



February 10, 2020

TO: Town of McCordsville, IN / All Bidding General Contractors

FROM: Aero-Mod, Inc.
Manhattan, Kansas

RE: Scope of Supply – Town of McCordsville, IN – WWTP Expansion
Appendix A – Wastewater Treatment Plant

Aero-Mod proposes to provide the following equipment for the referenced project. The equipment is quoted FOB Manhattan, KS with freight allowed to the job site. Off-loading of the equipment on-site will be the responsibility of the contractor and will require a crane to be on-site upon the arrival of equipment. This scope references drawings prepared by Whitaker Engineering.

EQUIPMENT SCOPE

2.0 Split-ClarAator Secondary Clarifier

A. Train B New Clarifier

Note: All required fittings, interior Schedule 40 PVC distributor piping, SS bolts, SS brackets & U-bolts, flexible hoses, and flexible tubing for the clarifier are provided by Aero-Mod. Inlet piping from the screens into the clarifier and effluent piping are to be supplied by the contractor. This piping is listed in the table “Contractor Supplied Parts & Fittings”. All SS equipment uses 304.

Two (2) Split-ClarAator, Model 20360 as provided by Aero-Mod. This equipment is installed in the clarifier tank train B (existing aeration basin train B) and will perform the operations of clarification, sludge return, and skimming. Each unit is equipped with grating, kickplate, and a two-rail handrail system. The Split-ClarAator equipment will be shipped in sections. The largest section will be the upper SS effluent/RAS trough section weighing about 4000 pounds. The rest of the sections will all weigh less than 400 lbs each. The contractor is responsible for providing a crane to off-load the equipment and install it into the tankage.

The following is supplied with the Split-ClarAator equipment:

Two (2) 8” Inlet Screens. These inlet screens bolt to the Schedule 40 PVC inlet piping (supplied by GC) that will feed the (new) clarifier through the tank wall separating the (new) aeration basin from the (new) clarifier. These inlet screens will be used in conjunction to the three (3) existing 8” inlet screens.

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Twenty (20) Hydraulic Suction Hoods

Twenty (20) 4" Schedule 40 PVC Airlift Pipes

Two (2) 8" Schedule 40 PVC Side Distributor Pipes w/ 4" Tees. These PVC pipe distributors are solvent welded in place at the factory and supported with SS brackets and U-Bolts (supplied by Aero-Mod).

Three (3) 8" Schedule 40 PVC Center Distributor Pipe w/ 6" Tees. These PVC pipe distributors are solvent welded in place at the factory and supported with SS brackets and U-Bolts (supplied by Aero-Mod).

One (1) Set of suction hood base forming frames for use by the general contractor. Frames are to be returned to Aero-Mod upon completion of concrete work.

Twelve (12) Skimmer Assemblies

Each Split-ClarAstor upper section has four (4) SS air pipes. Two (2) air pipes supply the air for the skimmers, while the other two (2) air pipes supply the air to the RAS airlift pumps. The flexible hose for these two (2) connections is provided by Aero-Mod.

The pipe supplying air for the RAS airlift pumps will have two (2) 1-1/4" SS ball valves with double actuating pneumatic actuators. Two (2) 1/4" Parflex tubing connections are required for each pneumatic ball valve. This 1/4" Parflex tubing is supplied by Aero-Mod and will need to be installed in PVC conduit. The flexible hoses used to connect to these SS pipes to the PVC air piping are provided by Aero-Mod.

Each clarifier bridge has six (6) skimmers. These are pre-assembled in the factory and require a single SS union connection in the field plus a single 1/2" flexible hose (Aero-Mod supplied) connection to the 1/2" SS air supply.

The suction hoods are placed over the top of the concrete suction hood bases. These bases are formed in the field by the general contractor utilizing the set of metal frames and contractor supplied 3/4" plywood and 2x4's.

Each clarifier bridge will require ten (10) airlift pipe connections. The 3/4" airlift air supply line is pre-assembled on each airlift pipe in the factory. Each airlift will require a single flexible hose (Aero-Mod supplied) connection in the field to the 3/4" SS air pipe on the upper assembly.

B. Train B Existing Clarifier

Two (2) 10" Inlet Screens. These inlet screens bolt to the Schedule 40 PVC inlet piping (supplied by GC) that will feed the (existing) clarifier through the tank wall separating the (new) aeration basin from the clarifier.

Two (2) 10" Distributor Headers. These headers will provide the connection between the 10" inlet screen piping and the 8" distributor pipes. The distributor headers will connect to each distributor by an 8" flange.

Two (2) 8" Schedule 40 PVC Side Distributor Pipes w/ 4" Tees. These PVC pipe distributors are solvent welded in place at the factory and supported with SS brackets and U-Bolts (supplied by Aero-Mod).

One (1) 8" Schedule 40 PVC Center Distributor Pipe w/ 6" Tees. This PVC pipe distributor is solvent welded in place at the factory and supported with SS brackets and U-Bolts (supplied by Aero-Mod).

Four (4) complete skimmer assemblies to replace existing.

3.0 Wall Mounted Aerators

A. Note: All required flexible hose, SS brackets, SS bolts, and saddles for tapping into the PVC air piping are supplied by Aero-Mod. PVC piping from the saddle to the flexible hose is to be supplied by the general contractor.

B. Aeration Basin – First Stage Train B

Eight (8) Aerator Assemblies, Model WA-PF6-2. These units bolt to the concrete walls of the tank as per the plans with ½" SS expansion bolts. Each assembly includes a SS guide rail fabricated of 1-1/2" Schedule 5 pipe that is bolted to the concrete wall and floor. A saddle is provided for connection to the PVC air header piping for each aerator. All necessary fittings and piping from and including the flexible hose to the diffusers are provided by Aero-Mod. Included is the air header saddle, a flexible hose connection, a SS ball valve and union assembly with two (2) SS ells, and a 2" Sch. 40 PVC air drop pipe. A Sch. 40 PVC diffuser header with six (6) 0.5m EPDM fine bubble diffusers is supplied. The diffuser header is glued to the drop pipe in the field, and the diffusers are installed on the diffuser header with a 1-1/2"x3/4" PVC reducer bushing.

C. Aeration Basin – Second Stage Train B

Ten (10) Aerator Assemblies, Model WA-PF6-2. These units bolt to the concrete walls of the tank as per the plans with ½" SS expansion bolts. Each assembly includes a SS guide rail fabricated of 1-1/2" Schedule 5 pipe that is bolted to the concrete wall and floor. A saddle is provided for connection to the PVC air header piping for each aerator. All necessary fittings and piping from and including the flexible hose to the diffusers are provided by Aero-Mod. Included is the air header saddle, a flexible hose connection, a SS ball valve and union assembly with two (2) SS ells, and a 2" Sch. 40 PVC air drop pipe. A Sch. 40 PVC diffuser header with six (6) 0.5m EPDM fine bubble diffusers is supplied. The diffuser header is glued to the drop pipe in the field, and the diffusers are installed on the diffuser header with a 1-1/2"x3/4" PVC reducer bushing.

D. Aeration Basin – Third Stage Train B

Eighteen (18) Aerator Assemblies, Model WA-PS4-2. These units bolt to the concrete walls of the tank as per the plans with ½" SS expansion bolts. Each assembly includes a SS guide rail fabricated of 1-1/2" Schedule 5 pipe that is bolted to the concrete wall and floor. A saddle is provided for connection to the PVC air header piping for each aerator. All necessary fittings and piping from and including the flexible hose to the diffusers are provided by Aero-Mod. Included is the air header saddle, a flexible hose connection, a SS ball valve and union assembly with two (2) SS ells, and a 2" Sch. 40 PVC air drop pipe. A Sch. 40 PVC diffuser header with four (4) 24" SS coarse bubble diffusers is supplied. The diffuser header is glued to the drop pipe in the field, and the diffusers are installed on the diffuser header with a 1-1/2"x3/4" PVC reducer bushing.

E. Aerobic Digester Tank Train B

Twenty-four (24) Aerator Assemblies, Model WAD-HS2-2. These units bolt to the concrete walls of the tank as per the plans with ½" SS expansion bolts. Each assembly includes a SS guide rail fabricated of 1-1/2" Schedule 5 pipe that is bolted to the concrete wall and floor. A saddle is provided for connection to the PVC air header piping for each aerator. All necessary fittings and piping from and including the flexible hose to the diffusers are provided by Aero-Mod. Included is the air header saddle, a flexible hose connection, a SS ball valve and union assembly with two (2) SS ells, and a 2" Sch. 40 PVC air drop pipe. A Sch. 40 PVC diffuser header with two (2) 24" SS coarse bubble diffusers is supplied. The diffuser header is glued to the drop pipe in the field, and the diffusers are installed on the diffuser header with a 1-1/2"x3/4" PVC reducer bushing.

NOTE: For the Digester Aerators, thirty-two (32) of the required SS coarse bubble diffusers will be taken from the existing digester aerators.

F. Aeration Basin – Second Stage Train A

Five (5) 6"x1-1/2" bolt-on saddles for re-connection of existing aerators to new 6" PVC air header.

G. Post Aeration Tank

One (1) Aerator Assembly, Model WA-PF2. This unit bolts to the concrete wall of the tank as per the plans with ½" SS expansion bolts. The assembly includes a SS guide rail fabricated of 1-1/2" Schedule 5 pipe that is bolted to the concrete wall and floor. All necessary fittings and piping from and including the flexible hose to the diffusers are provided by Aero-Mod. Included is the flexible hose connection, a SS ball valve and union assembly with two (2) SS ells, and a 2" Sch. 40 PVC air drop pipe. A Sch. 40 PVC diffuser header with two (2) 0.5m EPDM fine bubble diffusers is supplied. The diffuser header is glued to the drop pipe in the field, and the diffusers are installed on the diffuser header with a 1-1/2"x3/4" PVC reducer bushing.

4.0 Plant Process Controls

A. Plant Process Control Panel – PLC & RTU

1. Solenoid Valves

A complete bank of 1/8" solenoid valves (for all process functions) will be supplied and installed by Aero-Mod.

2. HOA Switches and Lights

If there are any new functions requiring an HOA switch and light, they will be supplied and installed by Aero-Mod.

3. PLC & Touchscreen Programming

Any required PLC and/or touchscreen programming required for new Aero-Mod functions will be installed by Aero-Mod.

5.0 Actuated Valves (Aeration)

A. SEQUOX Air Valves

1. First Stage Aeration Basin – Train B

One (1) SEQUOX Air Control Valve. An 8" Ultraflo series 399 butterfly valve with an El-O-Matic pneumatic actuator will be mounted in-line with the air header pipe for the first stage aeration basin. This valve shall include a cast iron body, an EPDM seat, and a 316 SS stem/disc assembly. Two 1/4" nylon pneumatic lines will need to be connected from the Plant Process Control Panel to the actuator.

One (1) SEQUOX Air Throttling/Isolation Valve. An 8" Ultraflo series 399 butterfly valve with a gear-operator will be mounted in-line with the air header pipe for the first stage aeration basin. This valve shall include a cast iron body, an EPDM seat, and a 316 SS stem/disc assembly.

One (1) 8" flanged, sch. 5 SS header shall be supplied for placement of the actuated valve and the manual valve. GC will need to provide brackets for mounting to wall.

2. Second Stage Aeration Basin – Trains A & B

Two (2) SEQUOX Air Control Valves. An 8" Ultraflo series 399 butterfly valve and El-O-Matic pneumatic actuator will be mounted in-line with the air header pipe for each second stage aeration basin. This valve shall include a cast iron body, an EPDM seat, and a 316 SS stem/disc assembly. Two 1/4" nylon pneumatic lines will need to be connected from the Plant Process Control Panel to each actuator.

Two (2) SEQUOX Air Throttling/Isolation Valves. An 8" Ultraflo series 399 butterfly valve with a Rotork electric actuator, model IQT250, will be mounted in-line with the air header pipe for each second stage aeration basin. This valve shall include a cast iron body, an EPDM seat, and a 316 SS stem/disc assembly.

Two (2) 8" flanged, sch. 5 SS headers shall be supplied for placement of the actuated valve and the manual valve. GC will need to provide brackets for mounting to wall.

3. Third Stage Aeration Basin – Train B

One (1) SEQUOX Air Control Valve. A 6" Ultraflo series 399 butterfly valve and El-O-Matic pneumatic actuator will be mounted in-line with the air header pipe for the third stage aeration basin. This valve shall include a cast iron body, an EPDM seat, and a 316 SS stem/disc assembly. Two 1/4" nylon pneumatic lines will need to be connected from the Plant Process Control Panel to the actuator.

One (1) SEQUOX Air Throttling/Isolation Valve. A 6" Ultraflo series 399 butterfly valve with a Rotork electric actuator, model IQT250, will be mounted in-line with the air header pipe for the third stage aeration basin. This valve shall include a cast iron body, an EPDM seat, and a 316 SS stem/disc assembly.

One (1) SEQUOX air header VIP flow conditioner and one (1) airflow sensor. The VIP flow conditioner and airflow sensor shall be mounted within the air header to the third stage aeration basin. The airflow sensor will have wires that need to be connected to the Plant Process Control Panel.

One (1) 8" reduced to 6" flanged, sch. 5 SS header shall be supplied for placement of the set of flow conditioner, flow sensor, and actuated valves. Airflow sensor and valves may ship loose. GC will need to provide brackets for mounting to wall.

B. Digester Air Valves – Train B

One (1) SEQUOX Air Control Valve. A 4" Ultraflo series 399 butterfly valve and El-O-Matic pneumatic actuator will be mounted in-line with the air header pipe for the digester tank. This valve shall include a cast iron body, an EPDM seat, and a 316 SS stem/disc assembly. Two 1/4" nylon pneumatic lines will need to be connected from the Plant Process Control Panel to the actuator.

One (1) SEQUOX Air Throttling/Isolation Valve. A 4" Ultraflo series 399 butterfly valve with a Rotork electric actuator, model IQT250, will be mounted in-line with the air header pipe for the digester tank. This valve shall include a cast iron body, an EPDM seat, and a 316 SS stem/disc assembly.

One (1) SEQUOX air header VIP flow conditioner and one (1) airflow sensor. The VIP flow conditioner and airflow sensor shall be mounted within the air header to the digester tank. The airflow sensor will have wires that need to be connected to the Plant Process Control Panel.

One (1) 6" reduced to 4" flanged, sch. 5 SS header shall be supplied for placement of the set of flow conditioner, flow sensor, and actuated valves. Airflow sensor and valves may ship loose. GC will need to provide brackets for mounting to wall.

C. Digester Air Valves – Train A

Existing actuated and manual valves, as well as SS air header with airflow sensor and flow conditioner will need to be moved (and reconnected) by the GC to the new train A digester location, as shown on drawings.

D. Constant Air Valve - Clarifier Train B

One (1) Air Throttling/Isolation Valve. A 4" Ultraflo series 399 butterfly valve with a gear-operator will be mounted in-line with the air header pipe for the train A clarifiers. This valve shall include a cast iron body, an EPDM seat, and a 316 SS stem/disc assembly.

6.0 Wall Mounted Walkways & Stairways

A. Wall-Mounted Walkways

Approximately **399** LF of **25"** wide, two-rail aluminum framed walkway with aluminum handrail and banded aluminum grating. The walkways will be fabricated in sections and include grating and a 1-1/2" Nu-Rail aluminum handrail system. These walkways simply set over the top of the concrete walls as per the plans and bolt in place with SS bolts supplied by Aero-Mod. This walkway is only for the Aero-Mod portion of the concrete tankage. GC will need to cut the kickplate on the existing walkway sections at locations where the new walkway connects to the existing walkway.

B. Wall-Mounted Stairways

Five (5) aluminum-framed stairways w/ grating/handrail for access to process tankage.

7.0 Sludge Management

A. WAS Airlift Pump – Aeration Basin Train A to Digester Tank Train A

One (1) activated sludge wasting airlift pump, Model AL-600 and associated supernatant return weir plate/baffle. This airlift pump is bolted to the concrete wall of the train A second stage aeration basin adjacent to the train A digester tank as shown on the plans with 1/2" SS expansion bolts and is used to waste activated sludge from the aeration basin to the digester tank. The unit is controlled by the PLC Plant Process Control Panel and requires a single 1/4" pneumatic line connection.

B. WAS Airlift Pump – Aeration Basin Train B to Digester Tank Train B

Existing WAS airlift pump (located in train A first stage aeration basin) will need to be moved (and reconnected) by the GC to the new train B location, as shown on drawings.

C. Supernatant Weir & Baffle – Trains A & B

Two (2) supernatant return weir plate/baffle assemblies, which are to be bolted to the digester tank wall separating the digester tank from the aeration basin, as shown on the plans.

8.0/9.0 Aeration Blower and Controls

A. Aeration Blowers - Components

The two existing UBI blowers will be retrofitted with the following equipment. GC will need to remove existing components and replace with new components, including motor.

(1) 75 HP TEFC premium efficiency motor w/ thermostats, 460 V/60 Hz/3 phase

Note: one blower already has a 75 HP motor

- (2) sets of pulleys and belts
- (2) 6" expansion joints
- (2) 6"x8" bell reducer and spool piece
- (2) 8" discharge check valve
- (2) 8" spacer spool
- (2) 8" butterfly valve
- (2) 8"x12" 90° reducing elbow

B. Blower Control Panel (for new 75 HP motor)

One (1) Allen Bradley Powerflex 753 Variable Frequency Drive in a NEMA 12 floor-standing enclosure. The controls will be rated for 460V/3 phase power. The VFD section shall include:

- a) Manual/Off/Auto Functionality
- b) Circuit Protection (fused disconnect or circuit breaker)
- c) Fault Indication
- d) Power Indication
- e) VFD Running Indication
- f) Run Time Metering
- g) Manual Mode Speed Control
- h) Drive Enable Contact
- i) Drive Fault Contact
- j) Input Line Reactor or equivalent
- k) Constant Torque
- l) Run Permissive Feature
- m) 3% Line Reactor
- n) Ethernet IP Module

Note:

Harmonic distortion is a by-product of VFD controlled motors. Additional input filters ahead of the VFD's may be required and would need to be supplied by others to dampen the impact of the VFD controls and meet the appropriate electrical code.

10.0 Wall-Mounted Submersible Mixer

A. Submersible Mixer

Two (2) Wilo model TR 50-2.30-6/8, 2.7 HP, 460V, 3ph submersible mixers shall be located in the selector tanks, as shown on the plans. Each mixer shall include:

1. Thermal sensor
2. Closed cell polyurethane propeller
3. Liquid ceramic coating
4. Foot support
5. 33' power cable
6. Sliding console/frame
7. Recessed guide pipe part
8. Bottom bearing console
9. Stop console
10. Fixing bracket
11. Upper guide holder

B. Davit Crane and Bases

One (1) 500 lb capacity davit crane for removal of the submersible mixers from the basin. The crane shall be portable. The crane shall include the following:

- a. Rotatable horizontal crane arm
- b. Winch
- c. Hook
- d. Intermediate piece
- e. Relief chain
- f. Two (2) wall-mount sockets

C. Mixer Control Panel

A NEMA 4X control panel shall be mounted near the mixers and shall supply power and control to each mixer. The control panel face shall have the following: 1) run light, 2) H-O-A switch, 3) running time meter. Contractor will need to run control wires to the PLC Plant Process Control Panel. Seal fail and thermal switch relays shall be included in the Mixer Control Panel.

11.0 Probe Module & Sensor Probes – Trains A & B

A. Probe Analyzer Module

Three (3) Insite daughter boards for the existing MPA-48 multi-channel sensor analyzer module.

B. DO Sensor Probe

Three (3) model 10 fluorescent DO sensor. Each sensor probe shall include 33' of sensor cable and 33' of 8mm flushing hose.

C. Handrail Mounting Kit

Each sensor probe shall include an Insite handrail mounting kit.

12.0 Clarifier Algae Control – Trains A & B

- A. Two (2) Sonic Solutions model Mezzo-DB power modules.
- B. Four (4) ultrasonic transducers with cable.
- C. Four (4) mounting hangers, one for each transducer.

13.0 Hand Lift Stop Plates – Trains A & B

Eight (8) Wall Mounted SS Stop Plate Frames and five (5) Aluminum Stop Plates. The SS frame for each unit will bolt over notch provided between various tanks. The aluminum Stop Plate will fit into frame for isolation of corresponding tank.

14.0 Miscellaneous Installation Materials

A. Mounting Brackets, Hardware & PVC Wall Inserts

All PVC wall inserts and link-seals for concrete wall penetrations (for PVC pipe) in the aeration basins, clarifiers, and digester tanks. These wall inserts are for PVC wall penetrations on interior tank walls.

All other types of wall inserts (and exterior wall) are not included in this scope of supply.

All required SS wall brackets, SS U-bolts, and SS anchor bolts for installation of the Aero-Mod supplied equipment and contractor supplied PVC piping (in the selector tank, aeration basins, clarifiers, and digester tanks).

Note: Aero-Mod has supplied a list of “Contractor Supplied Parts & Fittings” for most of the piping (PVC) within tankage, which must be supplied by the general contractor. This list is an estimate and should be verified against the plan drawings by the contractor, as Aero-Mod will not be held responsible for its accuracy. All required expansion joints and SS repair clamps are also considered a part of the contractor’s supply.

B. Pneumatic System Air Tubing

Any required pneumatic 3/8” nylon tubing (black) between the Air Compressors and the Air Alternation Panel on the Regenerative Dryer/Dry Storage Tank, and between the Regenerative Dryer/Dry Storage Tank and the RTU Plant Process Control Panel will be supplied by Aero-Mod. Any required pneumatic 1/4” nylon tubing (color coded) for pneumatic control signals between the RTU Plant Process Control Panel and actuators within the process tankage will be supplied by Aero-Mod.

15.0 Spare Parts

- One (1) clarifier skimmer head
- Two (2) clarifier skimmer head guide rods
- Two (2) 91x502 EPDM fine bubble membrane sleeve w/ 2 clamps each

One (1) Aquamatic diaphragm actuator rebuild kit
Two (2) Prestolock union connectors
One (1) 4-pole relay, 24VDC
One (1) model 700-HX86SU24 repeat cycle timer
One (1) pilot light, red
One (1) pilot light, clear
Four (4) 1-pole relay, 24VDC
Four (4) Solenoid Valves
Three (3) inlet screen plug disks

Spare parts will be shipped in a protective container for storage (if applicable).

16.0 Warranty

Aero-Mod shall warranty the Split-ClarAto clarifier equipment for a period of five (5) years from the date of start-up. All other process equipment shall have a one (1) year warranty from the date of equipment start-up.

17.0 O&M Manuals/Submittals

Submittal documents will either be hardcopy or digital, but not both (unless specified). If the contractor wants both formats, an extra charge will be required with the P.O.

Four (4) Copies of O&M Manuals for the Aero-Mod supplied equipment.

18.0 Manufacturer's Services

A. On-Site Equipment Dry Inspection & Field Start-Up

When all equipment is installed, Aero-Mod shall provide two (2) days on-site for dry equipment inspection and equipment start-up/training. A check-off sheet shall be completed and signed by the contractor prior to dry equipment inspection.

B. Field Operator Training

After the process tankage has been made operational, Aero-Mod shall provide additional equipment and process training (one trip only) for two (2) days on-site. Start-up services shall only be supplied if all pending invoices are paid in full.

D. Classroom Operator Training

Process training for the new plant shall be conducted in Manhattan, KS. As part of this scope of supply, up to two (2) of the client's operators shall attend Aero-Mod's operator training school within 60 days (preferably after) mechanical start-up of the plant. If any additional trips are requested for additional assistance to the operator or to train new operators, additional days and/or trips shall be charged at a \$1,000/day rate plus travel expenses.

PRICING & TERMS

Aero-Mod will supply all of the aforementioned equipment listed above including freight to the jobsite for the lump sum of **\$549,600.00**. Taxes are NOT included and shall be added (or paid by GC) unless acceptable tax exemption documentation is provided.

Delivery may be within **eighteen (18)** weeks of receipt of approved submittal drawings. Allow **six (6)** weeks for drawing submittal after receipt of purchase order.

Upon completion, equipment will be shipped to the job site in full or partial shipments. The Contractor may request to delay equipment delivery only if a “Store & Pay” arrangement is agreeable. Upon agreement, Aero-Mod will store and insure all items until delivery is requested. Please note that documentation of completion and invoicing will proceed even if completed equipment is stored at Aero-Mod’s facilities.

Terms shall be 10% with purchase order, 15% upon approval of equipment submittal documents, and 75%, in accordance with the Project’s “Contract Documents”, for equipment delivered and/or stored at Aero-Mod’s facilities regardless of installation and operation. Payment of invoices are due within 40 days of receipt of the invoice if they are submitted at least 7 days prior to the first Tuesday of the preceding month. Invoices submitted less than 7 days prior to the first Tuesday of the preceding month will be due within 70 days. If retainage is withheld, it must follow the Contract Documents, 5% maximum. 100% of retainage due upon project’s Substantial Completion less 200% of outstanding punch list items pertaining to Aero-Mod’s supplied equipment and responsibility. Note, outstanding payments are subject to finance charges in accordance with Aero-Mod’s standard “Terms and Conditions” of sale.

Not included in Aero-Mod’s scope of supply and price: Installation, taxes, interconnecting wiring, or bulk piping (locally provided materials), or any other item(s) not listed above. No harmonic filtering or testing for harmonic distortion caused by VFDs is included with this scope.

The above pricing is good through **May 4, 2020** and is subject to change thereafter.

Aero-Mod will provide the detailed plan/construction submittal drawings in a timely manner to assure proper and timely construction. Note: **All submittals and O & M manuals from Aero-Mod will be electronic PDF format. If Contract Documents require hard print copies, the reproduction and binding will be the responsibility of the General Contractor.**

Standard Terms and Conditions of Sale

Aero-Mod’s standard Terms and Conditions of Sale, as stated on the attached sheets, shall apply.

As noted before, this scope of supply is based upon the referenced drawings. Should any changes be made to the plans that will affect this scope of services, then Aero-Mod reserves the right to adjust this scope appropriately. Specifically, should the scope of supply be reduced, the total contract price will be lowered. Should the scope of supply be increased, then the total contract price will be increased. All changes will be directed by and must be agreed upon by the owner’s consulting engineer.

CONTRACTOR'S RESPONSIBILITIES (relative to the Aero-Mod supplied equipment)

1. Supply the concrete tankage as per the drawings. Install the Aero-Mod supplied PVC wall inserts and link-seal sleeves (listed above) as per the concrete layout drawing. The inserts will be sent to the contractor (as per the notification of the contractor) prior to the main shipment of equipment. The contractor must supply any inserts, wall sleeves, or mechanical joints for piping other than PVC or that are not listed above as being supplied by Aero-Mod.
2. Supply and install the PVC conduit for the nylon pneumatic tubing from the air compressor system (dryer) to the RTU Plant Process Control Panel, and from the RTU Plant Process Control Panel to the junction box/points within the tankage. Install all nylon pneumatic tubing supplied by Aero-Mod within PVC conduit. All piping, tubing, and conduit needs to be installed as shown on plans/submittals.

Note: Contractor should run all pneumatic tubing to connection points, but not connect. An Aero-Mod tech/project manager will blow out all tubing and make connections at the time of equipment inspection.

3. Supply and install all PVC (and other) piping and fittings in the tankage as shown on the plans. Aero-Mod supplied butterfly valves (and their actuators, operators, and/or spool pieces) will also need to be installed within the tankage piping.
4. Install all of the Aero-Mod supplied equipment for the tankage, including (but not limited to) the Split-ClarAator clarifier sections, the wall mounted clarifier inlet screens in the third-stage aeration basin, the wall mounted aerator assemblies in the various basins, the wall mounted walkway, grating and handrails, the rail-mounted D.O. probes, the wall-mounted mixer guiderails and submersible mixers in the selector tank, the wall-mounted stop plates and frames, and the aeration sequencing butterfly valves and actuators (some with include SS spool pieces). Each aeration assembly will need to be attached to the air piping (by the contractor) with the included saddle. GC must provide support brackets/hardware for SS spool pieces (for butterfly valves) provided by Aero-Mod. GC will need to cut portions of the kickplate on existing walkway sections that connect to new walkway sections.
5. Supply and install a CAT 6 cable between the PLC Plant Process Control Panel and the existing blower VFD control panels, and the new blower control panels.
6. Remove old components and install new components on the existing pd blower packages and discharge piping, including new 75 HP motor. Reconnect discharge piping for both blowers to the discharge air header. Install new VFD control panel for the existing pd blower that receives a new 75 HP motor. Provide electrical connections to and between the blowers and the blower controls (power and control). The contractor will need to provide, install, and support all piping to and from the blowers.
7. Install submersible mixer control panel. Supply and install all electrical and communication cables and connections between the mixers and the mixer control panel, and the mixer control panel and the PLC Plant Process Control Panel.

8. Install the electrically-actuated butterfly valves, flow conditioner, and airflow sensor in the second-stage aeration basin and digester air headers. A SS spool section will be supplied by Aero-Mod to mount the airflow sensor and valves. Supply and install all electrical and communication connections to and from this actuator, including a Modbus cable to the PLC Plant Process Control Panel. GC must provide support brackets/hardware for SS spool pieces (for butterfly valves) provided by Aero-Mod.

9. Install the Sonic Solutions ultrasonic transducers (one in each clarifier tank) and cable, and the associated mounting hanger. Install the Sonic Solutions control module (one for each Train). Provide power to the control modules.

10. Supply and install all other equipment (and electrical hookups) that is not covered by this Scope but shown on the plans or discussed in the Specifications.

If you have any questions concerning this scope, please feel free to call our office or our representative, H&T. For installation questions, please contact Aero-Mod at 785-537-4995.

Sincerely,



Todd L. Steinbach, PE
 President
 Aero-Mod, Inc.

Accepted and ordered by the Town of McCordsville, IN this _____ day of _____, 2020.

By: _____

Printed: _____

Title: _____

Aero-Mod standard Terms and Conditions, as stated on the following four sheets shall apply:

Terms and Conditions of Aero-Mod (“Seller”)

1. **Pricing Policies.** The price shown in this Scope of Supply is good until May 4, 2020. All prices are subject to change without notice and shall not be binding on Seller until reduced to writing and signed by Seller. All orders are subject to written acceptance and approval by an authorized representative of Seller. All prices are F.O.B. to the job site. Prices quoted include standard packing according to Seller’s specifications. All costs and taxes for special packing requested by Purchaser, including packing for exports, shall be paid by Purchaser as an additional charge.

2. **Taxes.** The price for the goods does not include any applicable sales, use, excise, GST, VAT, or similar tax. The purchaser shall have the responsibility for the payment of such taxes if applicable.

3. **Payment Terms.** Unless different payment terms are expressly set forth elsewhere in this offer or agreed to in writing by Seller in any confirmation of sale, goods will be invoiced upon shipment or, in the case of goods to be installed by Seller, upon completion of installation. Payment in full, less any retainage when applicable, is due within thirty (30) days from the invoice date. If retainage is withheld, then the remaining balance is due in full within thirty (30) days from the invoice date following successful start-up of supplied equipment. In the event payment is not made when due, Purchaser agrees to pay Seller a service or finance charge of one and one-half percent (1.5%) per month (18% per annum) on the unpaid balance of the invoice from and after the invoice due date. Purchaser is responsible for all costs and expenses associated with any checks returned due to insufficient funds. All credit sales are subject to prior approval of Seller’s credit department.

4. **Effect of Purchaser’s Financial Condition.** If, during the performance of the contract with Purchaser, the financial responsibility or condition of Purchaser is such that Seller in good faith deems itself insecure, or if Purchaser becomes insolvent, or if a material change in the ownership of the Purchaser occurs, or if Purchaser fails to make any payments in accordance with the terms of its contract with Seller, then, in any such event, Seller is not obligated to continue performance under the contract and may stop goods in transit and defer or decline to make delivery of goods, except upon receipt of satisfactory security or cash payments in advance, or Seller may terminate the order without further obligation to Purchaser whatsoever. If the Purchaser fails to make payments or fails to furnish security satisfactory to Seller then Seller shall also have the right to enforce payment to the full contract price of the work completed and in process. Upon default by Purchaser in payment when due, Purchaser shall immediately pay to Seller the entire unpaid amounts for any and all shipments made to Purchaser irrespective of the terms of said shipment and whether said shipments are made pursuant to this proposal or any other contract of sale between Seller and Purchaser, and Seller may withhold all subsequent sips until the full amount is settled. Acceptance by the Seller of less than full payment shall not be a waiver of any of its rights hereunder.

5. **Risk of Loss, Title.** The risk of loss of the goods shall pass to the Purchaser as soon as they are deposited with the carrier for shipment to the Purchaser, but title to the goods shall remain In the Seller until the full purchase price therefor has been paid, unless otherwise agreed by Seller.

6. **Shipment.** Any stated shipment or delivery dates are approximate only and are contingent upon purchaser’s prompt acceptance of Seller’s offer. Seller will use every reasonable effort to meet estimated shipment or delivery dates. Seller’s obligation with respect to shipment of the goods shall not extend beyond a) putting the goods In the possession of a suitable carrier and making a contract for the transportation thereof as may be reasonable, having due regard for the nature of the goods and b) delivering, within a reasonable time, such documents as may be necessary for Purchaser to obtain possession of the goods. Seller shall have the right to ship all of the goods at one time or in portions from time to time within the shipment period. This contract shall be deemed separable as to the goods sold. Purchaser may not refuse to accept any lot or portion of the goods shipped hereunder on the grounds that there has been a failure to ship any other lot or that goods in any other lot were nonconforming. Any such default by Seller will not substantially impair the value of this contract as a whole and will not constitute a breach of the contract as a whole.

7. **Testing, Inspection, and Acceptance.** Purchaser shall have the right to inspect the goods upon their receipt. Purchaser’s failure to inspect the goods or failure to notify the Seller in writing that the goods are nonconforming within ten (10) days of their receipt, shall constitute a waiver of Purchaser’s right to inspect and/or

reject the goods for nonconformity and shall be equivalent to an irrevocable acceptance of the goods by Purchaser.

8. **Seller's Performance.** Seller shall not be responsible or liable for any delay directly or indirectly resulting from or contributed by limitations on Seller's production capabilities beyond its reasonable control, or to delays due to fires, explosions, acts of God, strikes or other differences with workers, shortage of utility, facility, components or labor, delay in transportation, breakdown or accident, war and acts of war, compliance with or actions taken to carry out the intent or purposes of any law or regulation, changes in goods or materials, or any other causes or contingencies not caused by Seller or over which Seller had no reasonable control. In the event that any one or more deliveries hereunder is suspended or delayed by reason of any one or more of the occurrences or contingencies stated above, any and all deliveries so suspended or delayed shall be made after such occurrences or contingencies have ceased to exist, and nothing herein contained shall be construed in any way as lessening the full amount of goods herein being purchased and sold, but only as deferring delivery and payment on the event(s) and to the extent herein provided for. Neither shall any delay in shipment be considered as a default under this contract nor give rise to any liability on the part of Seller for any incidental, special or consequential damage.

9. **Statement of Limited Warranty; Disclaimer and Limitation of Remedies.** Seller warrants that the goods purchased hereunder (with the exception of membranes, seals, gaskets, elastomer materials, coatings and "wear parts" all of which are not warranted) will be built in accordance with the specifications referred to in this quotation of confirmation of sale, as the case may be, and will be free from defects in material and workmanship for a period of one (1) year from the date of installation or eighteen (18) months from the date of shipment, whichever shall occur first. Seller warrants the clarifier equipment purchased hereunder will be free from defects in material and workmanship for a period of five (5) years from the date of installation or five and one-half (5 ½) years from the date of shipment, whichever shall occur first. In no event shall Seller be liable for any loss, damage, injury or expense, resulting from the use or operation of, or from the erosion or corrosion of the goods or from ordinary wear and tear of the goods unless otherwise agreed in writing. Parts or products manufactured by others and provided by Seller are warranted only to the extent of the manufacturer's original warranty. Seller makes no independent warranty or representation with respect to these products.

Purchaser must give written notice to Seller of any defects in material or workmanship of warranted goods within ten (10) days of the date when any defects are first manifest. **UPON SUCH NOTICE, THE SOLE RESPONSIBILITY OF SELLER UNDER THIS LIMITED WARRANTY SHALL BE TO REPAIR OR REPLACE, AT ITS OPTION, A DEFECT IN THE MATERIAL OR WORKMANSHIP DURING THE WARRANTY PERIOD. ALL LABOR REQUIRED TO MAKE SUCH REPAIRS OR REPLACEMENT SHALL BE MADE BY PURCHASER AND AT PURCHASER'S EXPENSE UNLESS OTHERWISE AGREED IN WRITING.**

This limited warranty is void unless the installation, operation and maintenance of the goods are done in accordance with the Seller's instructions. Further, Seller's warranty is void if Purchaser makes any repairs to the goods without Seller's prior written authorization.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES, GUARANTIES, AGREEMENTS, CONDITIONS OR REPRESENTATIONS MADE BY ANY PERSON WITH RESPECT TO THE GOODS COVERED BY THIS OFFER, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WHICH ARE HEREBY SPECIFICALLY DISCLAIMED. IN NO CASE WILL SELLER BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM A BREACH OF WARRANTY OR ANY OTHER CAUSE INCLUDING, BUT NOT LIMITED TO, LOSS OF USE OF THE PRODUCT, LOSS OF TIME, INCONVENIENCE, INJURY, LOSS OR DAMAGE TO PERSON OR PROPERTY, COMMERCIAL LOSS, LOSS OF PROFITS, LIABILITIES OF PURCHASER TO ITS CUSTOMERS OR THIRD PERSONS OR OTHER MATTERS NOT SPECIFICALLY STATED, WHETHER BASED ON CONTRACT, TORT OR ANY OTHER LEGAL THEORY.

It is specifically agreed that any action for breach of warranty or other action against Seller under this contract shall be commenced within one (1) year and one (1) day after such cause of action accrued.

10. **Installation and Start-up.** Unless otherwise agreed to in writing by Seller, installation shall be the sole responsibility of Purchaser. Where start-up service is required with respect to the goods purchased hereunder, it must be performed by Seller's authorized personnel or agents, otherwise, Seller's limited warranty is void. In the event Purchaser has engaged Seller to provide an engineer for start-up supervision, such engineer will function in supervisory capacity only and Seller shall have no responsibility for the quality of workmanship of the installation. In any event, Purchaser understands and agrees that it shall furnish, at Purchaser's expense, all necessary foundations, supplies, labor and facilities which might be required to install and operate the equipment.

11. **Cancellation.** No order may be canceled unless requested in writing by either party and accepted in writing by the other. In the event of a cancellation by Purchaser, Purchaser shall, within thirty days of such cancellation, pay Seller a cancellation fee which shall include all costs and expenses incurred by Seller prior to the receipt of the request for cancellation including, but not limited to, all commitments to its suppliers, subcontractors and others, all labor and overhead expended by Seller in the preparation of the Equipment prior to the cancellation, plus an amount equal to 15% of the aggregate of all the foregoing.

12. **Specifications.** Changes in specifications requested by Purchaser are subject to approval in writing by Seller. In the event such changes are approved, the price for the goods and the delivery schedule shall be changed to reflect such changes.

13. **Drawings.** All drawings are the property of Seller. Seller does not supply detailed or shop working drawings of the goods; however, Seller will supply necessary installation drawings. The drawings and bulletin illustrations submitted with Seller's quotation show general type, arrangement and approximate dimensions of the goods to be furnished. Seller reserves the right to alter such details in design or arrangement of its goods which, in its judgment, constitute an improvement in construction, application or operation. All engineering information necessary for installation of the goods shall be forwarded by Seller to Purchaser upon written acceptance of Seller's quotation. After acceptance of the quotation, any changes in the type of goods, the arrangement of the goods, or application of the goods requested by Purchaser will be made at Purchaser's expense. A parts list and general assembly and installation instructions necessary for erection and maintenance will be supplied when the goods are shipped.

14. **Patents.** The goods being provided by Seller may be covered by patents pending or issued. Seller grants Purchaser a license and the right to use these goods without further charge. Seller does not grant Purchaser the right to use the goods, or protection against patent infringement claims arising from use of the goods, in any patented processes controlled by others, unless specifically set forth in this quotation.

15. **Assignment.** No right or interest in this contract shall be assigned by Purchaser without the prior written permission and consent of Seller.

16. **Indemnification.** Purchaser hereby agrees to indemnify and save Seller, its directors, officers and employees, harmless from all loss, liability, damages, costs and expenses (including attorney's fees and other expenses of litigation), resulting from any claim or action for personal injury or death or damage to or loss of property or violation of or failure to comply with any applicable law, regulation, rule or order arising from the use by Purchaser, its employees, agents, customers, invitees or by other third parties of the goods and services to be provided under this contract. Purchaser, at its expense, shall defend any such claim or suit against Seller and/or its directors, officers and employees and shall pay any judgment resulting therefrom. Seller shall have the right, but not the duty, to participate in the defense of any such claim or suit with attorneys of its own selection without relieving Purchaser of any of its obligations hereunder. This indemnity shall survive delivery of the goods or performance of the services under this contract.

17. **Entire Agreement.** The terms and conditions contained herein and in any accompanying quotation or proposal of Seller, shall constitute the entire and complete agreement between Seller and Purchaser and shall supersede all prior oral or written statements or understandings of any kind of whatsoever made by the parties or their representatives. No modifications or additions to these terms and conditions shall be binding on Seller unless specifically agreed to in writing and signed by an authorized representative of Seller. Further, no oral or written statement made subsequent to the acceptance of Purchaser's order by Seller which purports to modify in any way these terms and conditions shall be binding upon Seller unless such statement is clearly adopted and agreed to

in writing by a duly authorized representative of Seller.

18. **Limited Authority of Sales Agents.** The sales agents and representatives of Seller have no authority to enter into agreements, contracts or understandings, or to bind or incur any liability or obligation on behalf of Seller. Orders and contract proposals taken by the sales agents and representatives of Seller are subject to written approval by an authorized representative of Seller.

19. **Interpretation of Contract.** This offer and any related confirmation or contract of sale shall be governed by and construed in accordance with the laws of the State of Kansas and is intended also as a complete and exclusive statement of the terms of the contract. No prior course of dealing between the parties and no usage of the trade shall be relevant to supplement or explain any term used in this contract. Acceptance or acquiescence in a course of performance rendered under this contract shall not be relevant to determine the meaning of this contract even though the accepting or acquiescing party has knowledge of the nature of the performance and opportunity for objection. Waiver by Seller of a breach by Purchaser of any provision of this contract shall not be deemed a waiver of future compliance therewith, and such provision shall remain in full force and effect. If any portion of these terms and conditions is deemed invalid by a court having jurisdiction over the parties, the remaining provisions shall remain fully effective. Any term used in this contract which is not defined herein shall have the same definition as that contained in the State of Kansas Uniform Commercial Code.