

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	37C-01-75	1975	6	6

GENERAL NOTES

- Grates and Frames shall be hot dip galvanized after fabrication, see specifications.
- All welds $\frac{3}{8}$ " unless otherwise noted.
- Refer to "Spacing Table" for Types 61614 & 61616 Drop Intake and Frame & Grates dimensions.
- The Frame & Grate materials shall conform to the specifications of ASTM Designation Structural Steel A283, Grade D and the Standard Specifications.
- Culvert shall leave Drop Intake from any position and any direction indicated by plans or ordered by the Engineer. Culverts may both enter and leave Drop Intake so that Drop Intake will act as manhole.
- Manhole Rungs (12"o.c.) are required when "H" is greater than 4 feet 6 inches. Only one rung (16 inches from the bottom) is required if "H" is 4 feet 6 inches or less. Manhole Rungs may be placed at any location as ordered by the Engineer.

SPACING TABLE

TYPE	NO. BARS	A	B	C	D
61614	11	2'-0"	1'-11½"	1¼"	1'-6"
61616	17	3'-0"	2'-11¾"	1⅝"	2'-0"

NO.	REVISION	APPROVED BY	DATE
1	Curb for Top of Fill Gutters	H.T.	6-5-71
2	Spacing on manhole rungs to conform to OSHA.	H.T.	1-21-75

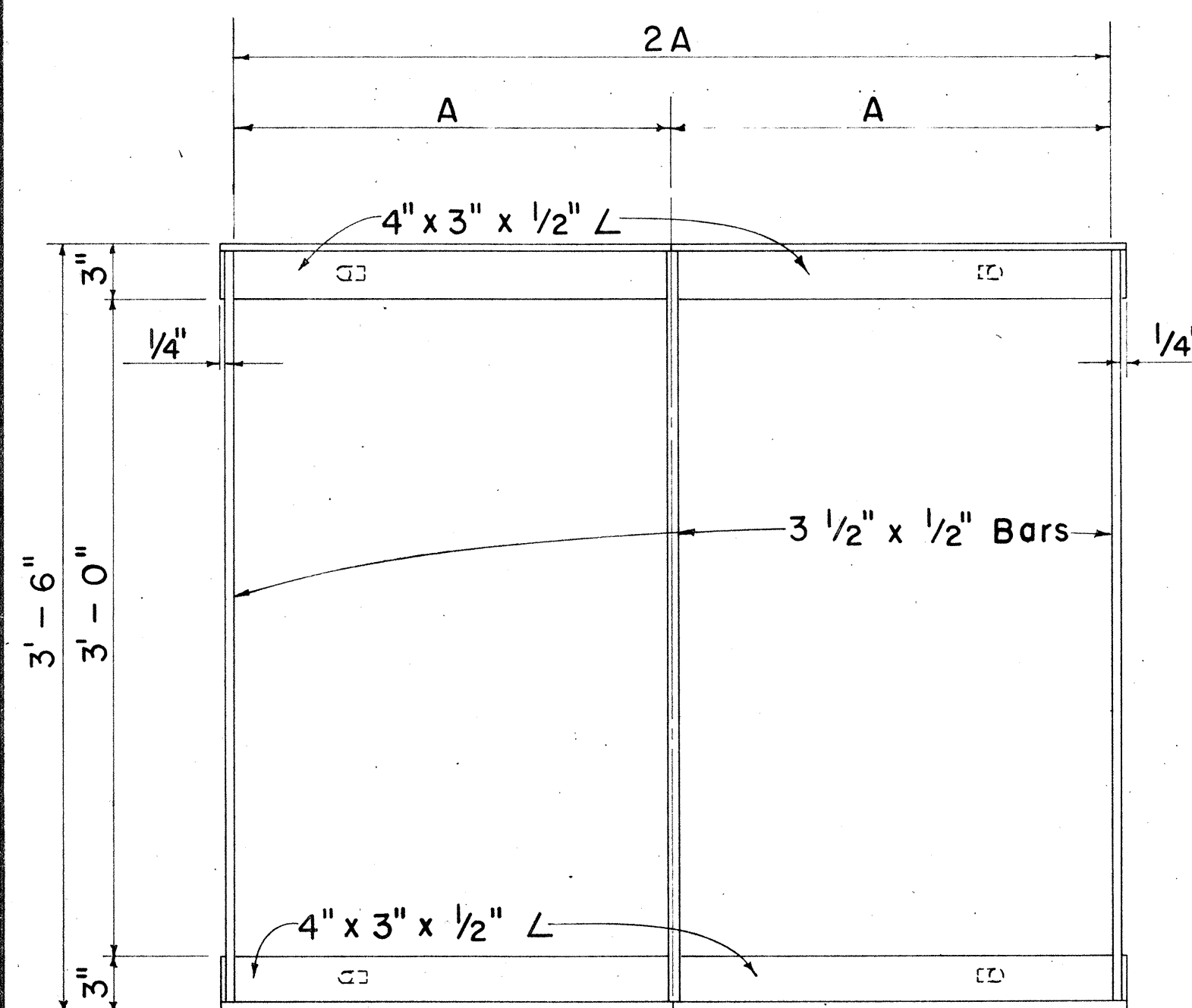
APPROVAL RECOMMENDED:

T. Palans
HYDRAULIC DESIGN ENGINEER 12-17-69
DATE

APPROVED:
Shelton S. Selen
ASSISTANT CHIEF, ENGINEERING 12-17-69
DATE

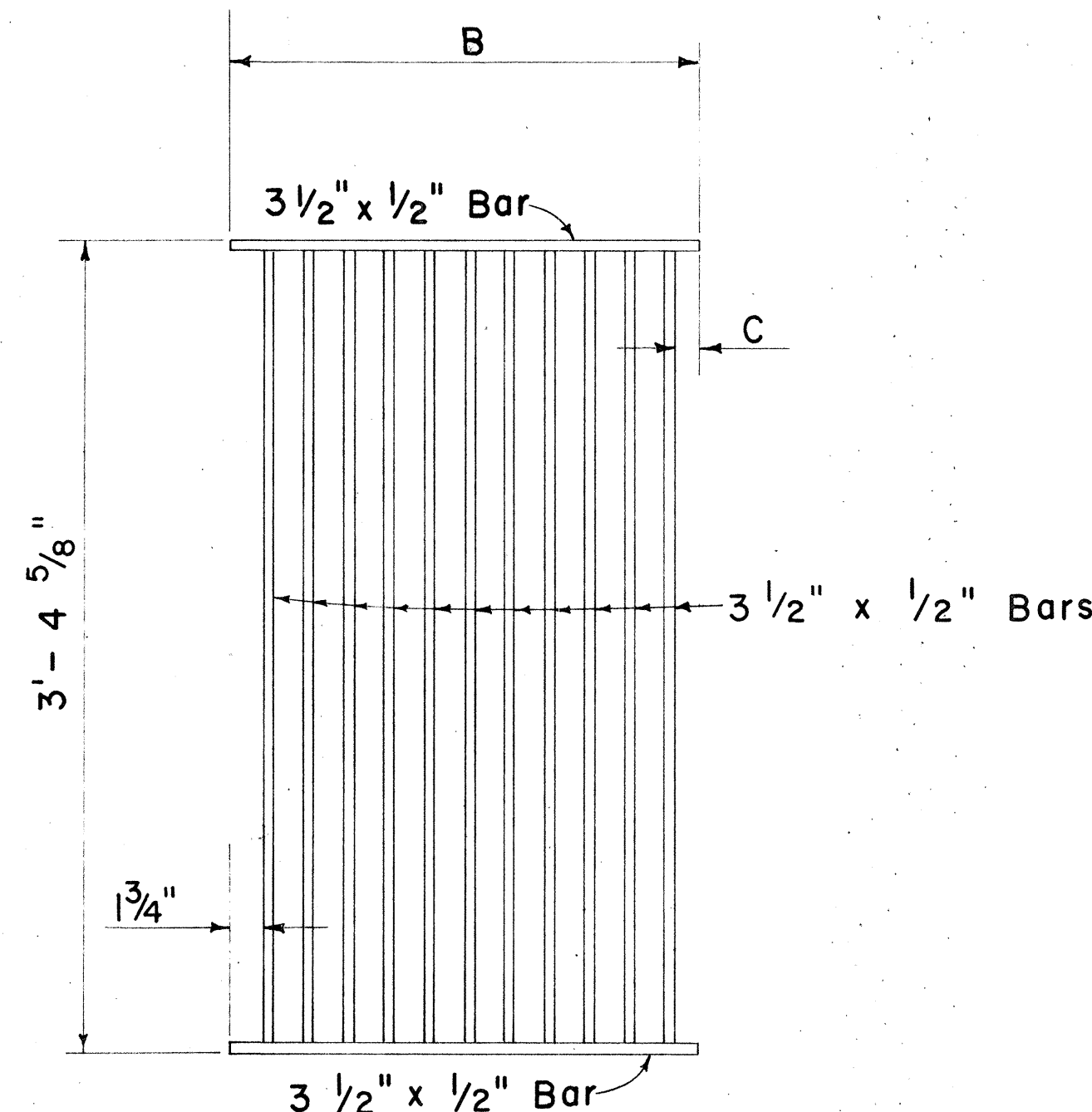
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS
TYPE 61614 & 61616
GRATED DROP INTAKES

Scales: As Noted Date: Feb. 1969
SHEET No. 1 OF 1 SHEETS DH 8



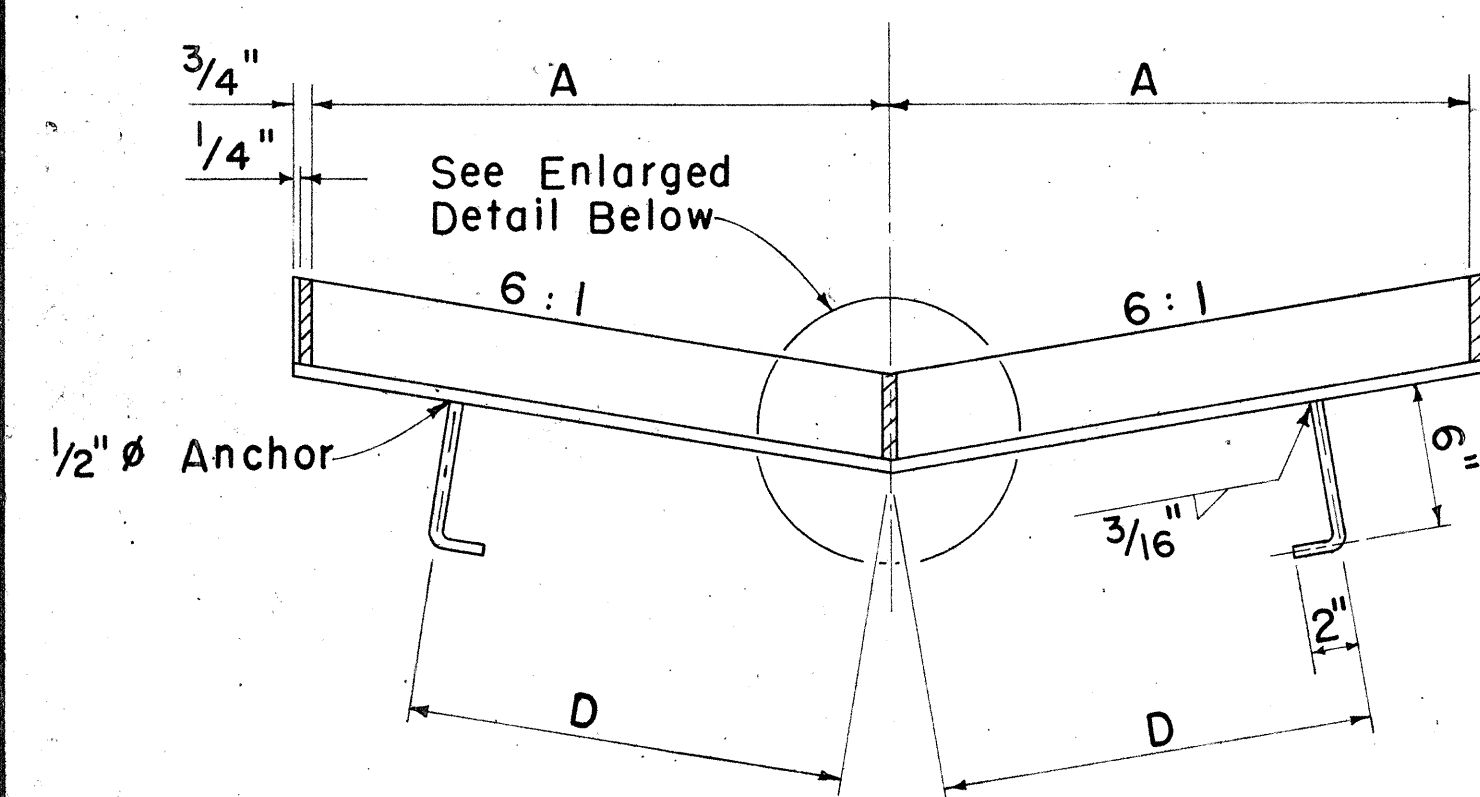
PLAN

Scale: 1½" = 1'-0"



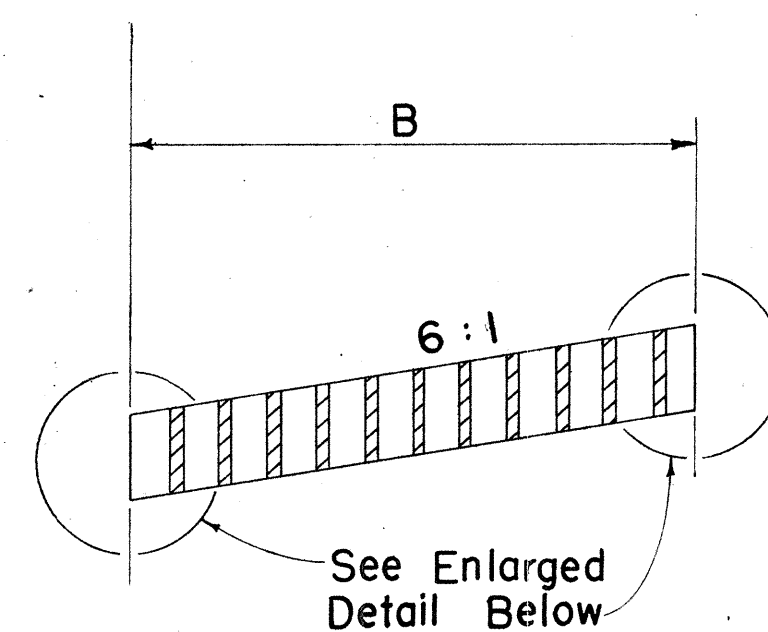
PLAN

Scale: 1½" = 1'-0"



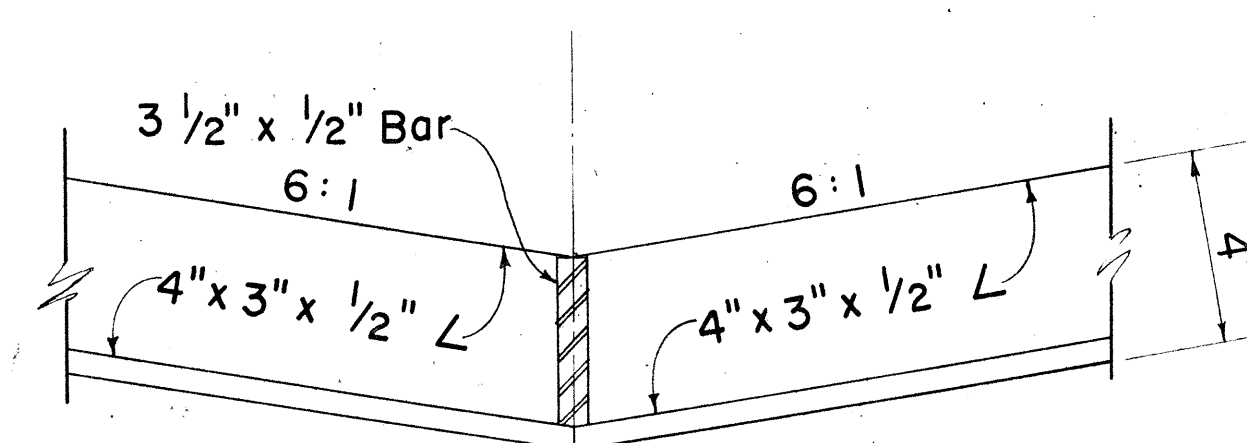
SECTION

Scale: 1½" = 1'-0"



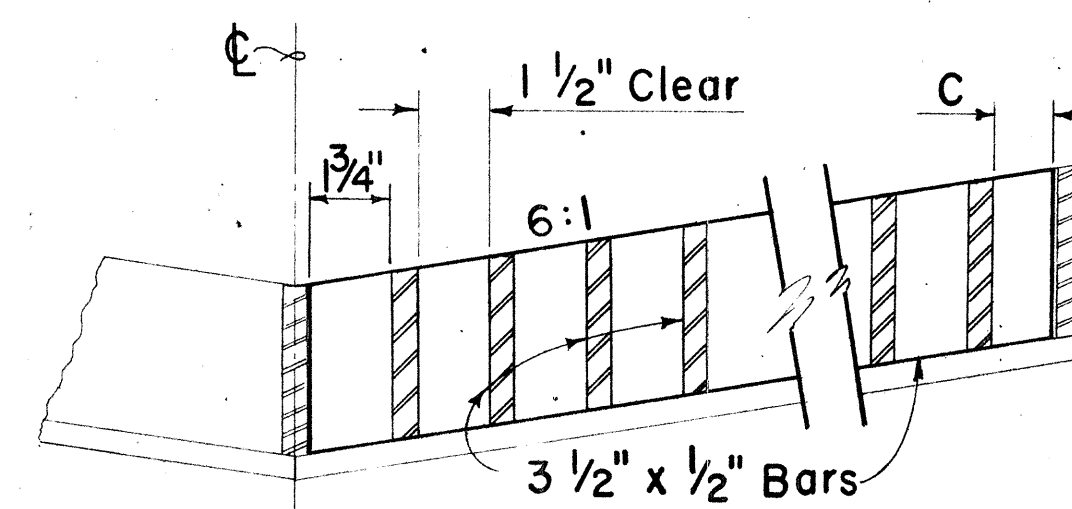
SECTION

Scale: 1½" = 1'-0"



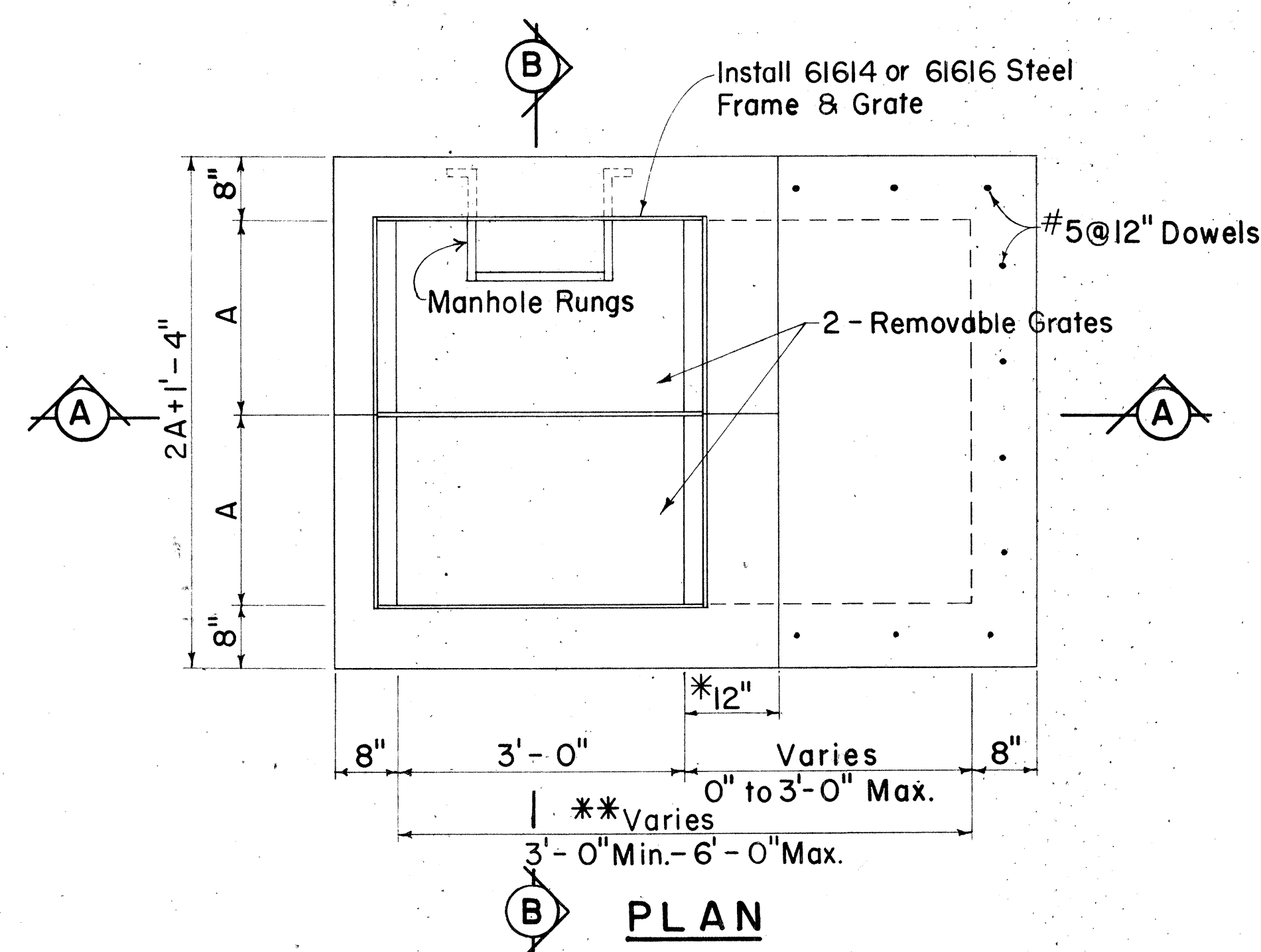
FRAME

Scale: 3" = 1'-0"

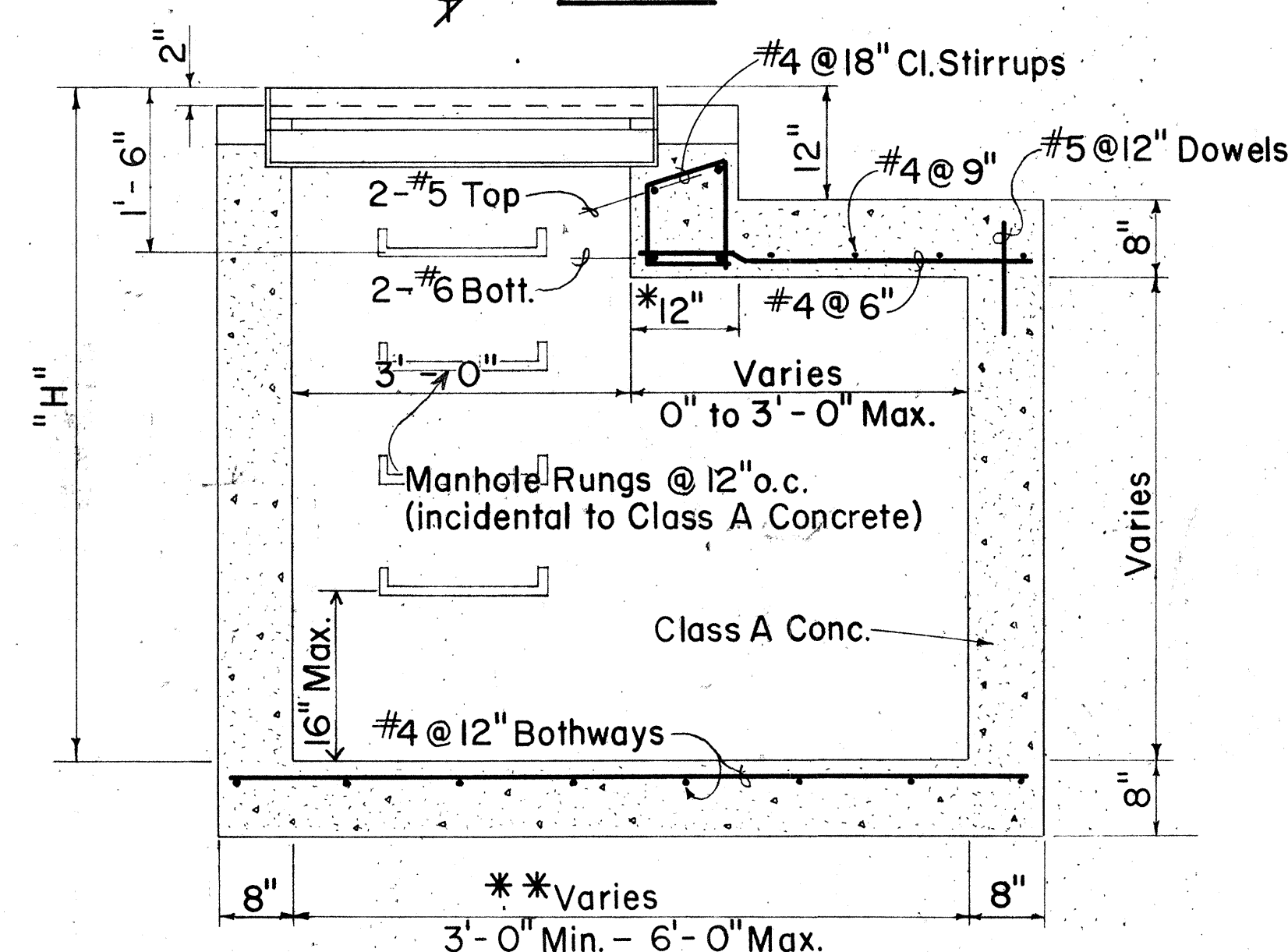


GRATE

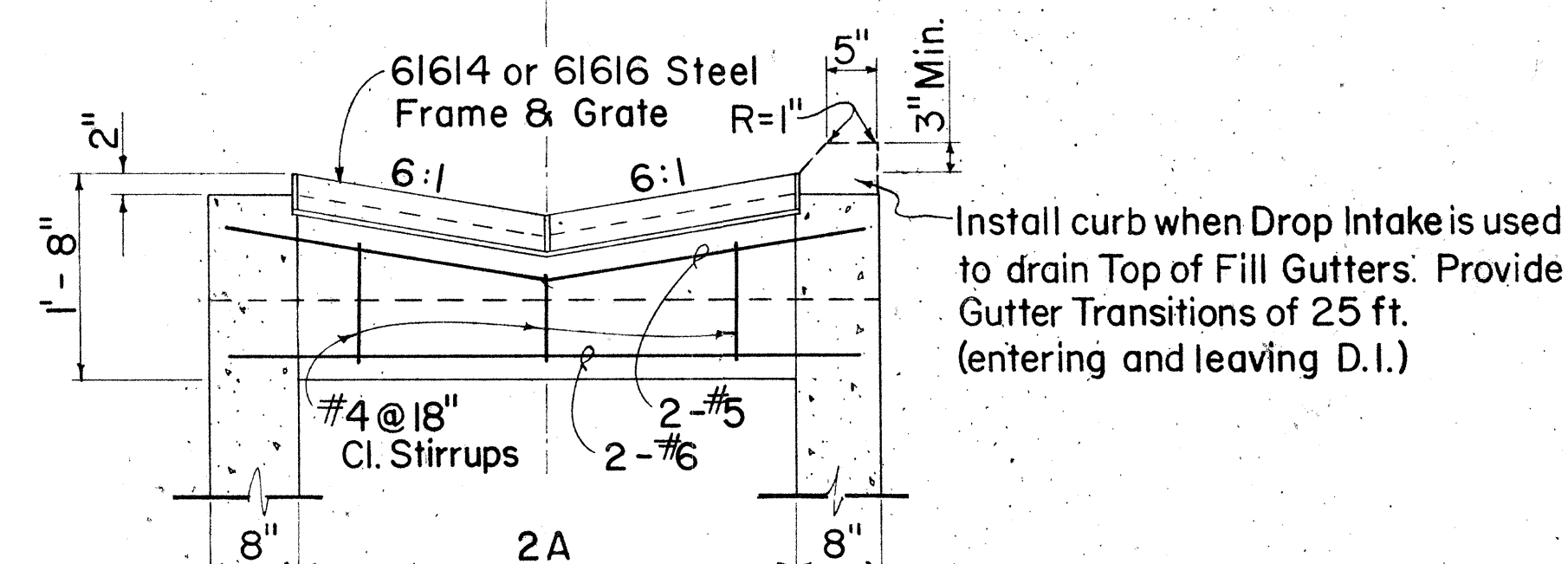
Scale: 3" = 1'-0"



PLAN



SECTION A - A



SECTION B - B

DETAILS OF 61614 OR 61616 DROP INTAKE

Scale: ¾" = 1'-0"

- *For Minimum size box of 3'-0", use 8" and eliminate reinforcing steel shown in the top portion.
- **For Culverts larger than 30", the minimum dimension shall be D.