

SECTION 807
PUMP STATION REHABILITATION

807-1 DESCRIPTION: Rehabilitation of pump stations shall be defined as the cleaning, removal, repair and/or replacement of any and/or all components including but not limited to piping, pumps, motors, valves, misc. equipment, castings, auxiliary equipment, wiring, features, finishes, services, and structures of the pump station site. This may include the removal and replacement of any part with one listed on the Quality Product List (QPL). This may require a portion of the facility, complete with all connections, rehabilitated to return the facility to its original design specifications or better as shown on the Contract Documents.

These specifications are intended to give a general description of what is required, but do not claim to cover all of the details which will vary in accordance with the requirements of the equipment as shown on the Contract Documents. They are, however, intended to cover the furnishing, shop testing, delivery, and complete installation and field testing of all materials, equipment, and accessories for complete pump station rehabilitation whether specifically mentioned in these specifications or not.

807-2 SUBMITTALS: Shop drawings shall be submitted to the Engineer. The material shall include, but shall not be limited to the following:

- a. Shop drawings and materials of construction and performance of the flow meter, control panel modifications, float switches, grating, concrete mix, reinforcing steel, raceways and conductors, pipe and fittings, valves, bypass couplings, pipe supports, seed mix and sub-base material.
- b. Floor plans, sections, and elevations showing a complete layout of all equipment, piping, valves, electrical conduits, control panels, and wall sleeve locations.
- c. Prior to commencing work, the Contractor shall submit a schedule of work to the Engineer for coordination with DPW operations and maintenance.
- d. Bypass pumping plan in accordance with Section 813.
- e. Coatings submittals in accordance with Section 822.
- f. Wet well cleaning plan including cleaning equipment, cleaning agents, and details of disposal of waste materials from pump station cleaning operations.

807-3 SITE PREPARATIONS:

- a. Plan - Contractor shall work within the limited areas defined by the pump station to efficiently schedule all cleaning, removals, and staging in a workman like fashion. He shall be fully responsible for maintaining a safe working environment with hazards properly delineated and appropriate on-site safety equipment provided. Once the Contractor notifies the Engineer of his intentions to begin work on a specific site, he shall await authorization to begin. After Contractor occupies the site, he shall become fully responsible for the site, the operation of the pump station, all of the existing equipment and any and all of the materials on the premises. The Contractor shall post a notice with the company name, 24 hour contact names and telephone numbers or other contact information at the site. The notice shall be placed in a clear weatherproof enclosure in a conspicuous location.
- b. Bypass Pumping – See Section 813 for details of the proper method for bypass pumping.

- c. The site must be free from any unsafe conditions or hazards.
- d. Cleaning – The Contractor shall provide all labor, materials, equipment, and incidentals necessary to perform the cleaning of pump stations as specified in this section. Pump station cleaning shall include preparatory cleaning prior to inspection and assessment for rehabilitation or heavy cleaning to prepare for rehabilitation work.
 - 1. Preparatory cleaning shall be performed prior to a comprehensive inspection of the facility by the Contractor and the Engineer. No separate payment shall be made for cleaning.
 - 2. Selection of cleaning equipment shall be made by the Contractor with the concurrence of the Engineer and shall be based on field conditions and the type of debris to be removed,
 - 3. Satisfactory precautions shall be taken to protect the pump station from damage that might be caused by improper use of the cleaning equipment. Chipping, scraping or wire brushing on the equipment is prohibited without the permission of the Engineer.
 - 4. The Work shall consist of cleaning sanitary sewer pump stations of all excess sand, debris, dirt, loose paint/surface coatings and grease so that inspection and assessment can be performed.
 - 5. Heavy cleaning shall remove all foreign materials from the interior surfaces of the pump station. Scale, loose paint or surface coverings shall also be removed for repair or replacement. Contractor shall remove loose, unsound, and protruding brick, mortar, and concrete. Contractor shall submit a Heavy Cleaning Plan detailing equipment, cleaning agents to be used, and disposal methods for approval by the Engineer. Disposal of cleaning agents and residue shall be performed according to the prevailing environmental laws of the State of Louisiana and is the responsibility of the Contractor.
 - 6. Precautions shall be taken to ensure that the water from cleaning operations does not cause damage or flooding to public or private property being served by the sewer line section involved.
 - 7. Care shall be taken to preserve any existing nameplates, labels or references during the cleaning operation. Recovery of any of these types of material shall be reinstalled as directed by the Engineer.
 - 8. All sanitary sewer lines entering or exiting the pump station shall be plugged prior to cleaning. Contractor shall perform sewer flow control in accordance with Section 813.
 - 9. All sludge, dirt, paint, sand, rocks, grease, and other solid or semi-solid material resulting from the cleaning operation shall be removed from the wet well. All solids or semi-solids resulting from the cleaning operations shall be removed from the site and disposed of at an approved landfill. All materials shall be removed from the site at minimum of the end of each workday. Under no circumstances will the Contractor be allowed to accumulate debris, etc., on the site of work beyond the stated time, except in totally enclosed containers and as approved by the Engineer.
 - 10. The Contractor must follow all of the current applicable local, state and federal rules and laws regarding the disposal of waste materials from pump

station cleaning operations.

11. After sufficient cleaning is performed to reveal areas requiring attention, the Contractor shall notify the Engineer to schedule an inspection. All sewer cleaning shall be performed to the satisfaction of the Engineer. If a check of the Work shows the cleaning to be inadequate, the Contractor will be required to re-clean and re-inspect the pump station until the cleaning is acceptable to the Engineer.

- e. Notification – It is the responsibility of the Contractor to notify of any defect, damage, rusting, erosion or other objectionable conditions revealed during the cleaning operations.

807-4 EQUIPMENT REMOVAL: The Contractor shall remove and tag each part with the pump station number. Equipment to be reused on this project shall be stored at the project site. Equipment that is not to be reused shall be delivered to DPW or disposed of, as directed by the Engineer. This equipment may include but not be limited to pipe and fittings, electrical support equipment, junction boxes, electrical panels, etc. Demolition shall be performed in accordance with Section 820.

807-5 EQUIPMENT REPLACEMENT:

- a. All new equipment will comply with the Contract Documents unless otherwise directed by the Engineer. New equipment will be the responsibility of the Contractor. Contractor shall store, install and maintain the equipment in part and as a whole until the Work is accepted as outlined by the Contract Documents. All replacement equipment shall comply with the appropriate manufacturer's specifications.
- b. Unless otherwise directed by the Engineer or the Contract Documents, electrical wall penetrations shall be made using a modular sealing strip. Wall sleeves for use with sealing strips shall be Schedule 40, PVC pipe. Only one service is allowed in each electrical penetration. A suitable water stop approximately ¼" thick by 2" wide shall be welded to the sleeve completely around the pipe. The use of such sealing strips shall not relieve the Contractor of his responsibility of providing a guaranteed water tight seal.
- c. All sewer pipe wall penetrations in concrete pump stations shall be sealed with link-seal or approved non-shrink grout.
- d. Unless otherwise directed by the Engineer or the Contract Documents, all metal replacement parts shall be 316 stainless steel.
- e. New connectors, lugs, retainers and hardware must be used in accordance with these Specifications.

807-6 SITE PREPARATION: The Contractor shall properly prepare the site or facility for the installation. The site should be cleaned and prepared according to the manufacturer's specifications or the Engineer's direction.

807-7 SURFACE COATING: All surfaces of features that are retained as part of the facility or any new part, assembly or hardware must be properly prepared and coated in accordance with Section 822, unless otherwise directed by the Engineer.

807-8 MISCELLANEOUS WORK:

- a. Concrete work shall be performed in accordance with Section 601 and as shown and noted on the Drawings.

- b. Earthwork shall be performed in accordance with Section 801 and as shown and noted on the Drawings.
- c. Temporary and permanent erosion control work shall be performed in accordance with Section 903 and as shown and noted on the Drawings.
- d. Demolition shall be performed in accordance with 820 and as shown and noted on the Drawings.
- e. Piping shall be furnished and installed in accordance with Section 804, Section 1016, and as shown and noted on the Drawings.
- f. Valves shall be furnished and installed in accordance with Section 1019 and as shown and noted on the Drawings.
- g. Electrical work shall be performed in accordance with the National Electric Code and as shown and noted on the Drawings

807-9 SITE CLEANUP: The finished site will be completely free from any construction debris, dirt, residual packing material, packing containers, wire trimmings, and garbage of any kind.

807-10 INSPECTION & TESTING:

- a. The Engineer shall review the facility to see if the site has been finished in a workman like manner. He will check to see that compliance with the Contract Documents has been made and that the site is free from visible compliance issues. The Engineer will also observe if the site has the proper utility services for testing and notify the Contractor if he can schedule the test.
- b. The facility will then be scheduled for the 24 hour test as outlined in Section 805-25. The Contractor must notify the Engineer at least 24 hours prior to testing. This process will continue until a satisfactory test has been achieved according to these Specifications.
- c. The Contractor shall coordinate with the Owner regarding start up services and testing to be provided for the Owner-furnished engine-generator and automatic transfer switch.

807-11 MEASUREMENT: Measurement for rehabilitation of pump stations shall be made on a lump sum basis. The specific items shall include bypass pumping, cleaning, surface rehabilitation, protective coatings, site cleanup, erosion control plus any other additional work as described in the Contract Documents. This additional work shall include, but not necessarily be limited to furnishing, repairing and installing some or all of the pumping equipment, electrical control, piping, valves, drives, wires, utilities, testing and all incidentals, thereto related to pump station rehabilitation as shown in the Contract Documents, complete and as specified herein.

807-12 PAYMENT: Payment of pump station rehabilitation will be made on a lump sum basis, which shall be full compensation for all work required in accordance with the Contract Documents.

The Contractor, prior to construction shall provide a schedule of values. On this schedule of values, the Contractor shall itemize the cost necessary to complete the work.

807-15 PAY ITEM:

<u>Item No.</u>	<u>Item</u>	<u>Unit</u>
807010_	Pump Station Rehabilitation (PS No. _)	Lump Sum