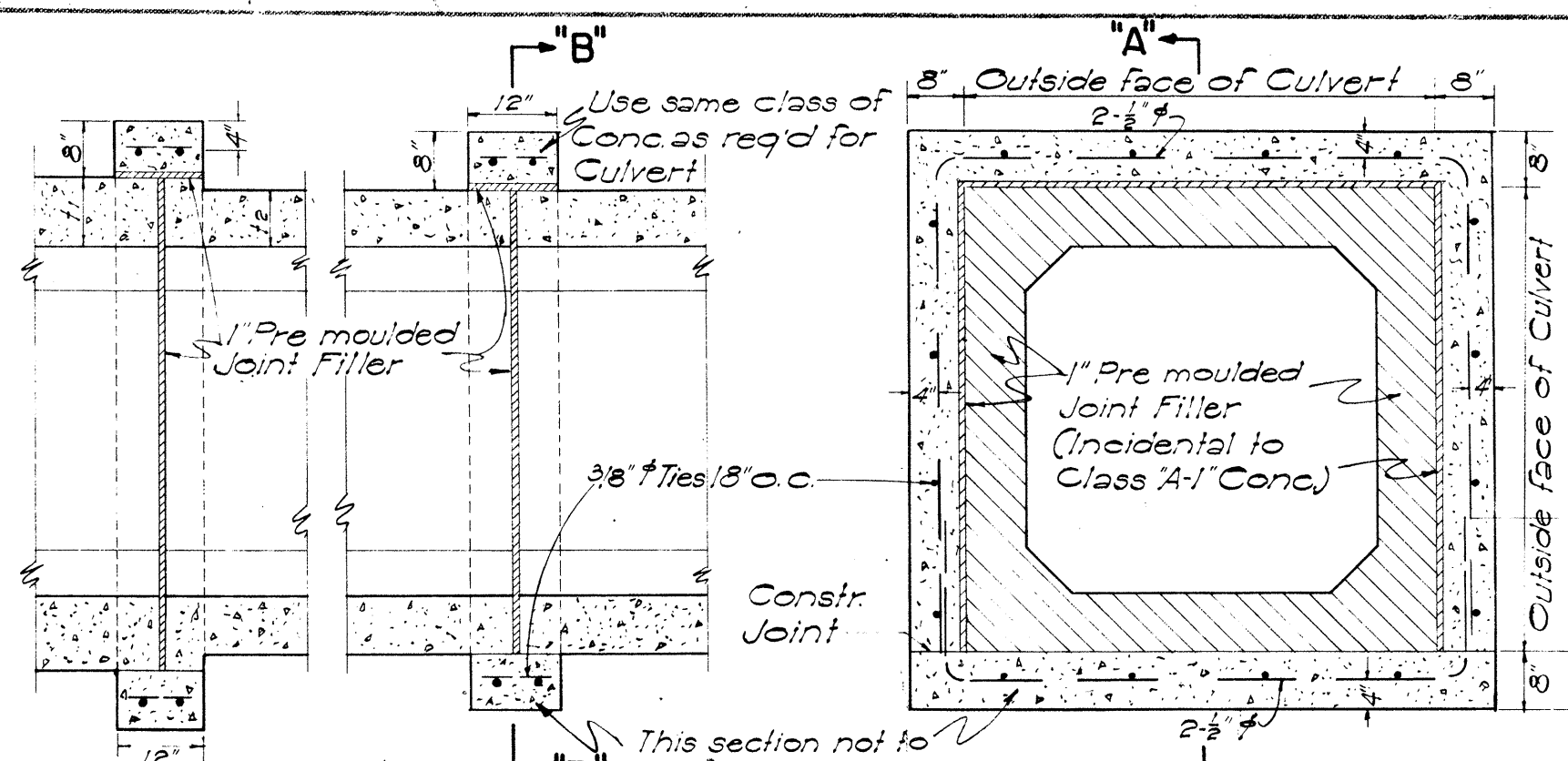
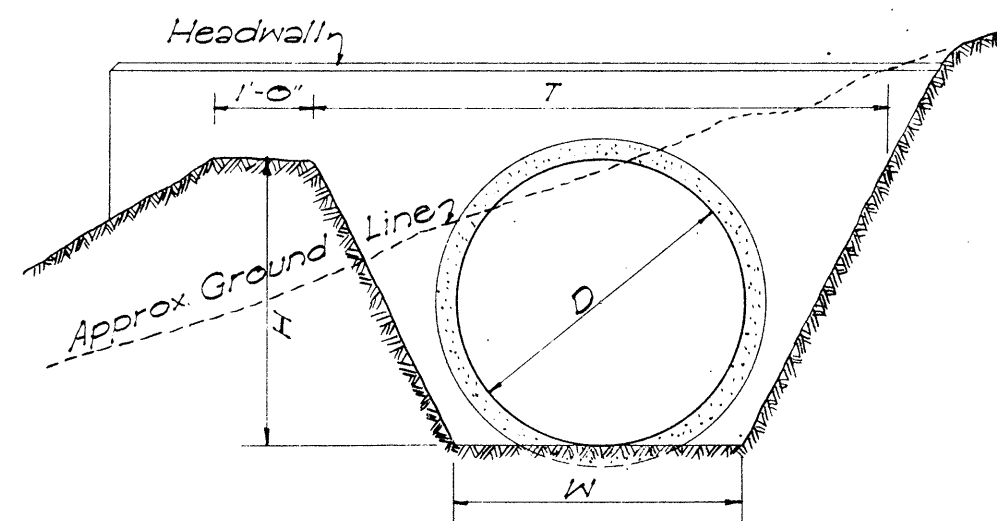


AUG. 1957

DATA FOR OUTLET DITCH				
D	W	H	T=H+H	
18"	24"	2'-0"	4'-0"	
24"	30"	2'-0"	4'-6"	
30"	36"	2'-6"	5'-0"	
36"	36"	3'-0"	6'-0"	

DETAIL OF OUTLET DITCH

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

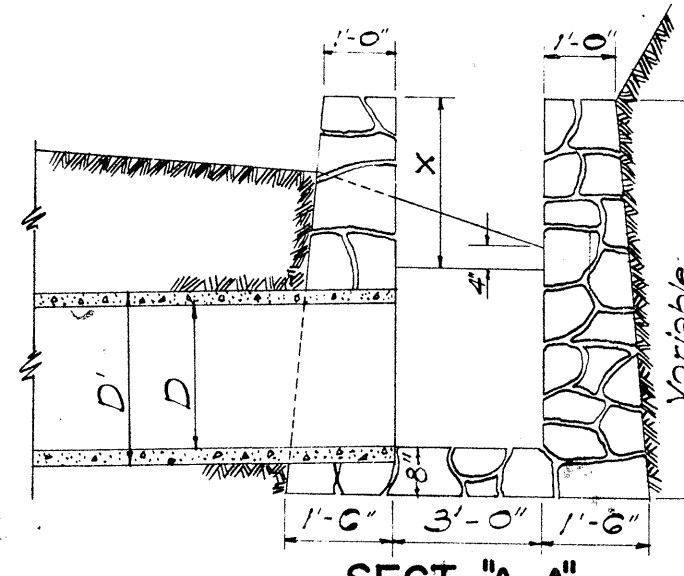
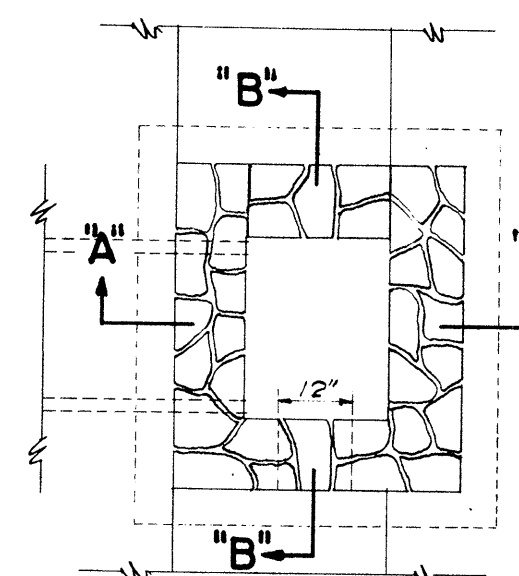
SECTION "A-A" SECTION "B-B"
CONC. COLLAR FOR CONC. BOX CULVERT

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

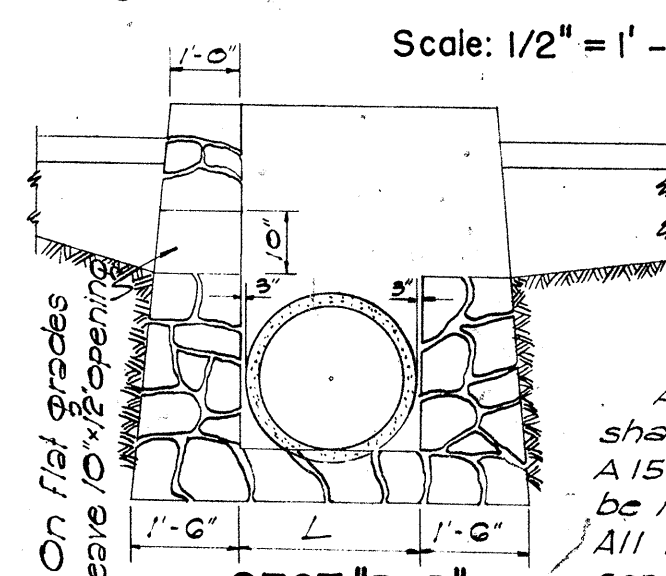
DATA FOR MASONRY DROP INTAKE				
D'	D	L=D+G	Cu. Yds.	Where Variables Equal
23"	18"	2'-5"	3.02	4'-6"
30"	24"	3'-0"	3.61	5'-0"
37"	30"	3'-7"	4.21	5'-6"
44"	36"	4'-2"	4.85	6'-0"

NOTE:

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



SECT. "A-A"



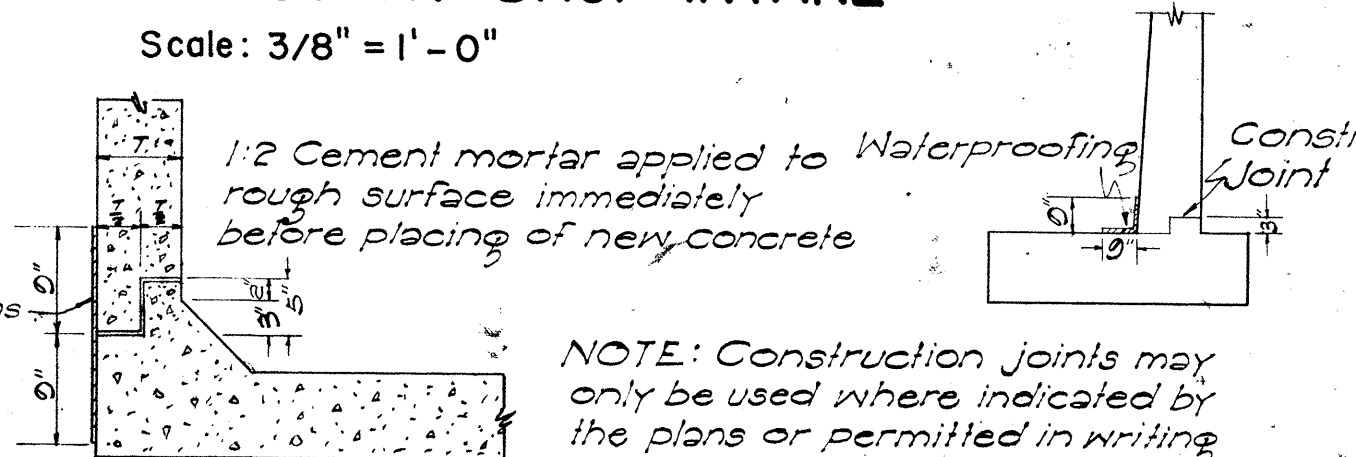
SECT. "B-B"

REINFORCING BARS

All reinforcing bars for concrete shall be Billet Steel bars, ASTM A15, intermediate grade. Steel shall be made by the open-hearth process. All bars shall be deformed type conforming to ASTM A-305.

DETAIL OF MASONRY DROP INTAKE

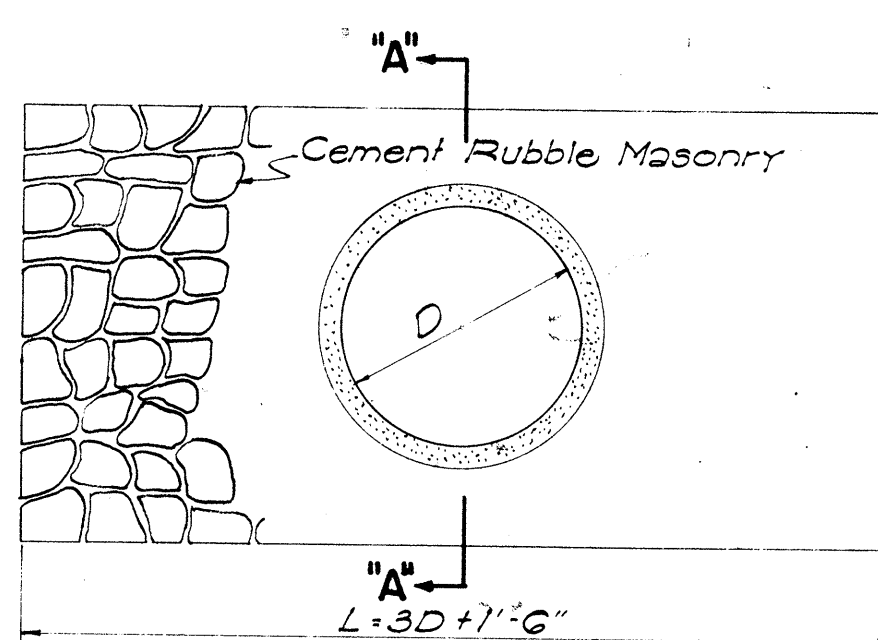
Scale: 3/8" = 1'-0"



CONSTR. JOINT DETAILS

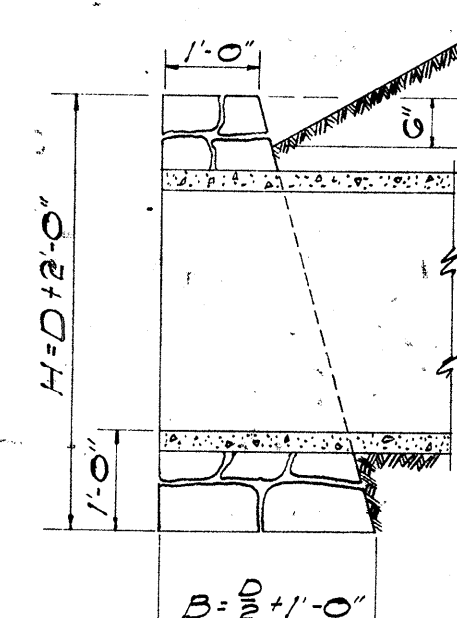
NOTE: Construction joints may only be used where indicated by the plans or permitted in writing by the Engineer.

DATA - MASONRY HEADWALL				
D	H	B	L	
18"	3'-6"	1'-0"	6'-0"	0.85
24"	4'-0"	2'-0"	7'-6"	1.28
30"	4'-6"	2'-3"	9'-0"	1.83
36"	5'-0"	2'-6"	10'-6"	2.40

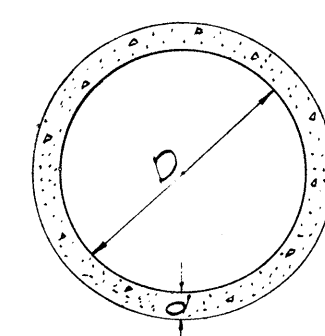


DETAIL OF MASONRY HEADWALL

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



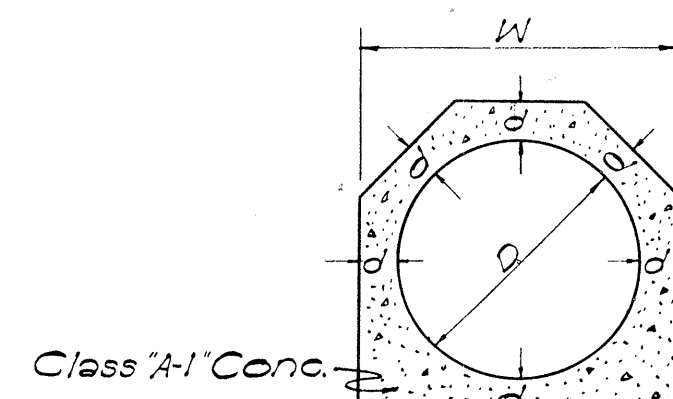
SECT. "A-A"



SECTION

CONC. PIPE CULVERT

NOTE: Thickness "d", reinforcing, and concrete used, are to conform with the approved design as provided by the Specifications.



SECTION

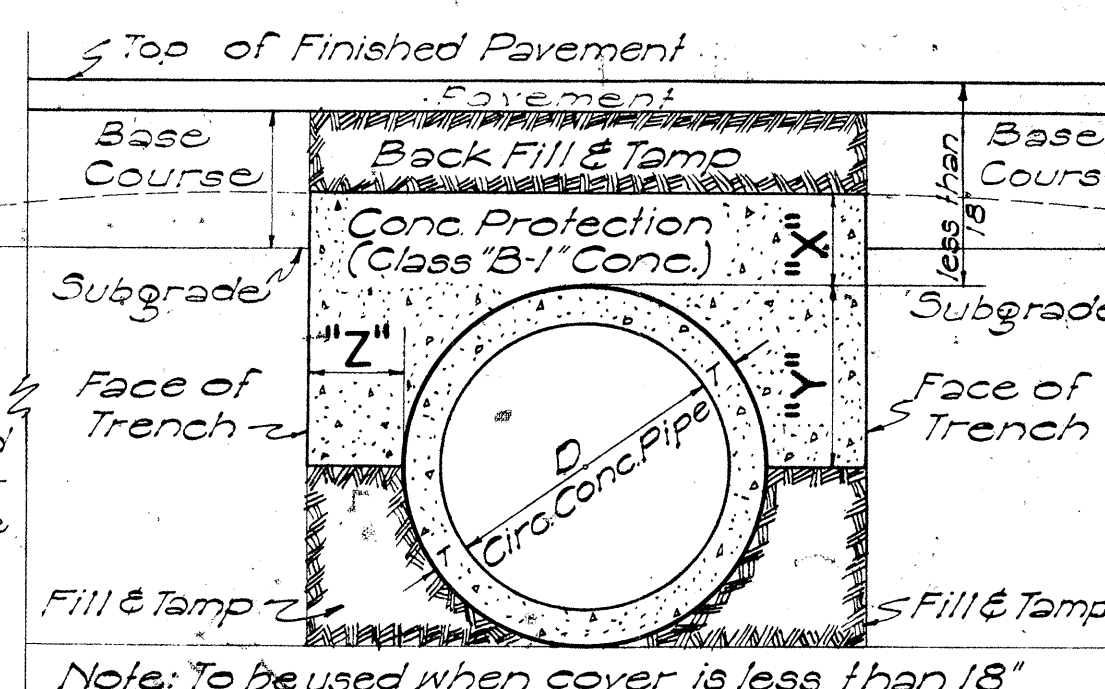
CAST-IN-PLACE CONC. CULVERT

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	

DATA FOR CONC. HEADWALL				
D	B	L	H	
18"	1'-6"	6'-0"	4'-0"	0.02
24"	1'-6"	7'-6"	4'-6"	1.23
30"	2'-0"	9'-0"	5'-0"	1.05
36"	2'-0"	10'-6"	5'-6"	2.45
42"	2'-6"	12'-0"	6'-0"	3.87
48"	2'-6"	13'-6"	6'-6"	4.66

DETAIL OF CONCRETE HEADWALL

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

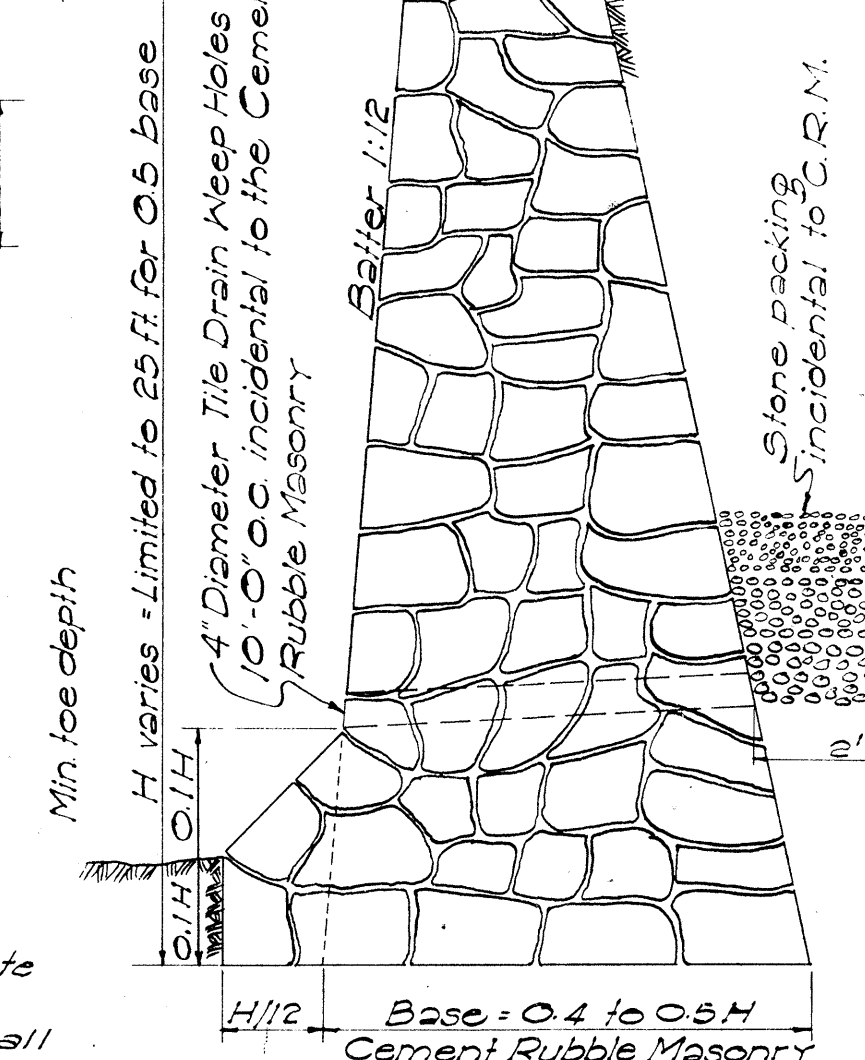


DATA FOR CONCRETE PROTECTION OVER CULVERTS		
X	Y	Z
6" for 18" D		Z must be from pipe to face of trench
7" " 24" D		
8" " 30" D		
9" " 36" D		
10" " 42" D		
11" " 48" D		
12" " 54" D		

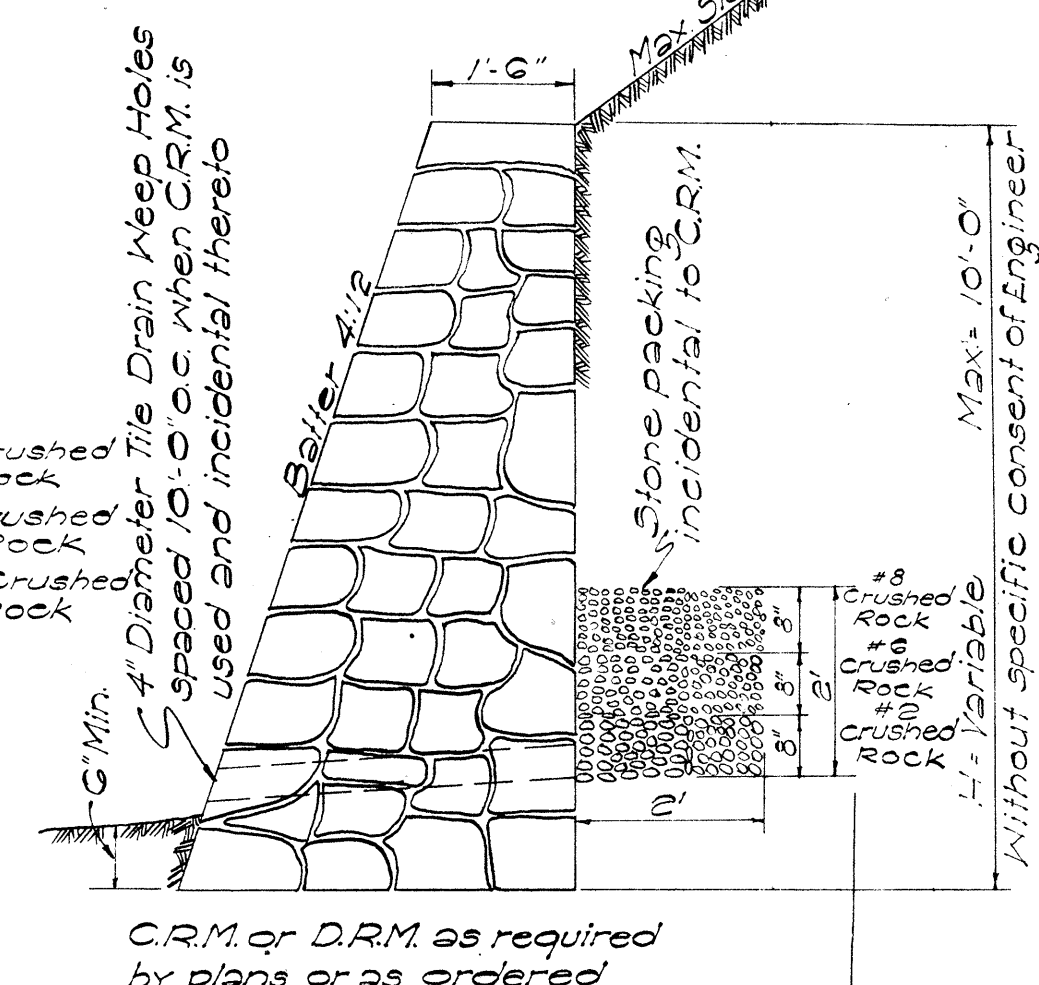
SECT. OF CULVERT WITH CONC. PROTECTION

Scale: 1" = 1'-0"

Note: To Resident Engineer
 1) Consider economy of reinf. conc. for high retaining walls which did not originate on plan layout.
 2) 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.



SECTION OF HIGH CEMENT RUBBLE MASONRY RETAINING WALL OR SEAWALL

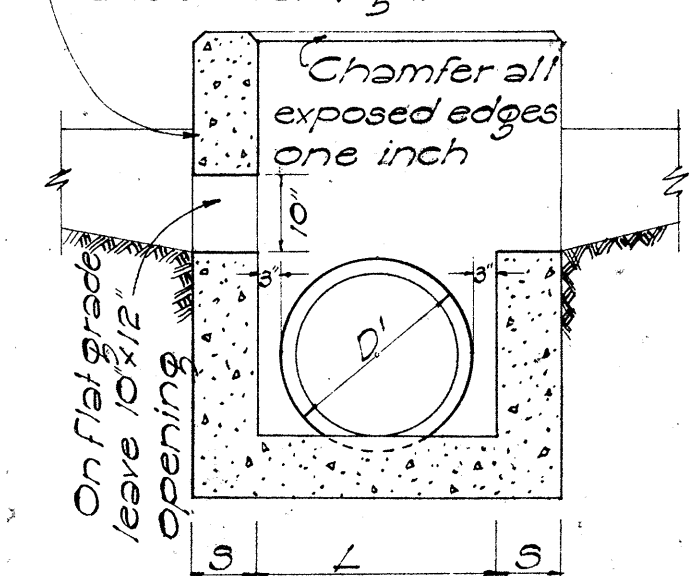


SECTION OF LOW MASONRY RETAINING WALL OR SEAWALL

DATA - CONC. DROP INTAKE				
D'	D	L=D+G	Cu. Yds.	Where Variables Equal
23"	18"	2'-5"	1.41	4'-6"
30"	24"	3'-0"	1.72	5'-0"
37"	30"	3'-7"	2.32	5'-6"
44"	36"	4'-2"	2.73	6'-0"
51"	42"	4'-9"	3.54	6'-6"
58"	48"	5'-4"	4.01	7'-0"

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

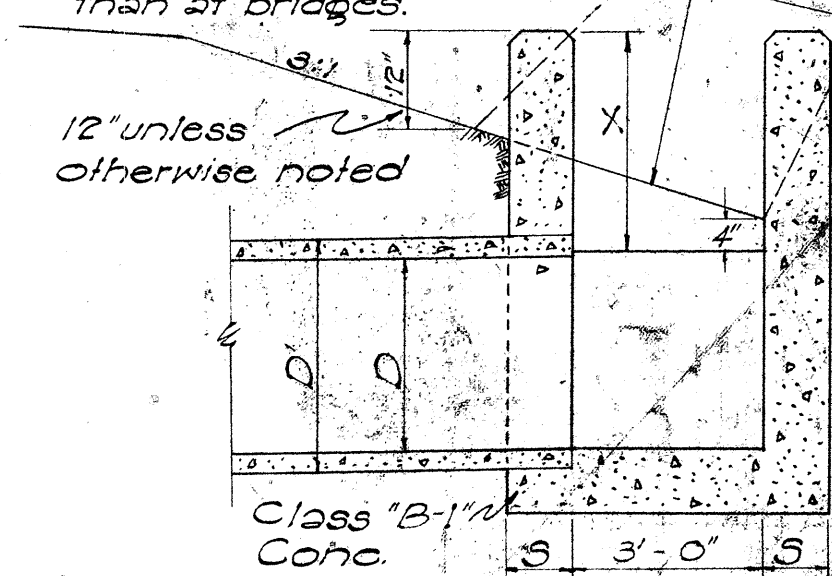
Note: This type of structure shall also be used for the Drop Intakes of Irrigation Ditches or Flumes with appropriate changes to dimensions. In this case all joints must be made water tight.



SECTION "B-B"

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

Excavate recess in roadway excavation slope for inlet to dimensions and form designated by Engineer. This is Unclassified Excavation.



SECTION "A-A"

DETAIL OF CONCRETE DROP INTAKE

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

HAWAII STATE HIGHWAY DEPARTMENT
STATE OF HAWAII

STANDARD DETAILS
 DROP INTAKES, RETAINING WALLS,
 HEADWALLS, CONSTRUCTION JOINTS
 SCALES AS NOTED

SHEET No 2 OF 11 SHEETS

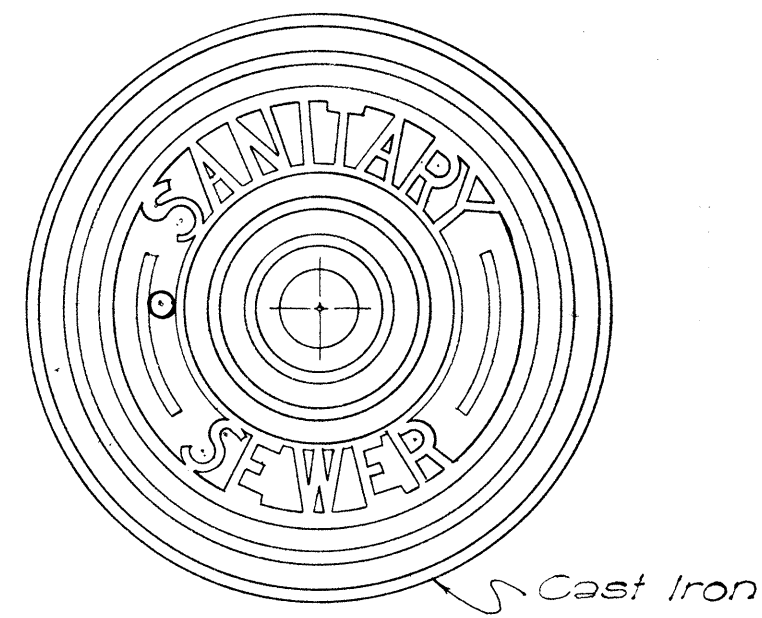
S132(1).3 S

APPROVED: DATE: Aug. 23, 1952
 STATE HIGHWAY ENGINEER

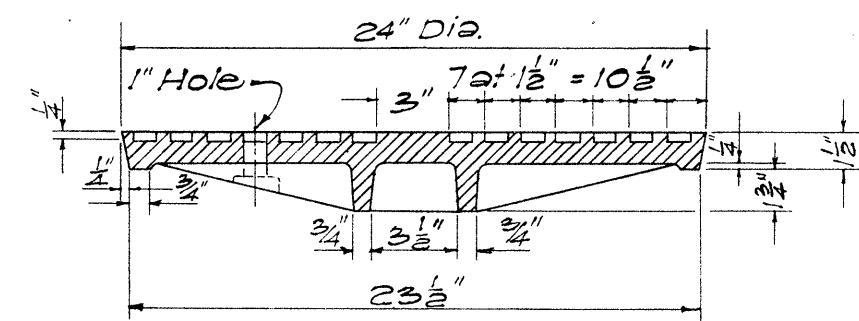
2/17/50
8/14/50

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	5-06306	1950	40	47
August 1957					

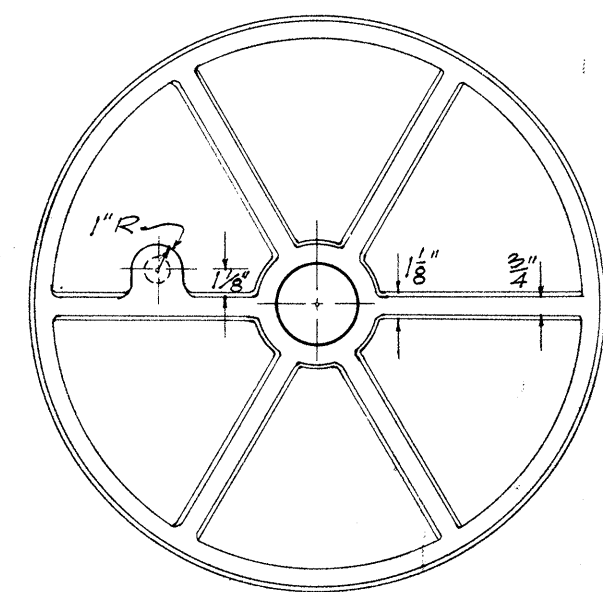
NOTE: Stock Pattern From Novelty Foundry ~ Honolulu



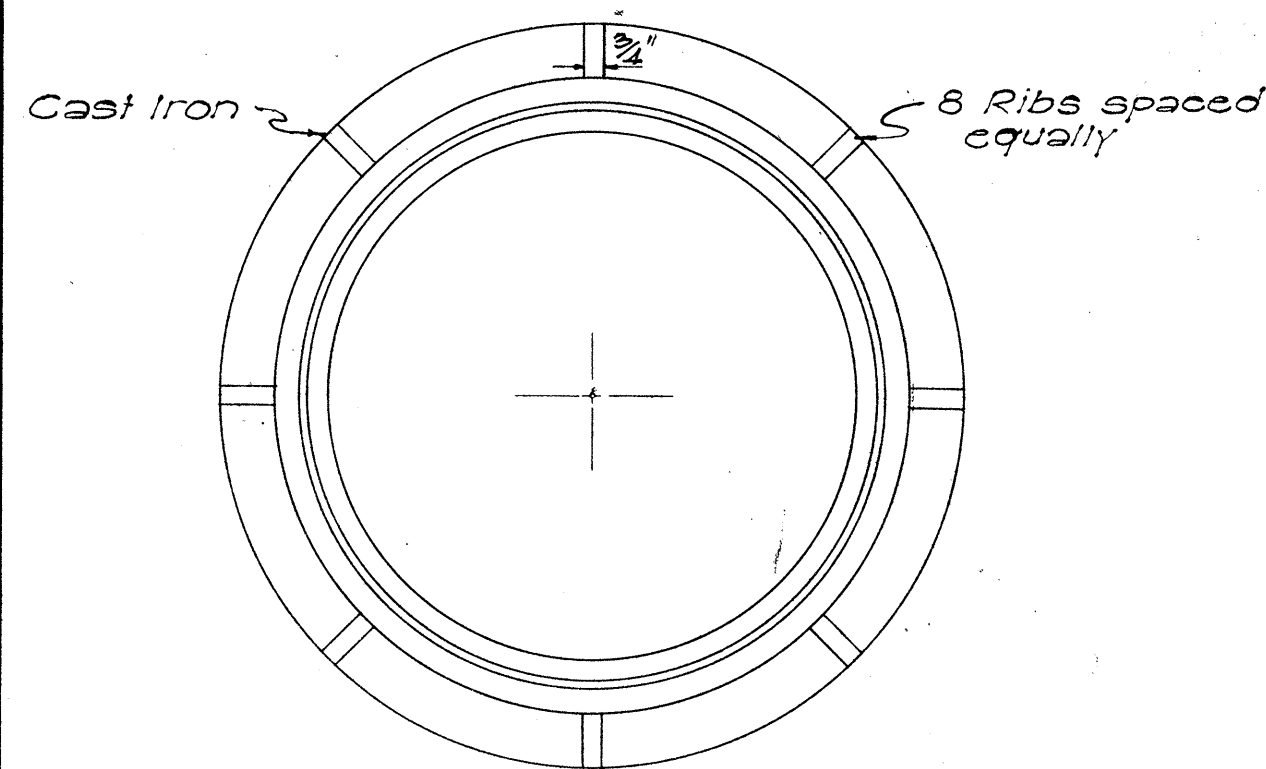
TOP VIEW OF COVER



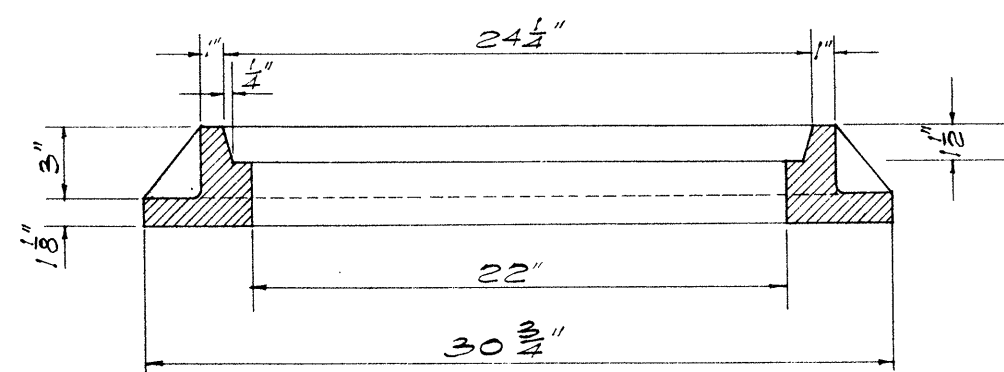
SECTION



BOTTOM VIEW OF COVER

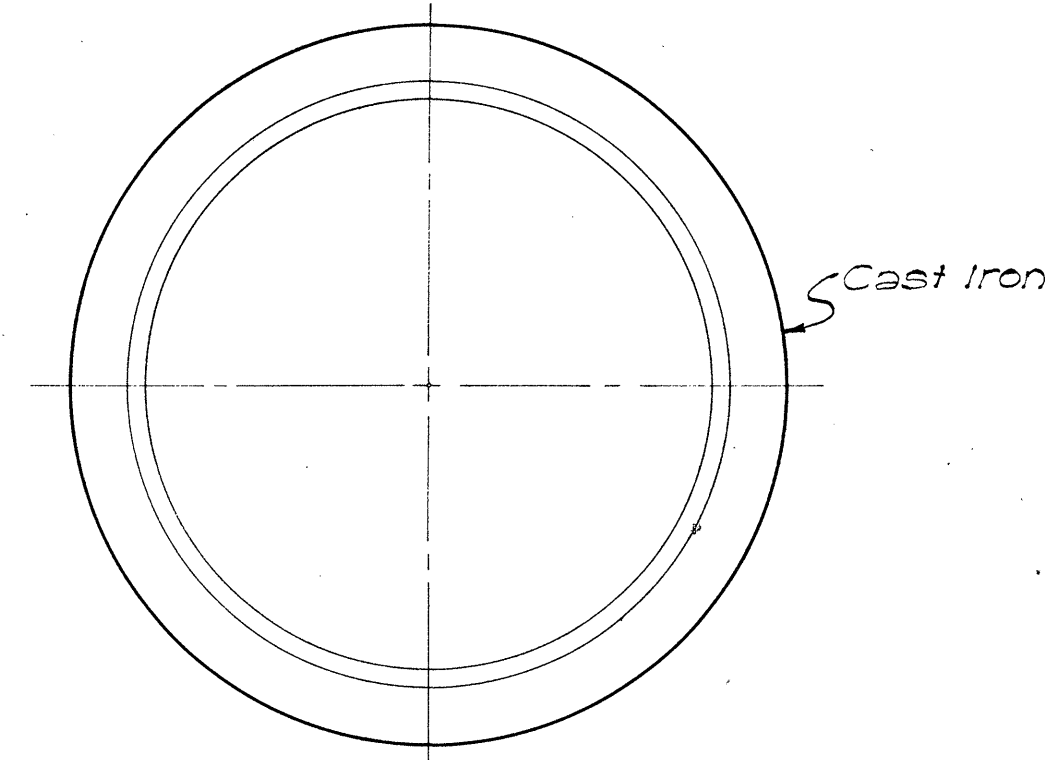


PLAN OF RIM

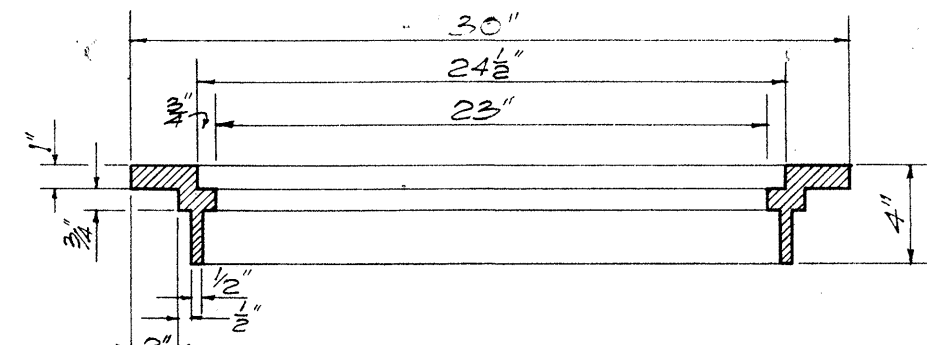


SECTION OF RIM
DETAILS OF TYPE "C"
MANHOLE CASTINGS

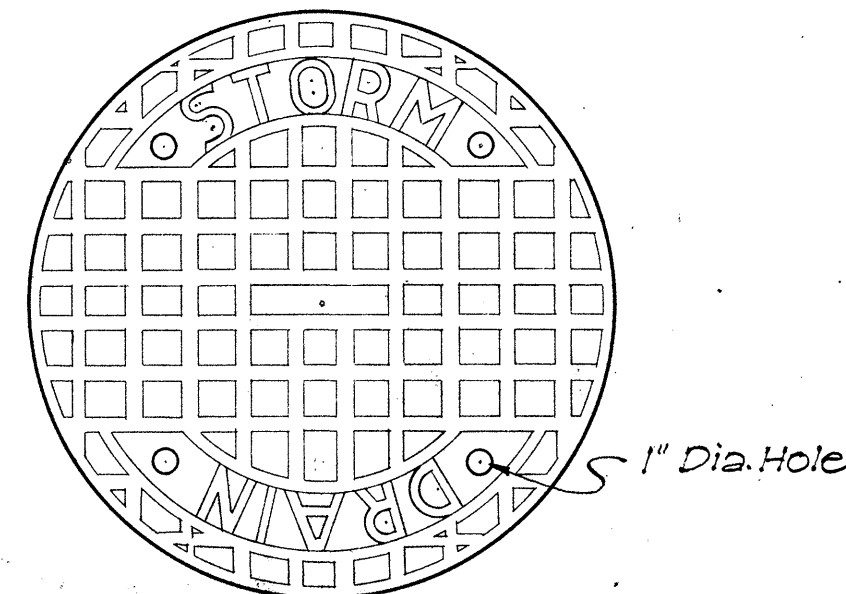
SCALE: 1-1/2" = 1'-0"



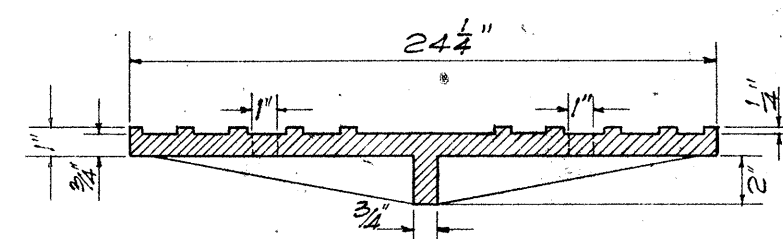
PLAN OF RIM



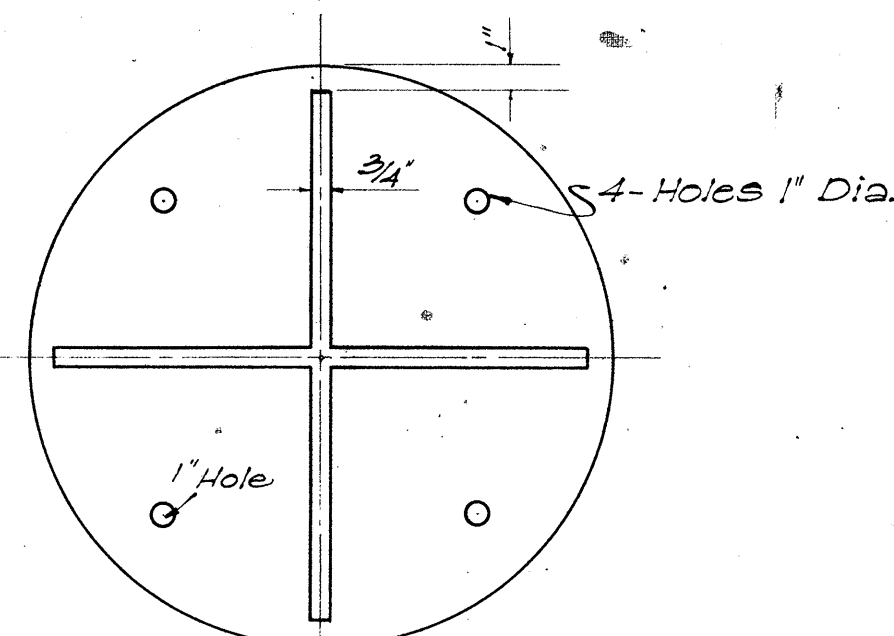
SECTION OF RIM



TOP VIEW OF COVER



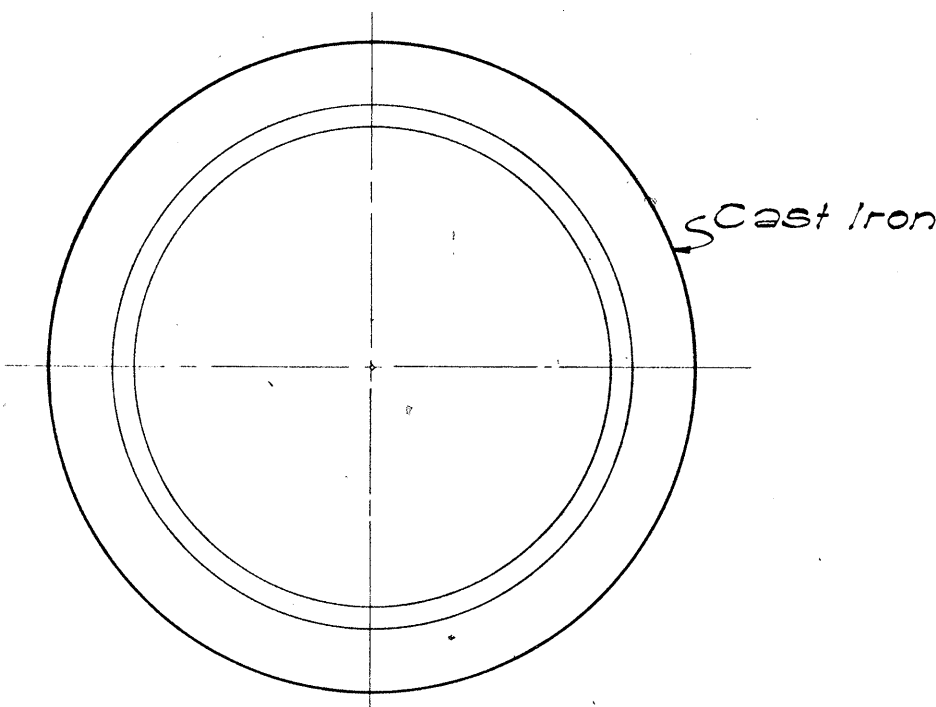
SECTION



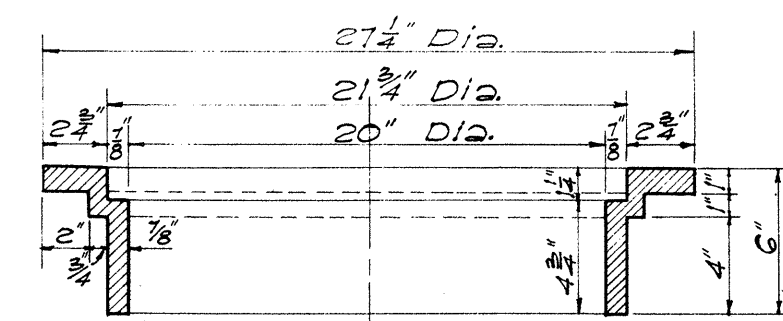
BOTTOM VIEW OF COVER

DETAILS OF TYPE "B"
CATCH BASIN CASTINGS

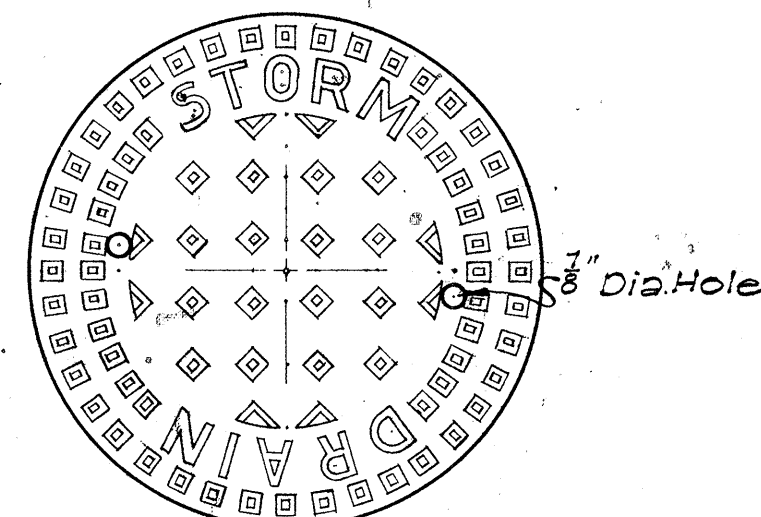
SCALE: 1-1/2" = 1'-0"



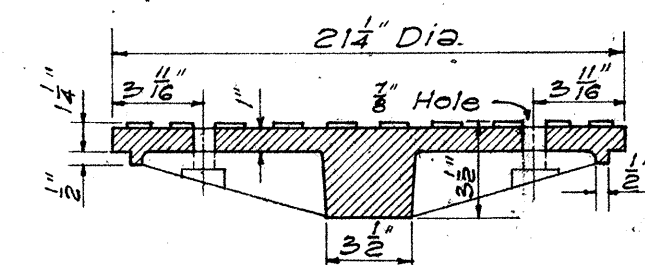
PLAN OF RIM



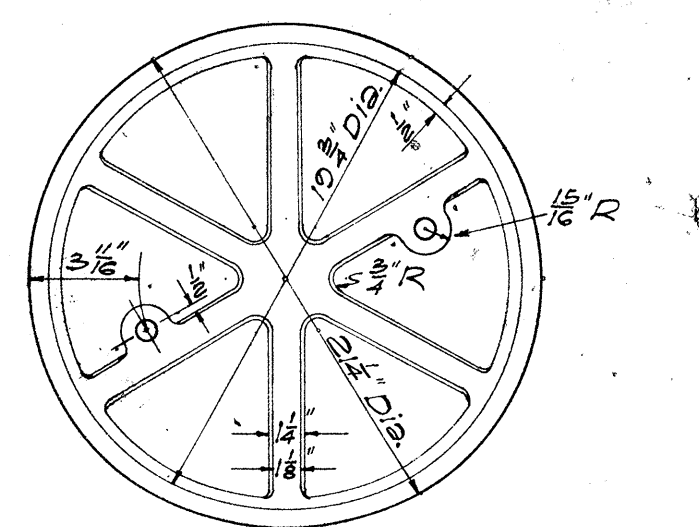
SECTION OF RIM



TOP VIEW OF COVER



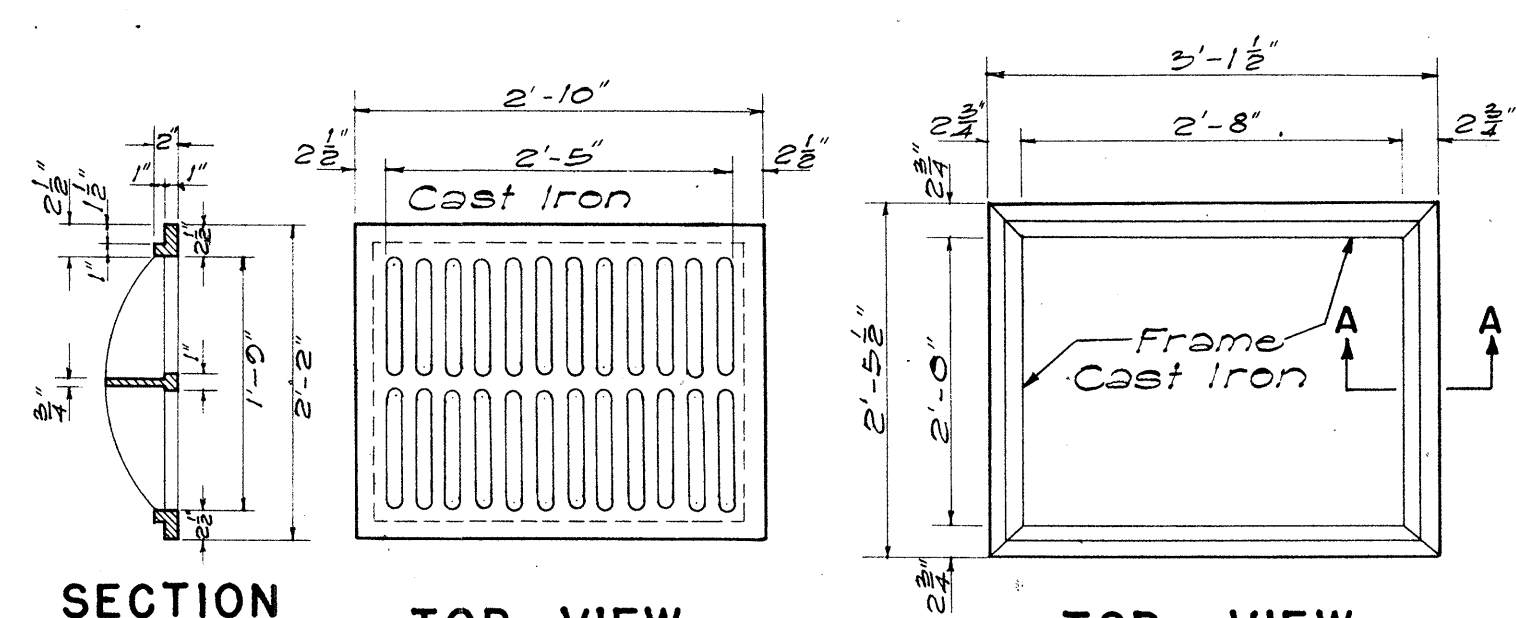
SECTION



BOTTOM VIEW OF COVER

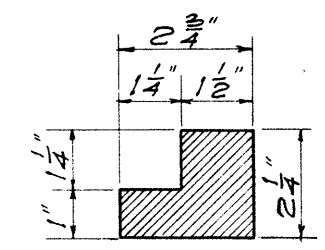
DETAILS OF TYPE "A"
MANHOLE CASTINGS

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

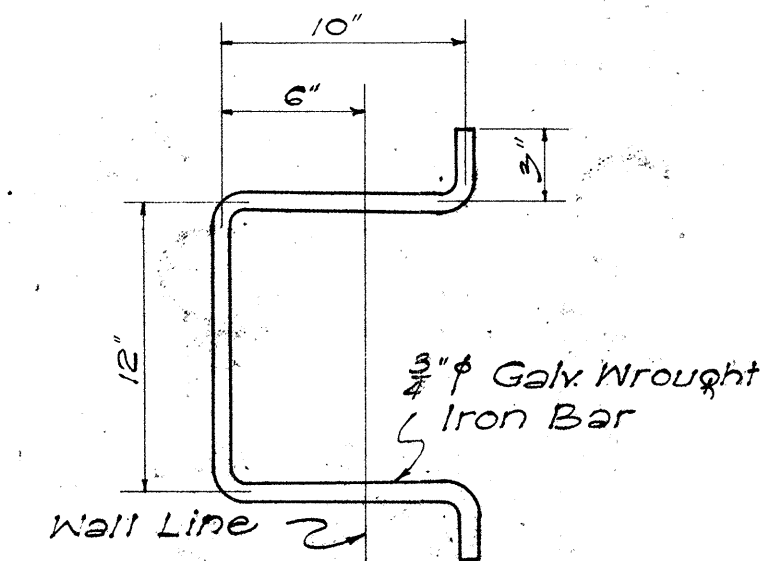


SECTION TOP VIEW
TYPE C C.I. FRAME AND GRATING

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

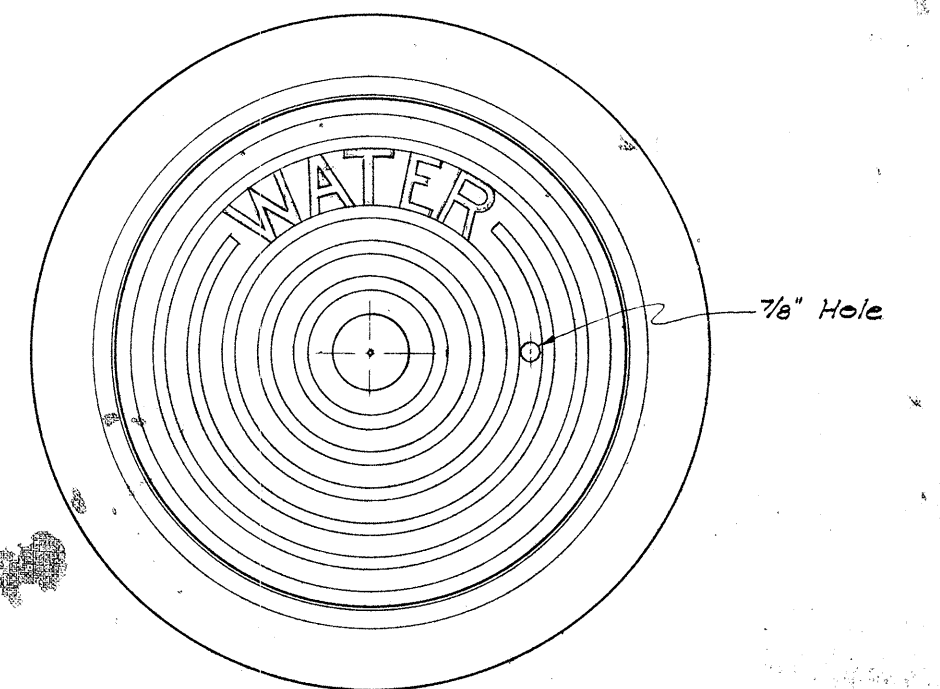


SECTION "A-A"
SCALE 3" = 1'-0"

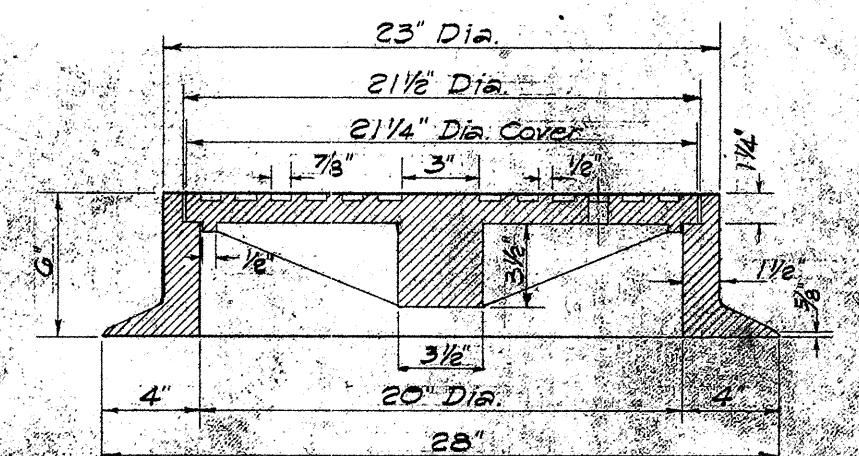


MANHOLE RUNG

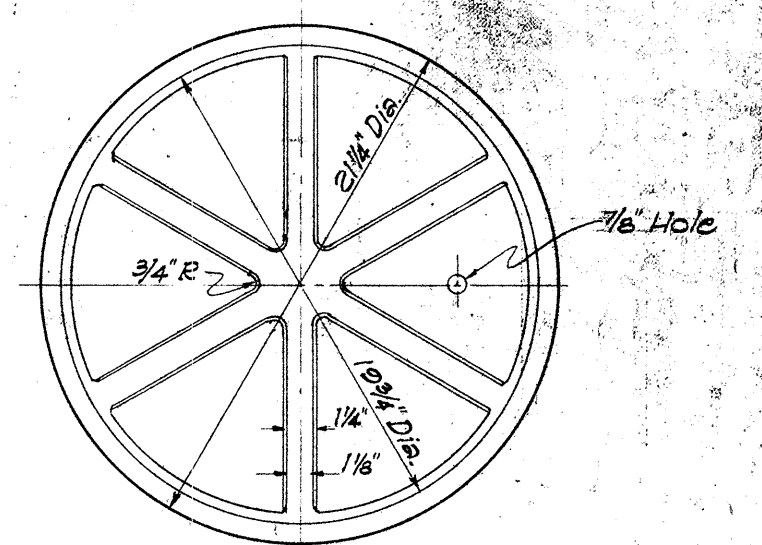
SCALE: 1-1/2" = 1'-0"



PLAN OF FRAME AND COVER



SECTION OF FRAME AND COVER



BOTTOM VIEW OF COVER

DETAILS OF 20" CAST IRON
FRAME AND COVER FOR
WATER MANHOLE

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

APPROVED: DATE: Aug. 26, 1957
STATE HIGHWAY ENGINEER

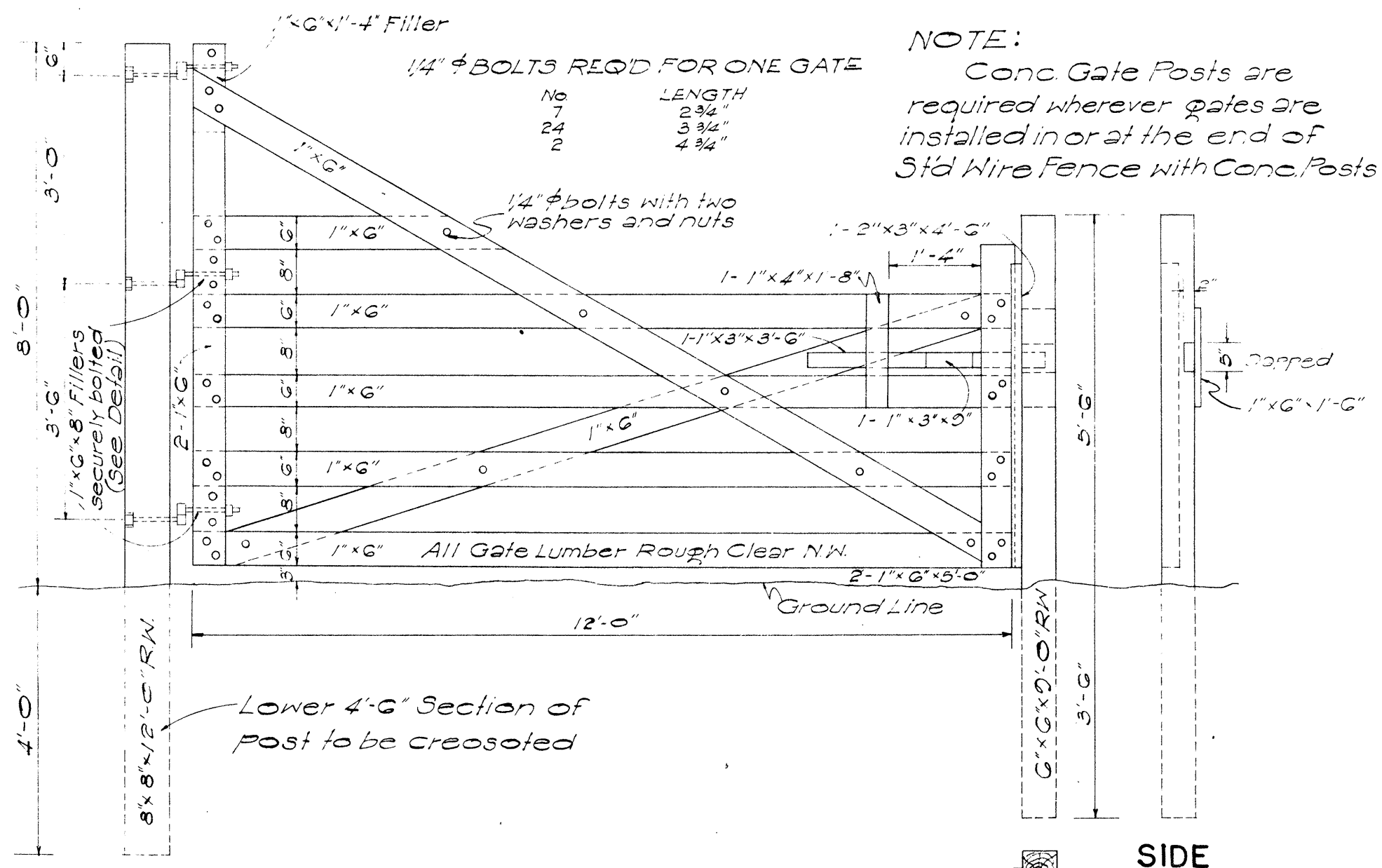
HAWAII STATE HIGHWAY DEPARTMENT
STATE OF HAWAII
STANDARD DETAILS
CATCH BASIN AND
MANHOLE CASTINGS
SCALES AS NOTED

SHEET NO. 4 OF 11 SHEETS

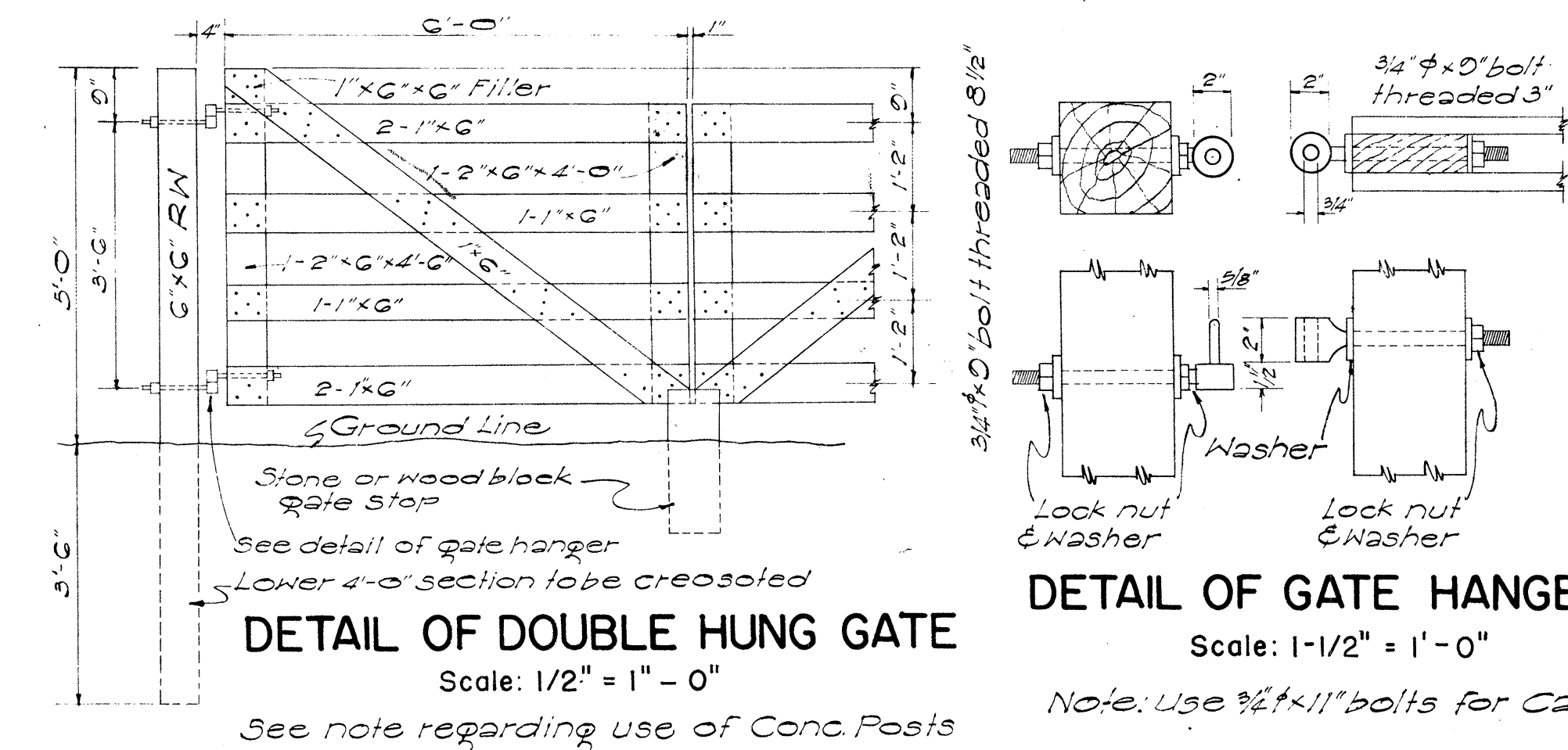
\$132 (1).40

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

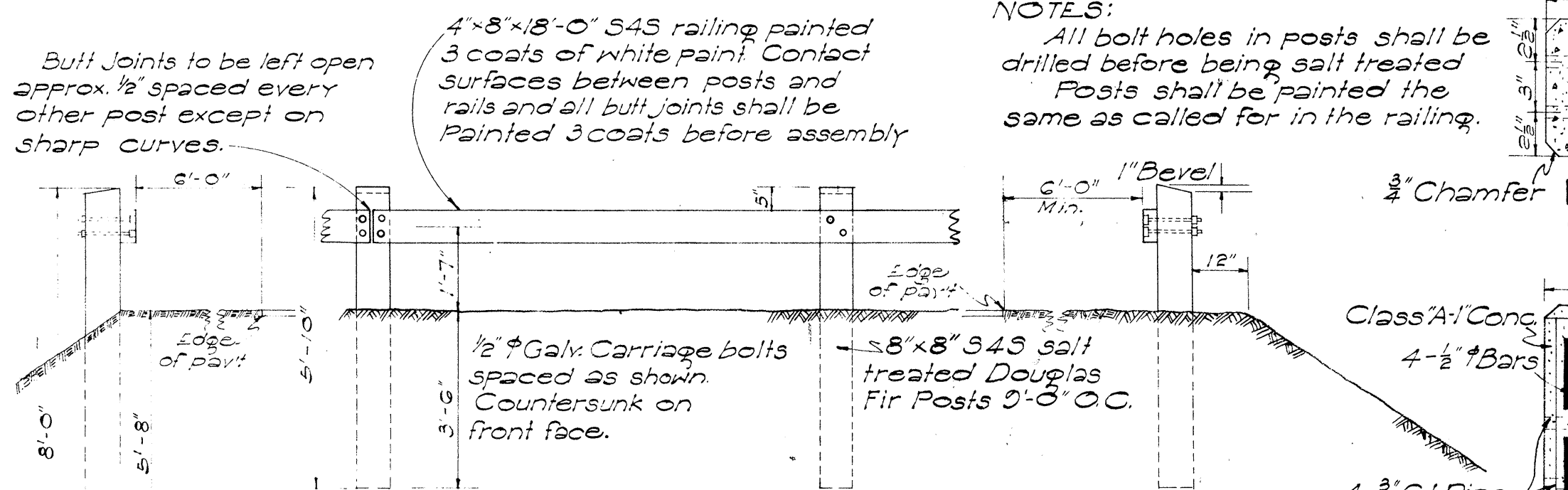
AUG. 1957



DETAIL OF CATTLE GATE
Scale: 1/2" = 1'-0"

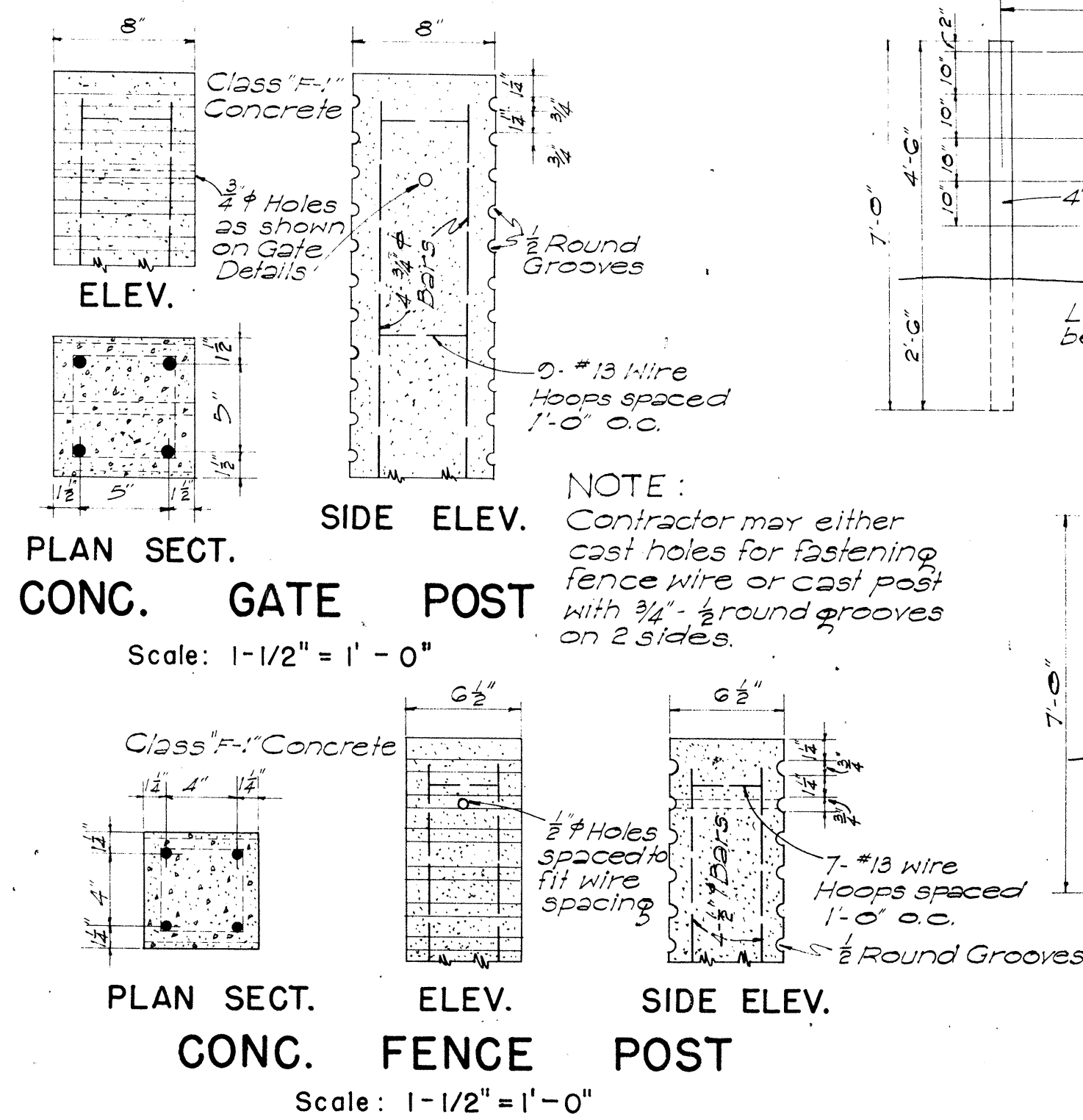


DETAIL OF DOUBLE HUNG GATE
Scale: 1/2" = 1'-0"

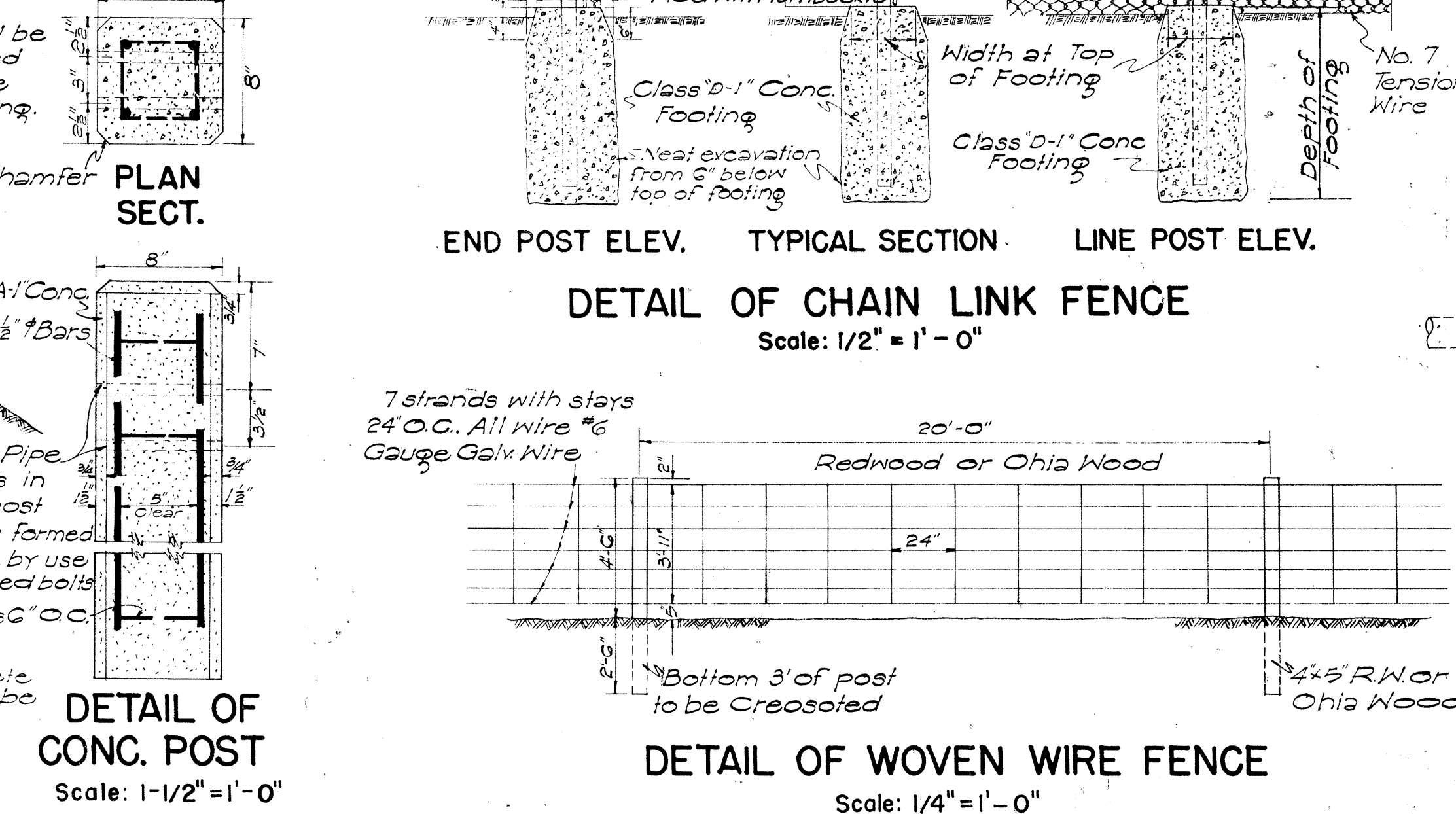


WOOD GUARD RAIL WITH WOOD POSTS
Scale: 3/8" = 1'-0"

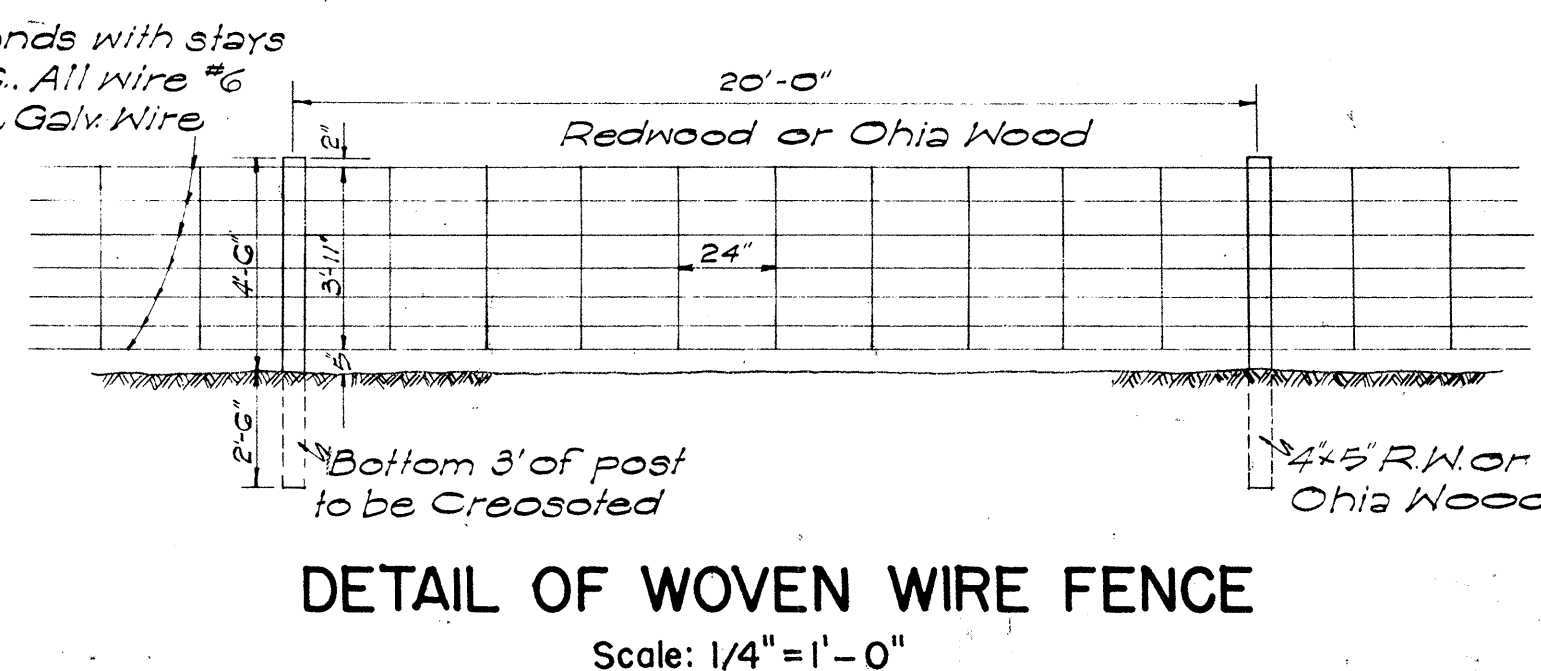
GUIDE POSTS: Wood or Conc. Guide Posts are the same as those used for Wood Guard Rail spaced as shown on plans.



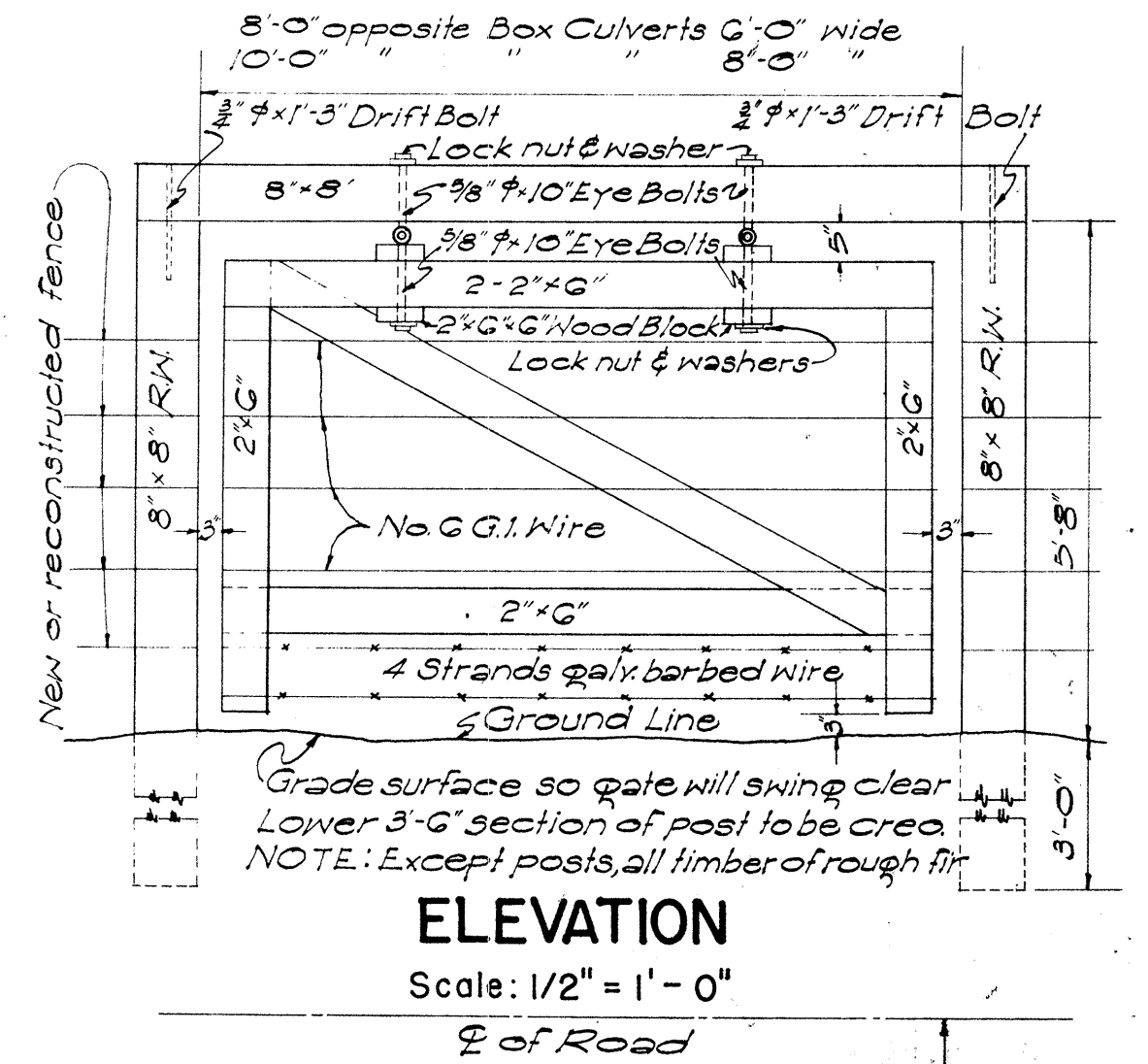
DETAILS OF STANDARD WIRE FENCE WITH WOOD POSTS
Scale: 3/8" = 1'-0"



DETAIL OF CHAIN LINK FENCE
Scale: 1/2" = 1'-0"

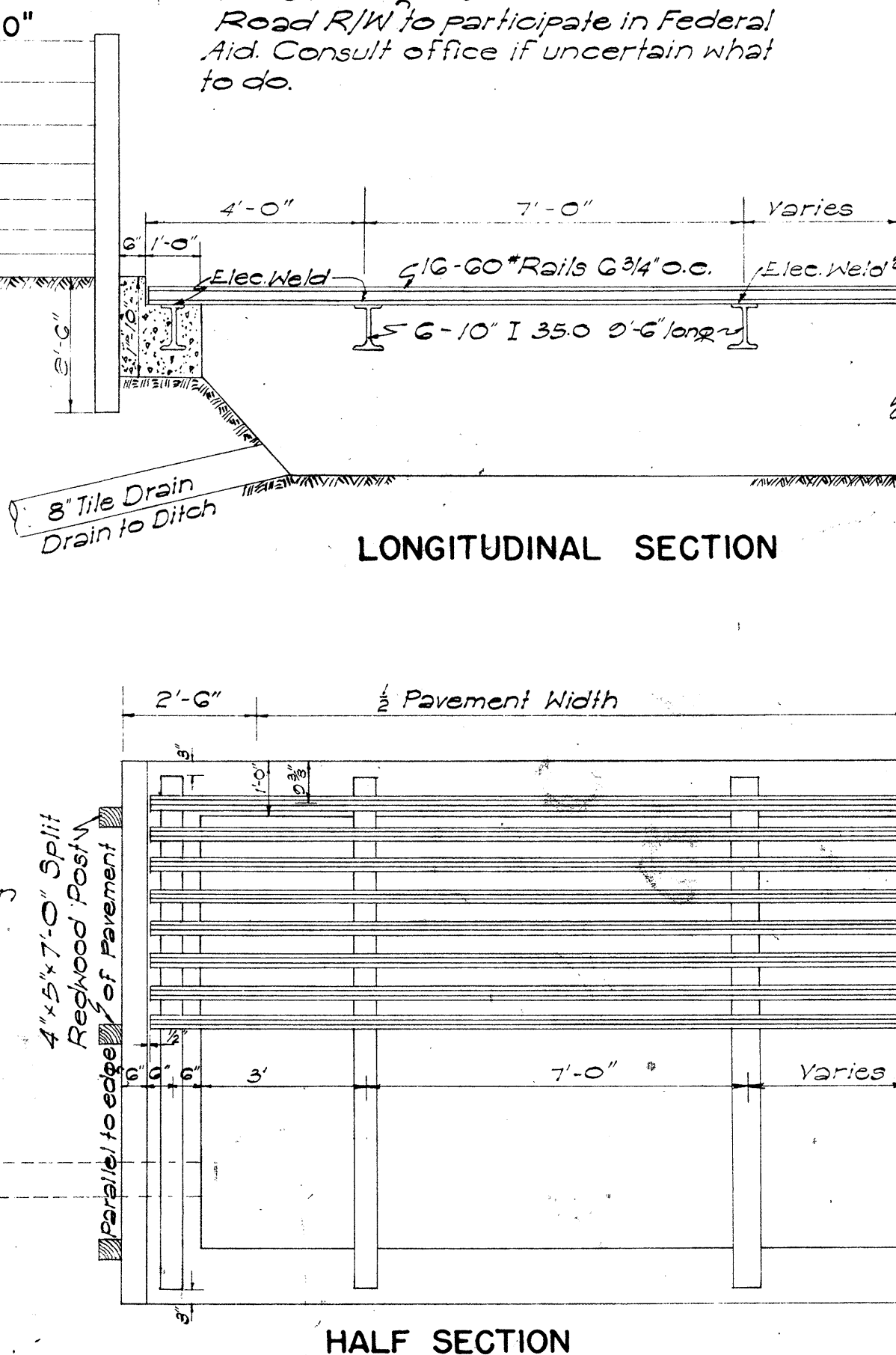


DETAIL OF WOVEN WIRE FENCE
Scale: 1/4" = 1'-0"



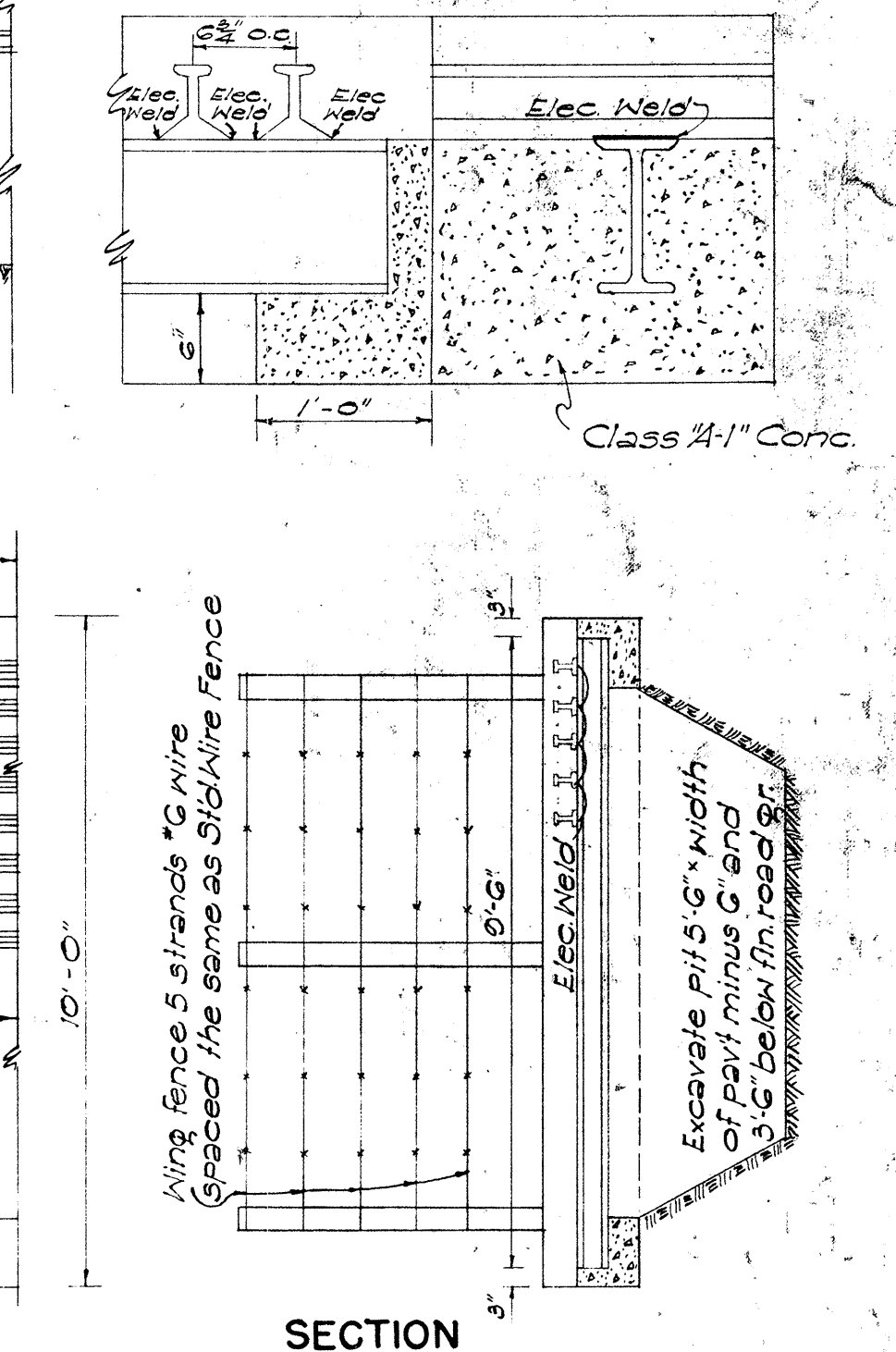
LAYOUT SHOWING HURDLE PLACED BELOW CULVERT IN A POSITION WHICH WILL BE CATTLE TIGHT

DETAILS OF HURDLE



LONGITUDINAL SECTION

DETAIL OF CATTLE GUARD
Scale: 3/8" = 1'-0"



SECTION

HAWAII STATE HIGHWAY DEPARTMENT
STATE OF HAWAII

STANDARD DETAILS
FENCES, GATES, GUARD RAILS,
GUIDE POSTS, CATTLE GUARD

SCALES AS NOTED

2/17/59
4/6/59
4/28/59

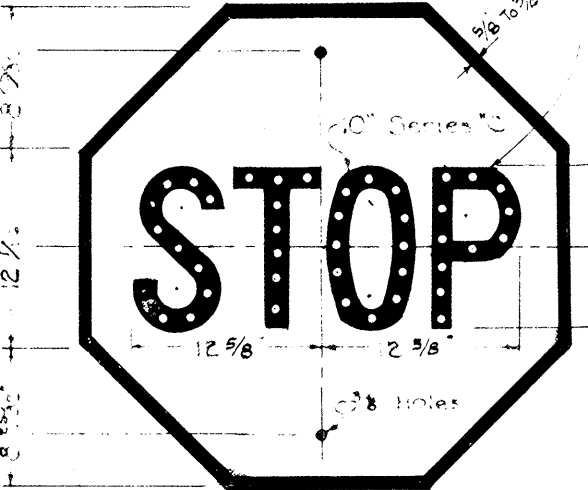
White Letters and Border on Red Backgrounds. Background may be of red reflective sheeting. Letters to be reflectorized with buttons or reflective sheeting.

Note: All Regulatory and Warning Signs Shall Have $\frac{1}{8}$ " Bolt Holes.

NOTE: Signs noted with an (R) designation indicate reflectorization with either buttons or reflective sheeting.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	5-0630(4)	1959	42	47

JULY 3, 1957

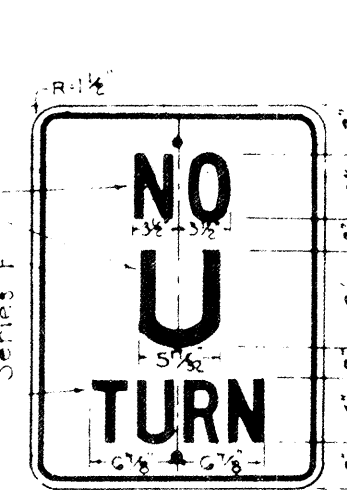


R-1
30" x 30"

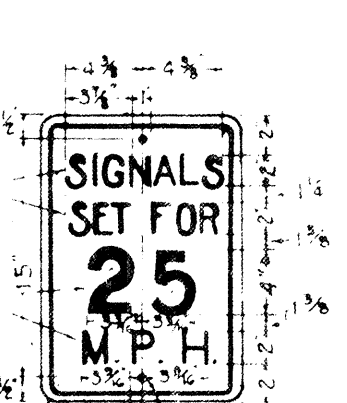
Red Letters & Border on White Background



R-6
18" x 24"



R-8
18" x 24"



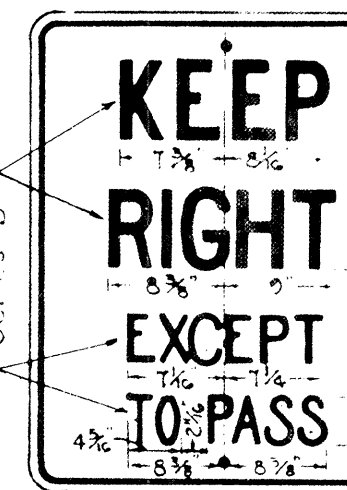
R-10
12" x 18"



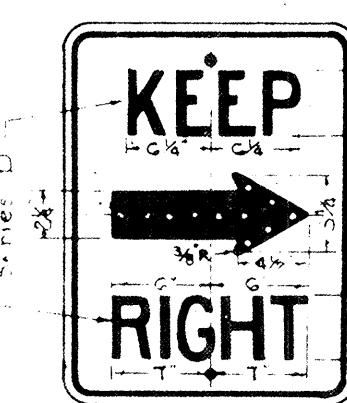
R-11
18" x 24"



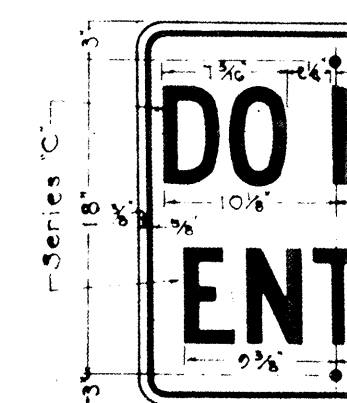
R-12
18" x 24"



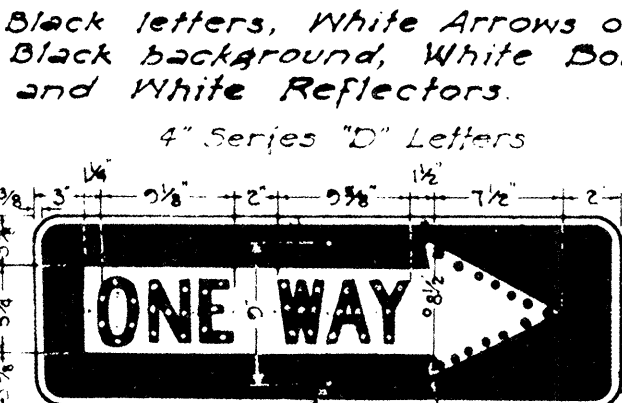
R-13
24" x 30"



R-14 (R)
18" x 24"



R-15
24" x 24"



R-16-R (R)
R-16-L (R)
36" x 12"



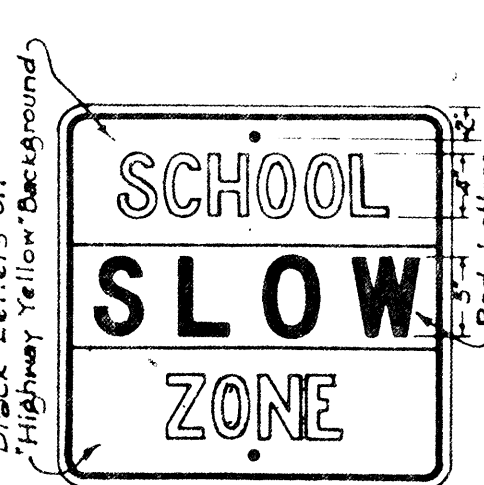
R-18
12" x 18"



R-26
12" x 18"



R-29
24" x 30"



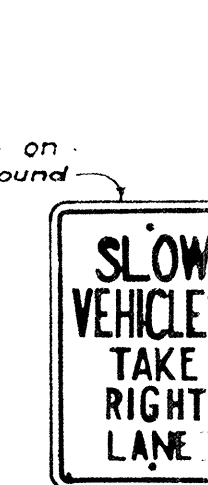
R-41-S
24" x 24"



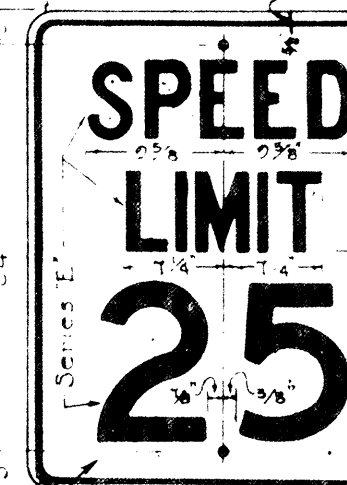
R-42-S
12" x 18"



R-43-S
12" x 18"



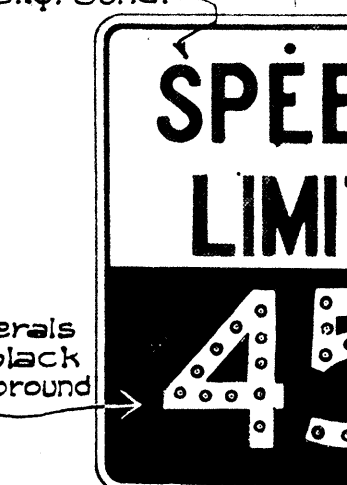
R-44-S
12" x 18"



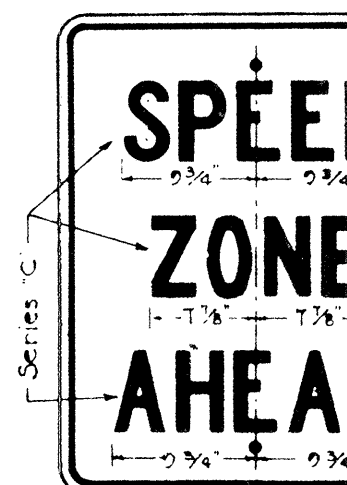
R-102-A
24" x 30"



R-102-B
24" x 30"



R-102-C (R)
24" x 30"



R-104
24" x 30"



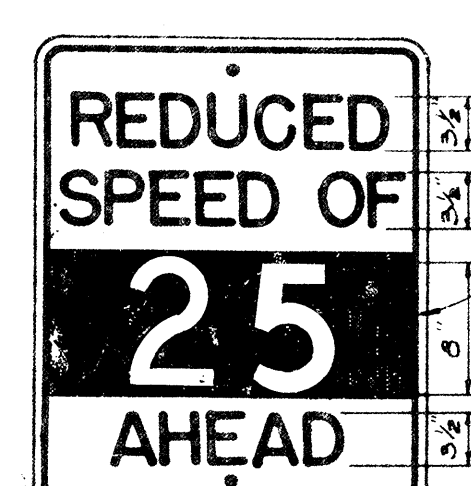
R-105-A (R)
24" x 30"



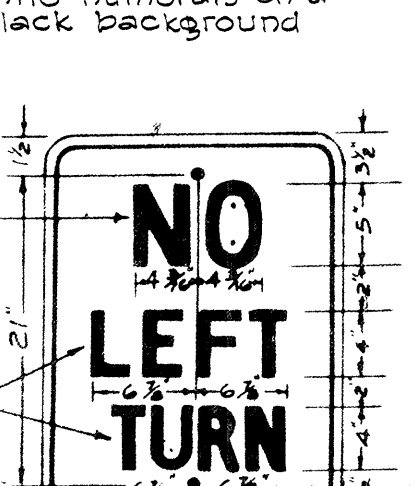
R-105-B
24" x 30"



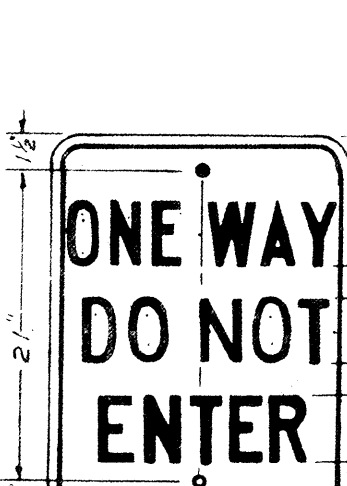
R-105-C
24" x 30"



R-104-A
24" x 30"



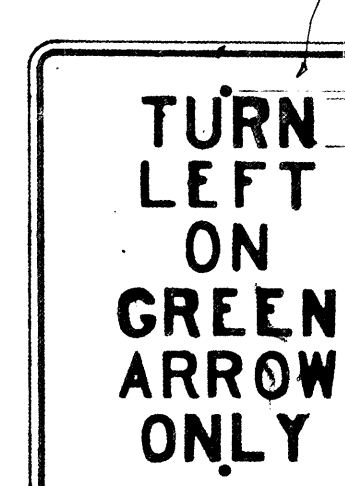
R-7
18" x 24"



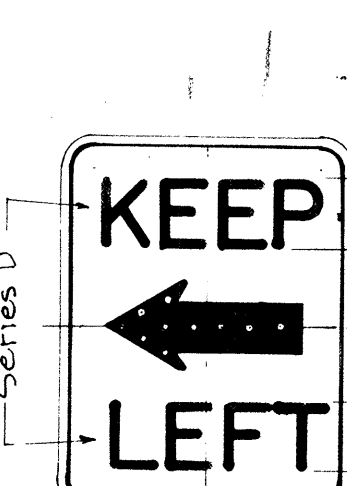
R-66
18" x 24"



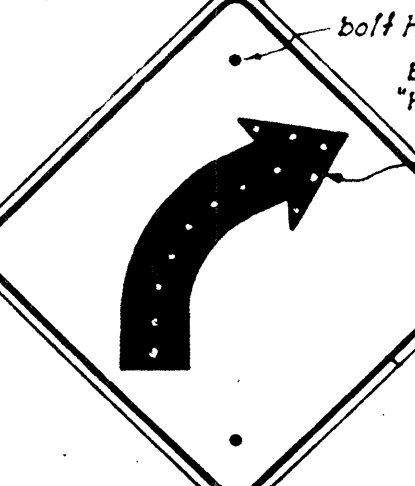
R-106
24" x 30"



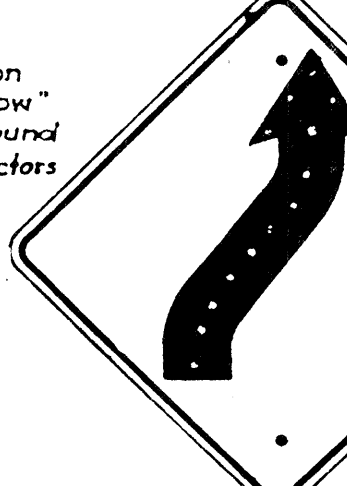
R-107-A
24" x 30"



R-14-A
24" x 24"



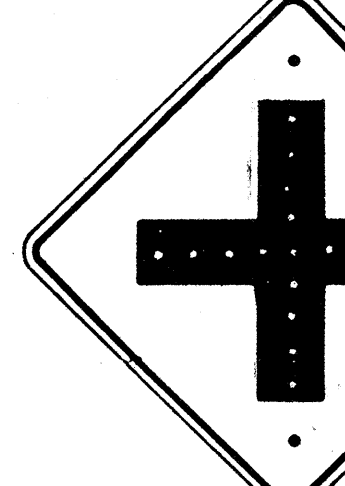
W-2-R
*W-2-L
24" x 24"



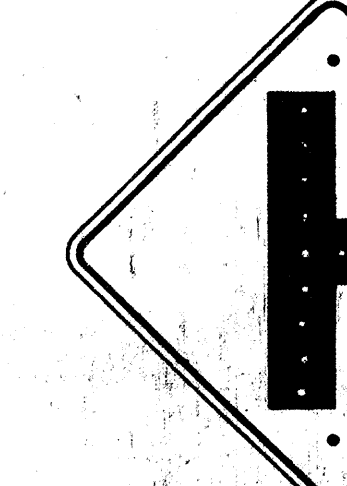
W-4-R
*W-4-L
24" x 24"



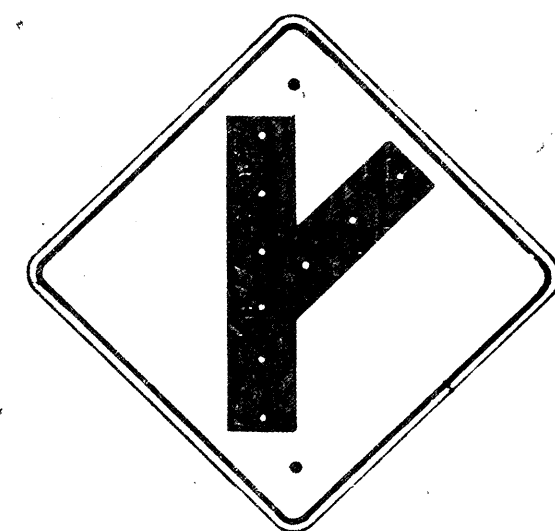
W-5-R
*W-5-L
24" x 24"



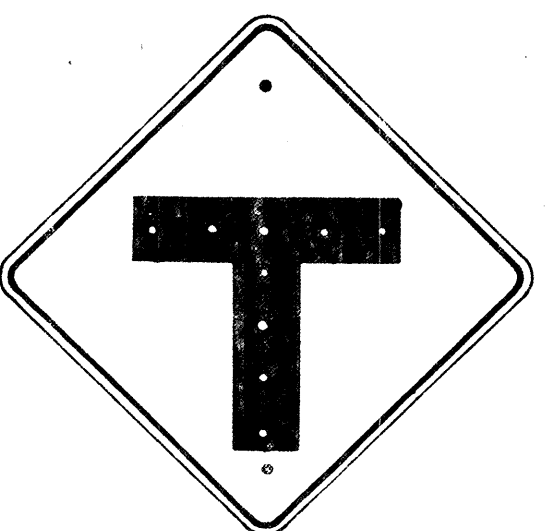
W-6
24" x 24"



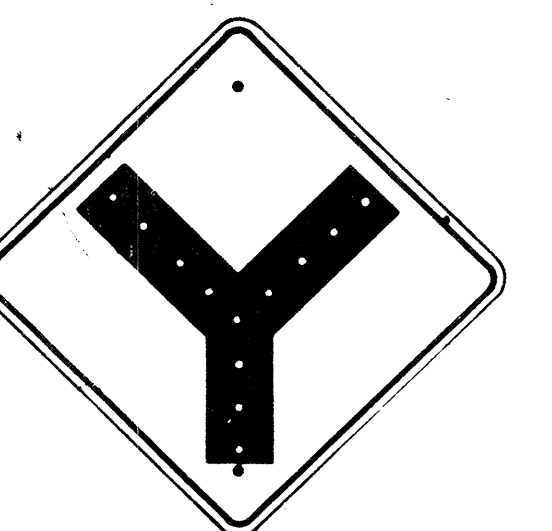
W-7
24" x 24"



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



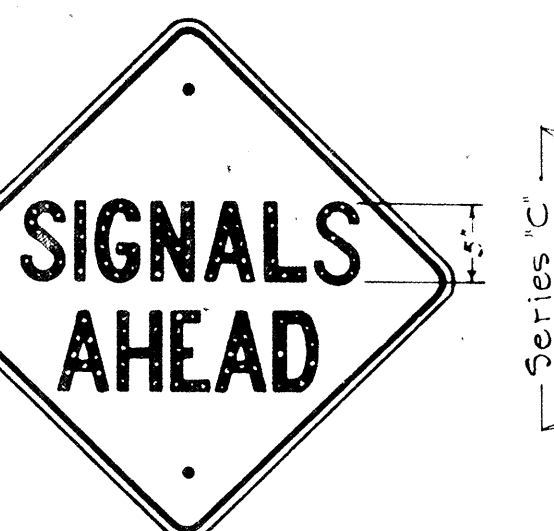
W-9
24" x 24"



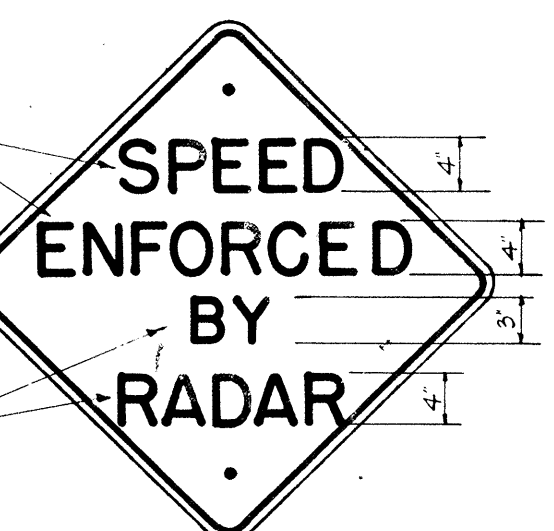
W-10
24" x 24"



W-13
24" x 24"



W-14
24" x 24"



W-40
24" x 24"



W-19
30" x 30"



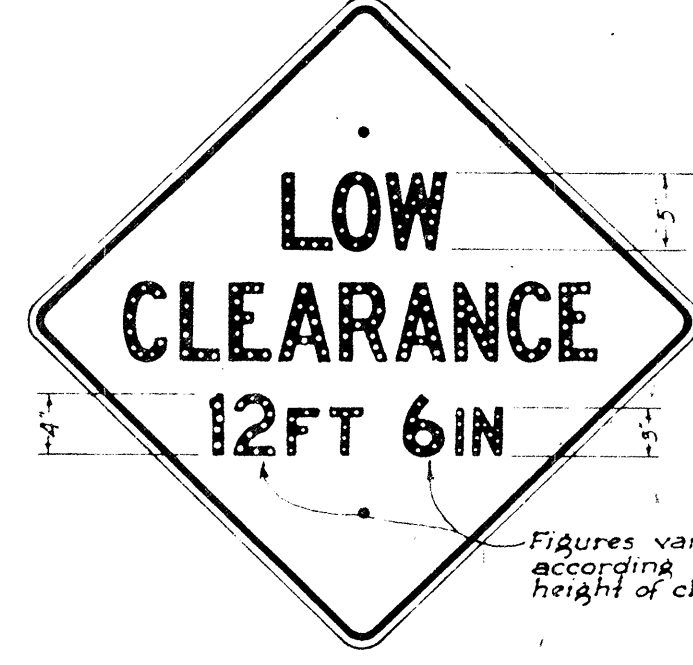
W-20
30" x 30"



W-21
30" x 30"



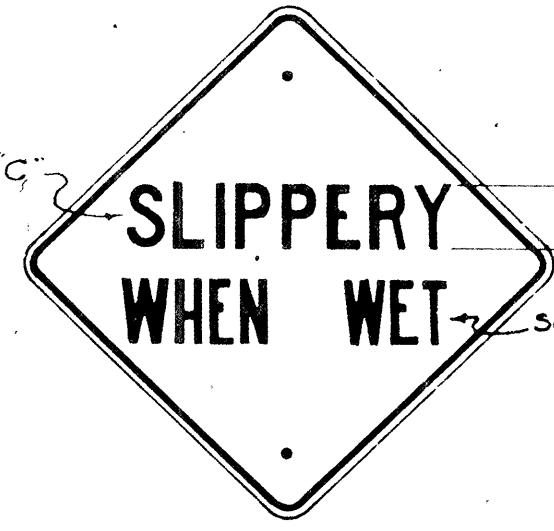
W-22
24" x 24"



W-24
30" x 30"



W-25
24" x 24"



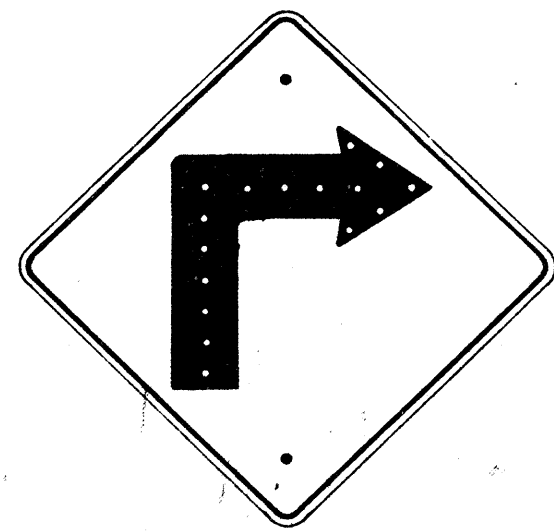
W-29
24" x 24"



W-59
24" x 24"



W-39
24" x 24"



W-1-R
*W-1-L
24" x 24"

NOTE: R-104, A, B, C signs with (R) designation shall have white numerals reflectorized with buttons or reflective sheeting on a black background.

NOTE: R-102, A, B, C signs with (R) designation: Lower half with white numerals, reflectorized with buttons or reflective sheeting, on black background.

NOTE: R-105, A, B, C signs with (R) designation shall have white numerals, reflectorized with buttons or reflective sheeting on a black background.

Background may be made of Yellow Reflective sheeting.

Unless otherwise specified, all signs shall conform with requirements of "Manual on Uniform Traffic Control Devices for Streets and Highways."

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.

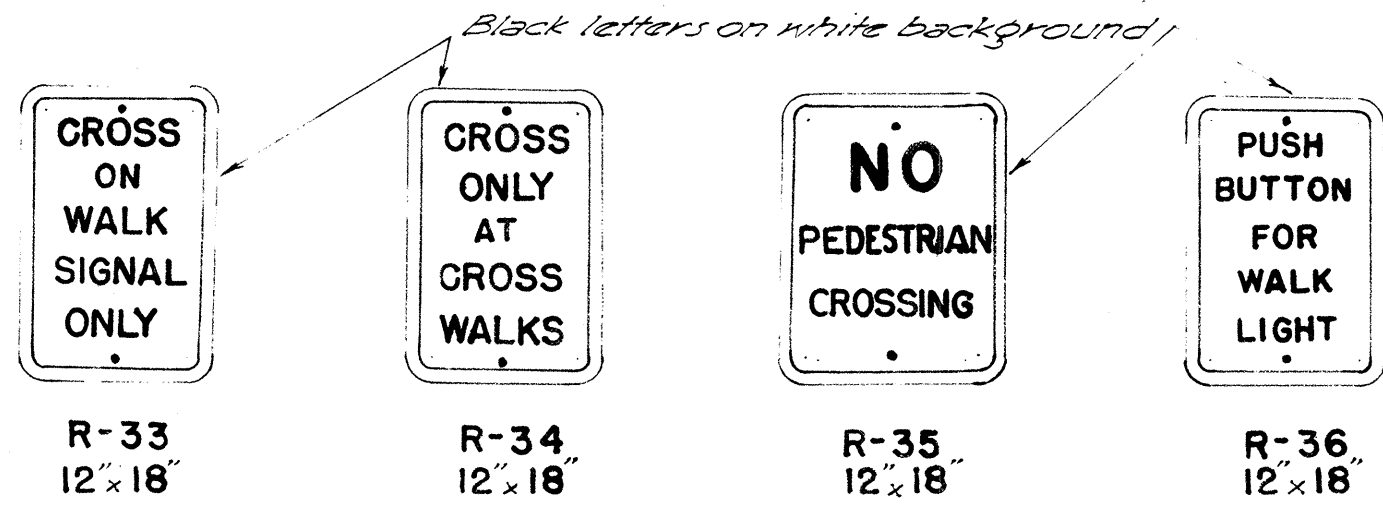
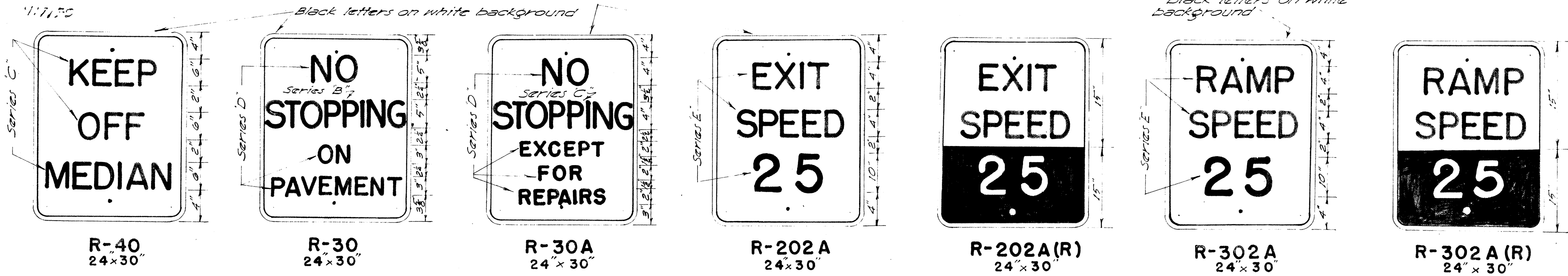
Note: All Regulatory signs shall have black letters on a white background except where noted. All Warning (W) signs shall have black letters or figures on a "Highway Yellow" background. *Signs shall be similar but opposite in direction. See Specifications for Materials and Finish.

HAWAII STATE HIGHWAY DEPARTMENT
STATE OF HAWAII
REGULATORY & WARNING SIGNS
Scale: 1" = 1'
DATE: 1959, 09, 1959
APPROVED: _____
STATE HIGHWAY ENGINEER

SHEET NO. 42 OF 47 SHEETS

8132(1).42

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	5-06306	1959	43	47



NOTE: R-202B-Numerals 35
R-202A, B signs with (R)
designation. Lower half with
white numerals, reflectorized
with buttons or reflective
sheeting on a black background.

NOTE: R-302B-Numerals 35
R-302A, B signs with (R)
designation. Lower half with white
numerals, reflectorized with
buttons or reflective sheeting
on a black background.

Note: All Regulatory and Warning Signs Shall
Have 3/8" Bolt Holes.



W-34
30' x 30'

NOTE: Locations and placements of signs shall conform with requirements of the Manual on Uniform Traffic Control Devices for streets and highways. All regulatory (R-series) signs shall be black letters on a white background except where noted. All warning (W-series) signs shall have black letters or figures reflectorized with white button reflectors on a highway yellow background or black letters or figures on a background made of yellow reflective material. All letters and figures shall be of size and design shown and shall conform with Standard Alphabets for Highway Signs, BPR, Standard Highway Signs, BPR and The American Association of State Highway Officials Manual for Signing and Pavement Markings of the National System of Interstate and Defense Highways, 1958. See Specifications for Materials and Finish.

HAWAII STATE HIGHWAY DEPARTMENT STATE OF HAWAII	
REGULATORY & WARNING SIGNS	
Scale: 1" = 1'	DATE: Aug. 29, 1959
APPROVED: _____ STATE HIGHWAY ENGINEER	

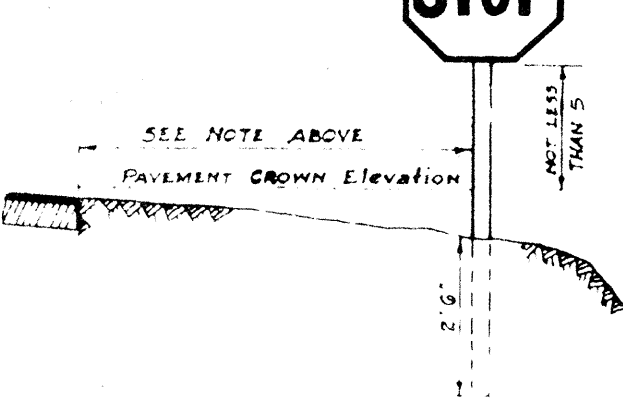
Revised: 2/17/57
4/6/59
4/28/59
7/30/59

NOTE:

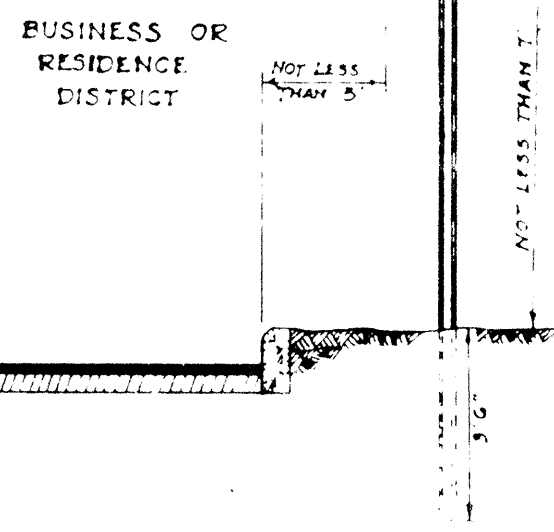
Sign Posts shall be 3" galv std pipe for signs larger than 24" in any dimension and 2" galv std pipe for signs not over 24" in any dimension.
Two (2) 5/16" bolt holes drilled at location shown

Two (2) 5/16" x 4 1/2" or 5/16" x 5" galvanized carriage bolts with nuts, two (2) 3/8" iron washers and two (2) 3/4" x 1/2" stainless steel with neoprene rubber gasket attached washers SPEED LIMIT shall be provided with each sign installation.

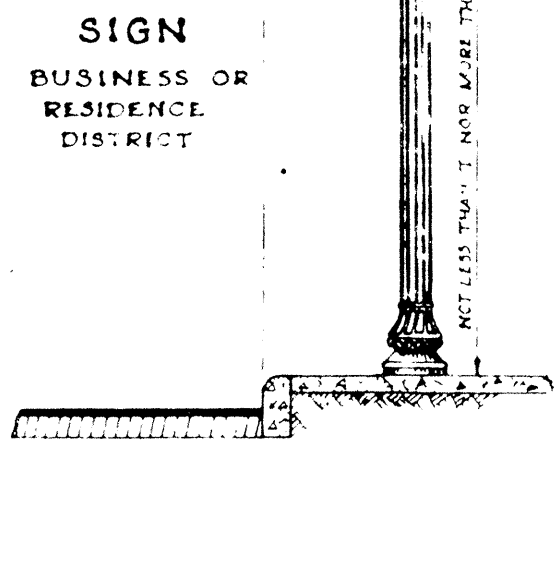
STOP SIGN
RURAL DISTRICT



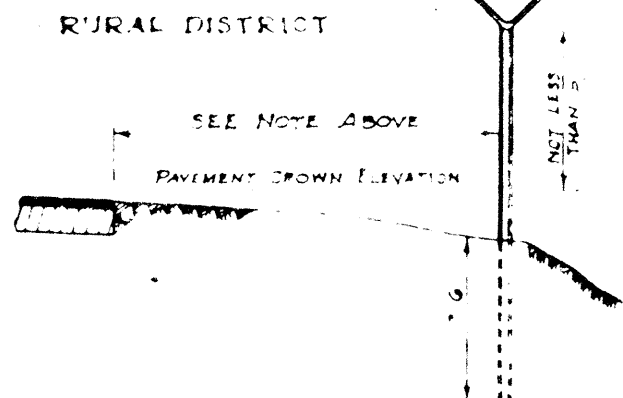
SIGN
BUSINESS OR
RESIDENCE
DISTRICT



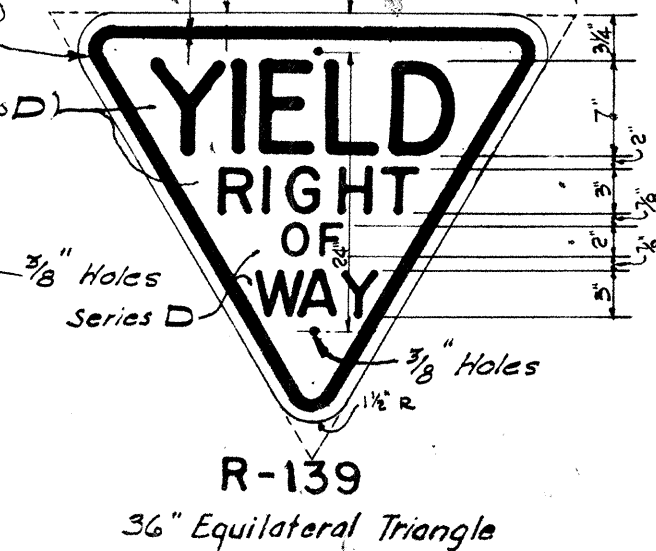
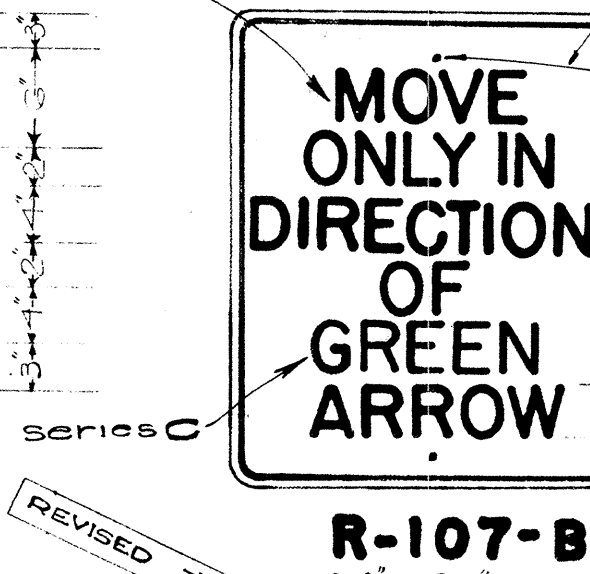
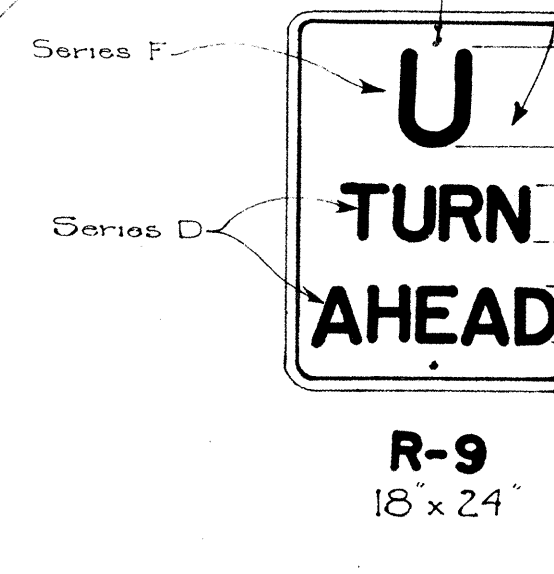
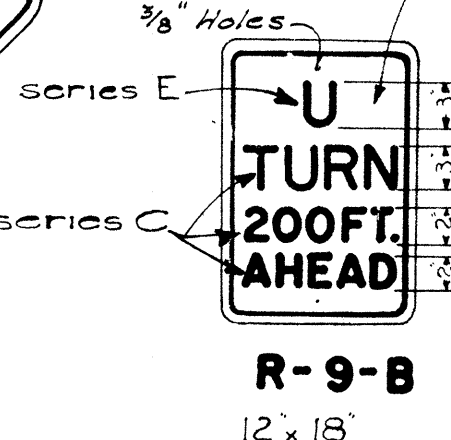
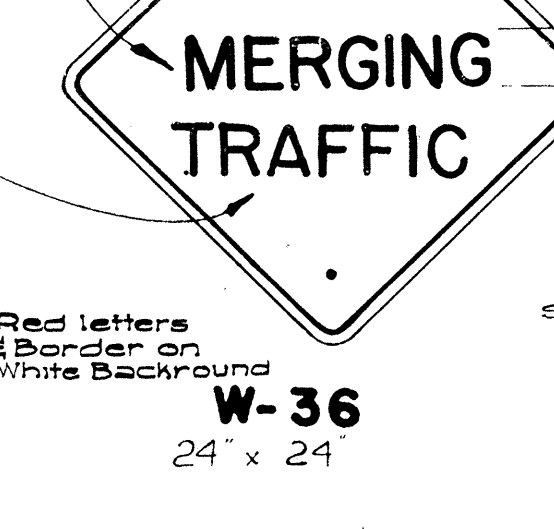
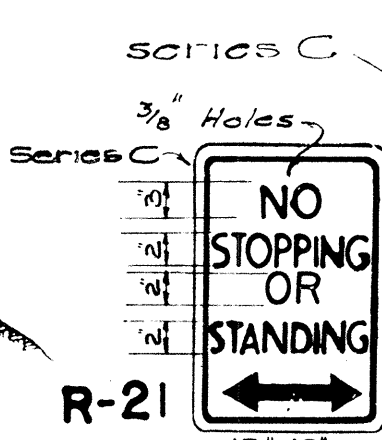
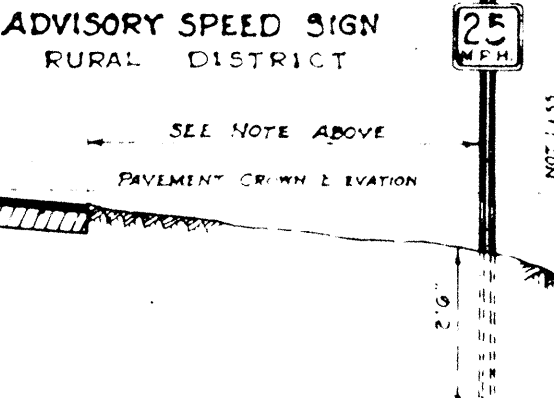
PARKING SIGN
BUSINESS OR
RESIDENCE
DISTRICT



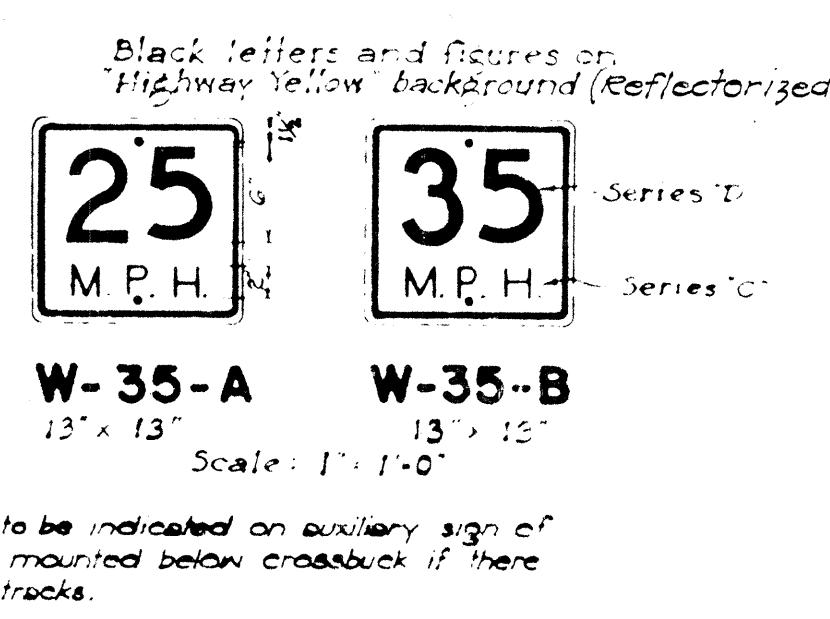
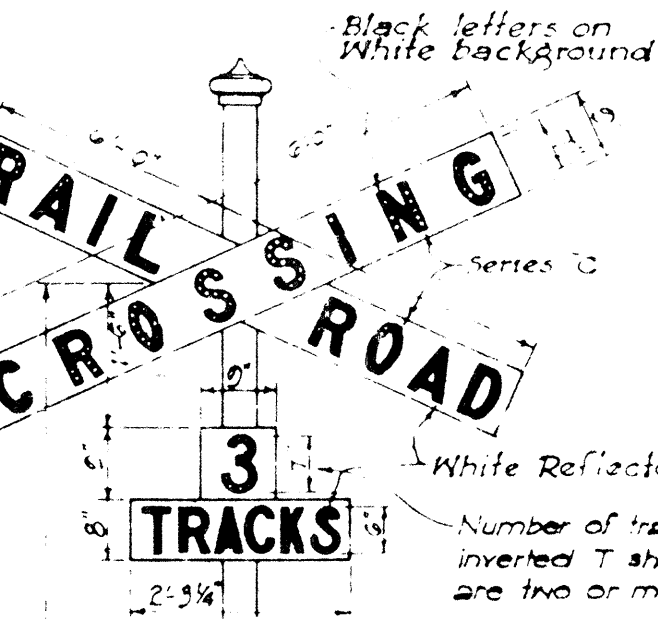
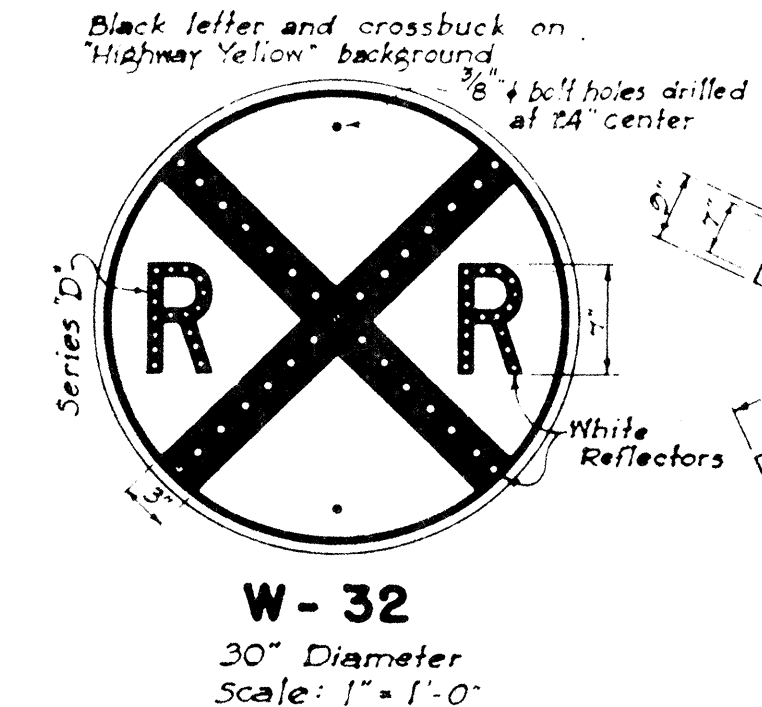
WARNING SIGN
RURAL DISTRICT



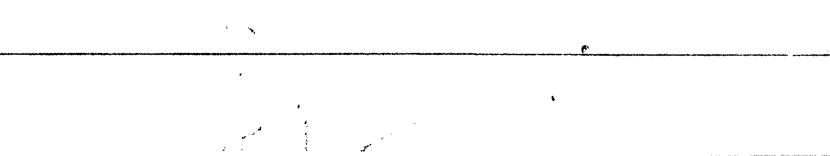
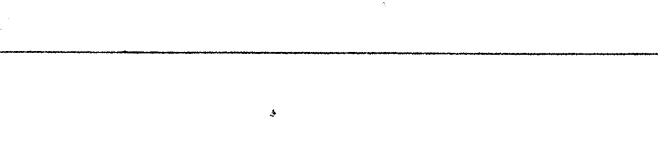
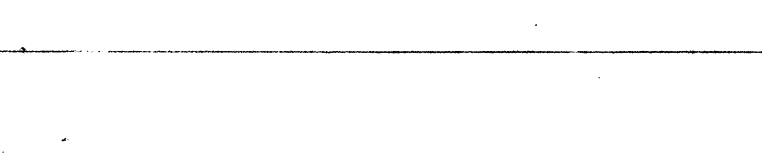
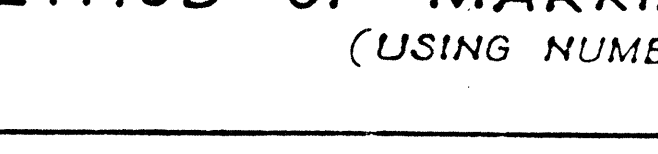
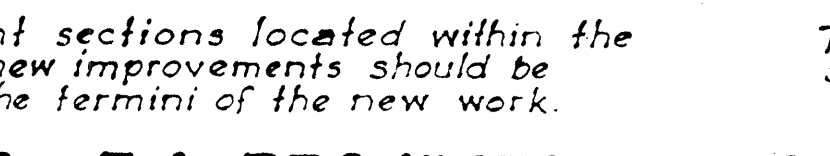
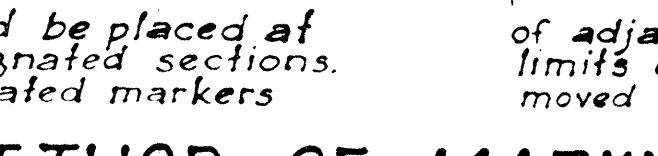
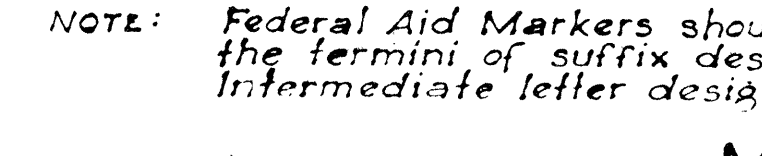
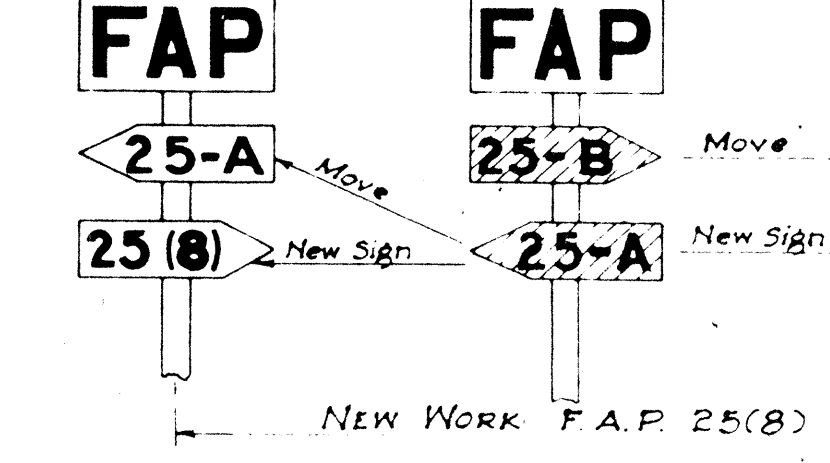
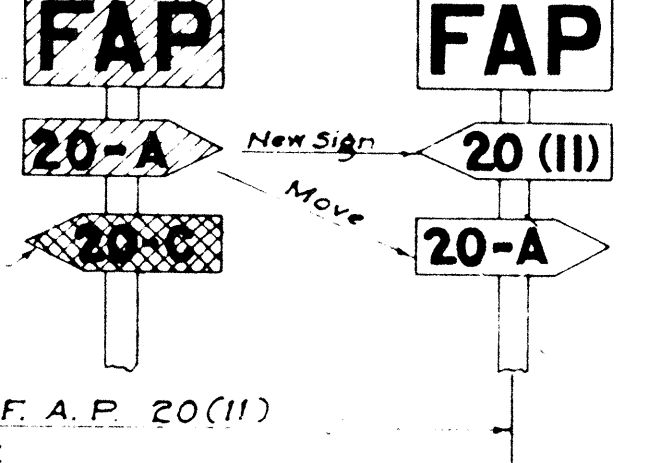
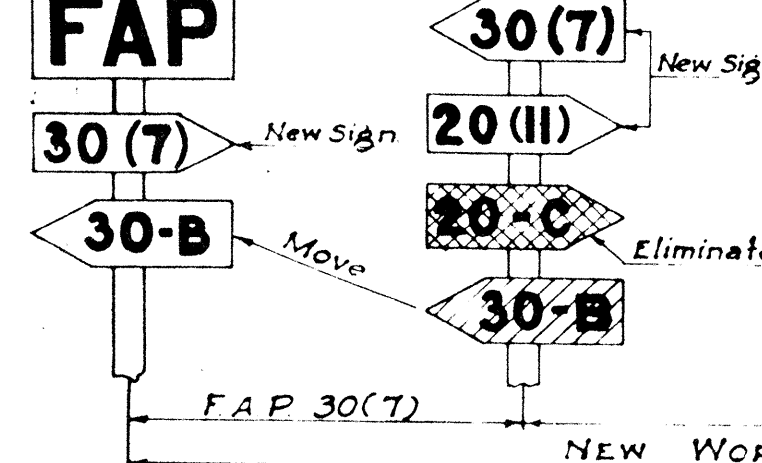
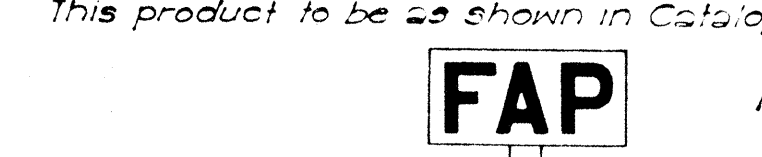
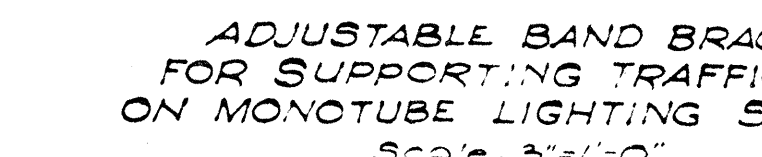
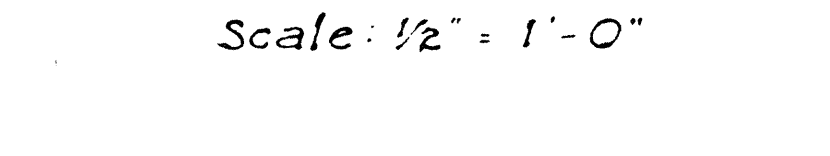
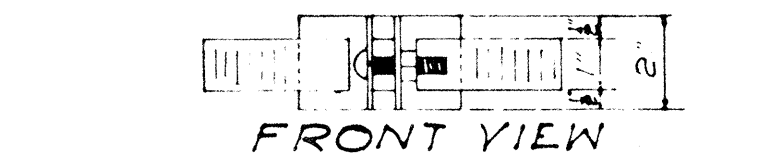
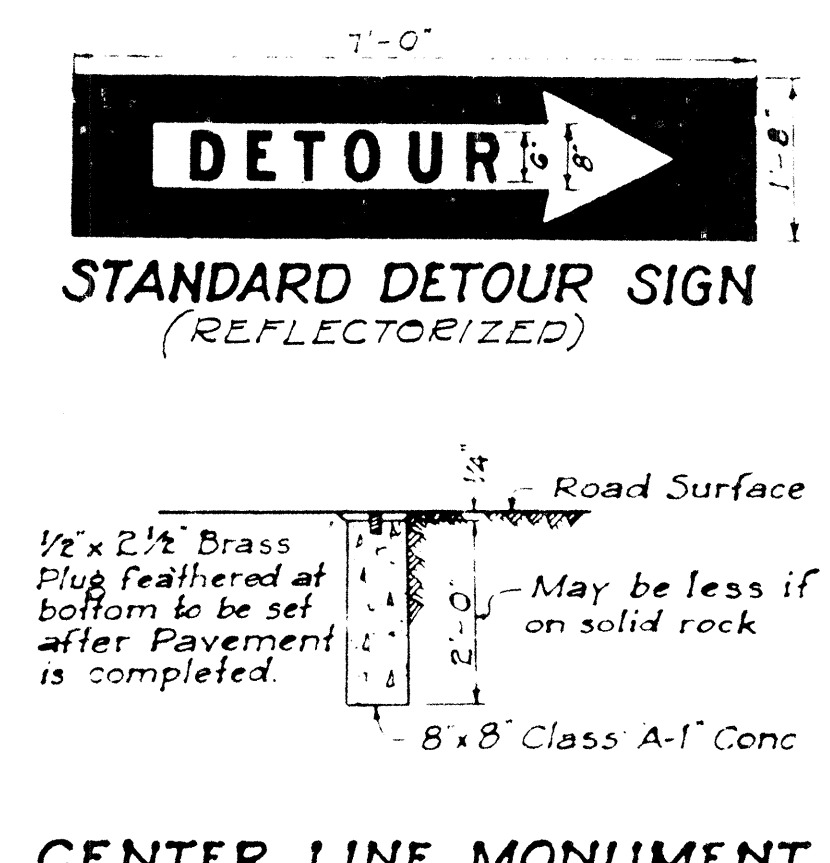
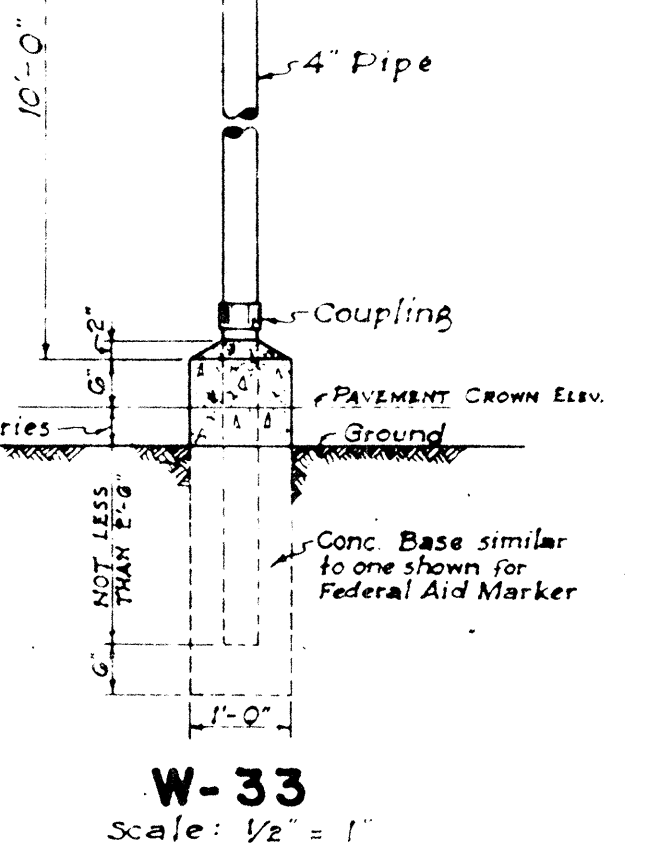
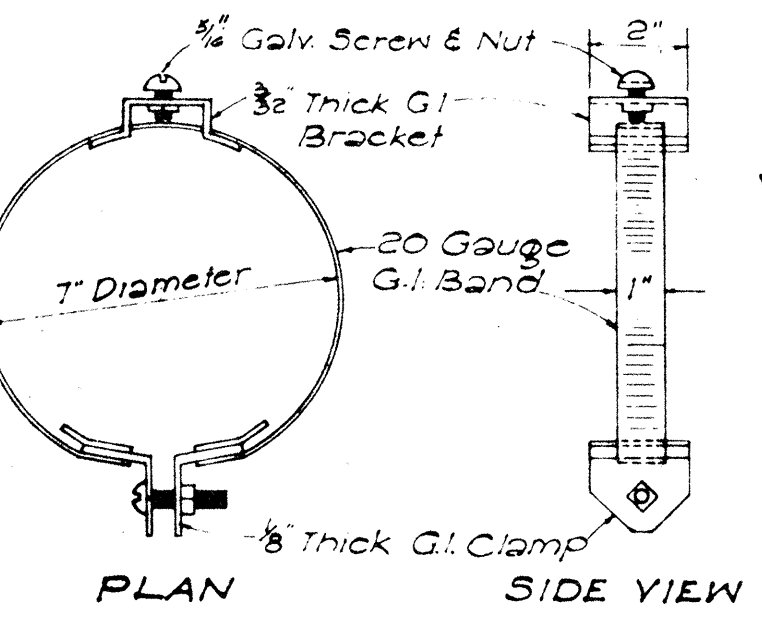
WARNING SIGN
WITH
ADVISORY SPEED SIGN
RURAL DISTRICT



HEIGHT AND LATERAL LOCATION OF SIGNS -- TYPICAL INSTALLATIONS

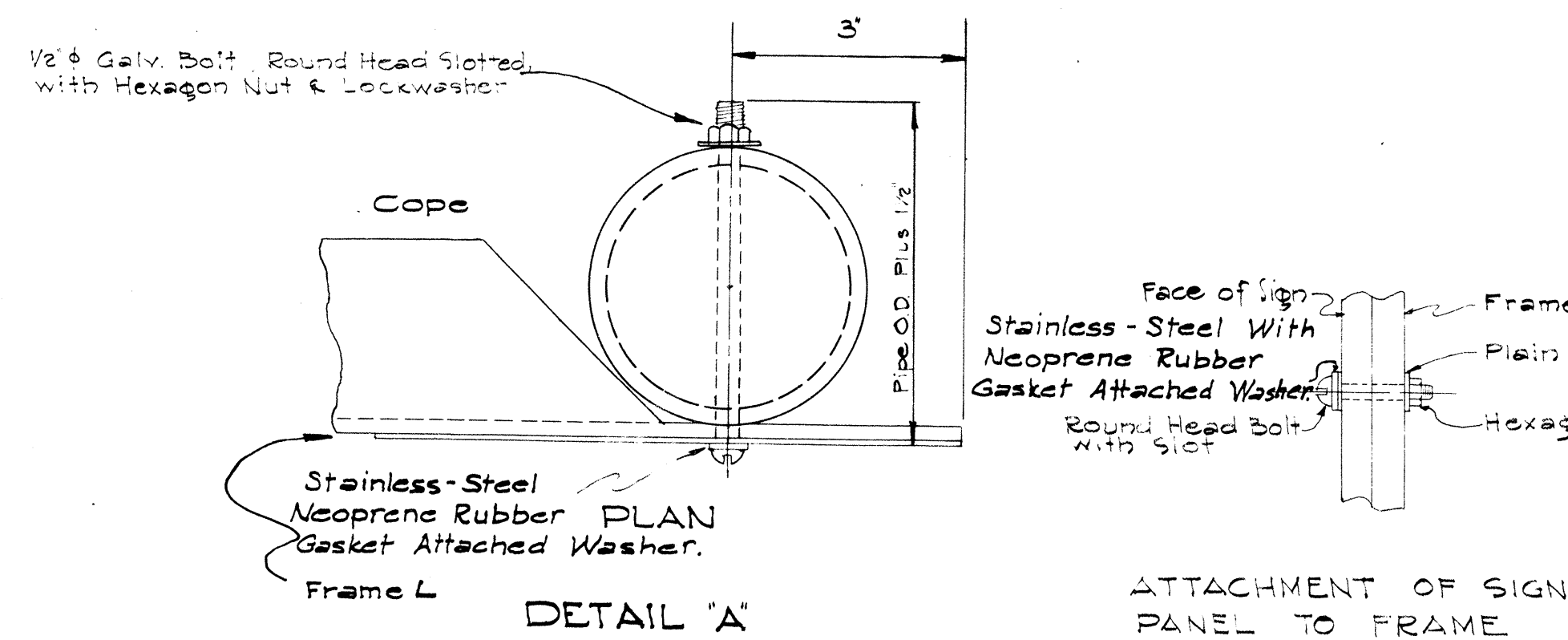
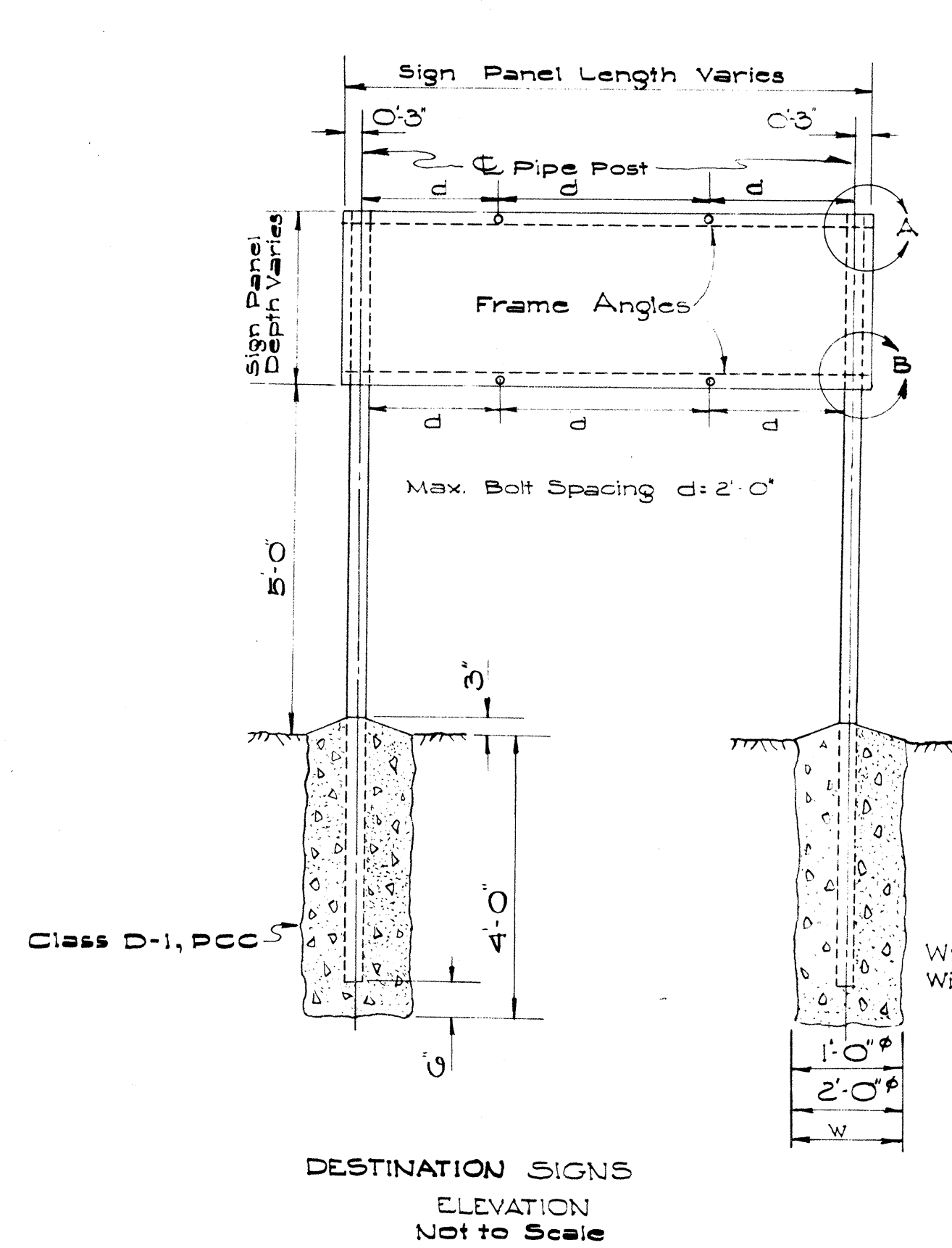


NOTE: This sign shall be placed from 300 to 500 feet from R.R. intersections in rural areas and a minimum distance of 100 feet from R.R. intersections in Residence or Business districts.

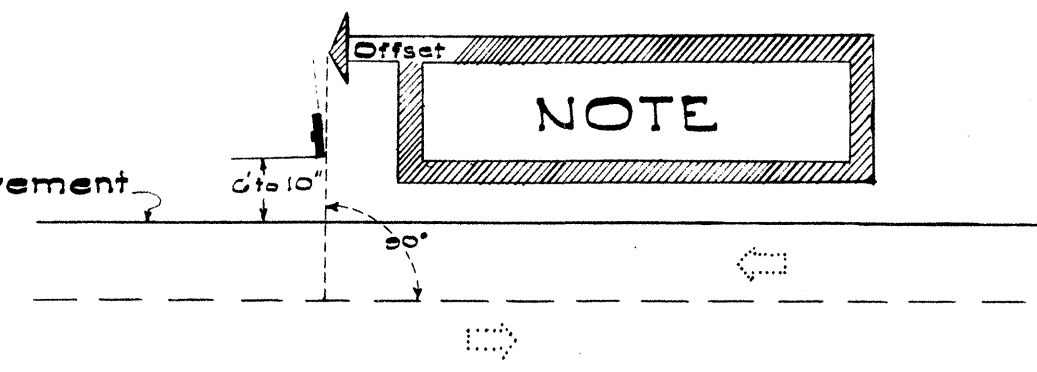


2/17/59
4/6/59
4/28/59

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	5-06306	1959	45	47

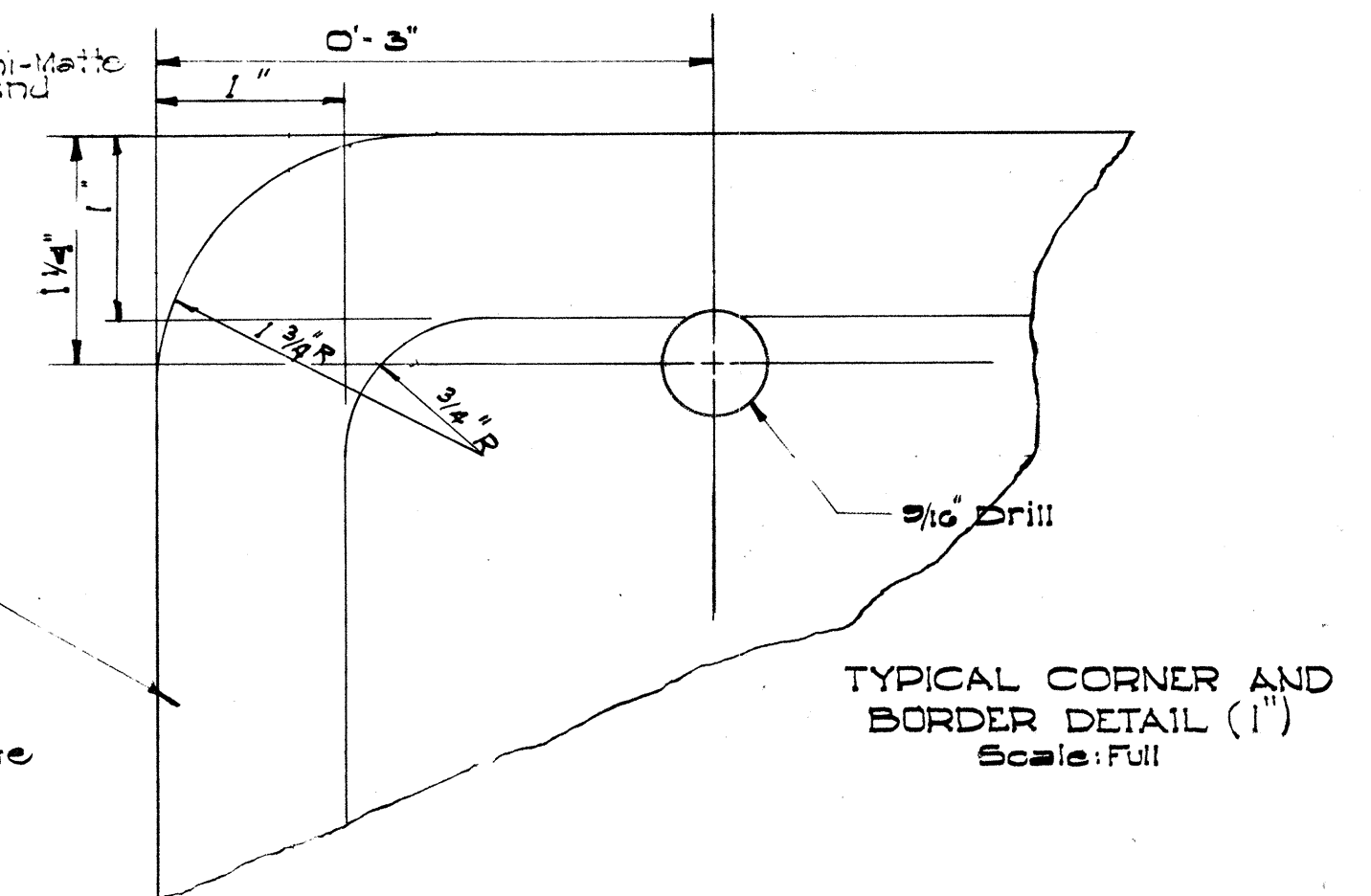
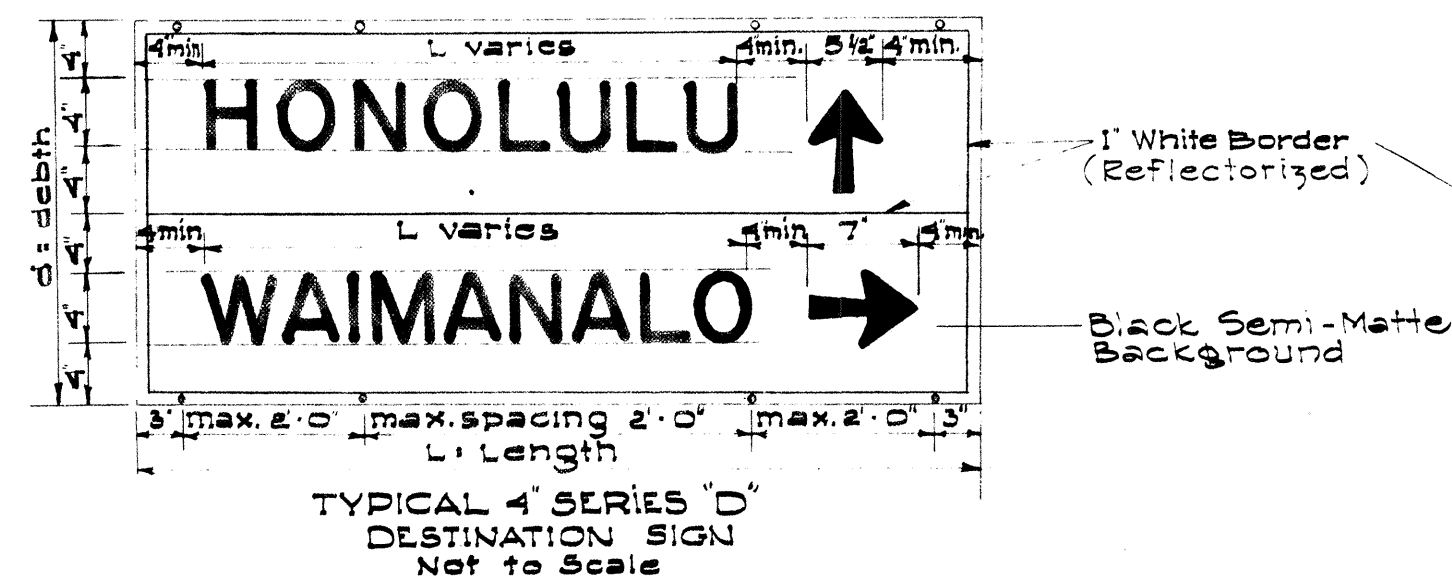
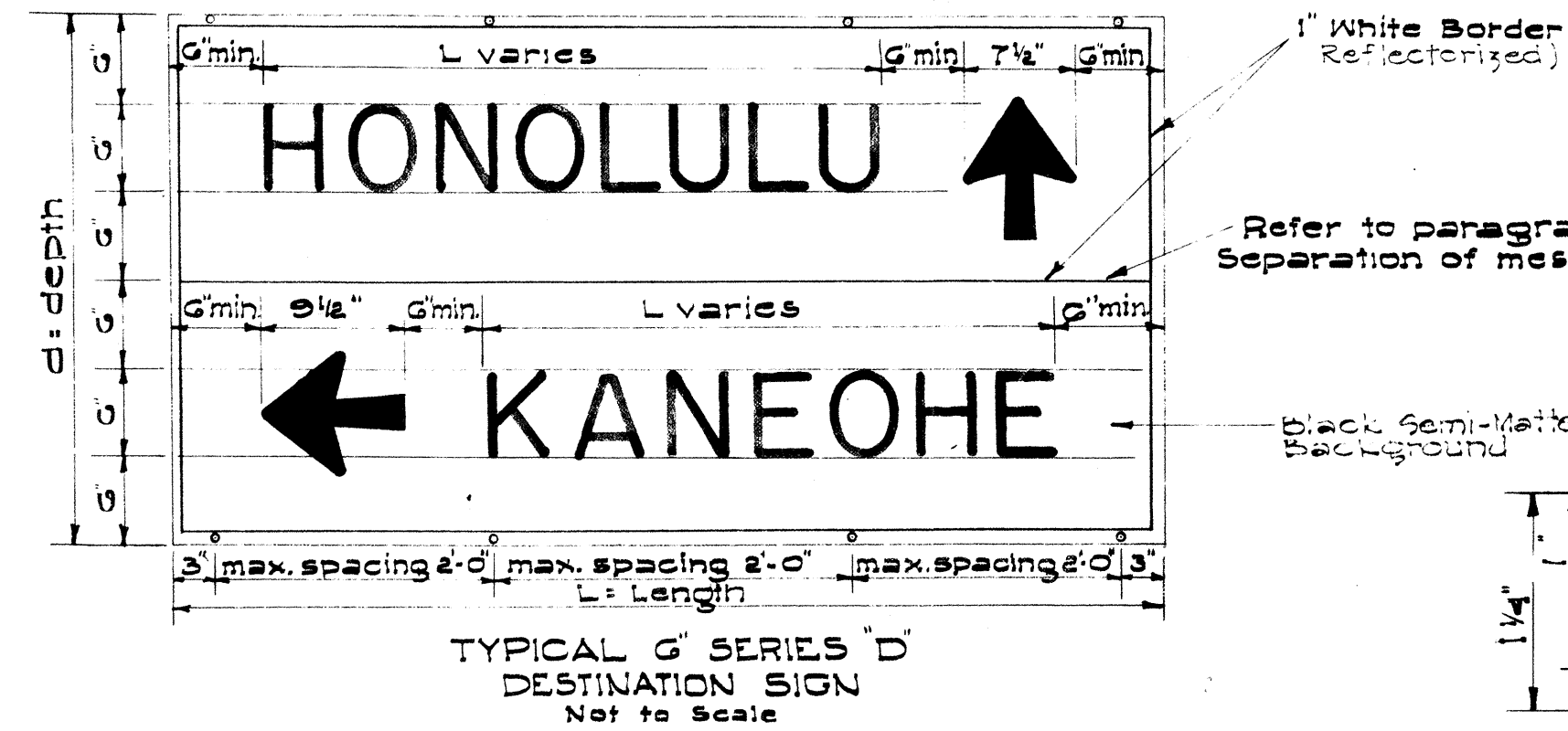


SIGN POSITION WITH RELATION TO DIRECTION OF TRAFFIC



SIGN PANEL SPACING REQUIREMENTS

1. The spacing between letters and words in the same line shall be equal to 1 1/2 times the height of the letter.
2. The spacing between lines of copy shall be not more than the height of the letters in line one, plus the height of the letters in line two, divided by two.
3. Margins: Copy shall be applied in the background in such a way that the distance between any point in the copy and the nearest edge of the background shall be not less than the average height of letters used.
4. Borders: On small signs a margin between border and sign edge equivalent to the border width of 1" shall be used.
5. Arrows: Arrows shall point in directions as shown on the plans and on the "Standard Arrows for Directional Signs" sheet. The spacing between copy and the nearest part of arrow shall be equivalent to the average height of letters used.
6. Separation of messages: In a multi-direction or multi-message sign, the distinction between the two destinations or two messages shall be defined sharply by separating the two with a horizontal white line as shown on the Typical Sign Layout. When the horizontal line is used the spacing to the copy both above and below the line shall be not less than either height.

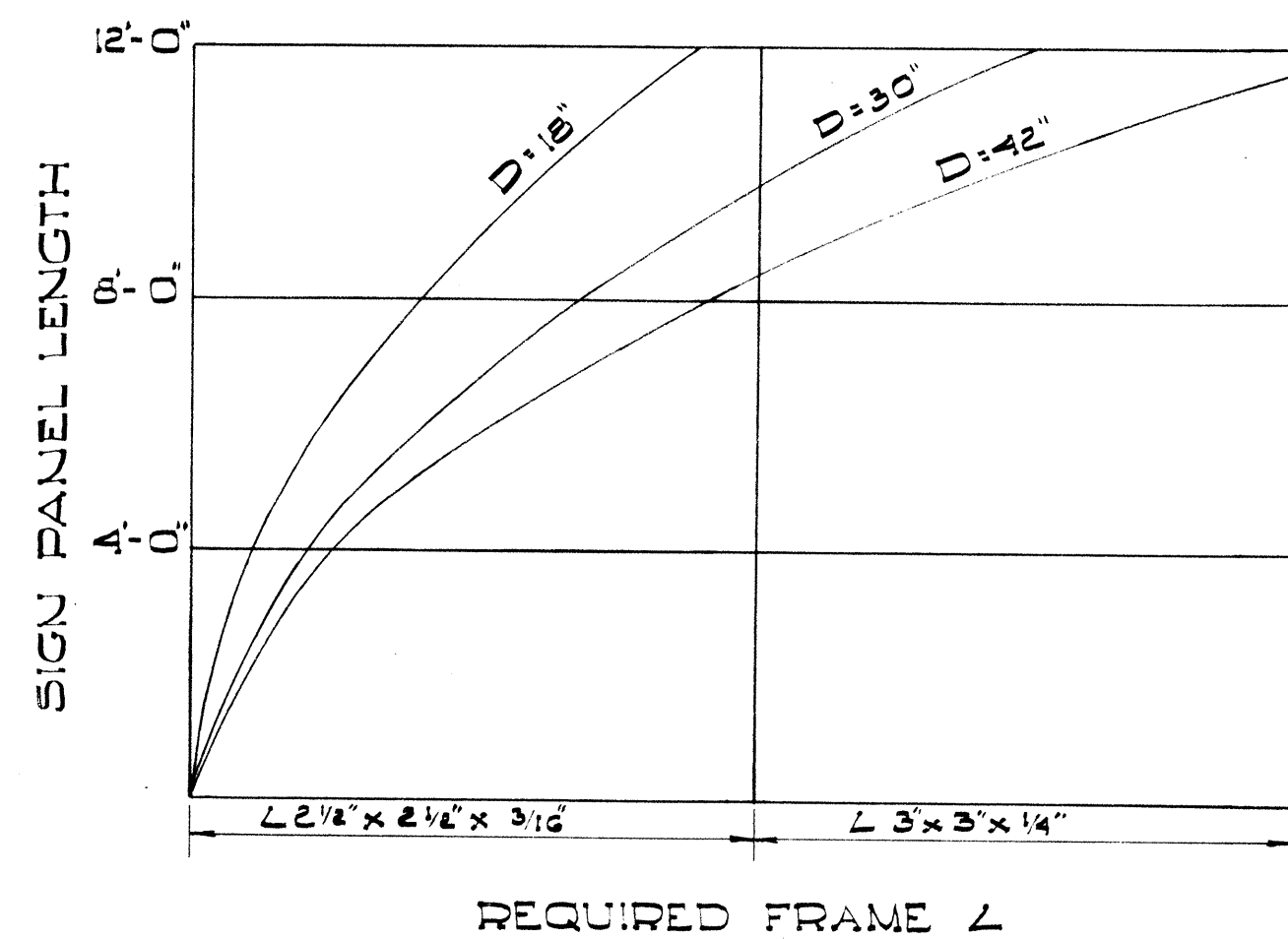


TYPICAL TABLE

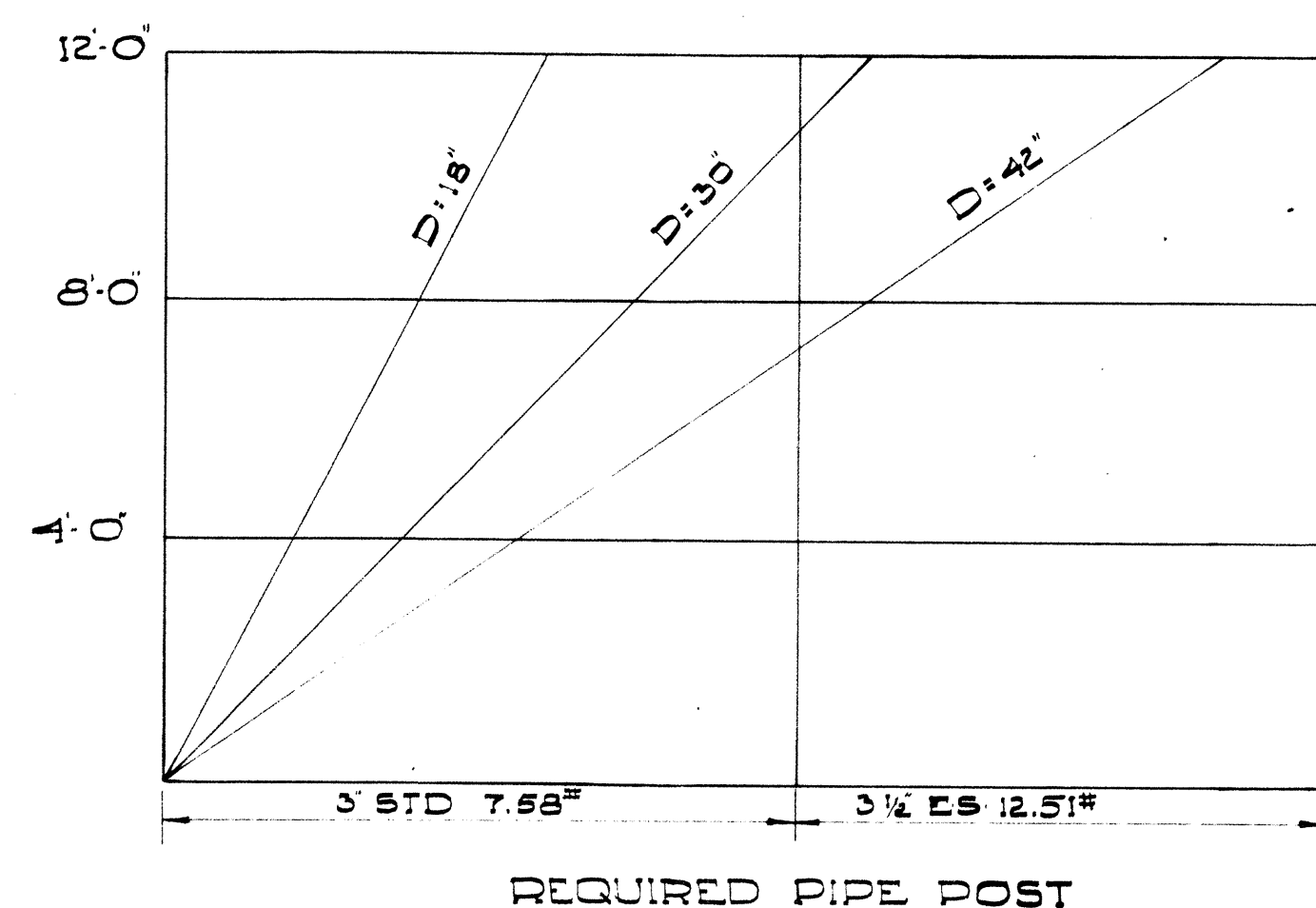
SIGN NO.	STATION	SIGN PANEL	FRAME L	PIPE POST	BOLT HOLE SPACING
----------	---------	------------	---------	-----------	-------------------

DESIGN DATA
1. Wind Load: 30 psi
2. Allowable Stresses
a. Concrete: $f_c = 1500$ psi
b. Pipe: $f_s = 14000$ psi

GRAPH I
REQUIRED FRAME ANGLE



GRAPH II
REQUIRED PIPE POST



GENERAL NOTES

1. Sign message shall be lettered according to "Standard Alphabets for Highway Signs" Public Roads Administration, Federal Works Agency, 1932 and from Table III, Width of Capital Letters and Digits, Series D, Table IX, Spacing of Letters and Digits. Use Series "D" Letters unless otherwise noted.
2. Arrows shall conform with "Standard Arrows for Directional Signs".
3. Thickness of sign plate shall be No. 16 U.S. standard gauge.
4. Signs shall be bolted with 1/2" round head Galv. Bolts and hex. nuts with stainless-steel washer with neoprene rubber gasket attached on face of signs. For number and exact location of 9/16" holes, see plans.
5. Sign finish shall be porcelain enamel as specified in the latest Department specifications.
6. Signs shall have white letters on a black background; non-embossed, and letters reflectorized with reflective sheeting.
7. All sign frame members shall be painted with one prime coat and two field coats. Finish coat shall be aluminum or approved green (see plans).
8. Class "D-1" concrete for footing will not be paid for separately, but shall be considered incidental to the item of destination signs.
9. Pipe shall be galvanized conforming to A.S.T.M. Designation A120 and shall be painted in accordance with paragraph 7. (General Notes).
10. All welding shall conform to the latest specifications for Welded Highway and Railway Bridges, of the American Welding Society.
11. Reflective sheeting material shall be applied by heat and vacuum applicator over the white porcelain enamel letters and arrow.
12. Borders shall be white porcelain enamel finish and reflectorized.

Note: This Standard Detail Sheet applies to G-25 Series Expressway signs with 6" Series "E" u.c. and 4" l.c. letters.

HAWAII STATE HIGHWAY DEPARTMENT
STATE OF HAWAII

STANDARD DETAILS
DESTINATION SIGNS
POST AND FRAMES
TYPICAL SIGN PANELS
SCALE AS NOTED

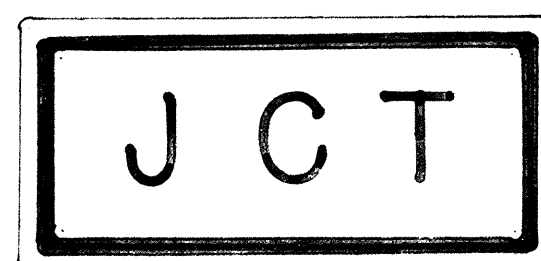
SHEET NO. 9 OF 11 SHEETS

8132(1).45

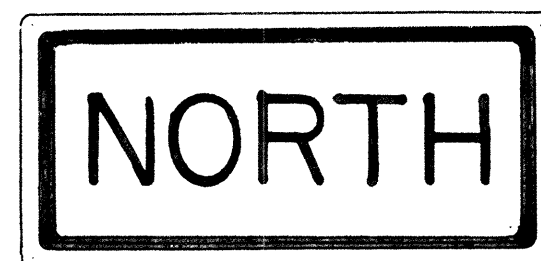
DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
APPROVED BY	

APPROVED:
STATE HIGHWAY ENGINEER
DATE: Aug. 25, 1959

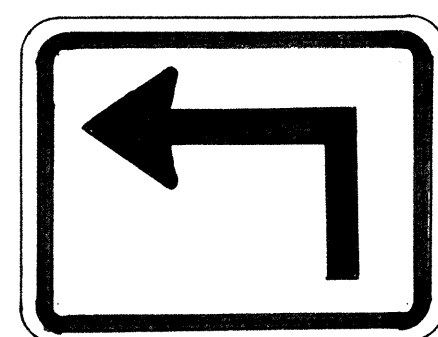
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	5-0630(1)	1959	46	47



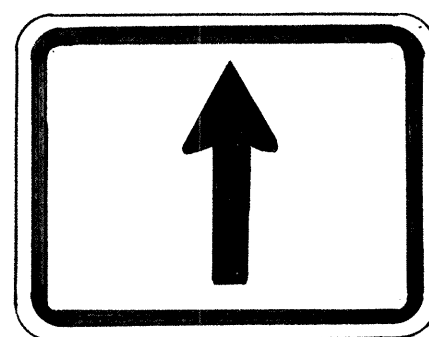
M-3
16 1/2 x 8"



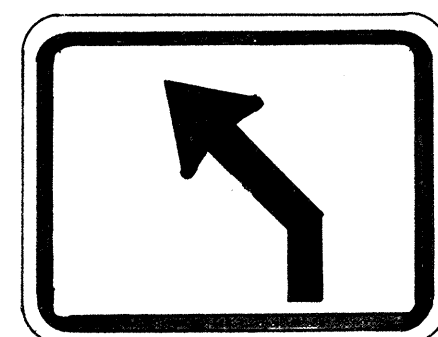
M-21-N
16 1/2 x 8"



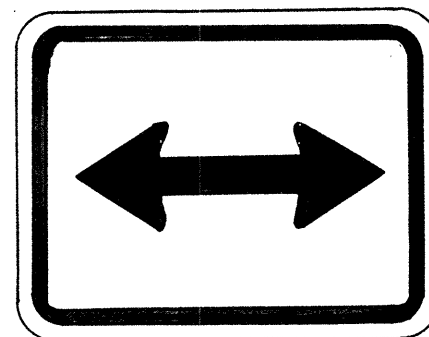
M-7-L
* M-7-R (↗)
13 x 10"



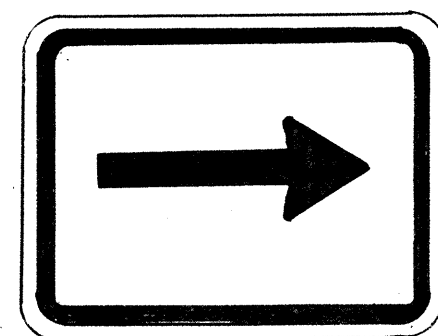
M-11
13 x 10"



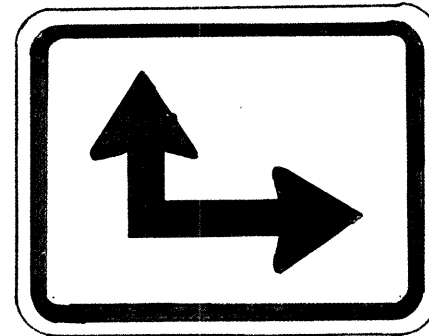
M-8-L
* M-8-R (↗)
13 x 10"



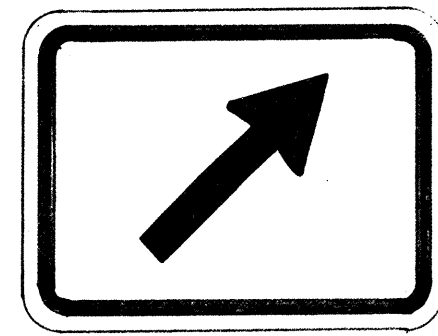
M-12
13 x 10"



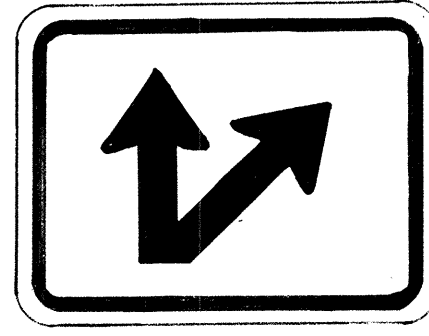
M-9
13 x 10"



M-13-R
* M-13-L (↖)
13 x 10"



M-10-R
* M-10-L (↖)
13 x 10"



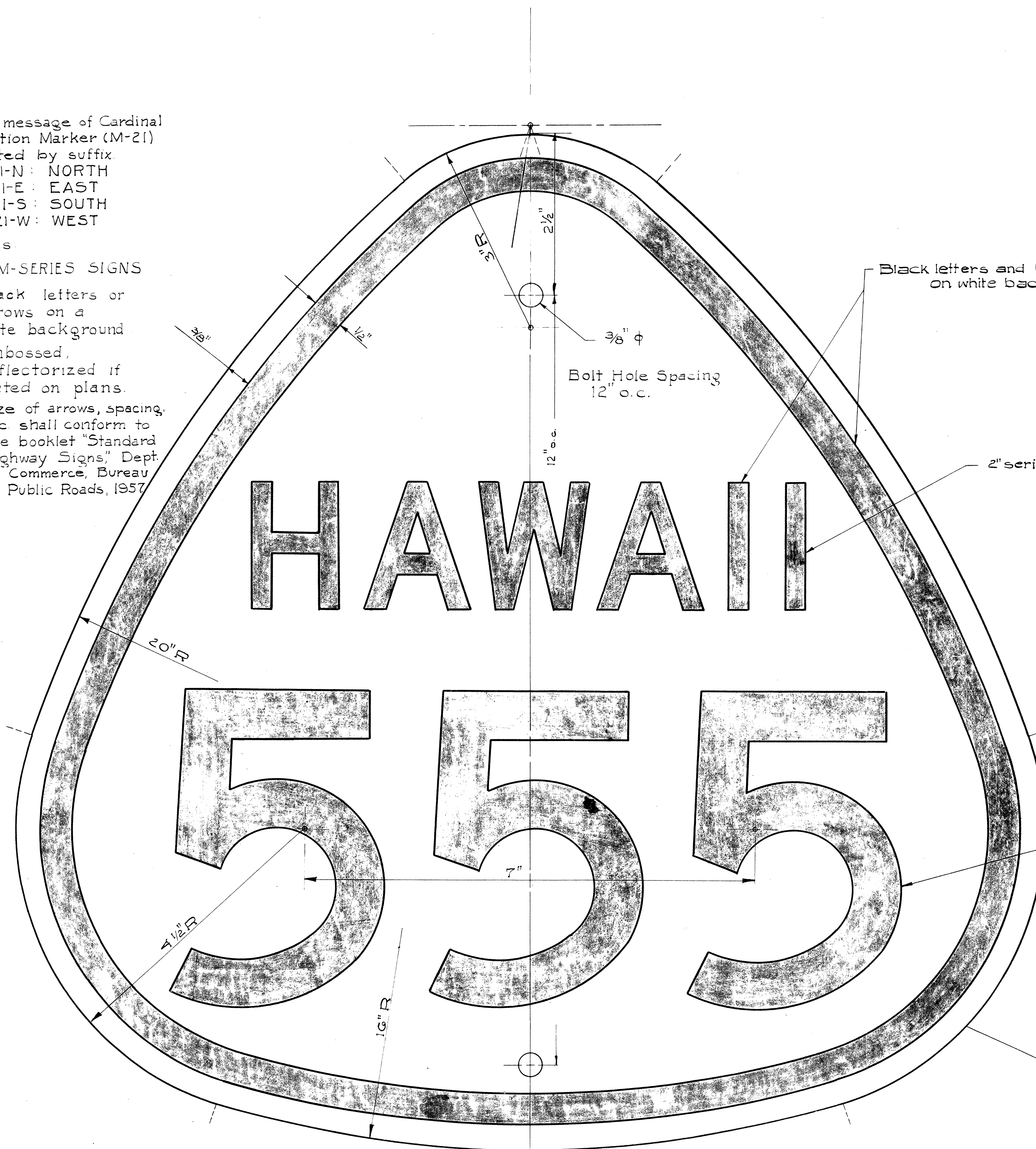
M-14-R
* M-14-L (↖)
13 x 10"

Note:
Sign message of Cardinal
Direction Marker (M-21)
denoted by suffix:
M-21-N: NORTH
M-21-E: EAST
M-21-S: SOUTH
M-21-W: WEST

Notes:

M-SERIES SIGNS

1. Black letters or arrows on a white background
2. Embossed, reflectorized if stated on plans.
3. Size of arrows, spacing, etc. shall conform to the booklet "Standard Highway Signs," Dept. of Commerce, Bureau of Public Roads, 1957.



Black letters and border
on white background.

Location:

Use the M-2 sign at important rural and urban intersections and intermediate locations as specified in sections 93-111, Manual of Uniform Traffic Control Devices, to guide traffic over State numbered highways.

Note:

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 "D" letters and series "E" numerals shall be used.

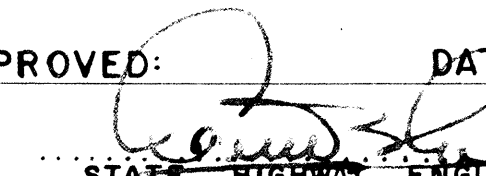
Embossed
Black on White
16 x 16"
2" series "D" letters
5" series "E" numerals
Reflectorized if
stated on plans.

5" series "E" letters

STATE ROUTE MARKER
M-2
Scale: Full Size

NOT TO SCALE

* Signs shall be similar
but opposite in direction.

APPROVED:  DATE: AUG. 26, 1959
STATE HIGHWAY ENGINEER

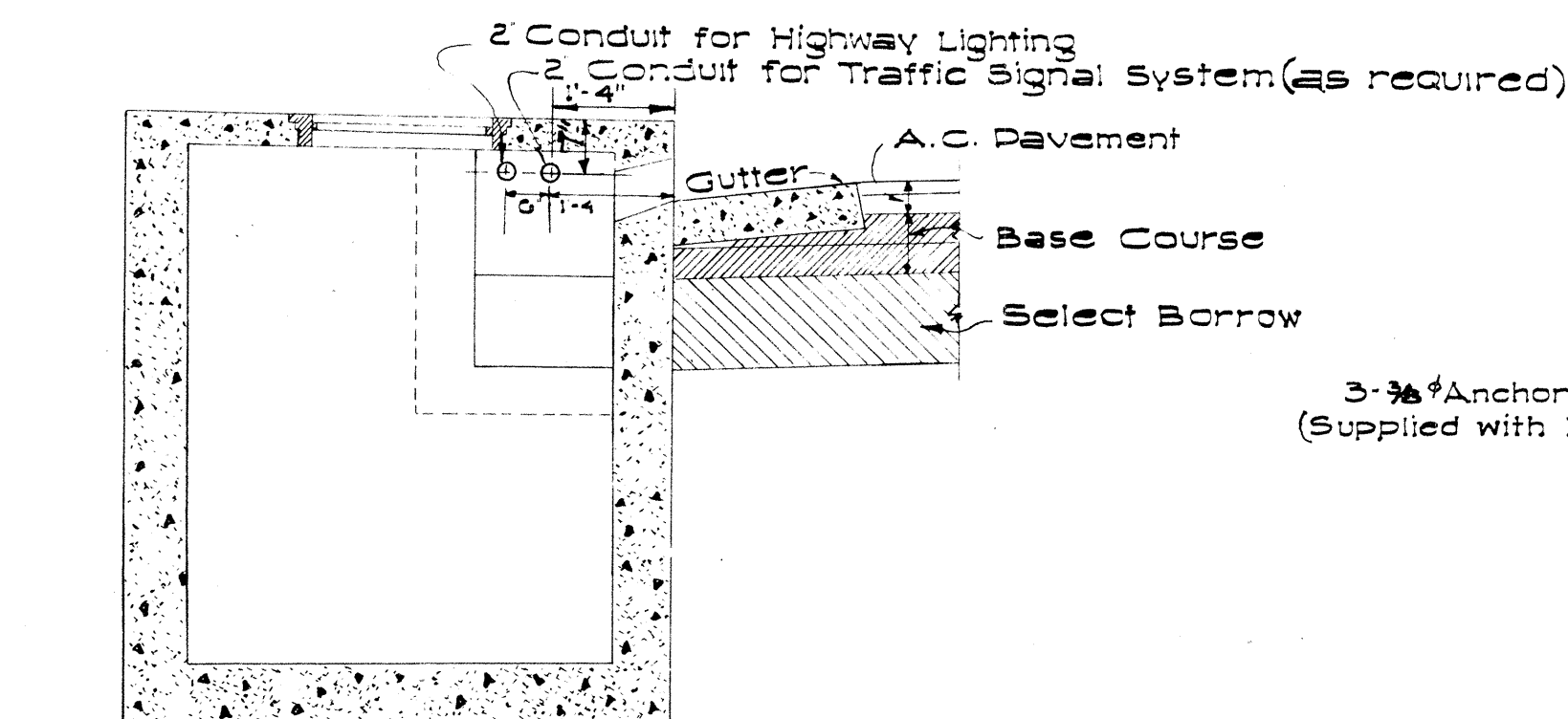
HAWAII STATE HIGHWAY DEPARTMENT
STATE OF HAWAII
STANDARD DETAILS
STATE
ROUTE NUMBER
AND DIRECTIONAL
MARKER SIGNS
SCALE: AS NOTED
SHEET NO. 10 OF 11 SHEETS

8132(1).46

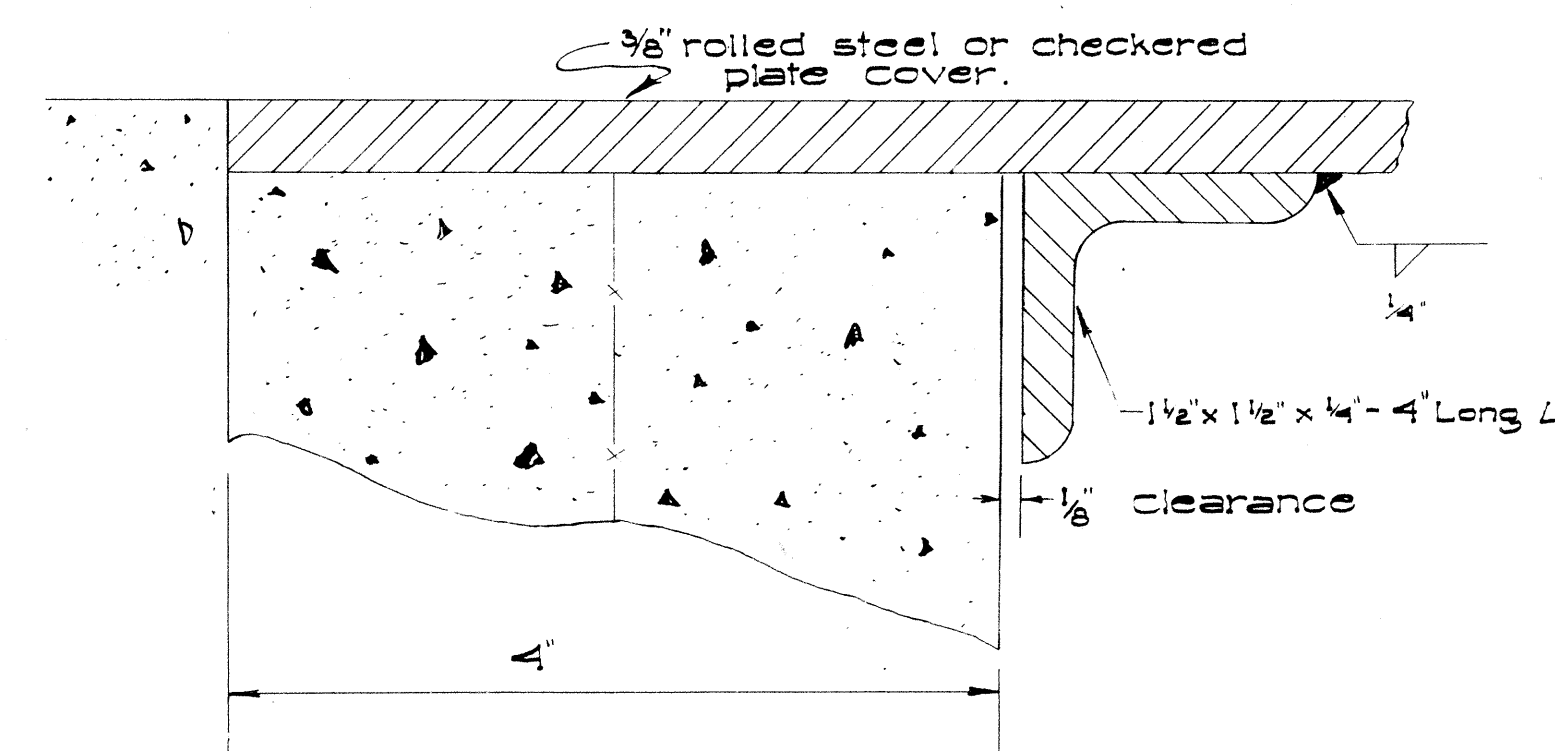
2/17/57

NOTE: Galv. 2" Conduits shall be supported by Band Hangers bolted to the top slab of Catch Basins. Band Hangers shall be No. 260-C Crane Catalogue No. 45 or equal. Pipe Hangers and bolts shall be incidental to item No. 46(1) Class A-1 Concrete other than in Bridges.

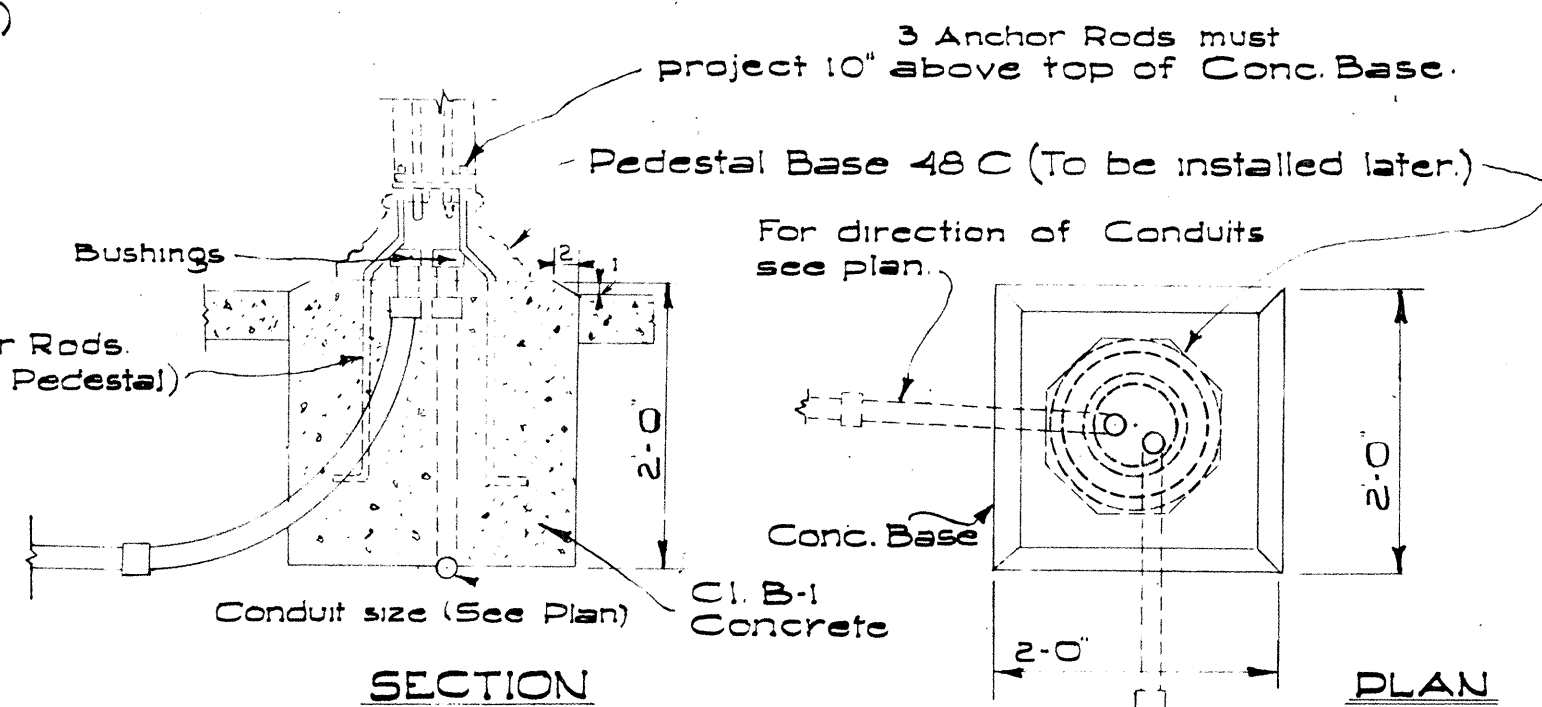
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	5-06306	1959	47	47



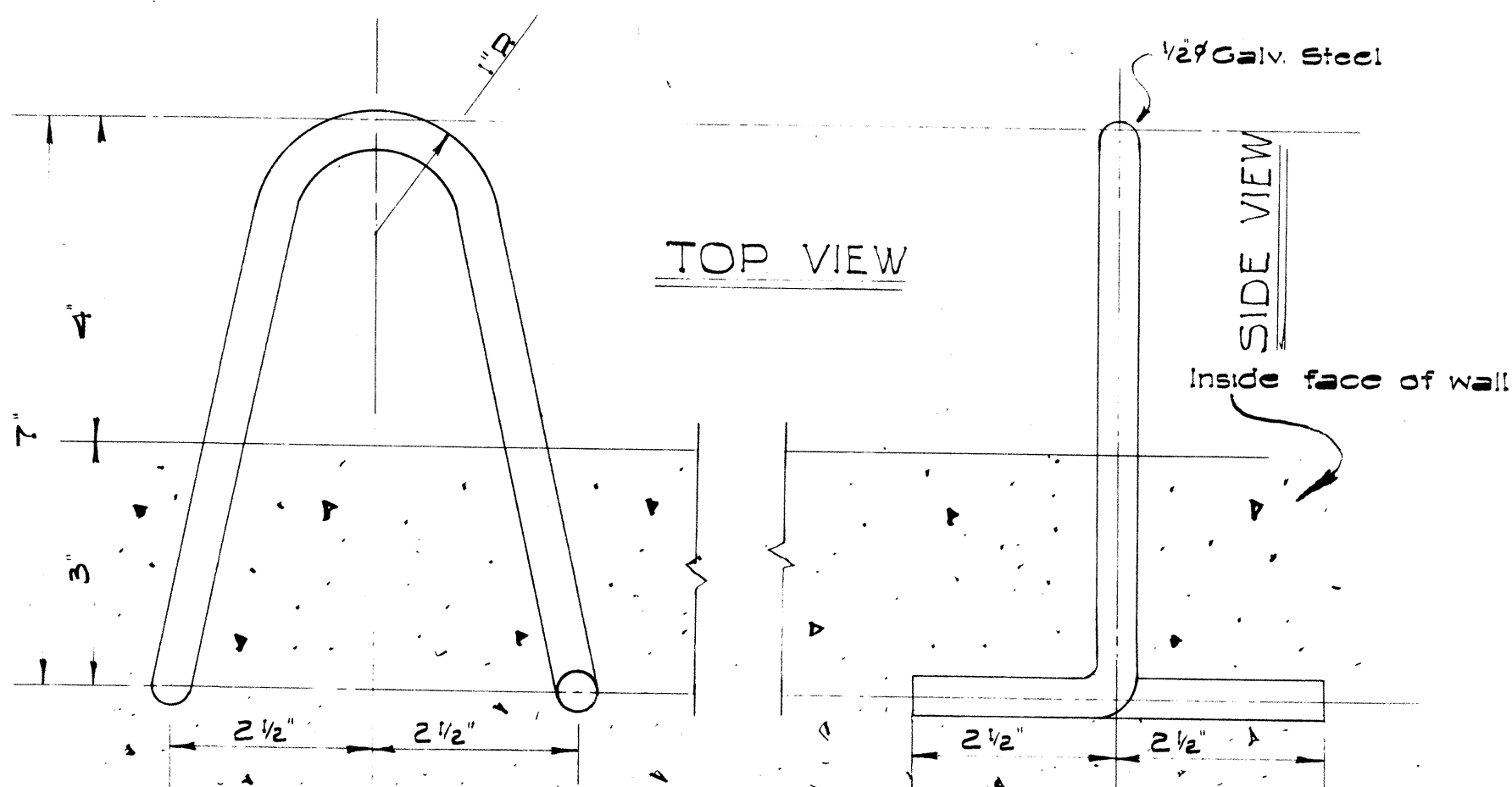
TYPICAL SECTION SHOWING CONDUITS PASSING THROUGH CATCH BASINS
Scale: 1/2" = 1'-0"



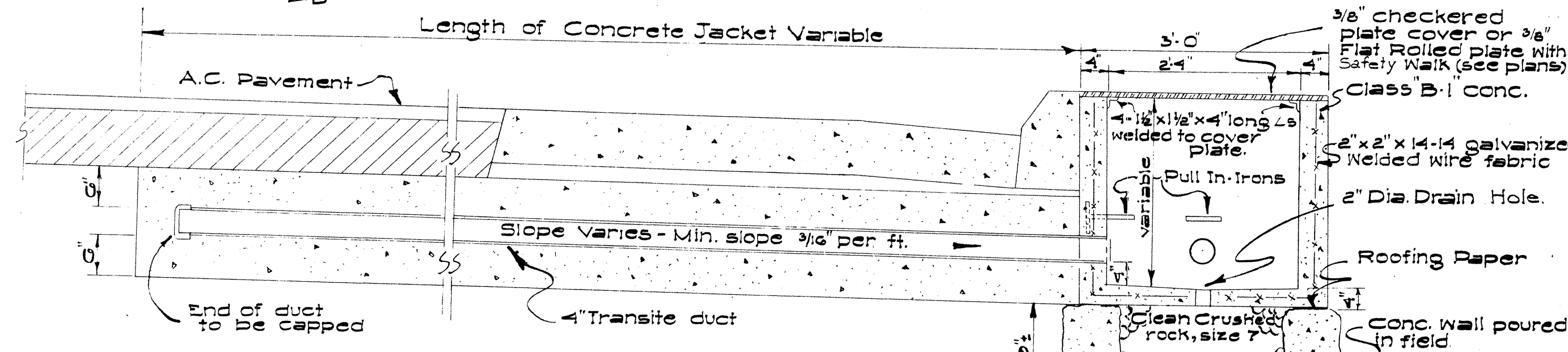
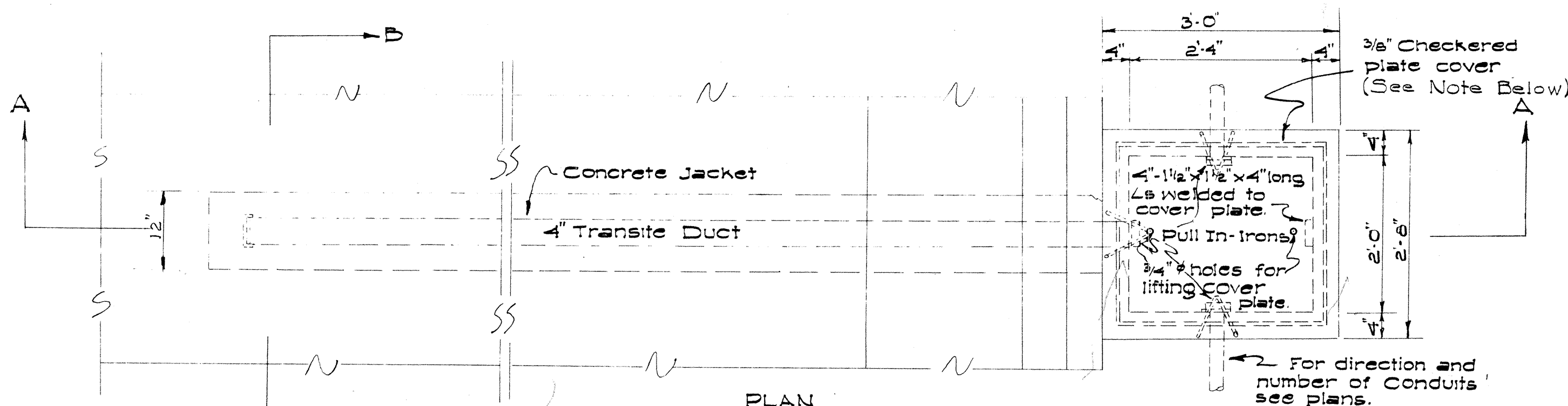
DETAIL 'A'



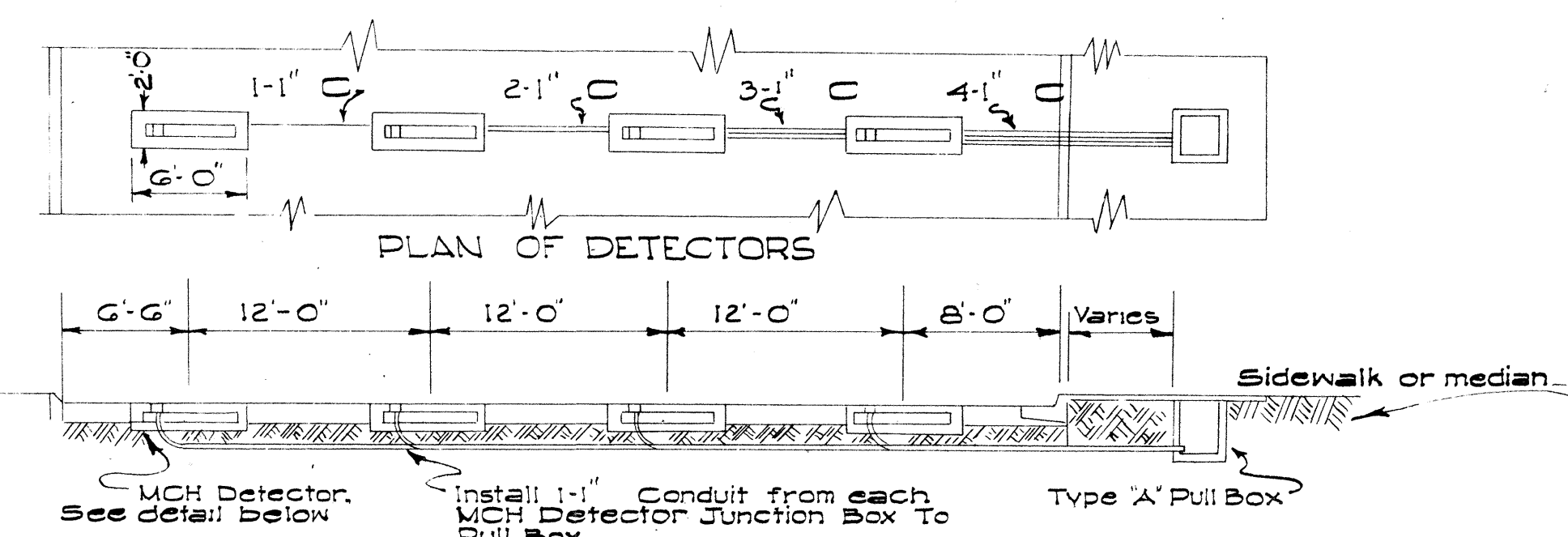
BASE FOR TRAFFIC SIGNAL POLES
Scale: 3/4" = 1'-0"



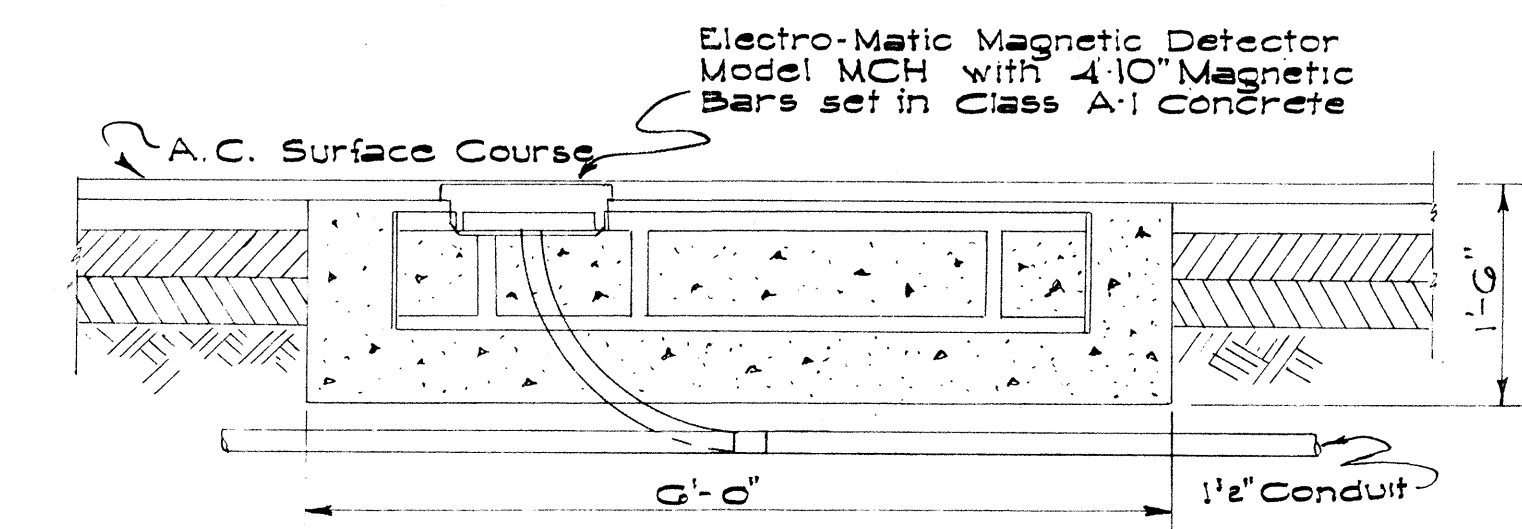
PULL-IN IRON DETAIL 'B'
Scale: 1/2" = 1'-0"



SECTION 'A-A'
DETAIL OF TYPE 'A' PULLBOX AND TRANSITE DUCT FOR MODEL 'MK' DETECTORS
Scale: 3/4" = 1'-0"

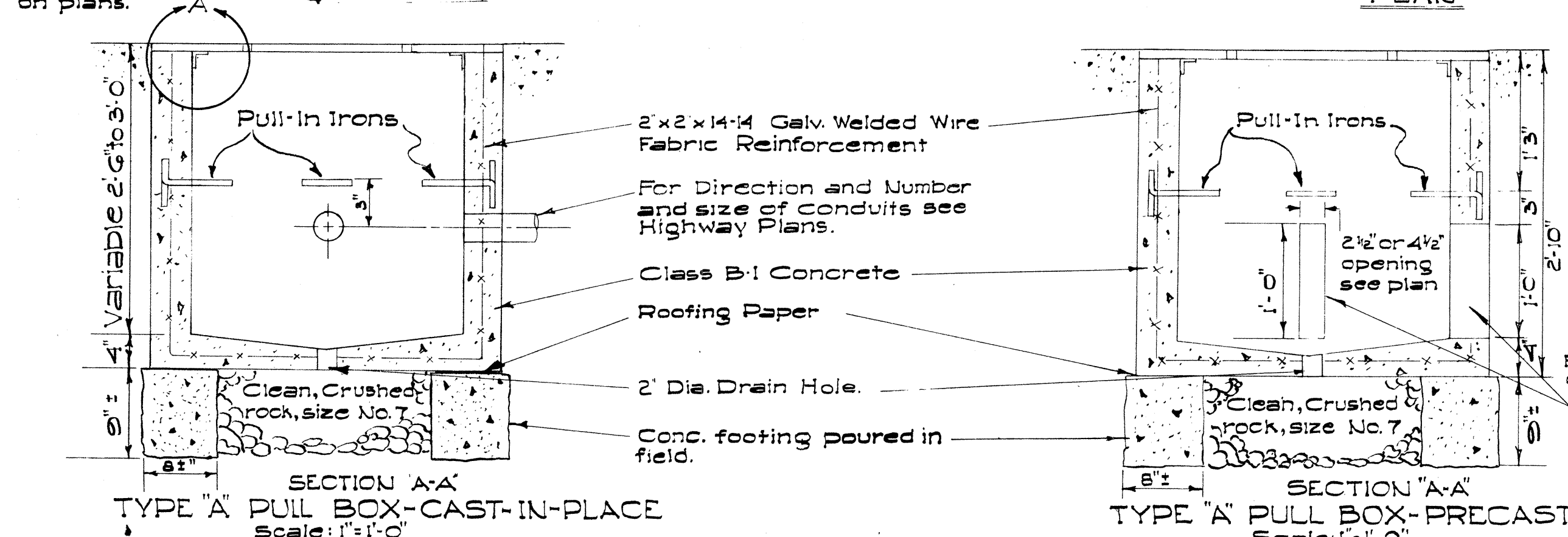
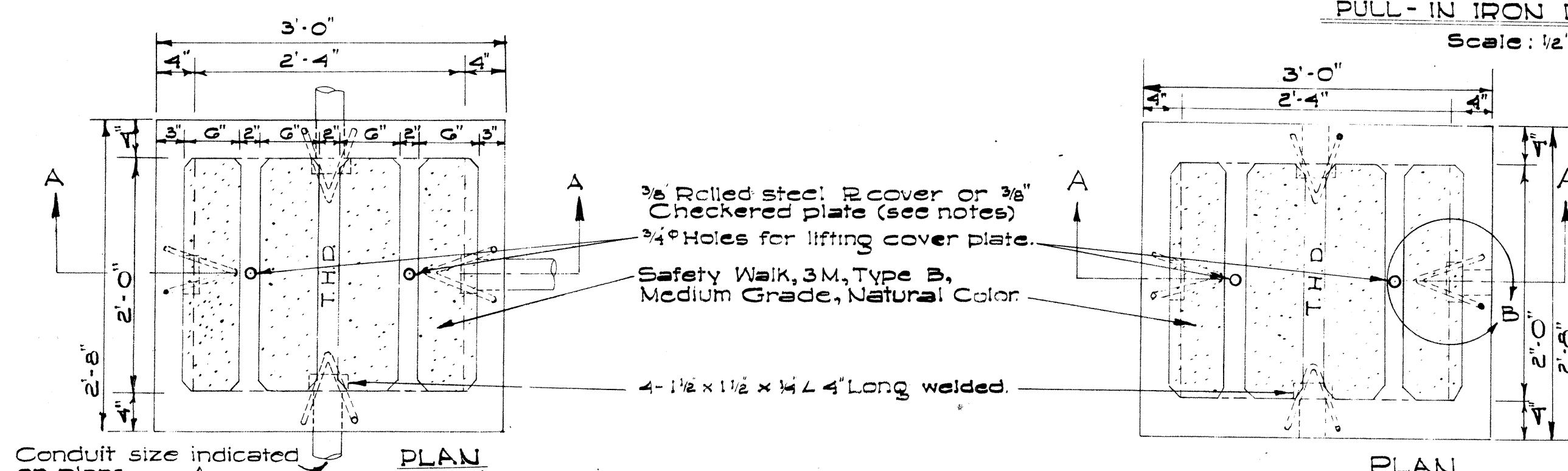


TYPICAL LAYOUT OF MCH DETECTORS IN CONCRETE JACKET
Scale: 1/8" = 1'-0"

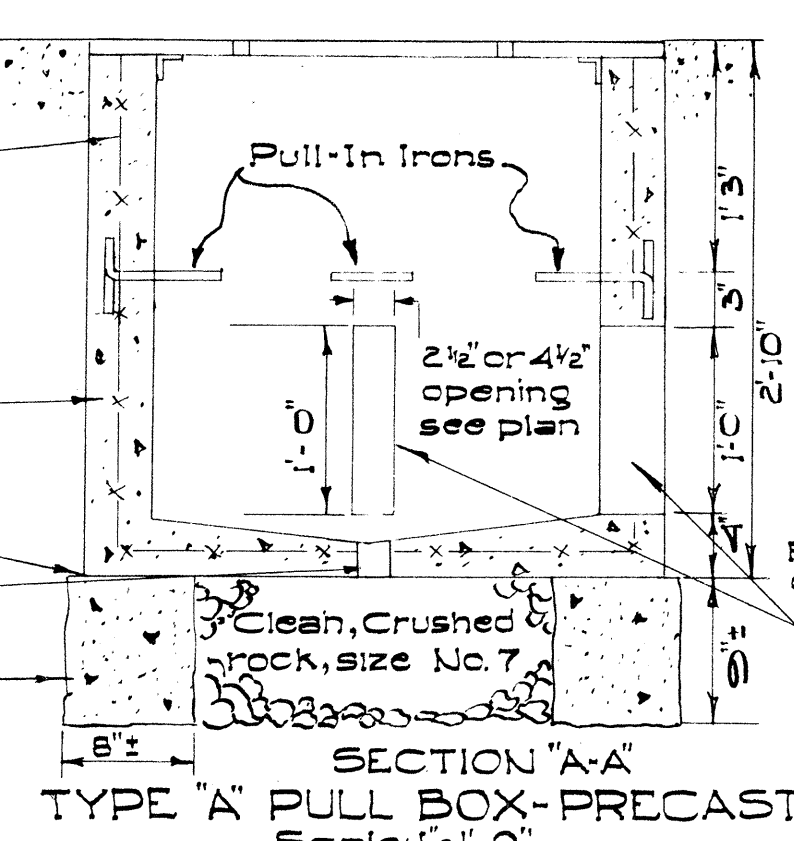


DETAIL OF MCH DETECTOR IN CONCRETE JACKET
Scale: 3/4" = 1'-0"

Note:
1. 3/8" Rolled steel Plate Cover with Safety Walk 3M, Type B, Medium Grade, Natural Color shall be used on all Pull Boxes located on sidewalk areas where pedestrians are walking.
2. 3/8" Checkered Plate Cover shall be used on all Pull Boxes located in median areas and other locations where there are no pedestrians walking.
3. Pull Irons shall be placed opposite each conduit slot.
4. Covers on all Pull Boxes located in sidewalk areas shall be set flush with the concrete sidewalk.
5. Each Pull Box shall have a pair of pull irons opposite each other for lifting purposes.
For direction and number and size of slots for conduits (See plan)
Grout Conduit Slot with 1:3 Cement Mortar after conduit is placed.



SECTION 'A-A'
TYPE 'A' PULL BOX - CAST-IN-PLACE
Scale: 1" = 1'-0"



SECTION 'A-A'
TYPE 'A' PULL BOX - PRECAST
Scale: 1" = 1'-0"

HAWAII STATE HIGHWAY DEPARTMENT
STATE OF HAWAII
STANDARD DETAILS
TRAFFIC SIGNAL SYSTEM
BASE, PULLBOX,
MAGNETIC DETECTORS

SHEET NO. 47 OF 47 SHEETS

8132(1).47

APPROVED DATE Aug. 29, 1959
STATE HIGHWAY ENGINEER