CONTRACT DOCUMENTS

FOR

NE WRF IMPROVEMENTS PROJECT PROJECT #19-0029-UT

FOR

CITY OF CLEARWATER

ADDENDUM NO. 7

Date Issued: August 11, 2020

Bidders on this project are hereby notified that Addendum No. 7 shall be attached to and made part of the above-named Bid Documents, dated May 2020.

The following items are issued to add to, modify, and clarify the Bid Documents. These items shall have full force and effect as the Bid Documents, and the cost involved shall be included in the various prices bid. Bids, to be submitted on the specified bid date, shall conform to the additions and revisions listed herein.

IN THE SPECIFICATIONS

SECTION IIIA SUPPLEMENTAL GENERAL CONDITIONS

1. **CHANGE** the 4th line in Paragraph 6 on Page 2 of 4 to read as follows:

"two hundred and fifty (250), not to exceed \$600 each. Contractor may combine or group similar"

SECTION IVA DIVISION 1 GENERAL REQUIREMENTS

2. SECTION 01005 GENERAL REQUIRMENTS

CHANGE line 27 on page 01005-7 to read as follows:

"All inspection of materials furnished under this Contract will be"

3. SECTION 01016 CONSTRUCTION PHASING PLAN

CHANGE line 35 on page 01016-2 to read as follows:

"Phase 1 - Install temporary LS No. 2 pump station, establish its reliability and re-

route the discharge piping LS 2 to upstream of the existing bar screens as shown on the drawings before".

4. SECTION 01040 COORDINATION

ADD new paragraph 1.01 C as follows:

"C. The Contractor shall make all submittals to the single designated Construction Manager with copy to the City's Project Manager. The Construction Manager will disseminate the submittals to the proper engineering firm for action and response".

5. **SECTION 01040 COORDINATION**

ADD new paragraph 1.01 D as follows:

"D. The Section IVA Northeast WRF Improvements Project Supplemental Technical Specifications - Division 1 General Requirements specifications - apply to both the King Engineering IVB Northeast WRF Grit Removal, Salsnes Filter and Equalization System Improvements Project and the Jones Edmunds Section IVC Northeast WRF Blend Tank Improvements; and may not be listed in the Table of Contents for each of the respective Technical Specifications."

6. **SECTION 01040 COORDINATION**

ADD new paragraph 1.01 E as follows:

"E. All references to O&M Data in the Jones Edmunds Section IVC Northeast WRF Blend Tank Improvements shall be to Specification Section 01830 – O&M Manuals of the Section IVA Northeast WRF Improvements Project Supplemental Technical Specifications - Division 1 General Requirements specifications."

7. SECTION 01200 MEETINGS AND CONFERENCES

CHANGE line 47 on page 01200-1 to read as follows:

"bi-weekly and at other times as deemed necessary by the progress of the work."

8. SECTION 01640 QUALITY CONTROL

CHANGE line 36 on page 01640-2 to read as follows:

"A. Contractor shall employ and pay for services of an independent firm to"

SECTION IVB - NORTHEAST WRF GRIT REMOVAL, SALNES FILTER AND EQUALIZATION SYSTEM IMPROVEMENTS SUPPLEMENTAL TECHNICAL SPECIFICATIONS

9. **SECTION 02100 SITE PREPARATION**

CHANGE line 16 on page 02100-2 to read as follows:

"is not expected on this project."

10. SECTION 03750 FLOW CHANNEL COATING SYSTEM

CHANGE line 13 on page 03750-1 to read as follows:

"repair materials as specified herein to the limits directed by the Engineer and/or as indicated on"

CHANGE line 24 on page 03750-1 to read as follows:

"Apply Xypex Megamix II with BIO SAN"

DELETE lines 25-29 on page 03750-1.

CHANGE line 40 on page 03750-4 to read as follows:

"B. The Contractor shall warrant the lining coating for a period of 5 years. A"

CHANGE line 36 on page 03750-7 to read as follows:

"Corporation, the Sika Corporation, or equal."

CHANGE line 42 on page 03750-7 to read as follows:

"A. Structural Repair Mortar (XYPEX Megamix II with BIO-SAN)"

CHANGE line 4 on page 03750-8 to read as follows:

"a. Compressive Strength: 7700 psi"

CHANGE line 8 on page 03750-8 to read as follows:

"e. Elastic Modulus: 20.4 GPa"

CHANGE line 12 on page 03750-8 to read as follows:

"i. Acid Resistance @ 84 days: negligible mass loss"

DELETE Paragraph 2.03 A thru D from line 46 on page 03750-8 to line 36 on page 03750-10.

CHANGE line 48 on page 03750-11 through to line 6 on page 03750-12 to read as

follows:

"C. Prepare the surface to be coated per the coating manufacturers' recommendations":

CHANGE line 8 on page 03750-13 to read as follows:

"3.03 APPLICATION REQUIREMENTS RESURFACING MORTAR"

CHANGE line 10 on page 03750-13 through line 2 on page 03750-14 to read as follows:

"Application of the resurfacing material shall be in accordance with the manufacturers' recommendations"

DELETE Paragraph 3.05 A thru J, from line 13 on page 03750-15 to line 41 on page 03750-16.

DELETE Paragraph 3.06 F, from line 41 to line 45 on page 03750-17.

11. SECTION 11306 SUMP PUMP

CHANGE line 9 on page 11306-1 to read as follows:

"Furnish and install four pairs (8 total) sump pumps, each with swing check valves installed in a horizontal run of piping,"

CHANGE line 16 on page 11306-1

"A. The proposed equipment is intended to pump seal water drainage and liquids from"

ADD new paragraph "B" to line 22 on page 11306-1 to read as follows:

"B. Two (2) of the eight (8) pumps shall be installed in the existing sump on the lower level of the headworks building. These pumps are also intended to pump seal water drainage and other liquids from pump cleanout events that may accumulate in the sump".

CHANGE line 8 on page 11306-2 to read as follows:

"2.01 EXTERIOR SUBMERSIBLE SUMP PUMPS"

ADD new Section 2.02 to line 13 on page 11306-3 to read as follows:

"2.02 HEADWORKS BUILDING SUMP PUMPS

- A. The Contractor shall furnish and install (two) 230V, single phase, submersible sump pumps with 1.5 HP motors. The capacity of each pump shall be nominally 100 gallons per minute at a minimum 20 feet of total dynamic head. Each pump shall operate at 1750 RPM and be capable of passing a 2-inch diameter sphere. The pumps shall be Series 3MW manufactured by Pentair Myers or approved equal.
- B. The curve submitted for approval shall state head and capacity performance of the pump.
- C. Pumps shall be able to operate dry for extended periods without damage to motor and/or seals.
- D. Pump shall be easily removable for inspection or service, requiring no bolts, nuts or other fasteners to be disconnected other than the discharge piping, or the need for personnel to enter the sump. Provide a quick disconnect in the discharge piping, upstream of the discharge check valve, to allow the pump to be removed by grasping the piping, The motor and pump shall be designed, manufactured and assembled by the same manufacturer.

E. Materials of Construction:

- 1. The pump shall be constructed with two ball bearings to support the shaft and take radial and thrust loads.
- 2. The pump volute, motor, and seal housing shall be 304 stainless steel or cast iron, ASTM A48, Class 30, with smooth surfaces devoid of blow holes or other casting irregularities.
- 3. Impeller shall be cast stainless steel, cast iron or ductile iron, ASTM A536, Class 40.
- 4. The motor shaft shall be 304 Stainless Steel.
- 5. All external mating parts shall be machined and sealed with Buna N O-Rings.
- 6. All exposed bolts and nuts shall be 316 stainless steel.
- 7. All power cords shall be water resistant UL or CSA approved, with double insulation and sized as a function of amperage draw. Sufficient cord length shall be provided to connect to weatherproof receptacles.
- F. Provide a minimum 2-inch threaded NPT galvanized steel discharge connection with a steel handle for lifting the pump out of the sump.

- G. The pumps shall be supplied with dual mechanical seals that have carbon/ceramic faces, a stainless-steel body and spring, and a Buna-N bellows.
- H. The pump manufacturer's typical duplex control panel shall be provided and installed. The control panel shall be equipped with on/off manual switches for each pump, a pump alternator, and audible and visual alarms. Four (4) floats shall be provided and installed to produce on/off, override, and high-level alarm signals to the control panel. No backup battery power supply or SCADA connection is required for this control panel."

12. **SECTION 11323 GRIT SEPARATION EQUIPMENT**

CHANGE line 13 on page 11323-1 to read as follows:

"chute, which shall connect the classifier and direct grit by gravity to a new"

CHANGE line 8 on page 11323-11 to read as follows:

"AD. Classifier safety stop switches: Each classifier, one new and one existing, shall be fitted with an emergency"

CHANGE line 26 on page 11323-11 to read as follows:

"B. Furnish a zero-speed switch mounted to the classifier input shaft of each classifier, one new and one existing, to provide an"

CHANGE line 40 on page 11323-12 to read as follows:

"emergency stop switch, and all other typical wear items. Furnish all new conduit and wiring required for retrofitting the existing grit classifier with an e-stop and a zero-speed switch as are specified or shown on the drawings for the new classier."

13. SECTION 11350 CONTINOUS LOOP MOVING BELT FILTER

ADD the following on line 2 of page 11350-2 to read as follows:

- "7. Typical Influent Solids Concentration (TSS) Range: 140 to 240 mg/L (monthly average).
- 8. Typical Influent Biological Oxygen Demand (BOD) Range: 160 to 250 mg/L (monthly average).
- 9. Typical Particle Size Distribution (PSD): At least 47% of particles greater than 350 micron."

CHANGE lines 3 and 4 on page 11350-04 to read as follows:

"bearing flush system shall be warranted for 5 years parts. One (1) complete spare valve with actuator and set of bearings shall be furnished for each filter."

CHANGE lines 16 and 17 on page 11350-6 to read as follows:

"6. Hot water spray nozzles shall be provided for cleaning the filter belt and in dewatering chamber. Spray nozzles and"

ADD new Paragraph 3.05 to line 47 on Page 11350-11 to read as follows:

"3.05 PARTIAL SUBSTANTIAL COMPLETION

At the Contractor's discretion, after the moving belt filters and all related subsystems, including inlet and sludge pumping systems, piping systems, mechanical systems, water systems, electrical systems and instrumentation and controls have been installed and successfully tested to the satisfaction of the Engineer and Owner, the Contractor may request partial substantial completion and the City will assume responsibility for the moving belt filter system."

SECTION 11560 COMPRESSED GAS MIXING SYSTEM

CHANGE line 48 on page 11560-8 to read as follows:

"shall be sized to provide heat dissipation such that, at 80 degrees F"

CHANGE line 2 on page 11560-9 to read as follows:

"requirements of Section 13630, including the requirement to furnish and install a managed switch and a UPS in the MCP."

CHANGE lines 9 and 10 on page 11560-9 to read as follows:

"the lowest-rated component in the panel is not exceeded."

CHANGE lines 16 and 17 on page 11560-9 to read as follows:

"power. Lightning and surge protection shall be as specified in Section 13630, 2.10."

DELETE Paragraph F Back-Up Controller on page 11560-9 in its entirety.

DELETE Paragraph L System Start-Up Monitoring on page 11560-10 in its entirety.

14. SECTION 13210 BOLTED STEEL WATER STORAGE TANK

CHANGE line 37 on page13210-2 to read as follows:

"b. Florida Building Code 2017."

15. SECTION 13567 TEMPORARY BYPASS PUMPING, TREATMENT AND PIPING

SYSTEMS

ADD new Sections 1.01 F and 1.01 G on line 5 of page 13567-2 to read as follows:

- "F. Operation and maintenance of the temporary bypass pumping and treatment system requires personnel with appropriate skill sets but does not require a State of Florida Licensed Wastewater Operator and does not require a person to be on site 24 hours/day, or 7 days per week. The Contractor shall provide a telecommunications system to provide remote monitoring of alarms for its staff, with the ability for the Owner and Engineer to also monitor system alarms.
- G. The Contractor may propose alternative treatment systems or processes for approval by the Owner/Engineer. The alternative system shall have the same performance and treatment levels as the existing system. The design TSS removal requirement shall be 7,000 pounds/day at a flow rate of 13.5 MGD and must be variable with the incoming flow."

CHANGE line 6 on page 13567-3 to read as follows:

"shall not exceed 140. Velocity in any pipe shall not exceed 8.5 feet per second."

CHANGE lines 17 and 18 on page 13567-4 to read as follows:

"or similar portable device. The existing grit and screenings collection container volume is 10 yards and the container is typically emptied twice per week by the City. The City will continue to haul the grit and screenings container throughout the construction period unless the contents of the container do not pass the paint filter test for free water, at which point disposal shall be by the Contractor at no additional cost to the Owner."

16. **SECTION 13600 INSTRUMENTATION GENERAL PROVISIONS**

CHANGE line 8 on page 13600-6 to read as follows:

"1. Attend all construction progress meetings."

DELETE Section 2.19 SPARES AND MAINTENANCE MATERIALS in its entirety.

17. SECTION 13630 LOCAL CONTROL PANELS AND CONTROL SYSTEM

CHANGE Section 1.01, A on page 13630-1 to read as follows:

- "A. Design, furnish and/or install local control panels in accordance with the contract documents for the following new equipment:
 - Grit Pumps (LCP-G1, LCP-G2, LCP-G3, LCP-G4)

- Grit Classifier (LCP-GC2)
- Moving Belt Filter Feed Pumps (LCP-SF1, LCP-SF2, LCP-SF3)
- Moving Belt Filter Sludge Pumps (LCP-SL1, LCP-SL2, LCP-SL3)
- Moving Belt Filters (LCP-S1, LCP-S2, LCP-S3)
- Scum Pump (LCP-SC1)
- Equalization Basin Feed Pumps (LCP-S1, LCP-S2)
- Equalization Basin Return Pumps (LCP-R1, LCP-R2)
- Equalization Basin Compressors (LCP-C1, LCP-C2)
- Equalization Basin Compressed Gas Mixing System Valve Panel (EMX-VM-1)
- Macerator (LCP-MAC)
- In Plant Lift Station 2 (LCP-LS2)"

CHANGE Section 1.01, B on page 13630-1 to read as follows:

- "B. Design, furnish and/or install control panels in accordance with the contract documents for the following new equipment:
 - Control Panel with PLC for Moving Belt Filter No. 1 (MCP-MBF1)
 - Control Panel with PLC for Moving Belt Filter No. 2 (MCP-MBF2)
 - Control Panel with PLC for Moving Belt Filter No. 3 (MCP-MBF3)
 - Master Control Panel with PLC for Moving Belt Filter Feed Pumps, Moving Belt Filter Sludge Pumps, Grit Pumps, and Grit Classifier (MCP-15)
 - Master Control Panel with PLC for Equalization Basin Feed Pumps and Equalization Basin Return Pumps (MCP-16)
 - Master Control Panel with PLC for Equalization Basin Compressed Gas Mixing System (MCP-CGM)"

CHANGE Section 1.01, D on page 13630-1 to read as follows:

"D. PLC ladder logic programming for the new Moving Belt Filter PLCs and Compressed Gas Mixing System PLC shall be provided by the equipment manufacturer as specified in Division 11. PLC ladder logic programming for the remaining Master Control Panels shall be provided by the SI. HMI graphics, and alarms for the monitoring and control of equipment as specified herein, shall be performed by the SI. The Contractor shall be responsible for furnishing, installing and testing the complete control system. The Contractor shall be responsible for all labor, materials, equipment, calibration, coordination and incidentals required to furnish and install the control system specified or required."

CHANGE Paragraph 2.01 on page 13630-4 to read as follows:

"2.01 CONTROL PANELS"

CHANGE Paragraph 2.01, A on page 13630-4 to read as follows:

"A. All new control panels shall be at minimum NEMA 4X 316 S.S. and shall comply with NFPA 820 area classifications. All panels shall be as manufactured by Hoffman or approved equal."

CHANGE Paragraph 2.01, C on page 13630-4 to read as follows:

"C. Any control panels to be located in a non-air-conditioned space as shown on the Drawings shall be designed to operate between 0 – 100 degrees F without air conditioning including all components, wiring, and equipment. The three (3) manufacturer-furnished Moving Belt Filter Master Control Panels (MCP-MBF1, MCP-MBF2, MCP-MBF3), the two (2) Master Control Panels (MCP-15, MCP-16), and the Compressed Gas Mixing System Master Control Panel (MCP-CGM) shall be located in air-conditioned electrical enclosures and shall be designed to operate between 0 – 80 degrees F."

CHANGE Paragraph 2.01, G on page 13630-5 to read as follows:

"G. Control panels shall be completely fabricated, with instruments installed and wired, at the System Integrator's facility, except for the manufacturer-supplied Moving Belt Filter Control Panels and the Compressed Gas Mixing System Control Panel, which shall be completely fabricated, with instruments installed and wired, at the manufacturer's facility."

CHANGE Paragraph 2.04, G on page 13630-14 to read as follows:

- "G. PLC Programming Software
 - 1. The Moving Belt Filter Manufacturer and the Compressed Gas Mixing System Manufacturer shall be responsible for developing the program for controlling their respective equipment. The Systems Integrator shall be responsible for developing all other programs. As such, the Moving Belt Filter equipment manufacturer, the Compressed Gas Mixing System Manufacturer, and the Systems Integrator shall possess a complete licensed copy of the latest version of Rockwell Automation RSLogix, RSLinx and RSNetworx programming software compatible with the PLC specified herein.
 - 2. The Moving Belt Filter manufacturer and the Compressed Gas Mixing System Manufacturer shall supply all programming necessary to provide a fully debugged and operating system. The SCADA Systems Programmer shall supply all programming necessary to provide a fully debugged and operating system for all other new equipment. The software required shall consist of those programs necessary for the equipment to efficiently perform the functions specified herein or other parts of the Contract Documents. The Contractor shall provide any and all additional controls required for smooth operation of the system,

whether or not specified herein, at no additional cost to the Owner. The Owner and Engineer shall not be required to expend any programming effort in order to achieve a fully operational system."

CHANGE Paragraph 2.08, A on page 13630-16 to read as follows:

"A. Where shown on the drawings or required for proper communication, Ethernet switches shall be furnished and installed in all control panels containing a PLC."

CHANGE lines 35 and 36 on page 13630-16 to read as follows:

"H. Managed switches shall be sized by the Systems Integrator with sufficient quantities of Ethernet ports and Fiber Optic ports to connect all Ethernet/Fiber devices as shown on the drawing plus two (2) spare Ethernet ports."

18. SECTION 13640 CONTROL STRATEGY

CHANGE lines 40-41 on page 13640-5 to read as follows:

"trip status, and elapsed run time of each pump. In the REMOTE mode, each pump shall be automatically controlled from the HMI using individual 24-hour ON/OFF timers."

CHANGE lines 37-39 on page 13640-6 to read as follows:

- "F. Moving Belt Filters (Salsnes Filters -SAF)
- 1. Three (3) Moving Belt Filters (Salsnes Filters SAF) are to be installed with provisions for a"

CHANGE line 4 on page 13640-7 to read as follows:

"door."

CHANGE line 11 on page 13640-7 to read as follows:

"disconnect switch, or door mount disconnect switch."

19. SECTION 15100 VALVES AND APPURTENANCES

ADD the following on Line 39 of page 15100-24:

- "2.25 SWING CHECK VALVES LEVER AND WEIGHT
 - A. Swing check valves shall be constructed with heavy cast iron or ASTM A536 Grade 65-45-12 ductile iron. The valve shall meet the minimum

requirements of AWWA C-508. Flanges shall be drilled for ANSI Standard B.16.1, 125 lb. Class. Check valves shall absolutely prevent the return of water back through the valve when the inlet pressure decreases below the delivery pressure.

- B. The valves must be tight seating and must operate without hammer or shock. The seat ring shall be replaceable bronze or stainless steel and shall be securely held in place by a threaded joint or other mechanical fastener. The shaft shall be non-corrosive steel. The shaft seals shall be a stuffing box and packing.
- C. Check valves shall be the lever and weight type with an adjustable position weight and lever arm attached to a cast or ductile iron disc assembly to allow adjustment of the closure force and include a sidemounted, corrosion-resistant, spring assist to control closing speed over the final 10% of stroke.
- D. The valves shall be APCO Series 6000 CLW, Kennedy, Val-Matic Swing-Flex, or approved equal, and shall be suitable for horizontal and vertical installation."

20. SECTION 16775 VARIABLE FREQUENCY DRIVES

CHANGE line 46 on page 16775-7 to read as follows:

"A. Yaskawa by Icon Technologies, Altivar Process VFD by Schneider Electric USA, Inc., or approved equal."

CHANGE Paragraph 2.01, B on page 16775 to read as follows:

"Acceptable Products: VFDs specified herein shall be the product of a single manufacturer. All Drives in MCC's must meet UL 845. Note: UL 508 will be accepted. Products and manufacturers specified are to establish a standard of quality for design, function, materials, and appearance. Products shall be modified as necessary by the manufacturer for compliance with requirements. Provide Yaskawa by Icon Technologies, Altivar Process VFD by Schneider Electric USA, Inc., or approved equal."

21. SECTION V - BIDDERS PROPOSAL

REPLACE the table in the Bidder's Proposal on page 15 of 18 and 16 of 18 with the following table.

ITEM NO.	BASE BID ITEMS	UNIT	EST. QTY.	UNIT	PRICE	TOTAL
	DESCRIPTION					
NORTI	HEAST WRF SLUDGE BLEND TANKS IMPROVEMENT	S				
1	Remove Contents of Existing Sludge Storage and Blend Tanks in accordance with Section 01150, 3.01A.	CY	400	\$		\$
2	Existing Sludge Storage and Blend Tank Concrete Crack Repair in accordance with Section 01150, 3.01B.	LF	100	\$		\$
3	Existing Sludge Storage and Blend Tank Spalled Concrete Repair in accordance with Section 01150, 3.01C.	CY	2	\$		\$
4	Demolition of Existing Aeration Equipment, Mixing Equipment, and Associated Appurtenances in accordance with Section 01150, 3.01D.	LS	1	\$		\$
5	Existing Odor Control Piping, Stair Treads, and Tank Walkway Repair and Refurbishment in accordance with Section 01150, 3.01E.	LS	1	\$		\$
6	Clean and Coat the Interior and Exterior of the Existing Sludge Storage and Blend Tanks in accordance with Section 01150, 3.01F.	LS	1	\$		\$
7	Sludge Storage and Blend Tanks, Pump Stations, and Yard Piping Equipment and Rehabilitation in accordance with Section 01150, 3.01G.	LS	1	\$		\$
8	New Truck Off-Loading and Anaerobic Digester Feed Pump Station Canopy in accordance with Section 01150, 3.01H.	LS	1	\$		\$
9	Dewatering Feed Pump Station Canopy Removal and Replacement in accordance with Section 01150, 3.01I.	LS	1	\$		\$
10	Thickened Primary Sludge and Thickened WAS Yard Piping Modification in accordance with Section 01150, 3.01J.	LS	1	\$		\$
11	Mobilization in accordance with Section 01150, 3.01K.	LS	1	\$		\$
12	Indemnification in accordance with Section 01150, 3.01L.	LS	1	\$	100.00	\$
	Sub-total NE WRF Sludge Blend Tanks Imp					\$
13	10% Owner's Contingency	LS	1	\$		\$
	Total NE WRF Sludge Blend Tanks Imp					\$
NORTI	HEAST WRF GRIT REMOVAL, MOVING BELT FILTER	, AND EQ	UALIZAT	ION SYS	STEM IMP	ROVEMENTS
14	Northeast WRF Pretreatment and Primary Treatment Improvements in accordance with Section 01150, 3.01N.	LS	1	\$		\$
15	Removal and Replacement of the Top Portion of the Existing Primary Clarifier Effluent Box Channel in accordance with Section 01150, 3.01O.	LS	1	\$		\$
16	Rehabilitation of the walls and floors of the flow channels in the headworks building, the flow channel to the primary clarifier splitter box, the primary clarifier splitter box, the scum box, and the primary clarifier effluent box channel in accordance with Section 01150, 3.01P.	SF	7,300	\$		\$
17	Mobilization in accordance with Section 01150, 3.01Q.	LS	1	\$		\$
18	Indemnification in accordance with Section 01150, 3.01R.	LS	1	\$	100.00	\$
	Sub-total NE WRF Grit Removal, Moving Belt Filter					\$

	and Equalization System Imp			
19	10% Owner's Contingency	LS	1	\$ \$
	Total NE WRF Grit Removal, Moving Belt Filter, and			\$
	Equalization Sys Imp			
	Sub-total Sub-total			\$
	Total Contingency			\$
	Total Contract			\$
	BIDDER'S GRAND TOTAL			\$

IN THE KING ENGINEERING DRAWINGS

1. On Sheet G1.05, **ADD** the following note:

"The Contractor may temporarily remove the existing channel-type deck plate upstream of the screens to gain access for temporary pumping facilities."

2. On Sheet C2.01, **ADD** the following note at coordinate C7 to read:

"Information on the age, materials of construction, flow and operability of the four (4) existing 24" force mains is unavailable. The Contractor shall proceed accordingly."

3. On Sheet C2.01, **ADD** the following note at coordinate D5 to read:

"The Zabocs Biofilter contains 88 cu. Ft. of Bioglas Biological Media and 811 lbs. of VOCARB P60 Carbon Media."

4. On Sheet C2.02, **CHANGE** the note at coordinate 6F to read:

"NEW 4" EFW".

5. On Sheet S2.02, **CHANGE** the third line in the <u>LEGEND</u> at coordinate 11D to read as follows:

"COATING SYSTEM SHALL BE MEGAMIX II with BIO-SAN BY XYPEX."

- 6. On Sheet M2.02, **DELETE** the note on the left side that mentions new gratings and supports.
- 7. On Sheet M2.03, **REMOVE** the arrow pointing at the sump pump discharge pipe in IMAGE#5.
- 8. On Sheet M2.03, **ADD** the following note to IMAGE#5:

"The existing sump pump, discharge pipe, and controls shall remain in service".

Addendum No. 7

9. On Sheet M2.22, **CHANGE** the note at coordinate B2 to read as follows:

"NEW 3-INCH SCH. 10 SS AIR LINE W/ EXP. JT. (TYPICAL OF 3)"

10. On Sheet M4.02, **ADD** the following to all three notes in IMAGE #1:

"including concrete bases, slabs, and foundations"

- 11. On sheet E4.0, **DELETE** the starters from bucket 2c and 2i. Starters for the compressors are supplied with and mounted on the compressors.
- 12. On Sheet M4.02, **ADD** the following to IMAGE #1:

"The existing AC compressor and concrete slab shall remain in service."

13. On Sheet M3.10, **CHANGE** the note at coordinate 4E to read as follows:

"304 S.S. Diffusion Header Distribution Piping"

14. On Sheet M4.02, **ADD** the following note to IMAGE #1:

"The Contractor shall remove the existing 36" FRP odor control inlet pipe between the Headworks Building and the large odor control tower. Furnish and install steel reinforced concrete wall patch to seal opening in accordance with details shown on the structural drawings. Demolish and remove existing handrail and a 5- foot section of walkway extending from the top of the headworks building to the top of the odor control unit. Repair the roof, edge flashing, and gutter, as required.

15. On Sheet E2.0, **CHANGE** Drawing Note 11 to read as follows

"Remove existing sump pump controls, conduit and wiring."

16. On Sheet E2.2, **ADD** the following note at coordinate A5:

"The 2 existing sump pumps and the associated control panel, conduit, and wire are to be removed."

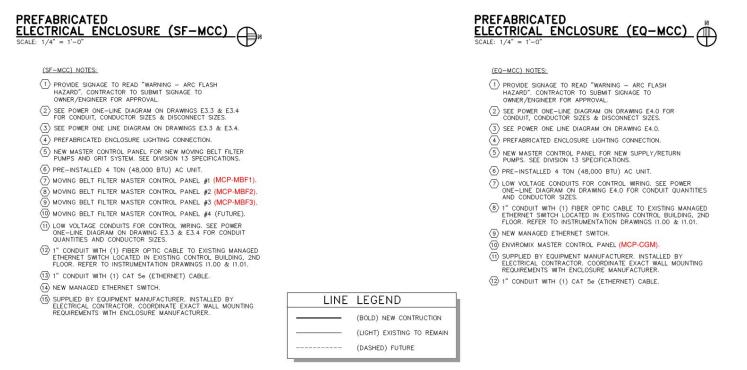
17. On Sheet E2.2, **ADD** the following note at coordinate A5:

"Furnish and install new control panel for (2) new 230-V single phase 1.5 HP sump pumps including new control panel, conduit and wire. The new pump control panel shall be fed from Panel R4 with new 3 No.12 and 1 No.12 E.G. in 3/4" conduit."

- 18. On sheet E2.3, **CHANGE** General Note 1 to read as follows:
 - "1. All electrical equipment, disconnect switches, conduit, junction boxes, and

control panels shall be in accordance with the area classifications defined on Sheet G1.01".

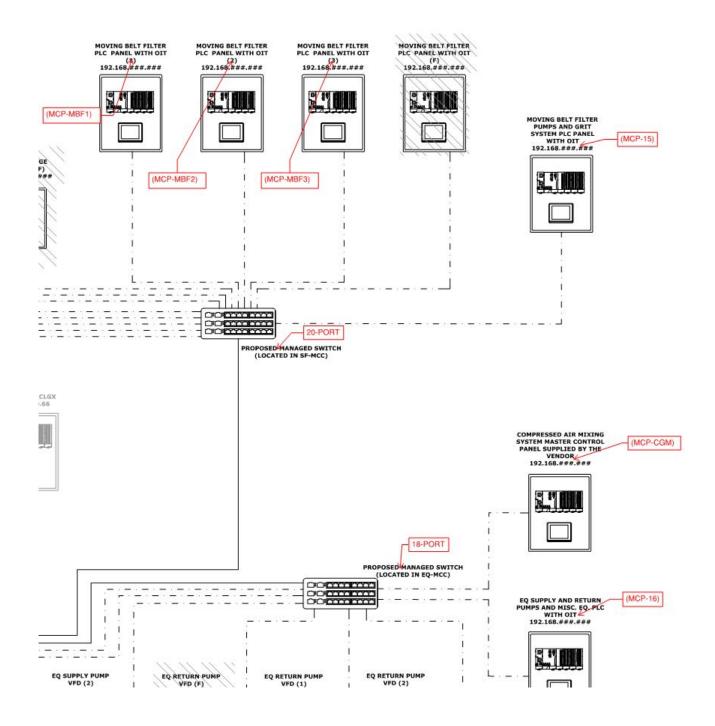
- 19. On sheet E2.3, **CHANGE** Drawing Note 8 to read as follows:
 - "8 New shaft speed sensor (zero-speed switch), typical for two classifiers, one existing and one new."
- 20. On sheet E2.3, **CHANGE** Drawing Note 11 to read as follows:
 - "11 New emergency stop pushbutton for Classifier #2, typical for two classifiers, one existing and one new."
- 21. On sheet E2.4, **CHANGE** General Note 1 to read as follows:
 - "1. All electrical equipment, disconnect switches, conduit, junction boxes, and control panels shall be in accordance with the area classifications defined on Sheet G1.01".
- 22. On Sheet E3.2, **ADD** the following notes shown in red:



- 23. On sheet E3.3, **REMOVE** the starter, conduit, wire, disconnect, and existing 5 HP sump pump from bucket 10A of New MCC-15. Label the bucket as SPARE.
- 24. On sheet E3.4, **REMOVE** the starter, conduit, wire, disconnect, and existing 5 HP

sump pump from bucket 3U of New MCC-15. Label the bucket as SPARE.

- 25. On sheet E3.4, **CHANGE** Drawing Note 12 to read as follows:
 - "12 15 KVA, 480-120/24V, 1 Ph, 3W transformer"
- 24. On sheet E4.0, **REMOVE** the starters from bucket 2c and 2i. Starters for the compressors are supplied with and mounted on the compressors.
- 25. On sheet E5.1, **CHANGE** the main breaker in Panel R4 from 60 amps to 100 amps.
- 26. On sheet E5.1, **ADD** two (2) 20-amp breakers to the connected load in Panel R4 for the new sump pumps.
- 27. On sheet E6.1, **ADD** the following note:
 - "Refer to Sheet G1.01 for area classifications ratings for all control panels."
- 28. On sheet E7.0, **ADD** the following General Note:
 - "2. All electrical equipment, disconnect switches, conduit, junction boxes, and control panels shall be in accordance with the area classifications defined on Sheet G1.01".
- 29. On Sheet E7.0, **CHANGE** the call-outs referring to the enclosure on each of the three Local Control Panels Details A, B and C from "NEMA 9 (EXPLOSION POOF)" to "NEMA 4X".
- 30. On Sheet I1.00, **ADD** the following text shown below in red:



JONES EDMUNDS' - Responses to Bidder Questions 08/07/2020

Question 1: The VFD specification calls out for 12-pulse low harmonic VFDs. Since these are small VFDs, please confirm that 6-pulse VFDs with input line reactors are acceptable. Also, is a VFD schematic for the stand-alone VFDs available?

Response: VFD Rev. 1

Specifications:

1. In section 16370, page 4, paragraph 2.01 B.1. Change "12-pulse" to "6-pulse"

"Each Adjustable Frequency Drives shall consist of a 460V, 6-pulse minimum rectifier and adjustable frequency inverter with features, functions and options as specified."

2. In section 16370, page 4, paragraph 2.01 B.4. Change "12-pulse" to "6-pulse"

"The ASD shall be of the Pulse-Width Modulated type and shall employ a 6-pulse (minimum) dual full-wave diode bridge converters to convert incoming fixed voltage/frequency to a fixed DC voltage, all components for 6-pulse converters must be integral to ASD enclosure and require no additional installation costs. The Pulse Width Modulation strategy shall be of the space vector type implemented in a microprocessor which generates a sine-coded output voltage."

Drawings: Jones Edmunds has posted revised drawings addressing the following:

- 1. Sheet E3, Duct bank A-A has been revised to include Note #20. INSTRUMENTATION -2"
- Sheet E6 has been revised as follows:
 Note #23 has been revised to: 6#14-3/4" TO C-BT & (1)-3/C#16SH-3/4" TO I-BT
 Note #28 has been revised to: (2)-3" w/ (2) 3/7C#14 EA. & (1)-2" W/ (8)-3/C#16SH TO I-PB
- 3. Sheet E8, ELECTRICAL ROOM has been revised to include a home run to VFD with the following note: (1)-3/C#16SH-3/4" TO C-PB (TYP. For Each VFD).
- 4. Sheet E10 has been revised to include a Typical VFD Control diagram.
- Question 2: Regarding the cleaning of the existing Blend Tanks, will the Owner remove or drain the tanks of water?
- **Response:**JONES EDMUNDS RESPONSE: It is the Contractors responsibility to evacuate all Fluids and Materials within the existing Blend Tanks. Per the Bid Form Contractor should assume the responsibility to remove 400 cubic yards of Fluid and Material. Please also refer to Specification 02220 and 02225 pertaining to this matter."
- Question 3: Drawing C3 of the Jones Edmunds drawings, Note 1 references specification section 01815 Maintenance of Plant Operation and Sequence of Construction. However, this specification section is not provided with the bid documents. Please clarify.
- **Response:**<u>JONES EDMUNDS RESPONSE</u>: Specification 01815 has been intentionally omitted from the documents. Please refer to Specifications 01105 Control of Work; and 01016 Construction Phasing Plan, for General and Specific requirements pertaining to Maintenance of Plant Operation and Sequence of Construction throughout the entire project.
- Question 4: Specification Section 15860 Odor Control System Equipment of the Jones Edmunds Specifications; Paragraph 3.01-A states the odor control system shall be located on a foundation as show on the Drawing. However, we have not seen the location of this odor control system on the drawings. Please provide the location of this odor control system and provide details of the foundation.
- **Response:**JONES EDMUNDS RESPONSE: No drawing has been included for this item. The scope of work is to maintain the existing Odor Control System and all related FRP piping for reconnection to the New Covers for Rehabilitated Blending Tanks. Please also refer to Specification 01150-4, E Existing Odor Control Piping, Stairs, Treads and Tank Walkway Repairs pertaining to this matter.
- Question 5: Drawing 16 Detail 1 the note atop photo: PLC-DG "add SLCI/O expansion and din rail termination to match existing" Section 13401 2.02 O 1 "PLC CPU shall be as manufactured by Allen-Bradley Compact Logix with built in ethernet network" Please clarify.
- **Response**: <u>JONES EDMUNDS RESPONSE</u>: The existing PLC in the Digester Building (PLC-DG) is of the SLC series, (Processor 1747-L551) as of March 26, 2019 when the photo was taken.

Question 6: There are not Analog Out signals, Are A/O cards required?

Response: <u>JONES EDMUNDS RESPONSE:</u> Refer to the I/O tables 13616-1 and table 13616-2.

Question 7: There are two drawings 17 one with panel details and one with network diagram. Please

clarify the required scope of supply required from the network sheet.

Response: JONES EDMUNDS RESPONSE: The diagram calls for a "PROPOSED ETHERNET SWITCH

and IOTs.

Questions 8: Who is responsible for the cameras?

Response: JONES EDMUNDS RESPONSE: The cameras are specified on sheet 16. Forward this

question to the prime bidders.

Question 9: On Network drawing 17 what are the six items attached by CAT6 SH wired to proposed

ethernet switch?

Response: JONES EDMUNDS RESPONSE: The items are VFDs as follows:102-FVD-1, 102-VFD-2,

103-VFD-1, 103-VFD-2, 103-VFD-, 103-VFD-4.

Question 10: Are there OIT on the left side of Network drawing 17 the 9" OIT's shown in a panel detail sheet

17?

Response: <u>JONES EDMUNDS RESPONSE</u>: Correct.

Question 11: Bid Item #3, Spalled Concrete Repair at the Sludge Blend Tanks, is measured by the unit of

per CY and a Bid Quantity of 2 CY. This method of measure, per BCY, is highly irregular and not standard in the industry. Concrete spall repairs are commonly, if not exclusively, measure per SF and generally considered a max of 3" in depth or less coinciding with the cover of reinforcing. Please consider revisiting the measure of Spalled Concrete Repair to per Square

Foot (SF) unit of measure. (Archer RFI 080420)

Response: JONES EDMUNDS RESPONSE: Bid Item # 3 is herein revised to read:

"Existing Sludge Storage and Blend Tank Spalled Concrete Repair in Accordance with

Section 01150, 3.01B EST. QTY. 54 SF. "

Question 12: On sheet M8, there are three 6B920 valves called out. Can you please provide pipe elevations

along with a ground elevation to determine if chainwheel operators will be required? (Env. MD

RFI 080320 question 2)

Response: JONES EDMUNDS RESPONSE:

The Centerline pipe manifold elevations are shown on Drawing M-8 section B-B. Section A-A

of the same drawing depicts the vault at 8' total depth. Chain Wheel Actuators should not be

necessary.

Question 13: Section 15100 / 2.21 is calling for a cushioned swing check valve with oil bottom mounted

buffer. This valve is only offered down to 8" size with an oil bottom mounted buffer. There are 4", 6", 8" and 12" sizes observed within the plan set. Please advise if this style of check valve you are seeing for the service application is required for the sizes available along with what style of check valve should be supplied for the smaller sizes. (Env. MD FRI 080320 guestion

3)

Response: <u>JONES EDMUNDS RESPONSE</u>:

Refer to Supplemental Tech Specs IVc, Specification 15110, Section 2.11 for the Ductile Iron

Swing-Flex Check Valves required for the Sludge Tank Blending portion of the project.

Question 14: Allen-Bradley Stratix vs. Phoenix Managed Ethernet Switch – (REV 080420 Com Cntlr),

Question #5 ..." For the JEA/EMI Design, the specification (13401-2.02-N) specifies Phoenix Contact SFN 6GT/2SX. Are we to assume per each design and specifications that there are different Make/Model for switches to be provided, or do we try to find commonality of provision

between the 2 Design/Specifications? "

Response: JONES EDMUNDS RESPONSE:

The City preference is that Allen Bradley Managed Switches be utilitized in all applicable locations for both design projects. This is requested to match existing equipment on site. Please provide the appropriate Allen Bradley switches for the JEA/EMI Design.

END OF ADDENDUM NO. 7