ADDENDUM NO. 4
SPECIFICATIONS AND CONTRACT DOCUMENTS
BURKESVILLE WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF BURKESVILLE, KY
GRW PROJECT NO. 4667
July 16, 2020

GENERAL

1. APPENDIX B
   A. Please note that Appendix B was added per Addendum No 2 for reference of existing door and window conditions only. Refer to the plans drawings and specification for which items that are to be replaced or that are to remain, as well as the proposed materials for the new items that are to be installed.

SPECIFICATIONS

1. SPECIFICATIONS SECTION 409413 – PROCESS CONTROL COMPUTERS AND PERIPHERALS
   A. Two computer workstations are not required for this project. A single workstation meeting the hardware and software requirements in section 2.1 is required.

2. SPECIFICATIONS SECTION 462542 – HANDWHEEL OPERATED SCUM TROUGH
   A. Add the attached Specification Section 462542 – HANDWHEEL OPERATED SCUM TROUGH in its entirety.

3. SPECIFICATIONS SECTION 465116 – SUBMERSIBLE ASPIRATING EQUIPMENT
   A. Modify Paragraph 1.4 Manufacturer Item A. to read as follows.
      A. Horizontally mixing aspirating aerators shall be manufactured Aeration Industries International (AIRE-O2), Chaska, MN, Fluence Water (Tornado), Minneapolis, MN or equal.

DRAWINGS

1. DRAWING – SHEET M-01-102
   A. Add Construction Note No. 5
      5. Contractor shall replace all 1 ½” grating inside of the Pretreatment facilities. This includes both areas in front of the static screens and in the grit influent channel. Grating on the elevated grit collection and distribution box areas shall be replaced as needed to accommodate new equipment.
2. **DRAWING – SHEET E-01-103**

   B. Drawing E-01-103 shall be replaced with revised addendum drawing included herein.
   - Note the areas shown clouded. Electrical devices and circuits have been added for new HVAC equipment.

3. **DRAWING – SHEET E-00-102**

   C. Refer to drawing E-00-102. Drawing scale shall be changed to $1''=50'-0''$.

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GRW ENGINEERS, INC.

[Signature]

Michael Jacobs, P.E.
Project Manager

**ATTACHMENTS:**

- Specification Section 462542
- Drawing E-01-103
- Plan Holder’s List
SECTION 462542 - HAND WHEEL OPERATED SCUM TROUGH

PART 1 - GENERAL

1.1 SCOPE OF WORK:
   A. Provide all labor, materials, equipment and services required to furnish and install two (2) new hand wheel operated scum troughs as shown on the Drawings and/or specified herein.

1.2 SUBMITTALS
   A. Descriptive literature, catalog cuts, and dimensional prints clearly indicating all dimensions and materials of construction, shall be submitted on all items specified herein to the Engineer for review before ordering. Comply with provisions of Section 013323.
   B. At the time of submission, the Contractor shall, in writing, call Engineer’s attention to any deviations that the submittals may have from the requirements of the Engineer’s Contract Drawings and Specifications.

PART 2 - PRODUCTS

2.1 MANUFACTURERS
   A. Equipment Systems specified in this Section shall be product of Viking Chains Group, Amwell, or equal.

2.2 MATERIALS:
   A. Materials of pipe construction shall be 316 Stainless Steel
      1. Service and Installation Conditions:
   B. All components shall be designed for suitable installation in a concrete tank.
   C. The slotted scum trough pipes shall be specifically designed for collection of scum and floatables within a Municipal Wastewater Treatment Plant.

2.3 PERFORMANCE AND DESIGN REQUIREMENTS:
   A. The slotted scum pipe skimmer shall be capable of spanning the width of the baffle walls within a maximum deflection limited to 1/16-inch (both empty and full) and shall allow for uniform flow of scum its entire length.
   B. The slotted scum pipe shall be suitable for installation in concrete basins with dimensions and maximum water depth as shown on the drawings.
C. A 60-degree slot shall be cut symmetrically about the vertical axis of the pipe with the edges serving as a weir over which the skimmings flow into the pipe when the pipe is rotated. The edges of the slot shall be parallel to the longitudinal axis of the pipe. At regular intervals of not more than 2'-6", 2" wide bands of the full pipe periphery shall be left in the pipe to act as stiffeners.

D. The revolving pipe shall be supported at each end such that a slight vertical or horizontal misalignment shall not interfere with the operation of the pipe. The pipe shall be supported and rotate on wall mounted Cast Iron bearings. The bearing insert shall be made of an ultra-high molecular weight polyethylene (UHMW) material. Neoprene Gaskets shall be furnished with the open-end supports to provide watertight connections to the tank walls without grouting.

E. A suitable watertight seal shall be provided between the rotating pipe and the wall mounted bearing. The seal shall be constructed that it remains effective even in a slight misalignment. The seal shall not be affected by grease, mild acids, or alkalis. The seal shall be renewable.

2.4 SKIMMER DRIVE

A. The revolving scum skimming pipe shall be Hand Wheel driven by means of a vertical shaft and a vertical worm gear drive, and shall be capable of skimming in both the forward and reverse modes. The worm gear drive shall consist of a UHMW, cut tooth worm gear wheel and a Nylon cut tooth double threaded worm rigidly mounted on a structural steel support. The worm shaft shall revolve in cast iron bearings with UHMW inserts and the worm shall revolve on a corrosion resistant Nylon bushing. The revolving pipe shall be free to float inside the worm wheel so that slight misalignment of the pipe will not affect the mesh of the worm and worm wheel.

B. Recesses in the worm shall engage the worm wheel teeth that are bolted to the pipe to turn the pipe as the worm is turned. The vertical pipe stem shall be secured to the worm shaft in such a manner that a slight misalignment will not affect the mesh of the worm and worm wheel. The worm reduction shall provide an adequate mechanical advantage so that a slight pressure on the hand-wheel will turn the pipe and allow easy, accurate adjustment.

C. A pedestal mounted Hand wheel operator shall be provided to operate the worm gear drive. The pipe stem shall be fabricated to complement the physical requirements of the pedestal and hand wheel. Compatibility of the worm gear drive mechanism, pedestal mount, and hand wheel is the unit responsibility of the supplier and the overall responsibility of the Contractor.

D. All parts of the mechanism shall be amply proportioned for all stress that may occur during fabrication, erections or intermittent or continuous operation. Workmanship of shall be of high grade in all respects.
GENERAL NOTES:

1. All exposed conductors shall be aluminum only.
2. All raceways/conduit shall be liquidtight flexible type, except where noted.
3. All conduit shall be Liquidtight flexible type.
4. Clean all conduit before installation.
5. Install new exposed conductors/pipes in existing locations.
6. Conduit shall be installed using approved methods and codes to prevent interference with other services.

SHEET KEYNOTES:

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EXISTING PRETREATMENT FACILITY

FIRST FLOOR PLAN - ELECTRICAL NEW WORK

EXISTING PRETREATMENT FACILITY

SECOND FLOOR PLAN - ELECTRICAL NEW WORK
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<td>Mary Beth Hewett</td>
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6/30/2020