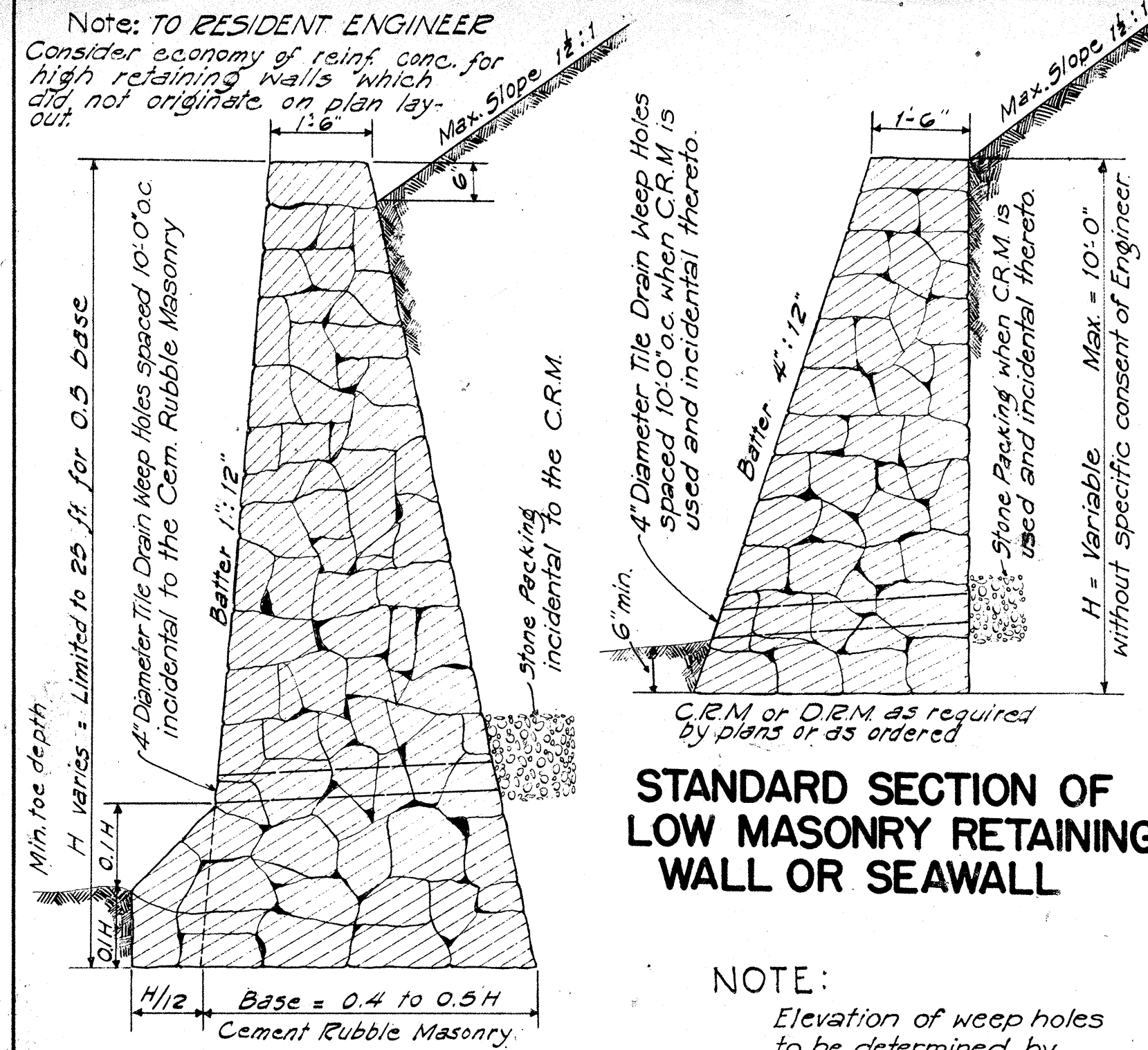
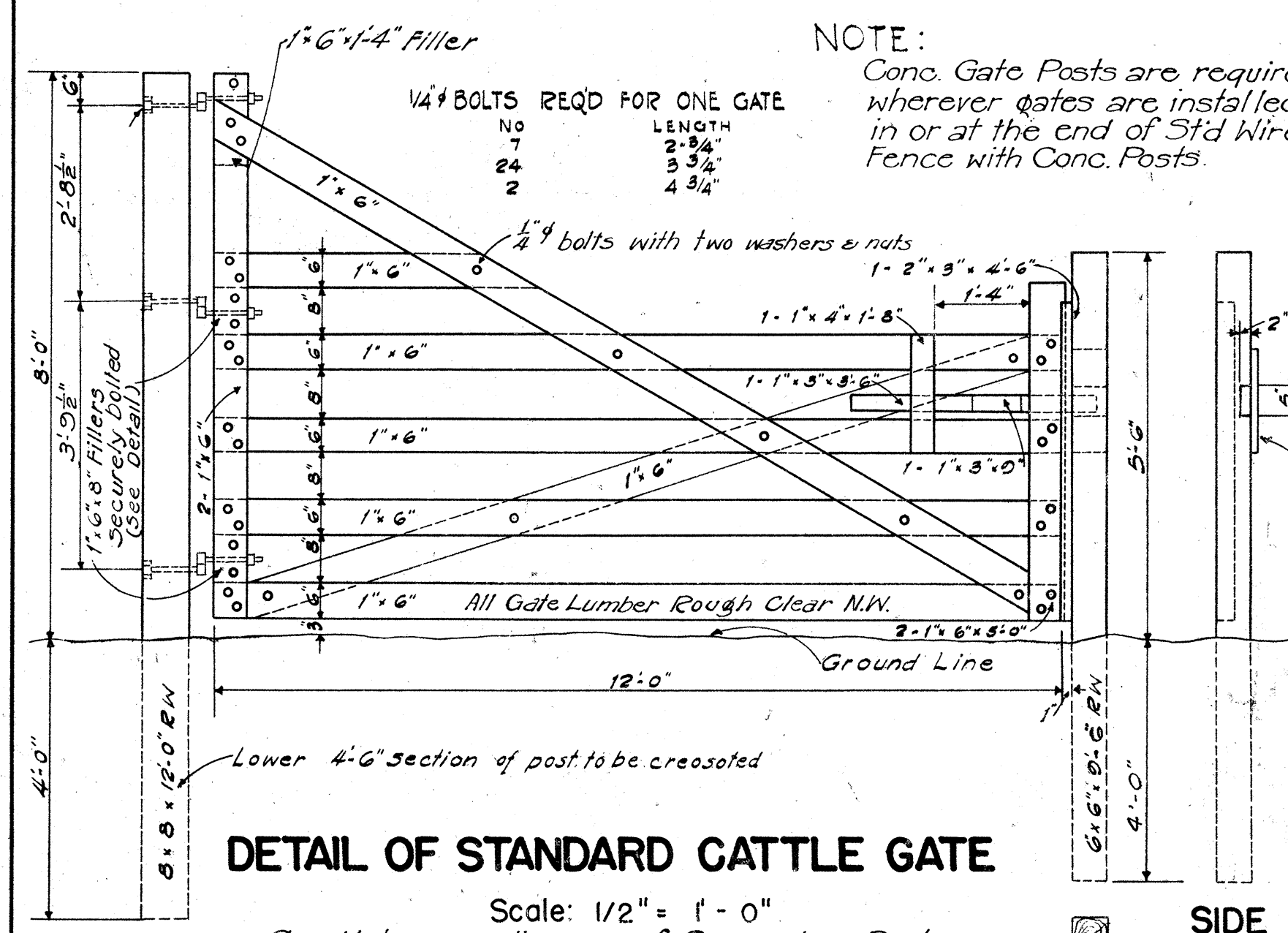




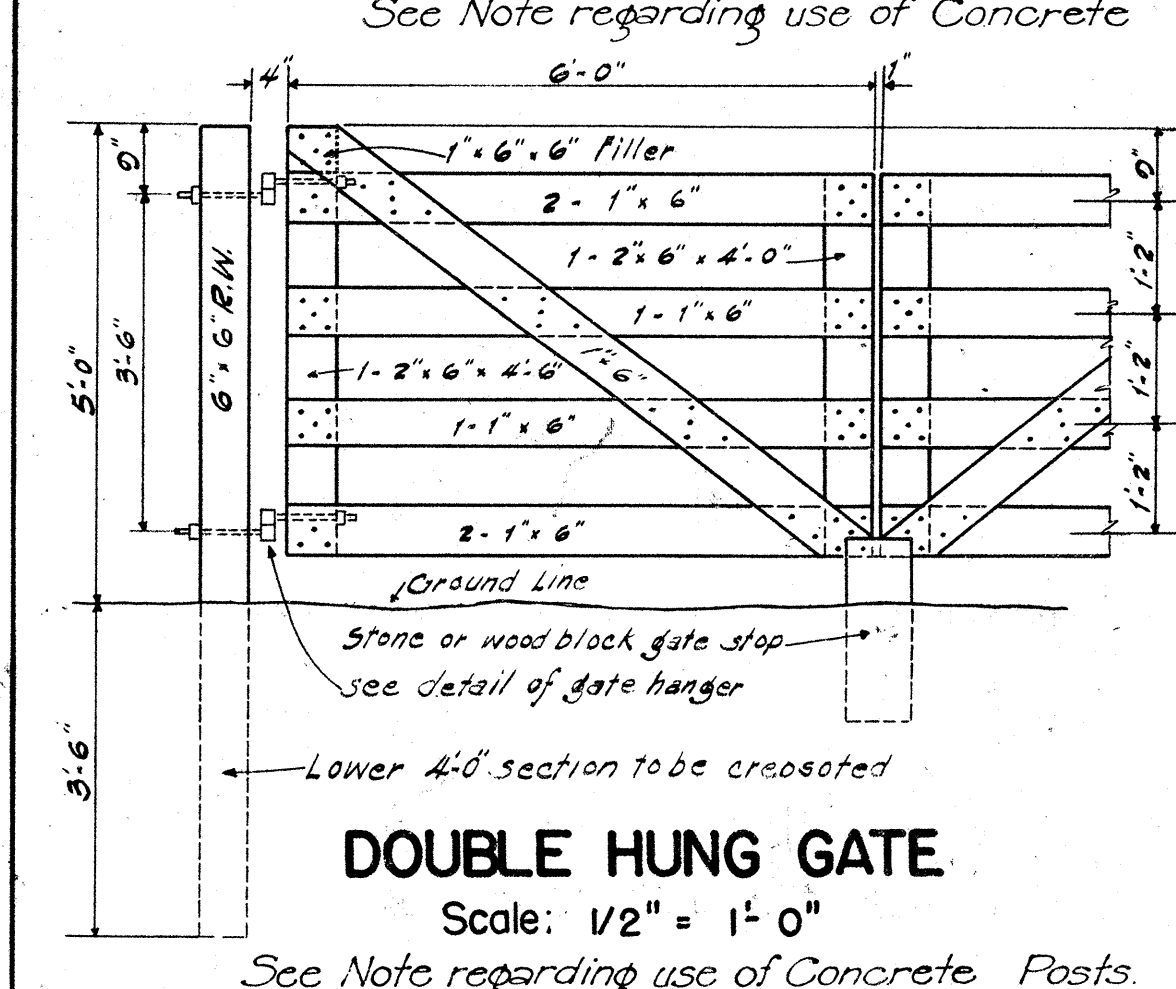
STANDARD SECTION OF LOW MASONRY RETAINING WALL OR SEAWALL

NOTE: Elevation of weep holes to be determined by Resident Engineer. Holes to be placed as close to the existing ground line as local conditions permit.

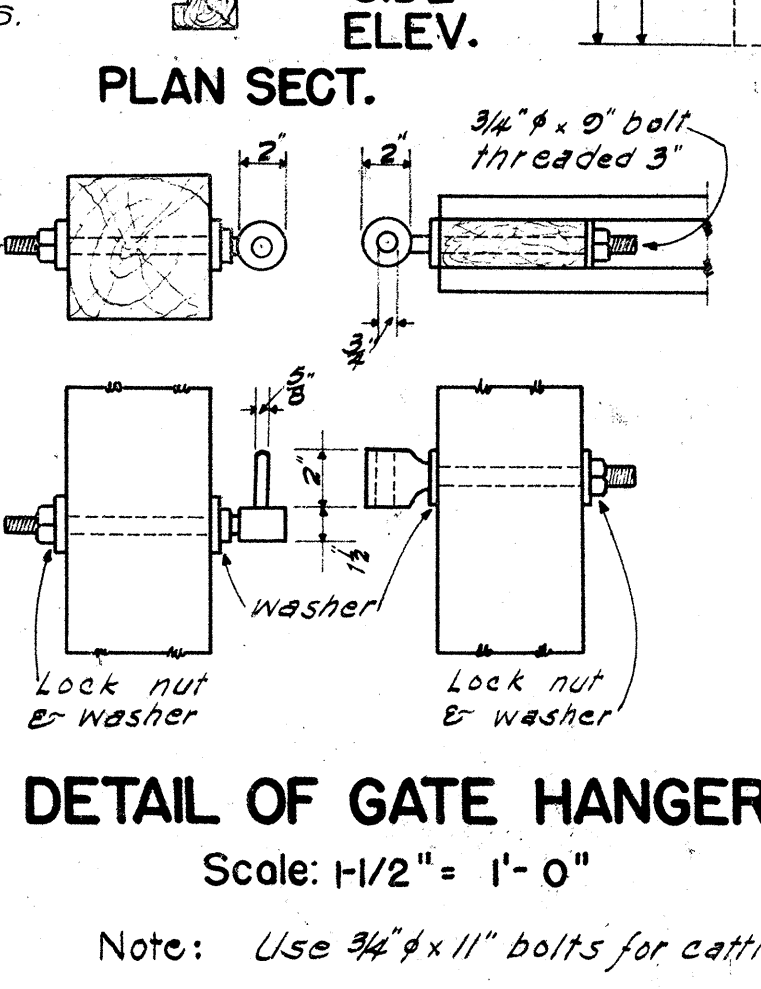
STANDARD SECTION OF HIGH CEMENT RUBBLE MASONRY RETAINING WALL OR SEAWALL



DETAIL OF STANDARD CATTLE GATE



DOUBLE HUNG GATE

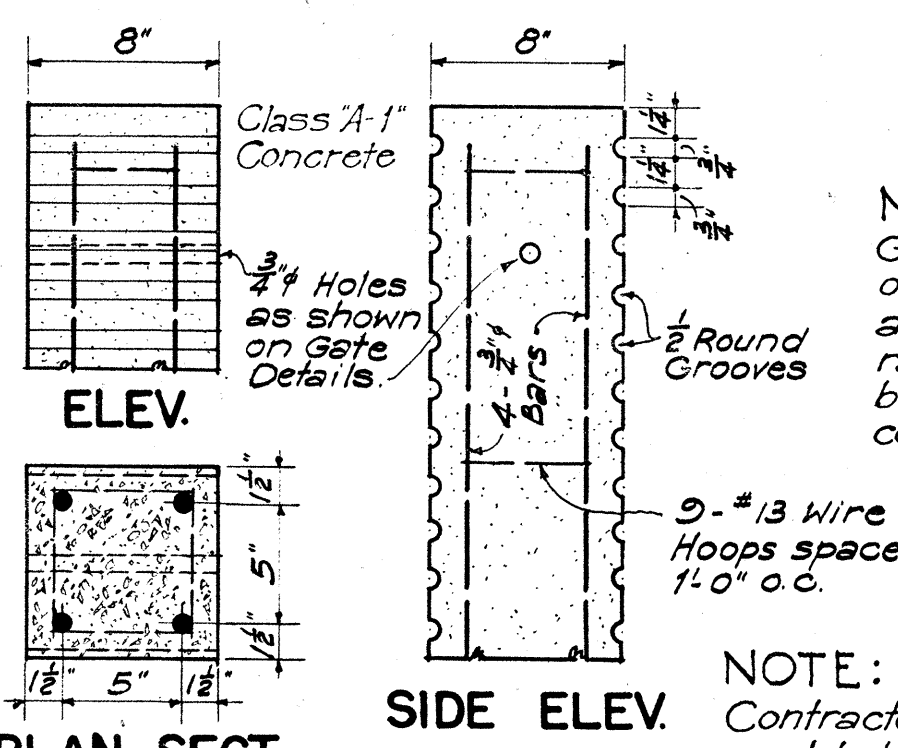


DETAIL OF GATE HANGER

Data Standard Masonry Drop Intake

D	H	L	D+G	Cu. Yds	Where Variable Equals
22"	18"	2'-0"	2.41	4'-6"	
24"	24"	2'-6"	2.89	5'-0"	
30"	30"	3'-0"	3.38	5'-6"	
42"	36"	3'-6"	3.92	6'-0"	

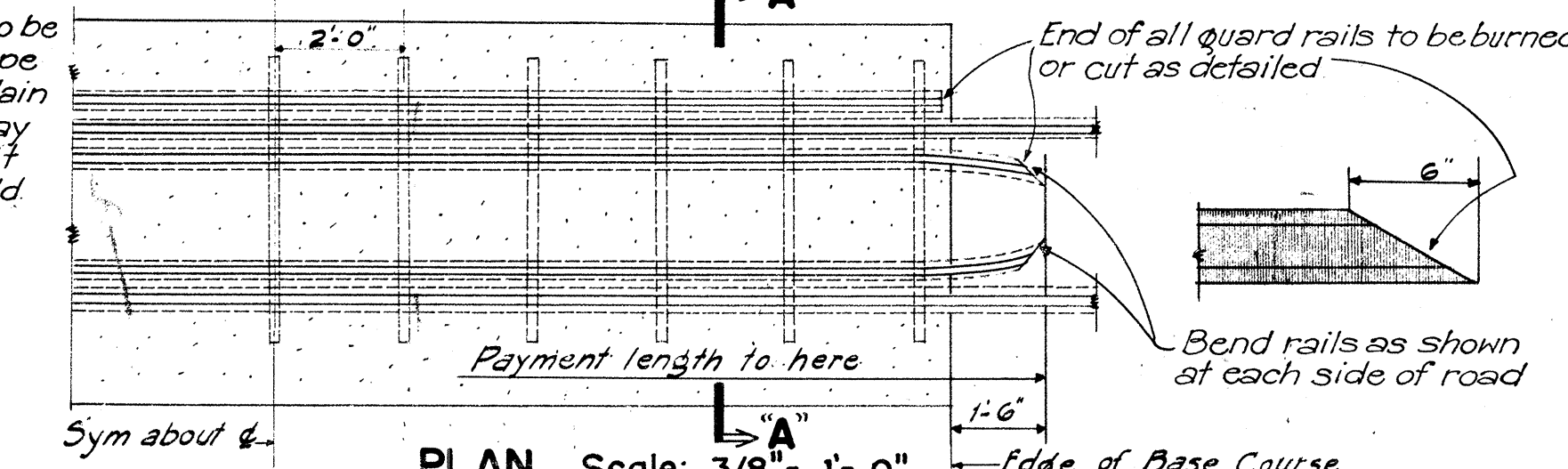
NOTE: Dimension "X" is assumed as 2'-4" in figuring the above quantities.



STANDARD MASONRY DROP INTAKE

Scale: 3/8" = 1'-0"

NOTE: Guard rails are to be of the same shape and weight as Main rails. Details may be varied to suit conditions in field.



Data Standard Rubble Masonry H.W.

Cu. Yds.	D	H	B	L	Cu. one H.W.
0.85	18"	3'-6"	1'-0"	6'-0"	0.03
1.23	24"	4'-0"	2'-0"	7'-6"	1.41
1.33	2.06	30"	4'-6"	2'-3"	2.00
2.49	2.84	36"	5'-0"	2'-6"	2.72

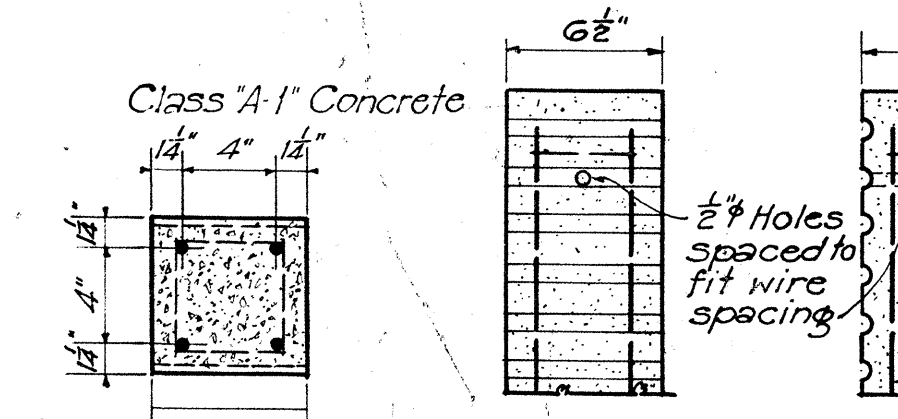
STANDARD MASONRY HEADWALL

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

NOTE: Volume for one head wall is for corrugated pipe culvert.

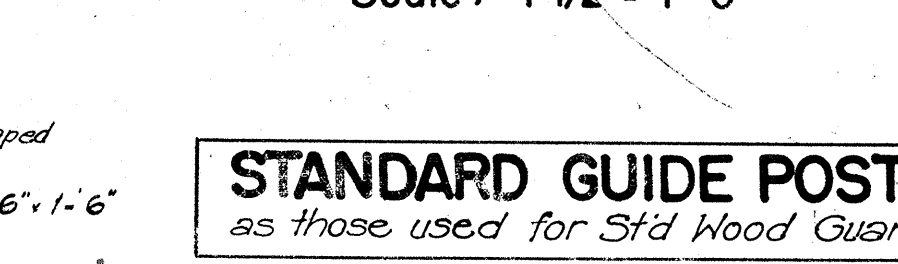
CONC. GATE POST

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

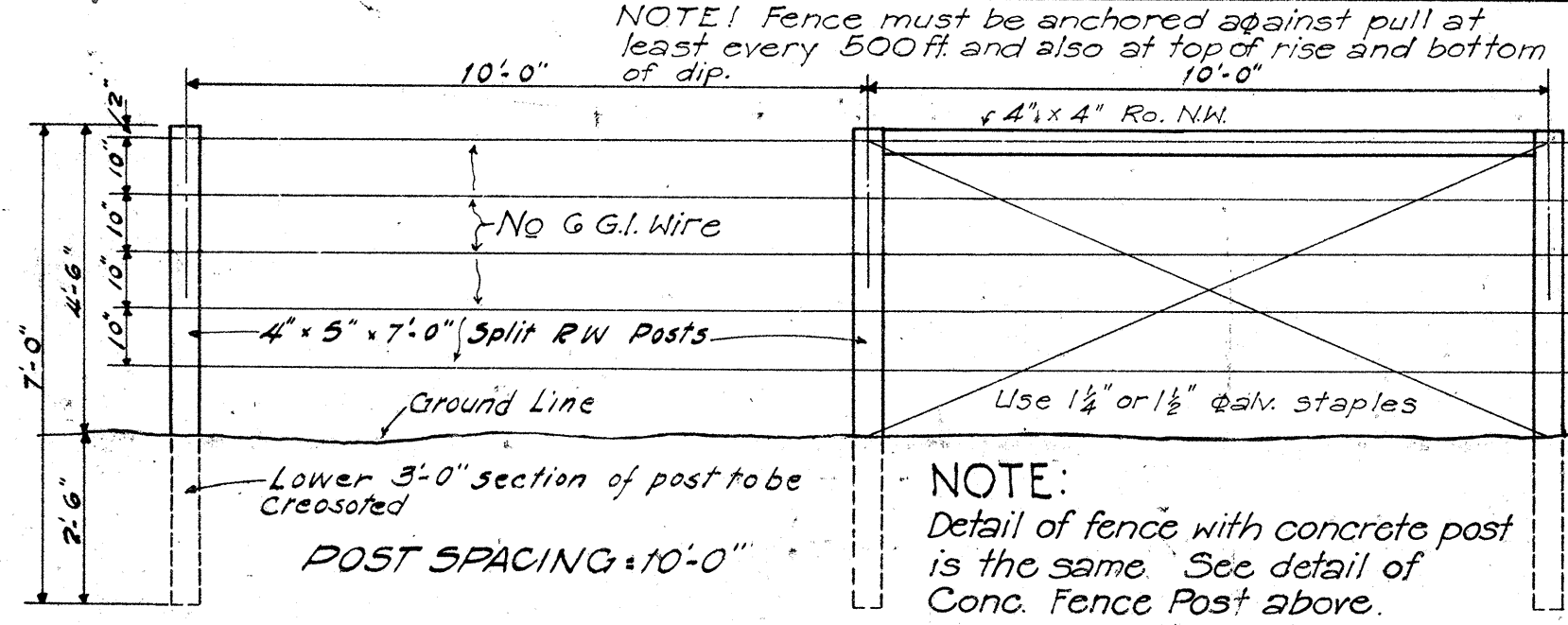


CONC. FENCE POST

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

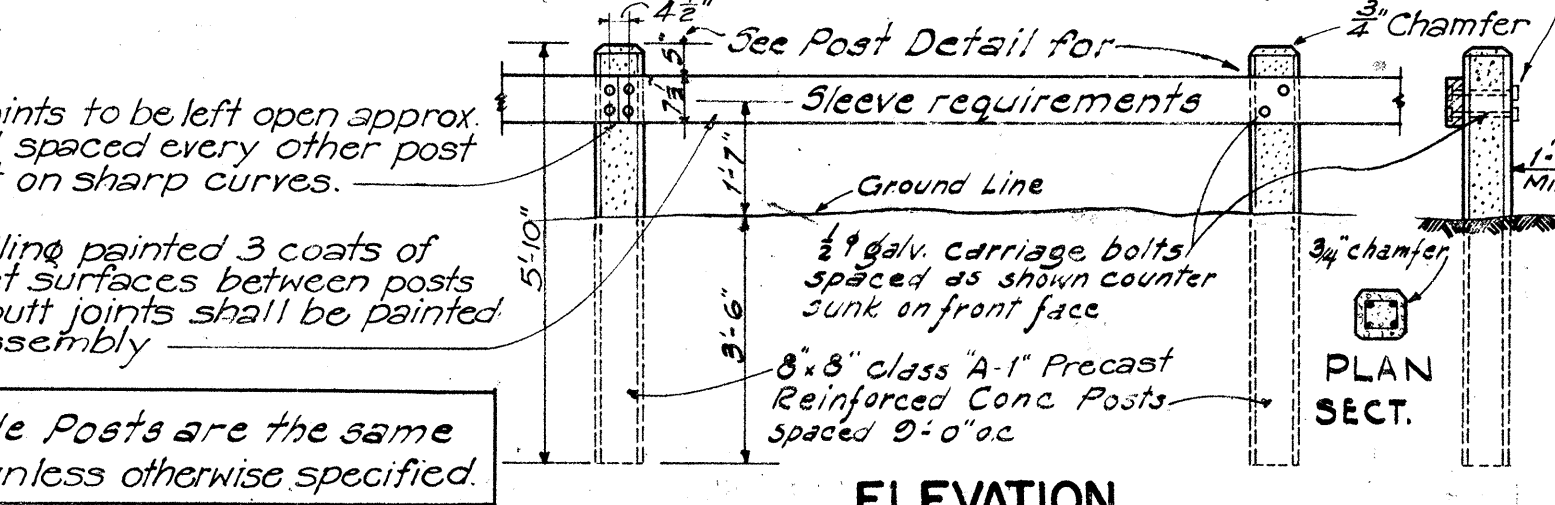


STANDARD GUIDE POSTS: 8"x8" Rein. Conc. Guide Posts are the same as those used for Std Wood Guard Rail spaced 18'-0" oc. unless otherwise specified.



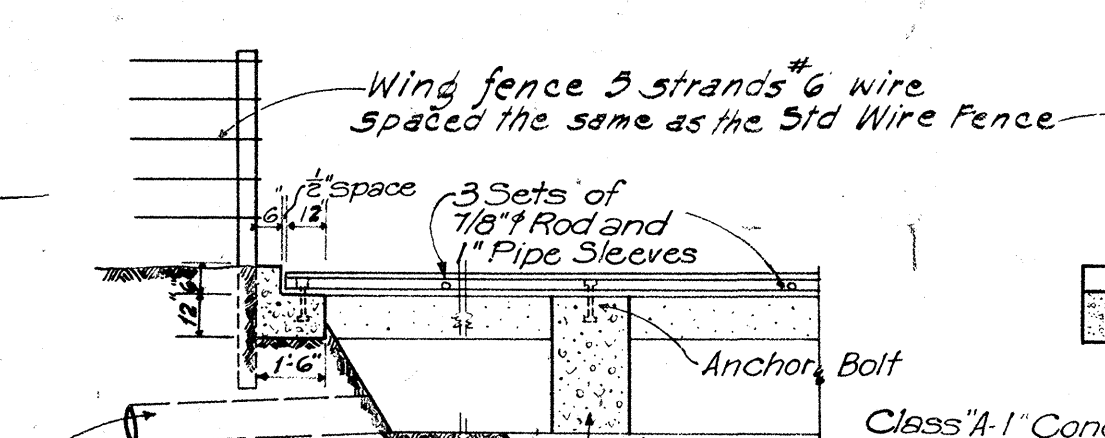
INDUSTRIAL TRACK CROSSING

NOTE: Use Type 'A' if neither Type 'A' or 'B' is specified.



STANDARD WOOD GUARD RAIL

Scale: 3/8" = 1'-0"



PART LONG. SECTION

CROSS SECTION

Approx. 6" oc.

1" pipe sleeve

5"x4"-3/4" plate

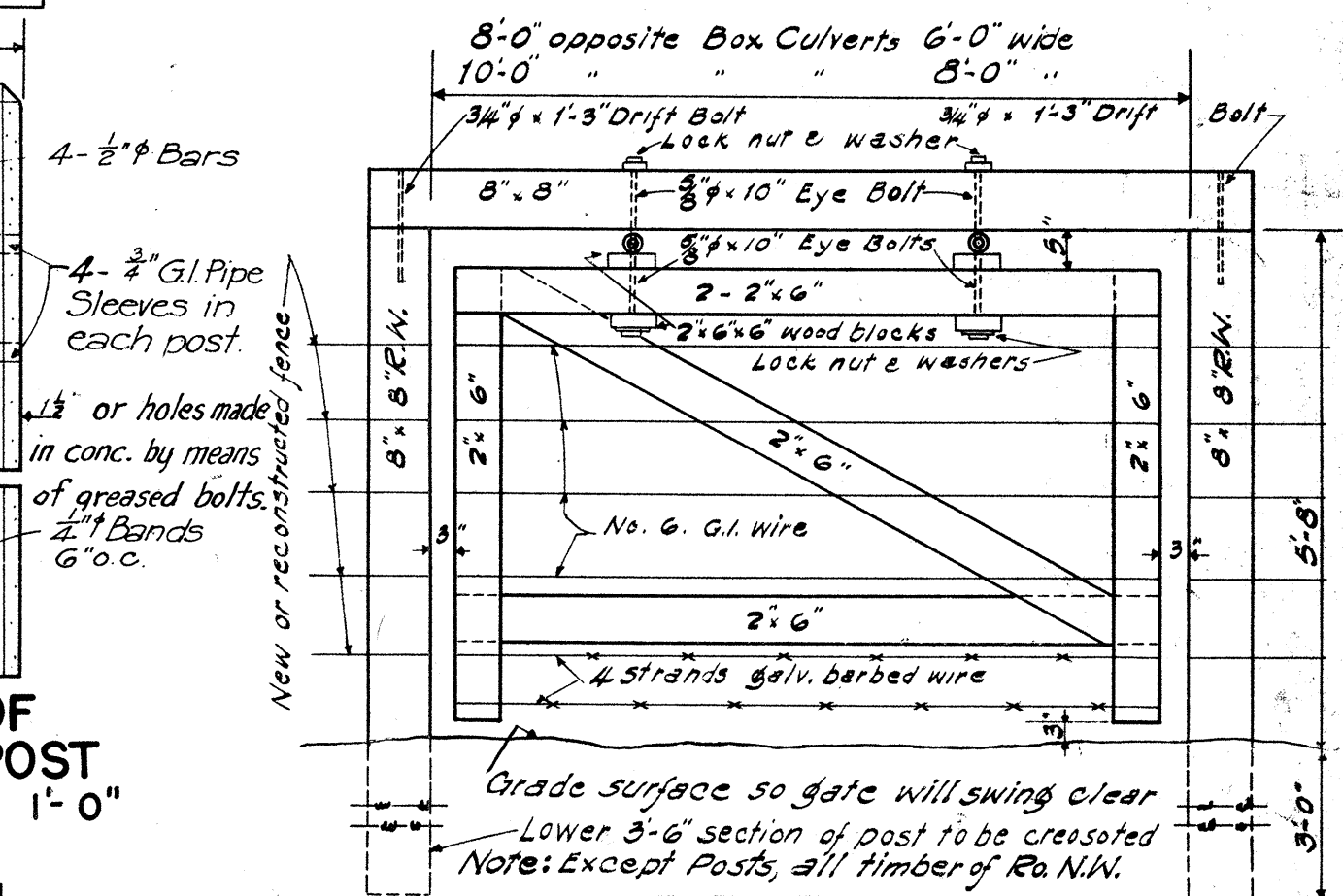
16"x10" Anchor Bolt

Rails need not be one piece each. Each rail may be spliced once with Std Fish Plate.

DETAILS OF CATTLE GUARD

Scale: 3/8" = 1'-0"

DETAIL OF STANDARD OUTLET DITCH



ELEVATION

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

LAYOUT SHOWING HURDLE PLACED BELOW CULVERT IN A POSITION WHICH WILL BE CATTLE TIGHT

DETAILS OF HURDLE

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

STANDARD DETAILS

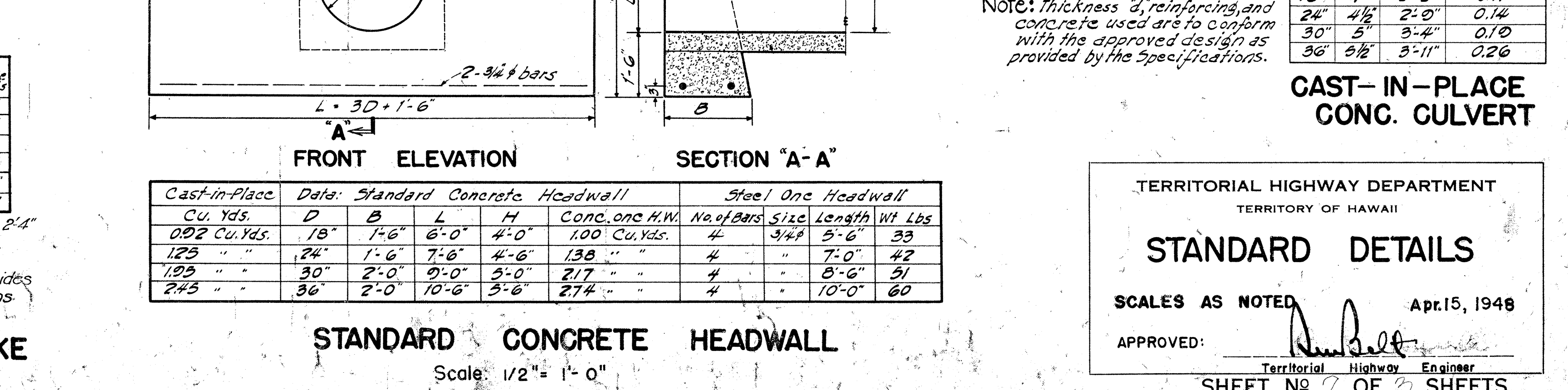
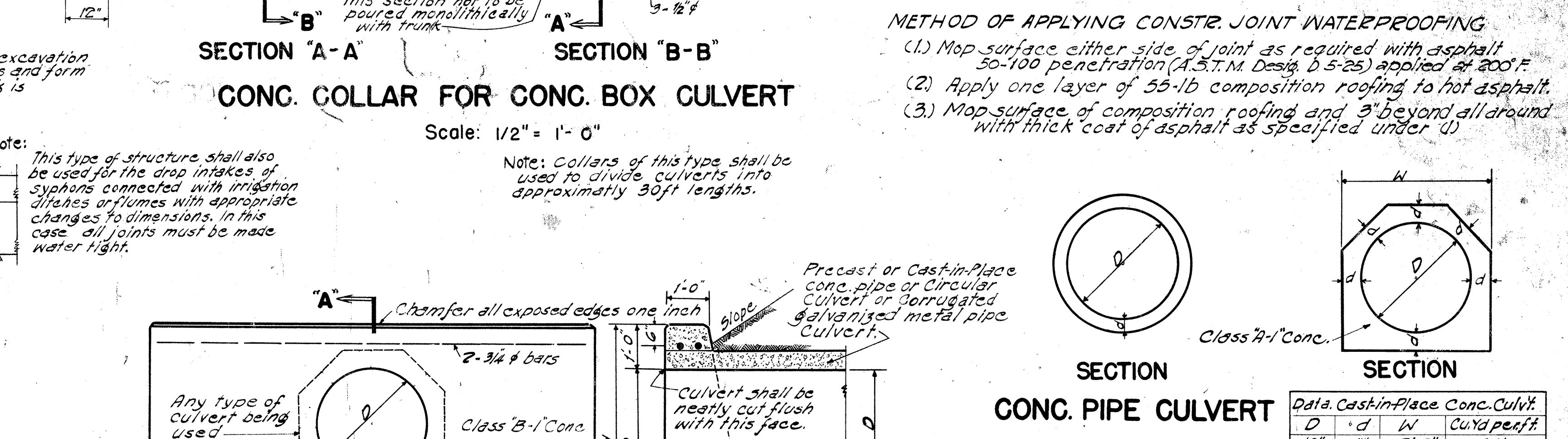
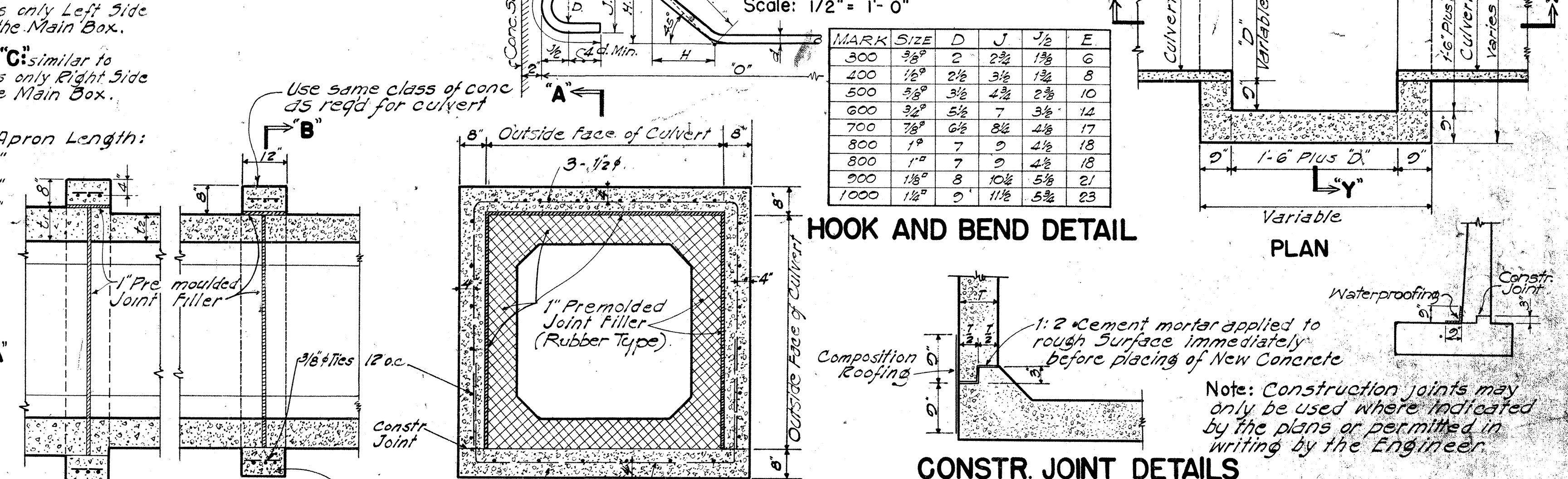
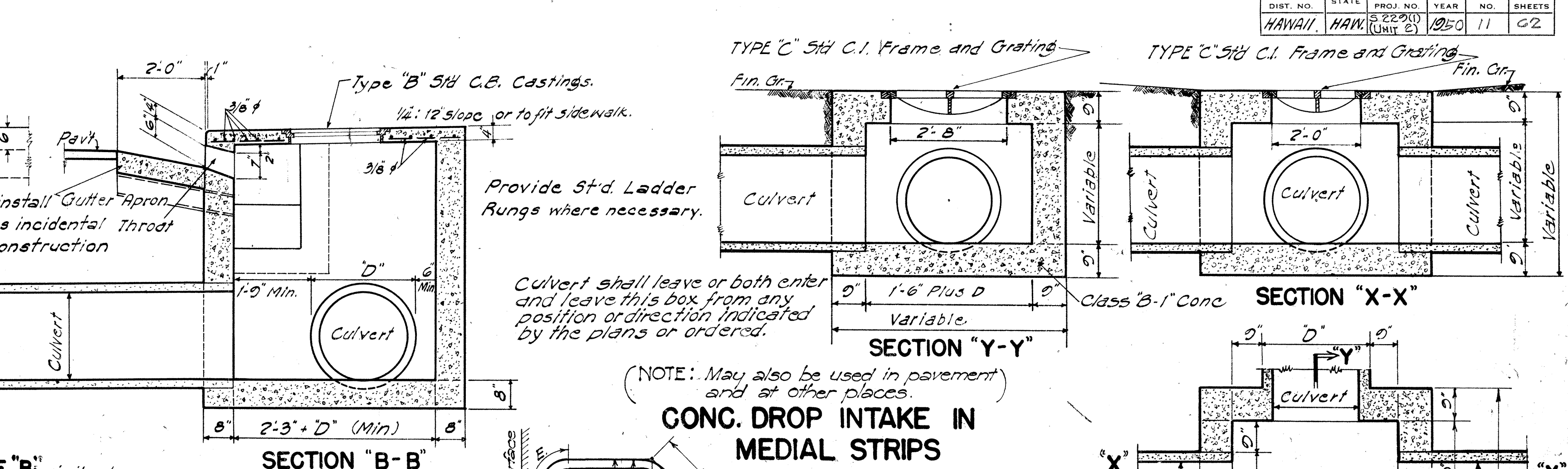
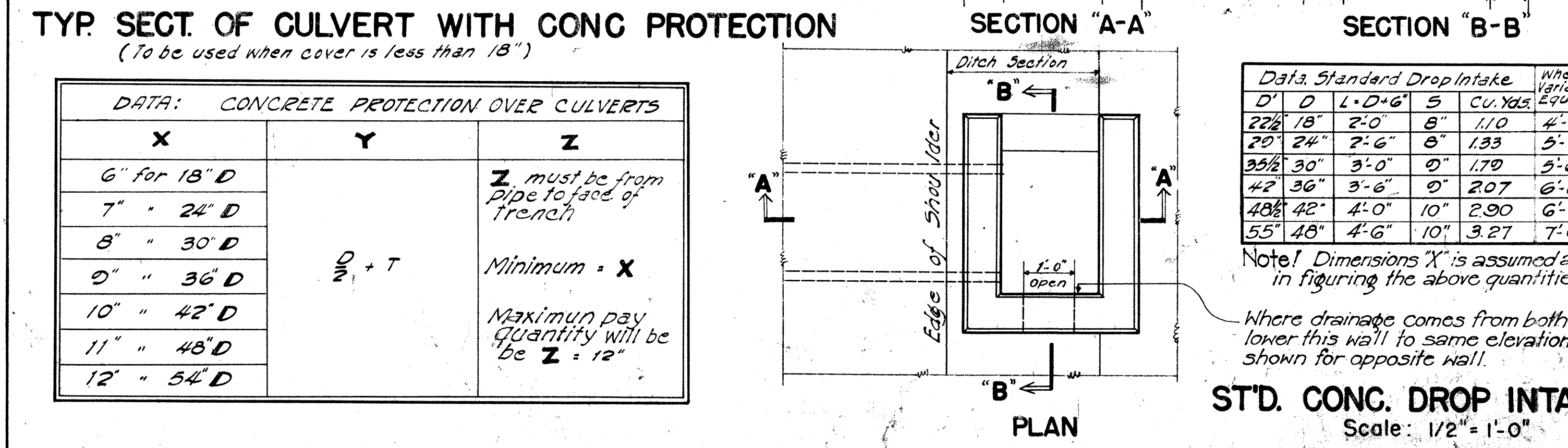
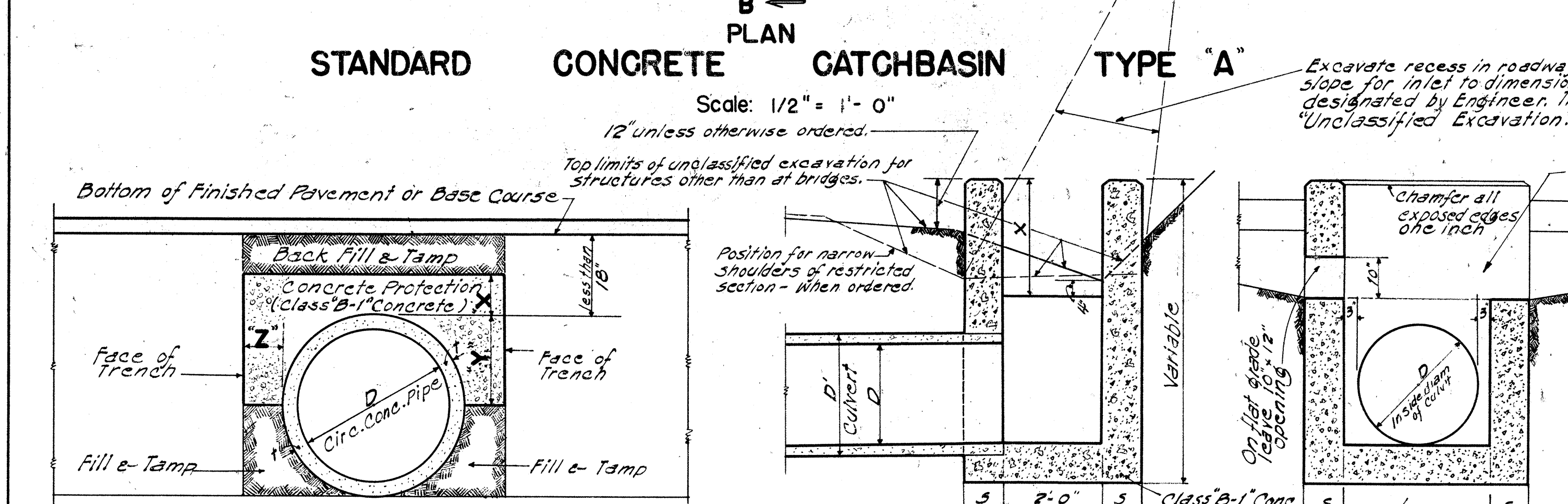
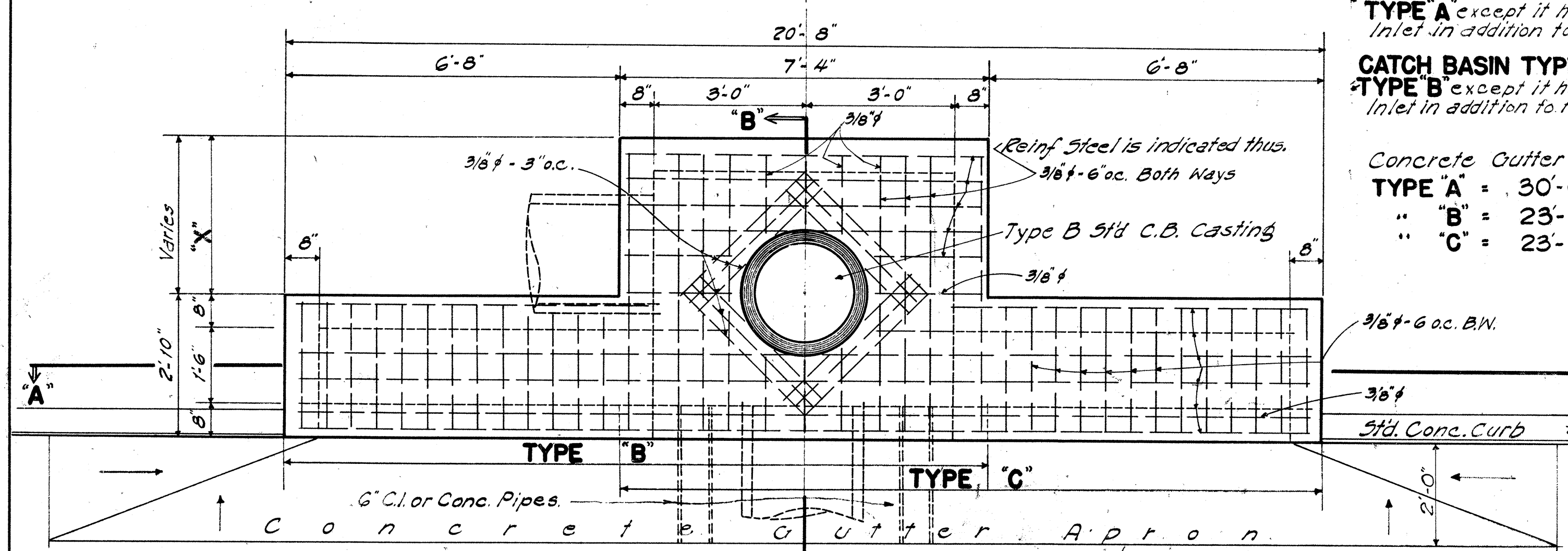
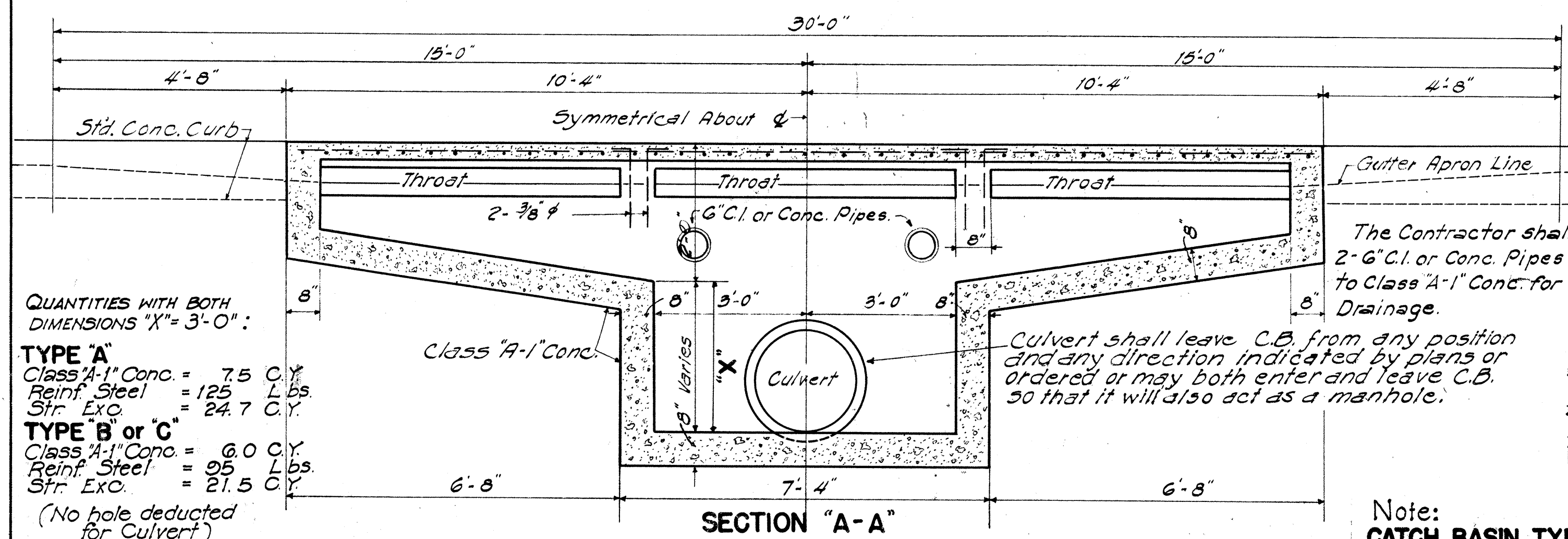
SCALES AS NOTED
Apr. 15, 1948

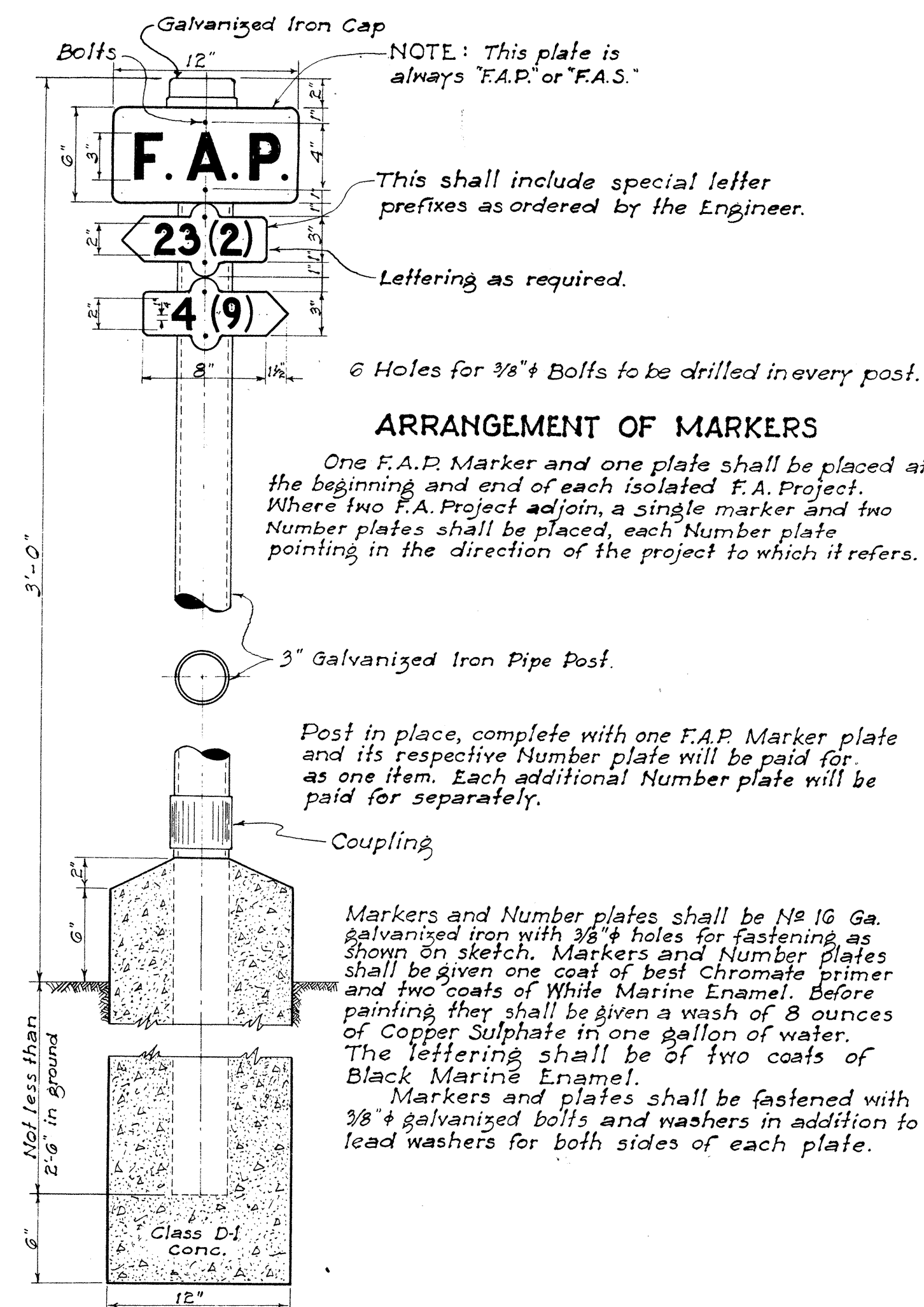
APPROVED: *[Signature]*
Territorial Highway Engineer

SHEET NO. 1 OF 3 SHEETS

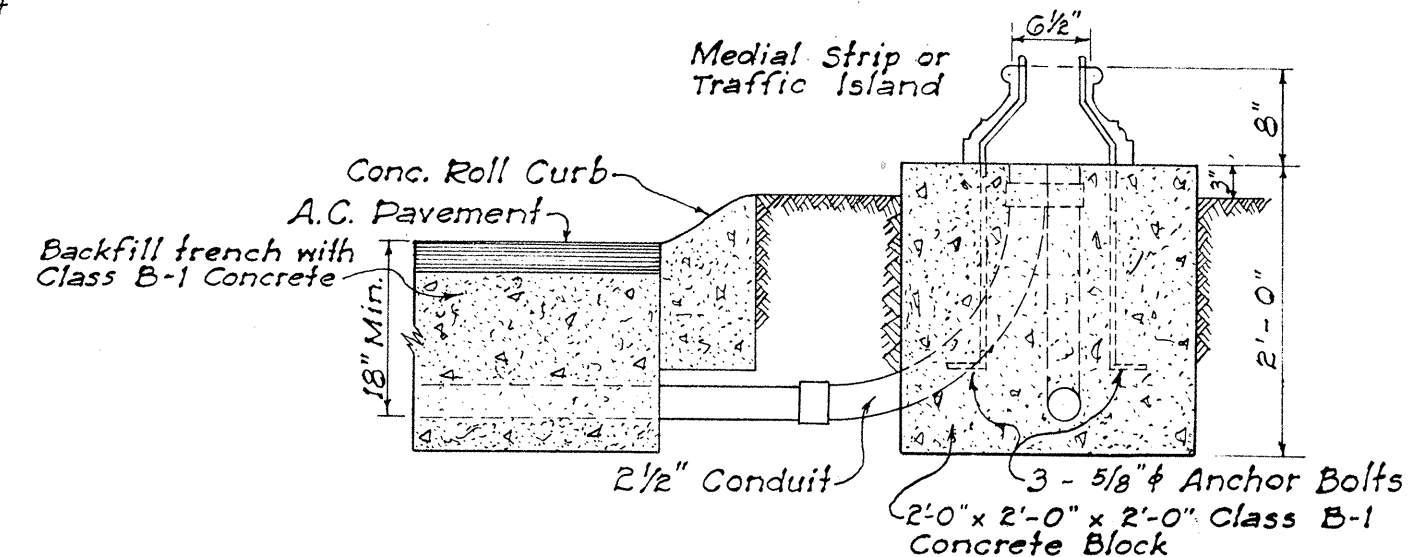
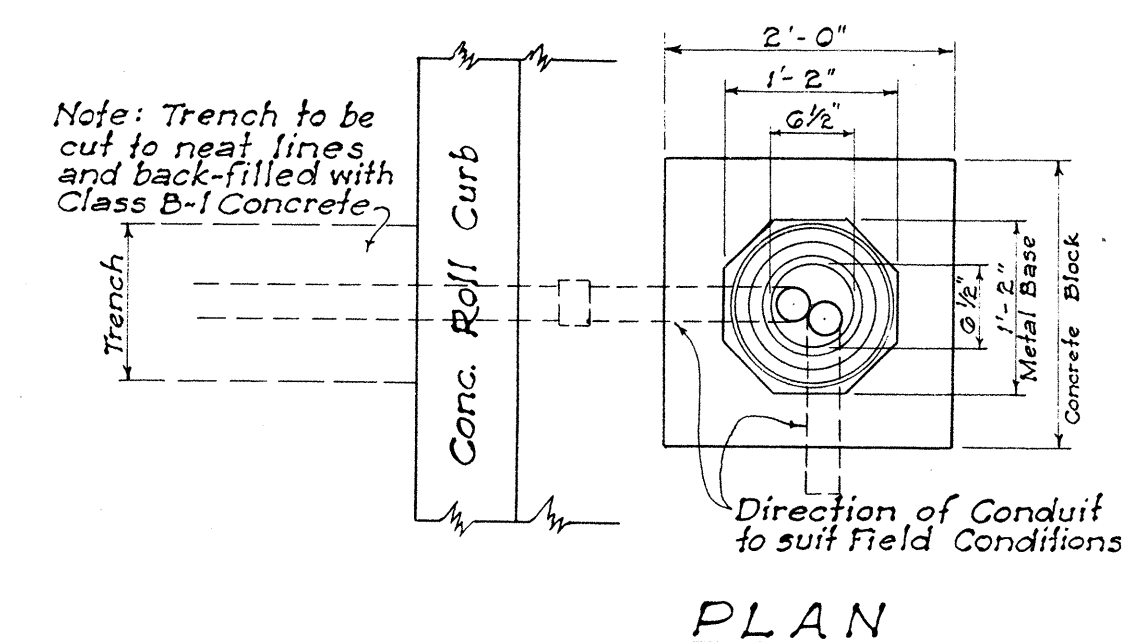
5486.10

DATE
DESIGNED BY
DRAWN BY
CHECKED BY
NOTED BY
QUANTITIES CHECKED BY
No.



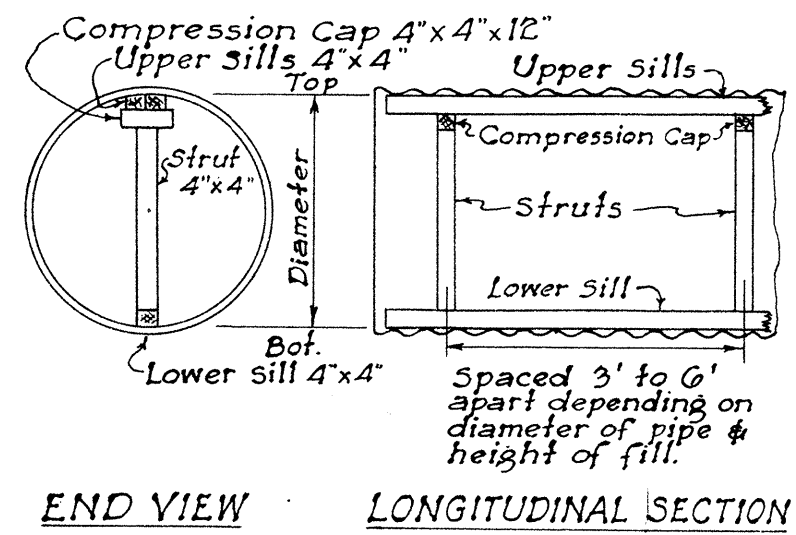


FEDERAL AID MARKER
Scale: 1 1/2" = 1'-0"



DETAIL OF BASE FOR TRAFFIC STANDARD AND DISPATCHER PEDESTAL

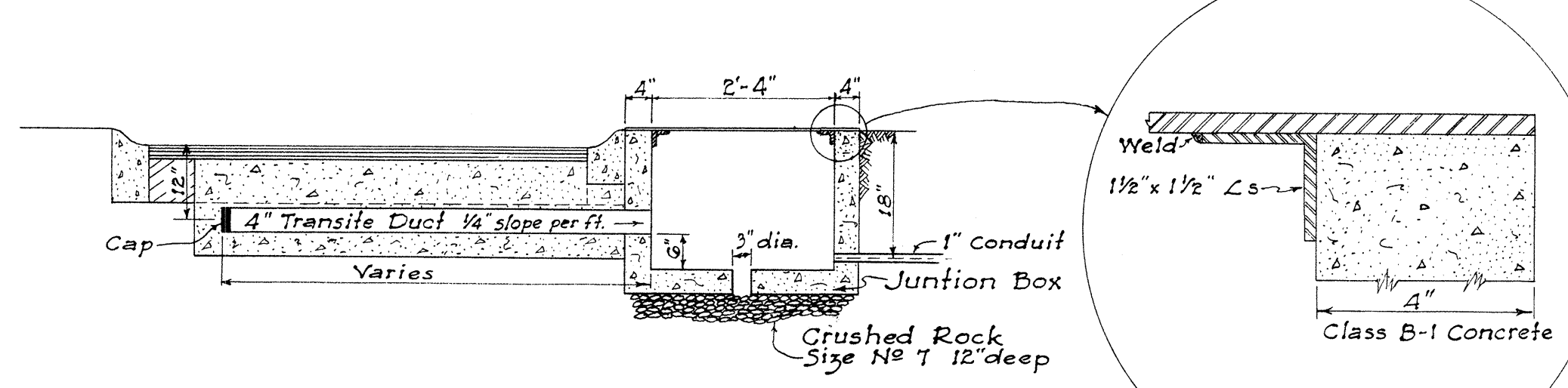
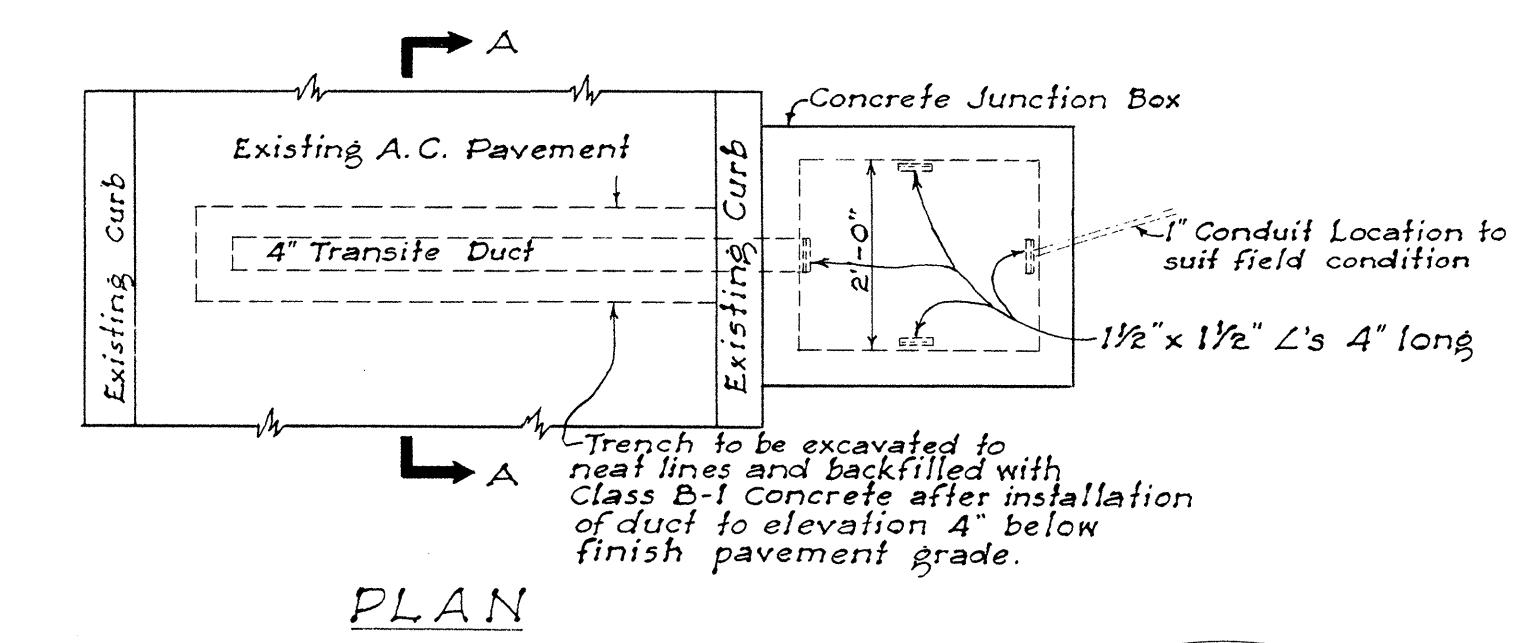
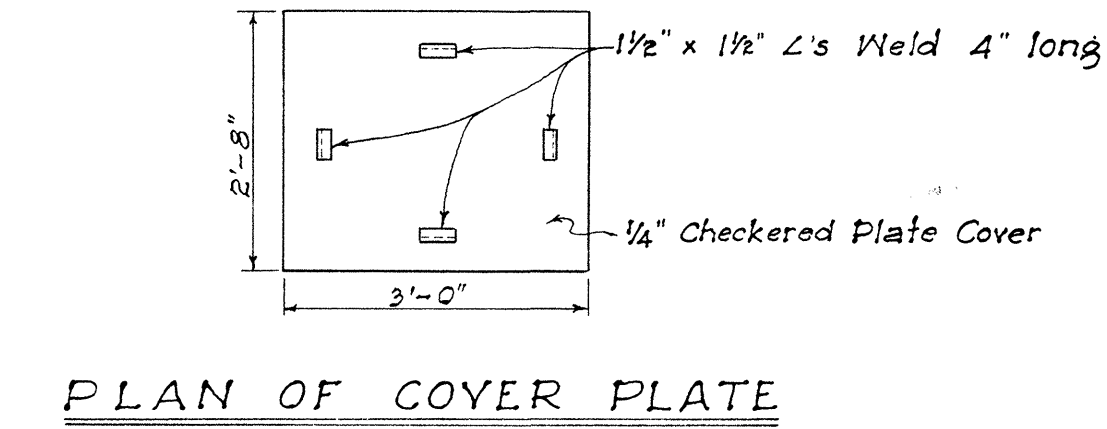
NOTE: Unless otherwise specified, all concrete for base for Traffic Standards, Pull Boxes, Concrete Jackets for Transite Ducts shall be Class B-1 Concrete.



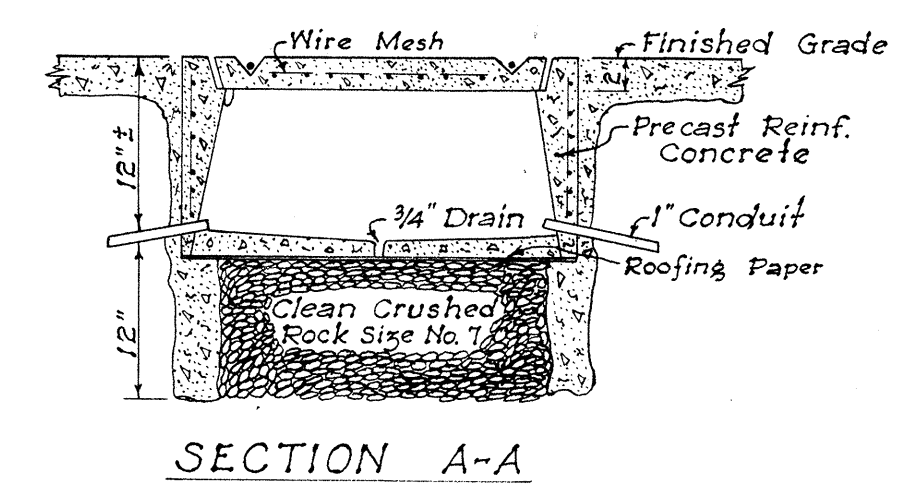
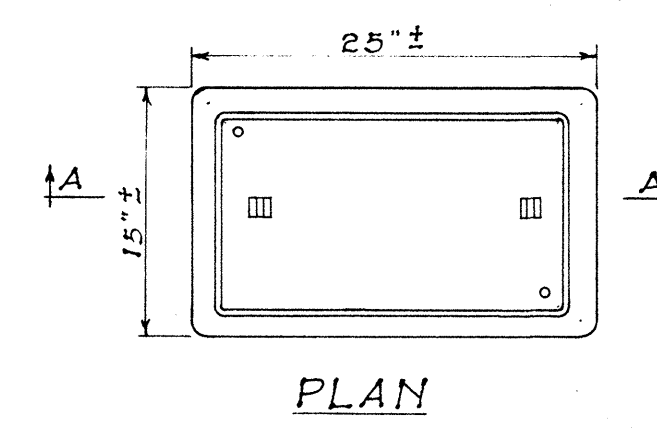
STRUTTING DIAGRAM & TABLE FOR CORRUGATED METAL PIPE CULVERT

Diameter of Pipe in inches	Length of Struts in inches	Spacing of Struts in ft. for Various Heights	FILL 1' to 5'	FILL 5' to 10'	FILL 10' to 20'	FILL 20' to 30'	FILL Over 30'
48	38 3/8	—	—	—	—	—	—
54	44 3/4	G	G	G	G	G	4
60	51	G	G	G	G	G	4
66	57 1/4	G	G	G	G	G	4
72	63 3/8	G	G	G	G	G	3.5
78	69 1/2	G	G	G	G	G	3.5
84	76 1/4	G	G	G	G	G	3

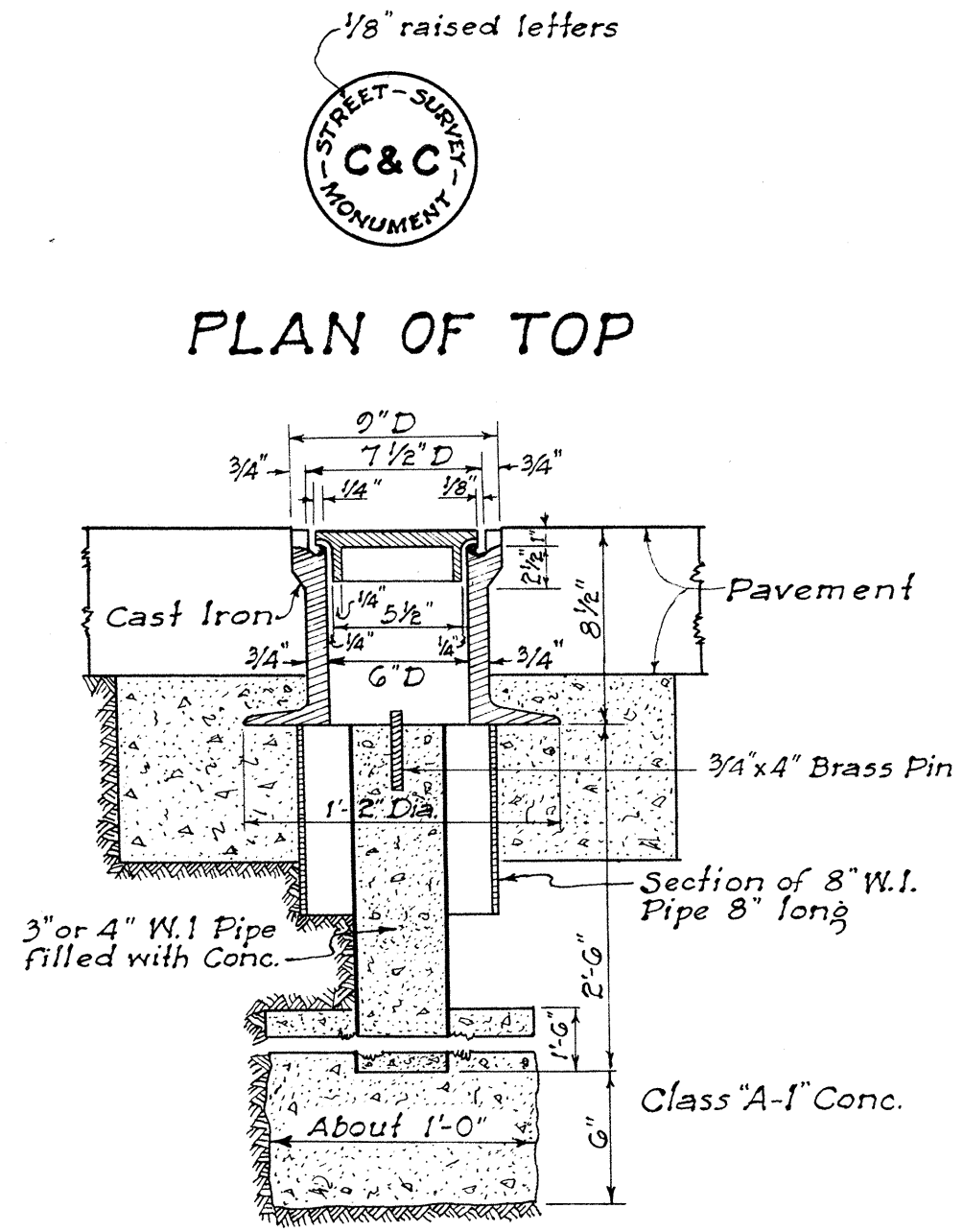
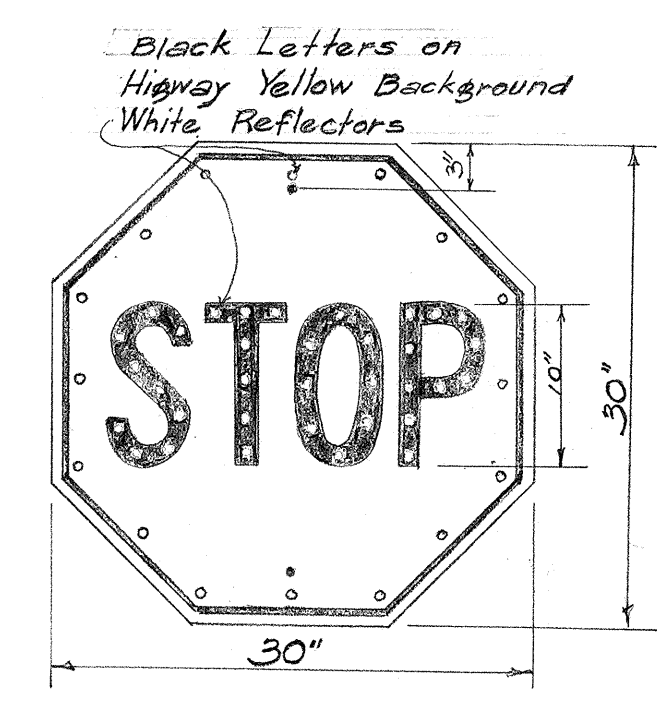
NOTE: Length of Struts are based on 4"x4" timbers which is the minimum size recommended. If larger sills or compression caps are used, length of struts should be changed accordingly.



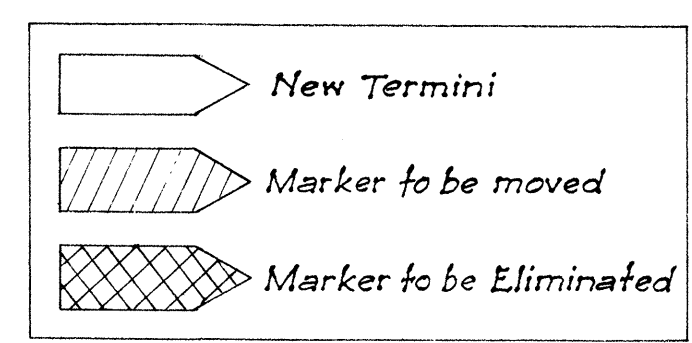
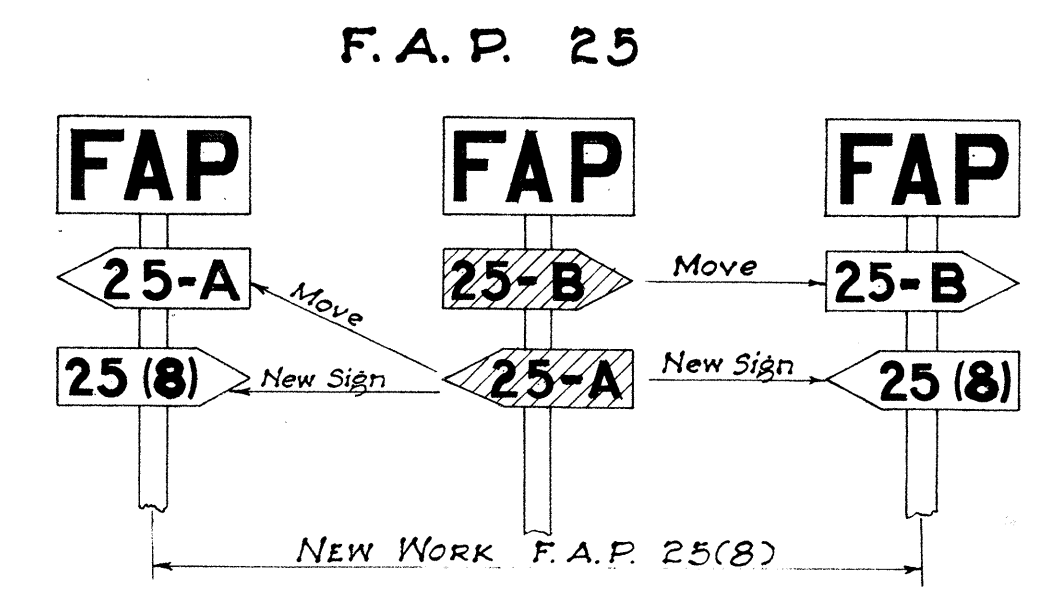
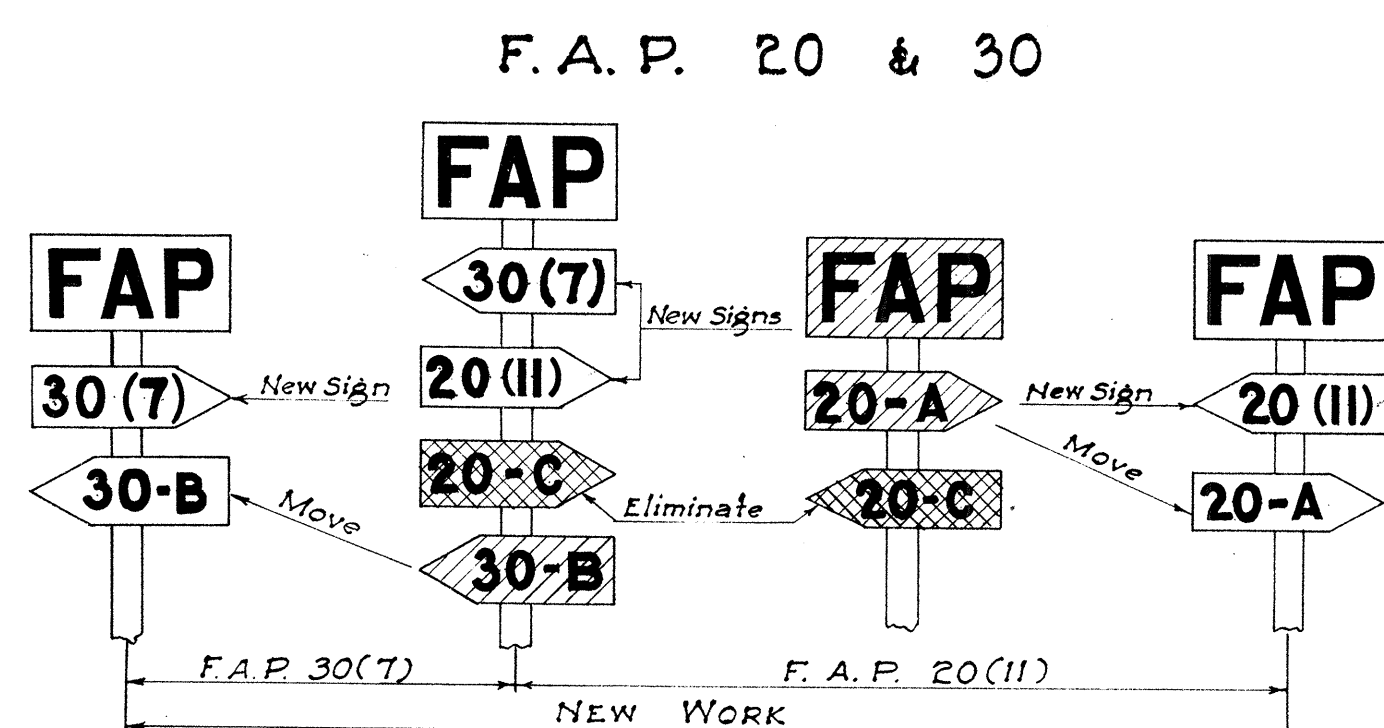
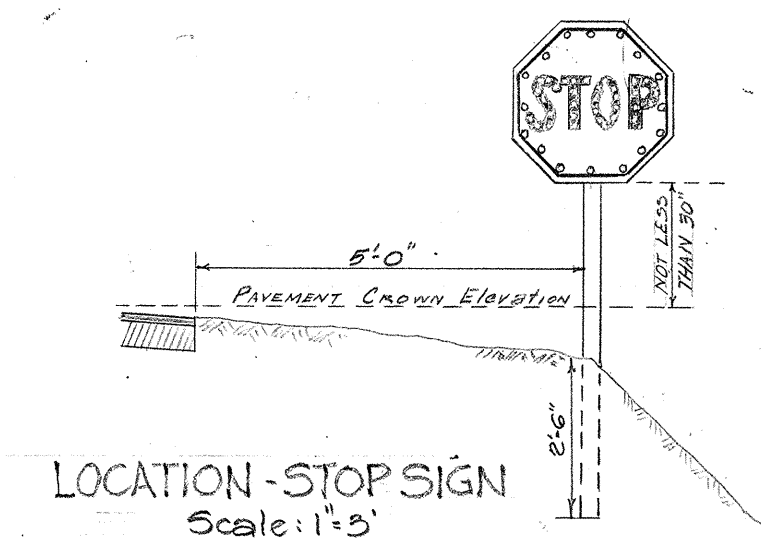
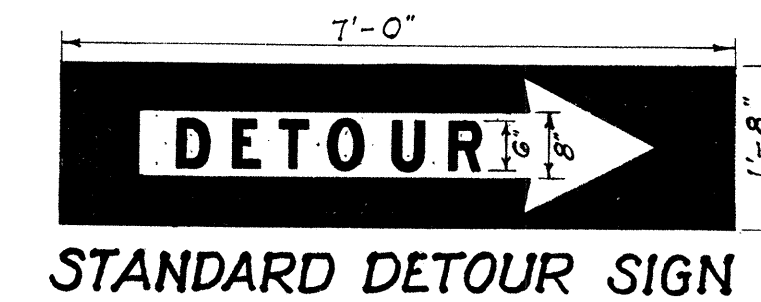
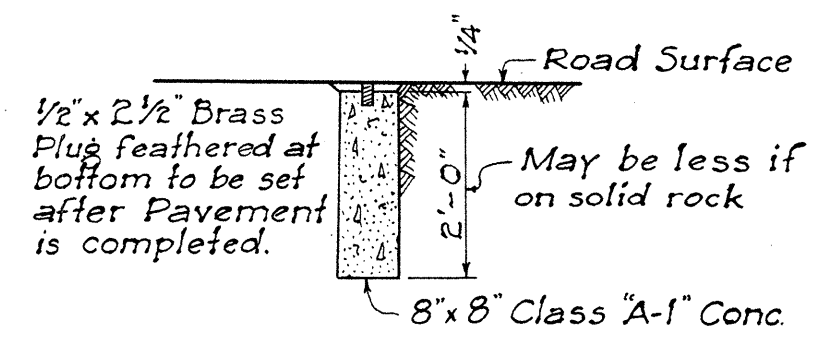
TYPICAL ROAD SECTION SHOWING TRAFFIC DETECTOR JUNCTION BOX AND DUCT



DETAIL OF PULL BOX
Scale: 1" = 1'-0"



STANDARD C&C STREET SURVEY MONUMENT



NOTE: Federal Aid Markers should be placed at the termini of suffix designated sections. Intermediate letter designated markers

of adjacent sections located within the limits of new improvements should be moved to the termini of the new work.

The same procedure would be followed on each successive improvement until all markers for letter designated sections are eventually eliminated.

METHOD OF MARKING F.A. PROJECTS AT OVERLAPS (USING NUMBER SUFFIX ON NEW WORK)

All letters and figures shall be of size and design shown and shall conform with "Standard Alphabets for Highway Signs" as set forth by the Public Roads Administration, Federal Works Agency. Series "C" letter and Series "D" numerals shall be used except where noted.

All Sign Posts shall be 3" Galv. Iron Pipe. Two (2) 1/2" bolt holes drilled at location shown. Two (2) 3/8" bolts with leather washers against face and back of metal sign.

See Specification for Materials and Finish.

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

STANDARD DETAILS

SCALES AS NOTED

APPROVED: *Neil Bell* May 31, 1949

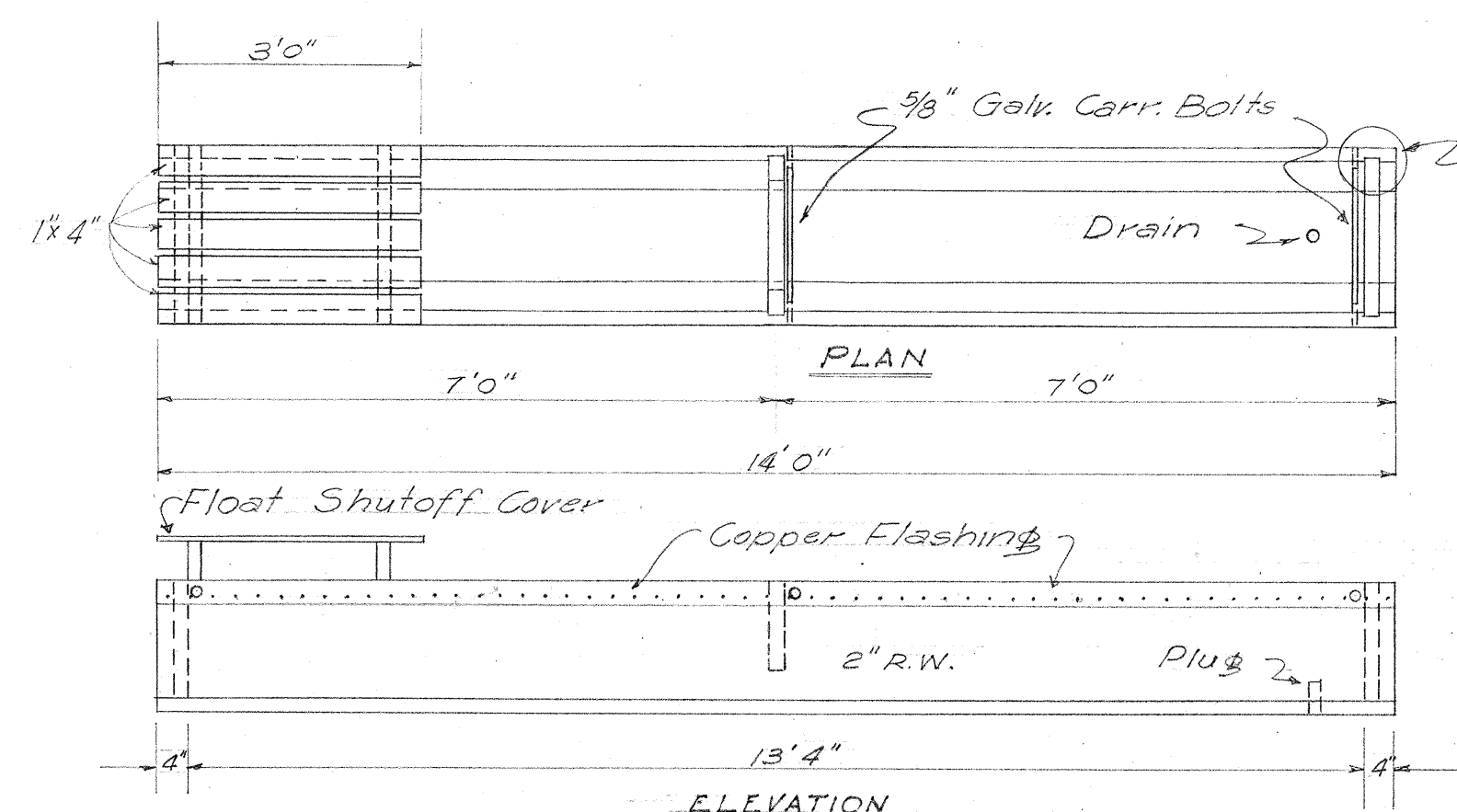
Territorial Highway Engineer

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	UNIT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	5229(1)	2	1950	12A	62

12-20-50
1-5-51

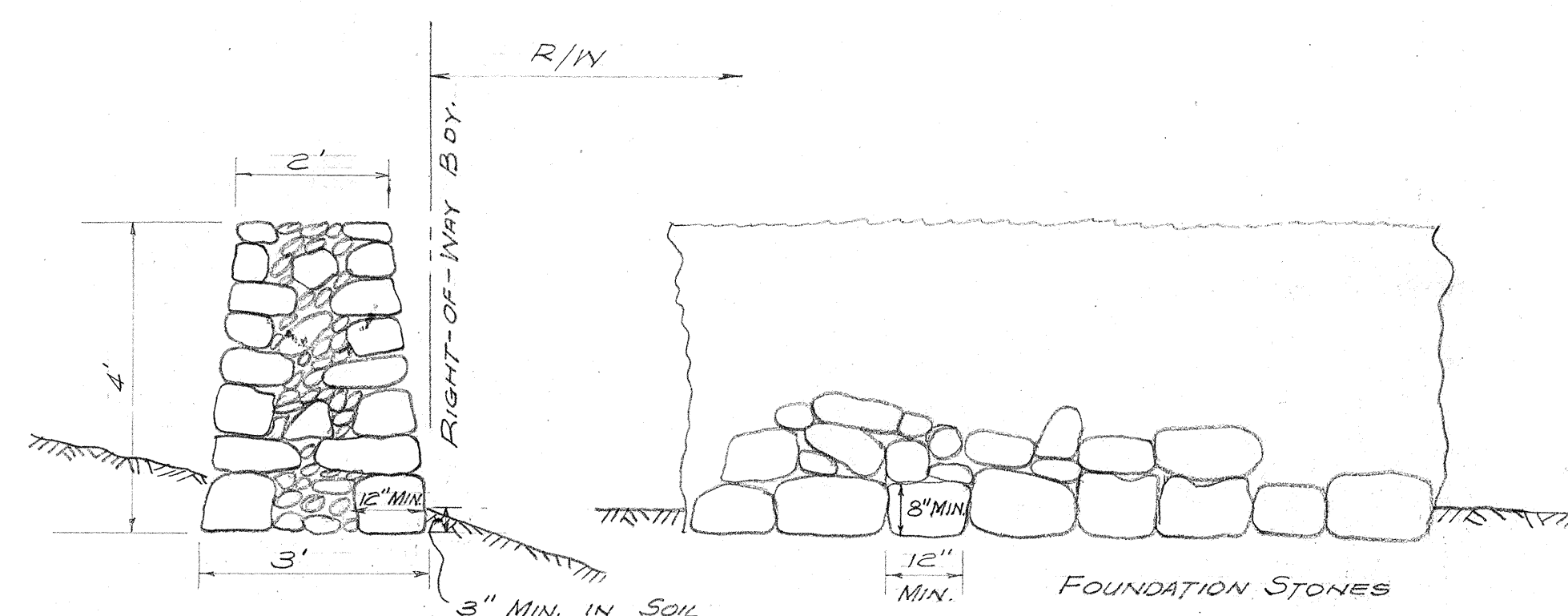
NOTE:

ALL NAILS WILL BE GALVANIZED UNLESS OTHERWISE NOTED.



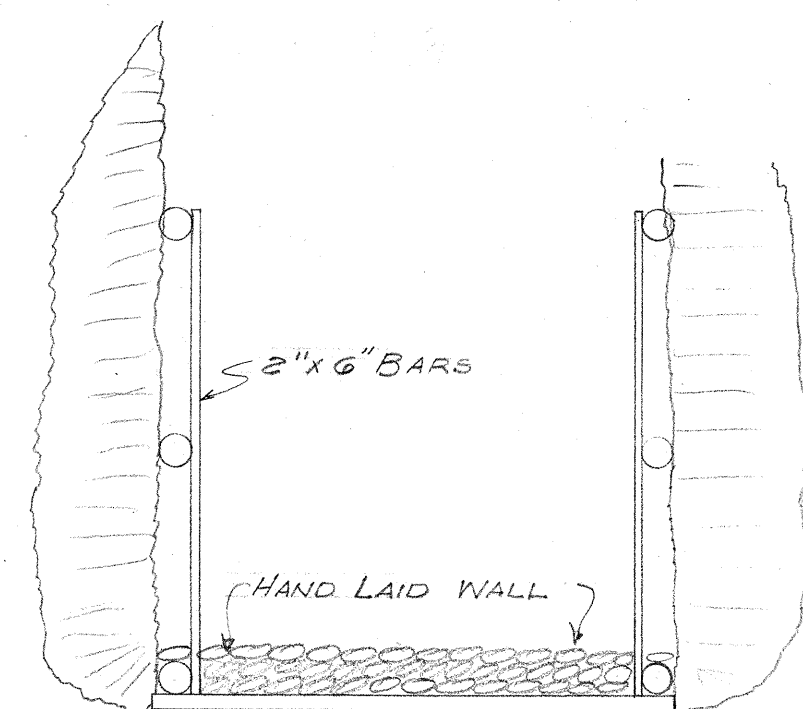
DETAIL OF CATTLE TROUGH

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

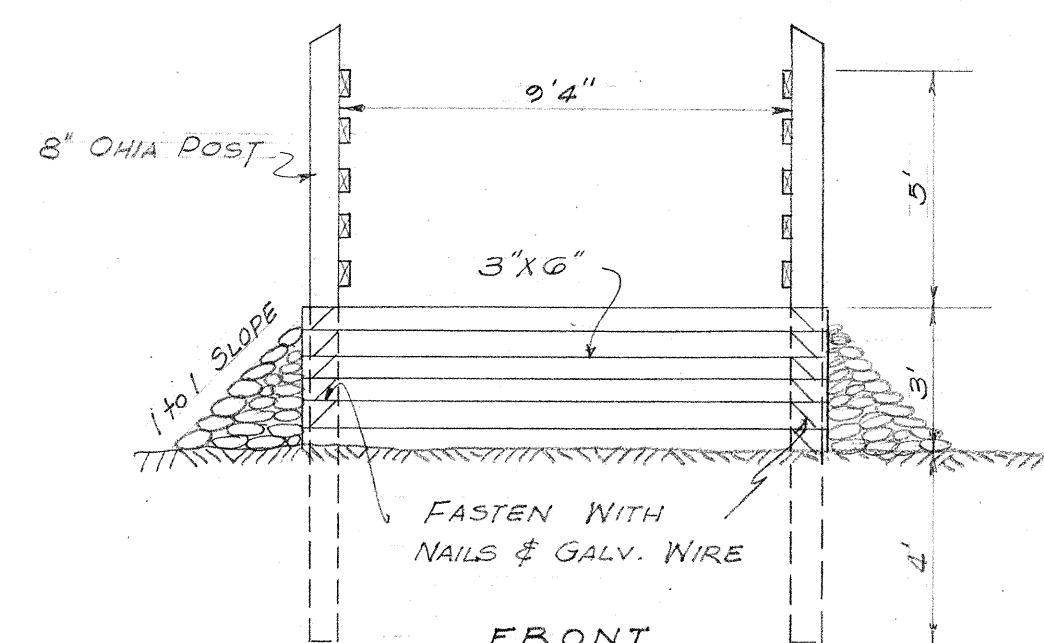


DETAIL OF STONEWALL

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

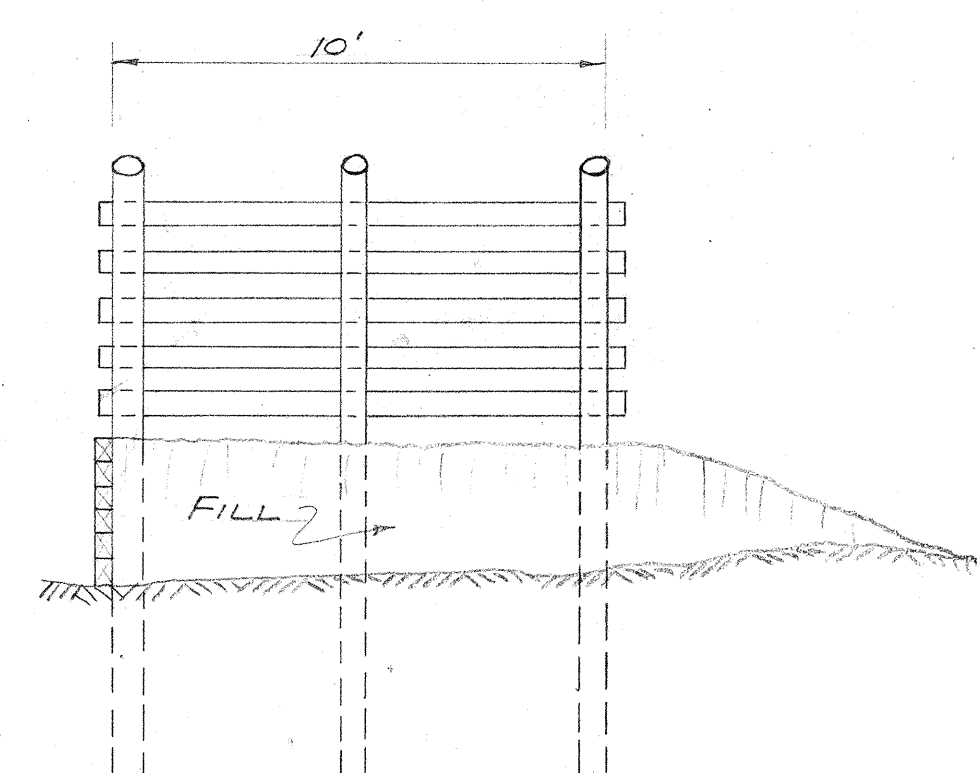


PLAN



DETAIL OF CATTLE CHUTE

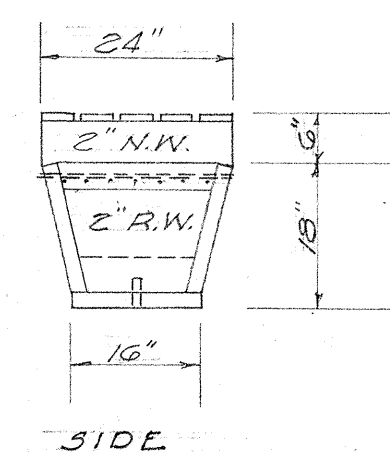
Scale: 1/2" = 1'-0"



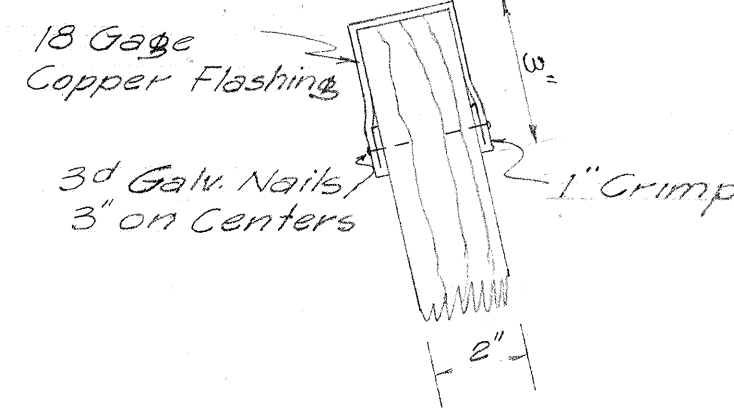
ELEVATION

DETAIL AT JOINT

Scale: 1/4" = 1"

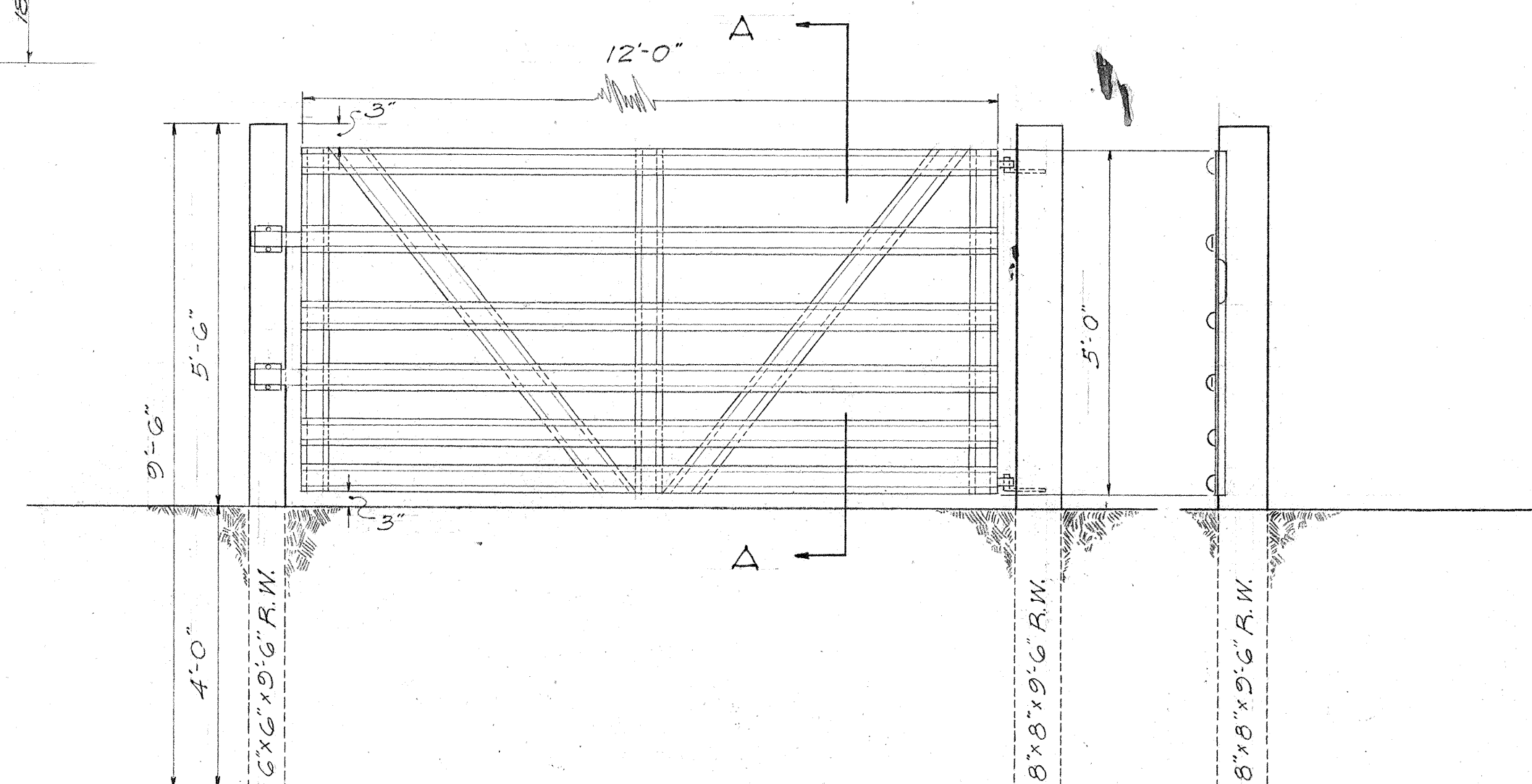


SIDE



FLASHING DETAIL

Scale: 1/4" = 1"

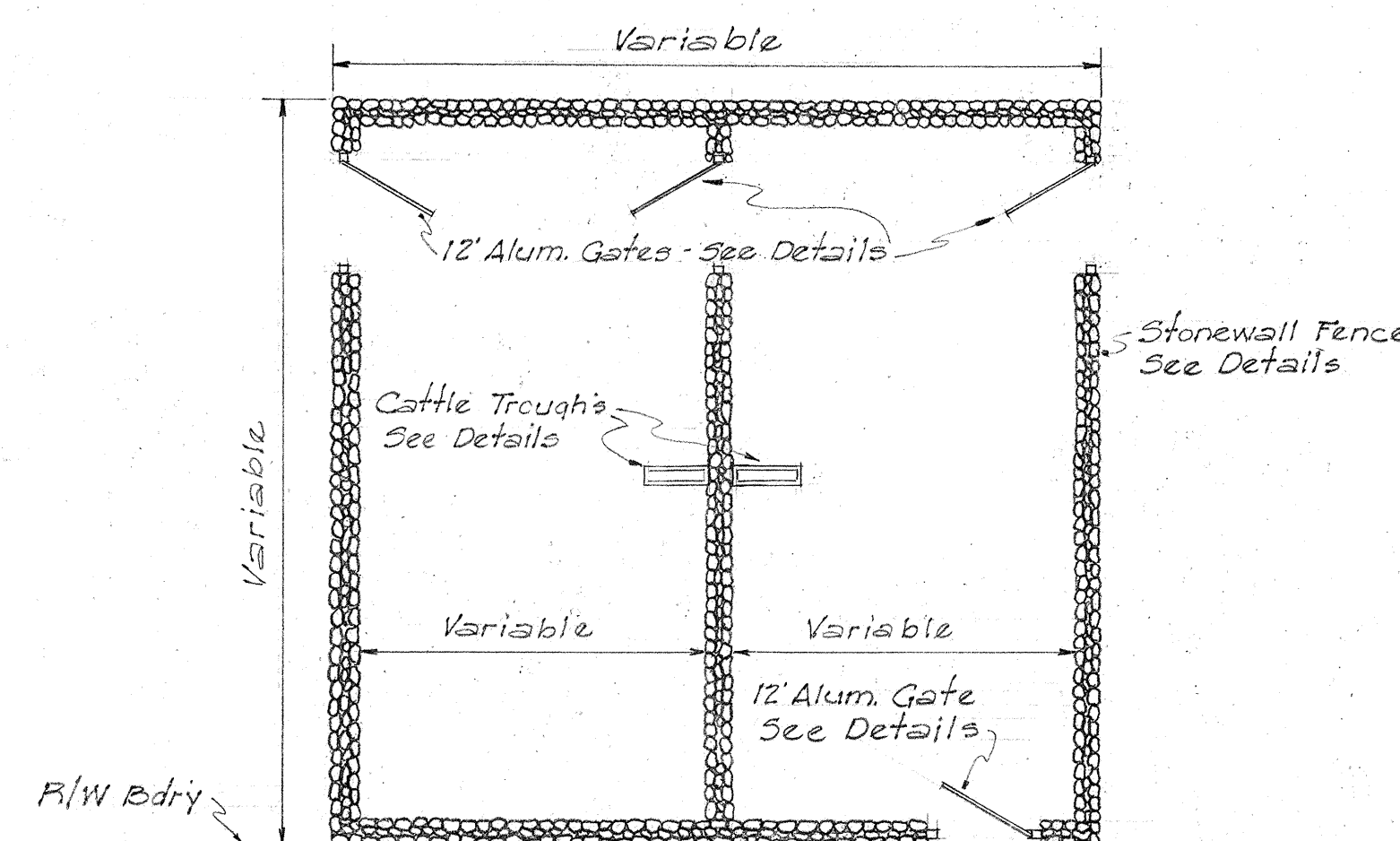


DETAIL OF ALUMINUM CATTLE GATE

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

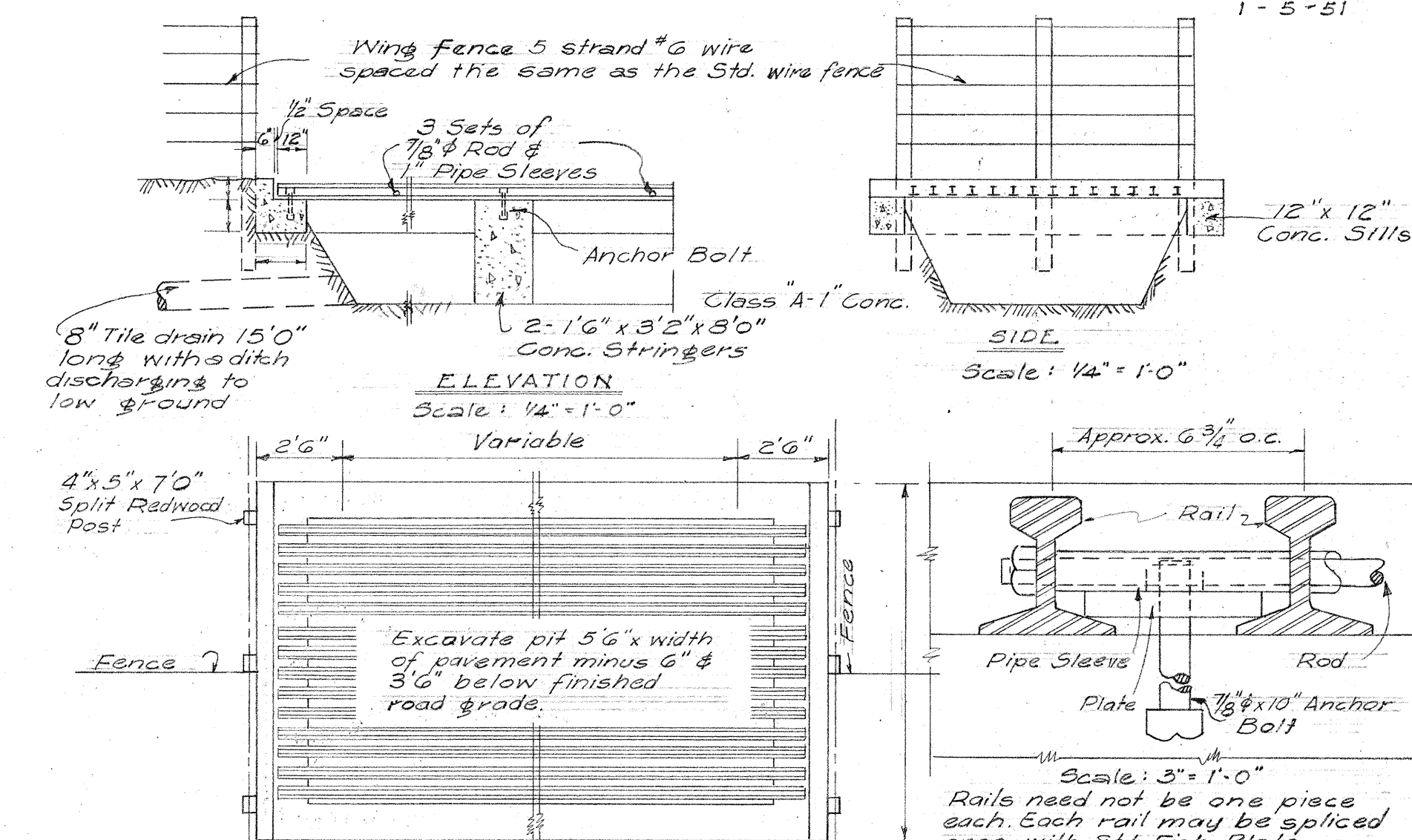
SECTION A-A

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



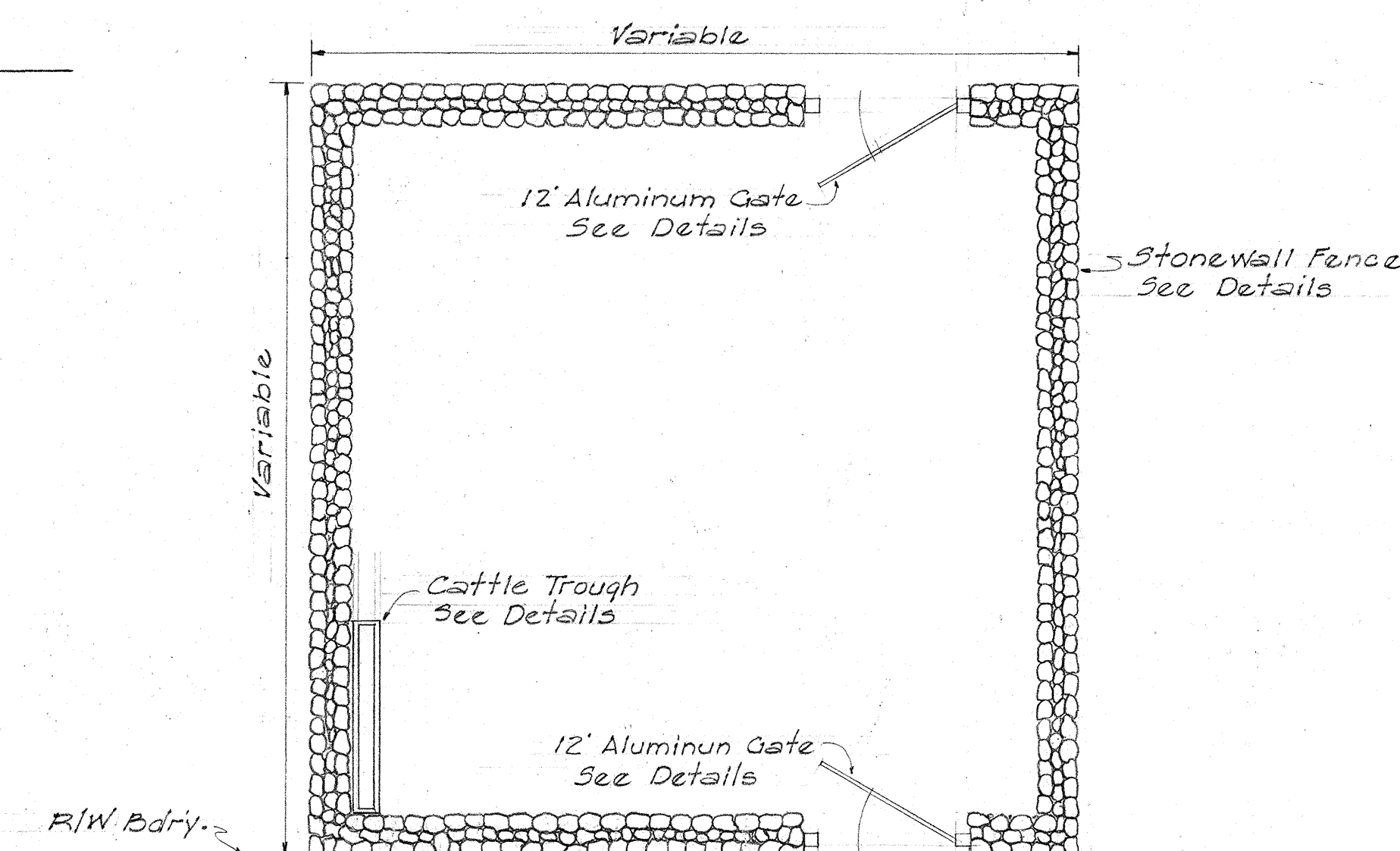
TYPICAL DOUBLE CORRAL

Not Drawn to Scale



DETAIL OF RECONSTRUCTED CATTLE GUARD

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



TYPICAL SINGLE CORRAL

Not Drawn to Scale

FOR DETAILS OF NEW WOODEN GATES

Refer to details of Standard Cattle Gate - Sheet No. 5486.12A

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

STANDARD DETAILS

KAILUA TO KEAUHOU

NORTH KONA

PROJ. No. 5229(1) Unit 2 Sept. 1950

SHEET NO. OF SHEETS

5486.12A

SURVEY PLOTTED BY	DATE
DESIGNED BY	
DRAWN BY	
CHECKED BY	
NOTE BOOK NO.	