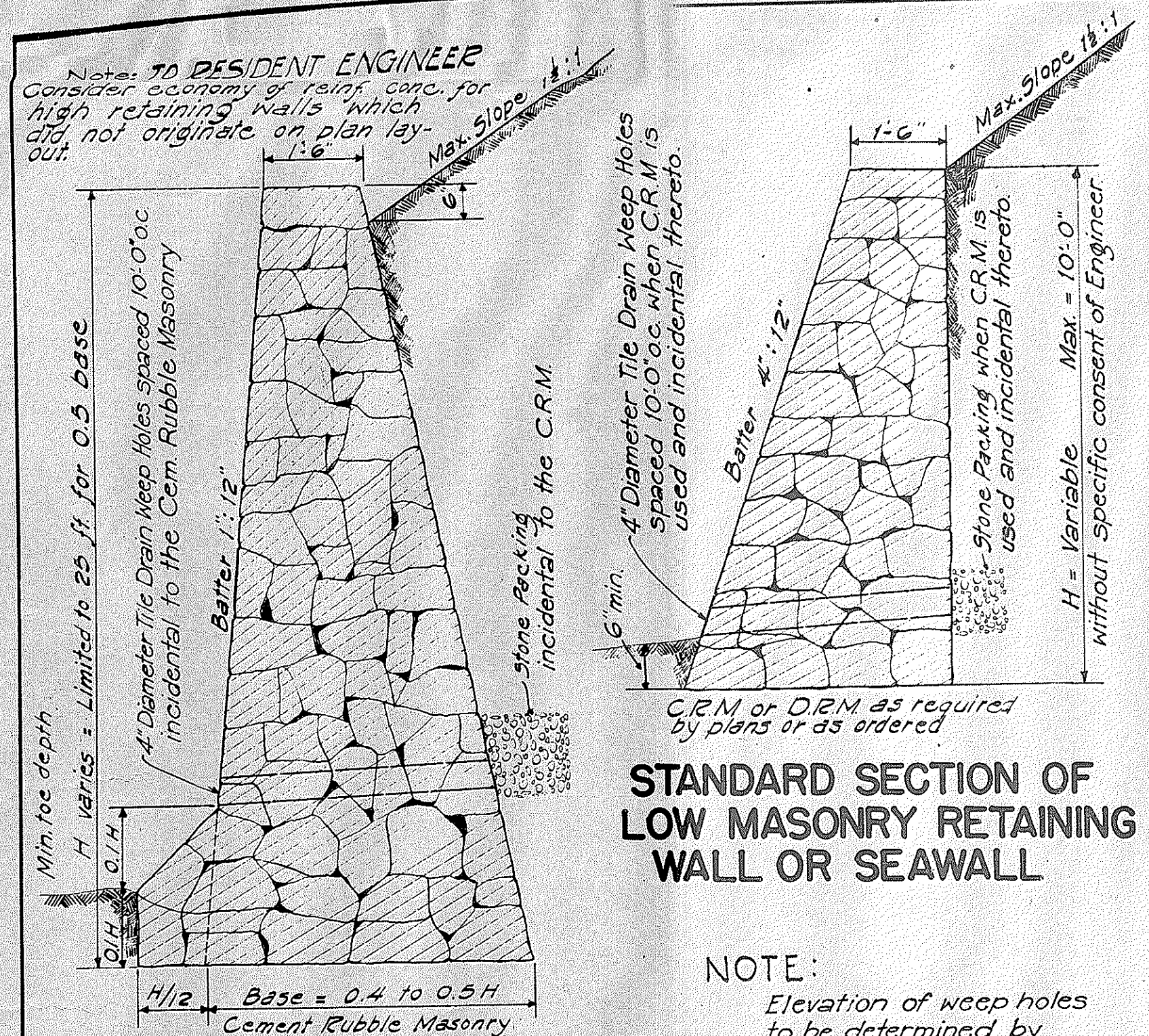
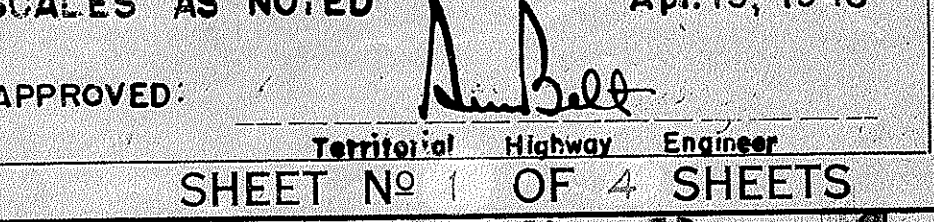
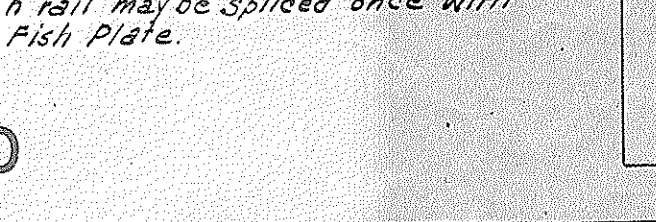
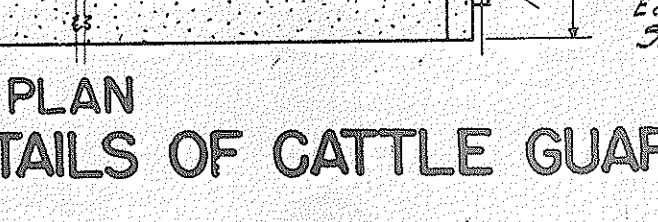
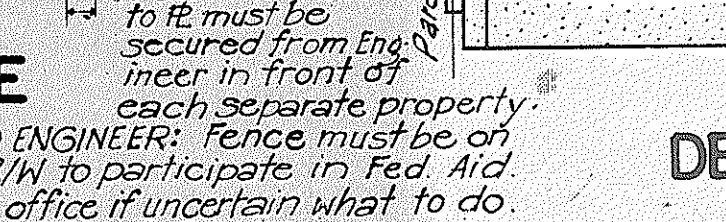
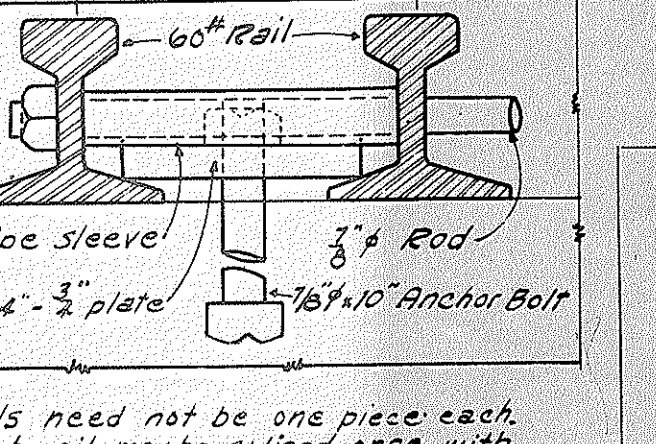
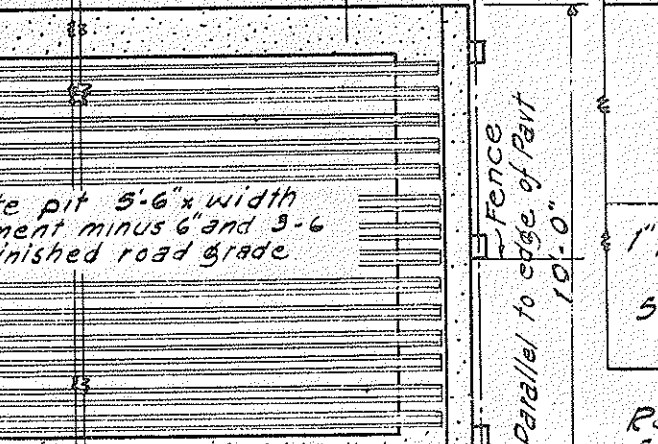
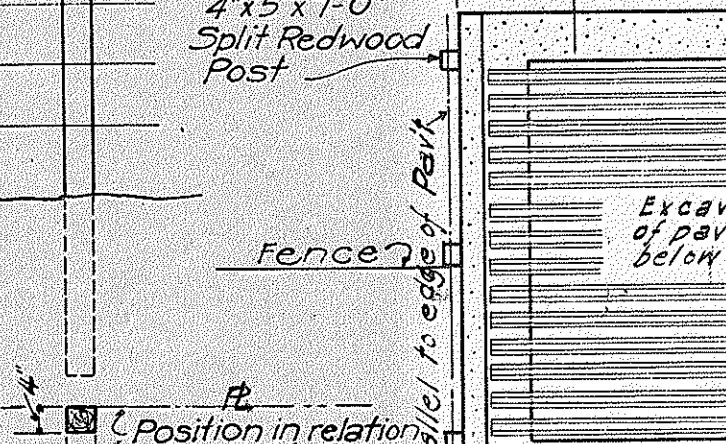
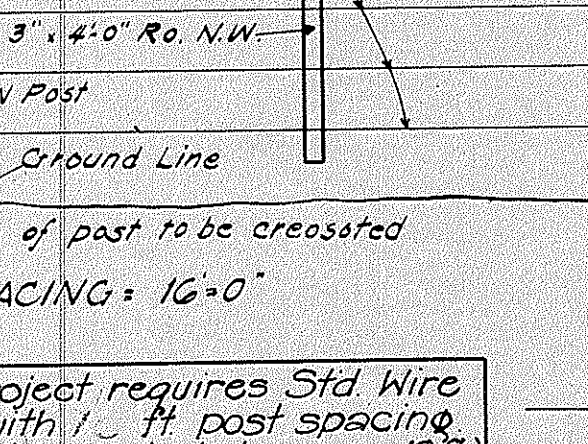
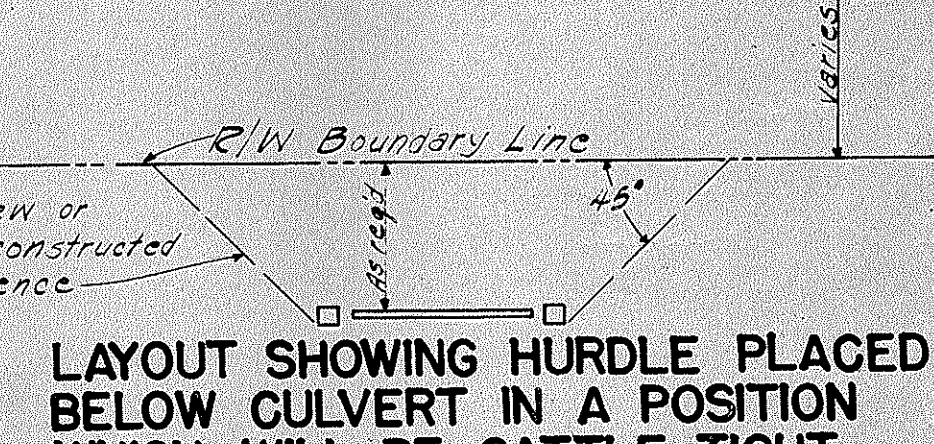
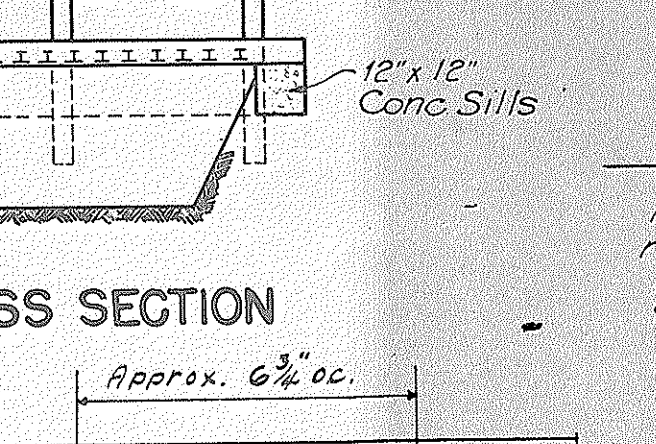
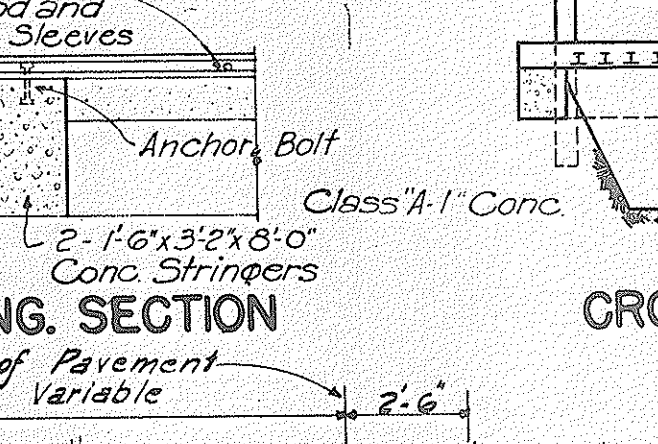
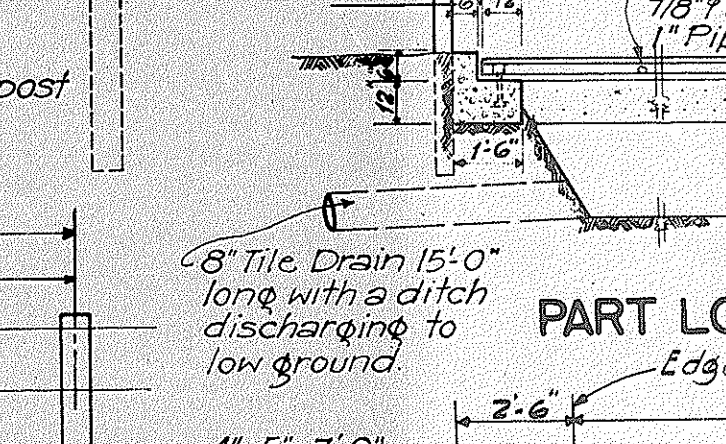
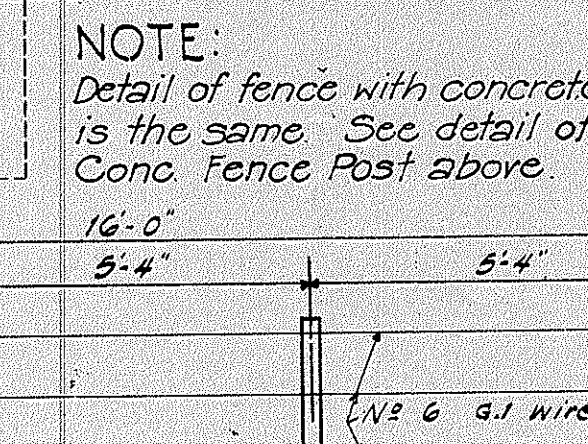
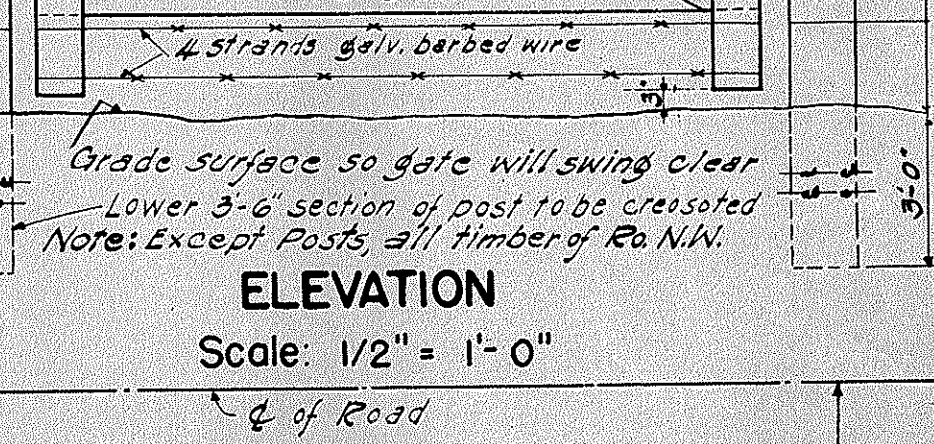
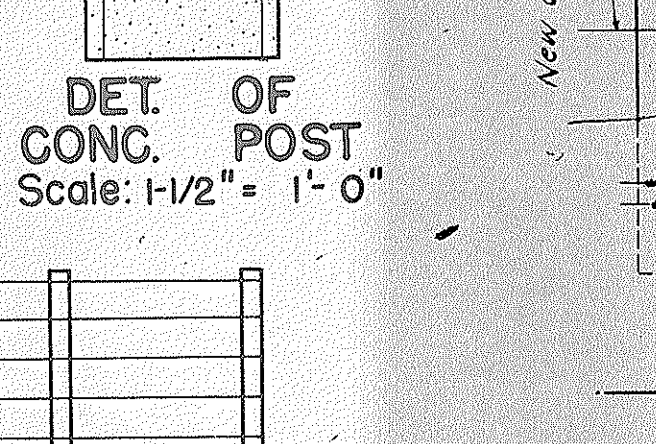
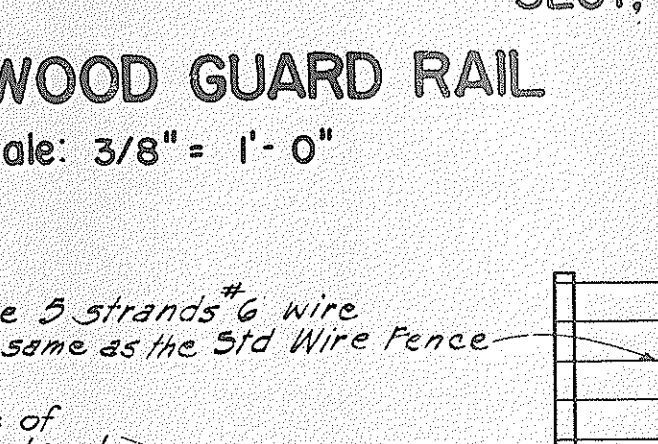
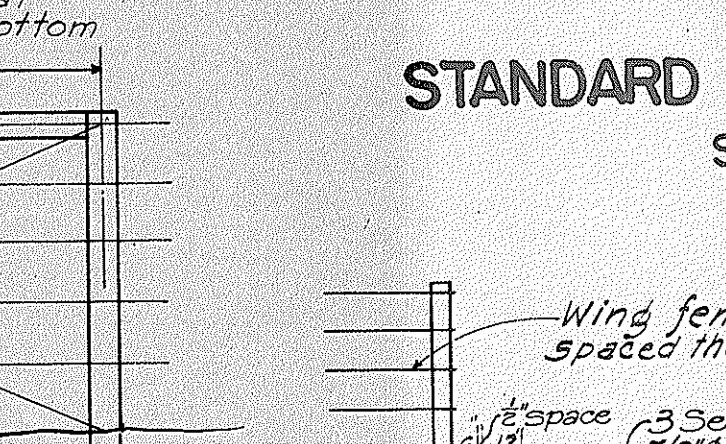
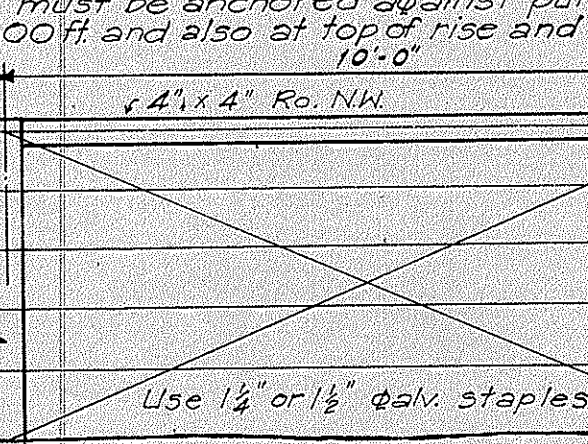
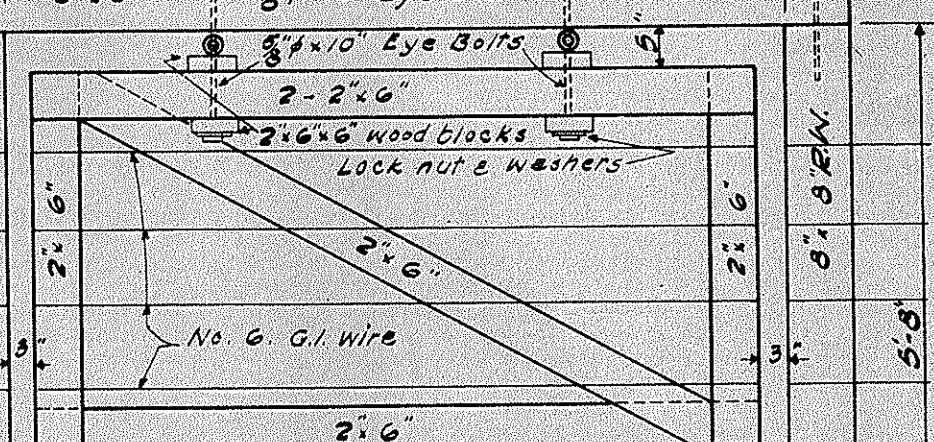
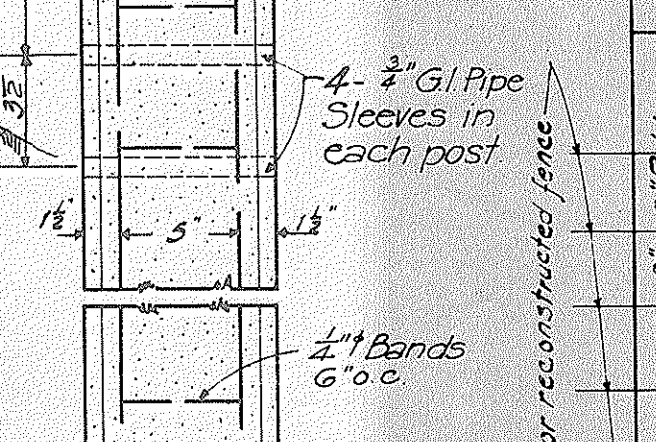
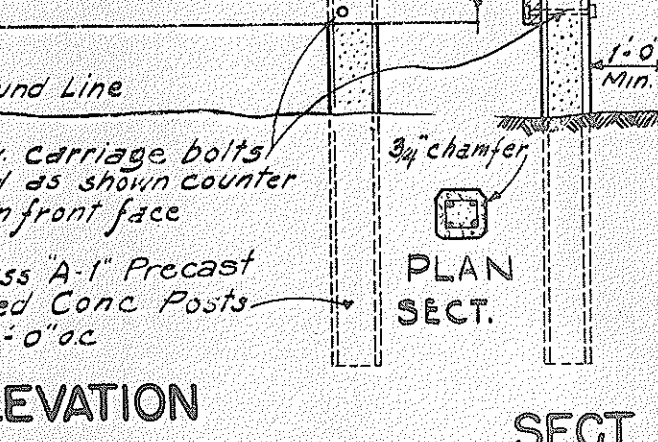
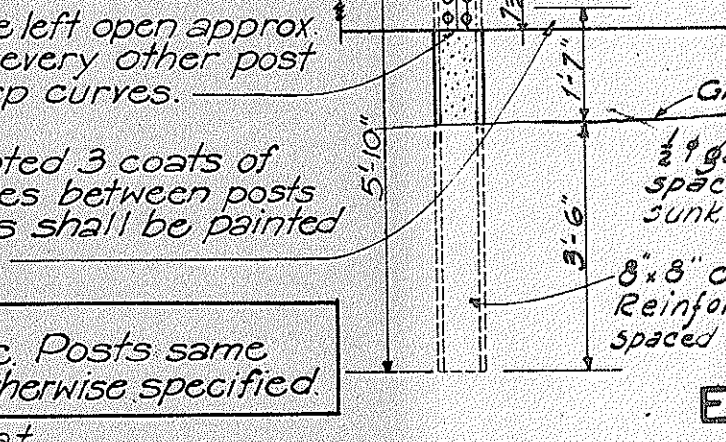
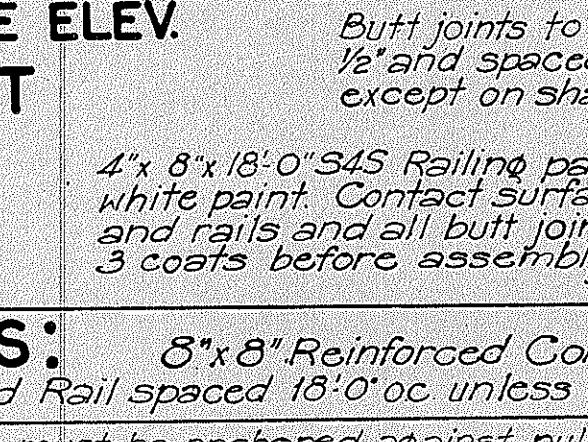
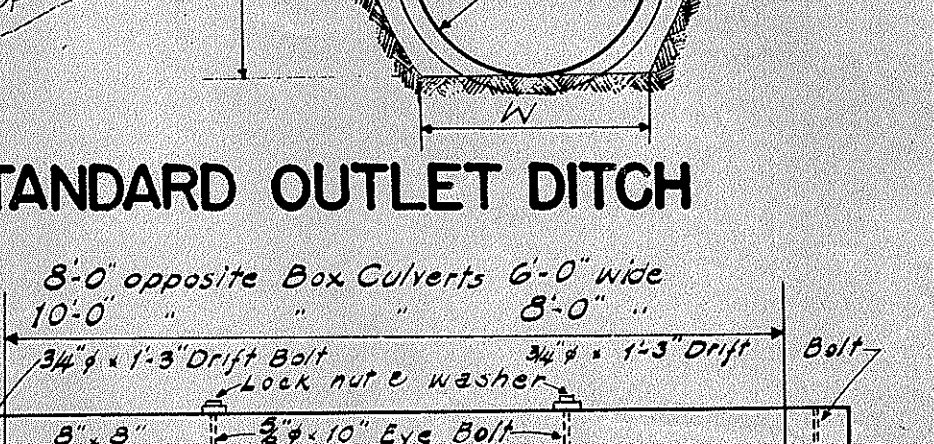
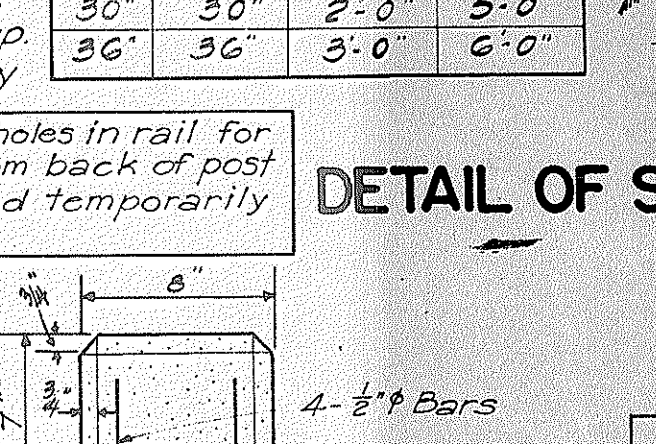
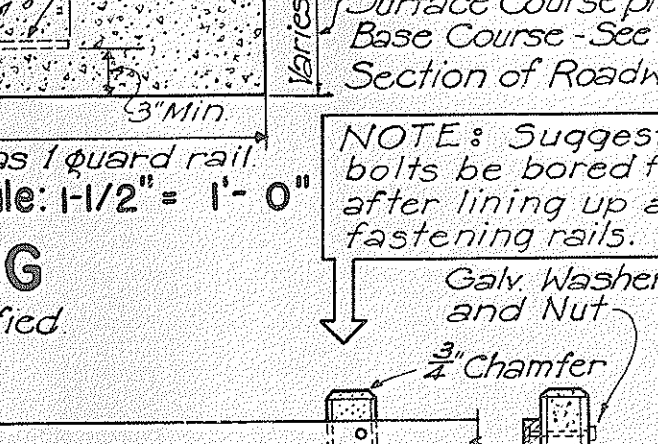
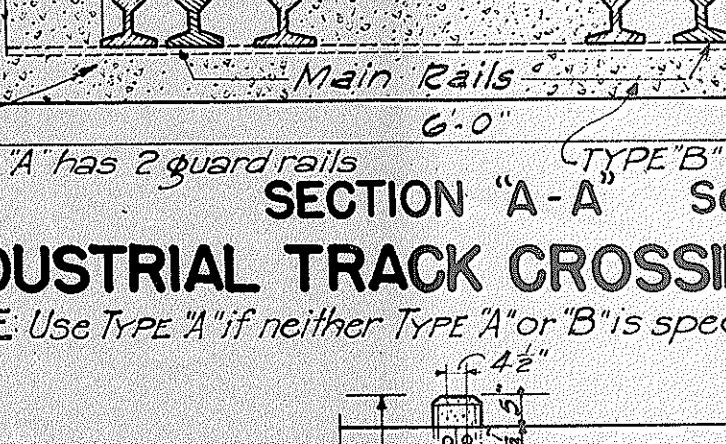
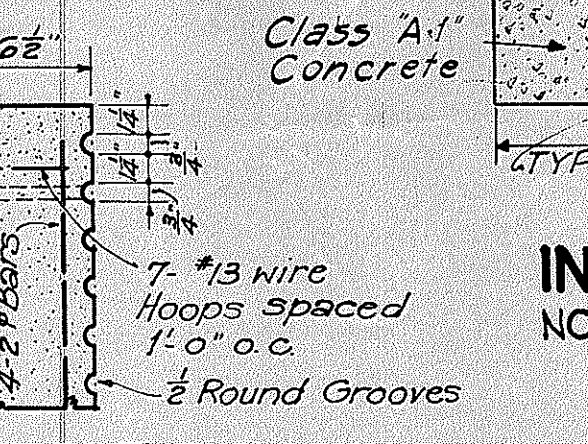
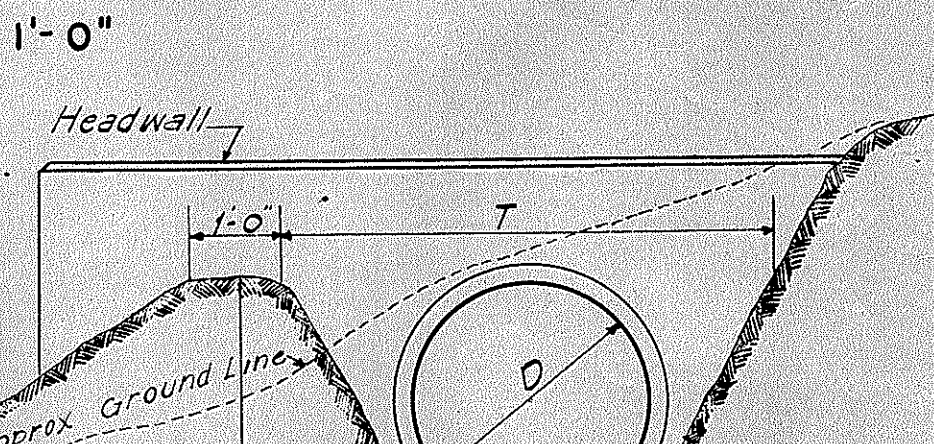
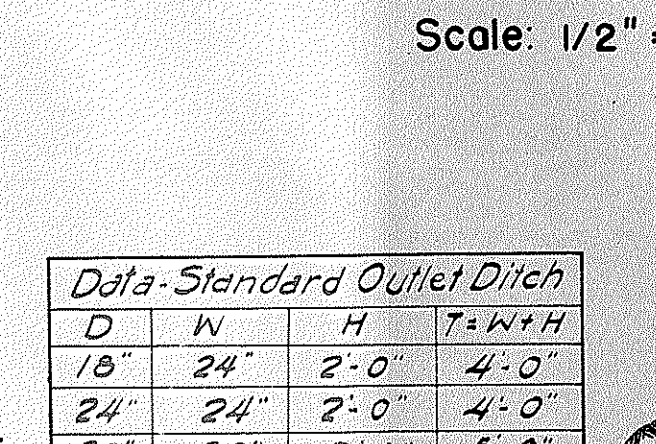
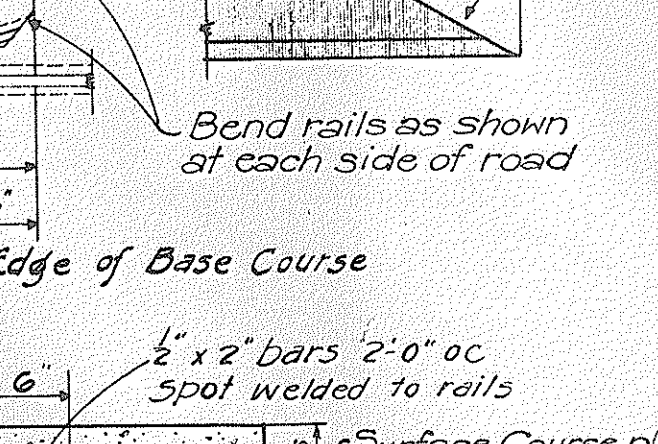
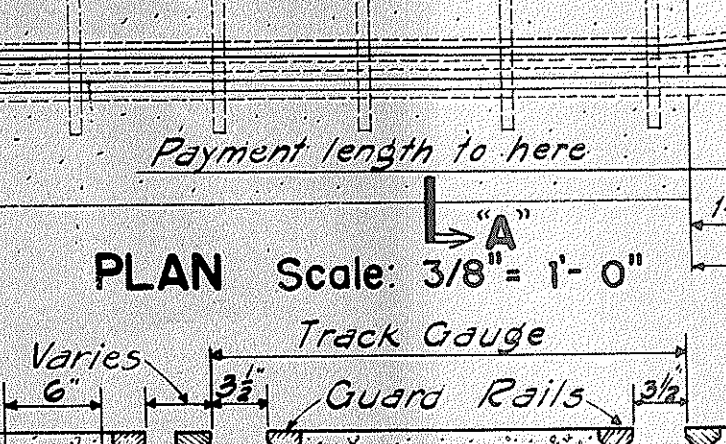
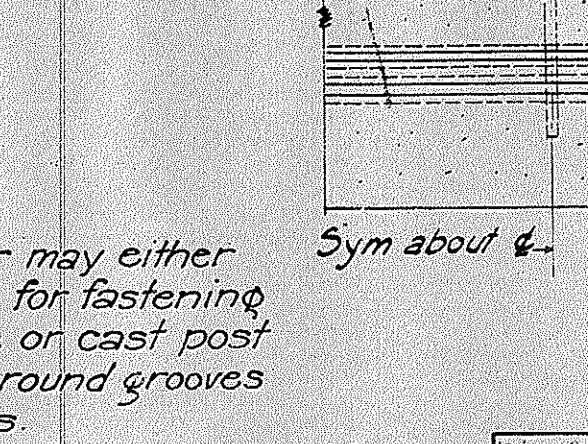
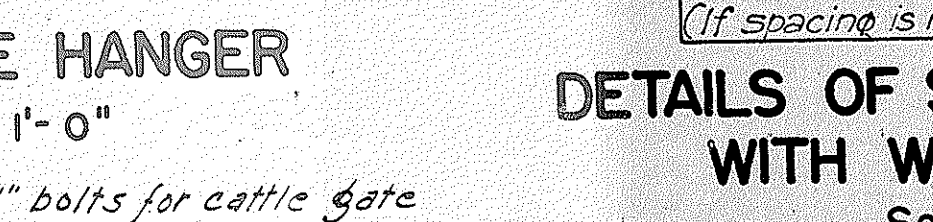
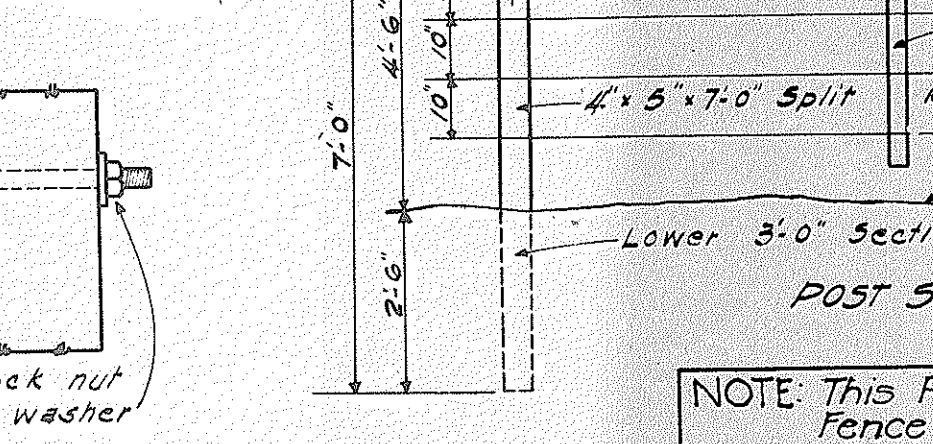
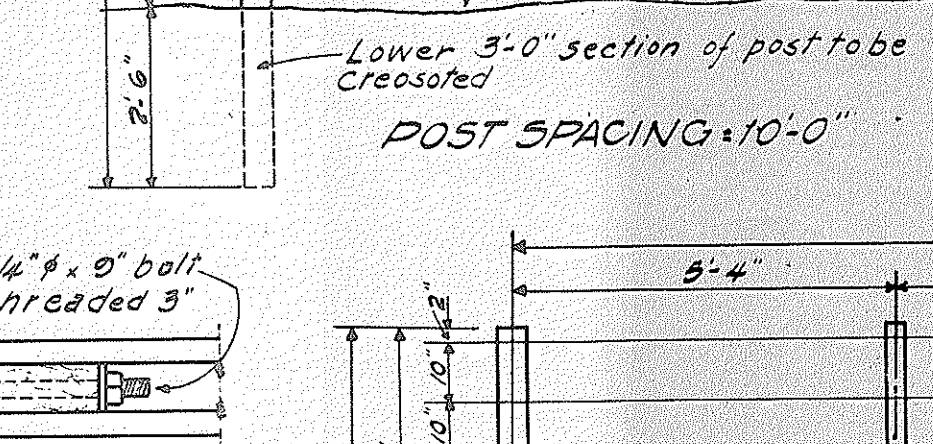
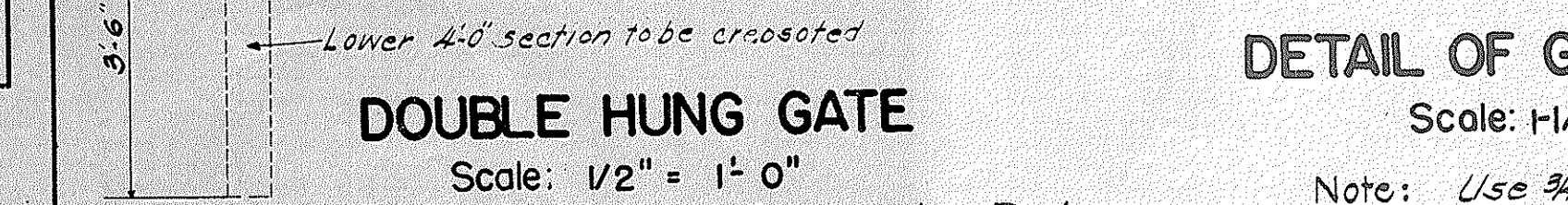
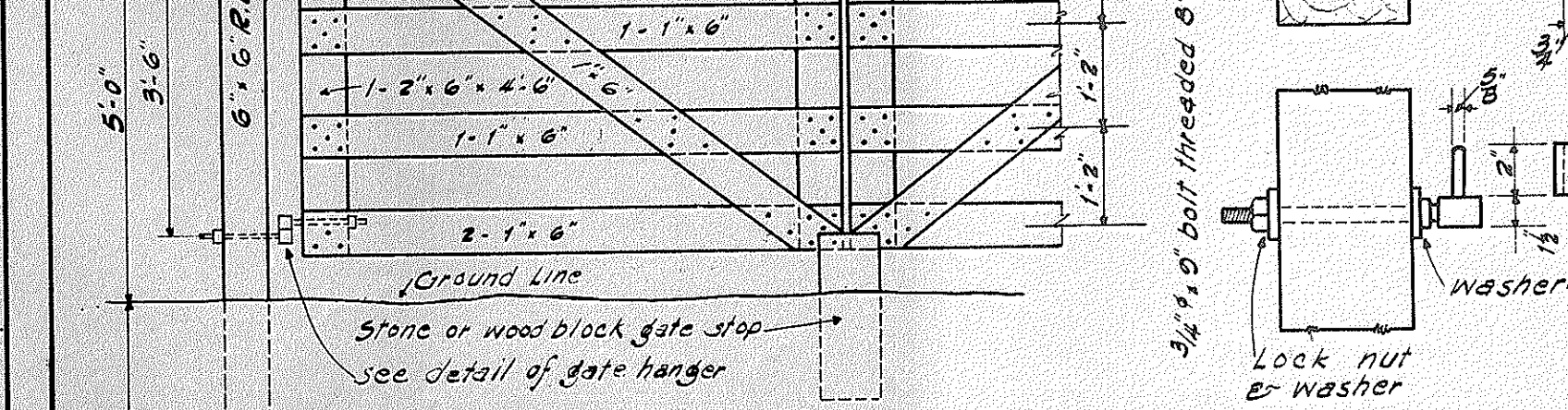
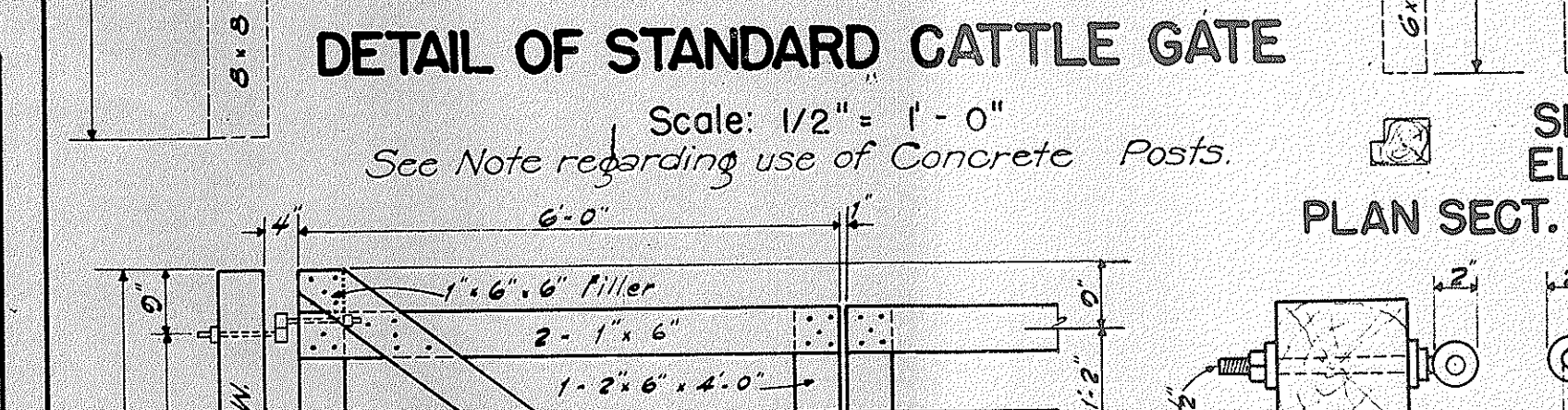
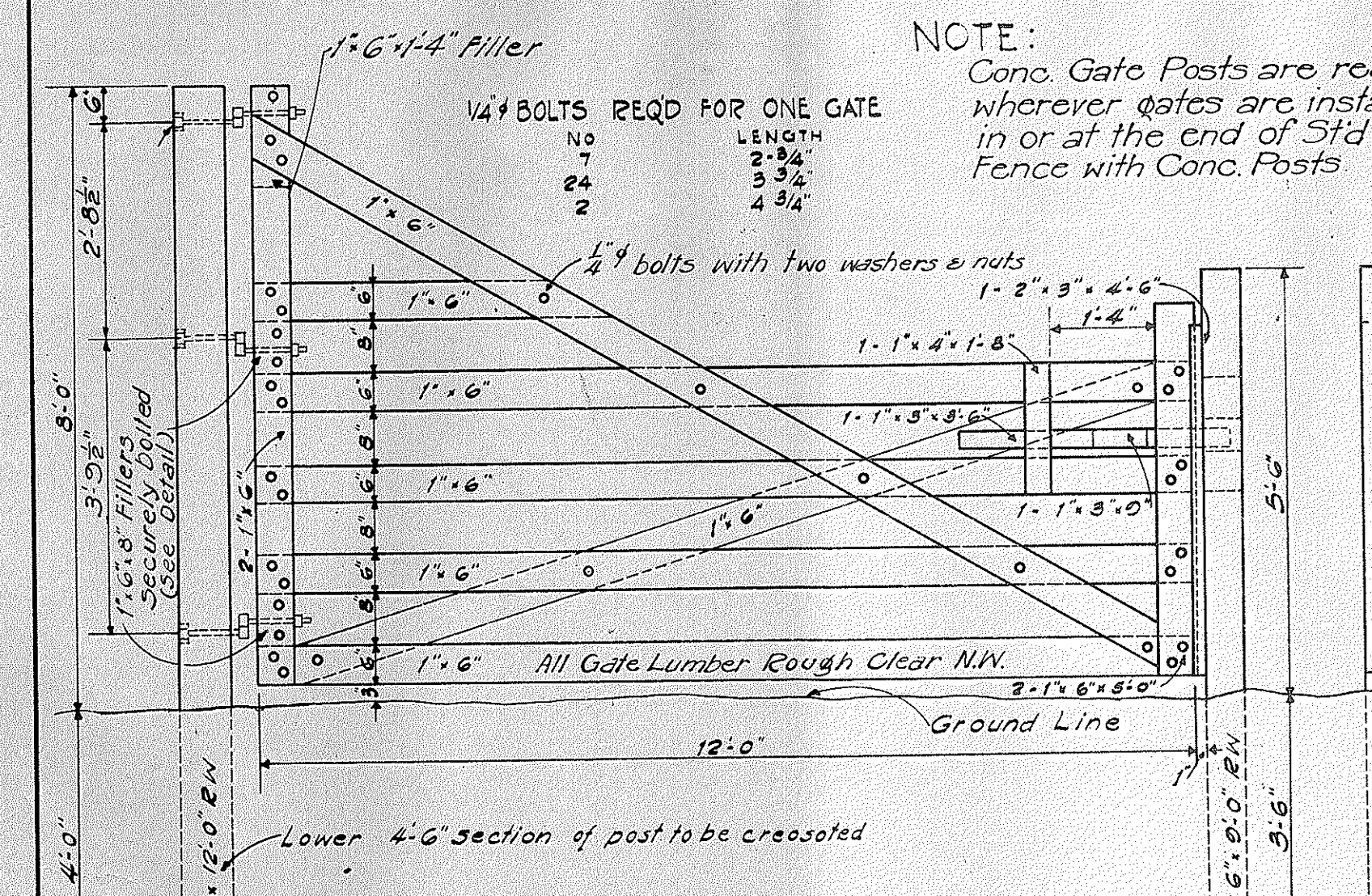
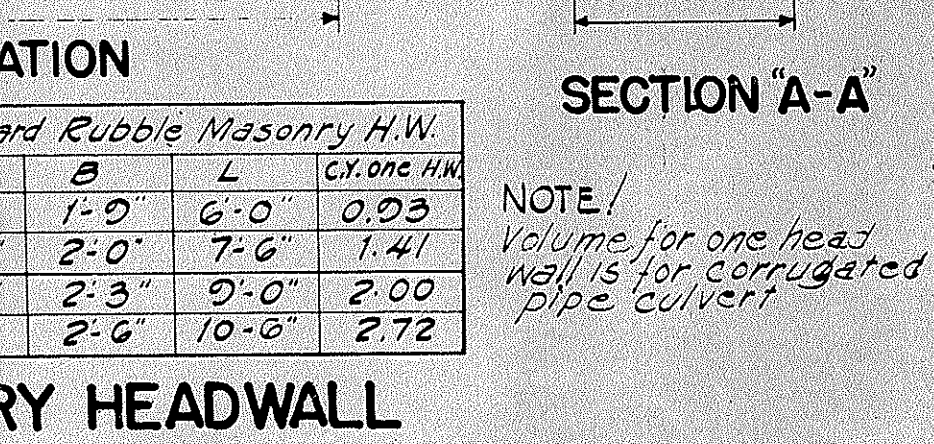
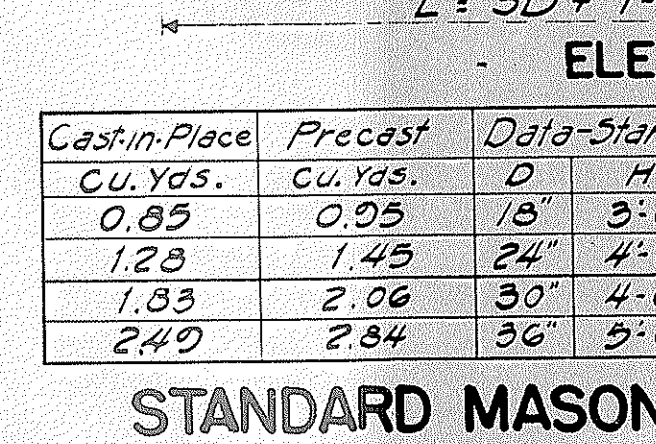
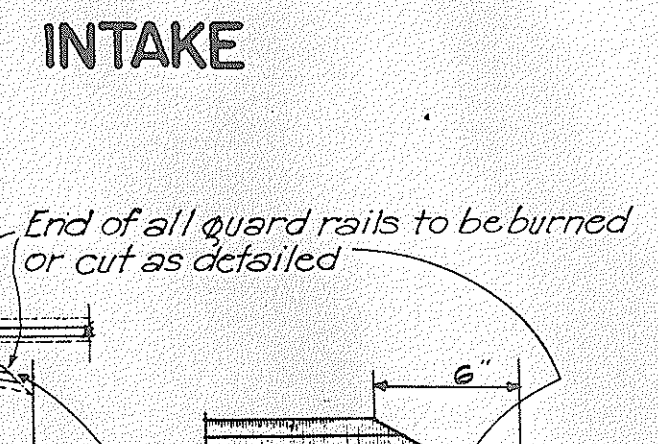
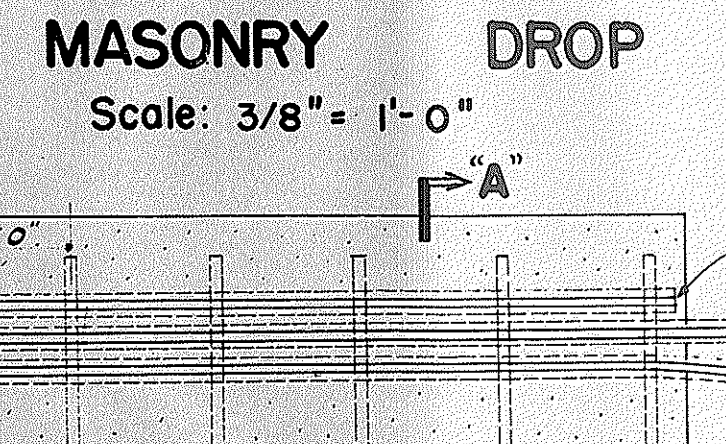
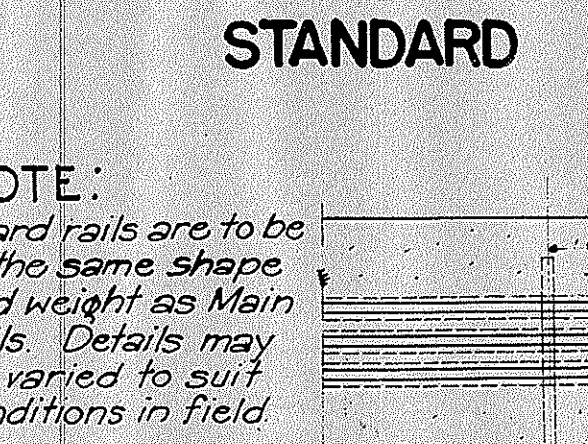
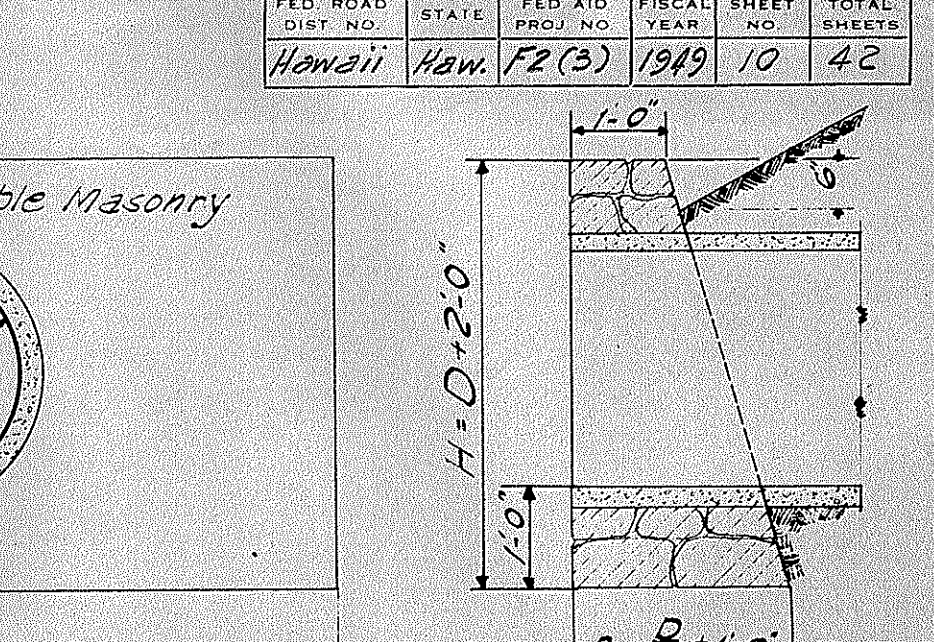
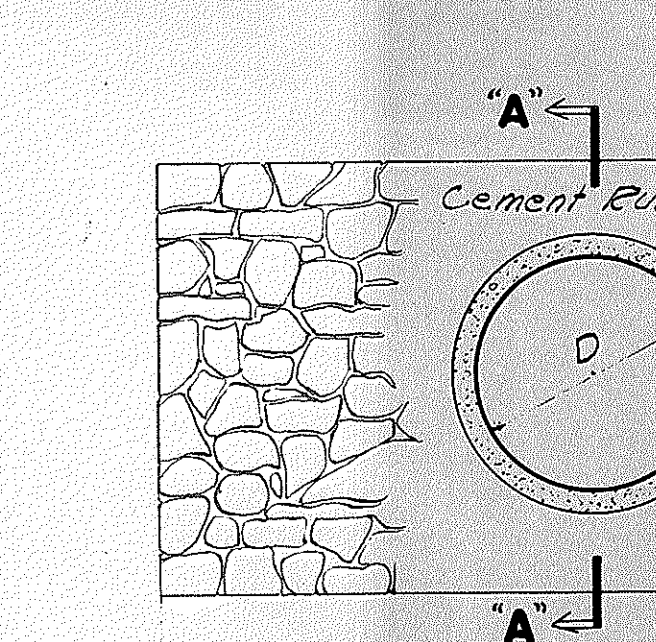
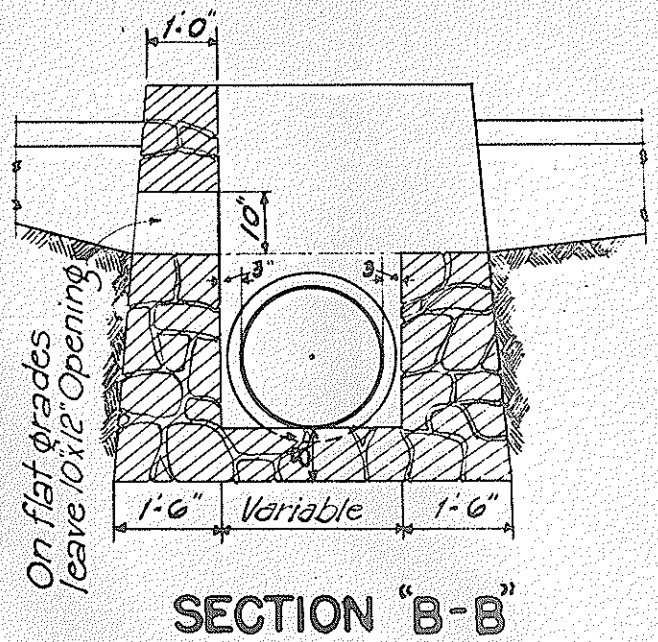
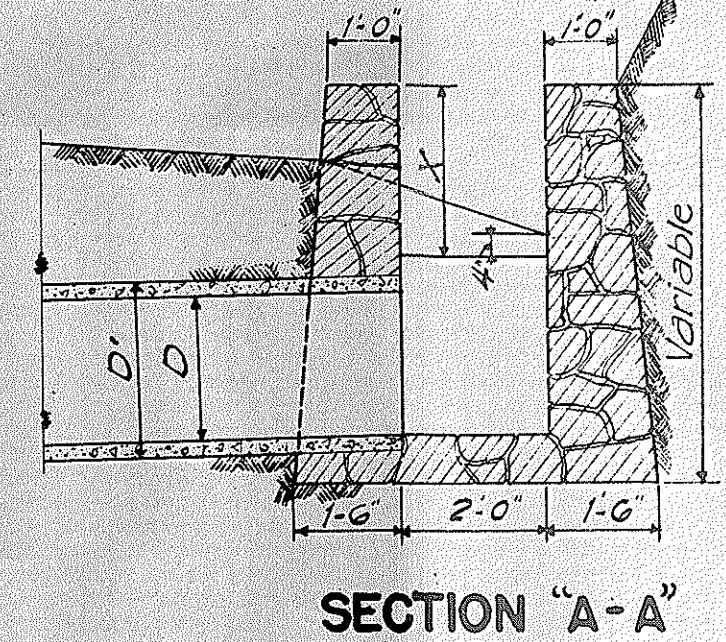
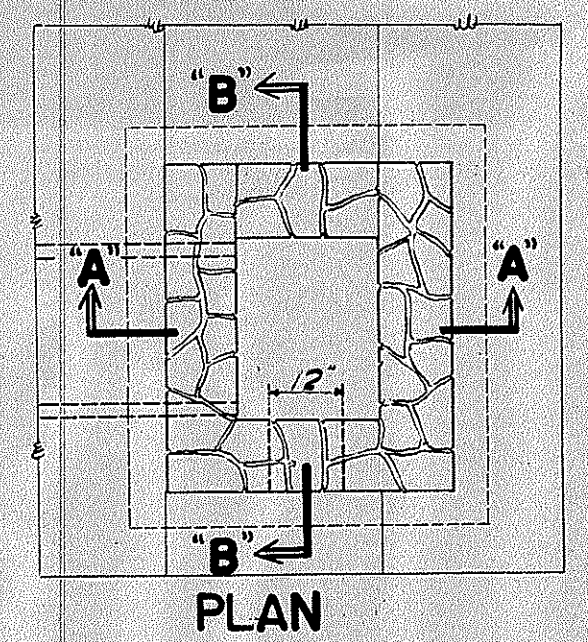
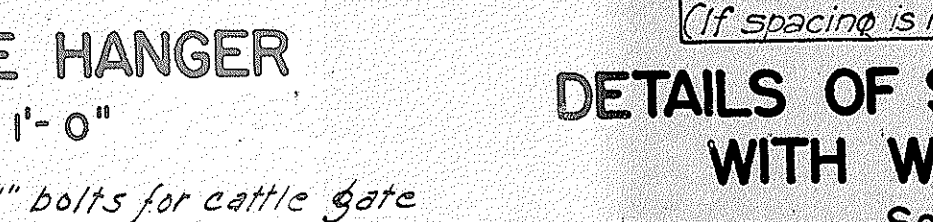
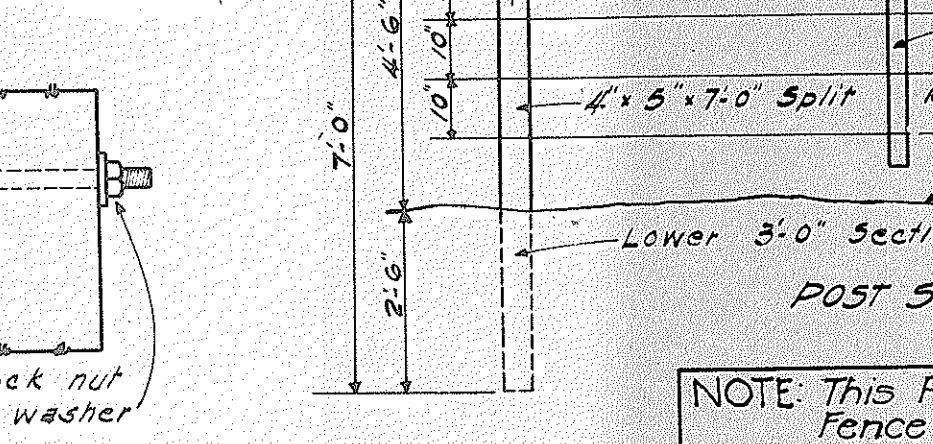
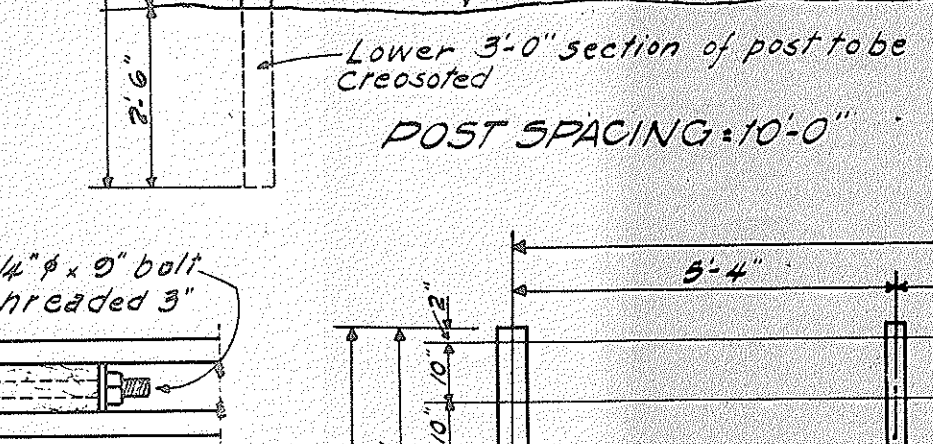
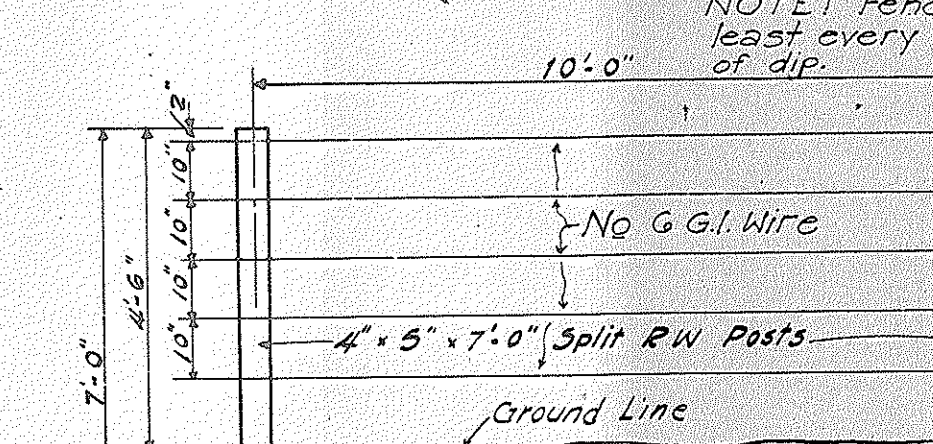
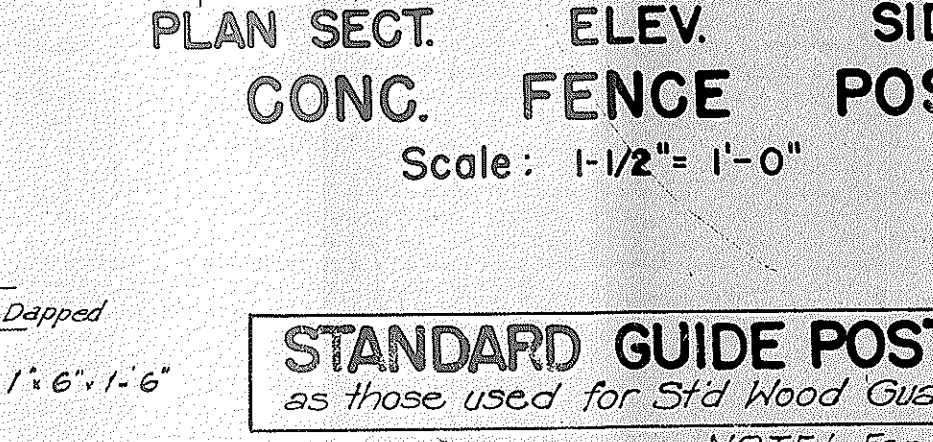
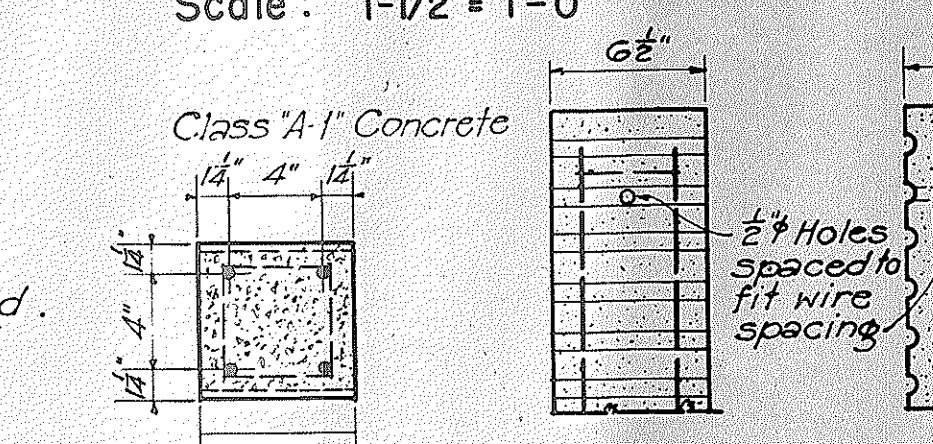
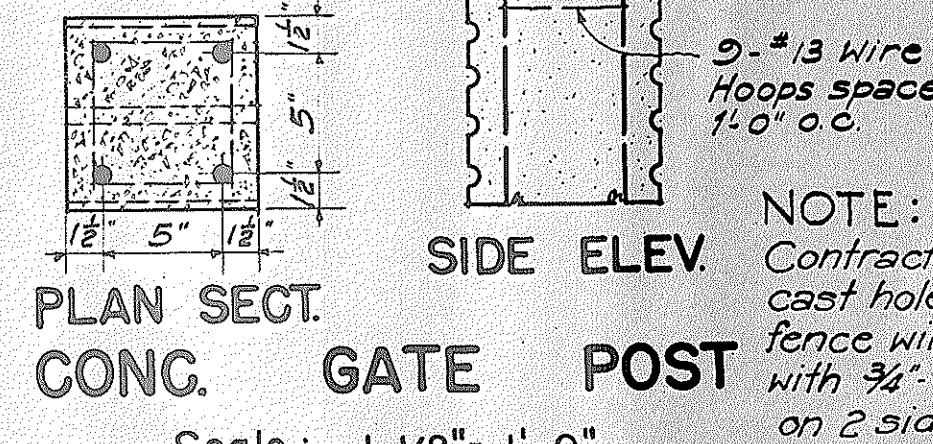
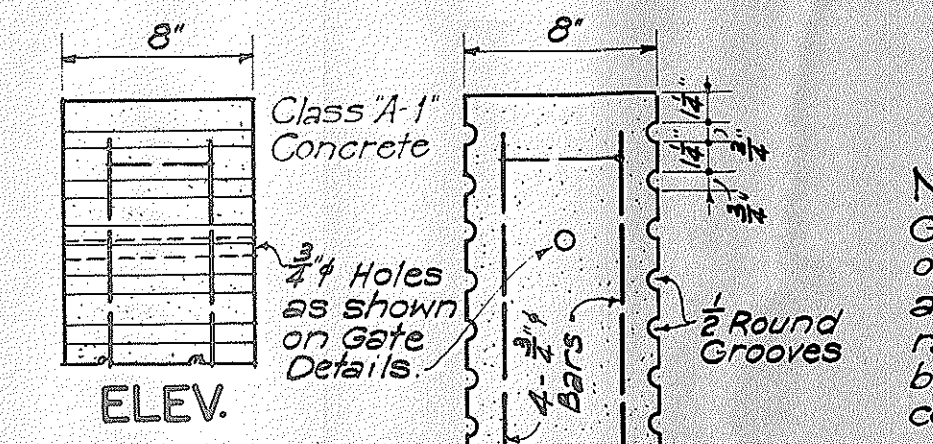


Data Standard Masonry Drop Intake

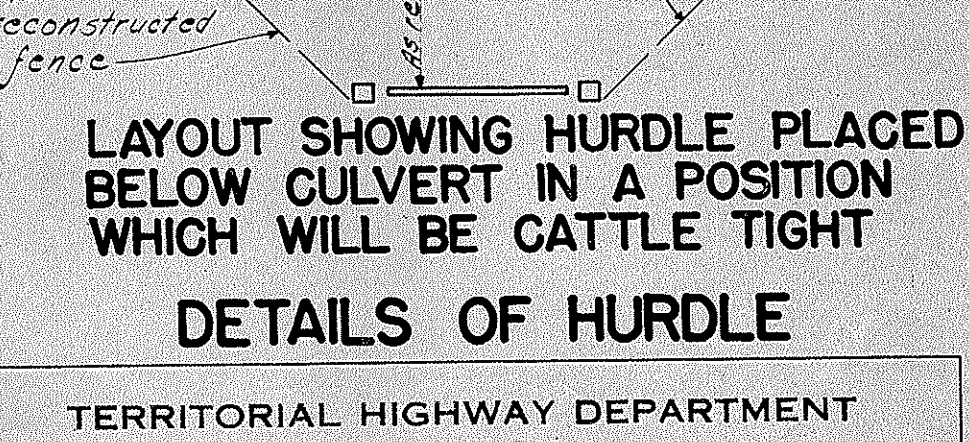
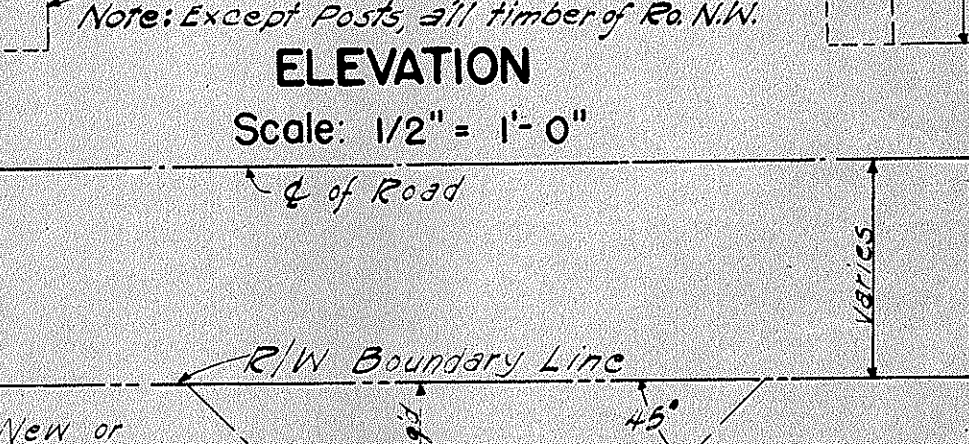
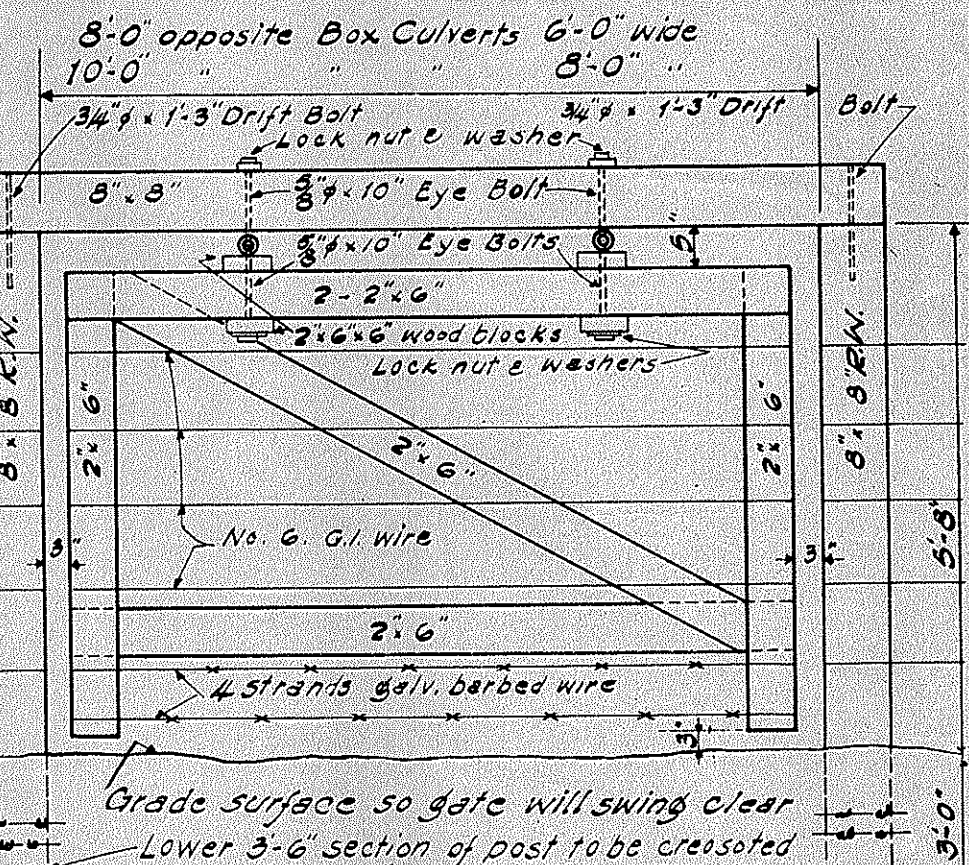
Drop	W	L	D+G	Cu. Yds	Where Variable
22 1/2"	18"	2'-0"	2'-4 1/2"	2.41	4'-6"
29"	24"	2'-6"	2'-8 1/2"	2.89	5'-0"
35 1/2"	30"	3'-0"	3'-3 1/2"	3.38	5'-6"
42"	36"	3'-6"	3'-9 1/2"	3.92	6'-0"

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



DATE: _____
 SURVEY PLOTTED BY: _____
 DRAWN BY: _____
 CHECKED BY: _____
 NOTE: _____

DETAIL OF STANDARD OUTLET DITCH



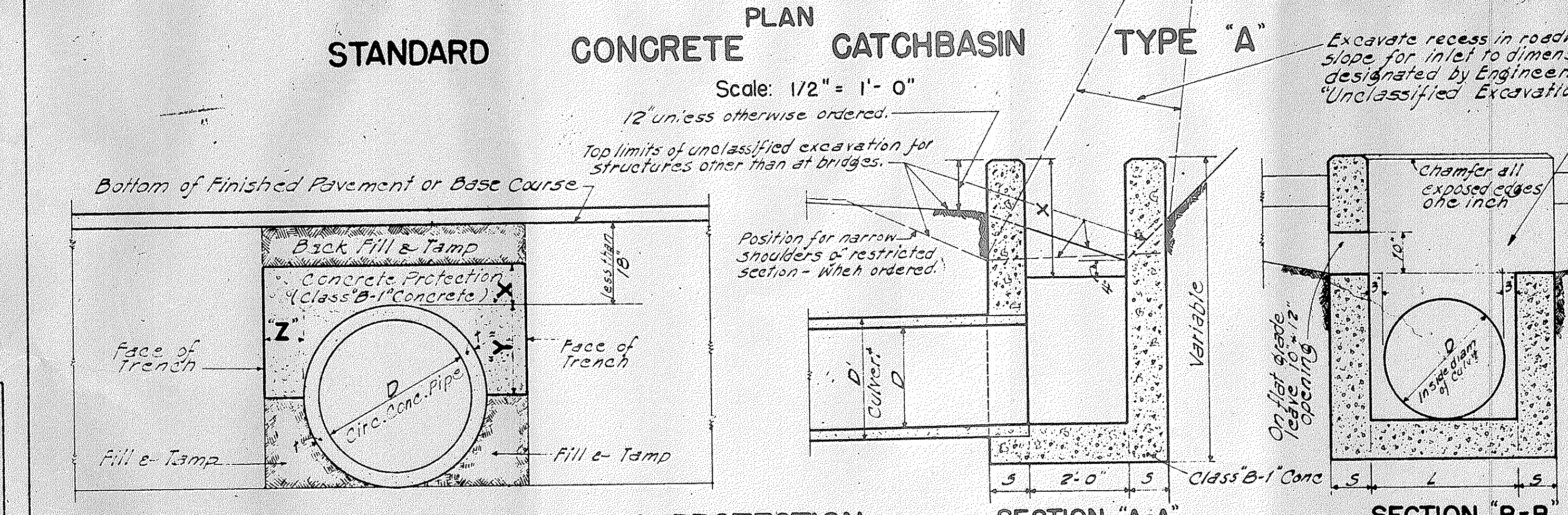
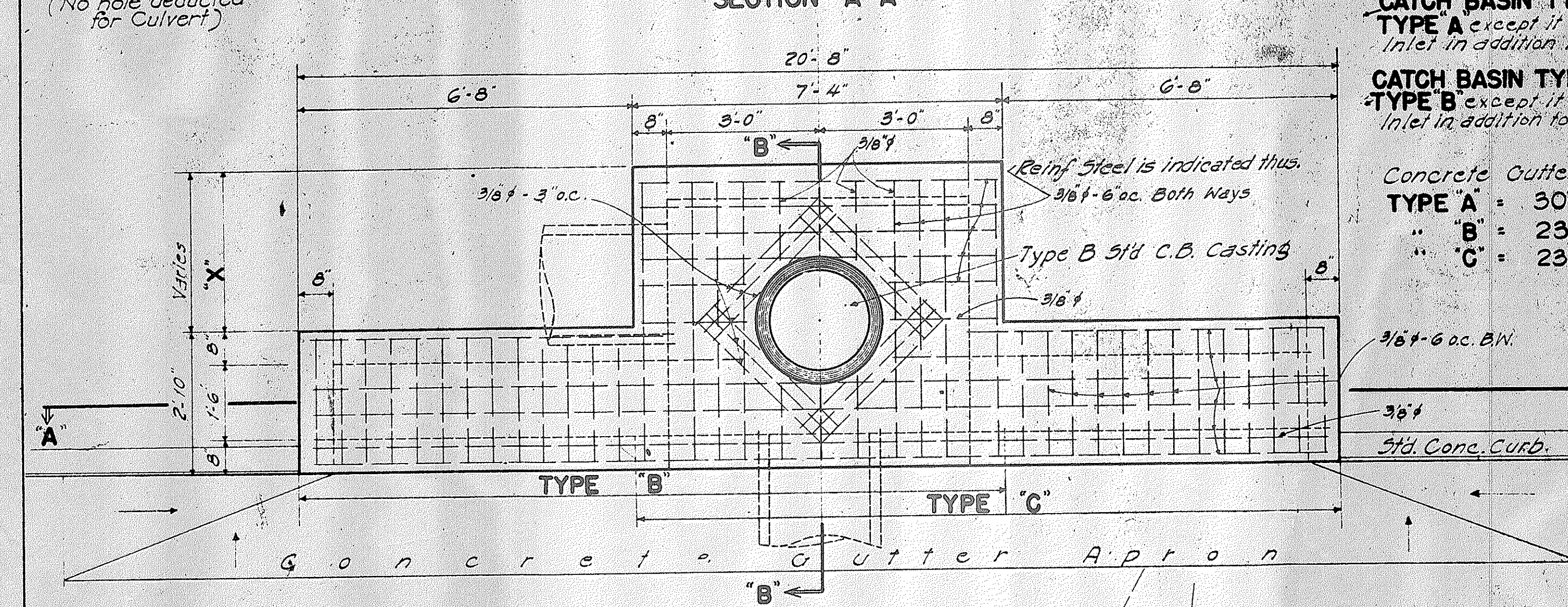
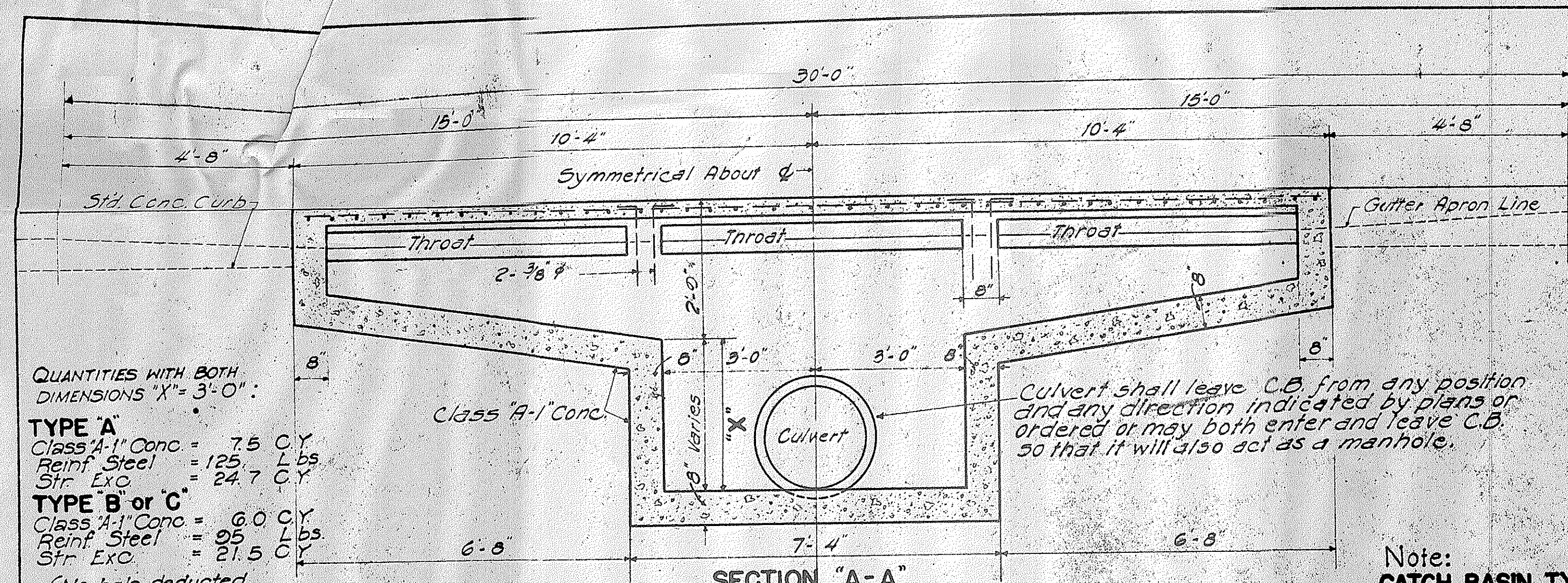
DETAILS OF HURDLE

TERRITORIAL HIGHWAY DEPARTMENT
 TERRITORY OF HAWAII

STANDARD DETAILS

APPROVED: _____
 Territorial Highway Engineer

SHEET NO. 1 OF 4 SHEETS



ST'D. CONC. DROP INTAKE
Scale: 1/2" = 1'-0"

DATA: CONCRETE PROTECTION OVER CULVERTS

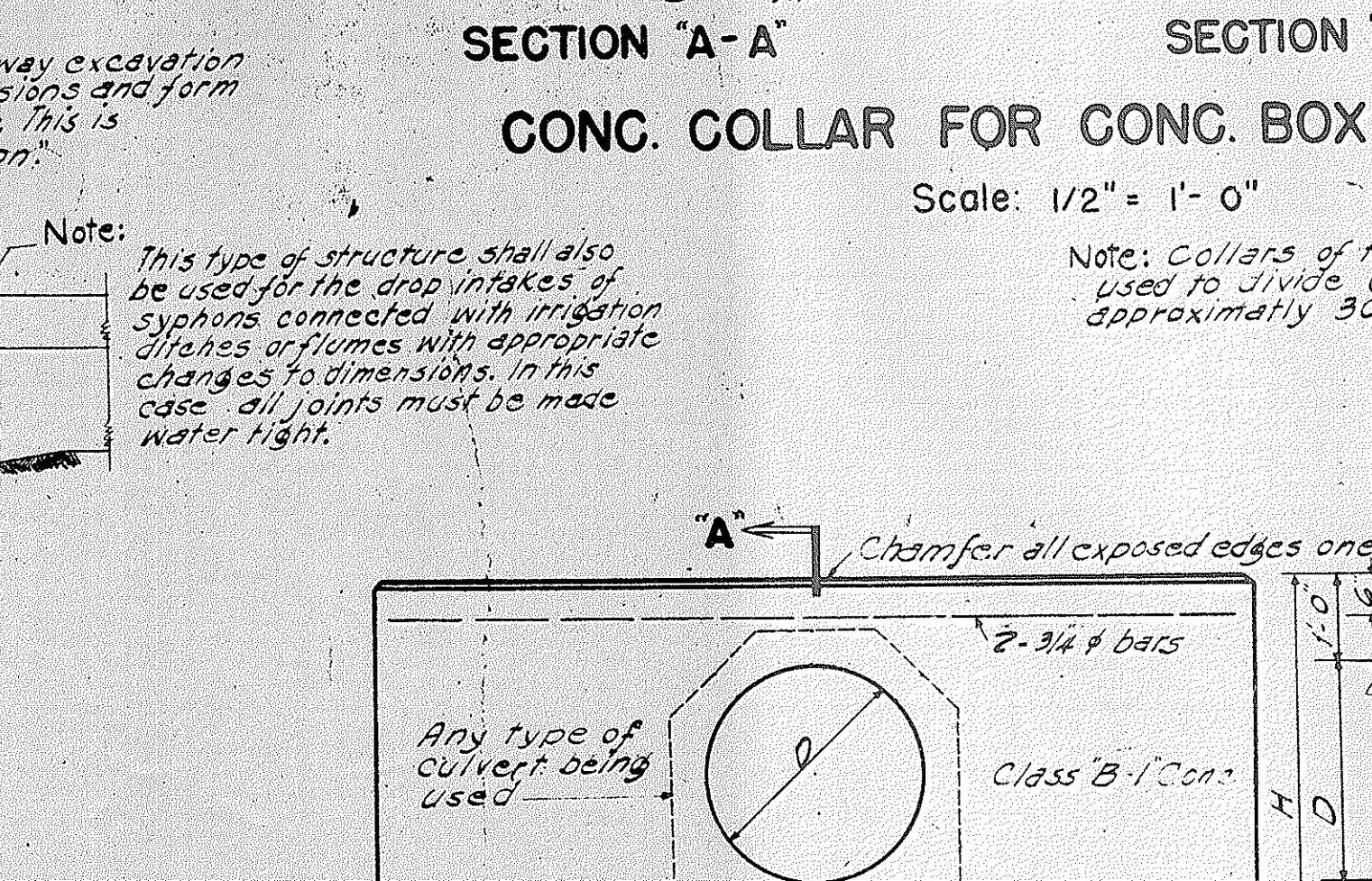
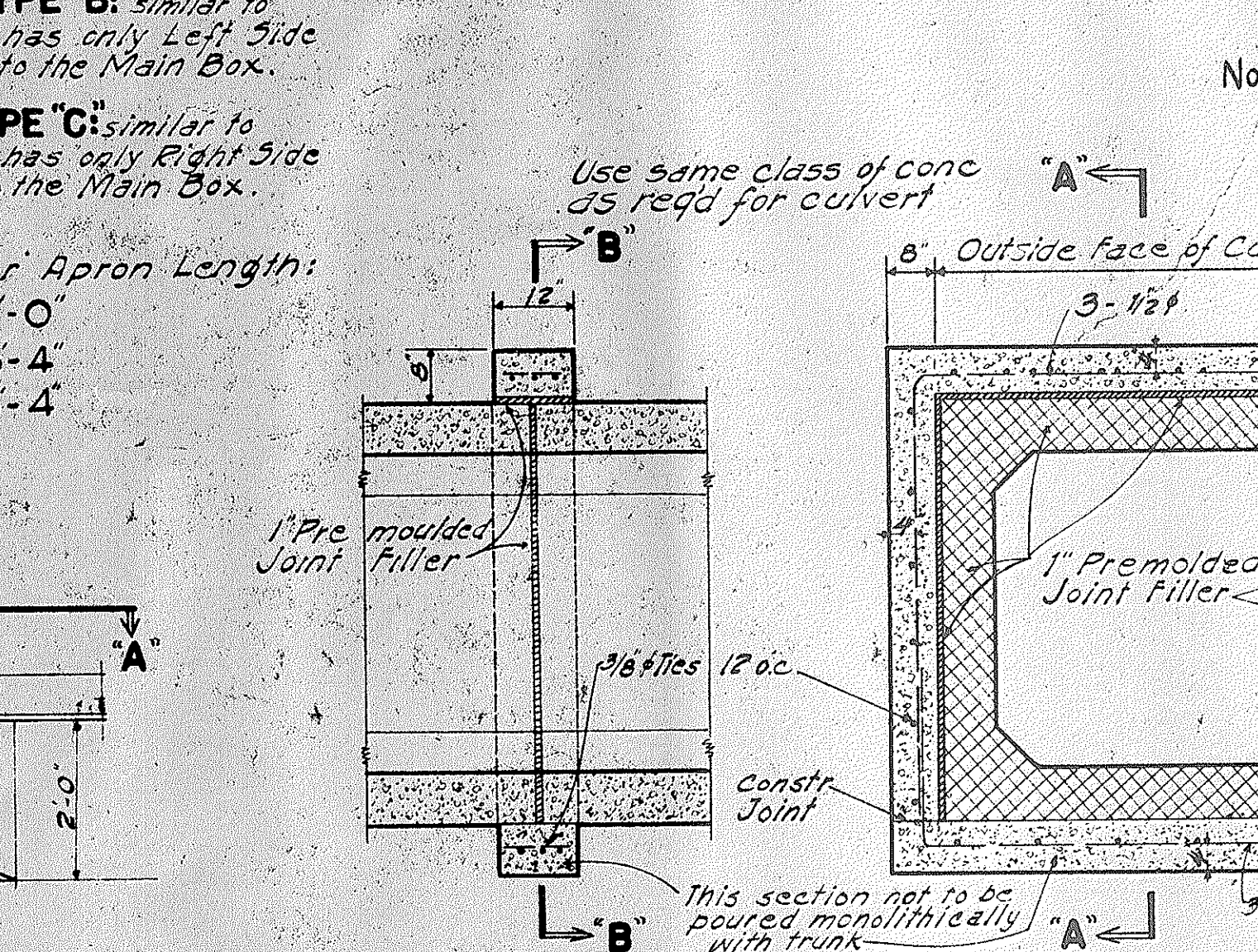
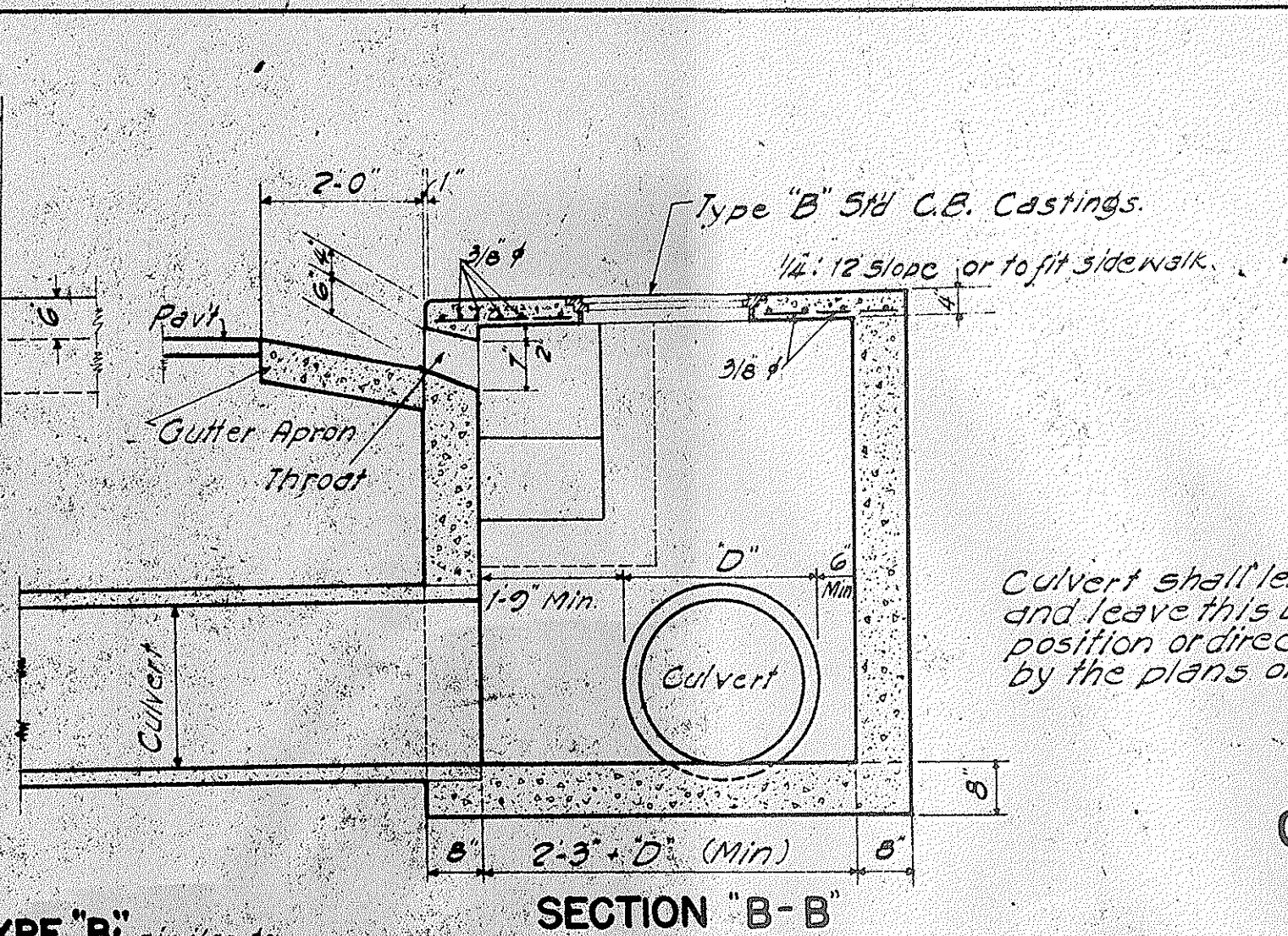
X	Y	Z
6" For 18" D		Z must be from pipe to face of trench
7" 24" D		
8" 30" D		
9" 36" D		
10" 42" D		
11" 48" D		
12" 54" D		

DATA: Standard Drop Intake

D	L	W	Area	Volume
18"	2'-0"	8"	1.10	4'-6"
24"	2'-6"	8"	1.33	5'-0"
30"	3'-0"	8"	1.70	5'-6"
36"	3'-6"	8"	2.07	6'-0"
42"	4'-0"	10"	2.90	6'-6"
48"	4'-6"	10"	3.27	7'-0"

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

Where drainage comes from both sides lower this wall to same elevation as shown for opposite wall.



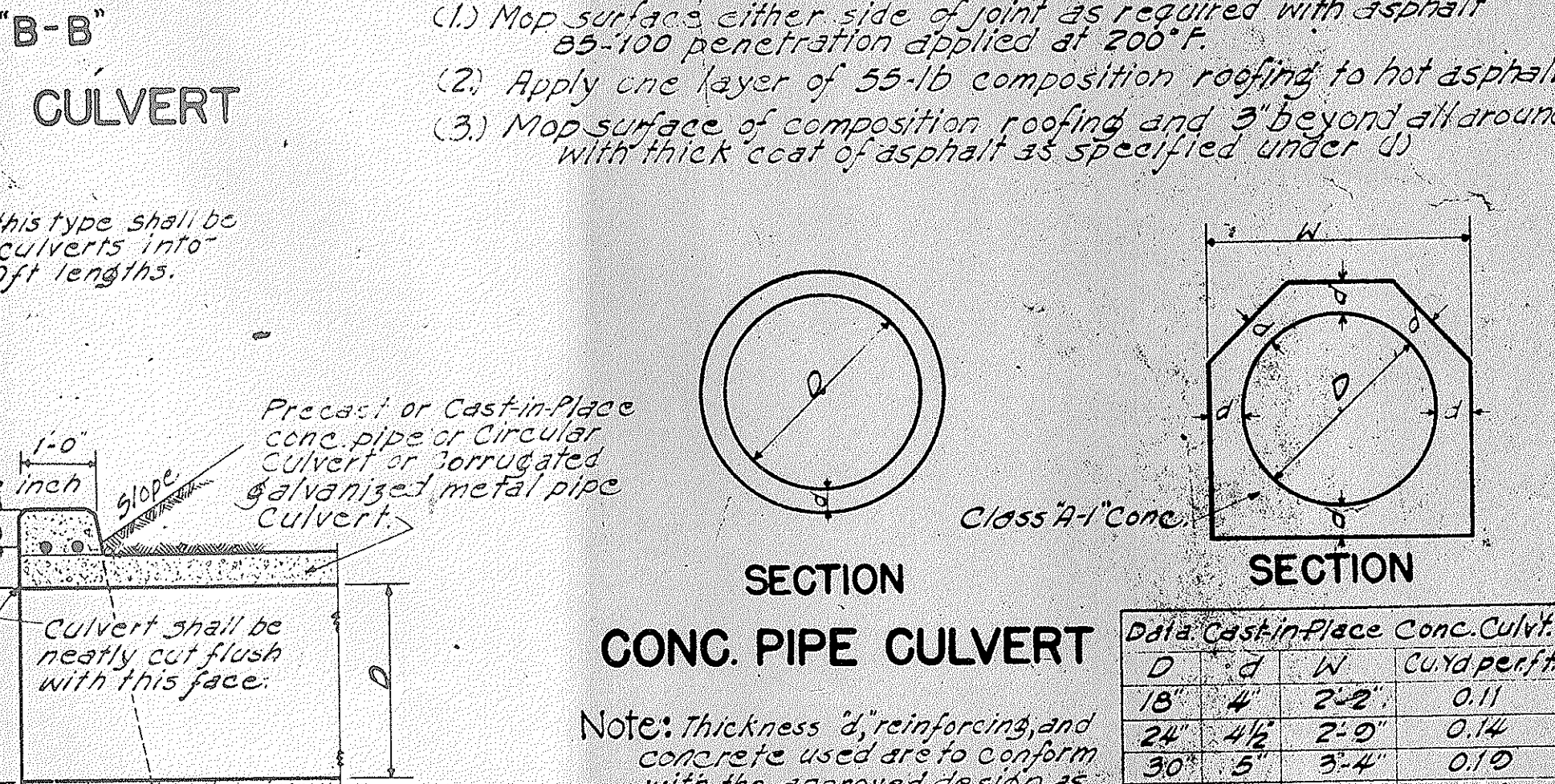
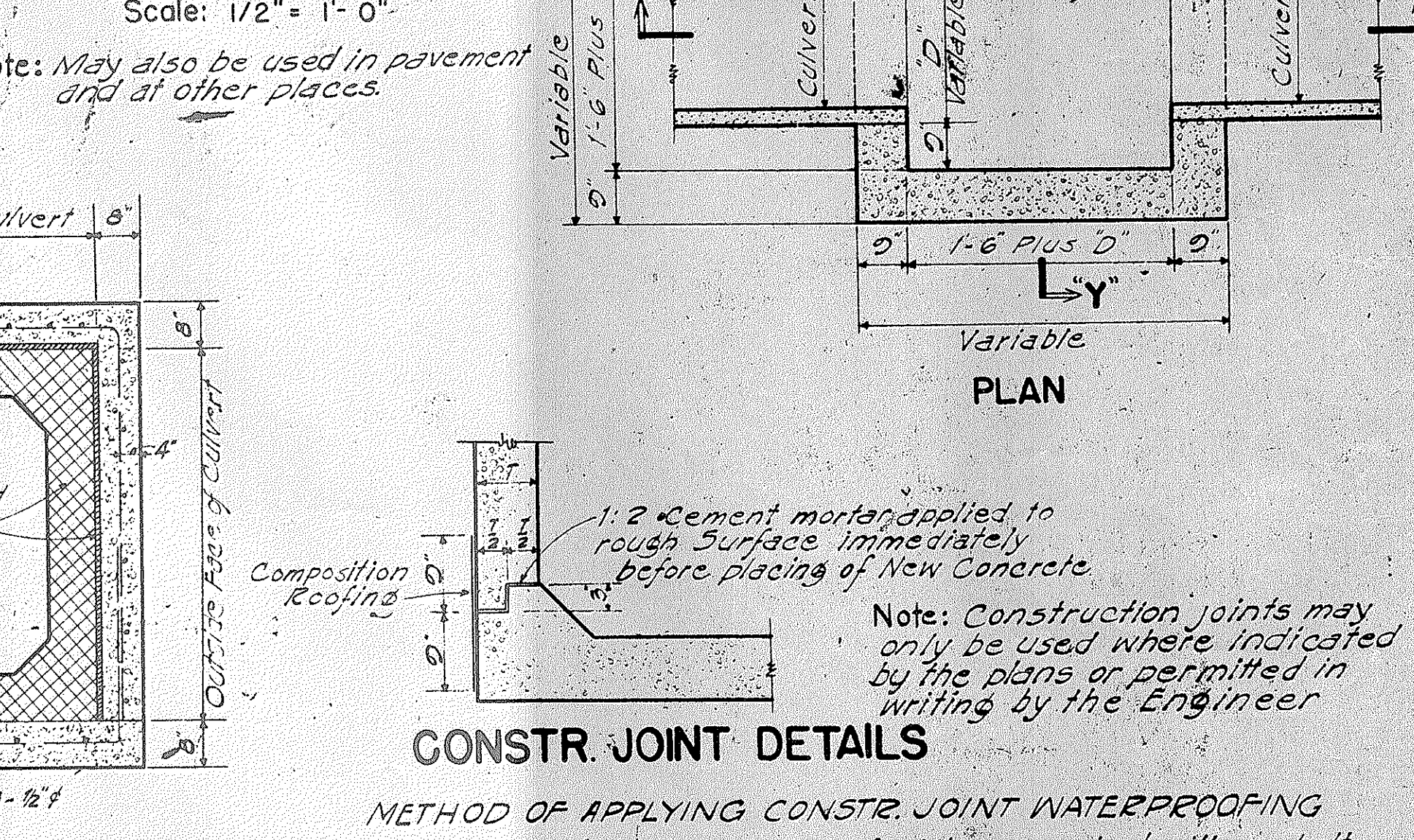
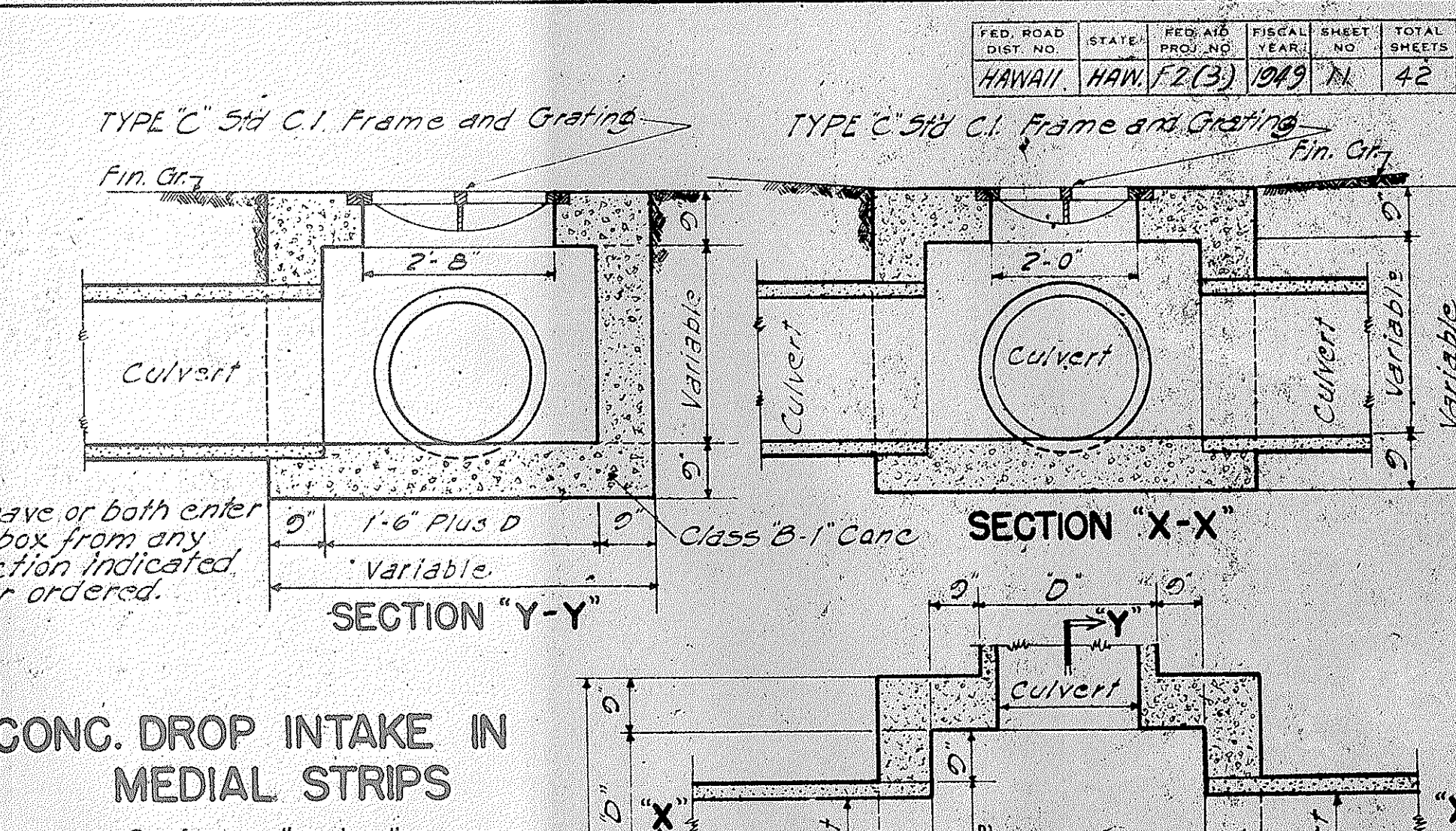
ST'D. CONC. DROP INTAKE
Scale: 1/2" = 1'-0"

DATA: Standard Drop Intake

D	L	W	Area	Volume
18"	2'-0"	8"	1.10	4'-6"
24"	2'-6"	8"	1.33	5'-0"
30"	3'-0"	8"	1.70	5'-6"
36"	3'-6"	8"	2.07	6'-0"
42"	4'-0"	10"	2.90	6'-6"
48"	4'-6"	10"	3.27	7'-0"

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

Where drainage comes from both sides lower this wall to same elevation as shown for opposite wall.



ST'D. CONC. DROP INTAKE
Scale: 1/2" = 1'-0"

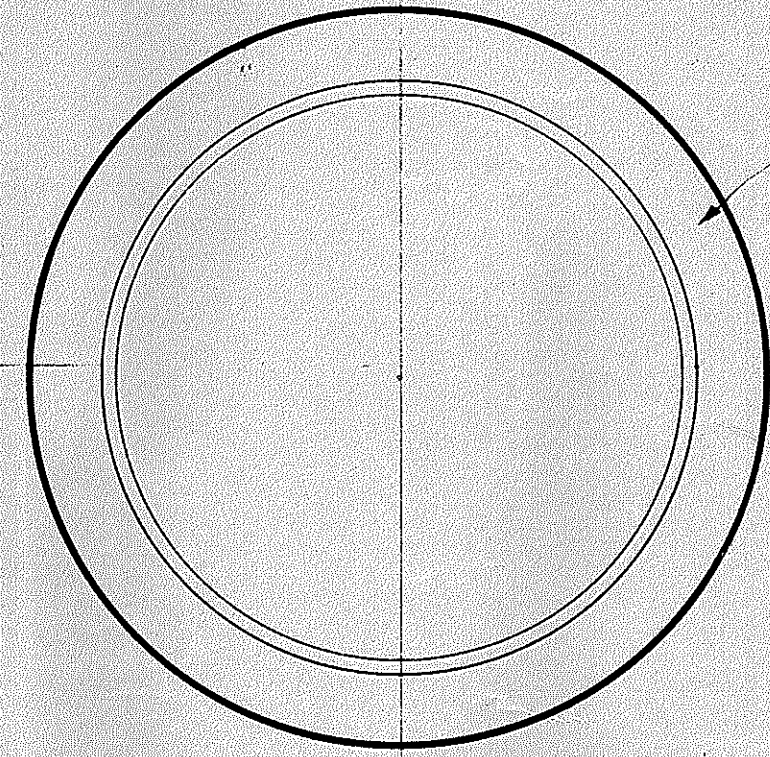
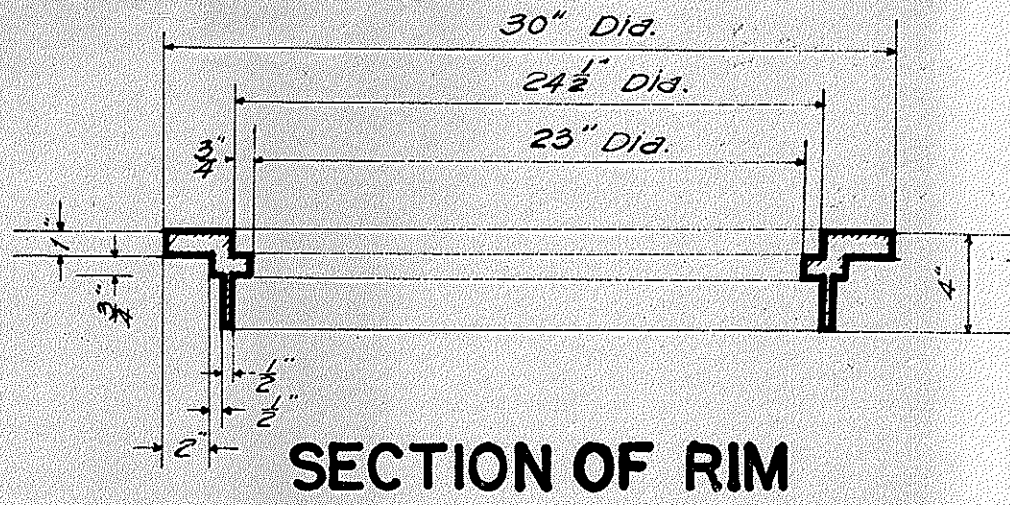
DATA: Standard Drop Intake

D	L	W	Area	Volume
18"	2'-0"	8"	1.10	4'-6"
24"	2'-6"	8"	1.33	5'-0"
30"	3'-0"	8"	1.70	5'-6"
36"	3'-6"	8"	2.07	6'-0"
42"	4'-0"	10"	2.90	6'-6"
48"	4'-6"	10"	3.27	7'-0"

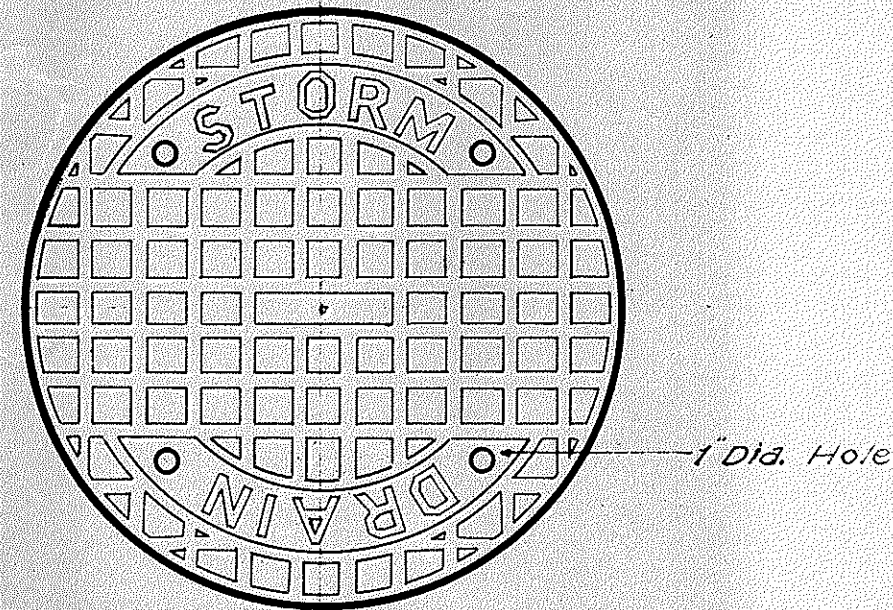
Note: Dimensions "X" is assumed as 2'-4" in figuring the above quantities.

Where drainage comes from both sides lower this wall to same elevation as shown for opposite wall.

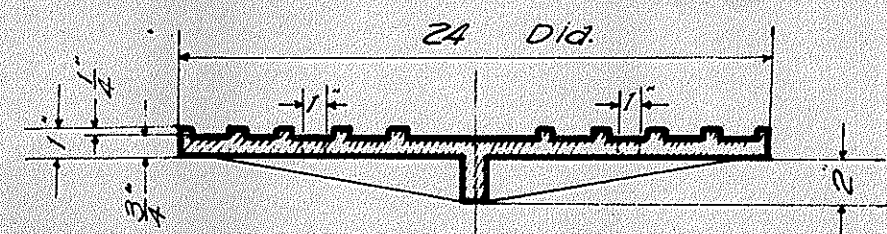
NOTE: The pattern for water manhole covers shall be the same as for sanitary sewer except that the word "water" shall be substituted for "sanitary sewer".



PLAN OF RIM

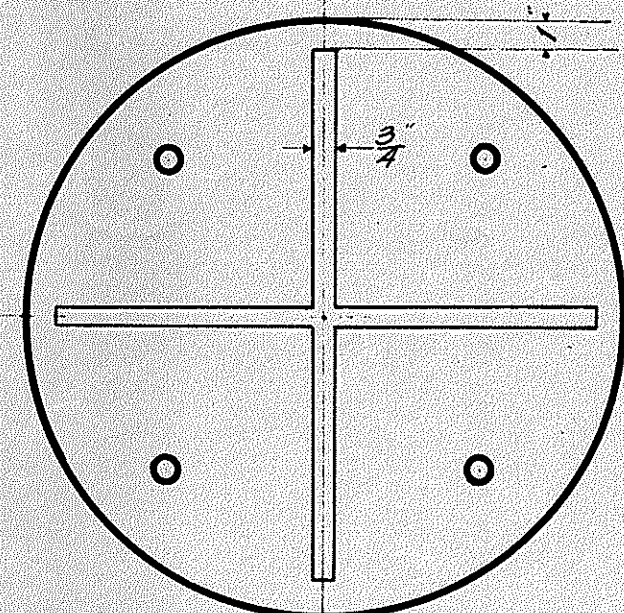


PLAN OF COVER TOP



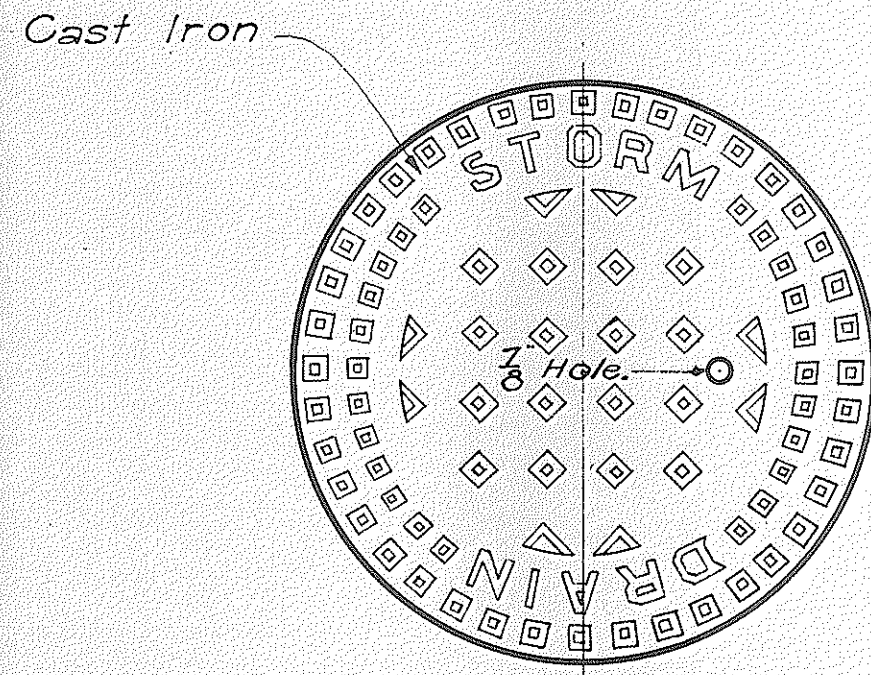
SECTION OF COVER

NOTE: A unit includes both Rim and Cover

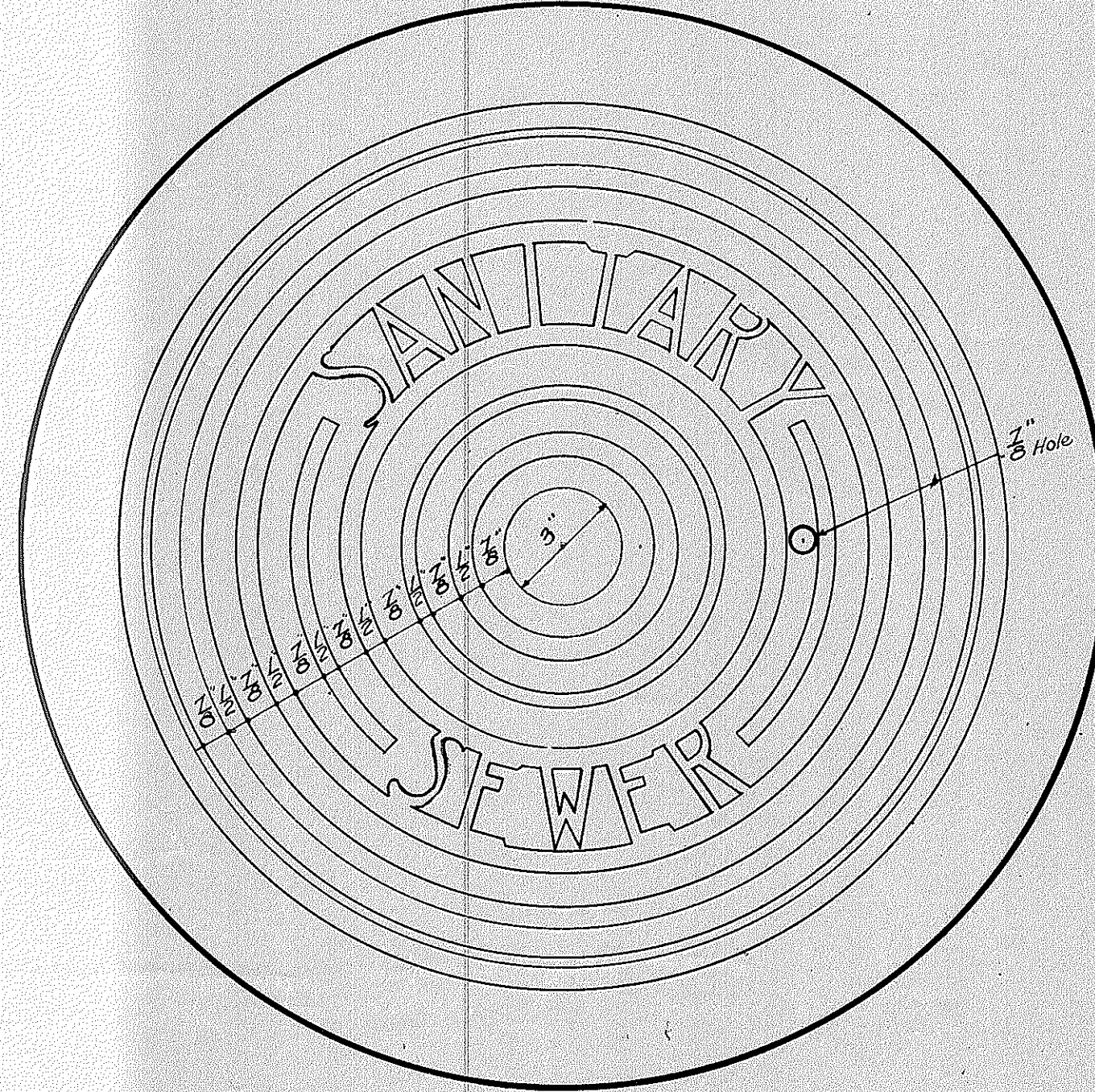


STANDARD CATCH BASIN CASTINGS

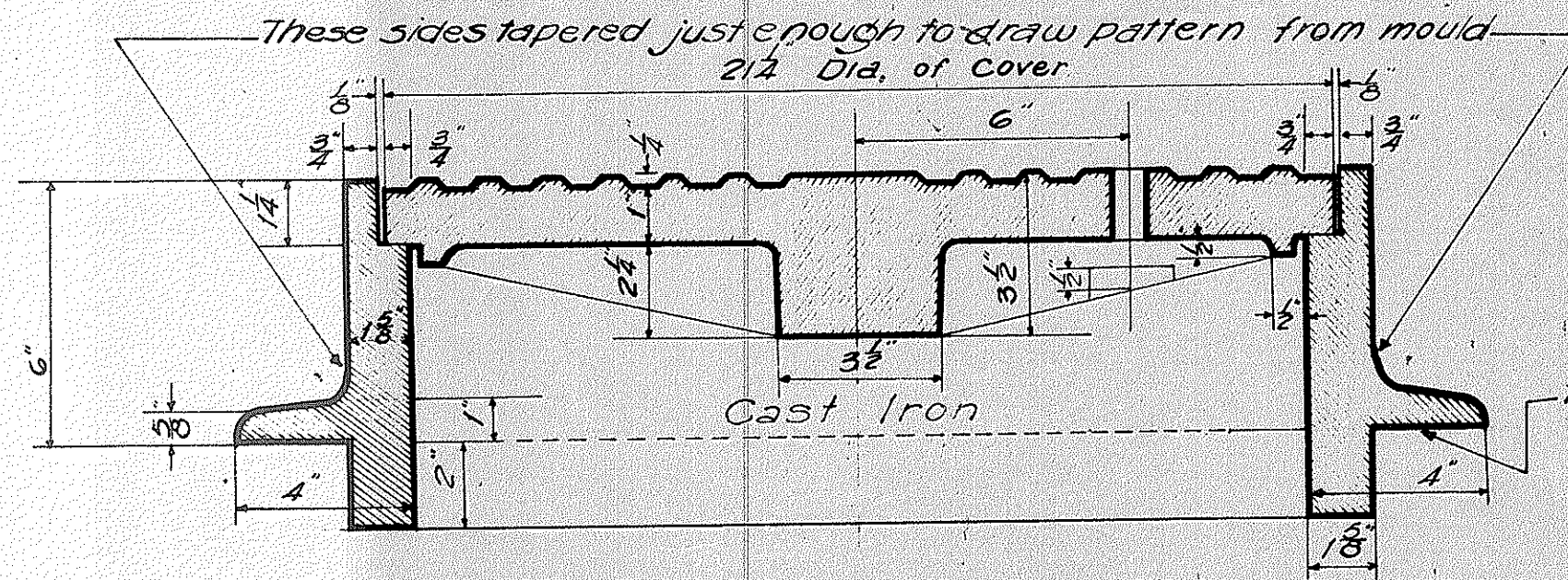
Scale: 1-1/2" = 1'-0"



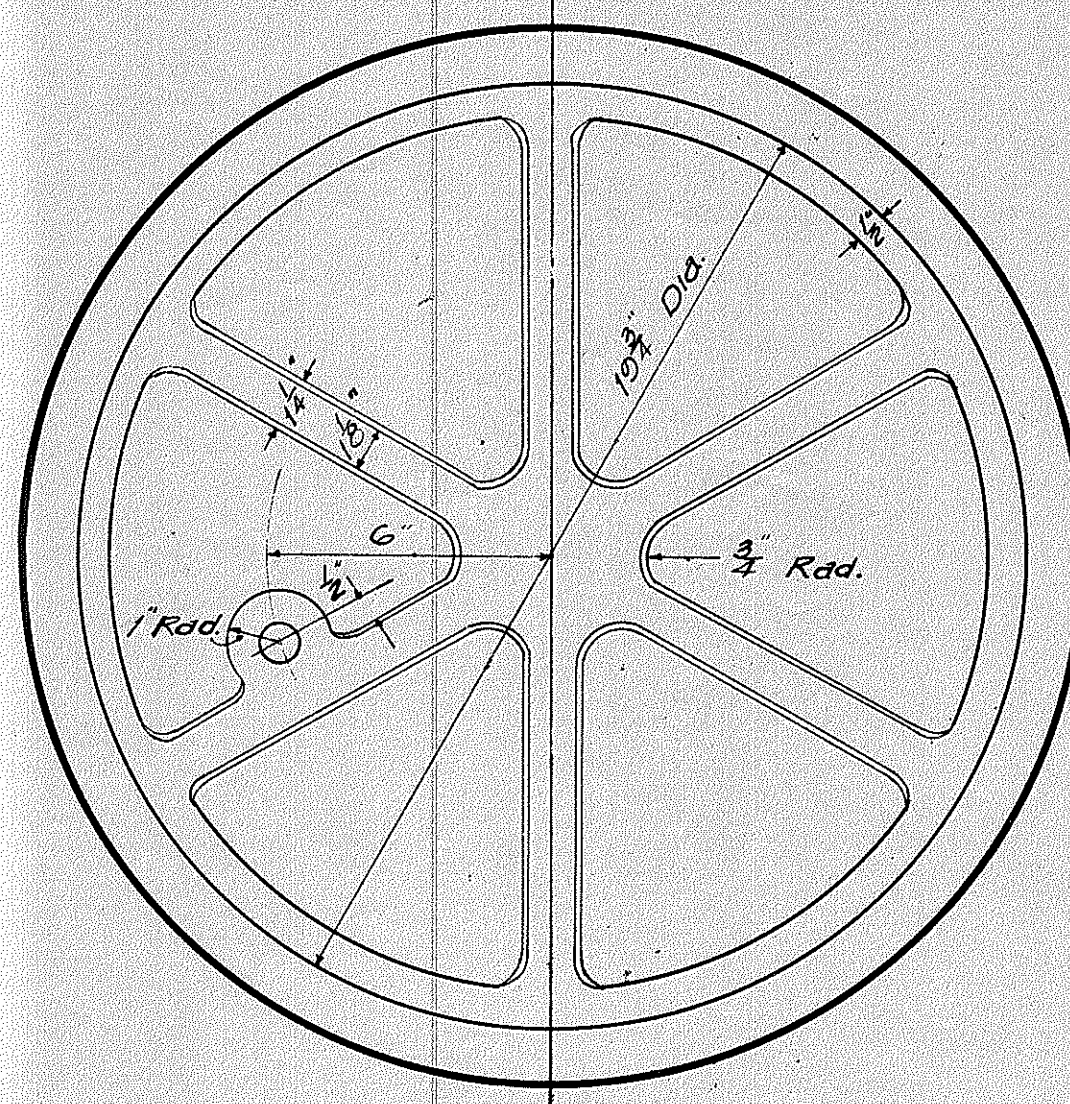
PATTERN FOR STORM DRAIN MANHOLE COVER



PATTERN FOR SEWER MANHOLE COVER

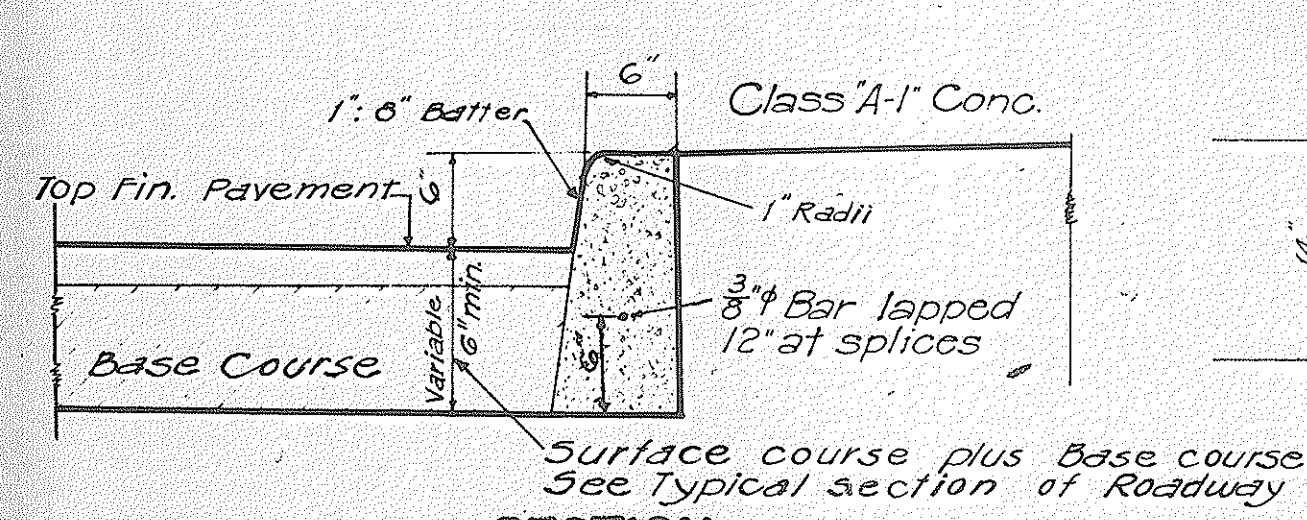


NOTE: A unit includes both Frame and Cover



STANDARD MANHOLE CASTINGS

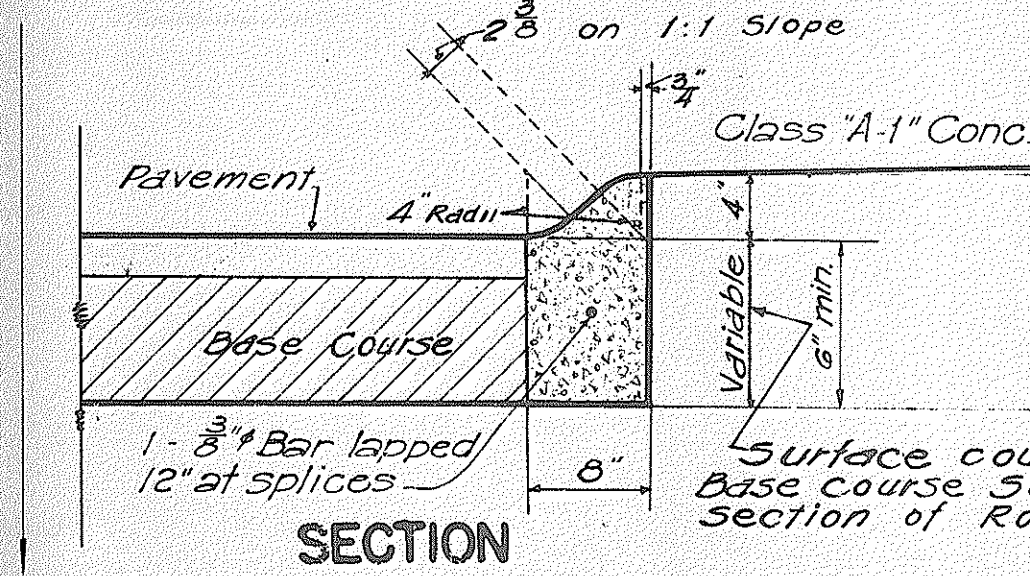
Scale: 3" = 1'-0"



ST'D. CAST IN PLACE CONC. CURB

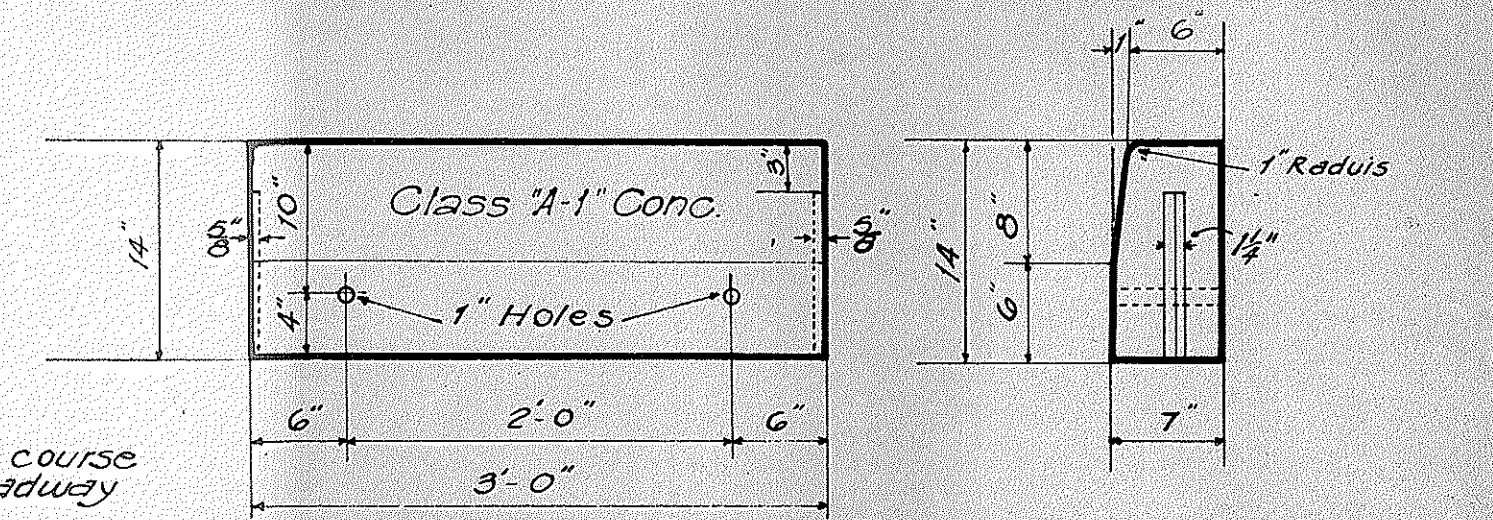
Scale: 1" = 1'-0"

NOTE: There may be more than one over-all curb height used on an individual project depending upon Base Courses used, but this shall make no difference in items under which payment is made.



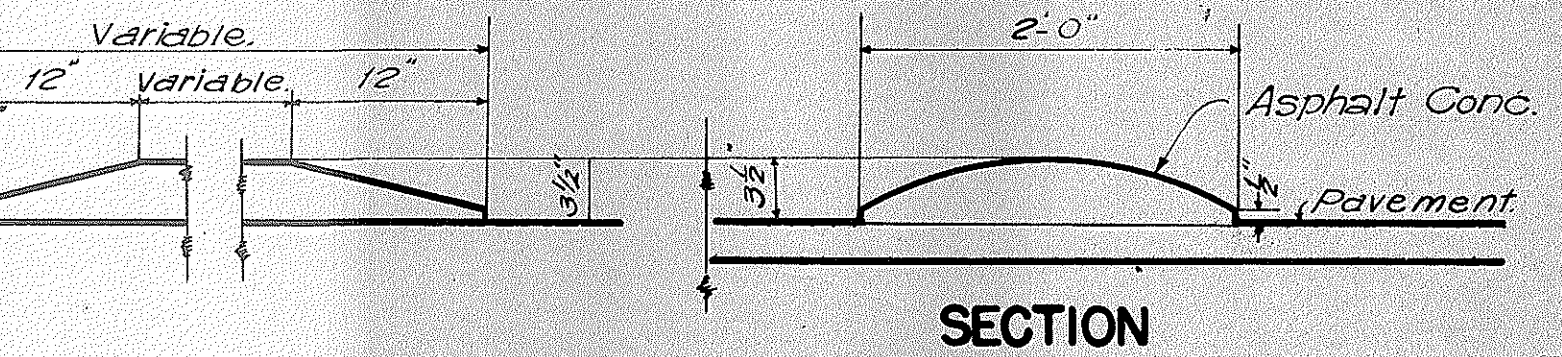
ST'D. CAST IN PLACE CONC. ROLL CURB

Scale: 1" = 1'-0"



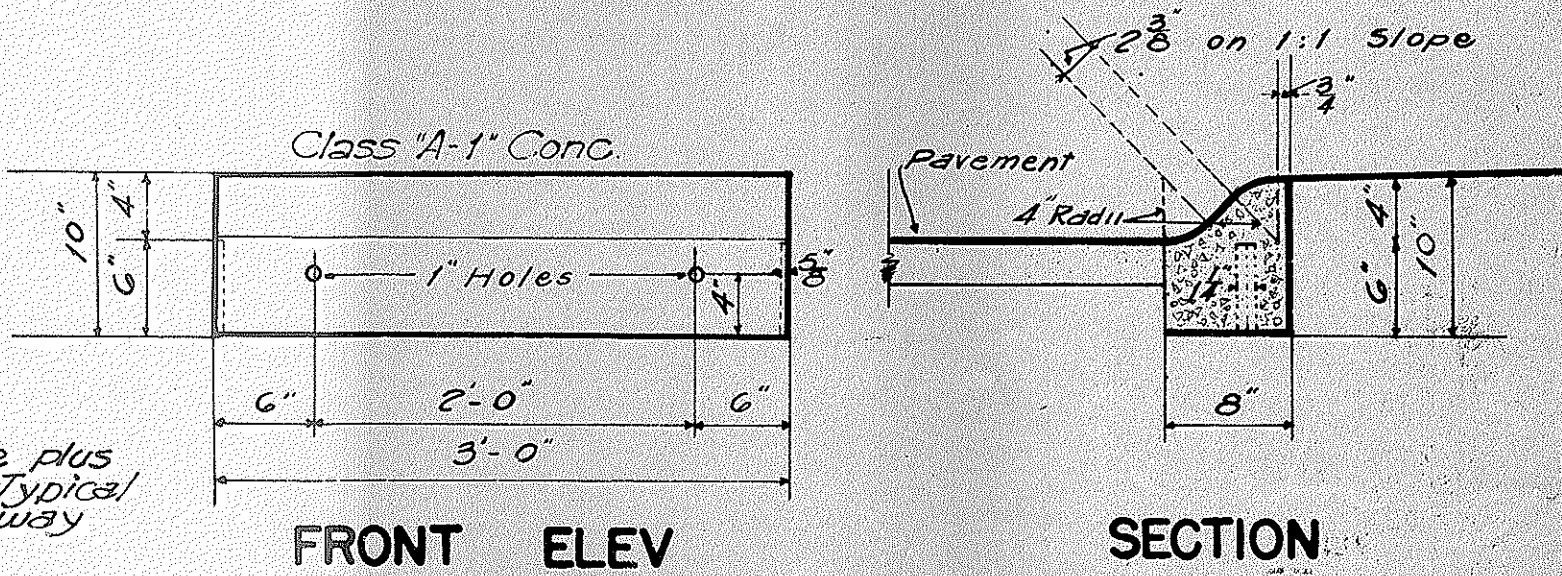
ST'D. PRECAST CONC. CURB

Scale: 1" = 1'-0"



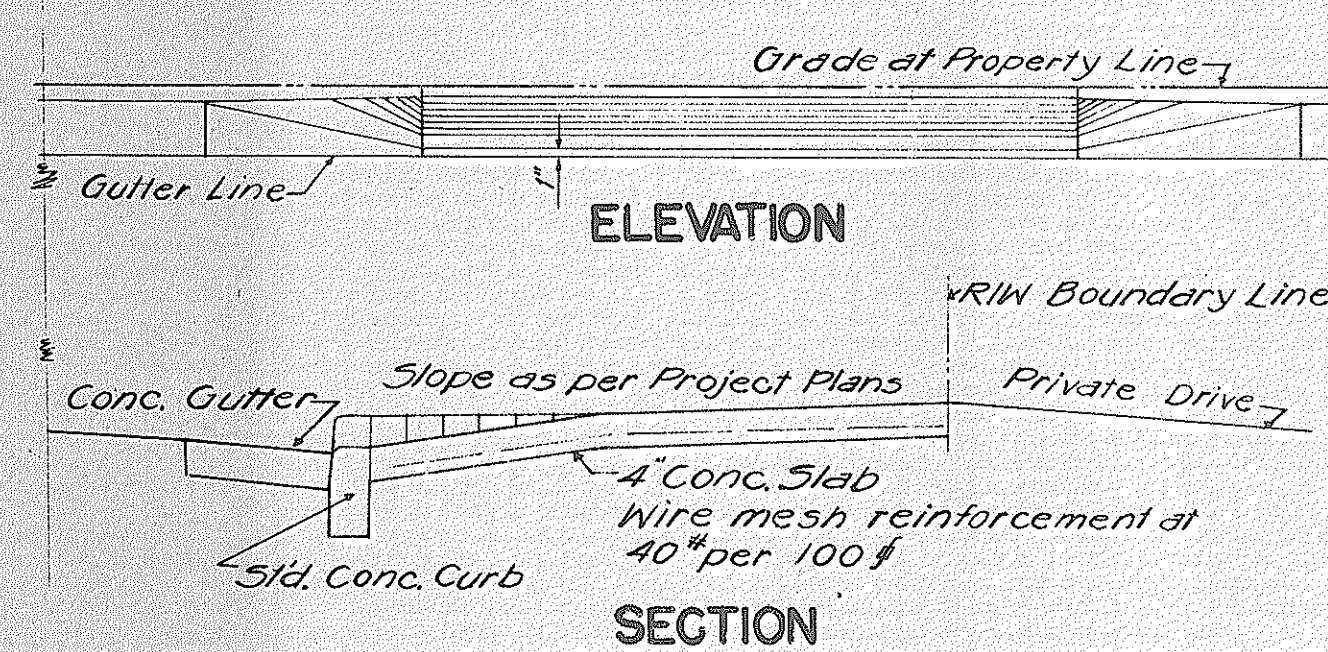
DETAIL OF A.C. ROLL

Scale: 1" = 1'-0"

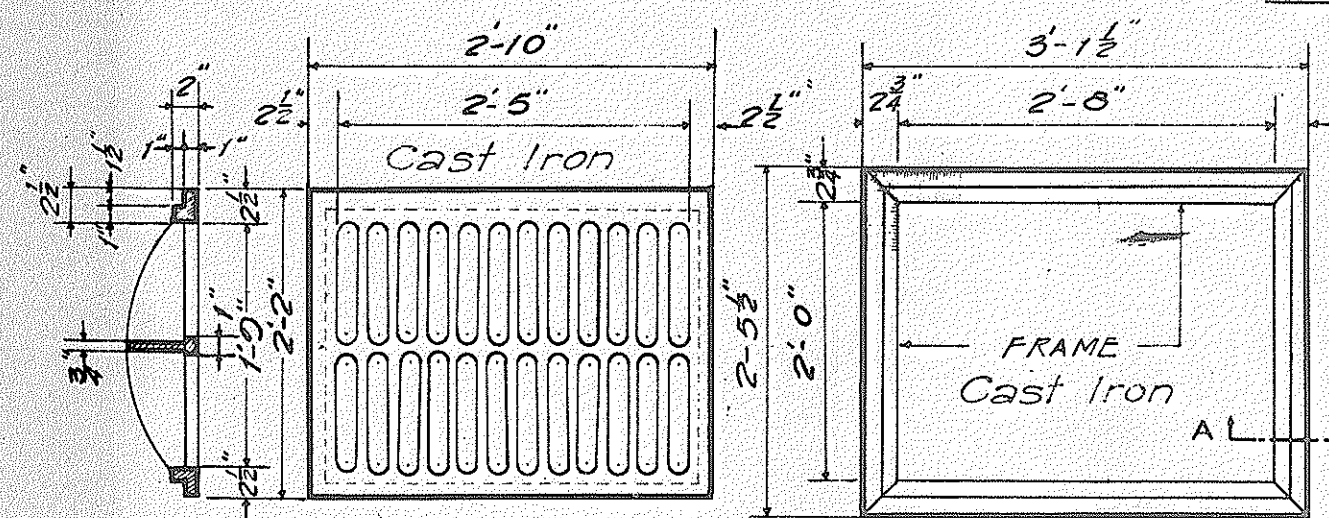


ST'D. PRECAST CONC. ROLL CURB

Scale: 1" = 1'-0"



SECTION

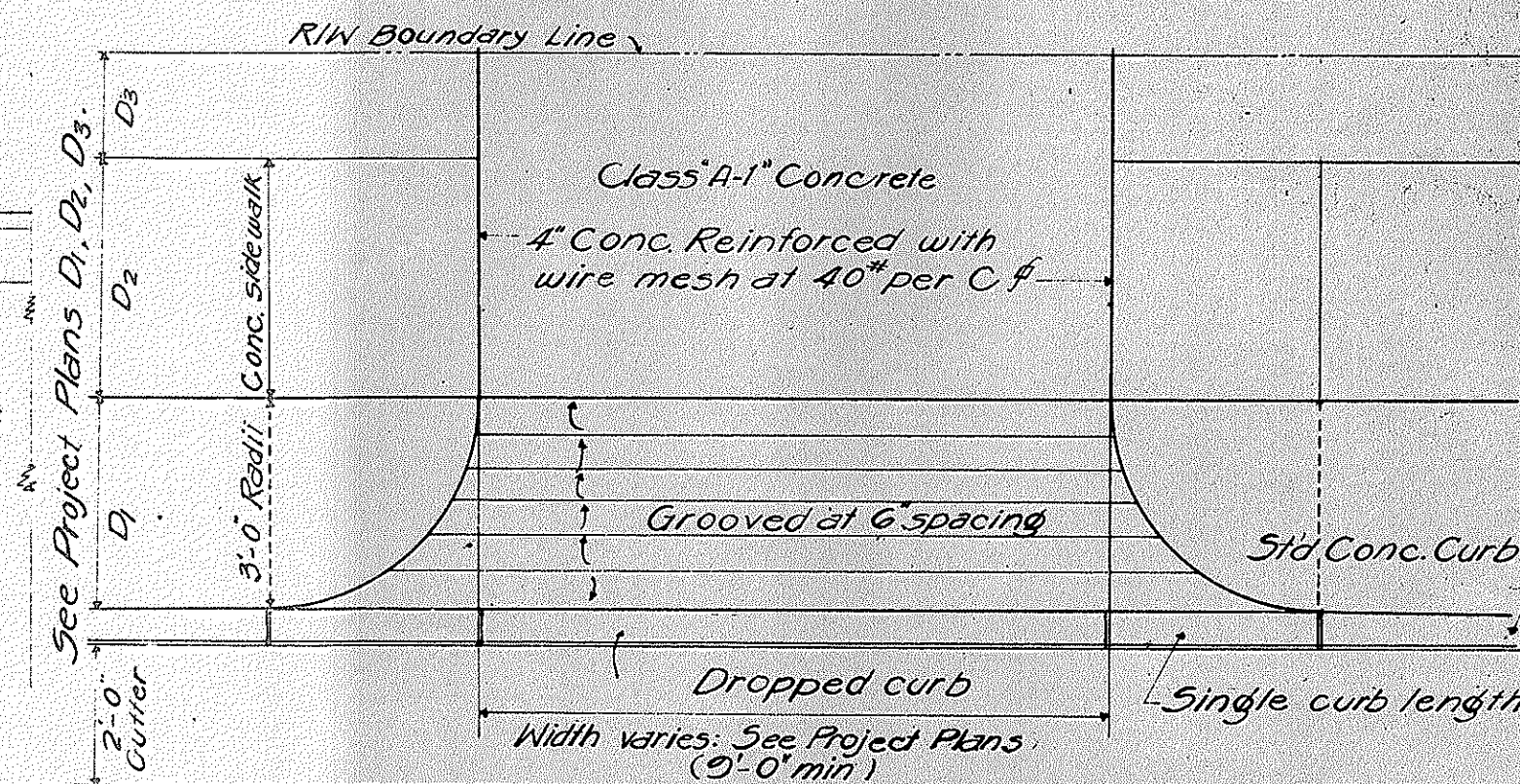


TOP VIEW

STANDARD C. I. FRAME AND GRATE TYPE "C"

Scale: 3/4" = 1'-0"

NOTE: Stock Pattern from Novelty Foundry-Honolulu



DETAILS OF DROPPED DRIVEWAY

SECTION A-A

Scale: 3" = 1'-0"

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

STANDARD DETAILS

SCALES AS NOTED Apr. 15, 1948

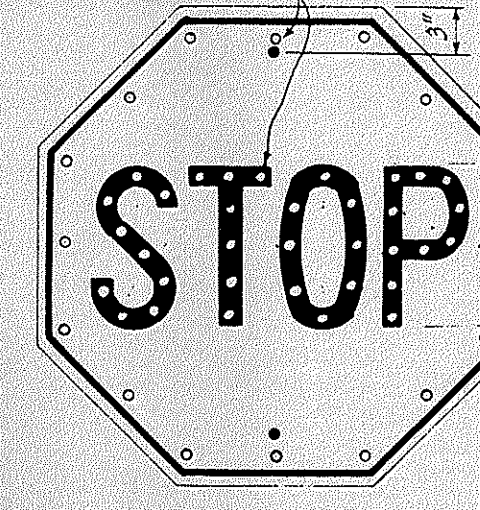
APPROVED:  Territorial Highway Engineer

SHEET NO. 4 OF 4 SHEETS

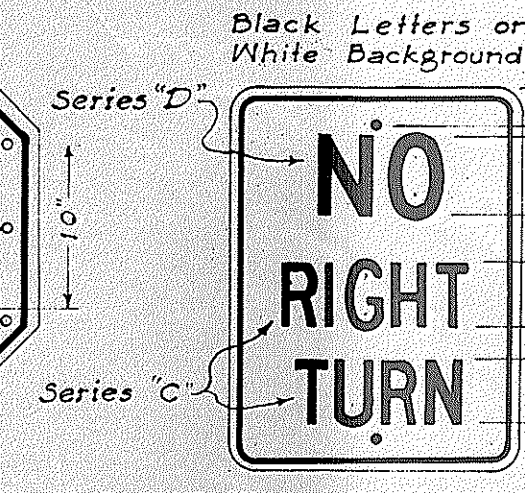
5398.12

DATE: _____
SURVEY PLOTTED BY: _____
DESIGNED BY: S. Nambu
CHECKED BY: _____
NOTE BOOK: _____
QUANTITIES CHECKED BY: _____
CHECKED BY: _____

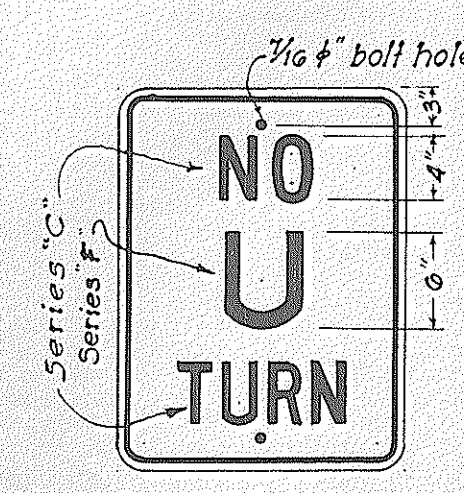
Black Letters on "Highway Yellow" Background White Reflectors



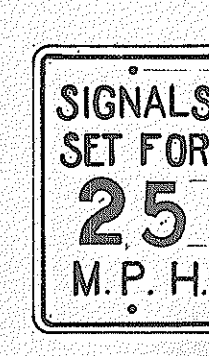
R-1
30" x 30"



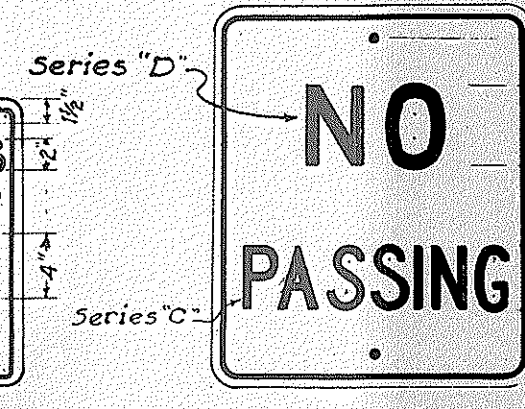
R-6
18" x 24"



R-8
18" x 24"



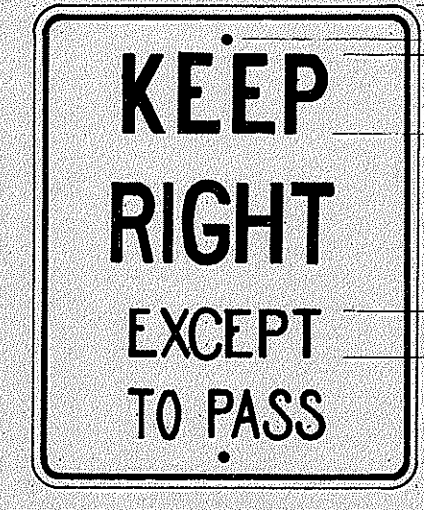
R-10
12" x 18"



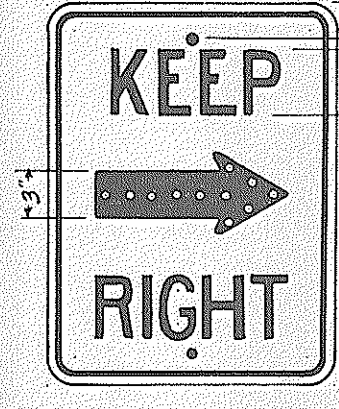
R-11
20" x 24"



R-12
20" x 24"



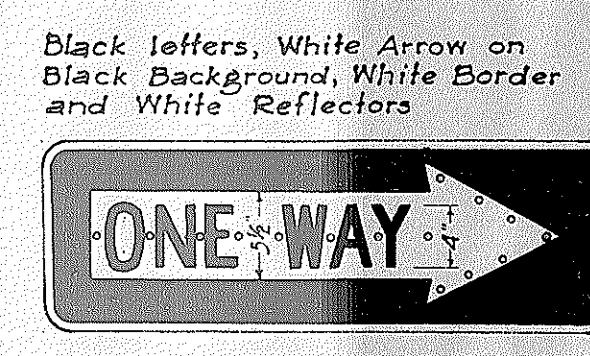
R-13
24" x 30"



R-14
18" x 24"



R-15
24" x 24"



R-16-R
*R-16-L
36" x 12"



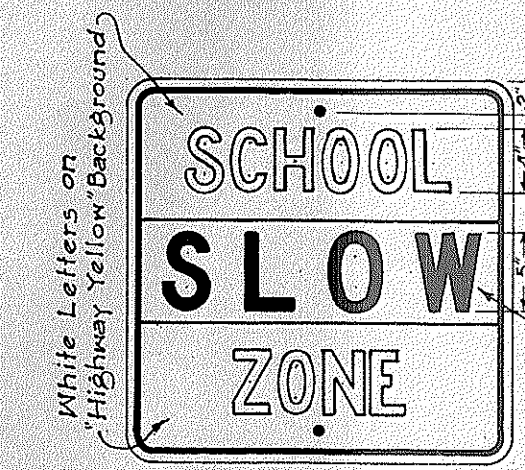
R-18
12" x 18"



R-26
12" x 18"



R-29
24" x 30"



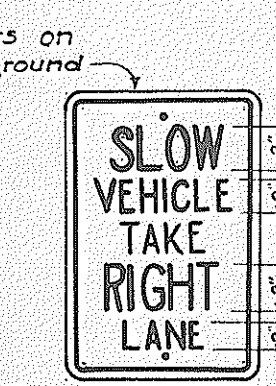
R-41-S
24" x 24"



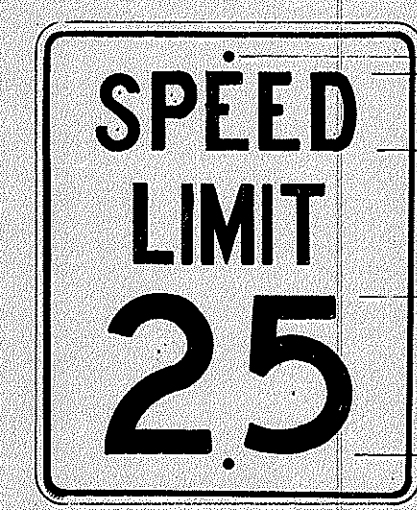
R-42-S
12" x 18"



R-43-S
12" x 18"



R-44-S
12" x 18"



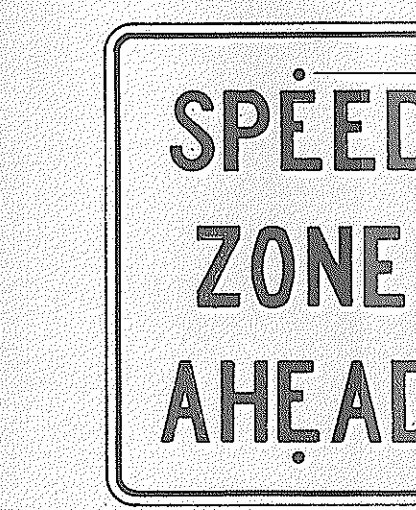
R-102-A
24" x 30"



R-102-B
24" x 30"



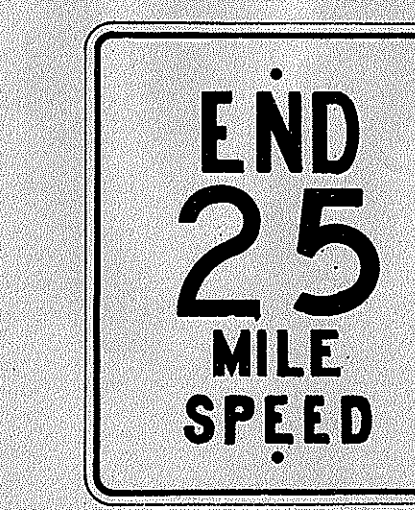
R-102-C
24" x 30"



R-104
24" x 30"



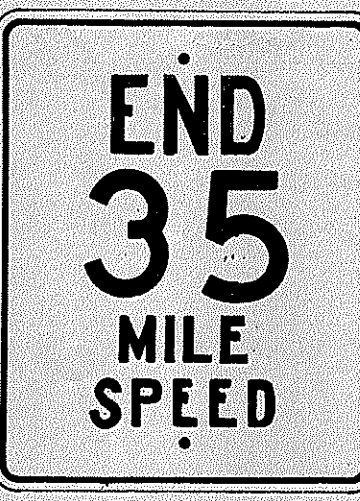
R-105-A
24" x 30"



R-105-B
24" x 30"



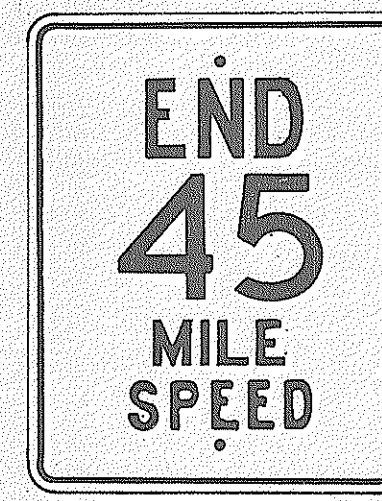
R-105-C
24" x 30"



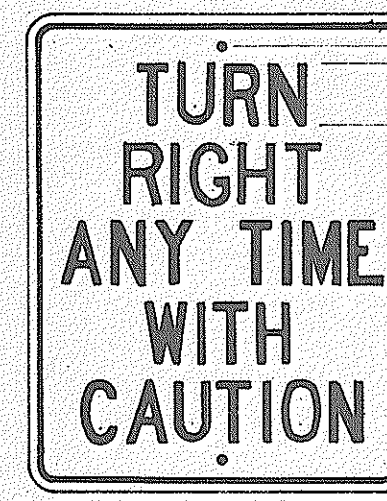
R-105-D
24" x 30"



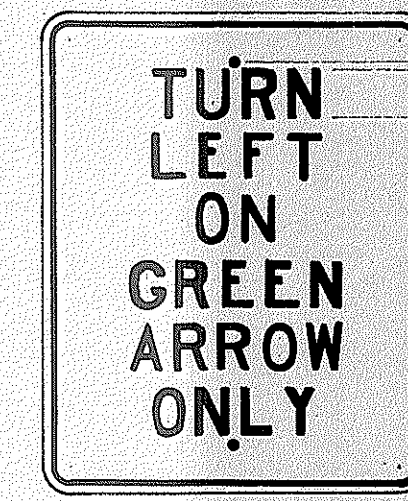
R-105-E
24" x 30"



R-105-F
24" x 30"



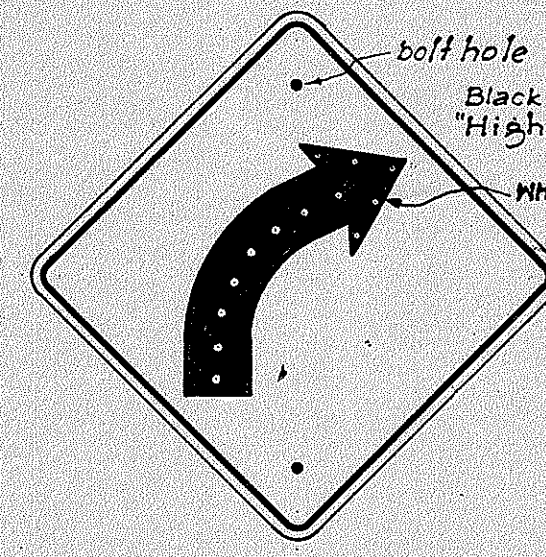
R-106
24" x 30"



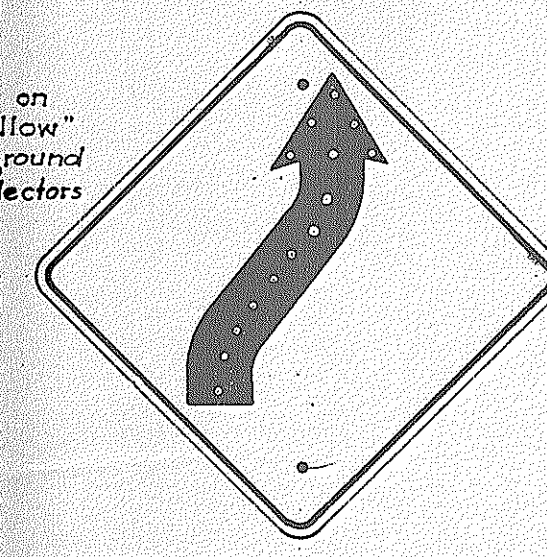
R-107-A
24" x 30"



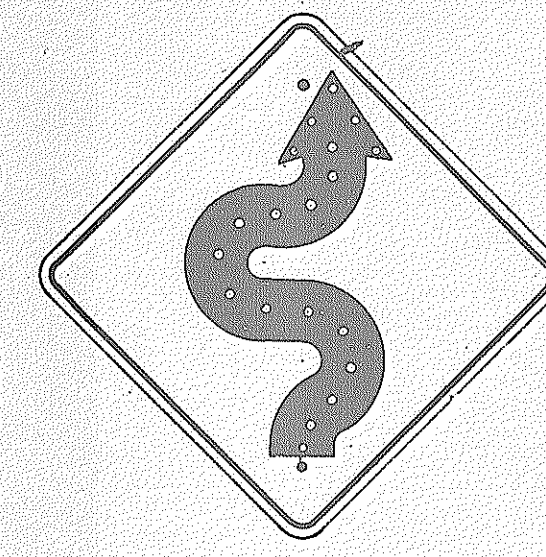
R-107
14" x 9"



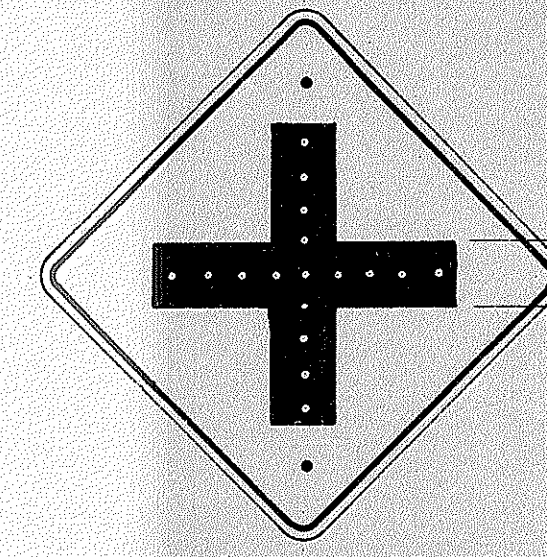
W-2-R
*W-2-L
24" x 24"



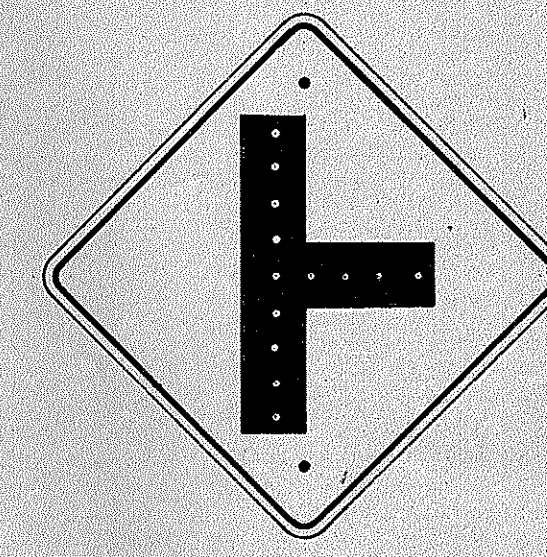
W-4-R
*W-4-L
24" x 24"



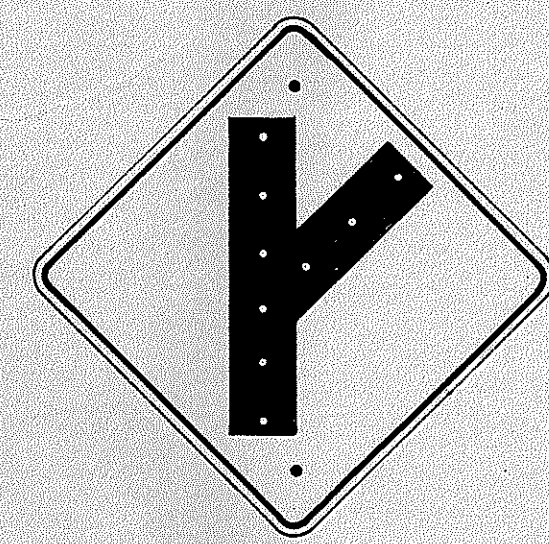
W-5-R
*W-5-L
24" x 24"



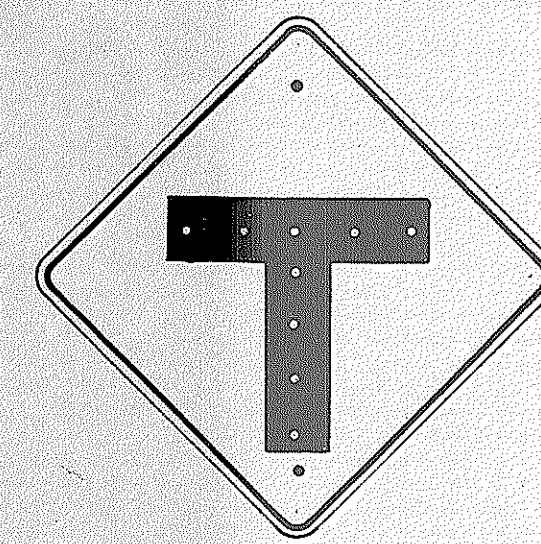
W-6
24" x 24"



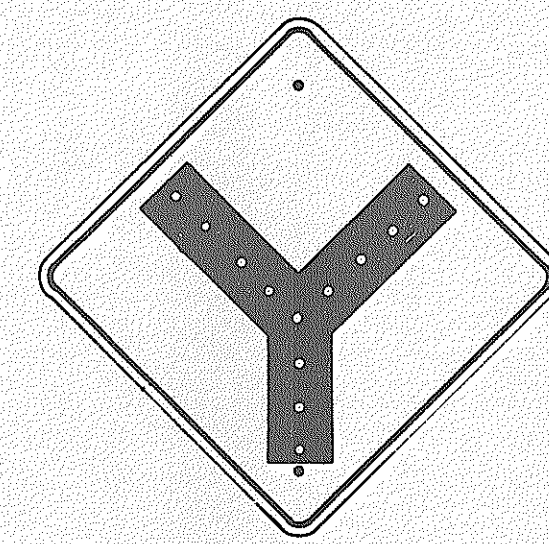
W-7
24" x 24"



W-8-R
*W-8-L
24" x 24"



W-9
24" x 24"



W-10
24" x 24"



W-13
24" x 24"



W-14
24" x 24"



W-14-A
24" x 24"



W-19
30" x 30"



W-20
30" x 30"



W-21
30" x 30"



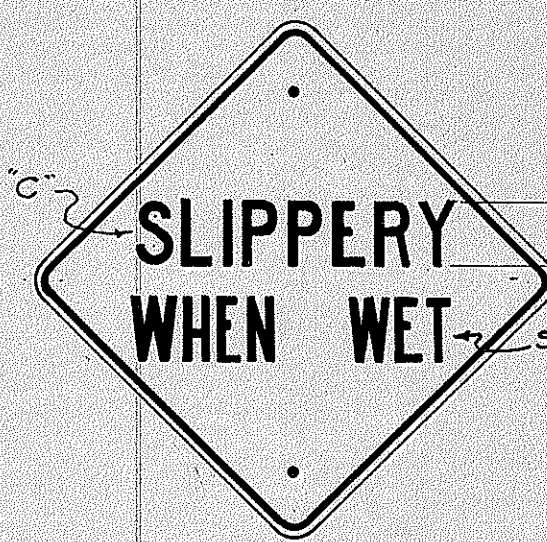
W-22
24" x 24"



W-24
30" x 30"



W-25
24" x 24"



W-29
24" x 24"



W-38
24" x 24"



W-39
24" x 24"

NOTE: All Warning Signs shall have two (2) 1/16" bolt holes drilled at 24" center unless otherwise noted.

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" letters and Series "D" numerals shall be used except where noted.

Note: All Regulatory (R) signs shall have black letters on a white background except where noted. All Warning (W) signs shall have black letters or figures on a "Highway Yellow" background. *Signs shall be similar but opposite in direction.

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
REGULATORY & WARNING SIGNS

Scale: 1" = 1' May 31, 1949

APPROVED: TERRITORIAL HIGHWAY ENGINEER

See Specifications for Materials & Finish.

SHEET NO. OF SHEETS

5398.13

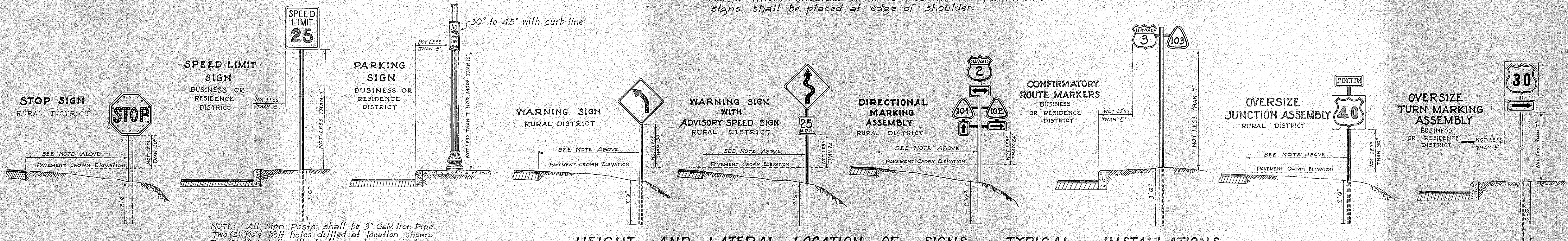
DATE
DESIGNED BY
TRACED BY
QUANTITIES BY
CHECKED BY

ORIGINAL
PLAN
NOTE BOOK
No.

SURVEY PLOTTED BY
DESIGNED BY
TRACED BY
QUANTITIES BY
CHECKED BY

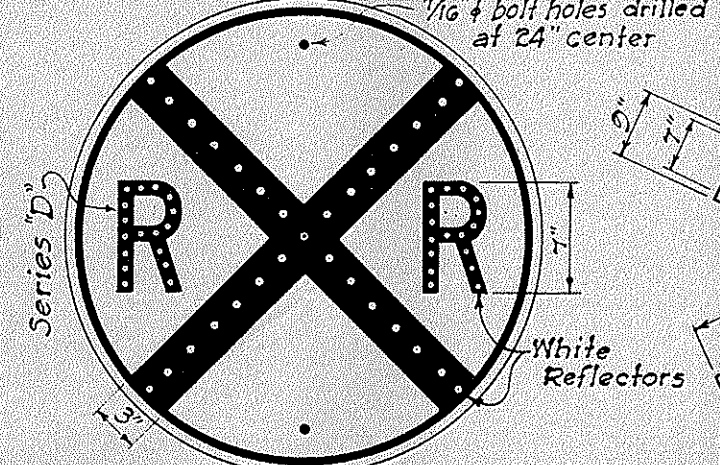
T. Tokunaga

NOTE: All signs shall be placed 10' from edge of pavement except where shoulder width is less than 10', in which case signs shall be placed at edge of shoulder.



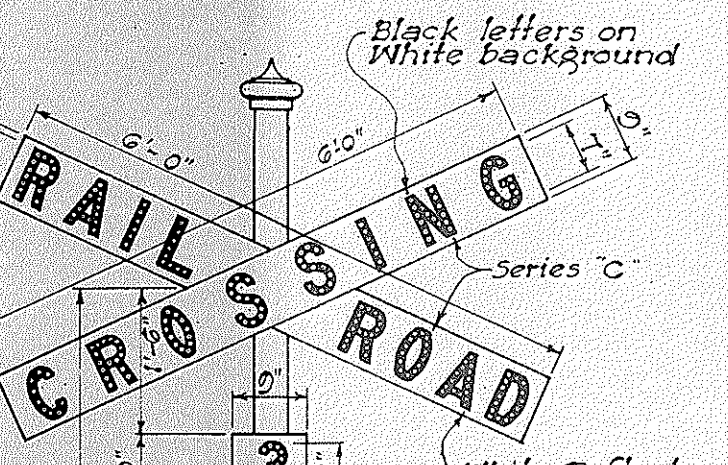
HEIGHT AND LATERAL LOCATION OF SIGNS - TYPICAL INSTALLATIONS
Scale: 1" = 3'-0"

Black letter and cross on "Highway Yellow" background

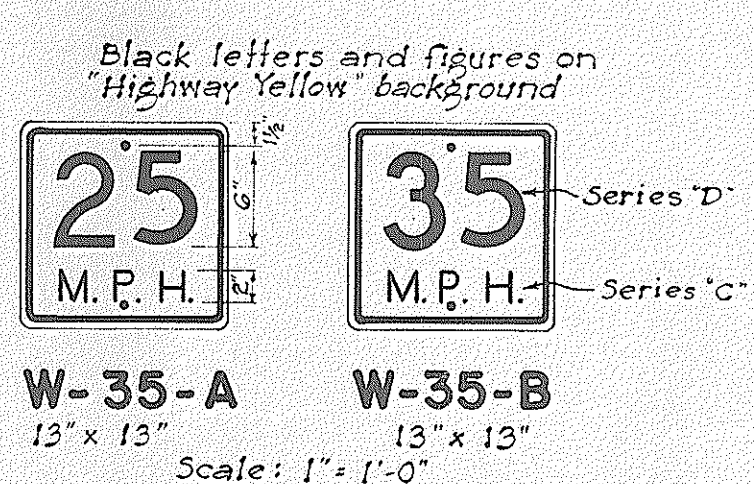


W-32
30" Diameter
Scale: 1" = 1'-0"

NOTE: This sign shall be placed from 300 to 500 feet from R.R. intersections in rural areas and a minimum distance of 100 feet from R.R. intersections in Residence or Business districts.

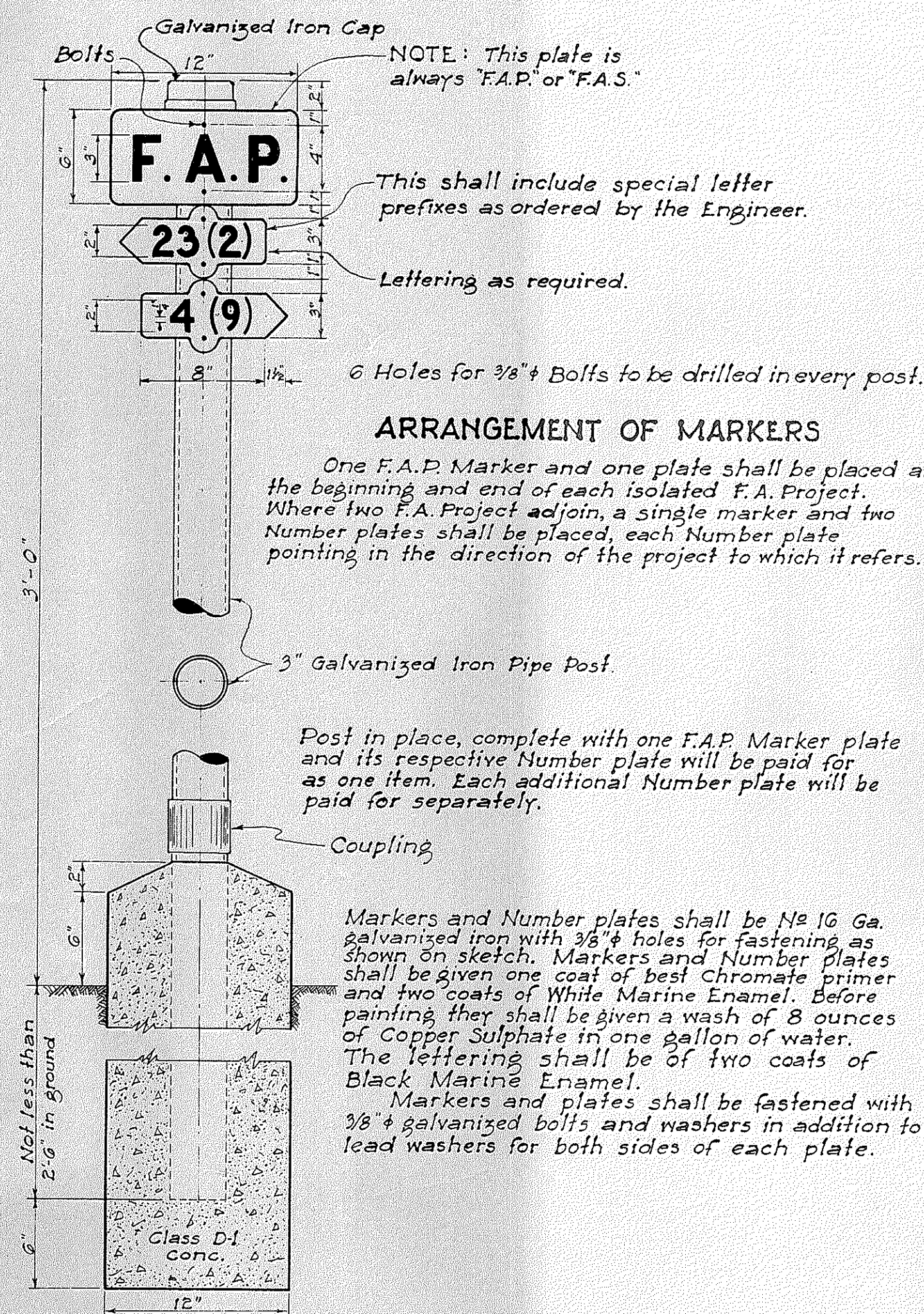


W-33
Scale: 1/2" = 1'

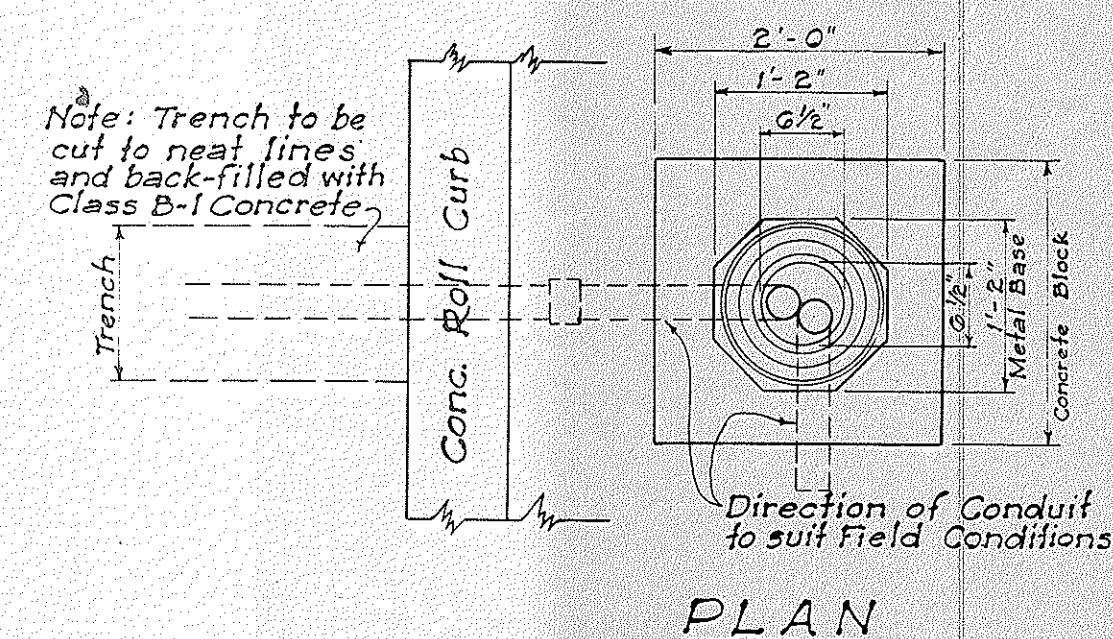


W-35-A **W-35-B**
13" x 13" 13" x 13"
Scale: 1" = 1'-0"

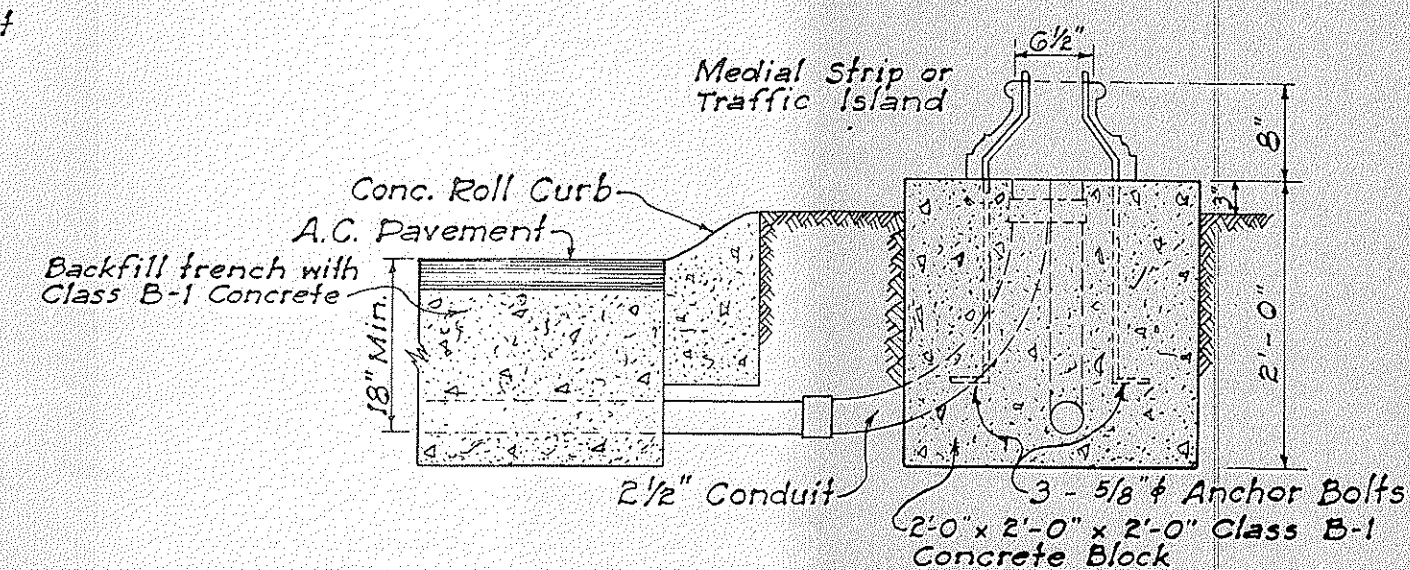
TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
REGULATORY & WARNING SIGNS
SCALE AS NOTED May 31, 1949
APPROVED: *Hubert*
Territorial Highway Engineer



FEDERAL AID MARKER
Scale: $1\frac{1}{2}" = 1'-0"$

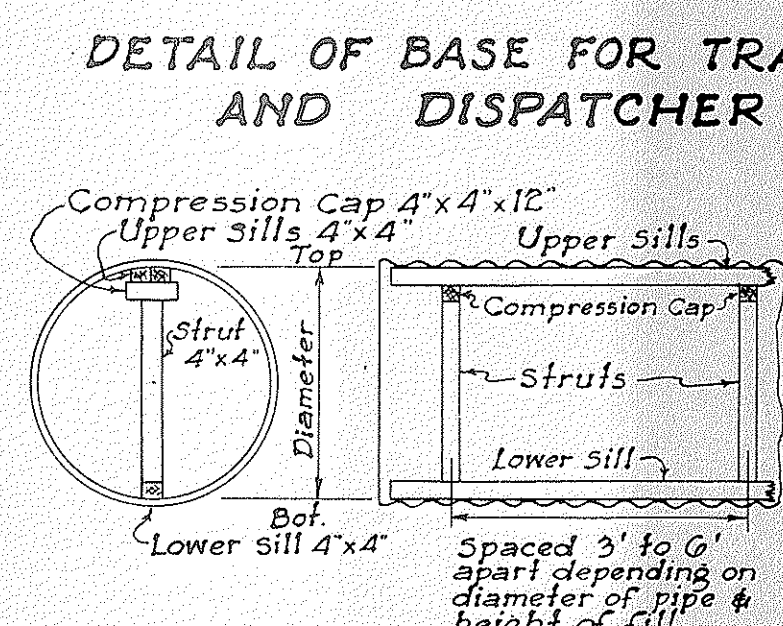


PLAN



SECTION

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

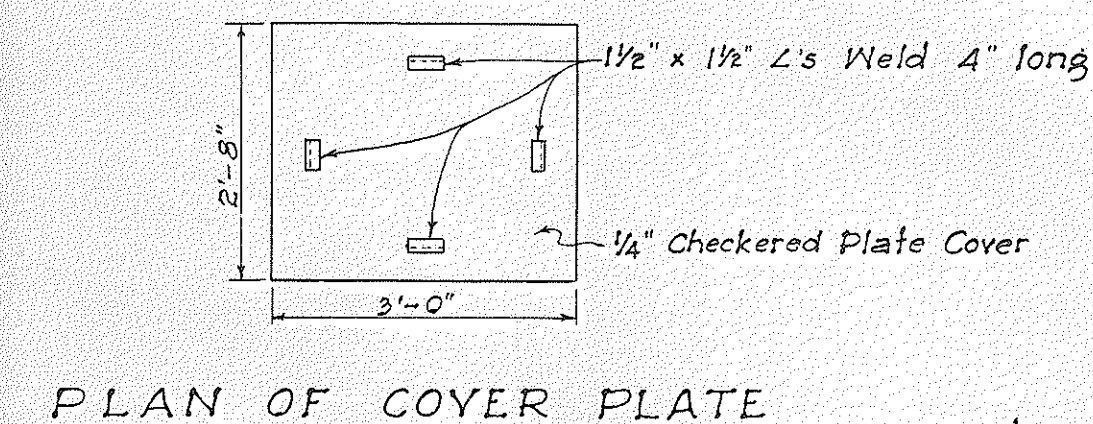


END VIEW LONGITUDINAL SECTION

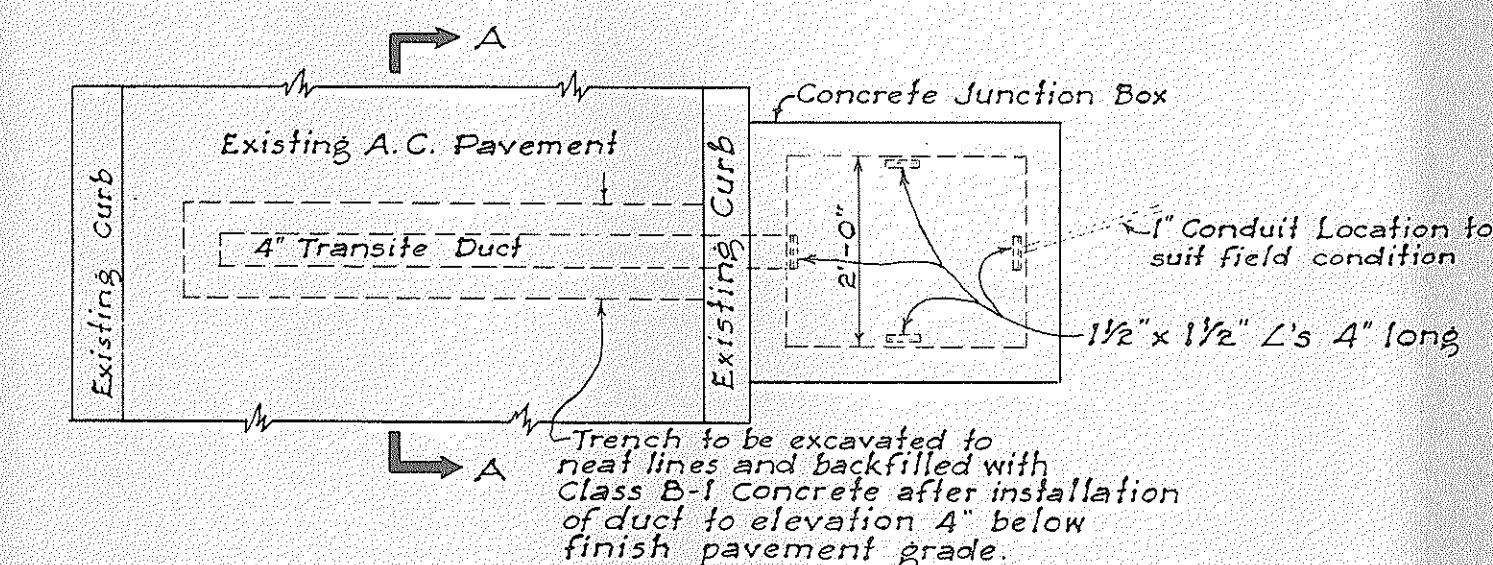
Diameter of Pipe in inches	Length of Struts in feet	Spacing of Struts in ft. for				Various Heights in feet
		FILL 1' to 5'	FILL 5' to 10'	FILL 10 to 20'	FILL 20 to 30'	
48	3.8 3/8	—	—	—	4	
54	4.4 3/4	—	—	—	4	
60	5.1	G	G	G	4	
66	5.7 1/4	G	G	G	4	
72	6.3 5/8	G	G	G	5	
78	6.9 1/2	G	G	G	4.5	
84	7.6 1/4	G	G	G	5	

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.

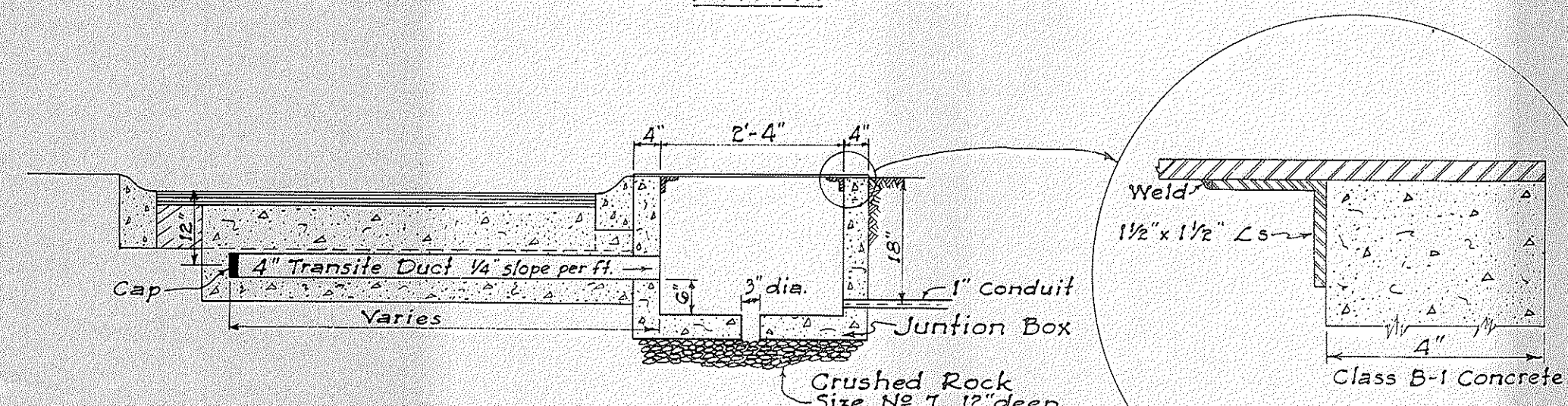
STRUTTING DIAGRAM & TABLE
FOR
CORRUGATED METAL PIPE CULVERT



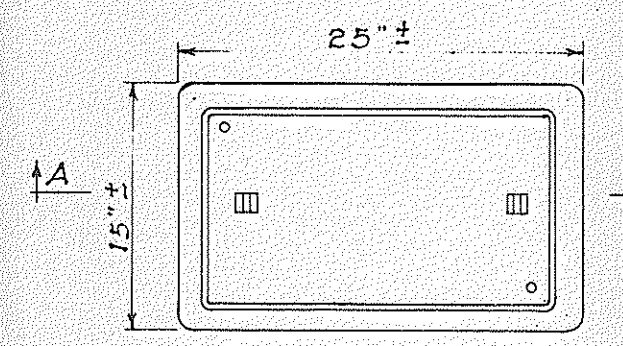
PLAN OF COVER PLATE



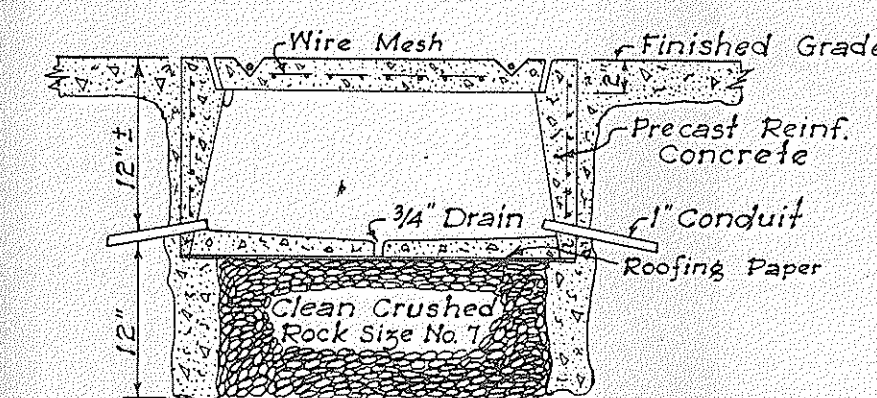
PLAN



TYPICAL ROAD SECTION
SHOWING
TRAFFIC DETECTOR JUNCTION BOX AND DUCT



PLAN

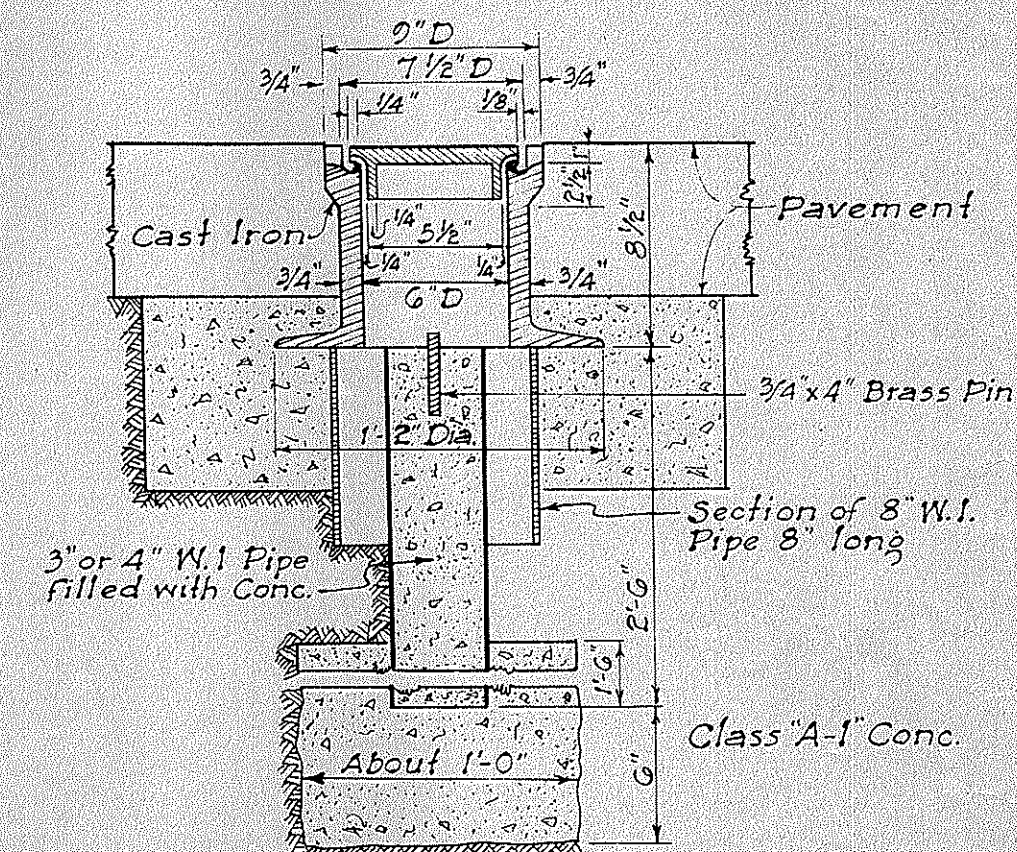


SECTION A-A

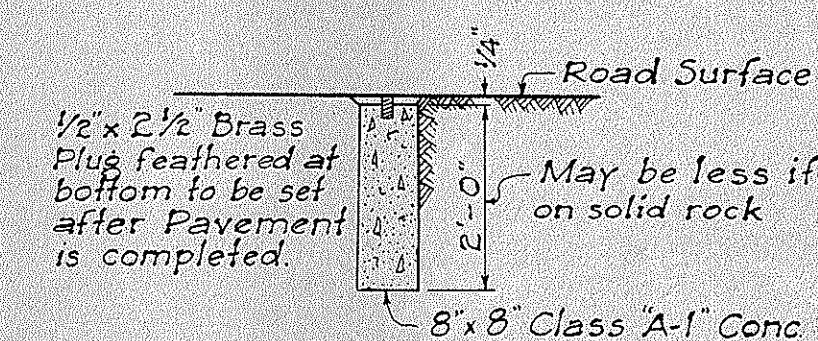
DETAIL OF PULL BOX
Scale: 1" = 1'-0"



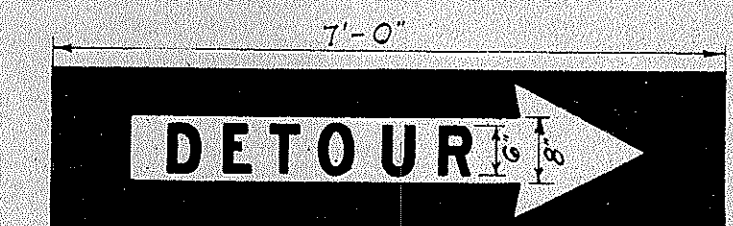
PLAN OF TOP



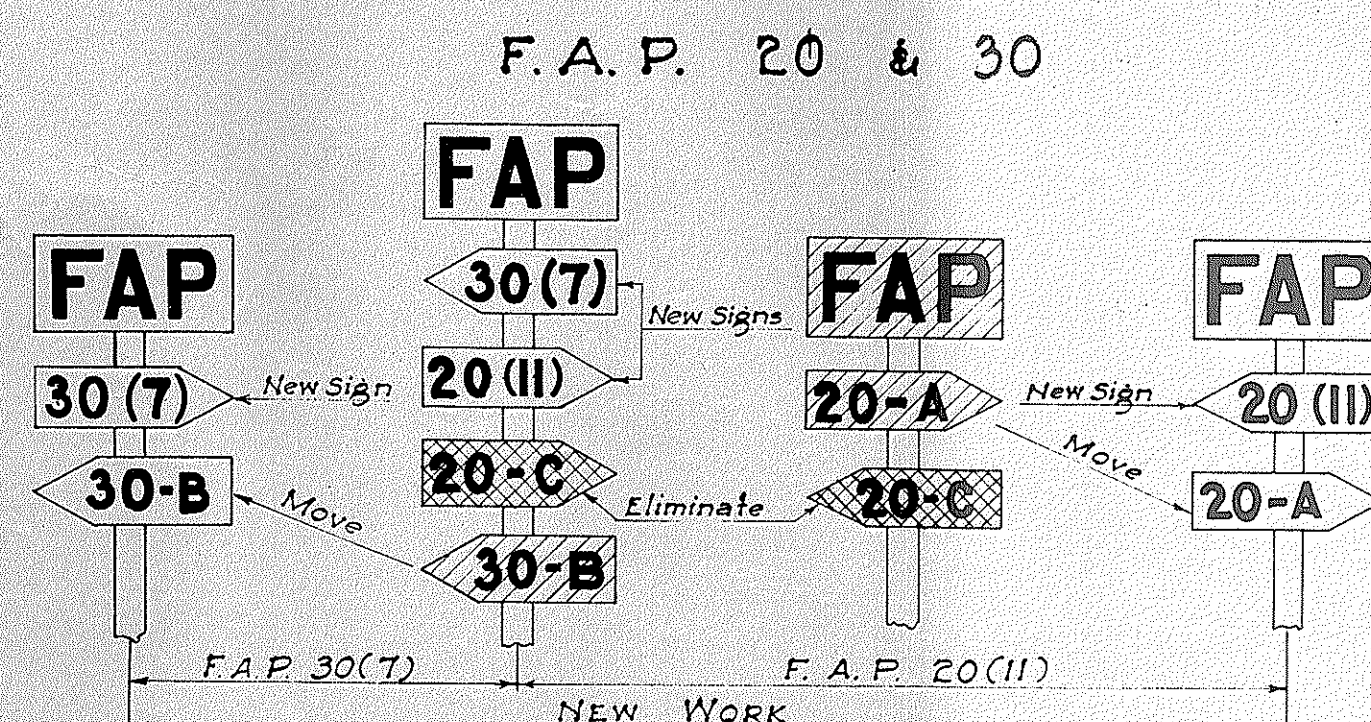
STANDARD C&C STREET
SURVEY MONUMENT



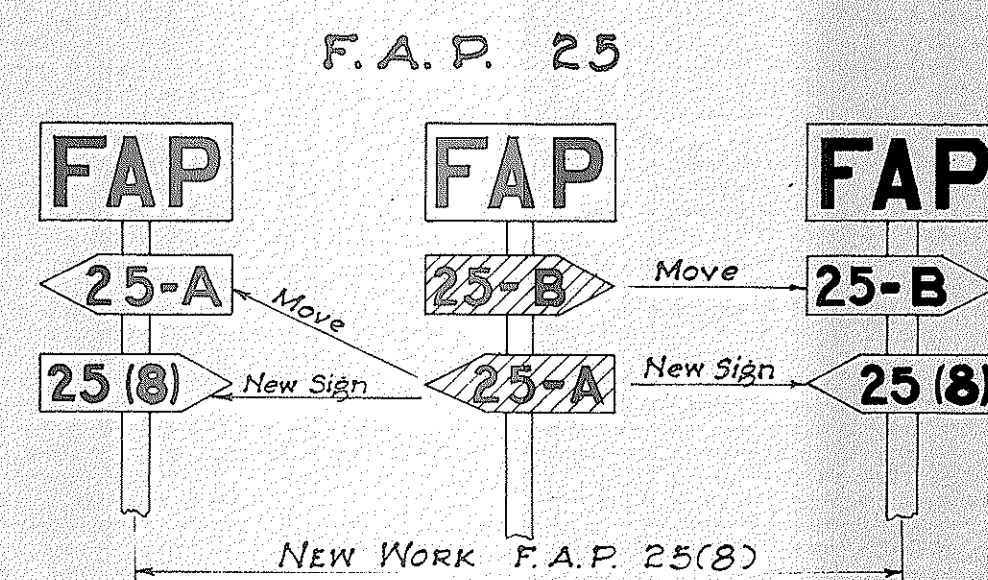
CENTER LINE MONUMENT
Scale: $\frac{1}{2}" = 1' - 0"$



STANDARD DETOUR SIGN



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

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

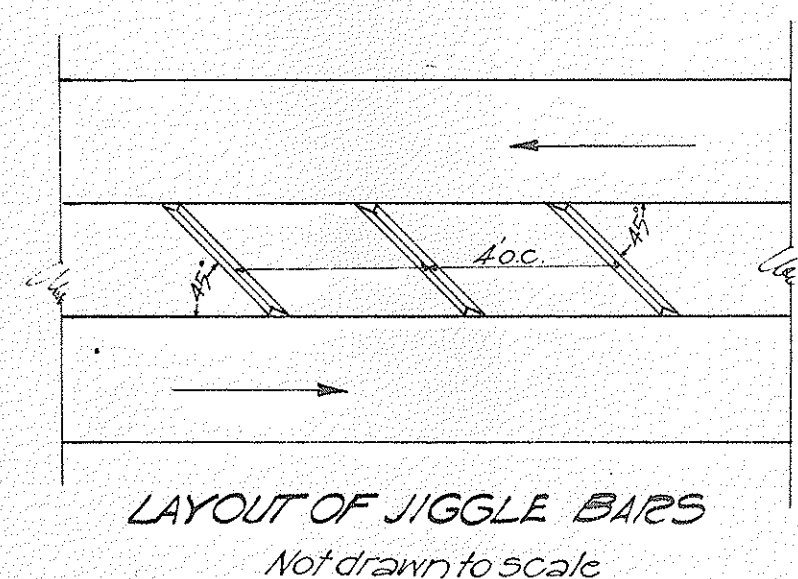
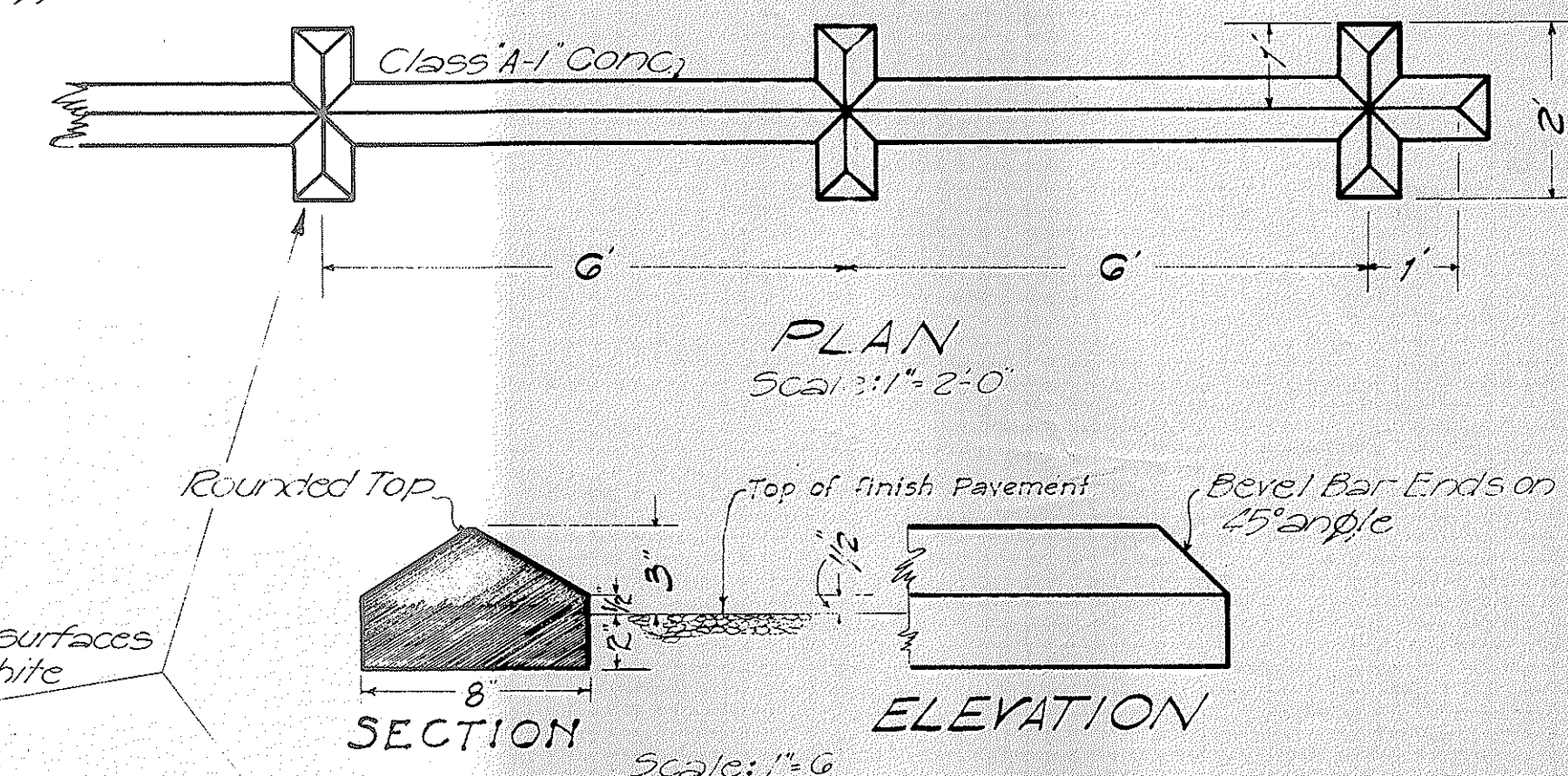
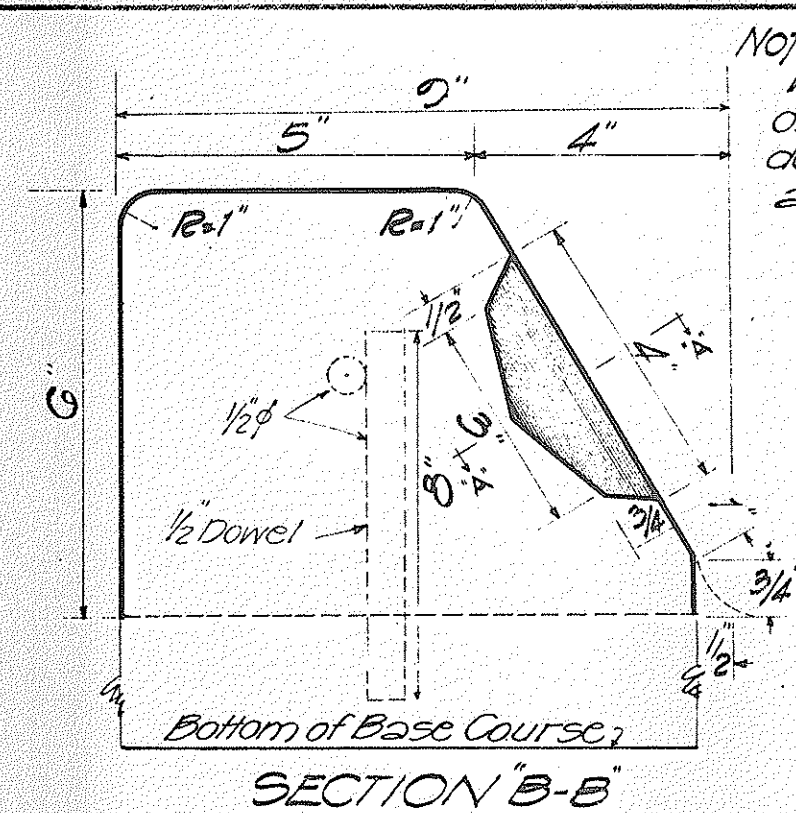
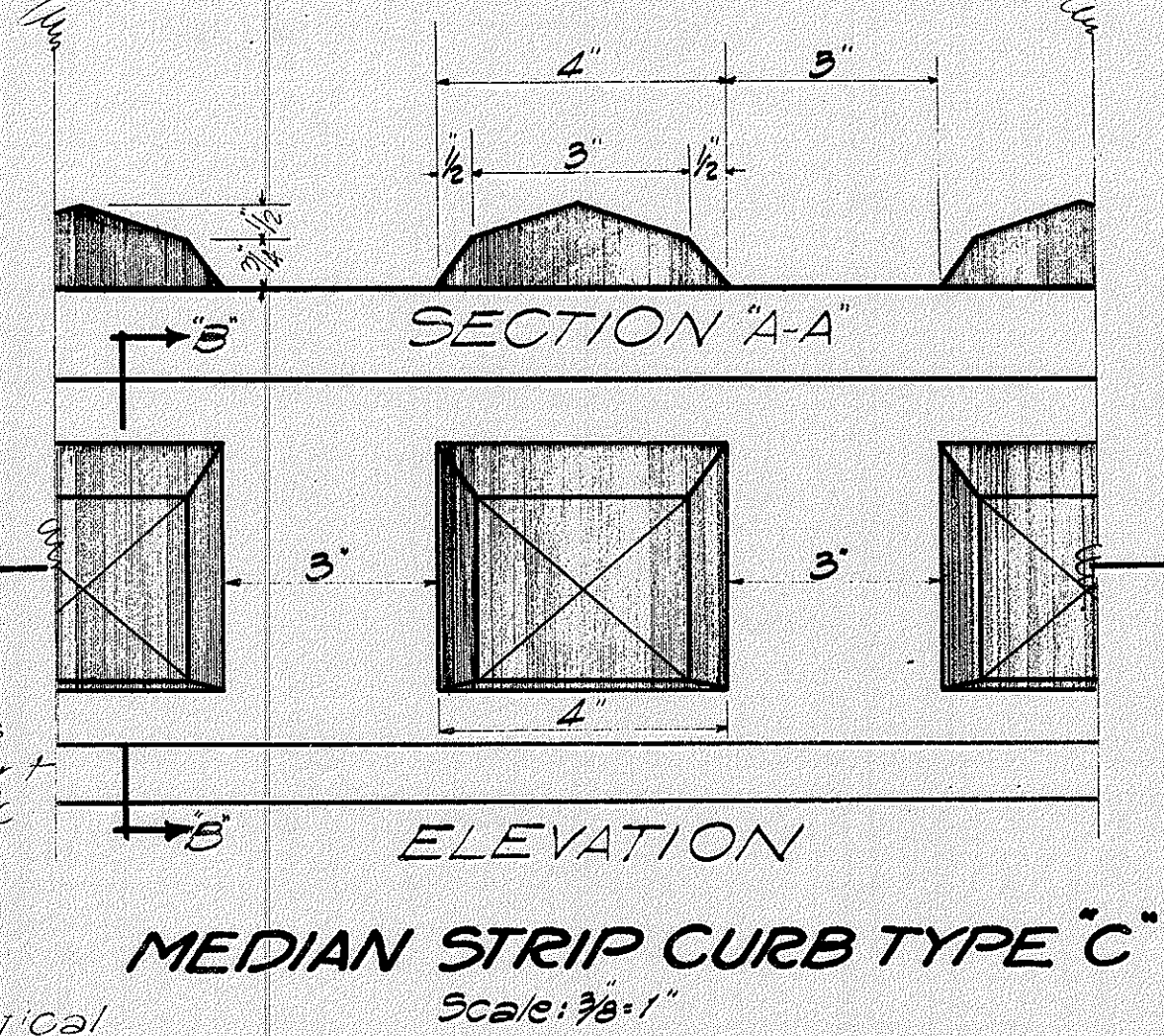
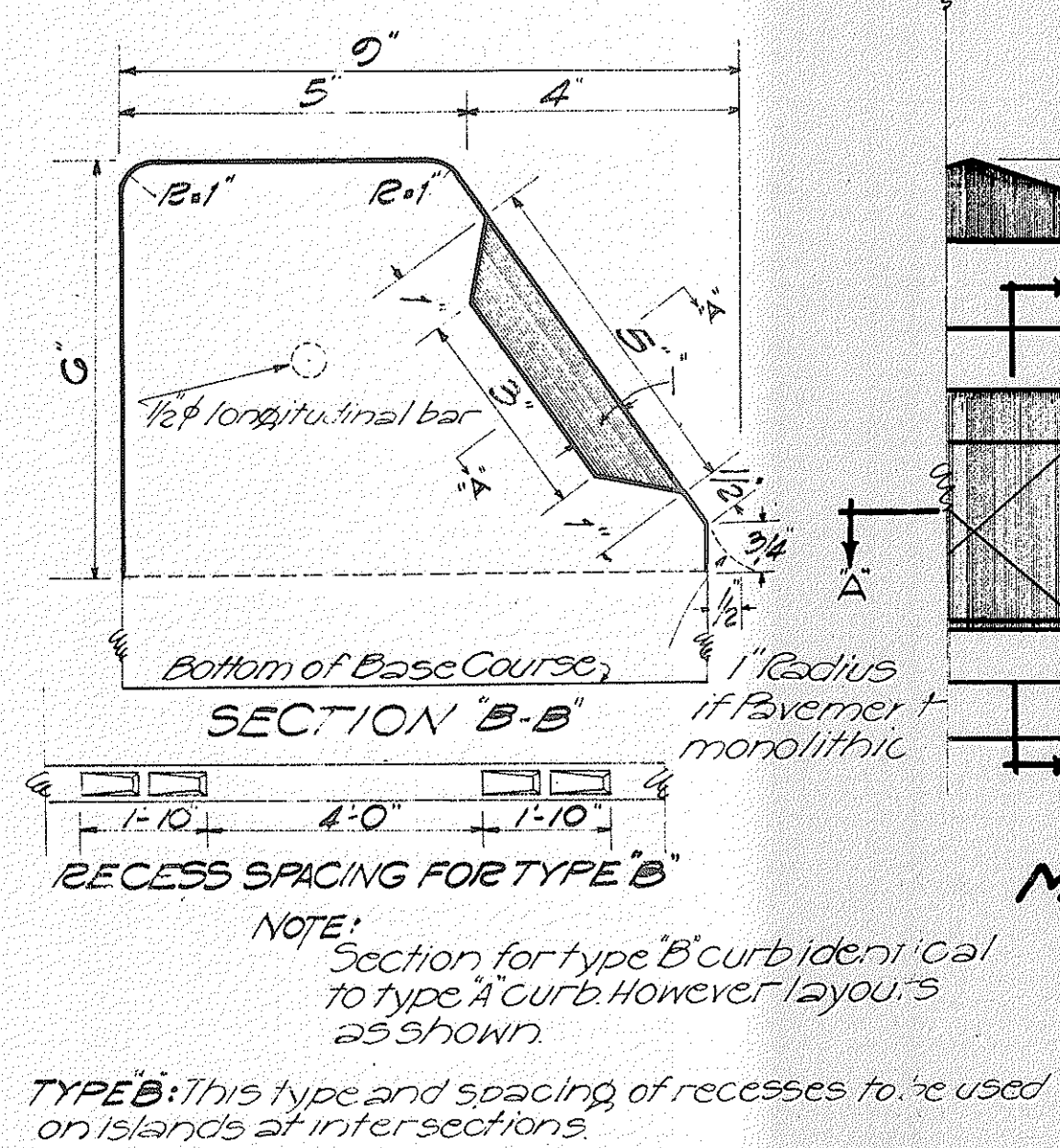
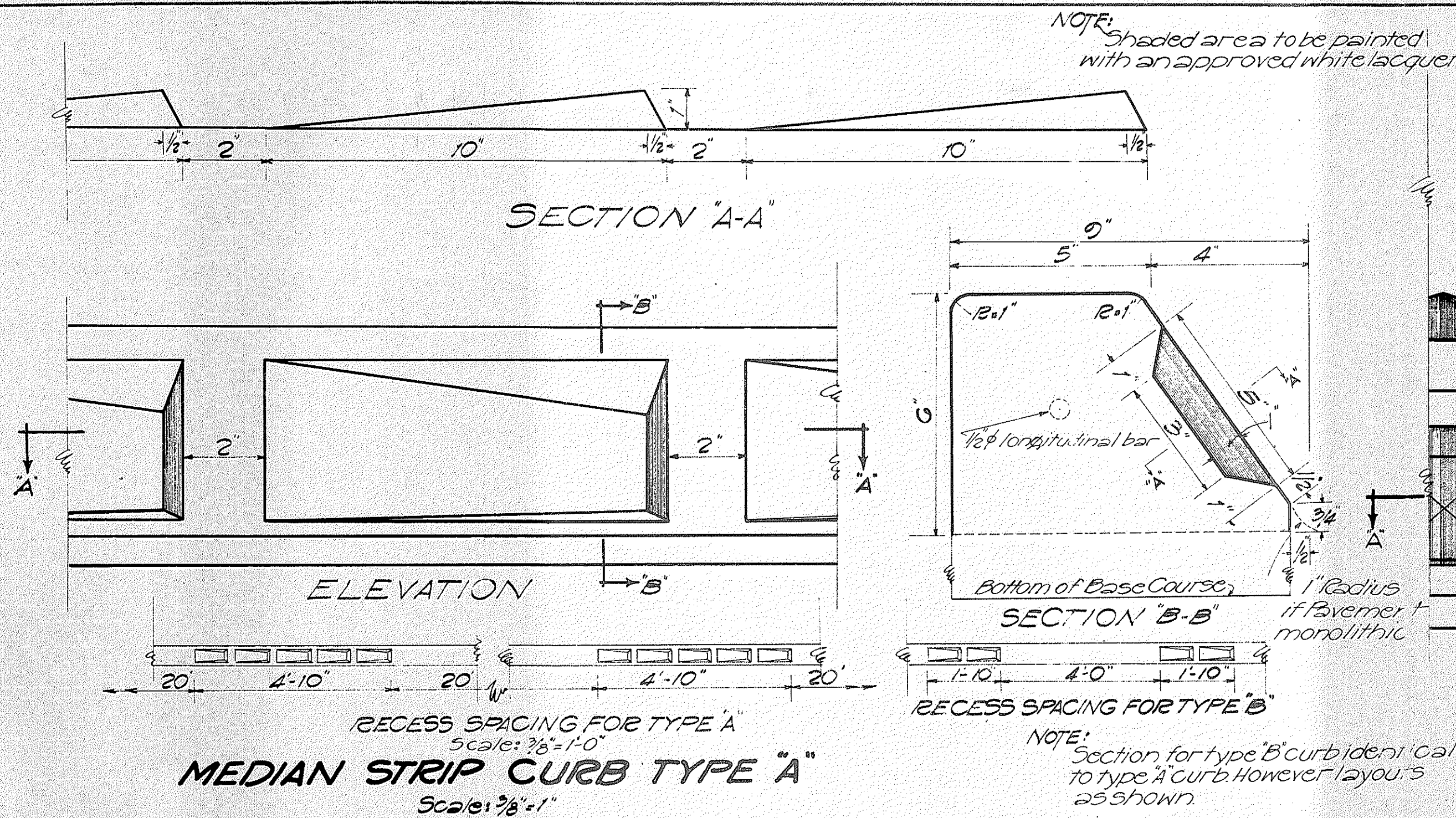
STANDARD DETAILS

SCALES AS NOTED May 31, 1949

APPROVED: _____
Territorial Highway Engineer

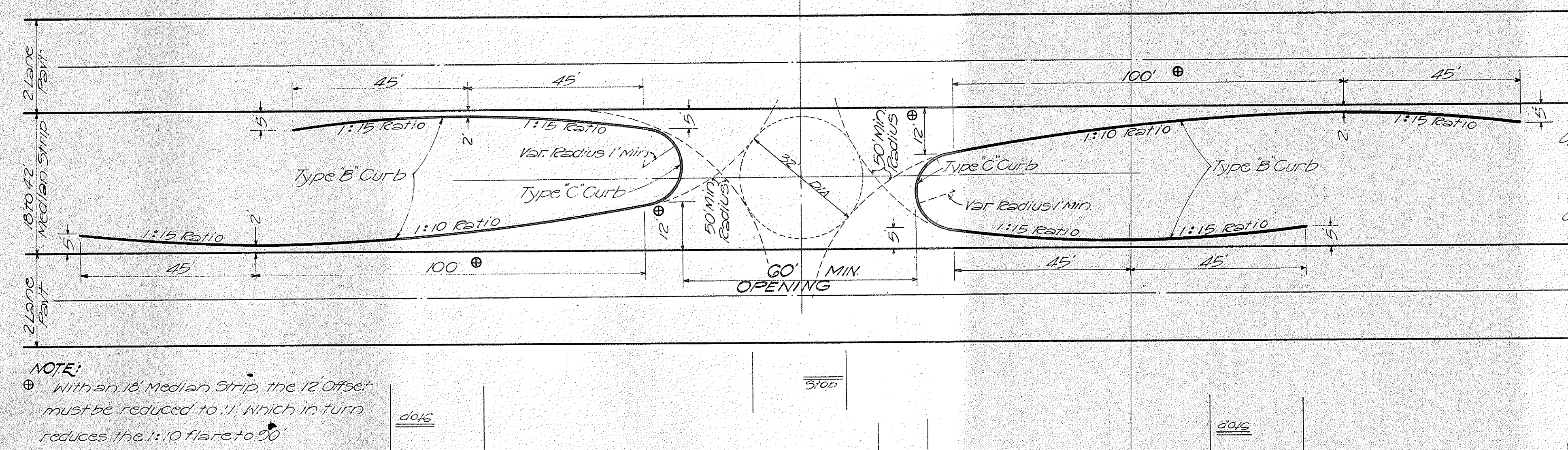
SHEET No OF SHEETS

539\$.15



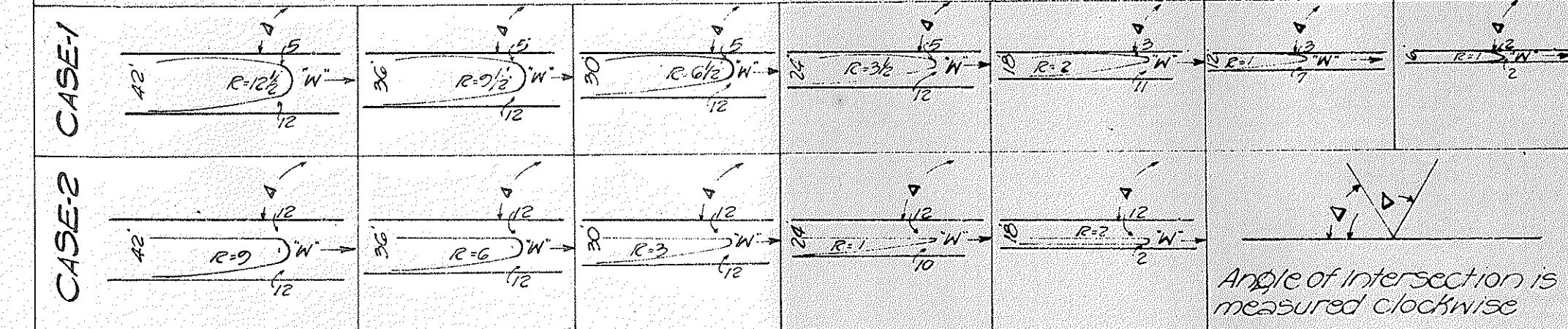
RAISED TRAFFIC BARS

RAISED JIGGLE BARS



Angle of Inters.	WIDTH OF MEDIAN STRIP									
	42'	42'	36'	30'	24'	18'	12'	6'	6'	6'
60°	CASE 1 54	CASE 2 58	CASE 1 58	CASE 2 62	CASE 1 64	CASE 2 66	CASE 1 68	CASE 2 70	CASE 1 70	CASE 2 66
65°	48	52	52	56	56	60	62	62	58	58
70°	42	46	46	50	54	54	56	54	52	56
75°	36	40	40	44	48	48	50	48	46	50
80°	32	36	36	38	42	42	42	42	40	44
85°	30	32	32	34	36	36	36	36	36	38
90°	30	30	30	30	30	30	30	30	30	35
95°	30	32	30	34	36	36	36	36	36	38
100°	30	36	30	38	40	42	44	46	40	44
105°	30	40	32	44	48	48	50	50	46	50
110°	32	46	36	50	54	54	56	56	52	56
115°	38	52	42	56	60	60	62	62	58	62
120°	44	58	48	62	66	66	68	70	64	68

"W" = Distance in feet from Island Nose to Centerline of Intersection



NOTE: Sketches are not to scale

STANDARD MEDIAN STRIP OPENING
Scale: 1" = 20'

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

STANDARD DETAILS

Scale as shown
APPROVED
Date 9-2-42
Territorial Highway Engineer

SHEET No. OF SHEETS

DATE
DESIGNED BY
DRAWN BY
CHECKED BY
NOTE BOOK
No.