SECTION 610 REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE STORM SEWERS

610.1 Description

(1) This section describes providing reinforced concrete horizontal elliptical pipe storm sewer.

610.2 Materials

(1) Use materials conforming to the requirements for the class of material named and specified below.

Mastic joint sealer 607.2.2
External rubber gaskets 607.2
Mortar 519.2.3

(2) Provide reinforced concrete horizontal elliptical pipe for storm sewers conforming to AASHTO M207, for the class of pipe specified, except for the following requirements. The concrete mixture shall not contain less than 565 pounds of cementitious materials per cubic yard. Use one of the following combinations of cementitious materials in the concrete:

- Portland cement only.
- Portland blast furnace slag cement only.
- Portland pozzolan cement only.
- A combination of portland cement and fly ash where the fly ash is between 5 and 25 percent by weight of total cementitious material.
- A combination of portland cement and ground granulated blast furnace slag where the slag is between 5 and 25 percent by weight of total cementitious material.

(3) Regardless of the basis of acceptance of the pipe, comply with AASHTO M207 for reinforcement placement.

610.3 Construction

(1) Use construction methods conforming to 607.3.

610.4 Measurement

(1) The department will measure the Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical bid items by the linear foot acceptably completed. The measured quantity equals the number of linear feet of each of the various sizes and classes of pipe measured along the centerline of the pipe. The department will measure from the pipe end at a free outlet to the center of the end catch basin, manhole, inlet, junction or other drainage structure; or from center to center of catch basins, end manholes, inlets, other drainage structures or junctions. The department will make no deduction from these measured lengths for intermediate catch basins, manholes, inlets, other drainage structures, junctions, or fittings.

610.5 Payment

(1) The department will pay for measured quantities at the contract unit price under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
610.0100 - 0199	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-III (size)	LF
610.0400 - 0499	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV (size)	LF

(2) Payment for the Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical bid items is full compensation for providing all materials; for all excavating except rock excavation; for forming the foundation; providing and removing sheeting and shoring, for laying pipe and sealing joints, and making connections to new or existing fixtures; for joint ties; for backfilling, for providing granular backfill material, including bedding material; for cleaning out; and absent the pertinent contract bid items, for restoring the work site.

(3) If the engineer directs the construction of pipe or portions of pipe greater than one foot above or below the elevation the plans show, the department will pay for this work as specified for extra work in 109.4.

(4) Work performed one foot or less below the pipe bottom to form a satisfactory foundation as specified in 607.3.2 is incidental to the work. The department will pay for work required at depths greater than one foot below the pipe bottom as specified for extra work in 109.4.

(5) The department will pay separately for rock excavation under the Storm Sewer Rock Excavation bid item as specified in 607.5.