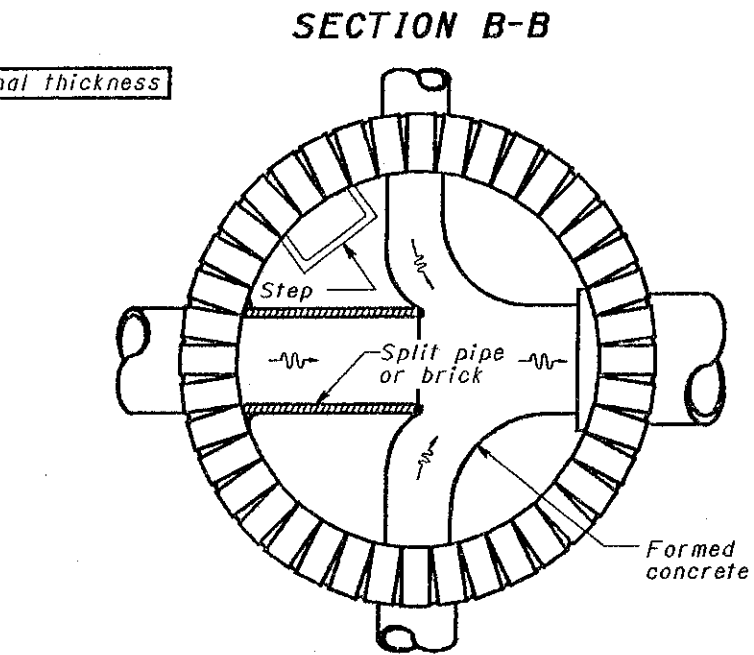
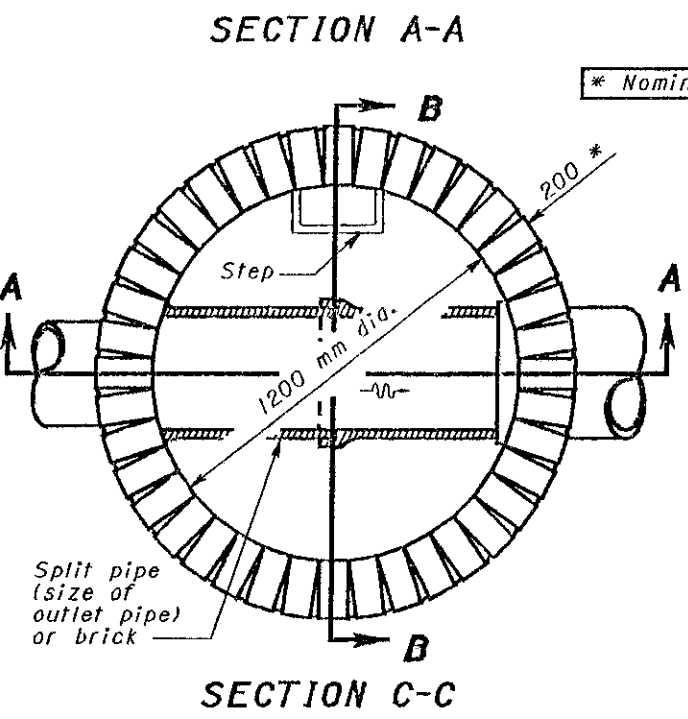
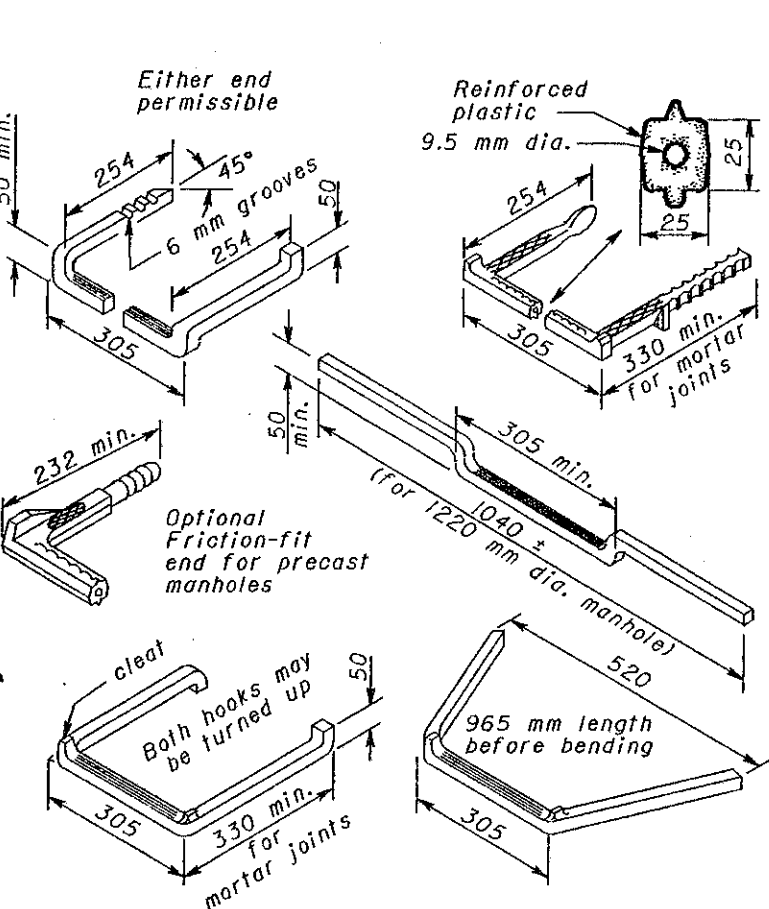


SECTION A-A: Precast or cast-in-place concrete. Bottom for 750 mm sewer on SCD MH-1.3M may be used.

SECTION B-B: Location of station and offset for manhole.

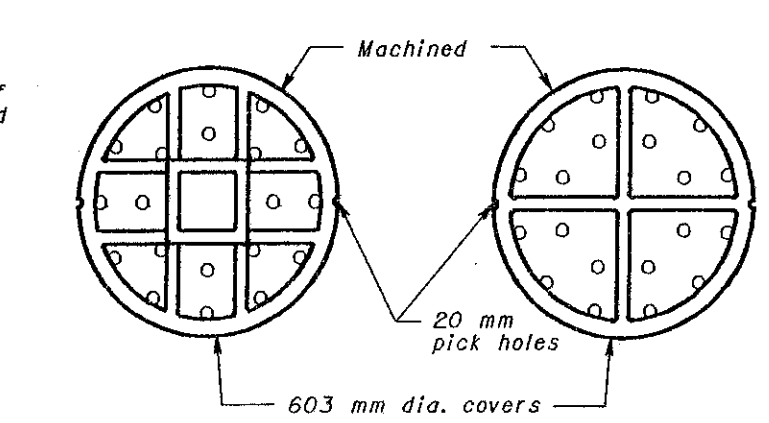


SECTION BELOW SPRING LINE SHOWING METHOD OF TURNING SIDE DRAINS

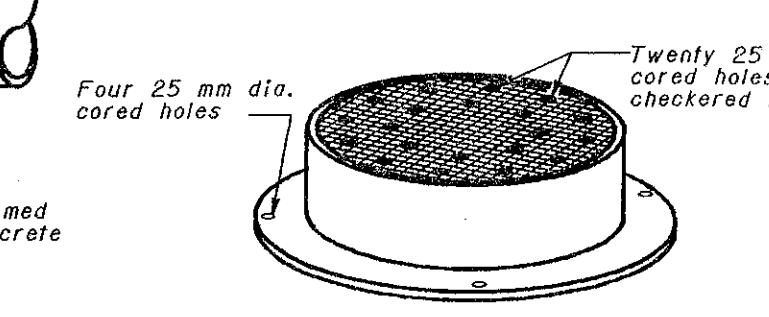


Steps shall have a minimum cross sectional dimension of 25 mm for ferrous metal and 19 mm for aluminum.

**STEP DETAILS**



HEAVY DUTY COVERS - BOTTOM VIEW LIGHT DUTY COVERS - BOTTOM VIEW



FRAME & COVER

**NOTES**

**CONSTRUCTION:** Manhole No. 1 is for sewers 750 mm diameter or less. The design shown is for brick construction with every sixth course a stretcher course. The 150 mm bottom may be precast or cast-in-place concrete. The bottom channel section shall be built with concrete and lined with split pipe or brick except curved channels may be formed in the concrete.

Precast solid concrete radial blocks or cast-in-place concrete reinforced with #16M bars on 300 mm centers both vertically and horizontally, may be used with a wall thickness of 150 mm or greater. Precast manholes detailed on SCD's MH-1.2M or MH-1.3M may be used in lieu of the design shown hereon unless otherwise specified by the plans.

**FRAME AND COVER:** The frame and cover shall be of heavy design (215 kg min. total mass) when the manhole is placed within the limits of the pavement or shoulder. Otherwise, the light design (124 kg min.) may be used. Bearing areas shall be finished smooth and fitted so as to provide a firm and even seat for all portions of the cover in the frame. Each cover shall seat in its frame without rocking and shall be marked as a matched frame and cover before delivery to the project. The base of the frame shall be set in a full bed of Portland cement mortar and adjusted to conform to the finished pavement or shoulder elevation and slope. Castings meeting CMS 604 requirements and designed essentially the same and equally as strong as those shown hereon shall be provided.

**STEPS:** Steps shall conform to the material requirements of CMS 604. All steps shall have a depressed tread or a 13 mm minimum cleat height at the ends. Steps installed in fresh concrete shall be embedded to a minimum depth of 100 mm. Steps installed in mortar joints shall be embedded to a minimum depth of 175 mm. Friction-fit steps meeting the requirements of CMS 711.31 with a rebar may be used in precast manholes. The receiving holes for friction-fit steps shall not penetrate the manhole wall.

The Engineer may require the contractor to test load a maximum of one step per manhole to a proof load of 1780 N in direct pull. The equipment and method used shall meet the approval of the Engineer. If the selected step fails the pullout test, the remaining steps in that manhole shall also be tested. All steps not passing the pullout test shall be removed and a new step installed and tested to the satisfaction of the Engineer. Cost of testing shall be incidental to the unit price bid for the manhole.

**DROP PIPE:** When specified on the plans, the drop pipe shall be constructed as shown on SCD MH-3.1M.

**SANITARY SEWER:** Covers shall be without the pick and vent holes shown hereon and shall include a sealing gasket affixed to the bearing surface. Bolt-down covers shall not be used unless specified in the plans.

All dimensions are in millimeters unless otherwise noted.



This Drawing Replaces MH-1.

OHIO DEPARTMENT OF TRANSPORTATION	
<b>MANHOLE No. 1</b>	DATE 9-6-95 10-21-97
STANDARD CONSTRUCTION DRAWING <b>MH-1.1M</b>	APPROVED: <i>Roy J. Sullivan</i>