

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-019- 2(18)	1981	63	63

GENERAL NOTES

1. Grates and Frames shall be hot dip galvanized after fabrication, see specifications.
2. All welds $\frac{3}{8}$ " unless otherwise noted.
3. Refer to "Spacing Table" for Types 61614 & 61616 Drop Intake and Frame & Grates dimensions.
4. The Frame & Grate materials shall conform to the specifications of ASTM Designation Structural Steel A283, Grade D and the Standard Specifications.
5. 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.
6. 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.

TYPE	NO. BARS	A	B	C	D
61614	11	2' - 0"	1' - 11 1/2"	1 1/4"	1' - 5"
61616	17	3' - 0"	2' - 11 1/8"	1 1/8"	2' - 0"

INCL.	REVISION	APPROVED	DATE
1.	for 100 # Fill Cutters		12-21-15
2.	adding arm mechanism to		
	convert to USMA.		

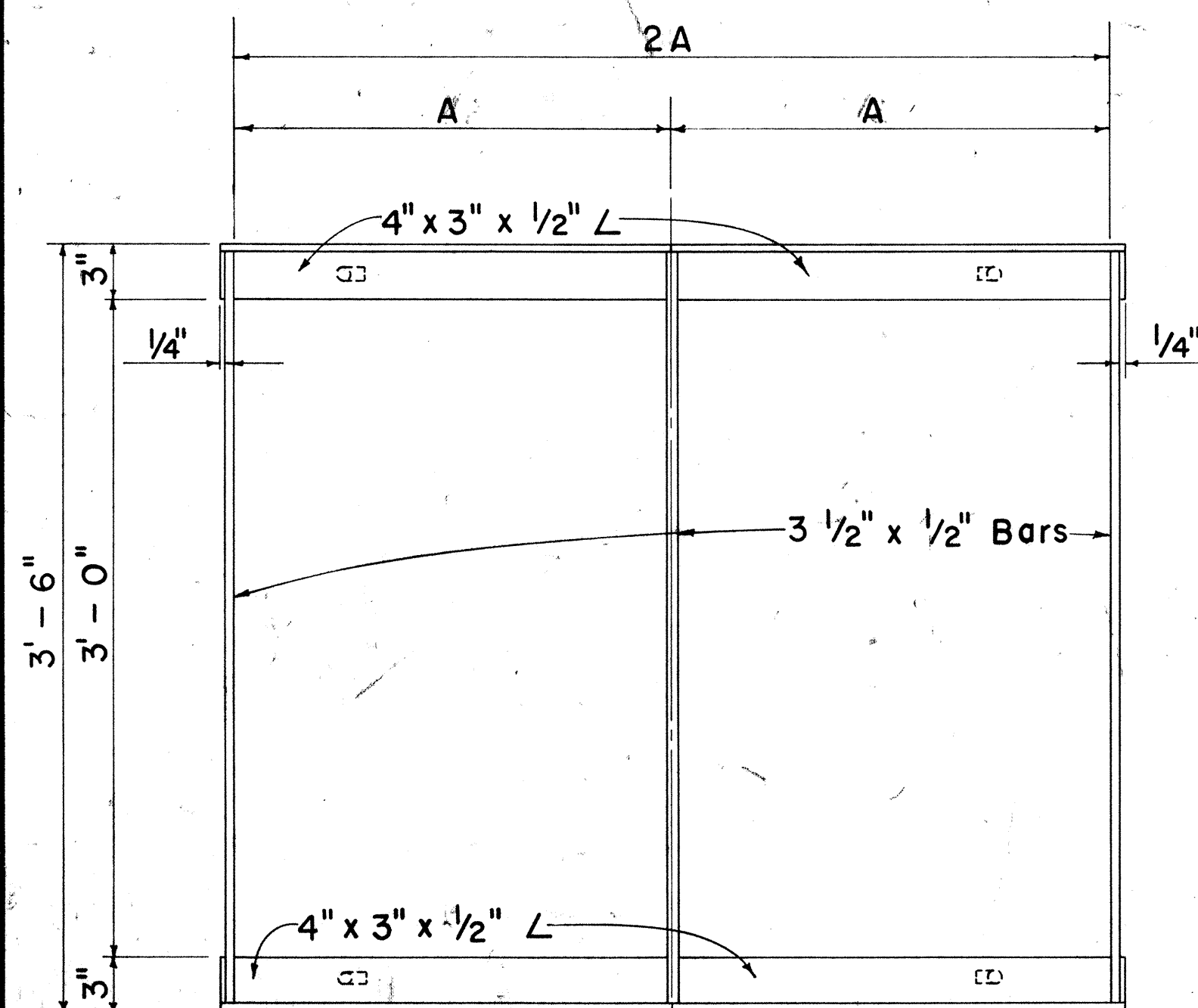
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPE 61614 & 61616
GRATED DROP INTAKES

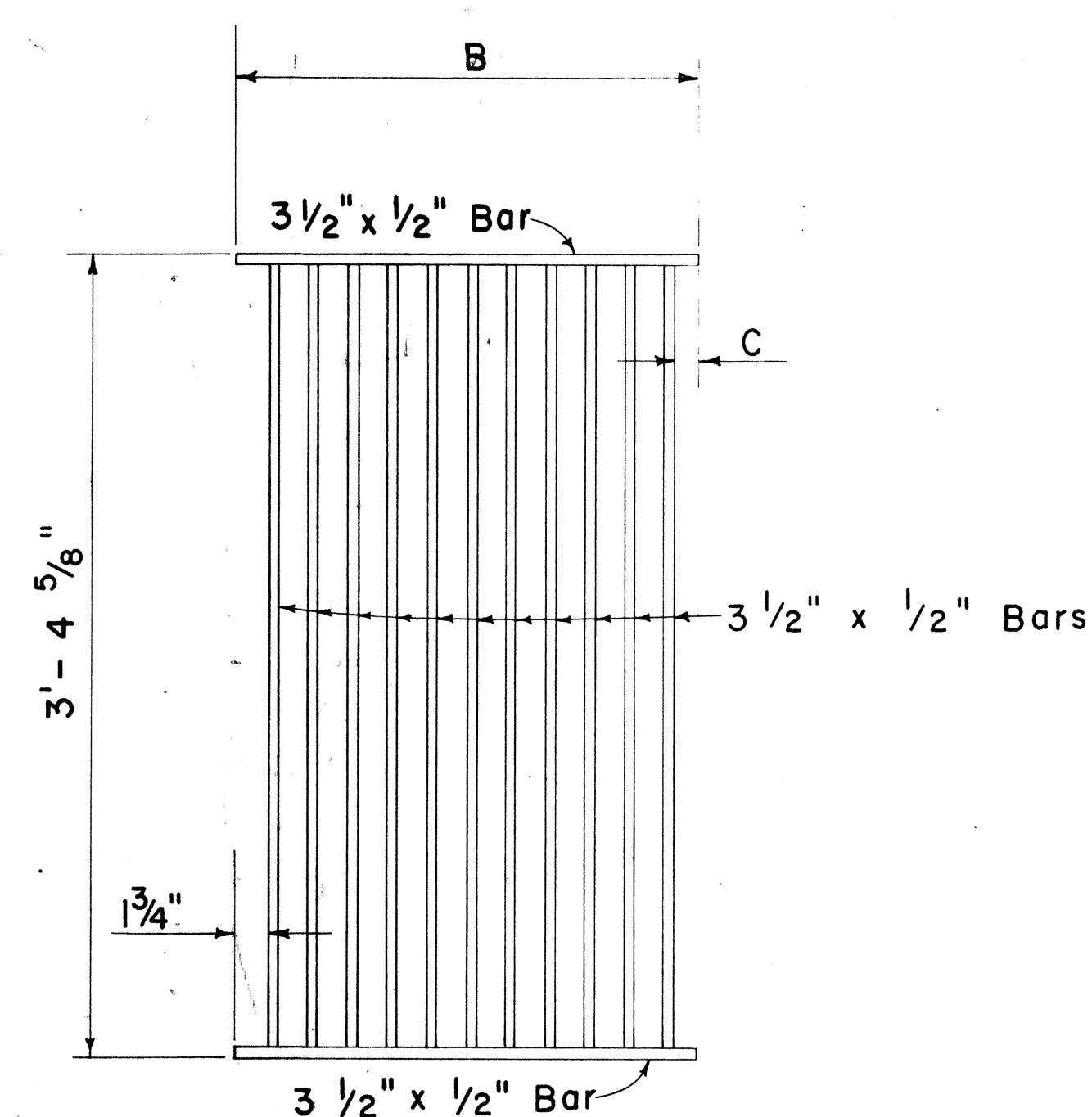
HAWAII BELT ROAD
AAMANU STREAM BRIDGE REPLACEMENT
F.A.P. NO. BRF-019-2(18)

Scales: As Noted Date: _____

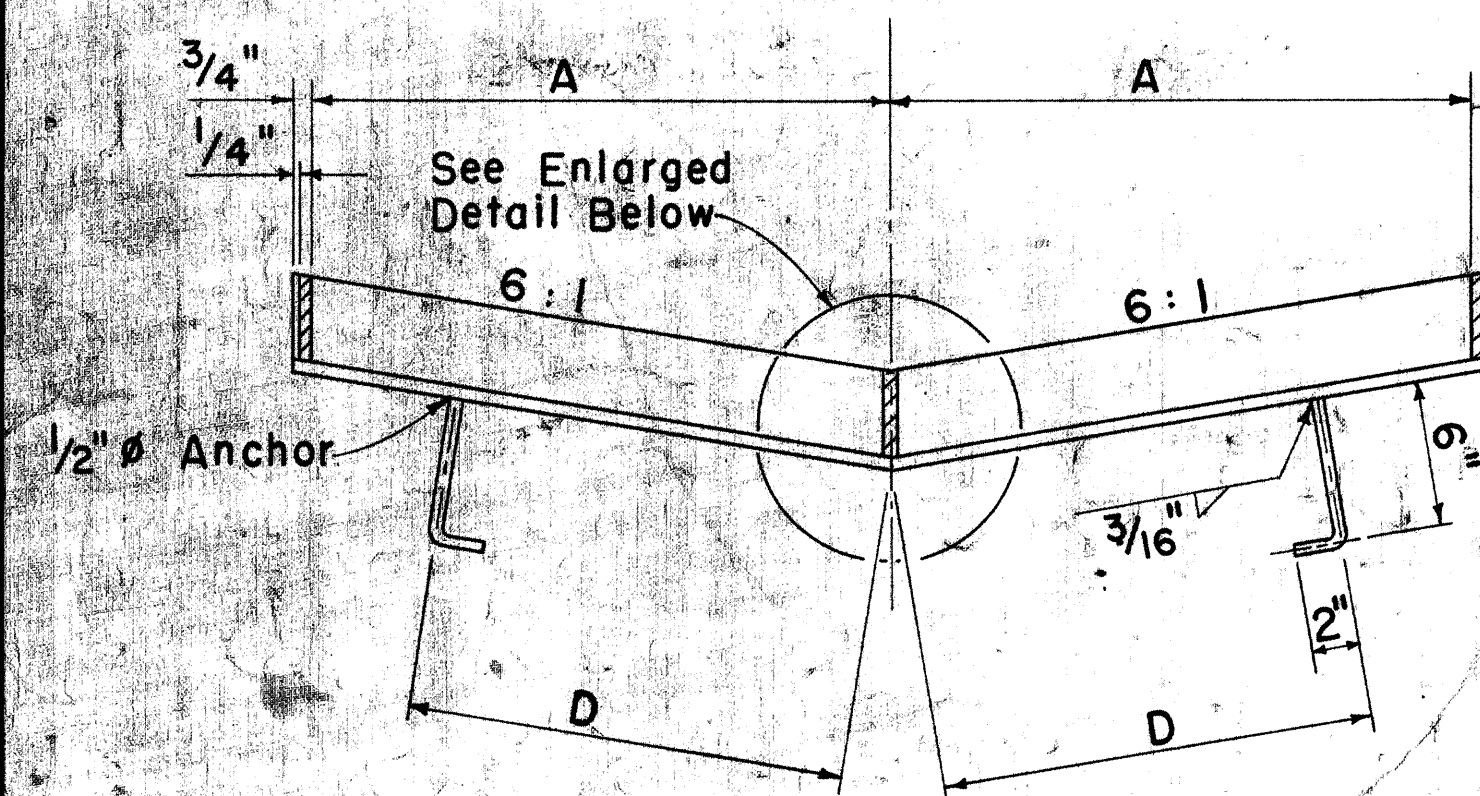
SHEET No. 1 OF 1 SHEETS DH 8



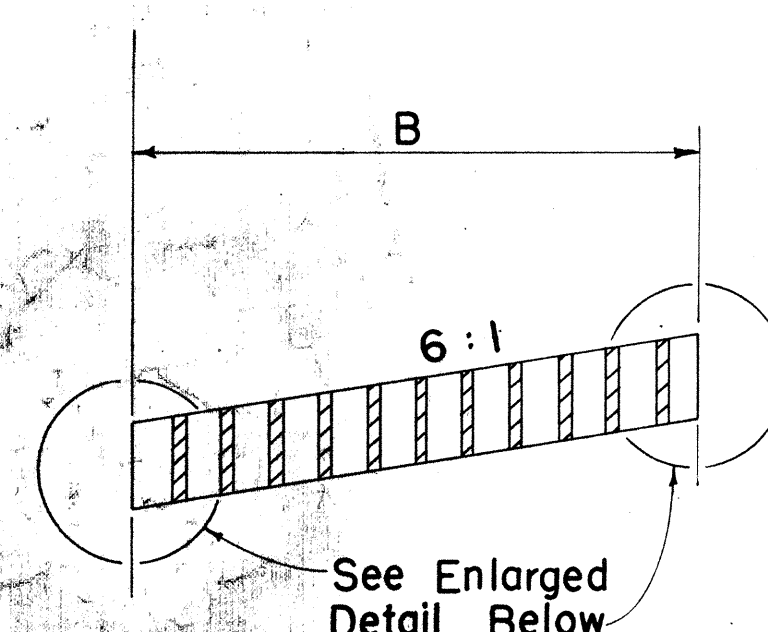
PLAN
Scale: $1\frac{1}{2}" = 1' - 0"$



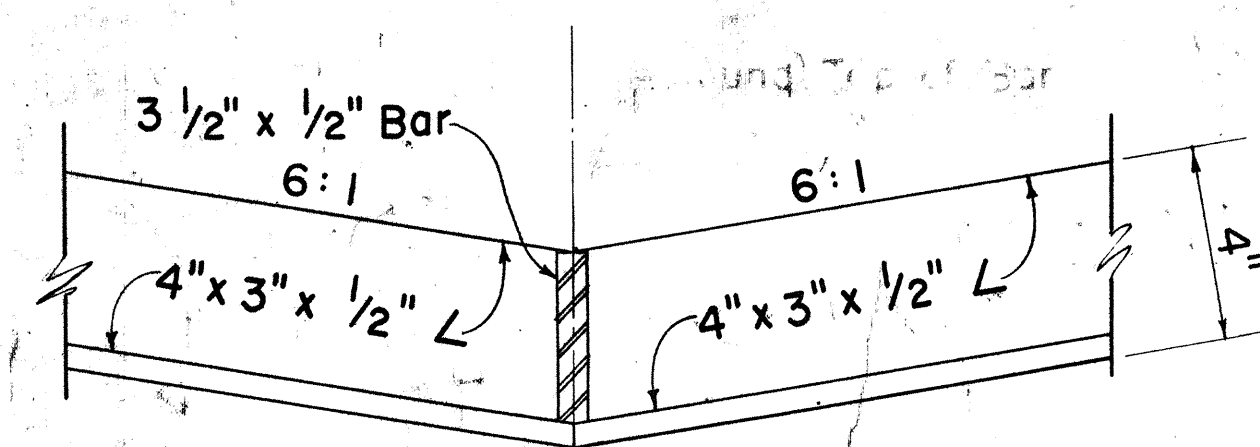
PLAN
Scale: $1\frac{1}{2}" = 1' - 0"$



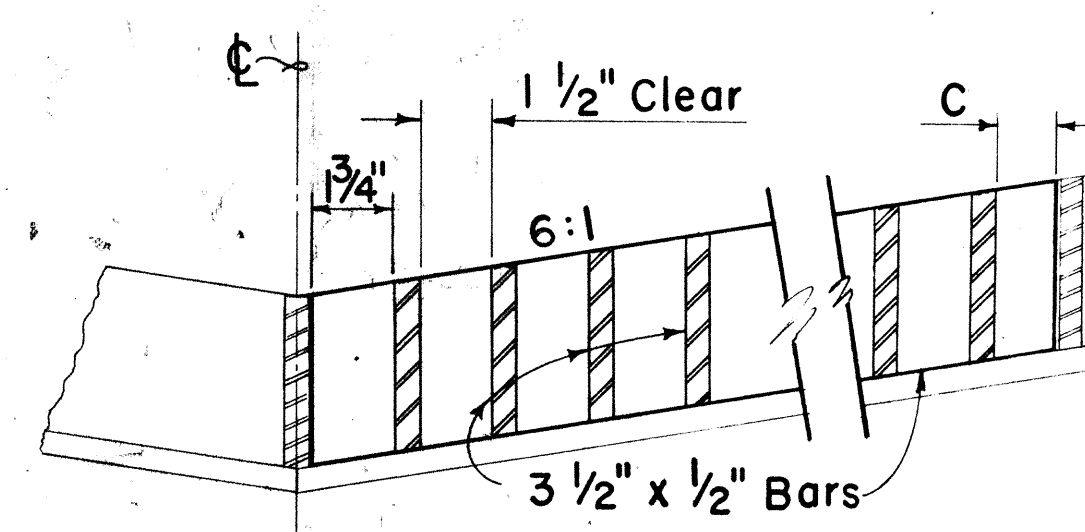
SECTION
Scale: $1\frac{1}{2}" = 1'-0"$



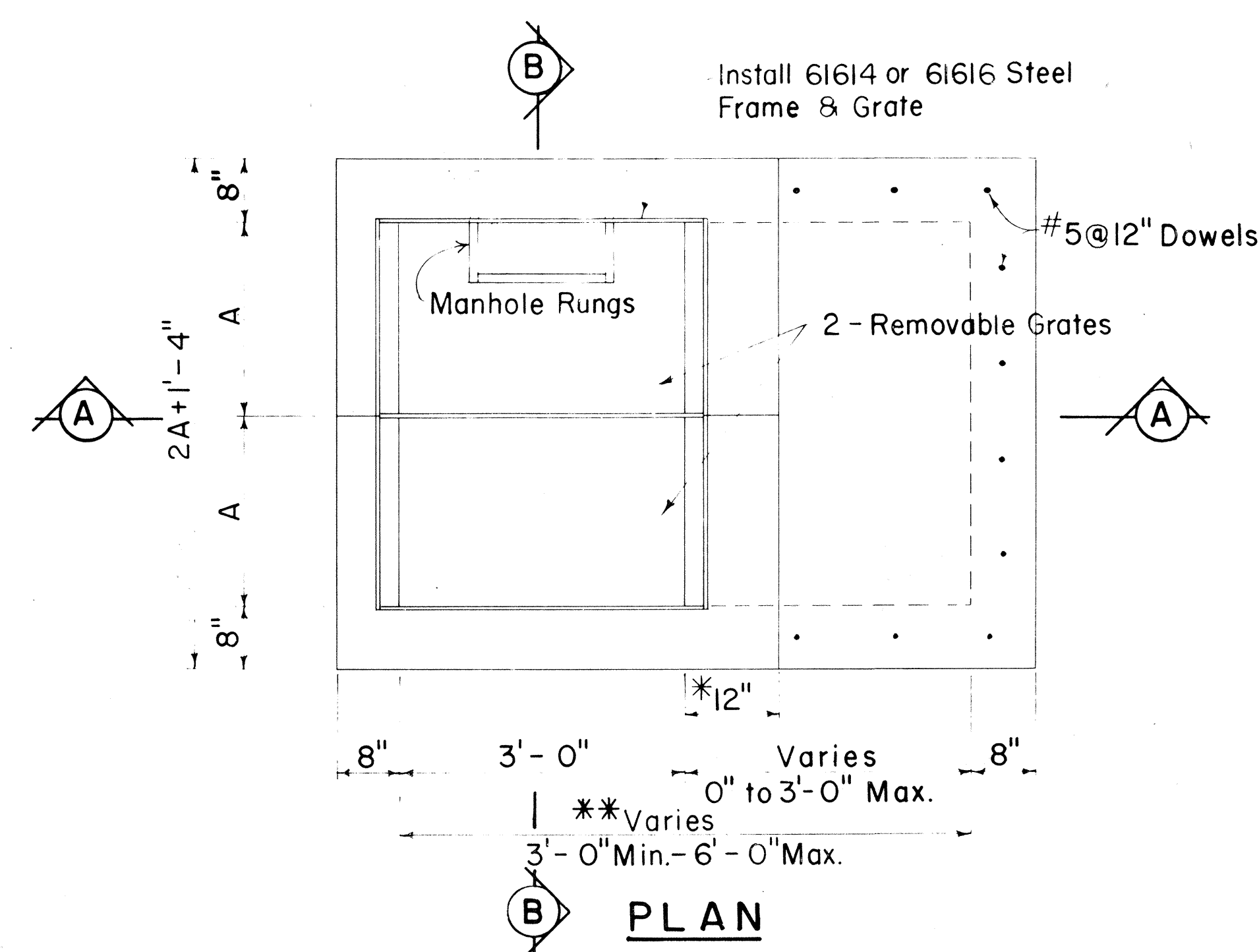
SECTION
Scale: $1\frac{1}{2}" = 1'-0"$



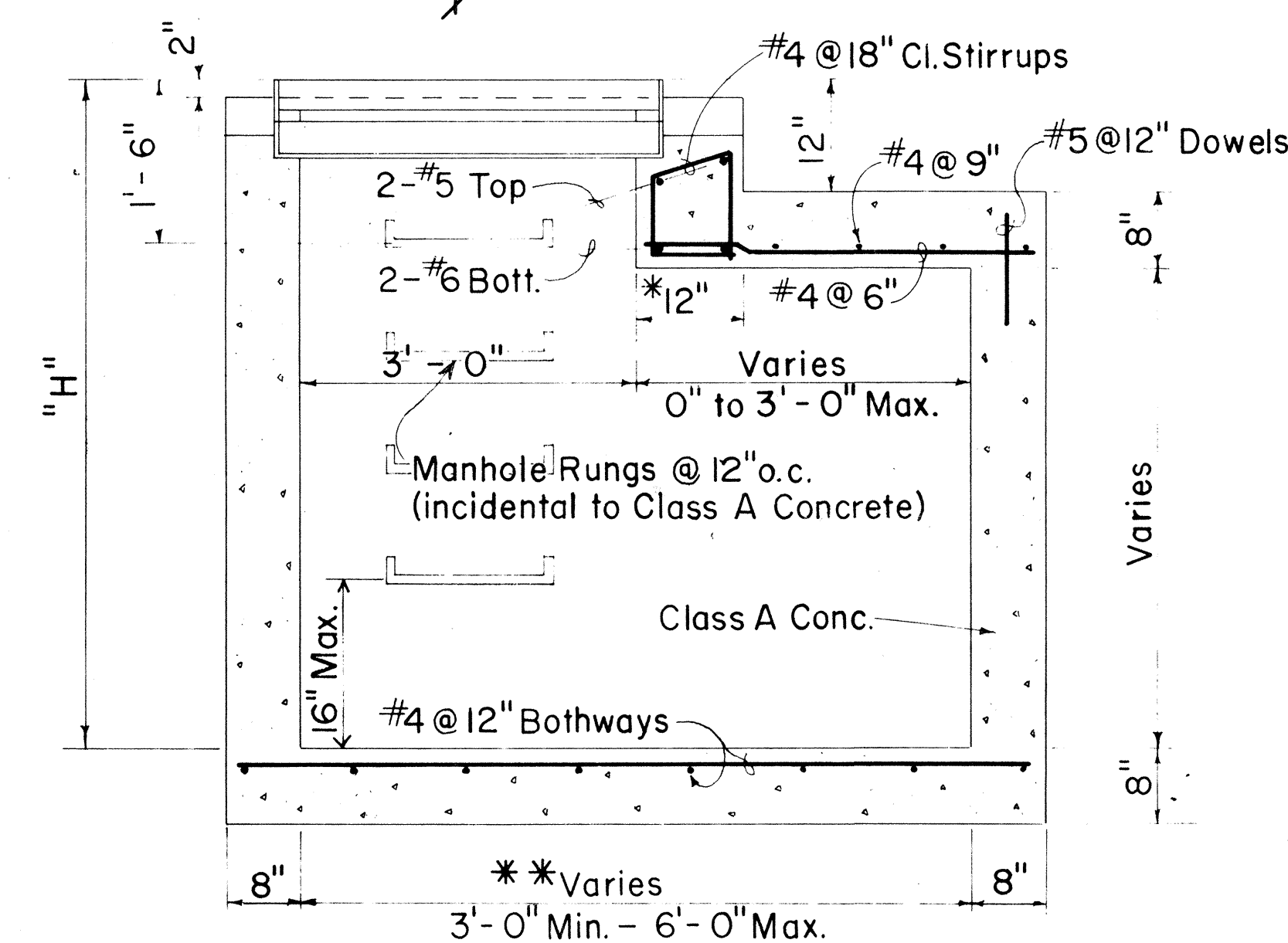
FRAME
Scale: 3" = 1' - 0"



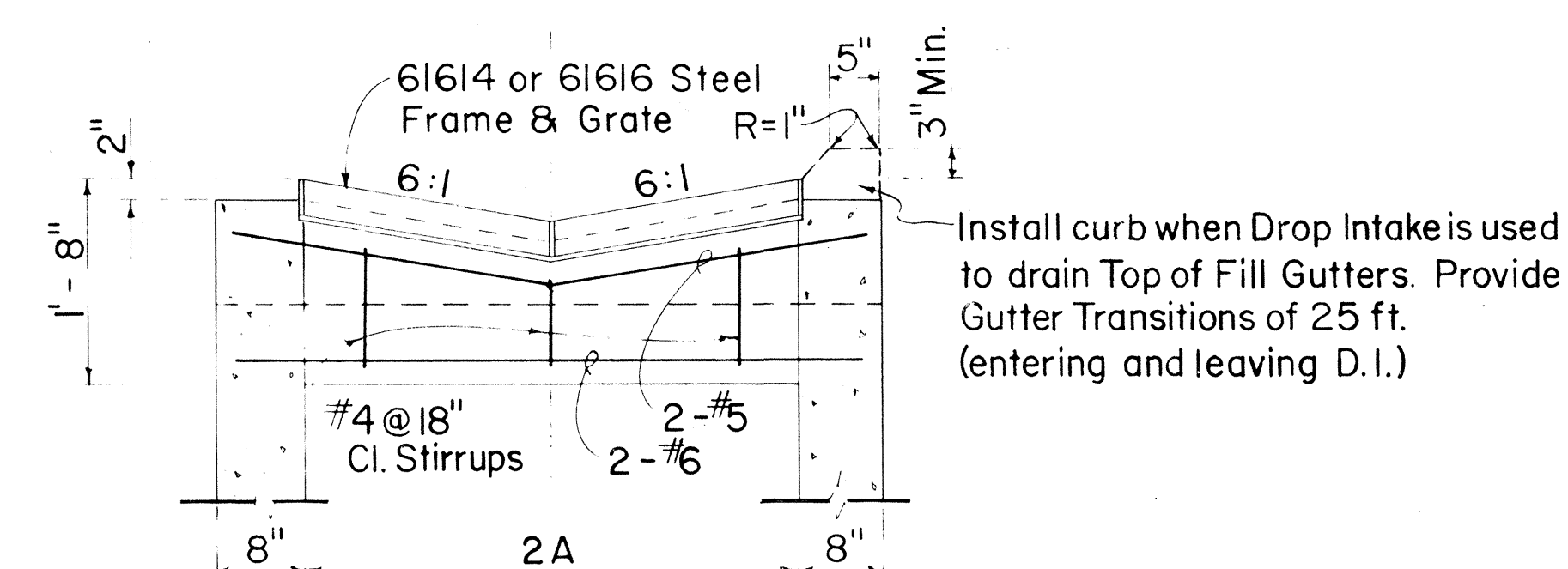
GRATE
Scale: 3" = 1' - 0"



B PLAN



SECTION A - A



SECTION B - B

DETAILS OF 61614 OR 61616 DROP INTAKE

Scale: $\frac{3}{4}" = 1' - 0"$

- * 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'.

ORIGINAL PLAN	SURVEY PLOTTED BY _____	DATE _____
NOTE BOOK	DRAWN BY _____	
	TRACED BY _____	
	DESIGNED BY _____	
	QUANTITIES BY _____	
	CHECKED BY _____	