

**SECTION 33 32 16.13
PACKAGED SEWAGE GRINDER PUMPING UNITS**

PART 1 GENERAL

1.01 SUMMARY

- A. This work shall include all required excavation and backfill, the disposal of any excess excavated material, installation of the grinder pump assembly, installation of the electrical control/alarm panel, electrical connection between grinder pump and control panel, grinder pump connection to service pipe and stub out for house drain pipe.
- B. These specifications are intended to technically describe the nature of the materials, equipment, and workmanship required to complete the low pressure sewers and appurtenances shown on the plans.
- C. All labor, tools, and materials necessary to excavate, place, join, backfill, and finish the low pressure sewers and appurtenances to provide a complete and operative system shall be considered as part of the low pressure sewer system construction.
- D. Low pressure sewers shall be considered to mean pressure pipe as called for on the plans, complete with specials, fittings, valves, valve wells, valve boxes, and connections to existing sewer systems.

1.02 PRICE AND PAYMENT PROCEDURES

- A. Payment for prefabricated grinder pump station supplied will be on the basis of the lump sum price as stated on the bid sheet for each size and type delivered.
- B. The Contractor shall buy the pump station from the manufacturer or local representative and indicate that the pump station is for use on an Oakland County Water Resources Commissioner project with pre-negotiated prices, and the cost for material as stated on the bid sheet is thereby guaranteed.
- C. Included in the lump sum price for grinder pump as supplied by the manufacturer shall be: the pump station of model and size as stated, alarm/control panel of model stated, electrical quick disconnects and pump station freight cost delivery to the Contractor.
- D. The lump sum price for grinder pump installation as stated on the bid sheet shall include; excavation, sheeting or bracing, draining or dewatering, normal or special bedding, concrete anchor, backfilling, disposal of surplus excavated material, 10 foot of 4 inch PVC stub for house drain connection, alarm/control panel installation, including electrical wiring, connections and wire protection between the alarm panel and pump station, clean-up, restoration and all costs associated with transporting, handling and storage of equipment and materials prior to installation.

1.03 RELATED REQUIREMENTS

- A. HORIZONTAL DIRECTIONAL DRILLING – SECTION 33 05 23.13

**JIM NASH
OAKLAND COUNTY WATER RESOURCES COMMISSIONER
PSGP 1 of 3**

May 20, 2013

**SECTION 33 32 16.13
PACKAGED SEWAGE GRINDER PUMPING UNITS**

B. LOW PRESSURE SEWERS – SECTION 33 33 00

1.04 SUBMITTALS

- A. Furnish shop drawings and guarantees covering the items included under this section of the work as specified herein and in accordance with the provisions for submittals in other sections of the contract documents.
- B. Operation and Maintenance Instructions
 - 1. The station manufacturer shall submit to the Engineer, through the Contractor, two copies of a manual giving operation and maintenance instructions.
- C. Each equipment supplier's representative shall furnish to the Owner, through the Engineer, a written report certifying the following:
 - 1. The equipment has been properly installed.
 - 2. The equipment is in accurate alignment.
 - 3. The equipment is free from any undue stress imposed by connecting piping or anchor bolts.
 - 4. The equipment has been operated under full load condition and that it operated satisfactorily to the Engineer.
 - 5. The Owner's representative has been instructed in the proper maintenance and operation of the equipment.
- D. Furnish the Owner a copy of all test data recorded during the installation check.

PART 2 PRODUCTS

2.01 PUMP STATION

- A. The pump station shall be a factory built grinder pump station consisting of grinder pump(s), suitably mounted in a high density polyethylene basin, with integral watertight access way, pump removal system, inlet for 4 inch DWV pipe, remote alarm/control panel and all necessary internal wiring with Electrical Quick Disconnects.
- B. Pump station shall be as manufactured by Environment/One Corporation, Niskayuna, New York, Model DH071, DH151, or DH152 or approved equal dependent on the service application as approved by the Engineer.

2.02 ELECTRICAL CONTROL/ALARM PANEL

- A. Control/alarm panel shall be factory built and supplied by the pump station manufacturer.

**SECTION 33 32 16.13
PACKAGED SEWAGE GRINDER PUMPING UNITS**

PART 3 EXECUTION

3.01 INSTALLATION

- A. The pump station shall be installed in accordance with the manufacturer's recommendations, with the 4" DWV inlet aligned toward the planned house drain connection. Contractor should fill the pump basin with water prior to backfill and placement of concrete anchor.
- B. Pump station installation includes 10 foot of 4 inch stub for house drain connection.
- C. At the time of pump station installation, the Contractor shall affix the electrical quick disconnects to the upper part of the pump station to prevent potential damage from water infiltration into the pump station.

3.02 ELECTRICAL CONTROL/ALARM PANEL

- A. Contractor shall install the control panel, located on the outside wall of the house as shown on the plan and as verified by the property owner.
- B. Control panel installation includes the electrical wiring and connections between the panel and the pump station. Wiring shall be direct-bury cable in accordance with electrical code. Wiring riser run to the control panel shall be in steel conduit. Riser run into pump station shall be protected with external cover placed along with the manufacturer's watertight seal at the wire penetration into pump station.

3.03 INSTALLATION CHECK AND START-UP

- A. An authorized representative of the manufacturer or supplier of each item of equipment shall visit the site of the work after installation to inspect, check, adjust if necessary, and approve the equipment's installation.

END OF SECTION