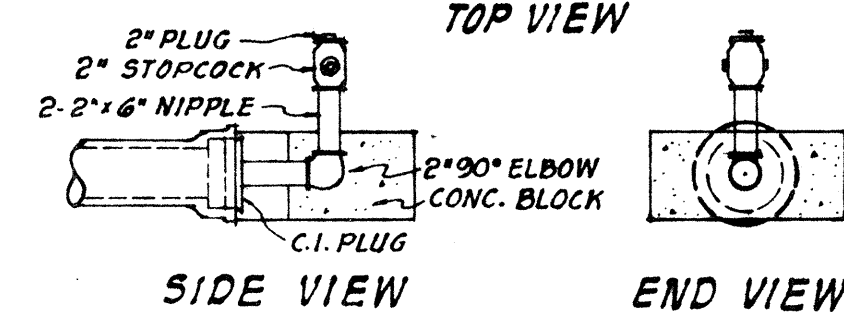
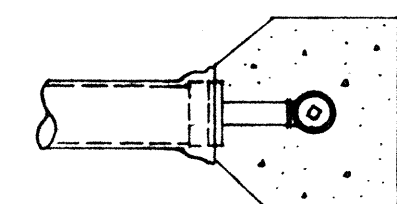
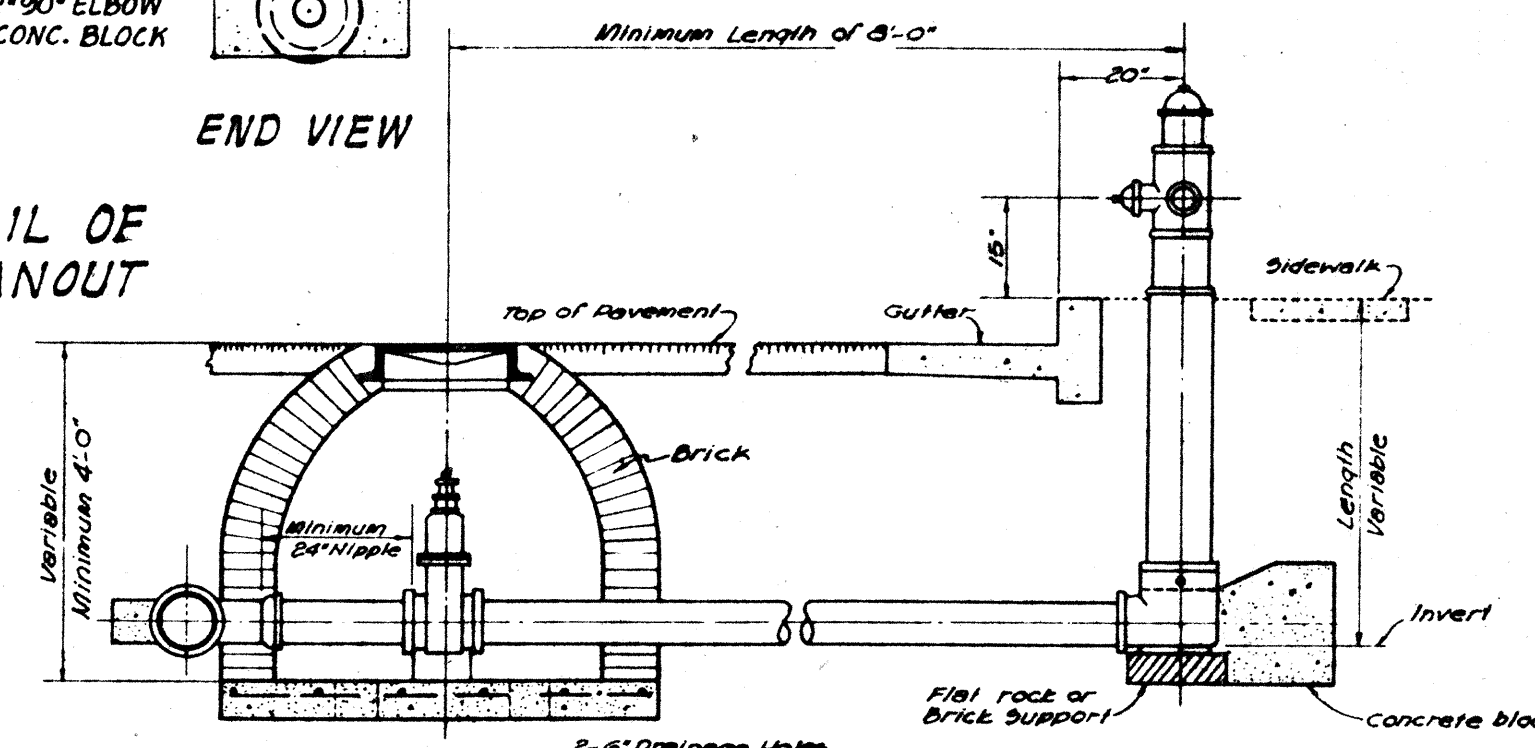
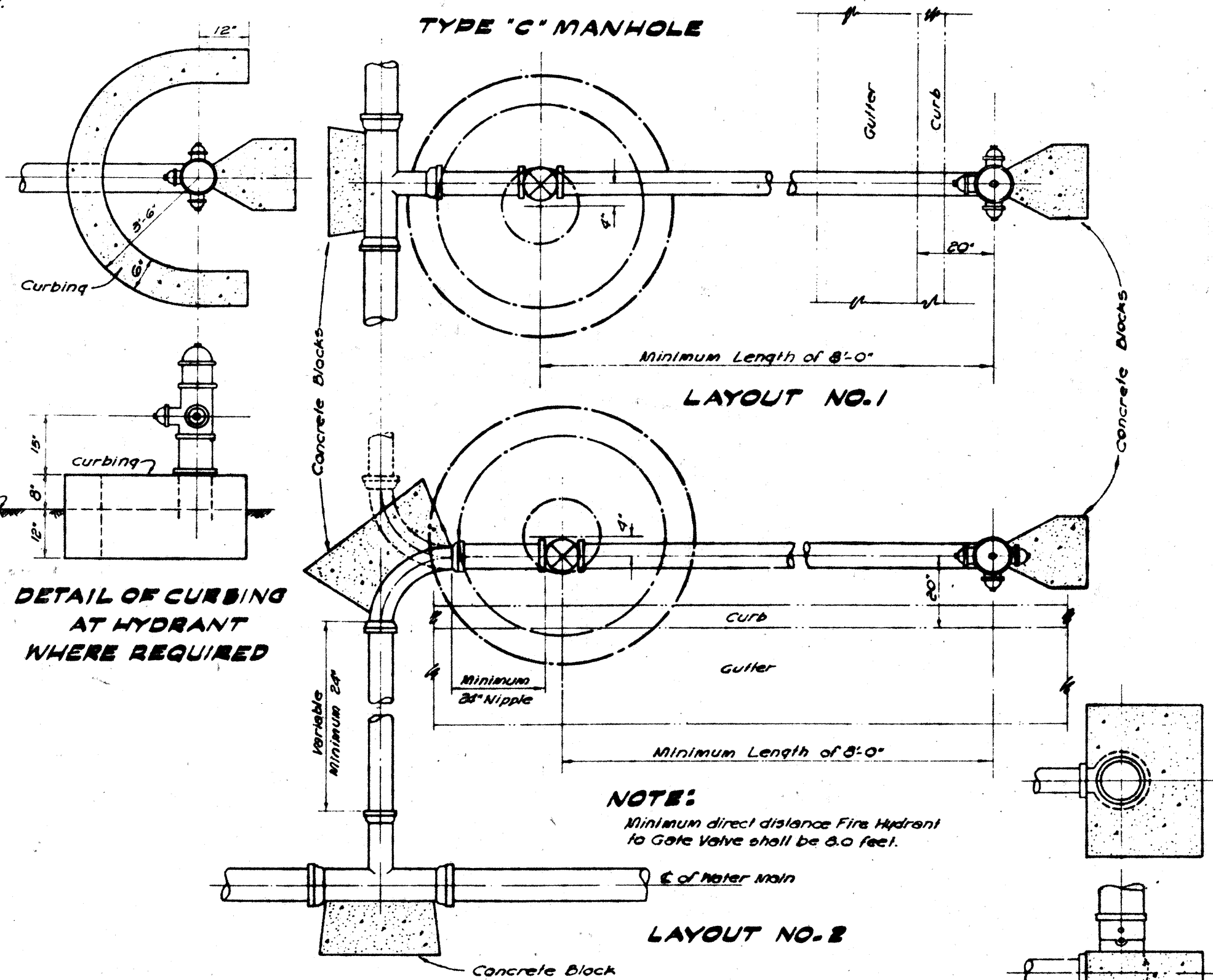




DETAIL OF CLEANOUT



TYPE 'C' MANHOLE

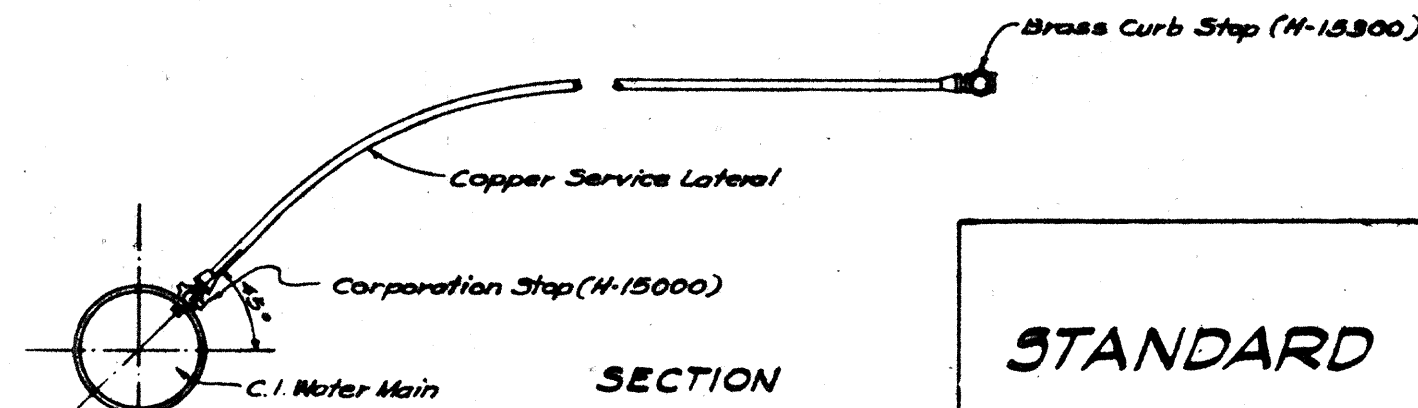


NOTE: Minimum direct distance Fire Hydrant to Gate Valve shall be 5.0 feet.

LAYOUT NO. 2

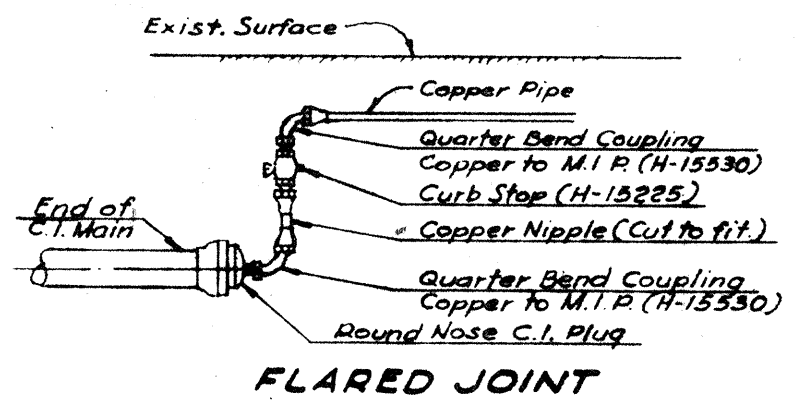
CONCRETE BLOCK FOR MATHEWS HYDRANT ONLY

STANDARD FIRE HYDRANT LAYOUT

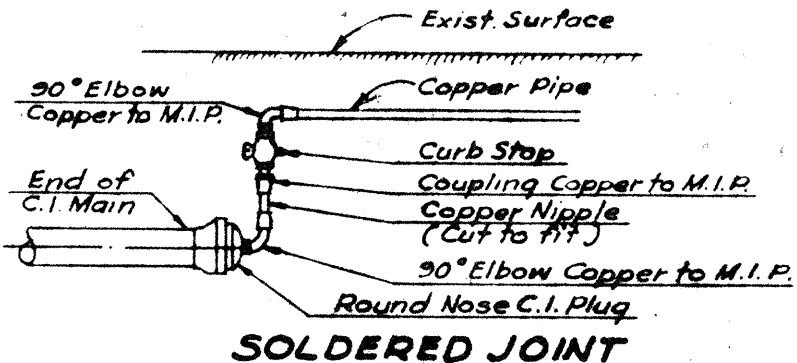


TYPICAL CONNECTION FOR COPPER SERVICE LATERALS

Division Engineer



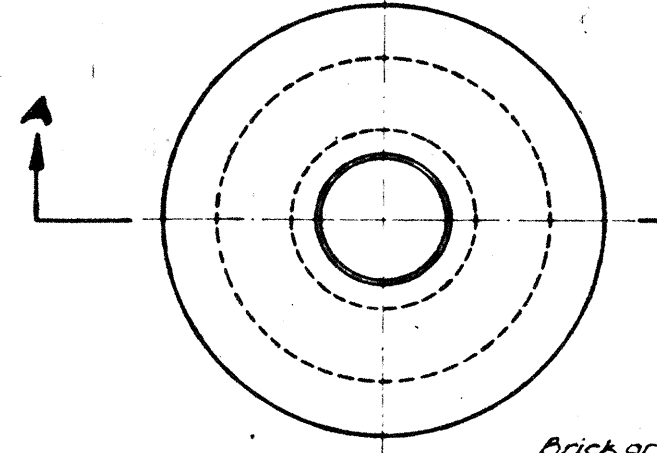
FLARED JOINT



SOLDERED JOINT

SERVICE LATERAL CONNECTION AT END OF LINE

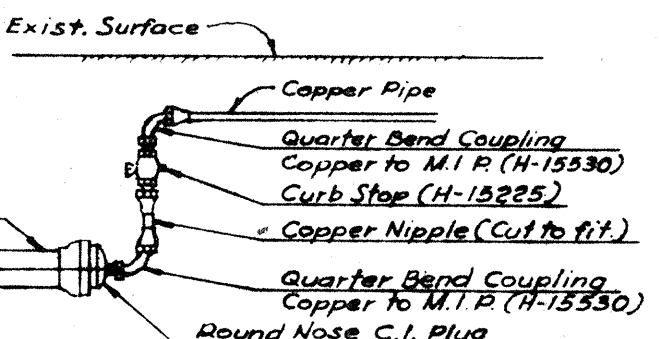
STEEL DETAIL IN BOTTOM SLAB



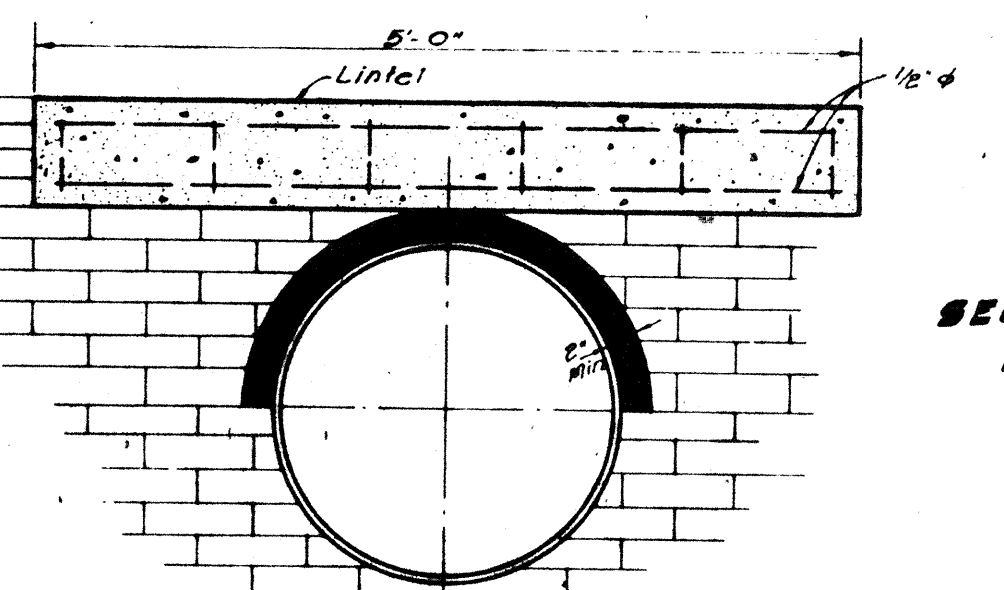
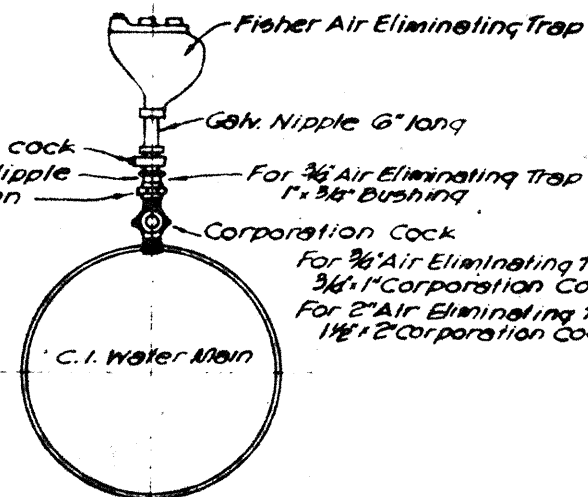
PLAN TYPES 'B' AND 'C' MANHOLES

TYPE 'B' 4'-6" DIA. (FOR 18" VALVE)
TYPE 'C' 4'-0" DIA. (FOR 6" & 8" VALVES)

DETAIL OF RING

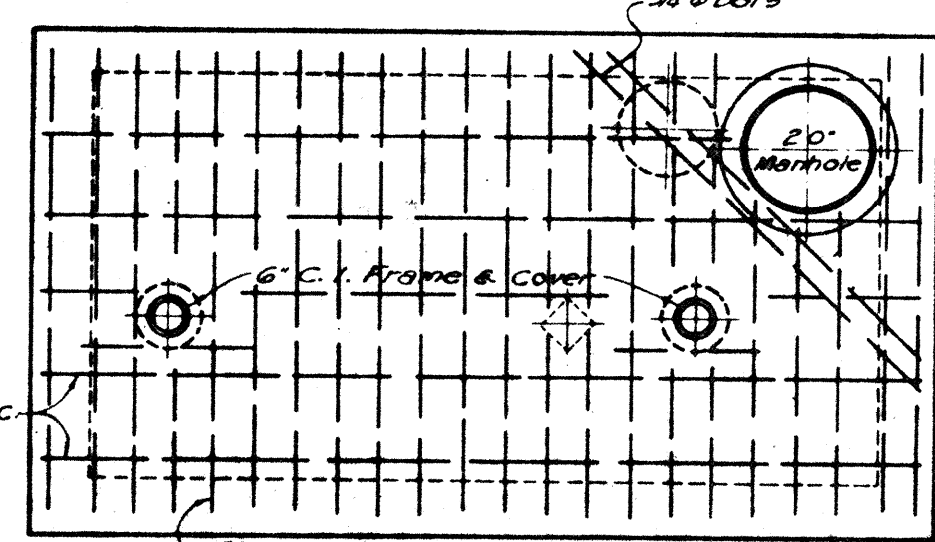


DETAIL OF CONNECTION FOR FISHER AIR ELIMINATING TRAP

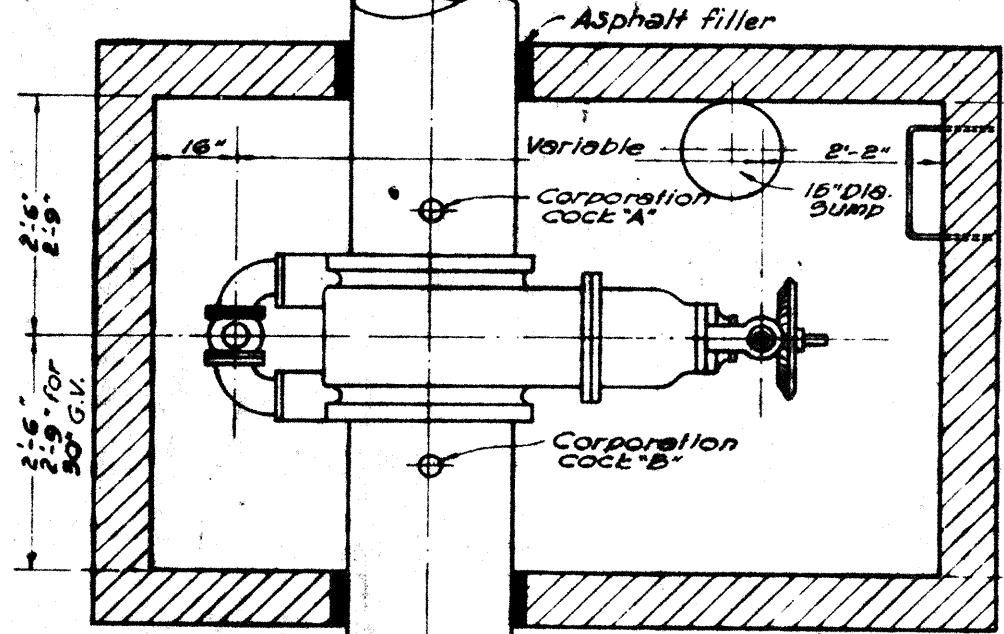


SECTION THRU LINTEL

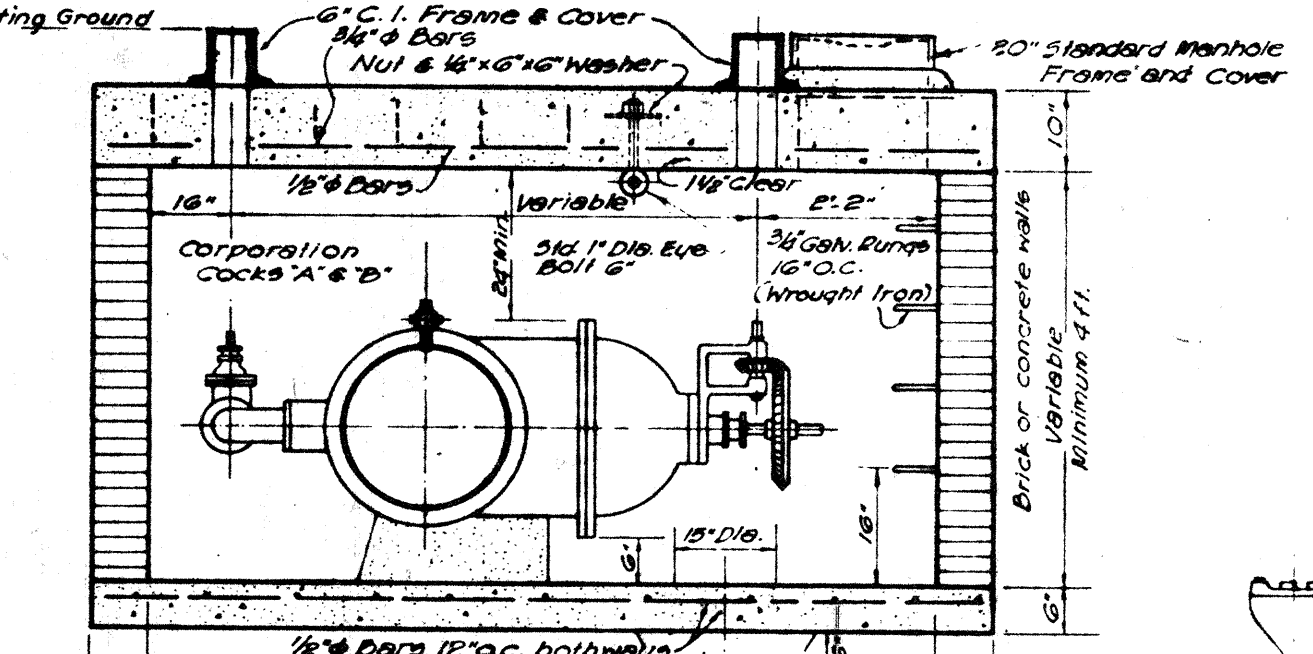
DETAIL OF LINTEL & ASPHALT FILLER



PLAN OF TOP

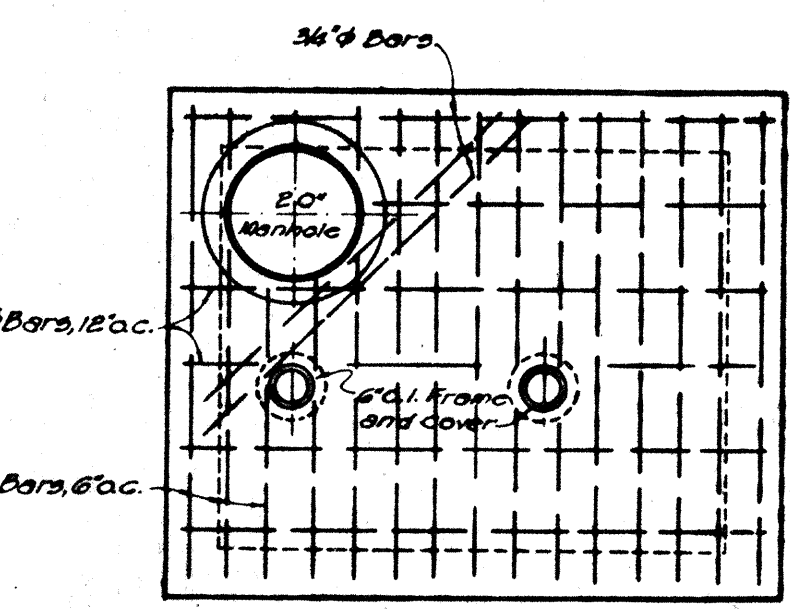


SECTION

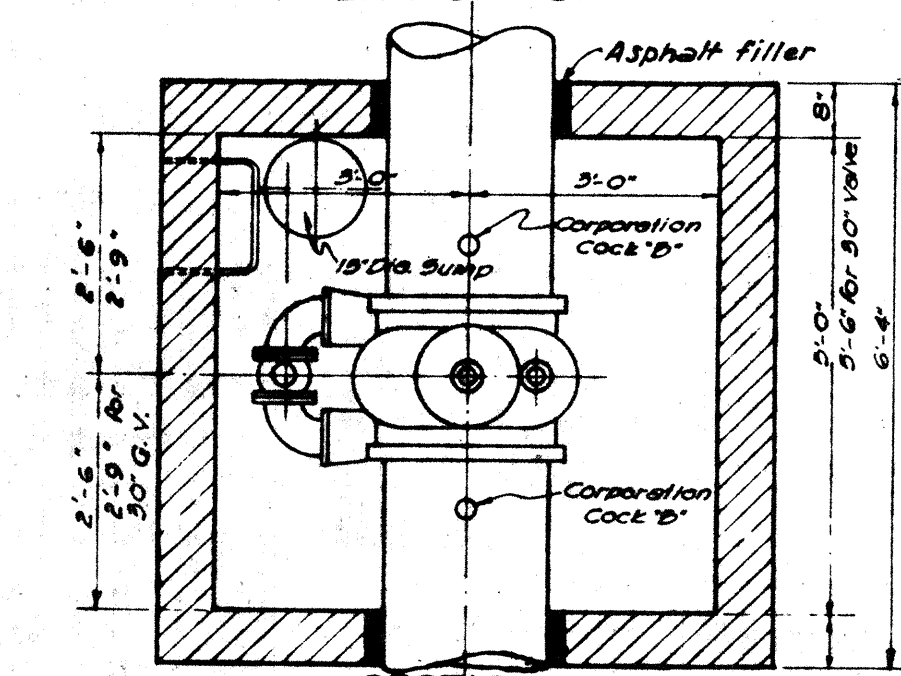


SECTION

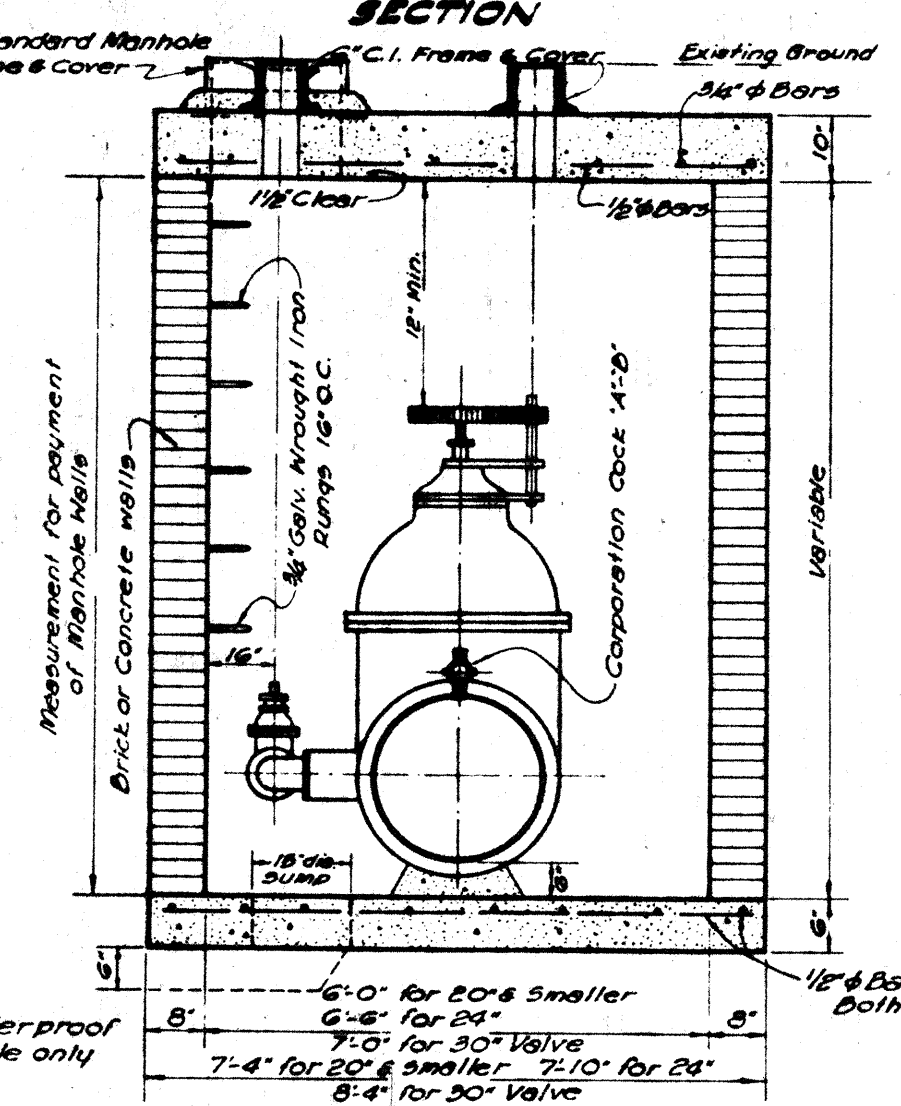
TYPE 'A' MANHOLE FOR BEVEL GEARED GATE VALVES



PLAN OF TOP



SECTION



SECTION

TYPE 'A' MANHOLE FOR SPUR GEARED GATE VALVES



BAR BENDING DETAIL

STANDARD DETAILS

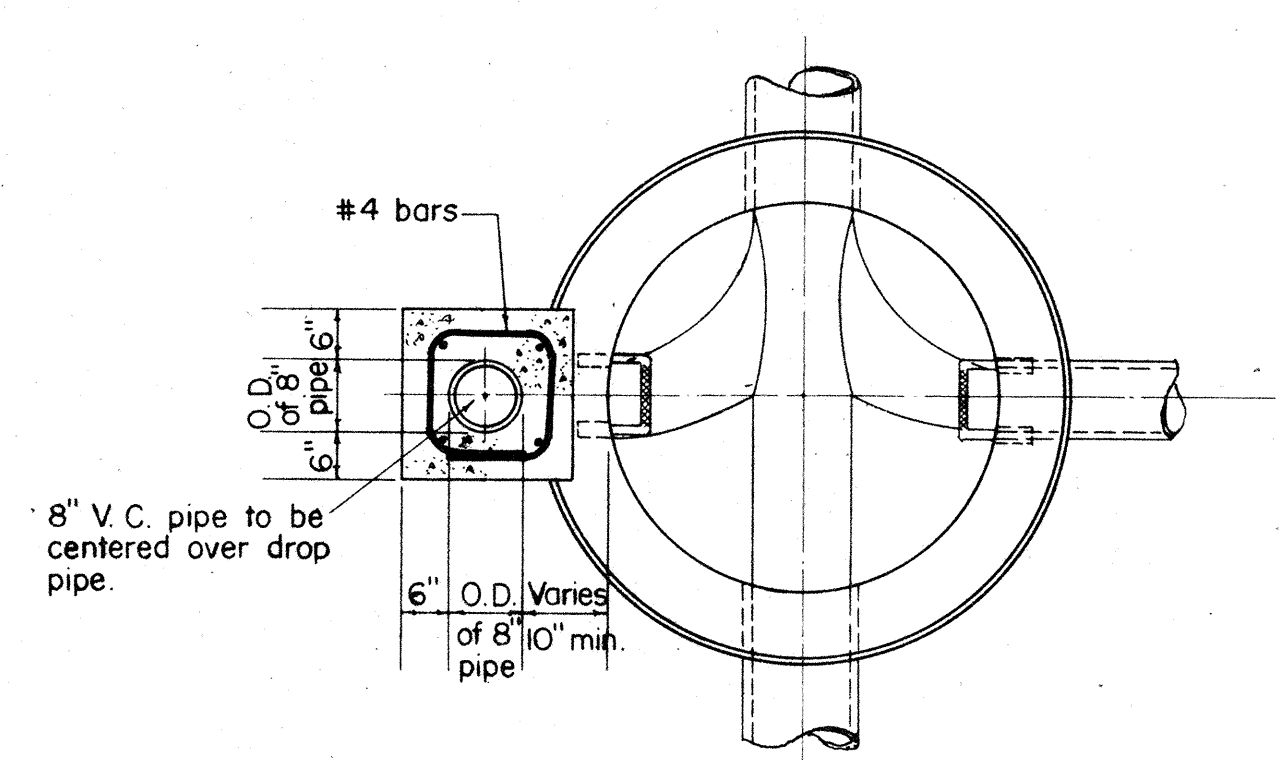
APPROVED: [Signature]
SCALE: [Blank]
DATE: OCT. 31, 1958
FILE NO. 1367
POCKET FOLDER NO. 10
ENGINEER: W.S.F.
DRAWING NO. 1367

BOARD OF WATER SUPPLY
HONOLULU, T.H.
(TERRITORIAL HIGHWAY DEPARTMENT)
TERRITORY OF HAWAII

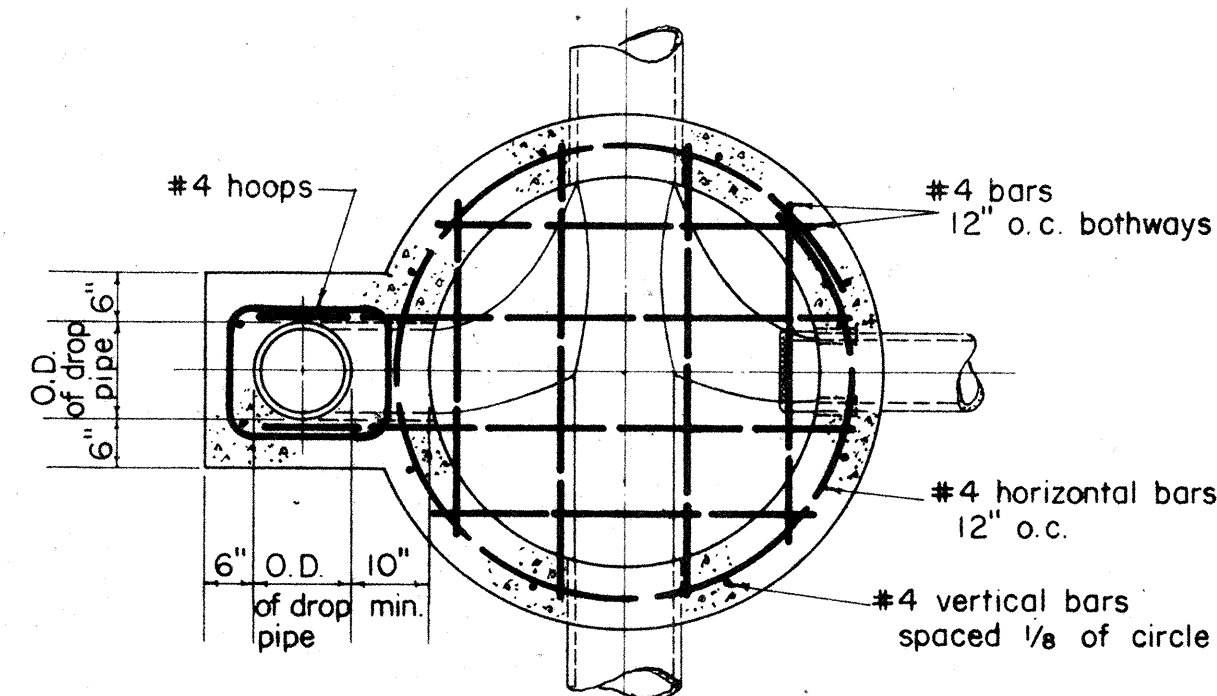
MOANALUA ROAD
PROJ. NO. S-0720(1)
UNIT 2

May 1958

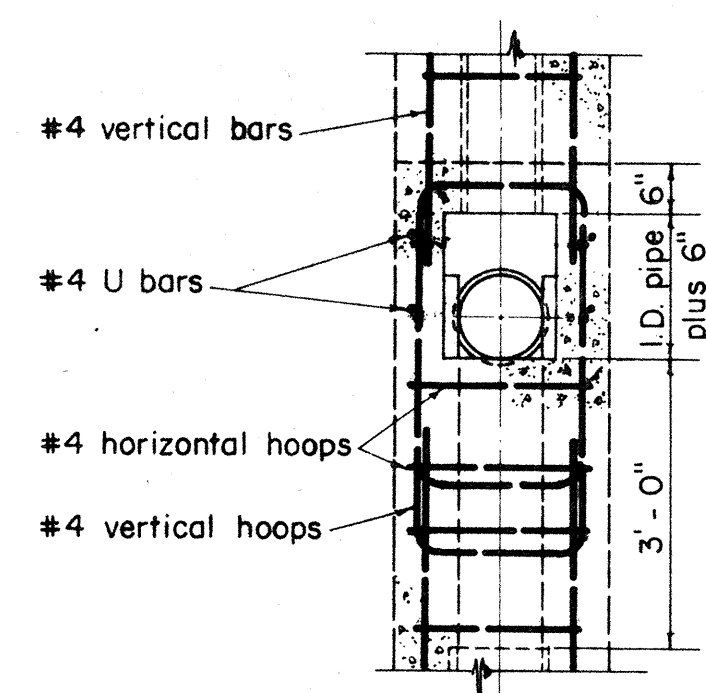
FED. ROAD DIST. No.	STATE	FED. AID PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
HAWAII	HAW.	S-0720(1) UNIT 2	1958	32	100



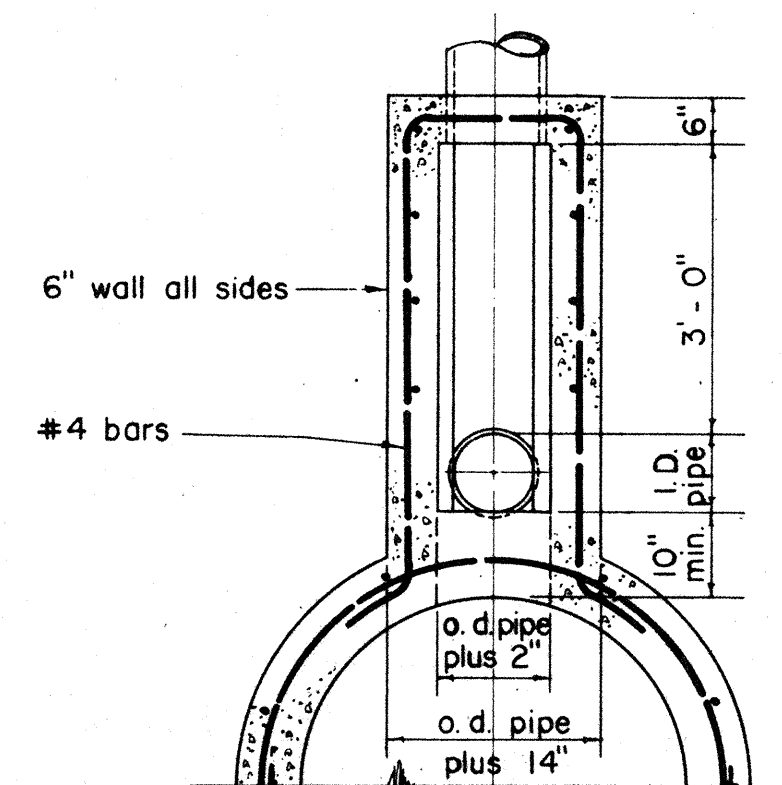
SECTION A-A



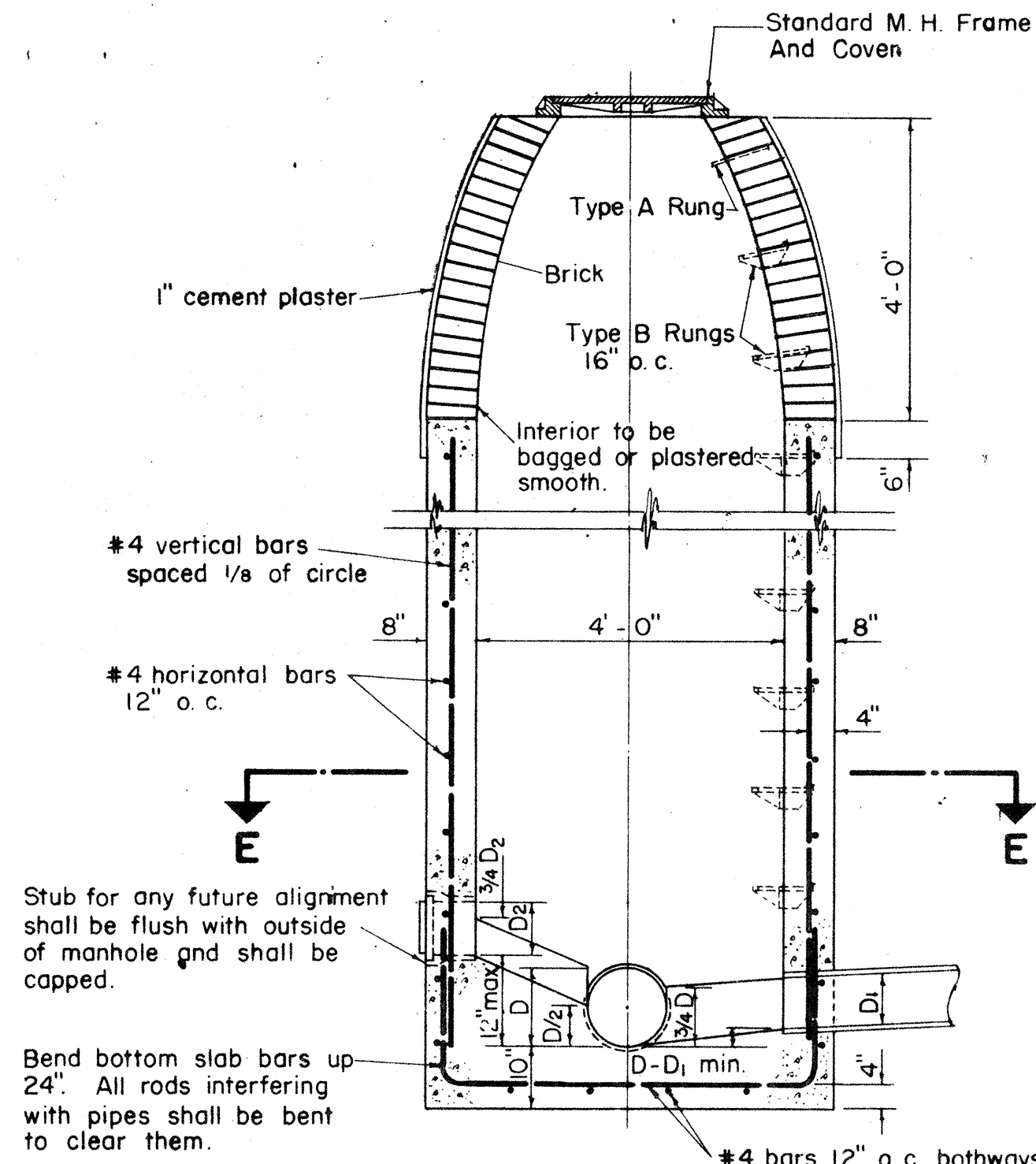
SECTION B-B



SECTION C-C

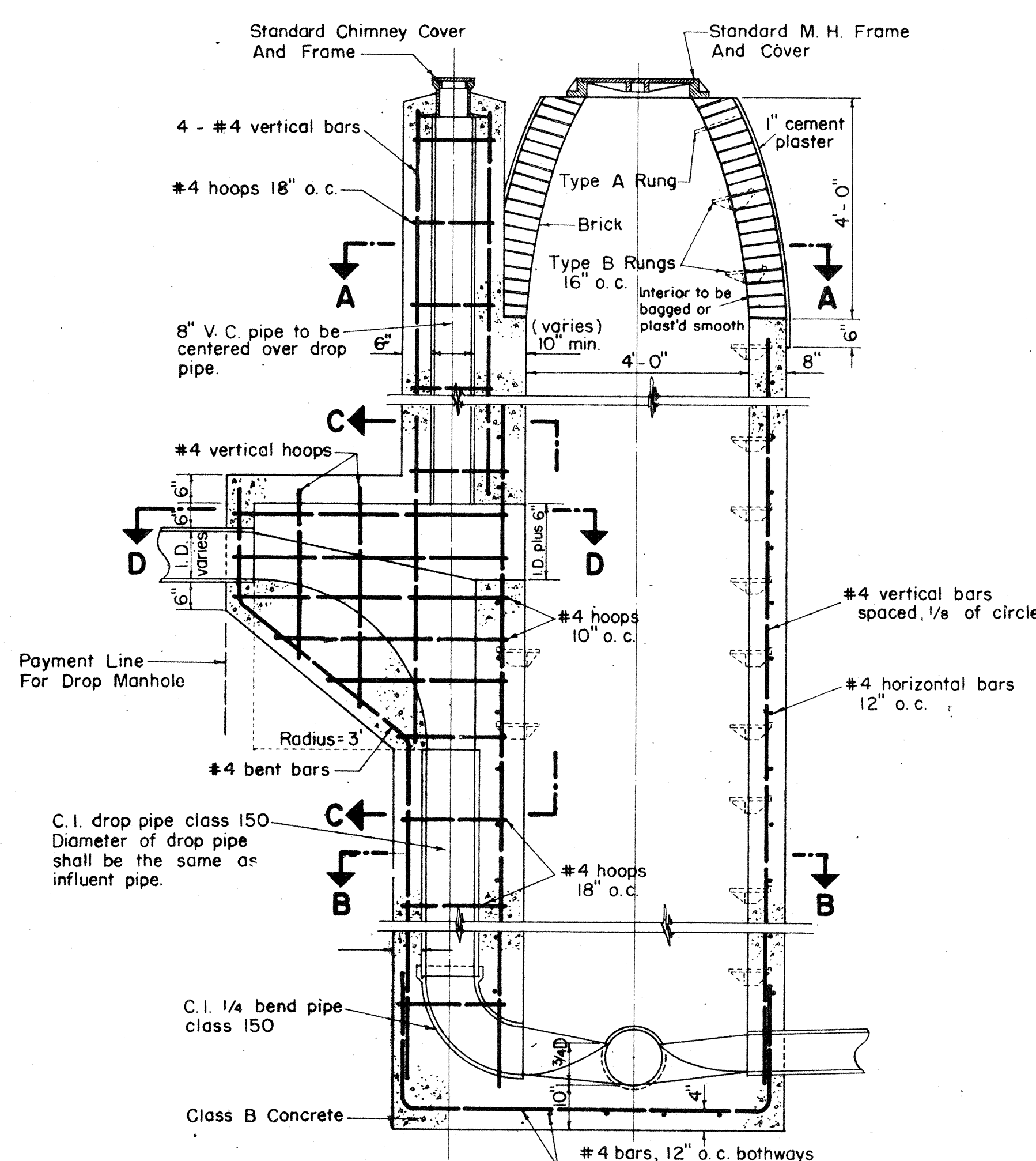


SECTION D-D



PLAIN MANHOLE

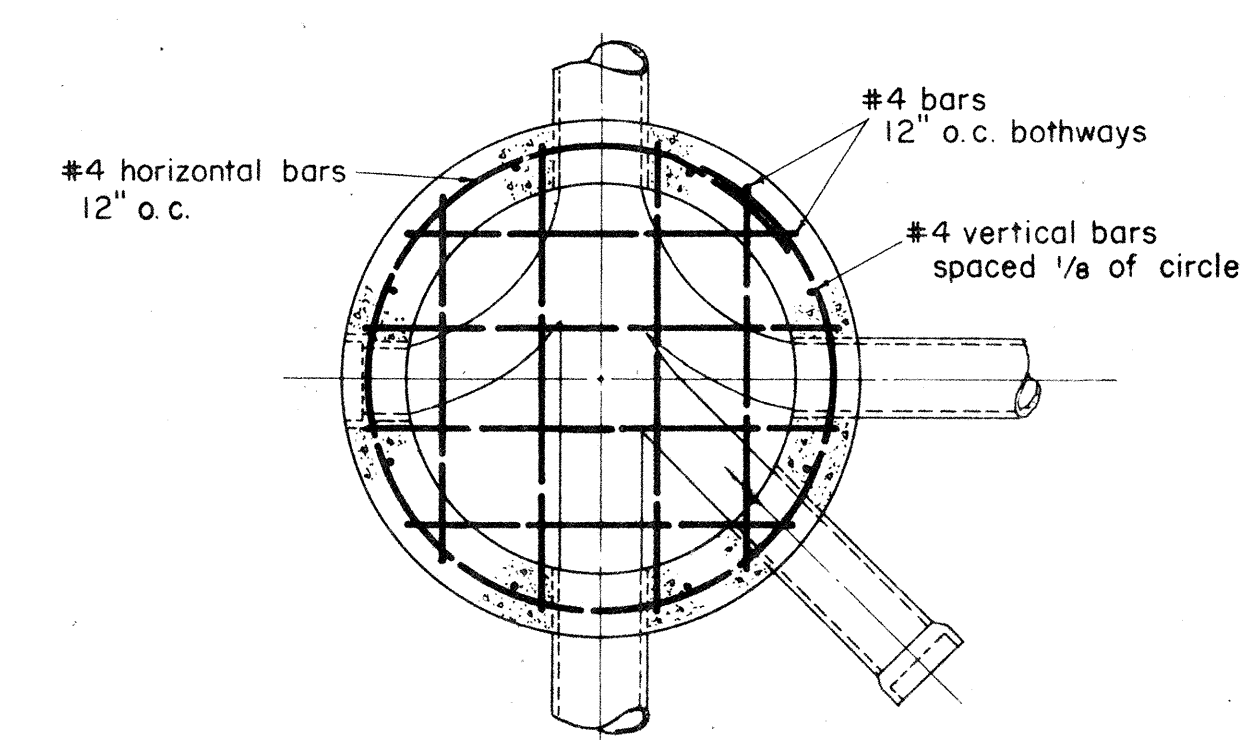
Scale: 1/2" = 1'-0"



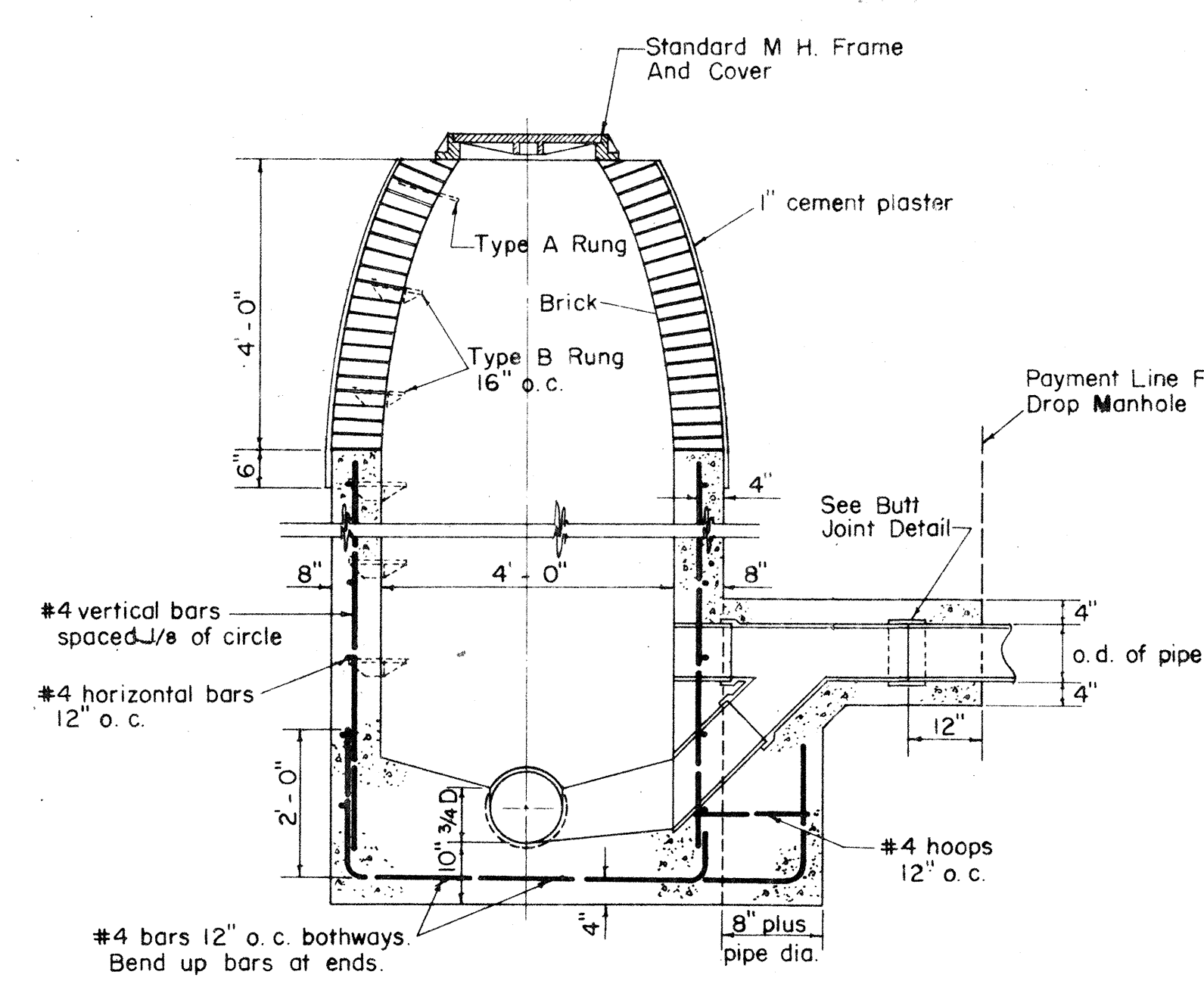
(FOR DROPS OVER 5.0 FEET)
DROP MANHOLE

Scale: 1/2" = 1'-0"

NOTE:
2" Minimum Cover
On Reinforcing Steel



SECTION E-E



(FOR DROPS UNDER 5.0 FEET)
(SHALLOW) DROP MANHOLE

Scale: 1/2" = 1'-0"

NOTE:

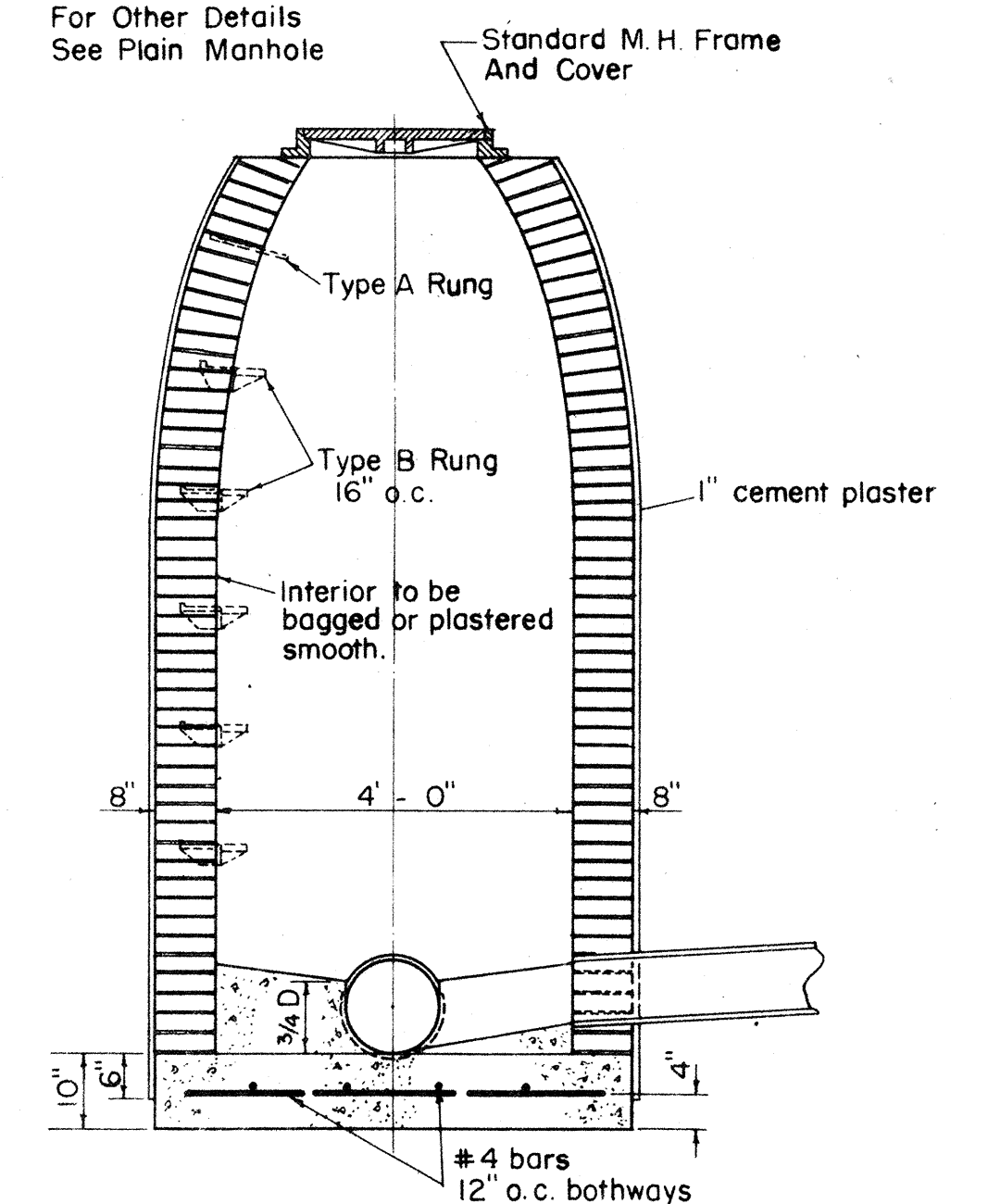
- Manhole rungs shall not be aligned above any flow line.
- No rungs shall be installed in manholes less than 3' high.
- When not otherwise noted, manhole stubs shall be sloped as follows:

Pipe Size	Rise Per Foot
6"	1/8"
8"	3/32"
10"	1/16"
12"	1/16"

- All reinforcing rods interfering with pipes shall be bent to clear them.
- Bar laps to be 40 diameters in length.
- Data for special manholes not shown shall be similar to that for plain manholes.
- Size of drop pipe in all Drop Manholes shall be same as influent line.
- Manhole wall to be of reinforced concrete to height 1' above normal ground water table.

NOTE:

For Other Details
See Plain Manhole



(MAXIMUM HEIGHT - 10.0 FEET)
BRICK MANHOLE

Scale: 1/2" = 1'-0"

Payment for excavation for manholes shall be made under unit price for trench excavation and shall be measured to one foot outside of walls from original ground elevation to authorized bottom elevation.
Payment for manhole walls (brick, precast concrete or cast-in-place concrete) shall include brick, precast concrete pipe sections, mortar, concrete, reinforcing steel, cast-iron steps, galvanized wrought iron rungs, and plastering.
Payment for manhole bases shall include concrete, reinforcing steel, and the construction of inverts.

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

MOANALUA ROAD
PROJ. NO. S-0720(1)
UNIT 2

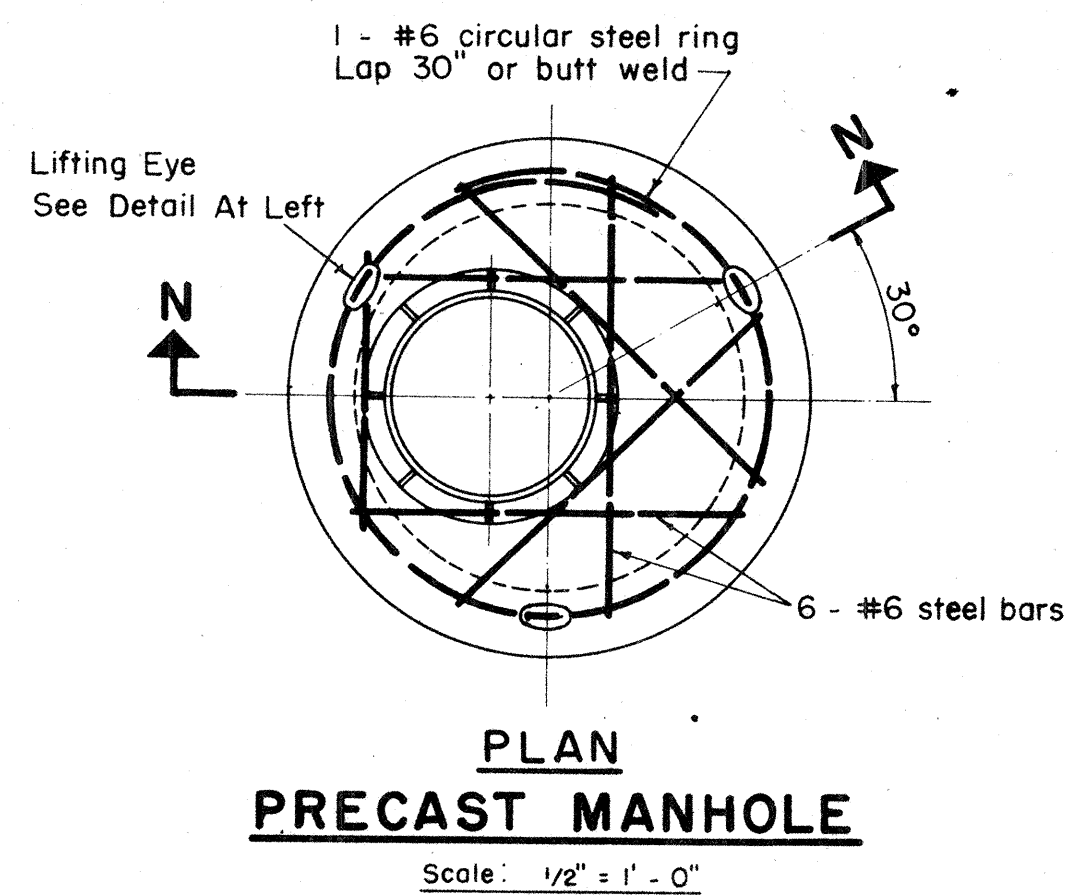
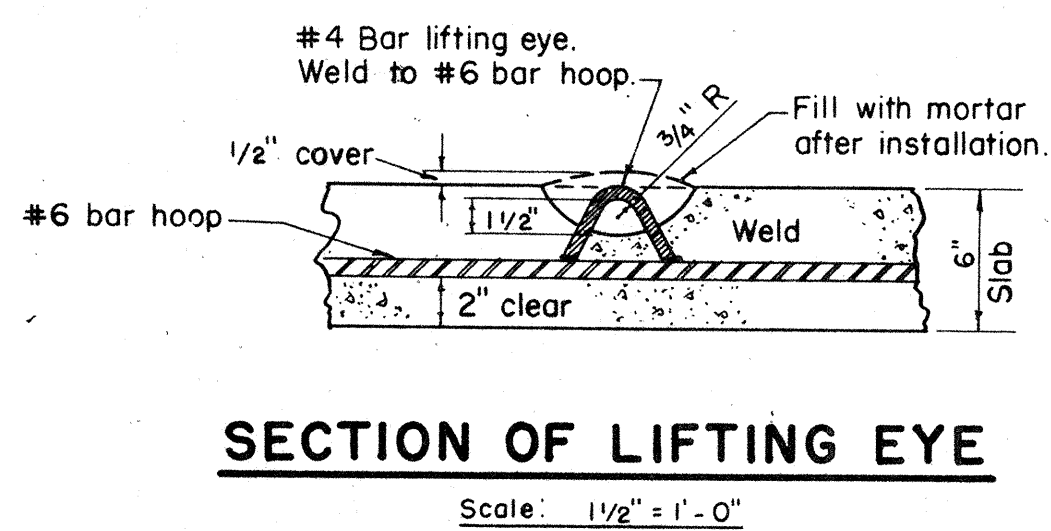
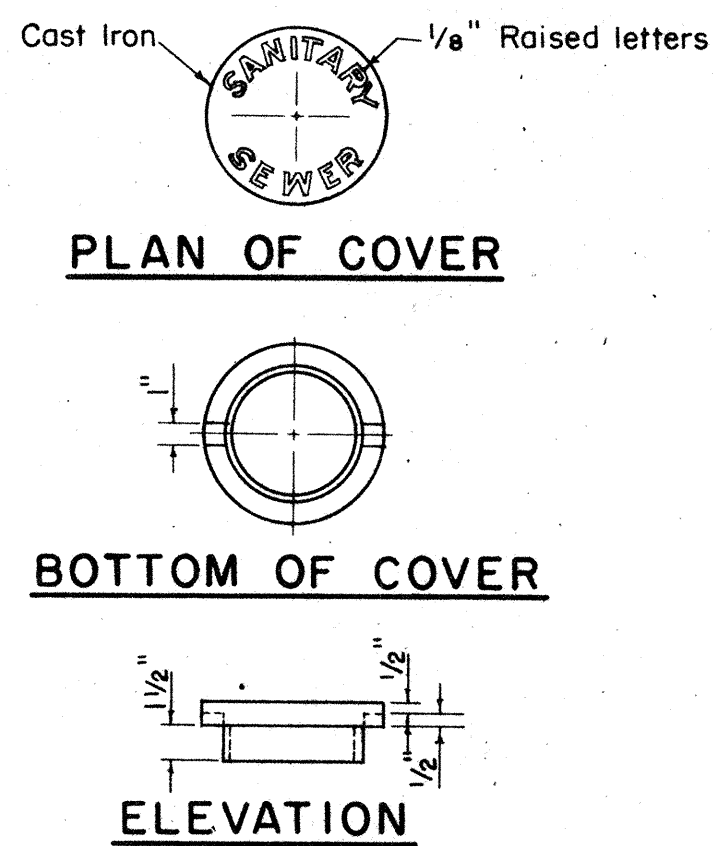
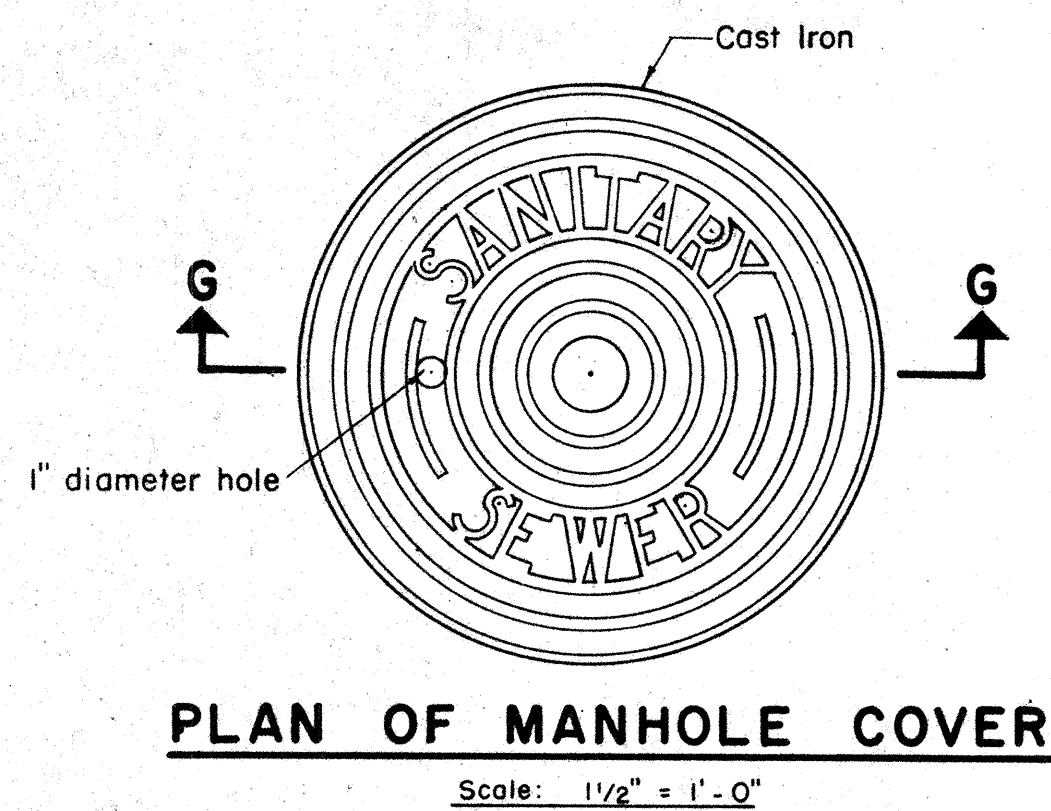
Scale: As Shown May 1958

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
DIVISION OF SEWERS

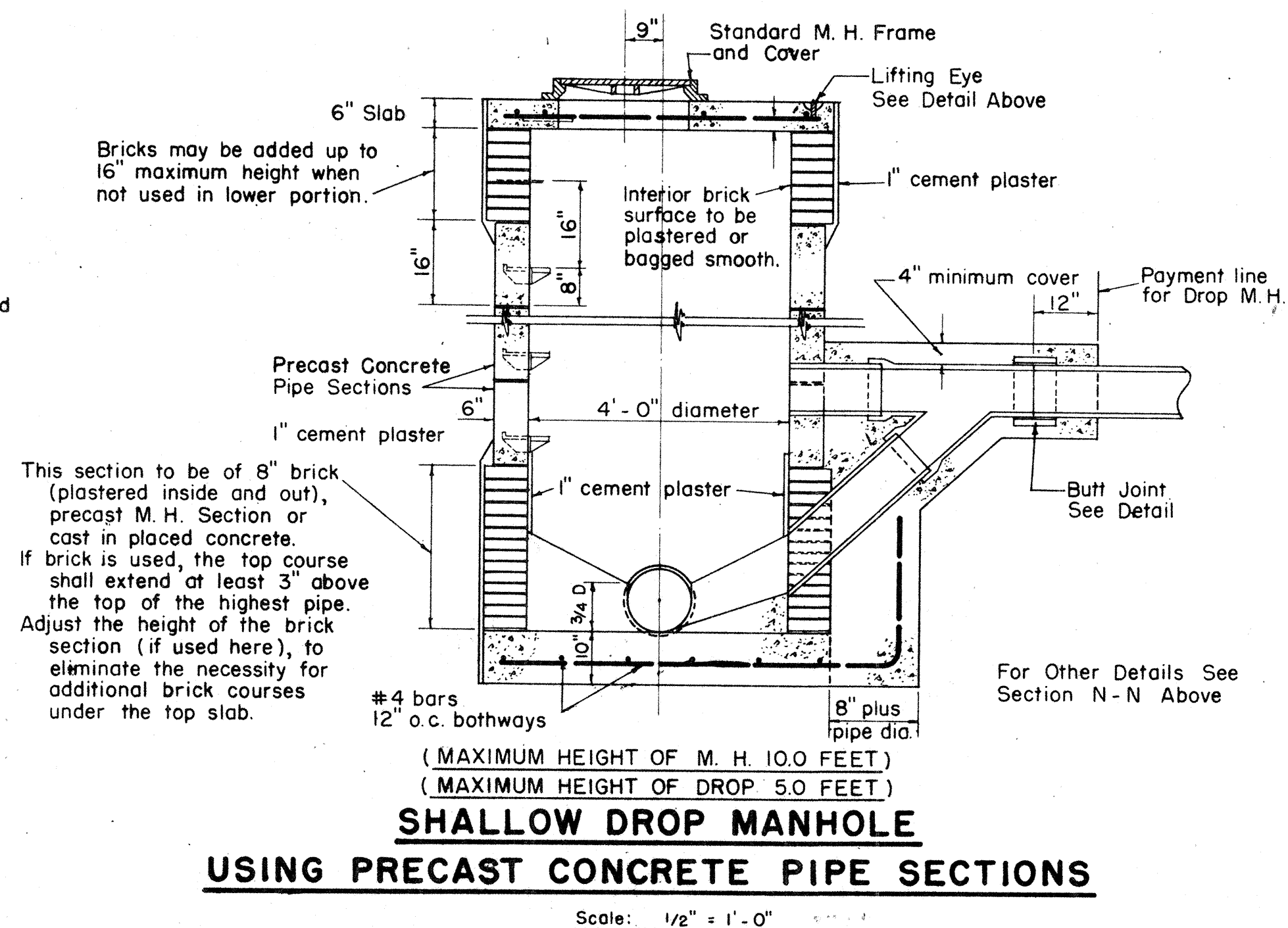
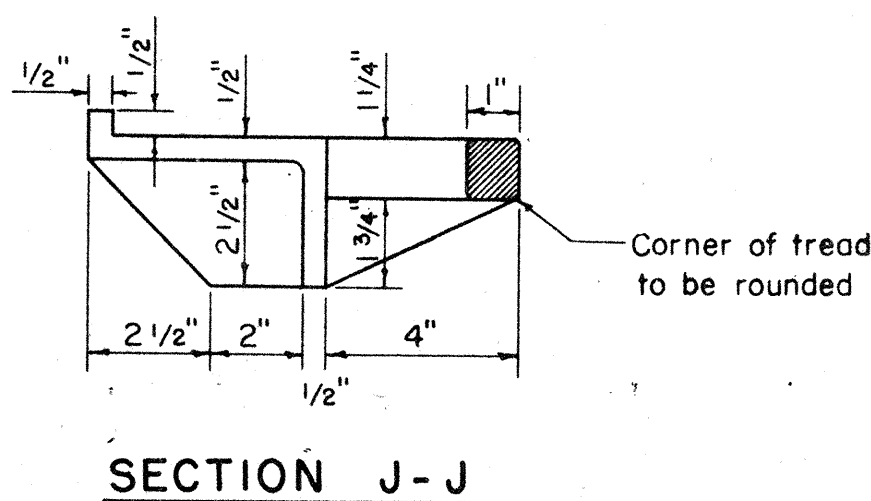
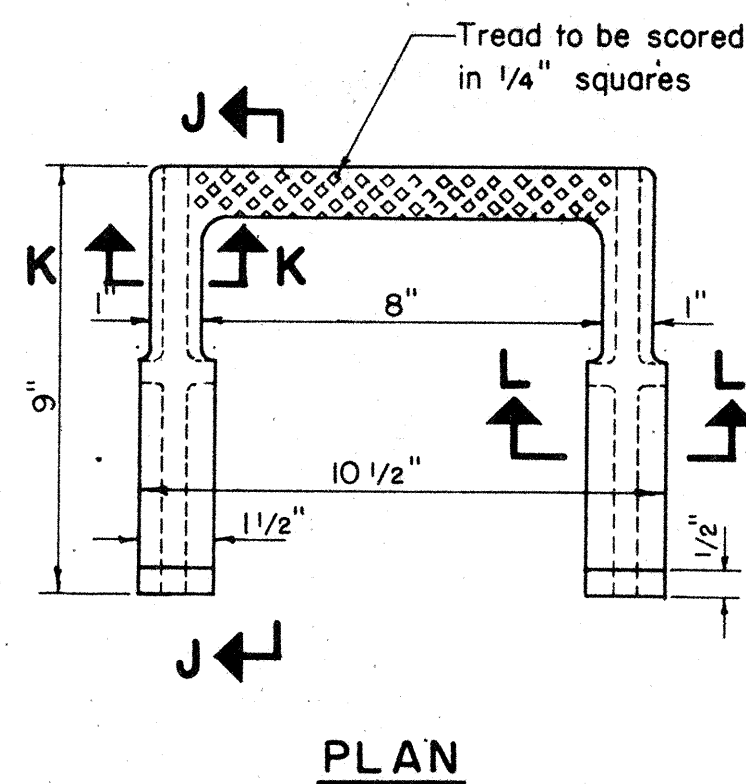
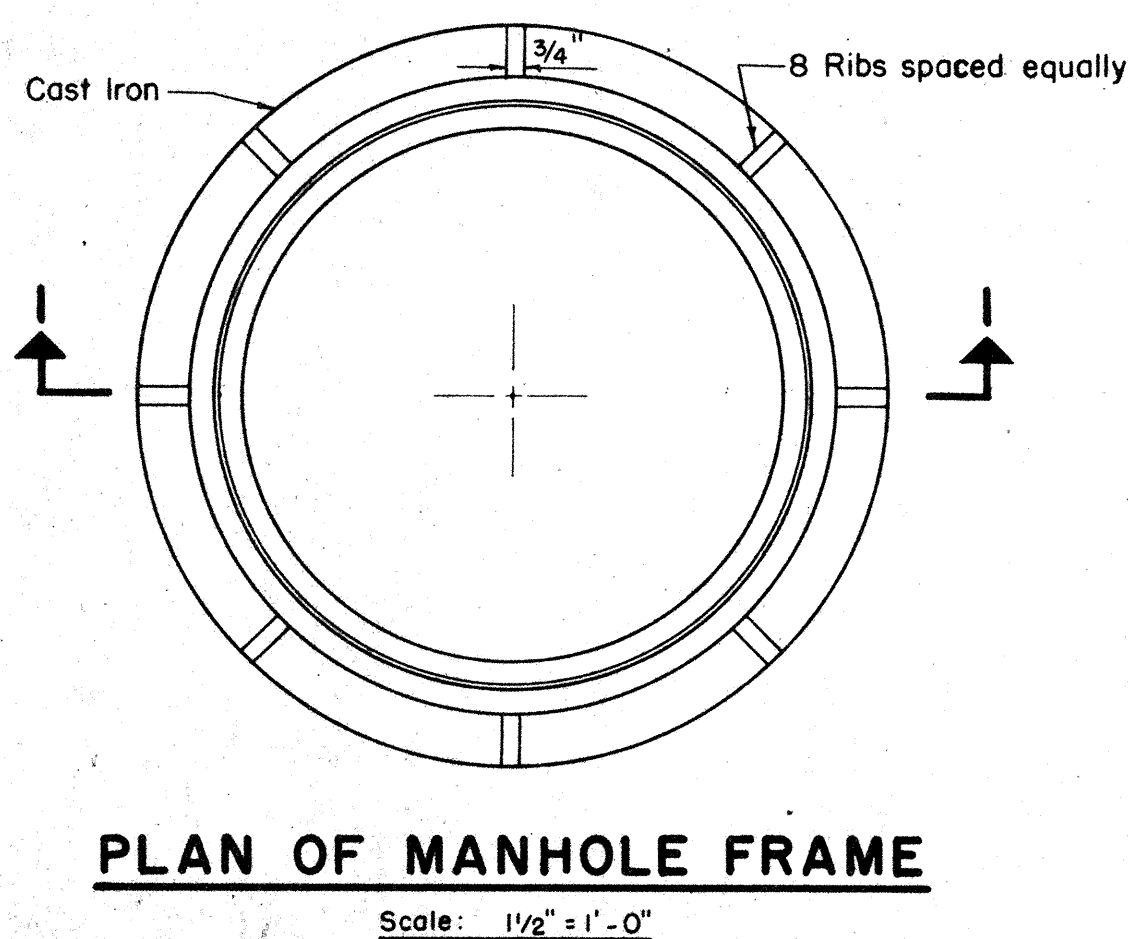
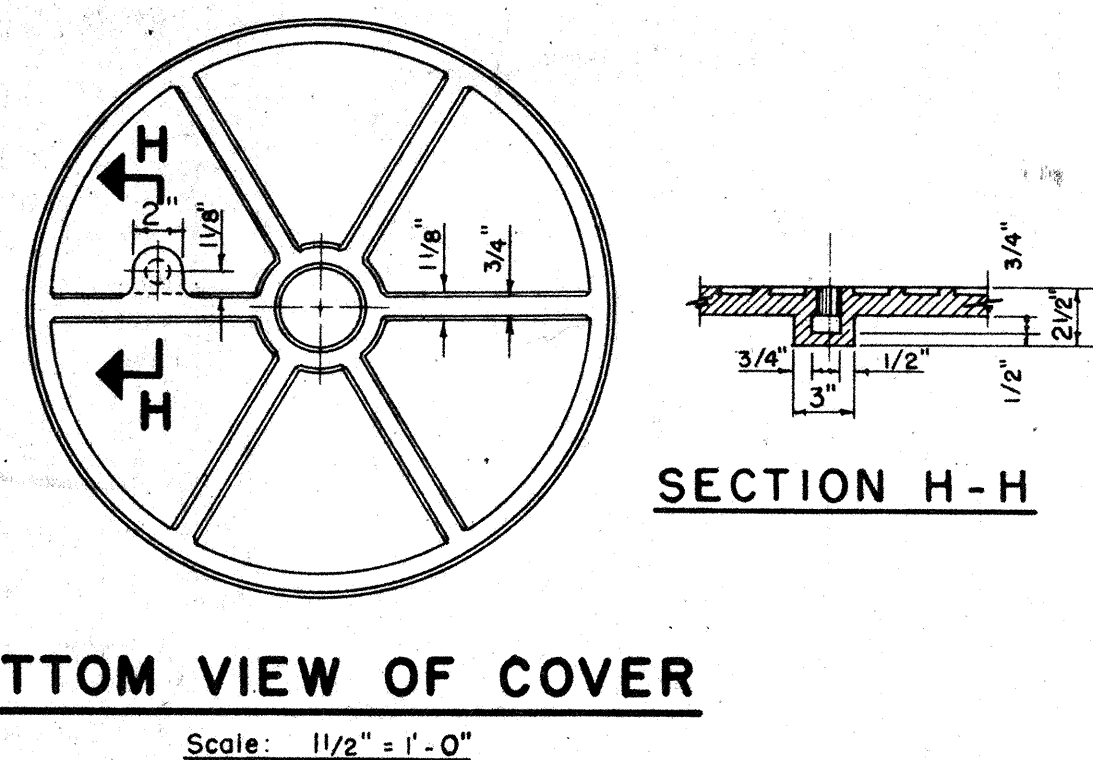
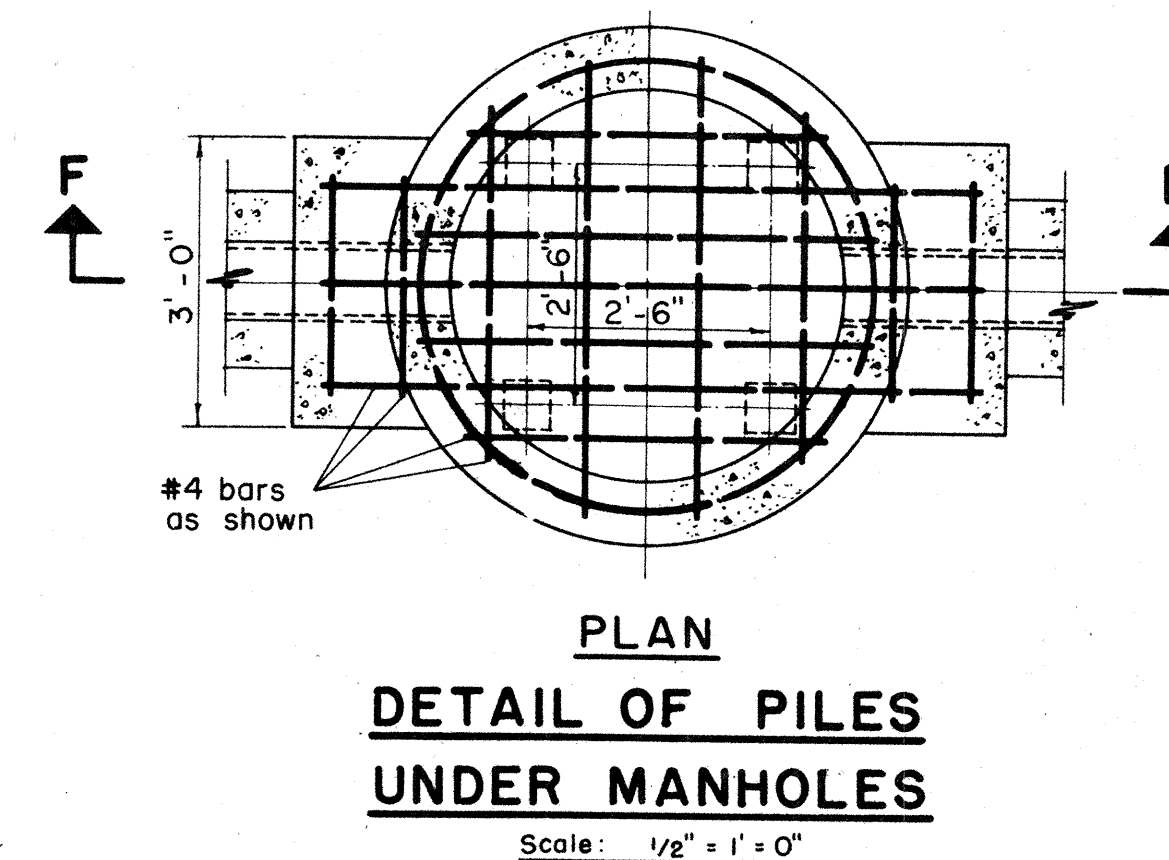
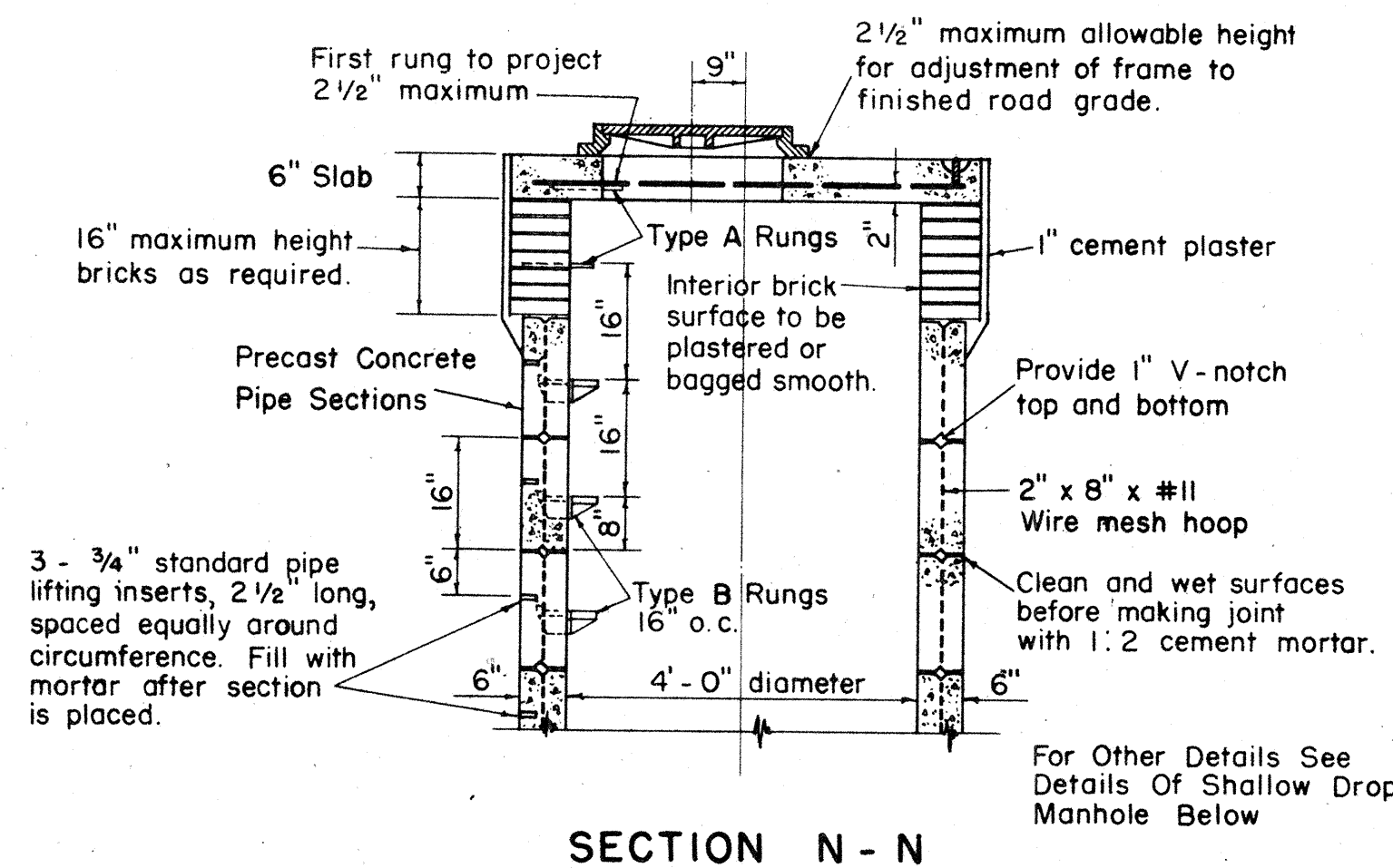
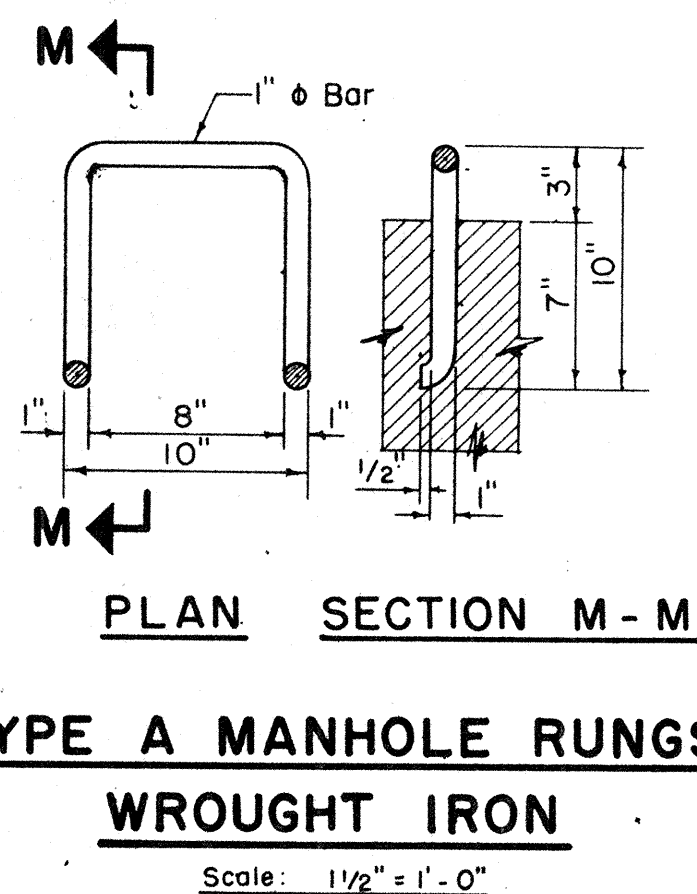
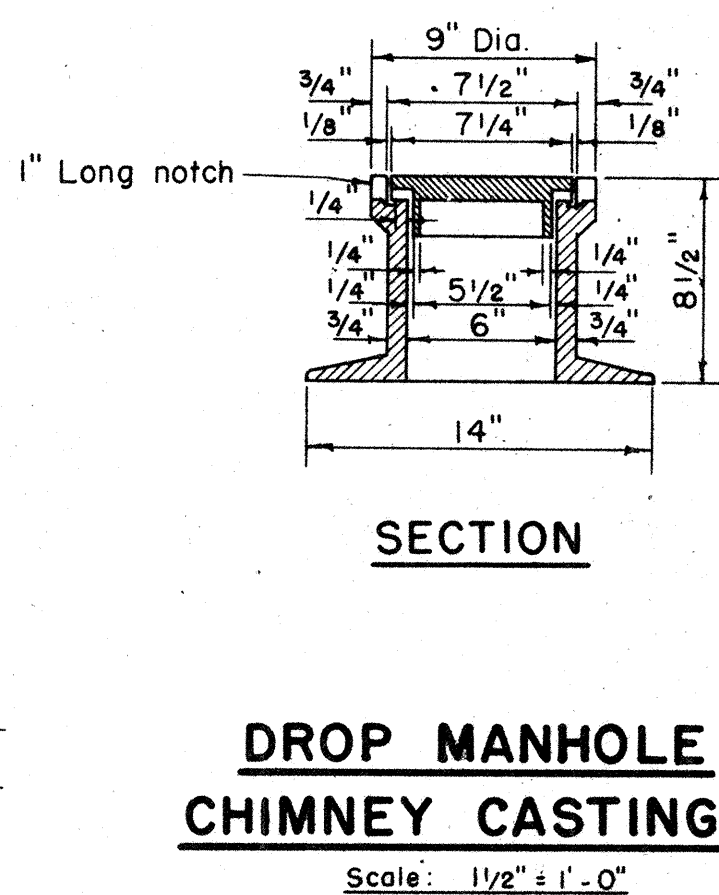
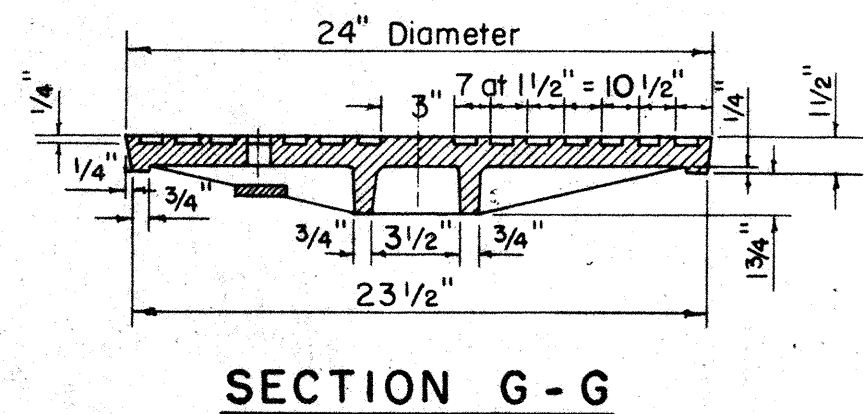
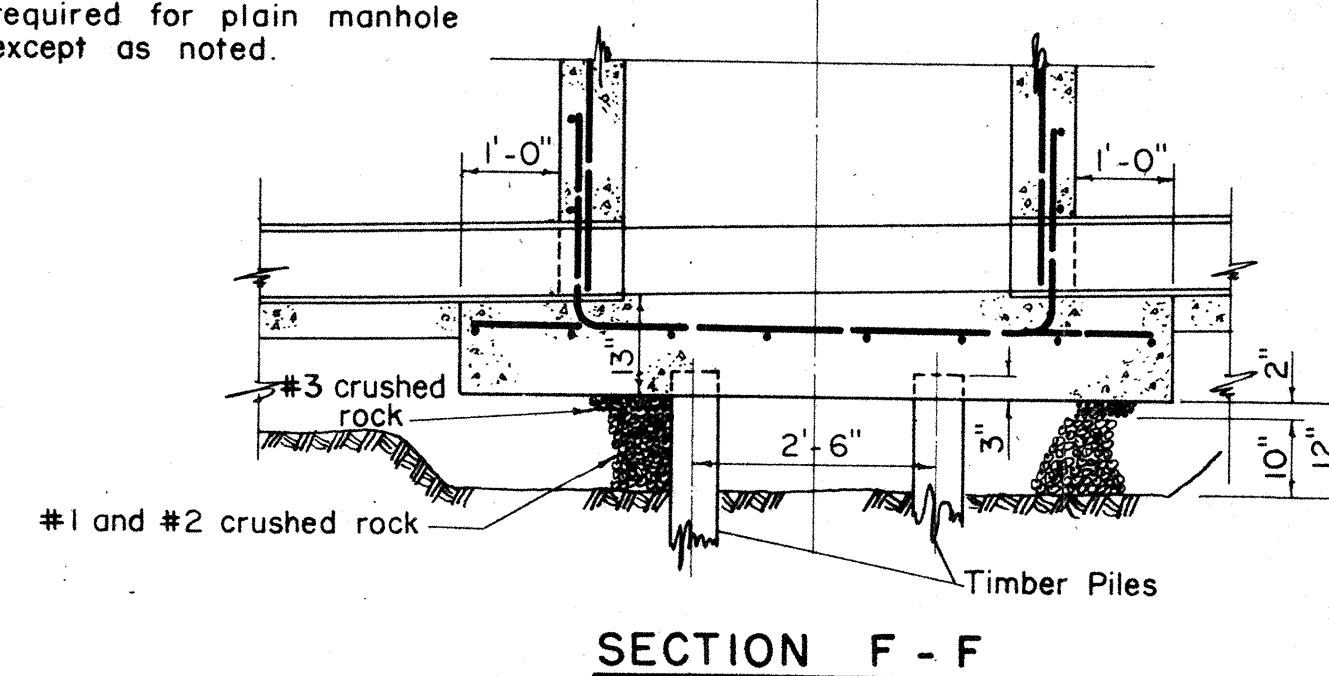
REVISED
STANDARD DETAILS
(SUPERSEDES STANDARD DATED 11-1-54)

ENGINEER: *A. T. Jones* DATE: *October 4, 1957*
DRAFTSMAN: *F. B. Smith* CHECKED BY: *H. K. Smith*
SCALE: *1/2" = 1'-0"* TRACER: *F. B. Smith*
APPROVED: *A. T. Jones* DIVISION ENGINEER: *A. T. Jones*

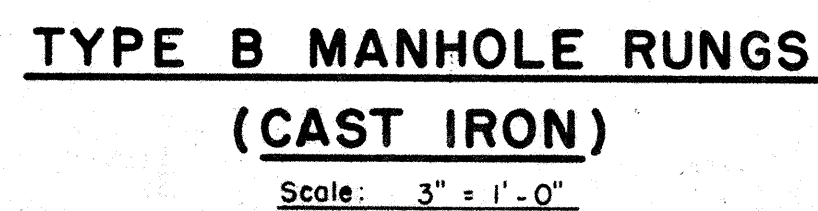
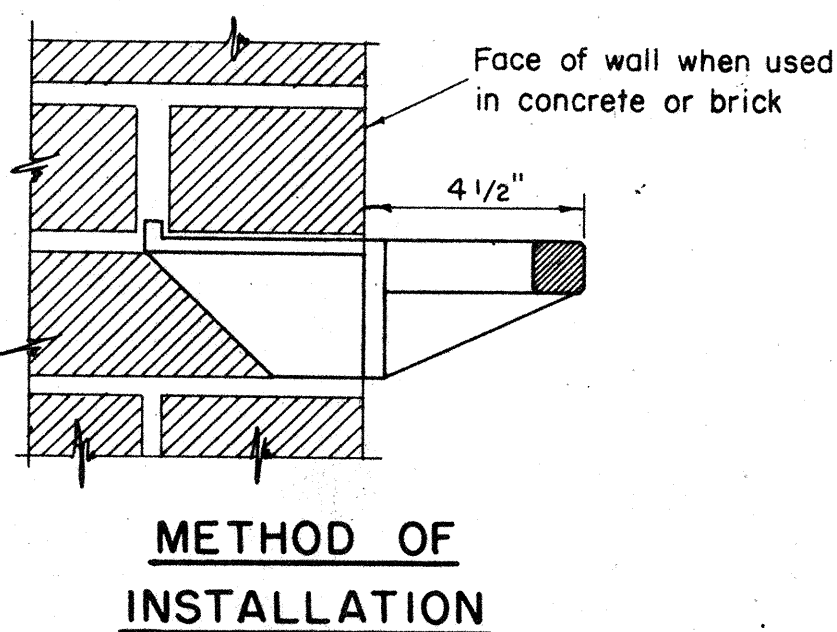
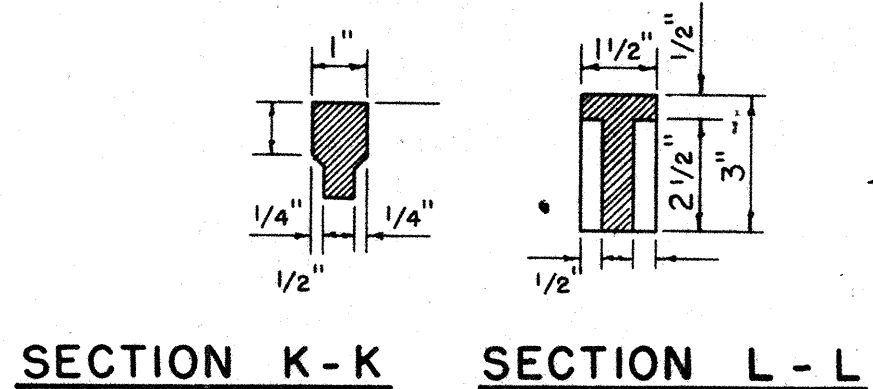
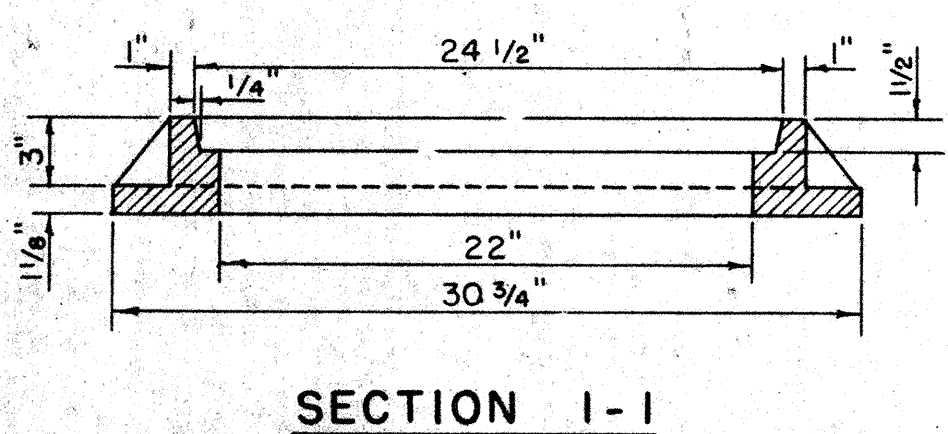
W. B.	PROFILE	C. B.
C. B.	F. W. BY:	S. B.
W. M. BY:		



NOTE: Reinforcing steel shall be the same as that required for plain manhole except as noted.



- NOTE:
- When backfilling around Precast Manhole, material shall be deposited in such a manner that the difference in elevation on one side of the manhole shall not exceed the elevation on the other side by more than 5 feet.
 - Pipe Sections may be made in heights other than 16 inches if desired.
 - Size of drop pipe shall be same as influent pipe.



TERRITORIAL HIGHWAY DEPARTMENT					
TERRITORY OF HAWAII					
MOANALUA ROAD					
PROJ. NO. S-0720 (1)					
UNIT 2					
Scale: As Shown May 1958					
DEPARTMENT OF PUBLIC WORKS					
CITY AND COUNTY OF HONOLULU					
DIVISION OF SEWERS					
REVISED					
STANDARD DETAILS					
(SUPERSEDES STANDARD DATED 11-1-54)					
ENGINEER	DATE	CHECKED BY	TRACER	APPROVED	APPROVED
W. B.	October 4, 1957	W. B.	W. B.	W. B.	W. B.
CR. SEC.		CR. SEC.	CR. SEC.	CR. SEC.	CR. SEC.
W. M. BY:		W. M. BY:	W. M. BY:	W. M. BY:	W. M. BY: