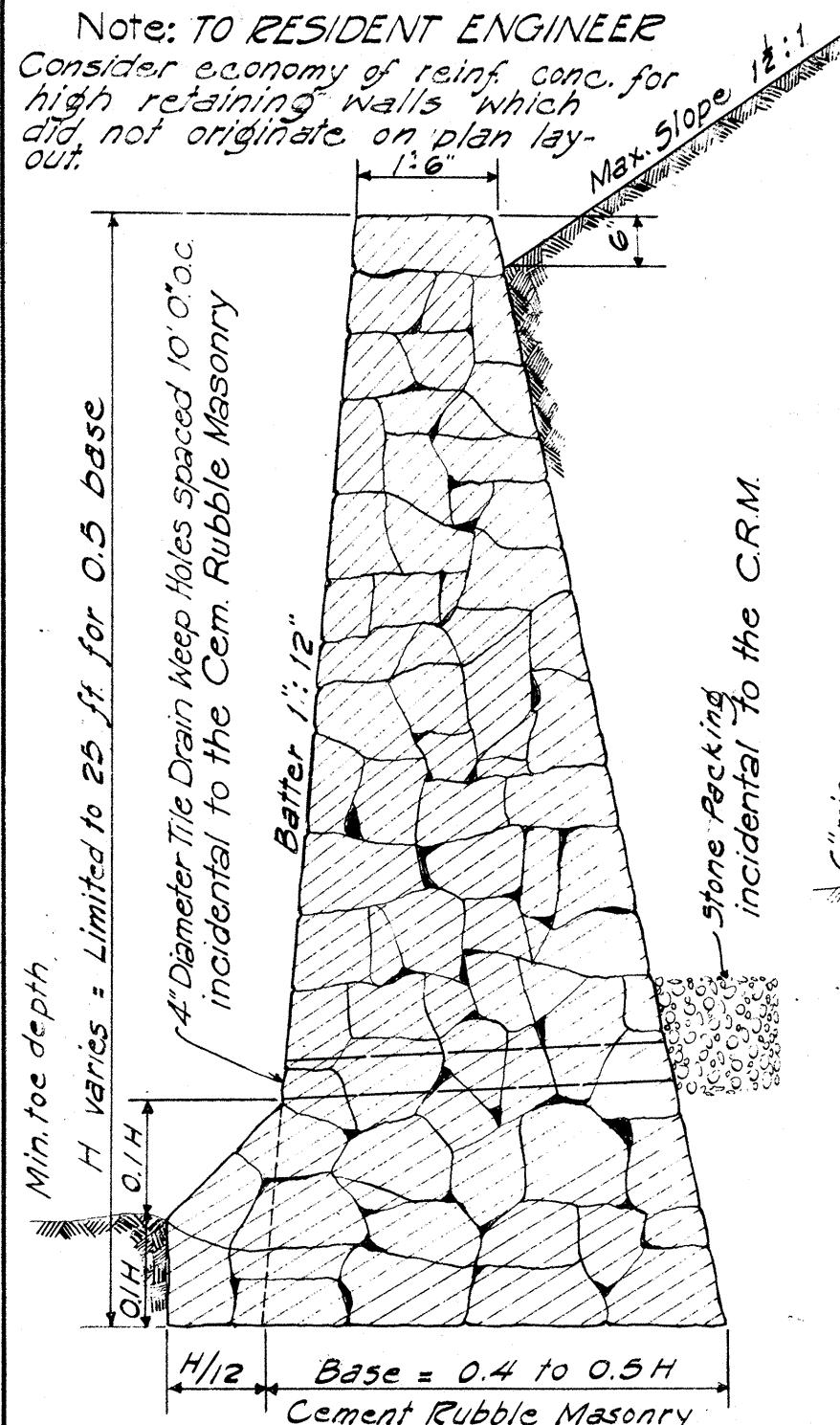
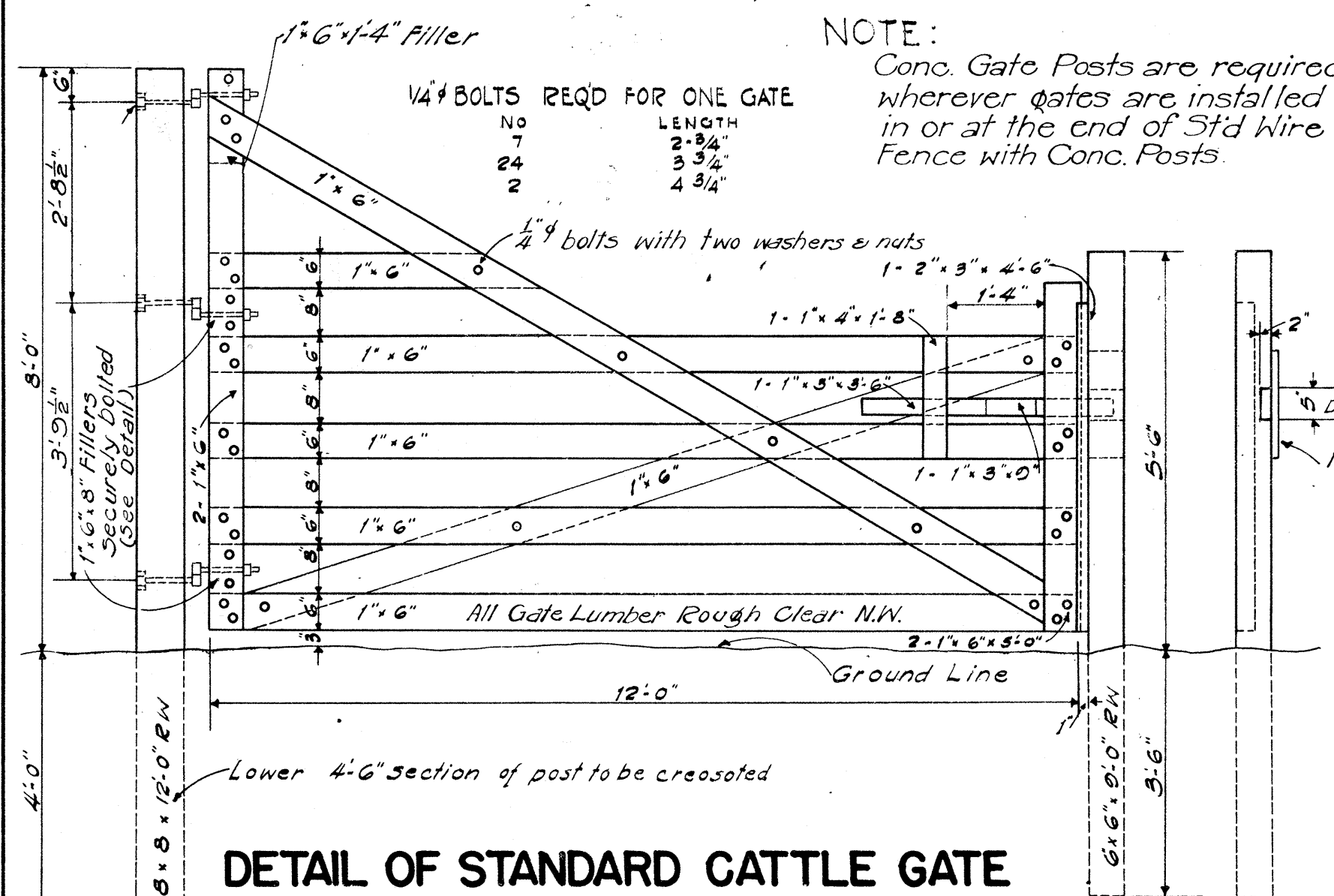




STANDARD SECTION OF LOW MASONRY RETAINING WALL OR SEAWALL

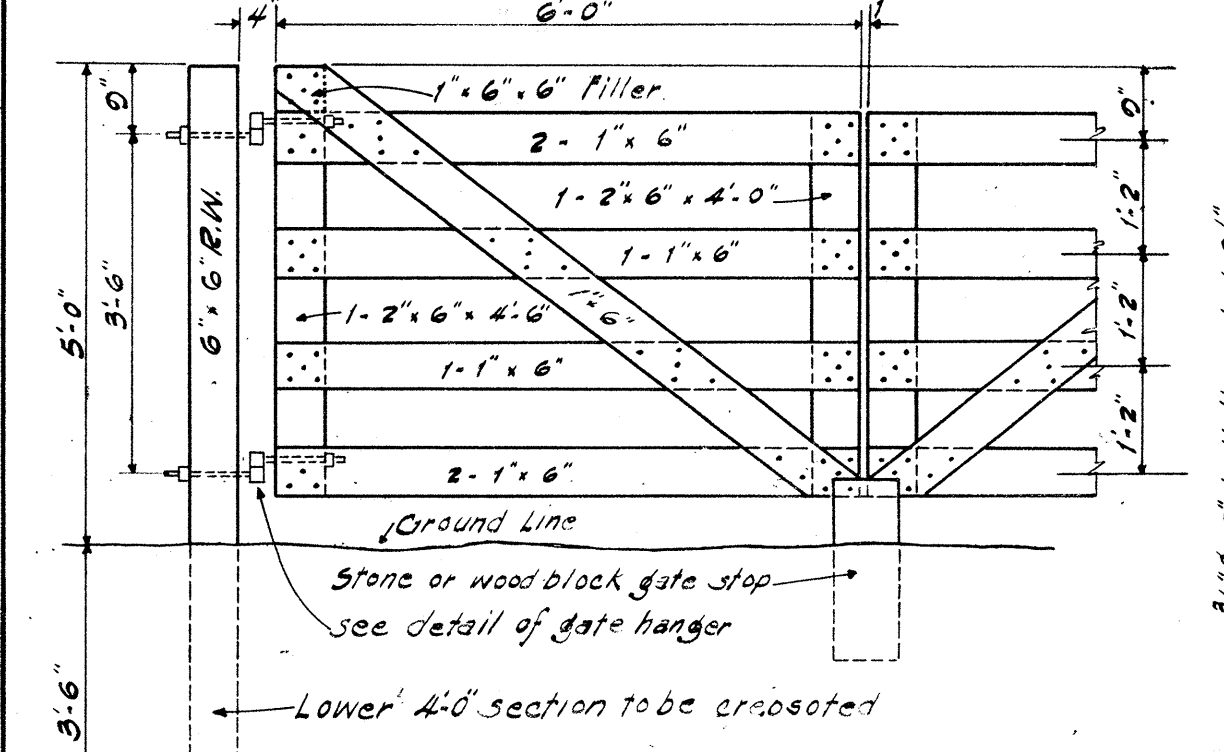
NOTE: Elevation of weep holes to be determined by Resident Engineer. Holes to be placed as close to the existing ground line as local conditions permit.

STANDARD SECTION OF HIGH CEMENT RUBBLE MASONRY RETAINING WALL OR SEAWALL



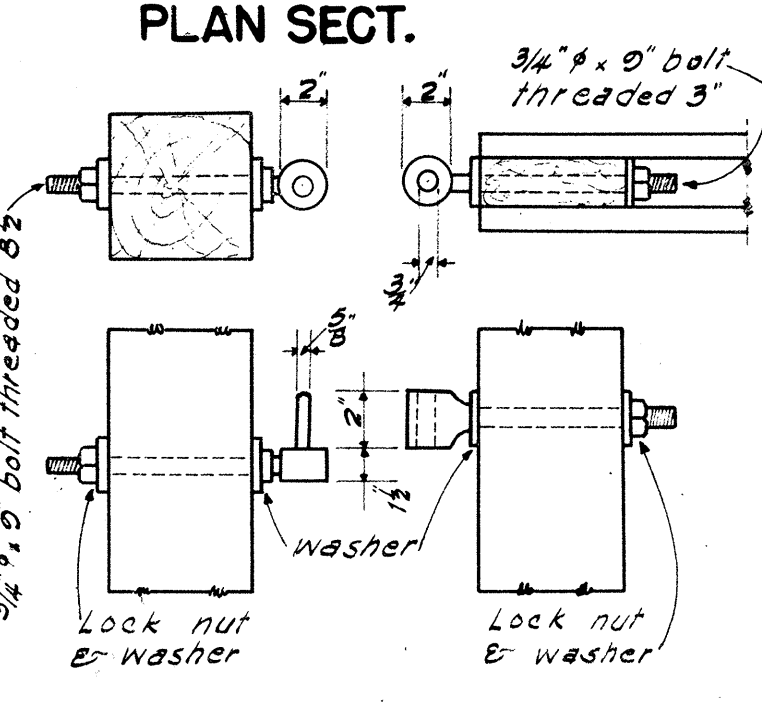
DETAIL OF STANDARD CATTLE GATE

Scale: 1/2" = 1'-0"
See Note regarding use of Concrete Posts.



DOUBLE HUNG GATE

Scale: 1/2" = 1'-0"
See Note regarding use of Concrete Posts.

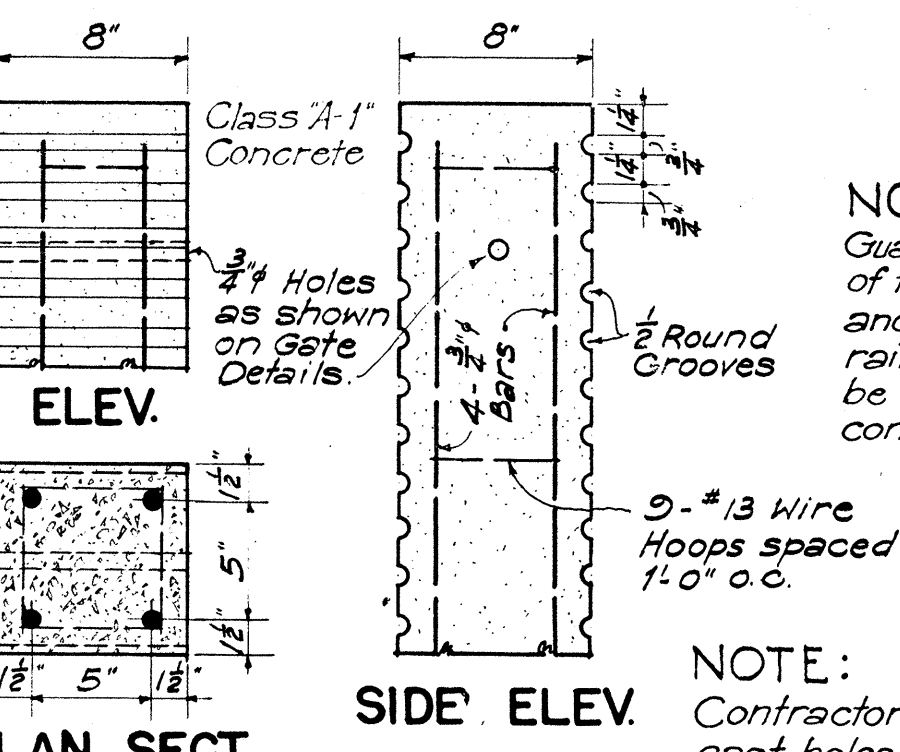


DETAIL OF GATE HANGER

Scale: 1/2" = 1'-0"
Note: Use 3/4" x 11" bolts for cattle gate

Data Standard Masonry Drop Intake					Where Variable Equals
D	D	L = D + 6"	Cu. Yds		
22 1/2"	18"	2'-0"	2.41	4'-6"	
29"	24"	2'-6"	2.89	5'-0"	
35 1/2"	30"	3'-0"	3.38	5'-6"	
42"	36"	3'-6"	3.92	6'-0"	

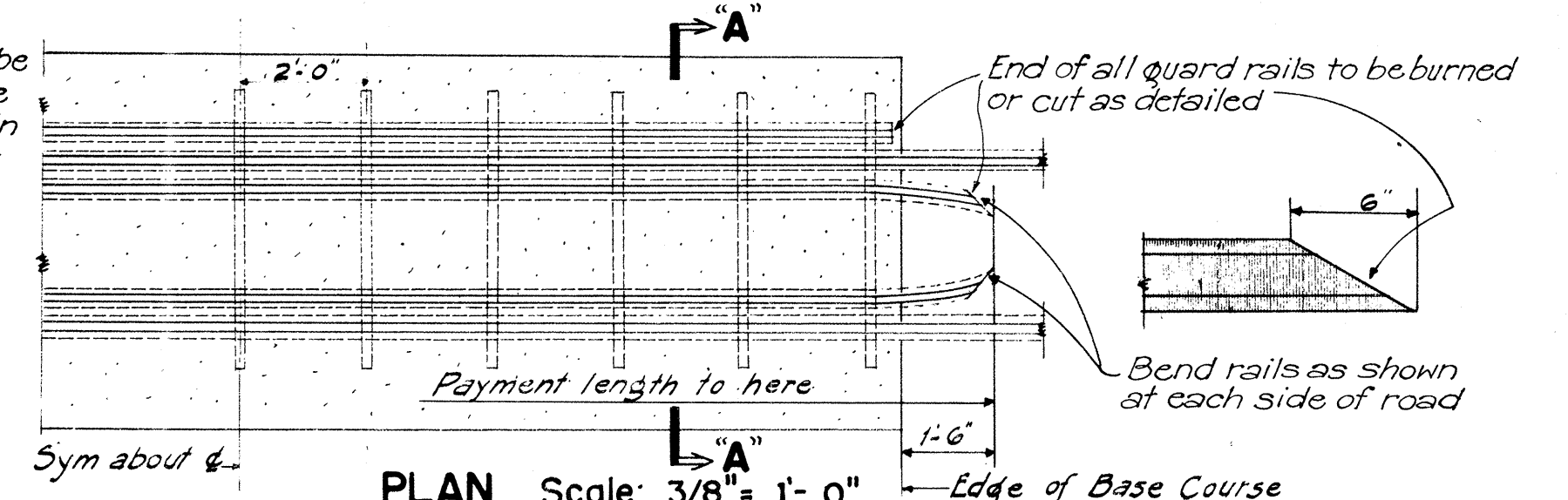
NOTE: Dimension "X" is assumed as 2'-4" in figuring the above quantities.



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.



STANDARD MASONRY HEADWALL

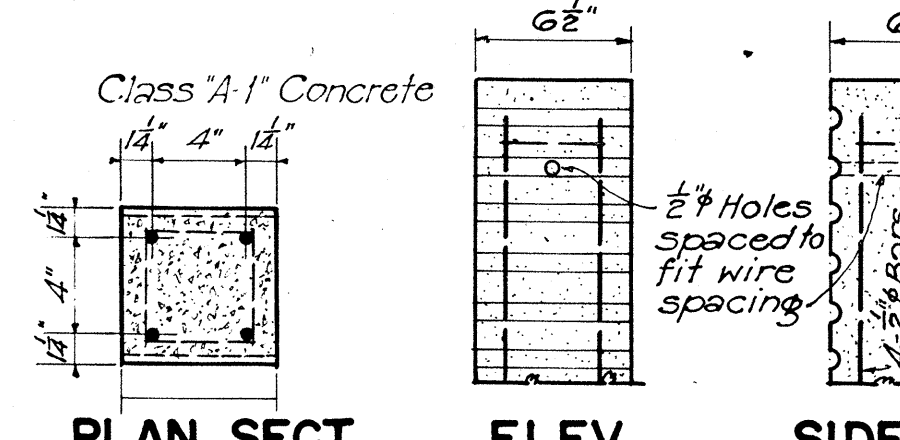
Scale: 1/2" = 1'-0"

Cast-in-Place Cu. Yds.	Precast Cu. Yds.	Data-Standard Rubble Masonry H.W.				Cu. Yds. H.W.
D	H	B	L			
0.85	0.95	18"	3'-6"	1'-0"	6'-0"	0.93
1.23	1.45	24"	4'-0"	2'-0"	7'-6"	1.41
1.83	2.06	30"	4'-6"	2'-3"	9'-0"	2.00
2.49	2.84	36"	5'-0"	2'-6"	10'-6"	2.72

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

CONC. GATE POST

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



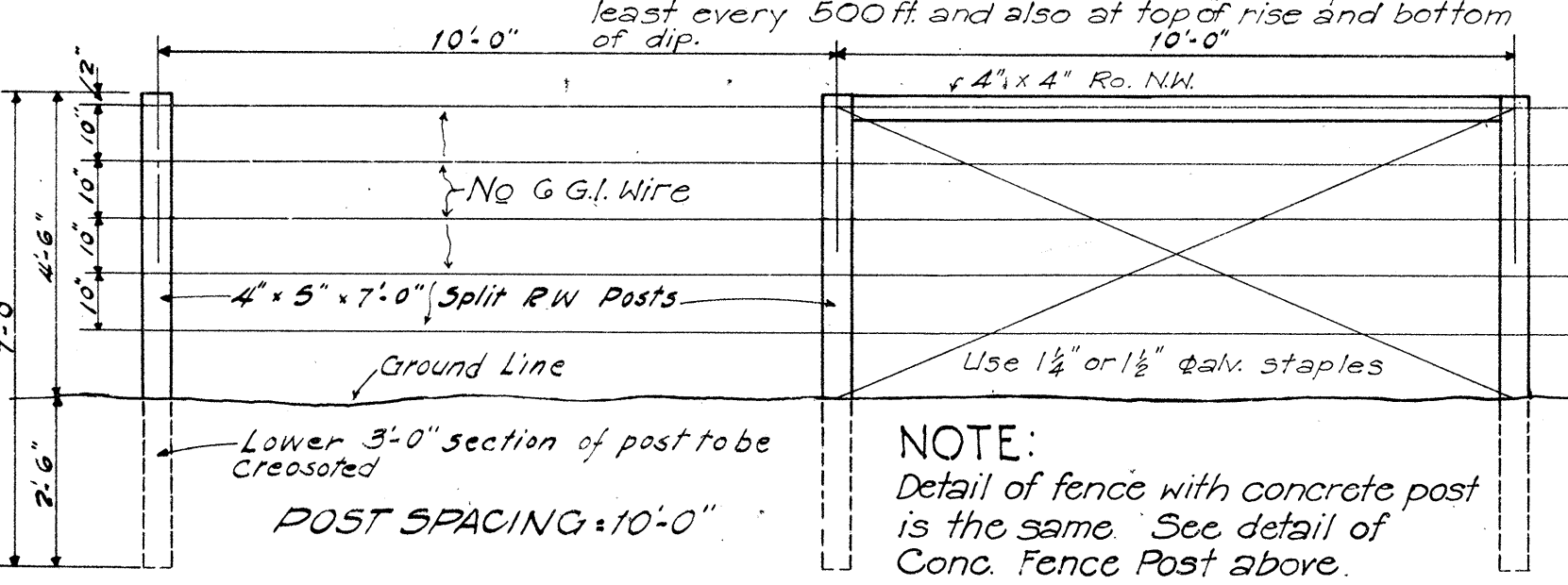
CONC. FENCE POST

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



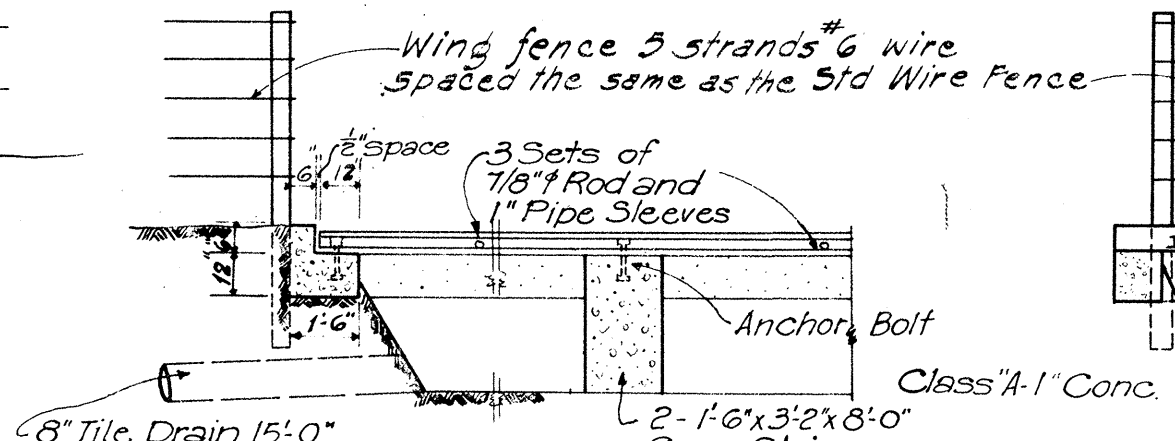
STANDARD GUIDE POSTS:

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

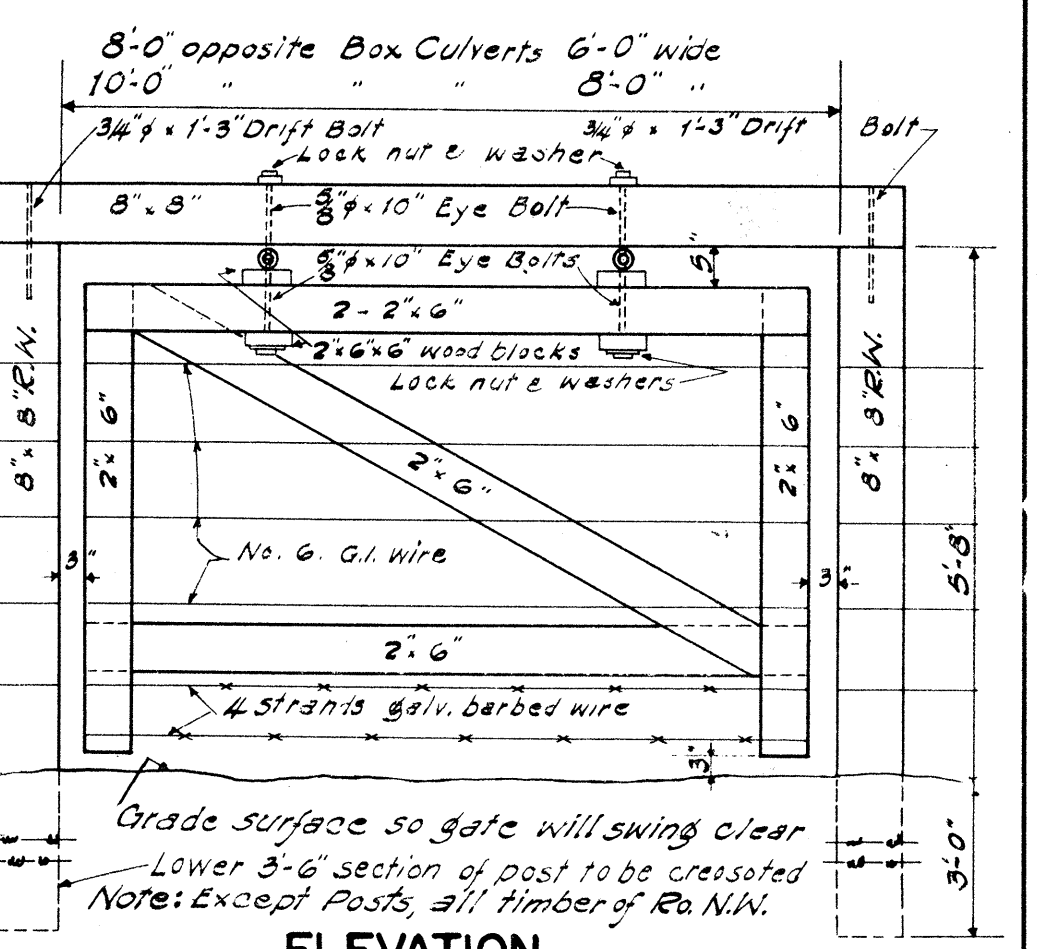


STANDARD WOOD GUARD RAIL

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

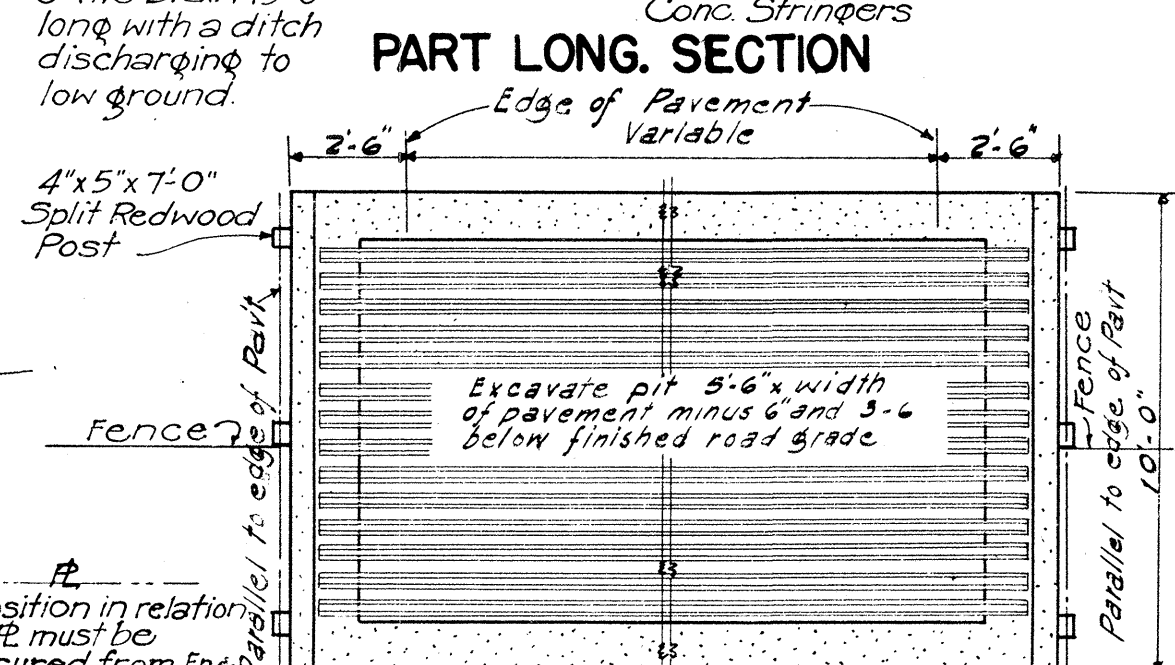


DETAIL OF STANDARD OUTLET DITCH



ELEVATION

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



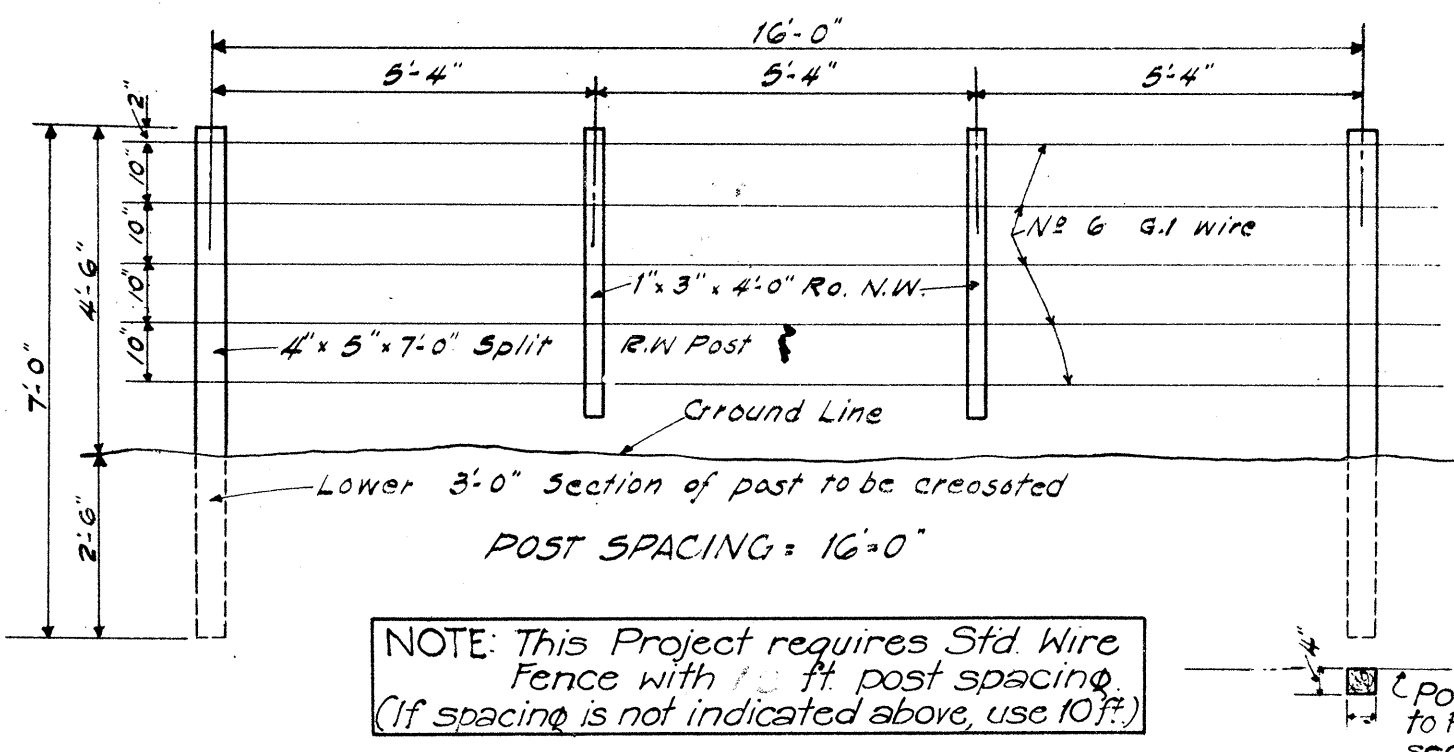
CROSS SECTION

Approx. 6 1/2' oc.

DETAILS OF CATTLE GUARD

DETAILS OF STANDARD WIRE FENCE WITH WOODEN POSTS

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



NOTE: This Project requires Std Wire Fence with 12" post spacing. (If spacing is not indicated above, use 10' ft.)

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

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 4 SHEETS

5242.14

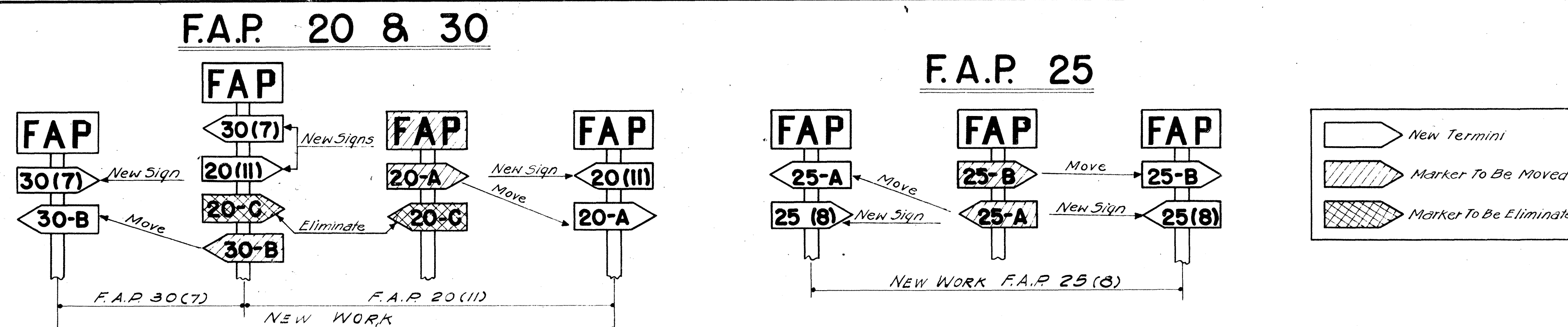
DATE:
SURVEY PLOTTED BY:
CHECKED BY:
ORIGINAL PLAN:
NOTE BOOK:
QUANTITIES CHECKED BY:
NO.:

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

WARNING AND CAUTION SIGNS

DETAILS OF REGULATORY SIGNS

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



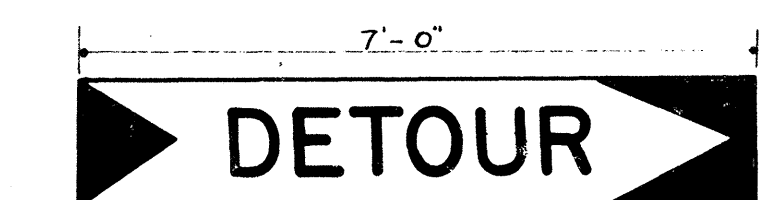
NOTE: Federal Aid markers should be placed at the termini of suffix designated sections. Intermediate letter designated markers

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)

Note:
Letters to be 12" high and 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

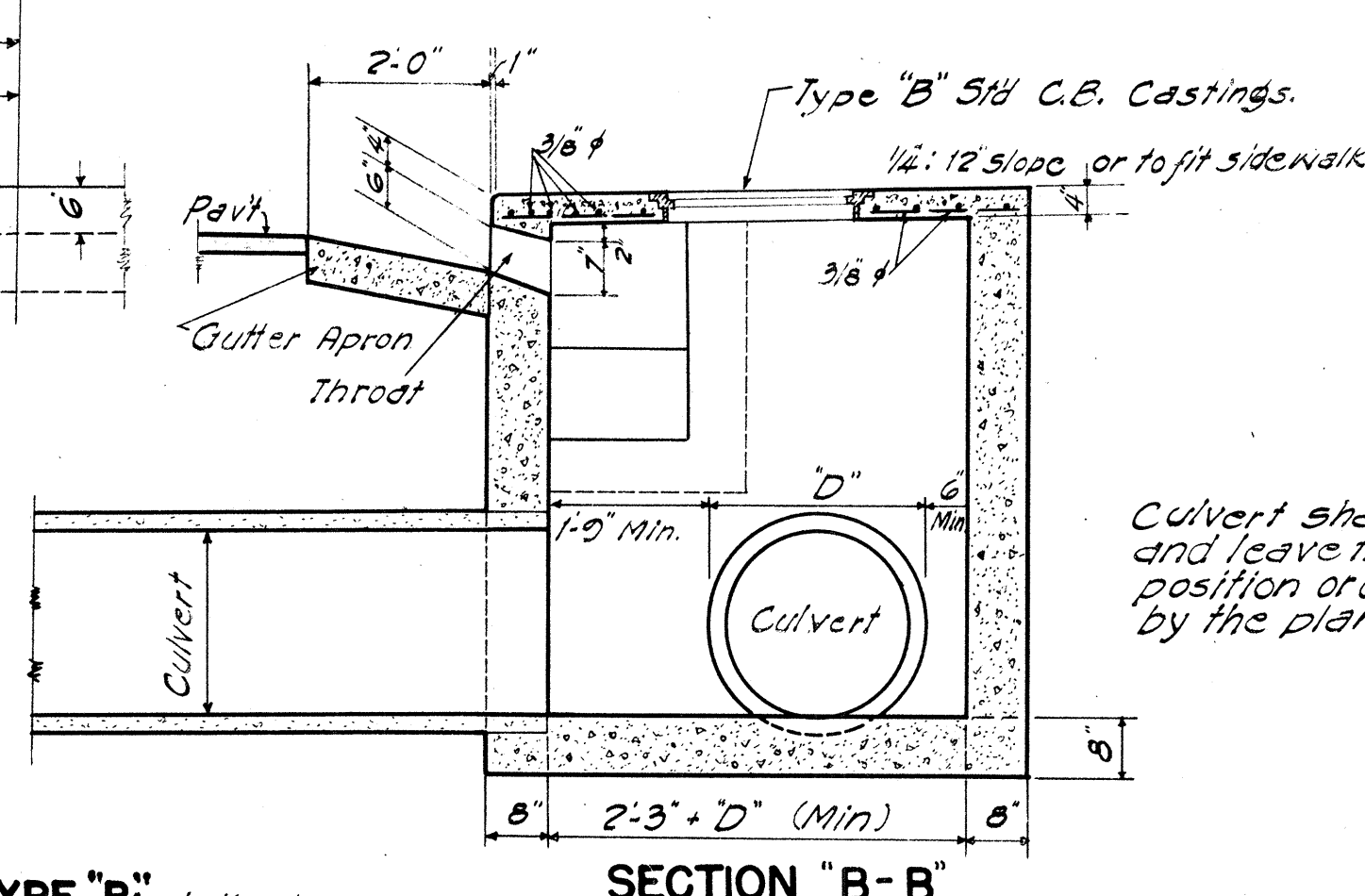
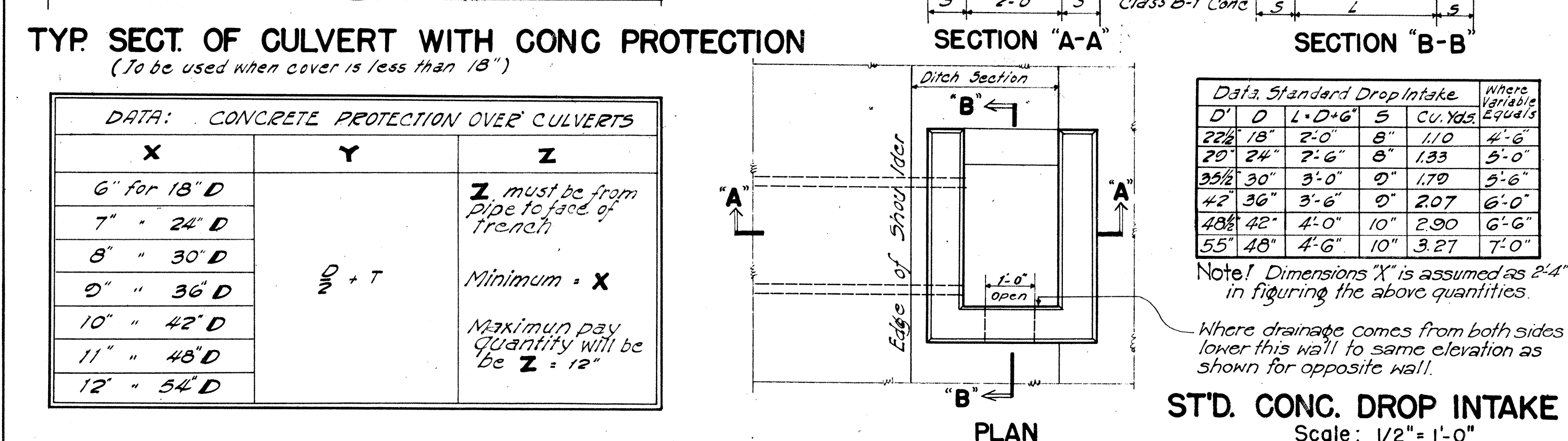
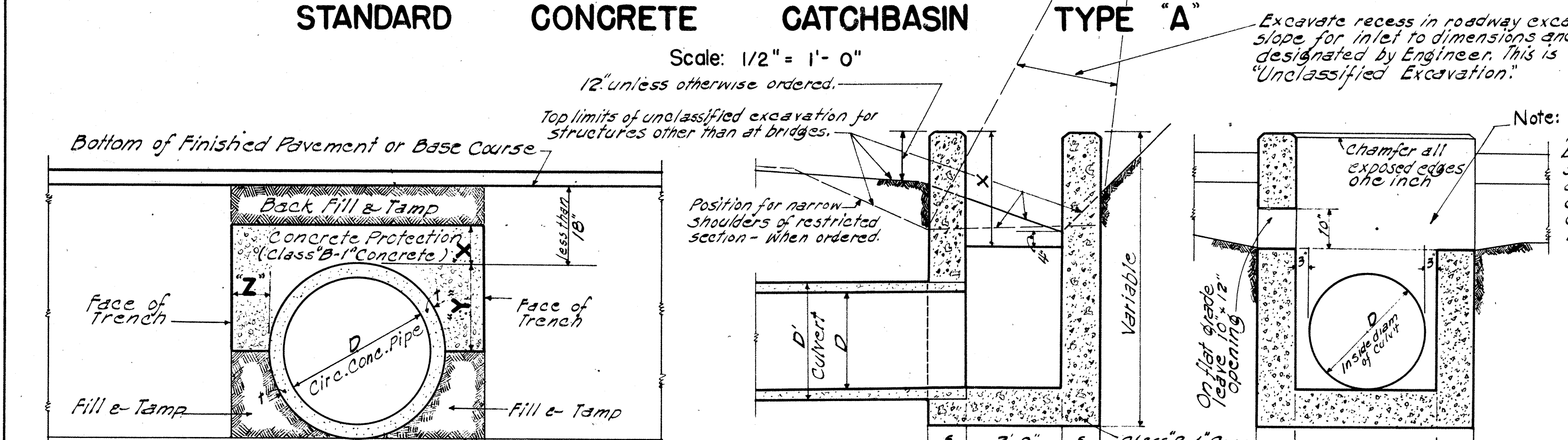
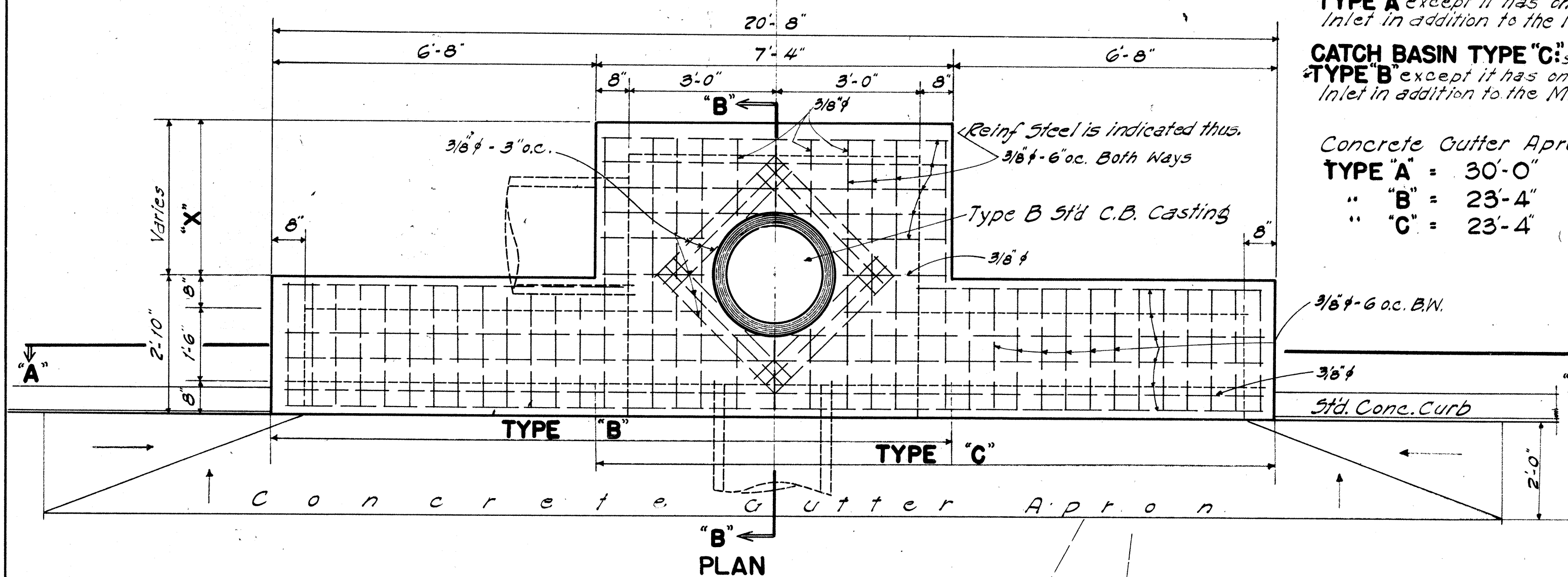
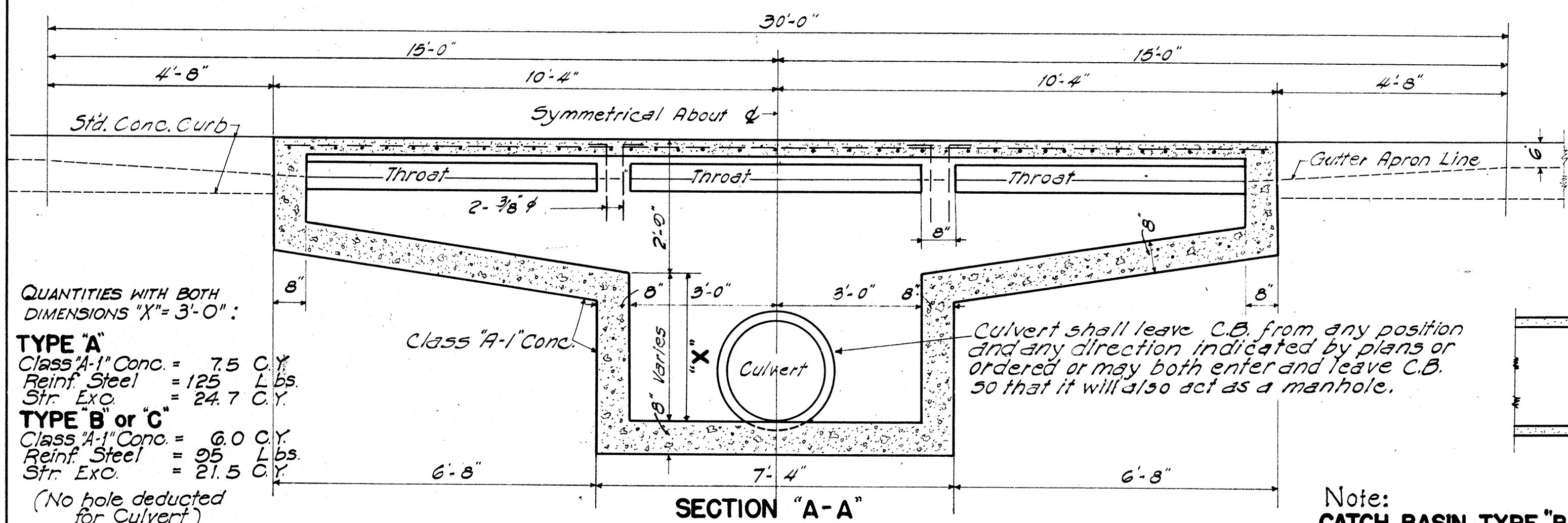
TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

STANDARD DETAILS

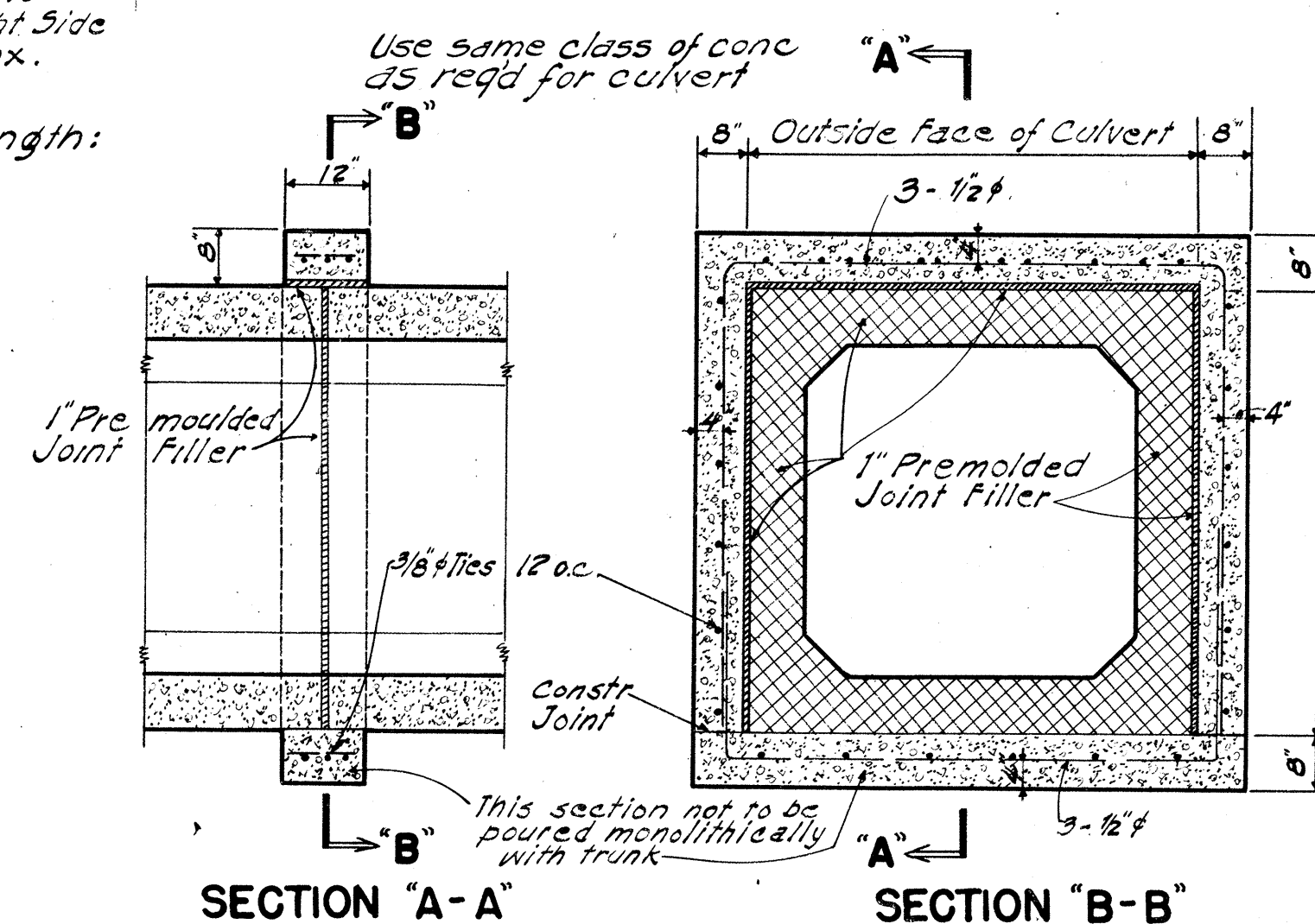
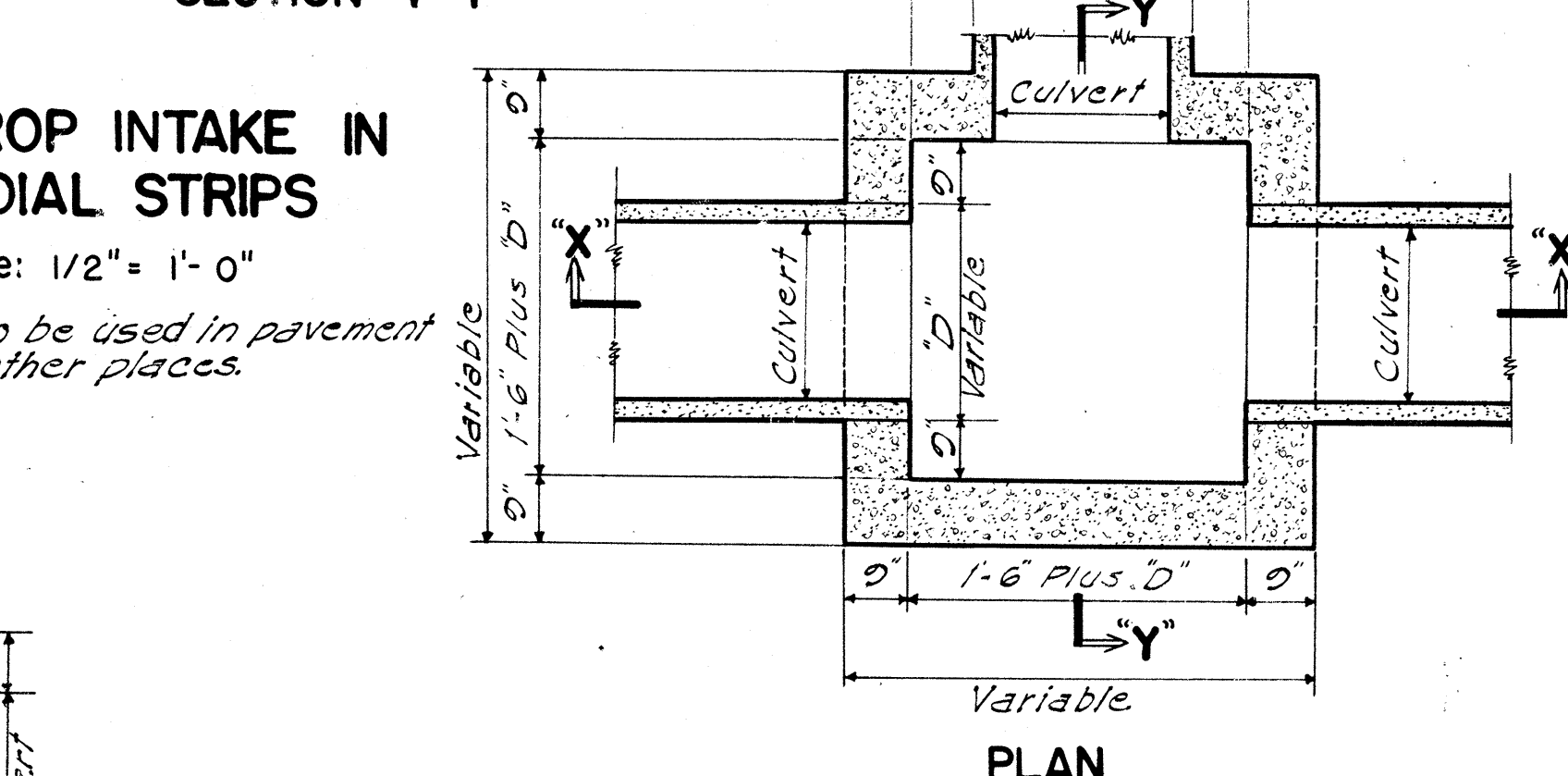
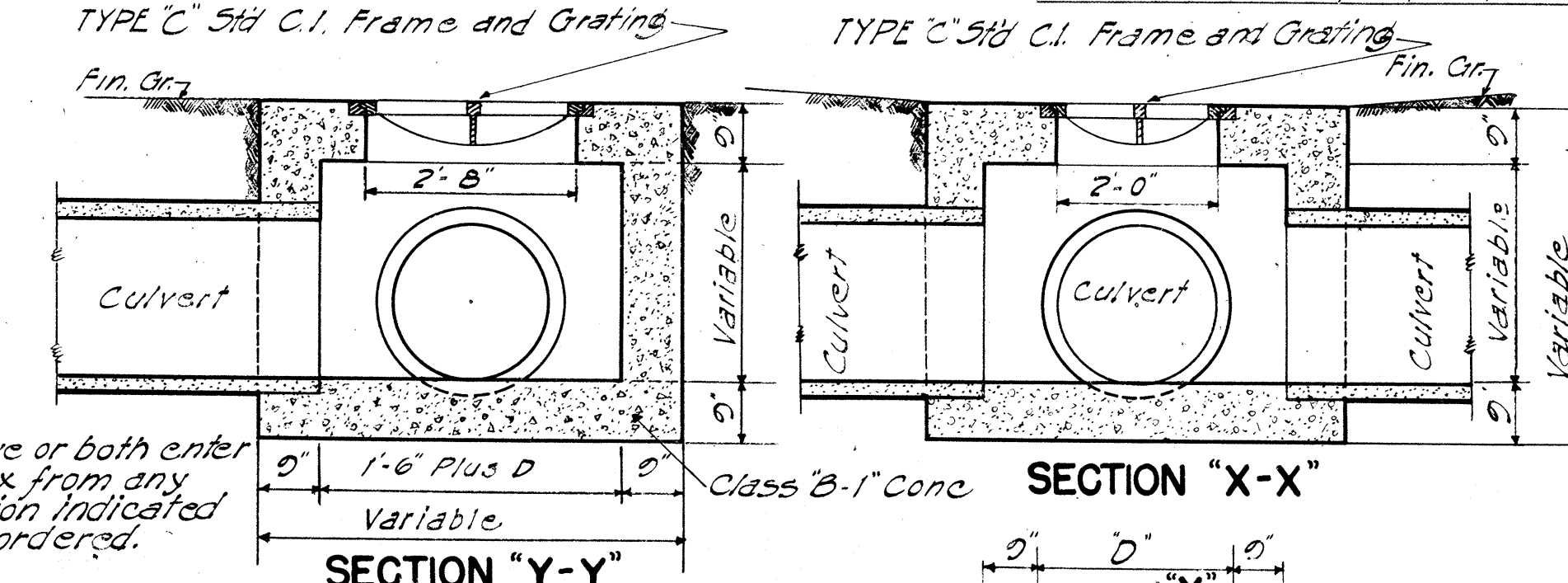
SCALES AS NOTED, Apr. 15, 1948

APPROVED: 

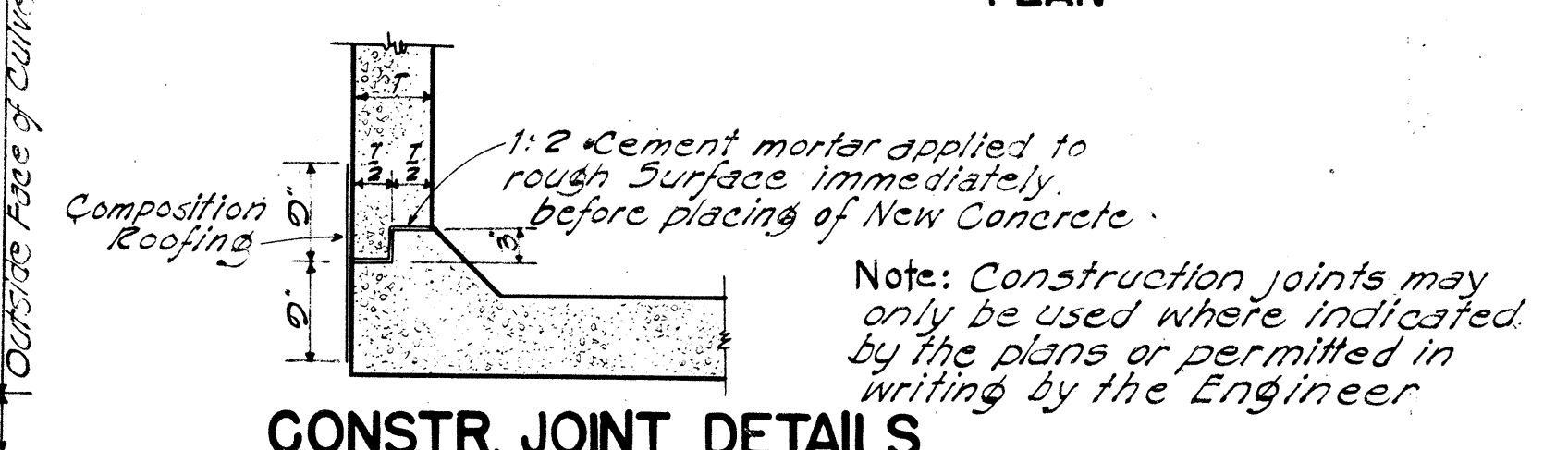
Territorial Highway Engineer
SHEET No 2 OF 4 SHEETS



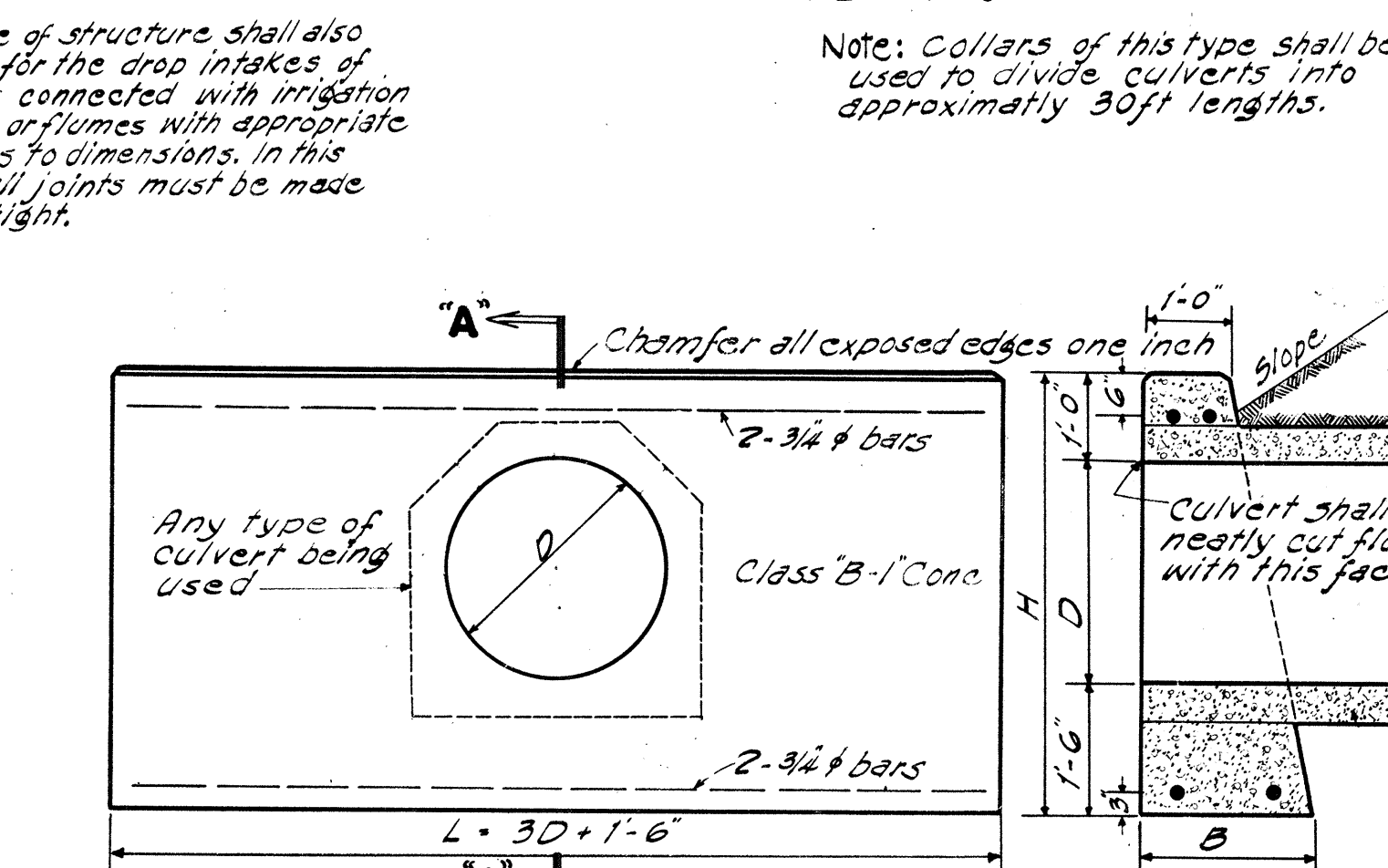
CONC. DROP INTAKE IN MEDIAL STRIPS
 Scale: 1/2" = 1'-0"
 Note: May also be used in pavement and at other places.



CONC. COLLAR FOR CONG. BOX CULVERT
 Scale: 1/2" = 1'-0"

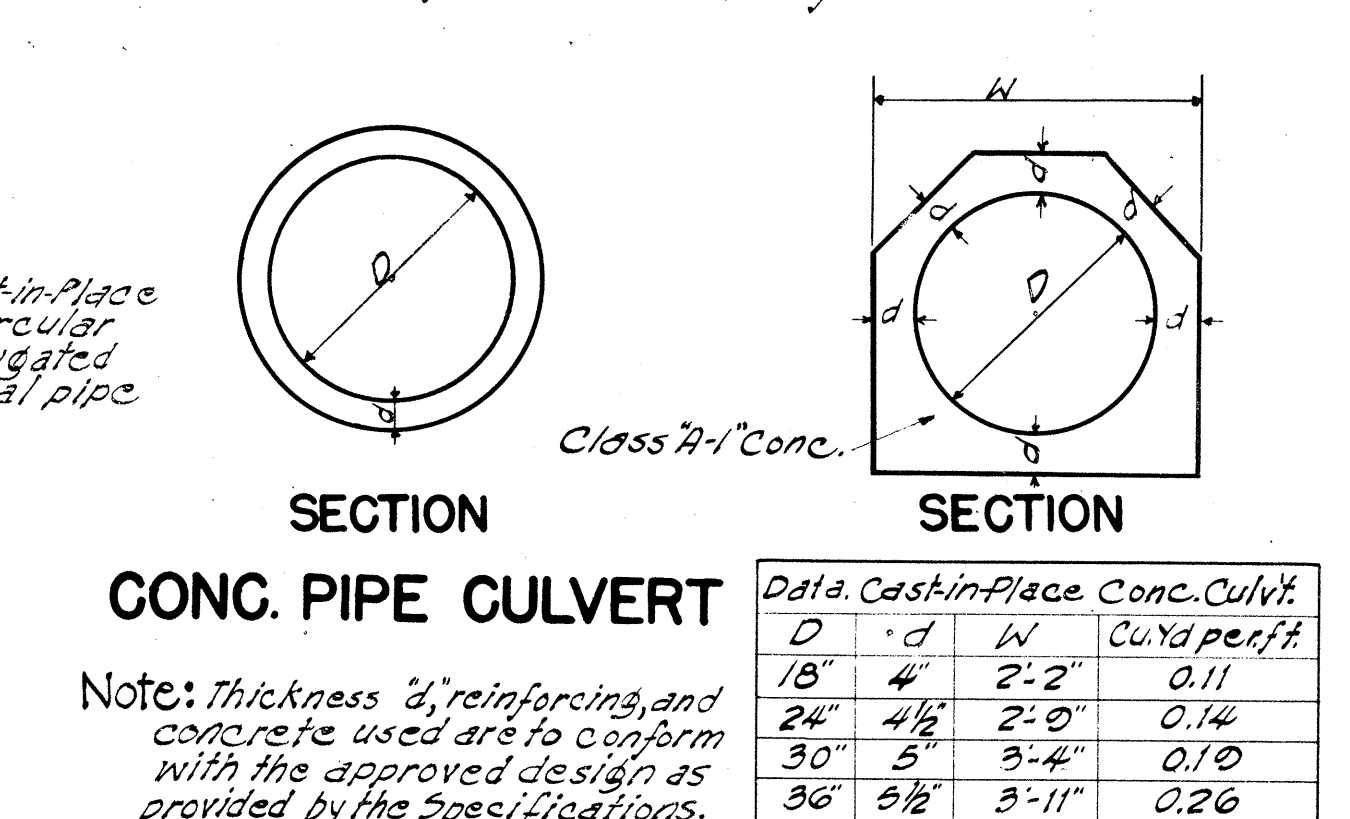


METHOD OF APPLYING CONSTR. JOINT WATERPROOFING
 (1) Map surface either side of joint as required with asphalt 85-100 penetration applied at 200".
 (2) Apply one layer of 55-lb composition roofing to hot asphalt.
 (3) Map surface of composition roofing and 3" beyond all around with thick coat of asphalt as specified under (1).



Cast-in-Place		Data: Standard Concrete Headwall				Steel One Headwall			
Cu. Yds.	D	B	L	H	Conc. one H.W.	No. of Bars	Size	Length	Wt Lbs
0.02	18"	1'-6"	6'-0"	4'-0"	1.00 Cu. Yds.	4	3/4"	5'-6"	33
1.25	"	24"	1'-6"	7'-6"	1.38	"	"	7'-0"	42
1.95	"	30"	2'-0"	9'-0"	2.17	"	"	8'-6"	51
2.45	"	36"	2'-0"	10'-6"	2.74	"	"	10'-0"	60

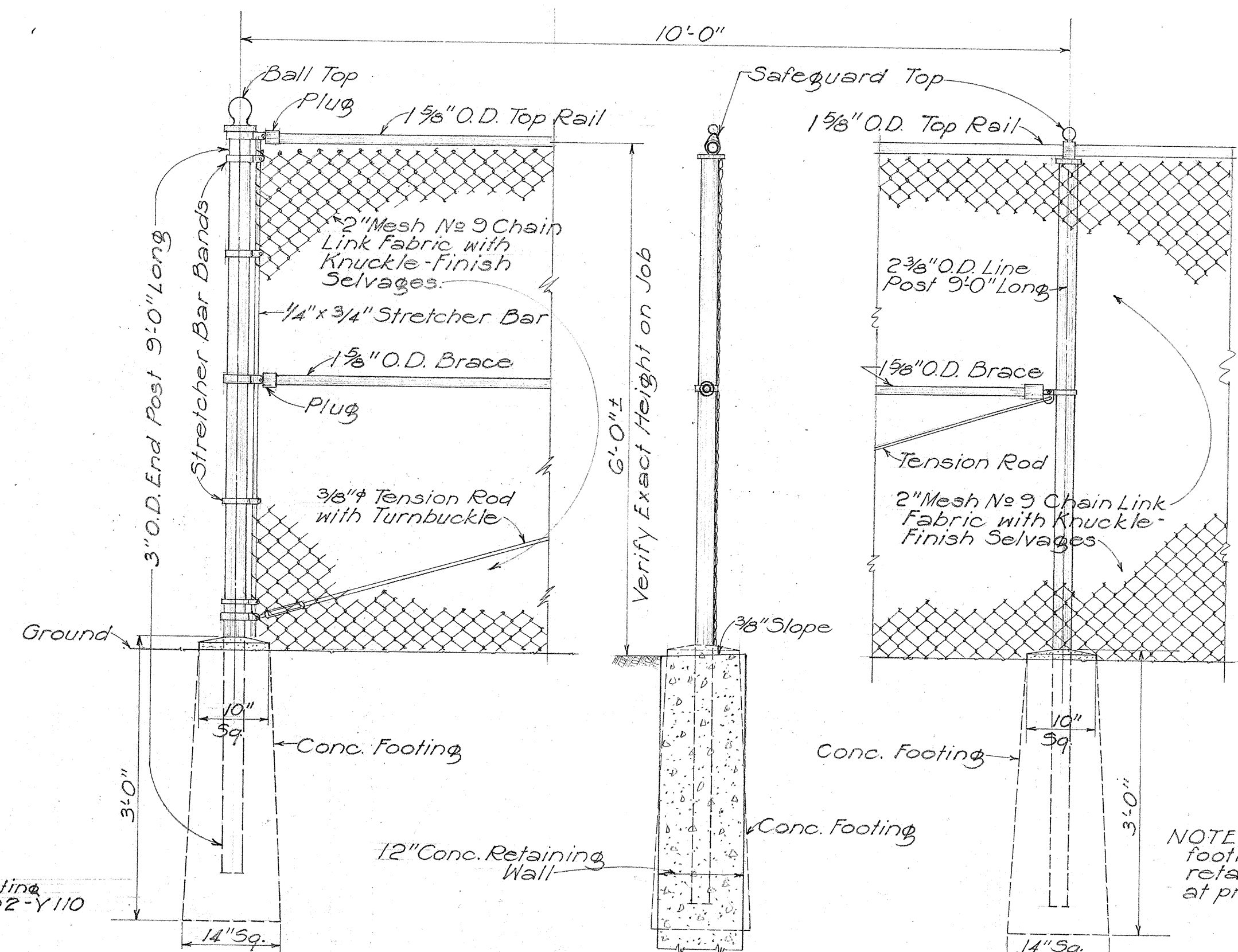
STANDARD CONCRETE HEADWALL
 Scale: 1/2" = 1'-0"



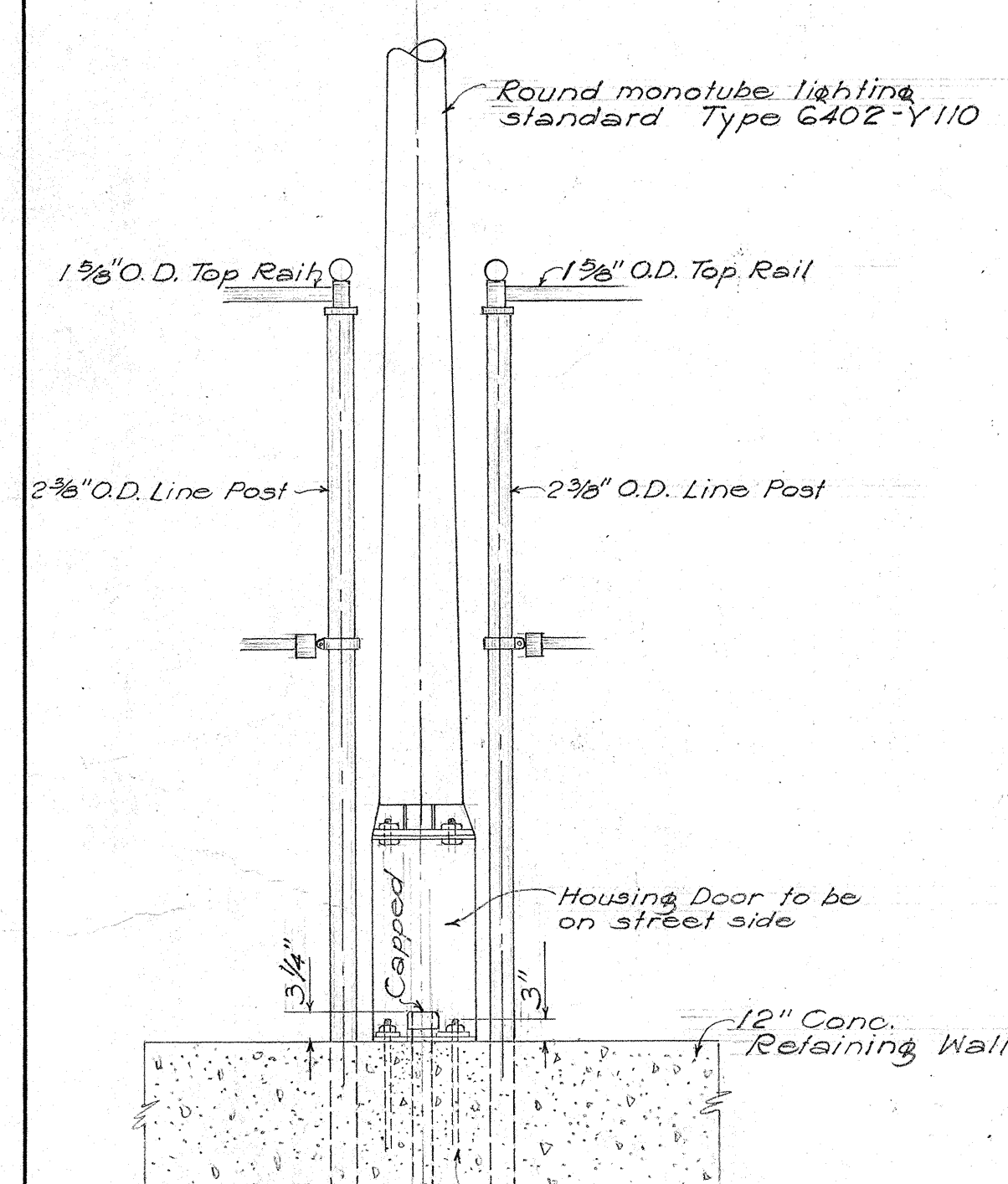
CONC. PIPE CULVERT
 Note: Thickness "d" reinforcing and concrete used are to conform with the approved design as provided by the Specifications.

Data: Cast-in-Place Conc. Culvert			
D	d	W	Cu. Yds. per ft
18"	4"	2'-2"	0.11
24"	4 1/2"	2'-5"	0.14
30"	5"	3'-4"	0.19
36"	5 1/2"	3'-11"	0.26

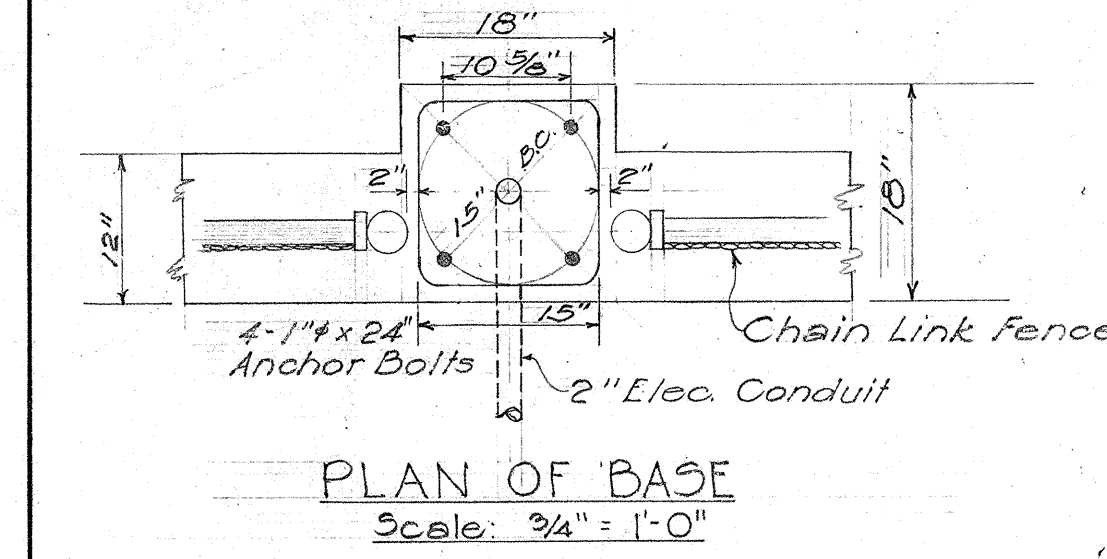
CAST-IN-PLACE CONG. CULVERT



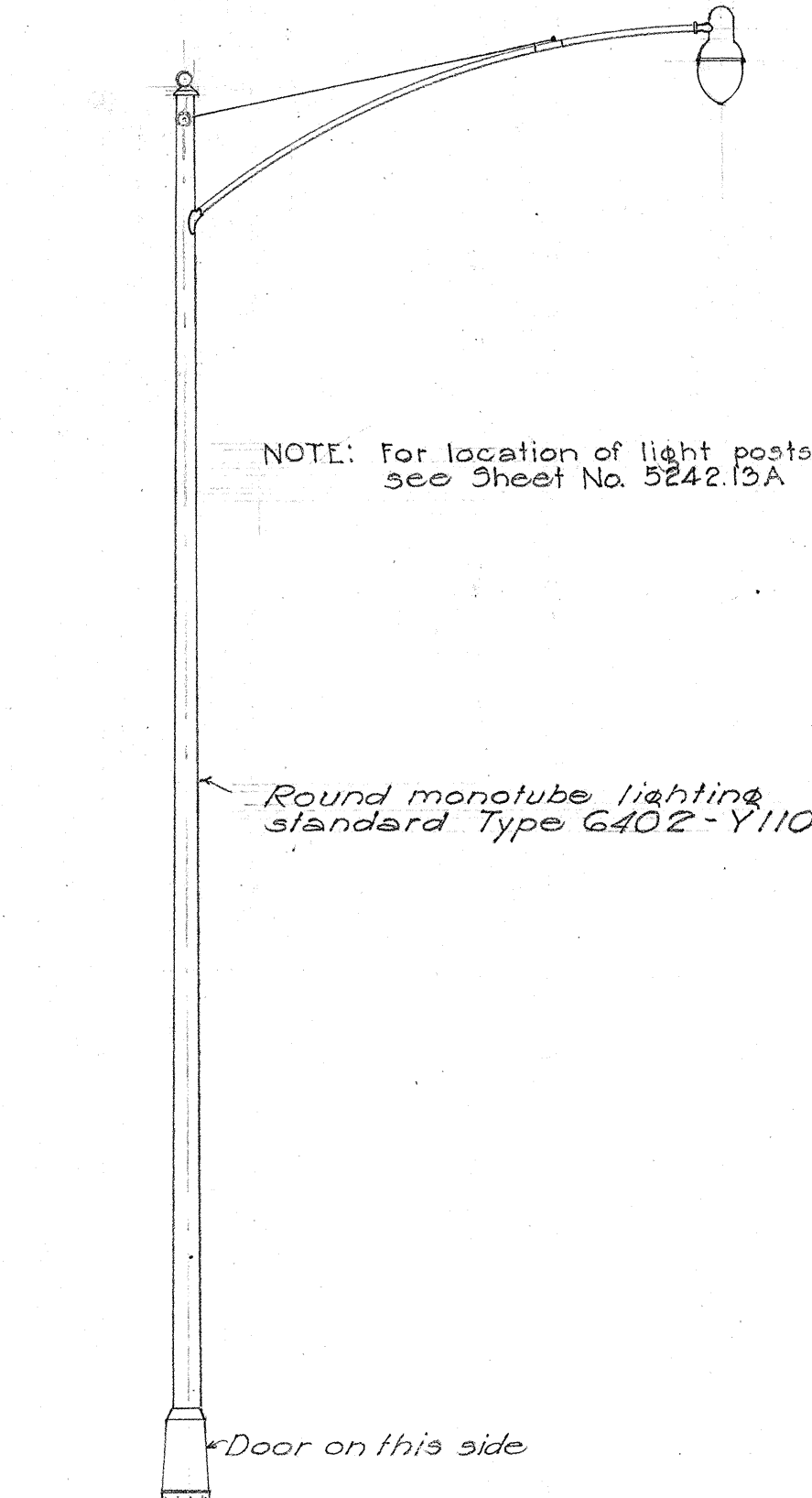
TYPICAL SECTION OF CHAIN LINK FENCE
Scale: 3/4" = 1'-0"



ELEVATION AT END POST
Scale: 3/4" = 1'-0"

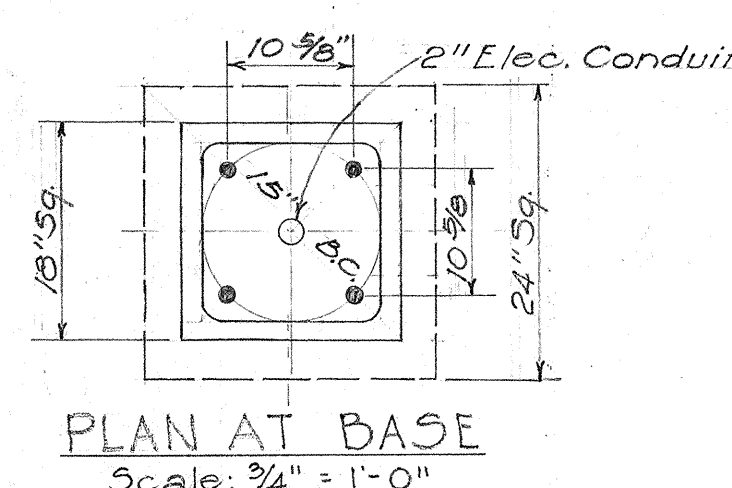


PLAN AT BASE
Scale: 3/4" = 1'-0"

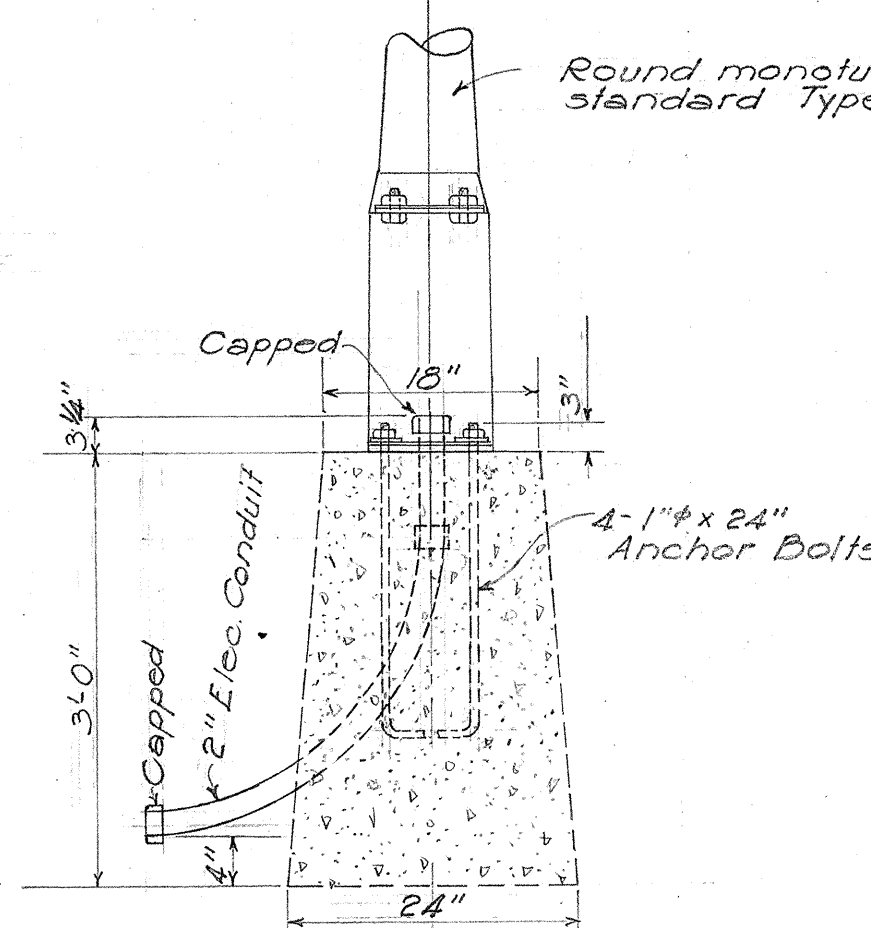


ELEVATION
Scale: 1/4" = 1'-0"

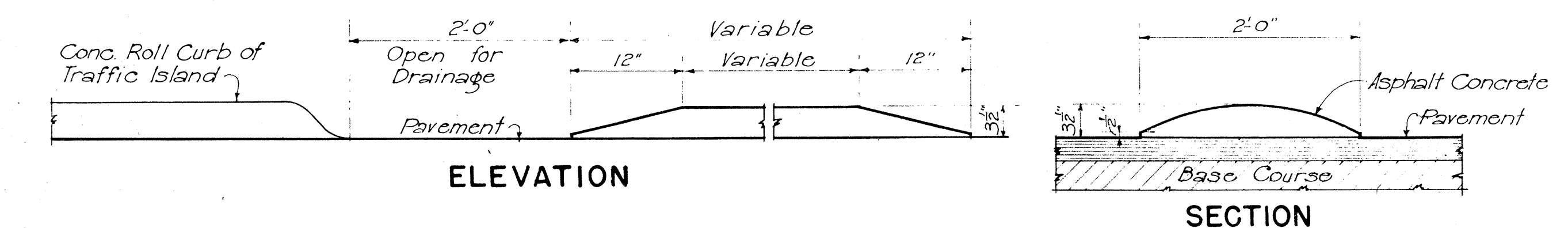
DETAIL OF ROUND MONOTUBE LIGHTING STANDARD TYPE G402-Y110



PLAN AT BASE
Scale: 3/4" = 1'-0"



ELEVATION AT LINE POST
Scale: 3/4" = 1'-0"

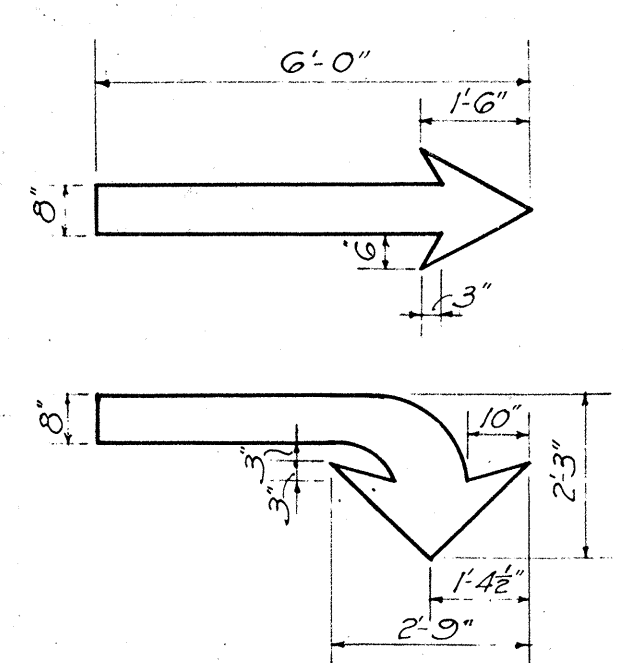


DETAIL OF A.C. ROLL

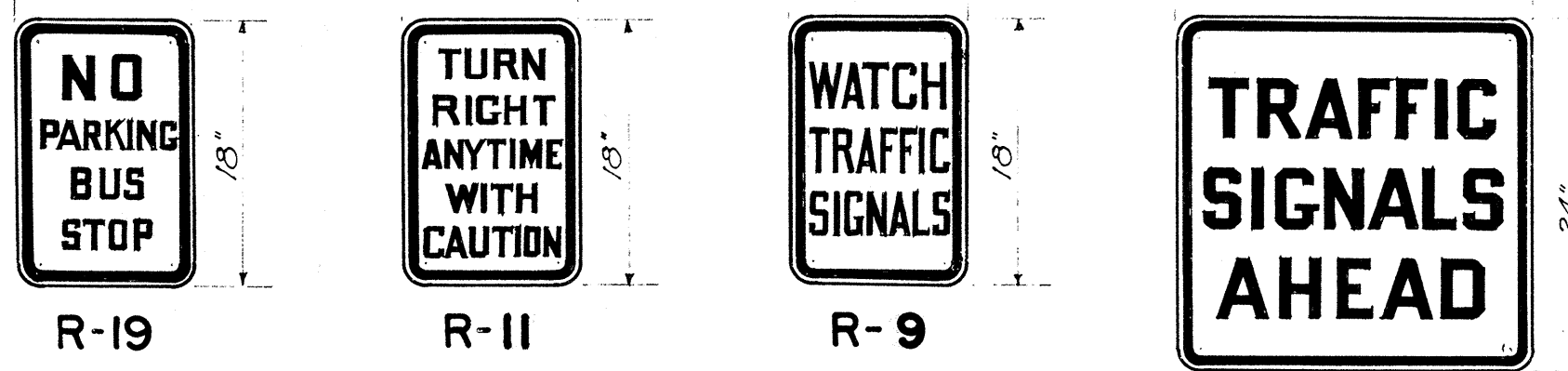
Scale: 1" = 1'-0"

NOTE:

Signs R-9 and C-8 to be mounted 4 feet above pavement to center of signs on 2" galv. iron posts set in concrete.
Mount Sign R-11 on signal standard 8 feet above pavement to center of sign.



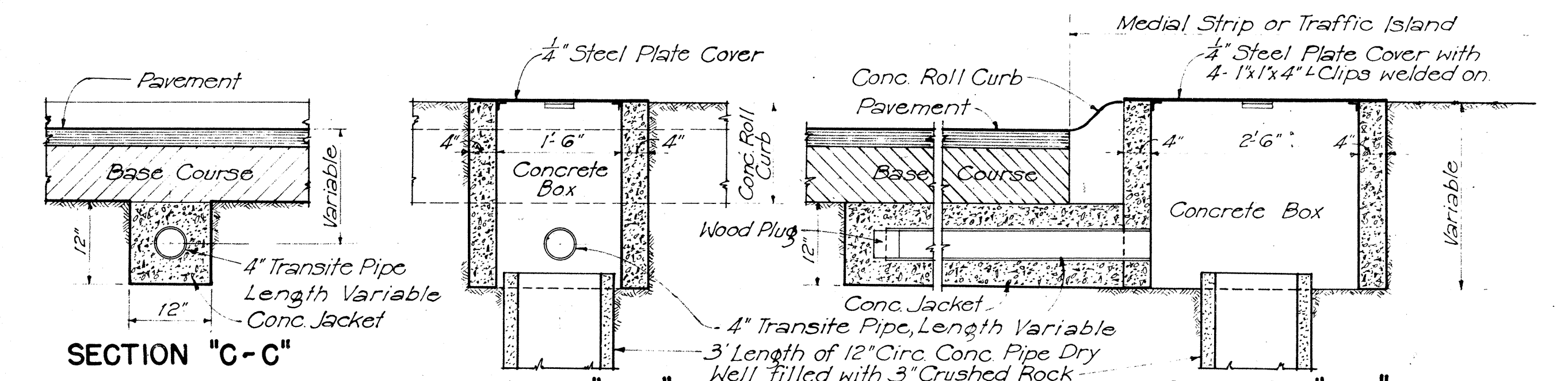
DETAIL OF TRAFFIC ARROWS
Scale: 3/8" = 1'-0"



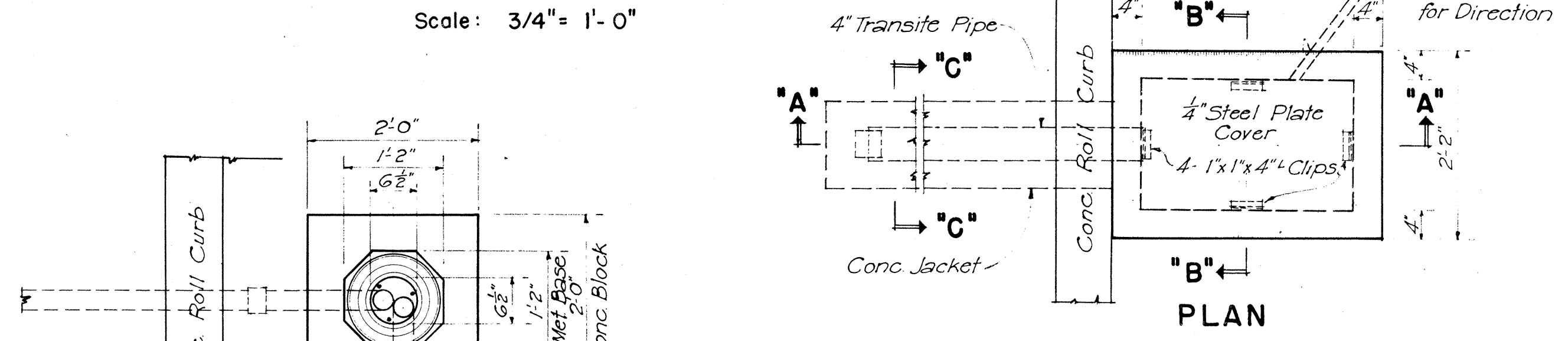
DETAILS OF REGULATORY SIGNS

Scale: 1" = 1'-0"

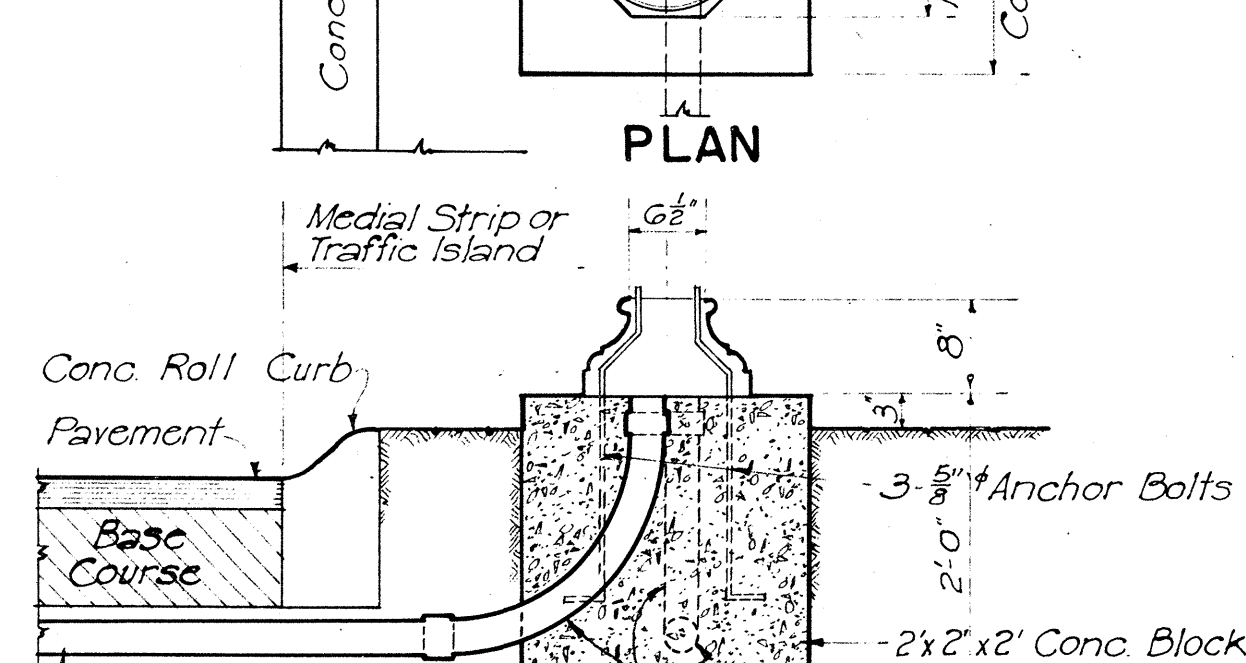
For additional Regulatory Signs, See Standard Detail Sheet No.



DETAIL OF TRAFFIC DETECTOR JUNCTION BOX
Scale: 3/4" = 1'-0"



PLAN



DETAIL OF BASE FOR TRAFFIC STANDARDS
Scale: 3/4" = 1'-0"

TERRITORIAL HIGHWAY DEPARTMENT	
TERRITORY OF HAWAII	
STANDARD DETAILS	
SCALES AS NOTED	Apr. 15, 1948
APPROVED:	
Territorial Highway Engineer	
SHEET NO. 18	OF 1 SHEETS