

**Typical Specifications**

**SCOPE:** Furnish and install \_\_\_\_\_ submersible screened sump pump(s). Each pump shall be capable of delivering the following performance points,: \_\_\_\_\_ U.S. GPM at \_\_\_\_\_ TDH; \_\_\_\_\_ U.S. GPM at \_\_\_\_\_ TDH; \_\_\_\_\_ U.S. GPM at \_\_\_\_\_ TDH, with a shut off head of \_\_\_\_\_ TDH (minimum). The pump motor speed shall be 3450 RPM, \_\_\_\_\_ HP (maximum), 1 Phase, 60 Hertz, 115 Volts. The pump (s) shall be manufactured in North America by a company regularly engaged in the manufacture and assembly of similar units for a minimum of five (5) years. The pump(s) shall be Sulzer Pumps Houston Inc. model \_\_\_\_\_.

**PUMP DESIGN:** Each pump shall be capable of handling wastewater or other drainage water. The suction shall be screened to prevent large solids from entering the pump. The pump (s) shall be capable of handling liquids with temperatures to 75 degrees F continuous, 120 degrees F intermittent, and shall be capable of running dry for extended periods.

**PUMP CONSTRUCTION:** The volute, seal plates, impeller and motor housing shall be constructed of high quality ASTM A-48 class 30 cast iron. The pump (s) shall be painted with a water based air dry enamel of 2.0 mil minimum thickness. All exposed hardware shall be 300 series stainless steel. The pump construction shall contain no points of critical clearance nor require periodic adjustment or replacement to maintain operating efficiency. Discharge connection shall be a standard \_\_\_\_\_ inch NPT in the vertical position. All gaskets shall be of the compression square ring type eliminating critical slip fits and the possibility of damage during service associated with sliding o-ring sealing arrangements. The impeller shall be of the non-clog design with pump out vanes on the back side. The impeller shall be dynamically balanced to ISO G6.3 specifications.

The unit shall utilize a single mechanical shaft seal which will operate in an oil atmosphere. The materials of construction shall be carbon for the rotating face and ceramic or silicon carbide for the stationary face, lapped and polished to a tolerance of one light band, 300 series stainless steel hardware, and all elastomer parts to be of Buna-N. The seal shall be commercially available and not a proprietary design of the manufacturer.

The pump shall be designed to be non-overloading throughout the entire pump curve. The rotor and stator assembly shall be of the standard frame design and secured to the pump seal plate by four threaded fasteners allowing for easy serviceability. Motor designs incorporating shrink or press fit assembly between the stator and motor housing shall not be acceptable. The motor shall be constructed with the windings operating in a sealed environment containing clean dielectric oil, making it capable of operating in a totally, partially or non-submerged condition for extended periods of time without damage due to the heat being generated.

The motor windings shall be of Class B insulation. The motor shall meet the standard NEMA design L. Motor shaft shall be of 416 stainless steel. The lower bearing shall be of the single ball type to accept radial and thrust loads, and the upper bearing of the single ball design, for radial loads. Bearings shall operate in an oil bath atmosphere for superior life. Permanently lubricated bearings are not acceptable. The pump shall be equipped with \_\_\_\_\_ ft. of UL approved power cable and connected to the motor via quick disconnect pin terminals.

The unit shall be furnished with a piggyback type float switch to allow for automatic or manual operation.