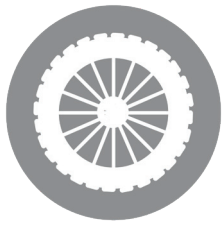


## CHAPTER 6



A transformational streetscape project has restored the Village of Lancaster's historic central business district after the area was devastated by a fire more than 60 years ago. An extension of West Main Street, a pair of roundabouts, an EV charging station, and Cayuga Creek Park were among the additions made to better serve the community.

"I think the village and village board really committed to looking at the whole scope of climate smart initiatives," says Lancaster Mayor Lynne Ruda. "We're trying to get people out walking, create fewer emissions, and provide safe spaces for pedestrians and bicyclists. Embracing that has had a great impact on downtown and has allowed businesses to develop and grow."



# Transportation



**GOAL: A safe, equitable, and affordable multi-modal transportation system that enhances mobility and access, phases out fossil fuel dependency, connects communities, supports a resilient supply chain, and decreases GHG emissions.**

**F**or thousands of years before European settlers arrived, the Haudenosaunee and other Indigenous people of North America understood the importance of Western New York’s geography to the movement of people and trade throughout the region. The location and geography of what is now called Erie County remains important to the efficient transportation of people, goods, and services locally, regionally, and throughout North America.

Unfortunately, the rise of the automobile and reliance on fossil fuels have resulted in a wide range of adverse environmental, social, and economic impacts. Decades of “sprawl without growth” have created land use patterns that are increasingly difficult to provide convenient, reliable, and energy effi-

cient transportation options, leaving our urban, suburban, and rural communities disconnected from one another. Sprawl and the expansion of auto-oriented highways and road infrastructure have also resulted in dramatic social, health, housing, and mobility inequities that primarily impact low-income and minority neighborhoods.

As the impacts of climate change become increasingly evident in our region, the resiliency of Erie County will be determined by how we choose to transport goods and services, connect people and communities, promote energy efficient modes of transportation, and reduce vehicle miles traveled.

New technologies and emerging trends offer unprecedented opportunities to build a transportation system that works better for our en-

## DEFINITIONS

FOR ACTIONS  
SPECIFICATIONS

### Short-term:

By or before 2030

### Medium-term:

By 2040

### Long-term:

By 2050

### Direct:

County government can directly control the action - relating to County government operations and infrastructure

### Indirect:

Regional agencies and municipalities have control and/or County government can support/influence

vironment and our health. Expanded and improved public transportation, electric vehicles (EVs), and ride-sharing services, as well as improved cycling and pedestrian infrastructure, offer ways to reduce GHG emissions, make land use more efficient, and connect people to employment opportunities.

One of the lessons that the COVID-19 pandemic has made clear

is the need for more resilient supply chain networks. The supply chain is a critical element of our transportation network and it has a direct impact on our quality of life. Developing a more resilient supply chain requires that we rethink how we integrate our economic and industrial development, workforce development, energy management, agriculture and food systems delivery, and EV infrastruc-

ture into land use decisions.

Transportation is what connects our economy, communities, and environment. How we develop and use our region's transportation system is a key to reducing GHG emissions and making the most of the many opportunities to increase resilience as we face an uncertain future.

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## STRATEGY 1: Active Transport

According to a 2017 National Household Transportation Survey, 45.6% of vehicle trips within Erie County are three miles or less.<sup>65</sup> These shorter trips provide a significant opportunity to utilize various types of transportation that reduce GHG emissions, improve public health, and promote economic vitality, including active transportation, such as walking and micromobility vehicles (e.g., electric scooters). Furthermore, expanding options for active transportation and micromobility vehicles will improve safety and quality of life for all residents, including those who do not have access to personal vehicles.

Active transportation is any form of human-powered, non-motorized transportation, such as cycling and walking. Substituting a motorized vehicle with zero-emission, active transportation choices can reduce an individual's total personal carbon footprint by more than 25%, in addition to improving one's health and quality of life. Additionally, there are emerging micromobility vehicle options which can further decrease one's carbon footprint by reducing the number of vehicle trips and providing convenient and cost-effective methods of transportation for shorter trips.

Enabling active transportation and micromobility options in Erie County means improving infrastructure, such as trails, sidewalks, streets, and intersections to provide safe and accessible routes to key destinations, services, and educational and employment opportunities. Educating residents about the benefits of active transportation in daily life, creating safe and seamless linkages to transit infrastructure, and expanding connectivity to existing cycling facilities and bicycle parking will promote lower-emission transportation in a way that centers equity, sustainability, and public health.



**TRANSPORTATION GOAL:** A safe, equitable, and affordable multi-modal transportation system that enhances mobility and access, phases out fossil fuel dependency, connects communities, supports a resilient supply chain, and decreases GHG emissions.

| <b>STRATEGY 1:<br/>Active<br/>Transport</b> | <b>HORIZON</b>  | <b>SPHERE OF<br/>INFLUENCE</b> | <b>LEAD<br/>COUNTY<br/>ENTITY</b> | <b>PARTNERS</b>   |
|---|---|--------------------------------|-----------------------------------|---|
| <b>ACTION ITEM<br/>6.1.1:</b>               | <b>Work with partners to develop procedures and access resources to better implement the County's Complete Streets policy, and promote efforts to improve vehicular and pedestrian safety and mobility.</b>                           |                                |                                   |   |
|   | Short-Term/<br>Ongoing  | Direct/<br>Indirect            | DPW, DEP                          | Greater Buffalo-Niagara Regional Transportation Council (GBNRTC), local municipalities, Live Well Erie                          |
| <b>ACTION ITEM<br/>6.1.2:</b>               | <b>Expand the County's active transportation network, including connecting on-road, park, and trail gaps.</b>   |                                |                                   |   |
|   | Ongoing   | Direct/<br>Indirect            | DPW, DEP;<br>Planning             | GBNRTC, local municipalities  |
| <b>ACTION ITEM<br/>6.1.3:</b>               | <b>Work with local governments to implement the Regional Bicycle Master Plan, including the Shoreline Trail.<sup>67</sup></b>   |                                |                                   |   |
|   | Medium-Term   | Direct                         | DEP                               | DPW, GBNRTC, local municipalities   |
| <b>ACTION ITEM<br/>6.1.4(A):</b>            | <b>Educate County residents about the health and economic benefits of choosing active transport options.</b>  |                                |                                   |   |
|   | Ongoing   | Direct                         | DEP                               | Live Well Erie, GObike Buffalo, GO Buffalo Niagara  |
| <b>ACTION ITEM<br/>6.1.4(B):</b>            | <b>Educate all road users, including pedestrians, cyclists, and drivers, on the rules of the road and how to safely interact with each other.</b>   |                                |                                   |   |
|   | Ongoing   | Direct                         | DEP                               | Central Police Services, Sheriff's Dept., GObike Buffalo, County Clerk, Department of Motor Vehicles (DMV)                      |
| <b>ACTION ITEM<br/>6.1.5:</b>               | <b>Provide recommendations on projects referred to the County through the 239-M<sup>68</sup> process to improve walkability and bikeability.</b>  |                                |                                   |   |
|   | Ongoing   | Indirect                       | DEP                               | Local municipalities  |
| <b>ACTION ITEM<br/>6.1.6:</b>               | <b>Address barriers to active transportation through maintenance of sidewalks, paths, and trails; increase access to repair tools and bike racks; and install Americans with Disabilities Act (ADA) compliant pedestrian devices.</b> |                                |                                   |   |
|   | Short-Term/<br>Ongoing  | Direct/<br>Indirect            | Parks, DEP                        | Local municipalities, GBNRTC, local bike and trail organizations, local school districts, parent-teacher associations, students |
| <b>ACTION ITEM<br/>6.1.7:</b>               | <b>Support community campaigns to encourage kids and adults to use active transportation methods to nearby destinations.</b>  |                                |                                   |   |
|   | Short-Term/<br>Ongoing  | Indirect                       | DEP                               | Live Well Erie, GObike Buffalo, GO Buffalo Niagara, bike clubs  |

Figure 20 Complete Streets



## Complete Streets

“Complete Streets is an approach to planning, designing, and building streets that enables safe access for all users, including pedestrians, bicyclists, motorists, and transit riders of all ages and abilities.”<sup>1</sup> Complete Streets make it easier to cross the street, walk to destinations, bicycle to work, and move actively with assistive devices. Complete Streets improve safety, allow buses to run on time, increase economic development, and enhance quality of life.<sup>2</sup>

The design of Complete Streets varies depending on the community's needs, but can include any of the following.

- Lighting
- Covered transit stops
- Sidewalks
- Bicycle lanes
- Frequent and safe crosswalks with pedestrian signals
- Curb ramps
- Landscaping
- Median islands
- Special bus lanes
- Traffic calming tools like traffic circles

Sources:

1 Smart Growth America, “Complete Streets,” Smart Growth America, accessed July 17, 2023, <https://smartgrowthamerica.org/what-are-complete-streets/>.

2 Smart Growth America.

## STRATEGY 2: Transit

Creating a safer, more efficient, and more affordable public transportation system will promote increased use by County residents, reduce the use of highly polluting, car-focused modes of transportation, and reduce climate pollution. The transportation sector generates the largest share of GHG emissions in the United States. One of the greatest overall contributors to transportation GHG emissions is single occupancy vehicle use.<sup>70</sup> According to the 2017 National Household Travel Survey, 44% of trips in the Buffalo-Niagara region are made in single occupancy vehicles, with 87% of

trips made in private vehicles (single or multiple occupants).<sup>71</sup> Reliance on private passenger vehicles negatively affects air quality, takes up significant space that could be used for more beneficial purposes, and results in more than 30% of our overall carbon footprint. Lack of investment in public transportation means that our low- and moderate-income residents and disabled residents often lack mobility or are burdened by the high transportation costs.

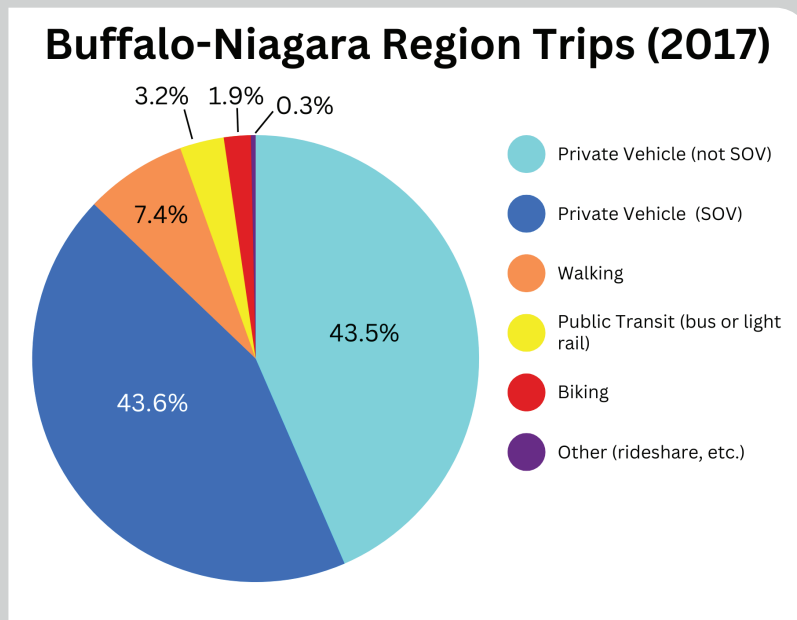
Erie County will continue to support the development of safe, efficient, and affordable transportation systems

through representation on boards such as NFTA and the Greater Buffalo-Niagara Regional Transportation Council (GBNRTC). Additionally, the County will

*To learn about land use, check out the Smart Growth Strategy in the Housing and Neighborhood Resiliency chapter.*

work with municipalities to update their comprehensive plans, provide technical assistance, and obtain funding. In order to promote climate resilience, the County will coordinate with its transportation system providers to improve connectivity to vulnerable neighborhoods during extreme weather events.

Figure 21 Buffalo-Niagara Region Trips



Data source: Federal Highway Administration National Household Travel Survey, <http://nhts.ornl.gov>

### Modes of Transport

In the Erie and Niagara County region, 87% of trips used a private vehicle and almost half of those were in single occupancy vehicles (SOV). A significant number of households in the County do not own a vehicle, so the accessibility of public transportation, walkability, and bikeability is essential to reduce the reliance on private vehicles, which also reduces GHG emissions.

| STRATEGY 2:<br>Transit        | HORIZON  | SPHERE OF<br>INFLUENCE | LEAD<br>COUNTY<br>ENTITY | PARTNERS   |
|-------------------------------|--|------------------------|--------------------------|--|
| <b>ACTION ITEM<br/>6.2.1:</b> | <b>Support expansion of the County’s current light rail system, including connection to East Buffalo and the airport.</b>  |                        |                          |  |
|                               | Ongoing  | Indirect               | DEP                      | NFTA, GBNRTC, ECEMC, City of Buffalo, local municipalities   |
| <b>ACTION ITEM<br/>6.2.2:</b> | <b>Support development of bus rapid transit service throughout the County.</b>   |                        |                          |  |
|                               | Ongoing  | Indirect               | DEP                      | NFTA, GBNRTC, ECEMC, City of Buffalo, local municipalities   |
| <b>ACTION ITEM<br/>6.2.3:</b> | <b>Support expansion of the County’s regional “hub and corridor” transit system, including increased transit frequency and the span of service day.</b>                                |                        |                          |  |
|                               | Ongoing  | Indirect               | DEP                      | NFTA, GBNRTC, ECEMC, City of Buffalo, local municipalities   |
| <b>ACTION ITEM<br/>6.2.4:</b> | <b>Develop alternative transportation programs, including microtransit options, that address transportation gaps.</b>  |                        |                          |  |
|                               | Short-Term/<br>Ongoing   | Direct/<br>Indirect    | DEP                      | NFTA, GBNRTC, private sector operators                       |
| <b>ACTION ITEM<br/>6.2.5:</b> | <b>Expand transit options for rural residents, including the County’s Rural Transit Services program.</b>  |                        |                          |  |
|                               | Short-Term   | Direct                 | DEP                      | NFTA, local municipalities, private sector operators, GBNRTC |
| <b>ACTION ITEM<br/>6.2.6:</b> | <b>Educate the community on the benefits of alternative commuting options such as work from home, alternatives to single occupancy vehicles, and public transportation incentives.</b> |                        |                          |  |
|                               | Ongoing  | Direct                 | DEP                      | GO Buffalo Niagara, local municipalities                     |
| <b>ACTION ITEM<br/>6.2.7:</b> | <b>Advocate for the implementation of the NFTA Equitable Transit Oriented Development Plan<sup>72</sup> for Metro Rail in alignment with state and federal initiatives.</b>            |                        |                          |  |
|                               | Medium-Term  | Direct                 | DEP                      | NFTA, GBNRTC, local municipalities                           |
| <b>ACTION ITEM<br/>6.2.8:</b> | <b>Identify opportunities to expand programs that make transit more affordable to low- and moderate-income residents.</b>  |                        |                          |  |
|                               | Ongoing  | Indirect               | DEP                      | NFTA, Senior Services, Workforce Investment Board            |
| <b>ACTION ITEM<br/>6.2.9:</b> | <b>Develop programs which ensure transportation for disadvantaged communities during extreme weather events.</b>   |                        |                          |  |
|                               | Short-Term   | Direct                 | DEP                      | ECDOH, Senior Services, UB, NFTA, DSS                        |



NFTA Metro Bus

GBNRTC, NFTA Metro bus with bicycle, 2017, photograph, Buffalo, NY, <https://tinyurl.com/2bmjfp4v>

## Bus Rapid Transit on Bailey Ave

Bus Rapid Transit (BRT) is a high-quality bus-based transit system that delivers fast and efficient service at capacities similar to light rail that may include dedicated lanes, busways, traffic signal priority, off-board fare collection, elevated platforms, and enhanced stations. BRT also presents the opportunity to include multi-modal transportation enhancements, such as improved pedestrian and bicycle infrastructure and connections to other regional transportation corridors by creating mobility hubs.

NFTA Route 19, also known as Bailey Avenue, is one of the busiest transit corridors in the Buffalo-Niagara region, carrying about 4,300 passengers on a typical weekday (before the COVID-19 pandemic). This route connects to the Metro Rail and 13 other bus routes. The NFTA-Metro in partnership with the GBNRTC and the City of Buffalo are working on a BRT project on Bailey Avenue. BRT enhancements are intended to make travel on Bailey Avenue safer and more efficient.

## Microtransit

At times of the day when public transportation is not running, and in less densely populated areas that have a weaker public transportation system, microtransit is a useful shared transit method that reduces GHG emissions and traffic. Microtransit is a method of shared transit that uses small-scale vehicles, such as shuttles, minibuses, or regular cars, to provide transportation to the public. Microtransit can provide services when public transit is not running.<sup>1</sup> Furthermore, microtransit is often described as a "first mile last mile" solution, where

it bridges the gap from departure and mass transit points to the final destination where public transportation is inaccessible.<sup>2</sup>

Sources:

1 GBNRTC, "Moving Forward 2050: A Regional Transportation Plan for Buffalo Niagara," May 2018, <https://drive.google.com/file/d/1w5rEukp9MXkE5NeA8HCJc5U5jWgQjydn/view?usp=sharing>.

2 Kristoffer Vik Hansen, "What Is Microtransit? Bringing Greater Equity to Public Transit," Spare Labs, February 4, 2021, <https://sparelabs.com/en/blog/what-is-microtransit>.

## Rural Transit Service

Rural Transit Service<sup>1</sup> is a non-profit organization run by volunteers in Erie County that provides safe, affordable, and reliable transportation to seniors, low-income, and disabled clients. Eligible residents are transported to places such as medical offices, pharmacies, colleges, workplaces, adult day care facilities, grocery stores, banks, and salons/barbers.

Rural Transit Service is a great way for those that need transportation assistance to better handle climate change-related events. For example, they can go to the grocery store to stock up on food and medicine before a forecasted disaster. After the disaster has happened, if someone has been injured, Rural Transit Service can take them to a medical office to receive medical treatment. Without Rural Transit Service, essential methods to protect someone's health and safety may not be possible for those without reliable transportation. Clients are not required to pay for their services, but donations are welcome.

Note:

<sup>1</sup> To learn more about the Rural Transit Service, go to <https://www.ruraltransitservice.org/Ridership/-Eligibility>



Rural Transit Service Van

Rural Transit Service, Rural Transit Service van, n.d., photograph, <https://www.ruraltransitservice.org/Photo-Gallery>



## STRATEGY 3: Electric Vehicles

Light duty vehicles like cars and small trucks account for about 28% of Erie County's carbon footprint and reducing these emissions is key to achieving our GHG reduction goals. A recent development is the availability of practical, longer-range EVs that promise to quickly transform the County's light duty vehicle fleet to one powered by our relatively low-carbon electric grid, while also improving air quality in our neighborhoods and lowering costs for vehicle owners. This transition is happening regardless of our actions and is mostly funded by consumer and business purchasing. The County's challenge is to make sure it supports a quick and smooth transition to EVs that is equitable and addresses key challenges so that low- and moderate-income residents are not left behind. Zero-emission heavy duty vehicles are also on the horizon, although this transition will be slower and more challenging.

While technological breakthroughs will continue to improve EVs and make them more affordable, there are practical, local issues with EV adoption that require leadership from the Erie County government. For most vehicle owners, the lowest cost way to charge EVs is at home and at night, when time-of-use metering make charging less expensive. Unfortunately, many residents, especially lower-income residents, are not able to easily install EV chargers for a variety of reasons. These issues disproportionately affect low- and moderate-income urban and rural residents, so to equitably transition to EVs, the County will need to exert leadership and help municipalities implement creative solutions to meet a variety of EV

*To learn more about green technology jobs, check out the Workforce Development Strategy in the Economic and Workforce Development chapter.*

charging needs.

Business adoption of EVs will also be important to Erie County's clean energy transition. Commercial vehicle use is increasing with the rise of online shopping and delivery services. Where the County is involved in business development, it needs to inform businesses of the benefits of EVs and available incentives for EVs and EV infrastructure. Erie County also needs to promote businesses providing EV charging stations to their workers, which may become a solution for increasing EV charger access to low- and moderate-income workers.

Although the transition to EVs provides important benefits, many impacts will remain, including the County's current transportation system centered around cars and trucks, which has contributed to sprawl and the need for County residents to own a single-occupancy vehicle. These vehicles often use prime public space for parking and they can create safety issues for bicyclists and pedestrians. Even as prices for EVs decrease, they will not be affordable or accessible for everyone. As the County supports an equitable transition to EVs, it should support initiatives that move away from our reliance on cars and small trucks, and towards a more multi-modal public transportation system that reduces urban sprawl and encourages dense, mixed-use development.



# Installing EV Chargers

Most EV owners charge at home, occasionally using fast-charging locations on longer trips. As EVs become more common, the County expects many more home chargers to be installed.

Figure 22 Installing EV Chargers



## Transitioning to Electric Vehicles

EVs improve air quality. An American Lung Association report found that a shift to 100% sales of zero-emission passenger vehicles by 2035 and medium- and heavy-duty trucks by 2040, coupled with renewable electricity generation, would generate over \$1.2 trillion in public health benefits nationwide between 2020 and 2050. These benefits avoid up to 110,000 premature deaths, nearly 3 million asthma attacks, and over 13 million workdays lost due to cleaner air.<sup>1</sup>

Source:

<sup>1</sup> The American Lung Association, "Zeroing in on Healthy Air" (The American Lung Association, March 2022), <https://www.lung.org/getmedia/13248145-06f0-4e35-b79b-6dfacfd29a71/zeroing-in-on-healthy-air-report-2022>.



## Myths about Electric Vehicles

Western New York has one of the cleanest electricity grids in the nation.<sup>1</sup> Therefore, EVs are a powerful tool to reduce our community's carbon and air pollution. However, there are many myths about EVs that have created confusion, which can be found on the USEPA's "Electric Vehicle Myths" page online.<sup>2</sup>

Sources and Notes:

<sup>1</sup> USEPA, "Power Profiler," Data and Tools, United States Environmental Protection Agency, June 5, 2023, <https://www.epa.gov/egrid/power-profiler>.

<sup>2</sup> Check out the USEPA's "Electric Vehicle Myths" page to learn about common EV myths here, <https://www.epa.gov/greenvehicles/electric-vehicle-myths>

| STRATEGY 3:<br>Electric Vehicles | HORIZON  | SPHERE OF INFLUENCE | LEAD COUNTY ENTITY | PARTNERS   |
|----------------------------------|--|---------------------|--------------------|--|
| ACTION ITEM 6.3.1:               | <b>Foster the development of EV ridesharing and car sharing programs to provide more clean energy options, particularly in disadvantaged communities.</b>  |                     |                    |  |
|                                  | Short-Term/<br>Ongoing   | Direct/<br>Indirect | DEP                | NYSERDA, GO Buffalo Niagara, ridesharing and taxi companies  |
| ACTION ITEM 6.3.2:               | <b>Install public-facing EV charging stations at County facilities.</b>  |                     |                    |  |
|                                  | Short-Term/<br>Ongoing   | Direct              | DPW                | New York State Electric and Gas (NYSEG), National Grid, NYSEDA, GBNRTC   |
| ACTION ITEM 6.3.3:               | <b>Advocate for EV charging infrastructure on real estate development projects, especially for projects with direct County involvement.</b>  |                     |                    |  |
|                                  | Short-Term/<br>Ongoing   | Indirect            | DEP                | NYSEG, National Grid, New York Power Authority (NYPA), ECIDA, NYSEDA   |
| ACTION ITEM 6.3.4:               | <b>Participate in the regional planning of EV charging infrastructure and advocate for an equitable EV charging station network.</b>   |                     |                    |  |
|                                  | Short-Term/<br>Ongoing   | Indirect            | DEP                | GBNRTC, NYSEG, National Grid, Clean Communities of WNY, New York State Department of Transportation (NYSDOT)   |
| ACTION ITEM 6.3.5:               | <b>Expand publicly accessible EV charging stations for all by promoting their siting and installation through private and public programs throughout Erie County.</b>  |                     |                    |  |
|                                  | Short-Term/<br>Ongoing   | Indirect            | DEP                | Local municipalities, NYSEDA, NYSDOT, National Grid, Clean Communities of WNY, NYSEG, NYPA, NYSDEC, NYS Parks, American Automobile Association (AAA) |
| ACTION ITEM 6.3.6:               | <b>Promote purchasing, replacing, and converting gas and diesel-powered vehicles and fleets, construction equipment, and generators with electric- powered alternatives through federal, state, and utility incentive programs.</b>  |                     |                    |  |
|                                  | Short-Term/<br>Ongoing   | Indirect            | DEP                | National Grid, NYSEDA, NYSEG, NYSDEC, NYSDOT, Clean Communities of WNY, NYPA, AAA, WNY SBR   |
| ACTION ITEM 6.3.7:               | <b>Work with partners to promote and educate about the use of EVs, installation of home chargers, tax incentives, rebates, and trade-in programs to foster the equitable and affordable adoption of EVs.</b>   |                     |                    |  |
|                                  | Short-Term/<br>Ongoing   | Direct/<br>Indirect | DEP                | NYSEG, National Grid, NYSEDA, New York State Department of Taxation and Finance (NYSDTF), GBNRTC, Niagara Frontier Auto Dealers Association, ECEMC   |
| ACTION ITEM 6.3.8:               | <b>Continue to promote low and zero-emission fleet vehicles and the use of alternate fuels by municipalities and businesses throughout Erie County.</b>  |                     |                    |  |
|                                  | Short-Term/<br>Ongoing   | Indirect            | DEP                | Local municipalities, universities, school districts, ECEMC, Association of Governments, WNY SBR   |
| ACTION ITEM 6.3.9:               | <b>Consider the inclusion of conduit and other features that allow for the eventual inclusion of EV charging stations in the design criteria for publicly accessible parking lots, construction projects, Community Development Block Grant-funded projects, 239-M review projects, and other County projects.</b> |                     |                    |  |
|                                  | Ongoing  | Indirect            | DPW                | Division of Sewerage Management (DSM), local municipalities, highway departments   |

## STRATEGY 4: Transportation Resilience

Erie County owns and operates more than one thousand miles of roadways and is responsible for ensuring that those roads are safe during weather events.<sup>73</sup> As the climate changes, the County is adapting to new threats and how it works with community partners to design, operate, and maintain its transportation system to be resilient in its response to and recovery from extreme weather events. Extreme rain, snow, wind, and heat events all present different types of challenges and solutions. During extreme heat events, the County needs to work with partners to make sure that residents have safe ways to get to cooling centers

or green spaces to cool off, including the promotion of tree-lined streets and bus shelters that provide shade. Likewise, for extreme snow events, ensuring a safe and reliable way to get to warming

*To learn more about green infrastructure, a solution to extreme rain events, go to the Nature-Based Solutions chapter.*

centers is essential. Finally, the County will support the transition to EVs that are fully integrated into the utility grid, which will make homes and businesses more resilient during power outages.

Another aspect of transportation resilience is ensuring that the County's legis-

tics and distribution systems are adapted to withstand supply chain disruptions as we have seen during recent extreme weather events, such as the recent late-fall snowstorms. The County government must work with partner organizations to achieve a diverse freight network and avoid interruptions that impact both businesses and residents. The County should also ensure that its transportation system supports local businesses including agriculture, which will make us less dependent on long-distance transportation to meet community needs.



Traffic signals were replaced with two landscaped roundabouts in the Village of Lancaster as part of its West Main Street Extension Project. The slower but safer and more efficient flow of traffic has led to a reduction in emissions and intersection delays.

| <b>STRATEGY 4:<br/>Transportation<br/>Resilience</b> | <b>HORIZON</b>   | <b>SPHERE OF<br/>INFLUENCE</b> | <b>LEAD<br/>COUNTY<br/>ENTITY</b> | <b>PARTNERS</b>   |
|--|--|--------------------------------|-----------------------------------|---|
| <b>ACTION ITEM<br/>6.4.1:</b>                        | <b>Incorporate changes in seasonal and extreme events into how the County designs and builds transportation infrastructure.</b>                              |                                |                                   |   |
|  | Short-Term/<br>Long-Term   | Direct                         | DPW                               | Local municipalities, NYSDOT, NFTA  |
| <b>ACTION ITEM<br/>6.4.2:</b>                        | <b>Work with partners to make sure that streets, sidewalks, bike lanes, and transit stops are accessible during weather events, including snow and rain.</b> |                                |                                   |   |
|  | Short-Term/<br>Long-Term   | Direct/<br>Indirect            | DPW                               | Local municipalities, NYSDOT, NFTA, National Guard, GObike Buffalo, Partnership for the Public Good (PPG) |
| <b>ACTION ITEM<br/>6.4.3:</b>                        | <b>Implement high-priority transportation freight infrastructure projects that serve to increase the efficiency and diversity of our freight network.</b>    |                                |                                   |   |
|  | Short-Term/<br>Long-Term   | Indirect                       | DEP                               | GBNRTC, International Trade Gateway Organization  |
| <b>ACTION ITEM<br/>6.4.4:</b>                        | <b>Work with food and goods distributors and freight operators to assure that the community has access to food and supplies during disruptive storms.</b>    |                                |                                   |   |
|  | Long-Term  | Indirect                       | DEP                               | NYSDOT, local municipalities  |

## Further Reading

### Transit Strategy

#### Federal Justice40 Initiative –

Confronts and addresses decades of underinvestment in disadvantaged communities by bringing resources to communities most impacted by climate change, pollution, and environmental hazards.

<https://www.transportation.gov/equity-Justice40>

### Electric Vehicles Strategy

#### Electrify School Buses by 2035 –

Learn more about New York State’s commitment for all new school buses purchased to be zero emission by 2027 and all school buses in operation to be electric by 2035.

<https://www.nyserda.ny.gov/All-Programs/Electric-School-Buses>

### Active Transportation Strategy

#### Regional Bicycle Master Plan –

Bike Buffalo Niagara, the Regional Bicycle Master Plan for Erie and Niagara Counties will serve as a guide to provide a transportation system that safely integrates bicyclists in a coordinated and holistic manner.

<https://www.gbnrtc.org/regional-bike-buffalo-niagara-master-plan>



Snowstorms and other extreme weather conditions present various transportation challenges and solutions due to the impacts of climate change. Kevin Heffernan (shown above) helped clear an NFTA bus stop during a snowstorm in January 2022.

Photo credit: Simon Husted

#### FOOTNOTES: Transportation

65 Federal Highway Administration, "National Household Travel Survey," US Department of Transportation Federal Highway Administration, 2017, <https://nhts.ornl.gov/>.

66 CoolClimate Network, "CoolClimate Calculator," CoolClimate Network, accessed July 14, 2023, <https://coolclimate.berkeley.edu/calculator>.

67 To access the Regional Bicycle Master Plan from the GBNRTC, go to [https://static1.squarespace.com/static/56ccbbfd3c44d8670dbd1d84/t/60f710fe80c4d02ab34347c0/1626804481563/Bike\\_Buffalo\\_Niagara\\_Cover\\_and\\_Table\\_of\\_Contents.pdf](https://static1.squarespace.com/static/56ccbbfd3c44d8670dbd1d84/t/60f710fe80c4d02ab34347c0/1626804481563/Bike_Buffalo_Niagara_Cover_and_Table_of_Contents.pdf)

68 To learn more about the 239-M process, check out the Further Reading section of the Housing and Neighborhood Resiliency chapter or go to Erie County's website at <https://www3.erie.gov/environment/municipal-referrals>

69 USEPA, "Sources of Greenhouse Gas Emissions," Overviews and Factsheets, United States Environmental Protection Agency, April 28, 2023, <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions>.

70 Alexandra S. Kang et al., "Tackling Single-Occupancy Vehicles to Reduce Carbon Emissions: Actionable Model of Drivers' Implementation Intention to Try Public Buses," *Journal of Cleaner Production* 260 (July 2020): 1–13, <https://doi.org/10.1016/j.jclepro.2020.121111>.

71 Federal Highway Administration, "National Household Travel Survey."

72 To access the NFTA Equitable Transit Oriented Development Plan, go to <https://www.nfta.com/media/j1eeljng/tdp-2023-final-reduc.pdf>

73 Maintenance districts in Erie County can be accessed at [https://www3.erie.gov/dpw/sites/www3.erie.gov.dpw/files/2022-09/erie\\_county\\_maintenance\\_districts.pdf](https://www3.erie.gov/dpw/sites/www3.erie.gov.dpw/files/2022-09/erie_county_maintenance_districts.pdf). The Erie County Snow Plow Road List can be accessed at <http://www2.erie.gov/dpw/sites/www2.erie.gov.dpw/files/uploads/Snow%20Plow%20Routes.pdf>