

OVERFLOW CONTROL STRUCTURE

****From Barre City FEGC F 026-1(34) C/2**

- xx. DESCRIPTION. This work shall consist of furnishing and installing a wet pond overflow control structure in accordance with the Contract Documents and as directed by the Engineer.

The work under this Section shall be performed in accordance with these provisions, the Plans, and Sections 541, 604, and 629 of the Standard Specifications.

- xx. MATERIALS.

- (a) Gate Valves. Gate valves shall meet or exceed the requirements of AWWA Standard C509 "Resilient-seated Gate Valves for Water Supply Service." The gate valve shall be sized as shown in the Plans. The gate valve shall be installed with a riser stem to be accessed at the top of the overflow control structure.

- (1) Mechanical joint with retainer glands.
- (2) Rising stem, low operating torque, wedge design, seal flow in either direction.
- (3) Nut operated, open left (counter-clockwise).
- (4) Double "O" Ring seal.
- (5) Body and Bonnet. Ductile iron, smooth full diameter waterway, epoxy coated inside and out.
- (6) Stem. Bronze.
- (7) Disc Assembly. Wedge styrene butadiene rubber (SBR) bonded to ductile iron wedge.

- (b) Overflow Control Structure. Materials for the overflow control structure shall conform to the applicable requirements of Section 604 for Precast Catch Basins and Steel Grates.

- (1) Bedding Material. Bedding material shall consist of crushed gravel conforming to the requirements of Section 301 for Subbase of Crushed Gravel, Fine Graded.
- (2) Grade Rings. Grade rings for overflow control structure grade adjustment, if needed, shall be precast.
- (3) Sump. The sump of the overflow structure shall be filled structural concrete conforming to the requirements of Section 541 for Concrete, Class B.
- (4) Steel Gate. Steel gate shall conform to the applicable requirements of Subsection 604.02. The gate shall be configured as depicted in the Plans, with a minimum domed grate height of 150 mm (6 inches) and grate diameter of 300 mm (24 inches).

(5) Materials shall be furnished at the sizes specified in the Plans.

- xx. CONSTRUCTION REQUIREMENTS. A 100 mm (4 inch) ductile iron pipe with gate valve shall be constructed as shown in the Plans. A valve operating nut shall be installed at the top of the precast overflow control structure. Valves shall be set on a concrete foundation, with the stem vertical. Couplings and fittings shall be installed in accordance with the manufacturer's recommendations.
- xx. DESIGN REQUIREMENTS. Design of precast structures and components shall conform to ASTM C 478.

Structure shall be capable of withstanding AASHTO H-20 loading without failure.

The base section shall be monolithic to a point at least 150 mm (6 inches) above the openings cast to receive the storm sewer lines. Any opening shall be a minimum of 150 mm (6 inches) from any joint. The base shall be a minimum of 200 mm (8 inches) thick and walls shall be a minimum of 125 mm (5 inches) thick.

- xx. METHOD OF MEASUREMENT. The quantity of Special Provision (Overflow Control Structure) to be measured for payment will be the number of each unit installed in the complete and accepted work.
- xx. BASIS OF PAYMENT. The accepted quantity of Special Provision (Overflow Control Structure) will be paid for at the Contract unit price per each. Payment will be full compensation for furnishing, transporting, handling, and placing the materials specified, including concrete, concrete risers, top sections, reinforcing steel, steps, bedding material, mortar, brick, frames, grates, gate valves, covers, coatings, pipestubs, weep holes, and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Excavation for Special Provision (Overflow Control Structure) will be paid for as Trench Excavation of Earth or Trench Excavation of Rock, as appropriate.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.620 Special Provision (Overflow Control Structure)	Each