
SECTION 01110
SUMMARY OF WORK

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
1. General Project Description
 2. Scope of Work
 3. Type of Contract
 4. Starting Work
 5. Work by Owner
 6. Work by Others
 7. Salvage Requirement
 8. Sequence of Construction
 9. Guarantees
 10. Coordination of Work
 11. Quality Criteria

1.02 GENERAL PROJECT DESCRIPTION

- A. Project Location: The work of this Contract is located at the Lower Bucks County Joint Municipal Authority Wastewater Treatment Plant, 7900 Route 13 (Bristol Pike), Levittown, PA, 19057.
- B. Lower Bucks County Joint Municipal Authority (Authority) has a Wastewater Treatment Plant (WWTP) also referred to as a sewage treatment plant located at 7900 Bristol Pike, Levittown, Bristol Township, Bucks County, Pennsylvania. Currently the WWTP has two (2) automatically mechanically bar screens manufactured by Hycor Corporation (model HR-160Z). The existing bar screens are located in the plant influent concrete pits/channels (one bar screen on each influent concrete pit/channel) in the grit removal building. There is also one existing conveyor washer compactor for dewatering and compacting of dewatering and compacting of screens removed by the bar screen(s). All control panels for the existing screens and washer compactor are located in the existing control panel room attached to the existing screening and grit removal building. The compacted screens are conveyed into screen dumpster located in the screening/grit removal building. There is an existing potable water service line located within the screening/grit removal building to be connected as a backup for screen flushing/washing. There is also an existing utility water line located within the screening/grit removal building which will need to be connected to

screens and washing compactor for screen flushing/washing. The main scope of work covered in this contract is to remove and dispose of the existing mechanically cleaned bar screens and the existing conveyor-washer compactor along with the existing control panels and replace with/install/retrofit owner supplied two (2) new automatic center flow fine sewage screens with the required new control panels and two(2) new washing compactors with the required new control panels as manufactured and supplied by Hydro-Dyne Engineering, Inc. The contractor will be required to remove one existing screen at a time followed by installing and placing one new screen in full operation screen then remove the second existing screen system followed by installation the second screen system and placing it in full operation. The existing conveyor-washer-compactor could be removed and replaced with the new washing compactors after both the existing screens are removed and new screens are installed and placed in full operation.

1.03 SCOPE OF WORK

- A. Furnish all required labor, materials, equipment and incidentals required to install, test and complete and ready for operation two (2) complete automatic center flow fine sewage screens including but not limited to two (2) complete screen washing compactor systems, all required control panels, support system(s), anchoring to the existing influent concrete pit/channel, any required feed or discharge piping, make required connections to the existing utility water piping for washing/flushing screen, back screen wash water system and to the existing potable water piping with back flow preventor as a backup for washing/flushing screen and screen washing compactor, all required electrical work and all other required incidental work to make the screening and washing compactor systems complete and place the complete systems in continuous full operation, all in accordance with the manufacturer requirements. Work also includes all testing, installation certification and coordination of training of the Owner's operators/personnel on the operation and maintenance of the screening and washing compactor systems with the Contractor of screen supplier. It is the responsibility of the screen supplier contractor to provide the required training. The Authority has already awarded the Contract to Sherwood-Logan & Associates for the purchase and delivery of the above stated two (2) complete automatic center flow fine sewage screens with two (2) complete screen washing compactor systems manufactured by Hydro-Dyne Engineering. The screens are scheduled for delivery to the Authority during January-February, 2021. It is the responsibility of the Contractor to off-load the screens, control panels, washing compactors and other required equipment at the site and to provide temporary storage as needed and to handle the screen systems and washing compactor systems upon arrival at the site, all according to the manufacturer's written procedure and recommendations.
- B. The General Scope of Work is as follows:
1. Dismantle the existing two (2) mechanically cleaned bar screens and completely remove them from the Influent screen pits/channels and deposit in the Authority's supplied container located within the Authority's Wastewater Treatment Plant facility.
 2. Dismantle and completely remove the existing screen conveyor-washer-compactor system and deposit in the Authority's supplied container located within the Authority's Wastewater Treatment Plant facility.

3. Dismantle and remove all all existing control panels of the existing bar screens and conveyor-washer-compactor, and all electrical conduits, related electrical wires, hydraulic hoses, any hydraulic power pack, any other hardware and debris generated during the above dismantling and removal process and dispose of at the permitted/off site facility.
4. Furnish all labor, materials, equipment and incidentals required to install and install two (2) new complete automatic center flow fine sewage screens including the required control panels and equipment, required structural supports, anchoring, pipes, wash/flush water connections to the existing plant utility water pipe and potable water as a backup for screen washing/flushing, screen discharge system on the new washing compactors, any miscellaneous required supports and all other items as specified or required, equipment installation certification from the equipment supplier(s)/manufacturer(s), cleanup, start-up and place in continuous full automatic operation.
5. Furnish all labor, materials, equipment and incidentals required to install and install two (2) complete new automatic washing compactor systems including the required control panels and equipment, required structural support, anchoring, discharge pipe or any other required piping, any miscellaneous required supports and all other items as specified or required, equipment installation certification from the equipment supplier(s)/manufacturer(s), cleanup, start-up and place in continuous full automatic operation.
6. Furnish and supply all labor, materials, equipment and install fiberglass grate over the existing influent concrete pits and aluminum handrail on the walls of pit.
7. All electrical work required for the installation of screens, control panel, pump(s) or any other electrical required which is not covered in the above items for the full operation of the screening and washing compactor systems.
8. Install all necessary equipment and auxiliaries whether shown on the plan or specifically mentioned in the specifications or not.
9. Coordinate installation work with the Owner, Authority's Chief Mechanic, equipment manufacturer or Factory Engineer for the purpose of getting fully familiar with the method of installation, alignment and operation of the centrifuge and polymer system.
10. Furnish and install all piping and valves including all required supports.
11. Furnish all labor, materials, equipment and incidentals required to unload screens and washing compactors at the job site and to provide safe keeping until the contractor is ready to transport and lift to installation location for the installation. It shall be the responsibility of the Contractor to coordinate all required deliveries/transportation. It shall be the responsibility of the Contractor to request and coordinate with the equipment supplier for installation inspection and installation certification of all equipment and all the installation shall be in accordance with the equipment supplies(s)/manufacturer(s).

12. Furnish all labor, materials, equipment and incidentals required, to provide painting/protective coating work for all structural members, pipe and supports, pumps, as required.
 13. Furnish and install conduit, conduit fitting, supports and grounding to connect the new power panel PPF, manual transfer switch block/enclosure, junction boxes, disconnect switches, power zone center and unit heaters, test wire and cable connect all new electrical equipment as required to make sludge dewatering centrifuge complete and for full continuous operation.
 14. Furnish labor and material to test and start up all equipment installed or connected under this contract as specified herein.
 15. It is the responsibility of the contractor to visit the site and shall take all relative measurements for the pad, footing/foundation, structural support, location of equipment, piping, electrical wiring/conduits, gratings, centrifuge support legs, centrifuge access walkway platform, steps, etc.
 16. Submit shop drawing to the Owner for review and approval.
- C. The Drawings and Specifications do not necessarily indicate or describe all Work required for completion of Project.
 - D. The Contract Documents describe the essential elements sufficiently to determine the scope of the Project.
 - E. Provide all items required for complete operating systems including items not necessarily shown in these Contract Documents, but that can be reasonably inferred as being required for a complete operating system.
 - F. The Drawings and Specifications indicate the basic quality of material and quality of construction required for the entire Project.

1.04 TYPE OF CONTRACT

- A. The work of a single contract comprises the project.

1.05 STARTING WORK

- A. The Contractor shall not start work until the Notice to Proceed has been issued and all insurance certificates have been reviewed and accepted by the Owner.
- B. The Contractor shall notify the Owner prior to commencing any Work.

1.06 WORK BY OWNER

- A. General: Cooperate fully with Owner so work may be carried out smoothly, without interfering with or delaying work under this Contract or work by Owner. Coordinate the Work of this Contract with work performed by Owner.

- B. Concurrent Work: Owner will perform the following construction operations at Project site. Those operations will be conducted simultaneously with work under this Contract.
 - 1. Water, gas and sewer extension from the existing utility lines to within 10 feet from the new building extension.
- C. Authority will obtain all required construction permits.

1.07 WORK BY OTHERS

- A. Contractor shall cooperate and coordinate its work with work provided under this contract.
- B. Owner-Furnished Products:
 - 1. None

1.08 SALVAGE REQUIREMENT

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Unless otherwise indicated, all equipment that must be removed due to interference with work of this contract remains the property of the Owner, and may be salvaged at the Owner's discretion.

1.09 SEQUENCE OF CONSTRUCTION

The construction sequence shall be as follow and /or as noted on the plans or as directed by the Owner.

Prior to preparing the submittal of the shop drawings for the pipes, valves, etc. and the installation of the Screen and Washing Compactor systems, the Contractor shall field measure, in the presence of the Owner's representative. It should be noted that all existing equipment including Screen and Conveyor-washer-Compactor and water supply line are to remain fully operational until all new equipment and all auxiliaries are installed and fully operational.

After all required shop drawings are approved and all required materials are on site, install all required supports for Screens, Washing Compactors and all other equipment and piping. Subsequently install Screens, washing Compactors and utility water pump(s) including all auxiliaries and electrical panels, controls and wiring

Finalize all new equipment, tests, rendering, operative and coordinate training of Plant Operator by manufacturers. Submit certification of installation from the manufacturers of Screens and Washing Compactors that the Screens and Washing Compactors have been installed as per manufacturer's guidelines and requirements. Complete submittal of record plans/as-built documents and Operation and Maintenance manuals.

1.010 GUARANTEES

The Contractor shall guarantee all the material, labor and equipment furnished and installed under this contract to be free from all defects. All the tests called for in the Specifications are to be made on the entire system before acceptance. Should the tests show them to be defective, the Contractor shall correct such corrections at his own expense as may be necessary to the fulfillment of the Contract. The Contractor further agrees that all of the material and equipment installed under this Contract shall be guaranteed for a period of one (1) year from the date of acceptance and any defects which may develop within this period shall be replaced or repaired by the Contractor without any expense to the Owner. All the work shall be performed strictly in accordance with OSHA requirements.

1.011 COORDINATION OF WORK

It shall be the responsibility of the Contractor to coordinate ALL work with plant operators and the equipment supplier. Contractor is responsible to identify ALL parts of the equipment, transport them inside the centrifuge building and properly install them. The Contractor shall safeguard all parts and equipment at all times after they are received at the job site and immediately notify the Owner and equipment supplier about any missing parts. The Contractor shall thoroughly familiarize himself about the sequence of the installation of ALL mechanical and electrical work.

The contractor shall coordinate with the screen supplier for scheduling training to instruct the plant operator for operation and maintenance of the equipment. The Contractor shall coordinate his work with the manufacturer so that when the factory engineer arrives at the job site, his time is fully utilized. The Contractor shall make himself available at all times when the factory engineer visits the site. The Contractor must make his own arrangements for additional services that he might need from the factory engineer for installation, calibration, trouble-shooting and start-up of the automatic center flow fine screens and washing compactors.

1.012 QUALITY CRITERIA

- A. The Contractor shall adhere to applicable standards of the following as referenced:
1. American National Standards Institute (ANSI)
 2. American Society for testing and Materials (ASTM)
 3. American Water Works Association (AWWA)
 4. National Sanitary Foundation (NSF)
- B. **REFERENCE STANDARDS** – The properties of all materials, design, fabrication and performance of the equipment to be furnished under this section shall be in accordance with the latest issue of applicable standard specifications. Comply with all local, State and Federal codes including but not limited to the following governing authorities of these standards are listed below as a minimum:
- i. AISC, American Institute of Steel Construction
 - ii. AISI American Iron and Steel Institute
 - iii. ANSI, American National Standards Institute

- iv. ASCE, American Society of Civil Engineers
- v. ASME, American Society of Mechanical Engineers
- vi. ASTM, American Society of Testing and Materials
- vii. AWS, American Welding Society
- viii. IBC, International Building Code
- ix. IEC, International Electric Code
- x. IEEE, Institute of Electrical and Electronics Engineers
- xi. NEC, National Electrical Code
- xii. NEMA, National Electrical Manufacturers Association
- xiii. IEEE – Institute of Electrical and Electronics Engineers
- xiv. SSPC – Steel Structures Painting Council
- xv. UBC – Uniform Building Code

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

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