

Special Specification 4111

Deck Drain System



1. DESCRIPTION

Furnish and install a deck drain system for the railroad underpass structure in accordance with details shown on the plans and the requirements of this specification.

2. MATERIALS

8 in. Semi-Circular Deck Drain. Deck drains consist of one-half round perforated corrugated galvanized metal pipe (8-in. nominal diameter) placed in a perforated galvanized metal bottom pan 9 1/8 in. wide and 1 in. deep. Fabricate the one-half round pipe and the pan of 16-gauge metal with a 1/8 in. thick end plate tack welded to the ends. Fit the downstream end of the pan with a stub to fit the outlet pipe that carries the water from the structure.

Perforate the one-half round in a row of approximately 3/8-in. x 9/16-in. slots along the bottom on each side and a row of approximately 3/8-in. x 3/4-in. slots about 1 to 2 in. above the bottom on each side and at the top of the one-half round, all at approximately 2 2/3-in. spacing. Perforate the bottom pan with approximately 3/8-in. x 3/4-in. slots along each side at the bottom of the turned up edges at about 2 2/3-in. spacing.

The base metal and zinc coating must conform to the requirements of AASHTO M 218, and the fabrication of the one-half round pipe must conform to AASHTO M 36.

Furnish PVC outlet pipe in accordance with Item 481, "Pipe for Drains".

Furnish pipe, aggregate, riprap and filter fabric for abutment underdrains in accordance with Item 556, "Pipe Underdrains".

Furnish cast-in-place or precast concrete outlet endwall. Concrete must be Class A Concrete.

3. CONSTRUCTION

Construct deck drains on the bridge deck as shown in the plans or as governed by this Specification. During the entire construction period, keep all ends capped or plugged. Construct PVC outlet pipes and abutment underdrains as shown in the plans. If precast concrete endwall is used, outlet pipe must be grouted and sealed into endwall opening with non-shrink grout.

4. MEASUREMENT

Work and accepted materials of "Deck Drain System" will be measured by the Lump Sum.

5. PAYMENT

The work performed and materials furnished and measured as provided under "Measurement" will be paid for at the unit price bid for "Deck Drain System" which price will be full compensation for furnishing and placing all materials; for all plugs, outlet stubs, and screens; and for all labor, tools, equipment and incidentals.