

DIVISION 13**STORM DRAINS****Section 13.01 GENERAL:**

This section covers installation of storm drainpipe, manholes, and curb face inlet boxes. All improvements shall be constructed to the dimension and thickness shown on the Standard Drawings.

Section 13.02 PIPE INSTALLATION:

Installation of pipe shall be in an open trench unless otherwise shown. Trench and backfill shall meet the requirements of Division 2, Trench Excavation and Backfill.

Section 13.03 PIPE:

Pipe and pipe laying shall meet the requirements of Division 4, Concrete Pipe, Division 4A, PVC Plastic Pipe, Division 4B, Polyethylene Corrugated Pipe, Division 4C, Polyethylene Corrugated Pipe with Water Tight Joints. Pipe shall be laid with the bells up grade. Minimum pipe size for storm drainage is 15-inch diameter.

Section 13.04 MANHOLES:

Manholes shall meet the requirements of Division 5, Manholes. Where the size of the storm drain does not permit use of manholes, precast or cast-in-place reinforced concrete boxes shall be used. Concrete used in precast or cast-in-place boxes shall be Class AA(AE).

Section 13.05 CONCRETE:

Concrete shall meet the requirements of Division 8, Portland Cement Concrete.

Section 13.06 REINFORCING STEEL:

Reinforcing steel shall meet the requirements of Division 9, Reinforcing Steel.

Section 13.07 STORM DRAIN INLET BOXES:

The concrete to be used for the storm drain inlet boxes shall be Class AA(AE). The boxes shall be built to the dimensions and reinforced as shown on the Standard Drawings. The boxes may be precast or cast-in-place.

Excavation and backfill of the boxes shall meet the requirements of Division 7, Earthwork.

The storm drain inlet grate and frame shall be a D & L Supply I-3518 single unit with curb box with type "V" grate or equal. Grates and frames are to be dipped in cold tar epoxy following fabrication.

Section 13.08 PIPE CONNECTING INLET BOXES TO EXISTING STORM DRAINS:

The pipe to be used for connecting a new inlet box to an existing storm drain shall be of the same type of pipe as the existing pipe to which it is being connected. Where possible such connections shall be made by installation of a manhole. The Public Works Representative/Engineer shall approve connection locations and methods.

Connections to concrete pipe shall be by coring a hole in the pipe and then grouting the connecting pipe to the concrete pipe. Connections to PVC or HDPE pipe shall be as per manufacture's recommendations. These recommendations will be reviewed with the Public Works Representative/Engineer prior to construction.

Section 13.09 STORM DRAIN LATERALS:

Where storm drain laterals are required to drain commercial sites, the minimum diameter shall be 6". A two-inch (2") by four-inch (4") by six-foot (6') marker, with the top twelve-inches (12") painted yellow, shall be installed to clearly mark the end of each lateral line