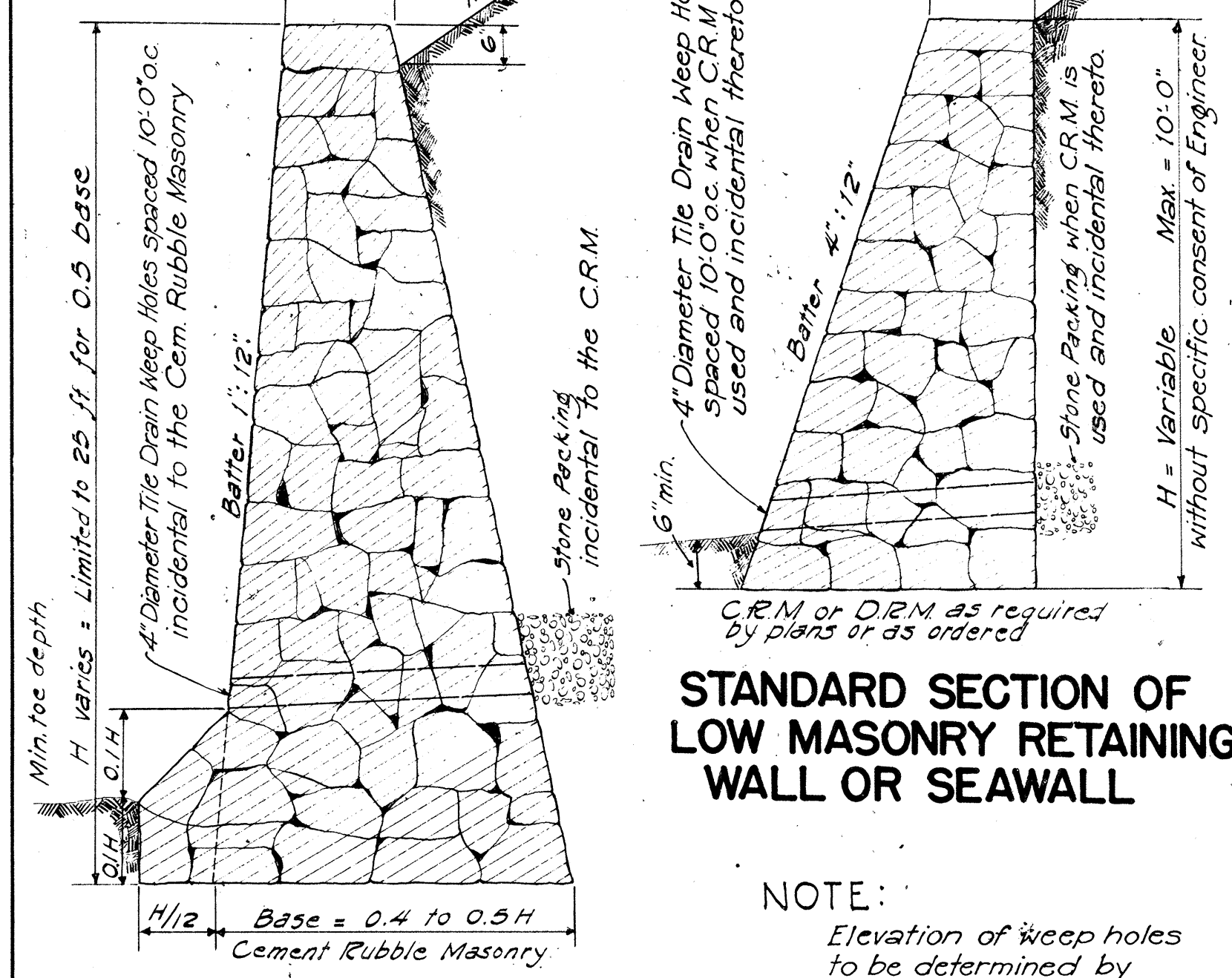


Note: TO RESIDENT ENGINEER
Consider economy of reinf. conc. for high retaining walls which do not originate on plan layout.



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.

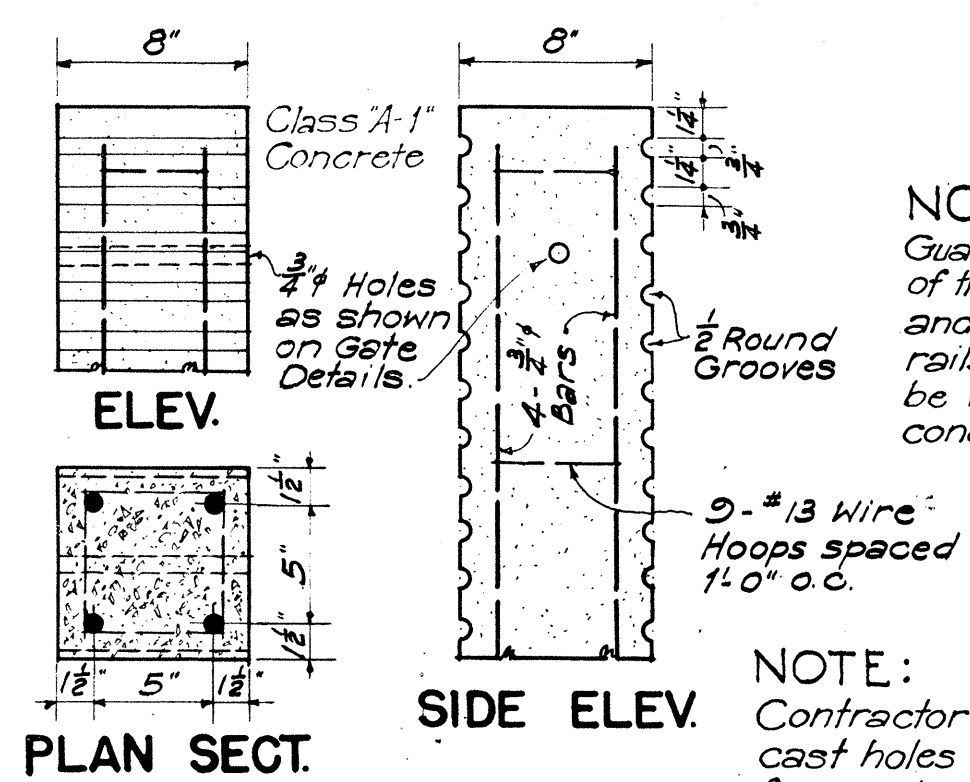


STANDARD SECTION OF HIGH CEMENT RUBBLE MASONRY RETAINING WALL OR SEAWALL

Data Standard Masonry Drop Intake

D	H	L	D+G	Cu. Yds.	Where Variable Equals
22 1/2"	18"	2'-0"	2'-4"	2.41	4'-6"
29"	24"	2'-6"	2'-8"	2.89	5'-0"
35 1/2"	30"	3'-0"	3'-3"	3.38	5'-6"
42"	36"	3'-6"	3'-9"	3.92	6'-0"

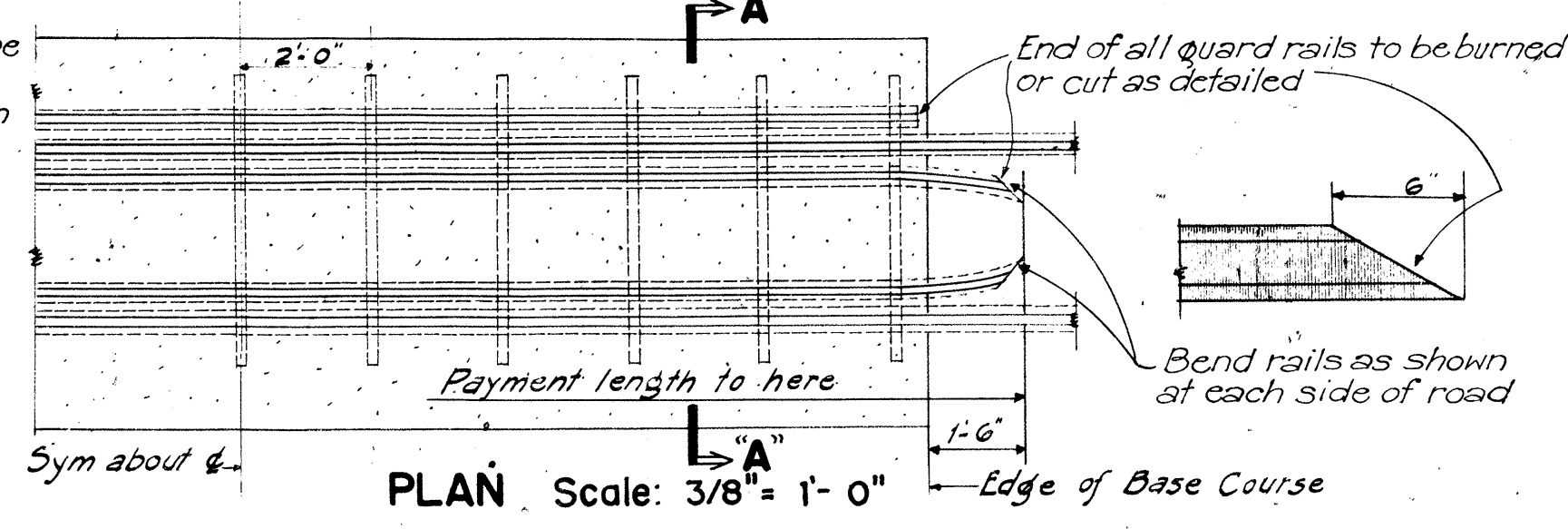
NOTE: Dimension "X" is assumed as 2'-4" in figuring the above quantities.



STANDARD MASONRY DROP INTAKE

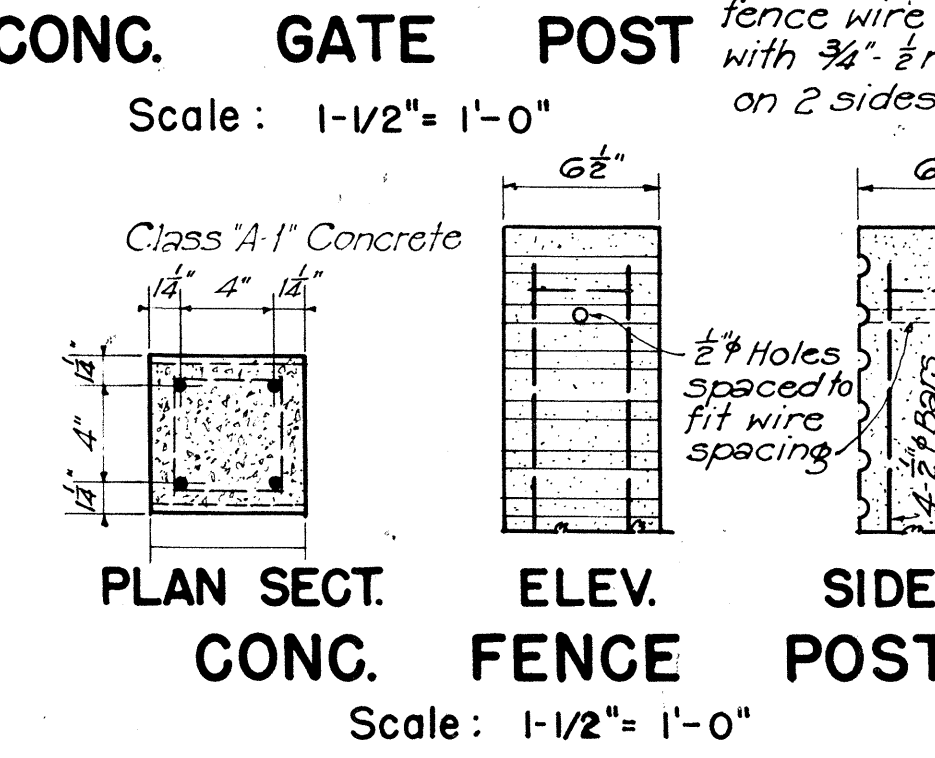
Scale: 3/8" = 1'-0"

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



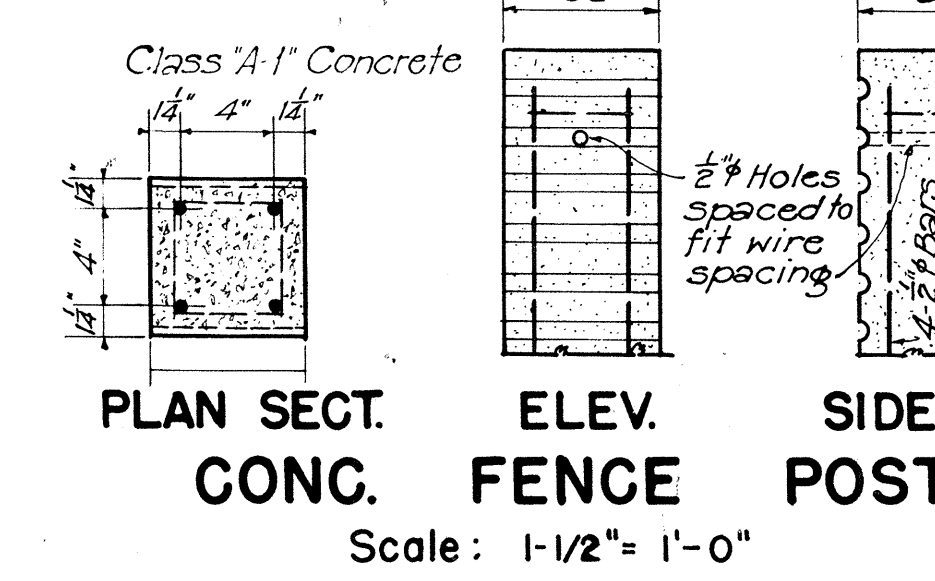
INDUSTRIAL TRACK CROSSING

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



CONC. GATE POST

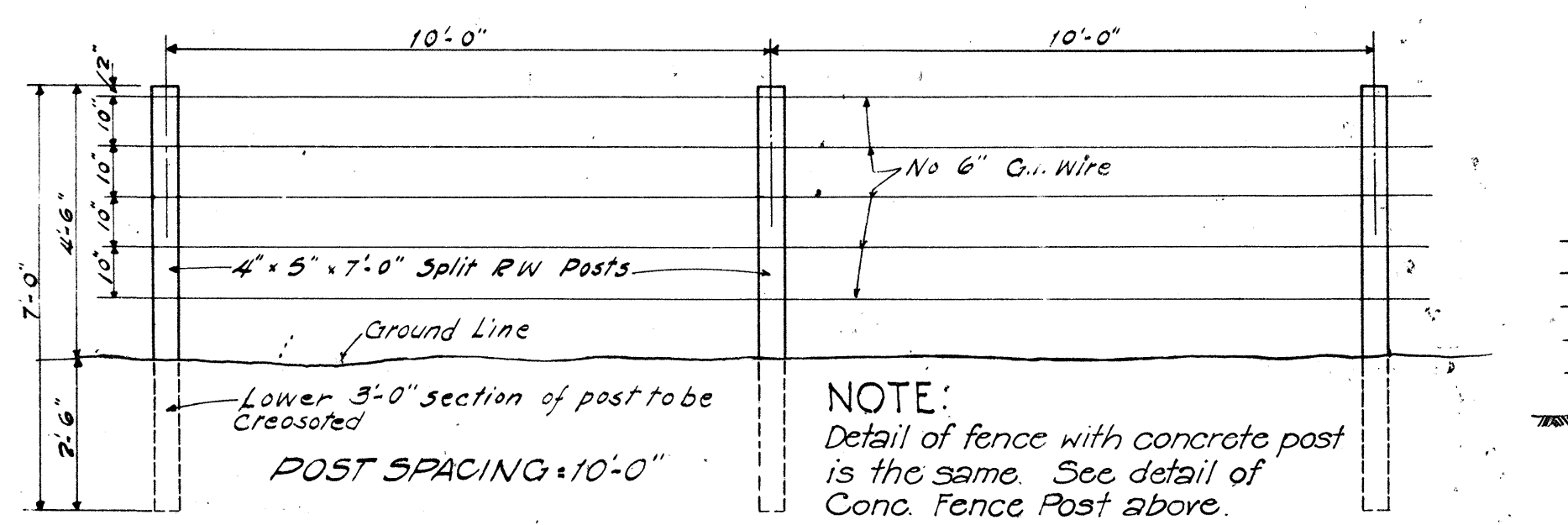
Scale: 1-1/2" = 1'-0"



CONC. FENCE POST

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

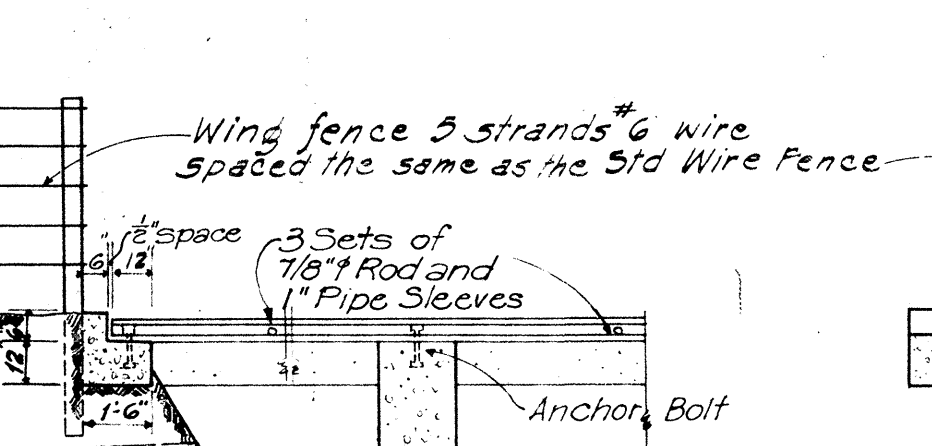
STANDARD GUIDE POSTS: 8"x8" Reinforced Conc. Posts same as those used for Std Wood Guard Rail spaced 18'-0" oc unless otherwise specified.



NOTE: Detail of fence with concrete post is the same. See detail of Conc. Fence Post above.

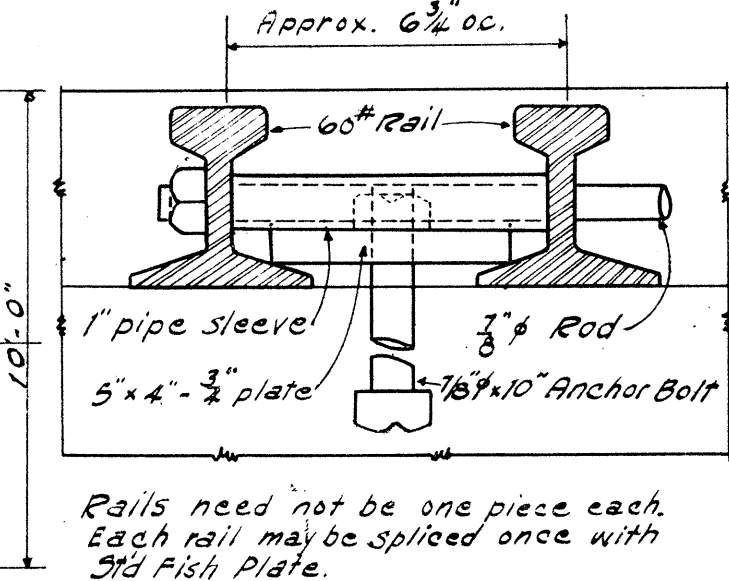
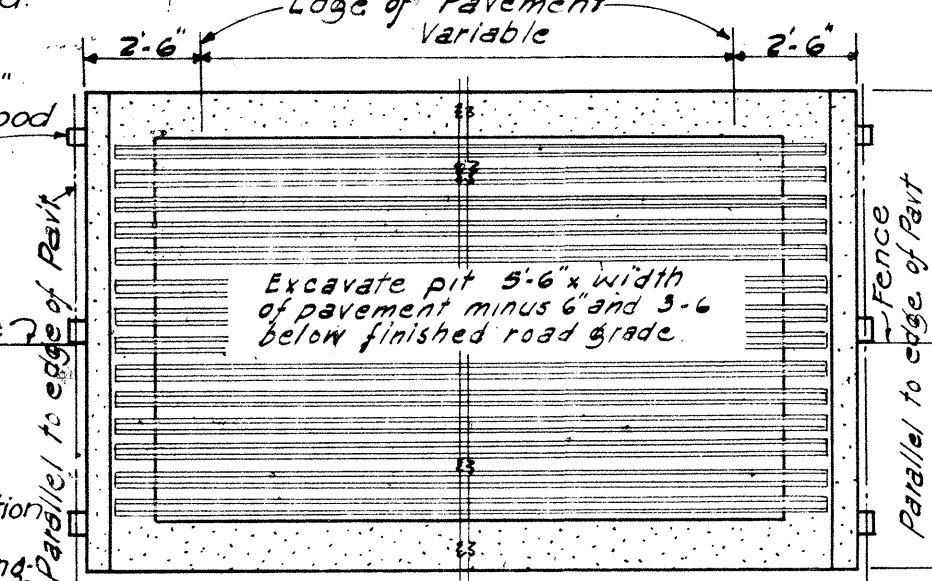
STANDARD WOOD GUARD RAIL

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

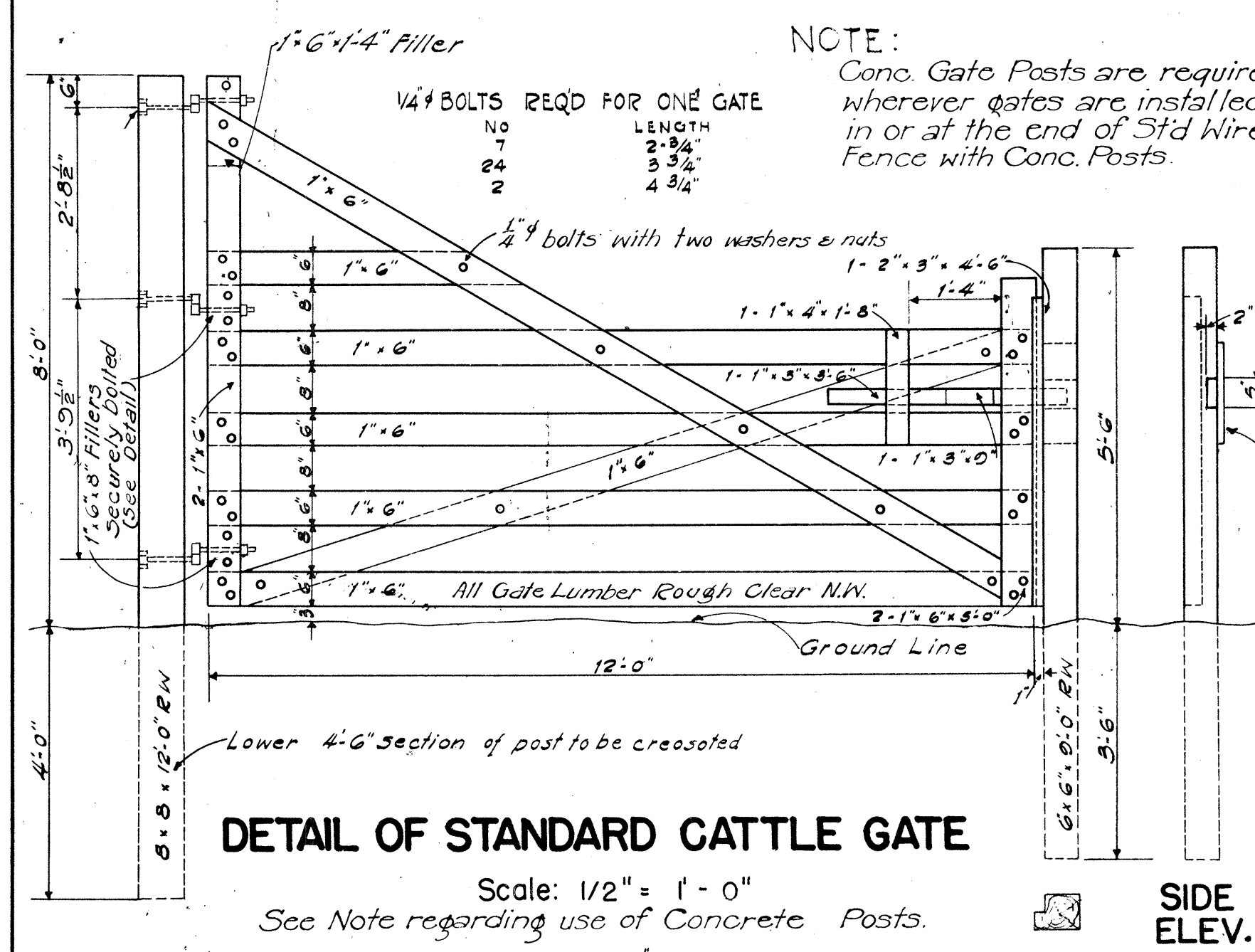


PART LONG SECTION

CROSS SECTION



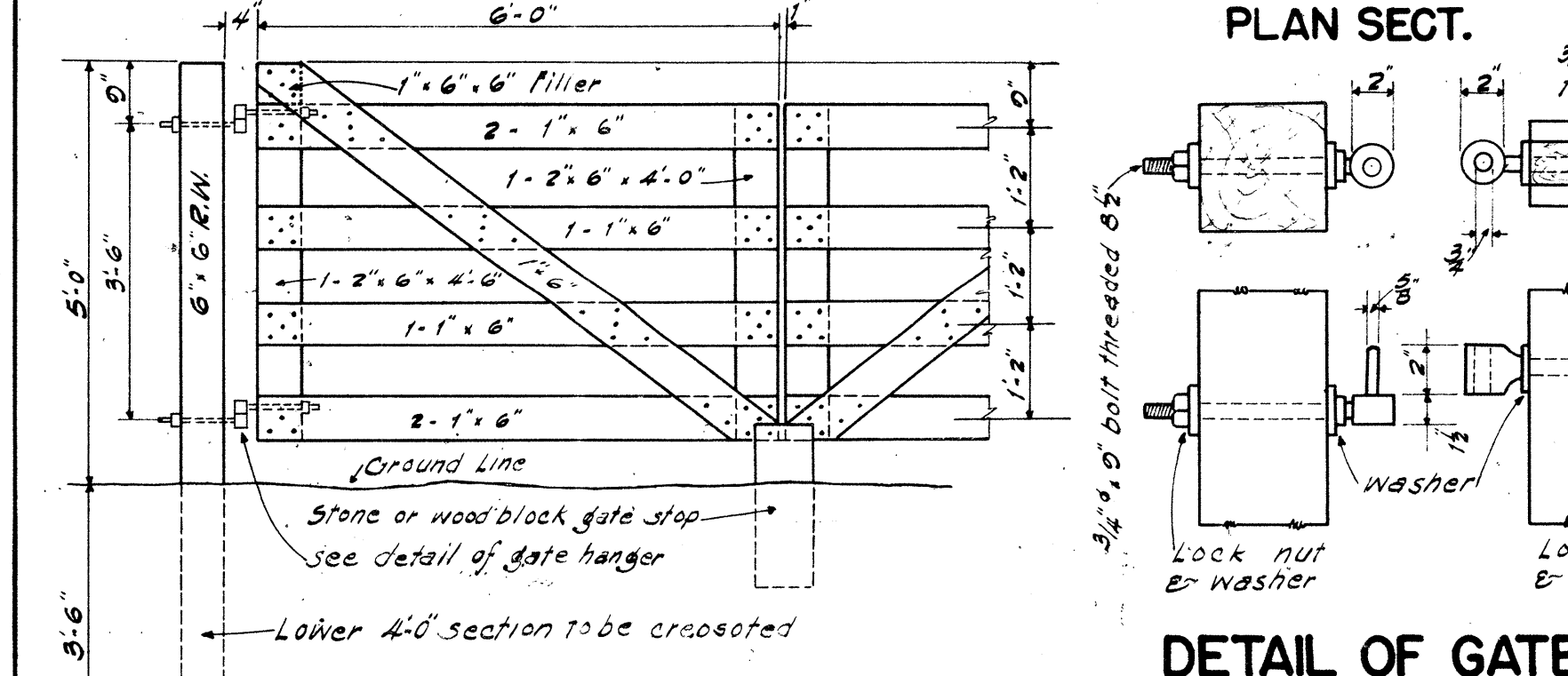
PLAN DETAILS OF CATTLE GUARD



DETAIL OF STANDARD CATTLE GATE

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

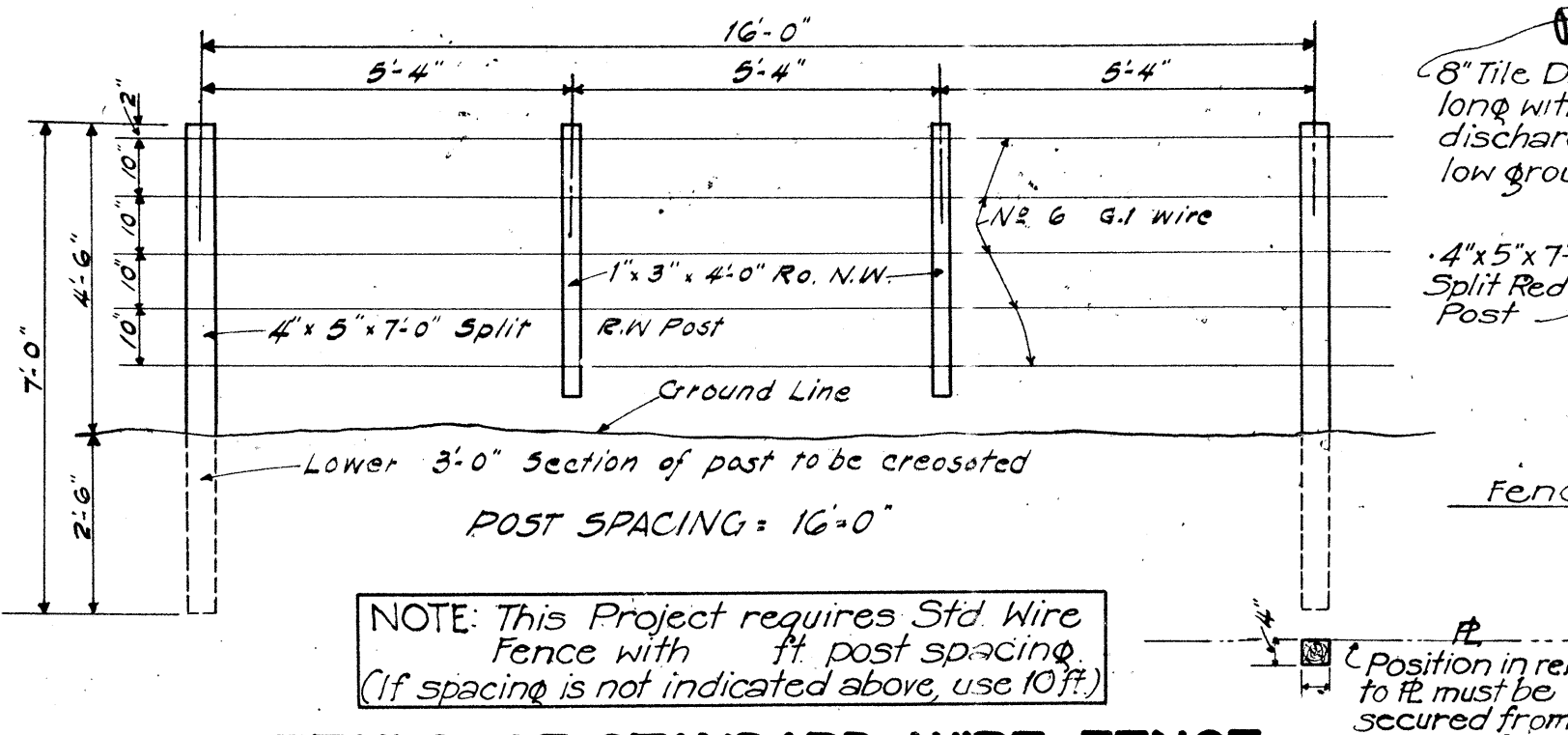
See Note regarding use of Concrete Posts.



DETAIL OF GATE HANGER

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

Note: Use 3/4" x 11" bolts for cattle gate



DETAILS OF STANDARD WIRE FENCE WITH WOODEN POSTS

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

NOTE TO ENGINEER: Fence must be of road R/W to participate in Fed. Aid. Consult office if uncertain what to do.

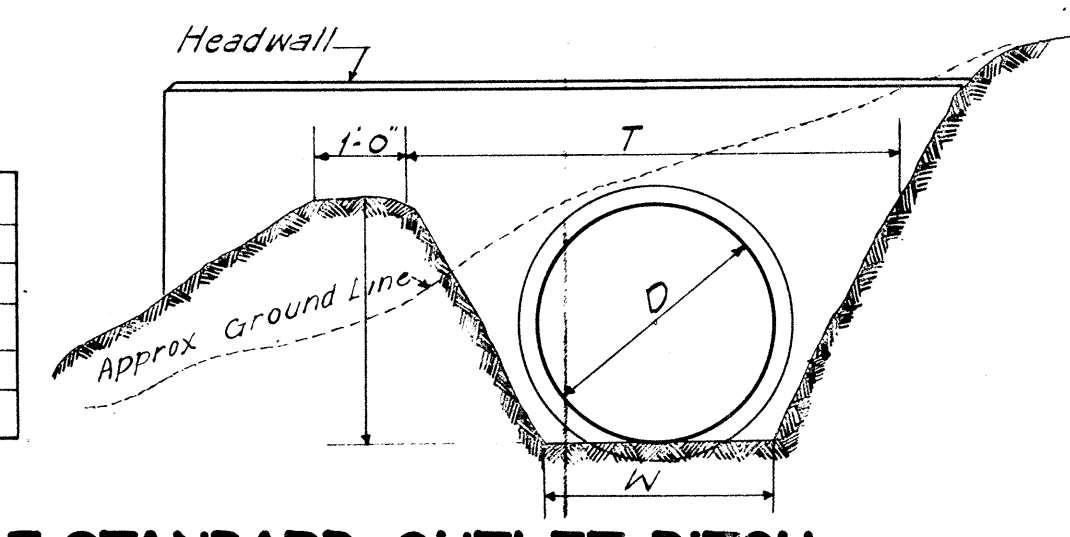
Cast-in-Place Precast Data-Standard Rubble Masonry H.W.

Cu. Yds.	Cu. Yds.	D	H	B	L	CX one HW
0.85	0.95	18"	3'-6"	1'-9"	6'-0"	0.93
1.23	1.45	24"	4'-0"	2'-3"	7'-6"	1.41
1.83	2.06	30"	4'-6"	2'-3"	9'-0"	2.00
2.40	2.84	36"	5'-0"	2'-6"	10'-0"	2.72

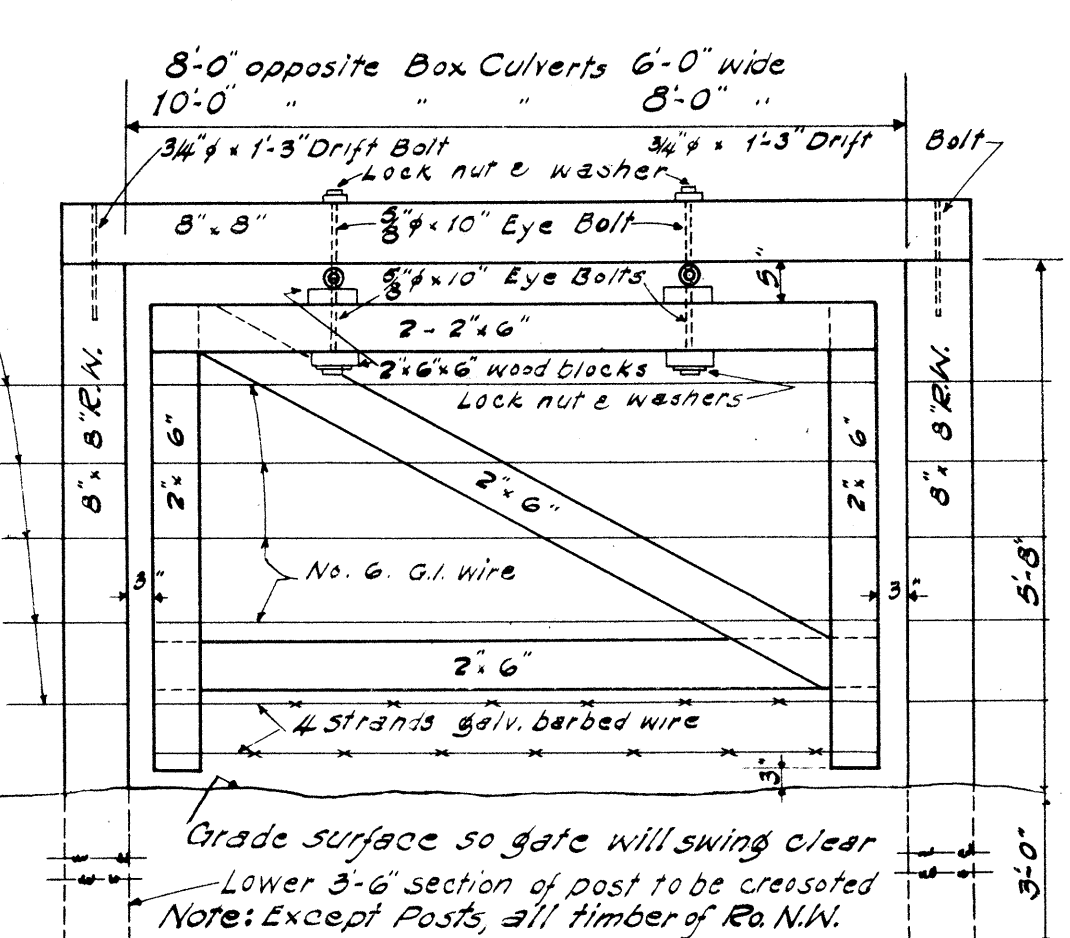
STANDARD MASONRY HEADWALL

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

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

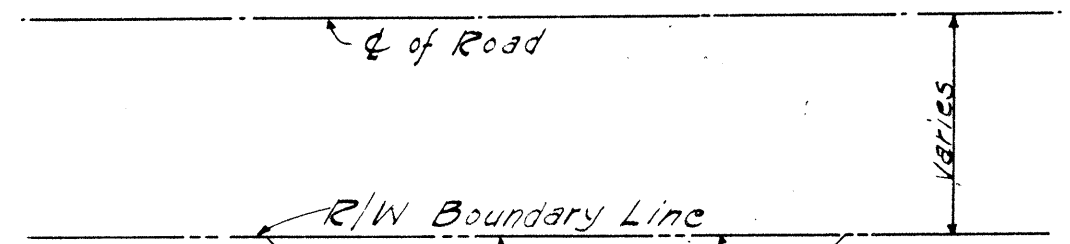


DETAIL OF STANDARD OUTLET DITCH



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

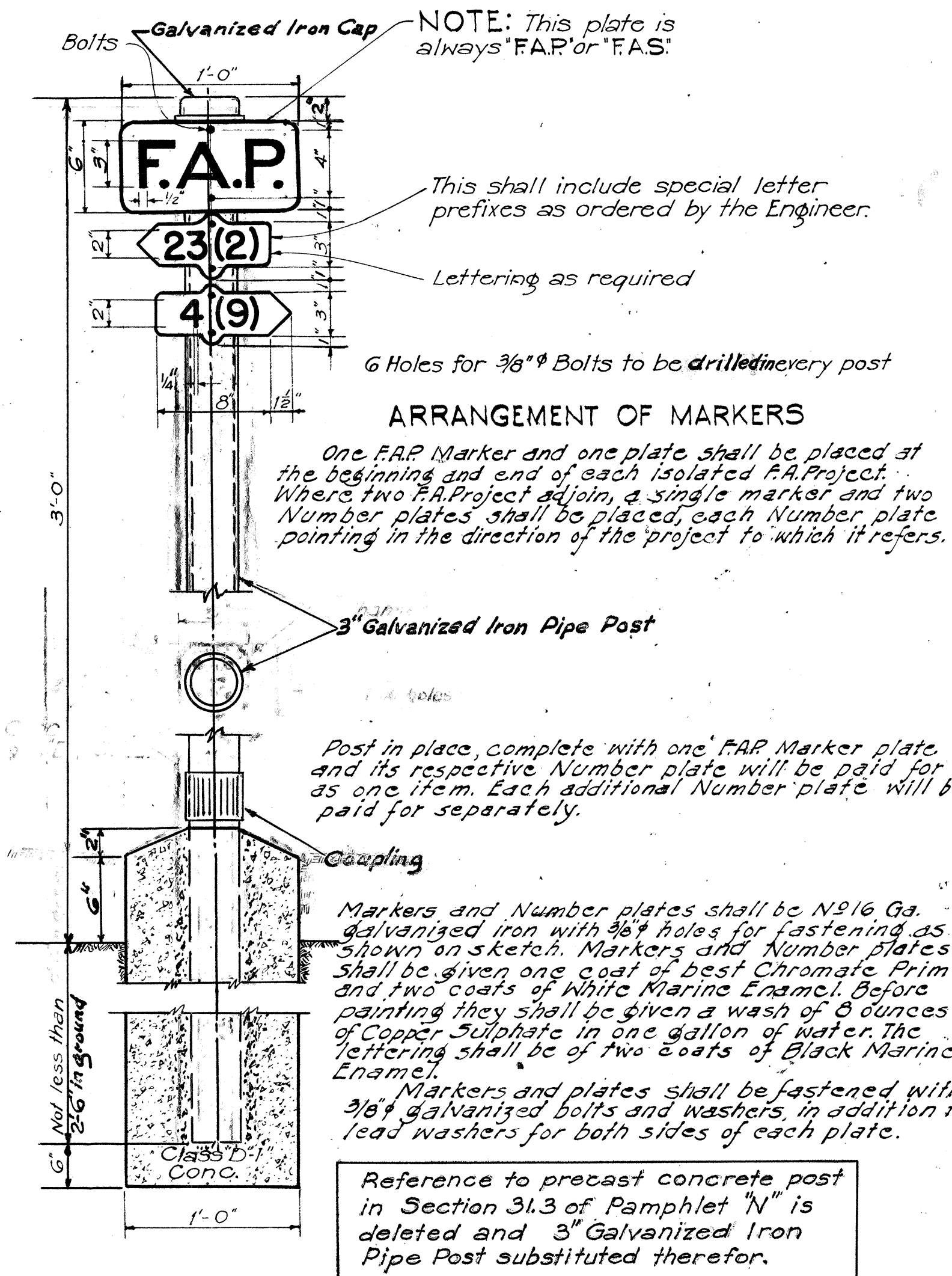
SCALES AS NOTED Sept. 5, 1946

APPROVED: *B. F. Rush*
Territorial Highway Engineer

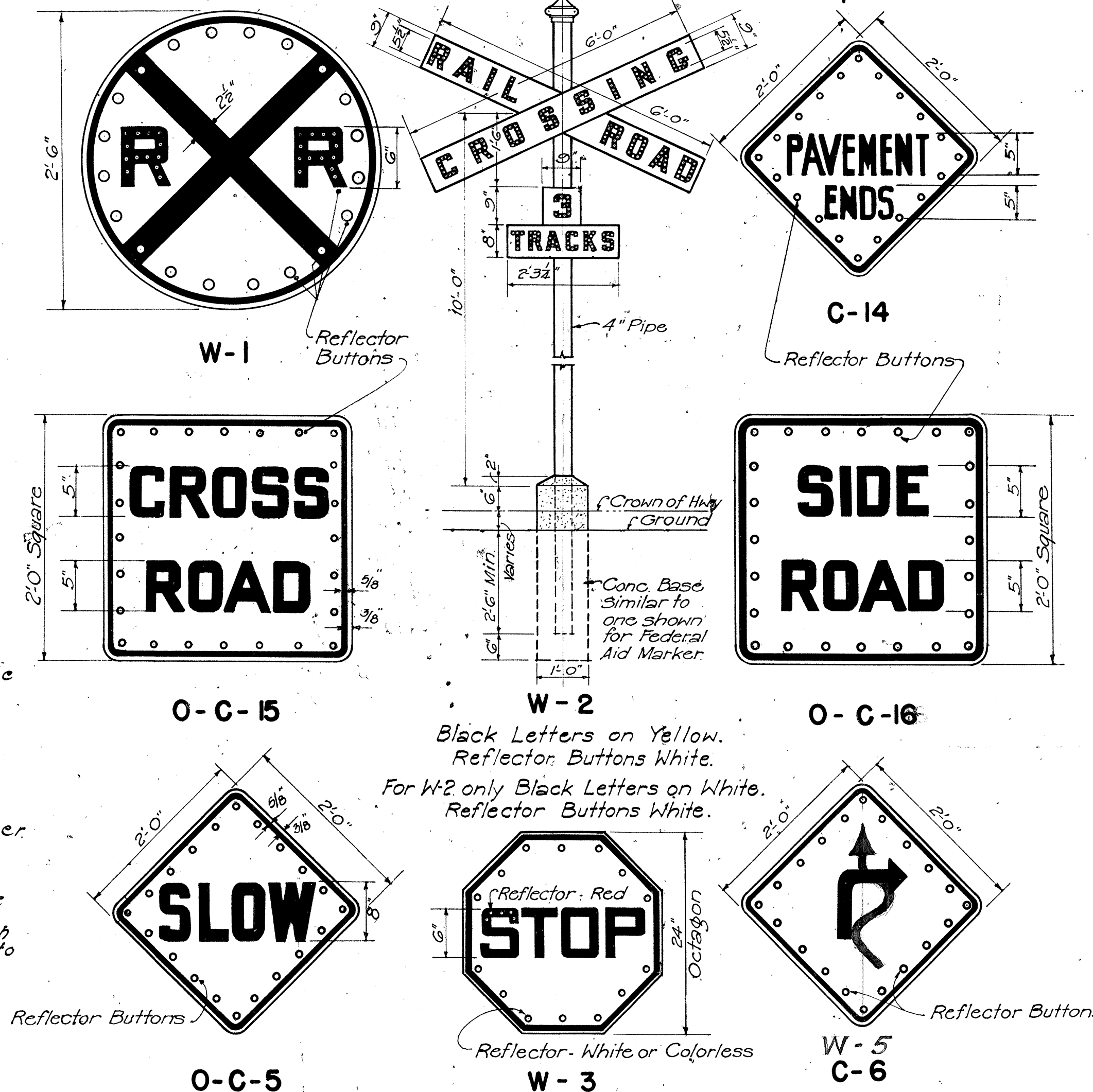
SHEET NO. 1 OF 4 SHEETS

5288.15

DATE
DESIGNED BY
DRAWN BY
CHECKED BY
ORIGINAL PLAN
NOTE BOOK
QUANTITIES CHECKED BY

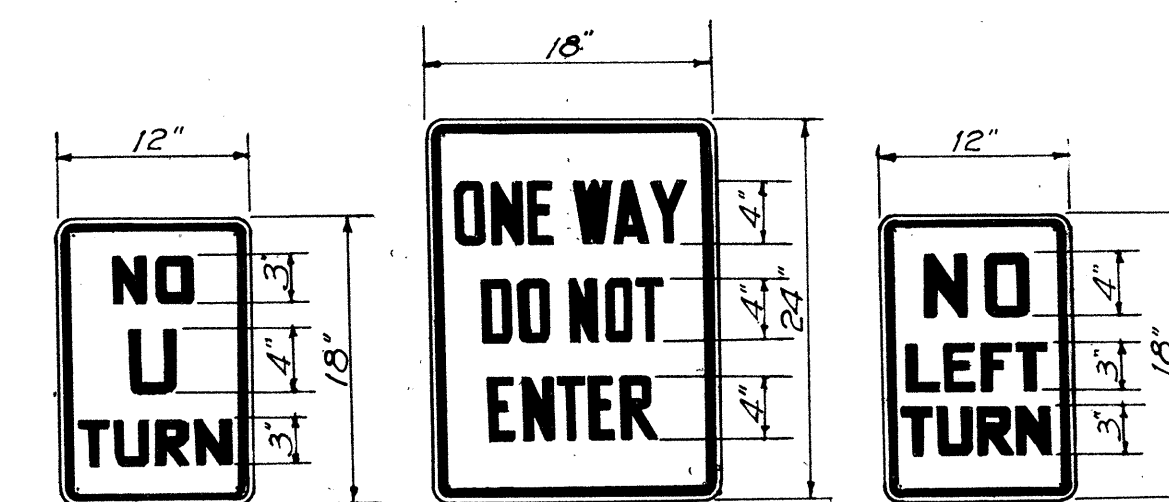


FEDERAL AID MARKER
Scale: 1-1/2" = 1'-0"

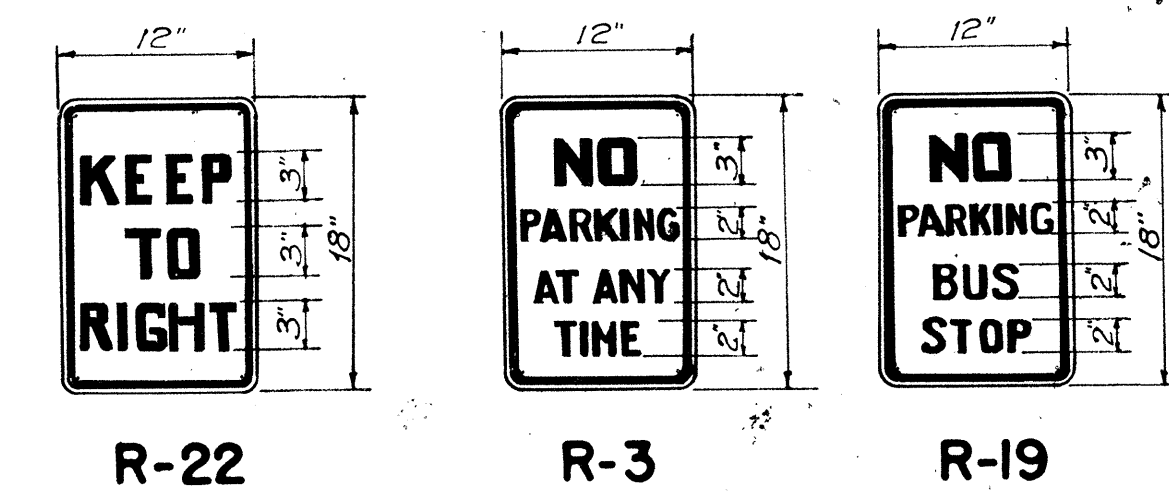


WARNING AND CAUTION SIGNS

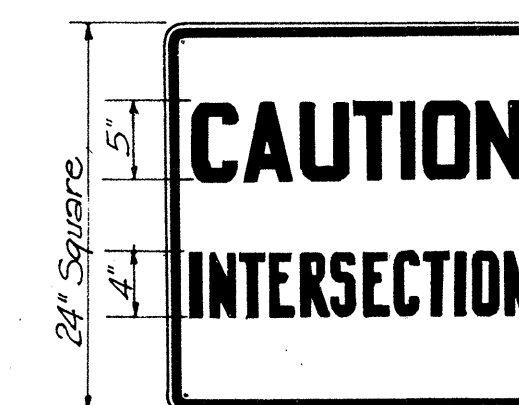
NOTE: Each sign, except W-2 is to be mounted on 3" Galv. Pipe in the same manner as detailed for Regulatory Sign.



For R-15, R-13, R-12, R-22, R-3, and R-19: Black Letters and Borders on White Background

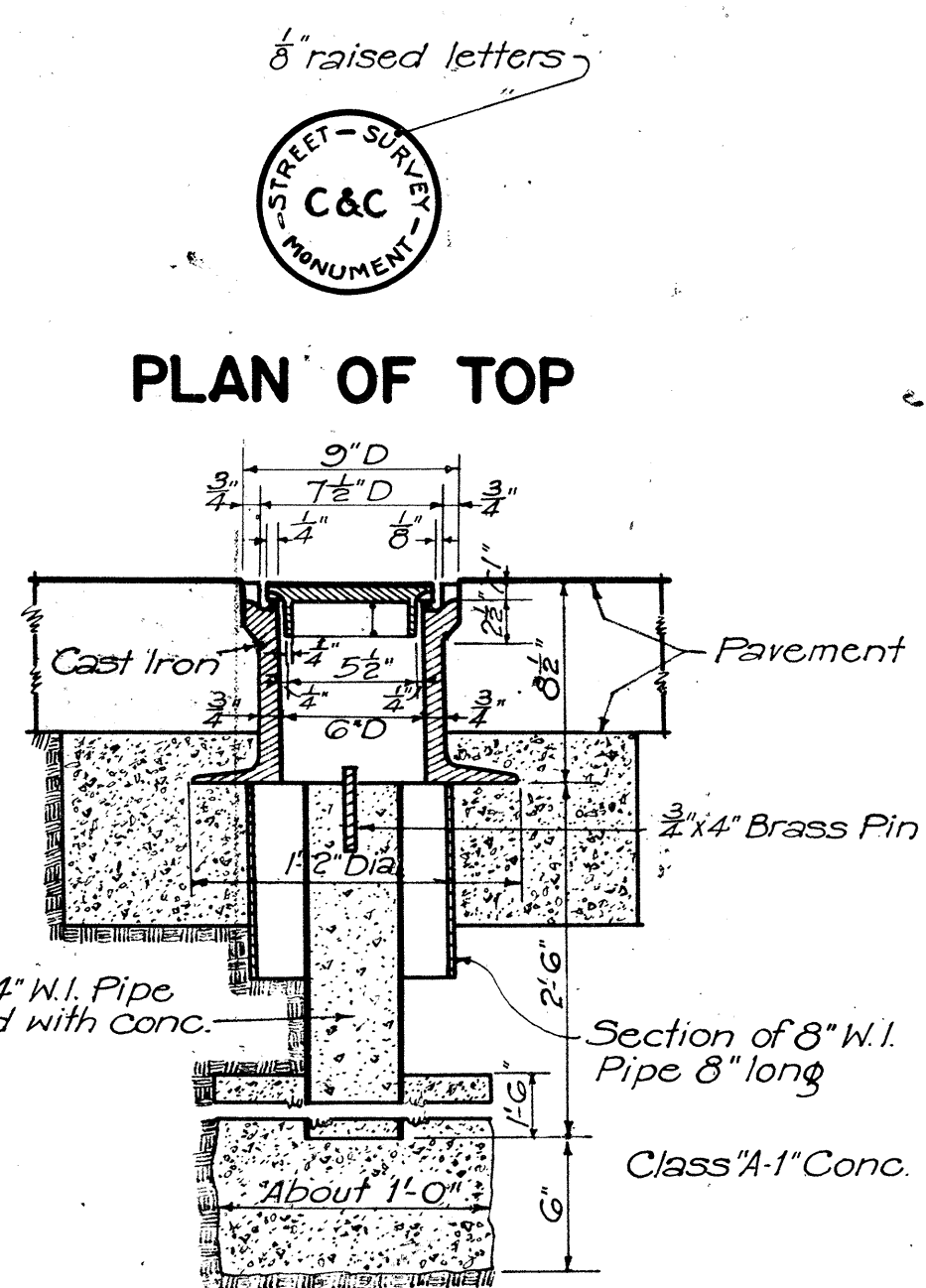
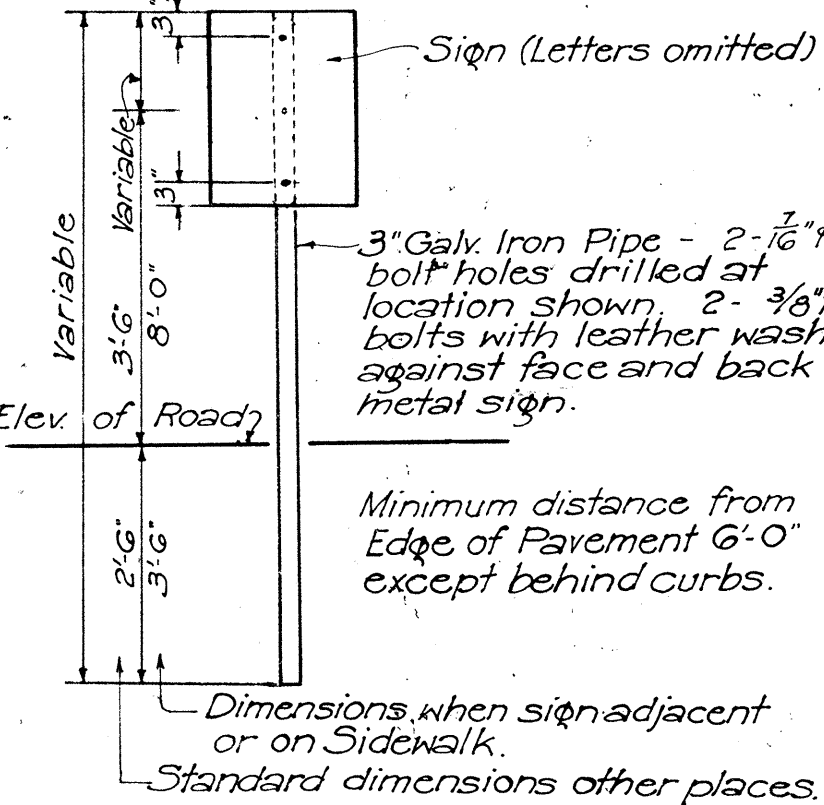


For NS-R33: Black Letters and Borders on Yellow Background.

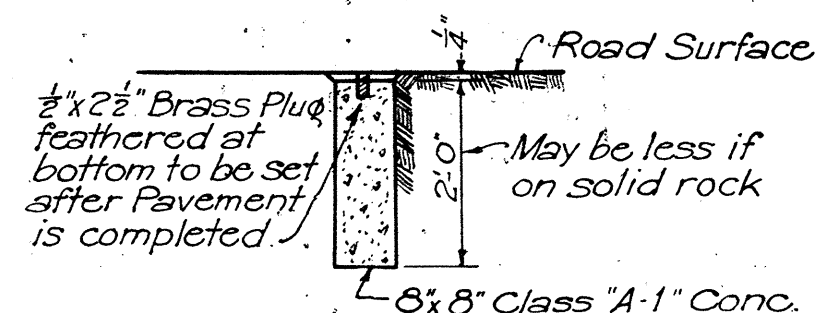


NS-R33

DETAILS OF REGULATORY SIGNS

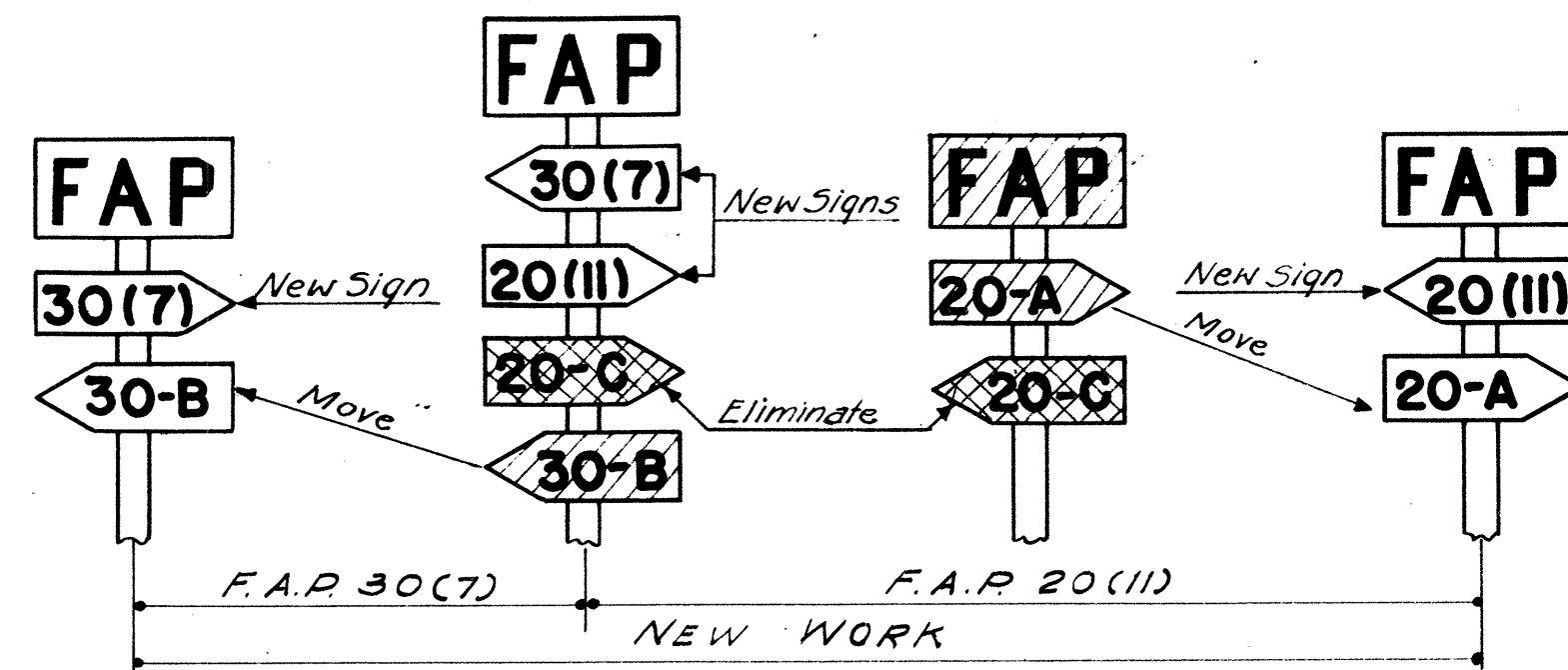


STD. C&C STREET SURVEY MONUMENT



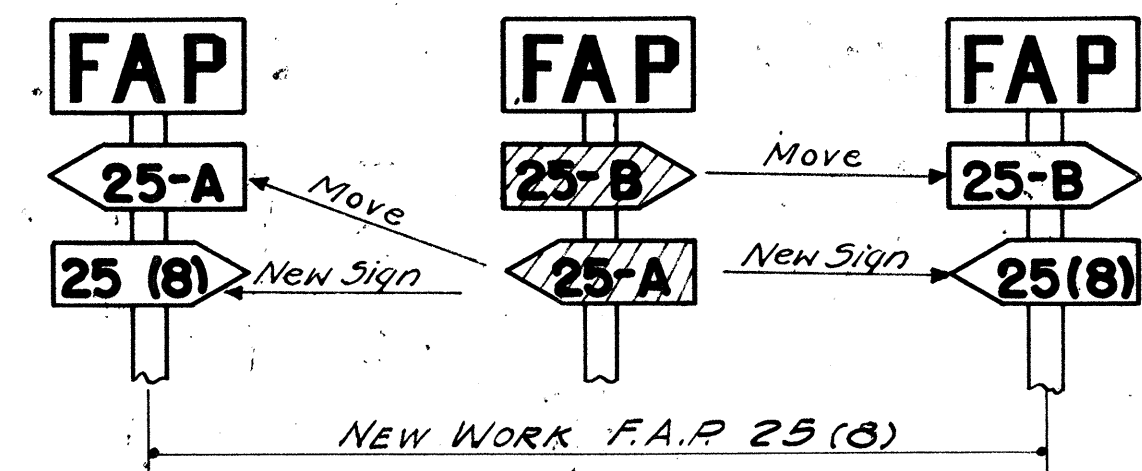
CENTER LINE MONUMENT
Scale: 1/2" = 1'-0"

F.A.P. 20 8 30



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

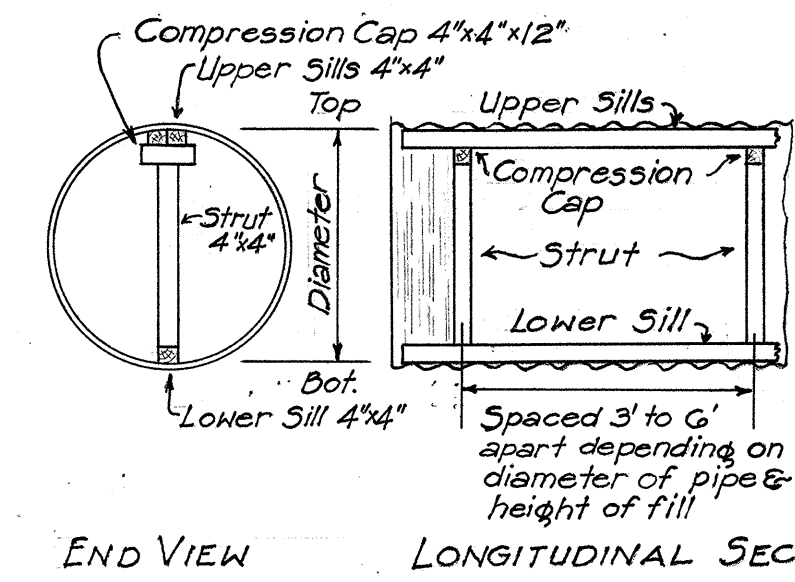
F.A.P. 25



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)

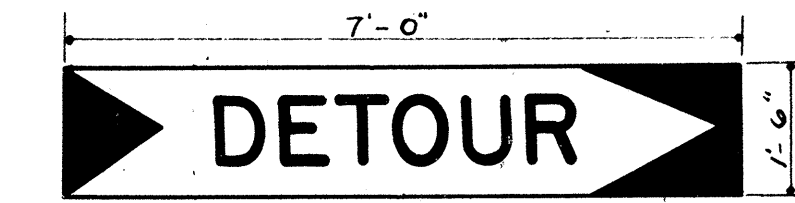


Diameter of Pipe in inches	Length of Struts in inches	Spacing of Struts in ft. for Various Heights				
		FILL 1' to 5'	FILL 5' to 10'	FILL 10' to 20'	FILL 20' to 30'	FILL Over 30'
48	38 3/4	G	—	—	G	4
54	44 1/2	G	G	G	G	4
60	51	G	G	G	G	4
66	57 1/2	G	G	G	G	4
72	63 3/4	G	G	G	G	5
78	69 3/4	G	G	G	G	5
84	76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

Note: Lengths 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.

STRUTTING DIAGRAM & TABLE FOR CORRUGATED METAL PIPE CULVERTS

Note: Letters to be 12" high and 1 1/2" thick. Secondary detour and direction signs necessary to be at least 1/2 the above size. Detour signs shall be placed at the location ordered by the Engineer.



STANDARD DETOUR SIGN

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

STANDARD DETAILS

SCALES AS NOTED Sept. 5, 1946

APPROVED: *B.F. Rush*
Territorial Highway Engineer

SHEET No 2 OF 4 SHEETS

5288.16