  | 8.5  | 4.9  |
| Stop Delay (hr)     | 0.1  | 0.3  | 0.1  | 0.2  | 0.3  | 0.0  | 0.2  | 0.3  | 0.0  | 0.0  | 0.4  | 0.0  |
| Stop Del/Veh (s)    | 16.9 | 15.6 | 4.5  | 20.9 | 16.2 | 3.6  | 5.9  | 4.3  | 2.6  | 4.9  | 6.1  | 2.8  |
| Total Stops         | 10   | 49   | 71   | 31   | 42   | 24   | 60   | 72   | 14   | 16   | 81   | 8    |
| Stop/Veh            | 0.71 | 0.69 | 0.74 | 0.82 | 0.72 | 0.69 | 0.57 | 0.32 | 0.34 | 0.52 | 0.39 | 0.42 |
| Travel Dist (mi)    | 0.7  | 3.6  | 4.9  | 1.9  | 2.9  | 1.8  | 13.5 | 27.5 | 5.3  | 2.3  | 16.0 | 1.4  |
| Travel Time (hr)    | 0.1  | 0.5  | 0.4  | 0.3  | 0.4  | 0.1  | 0.8  | 1.3  | 0.2  | 0.2  | 1.1  | 0.1  |
| Avg Speed (mph)     | 7    | 7    | 14   | 6    | 7    | 15   | 18   | 20   | 22   | 16   | 15   | 19   |
| Fuel Used (gal)     | 0.0  | 0.2  | 0.2  | 0.1  | 0.2  | 0.1  | 0.5  | 0.9  | 0.2  | 0.1  | 0.6  | 0.0  |
| Fuel Eff. (mpg)     | 18.8 | 18.4 | 32.2 | 17.5 | 16.7 | 33.9 | 28.4 | 28.9 | 27.1 | 24.5 | 25.6 | 29.2 |
| HC Emissions (g)    | 0    | 2    | 1    | 0    | 1    | 1    | 5    | 23   | 2    | 1    | 14   | 0    |
| CO Emissions (g)    | 6    | 68   | 41   | 21   | 49   | 18   | 140  | 470  | 64   | 33   | 309  | 13   |
| NOx Emissions (g)   | 1    | 7    | 4    | 2    | 5    | 2    | 16   | 65   | 8    | 3    | 39   | 1    |
| Vehicles Entered    | 14   | 71   | 96   | 38   | 58   | 35   | 104  | 223  | 41   | 30   | 208  | 19   |
| Vehicles Exited     | 14   | 70   | 96   | 37   | 58   | 34   | 104  | 223  | 41   | 30   | 209  | 18   |
| Hourly Exit Rate    | 14   | 70   | 96   | 37   | 58   | 34   | 104  | 223  | 41   | 30   | 209  | 18   |
| Input Volume        | 14   | 75   | 89   | 44   | 61   | 31   | 108  | 221  | 44   | 27   | 214  | 16   |
| % of Volume         | 100  | 93   | 108  | 84   | 95   | 110  | 96   | 101  | 93   | 111  | 98   | 112  |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Density (ft/veh)    |      |      |      |      |      |      |      |      |      |      |      |      |
| Occupancy (veh)     | 0    | 0    | 0    | 0    | 0    | 0    | 1    | 1    | 0    | 0    | 1    | 0    |



1: Abbott Road & Dorrance Avenue Performance by movement

| Movement            | All  |
|---------------------|------|
| Denied Delay (hr)   | 0.1  |
| Denied Del/Veh (s)  | 0.2  |
| Total Delay (hr)    | 2.6  |
| Total Del/Veh (s)   | 10.1 |
| Stop Delay (hr)     | 1.9  |
| Stop Del/Veh (s)    | 7.3  |
| Total Stops         | 478  |
| Stop/Veh            | 0.51 |
| Travel Dist (mi)    | 81.7 |
| Travel Time (hr)    | 5.5  |
| Avg Speed (mph)     | 15   |
| Fuel Used (gal)     | 3.1  |
| Fuel Eff. (mpg)     | 26.3 |
| HC Emissions (g)    | 51   |
| CO Emissions (g)    | 1232 |
| NOx Emissions (g)   | 152  |
| Vehicles Entered    | 937  |
| Vehicles Exited     | 934  |
| Hourly Exit Rate    | 934  |
| Input Volume        | 944  |
| % of Volume         | 99   |
| Denied Entry Before | 0    |
| Denied Entry After  | 0    |
| Density (ft/veh)    | 575  |
| Occupancy (veh)     | 5    |

## 2: Abbott Road & Plaza Driveway Performance by movement

| Movement            | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  | All   |
|---------------------|------|------|------|------|------|------|-------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   |
| Denied Del/Veh (s)  | 0.1  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   |
| Total Delay (hr)    | 0.3  | 0.0  | 0.4  | 0.1  | 0.0  | 0.4  | 1.3   |
| Total Del/Veh (s)   | 22.6 | 5.1  | 4.3  | 4.1  | 8.7  | 4.5  | 5.6   |
| Stop Delay (hr)     | 0.3  | 0.0  | 0.2  | 0.0  | 0.0  | 0.2  | 0.7   |
| Stop Del/Veh (s)    | 19.0 | 2.8  | 2.2  | 1.7  | 3.6  | 2.1  | 3.2   |
| Total Stops         | 46   | 3    | 67   | 14   | 1    | 57   | 188   |
| Stop/Veh            | 0.85 | 0.75 | 0.18 | 0.17 | 0.50 | 0.17 | 0.22  |
| Travel Dist (mi)    | 2.7  | 0.2  | 49.0 | 11.4 | 0.3  | 43.6 | 107.0 |
| Travel Time (hr)    | 0.4  | 0.0  | 2.4  | 0.5  | 0.0  | 1.9  | 5.3   |
| Avg Speed (mph)     | 6    | 15   | 21   | 21   | 19   | 23   | 20    |
| Fuel Used (gal)     | 0.1  | 0.0  | 2.3  | 0.5  | 0.0  | 1.8  | 4.8   |
| Fuel Eff. (mpg)     | 19.2 | 39.5 | 21.2 | 20.7 | 25.4 | 24.1 | 22.2  |
| HC Emissions (g)    | 1    | 0    | 39   | 9    | 0    | 33   | 83    |
| CO Emissions (g)    | 34   | 1    | 1149 | 275  | 4    | 850  | 2312  |
| NOx Emissions (g)   | 4    | 0    | 125  | 30   | 0    | 102  | 261   |
| Vehicles Entered    | 53   | 4    | 363  | 83   | 2    | 343  | 848   |
| Vehicles Exited     | 53   | 4    | 364  | 83   | 2    | 341  | 847   |
| Hourly Exit Rate    | 53   | 4    | 364  | 83   | 2    | 341  | 847   |
| Input Volume        | 51   | 5    | 368  | 82   | 2    | 348  | 856   |
| % of Volume         | 104  | 80   | 99   | 101  | 100  | 98   | 99    |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Density (ft/veh)    |      |      |      |      |      |      | 487   |
| Occupancy (veh)     | 0    | 0    | 2    | 1    | 0    | 2    | 5     |

### 3: Abbott Road & Ridge Road Performance by movement

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Denied Delay (hr)   | 0.0  | 0.1  | 0.0  | 0.1  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Denied Del/Veh (s)  | 3.2  | 0.6  | 3.4  | 2.9  | 0.7  | 0.4  | 0.4  | 0.0  | 0.3  | 0.2  | 0.0  | 0.3  |
| Total Delay (hr)    | 0.2  | 3.4  | 0.1  | 1.0  | 2.3  | 0.3  | 0.4  | 1.4  | 0.4  | 1.3  | 1.3  | 0.1  |
| Total Del/Veh (s)   | 22.5 | 26.7 | 8.6  | 20.3 | 19.8 | 3.5  | 23.9 | 32.4 | 6.2  | 24.8 | 25.5 | 6.9  |
| Stop Delay (hr)     | 0.2  | 2.7  | 0.1  | 0.8  | 1.7  | 0.2  | 0.3  | 1.2  | 0.3  | 1.1  | 1.1  | 0.0  |
| Stop Del/Veh (s)    | 18.0 | 21.3 | 7.0  | 16.7 | 14.8 | 2.5  | 21.3 | 28.6 | 4.5  | 21.3 | 21.4 | 5.7  |
| Total Stops         | 38   | 325  | 31   | 137  | 219  | 91   | 46   | 109  | 140  | 143  | 117  | 19   |
| Stop/Veh            | 1.15 | 0.70 | 0.63 | 0.77 | 0.53 | 0.34 | 0.81 | 0.73 | 0.63 | 0.76 | 0.64 | 0.61 |
| Travel Dist (mi)    | 4.8  | 65.8 | 7.1  | 24.4 | 56.6 | 37.3 | 11.2 | 27.6 | 43.3 | 25.1 | 23.9 | 4.1  |
| Travel Time (hr)    | 0.4  | 5.7  | 0.4  | 2.0  | 4.2  | 1.8  | 0.8  | 2.3  | 2.0  | 2.2  | 2.1  | 0.2  |
| Avg Speed (mph)     | 12   | 12   | 18   | 13   | 14   | 21   | 14   | 12   | 22   | 11   | 11   | 19   |
| Fuel Used (gal)     | 0.2  | 2.7  | 0.3  | 1.0  | 2.2  | 1.1  | 0.4  | 1.1  | 1.2  | 1.1  | 1.1  | 0.1  |
| Fuel Eff. (mpg)     | 25.0 | 24.2 | 27.7 | 24.3 | 25.3 | 34.5 | 29.7 | 26.1 | 35.7 | 23.6 | 22.7 | 28.6 |
| HC Emissions (g)    | 3    | 59   | 3    | 7    | 47   | 12   | 3    | 20   | 13   | 10   | 21   | 2    |
| CO Emissions (g)    | 73   | 1252 | 96   | 275  | 980  | 369  | 71   | 362  | 279  | 290  | 451  | 59   |
| NOx Emissions (g)   | 7    | 146  | 8    | 24   | 124  | 36   | 7    | 53   | 36   | 31   | 58   | 6    |
| Vehicles Entered    | 33   | 455  | 49   | 176  | 405  | 266  | 57   | 147  | 219  | 186  | 180  | 31   |
| Vehicles Exited     | 33   | 456  | 48   | 175  | 406  | 267  | 57   | 146  | 219  | 183  | 180  | 31   |
| Hourly Exit Rate    | 33   | 456  | 48   | 175  | 406  | 267  | 57   | 146  | 219  | 183  | 180  | 31   |
| Input Volume        | 38   | 449  | 49   | 168  | 408  | 260  | 54   | 151  | 224  | 188  | 179  | 30   |
| % of Volume         | 87   | 102  | 98   | 104  | 100  | 103  | 106  | 97   | 98   | 97   | 101  | 103  |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Density (ft/veh)    |      |      |      |      |      |      |      |      |      |      |      |      |
| Occupancy (veh)     | 0    | 6    | 0    | 2    | 4    | 2    | 1    | 2    | 2    | 2    | 2    | 0    |

### 3: Abbott Road & Ridge Road Performance by movement

| Movement            | All   |
|---------------------|-------|
| Denied Delay (hr)   | 0.4   |
| Denied Del/Veh (s)  | 0.7   |
| Total Delay (hr)    | 12.0  |
| Total Del/Veh (s)   | 19.4  |
| Stop Delay (hr)     | 9.7   |
| Stop Del/Veh (s)    | 15.7  |
| Total Stops         | 1415  |
| Stop/Veh            | 0.64  |
| Travel Dist (mi)    | 331.3 |
| Travel Time (hr)    | 24.3  |
| Avg Speed (mph)     | 14    |
| Fuel Used (gal)     | 12.4  |
| Fuel Eff. (mpg)     | 26.7  |
| HC Emissions (g)    | 199   |
| CO Emissions (g)    | 4558  |
| NOx Emissions (g)   | 535   |
| Vehicles Entered    | 2204  |
| Vehicles Exited     | 2201  |
| Hourly Exit Rate    | 2201  |
| Input Volume        | 2198  |
| % of Volume         | 100   |
| Denied Entry Before | 0     |
| Denied Entry After  | 0     |
| Density (ft/veh)    | 402   |
| Occupancy (veh)     | 24    |

4: Abbott Road & Fernald Avenue Performance by movement

| Movement            | EBR  | WBL  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  | All   |
|---------------------|------|------|------|------|------|------|------|------|------|-------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   |
| Denied Del/Veh (s)  | 0.1  | 0.1  | 0.1  | 0.3  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   |
| Total Delay (hr)    | 0.0  | 0.1  | 0.0  | 0.0  | 0.2  | 0.0  | 0.0  | 0.2  | 0.0  | 0.5   |
| Total Del/Veh (s)   | 5.5  | 11.7 | 7.2  | 6.5  | 1.5  | 1.7  | 5.8  | 2.0  | 3.0  | 2.0   |
| Stop Delay (hr)     | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.1   |
| Stop Del/Veh (s)    | 3.8  | 8.6  | 3.8  | 2.6  | 0.1  | 0.1  | 1.9  | 0.2  | 0.1  | 0.4   |
| Total Stops         | 2    | 16   | 7    | 1    | 2    | 0    | 1    | 3    | 0    | 32    |
| Stop/Veh            | 1.00 | 1.00 | 1.00 | 0.33 | 0.01 | 0.00 | 0.50 | 0.01 | 0.00 | 0.04  |
| Travel Dist (mi)    | 0.0  | 0.8  | 0.4  | 0.7  | 91.0 | 1.1  | 0.4  | 80.5 | 0.4  | 175.2 |
| Travel Time (hr)    | 0.0  | 0.1  | 0.0  | 0.0  | 3.2  | 0.0  | 0.0  | 3.1  | 0.0  | 6.6   |
| Avg Speed (mph)     | 6    | 10   | 14   | 25   | 28   | 28   | 23   | 26   | 27   | 27    |
| Fuel Used (gal)     | 0.0  | 0.0  | 0.0  | 0.0  | 2.8  | 0.0  | 0.0  | 3.2  | 0.0  | 6.1   |
| Fuel Eff. (mpg)     | 23.8 | 38.1 | 45.6 | 35.2 | 32.7 | 34.5 | 27.5 | 25.3 | 24.3 | 28.9  |
| HC Emissions (g)    | 0    | 0    | 0    | 0    | 67   | 0    | 0    | 46   | 0    | 113   |
| CO Emissions (g)    | 0    | 2    | 1    | 3    | 1114 | 5    | 4    | 1159 | 4    | 2291  |
| NOx Emissions (g)   | 0    | 0    | 0    | 0    | 180  | 1    | 0    | 149  | 0    | 331   |
| Vehicles Entered    | 2    | 16   | 7    | 3    | 396  | 5    | 2    | 401  | 2    | 834   |
| Vehicles Exited     | 2    | 16   | 7    | 3    | 395  | 5    | 2    | 402  | 2    | 834   |
| Hourly Exit Rate    | 2    | 16   | 7    | 3    | 395  | 5    | 2    | 402  | 2    | 834   |
| Input Volume        | 1    | 16   | 7    | 3    | 401  | 5    | 3    | 392  | 2    | 830   |
| % of Volume         | 200  | 100  | 100  | 100  | 99   | 100  | 67   | 103  | 100  | 100   |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Density (ft/veh)    |      |      |      |      |      |      |      |      |      | 744   |
| Occupancy (veh)     | 0    | 0    | 0    | 0    | 3    | 0    | 0    | 3    | 0    | 7     |

5: Abbott Road & Elmview Avenue Performance by movement

| Movement            | EBL  | EBT  | EBR  | WBL  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  | All   |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   |
| Denied Del/Veh (s)  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 3.9  | 0.3  | 0.2  | 0.0  | 0.0  | 0.0  | 0.2   |
| Total Delay (hr)    | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.3  | 0.0  | 0.0  | 0.5  | 0.0  | 0.9   |
| Total Del/Veh (s)   | 16.0 | 15.1 | 7.5  | 20.0 | 5.9  | 9.1  | 2.6  | 0.9  | 11.7 | 4.6  | 3.7  | 4.1   |
| Stop Delay (hr)     | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.1  | 0.0  | 0.0  | 0.2  | 0.0  | 0.5   |
| Stop Del/Veh (s)    | 12.7 | 11.9 | 4.7  | 17.0 | 3.3  | 5.3  | 1.5  | 0.0  | 6.7  | 2.0  | 1.0  | 2.2   |
| Total Stops         | 17   | 1    | 8    | 4    | 3    | 2    | 51   | 0    | 2    | 64   | 2    | 154   |
| Stop/Veh            | 0.94 | 1.00 | 0.89 | 1.00 | 0.75 | 1.00 | 0.14 | 0.00 | 0.67 | 0.16 | 0.20 | 0.19  |
| Travel Dist (mi)    | 0.9  | 0.1  | 0.4  | 0.2  | 0.2  | 0.2  | 28.5 | 0.1  | 0.8  | 90.9 | 2.5  | 124.8 |
| Travel Time (hr)    | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.3  | 0.0  | 0.0  | 3.6  | 0.1  | 5.2   |
| Avg Speed (mph)     | 8    | 9    | 13   | 7    | 15   | 17   | 23   | 29   | 22   | 26   | 26   | 24    |
| Fuel Used (gal)     | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.9  | 0.0  | 0.0  | 2.6  | 0.1  | 3.8   |
| Fuel Eff. (mpg)     | 29.0 | 30.0 | 37.5 | 27.0 | 37.6 | 31.9 | 30.0 | 29.1 | 33.2 | 34.3 | 33.1 | 33.2  |
| HC Emissions (g)    | 0    | 0    | 0    | 0    | 0    | 0    | 27   | 0    | 0    | 43   | 0    | 71    |
| CO Emissions (g)    | 3    | 0    | 2    | 0    | 1    | 1    | 523  | 2    | 2    | 695  | 8    | 1238  |
| NOx Emissions (g)   | 0    | 0    | 0    | 0    | 0    | 0    | 73   | 0    | 0    | 118  | 1    | 193   |
| Vehicles Entered    | 18   | 1    | 9    | 4    | 4    | 2    | 355  | 1    | 3    | 385  | 10   | 792   |
| Vehicles Exited     | 18   | 1    | 9    | 4    | 4    | 2    | 356  | 1    | 3    | 385  | 10   | 793   |
| Hourly Exit Rate    | 18   | 1    | 9    | 4    | 4    | 2    | 356  | 1    | 3    | 385  | 10   | 793   |
| Input Volume        | 19   | 1    | 7    | 5    | 3    | 3    | 363  | 2    | 3    | 371  | 10   | 787   |
| % of Volume         | 95   | 100  | 129  | 80   | 133  | 67   | 98   | 50   | 100  | 104  | 100  | 101   |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Density (ft/veh)    |      |      |      |      |      |      |      |      |      |      |      | 744   |
| Occupancy (veh)     | 0    | 0    | 0    | 0    | 0    | 0    | 1    | 0    | 0    | 4    | 0    | 5     |

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Total Network Performance

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|                     |        |
|---------------------|--------|
| Denied Delay (hr)   | 0.6    |
| Denied Del/Veh (s)  | 0.8    |
| Total Delay (hr)    | 18.4   |
| Total Del/Veh (s)   | 25.6   |
| Stop Delay (hr)     | 13.0   |
| Stop Del/Veh (s)    | 18.1   |
| Total Stops         | 2267   |
| Stop/Veh            | 0.88   |
| Travel Dist (mi)    | 1116.6 |
| Travel Time (hr)    | 58.2   |
| Avg Speed (mph)     | 19     |
| Fuel Used (gal)     | 43.0   |
| Fuel Eff. (mpg)     | 26.0   |
| HC Emissions (g)    | 776    |
| CO Emissions (g)    | 18318  |
| NOx Emissions (g)   | 2272   |
| Vehicles Entered    | 2533   |
| Vehicles Exited     | 2531   |
| Hourly Exit Rate    | 2531   |
| Input Volume        | 8033   |
| % of Volume         | 32     |
| Denied Entry Before | 0      |
| Denied Entry After  | 0      |
| Density (ft/veh)    | 415    |
| Occupancy (veh)     | 58     |



Queuing and Blocking Report  
2050 Build Alt 1 AM Peak Hour

12/04/2025

Intersection: 1: Abbott Road & Dorrance Avenue

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | LT  | TR  | LT  | TR  | L   | TR  | L   | TR  |
| Maximum Queue (ft)    | 76  | 55  | 98  | 50  | 103 | 162 | 29  | 144 |
| Average Queue (ft)    | 32  | 24  | 39  | 12  | 35  | 60  | 11  | 60  |
| 95th Queue (ft)       | 64  | 46  | 80  | 32  | 77  | 127 | 32  | 117 |
| Link Distance (ft)    | 255 | 255 | 255 | 255 |     | 608 |     | 402 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     | 200 |     | 200 |     |
| Storage Blk Time (%)  |     |     |     |     |     | 0   |     |     |
| Queuing Penalty (veh) |     |     |     |     |     | 0   |     |     |

Intersection: 2: Abbott Road & Plaza Driveway

| Movement              | WB  | WB  | NB  | SB | SB  |
|-----------------------|-----|-----|-----|----|-----|
| Directions Served     | L   | R   | TR  | L  | T   |
| Maximum Queue (ft)    | 81  | 20  | 182 | 18 | 138 |
| Average Queue (ft)    | 29  | 2   | 60  | 1  | 45  |
| 95th Queue (ft)       | 64  | 12  | 137 | 11 | 112 |
| Link Distance (ft)    | 256 | 256 | 660 |    | 608 |
| Upstream Blk Time (%) |     |     |     |    |     |
| Queuing Penalty (veh) |     |     |     |    |     |
| Storage Bay Dist (ft) |     |     | 100 |    |     |
| Storage Blk Time (%)  |     |     |     | 1  |     |
| Queuing Penalty (veh) |     |     |     | 0  |     |

Intersection: 3: Abbott Road & Ridge Road

| Movement              | EB  | EB  | EB  | WB  | WB  | WB  | NB  | NB   | NB  | SB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|
| Directions Served     | L   | T   | TR  | L   | T   | R   | L   | T    | R   | L   | T   | R   |
| Maximum Queue (ft)    | 140 | 346 | 307 | 225 | 345 | 93  | 88  | 161  | 129 | 186 | 209 | 49  |
| Average Queue (ft)    | 40  | 173 | 120 | 69  | 145 | 33  | 28  | 78   | 55  | 89  | 91  | 16  |
| 95th Queue (ft)       | 123 | 279 | 248 | 141 | 270 | 73  | 66  | 135  | 94  | 159 | 163 | 43  |
| Link Distance (ft)    |     | 752 |     |     | 723 | 723 |     | 1009 |     |     | 660 |     |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |      |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |      |     |     |     |     |
| Storage Bay Dist (ft) | 90  |     | 250 | 200 |     |     | 300 |      | 300 | 300 |     | 300 |
| Storage Blk Time (%)  | 0   | 32  | 0   | 0   | 4   |     |     |      |     |     | 0   |     |
| Queuing Penalty (veh) | 0   | 101 | 0   | 0   | 7   |     |     |      |     |     | 0   |     |

Intersection: 4: Abbott Road & Fernald Avenue

| Movement              | EB  | WB  | NB  | NB   | SB  | SB   |
|-----------------------|-----|-----|-----|------|-----|------|
| Directions Served     | LTR | LTR | L   | TR   | L   | TR   |
| Maximum Queue (ft)    | 14  | 38  | 24  | 31   | 20  | 36   |
| Average Queue (ft)    | 2   | 14  | 1   | 2    | 1   | 2    |
| 95th Queue (ft)       | 11  | 34  | 10  | 16   | 9   | 19   |
| Link Distance (ft)    | 58  | 258 |     | 1194 |     | 1009 |
| Upstream Blk Time (%) |     |     |     |      |     |      |
| Queuing Penalty (veh) |     |     |     |      |     |      |
| Storage Bay Dist (ft) |     |     | 100 |      | 100 |      |
| Storage Blk Time (%)  |     |     |     |      |     | 0    |
| Queuing Penalty (veh) |     |     |     |      |     | 0    |

Intersection: 5: Abbott Road & Elmview Avenue

| Movement              | EB  | WB  | NB  | NB  | SB  | SB   |
|-----------------------|-----|-----|-----|-----|-----|------|
| Directions Served     | LTR | LTR | L   | TR  | L   | TR   |
| Maximum Queue (ft)    | 52  | 24  | 15  | 133 | 25  | 173  |
| Average Queue (ft)    | 17  | 5   | 1   | 40  | 2   | 52   |
| 95th Queue (ft)       | 42  | 21  | 10  | 103 | 14  | 139  |
| Link Distance (ft)    | 260 | 258 |     | 420 |     | 1194 |
| Upstream Blk Time (%) |     |     |     |     |     |      |
| Queuing Penalty (veh) |     |     |     |     |     |      |
| Storage Bay Dist (ft) |     |     | 100 |     | 100 |      |
| Storage Blk Time (%)  |     |     |     | 1   |     | 2    |
| Queuing Penalty (veh) |     |     |     | 0   |     | 0    |

Network Summary

|                                   |
|-----------------------------------|
| Network wide Queuing Penalty: 108 |
|-----------------------------------|

Intersection: 1: Abbott Road & Dorrance Avenue

| Phase                | 1     | 2     | 4     | 5     | 6    | 8     |
|----------------------|-------|-------|-------|-------|------|-------|
| Movement(s) Served   | SBL   | NBTL  | EBTL  | NBL   | SBTL | WBTL  |
| Maximum Green (s)    | 14.8  | 29.8  | 24.8  | 14.8  | 29.8 | 24.8  |
| Minimum Green (s)    | 5.0   | 5.0   | 5.0   | 5.0   | 5.0  | 5.0   |
| Recall               | None  | Max   | None  | None  | Max  | None  |
| Avg. Green (s)       | 5.8   | 36.6  | 12.6  | 8.0   | 32.3 | 12.6  |
| g/C Ratio            | -0.01 | -0.01 | -0.01 | -0.01 | NA   | -0.01 |
| Cycles Skipped (%)   | 81    | 2     | 2     | 52    | 0    | 2     |
| Cycles @ Minimum (%) | 0     | 0     | 0     | 0     | 0    | 0     |
| Cycles Maxed Out (%) | 0     | 98    | 0     | 0     | 100  | 0     |
| Cycles with Peds (%) | 0     | 7     | 7     | 0     | 7    | 10    |

Controller Summary

Average Cycle Length (s): NA

Number of Complete Cycles : 0

Intersection: 2: Abbott Road & Plaza Driveway

| Phase                | 2    | 6    | 8    |
|----------------------|------|------|------|
| Movement(s) Served   | NBT  | SBTL | WBL  |
| Maximum Green (s)    | 44.8 | 44.8 | 24.8 |
| Minimum Green (s)    | 6.0  | 6.0  | 6.0  |
| Recall               | Max  | Max  | None |
| Avg. Green (s)       | 66.0 | 66.0 | 10.7 |
| g/C Ratio            | NA   | NA   | NA   |
| Cycles Skipped (%)   | 0    | 0    | 0    |
| Cycles @ Minimum (%) | 0    | 0    | 46   |
| Cycles Maxed Out (%) | 100  | 100  | 0    |
| Cycles with Peds (%) | 10   | 0    | 22   |

Controller Summary

Average Cycle Length (s): NA

Number of Complete Cycles : 0

Intersection: 3: Abbott Road & Ridge Road

| Phase                | 1     | 2     | 3     | 4    | 5     | 6    | 7     | 8    |
|----------------------|-------|-------|-------|------|-------|------|-------|------|
| Movement(s) Served   | SBL   | NBTL  | WBL   | EBTL | NBL   | SBTL | EBL   | WBTL |
| Maximum Green (s)    | 14.8  | 37.8  | 14.8  | 31.8 | 14.8  | 37.8 | 14.8  | 31.8 |
| Minimum Green (s)    | 7.0   | 7.0   | 7.0   | 7.0  | 7.0   | 7.0  | 7.0   | 7.0  |
| Recall               | None  | None  | None  | Max  | None  | None | None  | Max  |
| Avg. Green (s)       | 13.8  | 18.8  | 12.6  | 32.1 | 8.9   | 27.1 | 8.0   | 44.0 |
| g/C Ratio            | -0.01 | -0.01 | -0.01 | NA   | -0.01 | NA   | -0.01 | NA   |
| Cycles Skipped (%)   | 3     | 5     | 5     | 0    | 38    | 0    | 65    | 0    |
| Cycles @ Minimum (%) | 3     | 5     | 5     | 0    | 27    | 0    | 19    | 0    |
| Cycles Maxed Out (%) | 51    | 0     | 41    | 100  | 0     | 14   | 0     | 100  |
| Cycles with Peds (%) | 0     | 14    | 0     | 11   | 0     | 11   | 0     | 13   |

Controller Summary

Average Cycle Length (s): NA

Number of Complete Cycles : 0

Intersection: 5: Abbott Road & Elmview Avenue

| Phase                | 2    | 4    | 6    | 8    |
|----------------------|------|------|------|------|
| Movement(s) Served   | NBTL | EBTL | SBTL | WBTL |
| Maximum Green (s)    | 36.8 | 22.8 | 36.8 | 22.8 |
| Minimum Green (s)    | 20.0 | 6.0  | 20.0 | 6.0  |
| Recall               | Max  | None | Max  | None |
| Avg. Green (s)       | 88.5 | 11.1 | 88.5 | 11.1 |
| g/C Ratio            | NA   | NA   | NA   | NA   |
| Cycles Skipped (%)   | 0    | 0    | 0    | 0    |
| Cycles @ Minimum (%) | 0    | 63   | 0    | 63   |
| Cycles Maxed Out (%) | 100  | 0    | 100  | 0    |
| Cycles with Peds (%) | 9    | 13   | 13   | 16   |

Controller Summary

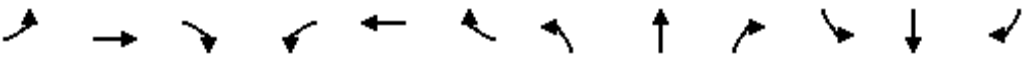
Average Cycle Length (s): NA

Number of Complete Cycles : 0

Lanes, Volumes, Timings  
1: Abbott Road & Dorrance Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

|                            |  |       |       |       |       |       |       |       |       |       |       |       |
|----------------------------|------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Group                 | EBL                                                                                | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |                                                                                    | ↔↔    |       |       | ↔↔    |       | ↗     | ↘     |       | ↗     | ↘     |       |
| Traffic Volume (vph)       | 34                                                                                 | 131   | 138   | 59    | 109   | 65    | 180   | 337   | 69    | 26    | 324   | 30    |
| Future Volume (vph)        | 34                                                                                 | 131   | 138   | 59    | 109   | 65    | 180   | 337   | 69    | 26    | 324   | 30    |
| Ideal Flow (vphpl)         | 1900                                                                               | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 10                                                                                 | 10    | 10    | 12    | 12    | 12    | 12    | 12    | 12    | 12    | 12    | 12    |
| Storage Length (ft)        | 0                                                                                  |       | 0     | 0     |       | 0     | 200   |       | 0     | 200   |       | 0     |
| Storage Lanes              | 0                                                                                  |       | 0     | 0     |       | 0     | 1     |       | 0     | 1     |       | 0     |
| Taper Length (ft)          | 25                                                                                 |       |       | 25    |       |       | 100   |       |       | 100   |       |       |
| Lane Util. Factor          | 0.95                                                                               | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Ped Bike Factor            |                                                                                    | 0.99  |       |       | 0.99  |       | 1.00  | 1.00  |       | 1.00  | 1.00  |       |
| Frt                        |                                                                                    | 0.932 |       |       | 0.958 |       |       | 0.974 |       |       | 0.987 |       |
| Flt Protected              |                                                                                    | 0.994 |       |       | 0.988 |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (prot)          | 0                                                                                  | 3017  | 0     | 0     | 3321  | 0     | 1770  | 1794  | 0     | 1770  | 1788  | 0     |
| Flt Permitted              |                                                                                    | 0.881 |       |       | 0.759 |       | 0.407 |       |       | 0.513 |       |       |
| Satd. Flow (perm)          | 0                                                                                  | 2672  | 0     | 0     | 2548  | 0     | 756   | 1794  | 0     | 953   | 1788  | 0     |
| Right Turn on Red          |                                                                                    |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |                                                                                    | 145   |       |       | 67    |       |       | 13    |       |       | 6     |       |
| Link Speed (mph)           |                                                                                    | 30    |       |       | 30    |       |       | 30    |       |       | 30    |       |
| Link Distance (ft)         |                                                                                    | 300   |       |       | 300   |       |       | 688   |       |       | 452   |       |
| Travel Time (s)            |                                                                                    | 6.8   |       |       | 6.8   |       |       | 15.6  |       |       | 10.3  |       |
| Confl. Peds. (#/hr)        | 5                                                                                  |       | 5     | 5     |       | 5     | 5     |       | 5     | 5     |       | 5     |
| Confl. Bikes (#/hr)        |                                                                                    |       | 2     |       |       | 2     |       |       | 2     |       |       | 2     |
| Peak Hour Factor           | 0.95                                                                               | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  |
| Heavy Vehicles (%)         | 2%                                                                                 | 2%    | 2%    | 2%    | 2%    | 2%    | 2%    | 3%    | 2%    | 2%    | 5%    | 2%    |
| Adj. Flow (vph)            | 36                                                                                 | 138   | 145   | 62    | 115   | 68    | 189   | 355   | 73    | 27    | 341   | 32    |
| Shared Lane Traffic (%)    |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 0                                                                                  | 319   | 0     | 0     | 245   | 0     | 189   | 428   | 0     | 27    | 373   | 0     |
| Enter Blocked Intersection | No                                                                                 | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left                                                                               | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |                                                                                    | 0     |       |       | 0     |       |       | 12    |       |       | 12    |       |
| Link Offset(ft)            |                                                                                    | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Crosswalk Width(ft)        |                                                                                    | 16    |       |       | 16    |       |       | 16    |       |       | 16    |       |
| Two way Left Turn Lane     |                                                                                    |       |       |       |       |       |       | Yes   |       |       | Yes   |       |
| Headway Factor             | 1.09                                                                               | 1.09  | 1.09  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Turning Speed (mph)        | 15                                                                                 |       | 9     | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     |
| Number of Detectors        | 1                                                                                  | 1     |       | 1     | 1     |       | 1     | 1     |       | 1     | 1     |       |
| Detector Template          | Left                                                                               | Thru  |       | Left  | Thru  |       | Left  | Thru  |       | Left  | Thru  |       |
| Leading Detector (ft)      | 20                                                                                 | 50    |       | 20    | 50    |       | 50    | 50    |       | 50    | 50    |       |
| Trailing Detector (ft)     | 0                                                                                  | 0     |       | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       |
| Detector 1 Position(ft)    | 0                                                                                  | 0     |       | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       |
| Detector 1 Size(ft)        | 20                                                                                 | 50    |       | 20    | 50    |       | 50    | 50    |       | 50    | 50    |       |
| Detector 1 Type            | Cl+Ex                                                                              | Cl+Ex |       | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex |       |
| Detector 1 Channel         |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Detector 1 Extend (s)      | 0.0                                                                                | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Detector 1 Queue (s)       | 0.0                                                                                | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Detector 1 Delay (s)       | 0.0                                                                                | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Turn Type                  | Perm                                                                               | NA    |       | Perm  | NA    |       | pm+pt | NA    |       | pm+pt | NA    |       |
| Protected Phases           |                                                                                    | 4     |       |       | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases           | 4                                                                                  |       |       | 8     |       |       | 2     |       |       | 6     |       |       |

Lanes, Volumes, Timings  
1: Abbott Road & Dorrance Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Detector Phase          | 4                                                                                 | 4                                                                                 |                                                                                   | 8                                                                                 | 8                                                                                 |                                                                                   | 5                                                                                  | 2                                                                                   |                                                                                     | 1                                                                                   | 6                                                                                   |                                                                                     |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 5.0                                                                               | 5.0                                                                               |                                                                                   | 5.0                                                                               | 5.0                                                                               |                                                                                   | 5.0                                                                                | 5.0                                                                                 |                                                                                     | 5.0                                                                                 | 5.0                                                                                 |                                                                                     |
| Minimum Split (s)       | 29.2                                                                              | 29.2                                                                              |                                                                                   | 29.2                                                                              | 29.2                                                                              |                                                                                   | 10.2                                                                               | 29.2                                                                                |                                                                                     | 10.2                                                                                | 29.2                                                                                |                                                                                     |
| Total Split (s)         | 30.0                                                                              | 30.0                                                                              |                                                                                   | 30.0                                                                              | 30.0                                                                              |                                                                                   | 20.0                                                                               | 35.0                                                                                |                                                                                     | 20.0                                                                                | 35.0                                                                                |                                                                                     |
| Total Split (%)         | 35.3%                                                                             | 35.3%                                                                             |                                                                                   | 35.3%                                                                             | 35.3%                                                                             |                                                                                   | 23.5%                                                                              | 41.2%                                                                               |                                                                                     | 23.5%                                                                               | 41.2%                                                                               |                                                                                     |
| Maximum Green (s)       | 24.8                                                                              | 24.8                                                                              |                                                                                   | 24.8                                                                              | 24.8                                                                              |                                                                                   | 14.8                                                                               | 29.8                                                                                |                                                                                     | 14.8                                                                                | 29.8                                                                                |                                                                                     |
| Yellow Time (s)         | 3.2                                                                               | 3.2                                                                               |                                                                                   | 3.2                                                                               | 3.2                                                                               |                                                                                   | 3.2                                                                                | 3.2                                                                                 |                                                                                     | 3.2                                                                                 | 3.2                                                                                 |                                                                                     |
| All-Red Time (s)        | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                                | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Lost Time Adjust (s)    |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)     |                                                                                   | 5.2                                                                               |                                                                                   |                                                                                   | 5.2                                                                               |                                                                                   | 5.2                                                                                | 5.2                                                                                 |                                                                                     | 5.2                                                                                 | 5.2                                                                                 |                                                                                     |
| Lead/Lag                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Lead                                                                               | Lag                                                                                 |                                                                                     | Lead                                                                                | Lag                                                                                 |                                                                                     |
| Lead-Lag Optimize?      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                                | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| Recall Mode             | None                                                                              | None                                                                              |                                                                                   | None                                                                              | None                                                                              |                                                                                   | None                                                                               | Max                                                                                 |                                                                                     | None                                                                                | Max                                                                                 |                                                                                     |
| Walk Time (s)           | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0                                                                               |                                                                                   |                                                                                    | 7.0                                                                                 |                                                                                     |                                                                                     | 7.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)     | 17.0                                                                              | 17.0                                                                              |                                                                                   | 17.0                                                                              | 17.0                                                                              |                                                                                   |                                                                                    | 17.0                                                                                |                                                                                     |                                                                                     | 17.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   |                                                                                    | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |
| Act Effect Green (s)    |                                                                                   | 11.5                                                                              |                                                                                   |                                                                                   | 11.5                                                                              |                                                                                   | 44.7                                                                               | 40.8                                                                                |                                                                                     | 36.2                                                                                | 30.2                                                                                |                                                                                     |
| Actuated g/C Ratio      |                                                                                   | 0.17                                                                              |                                                                                   |                                                                                   | 0.17                                                                              |                                                                                   | 0.67                                                                               | 0.61                                                                                |                                                                                     | 0.54                                                                                | 0.45                                                                                |                                                                                     |
| v/c Ratio               |                                                                                   | 0.55                                                                              |                                                                                   |                                                                                   | 0.50                                                                              |                                                                                   | 0.29                                                                               | 0.39                                                                                |                                                                                     | 0.05                                                                                | 0.46                                                                                |                                                                                     |
| Control Delay           |                                                                                   | 17.1                                                                              |                                                                                   |                                                                                   | 21.3                                                                              |                                                                                   | 6.4                                                                                | 10.8                                                                                |                                                                                     | 6.2                                                                                 | 16.9                                                                                |                                                                                     |
| Queue Delay             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Delay             |                                                                                   | 17.1                                                                              |                                                                                   |                                                                                   | 21.3                                                                              |                                                                                   | 6.4                                                                                | 10.8                                                                                |                                                                                     | 6.2                                                                                 | 16.9                                                                                |                                                                                     |
| LOS                     |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   | A                                                                                  | B                                                                                   |                                                                                     | A                                                                                   | B                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 17.1                                                                              |                                                                                   |                                                                                   | 21.3                                                                              |                                                                                   |                                                                                    | 9.4                                                                                 |                                                                                     |                                                                                     | 16.2                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                    | A                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |
| 90th %ile Green (s)     | 24.0                                                                              | 24.0                                                                              |                                                                                   | 24.0                                                                              | 24.0                                                                              |                                                                                   | 13.8                                                                               | 36.7                                                                                |                                                                                     | 6.9                                                                                 | 29.8                                                                                |                                                                                     |
| 90th %ile Term Code     | Ped                                                                               | Ped                                                                               |                                                                                   | Ped                                                                               | Ped                                                                               |                                                                                   | Gap                                                                                | Hold                                                                                |                                                                                     | Gap                                                                                 | MaxR                                                                                |                                                                                     |
| 70th %ile Green (s)     | 11.4                                                                              | 11.4                                                                              |                                                                                   | 11.4                                                                              | 11.4                                                                              |                                                                                   | 9.6                                                                                | 33.4                                                                                |                                                                                     | 6.0                                                                                 | 29.8                                                                                |                                                                                     |
| 70th %ile Term Code     | Gap                                                                               | Gap                                                                               |                                                                                   | Hold                                                                              | Hold                                                                              |                                                                                   | Gap                                                                                | Hold                                                                                |                                                                                     | Gap                                                                                 | MaxR                                                                                |                                                                                     |
| 50th %ile Green (s)     | 9.7                                                                               | 9.7                                                                               |                                                                                   | 9.7                                                                               | 9.7                                                                               |                                                                                   | 9.7                                                                                | 44.7                                                                                |                                                                                     | 0.0                                                                                 | 29.8                                                                                |                                                                                     |
| 50th %ile Term Code     | Gap                                                                               | Gap                                                                               |                                                                                   | Gap                                                                               | Gap                                                                               |                                                                                   | Gap                                                                                | Hold                                                                                |                                                                                     | Skip                                                                                | MaxR                                                                                |                                                                                     |
| 30th %ile Green (s)     | 8.3                                                                               | 8.3                                                                               |                                                                                   | 8.3                                                                               | 8.3                                                                               |                                                                                   | 8.3                                                                                | 43.3                                                                                |                                                                                     | 0.0                                                                                 | 29.8                                                                                |                                                                                     |
| 30th %ile Term Code     | Hold                                                                              | Hold                                                                              |                                                                                   | Gap                                                                               | Gap                                                                               |                                                                                   | Gap                                                                                | Hold                                                                                |                                                                                     | Skip                                                                                | MaxR                                                                                |                                                                                     |
| 10th %ile Green (s)     | 6.5                                                                               | 6.5                                                                               |                                                                                   | 6.5                                                                               | 6.5                                                                               |                                                                                   | 6.7                                                                                | 41.7                                                                                |                                                                                     | 0.0                                                                                 | 29.8                                                                                |                                                                                     |
| 10th %ile Term Code     | Hold                                                                              | Hold                                                                              |                                                                                   | Gap                                                                               | Gap                                                                               |                                                                                   | Gap                                                                                | Hold                                                                                |                                                                                     | Skip                                                                                | MaxR                                                                                |                                                                                     |
| Stops (vph)             |                                                                                   | 138                                                                               |                                                                                   |                                                                                   | 140                                                                               |                                                                                   | 62                                                                                 | 205                                                                                 |                                                                                     | 13                                                                                  | 235                                                                                 |                                                                                     |
| Fuel Used(gal)          |                                                                                   | 3                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   | 2                                                                                  | 4                                                                                   |                                                                                     | 0                                                                                   | 4                                                                                   |                                                                                     |
| CO Emissions (g/hr)     |                                                                                   | 177                                                                               |                                                                                   |                                                                                   | 163                                                                               |                                                                                   | 108                                                                                | 294                                                                                 |                                                                                     | 14                                                                                  | 263                                                                                 |                                                                                     |
| NOx Emissions (g/hr)    |                                                                                   | 34                                                                                |                                                                                   |                                                                                   | 32                                                                                |                                                                                   | 21                                                                                 | 57                                                                                  |                                                                                     | 3                                                                                   | 51                                                                                  |                                                                                     |
| VOC Emissions (g/hr)    |                                                                                   | 41                                                                                |                                                                                   |                                                                                   | 38                                                                                |                                                                                   | 25                                                                                 | 68                                                                                  |                                                                                     | 3                                                                                   | 61                                                                                  |                                                                                     |
| Dilemma Vehicles (#)    |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Queue Length 50th (ft)  |                                                                                   | 33                                                                                |                                                                                   |                                                                                   | 34                                                                                |                                                                                   | 21                                                                                 | 53                                                                                  |                                                                                     | 3                                                                                   | 93                                                                                  |                                                                                     |
| Queue Length 95th (ft)  |                                                                                   | 70                                                                                |                                                                                   |                                                                                   | 67                                                                                |                                                                                   | 73                                                                                 | 239                                                                                 |                                                                                     | 16                                                                                  | 241                                                                                 |                                                                                     |
| Internal Link Dist (ft) |                                                                                   | 220                                                                               |                                                                                   |                                                                                   | 220                                                                               |                                                                                   |                                                                                    | 608                                                                                 |                                                                                     |                                                                                     | 372                                                                                 |                                                                                     |
| Turn Bay Length (ft)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 200                                                                                |                                                                                     |                                                                                     | 200                                                                                 |                                                                                     |                                                                                     |
| Base Capacity (vph)     |                                                                                   | 1093                                                                              |                                                                                   |                                                                                   | 998                                                                               |                                                                                   | 735                                                                                | 1097                                                                                |                                                                                     | 813                                                                                 | 810                                                                                 |                                                                                     |
| Starvation Cap Reductn  |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |

Lanes, Volumes, Timings  
1: Abbott Road & Dorrance Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

|                       |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group            | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Spillback Cap Reductn |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Storage Cap Reductn   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Reduced v/c Ratio     |                                                                                   | 0.29                                                                              |                                                                                   |                                                                                   | 0.25                                                                              |                                                                                   | 0.26                                                                               | 0.39                                                                                |                                                                                     | 0.03                                                                                | 0.46                                                                                |                                                                                     |

Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 67

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 14.5

Intersection LOS: B

Intersection Capacity Utilization 67.2%

ICU Level of Service C

Analysis Period (min) 15

90th %ile Actuated Cycle: 83.2

70th %ile Actuated Cycle: 66.4

50th %ile Actuated Cycle: 64.8

30th %ile Actuated Cycle: 62

10th %ile Actuated Cycle: 58.6

Splits and Phases: 1: Abbott Road & Dorrance Avenue

|                                                                                        |                                                                                        |                                                                                          |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
|  Ø1   |  Ø2   |  Ø4   |
| 20 s                                                                                   | 35 s                                                                                   | 30 s                                                                                     |
|  Ø5 |  Ø6 |  Ø8 |
| 20 s                                                                                   | 35 s                                                                                   | 30 s                                                                                     |



Lanes, Volumes, Timings  
2: Abbott Road & Plaza Driveway

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

| Lane Group                 | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
|----------------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       |       |       |       |       |       |
| Traffic Volume (vph)       | 111   | 3     | 585   | 99    | 5     | 519   |
| Future Volume (vph)        | 111   | 3     | 585   | 99    | 5     | 519   |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 0     | 0     |       | 0     | 100   |       |
| Storage Lanes              | 1     | 1     |       | 0     | 1     |       |
| Taper Length (ft)          | 25    |       |       |       | 100   |       |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Ped Bike Factor            | 0.99  | 0.96  | 1.00  |       | 1.00  |       |
| Frt                        |       | 0.850 | 0.980 |       |       |       |
| Flt Protected              | 0.950 |       |       |       | 0.950 |       |
| Satd. Flow (prot)          | 1770  | 1583  | 1816  | 0     | 1770  | 1863  |
| Flt Permitted              | 0.950 |       |       |       | 0.329 |       |
| Satd. Flow (perm)          | 1754  | 1525  | 1816  | 0     | 612   | 1863  |
| Right Turn on Red          |       | Yes   |       | Yes   |       |       |
| Satd. Flow (RTOR)          |       | 3     | 17    |       |       |       |
| Link Speed (mph)           | 30    |       | 30    |       |       | 30    |
| Link Distance (ft)         | 300   |       | 748   |       |       | 688   |
| Travel Time (s)            | 6.8   |       | 17.0  |       |       | 15.6  |
| Confl. Peds. (#/hr)        | 5     | 8     |       | 9     | 5     |       |
| Confl. Bikes (#/hr)        |       | 2     |       | 2     |       |       |
| Peak Hour Factor           | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  |
| Adj. Flow (vph)            | 117   | 3     | 616   | 104   | 5     | 546   |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 117   | 3     | 720   | 0     | 5     | 546   |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Right | Left  | Right | Left  | Left  |
| Median Width(ft)           | 12    |       | 12    |       |       | 12    |
| Link Offset(ft)            | 0     |       | 0     |       |       | 0     |
| Crosswalk Width(ft)        | 16    |       | 16    |       |       | 16    |
| Two way Left Turn Lane     |       |       | Yes   |       |       | Yes   |
| Headway Factor             | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Turning Speed (mph)        | 60    | 60    |       | 60    | 60    |       |
| Number of Detectors        | 1     | 1     | 1     |       | 1     | 1     |
| Detector Template          | Left  | Right | Thru  |       | Left  | Thru  |
| Leading Detector (ft)      | 50    | 50    | 50    |       | 50    | 50    |
| Trailing Detector (ft)     | 0     | 0     | 0     |       | 0     | 0     |
| Detector 1 Position(ft)    | 0     | 0     | 0     |       | 0     | 0     |
| Detector 1 Size(ft)        | 50    | 50    | 50    |       | 50    | 50    |
| Detector 1 Type            | Cl+Ex | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex |
| Detector 1 Channel         |       |       |       |       |       |       |
| Detector 1 Extend (s)      | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |
| Detector 1 Queue (s)       | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |
| Detector 1 Delay (s)       | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |
| Turn Type                  | Perm  | Perm  | NA    |       | Perm  | NA    |
| Protected Phases           |       |       | 2     |       |       | 6     |
| Permitted Phases           | 8     | 8     |       |       | 6     |       |
| Detector Phase             | 8     | 8     | 2     |       | 6     | 6     |
| Switch Phase               |       |       |       |       |       |       |

Lanes, Volumes, Timings  
2: Abbott Road & Plaza Driveway

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

|                         |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group              | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Minimum Initial (s)     | 6.0                                                                               | 6.0                                                                               | 6.0                                                                               |                                                                                   | 6.0                                                                               | 6.0                                                                               |
| Minimum Split (s)       | 27.2                                                                              | 27.2                                                                              | 32.2                                                                              |                                                                                   | 32.2                                                                              | 32.2                                                                              |
| Total Split (s)         | 30.0                                                                              | 30.0                                                                              | 50.0                                                                              |                                                                                   | 50.0                                                                              | 50.0                                                                              |
| Total Split (%)         | 37.5%                                                                             | 37.5%                                                                             | 62.5%                                                                             |                                                                                   | 62.5%                                                                             | 62.5%                                                                             |
| Maximum Green (s)       | 24.8                                                                              | 24.8                                                                              | 44.8                                                                              |                                                                                   | 44.8                                                                              | 44.8                                                                              |
| Yellow Time (s)         | 3.2                                                                               | 3.2                                                                               | 3.2                                                                               |                                                                                   | 3.2                                                                               | 3.2                                                                               |
| All-Red Time (s)        | 2.0                                                                               | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                               | 2.0                                                                               |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |
| Total Lost Time (s)     | 5.2                                                                               | 5.2                                                                               | 5.2                                                                               |                                                                                   | 5.2                                                                               | 5.2                                                                               |
| Lead/Lag                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lead-Lag Optimize?      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                               | 3.0                                                                               |
| Recall Mode             | None                                                                              | None                                                                              | Max                                                                               |                                                                                   | Max                                                                               | Max                                                                               |
| Walk Time (s)           | 7.0                                                                               | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0                                                                               |
| Flash Dont Walk (s)     | 15.0                                                                              | 15.0                                                                              | 20.0                                                                              |                                                                                   | 20.0                                                                              | 20.0                                                                              |
| Pedestrian Calls (#/hr) | 2                                                                                 | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |
| Act Effct Green (s)     | 11.5                                                                              | 11.5                                                                              | 54.1                                                                              |                                                                                   | 54.1                                                                              | 54.1                                                                              |
| Actuated g/C Ratio      | 0.16                                                                              | 0.16                                                                              | 0.75                                                                              |                                                                                   | 0.75                                                                              | 0.75                                                                              |
| v/c Ratio               | 0.42                                                                              | 0.01                                                                              | 0.53                                                                              |                                                                                   | 0.01                                                                              | 0.39                                                                              |
| Control Delay           | 30.8                                                                              | 15.0                                                                              | 8.1                                                                               |                                                                                   | 5.6                                                                               | 6.5                                                                               |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |
| Total Delay             | 30.8                                                                              | 15.0                                                                              | 8.1                                                                               |                                                                                   | 5.6                                                                               | 6.5                                                                               |
| LOS                     | C                                                                                 | B                                                                                 | A                                                                                 |                                                                                   | A                                                                                 | A                                                                                 |
| Approach Delay          | 30.4                                                                              |                                                                                   | 8.1                                                                               |                                                                                   |                                                                                   | 6.5                                                                               |
| Approach LOS            | C                                                                                 |                                                                                   | A                                                                                 |                                                                                   |                                                                                   | A                                                                                 |
| 90th %ile Green (s)     | 22.0                                                                              | 22.0                                                                              | 44.8                                                                              |                                                                                   | 44.8                                                                              | 44.8                                                                              |
| 90th %ile Term Code     | Ped                                                                               | Ped                                                                               | MaxR                                                                              |                                                                                   | MaxR                                                                              | MaxR                                                                              |
| 70th %ile Green (s)     | 11.2                                                                              | 11.2                                                                              | 46.6                                                                              |                                                                                   | 46.6                                                                              | 46.6                                                                              |
| 70th %ile Term Code     | Gap                                                                               | Gap                                                                               | Dwell                                                                             |                                                                                   | Dwell                                                                             | Dwell                                                                             |
| 50th %ile Green (s)     | 10.1                                                                              | 10.1                                                                              | 52.2                                                                              |                                                                                   | 52.2                                                                              | 52.2                                                                              |
| 50th %ile Term Code     | Gap                                                                               | Gap                                                                               | Dwell                                                                             |                                                                                   | Dwell                                                                             | Dwell                                                                             |
| 30th %ile Green (s)     | 8.9                                                                               | 8.9                                                                               | 59.8                                                                              |                                                                                   | 59.8                                                                              | 59.8                                                                              |
| 30th %ile Term Code     | Gap                                                                               | Gap                                                                               | Dwell                                                                             |                                                                                   | Dwell                                                                             | Dwell                                                                             |
| 10th %ile Green (s)     | 0.0                                                                               | 0.0                                                                               | 59.8                                                                              |                                                                                   | 59.8                                                                              | 59.8                                                                              |
| 10th %ile Term Code     | Skip                                                                              | Skip                                                                              | Dwell                                                                             |                                                                                   | Dwell                                                                             | Dwell                                                                             |
| Stops (vph)             | 93                                                                                | 3                                                                                 | 310                                                                               |                                                                                   | 3                                                                                 | 201                                                                               |
| Fuel Used(gal)          | 1                                                                                 | 0                                                                                 | 7                                                                                 |                                                                                   | 0                                                                                 | 5                                                                                 |
| CO Emissions (g/hr)     | 103                                                                               | 2                                                                                 | 477                                                                               |                                                                                   | 3                                                                                 | 321                                                                               |
| NOx Emissions (g/hr)    | 20                                                                                | 0                                                                                 | 93                                                                                |                                                                                   | 1                                                                                 | 62                                                                                |
| VOC Emissions (g/hr)    | 24                                                                                | 1                                                                                 | 111                                                                               |                                                                                   | 1                                                                                 | 74                                                                                |
| Dilemma Vehicles (#)    | 0                                                                                 | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |
| Queue Length 50th (ft)  | 49                                                                                | 0                                                                                 | 116                                                                               |                                                                                   | 1                                                                                 | 78                                                                                |
| Queue Length 95th (ft)  | 84                                                                                | 6                                                                                 | 334                                                                               |                                                                                   | 5                                                                                 | 219                                                                               |
| Internal Link Dist (ft) | 220                                                                               |                                                                                   | 668                                                                               |                                                                                   |                                                                                   | 608                                                                               |
| Turn Bay Length (ft)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 100                                                                               |                                                                                   |
| Base Capacity (vph)     | 603                                                                               | 526                                                                               | 1361                                                                              |                                                                                   | 457                                                                               | 1392                                                                              |
| Starvation Cap Reductn  | 0                                                                                 | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |
| Spillback Cap Reductn   | 0                                                                                 | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |
| Storage Cap Reductn     | 0                                                                                 | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |

Lanes, Volumes, Timings  
2: Abbott Road & Plaza Driveway

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

|                   |  |  |  |  |  |  |
|-------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group        | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Reduced v/c Ratio | 0.19                                                                              | 0.01                                                                              | 0.53                                                                              |                                                                                   | 0.01                                                                              | 0.39                                                                              |

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 72.4

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.53

Intersection Signal Delay: 9.4

Intersection LOS: A

Intersection Capacity Utilization 54.6%

ICU Level of Service A

Analysis Period (min) 15

90th %ile Actuated Cycle: 77.2

70th %ile Actuated Cycle: 68.2

50th %ile Actuated Cycle: 72.7

30th %ile Actuated Cycle: 79.1

10th %ile Actuated Cycle: 65

Splits and Phases: 2: Abbott Road & Plaza Driveway



## Lanes, Volumes, Timings

## Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

## 3: Abbott Road/Abbott Road &amp; Ridge Road

12/04/2025

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph)       | 68                                                                                | 608                                                                               | 74                                                                                | 280                                                                               | 475                                                                               | 384                                                                               | 46                                                                                  | 298                                                                                 | 239                                                                                 | 280                                                                                 | 296                                                                                 | 56                                                                                  |
| Future Volume (vph)        | 68                                                                                | 608                                                                               | 74                                                                                | 280                                                                               | 475                                                                               | 384                                                                               | 46                                                                                  | 298                                                                                 | 239                                                                                 | 280                                                                                 | 296                                                                                 | 56                                                                                  |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Lane Width (ft)            | 11                                                                                | 11                                                                                | 11                                                                                | 10                                                                                | 10                                                                                | 12                                                                                | 12                                                                                  | 12                                                                                  | 12                                                                                  | 12                                                                                  | 12                                                                                  | 12                                                                                  |
| Storage Length (ft)        | 90                                                                                |                                                                                   | 250                                                                               | 200                                                                               |                                                                                   | 0                                                                                 | 300                                                                                 |                                                                                     | 300                                                                                 | 300                                                                                 |                                                                                     | 300                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                   |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     | 1                                                                                   |
| Taper Length (ft)          | 50                                                                                |                                                                                   |                                                                                   | 100                                                                               |                                                                                   |                                                                                   | 100                                                                                 |                                                                                     |                                                                                     | 100                                                                                 |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              |                                                                                   | 0.97                                                                              | 1.00                                                                                |                                                                                     | 0.98                                                                                | 1.00                                                                                |                                                                                     | 0.97                                                                                |
| Frt                        |                                                                                   | 0.984                                                                             |                                                                                   |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                     |                                                                                     | 0.850                                                                               |                                                                                     |                                                                                     | 0.850                                                                               |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1711                                                                              | 3355                                                                              | 0                                                                                 | 1652                                                                              | 1739                                                                              | 1583                                                                              | 1752                                                                                | 1863                                                                                | 1583                                                                                | 1770                                                                                | 1863                                                                                | 1583                                                                                |
| Flt Permitted              | 0.321                                                                             |                                                                                   |                                                                                   | 0.191                                                                             |                                                                                   |                                                                                   | 0.533                                                                               |                                                                                     |                                                                                     | 0.241                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 576                                                                               | 3355                                                                              | 0                                                                                 | 331                                                                               | 1739                                                                              | 1534                                                                              | 979                                                                                 | 1863                                                                                | 1555                                                                                | 448                                                                                 | 1863                                                                                | 1536                                                                                |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 11                                                                                |                                                                                   |                                                                                   |                                                                                   | 396                                                                               |                                                                                     |                                                                                     | 83                                                                                  |                                                                                     |                                                                                     | 67                                                                                  |
| Link Speed (mph)           |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                     | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 808                                                                               |                                                                                   |                                                                                   | 782                                                                               |                                                                                   |                                                                                     | 1105                                                                                |                                                                                     |                                                                                     | 748                                                                                 |                                                                                     |
| Travel Time (s)            |                                                                                   | 18.4                                                                              |                                                                                   |                                                                                   | 17.8                                                                              |                                                                                   |                                                                                     | 25.1                                                                                |                                                                                     |                                                                                     | 17.0                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                   |                                                                                     | 5                                                                                   | 5                                                                                   |                                                                                     | 5                                                                                   |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |
| Peak Hour Factor           | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                              | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 3%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 70                                                                                | 627                                                                               | 76                                                                                | 289                                                                               | 490                                                                               | 396                                                                               | 47                                                                                  | 307                                                                                 | 246                                                                                 | 289                                                                                 | 305                                                                                 | 58                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 70                                                                                | 703                                                                               | 0                                                                                 | 289                                                                               | 490                                                                               | 396                                                                               | 47                                                                                  | 307                                                                                 | 246                                                                                 | 289                                                                                 | 305                                                                                 | 58                                                                                  |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 11                                                                                |                                                                                   |                                                                                   | 11                                                                                |                                                                                   |                                                                                     | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |                                                                                   |                                                                                     | 16                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |
| Headway Factor             | 1.04                                                                              | 1.04                                                                              | 1.04                                                                              | 1.09                                                                              | 1.09                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Turning Speed (mph)        | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                  |                                                                                     | 60                                                                                  | 60                                                                                  |                                                                                     | 60                                                                                  |
| Number of Detectors        | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 | 1                                                                                 | 1                                                                                   | 1                                                                                   | 1                                                                                   | 1                                                                                   | 1                                                                                   | 1                                                                                   |
| Detector Template          | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                                | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                | Right                                                                               |
| Leading Detector (ft)      | 50                                                                                | 50                                                                                |                                                                                   | 50                                                                                | 50                                                                                | 50                                                                                | 50                                                                                  | 50                                                                                  | 50                                                                                  | 50                                                                                  | 50                                                                                  | 50                                                                                  |
| Trailing Detector (ft)     | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Detector 1 Position(ft)    | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Detector 1 Size(ft)        | 50                                                                                | 50                                                                                |                                                                                   | 50                                                                                | 50                                                                                | 50                                                                                | 50                                                                                  | 50                                                                                  | 50                                                                                  | 50                                                                                  | 50                                                                                  | 50                                                                                  |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Turn Type                  | pm+pt                                                                             | NA                                                                                |                                                                                   | pm+pt                                                                             | NA                                                                                | pm+ov                                                                             | pm+pt                                                                               | NA                                                                                  | pm+ov                                                                               | pm+pt                                                                               | NA                                                                                  | pm+ov                                                                               |
| Protected Phases           | 7                                                                                 | 4                                                                                 |                                                                                   | 3                                                                                 | 8                                                                                 | 1                                                                                 | 5                                                                                   | 2                                                                                   | 3                                                                                   | 1                                                                                   | 6                                                                                   | 7                                                                                   |
| Permitted Phases           | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   | 8                                                                                 | 2                                                                                   |                                                                                     | 2                                                                                   | 6                                                                                   |                                                                                     | 6                                                                                   |

## Lanes, Volumes, Timings

## Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

## 3: Abbott Road/Abbott Road &amp; Ridge Road

12/04/2025

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Detector Phase          | 7                                                                                 | 4                                                                                 |                                                                                   | 3                                                                                 | 8                                                                                 | 1                                                                                 | 5                                                                                  | 2                                                                                   | 3                                                                                   | 1                                                                                   | 6                                                                                   | 7                                                                                   |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0                                                                               | 7.0                                                                               | 7.0                                                                                | 7.0                                                                                 | 7.0                                                                                 | 7.0                                                                                 | 7.0                                                                                 | 7.0                                                                                 |
| Minimum Split (s)       | 12.2                                                                              | 36.2                                                                              |                                                                                   | 12.2                                                                              | 36.2                                                                              | 12.2                                                                              | 12.2                                                                               | 42.2                                                                                | 12.2                                                                                | 12.2                                                                                | 42.2                                                                                | 12.2                                                                                |
| Total Split (s)         | 20.0                                                                              | 37.0                                                                              |                                                                                   | 20.0                                                                              | 37.0                                                                              | 20.0                                                                              | 20.0                                                                               | 43.0                                                                                | 20.0                                                                                | 20.0                                                                                | 43.0                                                                                | 20.0                                                                                |
| Total Split (%)         | 16.7%                                                                             | 30.8%                                                                             |                                                                                   | 16.7%                                                                             | 30.8%                                                                             | 16.7%                                                                             | 16.7%                                                                              | 35.8%                                                                               | 16.7%                                                                               | 16.7%                                                                               | 35.8%                                                                               | 16.7%                                                                               |
| Maximum Green (s)       | 14.8                                                                              | 31.8                                                                              |                                                                                   | 14.8                                                                              | 31.8                                                                              | 14.8                                                                              | 14.8                                                                               | 37.8                                                                                | 14.8                                                                                | 14.8                                                                                | 37.8                                                                                | 14.8                                                                                |
| Yellow Time (s)         | 3.2                                                                               | 3.2                                                                               |                                                                                   | 3.2                                                                               | 3.2                                                                               | 3.2                                                                               | 3.2                                                                                | 3.2                                                                                 | 3.2                                                                                 | 3.2                                                                                 | 3.2                                                                                 | 3.2                                                                                 |
| All-Red Time (s)        | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                               | 2.0                                                                               | 2.0                                                                               | 2.0                                                                                | 2.0                                                                                 | 2.0                                                                                 | 2.0                                                                                 | 2.0                                                                                 | 2.0                                                                                 |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Total Lost Time (s)     | 5.2                                                                               | 5.2                                                                               |                                                                                   | 5.2                                                                               | 5.2                                                                               | 5.2                                                                               | 5.2                                                                                | 5.2                                                                                 | 5.2                                                                                 | 5.2                                                                                 | 5.2                                                                                 | 5.2                                                                                 |
| Lead/Lag                | Lead                                                                              | Lag                                                                               |                                                                                   | Lead                                                                              | Lag                                                                               | Lead                                                                              | Lead                                                                               | Lag                                                                                 | Lead                                                                                | Lead                                                                                | Lag                                                                                 | Lead                                                                                |
| Lead-Lag Optimize?      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                                | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 |
| Recall Mode             | None                                                                              | Max                                                                               |                                                                                   | None                                                                              | Max                                                                               | None                                                                              | None                                                                               | None                                                                                | None                                                                                | None                                                                                | None                                                                                | None                                                                                |
| Walk Time (s)           |                                                                                   | 7.0                                                                               |                                                                                   |                                                                                   | 7.0                                                                               |                                                                                   |                                                                                    | 7.0                                                                                 |                                                                                     |                                                                                     | 7.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)     |                                                                                   | 24.0                                                                              |                                                                                   |                                                                                   | 24.0                                                                              |                                                                                   |                                                                                    | 30.0                                                                                |                                                                                     |                                                                                     | 30.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) |                                                                                   | 5                                                                                 |                                                                                   |                                                                                   | 5                                                                                 |                                                                                   |                                                                                    | 5                                                                                   |                                                                                     |                                                                                     | 5                                                                                   |                                                                                     |
| Act Effect Green (s)    | 40.2                                                                              | 32.0                                                                              |                                                                                   | 51.9                                                                              | 41.4                                                                              | 55.7                                                                              | 30.8                                                                               | 23.2                                                                                | 38.1                                                                                | 42.7                                                                                | 32.6                                                                                | 40.8                                                                                |
| Actuated g/C Ratio      | 0.38                                                                              | 0.30                                                                              |                                                                                   | 0.49                                                                              | 0.39                                                                              | 0.53                                                                              | 0.29                                                                               | 0.22                                                                                | 0.36                                                                                | 0.41                                                                                | 0.31                                                                                | 0.39                                                                                |
| v/c Ratio               | 0.23                                                                              | 0.68                                                                              |                                                                                   | 0.83                                                                              | 0.72                                                                              | 0.39                                                                              | 0.14                                                                               | 0.75                                                                                | 0.40                                                                                | 0.80                                                                                | 0.53                                                                                | 0.09                                                                                |
| Control Delay           | 18.9                                                                              | 37.0                                                                              |                                                                                   | 40.4                                                                              | 37.6                                                                              | 2.9                                                                               | 19.7                                                                               | 49.9                                                                                | 15.5                                                                                | 39.9                                                                                | 34.4                                                                                | 3.7                                                                                 |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| Total Delay             | 18.9                                                                              | 37.0                                                                              |                                                                                   | 40.4                                                                              | 37.6                                                                              | 2.9                                                                               | 19.7                                                                               | 49.9                                                                                | 15.5                                                                                | 39.9                                                                                | 34.4                                                                                | 3.7                                                                                 |
| LOS                     | B                                                                                 | D                                                                                 |                                                                                   | D                                                                                 | D                                                                                 | A                                                                                 | B                                                                                  | D                                                                                   | B                                                                                   | D                                                                                   | C                                                                                   | A                                                                                   |
| Approach Delay          |                                                                                   | 35.4                                                                              |                                                                                   |                                                                                   | 26.6                                                                              |                                                                                   |                                                                                    | 33.4                                                                                |                                                                                     |                                                                                     | 34.1                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | D                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                    | C                                                                                   |                                                                                     |                                                                                     | C                                                                                   |                                                                                     |
| 90th %ile Green (s)     | 10.9                                                                              | 31.8                                                                              |                                                                                   | 14.8                                                                              | 35.7                                                                              | 14.8                                                                              | 9.0                                                                                | 37.0                                                                                | 14.8                                                                                | 14.8                                                                                | 42.8                                                                                | 10.9                                                                                |
| 90th %ile Term Code     | Gap                                                                               | MaxR                                                                              |                                                                                   | Max                                                                               | Hold                                                                              | Max                                                                               | Gap                                                                                | Ped                                                                                 | Max                                                                                 | Max                                                                                 | Hold                                                                                | Gap                                                                                 |
| 70th %ile Green (s)     | 8.7                                                                               | 31.8                                                                              |                                                                                   | 14.8                                                                              | 37.9                                                                              | 14.8                                                                              | 7.9                                                                                | 25.5                                                                                | 14.8                                                                                | 14.8                                                                                | 32.4                                                                                | 8.7                                                                                 |
| 70th %ile Term Code     | Gap                                                                               | MaxR                                                                              |                                                                                   | Max                                                                               | Hold                                                                              | Max                                                                               | Gap                                                                                | Gap                                                                                 | Max                                                                                 | Max                                                                                 | Hold                                                                                | Gap                                                                                 |
| 50th %ile Green (s)     | 7.7                                                                               | 31.8                                                                              |                                                                                   | 14.8                                                                              | 38.9                                                                              | 14.8                                                                              | 7.2                                                                                | 22.2                                                                                | 14.8                                                                                | 14.8                                                                                | 29.8                                                                                | 7.7                                                                                 |
| 50th %ile Term Code     | Gap                                                                               | MaxR                                                                              |                                                                                   | Max                                                                               | Hold                                                                              | Max                                                                               | Gap                                                                                | Gap                                                                                 | Max                                                                                 | Max                                                                                 | Hold                                                                                | Gap                                                                                 |
| 30th %ile Green (s)     | 7.0                                                                               | 31.8                                                                              |                                                                                   | 14.8                                                                              | 39.6                                                                              | 14.8                                                                              | 7.0                                                                                | 19.0                                                                                | 14.8                                                                                | 14.8                                                                                | 26.8                                                                                | 7.0                                                                                 |
| 30th %ile Term Code     | Min                                                                               | MaxR                                                                              |                                                                                   | Max                                                                               | Hold                                                                              | Max                                                                               | Min                                                                                | Gap                                                                                 | Max                                                                                 | Max                                                                                 | Hold                                                                                | Min                                                                                 |
| 10th %ile Green (s)     | 0.0                                                                               | 31.8                                                                              |                                                                                   | 14.8                                                                              | 51.8                                                                              | 12.1                                                                              | 0.0                                                                                | 14.4                                                                                | 14.8                                                                                | 12.1                                                                                | 31.7                                                                                | 0.0                                                                                 |
| 10th %ile Term Code     | Skip                                                                              | MaxR                                                                              |                                                                                   | Max                                                                               | Hold                                                                              | Gap                                                                               | Skip                                                                               | Gap                                                                                 | Max                                                                                 | Gap                                                                                 | Hold                                                                                | Skip                                                                                |
| Stops (vph)             | 40                                                                                | 574                                                                               |                                                                                   | 153                                                                               | 370                                                                               | 25                                                                                | 29                                                                                 | 266                                                                                 | 104                                                                                 | 183                                                                                 | 235                                                                                 | 7                                                                                   |
| Fuel Used(gal)          | 1                                                                                 | 13                                                                                |                                                                                   | 5                                                                                 | 9                                                                                 | 3                                                                                 | 1                                                                                  | 7                                                                                   | 3                                                                                   | 5                                                                                   | 5                                                                                   | 0                                                                                   |
| CO Emissions (g/hr)     | 64                                                                                | 882                                                                               |                                                                                   | 339                                                                               | 599                                                                               | 189                                                                               | 52                                                                                 | 494                                                                                 | 237                                                                                 | 344                                                                                 | 356                                                                                 | 28                                                                                  |
| NOx Emissions (g/hr)    | 12                                                                                | 172                                                                               |                                                                                   | 66                                                                                | 117                                                                               | 37                                                                                | 10                                                                                 | 96                                                                                  | 46                                                                                  | 67                                                                                  | 69                                                                                  | 6                                                                                   |
| VOC Emissions (g/hr)    | 15                                                                                | 204                                                                               |                                                                                   | 79                                                                                | 139                                                                               | 44                                                                                | 12                                                                                 | 114                                                                                 | 55                                                                                  | 80                                                                                  | 83                                                                                  | 7                                                                                   |
| Dilemma Vehicles (#)    | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Queue Length 50th (ft)  | 24                                                                                | 212                                                                               |                                                                                   | 114                                                                               | 282                                                                               | 0                                                                                 | 19                                                                                 | 195                                                                                 | 71                                                                                  | 135                                                                                 | 174                                                                                 | 0                                                                                   |
| Queue Length 95th (ft)  | 60                                                                                | 333                                                                               |                                                                                   | #316                                                                              | #577                                                                              | 53                                                                                | 41                                                                                 | 286                                                                                 | 129                                                                                 | #205                                                                                | 263                                                                                 | 18                                                                                  |
| Internal Link Dist (ft) |                                                                                   | 728                                                                               |                                                                                   |                                                                                   | 702                                                                               |                                                                                   |                                                                                    | 1025                                                                                |                                                                                     |                                                                                     | 668                                                                                 |                                                                                     |
| Turn Bay Length (ft)    | 90                                                                                |                                                                                   |                                                                                   | 200                                                                               |                                                                                   |                                                                                   | 300                                                                                |                                                                                     | 300                                                                                 | 300                                                                                 |                                                                                     | 300                                                                                 |
| Base Capacity (vph)     | 417                                                                               | 1027                                                                              |                                                                                   | 349                                                                               | 683                                                                               | 1011                                                                              | 463                                                                                | 672                                                                                 | 619                                                                                 | 368                                                                                 | 688                                                                                 | 736                                                                                 |
| Starvation Cap Reductn  | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |

|                       |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group            | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Spillback Cap Reductn | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Storage Cap Reductn   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Reduced v/c Ratio     | 0.17                                                                              | 0.68                                                                              |                                                                                   | 0.83                                                                              | 0.72                                                                              | 0.39                                                                              | 0.10                                                                               | 0.46                                                                                | 0.40                                                                                | 0.79                                                                                | 0.44                                                                                | 0.08                                                                                |

## Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 105.3

Natural Cycle: 105

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 31.5

Intersection LOS: C

Intersection Capacity Utilization 92.2%

ICU Level of Service F

Analysis Period (min) 15

90th %ile Actuated Cycle: 119.2

70th %ile Actuated Cycle: 107.7

50th %ile Actuated Cycle: 104.4

30th %ile Actuated Cycle: 101.2

10th %ile Actuated Cycle: 93.9

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Abbott Road/Abbott Road &amp; Ridge Road

|                                                                                        |                                                                                        |                                                                                        |                                                                                          |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
|  Ø1 |  Ø2 |  Ø3 |  Ø4 |
| 20 s                                                                                   | 43 s                                                                                   | 20 s                                                                                   | 37 s                                                                                     |
|  Ø5 |  Ø6 |  Ø7 |  Ø8 |
| 20 s                                                                                   | 43 s                                                                                   | 20 s                                                                                   | 37 s                                                                                     |

Lanes, Volumes, Timings  
4: Abbott Road & Fernald Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

|                                   |  |  |  |  |  |  |   |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                        | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |  |  |                                                                                     |  |  |                                                                                     |
| Traffic Volume (vph)              | 2                                                                                 | 0                                                                                 | 1                                                                                 | 15                                                                                | 0                                                                                 | 11                                                                                | 0                                                                                   | 557                                                                                 | 36                                                                                  | 24                                                                                  | 628                                                                                 | 0                                                                                   |
| Future Volume (vph)               | 2                                                                                 | 0                                                                                 | 1                                                                                 | 15                                                                                | 0                                                                                 | 11                                                                                | 0                                                                                   | 557                                                                                 | 36                                                                                  | 24                                                                                  | 628                                                                                 | 0                                                                                   |
| Ideal Flow (vphpl)                | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Storage Length (ft)               | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 100                                                                                 |                                                                                     | 0                                                                                   | 100                                                                                 |                                                                                     | 0                                                                                   |
| Storage Lanes                     | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)                 | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                |                                                                                   |                                                                                   | 100                                                                                 |                                                                                     |                                                                                     | 100                                                                                 |                                                                                     |                                                                                     |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Frt                               |                                                                                   | 0.955                                                                             |                                                                                   |                                                                                   | 0.942                                                                             |                                                                                   |                                                                                     | 0.991                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Flt Protected                     |                                                                                   | 0.968                                                                             |                                                                                   |                                                                                   | 0.972                                                                             |                                                                                   |                                                                                     |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)                 | 0                                                                                 | 1722                                                                              | 0                                                                                 | 0                                                                                 | 1706                                                                              | 0                                                                                 | 1863                                                                                | 1829                                                                                | 0                                                                                   | 1770                                                                                | 1845                                                                                | 0                                                                                   |
| Flt Permitted                     |                                                                                   | 0.968                                                                             |                                                                                   |                                                                                   | 0.972                                                                             |                                                                                   |                                                                                     |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)                 | 0                                                                                 | 1722                                                                              | 0                                                                                 | 0                                                                                 | 1706                                                                              | 0                                                                                 | 1863                                                                                | 1829                                                                                | 0                                                                                   | 1770                                                                                | 1845                                                                                | 0                                                                                   |
| Link Speed (mph)                  |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                     | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)                |                                                                                   | 100                                                                               |                                                                                   |                                                                                   | 300                                                                               |                                                                                   |                                                                                     | 1266                                                                                |                                                                                     |                                                                                     | 1105                                                                                |                                                                                     |
| Travel Time (s)                   |                                                                                   | 2.3                                                                               |                                                                                   |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                     | 28.8                                                                                |                                                                                     |                                                                                     | 25.1                                                                                |                                                                                     |
| Confl. Peds. (#/hr)               | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 13                                                                                  |                                                                                     | 7                                                                                   | 7                                                                                   |                                                                                     | 13                                                                                  |
| Confl. Bikes (#/hr)               |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |
| Peak Hour Factor                  | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                |
| Heavy Vehicles (%)                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                  | 3%                                                                                  | 2%                                                                                  | 2%                                                                                  | 3%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)                   | 2                                                                                 | 0                                                                                 | 1                                                                                 | 16                                                                                | 0                                                                                 | 12                                                                                | 0                                                                                   | 586                                                                                 | 38                                                                                  | 25                                                                                  | 661                                                                                 | 0                                                                                   |
| Shared Lane Traffic (%)           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)             | 0                                                                                 | 3                                                                                 | 0                                                                                 | 0                                                                                 | 28                                                                                | 0                                                                                 | 0                                                                                   | 624                                                                                 | 0                                                                                   | 25                                                                                  | 661                                                                                 | 0                                                                                   |
| Enter Blocked Intersection        | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment                    | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)                  |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                     | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Link Offset(ft)                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)               |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |                                                                                   |                                                                                     | 16                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Two way Left Turn Lane            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |
| Headway Factor                    | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Turning Speed (mph)               | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                  |                                                                                     | 60                                                                                  | 60                                                                                  |                                                                                     | 60                                                                                  |
| Sign Control                      |                                                                                   | Stop                                                                              |                                                                                   |                                                                                   | Stop                                                                              |                                                                                   |                                                                                     | Free                                                                                |                                                                                     |                                                                                     | Free                                                                                |                                                                                     |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                        | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:                     | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization | 44.6%                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | ICU Level of Service A                                                              |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min)             | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |



Lanes, Volumes, Timings  
5: Abbott Road & Elmview Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

|                            |  |  |  |  |  |  |   |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |  |  |                                                                                     |  |  |                                                                                     |
| Traffic Volume (vph)       | 19                                                                                | 1                                                                                 | 7                                                                                 | 7                                                                                 | 1                                                                                 | 11                                                                                | 8                                                                                   | 543                                                                                 | 9                                                                                   | 22                                                                                  | 587                                                                                 | 19                                                                                  |
| Future Volume (vph)        | 19                                                                                | 1                                                                                 | 7                                                                                 | 7                                                                                 | 1                                                                                 | 11                                                                                | 8                                                                                   | 543                                                                                 | 9                                                                                   | 22                                                                                  | 587                                                                                 | 19                                                                                  |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Storage Length (ft)        | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 100                                                                                 |                                                                                     | 0                                                                                   | 100                                                                                 |                                                                                     | 0                                                                                   |
| Storage Lanes              | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)          | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                |                                                                                   |                                                                                   | 100                                                                                 |                                                                                     |                                                                                     | 100                                                                                 |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor            |                                                                                   | 0.99                                                                              |                                                                                   |                                                                                   | 0.98                                                                              |                                                                                   | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     |
| Frt                        |                                                                                   | 0.966                                                                             |                                                                                   |                                                                                   | 0.919                                                                             |                                                                                   |                                                                                     | 0.997                                                                               |                                                                                     |                                                                                     | 0.995                                                                               |                                                                                     |
| Flt Protected              |                                                                                   | 0.966                                                                             |                                                                                   |                                                                                   | 0.983                                                                             |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 0                                                                                 | 1725                                                                              | 0                                                                                 | 0                                                                                 | 1652                                                                              | 0                                                                                 | 1770                                                                                | 1821                                                                                | 0                                                                                   | 1770                                                                                | 1834                                                                                | 0                                                                                   |
| Flt Permitted              |                                                                                   | 0.776                                                                             |                                                                                   |                                                                                   | 0.873                                                                             |                                                                                   | 0.392                                                                               |                                                                                     |                                                                                     | 0.423                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 0                                                                                 | 1378                                                                              | 0                                                                                 | 0                                                                                 | 1464                                                                              | 0                                                                                 | 728                                                                                 | 1821                                                                                | 0                                                                                   | 786                                                                                 | 1834                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 7                                                                                 |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 3                                                                                   |                                                                                     |
| Link Speed (mph)           |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                     | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 300                                                                               |                                                                                   |                                                                                   | 300                                                                               |                                                                                   |                                                                                     | 457                                                                                 |                                                                                     |                                                                                     | 1266                                                                                |                                                                                     |
| Travel Time (s)            |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                     | 10.4                                                                                |                                                                                     |                                                                                     | 28.8                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 6                                                                                   |                                                                                     | 5                                                                                   | 5                                                                                   |                                                                                     | 6                                                                                   |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |
| Peak Hour Factor           | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                  | 4%                                                                                  | 2%                                                                                  | 2%                                                                                  | 3%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 20                                                                                | 1                                                                                 | 7                                                                                 | 7                                                                                 | 1                                                                                 | 12                                                                                | 9                                                                                   | 578                                                                                 | 10                                                                                  | 23                                                                                  | 624                                                                                 | 20                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 0                                                                                 | 28                                                                                | 0                                                                                 | 0                                                                                 | 20                                                                                | 0                                                                                 | 9                                                                                   | 588                                                                                 | 0                                                                                   | 23                                                                                  | 644                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                     | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |                                                                                   |                                                                                     | 16                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |
| Headway Factor             | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Turning Speed (mph)        | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                  |                                                                                     | 60                                                                                  | 60                                                                                  |                                                                                     | 60                                                                                  |
| Number of Detectors        | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                   | 1                                                                                   |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     |
| Detector Template          | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                                | Thru                                                                                |                                                                                     | Left                                                                                | Thru                                                                                |                                                                                     |
| Leading Detector (ft)      | 20                                                                                | 50                                                                                |                                                                                   | 20                                                                                | 50                                                                                |                                                                                   | 50                                                                                  | 50                                                                                  |                                                                                     | 50                                                                                  | 50                                                                                  |                                                                                     |
| Trailing Detector (ft)     | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Detector 1 Position(ft)    | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Detector 1 Size(ft)        | 20                                                                                | 50                                                                                |                                                                                   | 20                                                                                | 50                                                                                |                                                                                   | 50                                                                                  | 50                                                                                  |                                                                                     | 50                                                                                  | 50                                                                                  |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Turn Type                  | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                                | NA                                                                                  |                                                                                     | Perm                                                                                | NA                                                                                  |                                                                                     |
| Protected Phases           |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |
| Permitted Phases           | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 2                                                                                   |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |                                                                                     |
| Detector Phase             | 4                                                                                 | 4                                                                                 |                                                                                   | 8                                                                                 | 8                                                                                 |                                                                                   | 2                                                                                   | 2                                                                                   |                                                                                     | 6                                                                                   | 6                                                                                   |                                                                                     |

Lanes, Volumes, Timings  
5: Abbott Road & Elmview Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 6.0                                                                               | 6.0                                                                               |                                                                                   | 6.0                                                                               | 6.0                                                                               |                                                                                   | 20.0                                                                               | 20.0                                                                                |                                                                                     | 20.0                                                                                | 20.0                                                                                |                                                                                     |
| Minimum Split (s)       | 27.2                                                                              | 27.2                                                                              |                                                                                   | 27.2                                                                              | 27.2                                                                              |                                                                                   | 27.2                                                                               | 27.2                                                                                |                                                                                     | 27.2                                                                                | 27.2                                                                                |                                                                                     |
| Total Split (s)         | 28.0                                                                              | 28.0                                                                              |                                                                                   | 28.0                                                                              | 28.0                                                                              |                                                                                   | 42.0                                                                               | 42.0                                                                                |                                                                                     | 42.0                                                                                | 42.0                                                                                |                                                                                     |
| Total Split (%)         | 40.0%                                                                             | 40.0%                                                                             |                                                                                   | 40.0%                                                                             | 40.0%                                                                             |                                                                                   | 60.0%                                                                              | 60.0%                                                                               |                                                                                     | 60.0%                                                                               | 60.0%                                                                               |                                                                                     |
| Maximum Green (s)       | 22.8                                                                              | 22.8                                                                              |                                                                                   | 22.8                                                                              | 22.8                                                                              |                                                                                   | 36.8                                                                               | 36.8                                                                                |                                                                                     | 36.8                                                                                | 36.8                                                                                |                                                                                     |
| Yellow Time (s)         | 3.2                                                                               | 3.2                                                                               |                                                                                   | 3.2                                                                               | 3.2                                                                               |                                                                                   | 3.2                                                                                | 3.2                                                                                 |                                                                                     | 3.2                                                                                 | 3.2                                                                                 |                                                                                     |
| All-Red Time (s)        | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                                | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Lost Time Adjust (s)    |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)     |                                                                                   | 5.2                                                                               |                                                                                   |                                                                                   | 5.2                                                                               |                                                                                   | 5.2                                                                                | 5.2                                                                                 |                                                                                     | 5.2                                                                                 | 5.2                                                                                 |                                                                                     |
| Lead/Lag                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lead-Lag Optimize?      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                                | 3.0                                                                                 |                                                                                     | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| Recall Mode             | None                                                                              | None                                                                              |                                                                                   | None                                                                              | None                                                                              |                                                                                   | Max                                                                                | Max                                                                                 |                                                                                     | Max                                                                                 | Max                                                                                 |                                                                                     |
| Walk Time (s)           | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                                | 7.0                                                                                 |                                                                                     | 7.0                                                                                 | 7.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)     | 15.0                                                                              | 15.0                                                                              |                                                                                   | 15.0                                                                              | 15.0                                                                              |                                                                                   | 15.0                                                                               | 15.0                                                                                |                                                                                     | 15.0                                                                                | 15.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                  | 2                                                                                   |                                                                                     | 2                                                                                   | 2                                                                                   |                                                                                     |
| Act Effect Green (s)    |                                                                                   | 9.1                                                                               |                                                                                   |                                                                                   | 9.0                                                                               |                                                                                   | 54.2                                                                               | 54.2                                                                                |                                                                                     | 54.2                                                                                | 54.2                                                                                |                                                                                     |
| Actuated g/C Ratio      |                                                                                   | 0.14                                                                              |                                                                                   |                                                                                   | 0.14                                                                              |                                                                                   | 0.86                                                                               | 0.86                                                                                |                                                                                     | 0.86                                                                                | 0.86                                                                                |                                                                                     |
| v/c Ratio               |                                                                                   | 0.14                                                                              |                                                                                   |                                                                                   | 0.09                                                                              |                                                                                   | 0.01                                                                               | 0.37                                                                                |                                                                                     | 0.03                                                                                | 0.41                                                                                |                                                                                     |
| Control Delay           |                                                                                   | 20.3                                                                              |                                                                                   |                                                                                   | 16.0                                                                              |                                                                                   | 4.9                                                                                | 5.0                                                                                 |                                                                                     | 4.6                                                                                 | 5.3                                                                                 |                                                                                     |
| Queue Delay             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Delay             |                                                                                   | 20.3                                                                              |                                                                                   |                                                                                   | 16.0                                                                              |                                                                                   | 4.9                                                                                | 5.0                                                                                 |                                                                                     | 4.6                                                                                 | 5.3                                                                                 |                                                                                     |
| LOS                     |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   | A                                                                                  | A                                                                                   |                                                                                     | A                                                                                   | A                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 20.3                                                                              |                                                                                   |                                                                                   | 16.0                                                                              |                                                                                   |                                                                                    | 5.0                                                                                 |                                                                                     |                                                                                     | 5.3                                                                                 |                                                                                     |
| Approach LOS            |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                    | A                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |
| 90th %ile Green (s)     | 22.0                                                                              | 22.0                                                                              |                                                                                   | 22.0                                                                              | 22.0                                                                              |                                                                                   | 41.5                                                                               | 41.5                                                                                |                                                                                     | 41.5                                                                                | 41.5                                                                                |                                                                                     |
| 90th %ile Term Code     | Ped                                                                               | Ped                                                                               |                                                                                   | Ped                                                                               | Ped                                                                               |                                                                                   | Dwell                                                                              | Dwell                                                                               |                                                                                     | Dwell                                                                               | Dwell                                                                               |                                                                                     |
| 70th %ile Green (s)     | 7.2                                                                               | 7.2                                                                               |                                                                                   | 7.2                                                                               | 7.2                                                                               |                                                                                   | 51.8                                                                               | 51.8                                                                                |                                                                                     | 51.8                                                                                | 51.8                                                                                |                                                                                     |
| 70th %ile Term Code     | Gap                                                                               | Gap                                                                               |                                                                                   | Hold                                                                              | Hold                                                                              |                                                                                   | Dwell                                                                              | Dwell                                                                               |                                                                                     | Dwell                                                                               | Dwell                                                                               |                                                                                     |
| 50th %ile Green (s)     | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 51.8                                                                               | 51.8                                                                                |                                                                                     | 51.8                                                                                | 51.8                                                                                |                                                                                     |
| 50th %ile Term Code     | Skip                                                                              | Skip                                                                              |                                                                                   | Skip                                                                              | Skip                                                                              |                                                                                   | Dwell                                                                              | Dwell                                                                               |                                                                                     | Dwell                                                                               | Dwell                                                                               |                                                                                     |
| 30th %ile Green (s)     | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 51.8                                                                               | 51.8                                                                                |                                                                                     | 51.8                                                                                | 51.8                                                                                |                                                                                     |
| 30th %ile Term Code     | Skip                                                                              | Skip                                                                              |                                                                                   | Skip                                                                              | Skip                                                                              |                                                                                   | Dwell                                                                              | Dwell                                                                               |                                                                                     | Dwell                                                                               | Dwell                                                                               |                                                                                     |
| 10th %ile Green (s)     | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 51.8                                                                               | 51.8                                                                                |                                                                                     | 51.8                                                                                | 51.8                                                                                |                                                                                     |
| 10th %ile Term Code     | Skip                                                                              | Skip                                                                              |                                                                                   | Skip                                                                              | Skip                                                                              |                                                                                   | Dwell                                                                              | Dwell                                                                               |                                                                                     | Dwell                                                                               | Dwell                                                                               |                                                                                     |
| Stops (vph)             |                                                                                   | 20                                                                                |                                                                                   |                                                                                   | 11                                                                                |                                                                                   | 4                                                                                  | 151                                                                                 |                                                                                     | 8                                                                                   | 173                                                                                 |                                                                                     |
| Fuel Used(gal)          |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   | 0                                                                                  | 3                                                                                   |                                                                                     | 0                                                                                   | 8                                                                                   |                                                                                     |
| CO Emissions (g/hr)     |                                                                                   | 19                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   | 4                                                                                  | 236                                                                                 |                                                                                     | 20                                                                                  | 530                                                                                 |                                                                                     |
| NOx Emissions (g/hr)    |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   | 1                                                                                  | 46                                                                                  |                                                                                     | 4                                                                                   | 103                                                                                 |                                                                                     |
| VOC Emissions (g/hr)    |                                                                                   | 5                                                                                 |                                                                                   |                                                                                   | 3                                                                                 |                                                                                   | 1                                                                                  | 55                                                                                  |                                                                                     | 5                                                                                   | 123                                                                                 |                                                                                     |
| Dilemma Vehicles (#)    |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Queue Length 50th (ft)  |                                                                                   | 7                                                                                 |                                                                                   |                                                                                   | 3                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Queue Length 95th (ft)  |                                                                                   | 25                                                                                |                                                                                   |                                                                                   | 17                                                                                |                                                                                   | 8                                                                                  | 249                                                                                 |                                                                                     | 14                                                                                  | 285                                                                                 |                                                                                     |
| Internal Link Dist (ft) |                                                                                   | 220                                                                               |                                                                                   |                                                                                   | 220                                                                               |                                                                                   |                                                                                    | 377                                                                                 |                                                                                     |                                                                                     | 1186                                                                                |                                                                                     |
| Turn Bay Length (ft)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 100                                                                                |                                                                                     |                                                                                     | 100                                                                                 |                                                                                     |                                                                                     |
| Base Capacity (vph)     |                                                                                   | 510                                                                               |                                                                                   |                                                                                   | 545                                                                               |                                                                                   | 627                                                                                | 1569                                                                                |                                                                                     | 677                                                                                 | 1580                                                                                |                                                                                     |
| Starvation Cap Reductn  |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Spillback Cap Reductn   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |

Lanes, Volumes, Timings  
5: Abbott Road & Elmview Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

|                     |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group          | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Storage Cap Reductn |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Reduced v/c Ratio   |                                                                                   | 0.05                                                                              |                                                                                   |                                                                                   | 0.04                                                                              |                                                                                   | 0.01                                                                               | 0.37                                                                                |                                                                                     | 0.03                                                                                | 0.41                                                                                |                                                                                     |

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 62.9

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.41

Intersection Signal Delay: 5.7

Intersection LOS: A

Intersection Capacity Utilization 47.8%

ICU Level of Service A

Analysis Period (min) 15

90th %ile Actuated Cycle: 73.9

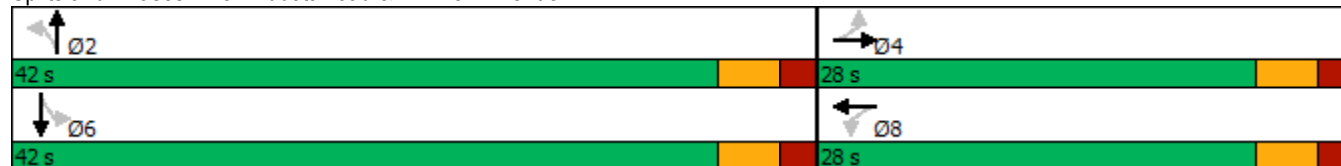
70th %ile Actuated Cycle: 69.4

50th %ile Actuated Cycle: 57

30th %ile Actuated Cycle: 57

10th %ile Actuated Cycle: 57

Splits and Phases: 5: Abbott Road & Elmview Avenue



HCM 6th TWSC  
4: Abbott Road & Fernald Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.8  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      | ↕    | ↕    |      | ↕    | ↕    |      |
| Traffic Vol, veh/h       | 2    | 0    | 1    | 15   | 0    | 11   | 0    | 557  | 36   | 24   | 628  | 0    |
| Future Vol, veh/h        | 2    | 0    | 1    | 15   | 0    | 11   | 0    | 557  | 36   | 24   | 628  | 0    |
| Conflicting Peds, #/hr   | 5    | 0    | 5    | 5    | 0    | 5    | 13   | 0    | 7    | 7    | 0    | 13   |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 100  | -    | -    | 100  | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 3    | 2    | 2    | 3    | 2    |
| Mvmt Flow                | 2    | 0    | 1    | 16   | 0    | 12   | 0    | 586  | 38   | 25   | 661  | 0    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 1340   | 1355  | 679    | 1329  | 1336   | 617   | 674    | 0 | 0 | 631   | 0 | 0 |
| Stage 1              | 724    | 724   | -      | 612   | 612    | -     | -      | - | - | -     | - | - |
| Stage 2              | 616    | 631   | -      | 717   | 724    | -     | -      | - | - | -     | - | - |
| Critical Hdwy        | 7.12   | 6.52  | 6.22   | 7.12  | 6.52   | 6.22  | 4.12   | - | - | 4.12  | - | - |
| Critical Hdwy Stg 1  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Critical Hdwy Stg 2  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Follow-up Hdwy       | 3.518  | 4.018 | 3.318  | 3.518 | 4.018  | 3.318 | 2.218  | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver   | 130    | 149   | 452    | 132   | 153    | 490   | 917    | - | - | 951   | - | - |
| Stage 1              | 417    | 430   | -      | 480   | 484    | -     | -      | - | - | -     | - | - |
| Stage 2              | 478    | 474   | -      | 421   | 430    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |       |        | - | - | -     | - | - |
| Mov Cap-1 Maneuver   | 122    | 142   | 444    | 128   | 146    | 484   | 906    | - | - | 945   | - | - |
| Mov Cap-2 Maneuver   | 122    | 142   | -      | 128   | 146    | -     | -      | - | - | -     | - | - |
| Stage 1              | 412    | 414   | -      | 477   | 481    | -     | -      | - | - | -     | - | - |
| Stage 2              | 464    | 471   | -      | 407   | 414    | -     | -      | - | - | -     | - | - |

| Approach             | EB   |  | WB   |  | NB |  | SB  |  |
|----------------------|------|--|------|--|----|--|-----|--|
| HCM Control Delay, s | 27.8 |  | 27.7 |  | 0  |  | 0.3 |  |
| HCM LOS              | D    |  | D    |  |    |  |     |  |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL   | SBT   | SBR |
|-----------------------|-----|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h)      | 906 | -   | -   | 161        | 186   | 945   | -   |
| HCM Lane V/C Ratio    | -   | -   | -   | 0.02       | 0.147 | 0.027 | -   |
| HCM Control Delay (s) | 0   | -   | -   | 27.8       | 27.7  | 8.9   | -   |
| HCM Lane LOS          | A   | -   | -   | D          | D     | A     | -   |
| HCM 95th %tile Q(veh) | 0   | -   | -   | 0.1        | 0.5   | 0.1   | -   |

## Summary of All Intervals

| Run Number              | 1     | 2    | 3    | 4    | 5    | Avg  |
|-------------------------|-------|------|------|------|------|------|
| Start Time              | 4:50  | 4:50 | 4:50 | 4:50 | 4:50 | 4:50 |
| End Time                | 6:00  | 6:00 | 6:00 | 6:00 | 6:00 | 6:00 |
| Total Time (min)        | 70    | 70   | 70   | 70   | 70   | 70   |
| Time Recorded (min)     | 60    | 60   | 60   | 60   | 60   | 60   |
| # of Intervals          | 2     | 2    | 2    | 2    | 2    | 2    |
| # of Recorded Intervals | 1     | 1    | 1    | 1    | 1    | 1    |
| Vehs Entered            | 3666  | 3664 | 3634 | 3537 | 3491 | 3599 |
| Vehs Exited             | 3665  | 3668 | 3612 | 3538 | 3512 | 3600 |
| Starting Vehs           | 98    | 106  | 82   | 96   | 118  | 98   |
| Ending Vehs             | 99    | 102  | 104  | 95   | 97   | 96   |
| Denied Entry Before     | 3     | 1    | 2    | 1    | 1    | 1    |
| Denied Entry After      | 0     | 2    | 3    | 1    | 0    | 1    |
| Travel Distance (mi)    | 1699  | 1680 | 1659 | 1625 | 1582 | 1649 |
| Travel Time (hr)        | 102.4 | 98.6 | 98.0 | 92.8 | 91.0 | 96.6 |
| Total Delay (hr)        | 44.3  | 41.3 | 41.4 | 37.2 | 36.9 | 40.2 |
| Total Stops             | 4299  | 4085 | 4013 | 3810 | 3712 | 3981 |
| Fuel Used (gal)         | 69.4  | 68.1 | 66.8 | 64.6 | 63.6 | 66.5 |

## Interval #0 Information Seeding

|                                     |      |
|-------------------------------------|------|
| Start Time                          | 4:50 |
| End Time                            | 5:00 |
| Total Time (min)                    | 10   |
| Volumes adjusted by Growth Factors. |      |
| No data recorded this interval.     |      |

## Interval #1 Information Recording

|                                     |      |
|-------------------------------------|------|
| Start Time                          | 5:00 |
| End Time                            | 6:00 |
| Total Time (min)                    | 60   |
| Volumes adjusted by Growth Factors. |      |

| Run Number           | 1     | 2    | 3    | 4    | 5    | Avg  |
|----------------------|-------|------|------|------|------|------|
| Vehs Entered         | 3666  | 3664 | 3634 | 3537 | 3491 | 3599 |
| Vehs Exited          | 3665  | 3668 | 3612 | 3538 | 3512 | 3600 |
| Starting Vehs        | 98    | 106  | 82   | 96   | 118  | 98   |
| Ending Vehs          | 99    | 102  | 104  | 95   | 97   | 96   |
| Denied Entry Before  | 3     | 1    | 2    | 1    | 1    | 1    |
| Denied Entry After   | 0     | 2    | 3    | 1    | 0    | 1    |
| Travel Distance (mi) | 1699  | 1680 | 1659 | 1625 | 1582 | 1649 |
| Travel Time (hr)     | 102.4 | 98.6 | 98.0 | 92.8 | 91.0 | 96.6 |
| Total Delay (hr)     | 44.3  | 41.3 | 41.4 | 37.2 | 36.9 | 40.2 |
| Total Stops          | 4299  | 4085 | 4013 | 3810 | 3712 | 3981 |
| Fuel Used (gal)      | 69.4  | 68.1 | 66.8 | 64.6 | 63.6 | 66.5 |

1: Abbott Road & Dorrance Avenue Performance by movement

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Denied Del/Veh (s)  | 0.2  | 0.1  | 0.2  | 0.2  | 0.1  | 0.1  | 0.0  | 0.0  | 0.0  | 3.5  | 0.5  | 0.5  |
| Total Delay (hr)    | 0.2  | 0.8  | 0.3  | 0.5  | 0.7  | 0.1  | 0.7  | 1.1  | 0.2  | 0.1  | 1.5  | 0.1  |
| Total Del/Veh (s)   | 24.4 | 21.5 | 6.7  | 29.4 | 23.4 | 5.9  | 13.5 | 11.1 | 7.8  | 11.1 | 16.1 | 11.3 |
| Stop Delay (hr)     | 0.2  | 0.7  | 0.2  | 0.4  | 0.6  | 0.1  | 0.5  | 0.6  | 0.1  | 0.1  | 1.1  | 0.1  |
| Stop Del/Veh (s)    | 21.9 | 17.8 | 6.3  | 26.7 | 19.7 | 5.8  | 9.6  | 6.7  | 4.9  | 8.2  | 11.8 | 8.8  |
| Total Stops         | 29   | 97   | 98   | 48   | 78   | 53   | 129  | 133  | 30   | 17   | 185  | 18   |
| Stop/Veh            | 0.81 | 0.71 | 0.71 | 0.86 | 0.74 | 0.71 | 0.71 | 0.39 | 0.42 | 0.71 | 0.57 | 0.60 |
| Travel Dist (mi)    | 1.8  | 6.8  | 7.0  | 2.8  | 5.3  | 3.8  | 23.2 | 43.8 | 9.2  | 1.9  | 24.8 | 2.2  |
| Travel Time (hr)    | 0.3  | 1.1  | 0.6  | 0.6  | 0.9  | 0.3  | 1.5  | 2.5  | 0.5  | 0.2  | 2.3  | 0.2  |
| Avg Speed (mph)     | 5    | 7    | 11   | 5    | 6    | 12   | 15   | 17   | 18   | 13   | 11   | 12   |
| Fuel Used (gal)     | 0.1  | 0.4  | 0.2  | 0.2  | 0.3  | 0.1  | 0.9  | 1.7  | 0.3  | 0.1  | 1.2  | 0.1  |
| Fuel Eff. (mpg)     | 15.5 | 16.0 | 29.0 | 14.1 | 15.4 | 31.8 | 26.1 | 26.5 | 29.5 | 20.3 | 21.4 | 24.2 |
| HC Emissions (g)    | 1    | 2    | 2    | 1    | 2    | 1    | 7    | 18   | 4    | 1    | 18   | 1    |
| CO Emissions (g)    | 31   | 97   | 78   | 34   | 81   | 36   | 233  | 474  | 99   | 37   | 473  | 30   |
| NOx Emissions (g)   | 3    | 10   | 7    | 3    | 8    | 3    | 27   | 62   | 13   | 3    | 54   | 3    |
| Vehicles Entered    | 35   | 136  | 138  | 55   | 105  | 75   | 180  | 343  | 72   | 24   | 324  | 29   |
| Vehicles Exited     | 36   | 136  | 139  | 56   | 105  | 75   | 178  | 341  | 71   | 24   | 322  | 30   |
| Hourly Exit Rate    | 36   | 136  | 139  | 56   | 105  | 75   | 178  | 341  | 71   | 24   | 322  | 30   |
| Input Volume        | 34   | 131  | 138  | 59   | 109  | 65   | 180  | 342  | 69   | 26   | 324  | 30   |
| % of Volume         | 106  | 104  | 101  | 95   | 96   | 115  | 99   | 100  | 103  | 92   | 99   | 100  |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Density (ft/veh)    |      |      |      |      |      |      |      |      |      |      |      |      |
| Occupancy (veh)     | 0    | 1    | 1    | 1    | 1    | 0    | 2    | 3    | 1    | 0    | 2    | 0    |

1: Abbott Road & Dorrance Avenue Performance by movement

| Movement            | All   |
|---------------------|-------|
| Denied Delay (hr)   | 0.1   |
| Denied Del/Veh (s)  | 0.2   |
| Total Delay (hr)    | 6.1   |
| Total Del/Veh (s)   | 14.4  |
| Stop Delay (hr)     | 4.7   |
| Stop Del/Veh (s)    | 11.0  |
| Total Stops         | 915   |
| Stop/Veh            | 0.60  |
| Travel Dist (mi)    | 132.6 |
| Travel Time (hr)    | 11.1  |
| Avg Speed (mph)     | 12    |
| Fuel Used (gal)     | 5.6   |
| Fuel Eff. (mpg)     | 23.5  |
| HC Emissions (g)    | 59    |
| CO Emissions (g)    | 1704  |
| NOx Emissions (g)   | 197   |
| Vehicles Entered    | 1516  |
| Vehicles Exited     | 1513  |
| Hourly Exit Rate    | 1513  |
| Input Volume        | 1507  |
| % of Volume         | 100   |
| Denied Entry Before | 0     |
| Denied Entry After  | 0     |
| Density (ft/veh)    | 283   |
| Occupancy (veh)     | 11    |



## 2: Abbott Road & Plaza Driveway Performance by movement

| Movement            | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  | All   |
|---------------------|------|------|------|------|------|------|-------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   |
| Denied Del/Veh (s)  | 0.2  | 0.1  | 0.0  | 0.0  | 0.2  | 0.0  | 0.0   |
| Total Delay (hr)    | 0.9  | 0.0  | 1.5  | 0.3  | 0.0  | 1.0  | 3.7   |
| Total Del/Veh (s)   | 27.3 | 7.1  | 8.1  | 8.8  | 12.0 | 7.1  | 9.3   |
| Stop Delay (hr)     | 0.7  | 0.0  | 0.6  | 0.1  | 0.0  | 0.5  | 2.0   |
| Stop Del/Veh (s)    | 23.0 | 4.7  | 3.5  | 3.4  | 7.6  | 3.5  | 5.1   |
| Total Stops         | 96   | 4    | 175  | 32   | 2    | 149  | 458   |
| Stop/Veh            | 0.83 | 0.80 | 0.27 | 0.30 | 0.50 | 0.28 | 0.32  |
| Travel Dist (mi)    | 5.7  | 0.2  | 86.8 | 14.6 | 0.5  | 67.4 | 175.3 |
| Travel Time (hr)    | 1.1  | 0.0  | 4.4  | 0.7  | 0.0  | 3.5  | 9.8   |
| Avg Speed (mph)     | 5    | 13   | 20   | 20   | 16   | 19   | 18    |
| Fuel Used (gal)     | 0.4  | 0.0  | 3.6  | 0.6  | 0.0  | 3.0  | 7.7   |
| Fuel Eff. (mpg)     | 15.1 | 36.9 | 23.9 | 23.9 | 21.0 | 22.4 | 22.9  |
| HC Emissions (g)    | 2    | 0    | 40   | 5    | 0    | 42   | 90    |
| CO Emissions (g)    | 83   | 1    | 1134 | 180  | 6    | 1220 | 2624  |
| NOx Emissions (g)   | 9    | 0    | 147  | 22   | 1    | 144  | 322   |
| Vehicles Entered    | 115  | 5    | 657  | 105  | 4    | 525  | 1411  |
| Vehicles Exited     | 115  | 5    | 656  | 105  | 4    | 529  | 1414  |
| Hourly Exit Rate    | 115  | 5    | 656  | 105  | 4    | 529  | 1414  |
| Input Volume        | 111  | 3    | 651  | 99   | 5    | 529  | 1398  |
| % of Volume         | 104  | 167  | 101  | 106  | 80   | 100  | 101   |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Density (ft/veh)    |      |      |      |      |      |      | 262   |
| Occupancy (veh)     | 1    | 0    | 4    | 1    | 0    | 3    | 10    |

### 3: Abbott Road & Ridge Road Performance by movement

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Denied Delay (hr)   | 0.1  | 0.2  | 0.1  | 0.2  | 0.1  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Denied Del/Veh (s)  | 3.1  | 0.9  | 3.2  | 2.7  | 0.9  | 0.5  | 0.2  | 0.0  | 0.2  | 0.0  | 0.0  | 0.0  |
| Total Delay (hr)    | 0.6  | 6.1  | 0.4  | 2.8  | 4.0  | 1.0  | 0.3  | 3.5  | 0.5  | 3.0  | 2.4  | 0.2  |
| Total Del/Veh (s)   | 33.5 | 36.3 | 20.0 | 37.1 | 30.2 | 8.9  | 27.6 | 39.5 | 8.5  | 37.8 | 28.4 | 10.7 |
| Stop Delay (hr)     | 0.5  | 4.9  | 0.3  | 2.2  | 3.1  | 0.6  | 0.3  | 2.9  | 0.3  | 2.5  | 1.9  | 0.1  |
| Stop Del/Veh (s)    | 26.0 | 29.1 | 14.6 | 30.1 | 23.0 | 5.9  | 22.9 | 33.0 | 4.7  | 31.1 | 22.9 | 7.2  |
| Total Stops         | 88   | 503  | 51   | 250  | 330  | 162  | 36   | 248  | 127  | 263  | 196  | 30   |
| Stop/Veh            | 1.31 | 0.83 | 0.71 | 0.93 | 0.68 | 0.41 | 0.80 | 0.79 | 0.55 | 0.91 | 0.65 | 0.57 |
| Travel Dist (mi)    | 9.5  | 86.3 | 10.4 | 36.6 | 66.4 | 54.7 | 9.0  | 61.9 | 45.9 | 39.4 | 41.1 | 7.3  |
| Travel Time (hr)    | 1.0  | 9.2  | 0.8  | 4.2  | 6.4  | 2.9  | 0.7  | 5.5  | 2.1  | 4.3  | 3.8  | 0.4  |
| Avg Speed (mph)     | 10   | 10   | 14   | 9    | 11   | 19   | 14   | 11   | 22   | 9    | 11   | 18   |
| Fuel Used (gal)     | 0.4  | 3.9  | 0.4  | 1.8  | 3.0  | 1.9  | 0.3  | 2.4  | 1.4  | 2.0  | 1.9  | 0.3  |
| Fuel Eff. (mpg)     | 22.1 | 22.1 | 24.1 | 20.2 | 22.4 | 28.9 | 27.7 | 25.4 | 32.4 | 19.6 | 21.3 | 24.5 |
| HC Emissions (g)    | 2    | 26   | 5    | 20   | 19   | 22   | 2    | 19   | 15   | 15   | 18   | 2    |
| CO Emissions (g)    | 94   | 843  | 159  | 564  | 634  | 604  | 70   | 403  | 359  | 479  | 517  | 95   |
| NOx Emissions (g)   | 7    | 84   | 15   | 57   | 67   | 66   | 7    | 52   | 43   | 54   | 61   | 9    |
| Vehicles Entered    | 66   | 596  | 71   | 264  | 476  | 390  | 44   | 308  | 229  | 284  | 297  | 53   |
| Vehicles Exited     | 66   | 597  | 72   | 265  | 475  | 390  | 45   | 309  | 228  | 284  | 298  | 53   |
| Hourly Exit Rate    | 66   | 597  | 72   | 265  | 475  | 390  | 45   | 309  | 228  | 284  | 298  | 53   |
| Input Volume        | 68   | 608  | 74   | 280  | 475  | 384  | 46   | 303  | 239  | 280  | 296  | 56   |
| % of Volume         | 97   | 98   | 97   | 95   | 100  | 102  | 98   | 102  | 95   | 101  | 101  | 95   |
| Denied Entry Before | 0    | 0    | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Denied Entry After  | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Density (ft/veh)    |      |      |      |      |      |      |      |      |      |      |      |      |
| Occupancy (veh)     | 1    | 9    | 1    | 4    | 6    | 3    | 1    | 6    | 2    | 4    | 4    | 0    |

### 3: Abbott Road & Ridge Road Performance by movement

| Movement            | All   |
|---------------------|-------|
| Denied Delay (hr)   | 0.7   |
| Denied Del/Veh (s)  | 0.8   |
| Total Delay (hr)    | 24.8  |
| Total Del/Veh (s)   | 28.6  |
| Stop Delay (hr)     | 19.6  |
| Stop Del/Veh (s)    | 22.6  |
| Total Stops         | 2284  |
| Stop/Veh            | 0.73  |
| Travel Dist (mi)    | 468.5 |
| Travel Time (hr)    | 41.3  |
| Avg Speed (mph)     | 12    |
| Fuel Used (gal)     | 19.8  |
| Fuel Eff. (mpg)     | 23.6  |
| HC Emissions (g)    | 164   |
| CO Emissions (g)    | 4821  |
| NOx Emissions (g)   | 522   |
| Vehicles Entered    | 3078  |
| Vehicles Exited     | 3082  |
| Hourly Exit Rate    | 3082  |
| Input Volume        | 3109  |
| % of Volume         | 99    |
| Denied Entry Before | 1     |
| Denied Entry After  | 1     |
| Density (ft/veh)    | 236   |
| Occupancy (veh)     | 41    |

4: Abbott Road & Fernald Avenue Performance by movement

| Movement            | EBL  | EBR  | WBL  | WBR  | NBT   | NBR  | SBL  | SBT   | All   |
|---------------------|------|------|------|------|-------|------|------|-------|-------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0   |
| Denied Del/Veh (s)  | 0.1  | 0.1  | 0.1  | 0.1  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0   |
| Total Delay (hr)    | 0.0  | 0.0  | 0.1  | 0.0  | 0.3   | 0.0  | 0.1  | 0.6   | 1.1   |
| Total Del/Veh (s)   | 10.3 | 12.7 | 17.5 | 8.8  | 2.2   | 2.2  | 8.2  | 3.2   | 3.1   |
| Stop Delay (hr)     | 0.0  | 0.0  | 0.1  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.1   |
| Stop Del/Veh (s)    | 7.8  | 10.3 | 14.3 | 5.8  | 0.1   | 0.1  | 2.4  | 0.2   | 0.4   |
| Total Stops         | 1    | 1    | 17   | 10   | 4     | 0    | 13   | 3     | 49    |
| Stop/Veh            | 1.00 | 1.00 | 1.00 | 1.00 | 0.01  | 0.00 | 0.50 | 0.00  | 0.04  |
| Travel Dist (mi)    | 0.0  | 0.0  | 0.8  | 0.5  | 130.6 | 7.9  | 5.3  | 127.2 | 272.4 |
| Travel Time (hr)    | 0.0  | 0.0  | 0.1  | 0.0  | 4.7   | 0.3  | 0.2  | 4.8   | 10.2  |
| Avg Speed (mph)     | 5    | 4    | 8    | 12   | 28    | 28   | 23   | 26    | 27    |
| Fuel Used (gal)     | 0.0  | 0.0  | 0.0  | 0.0  | 4.1   | 0.3  | 0.2  | 4.8   | 9.3   |
| Fuel Eff. (mpg)     | 20.0 | 16.5 | 27.8 | 34.6 | 32.1  | 31.6 | 27.4 | 26.7  | 29.2  |
| HC Emissions (g)    | 0    | 0    | 0    | 0    | 52    | 3    | 1    | 66    | 122   |
| CO Emissions (g)    | 0    | 0    | 3    | 2    | 969   | 63   | 42   | 1504  | 2584  |
| NOx Emissions (g)   | 0    | 0    | 0    | 0    | 154   | 9    | 5    | 217   | 384   |
| Vehicles Entered    | 1    | 1    | 17   | 10   | 557   | 34   | 25   | 613   | 1258  |
| Vehicles Exited     | 1    | 1    | 16   | 10   | 556   | 33   | 26   | 613   | 1256  |
| Hourly Exit Rate    | 1    | 1    | 16   | 10   | 556   | 33   | 26   | 613   | 1256  |
| Input Volume        | 2    | 1    | 15   | 11   | 561   | 36   | 24   | 632   | 1282  |
| % of Volume         | 50   | 100  | 107  | 91   | 99    | 92   | 108  | 97    | 98    |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0     | 0     |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0     | 0     |
| Density (ft/veh)    |      |      |      |      |       |      |      |       | 477   |
| Occupancy (veh)     | 0    | 0    | 0    | 0    | 5     | 0    | 0    | 5     | 10    |

5: Abbott Road & Elmview Avenue Performance by movement

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT   | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|-------|------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.1  | 0.0  | 0.0  | 0.0   | 0.0  |
| Denied Del/Veh (s)  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 2.8  | 0.5  | 0.4  | 0.0  | 0.0   | 0.0  |
| Total Delay (hr)    | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.6  | 0.0  | 0.1  | 1.0   | 0.0  |
| Total Del/Veh (s)   | 14.6 | 25.8 | 8.6  | 13.8 | 7.9  | 8.2  | 10.0 | 3.9  | 3.7  | 14.1 | 6.2   | 6.0  |
| Stop Delay (hr)     | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.3  | 0.0  | 0.0  | 0.4   | 0.0  |
| Stop Del/Veh (s)    | 11.3 | 21.8 | 5.5  | 10.7 | 5.7  | 5.3  | 6.4  | 2.0  | 1.6  | 8.9  | 2.4   | 2.1  |
| Total Stops         | 17   | 1    | 5    | 6    | 1    | 9    | 5    | 97   | 2    | 11   | 117   | 4    |
| Stop/Veh            | 0.81 | 1.00 | 0.83 | 0.75 | 1.00 | 0.90 | 0.62 | 0.18 | 0.22 | 0.69 | 0.20  | 0.22 |
| Travel Dist (mi)    | 1.0  | 0.1  | 0.3  | 0.4  | 0.1  | 0.5  | 0.6  | 43.2 | 0.7  | 3.7  | 140.5 | 4.2  |
| Travel Time (hr)    | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.1  | 2.1  | 0.0  | 0.2  | 5.8   | 0.2  |
| Avg Speed (mph)     | 9    | 7    | 12   | 9    | 13   | 13   | 15   | 21   | 21   | 20   | 24    | 25   |
| Fuel Used (gal)     | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.5  | 0.0  | 0.1  | 4.1   | 0.1  |
| Fuel Eff. (mpg)     | 29.2 | 25.3 | 41.8 | 30.2 | 33.5 | 37.6 | 27.6 | 29.0 | 25.9 | 33.8 | 34.6  | 33.7 |
| HC Emissions (g)    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 22   | 0    | 0    | 52    | 1    |
| CO Emissions (g)    | 5    | 0    | 1    | 2    | 0    | 2    | 6    | 522  | 8    | 13   | 850   | 14   |
| NOx Emissions (g)   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 64   | 1    | 2    | 138   | 2    |
| Vehicles Entered    | 21   | 1    | 6    | 8    | 1    | 10   | 8    | 539  | 9    | 15   | 592   | 17   |
| Vehicles Exited     | 21   | 1    | 6    | 8    | 1    | 10   | 8    | 539  | 9    | 16   | 592   | 18   |
| Hourly Exit Rate    | 21   | 1    | 6    | 8    | 1    | 10   | 8    | 539  | 9    | 16   | 592   | 18   |
| Input Volume        | 19   | 1    | 7    | 7    | 1    | 11   | 8    | 543  | 9    | 22   | 603   | 19   |
| % of Volume         | 111  | 100  | 86   | 114  | 100  | 91   | 100  | 99   | 100  | 73   | 98    | 95   |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0    |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0    |
| Density (ft/veh)    |      |      |      |      |      |      |      |      |      |      |       |      |
| Occupancy (veh)     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 2    | 0    | 0    | 6     | 0    |

5: Abbott Road & Elmview Avenue Performance by movement

| Movement            | All   |
|---------------------|-------|
| Denied Delay (hr)   | 0.1   |
| Denied Del/Veh (s)  | 0.2   |
| Total Delay (hr)    | 1.9   |
| Total Del/Veh (s)   | 5.5   |
| Stop Delay (hr)     | 0.9   |
| Stop Del/Veh (s)    | 2.5   |
| Total Stops         | 275   |
| Stop/Veh            | 0.22  |
| Travel Dist (mi)    | 195.4 |
| Travel Time (hr)    | 8.6   |
| Avg Speed (mph)     | 23    |
| Fuel Used (gal)     | 5.9   |
| Fuel Eff. (mpg)     | 33.0  |
| HC Emissions (g)    | 76    |
| CO Emissions (g)    | 1425  |
| NOx Emissions (g)   | 207   |
| Vehicles Entered    | 1227  |
| Vehicles Exited     | 1229  |
| Hourly Exit Rate    | 1229  |
| Input Volume        | 1250  |
| % of Volume         | 98    |
| Denied Entry Before | 0     |
| Denied Entry After  | 0     |
| Density (ft/veh)    | 450   |
| Occupancy (veh)     | 8     |

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Total Network Performance

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|                     |        |
|---------------------|--------|
| Denied Delay (hr)   | 0.9    |
| Denied Del/Veh (s)  | 0.9    |
| Total Delay (hr)    | 39.3   |
| Total Del/Veh (s)   | 38.3   |
| Stop Delay (hr)     | 27.5   |
| Stop Del/Veh (s)    | 26.7   |
| Total Stops         | 3981   |
| Stop/Veh            | 1.08   |
| Travel Dist (mi)    | 1649.1 |
| Travel Time (hr)    | 96.6   |
| Avg Speed (mph)     | 17     |
| Fuel Used (gal)     | 66.5   |
| Fuel Eff. (mpg)     | 24.8   |
| HC Emissions (g)    | 732    |
| CO Emissions (g)    | 20418  |
| NOx Emissions (g)   | 2414   |
| Vehicles Entered    | 3599   |
| Vehicles Exited     | 3600   |
| Hourly Exit Rate    | 3600   |
| Input Volume        | 12056  |
| % of Volume         | 30     |
| Denied Entry Before | 1      |
| Denied Entry After  | 1      |
| Density (ft/veh)    | 250    |
| Occupancy (veh)     | 96     |



Queuing and Blocking Report  
2050 Build Alt 1 PM Peak Hour

12/04/2025

Intersection: 1: Abbott Road & Dorrance Avenue

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | LT  | TR  | LT  | TR  | L   | TR  | L   | TR  |
| Maximum Queue (ft)    | 148 | 84  | 132 | 84  | 193 | 284 | 42  | 240 |
| Average Queue (ft)    | 66  | 37  | 66  | 24  | 64  | 102 | 11  | 120 |
| 95th Queue (ft)       | 119 | 71  | 116 | 56  | 130 | 207 | 33  | 210 |
| Link Distance (ft)    | 255 | 255 | 255 | 255 |     | 608 |     | 402 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     | 200 |     | 200 |     |
| Storage Blk Time (%)  |     |     |     |     |     | 1   |     | 1   |
| Queuing Penalty (veh) |     |     |     |     |     | 2   |     | 0   |

Intersection: 2: Abbott Road & Plaza Driveway

| Movement              | WB  | WB  | NB  | SB | SB  |
|-----------------------|-----|-----|-----|----|-----|
| Directions Served     | L   | R   | TR  | L  | T   |
| Maximum Queue (ft)    | 128 | 28  | 283 | 25 | 233 |
| Average Queue (ft)    | 57  | 3   | 127 | 3  | 94  |
| 95th Queue (ft)       | 108 | 18  | 244 | 17 | 192 |
| Link Distance (ft)    | 256 | 256 | 660 |    | 608 |
| Upstream Blk Time (%) |     |     |     |    |     |
| Queuing Penalty (veh) |     |     |     |    |     |
| Storage Bay Dist (ft) |     |     | 100 |    |     |
| Storage Blk Time (%)  |     |     |     | 5  |     |
| Queuing Penalty (veh) |     |     |     | 0  |     |

Intersection: 3: Abbott Road & Ridge Road

| Movement              | EB  | EB  | EB  | WB  | WB  | WB  | NB  | NB   | NB  | SB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|
| Directions Served     | L   | T   | TR  | L   | T   | R   | L   | T    | R   | L   | T   | R   |
| Maximum Queue (ft)    | 140 | 372 | 342 | 299 | 540 | 245 | 85  | 333  | 129 | 318 | 281 | 60  |
| Average Queue (ft)    | 75  | 226 | 178 | 147 | 223 | 76  | 22  | 176  | 58  | 153 | 150 | 23  |
| 95th Queue (ft)       | 169 | 333 | 293 | 267 | 395 | 166 | 56  | 283  | 102 | 259 | 249 | 52  |
| Link Distance (ft)    |     | 752 |     |     | 723 | 723 |     | 1009 |     |     |     | 660 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |      |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |      |     |     |     |     |
| Storage Bay Dist (ft) | 90  |     | 250 | 200 |     |     | 300 |      | 300 | 300 |     | 300 |
| Storage Blk Time (%)  | 0   | 49  | 0   | 3   | 12  |     |     | 1    |     | 1   | 0   |     |
| Queuing Penalty (veh) | 3   | 220 | 2   | 15  | 33  |     |     | 2    |     | 3   | 0   |     |

Intersection: 4: Abbott Road & Fernald Avenue

| Movement              | EB  | WB  | NB   | SB  | SB   |
|-----------------------|-----|-----|------|-----|------|
| Directions Served     | LTR | LTR | TR   | L   | TR   |
| Maximum Queue (ft)    | 23  | 50  | 50   | 38  | 38   |
| Average Queue (ft)    | 2   | 16  | 3    | 9   | 3    |
| 95th Queue (ft)       | 13  | 40  | 23   | 30  | 18   |
| Link Distance (ft)    | 58  | 258 | 1194 |     | 1009 |
| Upstream Blk Time (%) |     |     |      |     |      |
| Queuing Penalty (veh) |     |     |      |     |      |
| Storage Bay Dist (ft) |     |     |      | 100 |      |
| Storage Blk Time (%)  |     |     |      |     |      |
| Queuing Penalty (veh) |     |     |      |     |      |

Intersection: 5: Abbott Road & Elmview Avenue

| Movement              | EB  | WB  | NB  | NB  | SB  | SB   |
|-----------------------|-----|-----|-----|-----|-----|------|
| Directions Served     | LTR | LTR | L   | TR  | L   | TR   |
| Maximum Queue (ft)    | 43  | 37  | 29  | 184 | 35  | 261  |
| Average Queue (ft)    | 16  | 11  | 4   | 69  | 9   | 88   |
| 95th Queue (ft)       | 39  | 32  | 19  | 153 | 30  | 199  |
| Link Distance (ft)    | 260 | 258 |     | 420 |     | 1194 |
| Upstream Blk Time (%) |     |     |     |     |     |      |
| Queuing Penalty (veh) |     |     |     |     |     |      |
| Storage Bay Dist (ft) |     |     | 100 |     | 100 |      |
| Storage Blk Time (%)  |     |     |     | 2   |     | 5    |
| Queuing Penalty (veh) |     |     |     | 0   |     | 1    |

Network Summary

|                                   |
|-----------------------------------|
| Network wide Queuing Penalty: 281 |
|-----------------------------------|

Intersection: 1: Abbott Road & Dorrance Avenue

| Phase                | 1     | 2    | 4    | 5     | 6    | 8    |
|----------------------|-------|------|------|-------|------|------|
| Movement(s) Served   | SBL   | NBTL | EBTL | NBL   | SBTL | WBTL |
| Maximum Green (s)    | 14.8  | 29.8 | 24.8 | 14.8  | 29.8 | 24.8 |
| Minimum Green (s)    | 5.0   | 5.0  | 5.0  | 5.0   | 5.0  | 5.0  |
| Recall               | None  | Max  | None | None  | Max  | None |
| Avg. Green (s)       | 6.2   | 38.8 | 17.9 | 9.8   | 30.1 | 17.9 |
| g/C Ratio            | -0.01 | NA   | NA   | -0.01 | NA   | NA   |
| Cycles Skipped (%)   | 84    | 0    | 0    | 29    | 0    | 0    |
| Cycles @ Minimum (%) | 0     | 0    | 0    | 0     | 0    | 0    |
| Cycles Maxed Out (%) | 0     | 100  | 17   | 12    | 100  | 17   |
| Cycles with Peds (%) | 0     | 10   | 12   | 0     | 8    | 4    |

Controller Summary

Average Cycle Length (s): NA

Number of Complete Cycles : 0

Intersection: 2: Abbott Road & Plaza Driveway

| Phase                | 2    | 6    | 8    |
|----------------------|------|------|------|
| Movement(s) Served   | NBT  | SBTL | WBL  |
| Maximum Green (s)    | 44.8 | 44.8 | 24.8 |
| Minimum Green (s)    | 6.0  | 6.0  | 6.0  |
| Recall               | Max  | Max  | None |
| Avg. Green (s)       | 48.9 | 48.9 | 12.1 |
| g/C Ratio            | NA   | NA   | NA   |
| Cycles Skipped (%)   | 0    | 0    | 0    |
| Cycles @ Minimum (%) | 0    | 0    | 26   |
| Cycles Maxed Out (%) | 100  | 100  | 0    |
| Cycles with Peds (%) | 20   | 0    | 24   |

Controller Summary

Average Cycle Length (s): NA

Number of Complete Cycles : 0

Intersection: 3: Abbott Road & Ridge Road

| Phase                | 1    | 2    | 3    | 4    | 5     | 6    | 7     | 8    |
|----------------------|------|------|------|------|-------|------|-------|------|
| Movement(s) Served   | SBL  | NBTL | WBL  | EBTL | NBL   | SBTL | EBL   | WBTL |
| Maximum Green (s)    | 14.8 | 37.8 | 14.8 | 31.8 | 14.8  | 37.8 | 14.8  | 31.8 |
| Minimum Green (s)    | 7.0  | 7.0  | 7.0  | 7.0  | 7.0   | 7.0  | 7.0   | 7.0  |
| Recall               | None | None | None | Max  | None  | None | None  | Max  |
| Avg. Green (s)       | 14.3 | 27.0 | 14.1 | 32.2 | 8.8   | 38.5 | 8.4   | 42.6 |
| g/C Ratio            | NA   | NA   | NA   | NA   | -0.01 | NA   | -0.01 | NA   |
| Cycles Skipped (%)   | 0    | 0    | 0    | 0    | 44    | 0    | 39    | 0    |
| Cycles @ Minimum (%) | 0    | 0    | 0    | 0    | 22    | 0    | 21    | 0    |
| Cycles Maxed Out (%) | 82   | 6    | 69   | 100  | 0     | 48   | 3     | 100  |
| Cycles with Peds (%) | 0    | 12   | 0    | 18   | 0     | 9    | 0     | 15   |

Controller Summary

Average Cycle Length (s): NA

Number of Complete Cycles : 0

Intersection: 5: Abbott Road & Elmview Avenue

| Phase                | 2    | 4    | 6    | 8    |
|----------------------|------|------|------|------|
| Movement(s) Served   | NBTL | EBTL | SBTL | WBTL |
| Maximum Green (s)    | 36.8 | 22.8 | 36.8 | 22.8 |
| Minimum Green (s)    | 20.0 | 6.0  | 20.0 | 6.0  |
| Recall               | Max  | None | Max  | None |
| Avg. Green (s)       | 73.1 | 10.6 | 73.1 | 10.6 |
| g/C Ratio            | NA   | NA   | NA   | NA   |
| Cycles Skipped (%)   | 0    | 0    | 0    | 0    |
| Cycles @ Minimum (%) | 0    | 62   | 0    | 62   |
| Cycles Maxed Out (%) | 100  | 0    | 100  | 0    |
| Cycles with Peds (%) | 11   | 14   | 14   | 11   |

Controller Summary

Average Cycle Length (s): NA

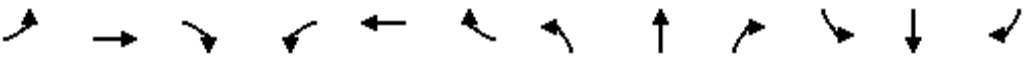
Number of Complete Cycles : 0

## **2050 Build Alternative 2**

Lanes, Volumes, Timings  
1: Abbott Road & Dorrance Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

|                            |  |       |       |       |       |       |       |       |       |       |       |       |
|----------------------------|------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Group                 | EBL                                                                                | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |                                                                                    | ↔↔    |       |       | ↔↔    |       |       | ↔↔    |       |       | ↔↔    |       |
| Traffic Volume (vph)       | 14                                                                                 | 75    | 89    | 44    | 61    | 31    | 108   | 197   | 44    | 27    | 214   | 16    |
| Future Volume (vph)        | 14                                                                                 | 75    | 89    | 44    | 61    | 31    | 108   | 197   | 44    | 27    | 214   | 16    |
| Ideal Flow (vphpl)         | 1900                                                                               | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 10                                                                                 | 10    | 10    | 12    | 12    | 12    | 10    | 10    | 10    | 10    | 10    | 10    |
| Lane Util. Factor          | 0.95                                                                               | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  |
| Ped Bike Factor            |                                                                                    | 0.99  |       |       | 0.99  |       |       | 1.00  |       |       | 1.00  |       |
| Frt                        |                                                                                    | 0.925 |       |       | 0.966 |       |       | 0.981 |       |       | 0.991 |       |
| Flt Protected              |                                                                                    | 0.996 |       |       | 0.984 |       |       | 0.985 |       |       | 0.995 |       |
| Satd. Flow (prot)          | 0                                                                                  | 3015  | 0     | 0     | 3350  | 0     | 0     | 3150  | 0     | 0     | 3176  | 0     |
| Flt Permitted              |                                                                                    | 0.920 |       |       | 0.799 |       |       | 0.775 |       |       | 0.899 |       |
| Satd. Flow (perm)          | 0                                                                                  | 2784  | 0     | 0     | 2716  | 0     | 0     | 2475  | 0     | 0     | 2869  | 0     |
| Right Turn on Red          |                                                                                    |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |                                                                                    | 95    |       |       | 33    |       |       | 21    |       |       | 14    |       |
| Link Speed (mph)           |                                                                                    | 30    |       |       | 30    |       |       | 30    |       |       | 30    |       |
| Link Distance (ft)         |                                                                                    | 300   |       |       | 300   |       |       | 688   |       |       | 452   |       |
| Travel Time (s)            |                                                                                    | 6.8   |       |       | 6.8   |       |       | 15.6  |       |       | 10.3  |       |
| Confl. Peds. (#/hr)        | 5                                                                                  |       | 5     | 5     |       | 5     | 5     |       | 5     | 5     |       | 5     |
| Confl. Bikes (#/hr)        |                                                                                    |       | 2     |       |       | 2     |       |       | 2     |       |       | 2     |
| Peak Hour Factor           | 0.94                                                                               | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  |
| Heavy Vehicles (%)         | 2%                                                                                 | 2%    | 2%    | 2%    | 2%    | 2%    | 2%    | 4%    | 2%    | 2%    | 5%    | 2%    |
| Adj. Flow (vph)            | 15                                                                                 | 80    | 95    | 47    | 65    | 33    | 115   | 210   | 47    | 29    | 228   | 17    |
| Shared Lane Traffic (%)    |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 0                                                                                  | 190   | 0     | 0     | 145   | 0     | 0     | 372   | 0     | 0     | 274   | 0     |
| Enter Blocked Intersection | No                                                                                 | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left                                                                               | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |                                                                                    | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Link Offset(ft)            |                                                                                    | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Crosswalk Width(ft)        |                                                                                    | 16    |       |       | 16    |       |       | 16    |       |       | 16    |       |
| Two way Left Turn Lane     |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Headway Factor             | 1.09                                                                               | 1.09  | 1.09  | 1.00  | 1.00  | 1.00  | 1.09  | 1.09  | 1.09  | 1.09  | 1.09  | 1.09  |
| Turning Speed (mph)        | 60                                                                                 |       | 60    | 60    |       | 60    | 60    |       | 60    | 60    |       | 60    |
| Number of Detectors        | 1                                                                                  | 1     |       | 1     | 1     |       | 1     | 1     |       | 1     | 1     |       |
| Detector Template          | Left                                                                               | Thru  |       | Left  | Thru  |       | Left  | Thru  |       | Left  | Thru  |       |
| Leading Detector (ft)      | 20                                                                                 | 50    |       | 20    | 50    |       | 20    | 50    |       | 20    | 50    |       |
| Trailing Detector (ft)     | 0                                                                                  | 0     |       | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       |
| Detector 1 Position(ft)    | 0                                                                                  | 0     |       | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       |
| Detector 1 Size(ft)        | 20                                                                                 | 50    |       | 20    | 50    |       | 20    | 50    |       | 20    | 50    |       |
| Detector 1 Type            | Cl+Ex                                                                              | Cl+Ex |       | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex |       |
| Detector 1 Channel         |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Detector 1 Extend (s)      | 0.0                                                                                | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Detector 1 Queue (s)       | 0.0                                                                                | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Detector 1 Delay (s)       | 0.0                                                                                | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Turn Type                  | Perm                                                                               | NA    |       | Perm  | NA    |       | Perm  | NA    |       | pm+pt | NA    |       |
| Protected Phases           |                                                                                    | 4     |       |       | 8     |       |       | 2     |       | 1     | 6     |       |
| Permitted Phases           | 4                                                                                  |       |       | 8     |       |       | 2     |       |       | 6     |       |       |
| Detector Phase             | 4                                                                                  | 4     |       | 8     | 8     |       | 2     | 2     |       | 1     | 6     |       |
| Switch Phase               |                                                                                    |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)        | 5.0                                                                                | 5.0   |       | 5.0   | 5.0   |       | 5.0   | 5.0   |       | 5.0   | 5.0   |       |

Lanes, Volumes, Timings  
1: Abbott Road & Dorrance Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

|                         |  |       |     |       |       |     |       |       |     |       |       |     |
|-------------------------|------------------------------------------------------------------------------------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Lane Group              | EBL                                                                                | EBT   | EBR | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
| Minimum Split (s)       | 29.2                                                                               | 29.2  |     | 29.2  | 29.2  |     | 29.2  | 29.2  |     | 10.2  | 29.2  |     |
| Total Split (s)         | 30.0                                                                               | 30.0  |     | 30.0  | 30.0  |     | 35.0  | 35.0  |     | 20.0  | 55.0  |     |
| Total Split (%)         | 35.3%                                                                              | 35.3% |     | 35.3% | 35.3% |     | 41.2% | 41.2% |     | 23.5% | 64.7% |     |
| Maximum Green (s)       | 24.8                                                                               | 24.8  |     | 24.8  | 24.8  |     | 29.8  | 29.8  |     | 14.8  | 49.8  |     |
| Yellow Time (s)         | 3.2                                                                                | 3.2   |     | 3.2   | 3.2   |     | 3.2   | 3.2   |     | 3.2   | 3.2   |     |
| All-Red Time (s)        | 2.0                                                                                | 2.0   |     | 2.0   | 2.0   |     | 2.0   | 2.0   |     | 2.0   | 2.0   |     |
| Lost Time Adjust (s)    |                                                                                    | 0.0   |     |       | 0.0   |     |       | 0.0   |     |       | 0.0   |     |
| Total Lost Time (s)     |                                                                                    | 5.2   |     |       | 5.2   |     |       | 5.2   |     |       | 5.2   |     |
| Lead/Lag                |                                                                                    |       |     |       |       |     | Lag   | Lag   |     | Lead  |       |     |
| Lead-Lag Optimize?      |                                                                                    |       |     |       |       |     |       |       |     |       |       |     |
| Vehicle Extension (s)   | 3.0                                                                                | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 3.0   |     |
| Recall Mode             | None                                                                               | None  |     | None  | None  |     | Max   | Max   |     | None  | Max   |     |
| Walk Time (s)           | 7.0                                                                                | 7.0   |     | 7.0   | 7.0   |     | 7.0   | 7.0   |     |       | 7.0   |     |
| Flash Dont Walk (s)     | 17.0                                                                               | 17.0  |     | 17.0  | 17.0  |     | 17.0  | 17.0  |     |       | 17.0  |     |
| Pedestrian Calls (#/hr) | 2                                                                                  | 2     |     | 2     | 2     |     | 2     | 2     |     |       | 2     |     |
| Act Effect Green (s)    |                                                                                    | 10.4  |     |       | 10.4  |     |       | 51.6  |     |       | 51.6  |     |
| Actuated g/C Ratio      |                                                                                    | 0.14  |     |       | 0.14  |     |       | 0.71  |     |       | 0.71  |     |
| v/c Ratio               |                                                                                    | 0.40  |     |       | 0.35  |     |       | 0.21  |     |       | 0.13  |     |
| Control Delay           |                                                                                    | 16.0  |     |       | 22.3  |     |       | 4.6   |     |       | 4.3   |     |
| Queue Delay             |                                                                                    | 0.0   |     |       | 0.0   |     |       | 0.0   |     |       | 0.0   |     |
| Total Delay             |                                                                                    | 16.0  |     |       | 22.3  |     |       | 4.6   |     |       | 4.3   |     |
| LOS                     |                                                                                    | B     |     |       | C     |     |       | A     |     |       | A     |     |
| Approach Delay          |                                                                                    | 16.0  |     |       | 22.3  |     |       | 4.6   |     |       | 4.3   |     |
| Approach LOS            |                                                                                    | B     |     |       | C     |     |       | A     |     |       | A     |     |
| 90th %ile Green (s)     | 24.0                                                                               | 24.0  |     | 24.0  | 24.0  |     | 49.8  | 49.8  |     | 0.0   | 49.8  |     |
| 90th %ile Term Code     | Ped                                                                                | Ped   |     | Ped   | Ped   |     | Hold  | Hold  |     | Skip  | MaxR  |     |
| 70th %ile Green (s)     | 9.1                                                                                | 9.1   |     | 9.1   | 9.1   |     | 49.8  | 49.8  |     | 0.0   | 49.8  |     |
| 70th %ile Term Code     | Hold                                                                               | Hold  |     | Gap   | Gap   |     | Hold  | Hold  |     | Skip  | MaxR  |     |
| 50th %ile Green (s)     | 8.1                                                                                | 8.1   |     | 8.1   | 8.1   |     | 49.8  | 49.8  |     | 0.0   | 49.8  |     |
| 50th %ile Term Code     | Hold                                                                               | Hold  |     | Gap   | Gap   |     | Hold  | Hold  |     | Skip  | MaxR  |     |
| 30th %ile Green (s)     | 7.1                                                                                | 7.1   |     | 7.1   | 7.1   |     | 49.8  | 49.8  |     | 0.0   | 49.8  |     |
| 30th %ile Term Code     | Hold                                                                               | Hold  |     | Gap   | Gap   |     | Hold  | Hold  |     | Skip  | MaxR  |     |
| 10th %ile Green (s)     | 5.8                                                                                | 5.8   |     | 5.8   | 5.8   |     | 57.2  | 57.2  |     | 0.0   | 57.2  |     |
| 10th %ile Term Code     | Hold                                                                               | Hold  |     | Gap   | Gap   |     | Dwell | Dwell |     | Skip  | Dwell |     |
| Stops (vph)             |                                                                                    | 77    |     |       | 87    |     |       | 107   |     |       | 73    |     |
| Fuel Used(gal)          |                                                                                    | 1     |     |       | 1     |     |       | 3     |     |       | 2     |     |
| CO Emissions (g/hr)     |                                                                                    | 100   |     |       | 99    |     |       | 196   |     |       | 108   |     |
| NOx Emissions (g/hr)    |                                                                                    | 19    |     |       | 19    |     |       | 38    |     |       | 21    |     |
| VOC Emissions (g/hr)    |                                                                                    | 23    |     |       | 23    |     |       | 45    |     |       | 25    |     |
| Dilemma Vehicles (#)    |                                                                                    | 0     |     |       | 0     |     |       | 0     |     |       | 0     |     |
| Queue Length 50th (ft)  |                                                                                    | 19    |     |       | 23    |     |       | 18    |     |       | 13    |     |
| Queue Length 95th (ft)  |                                                                                    | 44    |     |       | 46    |     |       | 65    |     |       | 47    |     |
| Internal Link Dist (ft) |                                                                                    | 220   |     |       | 220   |     |       | 608   |     |       | 372   |     |
| Turn Bay Length (ft)    |                                                                                    |       |     |       |       |     |       |       |     |       |       |     |
| Base Capacity (vph)     |                                                                                    | 1021  |     |       | 957   |     |       | 1767  |     |       | 2045  |     |
| Starvation Cap Reductn  |                                                                                    | 0     |     |       | 0     |     |       | 0     |     |       | 0     |     |
| Spillback Cap Reductn   |                                                                                    | 0     |     |       | 0     |     |       | 0     |     |       | 0     |     |
| Storage Cap Reductn     |                                                                                    | 0     |     |       | 0     |     |       | 0     |     |       | 0     |     |
| Reduced v/c Ratio       |                                                                                    | 0.19  |     |       | 0.15  |     |       | 0.21  |     |       | 0.13  |     |



#### Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 72.5

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.40

Intersection Signal Delay: 9.3

Intersection LOS: A

Intersection Capacity Utilization 71.7%

ICU Level of Service C

Analysis Period (min) 15

90th %ile Actuated Cycle: 84.2

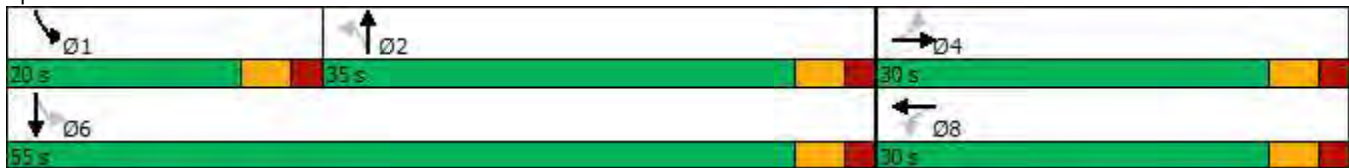
70th %ile Actuated Cycle: 69.3

50th %ile Actuated Cycle: 68.3

30th %ile Actuated Cycle: 67.3

10th %ile Actuated Cycle: 73.4

Splits and Phases: 1: Abbott Road & Dorrance Avenue



Lanes, Volumes, Timings  
2: Abbott Road & Plaza Driveway

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

|                            |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                 | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations        |  |  |  |                                                                                   |                                                                                   |  |
| Traffic Volume (vph)       | 51                                                                                | 5                                                                                 | 368                                                                               | 82                                                                                | 2                                                                                 | 330                                                                               |
| Future Volume (vph)        | 51                                                                                | 5                                                                                 | 368                                                                               | 82                                                                                | 2                                                                                 | 330                                                                               |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              |
| Ped Bike Factor            | 0.99                                                                              | 0.98                                                                              | 0.99                                                                              |                                                                                   |                                                                                   | 1.00                                                                              |
| Frt                        |                                                                                   | 0.850                                                                             | 0.973                                                                             |                                                                                   |                                                                                   |                                                                                   |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (prot)          | 1770                                                                              | 1583                                                                              | 3294                                                                              | 0                                                                                 | 0                                                                                 | 3439                                                                              |
| Flt Permitted              | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.954                                                                             |
| Satd. Flow (perm)          | 1760                                                                              | 1554                                                                              | 3294                                                                              | 0                                                                                 | 0                                                                                 | 3280                                                                              |
| Right Turn on Red          |                                                                                   | Yes                                                                               |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   |
| Satd. Flow (RTOR)          |                                                                                   | 5                                                                                 | 54                                                                                |                                                                                   |                                                                                   |                                                                                   |
| Link Speed (mph)           | 30                                                                                |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |
| Link Distance (ft)         | 300                                                                               |                                                                                   | 748                                                                               |                                                                                   |                                                                                   | 688                                                                               |
| Travel Time (s)            | 6.8                                                                               |                                                                                   | 17.0                                                                              |                                                                                   |                                                                                   | 15.6                                                                              |
| Confl. Peds. (#/hr)        | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   |
| Confl. Bikes (#/hr)        |                                                                                   | 2                                                                                 |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   |
| Peak Hour Factor           | 0.91                                                                              | 0.91                                                                              | 0.91                                                                              | 0.91                                                                              | 0.91                                                                              | 0.91                                                                              |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 7%                                                                                | 2%                                                                                | 2%                                                                                | 5%                                                                                |
| Adj. Flow (vph)            | 56                                                                                | 5                                                                                 | 404                                                                               | 90                                                                                | 2                                                                                 | 363                                                                               |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)      | 56                                                                                | 5                                                                                 | 494                                                                               | 0                                                                                 | 0                                                                                 | 365                                                                               |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment             | Left                                                                              | Right                                                                             | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              |
| Median Width(ft)           | 12                                                                                |                                                                                   | 10                                                                                |                                                                                   |                                                                                   | 10                                                                                |
| Link Offset(ft)            | 0                                                                                 |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |
| Crosswalk Width(ft)        | 16                                                                                |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Headway Factor             | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |
| Turning Speed (mph)        | 60                                                                                | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                |                                                                                   |
| Number of Detectors        | 1                                                                                 | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |
| Detector Template          | Left                                                                              | Right                                                                             | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              |
| Leading Detector (ft)      | 50                                                                                | 50                                                                                | 50                                                                                |                                                                                   | 20                                                                                | 50                                                                                |
| Trailing Detector (ft)     | 0                                                                                 | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |
| Detector 1 Position(ft)    | 0                                                                                 | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |
| Detector 1 Size(ft)        | 50                                                                                | 50                                                                                | 50                                                                                |                                                                                   | 20                                                                                | 50                                                                                |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |
| Turn Type                  | Perm                                                                              | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |
| Protected Phases           |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |
| Permitted Phases           | 8                                                                                 | 8                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |
| Detector Phase             | 8                                                                                 | 8                                                                                 | 2                                                                                 |                                                                                   | 6                                                                                 | 6                                                                                 |
| Switch Phase               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Minimum Initial (s)        | 6.0                                                                               | 6.0                                                                               | 6.0                                                                               |                                                                                   | 6.0                                                                               | 6.0                                                                               |
| Minimum Split (s)          | 27.2                                                                              | 27.2                                                                              | 32.2                                                                              |                                                                                   | 32.2                                                                              | 32.2                                                                              |

Lanes, Volumes, Timings  
2: Abbott Road & Plaza Driveway

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

| Lane Group              | WBL   | WBR   | NBT   | NBR | SBL   | SBT   |
|-------------------------|-------|-------|-------|-----|-------|-------|
| Total Split (s)         | 30.0  | 30.0  | 50.0  |     | 50.0  | 50.0  |
| Total Split (%)         | 37.5% | 37.5% | 62.5% |     | 62.5% | 62.5% |
| Maximum Green (s)       | 24.8  | 24.8  | 44.8  |     | 44.8  | 44.8  |
| Yellow Time (s)         | 3.2   | 3.2   | 3.2   |     | 3.2   | 3.2   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   |     | 2.0   | 2.0   |
| Lost Time Adjust (s)    | 0.0   | 0.0   | 0.0   |     |       | 0.0   |
| Total Lost Time (s)     | 5.2   | 5.2   | 5.2   |     |       | 5.2   |
| Lead/Lag                |       |       |       |     |       |       |
| Lead-Lag Optimize?      |       |       |       |     |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   |     | 3.0   | 3.0   |
| Recall Mode             | None  | None  | Max   |     | Max   | Max   |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   |     | 7.0   | 7.0   |
| Flash Dont Walk (s)     | 15.0  | 15.0  | 20.0  |     | 20.0  | 20.0  |
| Pedestrian Calls (#/hr) | 2     | 2     | 2     |     | 2     | 2     |
| Act Effect Green (s)    | 9.9   | 9.9   | 60.3  |     |       | 60.3  |
| Actuated g/C Ratio      | 0.14  | 0.14  | 0.82  |     |       | 0.82  |
| v/c Ratio               | 0.23  | 0.02  | 0.18  |     |       | 0.14  |
| Control Delay           | 30.0  | 15.8  | 3.3   |     |       | 3.5   |
| Queue Delay             | 0.0   | 0.0   | 0.0   |     |       | 0.0   |
| Total Delay             | 30.0  | 15.8  | 3.3   |     |       | 3.5   |
| LOS                     | C     | B     | A     |     |       | A     |
| Approach Delay          | 28.9  |       | 3.3   |     |       | 3.5   |
| Approach LOS            | C     |       | A     |     |       | A     |
| 90th %ile Green (s)     | 22.0  | 22.0  | 48.7  |     | 48.7  | 48.7  |
| 90th %ile Term Code     | Ped   | Ped   | Dwell |     | Dwell | Dwell |
| 70th %ile Green (s)     | 8.9   | 8.9   | 57.6  |     | 57.6  | 57.6  |
| 70th %ile Term Code     | Gap   | Gap   | Dwell |     | Dwell | Dwell |
| 50th %ile Green (s)     | 7.8   | 7.8   | 59.8  |     | 59.8  | 59.8  |
| 50th %ile Term Code     | Gap   | Gap   | Dwell |     | Dwell | Dwell |
| 30th %ile Green (s)     | 0.0   | 0.0   | 59.8  |     | 59.8  | 59.8  |
| 30th %ile Term Code     | Skip  | Skip  | Dwell |     | Dwell | Dwell |
| 10th %ile Green (s)     | 0.0   | 0.0   | 59.8  |     | 59.8  | 59.8  |
| 10th %ile Term Code     | Skip  | Skip  | Dwell |     | Dwell | Dwell |
| Stops (vph)             | 44    | 4     | 94    |     |       | 75    |
| Fuel Used(gal)          | 1     | 0     | 3     |     |       | 2     |
| CO Emissions (g/hr)     | 47    | 3     | 241   |     |       | 170   |
| NOx Emissions (g/hr)    | 9     | 1     | 47    |     |       | 33    |
| VOC Emissions (g/hr)    | 11    | 1     | 56    |     |       | 39    |
| Dilemma Vehicles (#)    | 0     | 0     | 0     |     |       | 0     |
| Queue Length 50th (ft)  | 26    | 0     | 22    |     |       | 18    |
| Queue Length 95th (ft)  | 49    | 8     | 72    |     |       | 59    |
| Internal Link Dist (ft) | 220   |       | 668   |     |       | 608   |
| Turn Bay Length (ft)    |       |       |       |     |       |       |
| Base Capacity (vph)     | 601   | 534   | 2721  |     |       | 2700  |
| Starvation Cap Reductn  | 0     | 0     | 0     |     |       | 0     |
| Spillback Cap Reductn   | 0     | 0     | 0     |     |       | 0     |
| Storage Cap Reductn     | 0     | 0     | 0     |     |       | 0     |
| Reduced v/c Ratio       | 0.09  | 0.01  | 0.18  |     |       | 0.14  |

Lanes, Volumes, Timings  
2: Abbott Road & Plaza Driveway

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 73.2

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.23

Intersection Signal Delay: 5.1

Intersection LOS: A

Intersection Capacity Utilization 38.2%

ICU Level of Service A

Analysis Period (min) 15

90th %ile Actuated Cycle: 81.1

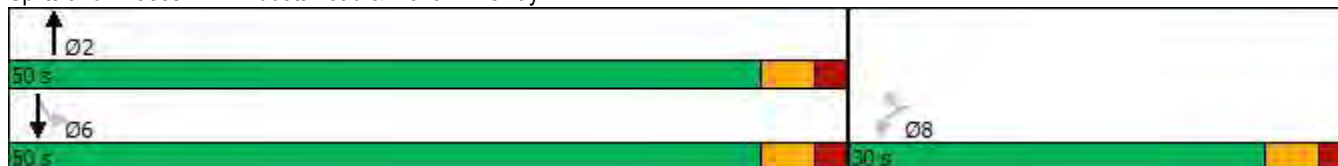
70th %ile Actuated Cycle: 76.9

50th %ile Actuated Cycle: 78

30th %ile Actuated Cycle: 65

10th %ile Actuated Cycle: 65

Splits and Phases: 2: Abbott Road & Plaza Driveway



## Lanes, Volumes, Timings

## Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

## 3: Abbott Road/Abbott Road &amp; Ridge Road

12/04/2025

|                            |  |  |  |  |  |  |   |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph)       | 38                                                                                | 449                                                                               | 49                                                                                | 168                                                                               | 408                                                                               | 260                                                                               | 54                                                                                  | 135                                                                                 | 224                                                                                 | 188                                                                                 | 171                                                                                 | 30                                                                                  |
| Future Volume (vph)        | 38                                                                                | 449                                                                               | 49                                                                                | 168                                                                               | 408                                                                               | 260                                                                               | 54                                                                                  | 135                                                                                 | 224                                                                                 | 188                                                                                 | 171                                                                                 | 30                                                                                  |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Lane Width (ft)            | 11                                                                                | 11                                                                                | 11                                                                                | 10                                                                                | 10                                                                                | 12                                                                                | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  |
| Storage Length (ft)        | 90                                                                                |                                                                                   | 250                                                                               | 200                                                                               |                                                                                   | 0                                                                                 | 170                                                                                 |                                                                                     | 170                                                                                 | 250                                                                                 |                                                                                     | 300                                                                                 |
| Storage Lanes              | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                   |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)          | 50                                                                                |                                                                                   |                                                                                   | 100                                                                               |                                                                                   |                                                                                   | 100                                                                                 |                                                                                     |                                                                                     | 100                                                                                 |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.95                                                                                | 1.00                                                                                | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                |
| Ped Bike Factor            | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              |                                                                                   | 0.98                                                                              | 0.99                                                                                |                                                                                     | 0.98                                                                                | 1.00                                                                                | 1.00                                                                                |                                                                                     |
| Frt                        |                                                                                   | 0.985                                                                             |                                                                                   |                                                                                   |                                                                                   | 0.850                                                                             |                                                                                     |                                                                                     | 0.850                                                                               |                                                                                     | 0.978                                                                               |                                                                                     |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1646                                                                              | 3194                                                                              | 0                                                                                 | 1652                                                                              | 1657                                                                              | 1583                                                                              | 1652                                                                                | 3271                                                                                | 1463                                                                                | 1652                                                                                | 3180                                                                                | 0                                                                                   |
| Flt Permitted              | 0.442                                                                             |                                                                                   |                                                                                   | 0.342                                                                             |                                                                                   |                                                                                   | 0.621                                                                               |                                                                                     |                                                                                     | 0.484                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 764                                                                               | 3194                                                                              | 0                                                                                 | 593                                                                               | 1657                                                                              | 1554                                                                              | 1073                                                                                | 3271                                                                                | 1437                                                                                | 838                                                                                 | 3180                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 9                                                                                 |                                                                                   |                                                                                   |                                                                                   | 271                                                                               |                                                                                     |                                                                                     | 210                                                                                 |                                                                                     | 17                                                                                  |                                                                                     |
| Link Speed (mph)           |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                     | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 808                                                                               |                                                                                   |                                                                                   | 782                                                                               |                                                                                   |                                                                                     | 1105                                                                                |                                                                                     |                                                                                     | 748                                                                                 |                                                                                     |
| Travel Time (s)            |                                                                                   | 18.4                                                                              |                                                                                   |                                                                                   | 17.8                                                                              |                                                                                   |                                                                                     | 25.1                                                                                |                                                                                     |                                                                                     | 17.0                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                   |                                                                                     | 5                                                                                   | 5                                                                                   |                                                                                     | 5                                                                                   |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |
| Peak Hour Factor           | 0.96                                                                              | 0.96                                                                              | 0.96                                                                              | 0.96                                                                              | 0.96                                                                              | 0.96                                                                              | 0.96                                                                                | 0.96                                                                                | 0.96                                                                                | 0.96                                                                                | 0.96                                                                                | 0.96                                                                                |
| Heavy Vehicles (%)         | 6%                                                                                | 8%                                                                                | 2%                                                                                | 2%                                                                                | 7%                                                                                | 2%                                                                                | 2%                                                                                  | 3%                                                                                  | 3%                                                                                  | 2%                                                                                  | 3%                                                                                  | 4%                                                                                  |
| Adj. Flow (vph)            | 40                                                                                | 468                                                                               | 51                                                                                | 175                                                                               | 425                                                                               | 271                                                                               | 56                                                                                  | 141                                                                                 | 233                                                                                 | 196                                                                                 | 178                                                                                 | 31                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 40                                                                                | 519                                                                               | 0                                                                                 | 175                                                                               | 425                                                                               | 271                                                                               | 56                                                                                  | 141                                                                                 | 233                                                                                 | 196                                                                                 | 209                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 11                                                                                |                                                                                   |                                                                                   | 11                                                                                |                                                                                   |                                                                                     | 10                                                                                  |                                                                                     |                                                                                     | 10                                                                                  |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |                                                                                   |                                                                                     | 16                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.04                                                                              | 1.04                                                                              | 1.04                                                                              | 1.09                                                                              | 1.09                                                                              | 1.00                                                                              | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                |
| Turning Speed (mph)        | 15                                                                                |                                                                                   | 9                                                                                 | 15                                                                                |                                                                                   | 9                                                                                 | 15                                                                                  |                                                                                     | 9                                                                                   | 15                                                                                  |                                                                                     | 9                                                                                   |
| Number of Detectors        | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 | 1                                                                                 | 1                                                                                   | 1                                                                                   | 1                                                                                   | 1                                                                                   | 1                                                                                   |                                                                                     |
| Detector Template          | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              | Right                                                                             | Left                                                                                | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                |                                                                                     |
| Leading Detector (ft)      | 50                                                                                | 50                                                                                |                                                                                   | 50                                                                                | 50                                                                                | 50                                                                                | 20                                                                                  | 50                                                                                  | 50                                                                                  | 20                                                                                  | 50                                                                                  |                                                                                     |
| Trailing Detector (ft)     | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |                                                                                     |
| Detector 1 Position(ft)    | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |                                                                                     |
| Detector 1 Size(ft)        | 50                                                                                | 50                                                                                |                                                                                   | 50                                                                                | 50                                                                                | 50                                                                                | 20                                                                                  | 50                                                                                  | 50                                                                                  | 20                                                                                  | 50                                                                                  |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Turn Type                  | pm+pt                                                                             | NA                                                                                |                                                                                   | pm+pt                                                                             | NA                                                                                | pm+ov                                                                             | pm+pt                                                                               | NA                                                                                  | pm+ov                                                                               | pm+pt                                                                               | NA                                                                                  |                                                                                     |
| Protected Phases           | 7                                                                                 | 4                                                                                 |                                                                                   | 3                                                                                 | 8                                                                                 | 1                                                                                 | 5                                                                                   | 2                                                                                   | 3                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     |
| Permitted Phases           | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   | 8                                                                                 | 2                                                                                   |                                                                                     | 2                                                                                   | 6                                                                                   |                                                                                     |                                                                                     |

## Lanes, Volumes, Timings

## Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

## 3: Abbott Road/Abbott Road &amp; Ridge Road

12/04/2025

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Detector Phase          | 7                                                                                 | 4                                                                                 |                                                                                   | 3                                                                                 | 8                                                                                 | 1                                                                                 | 5                                                                                  | 2                                                                                   | 3                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0                                                                               | 7.0                                                                               | 7.0                                                                                | 7.0                                                                                 | 7.0                                                                                 | 7.0                                                                                 | 7.0                                                                                 |                                                                                     |
| Minimum Split (s)       | 12.2                                                                              | 36.2                                                                              |                                                                                   | 12.2                                                                              | 36.2                                                                              | 12.2                                                                              | 12.2                                                                               | 42.2                                                                                | 12.2                                                                                | 12.2                                                                                | 42.2                                                                                |                                                                                     |
| Total Split (s)         | 20.0                                                                              | 37.0                                                                              |                                                                                   | 20.0                                                                              | 37.0                                                                              | 20.0                                                                              | 20.0                                                                               | 43.0                                                                                | 20.0                                                                                | 20.0                                                                                | 43.0                                                                                |                                                                                     |
| Total Split (%)         | 16.7%                                                                             | 30.8%                                                                             |                                                                                   | 16.7%                                                                             | 30.8%                                                                             | 16.7%                                                                             | 16.7%                                                                              | 35.8%                                                                               | 16.7%                                                                               | 16.7%                                                                               | 35.8%                                                                               |                                                                                     |
| Maximum Green (s)       | 14.8                                                                              | 31.8                                                                              |                                                                                   | 14.8                                                                              | 31.8                                                                              | 14.8                                                                              | 14.8                                                                               | 37.8                                                                                | 14.8                                                                                | 14.8                                                                                | 37.8                                                                                |                                                                                     |
| Yellow Time (s)         | 3.2                                                                               | 3.2                                                                               |                                                                                   | 3.2                                                                               | 3.2                                                                               | 3.2                                                                               | 3.2                                                                                | 3.2                                                                                 | 3.2                                                                                 | 3.2                                                                                 | 3.2                                                                                 |                                                                                     |
| All-Red Time (s)        | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                               | 2.0                                                                               | 2.0                                                                               | 2.0                                                                                | 2.0                                                                                 | 2.0                                                                                 | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)     | 5.2                                                                               | 5.2                                                                               |                                                                                   | 5.2                                                                               | 5.2                                                                               | 5.2                                                                               | 5.2                                                                                | 5.2                                                                                 | 5.2                                                                                 | 5.2                                                                                 | 5.2                                                                                 |                                                                                     |
| Lead/Lag                | Lead                                                                              | Lag                                                                               |                                                                                   | Lead                                                                              | Lag                                                                               | Lead                                                                              | Lead                                                                               | Lag                                                                                 | Lead                                                                                | Lead                                                                                | Lag                                                                                 |                                                                                     |
| Lead-Lag Optimize?      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                                | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| Recall Mode             | None                                                                              | Max                                                                               |                                                                                   | None                                                                              | Max                                                                               | None                                                                              | None                                                                               | None                                                                                | None                                                                                | None                                                                                | None                                                                                |                                                                                     |
| Walk Time (s)           |                                                                                   | 7.0                                                                               |                                                                                   |                                                                                   | 7.0                                                                               |                                                                                   |                                                                                    | 7.0                                                                                 |                                                                                     |                                                                                     | 7.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)     |                                                                                   | 24.0                                                                              |                                                                                   |                                                                                   | 24.0                                                                              |                                                                                   |                                                                                    | 30.0                                                                                |                                                                                     |                                                                                     | 30.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) |                                                                                   | 5                                                                                 |                                                                                   |                                                                                   | 5                                                                                 |                                                                                   |                                                                                    | 5                                                                                   |                                                                                     |                                                                                     | 5                                                                                   |                                                                                     |
| Act Effect Green (s)    | 40.1                                                                              | 32.6                                                                              |                                                                                   | 47.5                                                                              | 41.0                                                                              | 53.6                                                                              | 21.0                                                                               | 13.0                                                                                | 23.2                                                                                | 30.7                                                                                | 20.5                                                                                |                                                                                     |
| Actuated g/C Ratio      | 0.45                                                                              | 0.36                                                                              |                                                                                   | 0.53                                                                              | 0.46                                                                              | 0.60                                                                              | 0.23                                                                               | 0.14                                                                                | 0.26                                                                                | 0.34                                                                                | 0.23                                                                                |                                                                                     |
| v/c Ratio               | 0.10                                                                              | 0.45                                                                              |                                                                                   | 0.40                                                                              | 0.56                                                                              | 0.26                                                                              | 0.19                                                                               | 0.30                                                                                | 0.44                                                                                | 0.49                                                                                | 0.28                                                                                |                                                                                     |
| Control Delay           | 14.6                                                                              | 25.6                                                                              |                                                                                   | 16.3                                                                              | 26.5                                                                              | 2.4                                                                               | 21.1                                                                               | 35.3                                                                                | 6.7                                                                                 | 25.5                                                                                | 27.7                                                                                |                                                                                     |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Delay             | 14.6                                                                              | 25.6                                                                              |                                                                                   | 16.3                                                                              | 26.5                                                                              | 2.4                                                                               | 21.1                                                                               | 35.3                                                                                | 6.7                                                                                 | 25.5                                                                                | 27.7                                                                                |                                                                                     |
| LOS                     | B                                                                                 | C                                                                                 |                                                                                   | B                                                                                 | C                                                                                 | A                                                                                 | C                                                                                  | D                                                                                   | A                                                                                   | C                                                                                   | C                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 24.8                                                                              |                                                                                   |                                                                                   | 16.9                                                                              |                                                                                   |                                                                                    | 18.0                                                                                |                                                                                     |                                                                                     | 26.7                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                    | B                                                                                   |                                                                                     |                                                                                     | C                                                                                   |                                                                                     |
| 90th %ile Green (s)     | 9.1                                                                               | 31.8                                                                              |                                                                                   | 14.8                                                                              | 37.5                                                                              | 14.8                                                                              | 9.8                                                                                | 37.0                                                                                | 14.8                                                                                | 14.8                                                                                | 42.0                                                                                |                                                                                     |
| 90th %ile Term Code     | Gap                                                                               | MaxR                                                                              |                                                                                   | Max                                                                               | Hold                                                                              | Max                                                                               | Gap                                                                                | Ped                                                                                 | Max                                                                                 | Max                                                                                 | Hold                                                                                |                                                                                     |
| 70th %ile Green (s)     | 7.0                                                                               | 31.8                                                                              |                                                                                   | 11.4                                                                              | 36.2                                                                              | 14.8                                                                              | 8.4                                                                                | 10.1                                                                                | 11.4                                                                                | 14.8                                                                                | 16.5                                                                                |                                                                                     |
| 70th %ile Term Code     | Min                                                                               | MaxR                                                                              |                                                                                   | Gap                                                                               | Hold                                                                              | Max                                                                               | Gap                                                                                | Gap                                                                                 | Gap                                                                                 | Max                                                                                 | Hold                                                                                |                                                                                     |
| 50th %ile Green (s)     | 7.0                                                                               | 31.8                                                                              |                                                                                   | 9.9                                                                               | 34.7                                                                              | 13.2                                                                              | 7.5                                                                                | 9.0                                                                                 | 9.9                                                                                 | 13.2                                                                                | 14.7                                                                                |                                                                                     |
| 50th %ile Term Code     | Min                                                                               | MaxR                                                                              |                                                                                   | Gap                                                                               | Hold                                                                              | Gap                                                                               | Gap                                                                                | Gap                                                                                 | Gap                                                                                 | Gap                                                                                 | Hold                                                                                |                                                                                     |
| 30th %ile Green (s)     | 0.0                                                                               | 31.8                                                                              |                                                                                   | 8.6                                                                               | 45.6                                                                              | 11.3                                                                              | 7.0                                                                                | 8.0                                                                                 | 8.6                                                                                 | 11.3                                                                                | 12.3                                                                                |                                                                                     |
| 30th %ile Term Code     | Skip                                                                              | MaxR                                                                              |                                                                                   | Gap                                                                               | Hold                                                                              | Gap                                                                               | Min                                                                                | Gap                                                                                 | Gap                                                                                 | Gap                                                                                 | Hold                                                                                |                                                                                     |
| 10th %ile Green (s)     | 0.0                                                                               | 31.8                                                                              |                                                                                   | 7.1                                                                               | 44.1                                                                              | 8.9                                                                               | 0.0                                                                                | 7.0                                                                                 | 7.1                                                                                 | 8.9                                                                                 | 21.1                                                                                |                                                                                     |
| 10th %ile Term Code     | Skip                                                                              | MaxR                                                                              |                                                                                   | Gap                                                                               | Hold                                                                              | Gap                                                                               | Skip                                                                               | Min                                                                                 | Gap                                                                                 | Gap                                                                                 | Hold                                                                                |                                                                                     |
| Stops (vph)             | 22                                                                                | 360                                                                               |                                                                                   | 84                                                                                | 291                                                                               | 17                                                                                | 38                                                                                 | 109                                                                                 | 29                                                                                  | 127                                                                                 | 141                                                                                 |                                                                                     |
| Fuel Used(gal)          | 0                                                                                 | 8                                                                                 |                                                                                   | 2                                                                                 | 6                                                                                 | 2                                                                                 | 1                                                                                  | 3                                                                                   | 2                                                                                   | 3                                                                                   | 3                                                                                   |                                                                                     |
| CO Emissions (g/hr)     | 33                                                                                | 540                                                                               |                                                                                   | 143                                                                               | 440                                                                               | 126                                                                               | 63                                                                                 | 191                                                                                 | 168                                                                                 | 194                                                                                 | 216                                                                                 |                                                                                     |
| NOx Emissions (g/hr)    | 6                                                                                 | 105                                                                               |                                                                                   | 28                                                                                | 86                                                                                | 25                                                                                | 12                                                                                 | 37                                                                                  | 33                                                                                  | 38                                                                                  | 42                                                                                  |                                                                                     |
| VOC Emissions (g/hr)    | 8                                                                                 | 125                                                                               |                                                                                   | 33                                                                                | 102                                                                               | 29                                                                                | 15                                                                                 | 44                                                                                  | 39                                                                                  | 45                                                                                  | 50                                                                                  |                                                                                     |
| Dilemma Vehicles (#)    | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |                                                                                     |
| Queue Length 50th (ft)  | 9                                                                                 | 104                                                                               |                                                                                   | 43                                                                                | 175                                                                               | 0                                                                                 | 21                                                                                 | 37                                                                                  | 9                                                                                   | 79                                                                                  | 47                                                                                  |                                                                                     |
| Queue Length 95th (ft)  | 39                                                                                | 240                                                                               |                                                                                   | 135                                                                               | #463                                                                              | 44                                                                                | 47                                                                                 | 66                                                                                  | 53                                                                                  | 138                                                                                 | 82                                                                                  |                                                                                     |
| Internal Link Dist (ft) |                                                                                   | 728                                                                               |                                                                                   |                                                                                   | 702                                                                               |                                                                                   |                                                                                    | 1025                                                                                |                                                                                     |                                                                                     | 668                                                                                 |                                                                                     |
| Turn Bay Length (ft)    | 90                                                                                |                                                                                   |                                                                                   | 200                                                                               |                                                                                   |                                                                                   | 170                                                                                |                                                                                     | 170                                                                                 | 250                                                                                 |                                                                                     |                                                                                     |
| Base Capacity (vph)     | 548                                                                               | 1165                                                                              |                                                                                   | 497                                                                               | 755                                                                               | 1077                                                                              | 432                                                                                | 1411                                                                                | 598                                                                                 | 426                                                                                 | 1404                                                                                |                                                                                     |
| Starvation Cap Reductn  | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |                                                                                     |

|                       |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group            | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Spillback Cap Reductn | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Storage Cap Reductn   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Reduced v/c Ratio     | 0.07                                                                              | 0.45                                                                              |                                                                                   | 0.35                                                                              | 0.56                                                                              | 0.25                                                                              | 0.13                                                                               | 0.10                                                                                | 0.39                                                                                | 0.46                                                                                | 0.15                                                                                |                                                                                     |

## Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 89.8

Natural Cycle: 105

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.56

Intersection Signal Delay: 20.8

Intersection LOS: C

Intersection Capacity Utilization 72.6%

ICU Level of Service C

Analysis Period (min) 15

90th %ile Actuated Cycle: 119.2

70th %ile Actuated Cycle: 88.9

50th %ile Actuated Cycle: 84.7

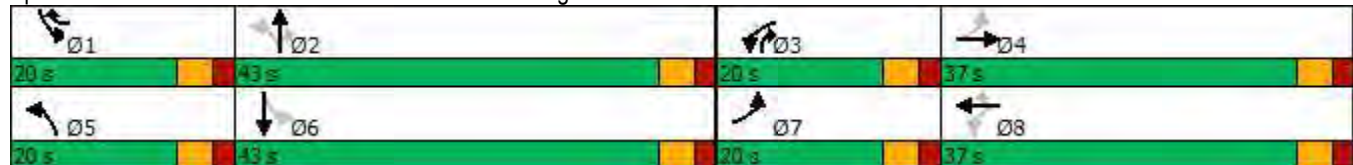
30th %ile Actuated Cycle: 80.5

10th %ile Actuated Cycle: 75.6

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Abbott Road/Abbott Road &amp; Ridge Road



Lanes, Volumes, Timings  
4: Abbott Road & Fernald Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                        | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                    |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)              | 0                                                                                 | 0                                                                                 | 1                                                                                 | 16                                                                                | 0                                                                                 | 7                                                                                 | 3                                                                                  | 396                                                                                 | 5                                                                                   | 3                                                                                   | 363                                                                                 | 2                                                                                   |
| Future Volume (vph)               | 0                                                                                 | 0                                                                                 | 1                                                                                 | 16                                                                                | 0                                                                                 | 7                                                                                 | 3                                                                                  | 396                                                                                 | 5                                                                                   | 3                                                                                   | 363                                                                                 | 2                                                                                   |
| Ideal Flow (vphpl)                | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                               | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Lane Width (ft)                   | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                 | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 12                                                                                  |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                               | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                |
| Ped Bike Factor                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Frt                               |                                                                                   | 0.865                                                                             |                                                                                   |                                                                                   | 0.959                                                                             |                                                                                   |                                                                                    | 0.998                                                                               |                                                                                     |                                                                                     | 0.999                                                                               |                                                                                     |
| Flt Protected                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.966                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)                 | 0                                                                                 | 1611                                                                              | 0                                                                                 | 0                                                                                 | 1726                                                                              | 0                                                                                 | 0                                                                                  | 3145                                                                                | 0                                                                                   | 0                                                                                   | 3207                                                                                | 0                                                                                   |
| Flt Permitted                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.966                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)                 | 0                                                                                 | 1611                                                                              | 0                                                                                 | 0                                                                                 | 1726                                                                              | 0                                                                                 | 0                                                                                  | 3145                                                                                | 0                                                                                   | 0                                                                                   | 3207                                                                                | 0                                                                                   |
| Link Speed (mph)                  |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                    | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)                |                                                                                   | 100                                                                               |                                                                                   |                                                                                   | 300                                                                               |                                                                                   |                                                                                    | 1266                                                                                |                                                                                     |                                                                                     | 1105                                                                                |                                                                                     |
| Travel Time (s)                   |                                                                                   | 2.3                                                                               |                                                                                   |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                    | 28.8                                                                                |                                                                                     |                                                                                     | 25.1                                                                                |                                                                                     |
| Confl. Peds. (#/hr)               | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                  |                                                                                     | 5                                                                                   | 5                                                                                   |                                                                                     | 5                                                                                   |
| Confl. Bikes (#/hr)               |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                    |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |
| Peak Hour Factor                  | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                              | 0.98                                                                               | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                | 0.98                                                                                |
| Heavy Vehicles (%)                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                 | 7%                                                                                  | 2%                                                                                  | 2%                                                                                  | 5%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)                   | 0                                                                                 | 0                                                                                 | 1                                                                                 | 16                                                                                | 0                                                                                 | 7                                                                                 | 3                                                                                  | 404                                                                                 | 5                                                                                   | 3                                                                                   | 370                                                                                 | 2                                                                                   |
| Shared Lane Traffic (%)           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)             | 0                                                                                 | 1                                                                                 | 0                                                                                 | 0                                                                                 | 23                                                                                | 0                                                                                 | 0                                                                                  | 412                                                                                 | 0                                                                                   | 0                                                                                   | 375                                                                                 | 0                                                                                   |
| Enter Blocked Intersection        | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment                    | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)                  |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 10                                                                                  |                                                                                     |                                                                                     | 10                                                                                  |                                                                                     |
| Link Offset(ft)                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)               |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |                                                                                   |                                                                                    | 16                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Two way Left Turn Lane            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor                    | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.00                                                                                |
| Turning Speed (mph)               | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                 |                                                                                     | 60                                                                                  | 60                                                                                  |                                                                                     | 60                                                                                  |
| Sign Control                      |                                                                                   | Stop                                                                              |                                                                                   |                                                                                   | Stop                                                                              |                                                                                   |                                                                                    | Free                                                                                |                                                                                     |                                                                                     | Free                                                                                |                                                                                     |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                        | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:                     | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization | 28.8%                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | ICU Level of Service A                                                             |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min)             | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |



Lanes, Volumes, Timings  
5: Abbott Road & Elmview Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                    |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)       | 19                                                                                | 1                                                                                 | 7                                                                                 | 5                                                                                 | 0                                                                                 | 3                                                                                 | 3                                                                                  | 363                                                                                 | 2                                                                                   | 3                                                                                   | 364                                                                                 | 10                                                                                  |
| Future Volume (vph)        | 19                                                                                | 1                                                                                 | 7                                                                                 | 5                                                                                 | 0                                                                                 | 3                                                                                 | 3                                                                                  | 363                                                                                 | 2                                                                                   | 3                                                                                   | 364                                                                                 | 10                                                                                  |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                               | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Lane Width (ft)            | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 10                                                                                 | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                               | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                |
| Ped Bike Factor            |                                                                                   | 0.99                                                                              |                                                                                   |                                                                                   | 0.99                                                                              |                                                                                   |                                                                                    | 1.00                                                                                |                                                                                     |                                                                                     | 1.00                                                                                |                                                                                     |
| Frt                        |                                                                                   | 0.965                                                                             |                                                                                   |                                                                                   | 0.949                                                                             |                                                                                   |                                                                                    | 0.999                                                                               |                                                                                     |                                                                                     | 0.996                                                                               |                                                                                     |
| Flt Protected              |                                                                                   | 0.966                                                                             |                                                                                   |                                                                                   | 0.970                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 0                                                                                 | 1728                                                                              | 0                                                                                 | 0                                                                                 | 1703                                                                              | 0                                                                                 | 0                                                                                  | 3090                                                                                | 0                                                                                   | 0                                                                                   | 3168                                                                                | 0                                                                                   |
| Flt Permitted              |                                                                                   | 0.786                                                                             |                                                                                   |                                                                                   | 0.794                                                                             |                                                                                   |                                                                                    | 0.953                                                                               |                                                                                     |                                                                                     | 0.953                                                                               |                                                                                     |
| Satd. Flow (perm)          | 0                                                                                 | 1402                                                                              | 0                                                                                 | 0                                                                                 | 1390                                                                              | 0                                                                                 | 0                                                                                  | 2945                                                                                | 0                                                                                   | 0                                                                                   | 3019                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                    |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 7                                                                                 |                                                                                   |                                                                                   | 34                                                                                |                                                                                   |                                                                                    | 1                                                                                   |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |
| Link Speed (mph)           |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                    | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 300                                                                               |                                                                                   |                                                                                   | 300                                                                               |                                                                                   |                                                                                    | 457                                                                                 |                                                                                     |                                                                                     | 1266                                                                                |                                                                                     |
| Travel Time (s)            |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                    | 10.4                                                                                |                                                                                     |                                                                                     | 28.8                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                  |                                                                                     | 5                                                                                   | 5                                                                                   |                                                                                     | 5                                                                                   |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                    |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |
| Peak Hour Factor           | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                              | 0.99                                                                               | 0.99                                                                                | 0.99                                                                                | 0.99                                                                                | 0.99                                                                                | 0.99                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                 | 9%                                                                                  | 2%                                                                                  | 2%                                                                                  | 6%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 19                                                                                | 1                                                                                 | 7                                                                                 | 5                                                                                 | 0                                                                                 | 3                                                                                 | 3                                                                                  | 367                                                                                 | 2                                                                                   | 3                                                                                   | 368                                                                                 | 10                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 0                                                                                 | 27                                                                                | 0                                                                                 | 0                                                                                 | 8                                                                                 | 0                                                                                 | 0                                                                                  | 372                                                                                 | 0                                                                                   | 0                                                                                   | 381                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |                                                                                   |                                                                                    | 16                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.09                                                                               | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                |
| Turning Speed (mph)        | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                 |                                                                                     | 60                                                                                  | 60                                                                                  |                                                                                     | 60                                                                                  |
| Number of Detectors        | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                  | 1                                                                                   |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     |
| Detector Template          | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                               | Thru                                                                                |                                                                                     | Left                                                                                | Thru                                                                                |                                                                                     |
| Leading Detector (ft)      | 20                                                                                | 50                                                                                |                                                                                   | 20                                                                                | 50                                                                                |                                                                                   | 20                                                                                 | 50                                                                                  |                                                                                     | 20                                                                                  | 50                                                                                  |                                                                                     |
| Trailing Detector (ft)     | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Detector 1 Position(ft)    | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Detector 1 Size(ft)        | 20                                                                                | 50                                                                                |                                                                                   | 20                                                                                | 50                                                                                |                                                                                   | 20                                                                                 | 50                                                                                  |                                                                                     | 20                                                                                  | 50                                                                                  |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                              | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Turn Type                  | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                               | NA                                                                                  |                                                                                     | Perm                                                                                | NA                                                                                  |                                                                                     |
| Protected Phases           |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   |                                                                                    | 2                                                                                   |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |
| Permitted Phases           | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 2                                                                                  |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |                                                                                     |
| Detector Phase             | 4                                                                                 | 4                                                                                 |                                                                                   | 8                                                                                 | 8                                                                                 |                                                                                   | 2                                                                                  | 2                                                                                   |                                                                                     | 6                                                                                   | 6                                                                                   |                                                                                     |
| Switch Phase               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)        | 6.0                                                                               | 6.0                                                                               |                                                                                   | 6.0                                                                               | 6.0                                                                               |                                                                                   | 20.0                                                                               | 20.0                                                                                |                                                                                     | 20.0                                                                                | 20.0                                                                                |                                                                                     |

Lanes, Volumes, Timings  
5: Abbott Road & Elmview Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

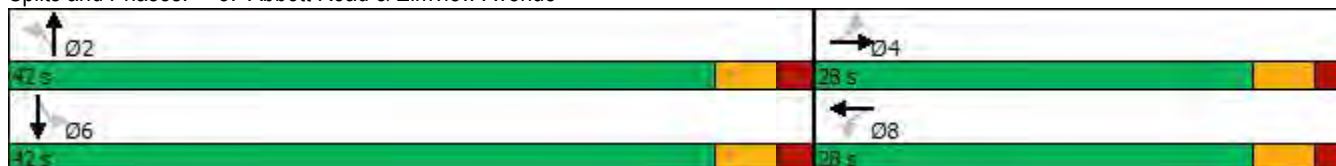
12/04/2025

|                         |  |       |     |       |       |     |       |       |     |       |       |     |
|-------------------------|------------------------------------------------------------------------------------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Lane Group              | EBL                                                                                | EBT   | EBR | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
| Minimum Split (s)       | 27.2                                                                               | 27.2  |     | 27.2  | 27.2  |     | 27.2  | 27.2  |     | 27.2  | 27.2  |     |
| Total Split (s)         | 28.0                                                                               | 28.0  |     | 28.0  | 28.0  |     | 42.0  | 42.0  |     | 42.0  | 42.0  |     |
| Total Split (%)         | 40.0%                                                                              | 40.0% |     | 40.0% | 40.0% |     | 60.0% | 60.0% |     | 60.0% | 60.0% |     |
| Maximum Green (s)       | 22.8                                                                               | 22.8  |     | 22.8  | 22.8  |     | 36.8  | 36.8  |     | 36.8  | 36.8  |     |
| Yellow Time (s)         | 3.2                                                                                | 3.2   |     | 3.2   | 3.2   |     | 3.2   | 3.2   |     | 3.2   | 3.2   |     |
| All-Red Time (s)        | 2.0                                                                                | 2.0   |     | 2.0   | 2.0   |     | 2.0   | 2.0   |     | 2.0   | 2.0   |     |
| Lost Time Adjust (s)    |                                                                                    | 0.0   |     |       | 0.0   |     |       | 0.0   |     |       | 0.0   |     |
| Total Lost Time (s)     |                                                                                    | 5.2   |     |       | 5.2   |     |       | 5.2   |     |       | 5.2   |     |
| Lead/Lag                |                                                                                    |       |     |       |       |     |       |       |     |       |       |     |
| Lead-Lag Optimize?      |                                                                                    |       |     |       |       |     |       |       |     |       |       |     |
| Vehicle Extension (s)   | 3.0                                                                                | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 3.0   |     |
| Recall Mode             | None                                                                               | None  |     | None  | None  |     | Max   | Max   |     | Max   | Max   |     |
| Walk Time (s)           | 7.0                                                                                | 7.0   |     | 7.0   | 7.0   |     | 7.0   | 7.0   |     | 7.0   | 7.0   |     |
| Flash Dont Walk (s)     | 15.0                                                                               | 15.0  |     | 15.0  | 15.0  |     | 15.0  | 15.0  |     | 15.0  | 15.0  |     |
| Pedestrian Calls (#/hr) | 2                                                                                  | 2     |     | 2     | 2     |     | 2     | 2     |     | 2     | 2     |     |
| Act Effect Green (s)    |                                                                                    | 8.9   |     |       | 8.9   |     |       | 55.3  |     |       | 55.3  |     |
| Actuated g/C Ratio      |                                                                                    | 0.14  |     |       | 0.14  |     |       | 0.87  |     |       | 0.87  |     |
| v/c Ratio               |                                                                                    | 0.13  |     |       | 0.04  |     |       | 0.15  |     |       | 0.15  |     |
| Control Delay           |                                                                                    | 21.2  |     |       | 0.2   |     |       | 3.2   |     |       | 3.1   |     |
| Queue Delay             |                                                                                    | 0.0   |     |       | 0.0   |     |       | 0.0   |     |       | 0.0   |     |
| Total Delay             |                                                                                    | 21.2  |     |       | 0.2   |     |       | 3.2   |     |       | 3.1   |     |
| LOS                     |                                                                                    | C     |     |       | A     |     |       | A     |     |       | A     |     |
| Approach Delay          |                                                                                    | 21.2  |     |       | 0.3   |     |       | 3.2   |     |       | 3.1   |     |
| Approach LOS            |                                                                                    | C     |     |       | A     |     |       | A     |     |       | A     |     |
| 90th %ile Green (s)     | 22.0                                                                               | 22.0  |     | 22.0  | 22.0  |     | 46.2  | 46.2  |     | 46.2  | 46.2  |     |
| 90th %ile Term Code     | Ped                                                                                | Ped   |     | Ped   | Ped   |     | Dwell | Dwell |     | Dwell | Dwell |     |
| 70th %ile Green (s)     | 7.2                                                                                | 7.2   |     | 7.2   | 7.2   |     | 51.8  | 51.8  |     | 51.8  | 51.8  |     |
| 70th %ile Term Code     | Gap                                                                                | Gap   |     | Hold  | Hold  |     | Dwell | Dwell |     | Dwell | Dwell |     |
| 50th %ile Green (s)     | 0.0                                                                                | 0.0   |     | 0.0   | 0.0   |     | 51.8  | 51.8  |     | 51.8  | 51.8  |     |
| 50th %ile Term Code     | Skip                                                                               | Skip  |     | Skip  | Skip  |     | Dwell | Dwell |     | Dwell | Dwell |     |
| 30th %ile Green (s)     | 0.0                                                                                | 0.0   |     | 0.0   | 0.0   |     | 51.8  | 51.8  |     | 51.8  | 51.8  |     |
| 30th %ile Term Code     | Skip                                                                               | Skip  |     | Skip  | Skip  |     | Dwell | Dwell |     | Dwell | Dwell |     |
| 10th %ile Green (s)     | 0.0                                                                                | 0.0   |     | 0.0   | 0.0   |     | 51.8  | 51.8  |     | 51.8  | 51.8  |     |
| 10th %ile Term Code     | Skip                                                                               | Skip  |     | Skip  | Skip  |     | Dwell | Dwell |     | Dwell | Dwell |     |
| Stops (vph)             |                                                                                    | 19    |     |       | 0     |     |       | 70    |     |       | 71    |     |
| Fuel Used(gal)          |                                                                                    | 0     |     |       | 0     |     |       | 2     |     |       | 4     |     |
| CO Emissions (g/hr)     |                                                                                    | 20    |     |       | 1     |     |       | 135   |     |       | 304   |     |
| NOx Emissions (g/hr)    |                                                                                    | 4     |     |       | 0     |     |       | 26    |     |       | 59    |     |
| VOC Emissions (g/hr)    |                                                                                    | 5     |     |       | 0     |     |       | 31    |     |       | 71    |     |
| Dilemma Vehicles (#)    |                                                                                    | 0     |     |       | 0     |     |       | 0     |     |       | 0     |     |
| Queue Length 50th (ft)  |                                                                                    | 6     |     |       | 0     |     |       | 0     |     |       | 0     |     |
| Queue Length 95th (ft)  |                                                                                    | 26    |     |       | 0     |     |       | 62    |     |       | 62    |     |
| Internal Link Dist (ft) |                                                                                    | 220   |     |       | 220   |     |       | 377   |     |       | 1186  |     |
| Turn Bay Length (ft)    |                                                                                    |       |     |       |       |     |       |       |     |       |       |     |
| Base Capacity (vph)     |                                                                                    | 514   |     |       | 527   |     |       | 2553  |     |       | 2618  |     |
| Starvation Cap Reductn  |                                                                                    | 0     |     |       | 0     |     |       | 0     |     |       | 0     |     |
| Spillback Cap Reductn   |                                                                                    | 0     |     |       | 0     |     |       | 0     |     |       | 0     |     |
| Storage Cap Reductn     |                                                                                    | 0     |     |       | 0     |     |       | 0     |     |       | 0     |     |
| Reduced v/c Ratio       |                                                                                    | 0.05  |     |       | 0.02  |     |       | 0.15  |     |       | 0.15  |     |

#### Intersection Summary

Area Type: Other  
 Cycle Length: 70  
 Actuated Cycle Length: 63.8  
 Natural Cycle: 55  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.15  
 Intersection Signal Delay: 3.7 Intersection LOS: A  
 Intersection Capacity Utilization 34.0% ICU Level of Service A  
 Analysis Period (min) 15  
 90th %ile Actuated Cycle: 78.6  
 70th %ile Actuated Cycle: 69.4  
 50th %ile Actuated Cycle: 57  
 30th %ile Actuated Cycle: 57  
 10th %ile Actuated Cycle: 57

Splits and Phases: 5: Abbott Road & Elmview Avenue



| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↔    |      |      | ↔    |      |      | ↔    |      |      | ↔    |      |
| Traffic Vol, veh/h       | 0    | 0    | 1    | 16   | 0    | 7    | 3    | 396  | 5    | 3    | 363  | 2    |
| Future Vol, veh/h        | 0    | 0    | 1    | 16   | 0    | 7    | 3    | 396  | 5    | 3    | 363  | 2    |
| Conflicting Peds, #/hr   | 5    | 0    | 5    | 5    | 0    | 5    | 5    | 0    | 5    | 5    | 0    | 5    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 98   | 98   | 98   | 98   | 98   | 98   | 98   | 98   | 98   | 98   | 98   | 98   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 7    | 2    | 2    | 5    | 2    |
| Mvmt Flow                | 0    | 0    | 1    | 16   | 0    | 7    | 3    | 404  | 5    | 3    | 370  | 2    |

| Major/Minor          | Minor2 |      | Minor1 |      | Major1 |      | Major2 |   |   |      |   |   |
|----------------------|--------|------|--------|------|--------|------|--------|---|---|------|---|---|
| Conflicting Flow All | 595    | 802  | 196    | 614  | 801    | 215  | 377    | 0 | 0 | 414  | 0 | 0 |
| Stage 1              | 382    | 382  | -      | 418  | 418    | -    | -      | - | - | -    | - | - |
| Stage 2              | 213    | 420  | -      | 196  | 383    | -    | -      | - | - | -    | - | - |
| Critical Hdwy        | 7.54   | 6.54 | 6.94   | 7.54 | 6.54   | 6.94 | 4.14   | - | - | 4.14 | - | - |
| Critical Hdwy Stg 1  | 6.54   | 5.54 | -      | 6.54 | 5.54   | -    | -      | - | - | -    | - | - |
| Critical Hdwy Stg 2  | 6.54   | 5.54 | -      | 6.54 | 5.54   | -    | -      | - | - | -    | - | - |
| Follow-up Hdwy       | 3.52   | 4.02 | 3.32   | 3.52 | 4.02   | 3.32 | 2.22   | - | - | 2.22 | - | - |
| Pot Cap-1 Maneuver   | 388    | 316  | 812    | 376  | 316    | 790  | 1178   | - | - | 1141 | - | - |
| Stage 1              | 612    | 611  | -      | 583  | 589    | -    | -      | - | - | -    | - | - |
| Stage 2              | 769    | 588  | -      | 787  | 610    | -    | -      | - | - | -    | - | - |
| Platoon blocked, %   |        |      |        |      |        |      |        | - | - | -    | - | - |
| Mov Cap-1 Maneuver   | 379    | 311  | 805    | 371  | 311    | 783  | 1172   | - | - | 1136 | - | - |
| Mov Cap-2 Maneuver   | 379    | 311  | -      | 371  | 311    | -    | -      | - | - | -    | - | - |
| Stage 1              | 607    | 606  | -      | 578  | 584    | -    | -      | - | - | -    | - | - |
| Stage 2              | 757    | 583  | -      | 781  | 605    | -    | -      | - | - | -    | - | - |

| Approach             | EB  |  | WB   |  | NB  |  | SB  |  |
|----------------------|-----|--|------|--|-----|--|-----|--|
| HCM Control Delay, s | 9.5 |  | 13.6 |  | 0.1 |  | 0.1 |  |
| HCM LOS              | A   |  | B    |  |     |  |     |  |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1WBLn1 | SBL   | SBT   | SBR |
|-----------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h)      | 1172  | -   | -   | 805        | 442   | 1136  | -   |
| HCM Lane V/C Ratio    | 0.003 | -   | -   | 0.001      | 0.053 | 0.003 | -   |
| HCM Control Delay (s) | 8.1   | 0   | -   | 9.5        | 13.6  | 8.2   | 0   |
| HCM Lane LOS          | A     | A   | -   | A          | B     | A     | A   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0          | 0.2   | 0     | -   |

## Summary of All Intervals

| Run Number              | 1    | 2    | 3    | 4    | 5    | Avg  |
|-------------------------|------|------|------|------|------|------|
| Start Time              | 7:50 | 7:50 | 7:50 | 7:50 | 7:50 | 7:50 |
| End Time                | 9:00 | 9:00 | 9:00 | 9:00 | 9:00 | 9:00 |
| Total Time (min)        | 70   | 70   | 70   | 70   | 70   | 70   |
| Time Recorded (min)     | 60   | 60   | 60   | 60   | 60   | 60   |
| # of Intervals          | 2    | 2    | 2    | 2    | 2    | 2    |
| # of Recorded Intervals | 1    | 1    | 1    | 1    | 1    | 1    |
| Vehs Entered            | 2471 | 2520 | 2550 | 2602 | 2511 | 2527 |
| Vehs Exited             | 2474 | 2502 | 2528 | 2586 | 2499 | 2519 |
| Starting Vehs           | 66   | 53   | 40   | 44   | 54   | 48   |
| Ending Vehs             | 63   | 71   | 62   | 60   | 66   | 66   |
| Denied Entry Before     | 1    | 1    | 0    | 0    | 0    | 0    |
| Denied Entry After      | 1    | 0    | 0    | 0    | 1    | 0    |
| Travel Distance (mi)    | 1071 | 1122 | 1106 | 1145 | 1096 | 1108 |
| Travel Time (hr)        | 54.5 | 57.0 | 55.5 | 58.8 | 56.0 | 56.4 |
| Total Delay (hr)        | 16.9 | 17.7 | 16.8 | 18.8 | 17.5 | 17.5 |
| Total Stops             | 2114 | 2146 | 2102 | 2284 | 2169 | 2162 |
| Fuel Used (gal)         | 40.7 | 42.3 | 41.7 | 43.9 | 41.6 | 42.1 |

## Interval #0 Information Seeding

|                                     |      |
|-------------------------------------|------|
| Start Time                          | 7:50 |
| End Time                            | 8:00 |
| Total Time (min)                    | 10   |
| Volumes adjusted by Growth Factors. |      |
| No data recorded this interval.     |      |

## Interval #1 Information Recording

|                                     |      |
|-------------------------------------|------|
| Start Time                          | 8:00 |
| End Time                            | 9:00 |
| Total Time (min)                    | 60   |
| Volumes adjusted by Growth Factors. |      |

| Run Number           | 1    | 2    | 3    | 4    | 5    | Avg  |
|----------------------|------|------|------|------|------|------|
| Vehs Entered         | 2471 | 2520 | 2550 | 2602 | 2511 | 2527 |
| Vehs Exited          | 2474 | 2502 | 2528 | 2586 | 2499 | 2519 |
| Starting Vehs        | 66   | 53   | 40   | 44   | 54   | 48   |
| Ending Vehs          | 63   | 71   | 62   | 60   | 66   | 66   |
| Denied Entry Before  | 1    | 1    | 0    | 0    | 0    | 0    |
| Denied Entry After   | 1    | 0    | 0    | 0    | 1    | 0    |
| Travel Distance (mi) | 1071 | 1122 | 1106 | 1145 | 1096 | 1108 |
| Travel Time (hr)     | 54.5 | 57.0 | 55.5 | 58.8 | 56.0 | 56.4 |
| Total Delay (hr)     | 16.9 | 17.7 | 16.8 | 18.8 | 17.5 | 17.5 |
| Total Stops          | 2114 | 2146 | 2102 | 2284 | 2169 | 2162 |
| Fuel Used (gal)      | 40.7 | 42.3 | 41.7 | 43.9 | 41.6 | 42.1 |

1: Abbott Road & Dorrance Avenue Performance by movement

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Denied Del/Veh (s)  | 0.2  | 0.1  | 0.2  | 0.2  | 0.1  | 0.1  | 0.0  | 0.0  | 0.0  | 0.2  | 0.2  | 0.1  |
| Total Delay (hr)    | 0.1  | 0.5  | 0.2  | 0.4  | 0.4  | 0.1  | 0.3  | 0.3  | 0.0  | 0.1  | 0.3  | 0.0  |
| Total Del/Veh (s)   | 28.3 | 25.2 | 6.2  | 31.4 | 26.2 | 6.1  | 9.3  | 4.6  | 3.6  | 9.0  | 4.9  | 2.3  |
| Stop Delay (hr)     | 0.1  | 0.4  | 0.1  | 0.3  | 0.4  | 0.0  | 0.1  | 0.2  | 0.0  | 0.0  | 0.2  | 0.0  |
| Stop Del/Veh (s)    | 24.8 | 21.7 | 3.5  | 27.3 | 22.6 | 3.5  | 5.2  | 2.8  | 1.7  | 5.3  | 3.2  | 1.3  |
| Total Stops         | 13   | 56   | 67   | 35   | 42   | 24   | 46   | 50   | 11   | 11   | 56   | 5    |
| Stop/Veh            | 0.87 | 0.77 | 0.72 | 0.83 | 0.75 | 0.77 | 0.46 | 0.23 | 0.24 | 0.38 | 0.27 | 0.28 |
| Travel Dist (mi)    | 0.7  | 3.6  | 4.6  | 2.1  | 2.8  | 1.6  | 12.9 | 26.5 | 5.9  | 2.2  | 15.9 | 1.4  |
| Travel Time (hr)    | 0.1  | 0.6  | 0.3  | 0.4  | 0.5  | 0.1  | 0.7  | 1.2  | 0.2  | 0.1  | 0.8  | 0.1  |
| Avg Speed (mph)     | 5    | 6    | 15   | 5    | 6    | 15   | 19   | 23   | 24   | 15   | 19   | 23   |
| Fuel Used (gal)     | 0.0  | 0.2  | 0.1  | 0.1  | 0.2  | 0.0  | 0.4  | 0.9  | 0.2  | 0.1  | 0.6  | 0.0  |
| Fuel Eff. (mpg)     | 15.8 | 15.3 | 32.2 | 14.2 | 14.6 | 38.4 | 30.8 | 29.4 | 29.6 | 26.9 | 27.8 | 34.2 |
| HC Emissions (g)    | 0    | 2    | 2    | 1    | 1    | 0    | 3    | 23   | 3    | 1    | 11   | 0    |
| CO Emissions (g)    | 7    | 63   | 51   | 29   | 41   | 11   | 94   | 447  | 65   | 25   | 260  | 6    |
| NOx Emissions (g)   | 1    | 6    | 5    | 3    | 4    | 1    | 11   | 64   | 8    | 2    | 32   | 1    |
| Vehicles Entered    | 15   | 73   | 93   | 42   | 56   | 31   | 99   | 217  | 45   | 28   | 206  | 18   |
| Vehicles Exited     | 15   | 73   | 93   | 41   | 56   | 31   | 100  | 217  | 46   | 29   | 206  | 18   |
| Hourly Exit Rate    | 15   | 73   | 93   | 41   | 56   | 31   | 100  | 217  | 46   | 29   | 206  | 18   |
| Input Volume        | 14   | 75   | 89   | 44   | 61   | 31   | 108  | 221  | 44   | 27   | 214  | 16   |
| % of Volume         | 107  | 97   | 104  | 93   | 92   | 100  | 93   | 98   | 105  | 107  | 96   | 112  |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Density (ft/veh)    |      |      |      |      |      |      |      |      |      |      |      |      |
| Occupancy (veh)     | 0    | 1    | 0    | 0    | 1    | 0    | 1    | 1    | 0    | 0    | 1    | 0    |

1: Abbott Road & Dorrance Avenue Performance by movement

| Movement            | All  |
|---------------------|------|
| Denied Delay (hr)   | 0.0  |
| Denied Del/Veh (s)  | 0.1  |
| Total Delay (hr)    | 2.6  |
| Total Del/Veh (s)   | 10.0 |
| Stop Delay (hr)     | 1.9  |
| Stop Del/Veh (s)    | 7.4  |
| Total Stops         | 416  |
| Stop/Veh            | 0.45 |
| Travel Dist (mi)    | 80.1 |
| Travel Time (hr)    | 5.3  |
| Avg Speed (mph)     | 15   |
| Fuel Used (gal)     | 3.0  |
| Fuel Eff. (mpg)     | 26.6 |
| HC Emissions (g)    | 46   |
| CO Emissions (g)    | 1097 |
| NOx Emissions (g)   | 139  |
| Vehicles Entered    | 923  |
| Vehicles Exited     | 925  |
| Hourly Exit Rate    | 925  |
| Input Volume        | 944  |
| % of Volume         | 98   |
| Denied Entry Before | 0    |
| Denied Entry After  | 0    |
| Density (ft/veh)    | 600  |
| Occupancy (veh)     | 5    |

## 2: Abbott Road & Plaza Driveway Performance by movement

| Movement            | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  | All   |
|---------------------|------|------|------|------|------|------|-------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   |
| Denied Del/Veh (s)  | 0.1  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   |
| Total Delay (hr)    | 0.3  | 0.0  | 0.3  | 0.1  | 0.0  | 0.4  | 1.1   |
| Total Del/Veh (s)   | 23.7 | 6.5  | 3.3  | 3.0  | 9.8  | 4.1  | 4.8   |
| Stop Delay (hr)     | 0.3  | 0.0  | 0.2  | 0.0  | 0.0  | 0.2  | 0.7   |
| Stop Del/Veh (s)    | 20.0 | 3.8  | 1.7  | 1.3  | 4.8  | 2.0  | 2.9   |
| Total Stops         | 46   | 5    | 55   | 13   | 1    | 59   | 179   |
| Stop/Veh            | 0.90 | 0.83 | 0.15 | 0.16 | 0.50 | 0.17 | 0.21  |
| Travel Dist (mi)    | 2.4  | 0.3  | 48.0 | 11.0 | 0.3  | 43.2 | 105.1 |
| Travel Time (hr)    | 0.4  | 0.0  | 2.2  | 0.5  | 0.0  | 1.8  | 5.0   |
| Avg Speed (mph)     | 6    | 14   | 22   | 22   | 19   | 23   | 21    |
| Fuel Used (gal)     | 0.1  | 0.0  | 2.3  | 0.5  | 0.0  | 1.7  | 4.7   |
| Fuel Eff. (mpg)     | 18.7 | 42.0 | 21.0 | 21.2 | 25.1 | 25.1 | 22.5  |
| HC Emissions (g)    | 0    | 0    | 45   | 6    | 0    | 31   | 82    |
| CO Emissions (g)    | 20   | 1    | 1296 | 226  | 3    | 817  | 2362  |
| NOx Emissions (g)   | 2    | 0    | 138  | 20   | 0    | 95   | 255   |
| Vehicles Entered    | 51   | 6    | 358  | 80   | 2    | 340  | 837   |
| Vehicles Exited     | 51   | 6    | 356  | 80   | 2    | 340  | 835   |
| Hourly Exit Rate    | 51   | 6    | 356  | 80   | 2    | 340  | 835   |
| Input Volume        | 51   | 5    | 368  | 82   | 2    | 348  | 856   |
| % of Volume         | 100  | 120  | 97   | 98   | 100  | 98   | 98    |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Density (ft/veh)    |      |      |      |      |      |      | 678   |
| Occupancy (veh)     | 0    | 0    | 2    | 0    | 0    | 2    | 5     |



### 3: Abbott Road & Ridge Road Performance by movement

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Denied Delay (hr)   | 0.0  | 0.1  | 0.0  | 0.1  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Denied Del/Veh (s)  | 3.2  | 0.7  | 3.3  | 2.9  | 0.8  | 0.4  | 0.3  | 0.0  | 0.2  | 0.1  | 0.0  | 0.0  |
| Total Delay (hr)    | 0.2  | 3.2  | 0.1  | 0.8  | 2.1  | 0.2  | 0.4  | 1.3  | 0.4  | 1.2  | 1.3  | 0.1  |
| Total Del/Veh (s)   | 19.4 | 24.4 | 7.3  | 17.9 | 18.0 | 3.2  | 24.0 | 30.1 | 6.2  | 24.5 | 26.2 | 15.4 |
| Stop Delay (hr)     | 0.2  | 2.5  | 0.1  | 0.7  | 1.5  | 0.2  | 0.3  | 1.2  | 0.3  | 1.1  | 1.1  | 0.1  |
| Stop Del/Veh (s)    | 15.3 | 19.1 | 6.0  | 14.7 | 13.1 | 2.3  | 21.9 | 27.0 | 4.6  | 21.0 | 22.7 | 13.8 |
| Total Stops         | 39   | 311  | 32   | 131  | 217  | 87   | 46   | 110  | 146  | 138  | 118  | 22   |
| Stop/Veh            | 0.98 | 0.66 | 0.60 | 0.77 | 0.51 | 0.35 | 0.82 | 0.71 | 0.67 | 0.76 | 0.68 | 0.76 |
| Travel Dist (mi)    | 5.8  | 67.2 | 7.7  | 23.1 | 58.1 | 34.3 | 11.1 | 29.0 | 43.4 | 24.5 | 23.1 | 3.9  |
| Travel Time (hr)    | 0.5  | 5.5  | 0.5  | 1.8  | 4.1  | 1.6  | 0.8  | 2.3  | 2.0  | 2.1  | 2.0  | 0.3  |
| Avg Speed (mph)     | 14   | 12   | 19   | 14   | 14   | 22   | 14   | 13   | 22   | 11   | 11   | 14   |
| Fuel Used (gal)     | 0.2  | 2.7  | 0.3  | 0.9  | 2.2  | 1.0  | 0.4  | 1.0  | 1.2  | 1.0  | 1.0  | 0.1  |
| Fuel Eff. (mpg)     | 25.7 | 24.9 | 29.2 | 25.4 | 25.9 | 34.8 | 29.9 | 27.6 | 35.9 | 23.4 | 23.1 | 27.5 |
| HC Emissions (g)    | 3    | 63   | 4    | 7    | 40   | 11   | 1    | 21   | 12   | 8    | 18   | 2    |
| CO Emissions (g)    | 88   | 1286 | 131  | 259  | 875  | 319  | 42   | 372  | 249  | 251  | 402  | 48   |
| NOx Emissions (g)   | 9    | 157  | 12   | 22   | 109  | 31   | 5    | 58   | 34   | 26   | 49   | 5    |
| Vehicles Entered    | 40   | 461  | 53   | 168  | 419  | 246  | 56   | 153  | 219  | 181  | 173  | 29   |
| Vehicles Exited     | 40   | 465  | 53   | 168  | 419  | 246  | 56   | 152  | 217  | 178  | 171  | 29   |
| Hourly Exit Rate    | 40   | 465  | 53   | 168  | 419  | 246  | 56   | 152  | 217  | 178  | 171  | 29   |
| Input Volume        | 38   | 449  | 49   | 168  | 408  | 260  | 54   | 151  | 224  | 188  | 179  | 30   |
| % of Volume         | 105  | 104  | 108  | 100  | 103  | 95   | 104  | 101  | 97   | 95   | 96   | 97   |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Density (ft/veh)    |      |      |      |      |      |      |      |      |      |      |      |      |
| Occupancy (veh)     | 0    | 5    | 0    | 2    | 4    | 2    | 1    | 2    | 2    | 2    | 2    | 0    |

### 3: Abbott Road & Ridge Road Performance by movement

| Movement            | All   |
|---------------------|-------|
| Denied Delay (hr)   | 0.5   |
| Denied Del/Veh (s)  | 0.8   |
| Total Delay (hr)    | 11.3  |
| Total Del/Veh (s)   | 18.4  |
| Stop Delay (hr)     | 9.2   |
| Stop Del/Veh (s)    | 14.9  |
| Total Stops         | 1397  |
| Stop/Veh            | 0.63  |
| Travel Dist (mi)    | 331.3 |
| Travel Time (hr)    | 23.6  |
| Avg Speed (mph)     | 14    |
| Fuel Used (gal)     | 12.1  |
| Fuel Eff. (mpg)     | 27.3  |
| HC Emissions (g)    | 191   |
| CO Emissions (g)    | 4323  |
| NOx Emissions (g)   | 518   |
| Vehicles Entered    | 2198  |
| Vehicles Exited     | 2194  |
| Hourly Exit Rate    | 2194  |
| Input Volume        | 2198  |
| % of Volume         | 100   |
| Denied Entry Before | 0     |
| Denied Entry After  | 0     |
| Density (ft/veh)    | 464   |
| Occupancy (veh)     | 23    |

4: Abbott Road & Fernald Avenue Performance by movement

| Movement            | EBR  | WBL  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  | All   |
|---------------------|------|------|------|------|------|------|------|------|------|-------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   |
| Denied Del/Veh (s)  | 0.1  | 0.1  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   |
| Total Delay (hr)    | 0.0  | 0.0  | 0.0  | 0.0  | 0.1  | 0.0  | 0.0  | 0.2  | 0.0  | 0.4   |
| Total Del/Veh (s)   | 3.9  | 9.2  | 6.4  | 4.9  | 1.1  | 0.9  | 4.9  | 1.5  | 1.9  | 1.5   |
| Stop Delay (hr)     | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.1   |
| Stop Del/Veh (s)    | 2.7  | 6.1  | 3.4  | 0.7  | 0.1  | 0.1  | 0.5  | 0.3  | 0.3  | 0.3   |
| Total Stops         | 1    | 15   | 10   | 1    | 2    | 0    | 0    | 2    | 0    | 31    |
| Stop/Veh            | 1.00 | 1.00 | 1.00 | 0.33 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.04  |
| Travel Dist (mi)    | 0.0  | 0.8  | 0.5  | 0.6  | 91.9 | 1.2  | 0.5  | 77.9 | 0.4  | 173.9 |
| Travel Time (hr)    | 0.0  | 0.1  | 0.0  | 0.0  | 3.2  | 0.0  | 0.0  | 3.0  | 0.0  | 6.4   |
| Avg Speed (mph)     | 6    | 12   | 14   | 25   | 29   | 29   | 24   | 26   | 26   | 27    |
| Fuel Used (gal)     | 0.0  | 0.0  | 0.0  | 0.0  | 2.8  | 0.0  | 0.0  | 3.1  | 0.0  | 6.0   |
| Fuel Eff. (mpg)     | 21.5 | 40.8 | 41.4 | 30.4 | 32.6 | 35.0 | 22.6 | 25.2 | 27.6 | 28.8  |
| HC Emissions (g)    | 0    | 0    | 0    | 0    | 67   | 0    | 0    | 50   | 0    | 118   |
| CO Emissions (g)    | 0    | 2    | 1    | 4    | 1186 | 5    | 7    | 1318 | 4    | 2527  |
| NOx Emissions (g)   | 0    | 0    | 0    | 0    | 189  | 1    | 1    | 158  | 0    | 349   |
| Vehicles Entered    | 1    | 15   | 10   | 3    | 400  | 5    | 3    | 391  | 2    | 830   |
| Vehicles Exited     | 1    | 15   | 10   | 3    | 399  | 5    | 3    | 391  | 2    | 829   |
| Hourly Exit Rate    | 1    | 15   | 10   | 3    | 399  | 5    | 3    | 391  | 2    | 829   |
| Input Volume        | 1    | 16   | 7    | 3    | 401  | 5    | 3    | 392  | 2    | 830   |
| % of Volume         | 100  | 94   | 143  | 100  | 100  | 100  | 100  | 100  | 100  | 100   |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Density (ft/veh)    |      |      |      |      |      |      |      |      |      | 787   |
| Occupancy (veh)     | 0    | 0    | 0    | 0    | 3    | 0    | 0    | 3    | 0    | 6     |

5: Abbott Road & Elmview Avenue Performance by movement

| Movement            | EBL  | EBT  | EBR  | WBL  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  | All   |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   |
| Denied Del/Veh (s)  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.2  | 0.2  | 0.1  | 0.0  | 0.0  | 0.0  | 0.1   |
| Total Delay (hr)    | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.3  | 0.0  | 0.0  | 0.3  | 0.0  | 0.7   |
| Total Del/Veh (s)   | 12.5 | 24.8 | 8.4  | 12.5 | 5.0  | 7.5  | 2.5  | 3.0  | 5.4  | 2.7  | 1.3  | 3.0   |
| Stop Delay (hr)     | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.2  | 0.0  | 0.0  | 0.1  | 0.0  | 0.4   |
| Stop Del/Veh (s)    | 9.3  | 21.3 | 5.1  | 9.5  | 3.0  | 4.3  | 1.5  | 1.5  | 2.2  | 1.4  | 0.5  | 1.8   |
| Total Stops         | 18   | 1    | 7    | 3    | 2    | 1    | 53   | 1    | 1    | 51   | 1    | 139   |
| Stop/Veh            | 0.86 | 1.00 | 1.00 | 0.75 | 0.67 | 0.33 | 0.15 | 0.33 | 0.33 | 0.14 | 0.10 | 0.18  |
| Travel Dist (mi)    | 1.0  | 0.1  | 0.4  | 0.2  | 0.1  | 0.2  | 28.9 | 0.3  | 0.6  | 88.0 | 2.4  | 122.1 |
| Travel Time (hr)    | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.2  | 0.0  | 0.0  | 3.3  | 0.1  | 4.8   |
| Avg Speed (mph)     | 10   | 7    | 13   | 9    | 16   | 17   | 24   | 23   | 24   | 27   | 29   | 26    |
| Fuel Used (gal)     | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.9  | 0.0  | 0.0  | 2.5  | 0.1  | 3.6   |
| Fuel Eff. (mpg)     | 32.5 | 25.6 | 37.9 | 32.5 | 37.7 | 38.9 | 31.0 | 31.1 | 37.2 | 34.8 | 34.8 | 33.8  |
| HC Emissions (g)    | 0    | 0    | 0    | 0    | 0    | 0    | 25   | 0    | 0    | 49   | 0    | 75    |
| CO Emissions (g)    | 4    | 0    | 1    | 1    | 1    | 1    | 496  | 1    | 2    | 792  | 6    | 1306  |
| NOx Emissions (g)   | 0    | 0    | 0    | 0    | 0    | 0    | 68   | 0    | 0    | 139  | 1    | 209   |
| Vehicles Entered    | 21   | 1    | 7    | 4    | 3    | 3    | 360  | 3    | 3    | 371  | 10   | 786   |
| Vehicles Exited     | 21   | 1    | 7    | 4    | 3    | 3    | 359  | 3    | 3    | 372  | 10   | 786   |
| Hourly Exit Rate    | 21   | 1    | 7    | 4    | 3    | 3    | 359  | 3    | 3    | 372  | 10   | 786   |
| Input Volume        | 19   | 1    | 7    | 5    | 3    | 3    | 363  | 2    | 3    | 371  | 10   | 787   |
| % of Volume         | 111  | 100  | 100  | 80   | 100  | 100  | 99   | 150  | 100  | 100  | 100  | 100   |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Density (ft/veh)    |      |      |      |      |      |      |      |      |      |      |      | 813   |
| Occupancy (veh)     | 0    | 0    | 0    | 0    | 0    | 0    | 1    | 0    | 0    | 3    | 0    | 5     |

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Total Network Performance

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|                     |        |
|---------------------|--------|
| Denied Delay (hr)   | 0.5    |
| Denied Del/Veh (s)  | 0.7    |
| Total Delay (hr)    | 17.0   |
| Total Del/Veh (s)   | 23.7   |
| Stop Delay (hr)     | 12.3   |
| Stop Del/Veh (s)    | 17.2   |
| Total Stops         | 2162   |
| Stop/Veh            | 0.84   |
| Travel Dist (mi)    | 1108.1 |
| Travel Time (hr)    | 56.4   |
| Avg Speed (mph)     | 20     |
| Fuel Used (gal)     | 42.1   |
| Fuel Eff. (mpg)     | 26.3   |
| HC Emissions (g)    | 762    |
| CO Emissions (g)    | 18030  |
| NOx Emissions (g)   | 2243   |
| Vehicles Entered    | 2527   |
| Vehicles Exited     | 2519   |
| Hourly Exit Rate    | 2519   |
| Input Volume        | 8033   |
| % of Volume         | 31     |
| Denied Entry Before | 0      |
| Denied Entry After  | 0      |
| Density (ft/veh)    | 468    |
| Occupancy (veh)     | 56     |

Intersection: 1: Abbott Road & Dorrance Avenue

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | LT  | TR  | LT  | TR  | LT  | TR  | LT  | TR  |
| Maximum Queue (ft)    | 103 | 67  | 107 | 43  | 93  | 98  | 115 | 51  |
| Average Queue (ft)    | 44  | 26  | 48  | 14  | 37  | 36  | 42  | 10  |
| 95th Queue (ft)       | 84  | 53  | 91  | 36  | 75  | 83  | 89  | 36  |
| Link Distance (ft)    | 254 | 254 | 253 | 253 | 609 | 609 | 402 | 402 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |

Intersection: 2: Abbott Road & Plaza Driveway

| Movement              | WB  | WB  | NB  | NB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | R   | T   | TR  | LT  | T   |
| Maximum Queue (ft)    | 73  | 21  | 97  | 108 | 116 | 86  |
| Average Queue (ft)    | 29  | 3   | 24  | 34  | 35  | 17  |
| 95th Queue (ft)       | 61  | 15  | 70  | 84  | 89  | 58  |
| Link Distance (ft)    | 245 | 245 | 658 | 658 | 609 | 609 |
| Upstream Blk Time (%) |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |

Intersection: 3: Abbott Road & Ridge Road

| Movement              | EB  | EB  | EB  | WB  | WB  | WB  | NB  | NB   | NB   | NB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|------|------|-----|-----|-----|
| Directions Served     | L   | T   | TR  | L   | T   | R   | L   | T    | T    | R   | L   | T   |
| Maximum Queue (ft)    | 139 | 339 | 284 | 212 | 349 | 89  | 73  | 106  | 112  | 124 | 184 | 112 |
| Average Queue (ft)    | 36  | 165 | 108 | 63  | 147 | 30  | 26  | 43   | 40   | 57  | 89  | 48  |
| 95th Queue (ft)       | 109 | 272 | 237 | 131 | 276 | 66  | 57  | 79   | 83   | 98  | 156 | 89  |
| Link Distance (ft)    |     | 757 |     |     | 718 | 718 |     | 1007 | 1007 |     |     | 658 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |      |      |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |      |      |     |     |     |
| Storage Bay Dist (ft) | 90  |     | 250 | 200 |     |     | 170 |      |      | 170 | 250 |     |
| Storage Blk Time (%)  | 0   | 29  | 0   | 0   | 3   |     |     |      |      | 0   |     |     |
| Queuing Penalty (veh) | 0   | 91  | 0   | 0   | 5   |     |     |      |      | 0   |     |     |

Intersection: 3: Abbott Road & Ridge Road

| Movement              | SB  |
|-----------------------|-----|
| Directions Served     | TR  |
| Maximum Queue (ft)    | 121 |
| Average Queue (ft)    | 58  |
| 95th Queue (ft)       | 108 |
| Link Distance (ft)    | 658 |
| Upstream Blk Time (%) |     |
| Queuing Penalty (veh) |     |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

Intersection: 4: Abbott Road & Fernald Avenue

| Movement              | EB  | WB  | NB   | NB   | SB   | SB   |
|-----------------------|-----|-----|------|------|------|------|
| Directions Served     | LTR | LTR | LT   | TR   | LT   | TR   |
| Maximum Queue (ft)    | 19  | 37  | 33   | 31   | 26   | 22   |
| Average Queue (ft)    | 1   | 15  | 2    | 2    | 1    | 1    |
| 95th Queue (ft)       | 7   | 36  | 14   | 14   | 10   | 11   |
| Link Distance (ft)    | 50  | 251 | 1192 | 1192 | 1007 | 1007 |
| Upstream Blk Time (%) |     |     |      |      |      |      |
| Queuing Penalty (veh) |     |     |      |      |      |      |
| Storage Bay Dist (ft) |     |     |      |      |      |      |
| Storage Blk Time (%)  |     |     |      |      |      |      |
| Queuing Penalty (veh) |     |     |      |      |      |      |

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Intersection: 5: Abbott Road & Elmview Avenue

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| Movement              | EB  | WB  | NB  | NB  | SB   | SB   |
|-----------------------|-----|-----|-----|-----|------|------|
| Directions Served     | LTR | LTR | LT  | TR  | LT   | TR   |
| Maximum Queue (ft)    | 46  | 24  | 116 | 96  | 88   | 85   |
| Average Queue (ft)    | 18  | 4   | 25  | 24  | 22   | 25   |
| 95th Queue (ft)       | 43  | 18  | 76  | 73  | 66   | 69   |
| Link Distance (ft)    | 258 | 256 | 419 | 419 | 1192 | 1192 |
| Upstream Blk Time (%) |     |     |     |     |      |      |
| Queuing Penalty (veh) |     |     |     |     |      |      |
| Storage Bay Dist (ft) |     |     |     |     |      |      |
| Storage Blk Time (%)  |     |     |     |     |      |      |
| Queuing Penalty (veh) |     |     |     |     |      |      |

Network Summary

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Network wide Queuing Penalty: 96

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Intersection: 1: Abbott Road & Dorrance Avenue

| Phase                | 1        | 2    | 4    | 6    | 8    |
|----------------------|----------|------|------|------|------|
| Movement(s) Served   | SBL NBTL | EBTL | SBTL | WBTL |      |
| Maximum Green (s)    | 14.8     | 29.8 | 24.8 | 49.8 | 24.8 |
| Minimum Green (s)    | 5.0      | 5.0  | 5.0  | 5.0  | 5.0  |
| Recall               | None     | Max  | None | Max  | None |
| Avg. Green (s)       | 0.0      | 51.5 | 13.8 | 51.5 | 13.8 |
| g/C Ratio            | -0.01    | NA   | NA   | NA   | NA   |
| Cycles Skipped (%)   | 100      | 0    | 0    | 0    | 0    |
| Cycles @ Minimum (%) | 0        | 0    | 0    | 0    | 0    |
| Cycles Maxed Out (%) | 0        | 100  | 0    | 100  | 0    |
| Cycles with Peds (%) | 0        | 9    | 9    | 9    | 11   |

Controller Summary

Average Cycle Length (s): NA

Number of Complete Cycles : 0

Intersection: 2: Abbott Road & Plaza Driveway

| Phase                | 2    | 6    | 8    |
|----------------------|------|------|------|
| Movement(s) Served   | NBT  | SBTL | WBL  |
| Maximum Green (s)    | 44.8 | 44.8 | 24.8 |
| Minimum Green (s)    | 6.0  | 6.0  | 6.0  |
| Recall               | Max  | Max  | None |
| Avg. Green (s)       | 69.4 | 69.4 | 10.4 |
| g/C Ratio            | NA   | NA   | NA   |
| Cycles Skipped (%)   | 0    | 0    | 0    |
| Cycles @ Minimum (%) | 0    | 0    | 53   |
| Cycles Maxed Out (%) | 100  | 100  | 0    |
| Cycles with Peds (%) | 15   | 0    | 23   |

Controller Summary

Average Cycle Length (s): NA

Number of Complete Cycles : 0

Intersection: 3: Abbott Road & Ridge Road

| Phase                | 1     | 2     | 3     | 4    | 5     | 6     | 7     | 8    |
|----------------------|-------|-------|-------|------|-------|-------|-------|------|
| Movement(s) Served   | SBL   | NBTL  | WBL   | EBTL | NBL   | SBTL  | EBL   | WBTL |
| Maximum Green (s)    | 14.8  | 37.8  | 14.8  | 31.8 | 14.8  | 37.8  | 14.8  | 31.8 |
| Minimum Green (s)    | 7.0   | 7.0   | 7.0   | 7.0  | 7.0   | 7.0   | 7.0   | 7.0  |
| Recall               | None  | None  | None  | Max  | None  | None  | None  | Max  |
| Avg. Green (s)       | 13.3  | 15.5  | 11.6  | 32.8 | 10.0  | 24.1  | 8.0   | 43.5 |
| g/C Ratio            | -0.01 | -0.01 | -0.01 | NA   | -0.01 | -0.01 | -0.01 | NA   |
| Cycles Skipped (%)   | 3     | 8     | 8     | 0    | 41    | 3     | 66    | 0    |
| Cycles @ Minimum (%) | 5     | 10    | 13    | 0    | 26    | 0     | 24    | 0    |
| Cycles Maxed Out (%) | 49    | 0     | 31    | 100  | 3     | 10    | 0     | 100  |
| Cycles with Peds (%) | 0     | 13    | 0     | 8    | 0     | 13    | 0     | 10   |

Controller Summary

Average Cycle Length (s): NA

Number of Complete Cycles : 0

Intersection: 5: Abbott Road & Elmview Avenue

| Phase                | 2    | 4    | 6    | 8    |
|----------------------|------|------|------|------|
| Movement(s) Served   | NBTL | EBTL | SBTL | WBTL |
| Maximum Green (s)    | 36.8 | 22.8 | 36.8 | 22.8 |
| Minimum Green (s)    | 20.0 | 6.0  | 20.0 | 6.0  |
| Recall               | Max  | None | Max  | None |
| Avg. Green (s)       | 90.4 | 10.8 | 90.4 | 10.8 |
| g/C Ratio            | NA   | NA   | NA   | NA   |
| Cycles Skipped (%)   | 0    | 0    | 0    | 0    |
| Cycles @ Minimum (%) | 0    | 63   | 0    | 63   |
| Cycles Maxed Out (%) | 100  | 0    | 100  | 0    |
| Cycles with Peds (%) | 10   | 13   | 10   | 16   |

Controller Summary

Average Cycle Length (s): NA

Number of Complete Cycles : 0

Lanes, Volumes, Timings  
1: Abbott Road & Dorrance Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                    |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)       | 34                                                                                | 131                                                                               | 138                                                                               | 59                                                                                | 109                                                                               | 65                                                                                | 180                                                                                | 337                                                                                 | 69                                                                                  | 26                                                                                  | 324                                                                                 | 30                                                                                  |
| Future Volume (vph)        | 34                                                                                | 131                                                                               | 138                                                                               | 59                                                                                | 109                                                                               | 65                                                                                | 180                                                                                | 337                                                                                 | 69                                                                                  | 26                                                                                  | 324                                                                                 | 30                                                                                  |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                               | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Lane Width (ft)            | 10                                                                                | 10                                                                                | 10                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 10                                                                                 | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  |
| Lane Util. Factor          | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                               | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                |
| Ped Bike Factor            |                                                                                   | 0.99                                                                              |                                                                                   |                                                                                   | 0.99                                                                              |                                                                                   |                                                                                    | 1.00                                                                                |                                                                                     |                                                                                     | 1.00                                                                                |                                                                                     |
| Frt                        |                                                                                   | 0.932                                                                             |                                                                                   |                                                                                   | 0.958                                                                             |                                                                                   |                                                                                    | 0.982                                                                               |                                                                                     |                                                                                     | 0.988                                                                               |                                                                                     |
| Flt Protected              |                                                                                   | 0.994                                                                             |                                                                                   |                                                                                   | 0.988                                                                             |                                                                                   |                                                                                    | 0.985                                                                               |                                                                                     |                                                                                     | 0.997                                                                               |                                                                                     |
| Satd. Flow (prot)          | 0                                                                                 | 3034                                                                              | 0                                                                                 | 0                                                                                 | 3332                                                                              | 0                                                                                 | 0                                                                                  | 3170                                                                                | 0                                                                                   | 0                                                                                   | 3170                                                                                | 0                                                                                   |
| Flt Permitted              |                                                                                   | 0.892                                                                             |                                                                                   |                                                                                   | 0.793                                                                             |                                                                                   |                                                                                    | 0.717                                                                               |                                                                                     |                                                                                     | 0.916                                                                               |                                                                                     |
| Satd. Flow (perm)          | 0                                                                                 | 2722                                                                              | 0                                                                                 | 0                                                                                 | 2672                                                                              | 0                                                                                 | 0                                                                                  | 2306                                                                                | 0                                                                                   | 0                                                                                   | 2912                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                    |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 145                                                                               |                                                                                   |                                                                                   | 67                                                                                |                                                                                   |                                                                                    | 19                                                                                  |                                                                                     |                                                                                     | 18                                                                                  |                                                                                     |
| Link Speed (mph)           |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                    | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 300                                                                               |                                                                                   |                                                                                   | 300                                                                               |                                                                                   |                                                                                    | 688                                                                                 |                                                                                     |                                                                                     | 452                                                                                 |                                                                                     |
| Travel Time (s)            |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                    | 15.6                                                                                |                                                                                     |                                                                                     | 10.3                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                  |                                                                                     | 5                                                                                   | 5                                                                                   |                                                                                     | 5                                                                                   |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                    |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |
| Peak Hour Factor           | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                               | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                 | 3%                                                                                  | 2%                                                                                  | 2%                                                                                  | 5%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 36                                                                                | 138                                                                               | 145                                                                               | 62                                                                                | 115                                                                               | 68                                                                                | 189                                                                                | 355                                                                                 | 73                                                                                  | 27                                                                                  | 341                                                                                 | 32                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 0                                                                                 | 319                                                                               | 0                                                                                 | 0                                                                                 | 245                                                                               | 0                                                                                 | 0                                                                                  | 617                                                                                 | 0                                                                                   | 0                                                                                   | 400                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |                                                                                   |                                                                                    | 16                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.09                                                                              | 1.09                                                                              | 1.09                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.09                                                                               | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                |
| Turning Speed (mph)        | 15                                                                                |                                                                                   | 9                                                                                 | 15                                                                                |                                                                                   | 9                                                                                 | 15                                                                                 |                                                                                     | 9                                                                                   | 15                                                                                  |                                                                                     | 9                                                                                   |
| Turn Type                  | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                               | NA                                                                                  |                                                                                     | pm+pt                                                                               | NA                                                                                  |                                                                                     |
| Protected Phases           |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   |                                                                                    | 2                                                                                   |                                                                                     | 1                                                                                   | 6                                                                                   |                                                                                     |
| Permitted Phases           | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 2                                                                                  |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |                                                                                     |
| Minimum Split (s)          | 29.2                                                                              | 29.2                                                                              |                                                                                   | 29.2                                                                              | 29.2                                                                              |                                                                                   | 29.2                                                                               | 29.2                                                                                |                                                                                     | 10.2                                                                                | 29.2                                                                                |                                                                                     |
| Total Split (s)            | 30.0                                                                              | 30.0                                                                              |                                                                                   | 30.0                                                                              | 30.0                                                                              |                                                                                   | 35.0                                                                               | 35.0                                                                                |                                                                                     | 20.0                                                                                | 55.0                                                                                |                                                                                     |
| Total Split (%)            | 35.3%                                                                             | 35.3%                                                                             |                                                                                   | 35.3%                                                                             | 35.3%                                                                             |                                                                                   | 41.2%                                                                              | 41.2%                                                                               |                                                                                     | 23.5%                                                                               | 64.7%                                                                               |                                                                                     |
| Maximum Green (s)          | 24.8                                                                              | 24.8                                                                              |                                                                                   | 24.8                                                                              | 24.8                                                                              |                                                                                   | 29.8                                                                               | 29.8                                                                                |                                                                                     | 14.8                                                                                | 49.8                                                                                |                                                                                     |
| Yellow Time (s)            | 3.2                                                                               | 3.2                                                                               |                                                                                   | 3.2                                                                               | 3.2                                                                               |                                                                                   | 3.2                                                                                | 3.2                                                                                 |                                                                                     | 3.2                                                                                 | 3.2                                                                                 |                                                                                     |
| All-Red Time (s)           | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                                | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Lost Time Adjust (s)       |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)        |                                                                                   | 5.2                                                                               |                                                                                   |                                                                                   | 5.2                                                                               |                                                                                   |                                                                                    | 5.2                                                                                 |                                                                                     |                                                                                     | 5.2                                                                                 |                                                                                     |
| Lead/Lag                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Lag                                                                                | Lag                                                                                 |                                                                                     | Lead                                                                                |                                                                                     |                                                                                     |
| Lead-Lag Optimize?         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Walk Time (s)              | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                                | 7.0                                                                                 |                                                                                     |                                                                                     | 7.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)        | 17.0                                                                              | 17.0                                                                              |                                                                                   | 17.0                                                                              | 17.0                                                                              |                                                                                   | 17.0                                                                               | 17.0                                                                                |                                                                                     |                                                                                     | 17.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr)    | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                  | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |
| Act Effect Green (s)       |                                                                                   | 24.8                                                                              |                                                                                   |                                                                                   | 24.8                                                                              |                                                                                   |                                                                                    | 29.8                                                                                |                                                                                     |                                                                                     | 49.8                                                                                |                                                                                     |

Lanes, Volumes, Timings  
1: Abbott Road & Dorrance Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

|                         | ↖   | →    | ↘   | ↙   | ←    | ↖   | ↙   | ↑    | ↗   | ↘   | ↓    | ↙   |
|-------------------------|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|
| Lane Group              | EBL | EBT  | EBR | WBL | WBT  | WBR | NBL | NBT  | NBR | SBL | SBT  | SBR |
| Actuated g/C Ratio      |     | 0.29 |     |     | 0.29 |     |     | 0.35 |     |     | 0.59 |     |
| v/c Ratio               |     | 0.36 |     |     | 0.30 |     |     | 0.75 |     |     | 0.23 |     |
| Control Delay           |     | 13.9 |     |     | 17.9 |     |     | 30.5 |     |     | 8.3  |     |
| Queue Delay             |     | 0.0  |     |     | 0.0  |     |     | 0.0  |     |     | 0.0  |     |
| Total Delay             |     | 13.9 |     |     | 17.9 |     |     | 30.5 |     |     | 8.3  |     |
| LOS                     |     | B    |     |     | B    |     |     | C    |     |     | A    |     |
| Approach Delay          |     | 13.9 |     |     | 17.9 |     |     | 30.5 |     |     | 8.3  |     |
| Approach LOS            |     | B    |     |     | B    |     |     | C    |     |     | A    |     |
| Stops (vph)             |     | 125  |     |     | 126  |     |     | 490  |     |     | 160  |     |
| Fuel Used(gal)          |     | 2    |     |     | 2    |     |     | 9    |     |     | 3    |     |
| CO Emissions (g/hr)     |     | 158  |     |     | 146  |     |     | 663  |     |     | 200  |     |
| NOx Emissions (g/hr)    |     | 31   |     |     | 28   |     |     | 129  |     |     | 39   |     |
| VOC Emissions (g/hr)    |     | 37   |     |     | 34   |     |     | 154  |     |     | 46   |     |
| Dilemma Vehicles (#)    |     | 0    |     |     | 0    |     |     | 0    |     |     | 0    |     |
| Queue Length 50th (ft)  |     | 36   |     |     | 37   |     |     | 146  |     |     | 46   |     |
| Queue Length 95th (ft)  |     | 71   |     |     | 68   |     |     | 212  |     |     | 68   |     |
| Internal Link Dist (ft) |     | 220  |     |     | 220  |     |     | 608  |     |     | 372  |     |
| Turn Bay Length (ft)    |     |      |     |     |      |     |     |      |     |     |      |     |
| Base Capacity (vph)     |     | 896  |     |     | 827  |     |     | 820  |     |     | 1758 |     |
| Starvation Cap Reductn  |     | 0    |     |     | 0    |     |     | 0    |     |     | 0    |     |
| Spillback Cap Reductn   |     | 0    |     |     | 0    |     |     | 0    |     |     | 0    |     |
| Storage Cap Reductn     |     | 0    |     |     | 0    |     |     | 0    |     |     | 0    |     |
| Reduced v/c Ratio       |     | 0.36 |     |     | 0.30 |     |     | 0.75 |     |     | 0.23 |     |

Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 85

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 70

Control Type: Pretimed

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 19.6

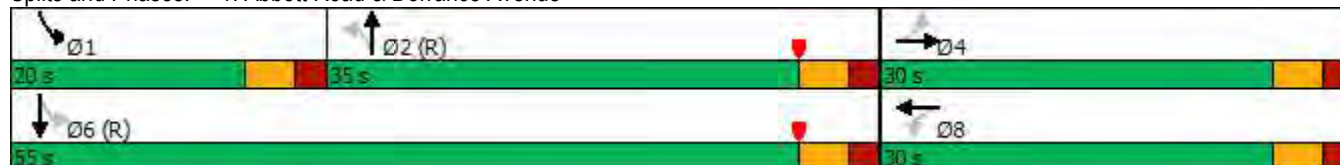
Intersection LOS: B

Intersection Capacity Utilization 97.3%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 1: Abbott Road & Dorrance Avenue



Lanes, Volumes, Timings  
2: Abbott Road & Plaza Driveway

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

|                            |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                 | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations        |  |  |  |                                                                                   |                                                                                   |  |
| Traffic Volume (vph)       | 111                                                                               | 3                                                                                 | 585                                                                               | 99                                                                                | 5                                                                                 | 519                                                                               |
| Future Volume (vph)        | 111                                                                               | 3                                                                                 | 585                                                                               | 99                                                                                | 5                                                                                 | 519                                                                               |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              |
| Ped Bike Factor            | 0.99                                                                              | 0.98                                                                              | 1.00                                                                              |                                                                                   |                                                                                   | 1.00                                                                              |
| Frt                        |                                                                                   | 0.850                                                                             | 0.978                                                                             |                                                                                   |                                                                                   |                                                                                   |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (prot)          | 1770                                                                              | 1583                                                                              | 3444                                                                              | 0                                                                                 | 0                                                                                 | 3539                                                                              |
| Flt Permitted              | 0.950                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.950                                                                             |
| Satd. Flow (perm)          | 1760                                                                              | 1549                                                                              | 3444                                                                              | 0                                                                                 | 0                                                                                 | 3362                                                                              |
| Right Turn on Red          |                                                                                   | Yes                                                                               |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   |
| Satd. Flow (RTOR)          |                                                                                   | 3                                                                                 | 39                                                                                |                                                                                   |                                                                                   |                                                                                   |
| Link Speed (mph)           | 30                                                                                |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |
| Link Distance (ft)         | 300                                                                               |                                                                                   | 748                                                                               |                                                                                   |                                                                                   | 688                                                                               |
| Travel Time (s)            | 6.8                                                                               |                                                                                   | 17.0                                                                              |                                                                                   |                                                                                   | 15.6                                                                              |
| Confl. Peds. (#/hr)        | 5                                                                                 | 8                                                                                 |                                                                                   | 9                                                                                 | 5                                                                                 |                                                                                   |
| Confl. Bikes (#/hr)        |                                                                                   | 2                                                                                 |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   |
| Peak Hour Factor           | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              |
| Adj. Flow (vph)            | 117                                                                               | 3                                                                                 | 616                                                                               | 104                                                                               | 5                                                                                 | 546                                                                               |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)      | 117                                                                               | 3                                                                                 | 720                                                                               | 0                                                                                 | 0                                                                                 | 551                                                                               |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment             | Left                                                                              | Right                                                                             | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              |
| Median Width(ft)           | 12                                                                                |                                                                                   | 10                                                                                |                                                                                   |                                                                                   | 10                                                                                |
| Link Offset(ft)            | 0                                                                                 |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |
| Crosswalk Width(ft)        | 16                                                                                |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Headway Factor             | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |
| Turning Speed (mph)        | 60                                                                                | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                |                                                                                   |
| Number of Detectors        | 1                                                                                 | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |
| Detector Template          | Left                                                                              | Right                                                                             | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              |
| Leading Detector (ft)      | 50                                                                                | 50                                                                                | 50                                                                                |                                                                                   | 20                                                                                | 50                                                                                |
| Trailing Detector (ft)     | 0                                                                                 | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |
| Detector 1 Position(ft)    | 0                                                                                 | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |
| Detector 1 Size(ft)        | 50                                                                                | 50                                                                                | 50                                                                                |                                                                                   | 20                                                                                | 50                                                                                |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |
| Turn Type                  | Perm                                                                              | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |
| Protected Phases           |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |
| Permitted Phases           | 8                                                                                 | 8                                                                                 |                                                                                   |                                                                                   | 6                                                                                 |                                                                                   |
| Detector Phase             | 8                                                                                 | 8                                                                                 | 2                                                                                 |                                                                                   | 6                                                                                 | 6                                                                                 |
| Switch Phase               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Minimum Initial (s)        | 6.0                                                                               | 6.0                                                                               | 6.0                                                                               |                                                                                   | 6.0                                                                               | 6.0                                                                               |
| Minimum Split (s)          | 27.2                                                                              | 27.2                                                                              | 32.2                                                                              |                                                                                   | 32.2                                                                              | 32.2                                                                              |
| Total Split (s)            | 30.0                                                                              | 30.0                                                                              | 50.0                                                                              |                                                                                   | 50.0                                                                              | 50.0                                                                              |

Lanes, Volumes, Timings  
2: Abbott Road & Plaza Driveway

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

|                         |  |  |  |  |  |       |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------|
| Lane Group              | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT   |
| Total Split (%)         | 37.5%                                                                             | 37.5%                                                                             | 62.5%                                                                             |                                                                                   | 62.5%                                                                             | 62.5% |
| Maximum Green (s)       | 24.8                                                                              | 24.8                                                                              | 44.8                                                                              |                                                                                   | 44.8                                                                              | 44.8  |
| Yellow Time (s)         | 3.2                                                                               | 3.2                                                                               | 3.2                                                                               |                                                                                   | 3.2                                                                               | 3.2   |
| All-Red Time (s)        | 2.0                                                                               | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                               | 2.0   |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   |                                                                                   | 0.0   |
| Total Lost Time (s)     | 5.2                                                                               | 5.2                                                                               | 5.2                                                                               |                                                                                   |                                                                                   | 5.2   |
| Lead/Lag                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |       |
| Lead-Lag Optimize?      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |       |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                               | 3.0   |
| Recall Mode             | None                                                                              | None                                                                              | Max                                                                               |                                                                                   | Max                                                                               | Max   |
| Walk Time (s)           | 7.0                                                                               | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0   |
| Flash Dont Walk (s)     | 15.0                                                                              | 15.0                                                                              | 20.0                                                                              |                                                                                   | 20.0                                                                              | 20.0  |
| Pedestrian Calls (#/hr) | 2                                                                                 | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2     |
| Act Effct Green (s)     | 11.5                                                                              | 11.5                                                                              | 54.1                                                                              |                                                                                   |                                                                                   | 54.1  |
| Actuated g/C Ratio      | 0.16                                                                              | 0.16                                                                              | 0.75                                                                              |                                                                                   |                                                                                   | 0.75  |
| v/c Ratio               | 0.42                                                                              | 0.01                                                                              | 0.28                                                                              |                                                                                   |                                                                                   | 0.22  |
| Control Delay           | 30.7                                                                              | 15.0                                                                              | 4.8                                                                               |                                                                                   |                                                                                   | 4.8   |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |                                                                                   |                                                                                   | 0.0   |
| Total Delay             | 30.7                                                                              | 15.0                                                                              | 4.8                                                                               |                                                                                   |                                                                                   | 4.8   |
| LOS                     | C                                                                                 | B                                                                                 | A                                                                                 |                                                                                   |                                                                                   | A     |
| Approach Delay          | 30.3                                                                              |                                                                                   | 4.8                                                                               |                                                                                   |                                                                                   | 4.8   |
| Approach LOS            | C                                                                                 |                                                                                   | A                                                                                 |                                                                                   |                                                                                   | A     |
| 90th %ile Green (s)     | 22.0                                                                              | 22.0                                                                              | 44.8                                                                              |                                                                                   | 44.8                                                                              | 44.8  |
| 90th %ile Term Code     | Ped                                                                               | Ped                                                                               | MaxR                                                                              |                                                                                   | MaxR                                                                              | MaxR  |
| 70th %ile Green (s)     | 11.2                                                                              | 11.2                                                                              | 46.6                                                                              |                                                                                   | 46.6                                                                              | 46.6  |
| 70th %ile Term Code     | Gap                                                                               | Gap                                                                               | Dwell                                                                             |                                                                                   | Dwell                                                                             | Dwell |
| 50th %ile Green (s)     | 10.1                                                                              | 10.1                                                                              | 52.2                                                                              |                                                                                   | 52.2                                                                              | 52.2  |
| 50th %ile Term Code     | Gap                                                                               | Gap                                                                               | Dwell                                                                             |                                                                                   | Dwell                                                                             | Dwell |
| 30th %ile Green (s)     | 8.9                                                                               | 8.9                                                                               | 59.8                                                                              |                                                                                   | 59.8                                                                              | 59.8  |
| 30th %ile Term Code     | Gap                                                                               | Gap                                                                               | Dwell                                                                             |                                                                                   | Dwell                                                                             | Dwell |
| 10th %ile Green (s)     | 0.0                                                                               | 0.0                                                                               | 59.8                                                                              |                                                                                   | 59.8                                                                              | 59.8  |
| 10th %ile Term Code     | Skip                                                                              | Skip                                                                              | Dwell                                                                             |                                                                                   | Dwell                                                                             | Dwell |
| Stops (vph)             | 93                                                                                | 3                                                                                 | 211                                                                               |                                                                                   |                                                                                   | 163   |
| Fuel Used(gal)          | 1                                                                                 | 0                                                                                 | 6                                                                                 |                                                                                   |                                                                                   | 4     |
| CO Emissions (g/hr)     | 103                                                                               | 2                                                                                 | 407                                                                               |                                                                                   |                                                                                   | 294   |
| NOx Emissions (g/hr)    | 20                                                                                | 0                                                                                 | 79                                                                                |                                                                                   |                                                                                   | 57    |
| VOC Emissions (g/hr)    | 24                                                                                | 1                                                                                 | 94                                                                                |                                                                                   |                                                                                   | 68    |
| Dilemma Vehicles (#)    | 0                                                                                 | 0                                                                                 | 0                                                                                 |                                                                                   |                                                                                   | 0     |
| Queue Length 50th (ft)  | 49                                                                                | 0                                                                                 | 45                                                                                |                                                                                   |                                                                                   | 34    |
| Queue Length 95th (ft)  | 84                                                                                | 6                                                                                 | 114                                                                               |                                                                                   |                                                                                   | 90    |
| Internal Link Dist (ft) | 220                                                                               |                                                                                   | 668                                                                               |                                                                                   |                                                                                   | 608   |
| Turn Bay Length (ft)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |       |
| Base Capacity (vph)     | 605                                                                               | 535                                                                               | 2584                                                                              |                                                                                   |                                                                                   | 2513  |
| Starvation Cap Reductn  | 0                                                                                 | 0                                                                                 | 0                                                                                 |                                                                                   |                                                                                   | 0     |
| Spillback Cap Reductn   | 0                                                                                 | 0                                                                                 | 0                                                                                 |                                                                                   |                                                                                   | 0     |
| Storage Cap Reductn     | 0                                                                                 | 0                                                                                 | 0                                                                                 |                                                                                   |                                                                                   | 0     |
| Reduced v/c Ratio       | 0.19                                                                              | 0.01                                                                              | 0.28                                                                              |                                                                                   |                                                                                   | 0.22  |
| Intersection Summary    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |       |

Lanes, Volumes, Timings  
2: Abbott Road & Plaza Driveway

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 72.4

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.42

Intersection Signal Delay: 7.0

Intersection LOS: A

Intersection Capacity Utilization 40.2%

ICU Level of Service A

Analysis Period (min) 15

90th %ile Actuated Cycle: 77.2

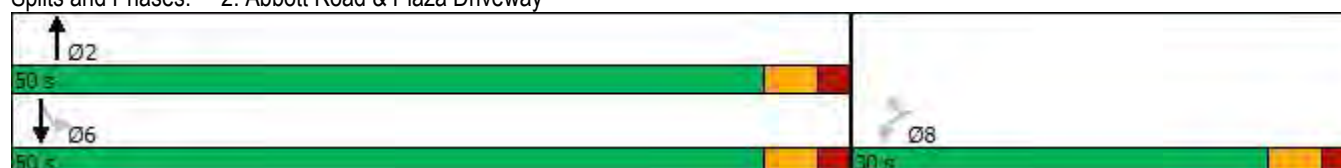
70th %ile Actuated Cycle: 68.2

50th %ile Actuated Cycle: 72.7

30th %ile Actuated Cycle: 79.1

10th %ile Actuated Cycle: 65

Splits and Phases: 2: Abbott Road & Plaza Driveway



# Lanes, Volumes, Timings

# Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

## 3: Abbott Road/Abbott Road & Ridge Road

12/04/2025

|                            |  |                                                                                   |       |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |       |
|----------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------|
| Lane Group                 | EBL                                                                                | EBT                                                                               | EBR   | WBL                                                                               | WBT                                                                               | WBR                                                                                | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR   |
| Lane Configurations        |   |  |       |  |  |  |  |  |  |  |  |       |
| Traffic Volume (vph)       | 68                                                                                 | 608                                                                               | 74    | 280                                                                               | 475                                                                               | 384                                                                                | 46                                                                                  | 298                                                                                 | 239                                                                                 | 280                                                                                 | 296                                                                                 | 56    |
| Future Volume (vph)        | 68                                                                                 | 608                                                                               | 74    | 280                                                                               | 475                                                                               | 384                                                                                | 46                                                                                  | 298                                                                                 | 239                                                                                 | 280                                                                                 | 296                                                                                 | 56    |
| Ideal Flow (vphpl)         | 1900                                                                               | 1900                                                                              | 1900  | 1900                                                                              | 1900                                                                              | 1900                                                                               | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900  |
| Lane Width (ft)            | 11                                                                                 | 11                                                                                | 11    | 10                                                                                | 10                                                                                | 12                                                                                 | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10    |
| Storage Length (ft)        | 90                                                                                 |                                                                                   | 250   | 200                                                                               |                                                                                   | 0                                                                                  | 170                                                                                 |                                                                                     | 170                                                                                 | 250                                                                                 |                                                                                     | 300   |
| Storage Lanes              | 1                                                                                  |                                                                                   | 1     | 1                                                                                 |                                                                                   | 1                                                                                  | 1                                                                                   |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     | 0     |
| Taper Length (ft)          | 50                                                                                 |                                                                                   |       | 100                                                                               |                                                                                   |                                                                                    | 100                                                                                 |                                                                                     |                                                                                     | 100                                                                                 |                                                                                     |       |
| Lane Util. Factor          | 1.00                                                                               | 0.95                                                                              | 0.95  | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 0.95                                                                                | 1.00                                                                                | 1.00                                                                                | 0.95                                                                                | 0.95  |
| Ped Bike Factor            | 1.00                                                                               | 1.00                                                                              |       | 1.00                                                                              |                                                                                   | 0.98                                                                               | 1.00                                                                                |                                                                                     | 0.98                                                                                | 1.00                                                                                | 1.00                                                                                |       |
| Frt                        |                                                                                    | 0.984                                                                             |       |                                                                                   |                                                                                   | 0.850                                                                              |                                                                                     |                                                                                     | 0.850                                                                               |                                                                                     | 0.976                                                                               |       |
| Flt Protected              | 0.950                                                                              |                                                                                   |       | 0.950                                                                             |                                                                                   |                                                                                    | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |       |
| Satd. Flow (prot)          | 1711                                                                               | 3359                                                                              | 0     | 1652                                                                              | 1739                                                                              | 1583                                                                               | 1636                                                                                | 3303                                                                                | 1478                                                                                | 1652                                                                                | 3208                                                                                | 0     |
| Flt Permitted              | 0.349                                                                              |                                                                                   |       | 0.205                                                                             |                                                                                   |                                                                                    | 0.535                                                                               |                                                                                     |                                                                                     | 0.376                                                                               |                                                                                     |       |
| Satd. Flow (perm)          | 627                                                                                | 3359                                                                              | 0     | 356                                                                               | 1739                                                                              | 1554                                                                               | 917                                                                                 | 3303                                                                                | 1452                                                                                | 652                                                                                 | 3208                                                                                | 0     |
| Right Turn on Red          |                                                                                    |                                                                                   | Yes   |                                                                                   |                                                                                   | Yes                                                                                |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes   |
| Satd. Flow (RTOR)          |                                                                                    | 11                                                                                |       |                                                                                   |                                                                                   | 396                                                                                |                                                                                     |                                                                                     | 105                                                                                 |                                                                                     | 19                                                                                  |       |
| Link Speed (mph)           |                                                                                    | 30                                                                                |       |                                                                                   | 30                                                                                |                                                                                    |                                                                                     | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |       |
| Link Distance (ft)         |                                                                                    | 808                                                                               |       |                                                                                   | 782                                                                               |                                                                                    |                                                                                     | 1105                                                                                |                                                                                     |                                                                                     | 748                                                                                 |       |
| Travel Time (s)            |                                                                                    | 18.4                                                                              |       |                                                                                   | 17.8                                                                              |                                                                                    |                                                                                     | 25.1                                                                                |                                                                                     |                                                                                     | 17.0                                                                                |       |
| Confl. Peds. (#/hr)        | 5                                                                                  |                                                                                   | 5     | 5                                                                                 |                                                                                   | 5                                                                                  | 5                                                                                   |                                                                                     | 5                                                                                   | 5                                                                                   |                                                                                     | 5     |
| Confl. Bikes (#/hr)        |                                                                                    |                                                                                   | 2     |                                                                                   |                                                                                   | 2                                                                                  |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 2     |
| Peak Hour Factor           | 0.97                                                                               | 0.97                                                                              | 0.97  | 0.97                                                                              | 0.97                                                                              | 0.97                                                                               | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97                                                                                | 0.97  |
| Heavy Vehicles (%)         | 2%                                                                                 | 2%                                                                                | 2%    | 2%                                                                                | 2%                                                                                | 2%                                                                                 | 3%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%    |
| Adj. Flow (vph)            | 70                                                                                 | 627                                                                               | 76    | 289                                                                               | 490                                                                               | 396                                                                                | 47                                                                                  | 307                                                                                 | 246                                                                                 | 289                                                                                 | 305                                                                                 | 58    |
| Shared Lane Traffic (%)    |                                                                                    |                                                                                   |       |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |       |
| Lane Group Flow (vph)      | 70                                                                                 | 703                                                                               | 0     | 289                                                                               | 490                                                                               | 396                                                                                | 47                                                                                  | 307                                                                                 | 246                                                                                 | 289                                                                                 | 363                                                                                 | 0     |
| Enter Blocked Intersection | No                                                                                 | No                                                                                | No    | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No    |
| Lane Alignment             | Left                                                                               | Left                                                                              | Right | Left                                                                              | Left                                                                              | Right                                                                              | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right |
| Median Width(ft)           |                                                                                    | 11                                                                                |       |                                                                                   | 11                                                                                |                                                                                    |                                                                                     | 10                                                                                  |                                                                                     |                                                                                     | 10                                                                                  |       |
| Link Offset(ft)            |                                                                                    | 0                                                                                 |       |                                                                                   | 0                                                                                 |                                                                                    |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |       |
| Crosswalk Width(ft)        |                                                                                    | 16                                                                                |       |                                                                                   | 16                                                                                |                                                                                    |                                                                                     | 16                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |       |
| Two way Left Turn Lane     |                                                                                    |                                                                                   |       |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |       |
| Headway Factor             | 1.04                                                                               | 1.04                                                                              | 1.04  | 1.09                                                                              | 1.09                                                                              | 1.00                                                                               | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09  |
| Turning Speed (mph)        | 60                                                                                 |                                                                                   | 60    | 60                                                                                |                                                                                   | 60                                                                                 | 60                                                                                  |                                                                                     | 60                                                                                  | 60                                                                                  |                                                                                     | 60    |
| Number of Detectors        | 1                                                                                  | 1                                                                                 |       | 1                                                                                 | 1                                                                                 | 1                                                                                  | 1                                                                                   | 1                                                                                   | 1                                                                                   | 1                                                                                   | 1                                                                                   |       |
| Detector Template          | Left                                                                               | Thru                                                                              |       | Left                                                                              | Thru                                                                              | Right                                                                              | Left                                                                                | Thru                                                                                | Right                                                                               | Left                                                                                | Thru                                                                                |       |
| Leading Detector (ft)      | 50                                                                                 | 50                                                                                |       | 50                                                                                | 50                                                                                | 50                                                                                 | 20                                                                                  | 50                                                                                  | 50                                                                                  | 20                                                                                  | 50                                                                                  |       |
| Trailing Detector (ft)     | 0                                                                                  | 0                                                                                 |       | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |       |
| Detector 1 Position(ft)    | 0                                                                                  | 0                                                                                 |       | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |       |
| Detector 1 Size(ft)        | 50                                                                                 | 50                                                                                |       | 50                                                                                | 50                                                                                | 50                                                                                 | 20                                                                                  | 50                                                                                  | 50                                                                                  | 20                                                                                  | 50                                                                                  |       |
| Detector 1 Type            | Cl+Ex                                                                              | Cl+Ex                                                                             |       | Cl+Ex                                                                             | Cl+Ex                                                                             | Cl+Ex                                                                              | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               | Cl+Ex                                                                               |       |
| Detector 1 Channel         |                                                                                    |                                                                                   |       |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |       |
| Detector 1 Extend (s)      | 0.0                                                                                | 0.0                                                                               |       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |       |
| Detector 1 Queue (s)       | 0.0                                                                                | 0.0                                                                               |       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |       |
| Detector 1 Delay (s)       | 0.0                                                                                | 0.0                                                                               |       | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |       |
| Turn Type                  | pm+pt                                                                              | NA                                                                                |       | pm+pt                                                                             | NA                                                                                | pm+ov                                                                              | pm+pt                                                                               | NA                                                                                  | pm+ov                                                                               | pm+pt                                                                               | NA                                                                                  |       |
| Protected Phases           | 7                                                                                  | 4                                                                                 |       | 3                                                                                 | 8                                                                                 | 1                                                                                  | 5                                                                                   | 2                                                                                   | 3                                                                                   | 1                                                                                   | 6                                                                                   |       |
| Permitted Phases           | 4                                                                                  |                                                                                   |       | 8                                                                                 |                                                                                   | 8                                                                                  | 2                                                                                   |                                                                                     | 2                                                                                   | 6                                                                                   |                                                                                     |       |



|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Detector Phase          | 7                                                                                 | 4                                                                                 |                                                                                   | 3                                                                                 | 8                                                                                 | 1                                                                                 | 5                                                                                   | 2                                                                                   | 3                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0                                                                               | 7.0                                                                               | 7.0                                                                                 | 7.0                                                                                 | 7.0                                                                                 | 7.0                                                                                 | 7.0                                                                                 |                                                                                     |
| Minimum Split (s)       | 12.2                                                                              | 36.2                                                                              |                                                                                   | 12.2                                                                              | 36.2                                                                              | 12.2                                                                              | 12.2                                                                                | 42.2                                                                                | 12.2                                                                                | 12.2                                                                                | 42.2                                                                                |                                                                                     |
| Total Split (s)         | 20.0                                                                              | 37.0                                                                              |                                                                                   | 20.0                                                                              | 37.0                                                                              | 20.0                                                                              | 20.0                                                                                | 43.0                                                                                | 20.0                                                                                | 20.0                                                                                | 43.0                                                                                |                                                                                     |
| Total Split (%)         | 16.7%                                                                             | 30.8%                                                                             |                                                                                   | 16.7%                                                                             | 30.8%                                                                             | 16.7%                                                                             | 16.7%                                                                               | 35.8%                                                                               | 16.7%                                                                               | 16.7%                                                                               | 35.8%                                                                               |                                                                                     |
| Maximum Green (s)       | 14.8                                                                              | 31.8                                                                              |                                                                                   | 14.8                                                                              | 31.8                                                                              | 14.8                                                                              | 14.8                                                                                | 37.8                                                                                | 14.8                                                                                | 14.8                                                                                | 37.8                                                                                |                                                                                     |
| Yellow Time (s)         | 3.2                                                                               | 3.2                                                                               |                                                                                   | 3.2                                                                               | 3.2                                                                               | 3.2                                                                               | 3.2                                                                                 | 3.2                                                                                 | 3.2                                                                                 | 3.2                                                                                 | 3.2                                                                                 |                                                                                     |
| All-Red Time (s)        | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                               | 2.0                                                                               | 2.0                                                                               | 2.0                                                                                 | 2.0                                                                                 | 2.0                                                                                 | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)     | 5.2                                                                               | 5.2                                                                               |                                                                                   | 5.2                                                                               | 5.2                                                                               | 5.2                                                                               | 5.2                                                                                 | 5.2                                                                                 | 5.2                                                                                 | 5.2                                                                                 | 5.2                                                                                 |                                                                                     |
| Lead/Lag                | Lead                                                                              | Lag                                                                               |                                                                                   | Lead                                                                              | Lag                                                                               | Lead                                                                              | Lead                                                                                | Lag                                                                                 | Lead                                                                                | Lead                                                                                | Lag                                                                                 |                                                                                     |
| Lead-Lag Optimize?      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               |                                                                                   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| Recall Mode             | None                                                                              | Max                                                                               |                                                                                   | None                                                                              | Max                                                                               | None                                                                              | None                                                                                | None                                                                                | None                                                                                | None                                                                                | None                                                                                |                                                                                     |
| Walk Time (s)           |                                                                                   | 7.0                                                                               |                                                                                   |                                                                                   | 7.0                                                                               |                                                                                   |                                                                                     | 7.0                                                                                 |                                                                                     |                                                                                     | 7.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)     |                                                                                   | 24.0                                                                              |                                                                                   |                                                                                   | 24.0                                                                              |                                                                                   |                                                                                     | 30.0                                                                                |                                                                                     |                                                                                     | 30.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) |                                                                                   | 5                                                                                 |                                                                                   |                                                                                   | 5                                                                                 |                                                                                   |                                                                                     | 5                                                                                   |                                                                                     |                                                                                     | 5                                                                                   |                                                                                     |
| Act Effct Green (s)     | 40.1                                                                              | 32.1                                                                              |                                                                                   | 52.1                                                                              | 41.7                                                                              | 56.2                                                                              | 25.0                                                                                | 17.2                                                                                | 32.2                                                                                | 36.9                                                                                | 29.2                                                                                |                                                                                     |
| Actuated g/C Ratio      | 0.40                                                                              | 0.32                                                                              |                                                                                   | 0.52                                                                              | 0.42                                                                              | 0.56                                                                              | 0.25                                                                                | 0.17                                                                                | 0.32                                                                                | 0.37                                                                                | 0.29                                                                                |                                                                                     |
| v/c Ratio               | 0.21                                                                              | 0.65                                                                              |                                                                                   | 0.76                                                                              | 0.67                                                                              | 0.38                                                                              | 0.16                                                                                | 0.54                                                                                | 0.45                                                                                | 0.75                                                                                | 0.38                                                                                |                                                                                     |
| Control Delay           | 16.7                                                                              | 33.3                                                                              |                                                                                   | 31.5                                                                              | 32.8                                                                              | 2.7                                                                               | 21.2                                                                                | 40.4                                                                                | 15.0                                                                                | 36.6                                                                                | 28.6                                                                                |                                                                                     |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Delay             | 16.7                                                                              | 33.3                                                                              |                                                                                   | 31.5                                                                              | 32.8                                                                              | 2.7                                                                               | 21.2                                                                                | 40.4                                                                                | 15.0                                                                                | 36.6                                                                                | 28.6                                                                                |                                                                                     |
| LOS                     | B                                                                                 | C                                                                                 |                                                                                   | C                                                                                 | C                                                                                 | A                                                                                 | C                                                                                   | D                                                                                   | B                                                                                   | D                                                                                   | C                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 31.8                                                                              |                                                                                   |                                                                                   | 22.3                                                                              |                                                                                   |                                                                                     | 28.5                                                                                |                                                                                     |                                                                                     | 32.1                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | C                                                                                 |                                                                                   |                                                                                   | C                                                                                 |                                                                                   |                                                                                     | C                                                                                   |                                                                                     |                                                                                     | C                                                                                   |                                                                                     |
| 90th %ile Green (s)     | 10.9                                                                              | 31.8                                                                              |                                                                                   | 14.8                                                                              | 35.7                                                                              | 14.8                                                                              | 9.3                                                                                 | 37.0                                                                                | 14.8                                                                                | 14.8                                                                                | 42.5                                                                                |                                                                                     |
| 90th %ile Term Code     | Gap                                                                               | MaxR                                                                              |                                                                                   | Max                                                                               | Hold                                                                              | Max                                                                               | Gap                                                                                 | Ped                                                                                 | Max                                                                                 | Max                                                                                 | Hold                                                                                |                                                                                     |
| 70th %ile Green (s)     | 8.1                                                                               | 31.8                                                                              |                                                                                   | 14.8                                                                              | 38.5                                                                              | 14.8                                                                              | 8.1                                                                                 | 15.7                                                                                | 14.8                                                                                | 14.8                                                                                | 22.4                                                                                |                                                                                     |
| 70th %ile Term Code     | Gap                                                                               | MaxR                                                                              |                                                                                   | Max                                                                               | Hold                                                                              | Max                                                                               | Gap                                                                                 | Gap                                                                                 | Max                                                                                 | Max                                                                                 | Hold                                                                                |                                                                                     |
| 50th %ile Green (s)     | 7.3                                                                               | 31.8                                                                              |                                                                                   | 14.8                                                                              | 39.3                                                                              | 14.8                                                                              | 7.3                                                                                 | 14.1                                                                                | 14.8                                                                                | 14.8                                                                                | 21.6                                                                                |                                                                                     |
| 50th %ile Term Code     | Gap                                                                               | MaxR                                                                              |                                                                                   | Max                                                                               | Hold                                                                              | Max                                                                               | Gap                                                                                 | Gap                                                                                 | Max                                                                                 | Max                                                                                 | Hold                                                                                |                                                                                     |
| 30th %ile Green (s)     | 7.0                                                                               | 31.8                                                                              |                                                                                   | 14.8                                                                              | 39.6                                                                              | 14.8                                                                              | 0.0                                                                                 | 12.6                                                                                | 14.8                                                                                | 14.8                                                                                | 32.6                                                                                |                                                                                     |
| 30th %ile Term Code     | Min                                                                               | MaxR                                                                              |                                                                                   | Max                                                                               | Hold                                                                              | Max                                                                               | Skip                                                                                | Gap                                                                                 | Max                                                                                 | Max                                                                                 | Hold                                                                                |                                                                                     |
| 10th %ile Green (s)     | 0.0                                                                               | 31.8                                                                              |                                                                                   | 14.8                                                                              | 51.8                                                                              | 12.6                                                                              | 0.0                                                                                 | 10.3                                                                                | 14.8                                                                                | 12.6                                                                                | 28.1                                                                                |                                                                                     |
| 10th %ile Term Code     | Skip                                                                              | MaxR                                                                              |                                                                                   | Max                                                                               | Hold                                                                              | Gap                                                                               | Skip                                                                                | Gap                                                                                 | Max                                                                                 | Gap                                                                                 | Hold                                                                                |                                                                                     |
| Stops (vph)             | 40                                                                                | 559                                                                               |                                                                                   | 143                                                                               | 354                                                                               | 25                                                                                | 31                                                                                  | 256                                                                                 | 96                                                                                  | 201                                                                                 | 255                                                                                 |                                                                                     |
| Fuel Used(gal)          | 1                                                                                 | 12                                                                                |                                                                                   | 4                                                                                 | 8                                                                                 | 3                                                                                 | 1                                                                                   | 6                                                                                   | 3                                                                                   | 5                                                                                   | 6                                                                                   |                                                                                     |
| CO Emissions (g/hr)     | 62                                                                                | 839                                                                               |                                                                                   | 300                                                                               | 561                                                                               | 188                                                                               | 54                                                                                  | 450                                                                                 | 232                                                                                 | 337                                                                                 | 385                                                                                 |                                                                                     |
| NOx Emissions (g/hr)    | 12                                                                                | 163                                                                               |                                                                                   | 58                                                                                | 109                                                                               | 37                                                                                | 10                                                                                  | 87                                                                                  | 45                                                                                  | 66                                                                                  | 75                                                                                  |                                                                                     |
| VOC Emissions (g/hr)    | 14                                                                                | 194                                                                               |                                                                                   | 70                                                                                | 130                                                                               | 44                                                                                | 12                                                                                  | 104                                                                                 | 54                                                                                  | 78                                                                                  | 89                                                                                  |                                                                                     |
| Dilemma Vehicles (#)    | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |                                                                                     |
| Queue Length 50th (ft)  | 20                                                                                | 186                                                                               |                                                                                   | 94                                                                                | 242                                                                               | 0                                                                                 | 19                                                                                  | 94                                                                                  | 61                                                                                  | 137                                                                                 | 96                                                                                  |                                                                                     |
| Queue Length 95th (ft)  | 60                                                                                | 333                                                                               |                                                                                   | #303                                                                              | #577                                                                              | 53                                                                                | 41                                                                                  | 133                                                                                 | 119                                                                                 | 205                                                                                 | 140                                                                                 |                                                                                     |
| Internal Link Dist (ft) |                                                                                   | 728                                                                               |                                                                                   |                                                                                   | 702                                                                               |                                                                                   |                                                                                     | 1025                                                                                |                                                                                     |                                                                                     | 668                                                                                 |                                                                                     |
| Turn Bay Length (ft)    | 90                                                                                |                                                                                   |                                                                                   | 200                                                                               |                                                                                   |                                                                                   | 170                                                                                 |                                                                                     | 170                                                                                 | 250                                                                                 |                                                                                     |                                                                                     |
| Base Capacity (vph)     | 458                                                                               | 1088                                                                              |                                                                                   | 379                                                                               | 727                                                                               | 1058                                                                              | 403                                                                                 | 1263                                                                                | 543                                                                                 | 391                                                                                 | 1264                                                                                |                                                                                     |
| Starvation Cap Reductn  | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |                                                                                     |

|                       |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group            | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Spillback Cap Reductn | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Storage Cap Reductn   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Reduced v/c Ratio     | 0.15                                                                              | 0.65                                                                              |                                                                                   | 0.76                                                                              | 0.67                                                                              | 0.37                                                                              | 0.12                                                                               | 0.24                                                                                | 0.45                                                                                | 0.74                                                                                | 0.29                                                                                |                                                                                     |

## Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 99.7

Natural Cycle: 105

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 27.8

Intersection LOS: C

Intersection Capacity Utilization 85.9%

ICU Level of Service E

Analysis Period (min) 15

90th %ile Actuated Cycle: 119.2

70th %ile Actuated Cycle: 97.9

50th %ile Actuated Cycle: 96.3

30th %ile Actuated Cycle: 94.8

10th %ile Actuated Cycle: 90.3

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Abbott Road/Abbott Road &amp; Ridge Road

|                                                                                        |                                                                                        |                                                                                        |                                                                                          |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
|  Ø1 |  Ø2 |  Ø3 |  Ø4 |
| 20 s                                                                                   | 43 s                                                                                   | 20 s                                                                                   | 37 s                                                                                     |
|  Ø5 |  Ø6 |  Ø7 |  Ø8 |
| 20 s                                                                                   | 43 s                                                                                   | 20 s                                                                                   | 37 s                                                                                     |

Lanes, Volumes, Timings  
4: Abbott Road & Fernald Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                        | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                    |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)              | 2                                                                                 | 0                                                                                 | 1                                                                                 | 15                                                                                | 0                                                                                 | 11                                                                                | 0                                                                                  | 557                                                                                 | 36                                                                                  | 24                                                                                  | 628                                                                                 | 0                                                                                   |
| Future Volume (vph)               | 2                                                                                 | 0                                                                                 | 1                                                                                 | 15                                                                                | 0                                                                                 | 11                                                                                | 0                                                                                  | 557                                                                                 | 36                                                                                  | 24                                                                                  | 628                                                                                 | 0                                                                                   |
| Ideal Flow (vphpl)                | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                               | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Lane Width (ft)                   | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                 | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 12                                                                                  |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                               | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                |
| Ped Bike Factor                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Frt                               |                                                                                   | 0.955                                                                             |                                                                                   |                                                                                   | 0.942                                                                             |                                                                                   |                                                                                    | 0.991                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Flt Protected                     |                                                                                   | 0.968                                                                             |                                                                                   |                                                                                   | 0.972                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     | 0.998                                                                               |                                                                                     |
| Satd. Flow (prot)                 | 0                                                                                 | 1722                                                                              | 0                                                                                 | 0                                                                                 | 1706                                                                              | 0                                                                                 | 0                                                                                  | 3244                                                                                | 0                                                                                   | 0                                                                                   | 3266                                                                                | 0                                                                                   |
| Flt Permitted                     |                                                                                   | 0.968                                                                             |                                                                                   |                                                                                   | 0.972                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     | 0.998                                                                               |                                                                                     |
| Satd. Flow (perm)                 | 0                                                                                 | 1722                                                                              | 0                                                                                 | 0                                                                                 | 1706                                                                              | 0                                                                                 | 0                                                                                  | 3244                                                                                | 0                                                                                   | 0                                                                                   | 3266                                                                                | 0                                                                                   |
| Link Speed (mph)                  |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                    | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)                |                                                                                   | 100                                                                               |                                                                                   |                                                                                   | 300                                                                               |                                                                                   |                                                                                    | 1266                                                                                |                                                                                     |                                                                                     | 1105                                                                                |                                                                                     |
| Travel Time (s)                   |                                                                                   | 2.3                                                                               |                                                                                   |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                    | 28.8                                                                                |                                                                                     |                                                                                     | 25.1                                                                                |                                                                                     |
| Confl. Peds. (#/hr)               | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 13                                                                                 |                                                                                     | 7                                                                                   | 7                                                                                   |                                                                                     | 13                                                                                  |
| Confl. Bikes (#/hr)               |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                    |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |
| Peak Hour Factor                  | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 0.95                                                                               | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                |
| Heavy Vehicles (%)                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                 | 3%                                                                                  | 2%                                                                                  | 2%                                                                                  | 3%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)                   | 2                                                                                 | 0                                                                                 | 1                                                                                 | 16                                                                                | 0                                                                                 | 12                                                                                | 0                                                                                  | 586                                                                                 | 38                                                                                  | 25                                                                                  | 661                                                                                 | 0                                                                                   |
| Shared Lane Traffic (%)           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)             | 0                                                                                 | 3                                                                                 | 0                                                                                 | 0                                                                                 | 28                                                                                | 0                                                                                 | 0                                                                                  | 624                                                                                 | 0                                                                                   | 0                                                                                   | 686                                                                                 | 0                                                                                   |
| Enter Blocked Intersection        | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment                    | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)                  |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 10                                                                                  |                                                                                     |                                                                                     | 10                                                                                  |                                                                                     |
| Link Offset(ft)                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)               |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |                                                                                   |                                                                                    | 16                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Two way Left Turn Lane            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor                    | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.00                                                                                |
| Turning Speed (mph)               | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                 |                                                                                     | 60                                                                                  | 60                                                                                  |                                                                                     | 60                                                                                  |
| Sign Control                      |                                                                                   | Stop                                                                              |                                                                                   |                                                                                   | Stop                                                                              |                                                                                   |                                                                                    | Free                                                                                |                                                                                     |                                                                                     | Free                                                                                |                                                                                     |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                        | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:                     | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization | 46.4%                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | ICU Level of Service A                                                             |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min)             | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

Lanes, Volumes, Timings  
5: Abbott Road & Elmview Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

12/04/2025

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                    |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)       | 19                                                                                | 1                                                                                 | 7                                                                                 | 7                                                                                 | 1                                                                                 | 11                                                                                | 8                                                                                  | 543                                                                                 | 9                                                                                   | 22                                                                                  | 587                                                                                 | 19                                                                                  |
| Future Volume (vph)        | 19                                                                                | 1                                                                                 | 7                                                                                 | 7                                                                                 | 1                                                                                 | 11                                                                                | 8                                                                                  | 543                                                                                 | 9                                                                                   | 22                                                                                  | 587                                                                                 | 19                                                                                  |
| Ideal Flow (vphpl)         | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                               | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Lane Width (ft)            | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 10                                                                                 | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  | 10                                                                                  |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.95                                                                               | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                | 0.95                                                                                |
| Ped Bike Factor            |                                                                                   | 0.99                                                                              |                                                                                   |                                                                                   | 0.99                                                                              |                                                                                   |                                                                                    | 1.00                                                                                |                                                                                     |                                                                                     | 1.00                                                                                |                                                                                     |
| Frt                        |                                                                                   | 0.966                                                                             |                                                                                   |                                                                                   | 0.919                                                                             |                                                                                   |                                                                                    | 0.997                                                                               |                                                                                     |                                                                                     | 0.996                                                                               |                                                                                     |
| Flt Protected              |                                                                                   | 0.966                                                                             |                                                                                   |                                                                                   | 0.983                                                                             |                                                                                   |                                                                                    | 0.999                                                                               |                                                                                     |                                                                                     | 0.998                                                                               |                                                                                     |
| Satd. Flow (prot)          | 0                                                                                 | 1730                                                                              | 0                                                                                 | 0                                                                                 | 1665                                                                              | 0                                                                                 | 0                                                                                  | 3227                                                                                | 0                                                                                   | 0                                                                                   | 3251                                                                                | 0                                                                                   |
| Flt Permitted              |                                                                                   | 0.776                                                                             |                                                                                   |                                                                                   | 0.873                                                                             |                                                                                   |                                                                                    | 0.946                                                                               |                                                                                     |                                                                                     | 0.928                                                                               |                                                                                     |
| Satd. Flow (perm)          | 0                                                                                 | 1385                                                                              | 0                                                                                 | 0                                                                                 | 1476                                                                              | 0                                                                                 | 0                                                                                  | 3056                                                                                | 0                                                                                   | 0                                                                                   | 3022                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                    |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 7                                                                                 |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                    | 4                                                                                   |                                                                                     |                                                                                     | 7                                                                                   |                                                                                     |
| Link Speed (mph)           |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                    | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 300                                                                               |                                                                                   |                                                                                   | 300                                                                               |                                                                                   |                                                                                    | 457                                                                                 |                                                                                     |                                                                                     | 1266                                                                                |                                                                                     |
| Travel Time (s)            |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                   | 6.8                                                                               |                                                                                   |                                                                                    | 10.4                                                                                |                                                                                     |                                                                                     | 28.8                                                                                |                                                                                     |
| Confl. Peds. (#/hr)        | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 6                                                                                  |                                                                                     | 5                                                                                   | 5                                                                                   |                                                                                     | 6                                                                                   |
| Confl. Bikes (#/hr)        |                                                                                   |                                                                                   | 2                                                                                 |                                                                                   |                                                                                   | 2                                                                                 |                                                                                    |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |
| Peak Hour Factor           | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                               | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                |
| Heavy Vehicles (%)         | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                 | 4%                                                                                  | 2%                                                                                  | 2%                                                                                  | 3%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 20                                                                                | 1                                                                                 | 7                                                                                 | 7                                                                                 | 1                                                                                 | 12                                                                                | 9                                                                                  | 578                                                                                 | 10                                                                                  | 23                                                                                  | 624                                                                                 | 20                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 0                                                                                 | 28                                                                                | 0                                                                                 | 0                                                                                 | 20                                                                                | 0                                                                                 | 0                                                                                  | 597                                                                                 | 0                                                                                   | 0                                                                                   | 667                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 16                                                                                |                                                                                   |                                                                                   | 16                                                                                |                                                                                   |                                                                                    | 16                                                                                  |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.09                                                                               | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                | 1.09                                                                                |
| Turning Speed (mph)        | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                |                                                                                   | 60                                                                                | 60                                                                                 |                                                                                     | 60                                                                                  | 60                                                                                  |                                                                                     | 60                                                                                  |
| Number of Detectors        | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 1                                                                                  | 1                                                                                   |                                                                                     | 1                                                                                   | 1                                                                                   |                                                                                     |
| Detector Template          | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                              | Thru                                                                              |                                                                                   | Left                                                                               | Thru                                                                                |                                                                                     | Left                                                                                | Thru                                                                                |                                                                                     |
| Leading Detector (ft)      | 20                                                                                | 50                                                                                |                                                                                   | 20                                                                                | 50                                                                                |                                                                                   | 20                                                                                 | 50                                                                                  |                                                                                     | 20                                                                                  | 50                                                                                  |                                                                                     |
| Trailing Detector (ft)     | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Detector 1 Position(ft)    | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                  | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Detector 1 Size(ft)        | 20                                                                                | 50                                                                                |                                                                                   | 20                                                                                | 50                                                                                |                                                                                   | 20                                                                                 | 50                                                                                  |                                                                                     | 20                                                                                  | 50                                                                                  |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                              | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Turn Type                  | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                               | NA                                                                                  |                                                                                     | Perm                                                                                | NA                                                                                  |                                                                                     |
| Protected Phases           |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   |                                                                                    | 2                                                                                   |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |
| Permitted Phases           | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 2                                                                                  |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |                                                                                     |
| Detector Phase             | 4                                                                                 | 4                                                                                 |                                                                                   | 8                                                                                 | 8                                                                                 |                                                                                   | 2                                                                                  | 2                                                                                   |                                                                                     | 6                                                                                   | 6                                                                                   |                                                                                     |
| Switch Phase               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)        | 6.0                                                                               | 6.0                                                                               |                                                                                   | 6.0                                                                               | 6.0                                                                               |                                                                                   | 20.0                                                                               | 20.0                                                                                |                                                                                     | 20.0                                                                                | 20.0                                                                                |                                                                                     |

Lanes, Volumes, Timings  
5: Abbott Road & Elmview Avenue

Abbott Road (CR4) from Fisher Rd to C/o Buffalo Line

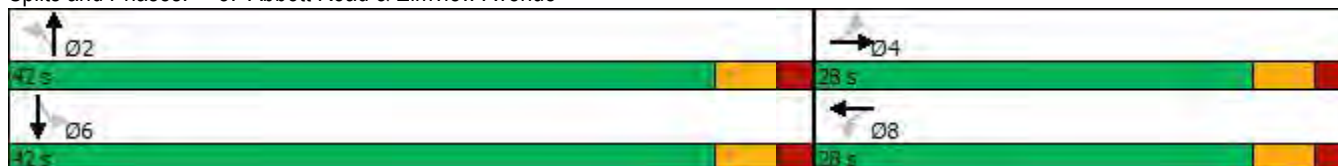
12/04/2025

|                         |  |       |     |       |       |     |       |       |     |       |       |     |
|-------------------------|------------------------------------------------------------------------------------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Lane Group              | EBL                                                                                | EBT   | EBR | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
| Minimum Split (s)       | 27.2                                                                               | 27.2  |     | 27.2  | 27.2  |     | 27.2  | 27.2  |     | 27.2  | 27.2  |     |
| Total Split (s)         | 28.0                                                                               | 28.0  |     | 28.0  | 28.0  |     | 42.0  | 42.0  |     | 42.0  | 42.0  |     |
| Total Split (%)         | 40.0%                                                                              | 40.0% |     | 40.0% | 40.0% |     | 60.0% | 60.0% |     | 60.0% | 60.0% |     |
| Maximum Green (s)       | 22.8                                                                               | 22.8  |     | 22.8  | 22.8  |     | 36.8  | 36.8  |     | 36.8  | 36.8  |     |
| Yellow Time (s)         | 3.2                                                                                | 3.2   |     | 3.2   | 3.2   |     | 3.2   | 3.2   |     | 3.2   | 3.2   |     |
| All-Red Time (s)        | 2.0                                                                                | 2.0   |     | 2.0   | 2.0   |     | 2.0   | 2.0   |     | 2.0   | 2.0   |     |
| Lost Time Adjust (s)    |                                                                                    | 0.0   |     |       | 0.0   |     |       | 0.0   |     |       | 0.0   |     |
| Total Lost Time (s)     |                                                                                    | 5.2   |     |       | 5.2   |     |       | 5.2   |     |       | 5.2   |     |
| Lead/Lag                |                                                                                    |       |     |       |       |     |       |       |     |       |       |     |
| Lead-Lag Optimize?      |                                                                                    |       |     |       |       |     |       |       |     |       |       |     |
| Vehicle Extension (s)   | 3.0                                                                                | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 3.0   |     |
| Recall Mode             | None                                                                               | None  |     | None  | None  |     | Max   | Max   |     | Max   | Max   |     |
| Walk Time (s)           | 7.0                                                                                | 7.0   |     | 7.0   | 7.0   |     | 7.0   | 7.0   |     | 7.0   | 7.0   |     |
| Flash Dont Walk (s)     | 15.0                                                                               | 15.0  |     | 15.0  | 15.0  |     | 15.0  | 15.0  |     | 15.0  | 15.0  |     |
| Pedestrian Calls (#/hr) | 2                                                                                  | 2     |     | 2     | 2     |     | 2     | 2     |     | 2     | 2     |     |
| Act Effect Green (s)    |                                                                                    | 9.1   |     |       | 9.0   |     |       | 54.2  |     |       | 54.2  |     |
| Actuated g/C Ratio      |                                                                                    | 0.14  |     |       | 0.14  |     |       | 0.86  |     |       | 0.86  |     |
| v/c Ratio               |                                                                                    | 0.14  |     |       | 0.09  |     |       | 0.23  |     |       | 0.26  |     |
| Control Delay           |                                                                                    | 20.2  |     |       | 16.0  |     |       | 3.5   |     |       | 3.6   |     |
| Queue Delay             |                                                                                    | 0.0   |     |       | 0.0   |     |       | 0.0   |     |       | 0.0   |     |
| Total Delay             |                                                                                    | 20.2  |     |       | 16.0  |     |       | 3.5   |     |       | 3.6   |     |
| LOS                     |                                                                                    | C     |     |       | B     |     |       | A     |     |       | A     |     |
| Approach Delay          |                                                                                    | 20.2  |     |       | 16.0  |     |       | 3.5   |     |       | 3.6   |     |
| Approach LOS            |                                                                                    | C     |     |       | B     |     |       | A     |     |       | A     |     |
| 90th %ile Green (s)     | 22.0                                                                               | 22.0  |     | 22.0  | 22.0  |     | 41.5  | 41.5  |     | 41.5  | 41.5  |     |
| 90th %ile Term Code     | Ped                                                                                | Ped   |     | Ped   | Ped   |     | Dwell | Dwell |     | Dwell | Dwell |     |
| 70th %ile Green (s)     | 7.2                                                                                | 7.2   |     | 7.2   | 7.2   |     | 51.8  | 51.8  |     | 51.8  | 51.8  |     |
| 70th %ile Term Code     | Gap                                                                                | Gap   |     | Hold  | Hold  |     | Dwell | Dwell |     | Dwell | Dwell |     |
| 50th %ile Green (s)     | 0.0                                                                                | 0.0   |     | 0.0   | 0.0   |     | 51.8  | 51.8  |     | 51.8  | 51.8  |     |
| 50th %ile Term Code     | Skip                                                                               | Skip  |     | Skip  | Skip  |     | Dwell | Dwell |     | Dwell | Dwell |     |
| 30th %ile Green (s)     | 0.0                                                                                | 0.0   |     | 0.0   | 0.0   |     | 51.8  | 51.8  |     | 51.8  | 51.8  |     |
| 30th %ile Term Code     | Skip                                                                               | Skip  |     | Skip  | Skip  |     | Dwell | Dwell |     | Dwell | Dwell |     |
| 10th %ile Green (s)     | 0.0                                                                                | 0.0   |     | 0.0   | 0.0   |     | 51.8  | 51.8  |     | 51.8  | 51.8  |     |
| 10th %ile Term Code     | Skip                                                                               | Skip  |     | Skip  | Skip  |     | Dwell | Dwell |     | Dwell | Dwell |     |
| Stops (vph)             |                                                                                    | 19    |     |       | 11    |     |       | 117   |     |       | 135   |     |
| Fuel Used(gal)          |                                                                                    | 0     |     |       | 0     |     |       | 3     |     |       | 7     |     |
| CO Emissions (g/hr)     |                                                                                    | 19    |     |       | 12    |     |       | 213   |     |       | 517   |     |
| NOx Emissions (g/hr)    |                                                                                    | 4     |     |       | 2     |     |       | 41    |     |       | 101   |     |
| VOC Emissions (g/hr)    |                                                                                    | 4     |     |       | 3     |     |       | 49    |     |       | 120   |     |
| Dilemma Vehicles (#)    |                                                                                    | 0     |     |       | 0     |     |       | 0     |     |       | 0     |     |
| Queue Length 50th (ft)  |                                                                                    | 7     |     |       | 3     |     |       | 0     |     |       | 0     |     |
| Queue Length 95th (ft)  |                                                                                    | 25    |     |       | 17    |     |       | 102   |     |       | 116   |     |
| Internal Link Dist (ft) |                                                                                    | 220   |     |       | 220   |     |       | 377   |     |       | 1186  |     |
| Turn Bay Length (ft)    |                                                                                    |       |     |       |       |     |       |       |     |       |       |     |
| Base Capacity (vph)     |                                                                                    | 513   |     |       | 549   |     |       | 2633  |     |       | 2605  |     |
| Starvation Cap Reductn  |                                                                                    | 0     |     |       | 0     |     |       | 0     |     |       | 0     |     |
| Spillback Cap Reductn   |                                                                                    | 0     |     |       | 0     |     |       | 0     |     |       | 0     |     |
| Storage Cap Reductn     |                                                                                    | 0     |     |       | 0     |     |       | 0     |     |       | 0     |     |
| Reduced v/c Ratio       |                                                                                    | 0.05  |     |       | 0.04  |     |       | 0.23  |     |       | 0.26  |     |

#### Intersection Summary

|                                   |                        |
|-----------------------------------|------------------------|
| Area Type:                        | Other                  |
| Cycle Length:                     | 70                     |
| Actuated Cycle Length:            | 62.9                   |
| Natural Cycle:                    | 55                     |
| Control Type:                     | Actuated-Uncoordinated |
| Maximum v/c Ratio:                | 0.26                   |
| Intersection Signal Delay:        | 4.1                    |
| Intersection LOS:                 | A                      |
| Intersection Capacity Utilization | 48.7%                  |
| ICU Level of Service              | A                      |
| Analysis Period (min)             | 15                     |
| 90th %ile Actuated Cycle:         | 73.9                   |
| 70th %ile Actuated Cycle:         | 69.4                   |
| 50th %ile Actuated Cycle:         | 57                     |
| 30th %ile Actuated Cycle:         | 57                     |
| 10th %ile Actuated Cycle:         | 57                     |

Splits and Phases: 5: Abbott Road & Elmview Avenue



| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.7  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 2    | 0    | 1    | 15   | 0    | 11   | 0    | 557  | 36   | 24   | 628  | 0    |
| Future Vol, veh/h        | 2    | 0    | 1    | 15   | 0    | 11   | 0    | 557  | 36   | 24   | 628  | 0    |
| Conflicting Peds, #/hr   | 5    | 0    | 5    | 5    | 0    | 5    | 13   | 0    | 7    | 7    | 0    | 13   |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 3    | 2    | 2    | 3    | 2    |
| Mvmt Flow                | 2    | 0    | 1    | 16   | 0    | 12   | 0    | 586  | 38   | 25   | 661  | 0    |

| Major/Minor          | Minor2 |      | Minor1 |      | Major1 |      | Major2 |   |   |      |   |   |
|----------------------|--------|------|--------|------|--------|------|--------|---|---|------|---|---|
| Conflicting Flow All | 1022   | 1355 | 349    | 998  | 1336   | 324  | 674    | 0 | 0 | 631  | 0 | 0 |
| Stage 1              | 724    | 724  | -      | 612  | 612    | -    | -      | - | - | -    | - | - |
| Stage 2              | 298    | 631  | -      | 386  | 724    | -    | -      | - | - | -    | - | - |
| Critical Hdwy        | 7.54   | 6.54 | 6.94   | 7.54 | 6.54   | 6.94 | 4.14   | - | - | 4.14 | - | - |
| Critical Hdwy Stg 1  | 6.54   | 5.54 | -      | 6.54 | 5.54   | -    | -      | - | - | -    | - | - |
| Critical Hdwy Stg 2  | 6.54   | 5.54 | -      | 6.54 | 5.54   | -    | -      | - | - | -    | - | - |
| Follow-up Hdwy       | 3.52   | 4.02 | 3.32   | 3.52 | 4.02   | 3.32 | 2.22   | - | - | 2.22 | - | - |
| Pot Cap-1 Maneuver   | 190    | 148  | 647    | 198  | 152    | 672  | 913    | - | - | 947  | - | - |
| Stage 1              | 383    | 429  | -      | 447  | 482    | -    | -      | - | - | -    | - | - |
| Stage 2              | 686    | 473  | -      | 609  | 429    | -    | -      | - | - | -    | - | - |
| Platoon blocked, %   |        |      |        |      |        |      |        | - | - | -    | - | - |
| Mov Cap-1 Maneuver   | 178    | 139  | 636    | 189  | 143    | 665  | 902    | - | - | 941  | - | - |
| Mov Cap-2 Maneuver   | 178    | 139  | -      | 189  | 143    | -    | -      | - | - | -    | - | - |
| Stage 1              | 378    | 406  | -      | 444  | 479    | -    | -      | - | - | -    | - | - |
| Stage 2              | 671    | 470  | -      | 580  | 406    | -    | -      | - | - | -    | - | - |

| Approach             | EB   |  | WB   |  | NB |  | SB  |  |
|----------------------|------|--|------|--|----|--|-----|--|
| HCM Control Delay, s | 20.6 |  | 19.8 |  | 0  |  | 0.5 |  |
| HCM LOS              | C    |  | C    |  |    |  |     |  |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL   | SBT   | SBR |
|-----------------------|-----|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h)      | 902 | -   | -   | 234        | 271   | 941   | -   |
| HCM Lane V/C Ratio    | -   | -   | -   | 0.013      | 0.101 | 0.027 | -   |
| HCM Control Delay (s) | 0   | -   | -   | 20.6       | 19.8  | 8.9   | 0.2 |
| HCM Lane LOS          | A   | -   | -   | C          | C     | A     | A   |
| HCM 95th %tile Q(veh) | 0   | -   | -   | 0          | 0.3   | 0.1   | -   |

### Summary of All Intervals

| Run Number              | 1    | 2    | 3    | 4    | 5    | Avg  |
|-------------------------|------|------|------|------|------|------|
| Start Time              | 4:50 | 4:50 | 4:50 | 4:50 | 4:50 | 4:50 |
| End Time                | 6:00 | 6:00 | 6:00 | 6:00 | 6:00 | 6:00 |
| Total Time (min)        | 70   | 70   | 70   | 70   | 70   | 70   |
| Time Recorded (min)     | 60   | 60   | 60   | 60   | 60   | 60   |
| # of Intervals          | 2    | 2    | 2    | 2    | 2    | 2    |
| # of Recorded Intervals | 1    | 1    | 1    | 1    | 1    | 1    |
| Vehs Entered            | 3615 | 3666 | 3513 | 3577 | 3517 | 3578 |
| Vehs Exited             | 3596 | 3660 | 3508 | 3593 | 3512 | 3574 |
| Starting Vehs           | 79   | 104  | 103  | 90   | 79   | 88   |
| Ending Vehs             | 98   | 110  | 108  | 74   | 84   | 90   |
| Denied Entry Before     | 0    | 1    | 3    | 0    | 0    | 0    |
| Denied Entry After      | 0    | 1    | 0    | 0    | 0    | 0    |
| Travel Distance (mi)    | 1678 | 1685 | 1606 | 1632 | 1613 | 1643 |
| Travel Time (hr)        | 94.4 | 95.9 | 88.0 | 93.2 | 90.5 | 92.4 |
| Total Delay (hr)        | 37.2 | 38.3 | 33.3 | 37.5 | 35.3 | 36.3 |
| Total Stops             | 3853 | 3944 | 3648 | 3863 | 3744 | 3811 |
| Fuel Used (gal)         | 66.8 | 67.2 | 63.5 | 65.4 | 64.1 | 65.4 |

### Interval #0 Information Seeding

|                                     |      |
|-------------------------------------|------|
| Start Time                          | 4:50 |
| End Time                            | 5:00 |
| Total Time (min)                    | 10   |
| Volumes adjusted by Growth Factors. |      |
| No data recorded this interval.     |      |

### Interval #1 Information Recording

|                                     |      |
|-------------------------------------|------|
| Start Time                          | 5:00 |
| End Time                            | 6:00 |
| Total Time (min)                    | 60   |
| Volumes adjusted by Growth Factors. |      |

| Run Number           | 1    | 2    | 3    | 4    | 5    | Avg  |
|----------------------|------|------|------|------|------|------|
| Vehs Entered         | 3615 | 3666 | 3513 | 3577 | 3517 | 3578 |
| Vehs Exited          | 3596 | 3660 | 3508 | 3593 | 3512 | 3574 |
| Starting Vehs        | 79   | 104  | 103  | 90   | 79   | 88   |
| Ending Vehs          | 98   | 110  | 108  | 74   | 84   | 90   |
| Denied Entry Before  | 0    | 1    | 3    | 0    | 0    | 0    |
| Denied Entry After   | 0    | 1    | 0    | 0    | 0    | 0    |
| Travel Distance (mi) | 1678 | 1685 | 1606 | 1632 | 1613 | 1643 |
| Travel Time (hr)     | 94.4 | 95.9 | 88.0 | 93.2 | 90.5 | 92.4 |
| Total Delay (hr)     | 37.2 | 38.3 | 33.3 | 37.5 | 35.3 | 36.3 |
| Total Stops          | 3853 | 3944 | 3648 | 3863 | 3744 | 3811 |
| Fuel Used (gal)      | 66.8 | 67.2 | 63.5 | 65.4 | 64.1 | 65.4 |



1: Abbott Road & Dorrance Avenue Performance by movement

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Denied Del/Veh (s)  | 0.2  | 0.1  | 0.2  | 0.2  | 0.1  | 0.1  | 0.0  | 0.0  | 0.0  | 0.2  | 0.2  | 0.2  |
| Total Delay (hr)    | 0.2  | 0.8  | 0.2  | 0.5  | 0.7  | 0.1  | 1.4  | 2.2  | 0.3  | 0.1  | 0.8  | 0.0  |
| Total Del/Veh (s)   | 22.0 | 22.3 | 4.6  | 29.6 | 24.5 | 5.2  | 29.1 | 23.3 | 16.3 | 13.2 | 9.6  | 2.2  |
| Stop Delay (hr)     | 0.2  | 0.7  | 0.2  | 0.4  | 0.6  | 0.1  | 1.2  | 1.7  | 0.2  | 0.1  | 0.6  | 0.0  |
| Stop Del/Veh (s)    | 19.3 | 18.9 | 4.1  | 27.0 | 20.9 | 5.1  | 24.8 | 18.2 | 13.1 | 10.5 | 6.7  | 1.8  |
| Total Stops         | 22   | 81   | 94   | 48   | 75   | 42   | 140  | 221  | 45   | 15   | 129  | 13   |
| Stop/Veh            | 0.71 | 0.65 | 0.69 | 0.80 | 0.69 | 0.67 | 0.82 | 0.64 | 0.66 | 0.68 | 0.40 | 0.38 |
| Travel Dist (mi)    | 1.5  | 6.2  | 6.8  | 2.9  | 5.3  | 3.1  | 22.1 | 43.7 | 8.7  | 1.7  | 24.6 | 2.6  |
| Travel Time (hr)    | 0.3  | 1.0  | 0.5  | 0.6  | 0.9  | 0.3  | 2.2  | 3.7  | 0.6  | 0.1  | 1.7  | 0.1  |
| Avg Speed (mph)     | 6    | 6    | 13   | 5    | 6    | 13   | 10   | 12   | 13   | 11   | 15   | 19   |
| Fuel Used (gal)     | 0.1  | 0.4  | 0.2  | 0.2  | 0.4  | 0.1  | 1.0  | 1.8  | 0.3  | 0.1  | 1.0  | 0.1  |
| Fuel Eff. (mpg)     | 16.0 | 15.2 | 32.2 | 13.7 | 14.6 | 33.8 | 23.0 | 23.8 | 26.9 | 25.1 | 24.6 | 39.4 |
| HC Emissions (g)    | 1    | 4    | 2    | 1    | 2    | 1    | 7    | 19   | 3    | 1    | 19   | 1    |
| CO Emissions (g)    | 21   | 124  | 65   | 33   | 86   | 29   | 203  | 508  | 80   | 21   | 487  | 22   |
| NOx Emissions (g)   | 2    | 13   | 6    | 3    | 9    | 2    | 24   | 60   | 9    | 2    | 54   | 3    |
| Vehicles Entered    | 31   | 124  | 136  | 58   | 106  | 63   | 170  | 341  | 67   | 22   | 318  | 34   |
| Vehicles Exited     | 31   | 125  | 137  | 60   | 108  | 63   | 168  | 337  | 67   | 21   | 316  | 34   |
| Hourly Exit Rate    | 31   | 125  | 137  | 60   | 108  | 63   | 168  | 337  | 67   | 21   | 316  | 34   |
| Input Volume        | 34   | 131  | 138  | 59   | 109  | 65   | 180  | 342  | 69   | 26   | 324  | 30   |
| % of Volume         | 91   | 95   | 99   | 102  | 99   | 97   | 93   | 99   | 97   | 81   | 98   | 113  |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Density (ft/veh)    |      |      |      |      |      |      |      |      |      |      |      |      |
| Occupancy (veh)     | 0    | 1    | 1    | 1    | 1    | 0    | 2    | 4    | 1    | 0    | 2    | 0    |

1: Abbott Road & Dorrance Avenue Performance by movement

| Movement            | All   |
|---------------------|-------|
| Denied Delay (hr)   | 0.0   |
| Denied Del/Veh (s)  | 0.1   |
| Total Delay (hr)    | 7.3   |
| Total Del/Veh (s)   | 17.8  |
| Stop Delay (hr)     | 6.0   |
| Stop Del/Veh (s)    | 14.5  |
| Total Stops         | 925   |
| Stop/Veh            | 0.63  |
| Travel Dist (mi)    | 129.1 |
| Travel Time (hr)    | 12.1  |
| Avg Speed (mph)     | 11    |
| Fuel Used (gal)     | 5.6   |
| Fuel Eff. (mpg)     | 22.9  |
| HC Emissions (g)    | 59    |
| CO Emissions (g)    | 1679  |
| NOx Emissions (g)   | 188   |
| Vehicles Entered    | 1470  |
| Vehicles Exited     | 1467  |
| Hourly Exit Rate    | 1467  |
| Input Volume        | 1507  |
| % of Volume         | 97    |
| Denied Entry Before | 0     |
| Denied Entry After  | 0     |
| Density (ft/veh)    | 263   |
| Occupancy (veh)     | 12    |

## 2: Abbott Road & Plaza Driveway Performance by movement

| Movement            | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  | All   |
|---------------------|------|------|------|------|------|------|-------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   |
| Denied Del/Veh (s)  | 0.2  | 0.1  | 0.0  | 0.0  | 0.1  | 0.0  | 0.0   |
| Total Delay (hr)    | 0.8  | 0.0  | 1.0  | 0.2  | 0.0  | 0.7  | 2.8   |
| Total Del/Veh (s)   | 26.4 | 7.0  | 5.6  | 6.0  | 12.4 | 5.1  | 7.1   |
| Stop Delay (hr)     | 0.7  | 0.0  | 0.5  | 0.1  | 0.0  | 0.4  | 1.6   |
| Stop Del/Veh (s)    | 22.2 | 3.9  | 2.6  | 2.4  | 8.0  | 2.8  | 4.2   |
| Total Stops         | 95   | 2    | 141  | 27   | 3    | 131  | 399   |
| Stop/Veh            | 0.86 | 0.67 | 0.22 | 0.26 | 0.75 | 0.25 | 0.29  |
| Travel Dist (mi)    | 5.2  | 0.1  | 84.5 | 14.3 | 0.5  | 67.0 | 171.6 |
| Travel Time (hr)    | 1.0  | 0.0  | 3.8  | 0.6  | 0.0  | 3.2  | 8.7   |
| Avg Speed (mph)     | 5    | 14   | 22   | 22   | 15   | 21   | 20    |
| Fuel Used (gal)     | 0.3  | 0.0  | 3.6  | 0.6  | 0.0  | 2.9  | 7.5   |
| Fuel Eff. (mpg)     | 15.0 | 44.1 | 23.6 | 23.7 | 22.1 | 23.1 | 23.0  |
| HC Emissions (g)    | 1    | 0    | 45   | 6    | 0    | 45   | 98    |
| CO Emissions (g)    | 61   | 1    | 1398 | 215  | 6    | 1345 | 3026  |
| NOx Emissions (g)   | 6    | 0    | 157  | 24   | 1    | 144  | 332   |
| Vehicles Entered    | 109  | 3    | 643  | 103  | 4    | 521  | 1383  |
| Vehicles Exited     | 109  | 3    | 639  | 103  | 4    | 522  | 1380  |
| Hourly Exit Rate    | 109  | 3    | 639  | 103  | 4    | 522  | 1380  |
| Input Volume        | 111  | 3    | 651  | 99   | 5    | 529  | 1398  |
| % of Volume         | 98   | 100  | 98   | 104  | 80   | 99   | 99    |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0     |
| Density (ft/veh)    |      |      |      |      |      |      | 387   |
| Occupancy (veh)     | 1    | 0    | 4    | 1    | 0    | 3    | 9     |

### 3: Abbott Road & Ridge Road Performance by movement

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Denied Delay (hr)   | 0.1  | 0.2  | 0.1  | 0.2  | 0.1  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Denied Del/Veh (s)  | 3.0  | 1.0  | 3.2  | 2.7  | 0.9  | 0.6  | 0.2  | 0.0  | 0.1  | 0.0  | 0.0  | 0.0  |
| Total Delay (hr)    | 0.5  | 5.3  | 0.3  | 2.3  | 3.9  | 0.6  | 0.3  | 3.1  | 0.7  | 2.5  | 2.0  | 0.3  |
| Total Del/Veh (s)   | 26.8 | 31.6 | 15.2 | 31.0 | 28.1 | 5.3  | 24.7 | 35.7 | 9.4  | 31.8 | 24.3 | 20.7 |
| Stop Delay (hr)     | 0.4  | 4.2  | 0.2  | 1.8  | 2.9  | 0.3  | 0.2  | 2.7  | 0.4  | 2.0  | 1.7  | 0.3  |
| Stop Del/Veh (s)    | 19.8 | 24.8 | 10.4 | 24.2 | 21.0 | 2.8  | 20.4 | 31.4 | 5.7  | 25.6 | 20.4 | 16.3 |
| Total Stops         | 77   | 475  | 50   | 248  | 333  | 127  | 32   | 240  | 149  | 235  | 186  | 38   |
| Stop/Veh            | 1.15 | 0.79 | 0.69 | 0.92 | 0.67 | 0.33 | 0.80 | 0.78 | 0.60 | 0.84 | 0.62 | 0.68 |
| Travel Dist (mi)    | 9.6  | 87.2 | 10.5 | 36.9 | 68.2 | 53.0 | 7.9  | 60.4 | 49.6 | 38.3 | 40.7 | 7.6  |
| Travel Time (hr)    | 0.9  | 8.4  | 0.7  | 3.8  | 6.3  | 2.4  | 0.5  | 5.1  | 2.3  | 3.8  | 3.4  | 0.6  |
| Avg Speed (mph)     | 12   | 11   | 16   | 10   | 11   | 23   | 15   | 12   | 21   | 10   | 12   | 13   |
| Fuel Used (gal)     | 0.4  | 3.7  | 0.4  | 1.7  | 3.0  | 1.7  | 0.3  | 2.3  | 1.5  | 1.9  | 1.8  | 0.3  |
| Fuel Eff. (mpg)     | 24.5 | 23.2 | 25.0 | 21.5 | 22.9 | 30.4 | 28.9 | 25.8 | 32.3 | 20.7 | 22.6 | 24.2 |
| HC Emissions (g)    | 2    | 24   | 5    | 11   | 25   | 20   | 3    | 23   | 12   | 15   | 15   | 4    |
| CO Emissions (g)    | 84   | 811  | 169  | 445  | 707  | 548  | 61   | 486  | 315  | 481  | 507  | 114  |
| NOx Emissions (g)   | 7    | 81   | 15   | 40   | 80   | 60   | 7    | 65   | 37   | 52   | 51   | 12   |
| Vehicles Entered    | 66   | 600  | 72   | 268  | 493  | 379  | 39   | 301  | 245  | 275  | 293  | 55   |
| Vehicles Exited     | 66   | 593  | 72   | 266  | 491  | 380  | 40   | 307  | 248  | 277  | 295  | 56   |
| Hourly Exit Rate    | 66   | 593  | 72   | 266  | 491  | 380  | 40   | 307  | 248  | 277  | 295  | 56   |
| Input Volume        | 68   | 608  | 74   | 280  | 475  | 384  | 46   | 303  | 239  | 280  | 296  | 56   |
| % of Volume         | 97   | 98   | 97   | 95   | 103  | 99   | 87   | 101  | 104  | 99   | 100  | 100  |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Density (ft/veh)    |      |      |      |      |      |      |      |      |      |      |      |      |
| Occupancy (veh)     | 1    | 8    | 1    | 4    | 6    | 2    | 1    | 5    | 2    | 4    | 3    | 1    |

### 3: Abbott Road & Ridge Road Performance by movement

| Movement            | All   |
|---------------------|-------|
| Denied Delay (hr)   | 0.7   |
| Denied Del/Veh (s)  | 0.8   |
| Total Delay (hr)    | 21.7  |
| Total Del/Veh (s)   | 25.0  |
| Stop Delay (hr)     | 17.0  |
| Stop Del/Veh (s)    | 19.6  |
| Total Stops         | 2190  |
| Stop/Veh            | 0.70  |
| Travel Dist (mi)    | 469.8 |
| Travel Time (hr)    | 38.2  |
| Avg Speed (mph)     | 13    |
| Fuel Used (gal)     | 19.1  |
| Fuel Eff. (mpg)     | 24.6  |
| HC Emissions (g)    | 159   |
| CO Emissions (g)    | 4729  |
| NOx Emissions (g)   | 508   |
| Vehicles Entered    | 3086  |
| Vehicles Exited     | 3091  |
| Hourly Exit Rate    | 3091  |
| Input Volume        | 3109  |
| % of Volume         | 99    |
| Denied Entry Before | 0     |
| Denied Entry After  | 0     |
| Density (ft/veh)    | 286   |
| Occupancy (veh)     | 37    |

4: Abbott Road & Fernald Avenue Performance by movement

| Movement            | EBL  | EBR  | WBL  | WBR  | NBT   | NBR  | SBL  | SBT   | All   |
|---------------------|------|------|------|------|-------|------|------|-------|-------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0   |
| Denied Del/Veh (s)  | 0.1  | 0.1  | 0.1  | 0.1  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0   |
| Total Delay (hr)    | 0.0  | 0.0  | 0.0  | 0.0  | 0.2   | 0.0  | 0.0  | 0.5   | 0.8   |
| Total Del/Veh (s)   | 10.0 | 8.2  | 11.7 | 7.0  | 1.4   | 1.6  | 7.7  | 2.7   | 2.3   |
| Stop Delay (hr)     | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.1   |
| Stop Del/Veh (s)    | 8.5  | 6.6  | 8.4  | 3.7  | 0.1   | 0.1  | 2.8  | 0.2   | 0.4   |
| Total Stops         | 3    | 2    | 14   | 12   | 5     | 0    | 11   | 6     | 53    |
| Stop/Veh            | 1.00 | 1.00 | 1.00 | 1.00 | 0.01  | 0.00 | 0.48 | 0.01  | 0.04  |
| Travel Dist (mi)    | 0.0  | 0.0  | 0.7  | 0.6  | 129.9 | 8.3  | 4.8  | 128.0 | 272.3 |
| Travel Time (hr)    | 0.0  | 0.0  | 0.1  | 0.0  | 4.6   | 0.3  | 0.2  | 4.8   | 10.0  |
| Avg Speed (mph)     | 4    | 4    | 10   | 14   | 28    | 28   | 23   | 27    | 27    |
| Fuel Used (gal)     | 0.0  | 0.0  | 0.0  | 0.0  | 4.1   | 0.3  | 0.2  | 4.9   | 9.4   |
| Fuel Eff. (mpg)     | 14.5 | 16.1 | 33.7 | 42.2 | 32.1  | 31.7 | 27.2 | 26.4  | 29.0  |
| HC Emissions (g)    | 0    | 0    | 0    | 0    | 57    | 3    | 1    | 55    | 116   |
| CO Emissions (g)    | 0    | 0    | 2    | 2    | 1111  | 70   | 43   | 1560  | 2789  |
| NOx Emissions (g)   | 0    | 0    | 0    | 0    | 165   | 10   | 4    | 188   | 368   |
| Vehicles Entered    | 3    | 2    | 14   | 12   | 556   | 36   | 23   | 616   | 1262  |
| Vehicles Exited     | 3    | 2    | 14   | 12   | 555   | 36   | 23   | 615   | 1260  |
| Hourly Exit Rate    | 3    | 2    | 14   | 12   | 555   | 36   | 23   | 615   | 1260  |
| Input Volume        | 2    | 1    | 15   | 11   | 561   | 36   | 24   | 632   | 1282  |
| % of Volume         | 150  | 200  | 93   | 109  | 99    | 100  | 96   | 97    | 98    |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0     | 0     |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0     | 0     |
| Density (ft/veh)    |      |      |      |      |       |      |      |       | 504   |
| Occupancy (veh)     | 0    | 0    | 0    | 0    | 5     | 0    | 0    | 5     | 10    |

5: Abbott Road & Elmview Avenue Performance by movement

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT   | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|-------|------|
| Denied Delay (hr)   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  |
| Denied Del/Veh (s)  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.2  | 0.2  | 0.2  | 0.0  | 0.0   | 0.0  |
| Total Delay (hr)    | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.5  | 0.0  | 0.1  | 0.7   | 0.0  |
| Total Del/Veh (s)   | 13.1 | 19.3 | 6.9  | 14.7 | 10.5 | 5.9  | 8.9  | 3.0  | 2.1  | 9.1  | 4.0   | 2.6  |
| Stop Delay (hr)     | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.3  | 0.0  | 0.0  | 0.3   | 0.0  |
| Stop Del/Veh (s)    | 9.9  | 14.9 | 4.2  | 11.3 | 8.7  | 3.4  | 5.6  | 1.9  | 1.0  | 4.7  | 1.8   | 0.6  |
| Total Stops         | 18   | 1    | 6    | 5    | 1    | 9    | 4    | 87   | 1    | 12   | 98    | 2    |
| Stop/Veh            | 0.82 | 1.00 | 0.86 | 0.83 | 1.00 | 0.75 | 0.44 | 0.16 | 0.12 | 0.55 | 0.17  | 0.11 |
| Travel Dist (mi)    | 1.1  | 0.1  | 0.3  | 0.3  | 0.1  | 0.6  | 0.7  | 42.9 | 0.6  | 5.2  | 139.0 | 4.4  |
| Travel Time (hr)    | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.9  | 0.0  | 0.2  | 5.3   | 0.2  |
| Avg Speed (mph)     | 9    | 9    | 13   | 9    | 12   | 15   | 15   | 23   | 25   | 22   | 26    | 27   |
| Fuel Used (gal)     | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.5  | 0.0  | 0.2  | 4.0   | 0.1  |
| Fuel Eff. (mpg)     | 28.2 | 27.2 | 37.8 | 31.9 | 28.6 | 37.5 | 31.1 | 29.3 | 28.9 | 33.6 | 34.5  | 34.1 |
| HC Emissions (g)    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 25   | 0    | 1    | 45    | 1    |
| CO Emissions (g)    | 5    | 0    | 2    | 1    | 0    | 3    | 6    | 599  | 5    | 20   | 799   | 17   |
| NOx Emissions (g)   | 1    | 0    | 0    | 0    | 0    | 0    | 0    | 72   | 0    | 2    | 129   | 2    |
| Vehicles Entered    | 21   | 1    | 7    | 6    | 1    | 12   | 9    | 535  | 8    | 22   | 588   | 19   |
| Vehicles Exited     | 22   | 1    | 6    | 6    | 1    | 12   | 8    | 534  | 8    | 22   | 585   | 18   |
| Hourly Exit Rate    | 22   | 1    | 6    | 6    | 1    | 12   | 8    | 534  | 8    | 22   | 585   | 18   |
| Input Volume        | 19   | 1    | 7    | 7    | 1    | 11   | 8    | 543  | 9    | 22   | 603   | 19   |
| % of Volume         | 116  | 100  | 86   | 86   | 100  | 109  | 100  | 98   | 89   | 100  | 97    | 95   |
| Denied Entry Before | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0    |
| Denied Entry After  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0    |
| Density (ft/veh)    |      |      |      |      |      |      |      |      |      |      |       |      |
| Occupancy (veh)     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 2    | 0    | 0    | 5     | 0    |

5: Abbott Road & Elmview Avenue Performance by movement

| Movement            | All   |
|---------------------|-------|
| Denied Delay (hr)   | 0.0   |
| Denied Del/Veh (s)  | 0.1   |
| Total Delay (hr)    | 1.4   |
| Total Del/Veh (s)   | 4.0   |
| Stop Delay (hr)     | 0.7   |
| Stop Del/Veh (s)    | 2.1   |
| Total Stops         | 244   |
| Stop/Veh            | 0.20  |
| Travel Dist (mi)    | 195.4 |
| Travel Time (hr)    | 8.0   |
| Avg Speed (mph)     | 25    |
| Fuel Used (gal)     | 5.9   |
| Fuel Eff. (mpg)     | 33.1  |
| HC Emissions (g)    | 72    |
| CO Emissions (g)    | 1459  |
| NOx Emissions (g)   | 207   |
| Vehicles Entered    | 1229  |
| Vehicles Exited     | 1223  |
| Hourly Exit Rate    | 1223  |
| Input Volume        | 1250  |
| % of Volume         | 98    |
| Denied Entry Before | 0     |
| Denied Entry After  | 0     |
| Density (ft/veh)    | 490   |
| Occupancy (veh)     | 8     |



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Total Network Performance

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|                     |        |
|---------------------|--------|
| Denied Delay (hr)   | 0.8    |
| Denied Del/Veh (s)  | 0.8    |
| Total Delay (hr)    | 35.5   |
| Total Del/Veh (s)   | 34.9   |
| Stop Delay (hr)     | 25.6   |
| Stop Del/Veh (s)    | 25.1   |
| Total Stops         | 3811   |
| Stop/Veh            | 1.04   |
| Travel Dist (mi)    | 1642.7 |
| Travel Time (hr)    | 92.4   |
| Avg Speed (mph)     | 18     |
| Fuel Used (gal)     | 65.4   |
| Fuel Eff. (mpg)     | 25.1   |
| HC Emissions (g)    | 729    |
| CO Emissions (g)    | 20973  |
| NOx Emissions (g)   | 2388   |
| Vehicles Entered    | 3578   |
| Vehicles Exited     | 3574   |
| Hourly Exit Rate    | 3574   |
| Input Volume        | 12056  |
| % of Volume         | 30     |
| Denied Entry Before | 0      |
| Denied Entry After  | 0      |
| Density (ft/veh)    | 286    |
| Occupancy (veh)     | 92     |

Intersection: 1: Abbott Road & Dorrance Avenue

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | LT  | TR  | LT  | TR  | LT  | TR  | LT  | TR  |
| Maximum Queue (ft)    | 133 | 94  | 164 | 105 | 222 | 216 | 164 | 132 |
| Average Queue (ft)    | 64  | 33  | 72  | 29  | 122 | 119 | 80  | 30  |
| 95th Queue (ft)       | 113 | 66  | 136 | 80  | 195 | 192 | 138 | 81  |
| Link Distance (ft)    | 254 | 254 | 253 | 253 | 609 | 609 | 402 | 402 |
| Upstream Blk Time (%) |     |     | 0   |     |     |     |     |     |
| Queuing Penalty (veh) |     |     | 0   |     |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |

Intersection: 2: Abbott Road & Plaza Driveway

| Movement              | WB  | WB  | NB  | NB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | R   | T   | TR  | LT  | T   |
| Maximum Queue (ft)    | 112 | 21  | 163 | 164 | 131 | 92  |
| Average Queue (ft)    | 53  | 2   | 53  | 66  | 60  | 35  |
| 95th Queue (ft)       | 95  | 11  | 120 | 127 | 113 | 77  |
| Link Distance (ft)    | 245 | 245 | 658 | 658 | 609 | 609 |
| Upstream Blk Time (%) |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |

Queuing and Blocking Report  
2050 Build Alt 2 PM Peak Hour

12/04/2025

Intersection: 3: Abbott Road & Ridge Road

| Movement              | EB  | EB  | EB  | WB  | WB  | WB  | NB  | NB   | NB   | NB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|------|------|-----|-----|-----|
| Directions Served     | L   | T   | TR  | L   | T   | R   | L   | T    | T    | R   | L   | T   |
| Maximum Queue (ft)    | 140 | 339 | 312 | 300 | 536 | 233 | 68  | 149  | 150  | 153 | 258 | 170 |
| Average Queue (ft)    | 63  | 213 | 168 | 138 | 220 | 51  | 19  | 87   | 87   | 64  | 132 | 72  |
| 95th Queue (ft)       | 148 | 310 | 276 | 263 | 403 | 144 | 48  | 136  | 139  | 115 | 223 | 129 |
| Link Distance (ft)    |     | 757 |     |     | 718 | 718 |     | 1007 | 1007 |     |     | 658 |
| Upstream Blk Time (%) |     |     |     |     | 0   |     |     |      |      |     |     |     |
| Queuing Penalty (veh) |     |     |     |     | 0   |     |     |      |      |     |     |     |
| Storage Bay Dist (ft) | 90  |     | 250 | 200 |     |     | 170 |      |      | 170 | 250 |     |
| Storage Blk Time (%)  | 0   | 44  | 0   | 1   | 12  |     |     | 0    | 0    | 0   | 1   |     |
| Queuing Penalty (veh) | 1   | 196 | 1   | 6   | 32  |     |     | 0    | 0    | 0   | 1   |     |

Intersection: 3: Abbott Road & Ridge Road

| Movement              | SB  |
|-----------------------|-----|
| Directions Served     | TR  |
| Maximum Queue (ft)    | 170 |
| Average Queue (ft)    | 91  |
| 95th Queue (ft)       | 146 |
| Link Distance (ft)    | 658 |
| Upstream Blk Time (%) |     |
| Queuing Penalty (veh) |     |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

Intersection: 4: Abbott Road & Fernald Avenue

| Movement              | EB  | WB  | NB   | NB   | SB   | SB   |
|-----------------------|-----|-----|------|------|------|------|
| Directions Served     | LTR | LTR | LT   | TR   | LT   | TR   |
| Maximum Queue (ft)    | 24  | 38  | 26   | 46   | 46   | 56   |
| Average Queue (ft)    | 4   | 16  | 1    | 3    | 10   | 3    |
| 95th Queue (ft)       | 17  | 36  | 12   | 22   | 34   | 24   |
| Link Distance (ft)    | 50  | 251 | 1192 | 1192 | 1007 | 1007 |
| Upstream Blk Time (%) |     |     |      |      |      |      |
| Queuing Penalty (veh) |     |     |      |      |      |      |
| Storage Bay Dist (ft) |     |     |      |      |      |      |
| Storage Blk Time (%)  |     |     |      |      |      |      |
| Queuing Penalty (veh) |     |     |      |      |      |      |

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Intersection: 5: Abbott Road & Elmview Avenue

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| Movement              | EB  | WB  | NB  | NB  | SB   | SB   |
|-----------------------|-----|-----|-----|-----|------|------|
| Directions Served     | LTR | LTR | LT  | TR  | LT   | TR   |
| Maximum Queue (ft)    | 55  | 33  | 118 | 98  | 129  | 142  |
| Average Queue (ft)    | 19  | 10  | 37  | 32  | 38   | 44   |
| 95th Queue (ft)       | 46  | 30  | 90  | 81  | 92   | 107  |
| Link Distance (ft)    | 258 | 256 | 419 | 419 | 1192 | 1192 |
| Upstream Blk Time (%) |     |     |     |     |      |      |
| Queuing Penalty (veh) |     |     |     |     |      |      |
| Storage Bay Dist (ft) |     |     |     |     |      |      |
| Storage Blk Time (%)  |     |     |     |     |      |      |
| Queuing Penalty (veh) |     |     |     |     |      |      |

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Network Summary

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Network wide Queuing Penalty: 237

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Intersection: 2: Abbott Road & Plaza Driveway

| Phase                | 2    | 6    | 8    |
|----------------------|------|------|------|
| Movement(s) Served   | NBT  | SBTL | WBL  |
| Maximum Green (s)    | 44.8 | 44.8 | 24.8 |
| Minimum Green (s)    | 6.0  | 6.0  | 6.0  |
| Recall               | Max  | Max  | None |
| Avg. Green (s)       | 49.6 | 49.6 | 12.2 |
| g/C Ratio            | NA   | NA   | NA   |
| Cycles Skipped (%)   | 0    | 0    | 0    |
| Cycles @ Minimum (%) | 0    | 0    | 26   |
| Cycles Maxed Out (%) | 100  | 100  | 0    |
| Cycles with Peds (%) | 20   | 0    | 26   |

Controller Summary

Average Cycle Length (s): NA

Number of Complete Cycles : 0

Intersection: 3: Abbott Road & Ridge Road

| Phase                | 1    | 2    | 3    | 4    | 5     | 6    | 7     | 8    |
|----------------------|------|------|------|------|-------|------|-------|------|
| Movement(s) Served   | SBL  | NBTL | WBL  | EBTL | NBL   | SBTL | EBL   | WBTL |
| Maximum Green (s)    | 14.8 | 37.8 | 14.8 | 31.8 | 14.8  | 37.8 | 14.8  | 31.8 |
| Minimum Green (s)    | 7.0  | 7.0  | 7.0  | 7.0  | 7.0   | 7.0  | 7.0   | 7.0  |
| Recall               | None | None | None | Max  | None  | None | None  | Max  |
| Avg. Green (s)       | 14.4 | 19.5 | 13.3 | 32.4 | 9.0   | 32.6 | 8.2   | 42.7 |
| g/C Ratio            | NA   | NA   | NA   | NA   | -0.01 | NA   | -0.01 | NA   |
| Cycles Skipped (%)   | 0    | 0    | 0    | 0    | 54    | 0    | 37    | 0    |
| Cycles @ Minimum (%) | 0    | 0    | 3    | 0    | 17    | 0    | 34    | 0    |
| Cycles Maxed Out (%) | 75   | 0    | 61   | 100  | 0     | 25   | 0     | 100  |
| Cycles with Peds (%) | 0    | 11   | 0    | 11   | 0     | 14   | 0     | 9    |

Controller Summary

Average Cycle Length (s): NA

Number of Complete Cycles : 0

Intersection: 5: Abbott Road & Elmview Avenue

| Phase                | 2    | 4    | 6    | 8    |
|----------------------|------|------|------|------|
| Movement(s) Served   | NBTL | EBTL | SBTL | WBTL |
| Maximum Green (s)    | 36.8 | 22.8 | 36.8 | 22.8 |
| Minimum Green (s)    | 20.0 | 6.0  | 20.0 | 6.0  |
| Recall               | Max  | None | Max  | None |
| Avg. Green (s)       | 76.0 | 10.6 | 76.0 | 10.6 |
| g/C Ratio            | NA   | NA   | NA   | NA   |
| Cycles Skipped (%)   | 0    | 0    | 0    | 0    |
| Cycles @ Minimum (%) | 0    | 59   | 0    | 59   |
| Cycles Maxed Out (%) | 100  | 0    | 100  | 0    |
| Cycles with Peds (%) | 14   | 11   | 11   | 14   |

Controller Summary

Average Cycle Length (s): NA

Number of Complete Cycles : 0

# Arterial LOS Reports

## Arterial Level of Service: NB Abbott Road

| Cross Street    | Arterial Class | Flow Speed | Running Time | Signal Delay | Travel Time (s) | Dist (mi) | Arterial Speed | Arterial LOS |
|-----------------|----------------|------------|--------------|--------------|-----------------|-----------|----------------|--------------|
| Elmview Avenue  | III            | 30         | 46.1         | 1.5          | 47.6            | 0.36      | 27.5           | B            |
| Ridge Road      | III            | 30         | 57.0         | 28.4         | 85.4            | 0.45      | 18.9           | C            |
| Plaza Driveway  | III            | 30         | 19.0         | 2.1          | 21.1            | 0.14      | 24.2           | B            |
| Dorrance Avenue | III            | 30         | 17.5         | 12.8         | 30.3            | 0.13      | 15.5           | D            |
| Total           | III            |            | 139.6        | 44.8         | 184.4           | 1.08      | 21.2           | C            |

## Arterial Level of Service: SB Abbott Road

| Cross Street    | Arterial Class | Flow Speed | Running Time | Signal Delay | Travel Time (s) | Dist (mi) | Arterial Speed | Arterial LOS |
|-----------------|----------------|------------|--------------|--------------|-----------------|-----------|----------------|--------------|
| Dorrance Avenue | III            | 30         | 22.5         | 4.7          | 27.2            | 0.18      | 23.4           | C            |
| Plaza Driveway  | III            | 30         | 17.5         | 2.3          | 19.8            | 0.13      | 23.7           | C            |
| Ridge Road      | III            | 30         | 19.0         | 17.2         | 36.2            | 0.14      | 14.1           | D            |
| Elmview Avenue  | III            | 30         | 57.0         | 1.4          | 58.4            | 0.45      | 27.7           | B            |
| Total           | III            |            | 116.0        | 25.6         | 141.6           | 0.90      | 22.8           | C            |



## Arterial Level of Service: NB Abbott Road

| Cross Street    | Arterial Class | Flow Speed | Running Time | Signal Delay | Travel Time (s) | Dist (mi) | Arterial Speed | Arterial LOS |
|-----------------|----------------|------------|--------------|--------------|-----------------|-----------|----------------|--------------|
| Elmview Avenue  | III            | 30         | 46.1         | 1.5          | 47.6            | 0.36      | 27.5           | B            |
| Ridge Road      | III            | 30         | 57.0         | 33.4         | 90.4            | 0.45      | 17.9           | D            |
| Plaza Driveway  | III            | 30         | 19.0         | 3.5          | 22.5            | 0.14      | 22.7           | C            |
| Dorrance Avenue | III            | 30         | 17.5         | 16.3         | 33.8            | 0.13      | 13.9           | E            |
| Total           | III            |            | 139.6        | 54.7         | 194.3           | 1.08      | 20.1           | C            |

## Arterial Level of Service: SB Abbott Road

| Cross Street    | Arterial Class | Flow Speed | Running Time | Signal Delay | Travel Time (s) | Dist (mi) | Arterial Speed | Arterial LOS |
|-----------------|----------------|------------|--------------|--------------|-----------------|-----------|----------------|--------------|
| Dorrance Avenue | III            | 30         | 22.5         | 4.9          | 27.4            | 0.18      | 23.3           | C            |
| Plaza Driveway  | III            | 30         | 17.5         | 3.6          | 21.1            | 0.13      | 22.2           | C            |
| Ridge Road      | III            | 30         | 19.0         | 23.9         | 42.9            | 0.14      | 11.9           | E            |
| Elmview Avenue  | III            | 30         | 57.0         | 1.6          | 58.6            | 0.45      | 27.6           | B            |
| Total           | III            |            | 116.0        | 34.0         | 150.0           | 0.90      | 21.6           | C            |

## Arterial Level of Service: NB Abbott Road

| Cross Street    | Arterial Class | Flow Speed | Running Time | Signal Delay | Travel Time (s) | Dist (mi) | Arterial Speed | Arterial LOS |
|-----------------|----------------|------------|--------------|--------------|-----------------|-----------|----------------|--------------|
| Elmview Avenue  | III            | 30         | 46.1         | 1.5          | 47.6            | 0.36      | 27.5           | B            |
| Ridge Road      | III            | 30         | 57.0         | 30.4         | 87.4            | 0.45      | 18.5           | C            |
| Plaza Driveway  | III            | 30         | 19.0         | 2.3          | 21.3            | 0.14      | 23.9           | C            |
| Dorrance Avenue | III            | 30         | 17.5         | 13.5         | 31.0            | 0.13      | 15.1           | D            |
| Total           | III            |            | 139.6        | 47.7         | 187.3           | 1.08      | 20.8           | C            |

## Arterial Level of Service: SB Abbott Road

| Cross Street    | Arterial Class | Flow Speed | Running Time | Signal Delay | Travel Time (s) | Dist (mi) | Arterial Speed | Arterial LOS |
|-----------------|----------------|------------|--------------|--------------|-----------------|-----------|----------------|--------------|
| Dorrance Avenue | III            | 30         | 22.5         | 4.8          | 27.3            | 0.18      | 23.4           | C            |
| Plaza Driveway  | III            | 30         | 17.5         | 2.4          | 19.9            | 0.13      | 23.6           | C            |
| Ridge Road      | III            | 30         | 19.0         | 19.0         | 38.0            | 0.14      | 13.4           | E            |
| Elmview Avenue  | III            | 30         | 57.0         | 1.5          | 58.5            | 0.45      | 27.6           | B            |
| Total           | III            |            | 116.0        | 27.7         | 143.7           | 0.90      | 22.5           | C            |

## Arterial Level of Service: NB Abbott Road

| Cross Street    | Arterial Class | Flow Speed | Running Time | Signal Delay | Travel Time (s) | Dist (mi) | Arterial Speed | Arterial LOS |
|-----------------|----------------|------------|--------------|--------------|-----------------|-----------|----------------|--------------|
| Elmview Avenue  | III            | 30         | 46.1         | 1.6          | 47.7            | 0.36      | 27.4           | B            |
| Ridge Road      | III            | 30         | 57.0         | 33.3         | 90.3            | 0.45      | 17.9           | D            |
| Plaza Driveway  | III            | 30         | 19.0         | 3.9          | 22.9            | 0.14      | 22.3           | C            |
| Dorrance Avenue | III            | 30         | 17.5         | 18.1         | 35.6            | 0.13      | 13.2           | E            |
| Total           | III            |            | 139.6        | 56.9         | 196.5           | 1.08      | 19.9           | C            |

## Arterial Level of Service: SB Abbott Road

| Cross Street    | Arterial Class | Flow Speed | Running Time | Signal Delay | Travel Time (s) | Dist (mi) | Arterial Speed | Arterial LOS |
|-----------------|----------------|------------|--------------|--------------|-----------------|-----------|----------------|--------------|
| Dorrance Avenue | III            | 30         | 22.5         | 5.1          | 27.6            | 0.18      | 23.1           | C            |
| Plaza Driveway  | III            | 30         | 17.5         | 3.9          | 21.4            | 0.13      | 21.9           | C            |
| Ridge Road      | III            | 30         | 19.0         | 26.1         | 45.1            | 0.14      | 11.3           | E            |
| Elmview Avenue  | III            | 30         | 57.0         | 1.7          | 58.7            | 0.45      | 27.5           | B            |
| Total           | III            |            | 116.0        | 36.8         | 152.8           | 0.90      | 21.2           | C            |

## Arterial Level of Service: NB Abbott Road

| Cross Street    | Arterial Class | Flow Speed | Running Time | Signal Delay | Travel Time (s) | Dist (mi) | Arterial Speed | Arterial LOS |
|-----------------|----------------|------------|--------------|--------------|-----------------|-----------|----------------|--------------|
| Elmview Avenue  | III            | 30         | 12.2         | 4.0          | 16.2            | 0.09      | 19.2           | C            |
| Ridge Road      | III            | 30         | 57.0         | 39.4         | 96.4            | 0.45      | 16.8           | D            |
| Plaza Driveway  | III            | 30         | 19.0         | 4.9          | 23.9            | 0.14      | 21.3           | C            |
| Dorrance Avenue | III            | 30         | 17.5         | 9.2          | 26.7            | 0.13      | 17.6           | D            |
| Total           | III            |            | 105.7        | 57.5         | 163.2           | 0.81      | 17.8           | D            |

## Arterial Level of Service: SB Abbott Road

| Cross Street    | Arterial Class | Flow Speed | Running Time | Signal Delay | Travel Time (s) | Dist (mi) | Arterial Speed | Arterial LOS |
|-----------------|----------------|------------|--------------|--------------|-----------------|-----------|----------------|--------------|
| Dorrance Avenue | III            | 30         | 22.5         | 12.7         | 35.2            | 0.18      | 18.1           | C            |
| Plaza Driveway  | III            | 30         | 17.5         | 4.4          | 21.9            | 0.13      | 21.4           | C            |
| Ridge Road      | III            | 30         | 19.0         | 32.5         | 51.5            | 0.14      | 9.9            | F *          |
| Elmview Avenue  | III            | 30         | 57.0         | 3.9          | 60.9            | 0.45      | 26.5           | B            |
| Total           | III            |            | 116.0        | 53.5         | 169.5           | 0.90      | 19.1           | C            |

\*The southbound segment of Abbott Road approaching Ridge Road operates at LOS E in the existing PM peak and is projected to operate at LOS E in the ETC+20 AM and PM peak hours. This Build Alternative LOS is due to optimizing signal phasing to balancing vehicular delay with Ridge Road, which is the major street at the intersection. The signal capacity analysis shows that the overall intersection and all approach lanes are projected to operate at LOS D or better.

## Arterial Level of Service: NB Abbott Road

| Cross Street    | Arterial Class | Flow Speed | Running Time | Signal Delay | Travel Time (s) | Dist (mi) | Arterial Speed | Arterial LOS |
|-----------------|----------------|------------|--------------|--------------|-----------------|-----------|----------------|--------------|
| Elmview Avenue  | III            | 30         | 12.2         | 5.0          | 17.2            | 0.09      | 18.1           | C            |
| Ridge Road      | III            | 30         | 57.0         | 49.9         | 106.9           | 0.45      | 15.1           | D            |
| Plaza Driveway  | III            | 30         | 19.0         | 8.1          | 27.1            | 0.14      | 18.8           | C            |
| Dorrance Avenue | III            | 30         | 17.5         | 10.8         | 28.3            | 0.13      | 16.6           | D            |
| Total           | III            |            | 105.7        | 73.8         | 179.5           | 0.81      | 16.2           | D            |

## Arterial Level of Service: SB Abbott Road

| Cross Street    | Arterial Class | Flow Speed | Running Time | Signal Delay | Travel Time (s) | Dist (mi) | Arterial Speed | Arterial LOS |
|-----------------|----------------|------------|--------------|--------------|-----------------|-----------|----------------|--------------|
| Dorrance Avenue | III            | 30         | 22.5         | 16.9         | 39.4            | 0.18      | 16.2           | D            |
| Plaza Driveway  | III            | 30         | 17.5         | 6.5          | 24.0            | 0.13      | 19.5           | C            |
| Ridge Road      | III            | 30         | 19.0         | 34.4         | 53.4            | 0.14      | 9.6            | F *          |
| Elmview Avenue  | III            | 30         | 57.0         | 5.3          | 62.3            | 0.45      | 25.9           | B            |
| Total           | III            |            | 116.0        | 63.1         | 179.1           | 0.90      | 18.1           | C            |

\*The southbound segment of Abbott Road approaching Ridge Road operates at LOS E in the existing PM peak and is projected to operate at LOS E in the ETC+20 AM and PM peak hours. This Build Alternative LOS is due to optimizing signal phasing to balancing vehicular delay with Ridge Road, which is the major street at the intersection. The signal capacity analysis shows that the overall intersection and all approach lanes are projected to operate at LOS D or better.

## Arterial Level of Service: NB Abbott Road

| Cross Street    | Arterial Class | Flow Speed | Running Time | Signal Delay | Travel Time (s) | Dist (mi) | Arterial Speed | Arterial LOS |
|-----------------|----------------|------------|--------------|--------------|-----------------|-----------|----------------|--------------|
| Elmview Avenue  | III            | 30         | 46.1         | 3.2          | 49.3            | 0.36      | 26.5           | B            |
| Ridge Road      | III            | 30         | 57.0         | 35.3         | 92.3            | 0.45      | 17.5           | D            |
| Plaza Driveway  | III            | 30         | 19.0         | 3.3          | 22.3            | 0.14      | 22.9           | C            |
| Dorrance Avenue | III            | 30         | 17.5         | 4.6          | 22.1            | 0.13      | 21.2           | C            |
| Total           | III            |            | 139.6        | 46.4         | 186.0           | 1.08      | 21.0           | C            |

## Arterial Level of Service: SB Abbott Road

| Cross Street    | Arterial Class | Flow Speed | Running Time | Signal Delay | Travel Time (s) | Dist (mi) | Arterial Speed | Arterial LOS |
|-----------------|----------------|------------|--------------|--------------|-----------------|-----------|----------------|--------------|
| Dorrance Avenue | III            | 30         | 22.5         | 4.3          | 26.8            | 0.18      | 23.8           | C            |
| Plaza Driveway  | III            | 30         | 17.5         | 3.5          | 21.0            | 0.13      | 22.3           | C            |
| Ridge Road      | III            | 30         | 19.0         | 27.7         | 46.7            | 0.14      | 10.9           | E *          |
| Elmview Avenue  | III            | 30         | 57.0         | 3.1          | 60.1            | 0.45      | 26.9           | B            |
| Total           | III            |            | 116.0        | 38.6         | 154.6           | 0.90      | 20.9           | C            |

\*The southbound segment of Abbott Road approaching Ridge Road operates at LOS E in the existing PM peak and is projected to operate at LOS E in the ETC+20 AM and PM peak hours. This Build Alternative LOS is due to optimizing signal phasing to balancing vehicular delay with Ridge Road, which is the major street at the intersection. The signal capacity analysis shows that the overall intersection and all approach lanes are projected to operate at LOS D or better.

## Arterial Level of Service: NB Abbott Road

| Cross Street    | Arterial Class | Flow Speed | Running Time | Signal Delay | Travel Time (s) | Dist (mi) | Arterial Speed | Arterial LOS |
|-----------------|----------------|------------|--------------|--------------|-----------------|-----------|----------------|--------------|
| Elmview Avenue  | III            | 30         | 46.1         | 3.5          | 49.6            | 0.36      | 26.4           | B            |
| Ridge Road      | III            | 30         | 57.0         | 40.4         | 97.4            | 0.45      | 16.6           | D            |
| Plaza Driveway  | III            | 30         | 19.0         | 4.8          | 23.8            | 0.14      | 21.4           | C            |
| Dorrance Avenue | III            | 30         | 17.5         | 30.5         | 48.0            | 0.13      | 9.8            | F            |
| Total           | III            |            | 139.6        | 79.2         | 218.8           | 1.08      | 17.8           | D            |

## Arterial Level of Service: SB Abbott Road

| Cross Street    | Arterial Class | Flow Speed | Running Time | Signal Delay | Travel Time (s) | Dist (mi) | Arterial Speed | Arterial LOS |
|-----------------|----------------|------------|--------------|--------------|-----------------|-----------|----------------|--------------|
| Dorrance Avenue | III            | 30         | 22.5         | 8.3          | 30.8            | 0.18      | 20.7           | C            |
| Plaza Driveway  | III            | 30         | 17.5         | 4.8          | 22.3            | 0.13      | 21.0           | C            |
| Ridge Road      | III            | 30         | 19.0         | 28.6         | 47.6            | 0.14      | 10.7           | E *          |
| Elmview Avenue  | III            | 30         | 57.0         | 3.6          | 60.6            | 0.45      | 26.7           | B            |
| Total           | III            |            | 116.0        | 45.3         | 161.3           | 0.90      | 20.0           | C            |

\*The southbound segment of Abbott Road approaching Ridge Road operates at LOS E in the existing PM peak and is projected to operate at LOS E in the ETC+20 AM and PM peak hours. This Build Alternative LOS is due to optimizing signal phasing to balancing vehicular delay with Ridge Road, which is the major street at the intersection. The signal capacity analysis shows that the overall intersection and all approach lanes are projected to operate at LOS D or better.

## **Appendix D**

### **Pavement Information**





# ATLANTIC TESTING LABORATORIES

**Buffalo**  
5167 S Park Ave  
Hamburg, NY 14075  
716-649-8110 (T)  
atlantictesting.com

June 17<sup>th</sup>, 2025

Colliers Engineering & Design  
40 LaRiviere Drive, Suite 200  
Buffalo, New York 14202

Attn: Jessica Ross  
Department Manager

Re: Subsurface Investigation Services  
Abbott Road Rehabilitation Project  
Lackawanna, Erie County, New York  
ATL Report No. BD209-01-10-24

Jessica Ross:

At the request of Jessica Ross, representing Colliers Engineering & Design (Colliers), and in accordance with our proposal (ATL No. BD998-1341-05-24, dated May 10, 2024), Atlantic Testing Laboratories, Limited (ATL) performed a Subsurface Investigation for the referenced project. The field investigation was performed between March 19<sup>th</sup>, 2025, and April 8<sup>th</sup>, 2025.

The boring locations were selected by Colliers and are shown on the **Boring Location Plans, Figures 1 through 6**, prepared by ATL, included in **Attachment A**. A total of seventeen (17) boring locations, designated as B-1 through B-17, were completed for this project. The recorded coordinates, along with the approximate ground surface elevations at the boring locations are summarized in **Table 1**, within **Attachment B. Pavement Surface Photographs** are included in **Attachment C** for each boring location.

A portable coring machine with a thin wall bit was initially utilized to obtain an approximate six-inch diameter core sample of the asphalt and/or concrete pavement. The subbase material was either hand sampled or cored depending on the material encountered. At multiple locations, cemented slag was encountered at the subbase layer requiring coring methods to extract the sample. The pavement conditions and subbase material encountered are summarized on the **Pavement Core Summary Sheets** included in **Attachment D**. This includes a photograph and description of the recovered pavement cores and subbase (when sampled).

Following removal of the pavement cores at 10 of the boring locations, the soil borings were advanced through the overburden soils using hollow stem auger and split spoon soil sampling techniques, to planned depths of 10 feet. Boring B-12 was the one exception which was terminated at a depth of 5.5 feet due to possibly encountering a utility. Soil sampling and standard penetration testing was performed continuously throughout the full depth of the borings, utilizing a 2-inch outside diameter split spoon sampler and automatic drop hammer, in accordance with ASTM D 1586. The findings from the soil borings are summarized in the **Subsurface Investigation Logs**, included in **Attachment E**.

The boreholes were backfilled with on-site material and patched at the surface upon completion. It is important that the backfilled borings be monitored for settlement or subsidence. This will be the responsibility of Colliers and/or their Client. ATL assumes no liability for loss or damage resulting from bore hole settlement.

Select soil samples collected from the borings were submitted to ATL's geotechnical laboratory for the following physical analyses:

- Four (4) samples for Water Content Determinations of Soil (ASTM D 2216).
- Four (4) samples for Particle Size Analyses without Hydrometer (ASTM D 422).
- Four (4) samples for pH Analysis (ASTM D 4972).
- Four (4) samples for Liquid Limit, Plastic Limit, Plasticity Index (ASTM D 4318).

The **Geotechnical Laboratory Test Results** are included in **Attachment F**.

Considering the subgrade soil types encountered, along with the SPT data obtained at the boring locations, ATL has estimated the effective Roadbed Soil Resilient Modulus ( $M_r$ ) values to range between 2,000 and 5,000 psi for this section of Abbott Road, as presented in **Table 2**, included in **Attachment G**.

Please contact our office if you have any questions or if we may be of further service. We look forward to our continued association to obtain a successful completion of the project.

Sincerely,  
ATLANTIC TESTING LABORATORIES, Limited  
Prepared by:



Jesse M. Roof, EIT  
Project Engineer

Reviewed by:



Greg Genco  
Operations Manager

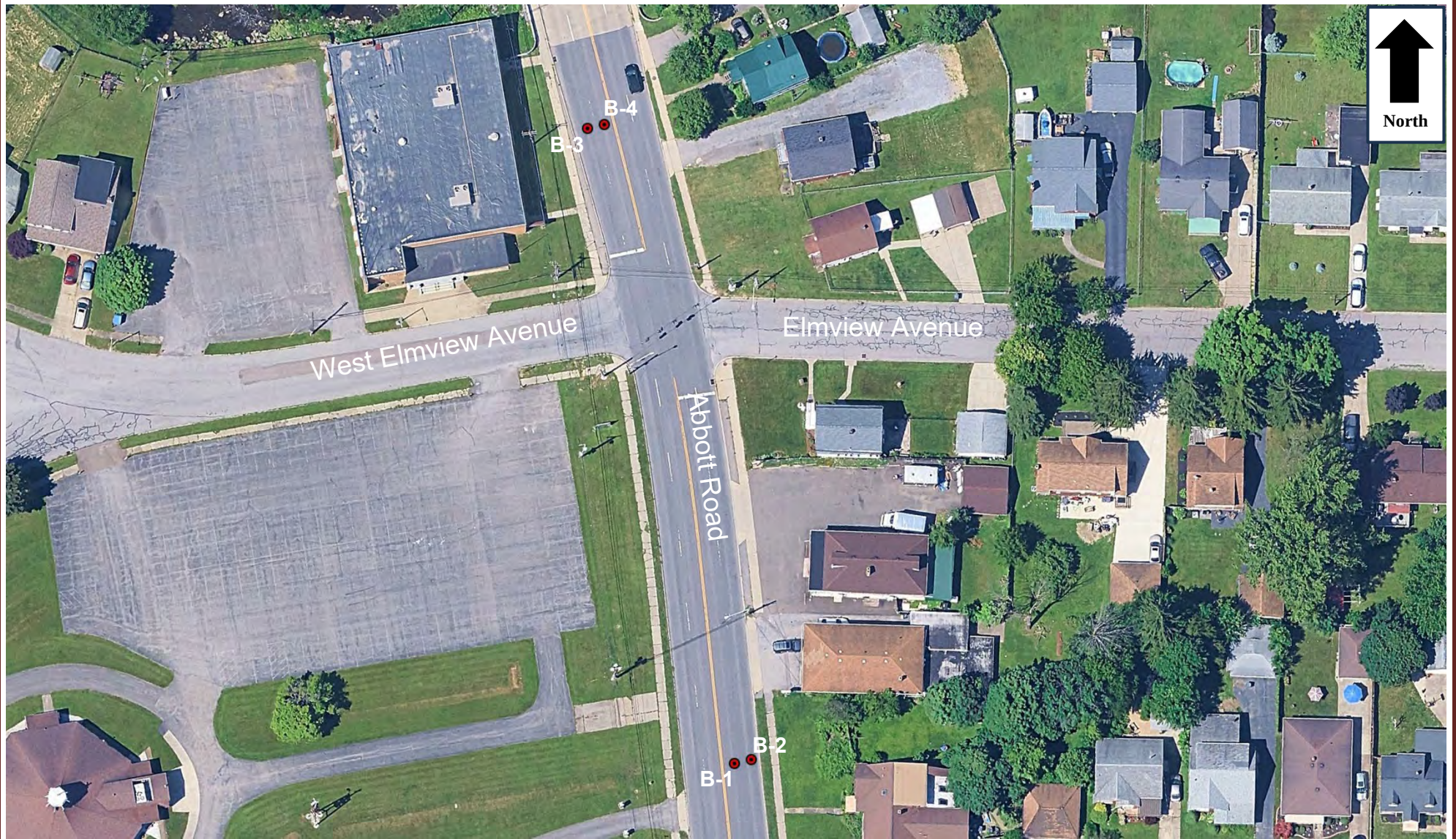
JMR/GTG/SW

#### Attachments

- Attachment A – Boring Location Plans, Figures 1 through 6
- Attachment B – Table 1 – Approximate Boring Locations and Ground Surface Elevations
- Attachment C – Pavement Surface Photographs
- Attachment D – Pavement Core Summary Sheets
- Attachment E – Subsurface Investigation Logs
- Attachment F – Geotechnical Laboratory Test Results
- Attachment G – Table 2 – Summary of Subbase and Subgrade Conditions

ATTACHMENT A  
BORING LOCATION PLANS  
FIGURES 1 THROUGH 6





Note: Figure Developed from Google Earth and Boring Plan provided by Colliers

## FIGURE 1: BORING LOCATION PLAN

Drawn by:  
JMR

Scale:  
Not to scale

Project No.:  
BD209

Date:  
05-15-2025

**ERIE COUNTY DEPARTMENT OF PUBLIC WORKS  
REHABILITATION OF ABBOTT ROAD (CR 4)  
CITY OF LACKAWANNA, NEW YORK**



### ATLANTIC TESTING LABORATORIES, Limited

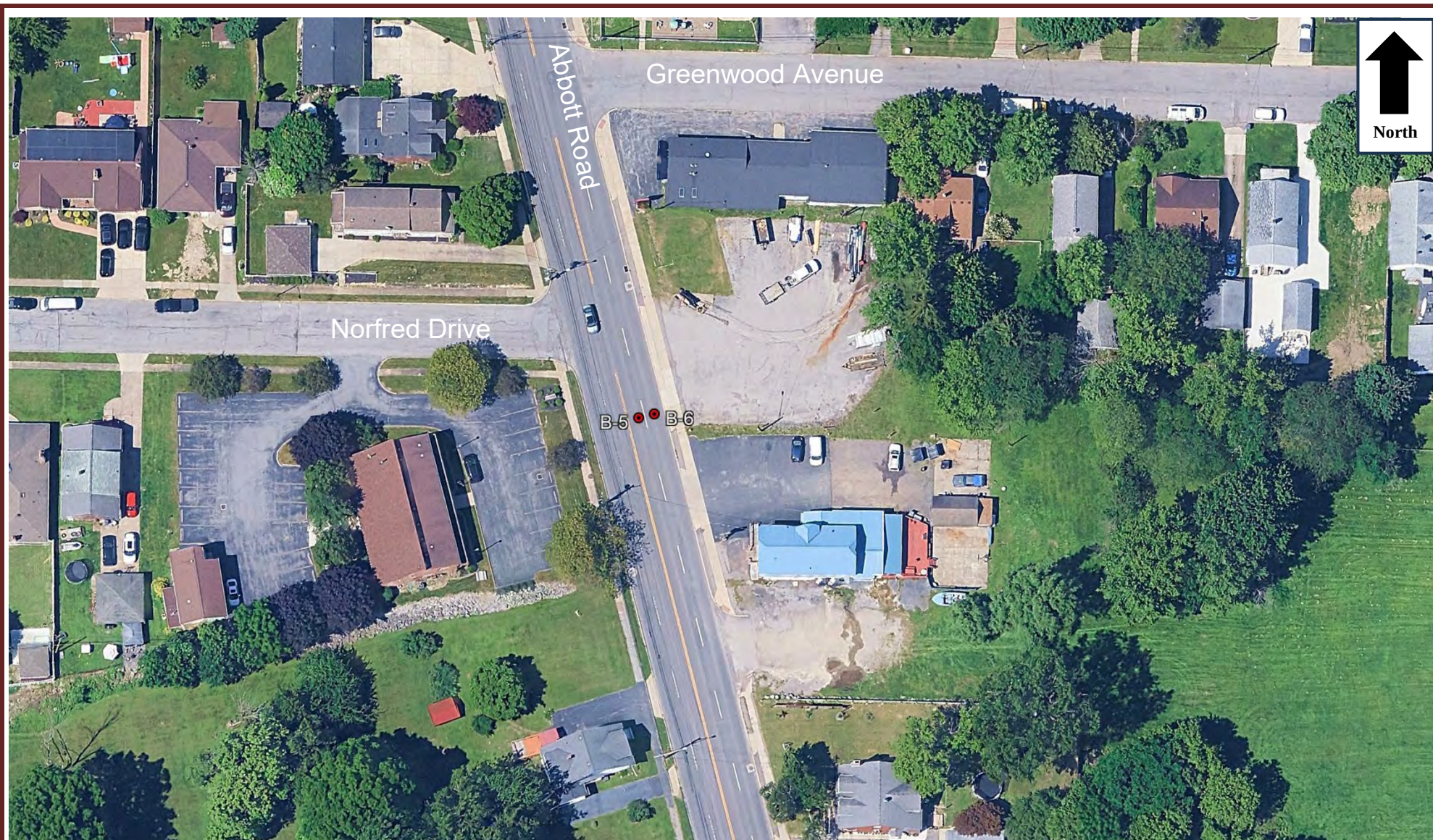
Albany, NY  
Elmira, NY  
Rochester, NY

Binghamton, NY  
Plattsburgh, NY  
Utica, NY

Buffalo, NY  
Poughkeepsie, NY  
Watertown, NY

Canton, NY  
Syracuse, NY





Note: Figure Developed from Google Earth and Boring Plan provided by Colliers

## FIGURE 2: BORING LOCATION PLAN

Drawn by:  
JMR

Scale:  
Not to scale

Project No.:  
BD209

Date:  
05-15-2025

**ERIE COUNTY DEPARTMENT OF PUBLIC WORKS  
REHABILITATION OF ABBOTT ROAD (CR 4)  
CITY OF LACKAWANNA, NEW YORK**



### ATLANTIC TESTING LABORATORIES, Limited

Albany, NY

Binghamton, NY

Buffalo, NY

Canton, NY

Elmira, NY

Plattsburgh, NY

Poughkeepsie, NY

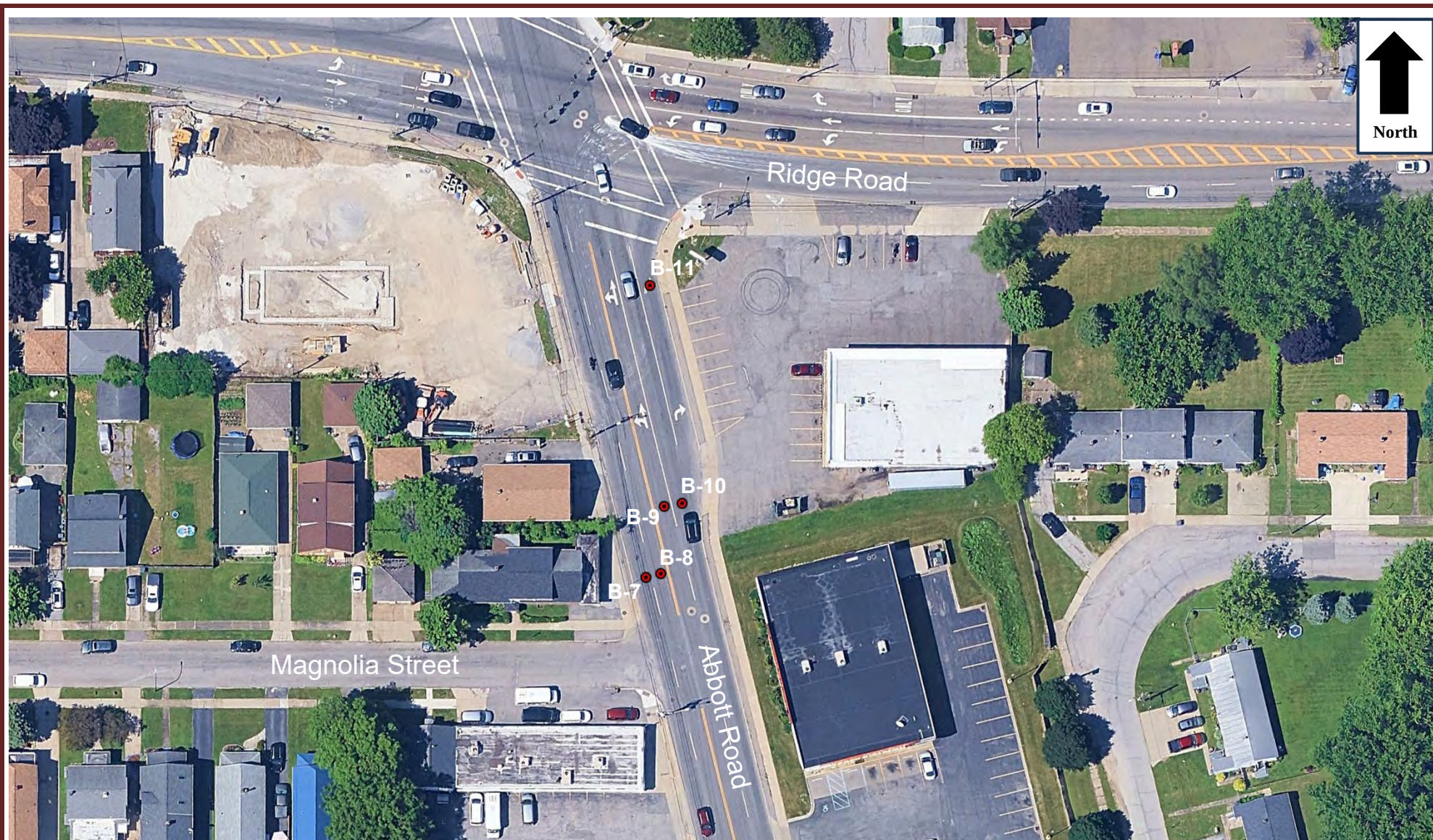
Syracuse, NY

Rochester, NY

Utica, NY

Watertown, NY





Note: Figure Developed from Google Earth and Boring Plan provided by Colliers

**FIGURE 3: BORING LOCATION PLAN**

Drawn by:  
JMR

Scale:  
Not to scale

Project No.:  
BD209

Date:  
05-15-2025

**ERIE COUNTY DEPARTMENT OF PUBLIC WORKS  
REHABILITATION OF ABBOTT ROAD (CR 4)  
CITY OF LACKAWANNA, NEW YORK**



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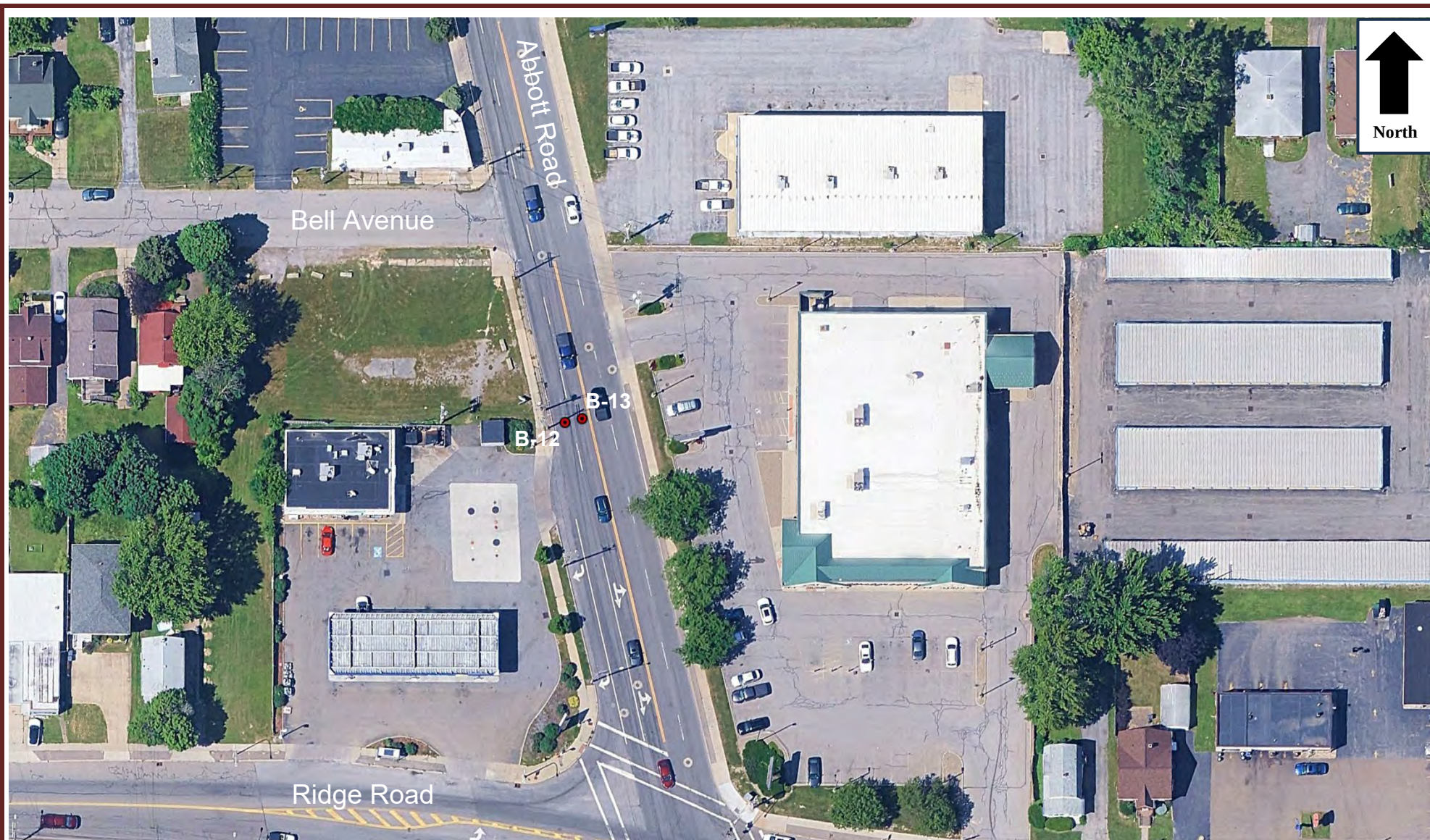
Albany, NY  
Elmira, NY  
Rochester, NY

Binghamton, NY  
Plattsburgh, NY  
Utica, NY

Buffalo, NY  
Poughkeepsie, NY  
Watertown, NY

Canton, NY  
Syracuse, NY





Note: Figure Developed from Google Earth and Boring Plan provided by Colliers

## FIGURE 4: BORING LOCATION PLAN

Drawn by:  
JMR

Scale:  
Not to scale

Project No.:  
BD209

Date:  
05-15-2025

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REHABILITATION OF ABBOTT ROAD (CR 4)  
CITY OF LACKAWANNA, NEW YORK**



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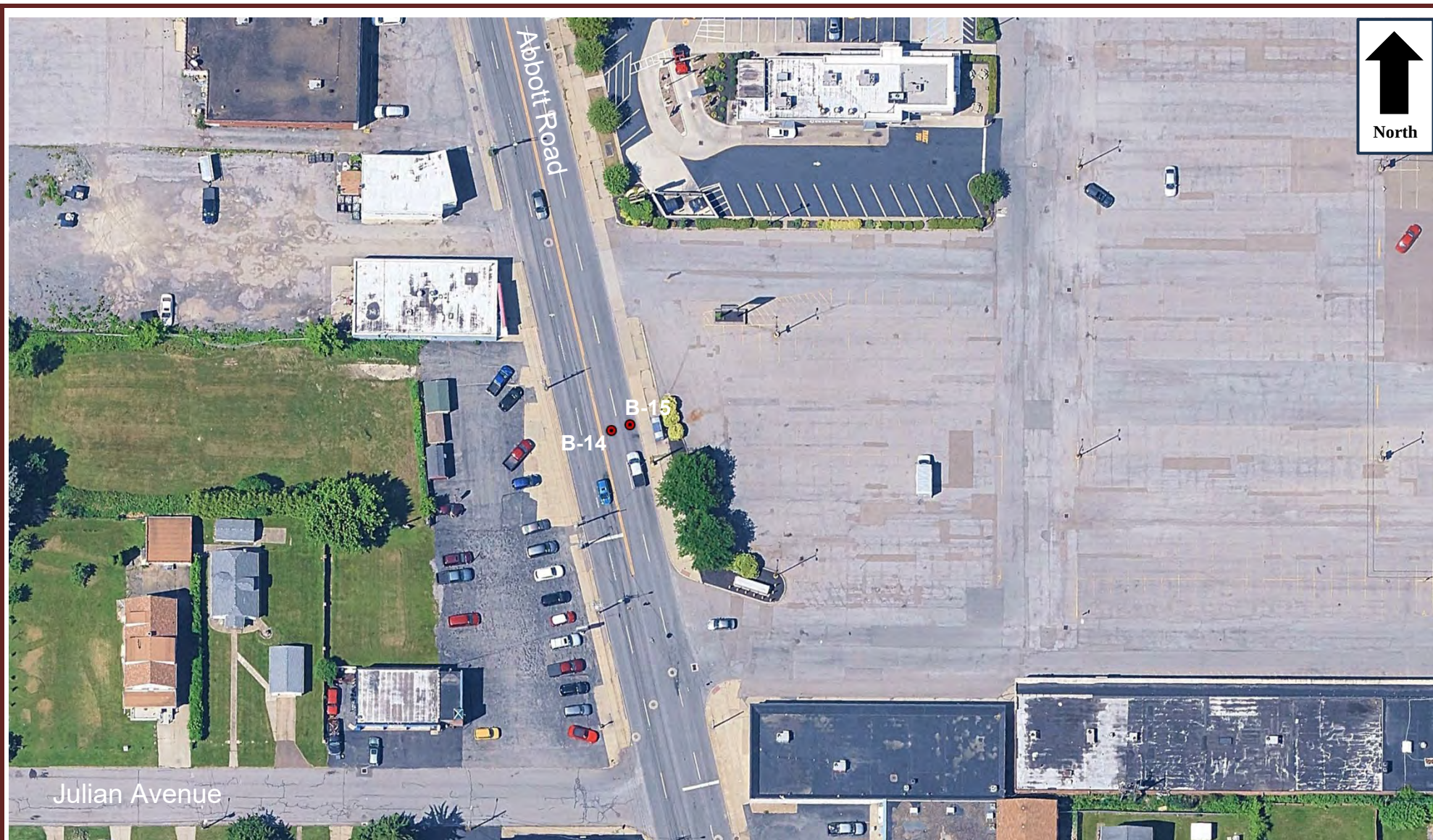
Albany, NY  
Elmira, NY  
Rochester, NY

Binghamton, NY  
Plattsburgh, NY  
Utica, NY

Buffalo, NY  
Poughkeepsie, NY  
Watertown, NY

Canton, NY  
Syracuse, NY





Note: Figure Developed from Google Earth and Boring Plan provided by Colliers

## FIGURE 5: BORING LOCATION PLAN

Drawn by:  
JMR

Scale:  
Not to scale

Project No.:  
BD209

Date:  
05-15-2025

**ERIE COUNTY DEPARTMENT OF PUBLIC WORKS  
REHABILITATION OF ABBOTT ROAD (CR 4)  
CITY OF LACKAWANNA, NEW YORK**



### **ATLANTIC TESTING LABORATORIES, Limited**

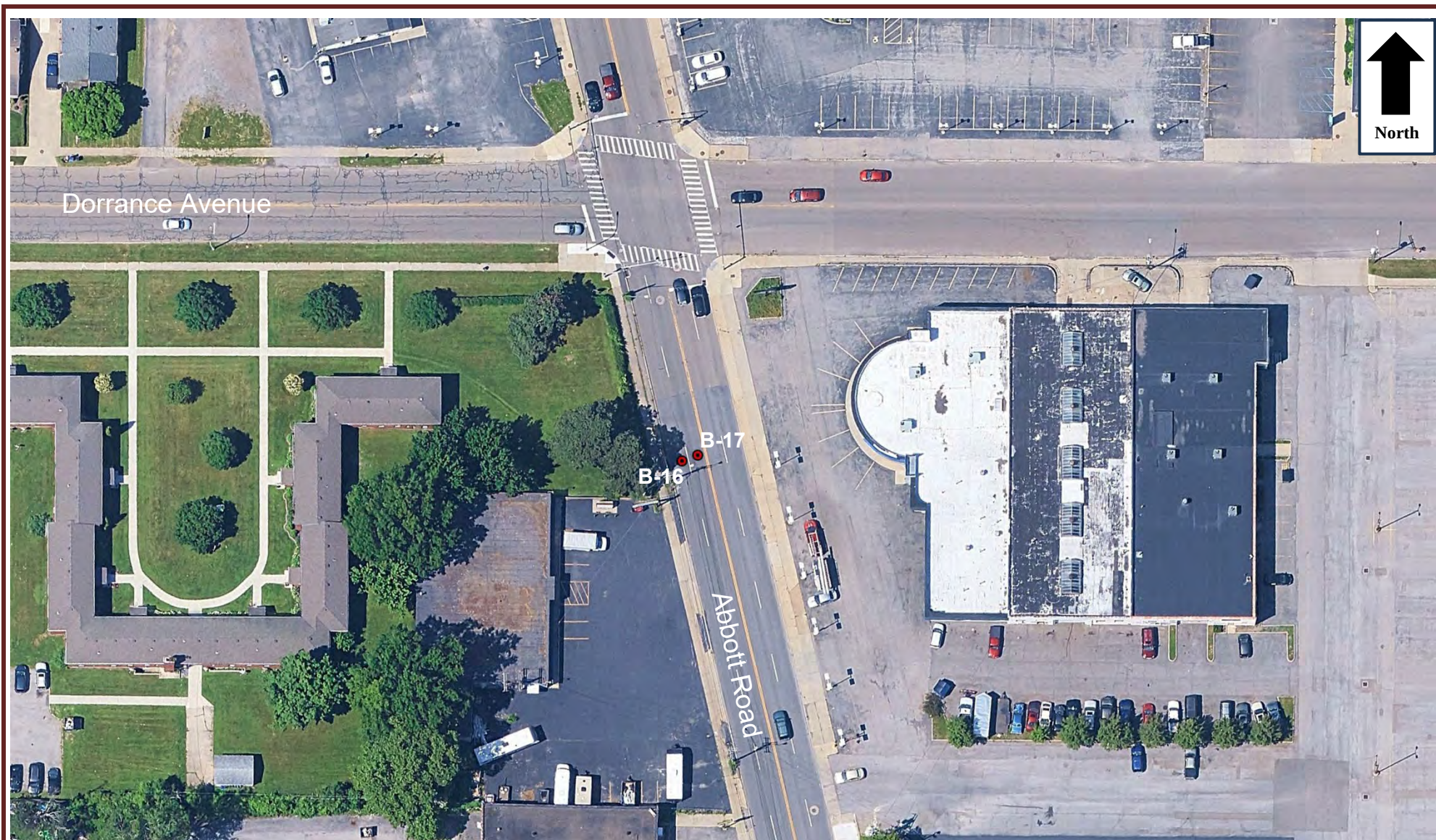
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Elmira, NY  
Rochester, NY

Binghamton, NY  
Plattsburgh, NY  
Utica, NY

Buffalo, NY  
Poughkeepsie, NY  
Watertown, NY

Canton, NY  
Syracuse, NY





Note: Figure Developed from Google Earth and Boring Plan provided by Colliers

## FIGURE 6: BORING LOCATION PLAN

Drawn by:  
JMR

Scale:  
Not to scale

Project No.:  
BD209

Date:  
05-15-2025

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REHABILITATION OF ABBOTT ROAD (CR 4)  
CITY OF LACKAWANNA, NEW YORK**



### **ATLANTIC TESTING LABORATORIES, Limited**

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Buffalo, NY

Canton, NY

Elmira, NY

Plattsburgh, NY

Poughkeepsie, NY

Syracuse, NY

Rochester, NY

Utica, NY

Watertown, NY

## ATTACHMENT B

TABLE 1 – APPROXIMATE BORING LOCATIONS  
AND GROUND SURFACE ELEVATIONS

**TABLE 1**  
**Approximate Pavement Core / Boring Locations**  
**and Ground Surface Elevations**

**Rehabilitation of Abbott Road (CR 4)**  
**from Fisher Road to City of Buffalo Line**  
**City of Lackawanna, New York**

| Boring Number | Approximate Boring Locations<br>GPS Coordinates |                        | Approximate Ground<br>Surface Elevation<br><br>(feet) |
|---------------|-------------------------------------------------|------------------------|-------------------------------------------------------|
|               | Latitude<br>(Northing)                          | Longitude<br>(Easting) |                                                       |
| B-1           | 42° 49' 16.49"                                  | 78° 48' 07.58"         | 612.9                                                 |
| B-2           | 42° 49' 16.51"                                  | 78° 48' 07.46"         | 612.8                                                 |
| B-3           | 42° 49' 19.76"                                  | 78° 48' 08.62"         | 610.0                                                 |
| B-4           | 42° 49' 19.78"                                  | 78° 48' 08.50"         | 610.1                                                 |
| B-5           | 42° 49' 26.27"                                  | 78° 48' 10.61"         | 611.5                                                 |
| B-6           | 42° 49' 26.29"                                  | 78° 48' 10.50"         | 611.4                                                 |
| B-7           | 42° 49' 39.00"                                  | 78° 48' 15.23"         | 614.0                                                 |
| B-8           | 42° 49' 39.02"                                  | 78° 48' 15.12"         | 614.1                                                 |
| B-9           | 42° 49' 39.37"                                  | 78° 48' 15.10"         | 613.8                                                 |
| B-10          | 42° 49' 39.39"                                  | 78° 48' 14.97"         | 613.5                                                 |
| B-11          | 42° 49' 40.52"                                  | 78° 48' 15.20"         | 611.9                                                 |
| B-12          | 42° 49' 43.82"                                  | 78° 48' 16.81"         | 608.2                                                 |
| B-13          | 42° 49' 43.84"                                  | 78° 48' 16.68"         | 608.3                                                 |
| B-14          | 42° 49' 49.65"                                  | 78° 48' 18.38"         | 603.6                                                 |
| B-15          | 42° 49' 49.68"                                  | 78° 48' 18.24"         | 603.4                                                 |
| B-16          | 42° 49' 53.90"                                  | 78° 48' 19.98"         | 601.4                                                 |
| B-17          | 42° 49' 53.93"                                  | 78° 48' 19.87"         | 601.6                                                 |

## ATTACHMENT C

### PAVEMENT SURFACE PHOTOGRAPHS



**Pavement Surface Photographs**  
**Proposed Abbott Road Rehabilitation Project**



**Pavement Core / Borings B-1 & B-2**



**Pavement Core / Borings B-3 & B-4**



**Pavement Surface Photographs**  
**Proposed Abbott Road Rehabilitation Project**



**Pavement Core / Borings B-5 & B-6**



**Pavement Core / Borings B-7 & B-8**



**Pavement Surface Photographs**  
**Proposed Abbott Road Rehabilitation Project**



**Pavement Core / Borings B-9 & B-10**



**Pavement Core / Boring B-11**



**Pavement Surface Photographs**  
**Proposed Abbott Road Rehabilitation Project**



**Pavement Core / Borings B-12 & B-13**



**Pavement Core / Borings B-14 & B-15**

**Pavement Surface Photographs**  
**Proposed Abbott Road Rehabilitation Project**



**Pavement Core / Borings B-16 & B-17**

ATTACHMENT D

PAVEMENT CORE SUMMARY SHEET

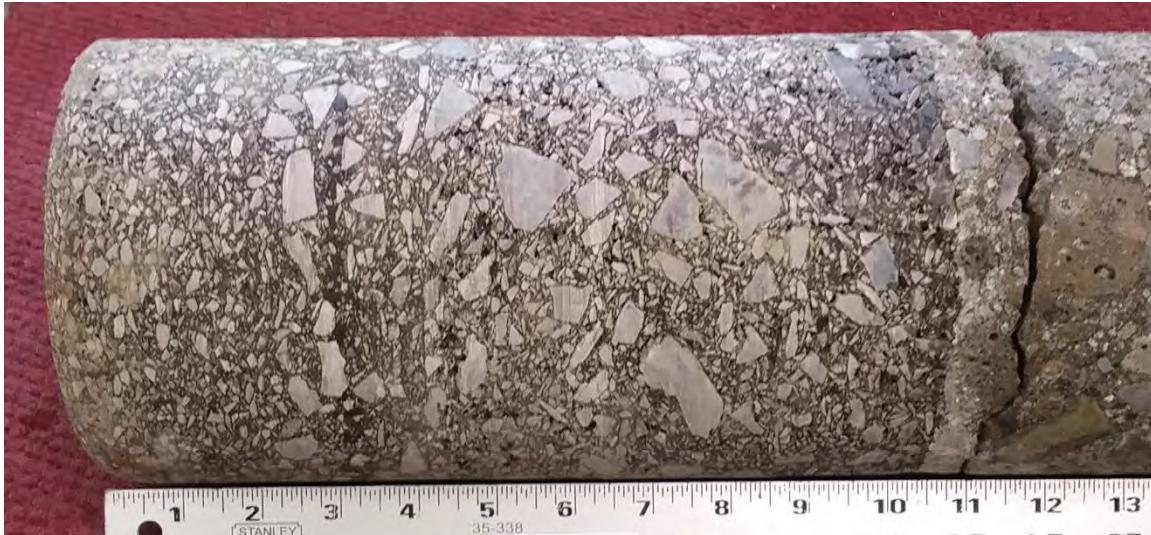


**ATLANTIC TESTING LABORATORIES, INC.**  
**BD209**  
**ABBOTT ROAD REHABILITATION PROJECT**  
**LACKAWANNA, NEW YORK**  
**CORE SUMMARY**



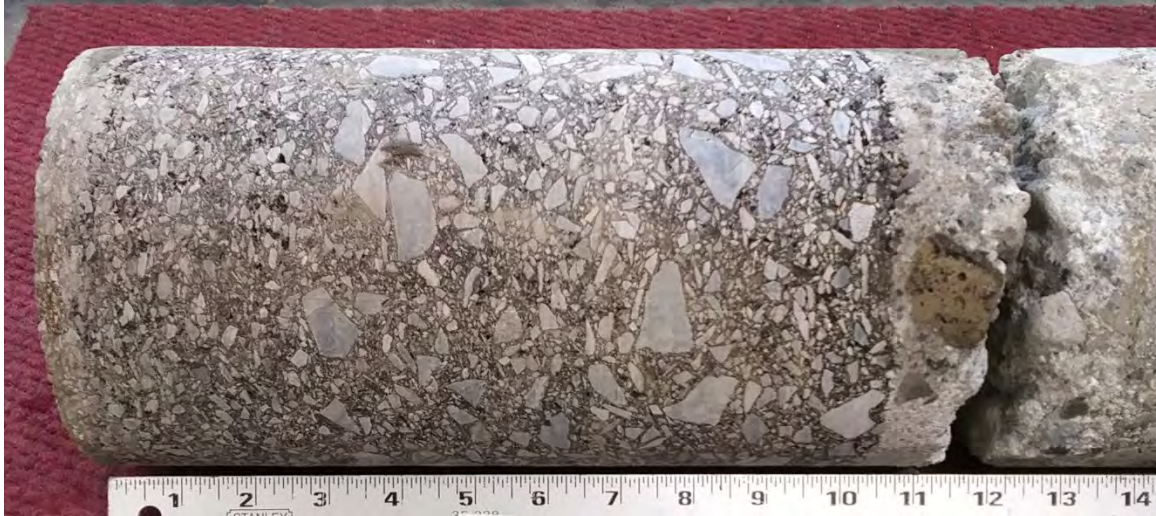
| CORE NUMBER | DESCRIPTION                                                                                                                                                                                                                                                                                                                                        |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B-1         | <p><b>TOTAL CORE LENGTH = 10.5"</b></p> <p><b>TOTAL ASPHALT = 10.5"</b></p> <ul style="list-style-type: none"><li>- 1<sup>st</sup> Top Layer = 2.0"</li><li>- 1<sup>st</sup> Binder Layer = 8.5"</li><li>- Multilayered</li></ul> <p><b>SUBBASE INVESTIGATION</b></p> <ul style="list-style-type: none"><li>- Description: Slag material</li></ul> |

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**LACKAWANNA, NEW YORK**  
**CORE SUMMARY**



| CORE NUMBER | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B-2         | <p><b>TOTAL CORE LENGTH = 10.5"</b></p> <p><b>TOTAL ASPHALT = 10.5"</b></p> <ul style="list-style-type: none"><li>- 1<sup>st</sup> Top Layer = 2.5"</li><li>- 2<sup>nd</sup> Top Layer = 1.5"</li><li>- 1<sup>st</sup> Binder Layer = 6.5"</li><li>- Multi-Layered</li></ul> <p><b>SUBBASE INVESTIGATION</b></p> <ul style="list-style-type: none"><li>- Description: Slag material</li></ul> |

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**LACKAWANNA, NEW YORK CORE SUMMARY**



| CORE NUMBER | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B-3         | <p><b>TOTAL CORE LENGTH = 10.0"</b></p> <p><b>TOTAL ASPHALT = 10.0"</b></p> <ul style="list-style-type: none"><li>- 1<sup>st</sup> Top Layer = 1.4"</li><li>- 2<sup>nd</sup> Top Layer = 1.6"</li><li>- 1<sup>st</sup> Binder Layer = 7.0"</li><li>- Multi-layered</li></ul> <p><b>SUBBASE INVESTIGATION</b></p> <ul style="list-style-type: none"><li>- Description: Slag material</li></ul> |



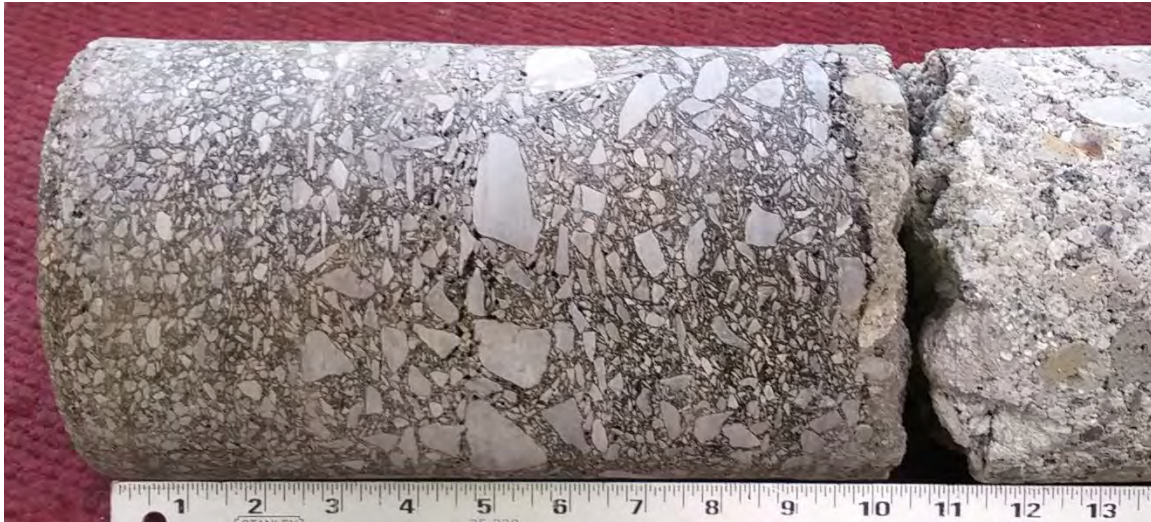
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**BD209**  
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**LACKAWANNA, NEW YORK CORE SUMMARY**



| CORE NUMBER | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B-4         | <p style="text-align: center;"><b>TOTAL CORE LENGTH = 9.0"</b></p> <p style="text-align: center;"><b>TOTAL ASPHALT = 9.0"</b></p> <ul style="list-style-type: none"><li>- 1<sup>st</sup> Top Layer = 3.0"</li><li>- Multi-layered</li><li>- 1<sup>st</sup> Binder Layer = 6.0"</li><li>- Multi-layered</li></ul> <p style="text-align: center;"><b>SUBBASE INVESTIGATION</b></p> <ul style="list-style-type: none"><li>- Description: Slag material</li></ul> |

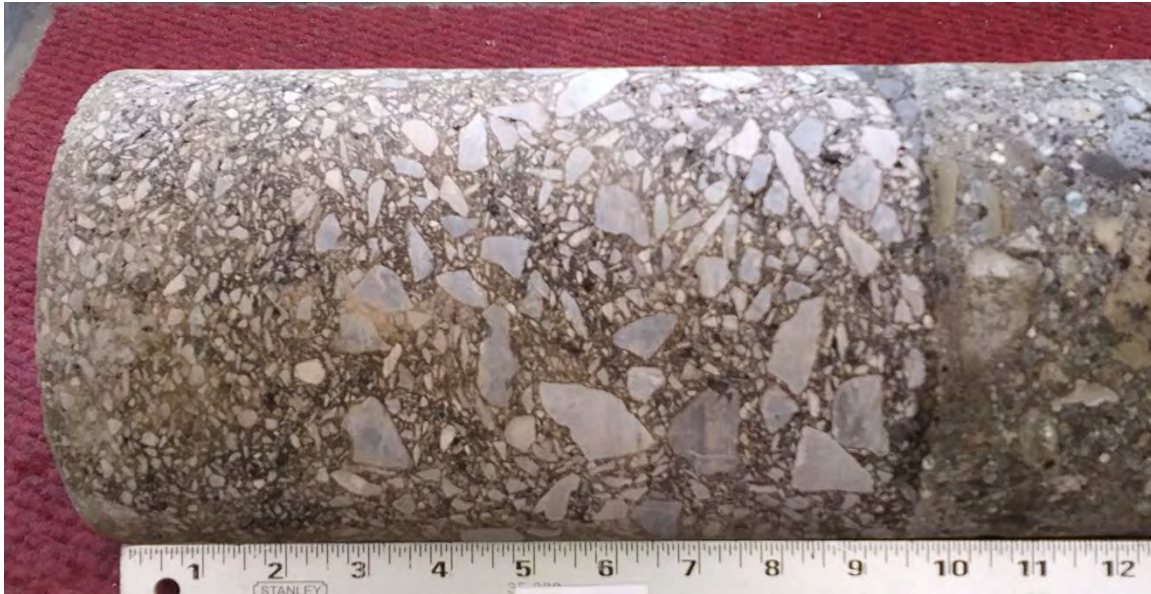


**ATLANTIC TESTING LABORATORIES, INC.**  
**BD209**  
**ABBOTT ROAD REHABILITATION PROJECT**  
**LACKAWANNA, NEW YORK**  
**CORE SUMMARY**



| CORE NUMBER | DESCRIPTION                           |
|-------------|---------------------------------------|
| B-5         | <b>TOTAL CORE LENGTH = 9.5"</b>       |
|             | <b>TOTAL ASPHALT = 9.5"</b>           |
|             | - 1 <sup>st</sup> Top Layer = 3.0"    |
|             | - 1 <sup>st</sup> Binder Layer = 6.5" |
|             | - Multi-layered                       |
|             | <b>SUBBASE INVESTIGATION</b>          |
|             | - Description: Slag material          |

**ATLANTIC TESTING LABORATORIES, INC.**  
**BD209**  
**ABBOTT ROAD REHABILITATION PROJECT**  
**LACKAWANNA, NEW YORK**  
**CORE SUMMARY**



| CORE NUMBER | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B-6         | <p style="text-align: center;"><b>TOTAL CORE LENGTH = 9.5"</b></p> <p style="text-align: center;"><b>TOTAL ASPHALT = 9.5"</b></p> <ul style="list-style-type: none"><li>- 1<sup>st</sup> Top Layer = 3.0"</li><li>- 1<sup>st</sup> Binder Layer = 6.5"</li></ul> <p style="text-align: center;"><b>SUBBASE INVESTIGATION</b></p> <ul style="list-style-type: none"><li>- Description: Slag material</li></ul> |

**ATLANTIC TESTING LABORATORIES, INC.**  
**BD209**  
**ABBOTT ROAD REHABILITATION PROJECT**  
**LACKAWANNA, NEW YORK**  
**CORE SUMMARY**



| CORE NUMBER | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                         |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B-7         | <p><b>TOTAL CORE LENGTH = 5.0"</b></p> <p><b>TOTAL ASPHALT = 5.0"</b></p> <ul style="list-style-type: none"><li>- 1<sup>st</sup> Top Layer = 0.5"</li><li>- 2<sup>nd</sup> Top Layer = 1.5"</li><li>- 1<sup>st</sup> Binder Layer = 3.0"</li></ul> <p><b>SUBBASE INVESTIGATION</b></p> <ul style="list-style-type: none"><li>- Description: Crushed Stone</li></ul> |

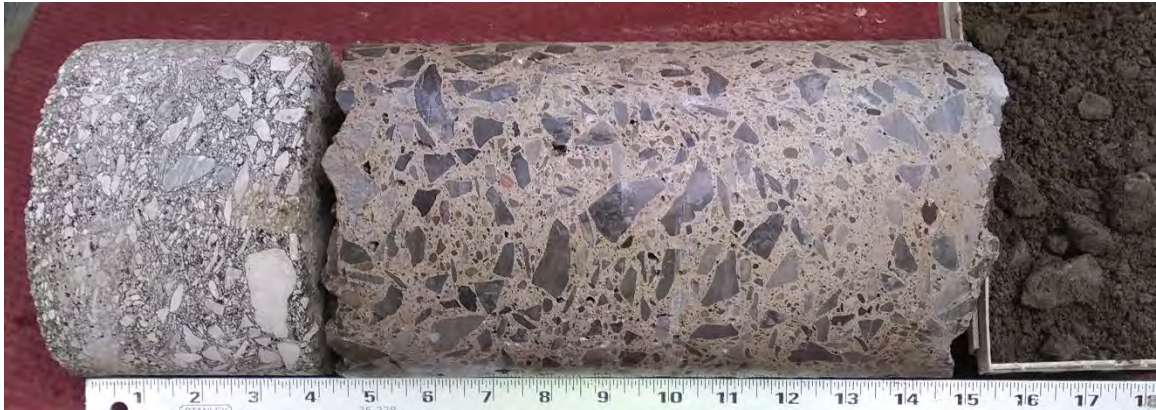


**ATLANTIC TESTING LABORATORIES, INC.**  
**BD209**  
**ABBOTT ROAD REHABILITATION PROJECT**  
**LACKAWANNA, NEW YORK**  
**CORE SUMMARY**



| CORE NUMBER | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B-8         | <p><b>TOTAL CORE LENGTH = 11.5"</b></p> <p><b>TOTAL ASPHALT = 4.5"</b></p> <ul style="list-style-type: none"><li>- 1<sup>st</sup> Top Layer = 0.5"</li><li>- 2<sup>nd</sup> Top Layer = 1.3"</li><li>- 1<sup>st</sup> Binder Layer = 2.7"</li><li>- Separated</li></ul> <p><b>TOTAL CONCRETE = 7.0"</b></p> <p><b>SUBBASE INVESTIGATION</b></p> <ul style="list-style-type: none"><li>- Description: Crushed Stone</li></ul> |

**ATLANTIC TESTING LABORATORIES, INC.**  
**BD209**  
**ABBOTT ROAD REHABILITATION PROJECT**  
**LACKAWANNA, NEW YORK**  
**CORE SUMMARY**



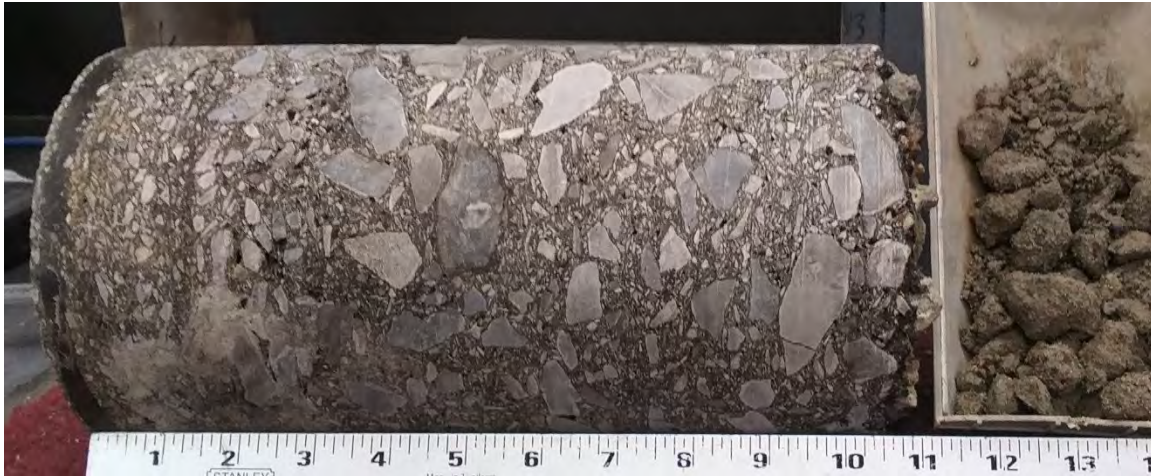
| CORE NUMBER | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                        |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B-9         | <p><b>TOTAL CORE LENGTH = 14.5"</b></p> <p><b>TOTAL ASPHALT = 4.5"</b></p> <ul style="list-style-type: none"><li>- 1<sup>st</sup> Top Layer = 1.9"</li><li>- 1<sup>st</sup> Binder Layer = 2.6"</li></ul> <p><b>TOTAL CONCRETE = 10.0"</b></p> <p><b>SUBBASE INVESTIGATION</b></p> <ul style="list-style-type: none"><li>- Description : Gravel and Sand</li></ul> |

**ATLANTIC TESTING LABORATORIES, INC.**  
**BD209**  
**ABBOTT ROAD REHABILITATION PROJECT**  
**LACKAWANNA, NEW YORK**  
**CORE SUMMARY**



| CORE NUMBER | DESCRIPTION                                  |
|-------------|----------------------------------------------|
| B-10        | <b>TOTAL CORE LENGTH = 18.5"</b>             |
|             | <b>TOTAL ASPHALT = 9.0"</b>                  |
|             | - 1 <sup>st</sup> Top Layer = 2.5"           |
|             | - 1 <sup>st</sup> Binder Layer = 6.5"        |
|             | - Multilayered                               |
|             | <b>TOTAL CONCRETE = 9.5"</b>                 |
|             | - Separated: cored through a placement joint |
|             | <b>SUBBASE INVESTIGATION</b>                 |
|             | - No subbase sample recovered                |

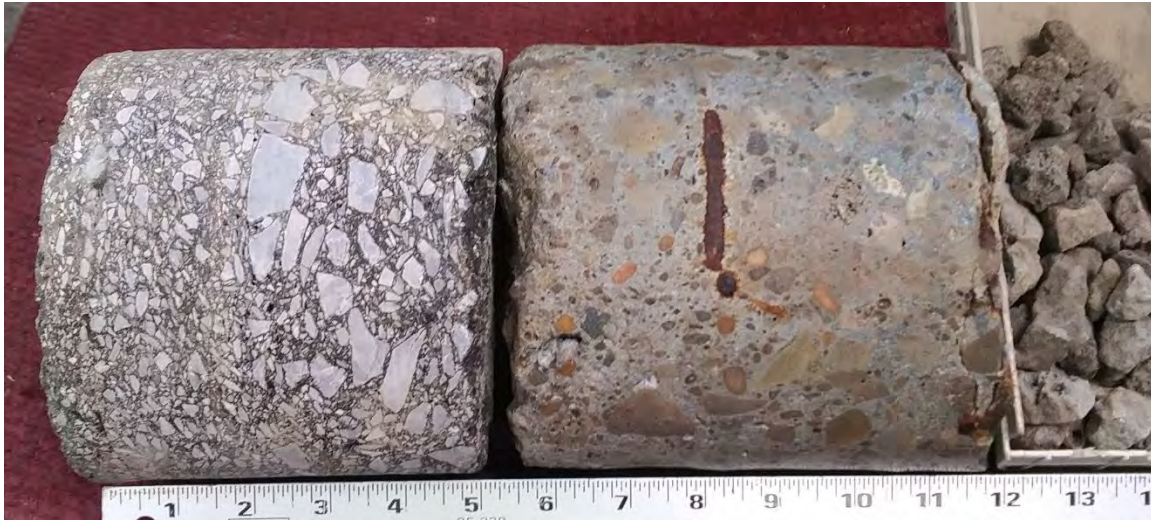
**ATLANTIC TESTING LABORATORIES, INC.**  
**BD209**  
**ABBOTT ROAD REHABILITATION PROJECT**  
**LACKAWANNA, NEW YORK**  
**CORE SUMMARY**



| CORE NUMBER | DESCRIPTION                                                                                                                                                                                                                                                                                                                                         |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B-11        | <p><b>TOTAL CORE LENGTH = 10.5"</b></p> <p><b>TOTAL ASPHALT = 10.5"</b></p> <ul style="list-style-type: none"><li>- 1<sup>st</sup> Top Layer = 2.0"</li><li>- 1<sup>st</sup> Binder Layer = 8.5"</li><li>- Multi-layered</li></ul> <p><b>SUBBASE INVESTIGATION</b></p> <ul style="list-style-type: none"><li>- Description: Slag material</li></ul> |



**ATLANTIC TESTING LABORATORIES, INC.**  
**BD209**  
**ABBOTT ROAD REHABILITATION PROJECT**  
**LACKAWANNA, NEW YORK**  
**CORE SUMMARY**



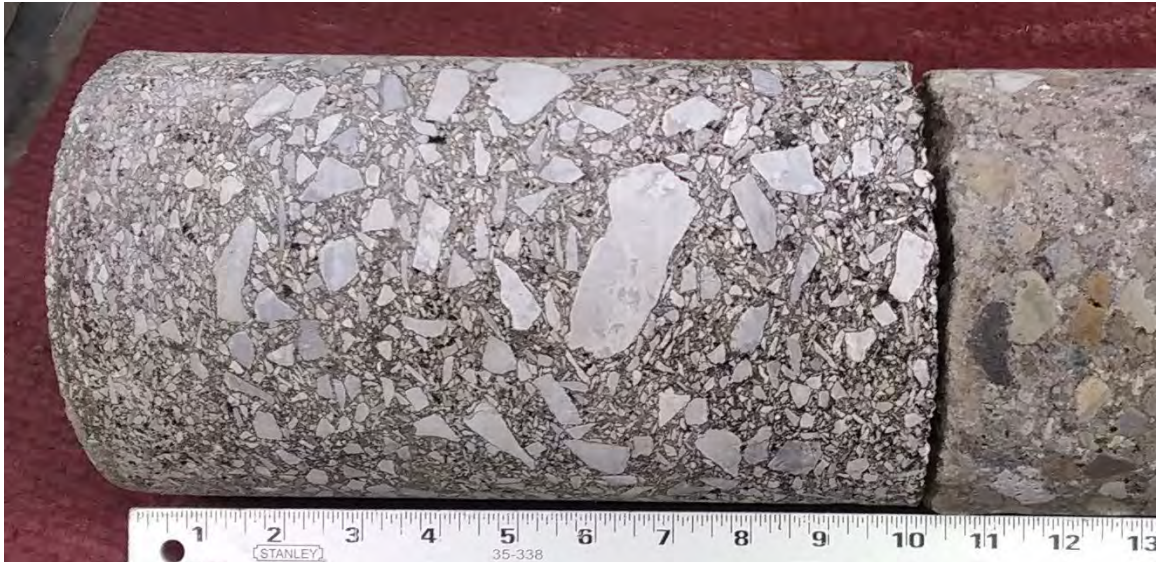
| CORE NUMBER | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                    |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B-12        | <p><b>TOTAL CORE LENGTH = 11.0"</b></p> <p><b>TOTAL ASPHALT = 5.0"</b></p> <ul style="list-style-type: none"><li>- 1<sup>st</sup> Top Layer = 2.3"</li><li>- 1<sup>st</sup> Binder Layer = 2.7"</li></ul> <p><b>TOTAL CONCRETE = 6.0"</b></p> <p><b>SUBBASE INVESTIGATION</b></p> <ul style="list-style-type: none"><li>- Description: Slag material</li></ul> |

**ATLANTIC TESTING LABORATORIES, INC.**  
**BD209**  
**ABBOTT ROAD REHABILITATION PROJECT**  
**LACKAWANNA, NEW YORK**  
**CORE SUMMARY**



| CORE NUMBER | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                    |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B-13        | <p><b>TOTAL CORE LENGTH = 10.5"</b></p> <p><b>TOTAL ASPHALT = 2.5"</b></p> <ul style="list-style-type: none"><li>- 1<sup>st</sup> Top Layer = 0.7"</li><li>- 1<sup>st</sup> Binder Layer = 1.8"</li></ul> <p><b>TOTAL CONCRETE = 8.0"</b></p> <p><b>SUBBASE INVESTIGATION</b></p> <ul style="list-style-type: none"><li>- Description: Slag material</li></ul> |

**ATLANTIC TESTING LABORATORIES, INC.**  
**BD209**  
**ABBOTT ROAD REHABILITATION PROJECT**  
**LACKAWANNA, NEW YORK**  
**CORE SUMMARY**



| CORE<br>NUMBER | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B-14           | <p style="text-align: center;"><b>TOTAL CORE LENGTH = 10.0"</b></p> <p style="text-align: center;"><b>TOTAL ASPHALT = 10.0"</b></p> <ul style="list-style-type: none"><li>- 1<sup>st</sup> Top Layer = 2.0"</li><li>- 1<sup>st</sup> Binder Layer = 8.0"</li></ul> <p style="text-align: center;"><b>SUBBASE INVESTIGATION</b></p> <ul style="list-style-type: none"><li>- Description: Slag material</li></ul> |



**ATLANTIC TESTING LABORATORIES, INC.**  
**BD209**  
**ABBOTT ROAD REHABILITATION PROJECT**  
**LACKAWANNA, NEW YORK**  
**CORE SUMMARY**



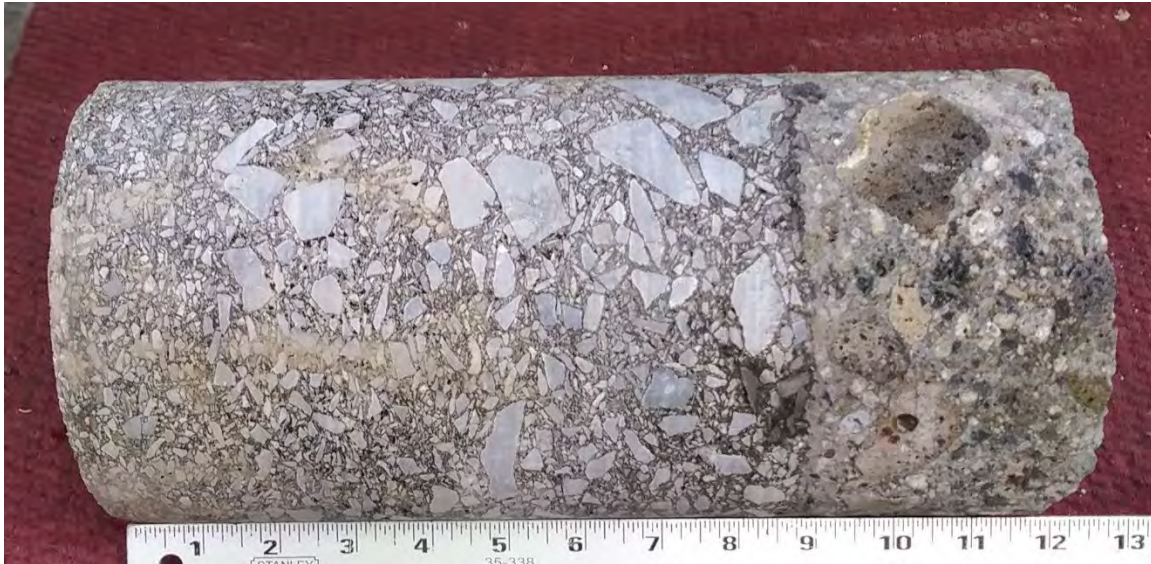
| CORE<br>NUMBER | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                              |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B-15           | <p><b>TOTAL CORE LENGTH = 9.0"</b></p> <p><b>TOTAL ASPHALT = 9.0"</b></p> <ul style="list-style-type: none"><li>- 1<sup>st</sup> Top Layer = 2.5"</li><li>- Multilayered</li><li>- 1<sup>st</sup> Binder Layers = 6.5"</li><li>- Multilayered</li></ul> <p><b>SUBBASE INVESTIGATION</b></p> <ul style="list-style-type: none"><li>- Description: Slag material</li></ul> |

**ATLANTIC TESTING LABORATORIES, INC.**  
**BD209**  
**ABBOTT ROAD REHABILITATION PROJECT**  
**LACKAWANNA, NEW YORK**  
**CORE SUMMARY**



| CORE NUMBER | DESCRIPTION                           |
|-------------|---------------------------------------|
| B-16        | <b>TOTAL CORE LENGTH = 8.5"</b>       |
|             | <b>TOTAL ASPHALT = 8.5"</b>           |
|             | - 1 <sup>st</sup> Top Layer = 1.5"    |
|             | - 1 <sup>st</sup> Binder Layer = 7.0" |
|             | - Multi-layered                       |
|             | <b>SUBBASE INVESTIGATION</b>          |
|             | - Description: Slag material          |

**ATLANTIC TESTING LABORATORIES, INC.**  
**BD209**  
**ABBOTT ROAD REHABILITATION PROJECT**  
**LACKAWANNA, NEW YORK**  
**CORE SUMMARY**



| CORE NUMBER | DESCRIPTION                                                                                                                                                                                                                                                                                                               |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B-17        | <p><b>TOTAL CORE LENGTH = 8.5"</b></p> <p><b>TOTAL ASPHALT = 8.5"</b></p> <ul style="list-style-type: none"><li>- 1<sup>st</sup> Top Layer = 1.8"</li><li>- 1<sup>st</sup> Binder Layer = 6.7"</li></ul> <p><b>SUBBASE INVESTIGATION</b></p> <ul style="list-style-type: none"><li>- Description: Slag material</li></ul> |

ATTACHMENT E

SUBSURFACE INVESTIGATION LOGS



# ATLANTIC TESTING LABORATORIES, Limited

## Subsurface Investigation

Client: Colliers Engineering & Design  
 Project: Subsurface Investigation  
Abbott Road Rehabilitation Project  
Lackawanna, New York

Report No.: BD209D-01-06-25  
 Boring Location: See Boring Location Plan

Boring No.: B-1 Sheet 1 of 1

Start Date: 3/21/2025 Finish Date: 3/21/2025

Coordinates  
 Latitude \_\_\_\_\_  
 Longitude \_\_\_\_\_

Sampler Hammer  
 Weight: 140 lbs.  
 Fall: 30 in.  
 Hammer Type: Automatic

Groundwater Observations

| Date             | Time           | Depth      | Casing      |
|------------------|----------------|------------|-------------|
| <u>3/21/2025</u> | <u>8:00 AM</u> | <u>DRY</u> | <u>8.0'</u> |
|                  |                |            |             |
|                  |                |            |             |
|                  |                |            |             |

Ground Elev.: 612.9'+/- Boring Advance By: \_\_\_\_\_  
6" Thin Wall Core/2 1/4" Auger

| DEPTH | METHOD OF ADVANCE                    | SAMPLE NO. | DEPTH OF SAMPLE |      | SAMPLE TYPE | BLOWS ON SAMPLER PER 6" 2" O.D. SAMPLER | DEPTH OF CHANGE | CLASSIFICATION OF MATERIAL<br><br>f - fine<br>m - medium<br>c - coarse<br><br>and - 35-50%<br>some - 20-35%<br>little - 10-20%<br>trace - 0-10% | Recovery (Inches) |
|-------|--------------------------------------|------------|-----------------|------|-------------|-----------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|       |                                      |            | From            | To   |             |                                         |                 |                                                                                                                                                 |                   |
| 1     | A<br>R<br>E<br>G<br>U<br>L<br>A<br>R |            | 0.0             | 1.9  |             | THIN WALL CORE                          | 0.9             | 10.5" ASPHALT PAVEMENT                                                                                                                          | 22.5              |
| 2     |                                      |            |                 |      |             |                                         | 2.0             | SUBBASE (Slag Material)                                                                                                                         |                   |
| 3     |                                      | 1          | 2.0             | 4.0  | SS          | 50 10 7 8                               |                 | Brown SILT & CLAY; trace mf Sand; trace cf Gravel (moist, low plasticity)                                                                       | 11                |
| 4     |                                      |            |                 |      |             |                                         | 4.0             |                                                                                                                                                 |                   |
| 5     |                                      | 2          | 4.0             | 6.0  | SS          | 6 7 7 8                                 |                 | Brown CLAY & SILT; trace cmf Sand (moist, medium plasticity)<br>w = 19%, LL = 37, PL = 17, PI = 20                                              | 12                |
| 6     |                                      |            |                 |      |             |                                         | 6.0             |                                                                                                                                                 |                   |
| 7     |                                      | 3          | 6.0             | 8.0  | SS          | 7 8 8 11                                |                 | Brown Clayey SILT; trace mf Sand (wet, slight plasticity)                                                                                       | 17                |
| 8     |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 9     |                                      | 4          | 8.0             | 10.0 | SS          | 7 13 14 13                              |                 | Similar Soil (wet, slight plasticity)                                                                                                           | 24                |
| 10    |                                      |            |                 |      |             |                                         | 10.0            |                                                                                                                                                 |                   |
| 11    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 12    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 13    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 14    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 15    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 16    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 17    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 18    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 19    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 20    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |

SS Split Spoon Sample  
 NX Rock Core  
 SH Undisturbed Sample (Shelby Tube)  
 Estimated Groundwater

Drillers: Randy Steiner; Owen Penfeld  
 Inspector: \_\_\_\_\_

ATL-LOG1 LL BD209 COLLIERS ENGINEERING - LACKAWANNA.GPJ ATL4-08.GDT 6/13/25

# ATLANTIC TESTING LABORATORIES, Limited

## Subsurface Investigation

Client: Colliers Engineering & Design  
Project: Subsurface Investigation  
Abbott Road Rehabilitation Project  
Lackawanna, New York

Report No.: BD209D-01-06-25  
Boring Location: See Boring Location Plan

Start Date: 3/19/2025 Finish Date: 3/19/2025

Boring No.: B-2 Sheet 1 of 1

Coordinates  
Latitude \_\_\_\_\_  
Longitude \_\_\_\_\_  
Sampler Hammer  
Weight: \_\_\_\_\_ lbs.  
Fall: \_\_\_\_\_ in.  
Hammer Type: \_\_\_\_\_

Ground Elev.: 612.8' +/- Boring Advance By:  
6" Thin Wall Core

| Groundwater Observations |       |       |        |
|--------------------------|-------|-------|--------|
| Date                     | Time  | Depth | Casing |
| _____                    | _____ | _____ | _____  |
| _____                    | _____ | _____ | _____  |
| _____                    | _____ | _____ | _____  |
| _____                    | _____ | _____ | _____  |

| DEPTH | METHOD OF ADVANCE | SAMPLE NO. | DEPTH OF SAMPLE |     | SAMPLE TYPE | BLOWS ON SAMPLER PER 6" 2" O.D. SAMPLER | DEPTH OF CHANGE | CLASSIFICATION OF MATERIAL<br><br>f - fine<br>m - medium<br>c - coarse<br><br>and - 35-50%<br>some - 20-35%<br>little - 10-20%<br>trace - 0-10% | Recovery (Inches) |
|-------|-------------------|------------|-----------------|-----|-------------|-----------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|       |                   |            | From            | To  |             |                                         |                 |                                                                                                                                                 |                   |
| 1     |                   |            | 0.0             | 2.3 |             | THIN WALL CORE                          | 0.9             | 10.5" ASPHALT PAVEMENT                                                                                                                          | 27.5              |
| 2     |                   |            |                 |     |             |                                         |                 | SUBBASE (Slag Material)                                                                                                                         |                   |
| 3     |                   |            | 2.3             | 2.5 |             | HAND SAMPLE                             | 2.5             |                                                                                                                                                 | 2                 |
| 4     |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 5     |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 6     |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 7     |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 8     |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 9     |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 10    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 11    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 12    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 13    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 14    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 15    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 16    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 17    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 18    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 19    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 20    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |

SS Split Spoon Sample  
NX Rock Core  
SH Undisturbed Sample (Shelby Tube)  
Estimated Groundwater

Drillers: Randy Steiner; Owen Penfeld  
Inspector: \_\_\_\_\_

ATL-LOG1 LL BD209 COLLIERS ENGINEERING - LACKAWANNA.GPJ ATL4-08.GDT 6/13/25

# ATLANTIC TESTING LABORATORIES, Limited

## Subsurface Investigation

Client: Colliers Engineering & Design

Project: Subsurface Investigation

Abbott Road Rehabilitation Project

Lackawanna, New York

Report No.: BD209D-01-06-25

Boring Location: See Boring Location Plan

Boring No.: B-3 Sheet 1 of 1

Start Date: 3/20/2025 Finish Date: 4/8/2025

Coordinates

Latitude \_\_\_\_\_

Longitude \_\_\_\_\_

Sampler Hammer

Weight: 140 lbs.

Fall: 30 in.

Hammer Type: Automatic

| Groundwater Observations |      |       |        |
|--------------------------|------|-------|--------|
| Date                     | Time | Depth | Casing |
|                          |      |       |        |
|                          |      |       |        |
|                          |      |       |        |
|                          |      |       |        |
|                          |      |       |        |

Ground Elev.: 610.0' +/- Boring Advance By: 6" Thin Wall Core/2 1/4" Auger

| DEPTH | METHOD OF ADVANCE | SAMPLE NO. | DEPTH OF SAMPLE |      | SAMPLE TYPE | BLOWS ON SAMPLER PER 6" 2" O.D. SAMPLER | DEPTH OF CHANGE | CLASSIFICATION OF MATERIAL<br><br>f - fine<br>m - medium<br>c - coarse<br><br>and - 35-50%<br>some - 20-35%<br>little - 10-20%<br>trace - 0-10% | Recovery (Inches) |
|-------|-------------------|------------|-----------------|------|-------------|-----------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|       |                   |            | From            | To   |             |                                         |                 |                                                                                                                                                 |                   |
| 1     | AUGER             |            | 0.0             | 2.0  |             | THIN WALL CORE                          | 0.8             | 10.0" ASPHALT PAVEMENT                                                                                                                          | 24                |
| 2     |                   |            |                 |      |             |                                         |                 | SUBBASE (Slag Material)                                                                                                                         |                   |
| 3     |                   | 1          | 2.0             | 2.2  | SS          | HAND SAMPLE                             | 2.2             | Brown cmf SAND; some f Gravel; little Silt; little Debris (slag) (moist, non-plastic) Fill                                                      | 2                 |
| 4     |                   |            | 2.2             | 4.0  |             | 6 4 9 11                                |                 |                                                                                                                                                 | 8                 |
| 5     |                   | 2          | 4.0             | 6.0  | SS          | 11 10 8 8                               |                 | Similar Soil (moist, non-plastic) Fill                                                                                                          | 6                 |
| 6     |                   |            |                 |      |             |                                         | 6.0             |                                                                                                                                                 |                   |
| 7     |                   | 3          | 6.0             | 8.0  | SS          | 9 5 5 5                                 |                 | Brown CLAY & SILT; little cmf Sand; trace Organic Material (roots) (moist, medium plasticity)                                                   | 18                |
| 8     |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 9     |                   | 4          | 8.0             | 10.0 | SS          | 5 6 7 7                                 |                 | Brown CLAY & SILT; little mf Gravel; little cmf Sand (moist, medium plasticity)                                                                 | 12                |
| 10    |                   |            |                 |      |             |                                         | 10.0            |                                                                                                                                                 |                   |
| 11    |                   |            |                 |      |             |                                         |                 | Boring terminated at 10.0 feet.<br><br>Notes:<br>1. Borehole backfilled with on-site soils and patched at the surface with asphalt cold patch.  |                   |
| 12    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 13    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 14    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 15    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 16    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 17    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 18    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 19    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 20    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |

SS Split Spoon Sample  
NX Rock Core  
SH Undisturbed Sample (Shelby Tube)  
Estimated Groundwater

Drillers: Randy Steiner; Owen Penfeld

Inspector: \_\_\_\_\_

ATL-LOG1 LL BD209 COLLIERS ENGINEERING - LACKAWANNA.GPJ ATL4-08.GDT 6/13/25

# ATLANTIC TESTING LABORATORIES, Limited

## Subsurface Investigation

Client: Colliers Engineering & Design  
Project: Subsurface Investigation  
Abbott Road Rehabilitation Project  
Lackawanna, New York

Report No.: BD209D-01-06-25  
Boring Location: See Boring Location Plan

Start Date: 4/8/2025 Finish Date: 4/8/2025

Boring No.: B-4 Sheet 1 of 1

Coordinates  
Latitude \_\_\_\_\_  
Longitude \_\_\_\_\_  
Sampler Hammer  
Weight: \_\_\_\_\_ lbs.  
Fall: \_\_\_\_\_ in.  
Hammer Type: \_\_\_\_\_

Ground Elev.: 610.1' +/- Boring Advance By:  
6" Thin Wall Core

| Groundwater Observations |       |       |        |
|--------------------------|-------|-------|--------|
| Date                     | Time  | Depth | Casing |
| _____                    | _____ | _____ | _____  |
| _____                    | _____ | _____ | _____  |
| _____                    | _____ | _____ | _____  |
| _____                    | _____ | _____ | _____  |

| DEPTH | METHOD OF ADVANCE | SAMPLE NO. | DEPTH OF SAMPLE |     | SAMPLE TYPE    | BLOWS ON SAMPLER PER 6" 2" O.D. SAMPLER | DEPTH OF CHANGE | CLASSIFICATION OF MATERIAL<br><br>f - fine<br>m - medium<br>c - coarse<br><br>and - 35-50%<br>some - 20-35%<br>little - 10-20%<br>trace - 0-10% | Recovery (Inches) |
|-------|-------------------|------------|-----------------|-----|----------------|-----------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|       |                   |            | From            | To  |                |                                         |                 |                                                                                                                                                 |                   |
| 1     |                   |            | 0.0             | 2.1 | THIN WALL CORE |                                         | 0.8             | 9.0" ASPHALT PAVEMENT                                                                                                                           | 25                |
| 2     |                   |            |                 |     |                |                                         |                 | SUBBASE (Slag Material)                                                                                                                         |                   |
| 3     |                   |            | 2.1             | 2.3 | HAND SAMPLE    |                                         | 2.3             |                                                                                                                                                 | 2                 |
| 4     |                   |            |                 |     |                |                                         |                 |                                                                                                                                                 |                   |
| 5     |                   |            |                 |     |                |                                         |                 |                                                                                                                                                 |                   |
| 6     |                   |            |                 |     |                |                                         |                 |                                                                                                                                                 |                   |
| 7     |                   |            |                 |     |                |                                         |                 |                                                                                                                                                 |                   |
| 8     |                   |            |                 |     |                |                                         |                 |                                                                                                                                                 |                   |
| 9     |                   |            |                 |     |                |                                         |                 |                                                                                                                                                 |                   |
| 10    |                   |            |                 |     |                |                                         |                 |                                                                                                                                                 |                   |
| 11    |                   |            |                 |     |                |                                         |                 |                                                                                                                                                 |                   |
| 12    |                   |            |                 |     |                |                                         |                 |                                                                                                                                                 |                   |
| 13    |                   |            |                 |     |                |                                         |                 |                                                                                                                                                 |                   |
| 14    |                   |            |                 |     |                |                                         |                 |                                                                                                                                                 |                   |
| 15    |                   |            |                 |     |                |                                         |                 |                                                                                                                                                 |                   |
| 16    |                   |            |                 |     |                |                                         |                 |                                                                                                                                                 |                   |
| 17    |                   |            |                 |     |                |                                         |                 |                                                                                                                                                 |                   |
| 18    |                   |            |                 |     |                |                                         |                 |                                                                                                                                                 |                   |
| 19    |                   |            |                 |     |                |                                         |                 |                                                                                                                                                 |                   |
| 20    |                   |            |                 |     |                |                                         |                 |                                                                                                                                                 |                   |

Boring terminated at 2.3 feet.

### Notes:

1. Borehole backfilled with on-site soils and patched at the surface with asphalt cold patch.

SS Split Spoon Sample  
NX Rock Core  
SH Undisturbed Sample (Shelby Tube)  
Estimated Groundwater

Drillers: Randy Steiner; Owen Penfeld  
Inspector: \_\_\_\_\_

# ATLANTIC TESTING LABORATORIES, Limited

## Subsurface Investigation

Client: Colliers Engineering & Design

Project: Subsurface Investigation

Abbott Road Rehabilitation Project

Lackawanna, New York

Report No.: BD209D-01-06-25

Boring Location: See Boring Location Plan

Start Date: 3/21/2025 Finish Date: 3/21/2025

Boring No.: B-5 Sheet 1 of 1

Coordinates

Latitude \_\_\_\_\_

Longitude \_\_\_\_\_

Sampler Hammer

Weight: 140 lbs.

Fall: 30 in.

Hammer Type: Automatic

Ground Elev.: 611.5' +/- Boring Advance By: \_\_\_\_\_

**6" Thin Wall Core/2 1/4" Auger**

| Groundwater Observations |      |       |        |
|--------------------------|------|-------|--------|
| Date                     | Time | Depth | Casing |
|                          |      |       |        |
|                          |      |       |        |
|                          |      |       |        |
|                          |      |       |        |

| DEPTH | METHOD OF ADVANCE                    | SAMPLE NO. | DEPTH OF SAMPLE |      | SAMPLE TYPE | BLOWS ON SAMPLER PER 6" 2" O.D. SAMPLER | DEPTH OF CHANGE | CLASSIFICATION OF MATERIAL<br><br>f - fine<br>m - medium<br>c - coarse<br><br>and - 35-50%<br>some - 20-35%<br>little - 10-20%<br>trace - 0-10% | Recovery (Inches) |
|-------|--------------------------------------|------------|-----------------|------|-------------|-----------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|       |                                      |            | From            | To   |             |                                         |                 |                                                                                                                                                 |                   |
| 1     | A<br>R<br>E<br>G<br>U<br>L<br>A<br>R |            | 0.0             | 1.9  |             | THIN WALL CORE                          | 0.8             | 9.5" ASPHALT PAVEMENT                                                                                                                           | 22.5              |
|       |                                      |            |                 |      |             |                                         |                 | SUBBASE (Slag Material)                                                                                                                         |                   |
| 2     |                                      | 1          | 2.0             | 4.0  | SS          | 3 4 5 5                                 | 2.0             | Brown CLAY & SILT; some cmf Sand; trace f Gravel (moist, medium plasticity) Fill w = 16.0%, LL = 34, PL = 14, PI = 20                           | 7                 |
| 3     |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 4     |                                      | 2          | 4.0             | 6.0  | SS          | 4 7 8 6                                 |                 | Brown CLAY & SILT; some cmf Sand; little f Gravel (moist, low plasticity) Fill                                                                  | 6                 |
| 5     |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 6     |                                      | 3          | 6.0             | 8.0  | SS          | 9 12 12 13                              | 6.0             | Brown SILT & CLAY; and cmf Sand; some f Gravel (moist, low plasticity)                                                                          | 24                |
| 7     |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 8     |                                      | 4          | 8.0             | 10.0 | SS          | 11 12 12 14                             |                 | Similar Soil (moist, low plasticity)                                                                                                            | 24                |
| 9     |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 10    |                                      |            |                 |      |             |                                         | 10.0            | Boring terminated at 10.0 feet.<br><br>Notes:<br>1. Borehole backfilled with on-site soils and patched at the surface with asphalt cold patch.  |                   |
| 11    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 12    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 13    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 14    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 15    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 16    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 17    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 18    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 19    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 20    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |

SS Split Spoon Sample  
 NX Rock Core  
 SH Undisturbed Sample (Shelby Tube)  
 Estimated Groundwater

Drillers: Randy Steiner; Owen Penfeld

Inspector: \_\_\_\_\_

ATL-LOG1 LL BD209 COLLIER ENGINEERING - LACKAWANNA.GPJ ATL4-08.GDT 6/13/25

# ATLANTIC TESTING LABORATORIES, Limited

## Subsurface Investigation

Client: Colliers Engineering & Design  
Project: Subsurface Investigation  
Abbott Road Rehabilitation Project  
Lackawanna, New York

Report No.: BD209D-01-06-25  
Boring Location: See Boring Location Plan

Start Date: 3/19/2025 Finish Date: 3/19/2025

Boring No.: B-6 Sheet 1 of 1

Coordinates  
Latitude \_\_\_\_\_  
Longitude \_\_\_\_\_  
Sampler Hammer  
Weight: \_\_\_\_\_ lbs.  
Fall: \_\_\_\_\_ in.  
Hammer Type: \_\_\_\_\_

Ground Elev.: 611.4' +/- Boring Advance By:  
6" Thin Wall Core

| Groundwater Observations |       |       |        |
|--------------------------|-------|-------|--------|
| Date                     | Time  | Depth | Casing |
| _____                    | _____ | _____ | _____  |
| _____                    | _____ | _____ | _____  |
| _____                    | _____ | _____ | _____  |
| _____                    | _____ | _____ | _____  |

| DEPTH | METHOD OF ADVANCE | SAMPLE NO. | DEPTH OF SAMPLE |     | SAMPLE TYPE | BLOWS ON SAMPLER PER 6" 2" O.D. SAMPLER | DEPTH OF CHANGE | CLASSIFICATION OF MATERIAL<br><br>f - fine<br>m - medium<br>c - coarse<br><br>and - 35-50%<br>some - 20-35%<br>little - 10-20%<br>trace - 0-10% | Recovery (Inches) |
|-------|-------------------|------------|-----------------|-----|-------------|-----------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|       |                   |            | From            | To  |             |                                         |                 |                                                                                                                                                 |                   |
| 1     |                   |            | 0.0             | 2.2 |             | THIN WALL CORE                          | 0.8             | 9.5" ASPHALT PAVEMENT                                                                                                                           | 25.5              |
| 2     |                   |            |                 |     |             |                                         |                 | SUBBASE (Slag Material)                                                                                                                         |                   |
| 3     |                   |            | 2.2             | 2.4 |             | HAND SAMPLE                             | 2.4             |                                                                                                                                                 | 2                 |
| 4     |                   |            |                 |     |             |                                         |                 | Boring terminated at 2.4 feet.                                                                                                                  |                   |
| 5     |                   |            |                 |     |             |                                         |                 | Notes:                                                                                                                                          |                   |
| 6     |                   |            |                 |     |             |                                         |                 | 1. Borehole backfilled with on-site soils and patched at the surface with asphalt cold patch.                                                   |                   |
| 7     |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 8     |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 9     |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 10    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 11    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 12    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 13    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 14    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 15    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 16    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 17    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 18    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 19    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 20    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |

SS Split Spoon Sample  
NX Rock Core  
SH Undisturbed Sample (Shelby Tube)  
Estimated Groundwater

Drillers: Randy Steiner; Owen Penfeld  
Inspector: \_\_\_\_\_

ATL-LOG1 LL BD209 COLLIERS ENGINEERING - LACKAWANNA.GPJ ATL4-08.GDT 6/13/25

# ATLANTIC TESTING LABORATORIES, Limited

## Subsurface Investigation

Client: Colliers Engineering & Design

Project: Subsurface Investigation

Abbott Road Rehabilitation Project

Lackawanna, New York

Report No.: BD209D-01-06-25

Boring Location: See Boring Location Plan

Boring No.: B-7 Sheet 1 of 1

Start Date: 3/20/2025 Finish Date: 3/20/2025

Coordinates

Latitude \_\_\_\_\_

Longitude \_\_\_\_\_

Sampler Hammer

Weight: 140 lbs.

Fall: 30 in.

Hammer Type: Automatic

| Groundwater Observations |      |       |        |
|--------------------------|------|-------|--------|
| Date                     | Time | Depth | Casing |
|                          |      |       |        |
|                          |      |       |        |
|                          |      |       |        |
|                          |      |       |        |

Ground Elev.: 614.0' +/- Boring Advance By: 6" Thin Wall Core/2 1/4" Auger

| DEPTH | METHOD OF ADVANCE | SAMPLE NO. | DEPTH OF SAMPLE |      | SAMPLE TYPE | BLOWS ON SAMPLER PER 6" 2" O.D. SAMPLER | DEPTH OF CHANGE | CLASSIFICATION OF MATERIAL                                                                    | Recovery (Inches) |
|-------|-------------------|------------|-----------------|------|-------------|-----------------------------------------|-----------------|-----------------------------------------------------------------------------------------------|-------------------|
|       |                   |            | From            | To   |             |                                         |                 |                                                                                               |                   |
| 1     | A<br>R<br>C<br>C  | 1          | 0.0             | 0.4  | SS          | THIN WALL CORE                          | 0.4             | 5.0" ASPHALT PAVEMENT                                                                         | 5                 |
|       |                   |            | 0.5             | 2.0  |             | 21 17 9                                 | 0.5             | CRUSHED STONE SUBBASE                                                                         | 6                 |
| 2     |                   | 2          | 2.0             | 4.0  |             | 10 7 5 6                                |                 | Brown f GRAVEL; and cmf Sand; little Silt & Clay (moist, low plasticity) Fill                 | 5                 |
| 3     |                   |            |                 |      |             |                                         |                 | Similar Soil (wet, low plasticity) Fill                                                       |                   |
| 4     |                   | 3          | 4.0             | 6.0  | SS          | 15 25 WH/12"                            |                 | Similar Soil (moist, low plasticity) Fill                                                     | 2                 |
| 5     |                   |            |                 |      |             |                                         | 6.0             |                                                                                               |                   |
| 6     |                   | 4          | 6.0             | 8.0  | SS          | 1 1 1 1                                 |                 | Brown SILT & CLAY; and f Sand; little f Gravel (moist, low plasticity)                        | 2                 |
| 7     |                   |            |                 |      |             |                                         |                 |                                                                                               |                   |
| 8     |                   | 5          | 8.0             | 10.0 | SS          | 2 2 3 5                                 |                 | Brown SILT & CLAY; some cmf Sand; little f Gravel (moist, low plasticity)                     | 12                |
| 9     |                   |            |                 |      |             |                                         |                 |                                                                                               |                   |
| 10    |                   |            |                 |      |             |                                         | 10.0            |                                                                                               |                   |
| 11    |                   |            |                 |      |             |                                         |                 | Boring terminated at 10.0 feet.                                                               |                   |
| 12    |                   |            |                 |      |             |                                         |                 |                                                                                               |                   |
| 13    |                   |            |                 |      |             |                                         |                 | Notes:                                                                                        |                   |
| 14    |                   |            |                 |      |             |                                         |                 | 1. Borehole backfilled with on-site soils and patched at the surface with asphalt cold patch. |                   |
| 15    |                   |            |                 |      |             |                                         |                 |                                                                                               |                   |
| 16    |                   |            |                 |      |             |                                         |                 |                                                                                               |                   |
| 17    |                   |            |                 |      |             |                                         |                 |                                                                                               |                   |
| 18    |                   |            |                 |      |             |                                         |                 |                                                                                               |                   |
| 19    |                   |            |                 |      |             |                                         |                 |                                                                                               |                   |
| 20    |                   |            |                 |      |             |                                         |                 |                                                                                               |                   |

SS Split Spoon Sample

NX Rock Core

SH Undisturbed Sample (Shelby Tube)

Estimated Groundwater

Drillers: Randy Steiner; Owen Penfeld

Inspector: \_\_\_\_\_

ATL-LOG1 LL BD209 COLLIERS ENGINEERING - LACKAWANNA.GPJ ATL4-08.GDT 6/13/25



# ATLANTIC TESTING LABORATORIES, Limited

## Subsurface Investigation

Client: Colliers Engineering & Design  
 Project: Subsurface Investigation  
Abbott Road Rehabilitation Project  
Lackawanna, New York

Report No.: BD209D-01-06-25  
 Boring Location: See Boring Location Plan

Boring No.: B-8 Sheet 1 of 1

Start Date: 3/21/2025 Finish Date: 3/21/2025

Coordinates  
 Latitude \_\_\_\_\_  
 Longitude \_\_\_\_\_

Sampler Hammer  
 Weight: 140 lbs.  
 Fall: 30 in.  
 Hammer Type: Automatic

| Groundwater Observations |      |       |        |
|--------------------------|------|-------|--------|
| Date                     | Time | Depth | Casing |
|                          |      |       |        |
|                          |      |       |        |
|                          |      |       |        |
|                          |      |       |        |
|                          |      |       |        |
|                          |      |       |        |

Ground Elev.: 614.1' +/- Boring Advance By: 6" Thin Wall Core/2 1/4" Auger

| DEPTH | METHOD OF ADVANCE | SAMPLE NO. | DEPTH OF SAMPLE |      | SAMPLE TYPE | BLOWS ON SAMPLER PER 6" 2" O.D. SAMPLER | DEPTH OF CHANGE | CLASSIFICATION OF MATERIAL<br><br>f - fine<br>m - medium<br>c - coarse<br><br>and - 35-50%<br>some - 20-35%<br>little - 10-20%<br>trace - 0-10% | Recovery (Inches) |
|-------|-------------------|------------|-----------------|------|-------------|-----------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|       |                   |            | From            | To   |             |                                         |                 |                                                                                                                                                 |                   |
| 1     | AUGER             | 1          | 0.0             | 1.0  | SS          | THIN WALL CORE                          | 0.4             | 4.5" ASPHALT PAVEMENT                                                                                                                           | 12                |
| 2     |                   | 2          | 1.0             | 2.0  | SS          | 16 11                                   | 1.0             | 7.0" CONCRETE                                                                                                                                   | 6                 |
| 3     |                   | 3          | 2.0             | 4.0  | SS          | 6 10 11 10                              | 2.0             | 0.5" CRUSHED STONE SUBBASE                                                                                                                      | 12                |
| 4     |                   | 4          | 4.0             | 6.0  | SS          | 6 5 5 6                                 | 4.0             | CRUSHED STONE; some Silt & Clay (moist, low plasticity)<br>Brown cmf SAND; and Silt; little f Gravel (moist, non-plastic)                       | 12                |
| 5     |                   | 5          | 6.0             | 8.0  | SS          | 3 3 2 5                                 | 6.0             | Brown SILT & CLAY; some cmf Sand (moist, low plasticity)                                                                                        | 24                |
| 6     |                   | 6          | 8.0             | 10.0 | SS          | 8 8 8 10                                | 10.0            | Similar Soil (wet, medium plasticity)                                                                                                           | 24                |
| 7     |                   | 7          |                 |      |             |                                         |                 | Boring terminated at 10.0 feet.<br><br>Notes:<br>1. Borehole backfilled with on-site soils and patched at the surface with asphalt cold patch.  |                   |
| 8     |                   | 8          |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 9     |                   | 9          |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 10    |                   | 10         |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 11    |                   | 11         |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 12    |                   | 12         |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 13    |                   | 13         |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 14    |                   | 14         |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 15    |                   | 15         |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 16    |                   | 16         |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 17    |                   | 17         |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 18    |                   | 18         |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 19    |                   | 19         |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 20    |                   | 20         |                 |      |             |                                         |                 |                                                                                                                                                 |                   |

SS Split Spoon Sample  
 NX Rock Core  
 SH Undisturbed Sample (Shelby Tube)  
 Estimated Groundwater

Drillers: Randy Steiner; Owen Penfeld  
 Inspector: \_\_\_\_\_

ATL-LOG1 LL BD209 COLLIERS ENGINEERING - LACKAWANNA.GPJ ATL4-08.GDT 6/13/25

**ATLANTIC TESTING LABORATORIES, Limited**

**Subsurface Investigation**

Client: Colliers Engineering & Design  
Project: Subsurface Investigation  
Abbott Road Rehabilitation Project  
Lackawanna, New York

Report No.: BD209D-01-06-25  
Boring Location: See Boring Location Plan

Boring No.: B-9 Sheet 1 of 1

Start Date: 3/21/2025 Finish Date: 3/21/2025

Coordinates  
Latitude \_\_\_\_\_  
Longitude \_\_\_\_\_  
Sampler Hammer  
Weight: \_\_\_\_\_ lbs.  
Fall: \_\_\_\_\_ in.  
Hammer Type: \_\_\_\_\_

| Groundwater Observations |       |       |        |
|--------------------------|-------|-------|--------|
| Date                     | Time  | Depth | Casing |
| _____                    | _____ | _____ | _____  |
| _____                    | _____ | _____ | _____  |
| _____                    | _____ | _____ | _____  |
| _____                    | _____ | _____ | _____  |

Ground Elev.: 613.8' +/- Boring Advance By: \_\_\_\_\_  
6" Thin Wall Core

| DEPTH | METHOD OF ADVANCE | SAMPLE NO. | DEPTH OF SAMPLE |     | SAMPLE TYPE | BLOWS ON SAMPLER PER 6" 2" O.D. SAMPLER | DEPTH OF CHANGE | CLASSIFICATION OF MATERIAL                                                                                                                                    |                                                                                 | Recovery (Inches) |
|-------|-------------------|------------|-----------------|-----|-------------|-----------------------------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|-------------------|
|       |                   |            | From            | To  |             |                                         |                 | <div>f - fine<br/>m - medium<br/>c - coarse</div>                                                                                                             | <div>and - 35-50%<br/>some - 20-35%<br/>little - 10-20%<br/>trace - 0-10%</div> |                   |
| 1     |                   |            | 0.0             | 1.2 |             | THIN WALL CORE                          | 0.4             | 4.5" ASPHALT PAVEMENT                                                                                                                                         |                                                                                 | 14                |
| 2     |                   |            | 1.2             | 1.3 |             | HAND SAMPLE                             | 1.2             | 10.0" CONCRETE                                                                                                                                                |                                                                                 | 2                 |
| 3     |                   |            |                 |     |             |                                         | 1.3             | GRAVEL and SAND SUBBASE                                                                                                                                       |                                                                                 |                   |
| 4     |                   |            |                 |     |             |                                         |                 | <div>Boring terminated at 1.3 feet.</div> <div>Notes:<br/>1. Borehole backfilled with on-site soils and patched at the surface with asphalt cold patch.</div> |                                                                                 |                   |
| 5     |                   |            |                 |     |             |                                         |                 |                                                                                                                                                               |                                                                                 |                   |
| 6     |                   |            |                 |     |             |                                         |                 |                                                                                                                                                               |                                                                                 |                   |
| 7     |                   |            |                 |     |             |                                         |                 |                                                                                                                                                               |                                                                                 |                   |
| 8     |                   |            |                 |     |             |                                         |                 |                                                                                                                                                               |                                                                                 |                   |
| 9     |                   |            |                 |     |             |                                         |                 |                                                                                                                                                               |                                                                                 |                   |
| 10    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                               |                                                                                 |                   |
| 11    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                               |                                                                                 |                   |
| 12    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                               |                                                                                 |                   |
| 13    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                               |                                                                                 |                   |
| 14    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                               |                                                                                 |                   |
| 15    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                               |                                                                                 |                   |
| 16    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                               |                                                                                 |                   |
| 17    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                               |                                                                                 |                   |
| 18    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                               |                                                                                 |                   |
| 19    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                               |                                                                                 |                   |
| 20    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                               |                                                                                 |                   |

Boring terminated at 1.3 feet.

Notes:

1. Borehole backfilled with on-site soils and patched at the surface with asphalt cold patch.

ATL-LOG1 LL BD209 COLLIERS ENGINEERING - LACKAWANNA.GPJ ATL4-08.GDT 6/13/25

SS Split Spoon Sample  
NX Rock Core  
SH Undisturbed Sample (Shelby Tube)  
Estimated Groundwater

Drillers: Randy Steiner; Owen Penfeld  
Inspector: \_\_\_\_\_

# ATLANTIC TESTING LABORATORIES, Limited

## Subsurface Investigation

Client: Colliers Engineering & Design  
Project: Subsurface Investigation  
Abbott Road Rehabilitation Project  
Lackawanna, New York

Report No.: BD209D-01-06-25  
Boring Location: See Boring Location Plan

Boring No.: B-10 Sheet 1 of 1

Start Date: 3/19/2025 Finish Date: 3/19/2025

Coordinates  
Latitude \_\_\_\_\_  
Longitude \_\_\_\_\_  
Sampler Hammer  
Weight: 140 lbs.  
Fall: 30 in.  
Hammer Type: Automatic

| Date             | Time           | Depth      | Casing      |
|------------------|----------------|------------|-------------|
| <u>3/19/2025</u> | <u>1:00 PM</u> | <u>DRY</u> | <u>8.0'</u> |
| _____            | _____          | _____      | _____       |
| _____            | _____          | _____      | _____       |
| _____            | _____          | _____      | _____       |

Ground Elev.: 613.5' +/- Boring Advance By:  
6" Thin Wall Core/2 1/4" Auger

| DEPTH | METHOD OF ADVANCE | SAMPLE NO. | DEPTH OF SAMPLE |      | SAMPLE TYPE | BLOWS ON SAMPLER PER 6" 2" O.D. SAMPLER | DEPTH OF CHANGE | CLASSIFICATION OF MATERIAL<br><br>f - fine<br>m - medium<br>c - coarse<br><br>and - 35-50%<br>some - 20-35%<br>little - 10-20%<br>trace - 0-10% | Recovery (Inches) |
|-------|-------------------|------------|-----------------|------|-------------|-----------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|       |                   |            | From            | To   |             |                                         |                 |                                                                                                                                                 |                   |
|       |                   |            | 0.0             | 1.5  |             | THIN WALL CORE                          | 0.8             | 9.0" ASPHALT PAVEMENT                                                                                                                           | 18.5              |
| 1     |                   |            |                 |      |             |                                         | 1.5             | 9.5" CONCRETE                                                                                                                                   |                   |
| 2     | A<br>G<br>R<br>E  | 1          | 1.5             | 3.0  | SS          | 2 1 1                                   |                 | Brown cmf SAND; some Silt; some cf Gravel (moist, non-plastic)<br>Fill w = 11.8%, LL = NP, PL = NP, PI = NP                                     | 3                 |
| 3     |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 4     |                   | 2          | 3.0             | 4.0  | SS          | 1 3                                     | 4.0             | Brown cmf SAND; and Clay & Silt; little f Gravel (moist, medium plasticity) Fill                                                                | 2                 |
| 5     |                   | 3          | 4.0             | 6.0  | SS          | 2 3 4 6                                 |                 | Brown CLAY & SILT; some cmf Sand; trace f Gravel (moist, medium plasticity)                                                                     | 6                 |
| 6     |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 7     |                   |            |                 |      |             |                                         |                 | Brown CLAY & SILT; little cmf Sand; trace cf Gravel; trace Organic Material (roots) (moist, medium plasticity)                                  | 6                 |
| 8     |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 9     |                   | 5          | 8.0             | 10.0 | SS          | 8 9 10 10                               | 10.0            | Brown CLAY & SILT; trace cmf Sand; trace f Gravel (moist, medium plasticity)                                                                    | 12                |
| 10    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 11    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 12    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 13    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 14    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 15    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 16    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 17    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 18    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 19    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 20    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
|       |                   |            |                 |      |             |                                         |                 | Boring terminated at 10.0 feet.                                                                                                                 |                   |
|       |                   |            |                 |      |             |                                         |                 | Notes:<br>1. Borehole backfilled with on-site soils and patched at the surface with asphalt cold patch.                                         |                   |

SS Split Spoon Sample  
NX Rock Core  
SH Undisturbed Sample (Shelby Tube)  
Estimated Groundwater

Drillers: Randy Steiner; Owen Penfeld  
Inspector: \_\_\_\_\_

ATL-LOG1 LL BD209 COLLIERS ENGINEERING - LACKAWANNA.GPJ ATL4-08.GDT 6/13/25

# ATLANTIC TESTING LABORATORIES, Limited

## Subsurface Investigation

Client: Colliers Engineering & Design  
 Project: Subsurface Investigation  
Abbott Road Rehabilitation Project  
Lackawanna, New York

Report No.: BD209D-01-06-25  
 Boring Location: See Boring Location Plan

Start Date: 3/20/2025 Finish Date: 3/20/2025

Boring No.: B-11 Sheet 1 of 1

Coordinates  
 Latitude \_\_\_\_\_  
 Longitude \_\_\_\_\_  
 Sampler Hammer  
 Weight: 140 lbs.  
 Fall: 30 in.  
 Hammer Type: Automatic

Ground Elev.: 611.9' +/- Boring Advance By:  
6" Thin Wall Core/2 1/4" Auger

Groundwater Observations  
 Date Time Depth Casing  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

| DEPTH | METHOD OF ADVANCE | SAMPLE NO. | DEPTH OF SAMPLE |      | SAMPLE TYPE | BLOWS ON SAMPLER PER 6" 2" O.D. SAMPLER | DEPTH OF CHANGE | CLASSIFICATION OF MATERIAL<br><br>f - fine<br>m - medium<br>c - coarse<br><br>and - 35-50%<br>some - 20-35%<br>little - 10-20%<br>trace - 0-10% | Recovery (Inches) |
|-------|-------------------|------------|-----------------|------|-------------|-----------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|       |                   |            | From            | To   |             |                                         |                 |                                                                                                                                                 |                   |
|       |                   |            | 0.0             | 0.9  |             | THIN WALL CORE                          | 0.9             | 10.5" ASPHALT PAVEMENT                                                                                                                          | 10.5              |
| 1     | AUGER             | 1          | 1.0             | 2.0  | SS          | 22 10                                   | 1.0             | SUBBASE (Slag Material)                                                                                                                         | 6                 |
| 2     |                   | 2          | 2.0             | 4.0  | SS          | 2 3 5 6                                 | 2.0             | SLAG; some Clay & Silt (moist, medium plasticity) Fill                                                                                          | 12                |
| 3     |                   |            |                 |      |             |                                         |                 | Brown CLAY & SILT; and cmf Sand; trace f Gravel; trace Organic Material (roots) (moist, medium plasticity)                                      |                   |
| 4     |                   | 3          | 4.0             | 6.0  | SS          | 1 3 3 5                                 |                 | Brown CLAY & SILT; some cmf Sand; trace f Gravel; trace Organic Material (roots, wood fragments) (moist, medium plasticity)                     | 7                 |
| 5     |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 6     |                   | 4          | 6.0             | 8.0  | SS          | 7 7 8 8                                 |                 | Similar Soil (moist, medium plasticity)                                                                                                         | 18                |
| 7     |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 8     |                   | 5          | 8.0             | 10.0 | SS          | 7 7 7 9                                 |                 | Brown CLAY & SILT; some cmf Sand; trace f Gravel (moist, medium plasticity)                                                                     | 24                |
| 9     |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 10    |                   |            |                 |      |             |                                         | 10.0            |                                                                                                                                                 |                   |
| 11    |                   |            |                 |      |             |                                         |                 | Boring terminated at 10.0 feet.                                                                                                                 |                   |
| 12    |                   |            |                 |      |             |                                         |                 | Notes:                                                                                                                                          |                   |
| 13    |                   |            |                 |      |             |                                         |                 | 1. Borehole backfilled with on-site soils and patched at the surface with asphalt cold patch.                                                   |                   |
| 14    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 15    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 16    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 17    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 18    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 19    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 20    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |

SS Split Spoon Sample  
 NX Rock Core  
 SH Undisturbed Sample (Shelby Tube)  
 Estimated Groundwater

Drillers: Randy Steiner; Owen Penfeld  
 Inspector: \_\_\_\_\_

ATL-LOG1 LL BD209 COLLIERS ENGINEERING - LACKAWANNA.GPJ ATL4-08.GDT 6/13/25

# ATLANTIC TESTING LABORATORIES, Limited

## Subsurface Investigation

Client: Colliers Engineering & Design  
 Project: Subsurface Investigation  
Abbott Road Rehabilitation Project  
Lackawanna, New York

Report No.: BD209D-01-06-25  
 Boring Location: See Boring Location Plan

Start Date: 3/20/2025 Finish Date: 3/20/2025

Boring No.: B-12 Sheet 1 of 1

Coordinates  
 Latitude \_\_\_\_\_  
 Longitude \_\_\_\_\_

Sampler Hammer  
 Weight: 140 lbs.  
 Fall: 30 in.  
 Hammer Type: Automatic

Ground Elev.: 608.2' +/- Boring Advance By:  
6" Thin Wall Core/2 1/4" Auger

| Groundwater Observations |      |       |        |
|--------------------------|------|-------|--------|
| Date                     | Time | Depth | Casing |
|                          |      |       |        |
|                          |      |       |        |
|                          |      |       |        |
|                          |      |       |        |
|                          |      |       |        |

| DEPTH | METHOD OF ADVANCE | SAMPLE NO. | DEPTH OF SAMPLE |     | SAMPLE TYPE | BLOWS ON SAMPLER PER 6" 2" O.D. SAMPLER | DEPTH OF CHANGE   | CLASSIFICATION OF MATERIAL<br><br>f - fine<br>m - medium<br>c - coarse<br><br>and - 35-50%<br>some - 20-35%<br>little - 10-20%<br>trace - 0-10% | Recovery (Inches) |
|-------|-------------------|------------|-----------------|-----|-------------|-----------------------------------------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|       |                   |            | From            | To  |             |                                         |                   |                                                                                                                                                 |                   |
| 1     | AUGER             | 1          | 0.0             | 0.9 | SS          | 3 2                                     | 0.4<br>0.9<br>1.0 | 5.0" ASPHALT PAVEMENT                                                                                                                           | 11                |
| 2     |                   | 2          | 1.0             | 2.0 | SS          | 1 1 1 1                                 | 1.0               | 6.0" CONCRETE                                                                                                                                   | 3                 |
| 3     |                   |            | 2.0             | 4.0 | SS          |                                         |                   | SUBBASE (Slag Material)                                                                                                                         | 7                 |
| 4     |                   |            |                 |     |             |                                         |                   | Brown Clayey SILT; and cmf Sand; little cf Gravel (wet, slight plasticity)                                                                      |                   |
| 5     |                   | 3          | 4.0             | 5.5 | SS          | WH/18"                                  |                   | Similar Soil (wet, slight plasticity)                                                                                                           |                   |
| 6     |                   |            |                 |     |             |                                         | 5.5               | Similar Soil (wet, slight plasticity)                                                                                                           |                   |
| 7     |                   |            |                 |     |             |                                         |                   |                                                                                                                                                 |                   |
| 8     |                   |            |                 |     |             |                                         |                   |                                                                                                                                                 |                   |
| 9     |                   |            |                 |     |             |                                         |                   |                                                                                                                                                 |                   |
| 10    |                   |            |                 |     |             |                                         |                   |                                                                                                                                                 |                   |
| 11    |                   |            |                 |     |             |                                         |                   |                                                                                                                                                 |                   |
| 12    |                   |            |                 |     |             |                                         |                   |                                                                                                                                                 |                   |
| 13    |                   |            |                 |     |             |                                         |                   |                                                                                                                                                 |                   |
| 14    |                   |            |                 |     |             |                                         |                   |                                                                                                                                                 |                   |
| 15    |                   |            |                 |     |             |                                         |                   |                                                                                                                                                 |                   |
| 16    |                   |            |                 |     |             |                                         |                   |                                                                                                                                                 |                   |
| 17    |                   |            |                 |     |             |                                         |                   |                                                                                                                                                 |                   |
| 18    |                   |            |                 |     |             |                                         |                   |                                                                                                                                                 |                   |
| 19    |                   |            |                 |     |             |                                         |                   |                                                                                                                                                 |                   |
| 20    |                   |            |                 |     |             |                                         |                   |                                                                                                                                                 |                   |

Boring terminated at 5.5 feet due to possible utility.

Notes:  
 1. Borehole backfilled with on-site soils and patched at the surface with asphalt cold patch.

SS Split Spoon Sample  
 NX Rock Core  
 SH Undisturbed Sample (Shelby Tube)  
 Estimated Groundwater

Drillers: Randy Steiner; Owen Penfeld  
 Inspector: \_\_\_\_\_

ATL-LOG1 LL BD209 COLLIERS ENGINEERING - LACKAWANNA.GPJ ATL4-08.GDT 6/13/25

# ATLANTIC TESTING LABORATORIES, Limited

## Subsurface Investigation

Client: Colliers Engineering & Design  
 Project: Subsurface Investigation  
Abbott Road Rehabilitation Project  
Lackawanna, New York

Report No.: BD209D-01-06-25  
 Boring Location: See Boring Location Plan

Start Date: 3/21/2025 Finish Date: 3/21/2025

Boring No.: B-13 Sheet 1 of 1

Coordinates  
 Latitude \_\_\_\_\_  
 Longitude \_\_\_\_\_

Sampler Hammer  
 Weight: \_\_\_\_\_ lbs.  
 Fall: \_\_\_\_\_ in.  
 Hammer Type: \_\_\_\_\_

Ground Elev.: 608.3 +/- Boring Advance By:  
6" Thin Wall Core

Groundwater Observations  
 Date Time Depth Casing  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

| DEPTH | METHOD OF ADVANCE | SAMPLE NO. | DEPTH OF SAMPLE |     | SAMPLE TYPE | BLOWS ON SAMPLER PER 6" 2" O.D. SAMPLER | DEPTH OF CHANGE | CLASSIFICATION OF MATERIAL           |                                                                   | Recovery (Inches) |
|-------|-------------------|------------|-----------------|-----|-------------|-----------------------------------------|-----------------|--------------------------------------|-------------------------------------------------------------------|-------------------|
|       |                   |            | From            | To  |             |                                         |                 | f - fine<br>m - medium<br>c - coarse | and - 35-50%<br>some - 20-35%<br>little - 10-20%<br>trace - 0-10% |                   |
| 1     |                   |            | 0.0             | 0.9 |             | THIN WALL CORE                          | 0.2<br>0.9      | 2.5" ASPHALT PAVEMENT                |                                                                   | 10.25             |
|       |                   |            | 0.9             | 1.1 |             | HAND SAMPLE                             | 1.1             | 8.0" CONCRETE                        |                                                                   | 2                 |
| 2     |                   |            |                 |     |             |                                         |                 | SUBBASE (Slag Material)              |                                                                   |                   |
| 3     |                   |            |                 |     |             |                                         |                 |                                      |                                                                   |                   |
| 4     |                   |            |                 |     |             |                                         |                 |                                      |                                                                   |                   |
| 5     |                   |            |                 |     |             |                                         |                 |                                      |                                                                   |                   |
| 6     |                   |            |                 |     |             |                                         |                 |                                      |                                                                   |                   |
| 7     |                   |            |                 |     |             |                                         |                 |                                      |                                                                   |                   |
| 8     |                   |            |                 |     |             |                                         |                 |                                      |                                                                   |                   |
| 9     |                   |            |                 |     |             |                                         |                 |                                      |                                                                   |                   |
| 10    |                   |            |                 |     |             |                                         |                 |                                      |                                                                   |                   |
| 11    |                   |            |                 |     |             |                                         |                 |                                      |                                                                   |                   |
| 12    |                   |            |                 |     |             |                                         |                 |                                      |                                                                   |                   |
| 13    |                   |            |                 |     |             |                                         |                 |                                      |                                                                   |                   |
| 14    |                   |            |                 |     |             |                                         |                 |                                      |                                                                   |                   |
| 15    |                   |            |                 |     |             |                                         |                 |                                      |                                                                   |                   |
| 16    |                   |            |                 |     |             |                                         |                 |                                      |                                                                   |                   |
| 17    |                   |            |                 |     |             |                                         |                 |                                      |                                                                   |                   |
| 18    |                   |            |                 |     |             |                                         |                 |                                      |                                                                   |                   |
| 19    |                   |            |                 |     |             |                                         |                 |                                      |                                                                   |                   |
| 20    |                   |            |                 |     |             |                                         |                 |                                      |                                                                   |                   |

Boring terminated at 1.1 feet.

### Notes:

1. Borehole backfilled with on-site soils and patched at the surface with asphalt cold patch.

SS Split Spoon Sample  
 NX Rock Core  
 SH Undisturbed Sample (Shelby Tube)  
 Estimated Groundwater

Drillers: Randy Steiner; Owen Penfeld  
 Inspector: \_\_\_\_\_

ATL-LOG1 LL BD209 COLLIERS ENGINEERING - LACKAWANNA.GPJ ATL4-08.GDT 6/13/25

# ATLANTIC TESTING LABORATORIES, Limited

## Subsurface Investigation

Client: Colliers Engineering & Design

Project: Subsurface Investigation

Abbott Road Rehabilitation Project

Lackawanna, New York

Report No.: BD209D-01-06-25

Boring Location: See Boring Location Plan

Boring No.: B-14 Sheet 1 of 1

Start Date: 3/20/2025 Finish Date: 3/20/2025

Coordinates \_\_\_\_\_

Latitude \_\_\_\_\_

Longitude \_\_\_\_\_

Sampler Hammer Weight: 140 lbs.

Fall: 30 in.

Hammer Type: Automatic

Groundwater Observations

| Date             | Time           | Depth       | Casing      |
|------------------|----------------|-------------|-------------|
| <u>3/20/2025</u> | <u>1:00 PM</u> | <u>7.0'</u> | <u>8.0'</u> |
|                  |                |             |             |
|                  |                |             |             |
|                  |                |             |             |

Ground Elev.: 603.6' +/-

Boring Advance By: 6" Thin Wall Core/2 1/4" Auger

| DEPTH | METHOD OF ADVANCE                    | SAMPLE NO. | DEPTH OF SAMPLE |      | SAMPLE TYPE | BLOWS ON SAMPLER PER 6" 2" O.D. SAMPLER | DEPTH OF CHANGE | CLASSIFICATION OF MATERIAL<br><br>f - fine<br>m - medium<br>c - coarse<br><br>and - 35-50%<br>some - 20-35%<br>little - 10-20%<br>trace - 0-10% | Recovery (Inches) |
|-------|--------------------------------------|------------|-----------------|------|-------------|-----------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|       |                                      |            | From            | To   |             |                                         |                 |                                                                                                                                                 |                   |
| 1     | A<br>R<br>E<br>G<br>U<br>L<br>A<br>R |            | 0.0             | 1.7  |             | THIN WALL CORE                          | 0.8             | 10.0" ASPHALT PAVEMENT                                                                                                                          | 20                |
| 2     |                                      |            |                 |      |             |                                         | 2.0             | SUBBASE (Slag Material)                                                                                                                         |                   |
| 3     |                                      | 1          | 2.0             | 4.0  | SS          | 7 3 2 2                                 | 4.0             | Brown cmf SAND; and Slag; some Silt & Clay (moist, low plasticity) Fill                                                                         | 12                |
| 4     |                                      | 2          | 4.0             | 6.0  | SS          | 1 2 3 2                                 |                 | Brown CLAY & SILT; and cmf Sand; trace f Slag (moist, medium plasticity) Fill w = 18.5%, LL = 31, PL = 16, PI = 15                              | 12                |
| 5     |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 6     |                                      | 3          | 6.0             | 8.0  | SS          | 2 3 3 2                                 |                 | Brown CLAY & SILT; little mf Sand (moist, medium plasticity)                                                                                    | 12                |
| 7     |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 8     |                                      | 4          | 8.0             | 10.0 | SS          | 3 3 3 5                                 | 10.0            | Brown CLAY & SILT; with Silt partings (moist, medium plasticity)                                                                                | 24                |
| 9     |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 10    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 11    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 12    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 13    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 14    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 15    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 16    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 17    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 18    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 19    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 20    |                                      |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
|       |                                      |            |                 |      |             |                                         |                 | Boring terminated at 10.0 feet.                                                                                                                 |                   |
|       |                                      |            |                 |      |             |                                         |                 | Notes:<br>1. Borehole backfilled with on-site soils and patched at the surface with asphalt cold patch.                                         |                   |

SS Split Spoon Sample  
NX Rock Core  
SH Undisturbed Sample (Shelby Tube)  
Estimated Groundwater

Drillers: Randy Steiner; Owen Penfeld

Inspector: \_\_\_\_\_

ATL-LOG1 LL BD209 COLLIERS ENGINEERING - LACKAWANNA.GPJ ATL4-08.GDT 6/13/25



# ATLANTIC TESTING LABORATORIES, Limited

## Subsurface Investigation

Client: Colliers Engineering & Design  
Project: Subsurface Investigation  
Abbott Road Rehabilitation Project  
Lackawanna, New York

Report No.: BD209D-01-06-25  
Boring Location: See Boring Location Plan

Start Date: 3/20/2025 Finish Date: 3/20/2025

Boring No.: B-15 Sheet 1 of 1

Coordinates  
Latitude \_\_\_\_\_  
Longitude \_\_\_\_\_  
Sampler Hammer  
Weight: \_\_\_\_\_ lbs.  
Fall: \_\_\_\_\_ in.  
Hammer Type: \_\_\_\_\_

Ground Elev.: 603.4' +/- Boring Advance By:  
6" Thin Wall Core

| Groundwater Observations |       |       |        |
|--------------------------|-------|-------|--------|
| Date                     | Time  | Depth | Casing |
| _____                    | _____ | _____ | _____  |
| _____                    | _____ | _____ | _____  |
| _____                    | _____ | _____ | _____  |
| _____                    | _____ | _____ | _____  |

| DEPTH | METHOD OF ADVANCE | SAMPLE NO. | DEPTH OF SAMPLE |     | SAMPLE TYPE | BLOWS ON SAMPLER PER 6" 2" O.D. SAMPLER | DEPTH OF CHANGE | CLASSIFICATION OF MATERIAL<br><br>f - fine<br>m - medium<br>c - coarse<br><br>and - 35-50%<br>some - 20-35%<br>little - 10-20%<br>trace - 0-10% | Recovery (Inches) |
|-------|-------------------|------------|-----------------|-----|-------------|-----------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|       |                   |            | From            | To  |             |                                         |                 |                                                                                                                                                 |                   |
| 1     |                   |            | 0.0             | 1.3 |             | THIN WALL CORE                          | 0.8             | 9.0" ASPHALT PAVEMENT                                                                                                                           | 16                |
| 2     |                   |            | 1.3             | 1.5 |             | HAND SAMPLE                             | 1.5             | SUBBASE (Slag Material)                                                                                                                         | 2                 |
| 3     |                   |            |                 |     |             |                                         |                 | Boring terminated at 1.5 feet.<br><br>Notes:<br>1. Borehole backfilled with on-site soils and patched at the surface with asphalt cold patch.   |                   |
| 4     |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 5     |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 6     |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 7     |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 8     |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 9     |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 10    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 11    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 12    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 13    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 14    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 15    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 16    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 17    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 18    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 19    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 20    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |

SS Split Spoon Sample  
NX Rock Core  
SH Undisturbed Sample (Shelby Tube)  
Estimated Groundwater

Drillers: Randy Steiner; Owen Penfeld  
Inspector: \_\_\_\_\_

ATL-LOG1 LL BD209 COLLIERS ENGINEERING - LACKAWANNA.GPJ ATL4-08.GDT 6/13/25

# ATLANTIC TESTING LABORATORIES, Limited

## Subsurface Investigation

Client: Colliers Engineering & Design  
 Project: Subsurface Investigation  
Abbott Road Rehabilitation Project  
Lackawanna, New York

Report No.: BD209D-01-06-25  
 Boring Location: See Boring Location Plan

Start Date: 3/20/2025 Finish Date: 3/20/2025

Boring No.: B-16 Sheet 1 of 1

Coordinates  
 Latitude \_\_\_\_\_  
 Longitude \_\_\_\_\_

Sampler Hammer  
 Weight: 140 lbs.  
 Fall: 30 in.  
 Hammer Type: Automatic

Ground Elev.: 601.4' +/- Boring Advance By:  
6" Thin Wall Core/2 1/4" Auger

| Groundwater Observations |      |       |        |
|--------------------------|------|-------|--------|
| Date                     | Time | Depth | Casing |
|                          |      |       |        |
|                          |      |       |        |
|                          |      |       |        |
|                          |      |       |        |

| DEPTH | METHOD OF ADVANCE | SAMPLE NO. | DEPTH OF SAMPLE |      | SAMPLE TYPE | BLOWS ON SAMPLER PER 6" 2" O.D. SAMPLER | DEPTH OF CHANGE | CLASSIFICATION OF MATERIAL<br><br>f - fine<br>m - medium<br>c - coarse<br><br>and - 35-50%<br>some - 20-35%<br>little - 10-20%<br>trace - 0-10% | Recovery (Inches) |
|-------|-------------------|------------|-----------------|------|-------------|-----------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|       |                   |            | From            | To   |             |                                         |                 |                                                                                                                                                 |                   |
| 1     | AUGER             |            | 0.0             | 1.5  |             | THIN WALL CORE                          | 0.7             | 8.5" ASPHALT PAVEMENT                                                                                                                           | 18.5              |
| 2     |                   | 1          | 1.5             | 3.0  | SS          | 23 9 3                                  | 1.5             | SUBBASE (Slag Material)                                                                                                                         |                   |
| 3     |                   |            |                 |      |             |                                         |                 | Brown CLAY & SILT; and Slag (moist, medium plasticity) Fill                                                                                     | 8                 |
| 4     |                   | 2          | 3.0             | 4.0  | SS          | 3 4                                     | 3.0             |                                                                                                                                                 |                   |
| 5     |                   |            |                 |      |             |                                         |                 | Brown cmf SAND; and Silt & Clay; little Slag (moist, low plasticity) Fill                                                                       | 6                 |
| 6     |                   | 3          | 4.0             | 6.0  | SS          | 1 1 2 4                                 | 4.0             | Brown CLAY & SILT; trace cmf Sand (moist, medium plasticity)                                                                                    | 24                |
| 7     |                   |            |                 |      |             |                                         |                 | Similar Soil (moist, medium plasticity)                                                                                                         |                   |
| 8     |                   | 4          | 6.0             | 8.0  | SS          | 4 5 6 7                                 |                 |                                                                                                                                                 | 12                |
| 9     |                   | 5          | 8.0             | 10.0 | SS          | 7 7 6 6                                 |                 | Brown CLAY & SILT; little cmf Sand (moist, medium plasticity)                                                                                   | 12                |
| 10    |                   |            |                 |      |             |                                         | 10.0            |                                                                                                                                                 |                   |
| 11    |                   |            |                 |      |             |                                         |                 | Boring terminated at 10.0 feet.<br><br>Notes:<br>1. Borehole backfilled with on-site soils and patched at the surface with asphalt cold patch.  |                   |
| 12    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 13    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 14    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 15    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 16    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 17    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 18    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 19    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |
| 20    |                   |            |                 |      |             |                                         |                 |                                                                                                                                                 |                   |

SS Split Spoon Sample  
 NX Rock Core  
 SH Undisturbed Sample (Shelby Tube)  
 Estimated Groundwater

Drillers: Randy Steiner; Owen Penfeld  
 Inspector: \_\_\_\_\_

ATL-LOG1 LL BD209 COLLIERS ENGINEERING - LACKAWANNA.GPJ ATL4-08.GDT 6/13/25

# ATLANTIC TESTING LABORATORIES, Limited

## Subsurface Investigation

Client: Colliers Engineering & Design  
Project: Subsurface Investigation  
Abbott Road Rehabilitation Project  
Lackawanna, New York

Report No.: BD209D-01-06-25  
Boring Location: See Boring Location Plan

Start Date: 3/21/2025 Finish Date: 3/21/2025

Boring No.: B-17 Sheet 1 of 1

Coordinates  
Latitude \_\_\_\_\_  
Longitude \_\_\_\_\_  
Sampler Hammer  
Weight: \_\_\_\_\_ lbs.  
Fall: \_\_\_\_\_ in.  
Hammer Type: \_\_\_\_\_

Ground Elev.: 601.6' +/- Boring Advance By:  
6" Thin Wall Core

| Groundwater Observations |       |       |        |
|--------------------------|-------|-------|--------|
| Date                     | Time  | Depth | Casing |
| _____                    | _____ | _____ | _____  |
| _____                    | _____ | _____ | _____  |
| _____                    | _____ | _____ | _____  |
| _____                    | _____ | _____ | _____  |

| DEPTH | METHOD OF ADVANCE | SAMPLE NO. | DEPTH OF SAMPLE |     | SAMPLE TYPE | BLOWS ON SAMPLER PER 6" 2" O.D. SAMPLER | DEPTH OF CHANGE | CLASSIFICATION OF MATERIAL<br><br>f - fine<br>m - medium<br>c - coarse<br><br>and - 35-50%<br>some - 20-35%<br>little - 10-20%<br>trace - 0-10% | Recovery (Inches) |
|-------|-------------------|------------|-----------------|-----|-------------|-----------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|       |                   |            | From            | To  |             |                                         |                 |                                                                                                                                                 |                   |
| 1     |                   |            | 0.0             | 1.8 |             | THIN WALL CORE                          | 0.8             | 8.5" ASPHALT PAVEMENT                                                                                                                           | 21                |
| 2     |                   |            | 1.8             | 1.9 |             | HAND SAMPLE                             | 1.9             | SUBBASE (Slag Material)                                                                                                                         | 2                 |
| 3     |                   |            |                 |     |             |                                         |                 | Boring terminated at 1.9 feet.<br><br>Notes:<br>1. Borehole backfilled with on-site soils and patched at the surface with asphalt cold patch.   |                   |
| 4     |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 5     |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 6     |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 7     |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 8     |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 9     |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 10    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 11    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 12    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 13    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 14    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 15    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 16    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 17    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 18    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 19    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |
| 20    |                   |            |                 |     |             |                                         |                 |                                                                                                                                                 |                   |

SS Split Spoon Sample  
NX Rock Core  
SH Undisturbed Sample (Shelby Tube)  
Estimated Groundwater

Drillers: Randy Steiner; Owen Penfeld  
Inspector: \_\_\_\_\_

ATL-LOG1 LL BD209 COLLIERS ENGINEERING - LACKAWANNA.GPJ ATL4-08.GDT 6/13/25

ATTACHMENT F

GEOTECHNICAL LABORATORY TEST RESULTS



# ATLANTIC TESTING LABORATORIES

## LABORATORY DETERMINATION OF MOISTURE CONTENT OF SOILS

ASTM D 2216

Page 1 of 1

### PROJECT INFORMATION

**Client:** Colliers Engineering  
**Project:** Abbott Rd Rehabilitation Project

**ATL Report No.:** BD209SL-01-05-25  
**Report Date:** June 2, 2025  
**Date Received:** May 15, 2025

### TEST DATA

| Boring No. | Sample No. | Depth (ft) | Moisture Content (%) |
|------------|------------|------------|----------------------|
| B-1        | S - 2      | 4.0 - 6.0  | 19.0                 |
| B-5        | S - 1      | 2.0 - 4.0  | 16.0                 |
| B-10       | S - 1      | 1.5 - 3.0  | 11.8                 |
| B-14       | S - 2      | 4.0 - 6.0  | 18.5                 |

### REMARKS

1 No material was excluded from the test sample.

Reviewed By: P.Gregorczyk

Date: 6-4-2025



# ATLANTIC TESTING LABORATORIES

## LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOIL ASTM D 4318

### PROJECT INFORMATION

**Client:** Colliers Engineering

**Project:** Abbott Road Rehabilitation Project

**ATL Report No.:** BD209SL01-05-25

**Report Date:** June 2, 2025

**Date Received:** May 15, 2025

### TEST DATA

| Boring No. | Sample No. | As Received<br>Moisture Content (%) | LL | PL | PI |
|------------|------------|-------------------------------------|----|----|----|
| B-1        | S-2        | 19.0                                | 37 | 17 | 20 |
| B-5        | S-1        | 16.0                                | 34 | 14 | 20 |
| B-10       | S-1        | 11.8                                | NP | NP | NP |
| B-14       | S-2        | 18.5                                | 31 | 16 | 15 |

### SAMPLE INFORMATION

| Boring No. | Sample No. | Grain Size | Sample Retained on | Preparation | Oversized Material        |
|------------|------------|------------|--------------------|-------------|---------------------------|
| B-1        | S-2        | 4.75       | 2                  | Oven Dry    | Pulverizing and Screening |
| B-5        | S-1        | 12.5       | 24                 | Oven Dry    | Pulverizing and Screening |
| B-10       | S-1        | 19         | 54                 | Oven Dry    | Pulverizing and Screening |
| B-14       | S-2        | 6.3        | 20                 | Oven Dry    | Pulverizing and Screening |

### EQUIPMENT INFORMATION

Liquid Limit Procedure: Multipoint - Method A

☒

Single Point - Method B

Liquid Limit Apparatus: Manual

☒

Motor Driven

Liquid Limit Grooving Tool Material: Plastic

☒

Metal

Liquid Limit Grooving Tool Shape: Flat

☒

Curved (AASHTO Only)

Plastic Limit: Hand Rolled

☒

Mechanical Rolling Device

### REMARKS

Reviewed By: P.Gregorczyk

Date: 6-4-2025



# ATLANTIC TESTING LABORATORIES

## PROJECT INFORMATION

**Client:** Colliers

**Project:** Abbott Rd Rehabilitation Project

**ATL Report No.:** BD209SL-01-05-25

**Report Date:** June 3, 2025

**Date Received:** May 15, 2025

## pH OF SOIL ASTM D 4972

| Boring No. | Sample No. | Sample Depth<br>(ft) | pH  | Test<br>Method | Sieved<br>Fraction | Soaking<br>Procedure |
|------------|------------|----------------------|-----|----------------|--------------------|----------------------|
| B-1        | S-2        | 4'-6'                | 7.9 | A              | #10                | Distilled Water      |
| B-5        | S-1        | 2'-4'                | 7.6 | A              | #10                | Distilled Water      |
| B-10       | S-1        | 1.5'-3'              | 9.1 | A              | #10                | Distilled Water      |
| B-14       | S-2        | 4'-6'                | 8.2 | A              | #10                | Distilled Water      |

Reviewed by: P.Gregorczyk

Date: 6-4-2025





# ATLANTIC TESTING LABORATORIES

## Particle Size Distribution Report

ASTM D 422

Project: Abbott Rd Rehabilitation Project

Report No.: BD209SL-05-15-25

Client: Colliers Engineering

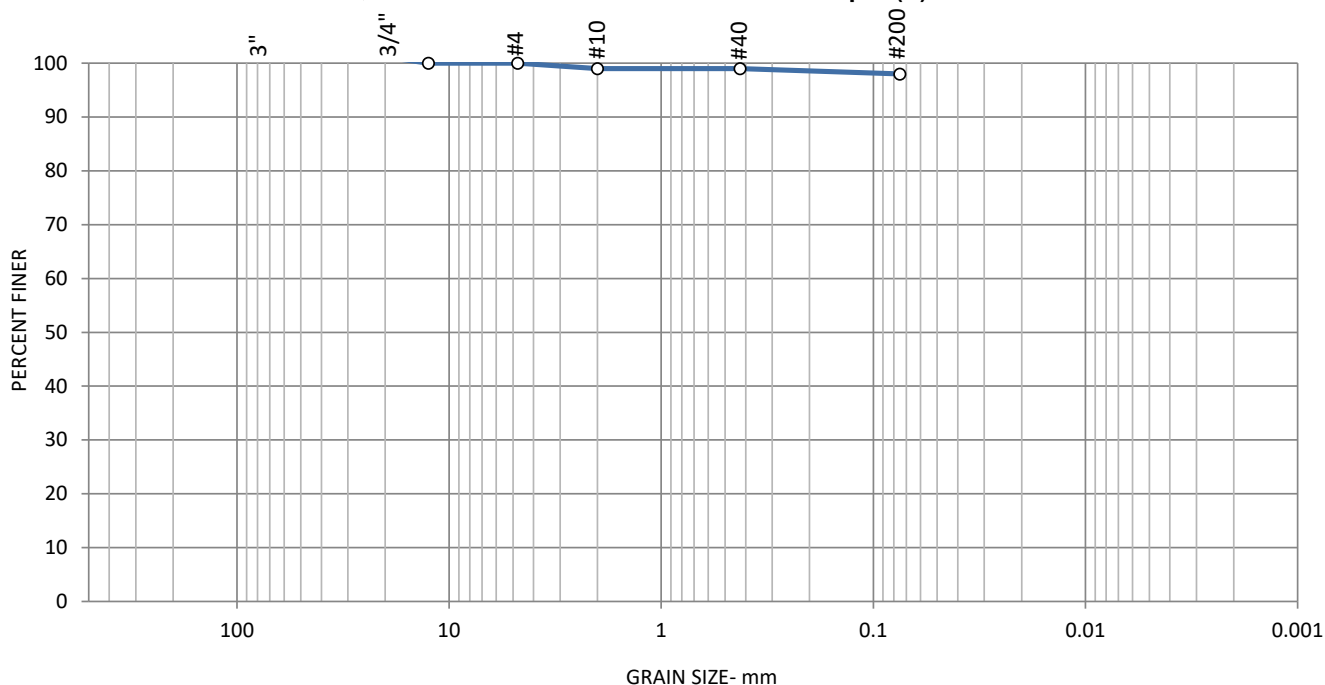
Test Date: 5/30/2025

Sample No: B-1 S-2

Location: Lackawanna, NY

Source of Sample: boring sample

Elev./Depth (ft): 4.0'-6.0'



| % Cobbles | % Gravel |      | % Sand |        |      | % Fines |      |
|-----------|----------|------|--------|--------|------|---------|------|
|           | Coarse   | Fine | Coarse | Medium | Fine | Silt    | Clay |
|           |          |      | 1      |        | 1    |         |      |

| SIEVE SIZE | PERCENT FINER | SPEC. PERCENT | OUT OF SPEC. |
|------------|---------------|---------------|--------------|
| 4"         |               |               |              |
| 3"         |               |               |              |
| 2"         |               |               |              |
| 1"         |               |               |              |
| 3/4"       |               |               |              |
| 1/2"       | 100           |               |              |
| #4         | 100           |               |              |
| #10        | 99            |               |              |
| #40        | 99            |               |              |
| #200       | 98            |               |              |

### Soil Description

Brown CLAY & SILT; trace cmf Sand

Moisture Content = 19.0%

### Atterburg Limits

PL= 17

LL= 37

PI= 20

### Coefficients

D<sub>60</sub>=

D<sub>30</sub>=

D<sub>10</sub>=

C<sub>u</sub>=

C<sub>c</sub>=

### Classification

USCS=

AASHTO=

### Remarks

ATLANTIC TESTING LABORATORIES, LIMITED

Reviewed by: P.Gregorczyk

Date: 6-4-2025



# ATLANTIC TESTING LABORATORIES

## Particle Size Distribution Report

ASTM D 422

Project: Abbott Rd Rehabilitation Project

Report No.: BD209SL-01-05-25

Client: Colliers Engineering

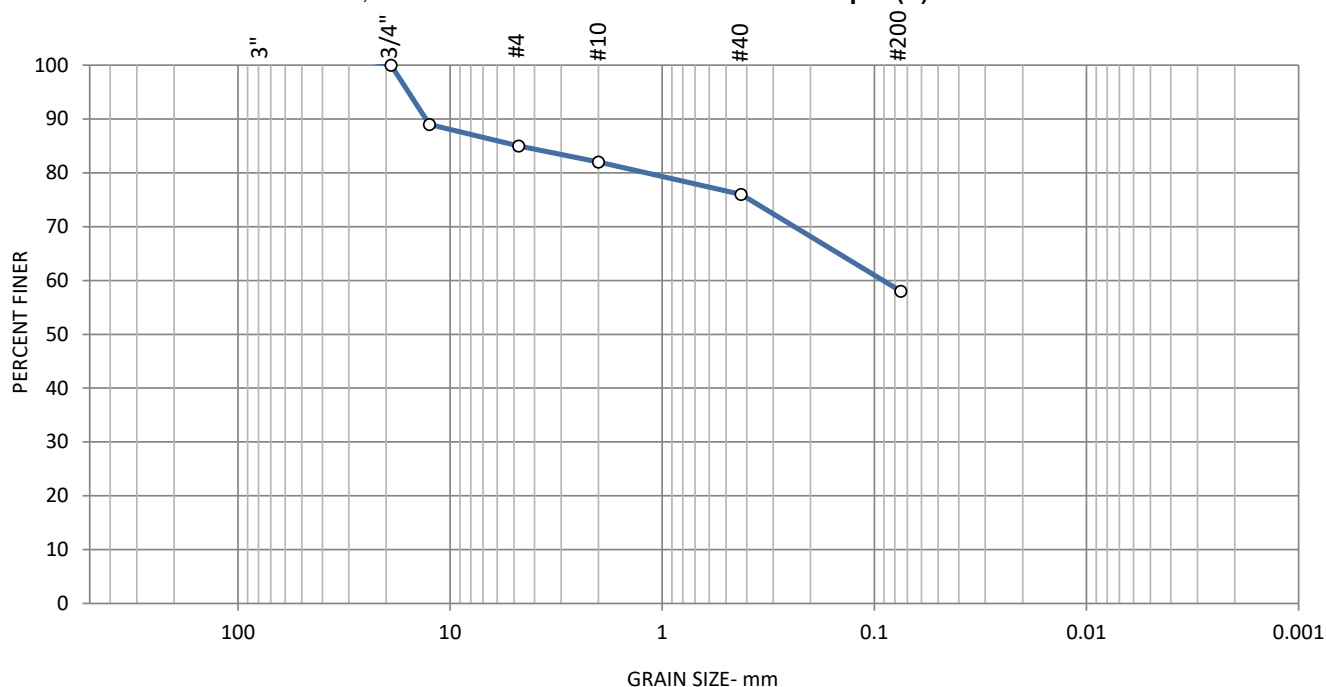
Test Date: 5/30/2025

Sample No: B-5 S-1

Location: Lackawanna, NY

Source of Sample: boring sample

Elev./Depth (ft): 2.0'-4.0'



| % Cobbles | % Gravel |      | % Sand |        |      | % Fines |      |
|-----------|----------|------|--------|--------|------|---------|------|
|           | Coarse   | Fine | Coarse | Medium | Fine | Silt    | Clay |
|           |          | 15   | 3      | 6      | 18   |         |      |

| SIEVE SIZE | PERCENT FINER | SPEC. PERCENT | OUT OF SPEC. |
|------------|---------------|---------------|--------------|
| 4"         |               |               |              |
| 3"         |               |               |              |
| 2"         |               |               |              |
| 1"         |               |               |              |
| 3/4"       | 100           |               |              |
| 1/2"       | 89            |               |              |
| #4         | 85            |               |              |
| #10        | 82            |               |              |
| #40        | 76            |               |              |
| #200       | 58            |               |              |

### Soil Description

Brown CLAY & SILT; some cmf Sand; trace f Gravel (FILL)

Moisture Content = 16.0%

### Atterburg Limits

PL= 14

LL= 34

PI= 20

### Coefficients

D<sub>60</sub>= 0.092

D<sub>30</sub>=

D<sub>10</sub>=

C<sub>u</sub>=

C<sub>c</sub>=

### Classification

USCS=

AASHTO=

### Remarks

ATLANTIC TESTING LABORATORIES, LIMITED

Reviewed by: P.Gregorczyk

Date: 6-4-2025



# ATLANTIC TESTING LABORATORIES

## Particle Size Distribution Report

ASTM D 422

Project: Abbott Rd Rehabilitation Project

Report No.: BD209SL-01-05-25

Client: Colliers Engineering

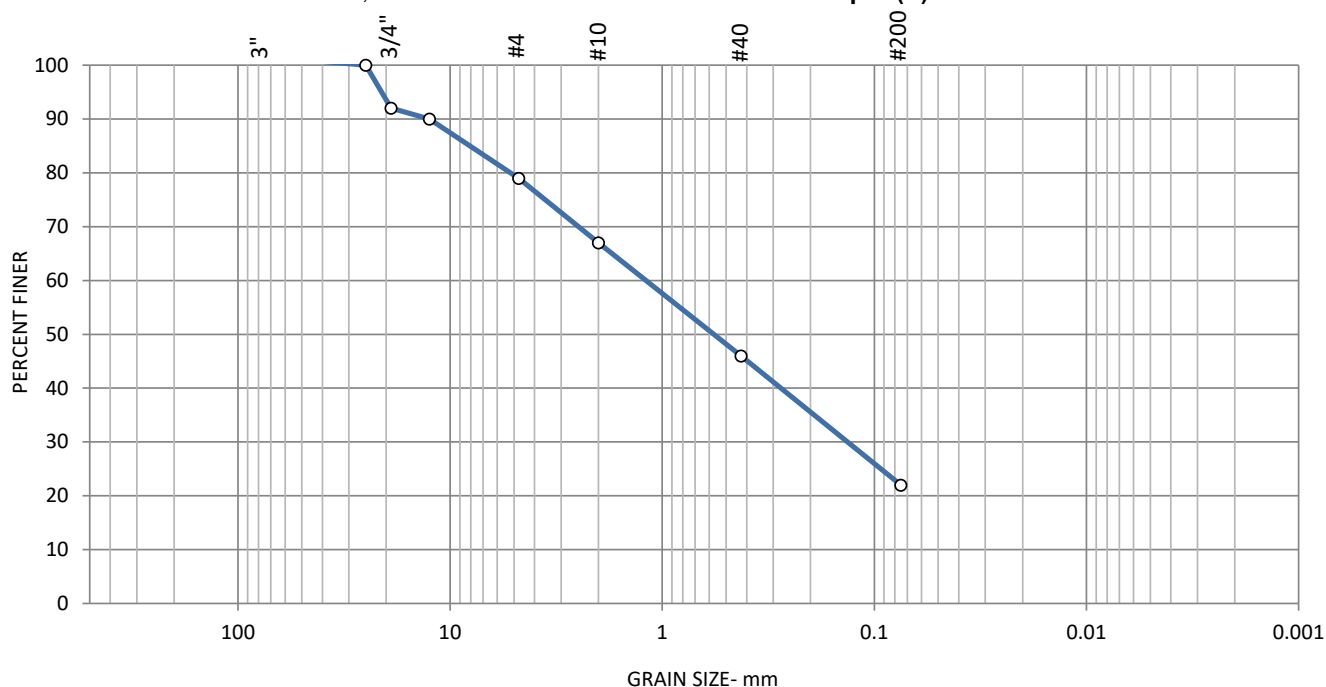
Test Date: 5/30/2025

Sample No: B-10 S-1

Location: Lackawanna, NY

Source of Sample: boring sample

Elev./Depth (ft): 1.5'-3.0'



| % Cobbles | % Gravel |      | % Sand |        |      | % Fines |      |
|-----------|----------|------|--------|--------|------|---------|------|
|           | Coarse   | Fine | Coarse | Medium | Fine | Silt    | Clay |
|           | 8        | 13   | 12     | 21     | 24   |         |      |

| SIEVE SIZE | PERCENT FINER | SPEC. PERCENT | OUT OF SPEC. |
|------------|---------------|---------------|--------------|
| 4"         |               |               |              |
| 3"         |               |               |              |
| 2"         |               |               |              |
| 1"         | 100           |               |              |
| 3/4"       | 92            |               |              |
| 1/2"       | 90            |               |              |
| #4         | 79            |               |              |
| #10        | 67            |               |              |
| #40        | 46            |               |              |
| #200       | 22            |               |              |

### Soil Description

Brown cmf SAND; some Silt; some of Gravel (FILL)

Moisture Content = 11.8%

### Atterburg Limits

PL= NP

LL= NP

PI= NP

### Coefficients

D<sub>60</sub>= 1.259

D<sub>30</sub>= 0.147

D<sub>10</sub>=

C<sub>u</sub>=

C<sub>c</sub>=

### Classification

USCS=

AASHTO=

### Remarks

ATLANTIC TESTING LABORATORIES, LIMITED

Reviewed by: P.Gregorczyk

Date: 6-4-2025



# ATLANTIC TESTING LABORATORIES

## Particle Size Distribution Report

ASTM D 422

Project: Abbott Rd Rehabilitation Project

Report No.: BD209SL-01-05-25

Client: Colliers Engineering

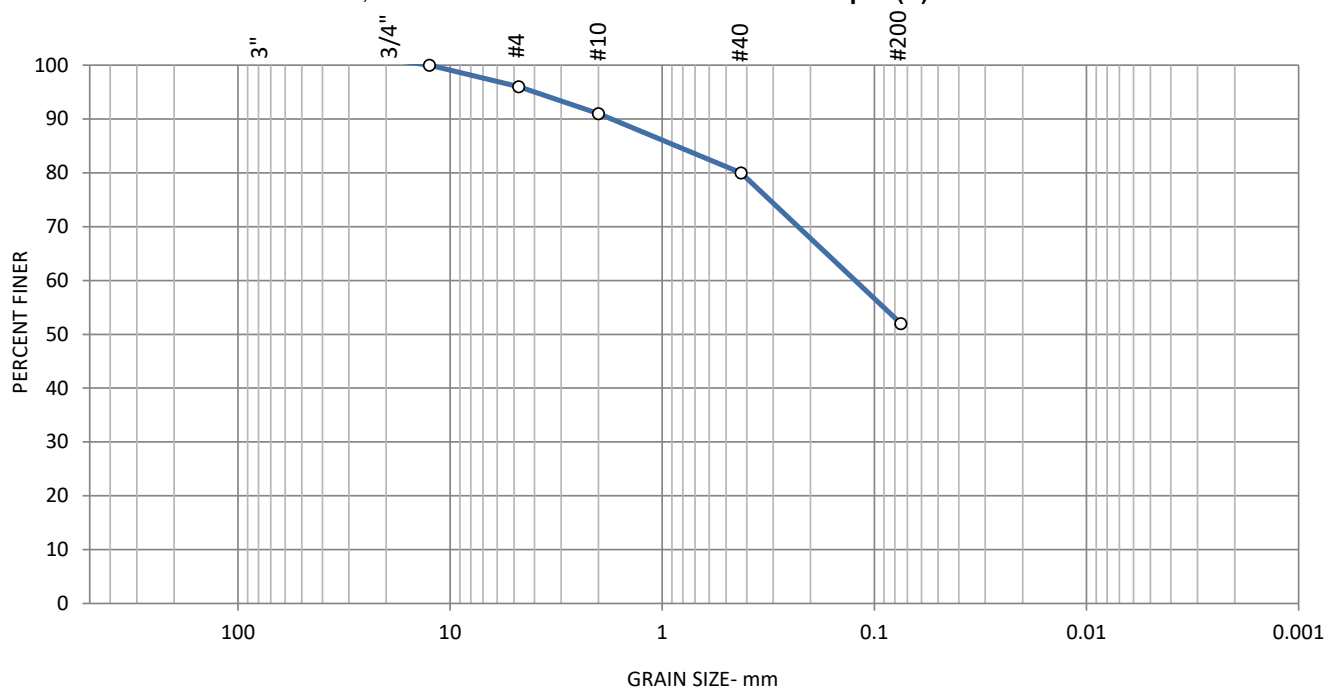
Test Date: 5/30/2025

Sample No: B-14 S-2

Location: Lackawanna, NY

Source of Sample: boring sample

Elev./Depth (ft): 4.0'-6.0'



| % Cobbles | % Gravel |      | % Sand |        |      | % Fines |      |
|-----------|----------|------|--------|--------|------|---------|------|
|           | Coarse   | Fine | Coarse | Medium | Fine | Silt    | Clay |
|           |          | 4    | 5      | 11     | 28   |         |      |

| SIEVE SIZE | PERCENT FINER | SPEC. PERCENT | OUT OF SPEC. |
|------------|---------------|---------------|--------------|
| 4"         |               |               |              |
| 3"         |               |               |              |
| 2"         |               |               |              |
| 1"         |               |               |              |
| 3/4"       |               |               |              |
| 1/2"       | 100           |               |              |
| #4         | 96            |               |              |
| #10        | 91            |               |              |
| #40        | 80            |               |              |
| #200       | 52            |               |              |

### Soil Description

Brown CLAY & SILT; and cmf Sand; trace f Slag (FILL)

Moisture Content = 18.5%

### Atterburg Limits

PL= 16

LL= 31

PI= 15

### Coefficients

D<sub>60</sub>= 0.139

D<sub>30</sub>=

D<sub>10</sub>=

C<sub>u</sub>=

C<sub>c</sub>=

### Classification

USCS=

AASHTO=

### Remarks

ATLANTIC TESTING LABORATORIES, LIMITED

Reviewed by: P.Gregorczyk

Date: 6-4-2025

## ATTACHMENT G

### TABLE 2 – SUMMARY OF SUBBASE AND SUBGRADE CONDITIONS

**TABLE 2**  
**SUMMARY OF SUBBASE AND SUBGRADE CONDITIONS**

Rehabilitation of Abbott Road (CR 4)  
from Fisher Road to City of Buffalo Line  
City of Lackawanna, New York

| Boring Number | Subbase Material            | Approximate Subbase Thickness (inches) | Subgrade Material Type                                        | Estimated Subgrade SPT "N" Value | Estimated Subgrade Soil Resilient Modulus, Mr (psi) |
|---------------|-----------------------------|----------------------------------------|---------------------------------------------------------------|----------------------------------|-----------------------------------------------------|
| B-1           | Slag Material               | 13.5                                   | SILT & CLAY; trace mf Sand; trace cf Gravel                   | 17                               | 3500                                                |
| B-2           | Slag Material               | 19.5                                   | Not Sampled                                                   | ---                              | ---                                                 |
| B-3           | Slag Material               | 16.4                                   | SAND; some f Gravel; little Silt; little Debris (slag) (Fill) | 13                               | 5000                                                |
| B-4           | Slag Material               | 18.6                                   | Not Sampled                                                   | ---                              | ---                                                 |
| B-5           | Slag Material               | 14.5                                   | CLAY & SILT; some cmf Sand; little f Gravel (Fill)            | 9                                | 2500                                                |
| B-6           | Slag Material               | 19.3                                   | Not Sampled                                                   | ---                              | ---                                                 |
| B-7           | Crushed Stone               | 1                                      | GRAVEL; and cmf Sand; little Silt & Clay (Fill)               | 12                               | 5000                                                |
| B-8           | Crushed Stone               | 0.5                                    | cmf SAND; and Silt; little f Gravel                           | 10                               | 5000                                                |
| B-9           | Gravel and Sand             | 1                                      | Not Sampled                                                   | ---                              | ---                                                 |
| B-10          | No subbase sample recovered | ---                                    | cmf SAND; some Silt; some cf Gravel (Fill)                    | 2                                | 2500                                                |
| B-11          | Slag Material               | 1.5 <sup>[1]</sup>                     | SLAG; some Clay & Silt (Fill)                                 | 8                                | 4000                                                |
| B-12          | Slag Material               | 1                                      | Clayey SILT,; and cmf Sand; little cf Gravel                  | 3                                | 2000                                                |
| B-13          | Slag Material               | 3                                      | Not Sampled                                                   | ---                              | ---                                                 |
| B-14          | Slag Material               | 4 <sup>[1]</sup>                       | SAND; and Slag; some Silt & Clay (Fill)                       | 5                                | 3000                                                |
| B-15          | Slag Material               | 9                                      | Not Sampled                                                   | ---                              | ---                                                 |
| B-16          | Slag Material               | 9.5                                    | CLAY & SILT; and Slag (Fill)                                  | 6                                | 2500                                                |
| B-17          | Slag Material               | 14.3                                   | Not Sampled                                                   | ---                              | ---                                                 |

Note:

1. At borings B-11 and B-14, the material recovered from split spoon sampling beneath the subbase consisted of a mixture of possible subbase material and subgrade soils.

## **Appendix E**

### **Design Criteria**




**Exhibit 2-15  
Nonstandard Feature Justification**

Rev. 06/05/2025

|                                               |                                                                                                                    |                                                                                  |                         |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|-------------------------|
| <b>PIN:</b> 5764.15                           | <b>Route No. and Name:</b> Abbott Road (CR4)                                                                       |                                                                                  |                         |
| <b>Project Type:</b> 2R Rehabilitation        | <input type="checkbox"/> <b>National Network/Qualifying Highway</b> <input type="checkbox"/> <b>Access Highway</b> |                                                                                  |                         |
| <b>Functional Class:</b> Urban Minor Arterial | <b>Design Classification:</b> Arterial                                                                             | <b>Context Class:</b> Urban                                                      |                         |
| <b>AADT:</b> 11,825                           | <b>% Trucks:</b> 10.5                                                                                              | <input type="radio"/> <b>NHS</b> <input checked="" type="radio"/> <b>Non-NHS</b> | <b>Terrain:</b> Rolling |

**1. Description of Nonstandard Feature**

|                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------|
| <b>Type of Feature:</b> Lane Width                                                                                             |
| <b>Location:</b> STA 18+48 to STA 31+47 (from approximately Elmview Avenue to Fisher Road)                                     |
| <b>Latitude and Longitude (Linear Feature)</b> FROM Lat: 42.81906944 Long: -78.80164167 TO Lat: 42.82262222 Long: -78.80250556 |
| <b>Latitude and Longitude (Point Feature)</b> Lat: n/a Long: n/a                                                               |
| <b>Existing Value:</b> 10 ft <b>Posted Speed:</b> 30 mph                                                                       |
| <b>Standard Value:</b> 12 ft <b>Design Speed:</b> 40 mph                                                                       |
| <b>Non-NHS Standard:</b> See Above <b>HDM Ch 7 (2R/3R) Std:</b> See Above <b>Recommended Speed - Existing:</b> 30-45 mph       |
| <b>Proposed Value:</b> 10 ft <b>Recommended Speed - Proposed:</b> 30-45 mph                                                    |

**2. Crash Analysis**

|                                                              |                                                                                                                        |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| <b>Observed Number of Crashes per year<sup>1</sup>:</b> 7.00 | <b>Number of Predicted Crashes per year based on Statewide Average (SPF)<sup>2</sup>:</b> 2.27                         |
| <b>From:</b> 3/1/2021 <b>To:</b> 2/29/2024                   | <b>Is the Nonstandard Feature a contributing factor?</b> <input type="radio"/> Yes <input checked="" type="radio"/> No |

Discuss the relationship of any overrepresented crash types to the nonstandard feature:

None observed.

**3. Cost Estimates**

|                                                |                                                        |
|------------------------------------------------|--------------------------------------------------------|
| <b>Cost to fully meet standards:</b> \$970,000 | <b>Cost(s) for incremental improvements:</b> \$860,000 |
|------------------------------------------------|--------------------------------------------------------|

**4. Mitigation e.g., increased superelevation and speed change lane length for a non-standard ramp radius**

|                                                 |                                                    |
|-------------------------------------------------|----------------------------------------------------|
| <b>Expected Crash Cost with Mitigation:</b> N/A | <b>Expected Crash Cost without Mitigation:</b> N/A |
|-------------------------------------------------|----------------------------------------------------|

No mitigation is proposed for the non-standard lane width; therefore, it is not expected to change existing crash patterns. No existing crash patterns are correctable by meeting standards.

**5. Compatibility with Adjacent Segments and Future Plans**

Keeping the current proposed widths would tie into the existing 4-lane section at the southern project limit (section was recently resurfaced).

**6. B/C Ratio and Other Factors e.g., social, economic, and environmental**

Widening the lanes would impact roadside features such as overhead and underground utilities, ROW, and the ability to tie into the existing 4-lane section at the southern project limit.

**7. Proposed Treatment (i.e., recommendation)**

The project will match existing 10' travel lanes from approximately Elmview Avenue to Fisher Road. See Sections 2.1 and 2.3 of the DAD for a more in-depth discussion of the design criteria and nonstandard feature.

<sup>1</sup> This form uses the annual number of crashes as the inputs. User to verify number of crashes per year is used, not the total over the study period.

<sup>2</sup> SPF = Safety Performance Function

## **Appendix F**

### **Stakeholder and Public Input**

(to be populated following January 2026 Public Meeting)