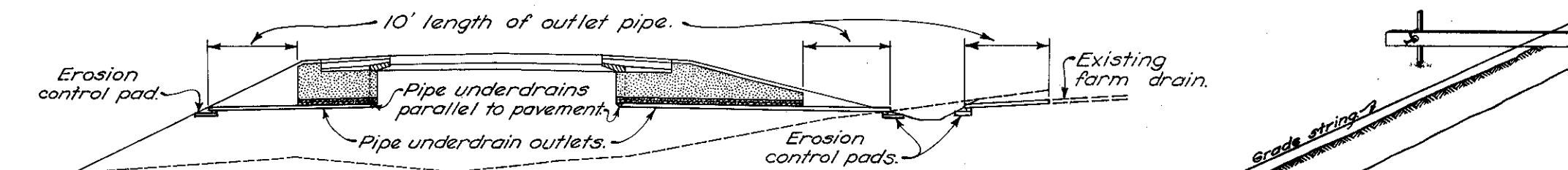
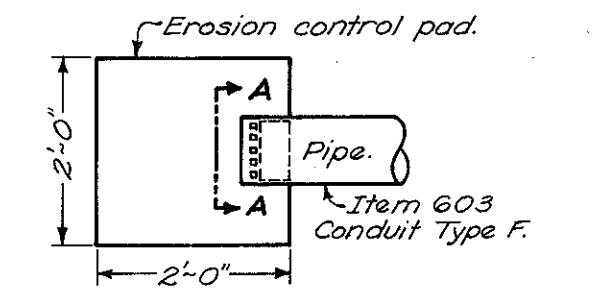


CONSTRUCTION METHODS

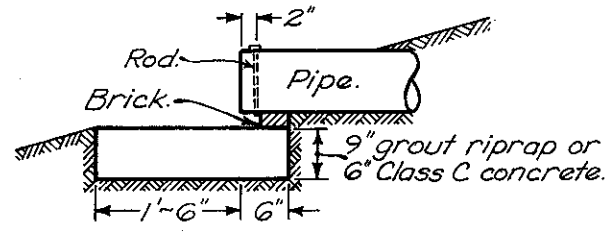
NOTES



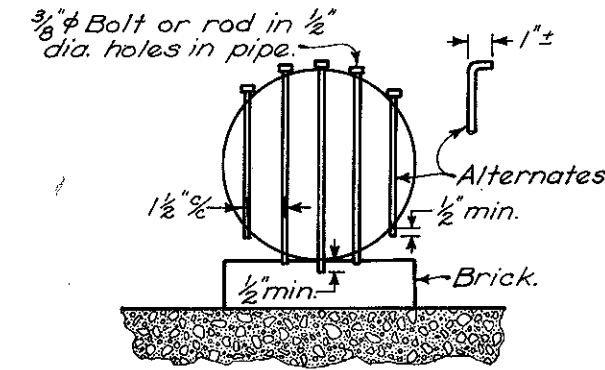
UNDERDRAIN OUTLET SECTION



PLAN



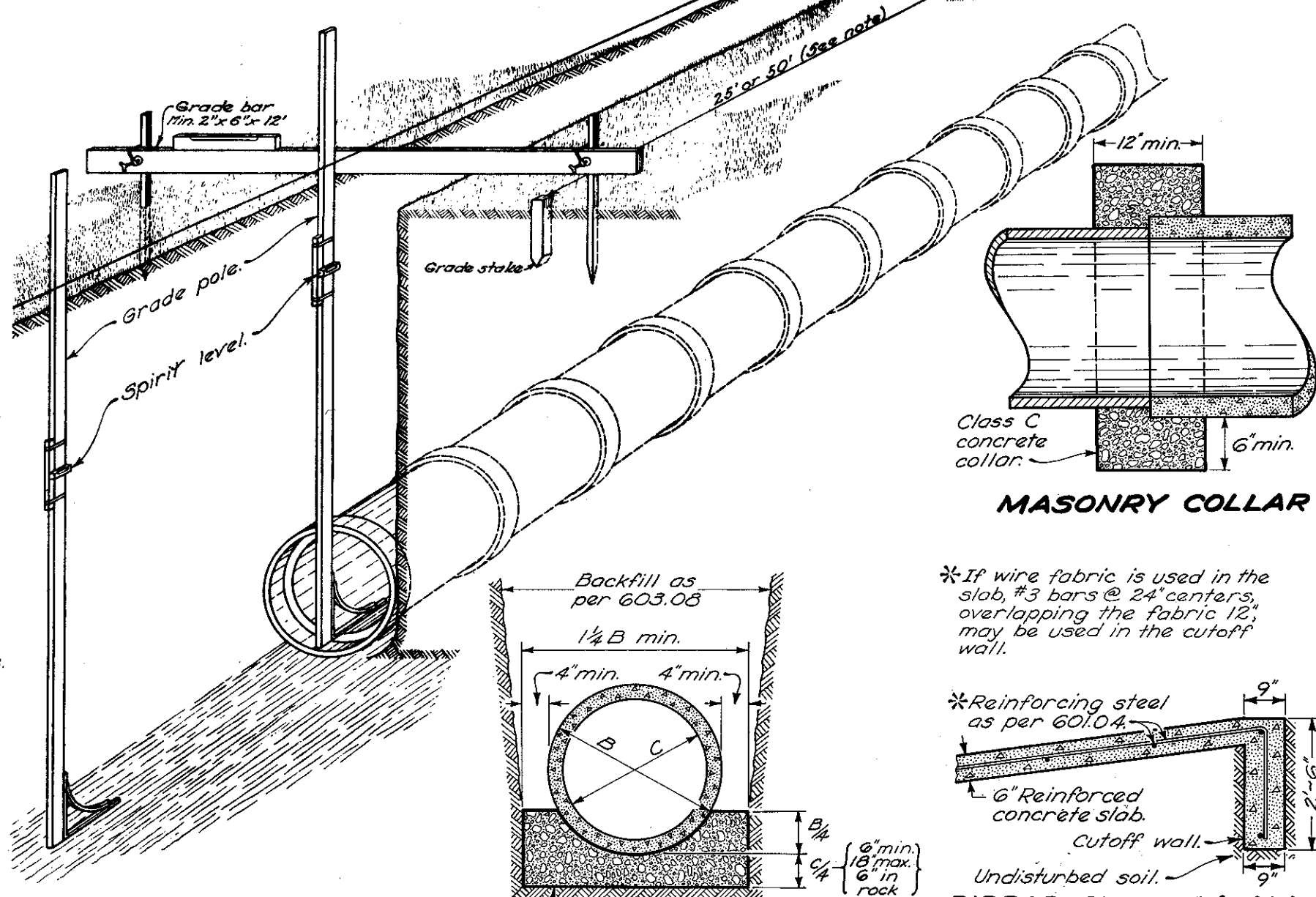
PROFILE



SECTION A-A

Conduit Size	4"	6"	8"	10"	12"	15"	18"
No. of Bolts	2	3	5	6	7	9	11

ANIMAL GUARD AND EROSION CONTROL PAD FOR OUTLET PIPE

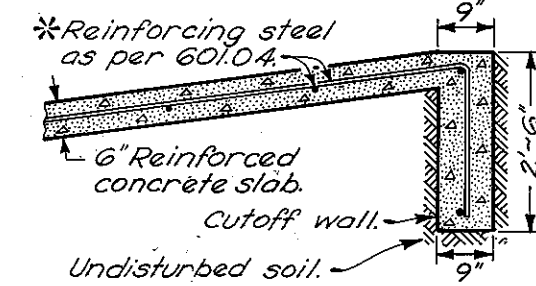


LAYING PIPE

CONCRETE CRADLE CLASS A BEDDING

MASONRY COLLAR

*If wire fabric is used in the slab, #3 bars @ 24" centers, overlapping the fabric 12", may be used in the cutoff wall.



RIPRAP CUTOFF WALL
Cutoff wall shall be included in the price bid for Item 601 Riprap-6" Reinforced Concrete Slab.

GRADE STAKES shall be set at the following intervals:
For grades less than 0.70% ~ 25 ft.
For grades of 0.70% and over ~ 50 ft.

GRADE POLE shall be a straight pole dressed with corners rounded, size depending on length but approximately 1" x 2". The pole shall be equipped with a metal bracket on the bottom with a projecting length of 12". Notches shall be cut on the pole for the depth of the flowline below the grade string and for the depth of trench. A spirit level shall be used on the pole to determine when the pole is vertical.

ALTERNATE METHODS: The Engineer may approve other methods of determining alignment and gradient of pipe lines if the Contractor can demonstrate that the same degree of accuracy can be obtained as can be obtained by use of the method shown on this drawing.

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

EROSION CONTROL PADS AND ANIMAL GUARDS shall be provided at the outlet end of all pipe underdrains and farm drains except when they outlet into a drainage structure.

The steel bolts or rods for the animal guard shall be galvanized per 710.10. In lieu of drilling or punching the 1/2" diameter holes into the pipe, a metal collar meeting all of the above requirements, may be clamped on the end of the pipe, if approved by the Engineer.

Payment for the erosion control pads and the animal guards shall be included in the price bid for Item 603 - Conduit, Type F.

BUREAU OF ROADWAY DESIGN
OHIO DEPARTMENT OF TRANSPORTATION

DRAINS AND SEWERS

STANDARD CONSTRUCTION DRAWING
APPROVED *E. J. Schaefer* ENGR., R.D.

DATE
6-1-65
6-13-69
7-26-76

MC-4