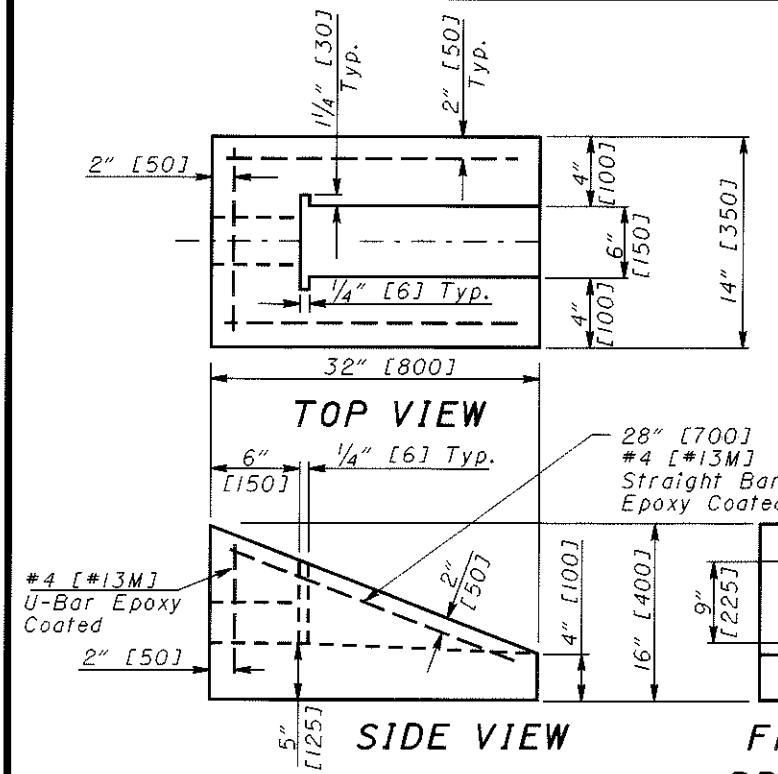
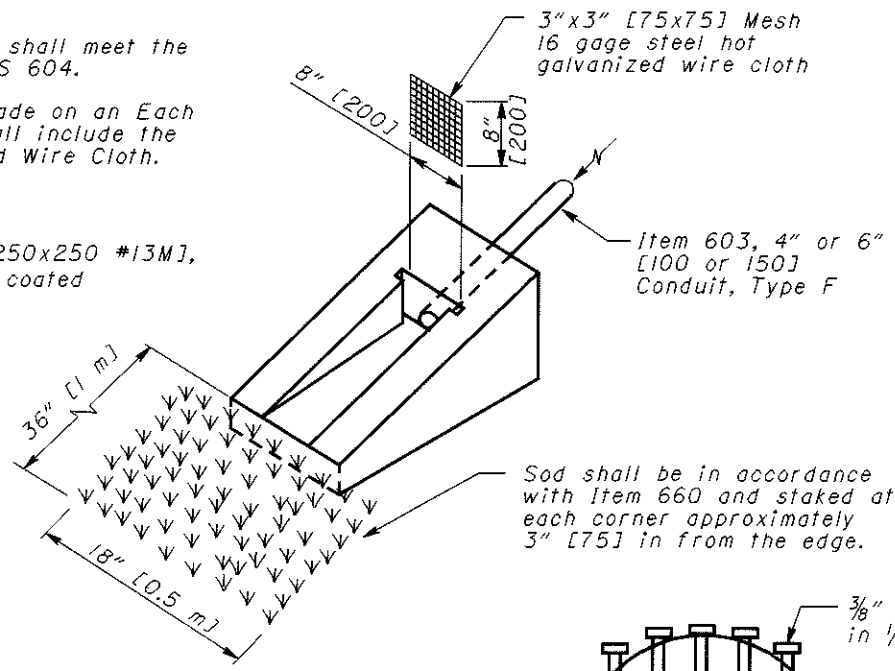


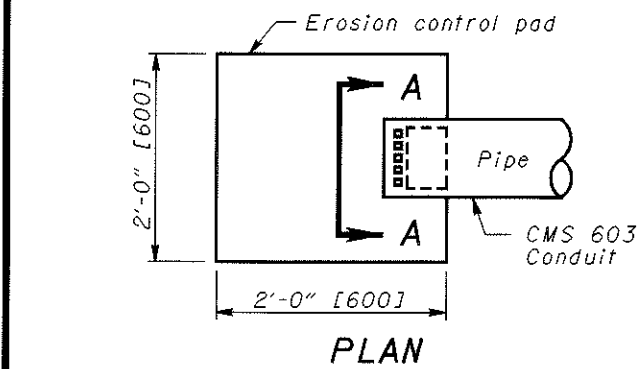
CONSTRUCTION METHODS



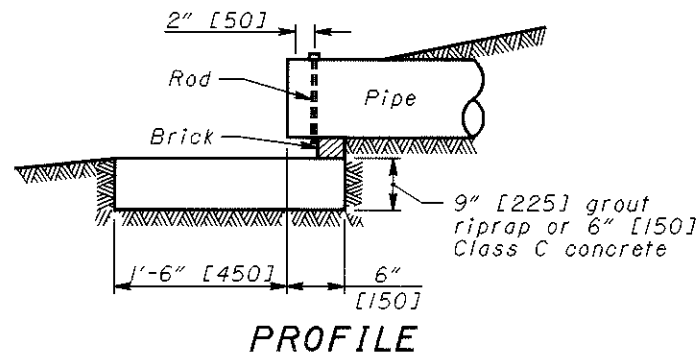
The concrete outlet shall meet the requirements of CMS 604.
 Payment shall be made on an Each basis. Payment shall include the cost of the Sod and Wire Cloth.



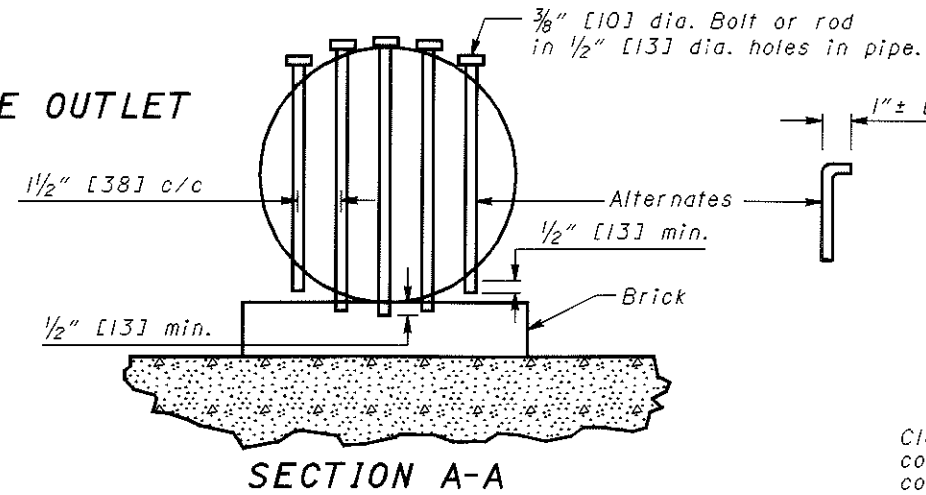
PRECAST REINFORCED CONCRETE OUTLET



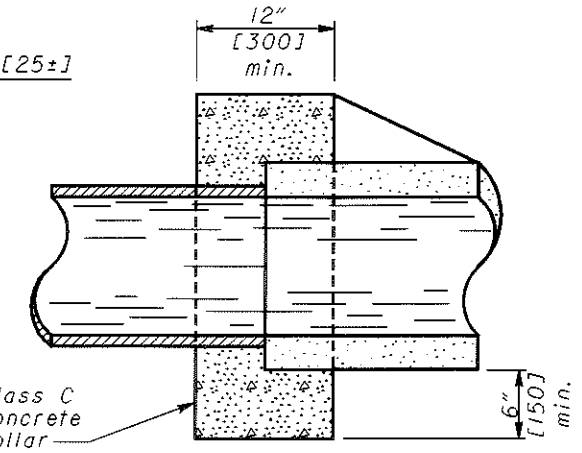
EROSION CONTROL PAD AND ANIMAL GUARD FOR OUTLET PIPE



PROFILE



CONDUIT SIZE	4" [100]	6" [150]	8" [200]	10" [250]	12" [300]	15" [375]	18" [450]
No. of Bolts	2	3	5	6	7	9	11



MASONRY COLLAR

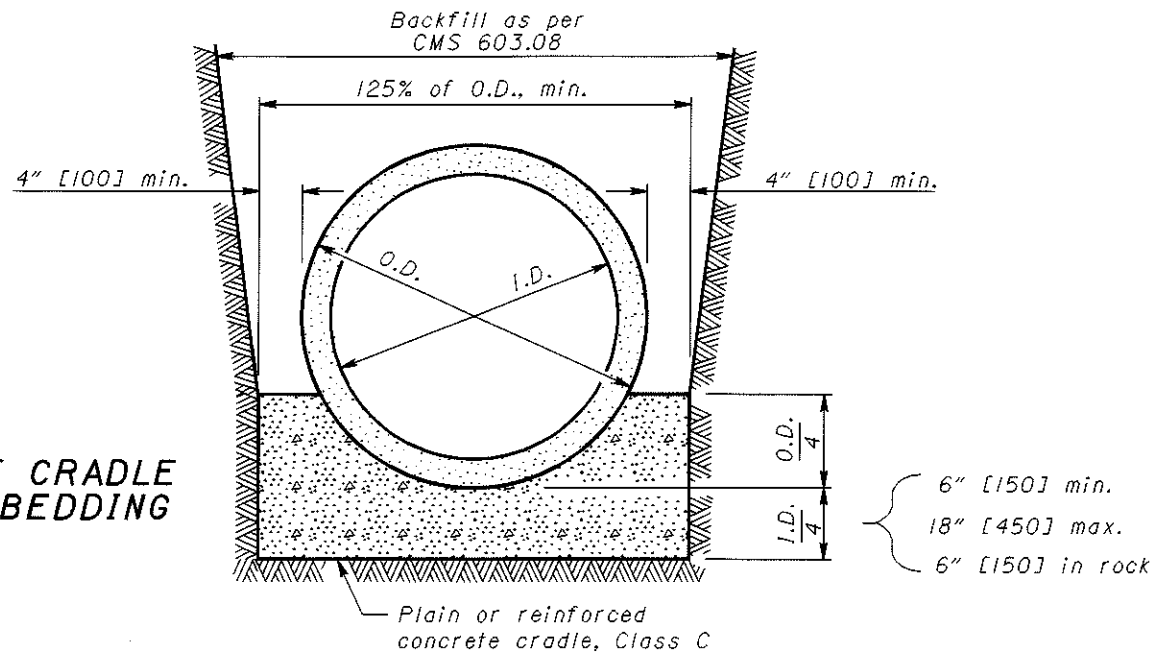
NOTES

MASONRY COLLARS: A masonry collar shall be provided where plans require that a pipe extension be joined to the end of an existing pipe with a butt joint. The cost shall be included in the unit price bid for the new conduit.

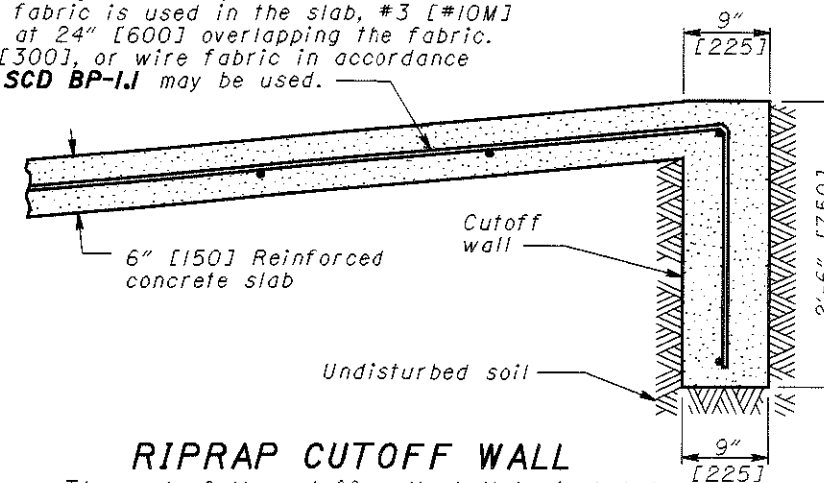
EROSION CONTROL PAD AND ANIMAL GUARDS: These items shall be provided at the outlet end of all farm drains except where they outlet into a drainage structure. The steel bolts or rods for the animal guard shall be galvanized per CMS 710.06. In lieu of drilling or punching the 1/2" [13] diameter holes into the pipe, a metal collar meeting all of the above requirements may be clamped onto the pipe if approved by the Engineer.

PAYMENT: for the erosion control pads and animal guards shall be included in the unit price bid for **Item 603 - inches [mm] Conduit, Type** .

CONCRETE CRADLE CLASS A BEDDING



Reinforcing steel as per CMS 601.04. If wire fabric is used in the slab, #3 [#10M] bars at 24" [600] overlapping the fabric. 12" [300], or wire fabric in accordance with **SCD BP-1.1** may be used.



RIPRAP CUTOFF WALL

The cost of the cutoff wall shall be included in the unit price bid for Item 601 Riprap using 6" [150] reinforced concrete slab.

THIS DRAWING REPLACES DM-1.1M DATED 10-21-97.

STANDARD ROADWAY CONSTRUCTION DRAWING
OUTLETS, DRAINS AND SEWERS
 NUMBER **DM-1.1**

ROADWAY ENGINEERING SERVICES

All metric dimensions (in brackets []) are in millimeters unless otherwise noted.

STDS. ENGR. D. Focke
 DRAWN D. Focke

REVISIONS

OHIO DEPARTMENT OF TRANSPORTATION
 Larry T. Sutherland
 ROADWAY DESIGN ENGINEER

DATE