



**Material Required for One Type D Inlet Box**

Bar	No.	Size	Length
u	8	#4	8'-5"
u <sub>1</sub>	3	#4	12'-2"
u <sub>2</sub>	4	#4	10'-4"
Concrete - Class X or Precast		Cu. Yds.	1.2
Reinf. Bars		Lbs.	100
Grating		Sq. Ft.	11.0

**Material Required for One Type C Inlet Box**

Bar	No.	Size	Length
u	6	#4	8'-5"
u <sub>1</sub>	3	#4	10'-1"
u <sub>2</sub>	4	#4	8'-4"
Concrete - Class X or Precast		Cu. Yds.	0.9
Reinf. Bars		Lbs.	80
Grating		Sq. Ft.	7.3

**DESIGN NOTES**

For shoulders less than 4' in width, special details using other Standard Inlets and castings should be proposed.

All installations which will also require the placement of approach guardrail should be checked to see if special Approach Shoulder Pavement or Guardrail details will be required. STD 2324

Design notes will not appear in the contract plans.

**GENERAL NOTES**

When Inlet Box or Boxes are not required, surface of the shoulder pavement shall be finished to provide a smooth transition from back of the abutment to normal approach roadway shoulder.

See plans for location of bridge approach shoulder pavement.

Use Type C Inlet Box for 4' thru 6' shoulder widths; use Type D Inlet Box for 7' and wider shoulder widths.

For placement of approach shoulder pavement on existing construction substitute expansion anchor ties for tie bars. For non-rigid approaches, shoulder pavement will be as shown except omit tie bars in approach pavement.

The material for Pipe Drains...12" shall be either corrugated steel or aluminum alloy pipe.

The P.C. Concrete used in the shoulder slab shall meet the requirements of Section 408 of the Standard Specifications.

The lengths of #4 bars used in the approach shoulder pavement shall be as required to accommodate the length, width and skew of the slab.

Class X concrete or precast concrete shall be used for the inlet. Precast concrete shall be in accordance with Sections 505.01 thru 505.05 of the Standard Specifications except that the concrete strength shall be 4000 p.s.i. after 28 days.

All exposed edges of the inlet, except the upper perimeter, shall be beveled  $\frac{1}{4}$ ".

Shop drawings will not be required for precast Inlet Boxes.

A 3" deep sand bedding conforming to Article T03.01 (FA 1 or FA 2) shall be provided under full length and width of precast units, and all voids around the pipe drain entrance, both inside and outside, shall be sealed with mortar.

The grating shall seat firmly in the frame and steel grates shall be secured to the frame with a locking device as shown. Cast grates will not require the locking device.

Steel grating and frames shall conform to Article 710.04 of the Standard Specifications and shall be galvanized to AASHTO Specification M11 after fabrication.

Cast grating and frames shall conform to Article 710.17 of the Standard Specifications. Cast grating and frames shall not be galvanized.

Pipe drains shall be installed, measured and paid for in accordance with Section 607 of the Standard Specifications.

Metal End Sections shall be installed, measured and paid for in accordance with Section 511 of the Standard Specifications.

Bridge approach shoulder pavement will be measured in place and paid for in square yards as P.C. CONCRETE BRIDGE APPROACH SHOULDER PAVEMENT which shall include the cost of subgrade preparation, expansion anchor ties, reinforcement and joint fillers. In computing the area for payment, a deduction will be made for the area displaced by the inlet (1.2 Sq. Yds. Type C; 1.7 Sq. Yds. Type D).

The contract unit price "Each" for TYPE D INLET BOX STANDARD 2324 or TYPE C INLET BOX STANDARD 2324, in place, shall include the frames and grating, class X or precast concrete, reinforcement bars, excavation, bedding when required, and compacted backfilling.

The contract unit price "Each" for CONCRETE THRUST BLOCKS, in place, shall include excavation and compacted backfilling.

FOR INFORMATION ONLY