

- Item 604.0808--18 200 MM DIAMETER PVC INLINE DRAIN WITH 200 MM GRATE
- Item 604.0810--18 250 MM DIAMETER PVC INLINE DRAIN WITH 250 MM GRATE
- Item 604.0812--18 300 MM DIAMETER PVC INLINE DRAIN WITH 300 MM GRATE

DESCRIPTION

This work shall consist of furnishing and installing PVC inline drains in accordance with these specifications, the contract documents and standard sheets for field inlets only. Inline drain items are not to be used in any traffic rated applications. They must be capable of supporting H-25 loading unless otherwise noted in the contract documents.

MATERIAL

The specified inline drains shall be made using PVC pipe stock meeting all mechanical property requirements for fabricated fittings as described in the latest version of *ASTM F794 Standard for PVC Profile Gravity Sewer and Fittings*, and *ASTM F1336 Standard for PVC Gasketed Sewer Fittings*. Manufacturer shall use a thermo-molding process to reform the pipe to the required configuration.

Additional Materials shall conform to the requirements of the following:

Cast-In-Place Concrete, Class A	501
Frames, Grates and Covers	655
Smooth Interior Corrugated Polyethylene Culvert and Storm Drain Pipe	603
Concrete curing materials and admixtures	711

Elastomeric gaskets shall be in conformance with ASTM F477 Elastomeric Seals (Gaskets) for Joining Plastic Pipe.

Grates shall be made of cast or ductile iron. Metal used in grates manufacturing shall conform to ASTM A48 or ASTM A48M or ASTM A536. Buy America requirements will apply to the grates material.

CONSTRUCTION DETAILS

Excavation: All requirements as specified in Section 206 “Trench, Culvert and Structure Excavation” shall apply except as modified herein or as ordered by the Engineer.

Inline drains shall be installed vertically on a minimum of 150 mm of compacted fill as follows: For entering an existing line from a point other than the beginning, a tee fitting shall be affixed to the main HDPE line. For entering at the beginning of a drain line, an elbow fitting shall be affixed to the main HDPE line. In both cases, a vertical pipe riser of a specified diameter and of sufficient height shall be used to allow the grate to be installed at the required grade. HDPE pipe connection to the elbow or tee fitting drain shall be made with a belled stub and gasket providing a silt tight seal. A field connection using a gasket and bell combination is allowed. Drains will be connected with the appropriately sized Smooth Interior Corrugated Polyethylene Culvert and Storm Drain Pipe along the flow line.

Field cutting of the vertical riser to proper height is allowed. Use of a manufacturer supplied vertical riser extension shall be allowed to add height to the inlet drain as required.

A transition section plate shall be used to transition from the riser to the specified grate. Concrete support collar for the specified grate and for H-25 loading conditions shall be Portland Cement Concrete, Class A, meeting all requirements of Section 501, Section 502-3.01 and shall be cured using a white pigmented curing compound material in accordance with Section 711-05. For applications where the maximum load experienced by the inline drain structure is less than 500 lbs (*e.g. wheel load of residential lawn care equipment*) no concrete support collar is necessary.

Backfill: All units shall be backfilled in accordance to Section 203-3.15, Fill and Backfill at Structures, Culverts, Pipes, Conduits and Direct Burial Cables.

METHOD OF MEASUREMENT

Inline drains will be measured for payment by the number of units installed on an each basis.

BASIS OF PAYMENT

The unit price bid per unit shall include the cost of all labor, equipment and materials necessary to complete the installation in order to support the specified loading conditions including the PVC body, all necessary pipe connections and fittings, gaskets, transition section plate, poured in place concrete support collar (if applicable) and grate except the following:

Excavation - Payment will be made under Trench, Culvert and Structure Excavation.

Backfill- Backfill of PVC inline drains will be paid under item 203.07M.