ADDENDUM NO. 1

COUNTY OF ERIE
DEPARTMENT OF ENVIRONMENT AND PLANNING
ERIE COUNTY SEWER DISTRICT NO. 4
CONTRACT NO. 61
DEPEW PUMPING STATION IMPROVEMENTS

All bidders please **fax** or **e-mail** this sheet to Erie County Department of Environment and Planning/Division of Sewerage Management (Attn: Beth Pfalzer), to fax no. 716-858-6257 or e-mail beth.pfalzer@erie.gov. By signing and dating this sheet bidders are stating that their company has received Addendum No. 1 to the Erie County Sewer District No. 4; Contract No. 61; Depew Pumping Station Improvements.

Received: _____

By: _____

Phone: _____

Date: _____

All bidders must incorporate Addendum No. 1 including all attachments when submitting bids for this contract. Bidders are also advised to acknowledge Addendum No. 1 in the Receipt of Addenda section 7.03 of the Bid Form and endorse the special notice page attached hereto and made part of Addendum No. 1. This Addendum consists of 2 pages and attachments, if any, listed on the last page.

IF YOU RECEIVED THIS ADDENDUM IN ERROR, OR WOULD LIKE TO BE REMOVED FROM THE POTENTIAL BIDDER LIST FOR THE REFERENCED PROJECT (AND NOT RECEIVE FURTHER CORRESPONDENCE REGARDING THIS PROJECT), PLEASE CONTACT BETH PFALZER (beth.pfalzer@erie.gov) OR CALL THE DSM OFFICE AT 716-858-8383.

Erie County Sewer District No. 4
Depew Pumping Station Improvements
Contract No. 61

ADDENDUM No. 1

Additions and Modifications

BIDDING REQUIREMENTS SPECIFICATIONS:

1. **Advertisement for Bids Section 00-11-13 – Paragraph 3 – Delete** "*Wednesday, May 20th at 10 AM*" **in its entirety and Replace with** "*Thursday May 28th at 10 AM*."

CONTRACT REQUIREMENTS:

SPECIFICATIONS

1. **Variable Frequency Drives Section 11480 – Delete Section 11480 (Variable Frequency Drives) in it its entirety and replace with Attachment 1.**

DRAWINGS

1. **Existing Pump Station Upper Level Electrical Demolition Plan Drawing No. ED-101 – Delete Drawing in its entirety and Replace with Attachment 2.**

ATTACHMENTS

1. Attachment 1 – Section 11480 – Variable Frequency Drives
2. Attachment 2 – ED-101 Existing Pump Station Upper Level Electrical Demolition Plan

End of Addendum

SECTION 11480

VARIABLE FREQUENCY DRIVES

PART 1 GENERAL

1.01. SECTION INCLUDES

A. This section covers the requirements for variable frequency drives (VFDs) for process equipment. VFDs provided by process equipment manufacturers (OEMs) are subject to this specification but may not be individually listed herein. See the applicable process specification. The provider of the VFDs shall also provide all harmonic reduction equipment and other appurtenances required by this specification and Section 16060.

B. Provide the hereinafter specified equipment as part of the systems called for in the Specifications and the Contract Drawings.

C. The VFD packages shall provide power and control for the project-proposed two (2) 250HP and three (3) existing 200HP, 480V, 60Hz, 3-phase wastewater pump induction motors, complete with soft-starter bypass switch for each drive in compliance with IEEE-519. Each VFD and bypass soft-starter shall be furnished with RJ45 ports for Modbus TCP/IP Ethernet communication to a common vendor supplied unmanaged Ethernet switch as shown on Contract Drawings.

D. The VFD packages shall be provided by the pump supplier covered under Section 11310.

1.02. RELATED SECTIONS

A. General Contract Conditions

B. All Division 1 Specifications

C. Section 11310 – Vertical Extended Shaft Centrifugal Pumps

D. Division 16

E. Division 17

1.03. REFERENCES

A. The latest revisions of the following standards and specifications are incorporated herein by reference and form a part of this specification to the extent that sections or portions of section are applicable hereto.

1. National Electric Code (NEC)

2. Underwriter's Laboratories, Inc. (UL)

a. UL 508

b. UL 61800-5-1

3. National Electrical Manufacturers Association (NEMA)

   a. NEMA - 1C - 1

   b. NEMA ICS 3.1

   c. NEMA 250

4. American National Standards Institute (ANSI)

5. Standards for Industrial Control (J.I.C.)

6. Institute for Electronic and Electrical Engineering (IEEE) - IEEE 519

1.04. SYSTEM DESCRIPTION

A. The drive packages shall be UL 508 serialized, completely factory-assembled, fully integrated, metal enclosed packages by Schneider Electric or approved equal.

B. Each drive package shall be equipped with a Schneider Electric drive, a bypass soft start controller, isolation contactors, and all other necessary and required protective devices, controls and auxiliaries as specified herein. The motors shall be located remotely from the drives, as shown on the Contract Drawings.

C. The drive packages shall be designed for continuously rated operation in the indoors, non-hazardous, municipal wastewater pump station environment (i.e., damp, humid, airborne dust environment) at temperature range 0°C to 40°C, and relative humidity 100%. The drive manufacturer shall supply and install HVAC equipment in the drive enclosure to maintain the internal conditions acceptable by the drive package components. The drive enclosure ventilation openings, if any, shall be equipped with filtration to prevent intrusion of dust, and rodents.

D. The motor drive packages shall be normally connected to a 480VAC, 3-phase, solidly grounded neutral system provided by a local power company. In case of the normal power interruption, the drive packages shall receive their power supply from an on-site emergency power generator. As such, the drive packages shall be capable of full operation both starting and running with a maximum 15 percent voltage and frequency dip on the startup with a complete voltage and frequency recovery in 2-to-4 seconds.

E. Performance Requirements

1. The VFD manufacturer shall provide performance affidavits for each standard drive or configured drive package when provided as such directly from the manufacturer.

   The VFD supplier shall provide performance affidavits for each drive or system of drives when the manufacturer's standard drive is provided as part of a control system, fabricated by the VFD supplier, systems integrator, or panel shop; and when components external to the manufacturer's VFD are required for proper operation as described in these Specifications.

   Performance affidavits shall be provided in accordance with the General Contract Conditions.

F. Harmonic Mitigation

1. The VFDs shall use Active Front End rectifier technology to provide low-harmonic operation and meet IEEE-519 compliance. Active front end VFDs shall be designed to comply with standard IEEE 519 when installed in a system that is already in compliance with the standard.

2. Contractor shall submit design calculations with the VFD shop drawing submittal proving compliance with IEEE STD. 519-2022.

1.05. SUBMITTALS

A. Submittals shall be made in accordance with the General Contract Conditions.

B. Submit performance affidavit per the General Contract Conditions.

C. Submit harmonic analysis (calculations) proving compliance with IEEE 519-2022 in accordance with Section 16060.

D. Submit written description of sequence of operation for each set of VFDs.

E. Submit dimensional data for each VFD. Include as a minimum: height, width, depth, distance from bottom of enclosure to center line of disconnect handle, conduit openings, size and location of cooling vents.

F. Submit drawings showing interior enclosure layout, panel door layout, complete wiring connection drawing showing physical location of all drive components and devices, all internal wiring and wiring tagging, and all external wiring termination points, including PLC I/O. Drive package information shall indicate voltage, controller size, ratings and size of switching and overcurrent protective devices, short circuit ratings.

G. Submit elementary diagrams and block diagrams for each VFD system. Indicate how/where remote equipment is wired to each VFD system.

H. Submit manufacturer's literature containing information needed to prove conformance with these specifications.

I. On-site installation and startup report.

J. A complete copy of the drive package Installation, Operation and Maintenance Manual.

K. Submit all as-built documents and record drawings for the VFD systems. Record actual locations, configurations, and ratings of VFDs and their components on single line diagrams and building plans.

1.06. QUALIFICATIONS

A. Manufacturer - Company specializing in manufacturing the products specified in this section with minimum three years' documented experience.

B. The VFD manufacturer shall have service facilities within 100 miles of the site.

C. VFDs shall conform to UL 508 and UL-61800-5.

1.07. DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, protect, and handle equipment to site under provisions of the General Contract Conditions.

B. Deliver in 36-inch maximum width shipping splits, individually wrapped for protection and mounted on shipping skids.

C. Store in a clean dry space. Maintain factory wrapping or provide a heavy canvas or heavy plastic to protect units from dirt, water, debris, and traffic. The Electrical Contractor shall replace any equipment damaged during shipping, handling, or storage.

1.08. SPARE PARTS

A. The following spare parts shall be furnished for each size VFD provided.

Either:

1. Two of each type of control fuse used.

2. Three of each type of power fuse used.

3. One spare of each type of PC card.

4. One complete power semiconductor assembly for each supplied.

5. All other spare parts normally recommended.

or:

6. One complete spare VFD for each size and set of VFDs installed, provided in the same form as those installed and containing, as a minimum, all parts listed in 1 through 5 above. The spare drive shall be capable of directly replacing an installed drive.

1.09. WARRANTY

A. The VFD and all equipment provided by the VFD supplier shall be provided with a 48-month warranty. The warranty period shall begin upon delivery to the site. The warranty shall cover all parts and labor necessary to repair equipment which is inoperable due to defects in material or workmanship.

PART 2 PRODUCTS

2.01. MANUFACTURERS

A. Whenever possible, all VFDs provided shall be by the same manufacturer.

1. Schneider Electric - Altivar ATV680 Series

2. or approved equivalent

B. All materials and equipment furnished shall be current products of manufacturers regularly engaged in the manufacturer of VFD and for which replacement parts are available.

2.02. VARIABLE FREQUENCY DRIVE

A. General

1. The General Contractor shall furnish and install the complete VFD system(s) described in this specification and as shown on the Contract Drawings.

2. Schneider Electric Altivar adjustable speed drive or equal. The drive shall be equipped with a door-mounted HMI feature (keypad and LCD display) to allow for the drive programming, operation monitoring, fault diagnostic and troubleshooting. Bypass solid state soft start controller, Schneider Electric SSRVS ATS-480 or equal shall be provided. The VFDs shall use Active Front End rectifier technology to provide low-harmonic operation and meet IEEE-519 compliance.

3. Isolating contactors to allow complete VFD isolation.

4. Drive and bypass starter circuit breakers, and current limiting fuses as required.

5. VFD shall offer microprocessor-based control logic that is isolated from power circuitry. VFDs shall be controlled via digital display and programming/status keypad.

6. The VFDs shall be heavy-duty rated and sized for the full horsepower and full load amperes and rpm of the equipment as indicated. Motor service factors shall be minimum 1.0, unless otherwise specified in respective equipment Sections. VFDs shall be specifically designed to provide continuous speed adjustment of three phase, inverted duty, NEMA design 'B' squirrel cage motors.

   The VFD applications shall be for the systems listed in Table 11480-1 at the end of this section.

7. Complete configured VFD system shall be UL listed per UL 508.

8. Minimum efficiency shall be 95 percent at motor full load. Unit service factor shall be minimum 1.0.

9. Modbus TCP/IP Ethernet communication for each pair of VFD and bypass soft-starter complete with a manufacturer supplied unmanaged Ethernet switch in each enclosure as shown on contract drawings. Vendor shall request required IP addresses in submittals, which will be provided by the OWNER.

B. Construction

1. The VFDs shall be housed in NEMA enclosures, as noted above. Provide replaceable, cleanable filters in enclosure cooling fan/vent openings. Each VFD enclosure shall also house other components, such as control power transformers, relays, circuit breakers, bypass contactors, thermal overloads, and other devices when such are necessary to achieve conformance to the specified system.

2. An input circuit breaker or fusible disconnect switch shall be supplied for the VFD. The circuit breaker or fusible disconnect switch shall have an external operator and shall be capable of being locked in the open (Off) position. Interlocking provisions shall prevent unauthorized opening of the enclosure door while the handle is in the On position. A defeater shall be provided.

3. VFD shall be rated to operate from 480VAC, 3-phase, 60 Hz. All drives shall be equipped with microprocessor-based controls to convert 480VAC, 3-phase, 60 Hz input to a variable voltage and frequency output for adjustable speed control of the equipment indicated.

4. The VFD shall be insensitive to the phase rotation of the AC line and shall not cause displacement power factor of less than 0.95 lagging under any speed or load condition.

5. The VFD shall have the following ratings:

   a. Minimum efficiency of 95 percent at rated load.

   b. Overload Rating

      1) Constant Torque - 150 percent rated current for 1 minute.

      2) Variable Torque - 110 percent rated current for 1 minute.

   c. Ambient operating temperature of 0 degrees C to 40 degrees C continuously, without derating.

   d. Operating humidity of 5 to 90 percent, non-condensing.

6. The following basic control features shall be provided standard on each VFD:

   a. VFD Manual-Off-Auto Switch - When this switch is in the Manual position, the VFD shall start/stop and using the VFD keypad located on the VFD enclosure and the frequency of the VFD shall be controlled by the keypad on the VFD enclosure. When this switch is in the Off position, the VFD shall be off. When this switch is in the Auto position, the VFD shall start/stop and speed controlled via a Modbus TCP network communication from the new level control panel (i.e., PLC panel). VFDs shall be capable of both three- and four-wire control for remote starting and stopping. Manual-Off-Auto switch status shall be wiring into the network communications to be remotely monitored by the PLC.

   b. VFD Run, Off and Fault LED pilot lights on the VFD enclosure, as shown on Contract Drawings.

   c. VFD – Bypass Switch – when this switch is in the Bypass position the motor shall start and stop with the bypass soft starter using the add Bypass start-stop buttons. Provide Bypass Run, Off, and Fault pilot lights as shown on Contract Drawings.

   d. E-Stop and E-Stop status wiring into the network communication to be remotely monitored by the PLC.

   e. Unidirectional operation, programmable acceleration and deceleration, restart into spinning loads. Implementation of the programmable acceleration and deceleration ramping shall be achieved without the programming of devices external to the VFD. The manufacturer shall provide acceleration and deceleration ramp programming as requested by the Engineer or Owner during system startup.

f. Full time torque limit, adjustable. Reduces speed to shed load when over current conditions exist.

g. Programmable torque performance from 4 to 60 Hertz. General Contractor shall coordinate with manufacturer of each motor controlled by a VFD. Program minimum VFD speed per motor manufacturer's recommendations to avoid overheating the motor.

h. Integral AC power line reactors or isolation transformers.

i. Frequency stability of 0.5 percent for 24 hours with voltage regulation of ±2 percent of maximum rated output voltage.

j. Status indication for the following:

1) Power On

2) Run

3) Motor Direction

4) Overcurrent

5) Overtemperature

6) High and Low Phase Loss

7) Current Limit

8) Ground Fault

k. Control power transformer (CPT) for 120 volt AC power for operator devices.

l. Motor slip dependent speed regulation.

m. Minimum one cycle logic power carryover during loss of power.

n. Programmable automatic restart upon the return of power following a power outage.

o. Automatic restart after fault, minimum three attempts and shutdown with manual reset.

p. Critical frequency rejection or lockout.

q. Programmable preset speeds, minimum of three.

r. Local speed control and speed indication via VFD standard keypad, configurable in either rpm, percent of full speed, or hertz.

s. Fault log for minimum of last three faults.

t. Isolated process instrument follower input signal of 4-20mA DC, grounded or ungrounded.

u. Provide Modbus TCP/IP communication via Ethernet for VFD speed control.

v. All wiring connections to the VFD shall be made on labeled terminal strips in accordance with Division 16.

w. Common local and remote start/stop contacts and protective automatic shutdown contacts/switches shall be used by the control circuits of both the VFD and the bypass contactor.

x. Bypass contactors shall be housed in the same enclosure as the VFD. The VFD supplier shall provide interconnecting wiring between VFD and bypass contactors.

7. The following protective features shall be provided standard on each VFD:

a. AC input line current limiting fuses for short circuit fault protection in accordance with VFD manufacturer's requirements.

b. Electronic over current trip for instantaneous or timed overload protection

c. Undervoltage and phase loss protection.

d. Overfrequency protection.

e. Overtemperature protection.

f. Surge protection from AC line transients.

g. Electrical isolation between power and logic circuits.

h. Ground fault protection.

i. VFD enable terminals. Normally closed, field mounted protective devices, (such as auxiliary contacts on disconnect switches, emergency stop pushbuttons, high discharge pressure switch, low suction pressure switch, high motor temperature switches - see Contract Drawings and system specifications) shall be wired in series across the enable terminals.

j. Provide a minimum of three sets of programmable output contacts for remote alarm indication. Programmable VFD output contacts shall be wired to interposing relays. The interposing relays shall be provided with a minimum of two normally open and two normally closed contacts, rated for 10 amps at 120 volts.

k. LCD or LED diagnostic display.

l. Password protection for VFD programming.

8. The following VFD operating parameters shall be capable of being independently adjusted on the VFD:

a. Minimum Speed - 4 to 40 Hertz (see paragraph 2.02.B.6.e.).

b. Maximum Speed - 40 to 90 Hertz.

c. Acceleration Time - 2 to 300 seconds.

d. Deceleration Time - 2 to 300 seconds.

e. Low Frequency Boost - Up to 46 volts.

f. Volts per hertz.

g. Current limits up to 110 percent for variable torque VFDs, up to 150 percent for constant torque VFDs.

h. Starting torque up to 150 percent.

i. Programmable Constant Torque - Variable torque switching. Drives which require physical modifications to accomplish this are not acceptable.

9. The following, manufacturer installed options shall be furnished with the VFDs as specified:

a. AC output contactors.

b. Motor overcurrent relay on VFD and on bypass contactors.

c. Bypass contactors when specified.

10. Each Enclosure shall include a manufacturer provided and installed unmanaged 10/100 5 port ethernet switch. The respective VFD network connection shall be connected to this ethernet switch. Switch shall be powered from VFD panel and be rated for 24 VDC.

a. Manufacturers:

1) Schneider Modicon MCSESU053FN0

2) Phoenix Contact FL SWITCH 1005N

3) Or approved equal.

2.03. SYSTEM-SPECIFIC CONTROLS AND ALARMS

A. General - Field-mounted equipment (remote from the VFD enclosure) such as selector switches, pilot lights, auxiliary contacts on disconnect switches, etc., as shown on the Contract Drawings.

PART 3 EXECUTION

3.01. GENERAL

A. Supply the VFD(s) complete with soft-starter bypass switch with the controls specified herein and shown on the Contract Drawings.

B. The Contractor shall arrange for the VFD manufacturer or supplier to furnish the services of a qualified representative to check and supervise the installation and the preliminary testing for not less than two days, to supervise final testing for not less than two days, and to instruct the Owner's operator(s) in proper operation at the time of final acceptance for not less than two

days. The representative shall also provide an additional two days of training during the warrant period at a date requested by the Owner. A day is defined as eight hours. All days are actual on-site time. Travel and subsistence is the responsibility of the manufacturer's/supplier's representative.

C. The Owner's training shall be videotaped with a copy left for the Owner. A full complete session may be made for one system that is typical for all systems. Any specifics which may vary for individual systems shall be covered separately on the video.

D. Three copies of a complete operations and maintenance manual shall be submitted to the engineer per the General Contract Conditions.

E. Field wiring shall be per manufacturers' recommendations.

3.02. FIELD TESTING

A. Field testing shall be in accordance with the General Contract Conditions and as specified herein.

B. Contractor shall include six (6) days of manufacturer provided startup services. One for each VFD and a final after all are installed.

C. The Contractor shall coordinate VFD testing such that both the Owner and the Engineer are available to witness the testing. The Contractor shall contact both the Engineer and the Owner two weeks prior to the proposed test date. The representative of the equipment run by the VFD (pumps) shall be present during VFD testing.

D. Shop drawing shall be available during testing.

E. A copy of the operations and maintenance manual shall be available during testing.

F. The Electrical Contractor shall verify that all systems have been electrically connected and that equipment is ready for operation.

G. Testing/Verification/Documentation

1. General explanation of each system shall be made.

2. Contractor/manufacturer/supplier shall have a written tabulation of all adjustable/settable parameters as set from the factory. In a separate column, all of the actual field adjusted/set values shall be shown.

3. Demonstrate the following and show how each is set/changed.

a. Manual operation both local/remote.

b. Minimum or default speed to be set for specific equipment operation.

c. Maximum set speed.

d. Adjust acceleration/deceleration times for proper equipment operation.

e. Restart after power outage.

f. Demonstrate starting into rotating motor (shut off circuit breaker and turn right back on).

g. Overcurrent/overvoltage (simulate with test equipment).

h. Overtemperature/low voltage (simulate with test equipment).

i. Phase Loss - Remove on fuse on supply voltage.

j. Auto operation (from input current or voltage signal).

k. Output contacts for alarm/run/status, etc., operate as required, simulate with test lights.

l. Units with bypass contactors shall be operated in "bypass mode" demonstrating operation including shutdowns from remote devices.

H. Unit(s) shall operate without unusual or undue noises or vibrations.

(continued)

TABLE 11480-1

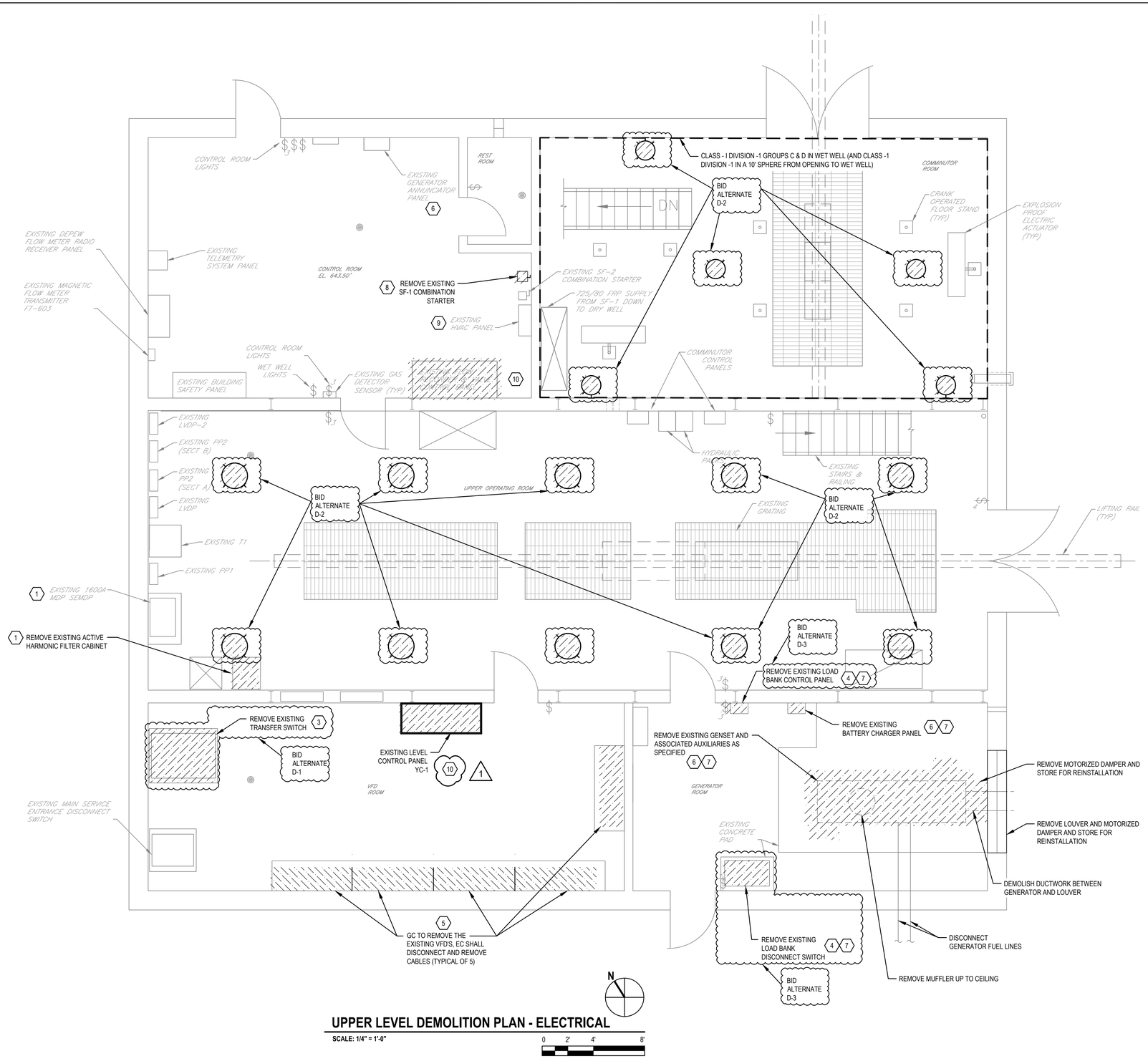
VARIABLE FREQUENCY DRIVE APPLICATIONS

Units	HP (each)	VFD Duty Rating	Motor FLA (each)	Type*	NEMA Enclosure	Bypass	Input Voltage
3	200	Heavy Duty	240	5	1	Soft-starter bypass	480 VAC
2	250	Heavy Duty	298	5	1	Soft-starter bypass	480 VAC

*Type Drive:

1 Variable torque centrifugal pumping application.
2 Variable torque drive and conveyor application.
3 Variable torque air fan application.
4 Constant torque air pumping application.
5 Constant torque pumping application.
6 Constant torque drive application.

END OF SECTION



UPPER LEVEL DEMOLITION PLAN - ELECTRICAL

SCALE: 1/4" = 1'-0"

0 2' 4' 8'

LEGEND

DEMOLITION LIMITS

SHEET GENERAL NOTES

1. THIS DRAWING HAS BEEN PREPARED TO PROVIDE THE CONTRACTOR WITH A GENERAL SCOPE OF DEMOLITION WORK TO BE REQUIRED. IT IS CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL ITEMS THAT MAY AFFECT DEMOLITION COSTS INCLUDING BUT NOT LIMITED TO EXACT EQUIPMENT AND PIPING LOCATIONS, ACTUAL EQUIPMENT AND PIPING SIZES, AND ALL INCIDENTAL EQUIPMENT OR PIPING NOT SHOWN BUT PART OF THE EQUIPMENT INDICATED TO BE REMOVED OR AFFECTING REMOVAL PROCESS.
2. DEMOLITION AND ASSOCIATED INSTALLATION MUST BE STAGED. SEE SPECIFICATIONS SECTION 01 12 16 WORK SEQUENCE FOR DETAILS. DEMOLITION AND ASSOCIATED INSTALLATION SHALL BE IN ACCORDANCE WITH AN APPROVED SEQUENCEING PLAN SUBMITTED BY THE CONTRACTOR RESPONSIBLE FOR THE WORK AND COORDINATED, AS NECESSARY WITH OTHER CONTRACTS.
3. REFER TO GC DRAWINGS FOR COORDINATION OF WIRING DEMOLITION AND INSTALLATION FOR GC SUPPLIED EQUIPMENT, STAGED ACCORDING TO THE GC'S APPROVED SEQUENCING PLAN.
4. REFER TO HVAC DRAWINGS FOR COORDINATION OF WIRING DEMOLITION AND INSTALLATION FOR HVAC SUPPLIED EQUIPMENT.
5. DEMOLISH EXISTING LIGHT FIXTURES AS SHOWN. REPLACE ASSOCIATED BRANCH CIRCUIT WIRING BACK TO THE LIGHT SWITCHES AND PANELBOARDS. REPLACE EXISTING LIGHTING RACEWAYS TO ACCOMMODATE CIRCUITING OF LIGHT FIXTURES.

BID ALTERNATE D-2

BID ALTERNATE D-1

BID ALTERNATE D-3

SHEET KEYNOTES

1. EXISTING MAIN DISTRIBUTION PANELBOARD SEMDP. SEE SHEET ED-601 FOR DEMOLITION OF EXISTING BREAKERS AND CONNECTIONS.
2. DISCONNECT AND DEMOLISH THE EXISTING VFD HARMONIC FILTER CABINET, AND ASSOCIATED CONDUITS AND WIRES BACK TO EXISTING SEMDP.
3. DISCONNECT AND DEMOLISH THE EXISTING TRANSFER SWITCH. DISCONNECT WIRE/CONDUITS, CUT BACK CONDUITS BACK TO A CONVENIENT WORK POINT, PULL BACK WIRES, TAG FOR RECONNECTION TO EQUIPMENT.
4. DISCONNECT AND DEMOLISH THE EXISTING LOAD BANK DISCONNECT SWITCH AND EXISTING LOAD BANK CONTROL PANEL. DISCONNECT THE LOAD BANK WIRE/CONDUITS, CUT CONDUITS BACK TO A CONVENIENT WORK POINT, PULL BACK WIRES, TAG FOR RECONNECTION TO THE LOAD BANK.
5. COORDINATE WITH GC TO DISCONNECT EXISTING VFD-1, VFD-2, VFD-3, VFD-4, AND VFD-5. DISCONNECT AND REMOVE EXISTING CONDUITS AND WIRES BETWEEN THE EXISTING SEMDP TO THE PUMPS IN THEIR ENTIRETY. NEW VFD CONNECTIONS AND RE-ESTABLISHMENT OF POWER SHALL BE AS SHOWN ON THE ELECTRICAL DRAWINGS AND COORDINATED WITH THE GC.
6. DISCONNECT AND DEMOLISH ALL CONDUCTORS, CABLES, SUPPORTS, HARDWARE, J-BOXES, ETC. ASSOCIATED WITH REPLACING OF THE EXISTING 900KW GENERATOR WITH 1250KW GENERATOR. REMOVE ALL EXPOSED CONDUITS AND ABANDON AND CAP ALL CONCEALED CONDUITS THAT ARE NOT BEING REUSED. COORDINATE WITH OWNER AND GC ON TIMING OF DEMOLITION AND STAGING.
7. COORDINATE WITH GC ON REHABILITATION OF CONCRETE. SEE SHEET D-104.
8. COORDINATE WITH HVAC-C FOR DEMOLITION OF EXISTING SF-1. DISCONNECT AND DEMOLISH THE EXISTING SF-1 STARTER AND ASSOCIATED CONDUITS AND WIRES BACK TO EXISTING PP1.
9. COORDINATE WITH HVAC-C FOR DEMOLITION OF EXISTING SF-1 AND RH-1. DISCONNECT AND DEMOLISH ASSOCIATED SF-1 AND RH-1 CONTROL WIRING FROM EXISTING HVAC CONTROL PANEL AND BLANK-OFF ASSOCIATED CONTROL SWITCHES. EXISTING HVAC CONTROL PANEL AND ALL OTHER CONNECTED DEVICES NOT ASSOCIATED WITH HVAC DEMOLITION SHALL REMAIN IN PLACE AND OPERATIONAL.
10. COORDINATE REMOVAL OF CONTROL PANEL WITH GC/CSI AND OWNER. EXISTING PANEL AND ASSOCIATED SYSTEMS SHALL REMAIN FULLY OPERATIONAL UNTIL PLC-1 PANEL IS FABRICATED AND READY FOR INSTALLATION. ONCE APPROVED FOR DEMOLITION, COORDINATE WITH GC/CSI AND OWNER TO DISCONNECT EXISTING PANEL FROM POWER AND CONTROL SOURCES AND REMOVE ALL ASSOCIATED CONDUITS, WIRING, AND TERMINATIONS.

1

No.	Issue	Checked	Approved	Date
1	ISSUED FOR ADDENDUM NO. 1	CC	CM	MAY-15-2026
0	ISSUED FOR BID	CC	CM	APR-27-2026

Author P. DIFRANCISCO | Drafting Check M. WIESTLING | Project Manager C. COWAN
Designer S. ALTHERR | Design Check S. BOCHONOWICZ | Project Director C. MARTIN

Notes

Underground facilities, structures, and utilities have been plotted from available surveys and records, and therefore their locations must be considered approximate only. There may be others, the existence of which is presently not known.

It is violation of New York State education law for any person, unless acting under the direction of a licensed professional engineer, to alter an item on this drawing in anyway. If an item is altered, the altering engineer shall affix to the item his/her seal and the notation "altered by" followed by his/her signature and date of such alteration and a specific description of the alteration.

Bar is one inch on original size sheet
0 1"

STATE OF NEW YORK STEVEN BOCHONOWICZ 198583 LICENSED PROFESSIONAL ENGINEER 4-27-26

GHD Consulting Services Inc.
285 Delaware Avenue, Suite 500
Buffalo NY 14202 USA
T 1 716 856 2142 F 1 716 856 2160 W www.ghd.com
www.ghd.com

Client ERIE COUNTY SEWER DISTRICT No 4

Project DEPEW PUMPING STATION IMPROVEMENTS - CONTRACT No 61

Project No. 11226283 WO7 | Date April 27, 2026 | Scale AS NOTED

Title EXISTING PUMP STATION UPPER LEVEL ELECTRICAL DEMOLITION PLAN

Size ARCH D

Sheet No. ED-101

Plot Date: 13 May 2026 - 3:11 PM | Plotted By: Julie Davenport | Path and Filename: N:\US\Buffalo\Projects\64\11226283\Digital_Design\WO7 - Depew PS\ACAD 2020\Sheets\Electrical\11226283-ED101.dwg