



## ST. TAMMANY PARISH

MICHAEL B. COOPER  
PARISH PRESIDENT

**July 3, 2024**

Please find the following addendum to the below mentioned BID.

**Addendum No.: 1**

**Bid#: 24-27-2**

**Project Name: Post Oak Sewer Consolidation & Faubourg Lift Station Improvements**

**Bid Due Date: Tuesday, July 23, 2024**

### **GENERAL INFORMATION:**

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**Receipt of this addendum shall be acknowledged by inserting its number in the space provided on the Proposal.**

1. Sheet G-002, General Notes:

In General Note 8, delete "As indicated in Note 8" and replace with "As indicated in Note 7".

2. Sheet G-201, Sewer Standard Notes (Sheet 1 of 2)

In General Sewer Standard Note 5A, delete "Sand bedding material shall placed" and replace with "Sand bedding material shall be placed".

In General Sewer Standard Note 7, delete "Prior the construction" and replace with "Prior to the construction".

3. Sheet G-202, Sewer Standard Notes (Sheet 2 of 2)

In Sewer Lift Station Note 3, delete "wooden" and replace with "chain link".

In Sewer Force Main Note 2, delete "8 feet per second shall approved", and replace with "8 feet per second shall be approved".



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4. Sheet C-301, New Post Oak Lift Station – Plan

At the stainless steel quick connect nozzle delete “chan” and replace with “chain”.

5. Sheet C-303, New Post Oak Lift Station Force Main – Plans

Delete “Sta. 120+00 Offset : 20.00’L” and replace with “Sta. 119+00 Offset: 20.00’L”.

6. Sheet C-307 New Faubourg Lift Station – Enlarged Site Plan

Delete “12 ft. wide double leaf gate w / locking device” and replace with “16 ft. wide double leaf gate w / locking device”.

7. Sheet C-308 New Faubourg Submersible Lift Station – Plan

Add pressure gauge on discharge piping between the two (2) 10” 45-Deg. elbows upstream of the flow meter.

8. Sheet C-309 New Faubourg Lift Station – Section

Add pressure gauge on discharge piping between the two (2) 10” 45 – Deg. elbows upstream of the flow meter.

In General Note No. 14, delete “14. Connect to the” and replace with “14. Connection to the”

9. Sheet C-310, New Faubourg Lift Station – Chain Link Fence Detail

In General Note No. 7, delete “dark green” and replace with “black”.

10. Specification Section 11312 Submersible Wastewater Pumps (Faubourg Lift Station)

Delete Section 11312 Submersible Wastewater Pumps (Faubourg Lift Station) and replace with the attached Section 11312 Submersible Wastewater Pumps (Faubourg Lift Station) – Revised (07.03.24)



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### **ATTACHMENTS:**

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1. Section 11312 Submersible Wastewater Pumps (Faubourg Lift Station) – Revised (07.03.24).pdf

**<< End of Addendum No. 1 >>**

SECTION 11312  
SUBMERSIBLE WASTEWATER PUMPS  
(FAUBOURG LIFT STATION)

**Revised (07.03.24)**

PART 1 - GENERAL

1.01 GENERAL

- A. Contractor shall furnish all labor, materials, equipment and incidentals required and install, place in operation, and field test three (3) explosion-proof non-clog submersible centrifugal sewage pumps including guide rails, control panel and appurtenances for NEC Class 1, Division 1, Group C,D hazardous locations as specified herein and shown on Drawings.
- B. Each pump shall be equipped with stainless steel nameplate, stating the unit is accepted for use in NEC Class 1, Division 1, Group C, D hazardous locations with third party, Factory Mutual approval. The nameplate shall also include manufacturer, serial number, rated capacity, TDH, speed, and all other pertinent data.

1.02 QUALIFICATIONS

- A. To assure unit responsibility, the pumps, motors, controls, hatches, guide rails, and anchor bolts and other auxiliary equipment, and materials specified in this Section shall be furnished and coordinated by a single pump manufacturer. The Contractor and manufacturer shall assume responsibility for the satisfactory installation and operation of the entire pumping system including pumps, motors, and controls as specified.
- B. The pumps and control panels covered by the Specifications are intended to be standard pumping equipment of proven ability as manufactured by a reputable manufacturer having a minimum of ten (10) years experience in the production of such pumps and control equipment. The pumps furnished shall be designed constructed and installed in accordance with the best practice and methods, and shall operate satisfactorily when installed. Pumps shall be manufactured in accordance with the Hydraulic Institute Standards. Pumps and control panels models shall have been in production for a minimum of ten (10) consecutive years.
- C. The pump manufacturer shall have, within a 150-mile radius of the jobsite, an authorized warranty center, fully staffed with factory trained mechanics, and equipped with a stock of all necessary spare parts for each model of pump furnished in this contract. Pump manufacturer shall have parts or unit distribution located in the United States.
- D. All equipment furnished under this Specification (pumps, motors, controls, etc.) shall be new and unused, shall be the standard product of manufacturers having a successful record of manufacturing and servicing the equipment and systems specified herein for a minimum of ten (10) years.

1.03 SUBMITTALS

- A. Copies of all materials required to establish compliance with the Specifications shall be submitted in accordance with the provisions of the General Conditions. Submittals shall include at least the following:
1. Shop and erection drawings showing all important details of construction, dimensions and anchor bolt locations. Shop drawings shall indicate that pumps can be constructed in wet well provided.
  2. Descriptive literature, bulletins, and/or catalogs of the equipment.
  3. Data on the characteristics and performance of each pump. Data shall include guaranteed performance curves, based on actual shop test of similar units, which show that they meet the specified requirements for head, capacity, efficiency, NPSHR, submergence and horsepower. Curves shall be plotted from zero flow at Shut Off Head to Pump Capacity at minimum specified TDH. Catalog sheets showing a family of curves will not be acceptable.
  4. The total weight of the equipment including the weight of the single largest item.
  5. A complete total bill of materials of all equipment.
  6. All submittal data required by the General Conditions.
  7. Complete motor data.
  8. Certified agreement to the conditions of the warranty.

#### 1.04 OPERATING INSTRUCTIONS

- A. Operating and Maintenance Manuals shall be furnished. The manuals shall be prepared specifically for equipment furnished and installed on this contract and shall include all required cuts, drawings, equipment lists, descriptions, etc., that are required to instruct operating and maintenance personnel unfamiliar with such equipment.
- B. A factory representative of all major component manufacturers, who has complete knowledge of proper operation and maintenance, shall be provided for one(1) day to instruct representatives of the Owner and the Engineer on proper operation and maintenance.

#### 1.05 TOOLS AND SPARE PARTS

- A. The manufacturer shall furnish a complete set of recommended spare parts necessary as follows:
1. One (1) set of O-rings and gaskets for each pump type supplied.
  2. One (1) set of seals for each size required by the pumping equipment supplied.
- B. Spare parts shall be properly bound and labeled for easy identification without opening the

packaging and suitably protected for long term storage.

## 1.06 PRODUCT HANDLING

- A. All equipment and parts shall be properly protected so that no damage or deterioration will occur during a prolonged delay from the time of shipment until installations completed and the units and equipment are ready for operation.
- B. Factory assembled parts and components shall not be dismantled for shipment unless permission is received in writing from the Engineer.
- C. Finished surfaces of all exposed pump openings shall be protected by wooden blanks, strongly built and securely bolted thereto.
- D. It is required a single control panel that houses all VFDs and equipment, including VFDs that communicate with each other, to alternate starts and runs without manual programming.

## PART 2 - PRODUCTS

### 2.01 OPERATING CONDITIONS

- A. Each pump shall be rated at the horsepower, speed, flow, TDH, efficiency and speed as described in the Table 11312-01. The pumps shall be non-overloading throughout the entire range of operation without employing a service factor. The pump shall reserve a minimum service factory of 1.15. The performance curve submitted for approval shall state in addition to head and capacity performance, the pump efficiency, solids handling capability, and reflect motor service factor. Units shall be capable of a minimum of 30 motor starts per hour, and able to run dry for extended periods of time without overheating or causing damage to the pump, motor, and/or controls.

### 2.02 CONSTRUCTION

- A. The pump shall be a centrifugal, non-clog, solids handling, submersible, wastewater type model NP3301HT3 as manufactured by ITT/Flygt or pre-approved equal. The pump volute, motor and seal housing shall be high quality gray cast iron, ASTM A-48, Class 30. The pump discharge shall be fitted with a standard ASA 125 lb. flange, faced and drilled. All external mating parts shall be machined and Buna N Rubber O-ring sealed on a beveled edge. All mating surfaces shall be flame proof joints with special labyrinth joint to prevent a flame or spark to travel to the media being pumped. Gaskets shall not be acceptable. All fasteners exposed to the pumped liquids shall be 300 series stainless steel.

### 2.03 ELECTRICAL POWER CORD

- A. Electrical Power cord shall be STW-A, water resistant 600V, 60<sup>0</sup> C., UL and or CSA approved and applied dependent on amp draw for size. Cord length shall be as required to reach control panel but shall not be less than 25 feet.
- B. The pump shall be triple protected with compression fitting and epoxy potted areas at the

power cord entry to the pump. A separation between the junction box area of the pump and the motor by a stator lead sealing gland or terminal board shall be provided for air filled motors.

- C. The power cable entry into the cord cap assembly shall be field serviceable and shall consist of grommets and washers which provide both a seal and strain relief. Each individual lead shall be stripped down to bare wire, at staggered intervals, and each strand shall be individually separated.
- D. The power cord leads shall then be connected to the motor leads with extra heavy connectors having brass inserts with a screwed wire to wire connection.
- E. The connection box for epoxy potted units wiring shall be separated from the motor housing wiring by stripping each lead down to bare wire, at staggered intervals, and separating each strand. This area shall be filled with an epoxy compound potting.
- F. The cord cap assembly where bolted to the connection box assembly and the connection box assembly where bolted to the motor housing shall be sealed with a Buna N Rubber O-ring on a beveled edge to assure proper sealing.
- G. The pump controller shall be capable of reverse rotation with high torque to allow for cleaning. The controller manufacturer shall provide a 2 (two) year non-clog guarantee with normally expected sewer (grease, rags, etc.).

#### 2.04 MOTOR

- A. The stator, rotor and bearings shall be mounted in a sealed submersible type housing. The stator windings shall have Class F insulation, (155° C. or 311° F). NEMA B design. Further protection shall be provided by winding thermal sensors in each winding.
- B. The pump and motor shall be specifically designed so that they may be operated partially or completely submerged in the liquid being pumped.
- C. Stators must be capable of being repaired or rewound by a local motor service station. Units which require service only by the factory shall not be acceptable. No special tools shall be required for pump and motor disassembly.
- D. Oil filled or air filled pumps shall be equipped with heat sensors. The heat sensor shall be a low resistance, bi-metal disc that is temperature sensitive. It shall be mounted directly on the stator and sized to open at 120°C or 130°C and automatically reset at 30 - 35°C differential. The sensor shall be connected in series with the motor starter coil so that the starter is tripped if a heat sensor opens.

#### 2.05 BEARINGS AND SHAFT

- A. An upper radial bearing and a lower thrust bearing shall be required. These shall be heavy-duty bearings which are permanently lubricated. Bearings which require lubrication according to a prescribed schedule shall not be acceptable.

- B. The shaft shall be machined from stainless steel and be a design which is of large diameter with minimum overhang to reduce shaft deflection and prolong bearing life. The shaft may be constructed of C 1035 carbon steel if the shaft is isolated from the pumped liquid.

## 2.06 SEALS

- A. The pump shall have two mechanical corrosion resistant tungsten carbide seals, mounted in tandem, with an oil chamber between the seals. The upper seal shall be used with the rotating seal faces being carbon and the stationary seal faces to be ceramic. The lower seal shall have tungsten carbide faces and shall be replaceable without disassembly of the seal chamber and without the use of special tools. Pump-out vanes shall be present on the backside of the impeller to keep contaminants out of the seal area. Seals shall be locally available.
- B. The pump shall be equipped with a seal leak detection probe and warning system. This shall be designed to alert maintenance personnel of lower seal failure without having to take the unit out of service for inspection or requiring access for checking seal chamber oil level and consistency.
- C. There shall be one or two electric probe or seal failure sensors to detect a leak in the upper or lower seal. If the seal fails, contaminants which enter the seal chamber shall be detected by the sensor and send a signal to operate the specified warning device.
- D. Units equipped with opposed mechanical seals shall not be acceptable.

## 2.07 IMPELLER

- A. Impeller shall be of the enclosed non-clogging design and have pump-out vanes on the front and backside of the impeller to prevent grit and other materials from collecting in the seal area. Impeller shall not require coating and comprised of 25% high chrome metallurgy.
- B. Impellers shall be dynamically balanced. The tolerance values shall be as listed below according to the International Standard Organization grade 6.3 for rotors in rigid frames. The tolerance is to be split equally between the two balance planes which are the two impeller shrouds.
- C. The impeller shall be slip fit to a shaft and key driven. A300 series stainless steel washer and impeller bolt shall be used to fasten the impeller to the shaft. Impeller shall be field adjusted internally using the one (1) impeller bolt assembly.

## 2.08 CASING

- A. The casing shall be of the end suction volute type having sufficient strength and thickness to withstand all stress and strain from service at full operating pressure and load. The casing shall be of the centerline discharge type equipped with an automatic pipe coupling arrangement for ease of installation and piping alignment. The design shall be such that the pumps will be automatically connected to the discharge piping when lowered into position with the guide rails. The casing shall be accurately machined and bored for register fits with the suction and casing covers.



- B. A volute case wearing ring shall be provided to minimize impeller wear. The wear ring shall be alloy 230 brass, ASTM B-43 and held by 300 series stainless steel fasteners. The wear ring shall be easily replaceable in the field.

#### 2.09 ACCESS FRAMES, GUIDE RAILS, AND ANCHOR BOLTS

- A. The manufacturer shall be furnished with the necessary aluminum access frames, complete with hinged and hasp-equipped covers, stainless steel upper guide holder and cable holder. The frames shall be securely mounted above the pumps.
- B. Lower guide holders shall be integral with the discharge connection as required. Guide bars shall be of 304 stainless steel size and length as required by the pump manufacturer.
- C. Intermediate guide brackets shall be furnished and installed so that the maximum length of unsupported guide bars will be no longer than 6 feet, and shall be fabricated of 316 stainless steel.
- D. Stainless steel cable holders including the cable hooks shall be fabricated from type 304 stainless steel plate. Sharp corners and edges shall be ground smooth to prevent abrasion and cutting of electrical cable insulation. The cable holder shall be of sufficient length and strength to provide support for each separate cable, except that the pump power and lift cables may use the same hook position, provided the cables do not foul one another and the lift cable is easily accessed from the hatch opening.
- E. Manufacturer shall furnish 304 anchor bolts as required.

#### 2.10 PAINTING

- A. The pump shall be painted after assembly, but before testing with an alkyd air dried enamel. The paint shall be applied in one coat with a minimum thickness of 3 to 4 mils.

#### 2.11 SERVICEABILITY

- A. The pumps shall be capable of being removed from the wet well without disturbing the stationary part of the discharge piping.

### PART 3 - EXECUTION

#### 3.01 TESTING

- A. Testing shall be required and include the following:
  1. Furnish the services of a qualified manufacturer's representative for two separate trips one to inspect installation and startup and one to train operators on maintenance.
  2. The pump shall be visually inspected to confirm that it is built in accordance with the specification as to HP, voltage, phase and hertz.

3. The motor and seal housing chambers shall be hi-potted to test for moisture content and/or insulation defects.
  4. Pump shall be allowed to run dry to check for proper rotation.
  5. Discharge piping shall be attached, the pump submerged in water and amp readings shall be taken in each leg to check for an imbalanced stator winding. If there is a significant difference in readings, the stator windings shall be checked with a bridge to determine if an unbalanced resistance exists. If so, the stator will be replaced.
- B. Certified performance curves shall be provided in the operation and maintenance manuals for each pump of the same size. Cost for these tests shall be included in the bid price.

### 3.02 WARRANTY

- A. The pump unit or any part thereof shall be warranted against defects in material or workmanship within one (1) year from date of final acceptance by the Owner and shall be replaced at no charge with a new part, F.O.B. factory or authorized warranty service station. In addition, pumps shall be provided with a one (1) year no-clog guarantee under normally expected sewer conditions (rags, grease, etc.).

### 3.03 OPERATING AND MAINTENANCE INSTRUCTION

- A. Complete operating and maintenance instructions for the pump shall be furnished to the Owner, the instructions shall be prepared specifically for this installation and shall include cuts, drawings, equipment, lists, spare parts, descriptions, etc., that are required to instruct operating and maintenance of such equipment.

### 3.04 COORDINATION WITH ELECTRICAL REQUIREMENTS

- A. Unless otherwise specified, the Contractor shall be responsible for furnishing all controls including magnetic starters with overload and under voltage protection, pushbutton stations, timers, limit switches, H-O-A switches, enclosures and other items as required by particular equipment in accordance with the manufacturer's recommendations and as shown on the Drawings.
- B. The vendors of the various pieces of equipment shall refer to the electrical specifications and the electrical drawings to supplement this section of the Specifications. Any additional equipment shown on the electrical plans or called for in the electrical specifications and not specifically specified in this section shall be furnished by the vendor. The plant electrical system is designed to the specific requirements of the Owner using a control system. The vendors shall design their electrical equipment and panels to match these electrical requirements. Shop drawings shall be submitted showing external wiring terminals and properly identifying the devices they are to be inter-connected with. Any drawings submitted where it is obvious that no effort was made to properly prepare them for checking by the Engineer will be rejected.
- C. The electrical contractor shall coordinate with the mechanical contractor and carefully

review the mechanical packages proposed to be supplied. It shall be the electrical contractor's responsibility to insure that all wire and conduit needed for electrical appurtenances, associated with mechanical packages, are provided even if not specifically called for in the plans and specifications.

TABLE 11312-01

SUBMERSIBLE NON-CLOG WASTEWATER PUMPS

TAG NO.	LOCATION	CONTENTS HANDLED	DESIGN FLOW	DESIGN HEAD	HORSEPOWER	MAX. RPM	MIN. PUMP EFFICIENCY	REMARKS :
FB-01	Faubourg Pump Station	Wastewater	1,100 GPM	136.5 FT.	85 HP	1775	66%	VFD
FB-02	Faubourg Pump Station	Wastewater	1,100 GPM	136.5 FT.	85 HP	1775	66%	VFD
FB-03	Faubourg Pump Station	Wastewater	1,100 GPM	136.5 FT.	85 HP	1775	66%	VFD

- D. Controls configuration shall be adjustable and shall be able to be adjusted such that two (2) pumps do not run simultaneously.

END OF SECTION