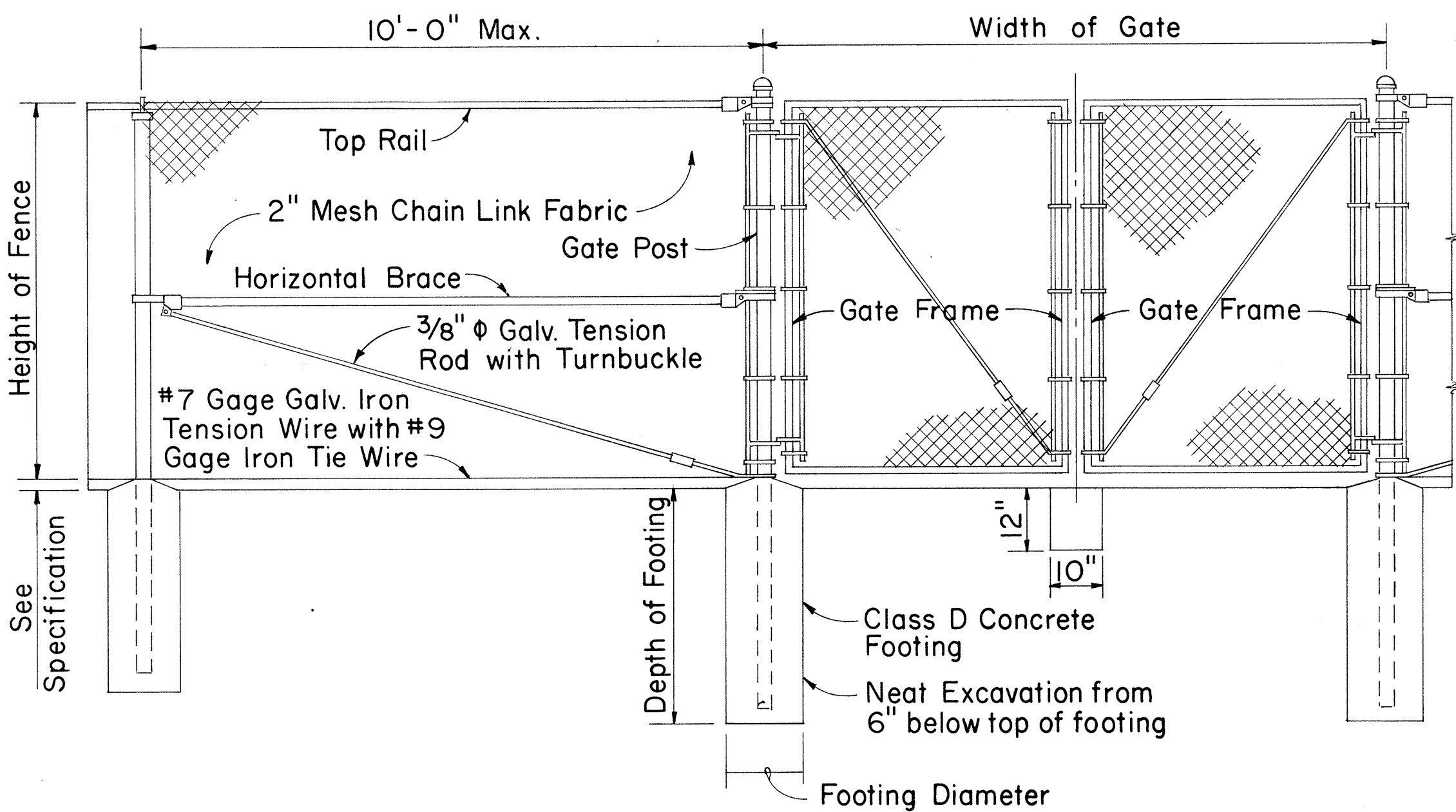


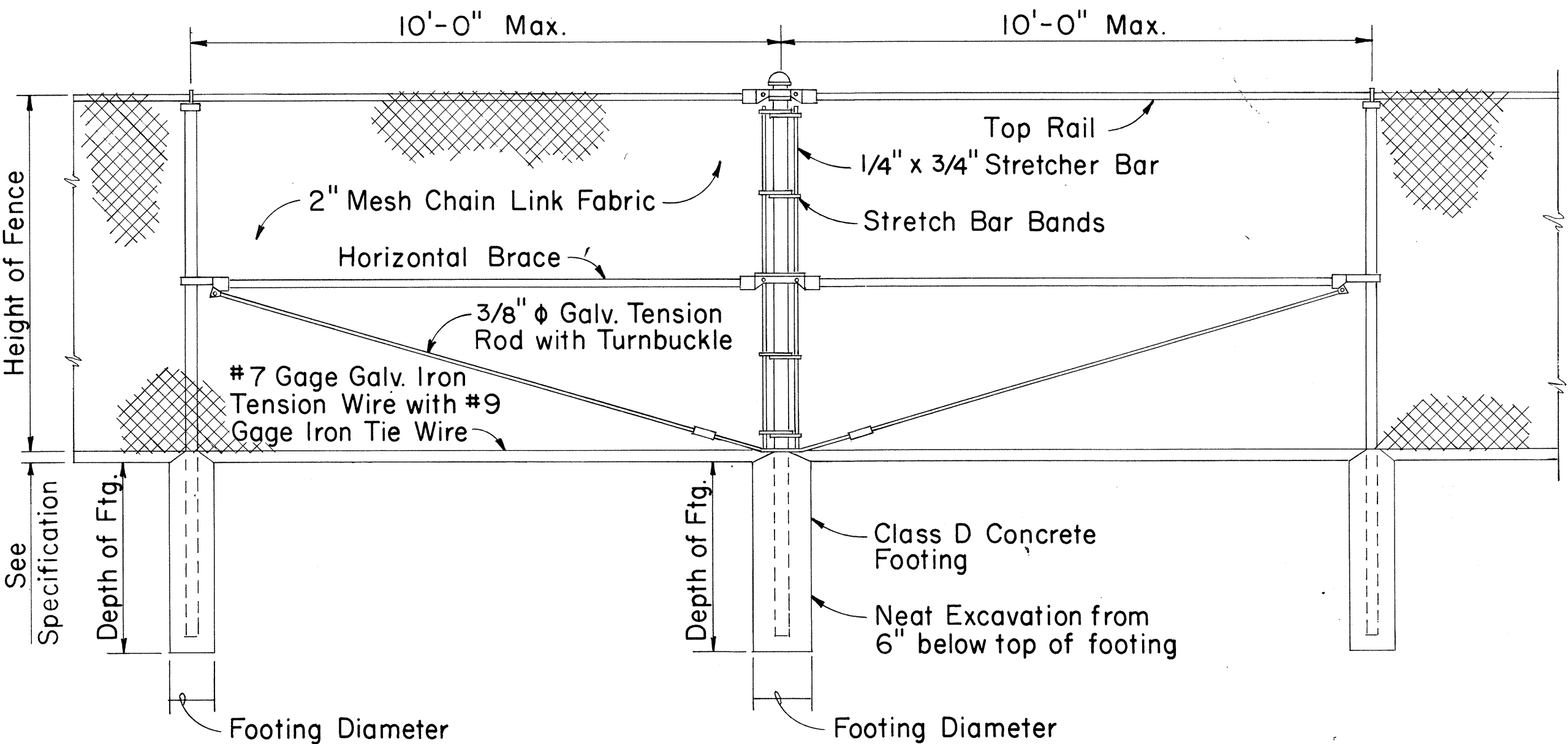
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	36A-01-74	1974	21	53



LINE POST

GATE POST

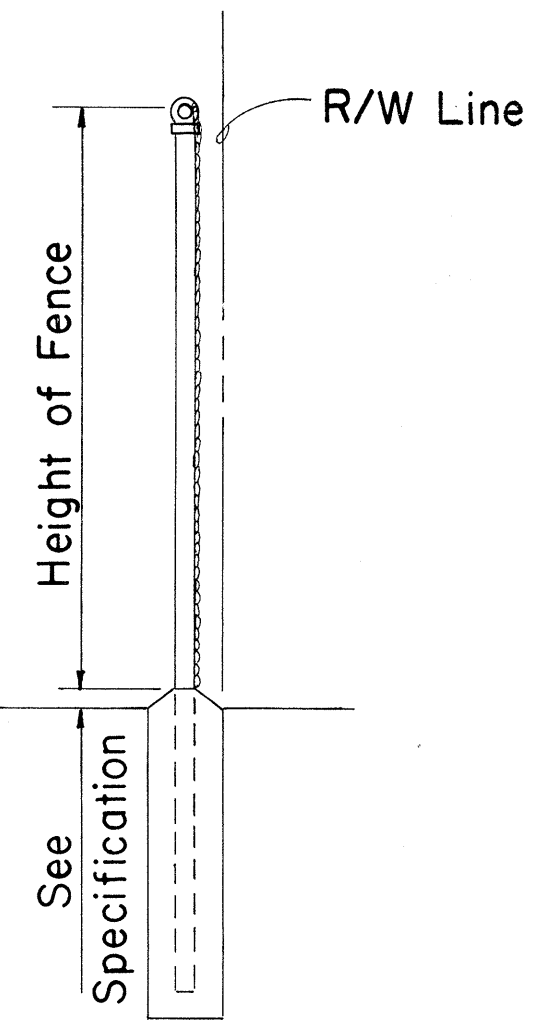
GATE POST



LINE POST

PULL POST

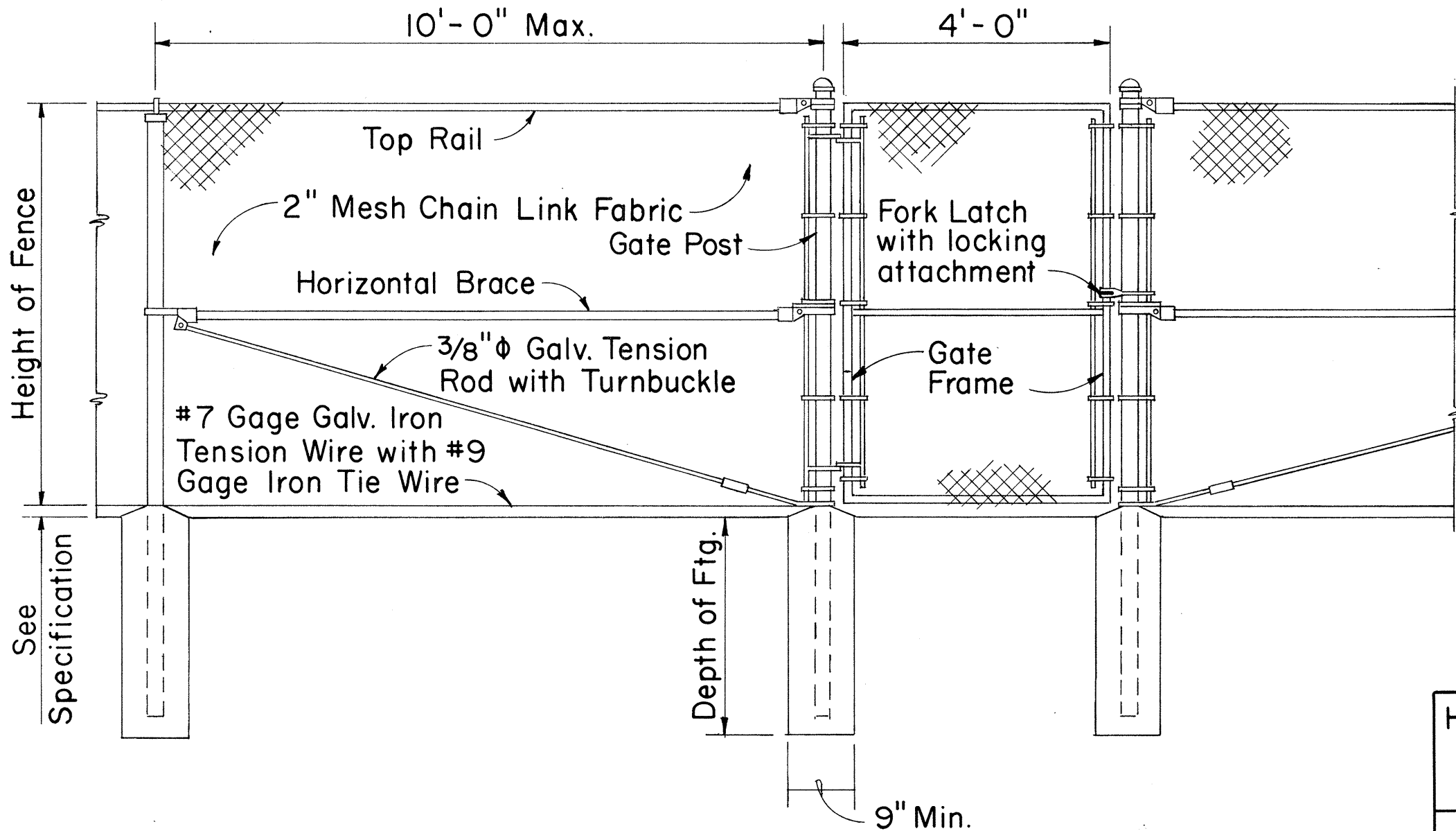
LINE POST



TYPICAL SECTION
(WITH CONCRETE FOOTING)

DETAIL OF CHAIN LINK GATE

- NOTE: 1. Gate fork latch and lock, flush plate and anchor, and plunger shall be installed with Gates, and shall be considered as incidental to Chain Link Fence Gate.
2. Gate frames shall be mitered and welded at corners.
3. Fence detail not shown shall be in accordance with the Standard Specifications.

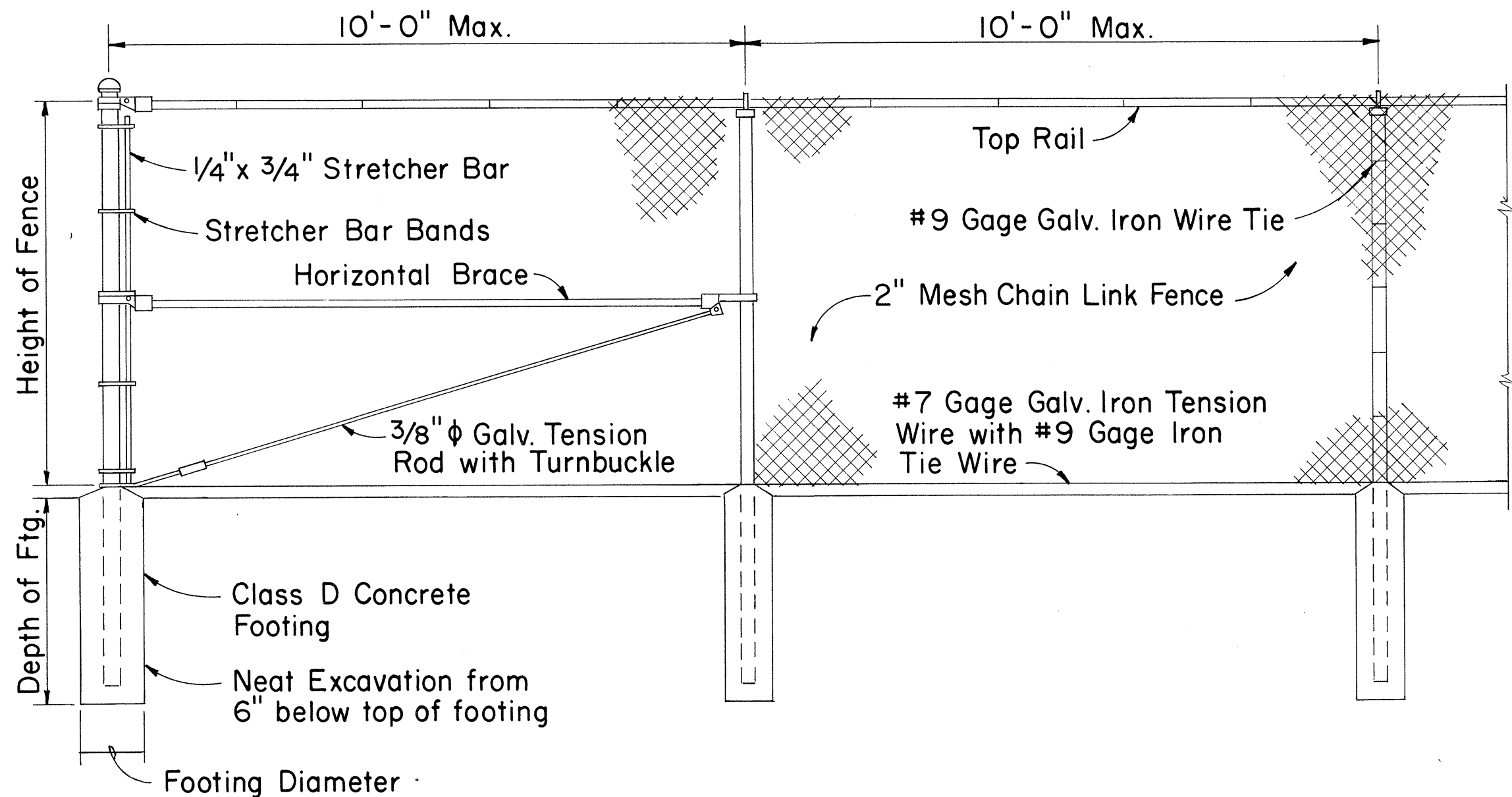


LINE POST

GATE POST

GATE POST

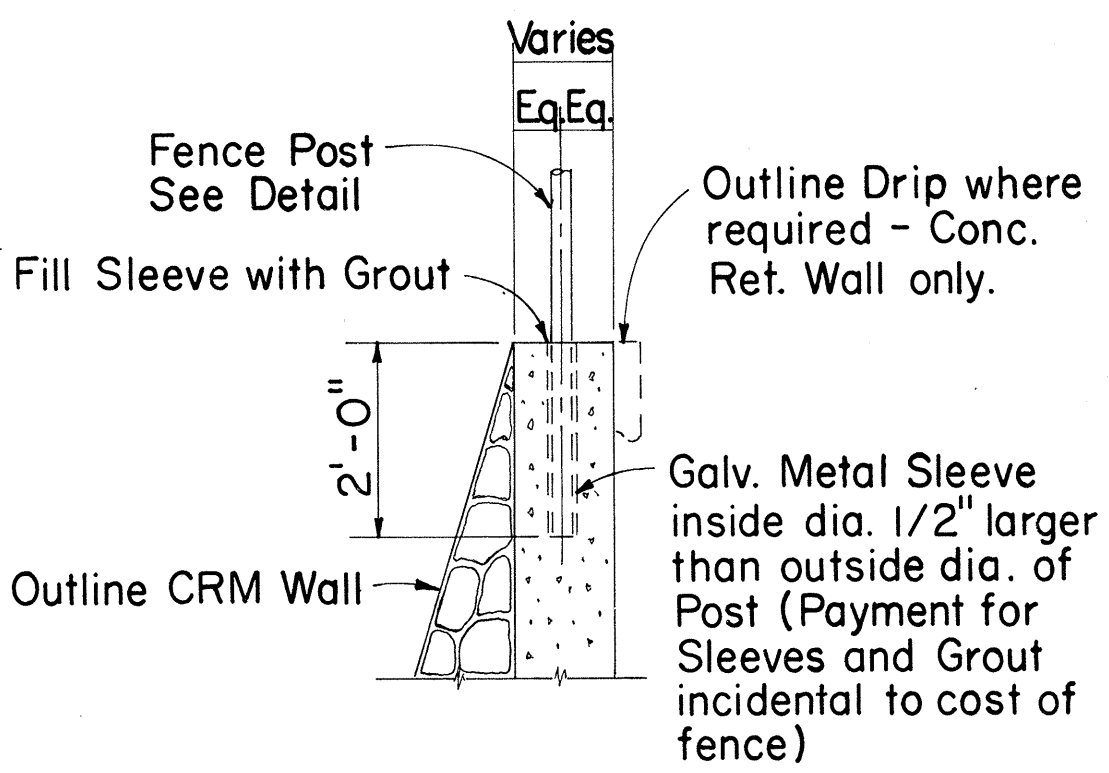
DETAIL OF 4 FT. CHAIN LINK GATE



END POST

LINE POST

LINE POST



TYPICAL SECTION
(ON CRM & CONC. RET. WALL)

CHAIN LINK FENCE DETAILS

Height of Fence	Minimum Depth of Footing		Minimum Footing Diameter	
	Line Post	Corner, Pull, End and Gate Posts	Line Post	Corner, Pull and End Posts
3'	2'-0"	2'-6"	8"	8"
4'	2'-6"	2'-6"	8"	8"
5'	3'-0"	3'-0"	8"	8"
6'	3'-0"	3'-0"	8"	9"
12'	3'-0"	3'-4"	12"	12"

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CHAIN LINK FENCE
(WITH TOPRAIL)

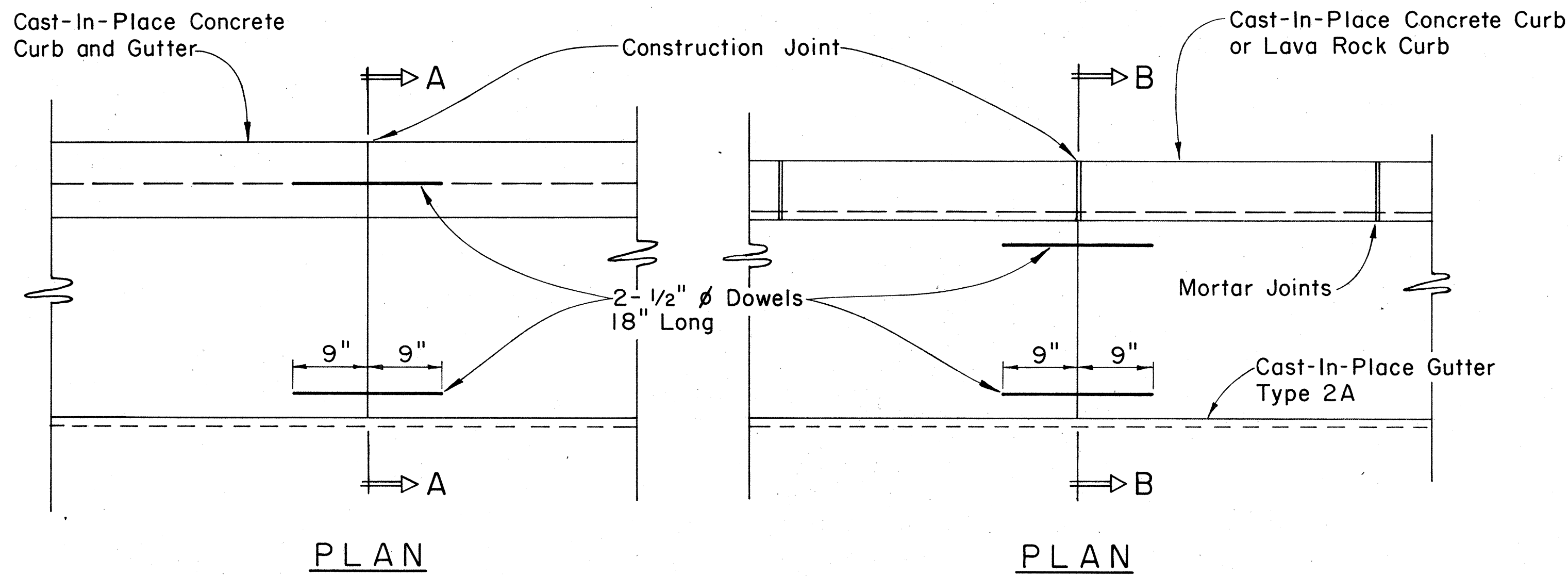
Scale: 1/2" = 1'-0"

Date:

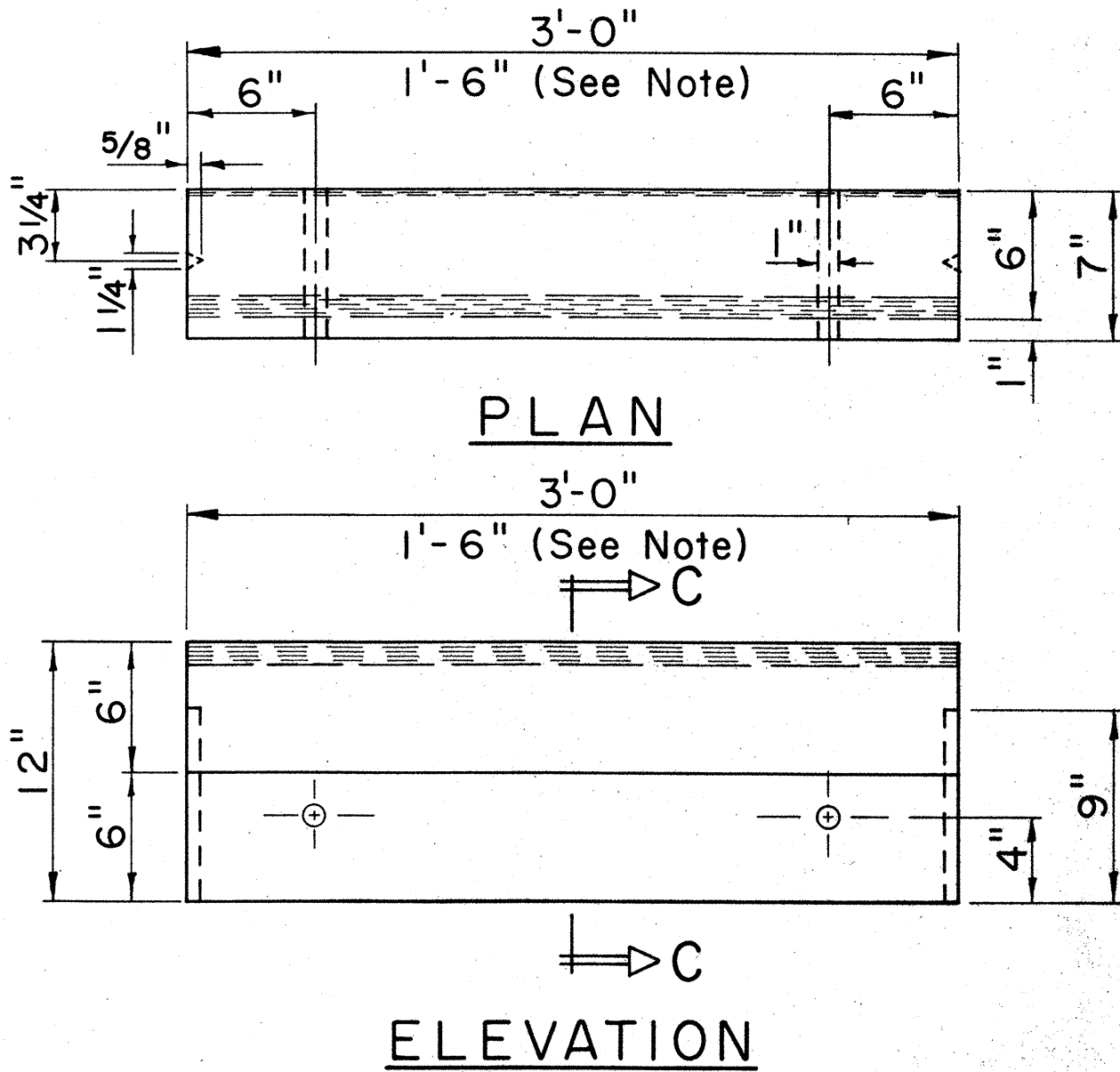
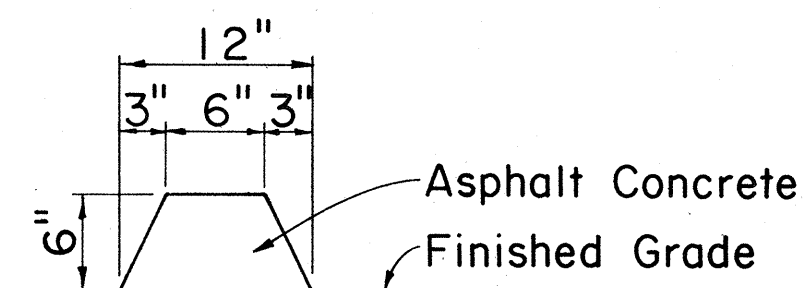
SHEET No. 1 OF 20 SHEETS

ORIGINAL PLAN	DATE
SURVEYED BY	
DESIGNED BY	
NOTED BY	
CHECKED BY	
NO.	

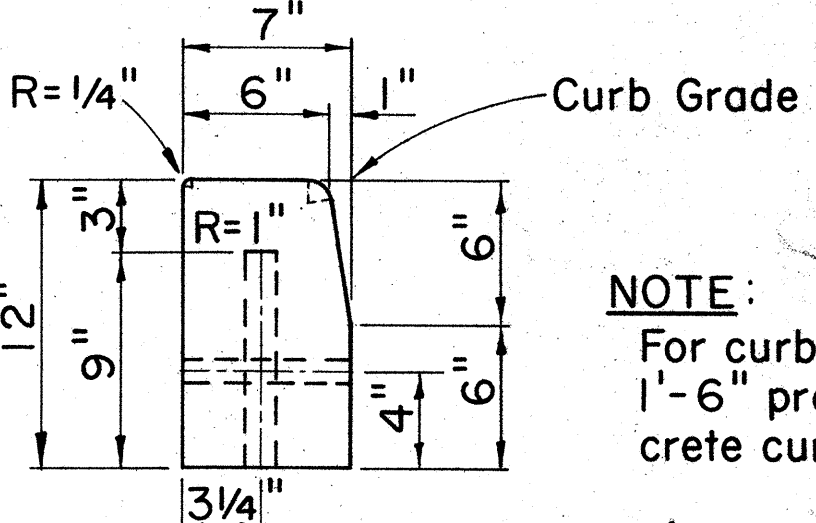
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56A-01-74	1014	22	53



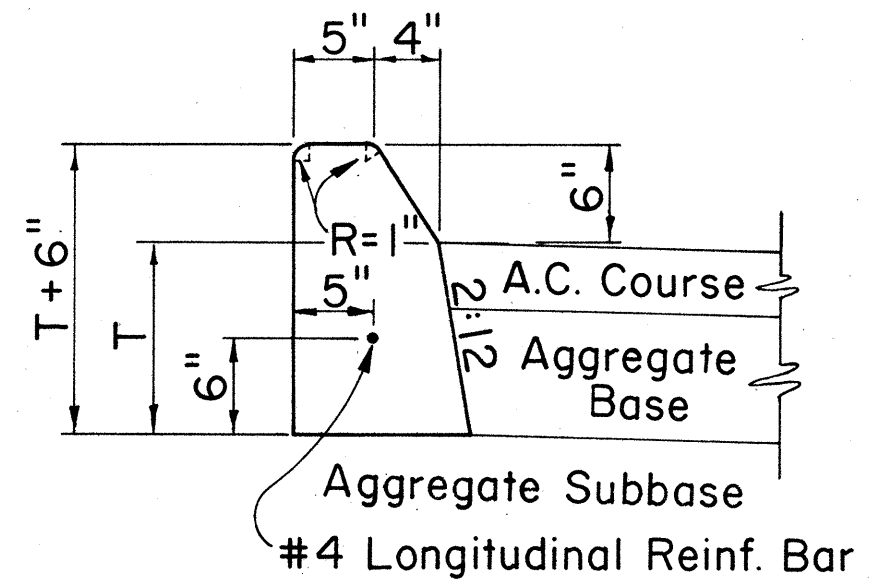
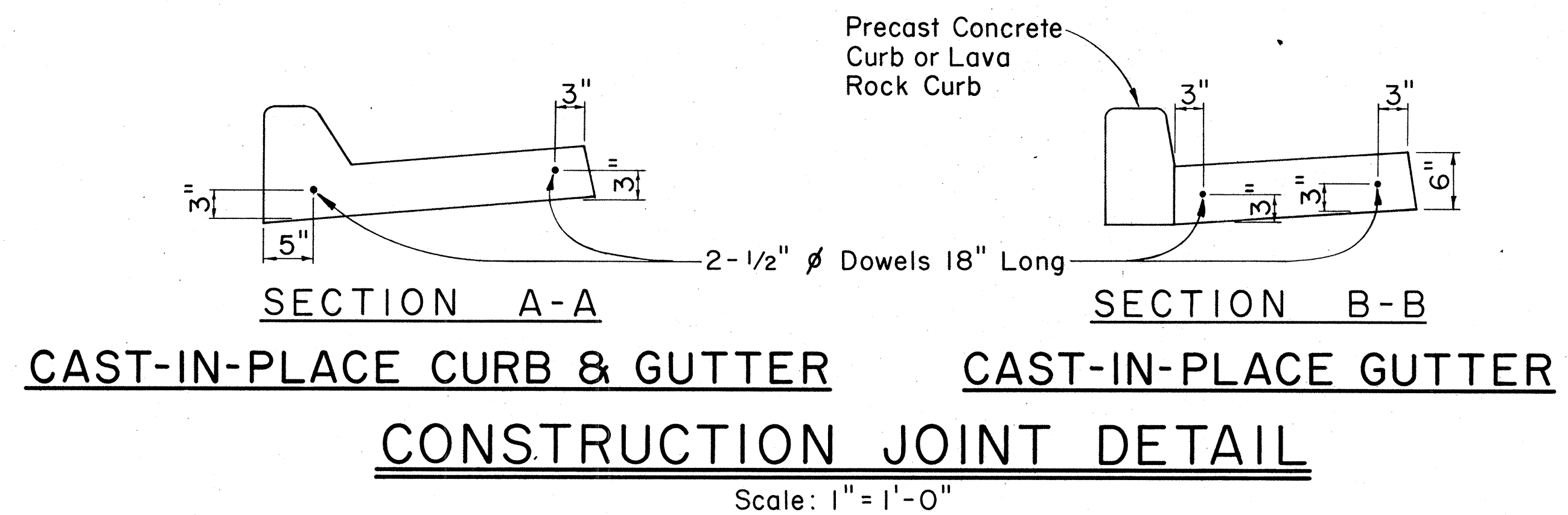
CURB, TYPE 6
BITUMINOUS CURB
 Scale: 1 1/2" = 1'-0"



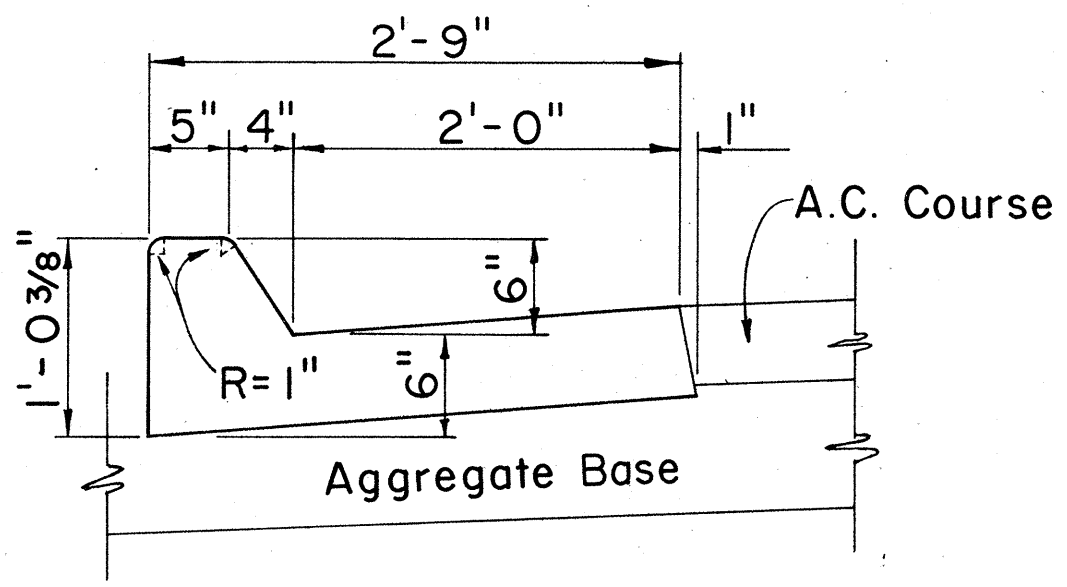
SECTION C-C
CURB, TYPE 3D
PRE-CAST CONC. CURB
 Scale: 1 1/2" = 1'-0"



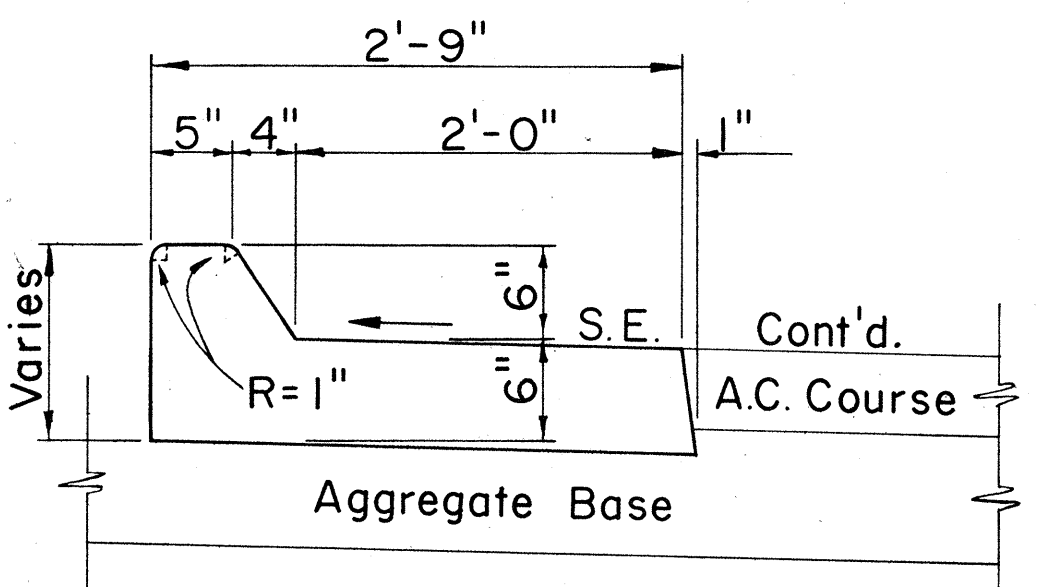
NOTE:
 For curb returns use
 1'-6" pre-cast con-
 crete curbs.



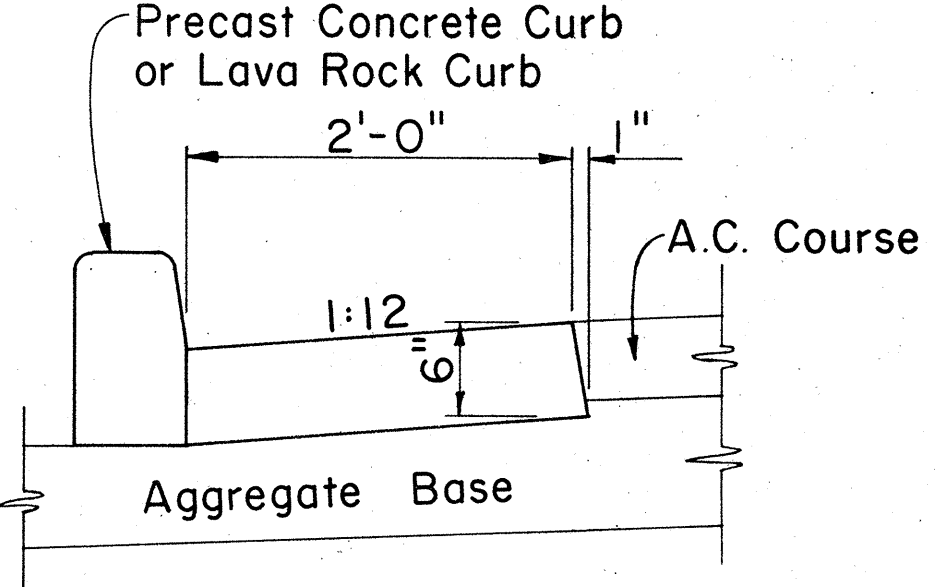
CURB, TYPE 2A



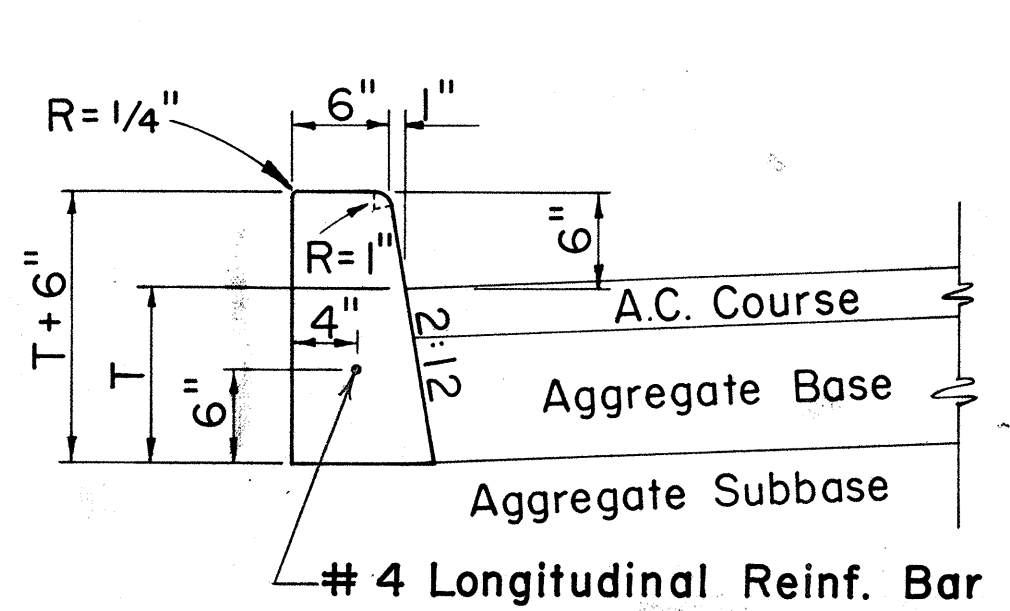
CURB & GUTTER, TYPE 2AG



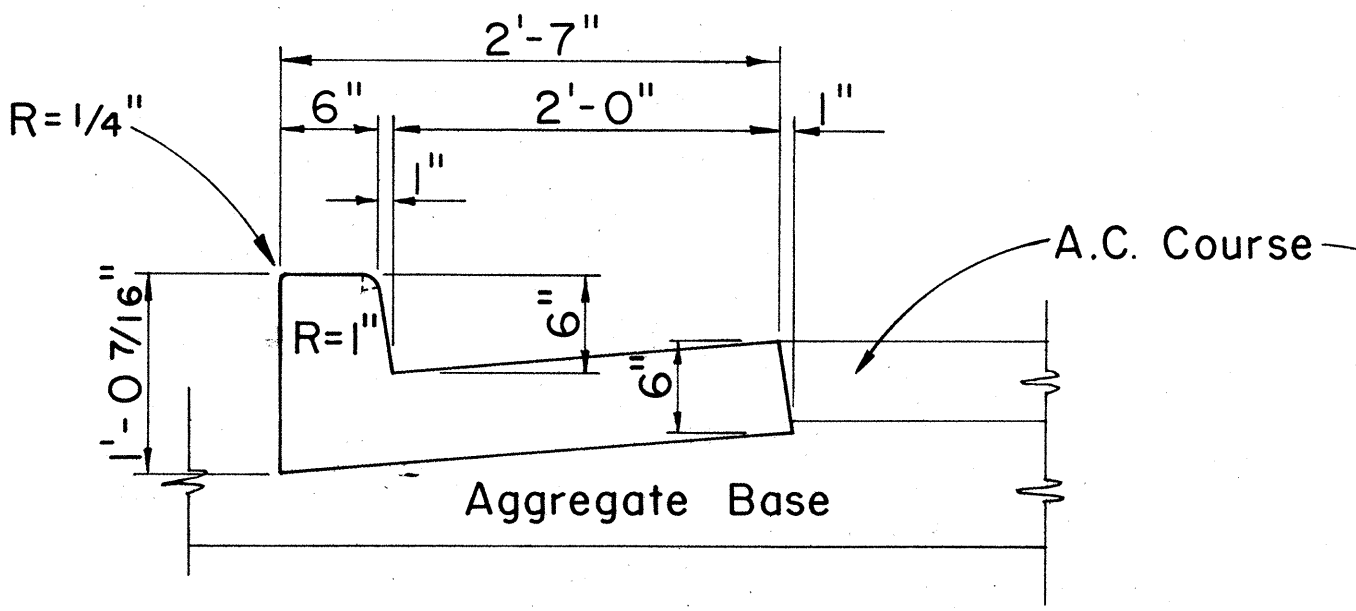
CURB & GUTTER, TYPE 2AGM



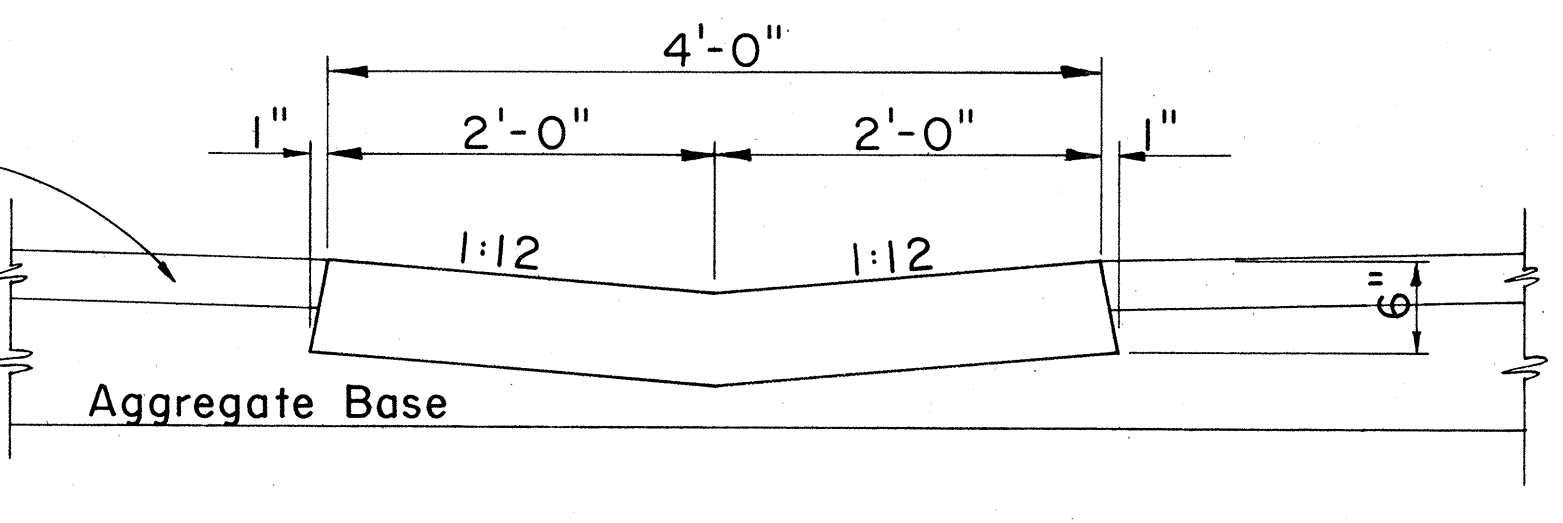
GUTTER, TYPE 2A



CURB, TYPE 2D



CURB & GUTTER, TYPE 2DG



GUTTER, TYPE 2G

CAST-IN-PLACE CONCRETE CURBS AND/OR GUTTERS
 Scale: 1" = 1'-0"

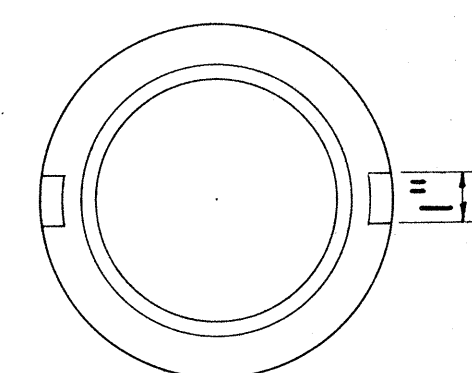
APPROVAL RECOMMENDED:
 HIGHWAY DESIGN ENGINEER 12-4-69
 DATE

APPROVED:
 ASSISTANT CHIEF, ENGINEERING 12-10-69
 DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
STANDARD DETAILS
TYPICAL DETAILS OF CURB
AND/OR GUTTERS
 Scale: As Shown
 SHEET No. 2 OF 20 SHEETS DD 609.1

DATE	
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
QUANTITIES BY	
CHECKED BY	
NOTE BOOK	
No.	

24[illegible]

STREET SURVEY MONUMENT CASTINGS

Street Survey Monument Castings

2'-0" Dia.

Top of Pavement

3/8" x 4" Brass Pin

Class A Concrete (6" Min. depth from top of pavement to be formed).

8" W.I. Pipe filled with #6 crushed rock ASTM D 448

3" Galv. Pipe filled with concrete.

Class A Concrete

12" Dia.

Dimensions: 1/2", 4", 14", 8", 6 1/2", 4", 1' - 6", 3' - 0", 3' - 8 1/2", 6"

STREET SURVEY MONUMENT

Existing ground or finish elevation
on shoulder or median.

1/4"

1/2" x 2 1/2" Brass Plug
feathered at bottom to be set
after pavement is completed.

8" x 8" Class A Concrete

2'-0"

NO.

Scale: $1\frac{1}{2}'' = 1' - 0''$

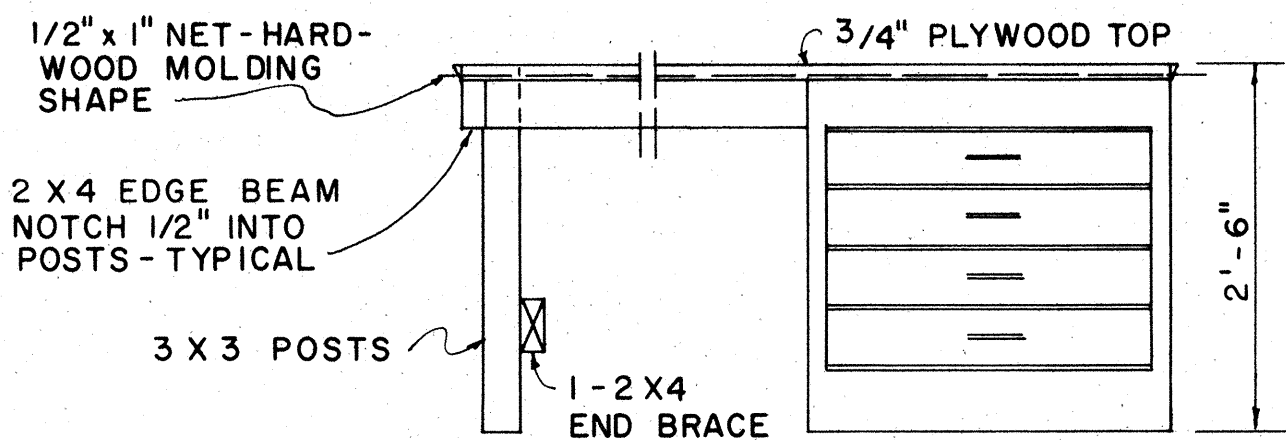
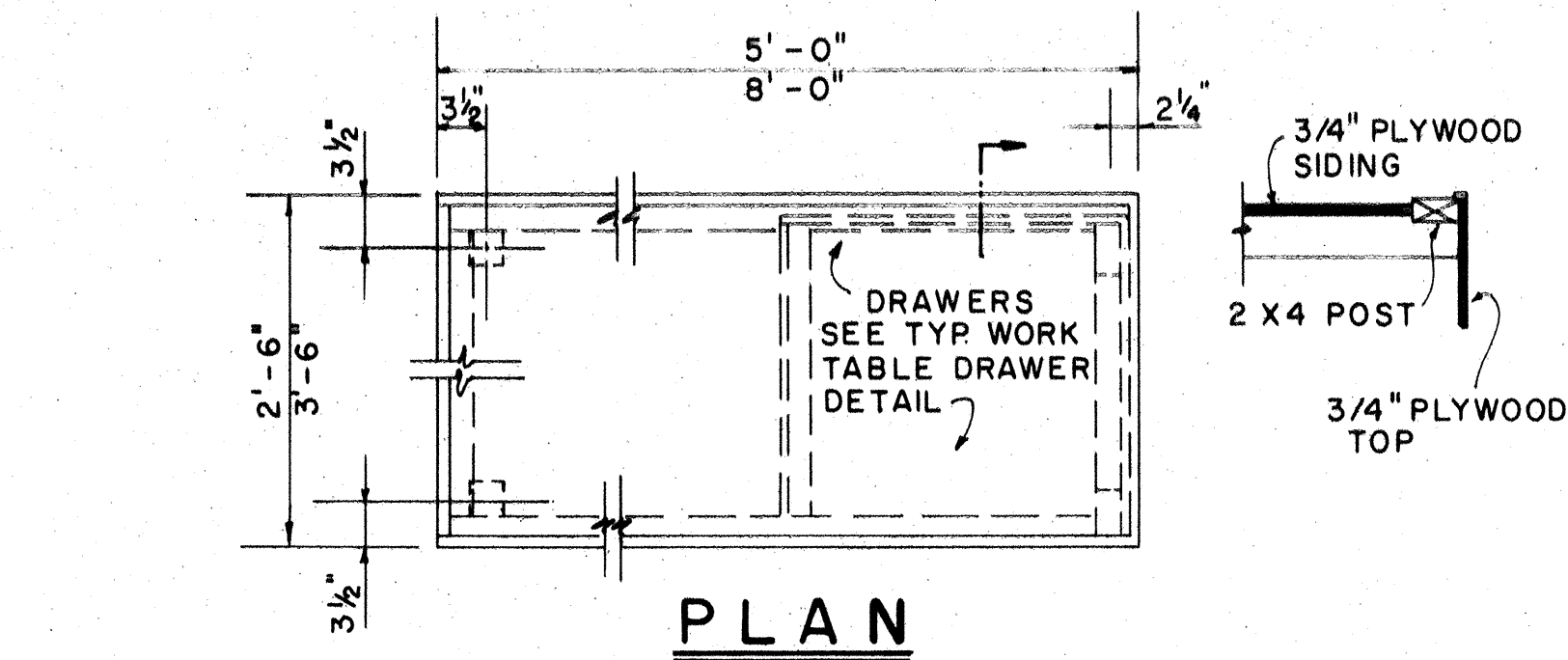
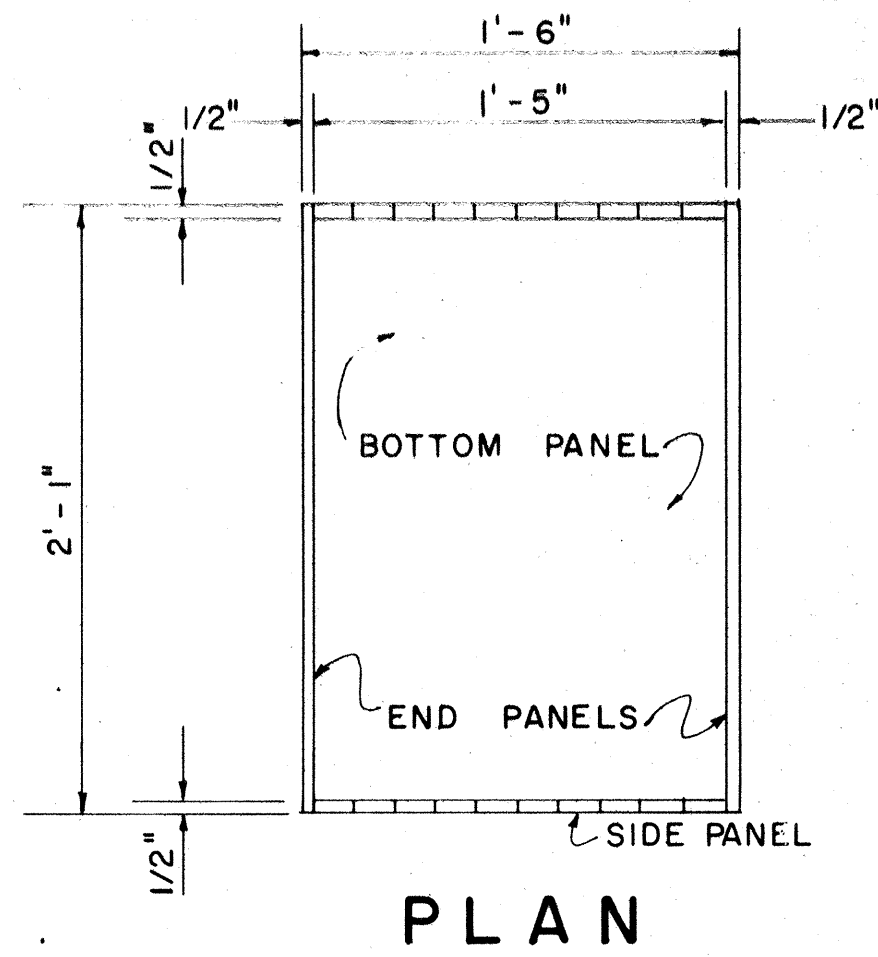
APPROVAL RECOMMENDED: M. H. H. H. H. 12-4-69
HIGHWAY DESIGN ENGINEER DATE

APPROVED: W. W. W. W. W. 12-10-69
ASSISTANT CHIEF, ENGINEERING DATE

Scale: As Shown

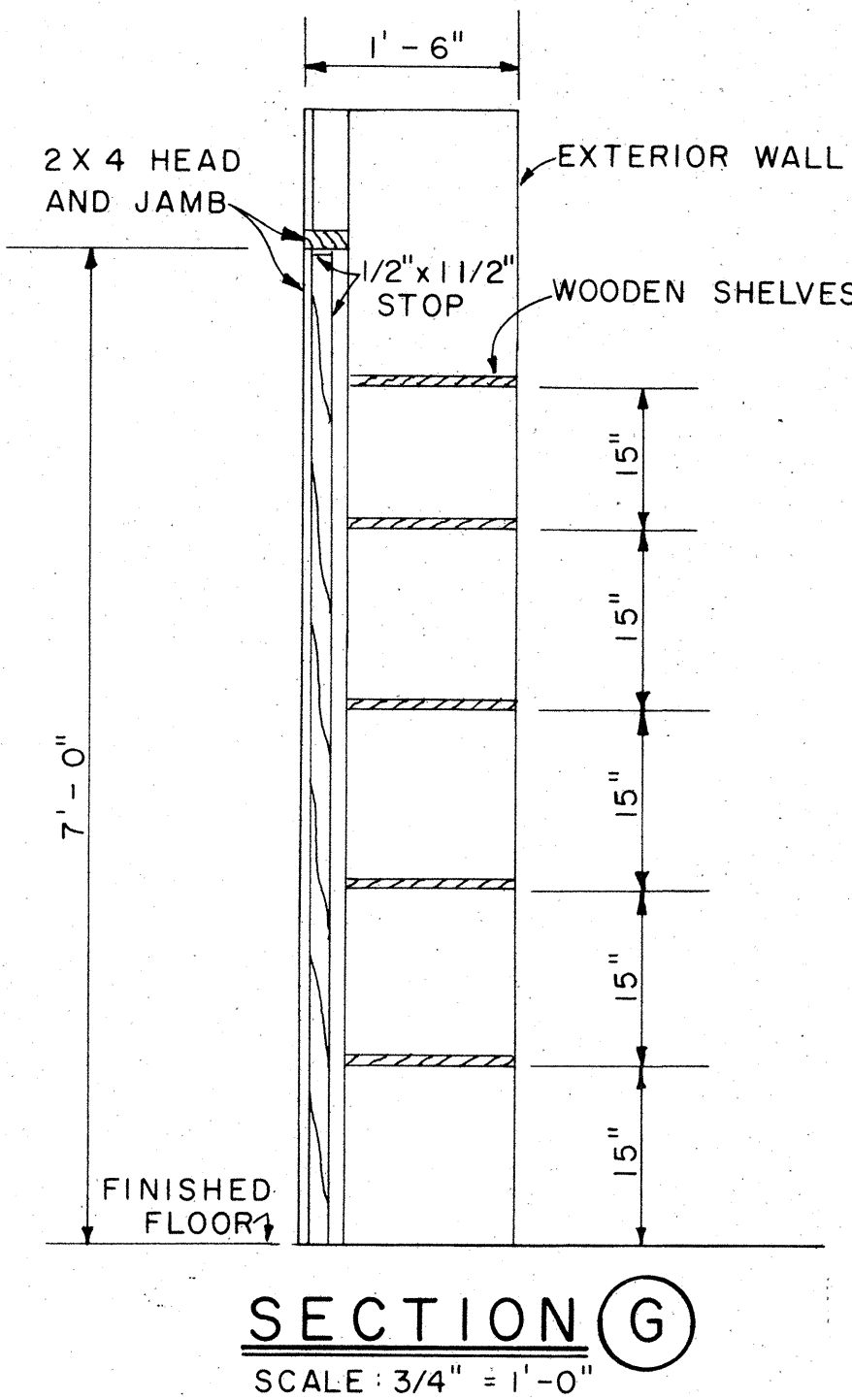
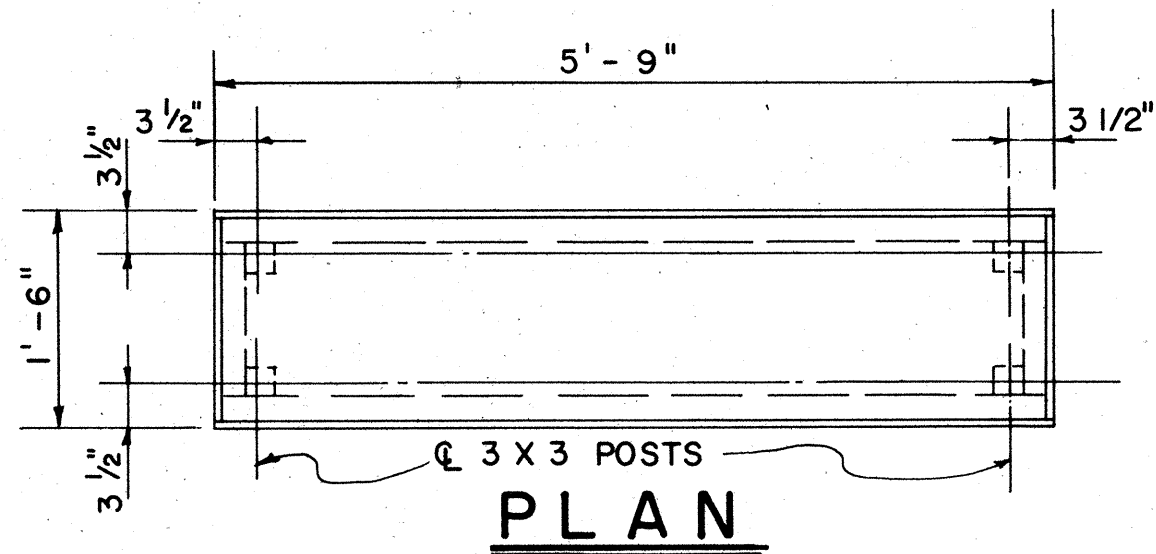
SHEET No. 4 OF 20 SHEETS	DD 613.1
--------------------------	----------

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	56A-01-74	1974	20	53

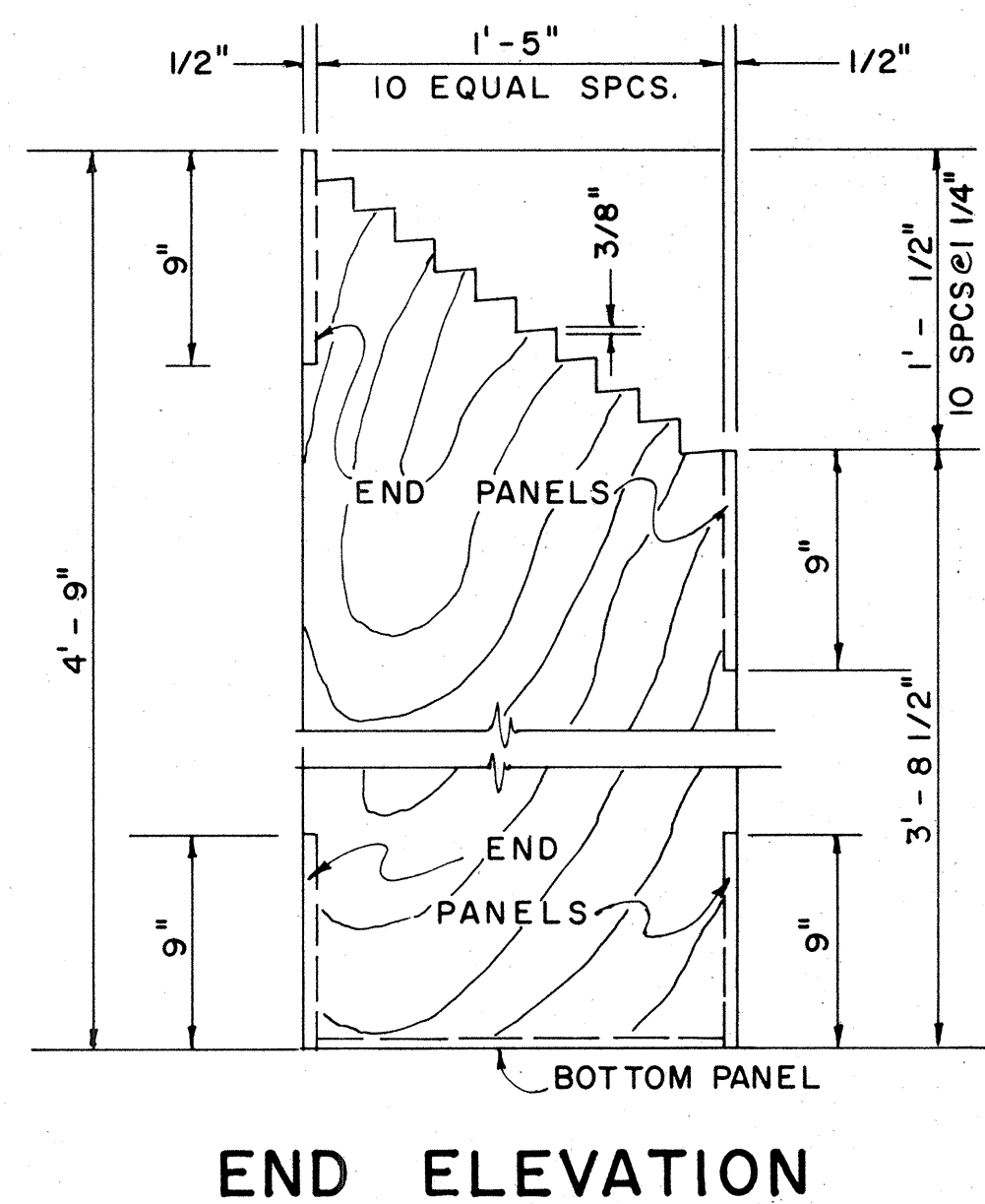
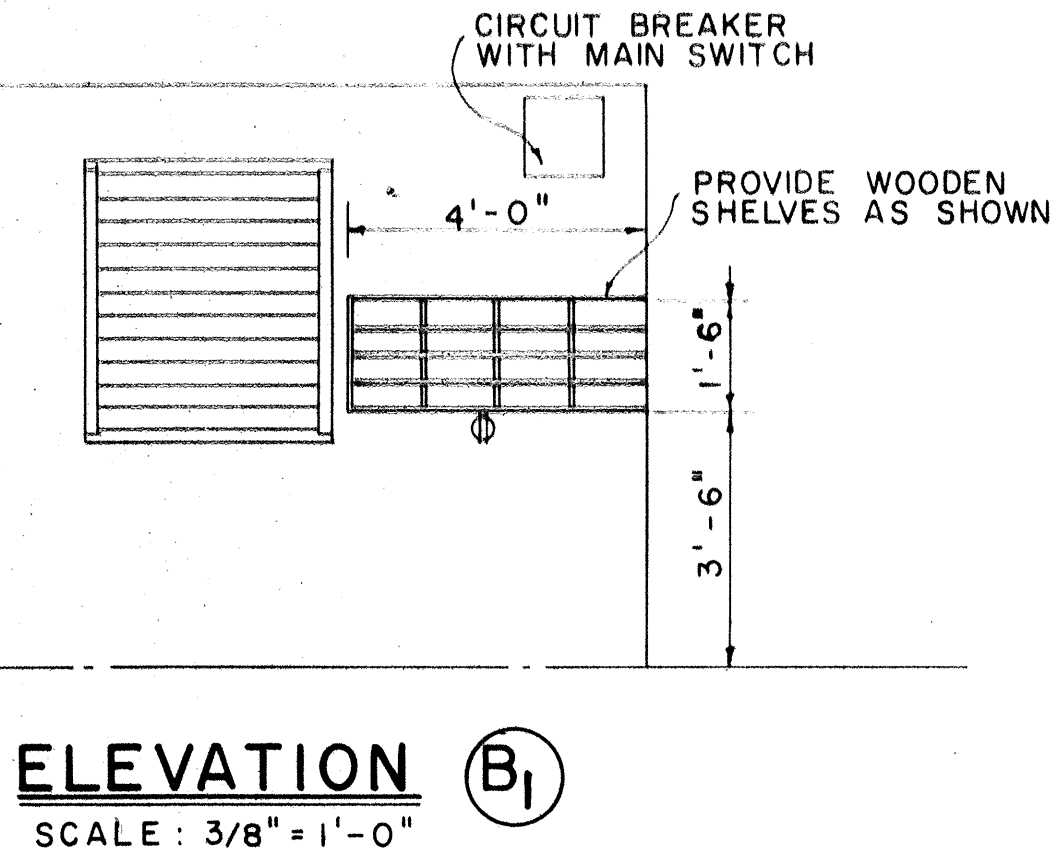


2'-6" x 5'-0" 2 REQ'D
3'-6" x 8'-0" 1 REQ'D
2'-6" x 8'-0" 1 REQ'D

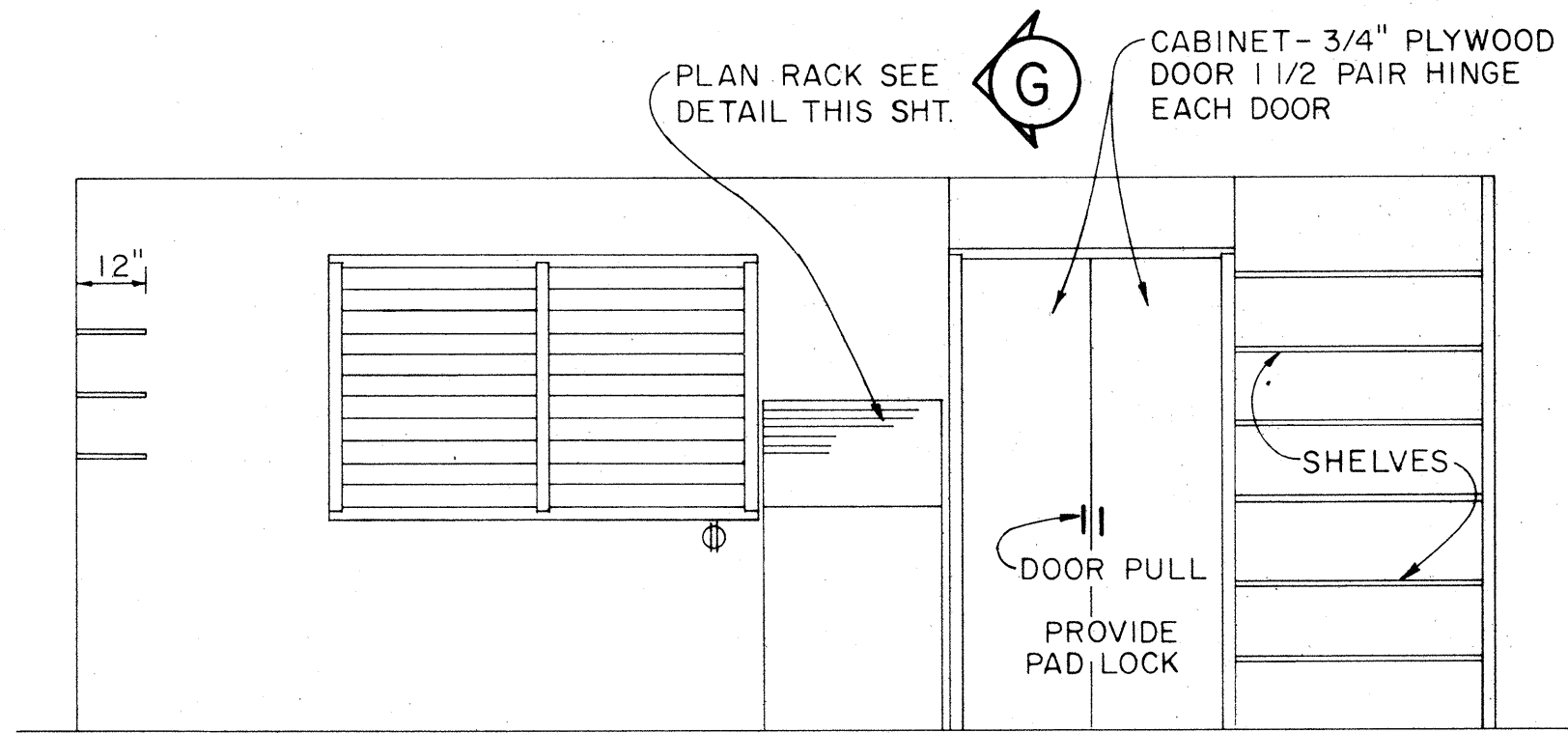
**PORTABLE WORK
TABLE DETAIL**
SCALE: 3/4" = 1'-0"



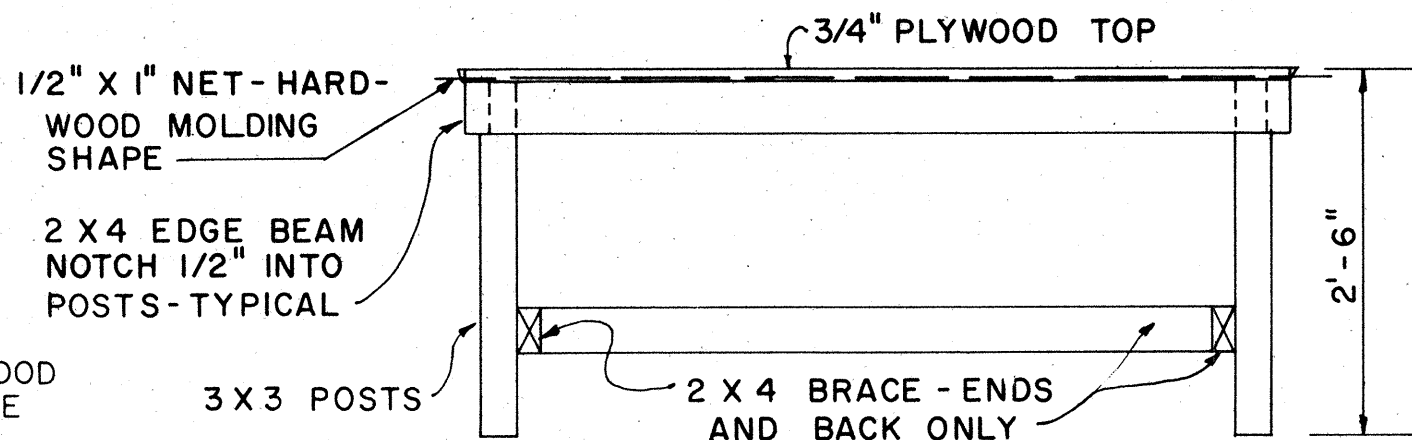
ELEVATION D₁
SCALE: 3/8" = 1'-0"



PLAN RACK DETAIL
SCALE: 1 1/2" = 1'-0"
(ONE REQUIRED)



ELEVATION A₁
SCALE: 3/8" = 1'-0"



**1'-6" x 5'-9" PORTABLE
WORK TABLE DETAIL**
SCALE: 3/4" = 1'-0"

APPROVAL RECOMMENDED:
[Signature] 12-4-69
HIGHWAY DESIGN ENGINEER DATE

APPROVED:
[Signature] 12-10-69
ASSISTANT CHIEF, ENGINEERING DATE

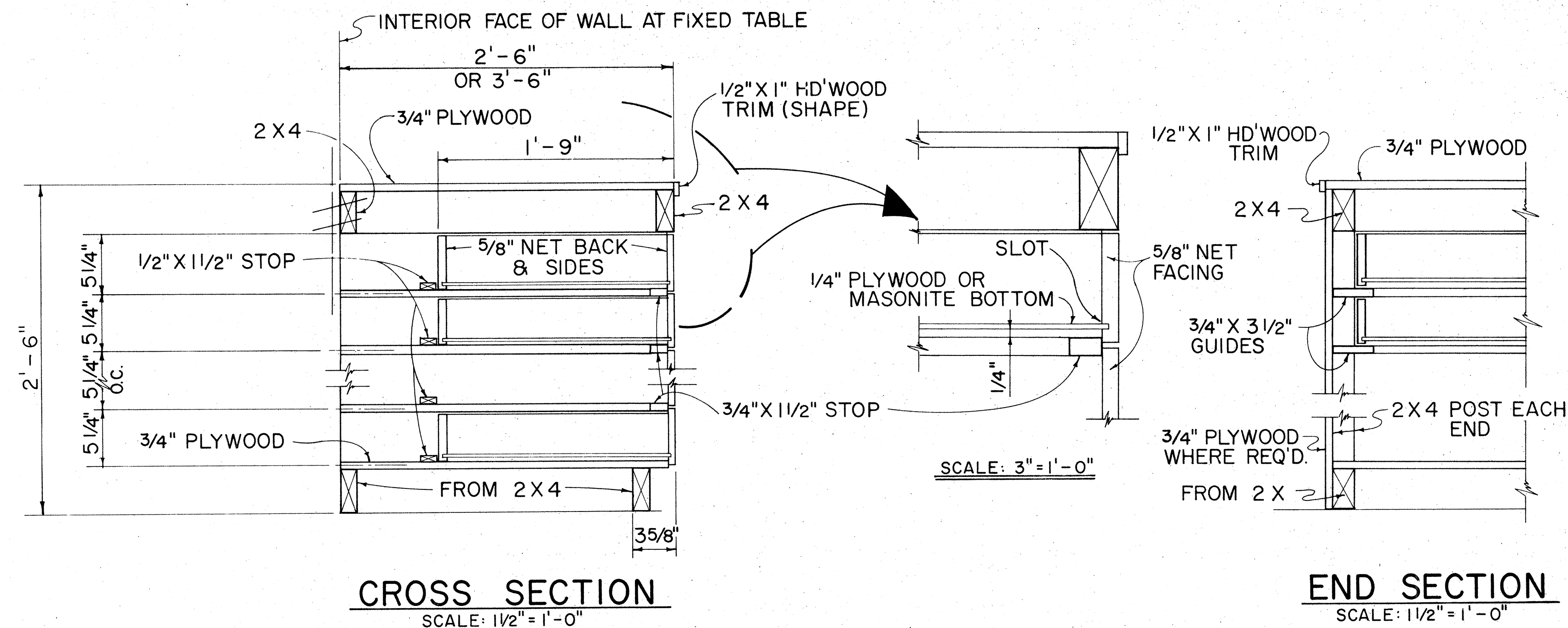
NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

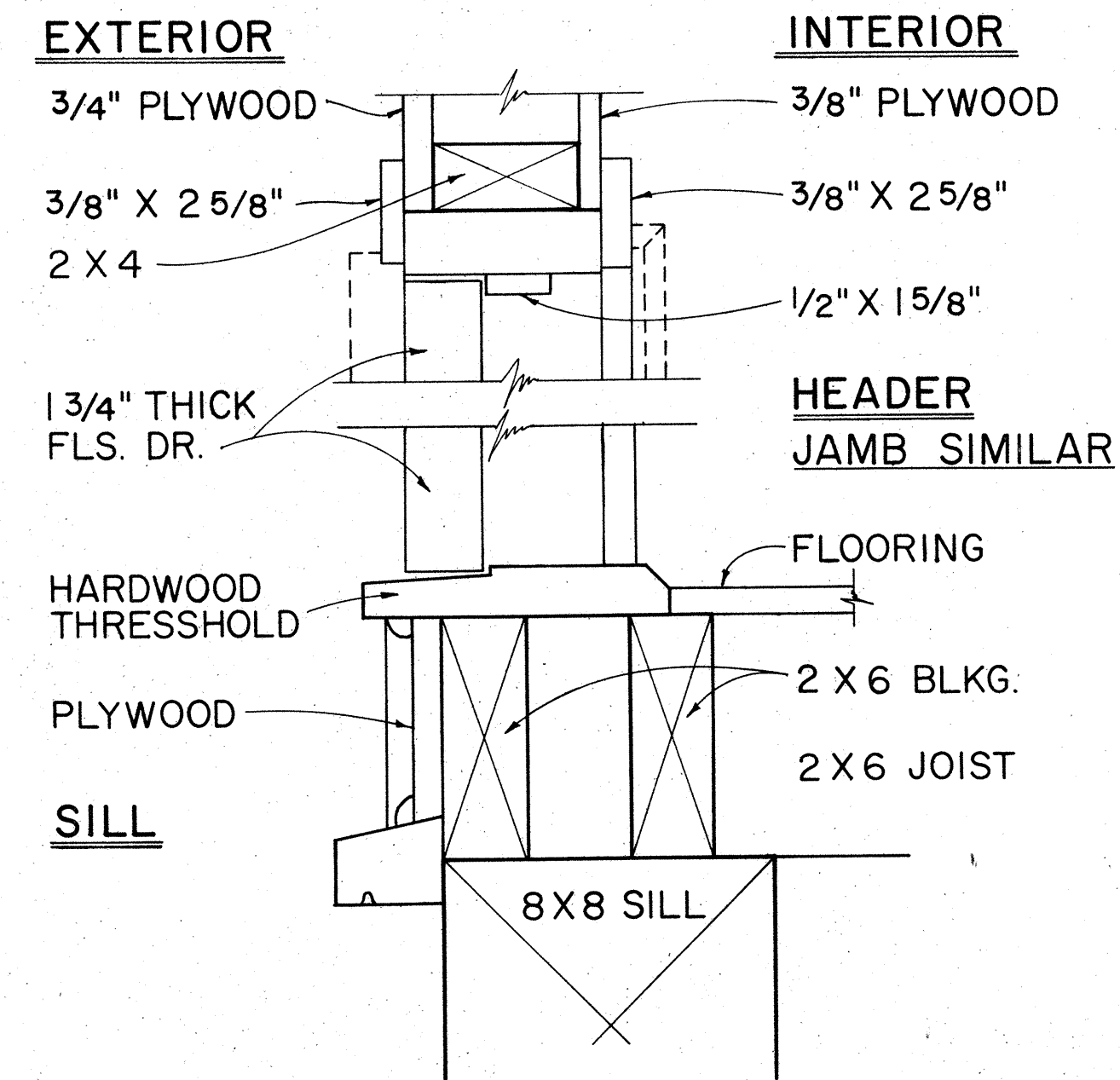
FIELD OFFICE

Scale: As Noted

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	56A-01-74	1974	27	53

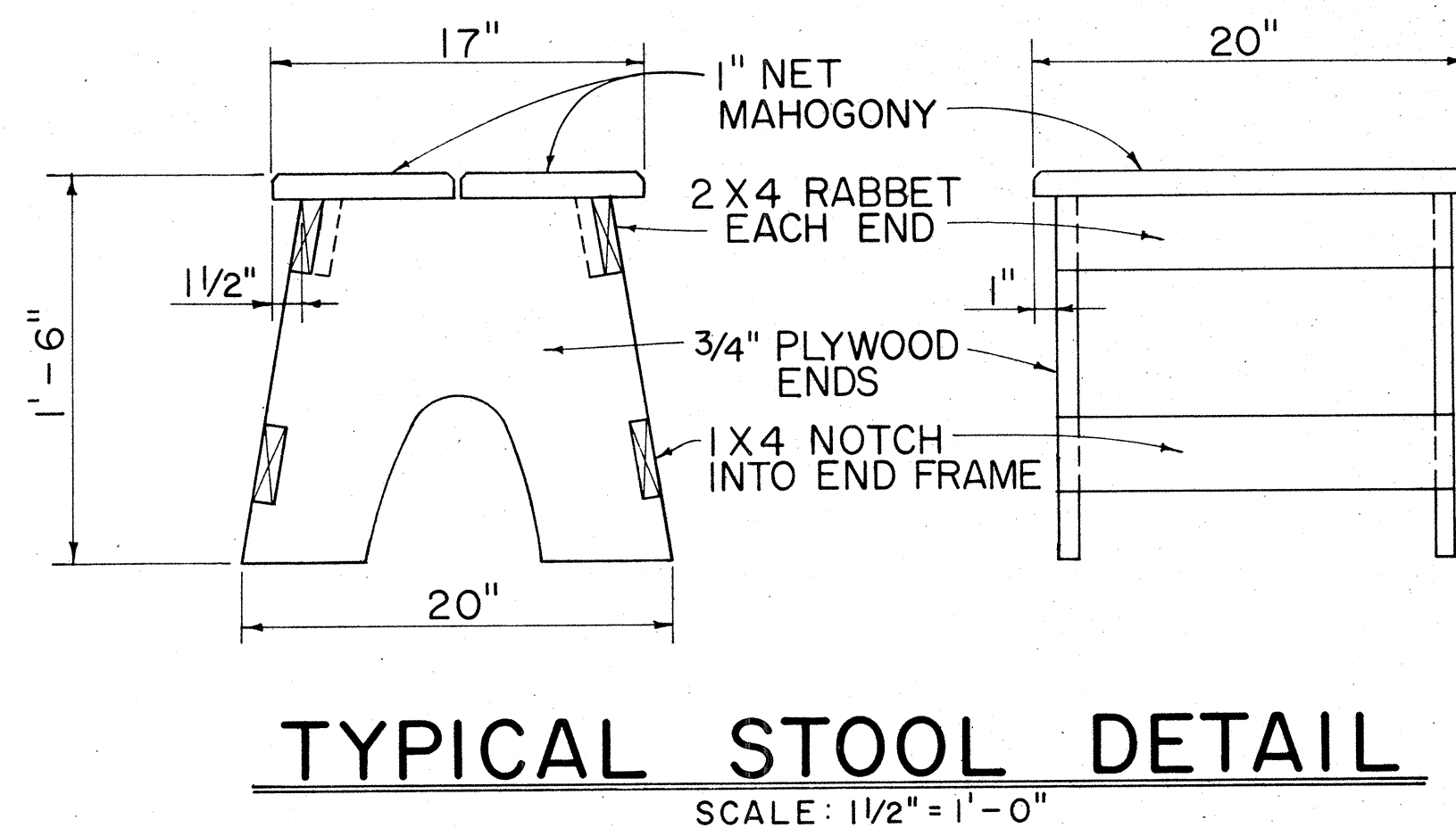


TYPICAL WORK TABLE DRAWER DETAIL

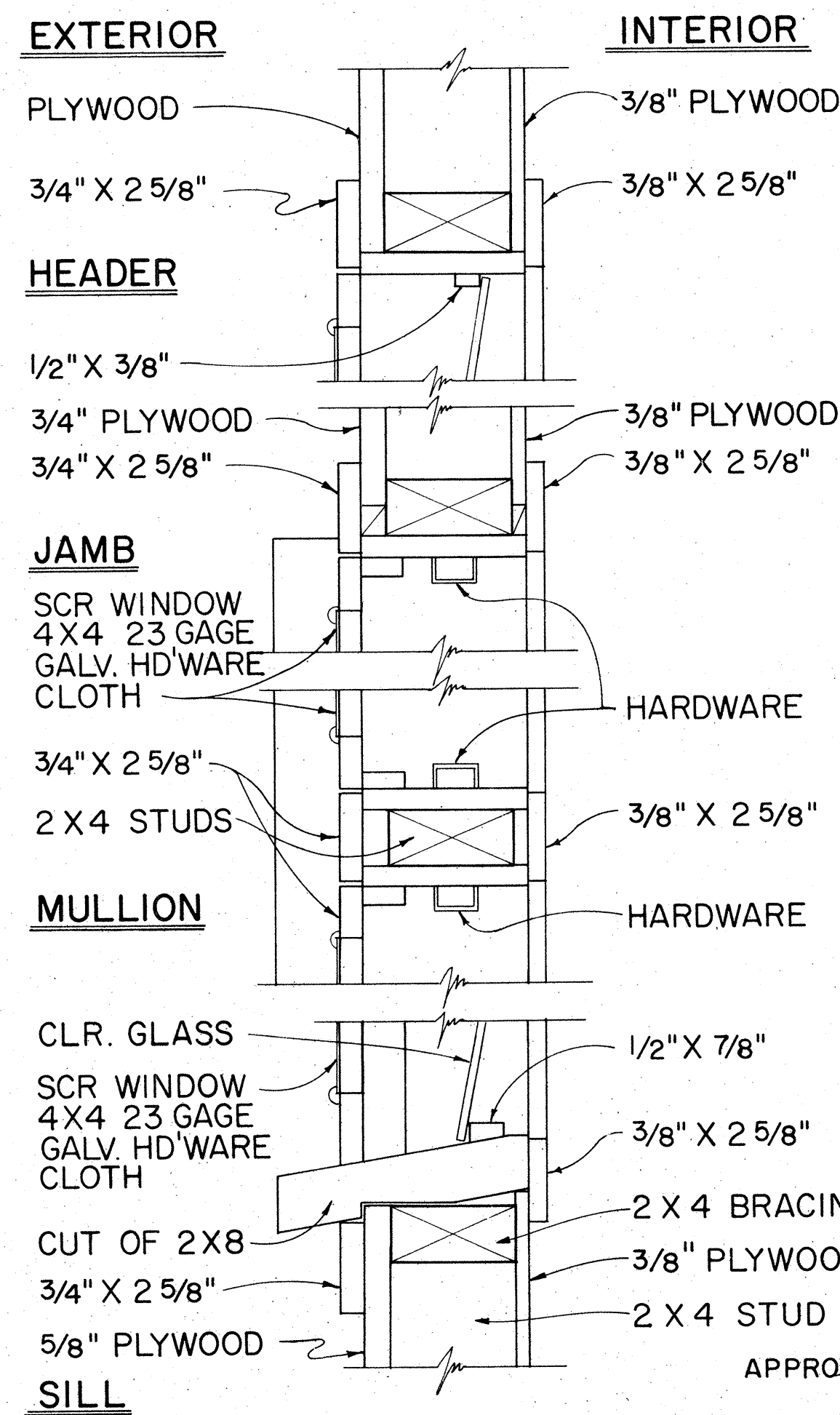


TYP. SWING OUT DOOR

TYPICAL SINGLE OR DOUBLE EXTERIOR DOOR DETAIL



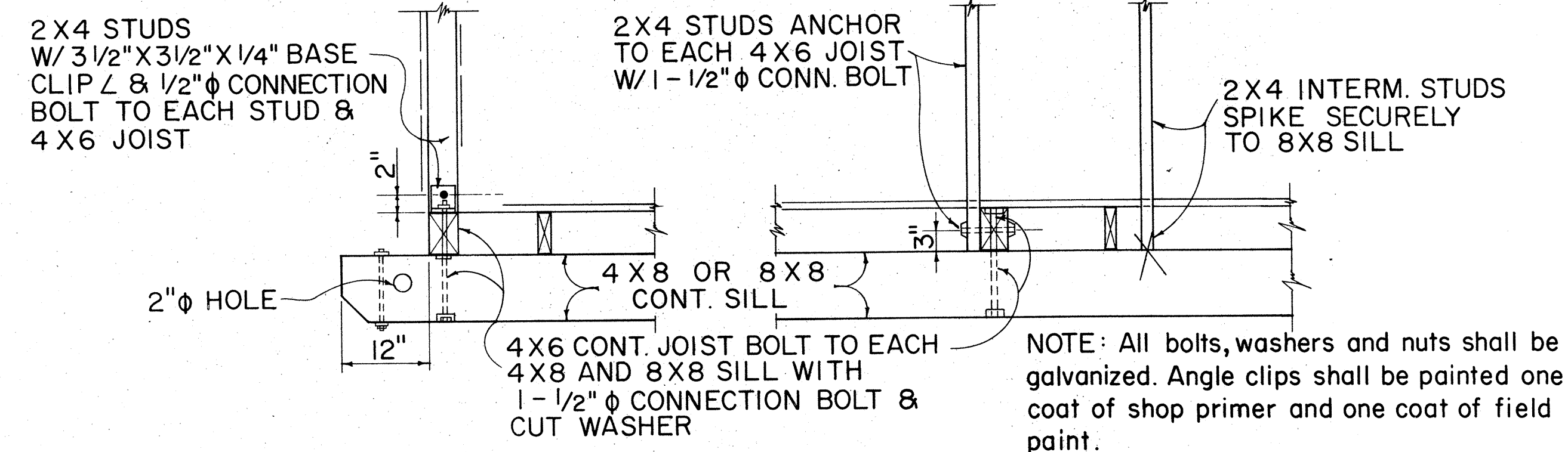
NOTE: CONTRACTOR MAY WITH THE APPROVAL OF THE ENGINEER FURNISH THE FIELD OFFICE OR PROJECT SITE LABORATORY WITH STOOLS OTHER THAN THE TYPE SHOWN IN THE DETAIL.



TYPICAL DETAIL JALOUSIES WINDOWS
SCALE: 3" = 1'-0"

APPROVAL RECOMMENDED:
M. H. H. H.
HIGHWAY DESIGN ENGINEER
DATE: 12-4-69

APPROVED:
M. H. H. H.
ASSISTANT CHIEF, ENGINEERING
DATE: 12-10-69



AT ENDS OF BLDG. , ALONG SIDES OF BLDG.

TYPICAL 2 X 4 STUD & 4 X 6 FLOOR JOIST BASE CONNECTION DETAILS

NO.	REVISION	APPROVED BY	DATE

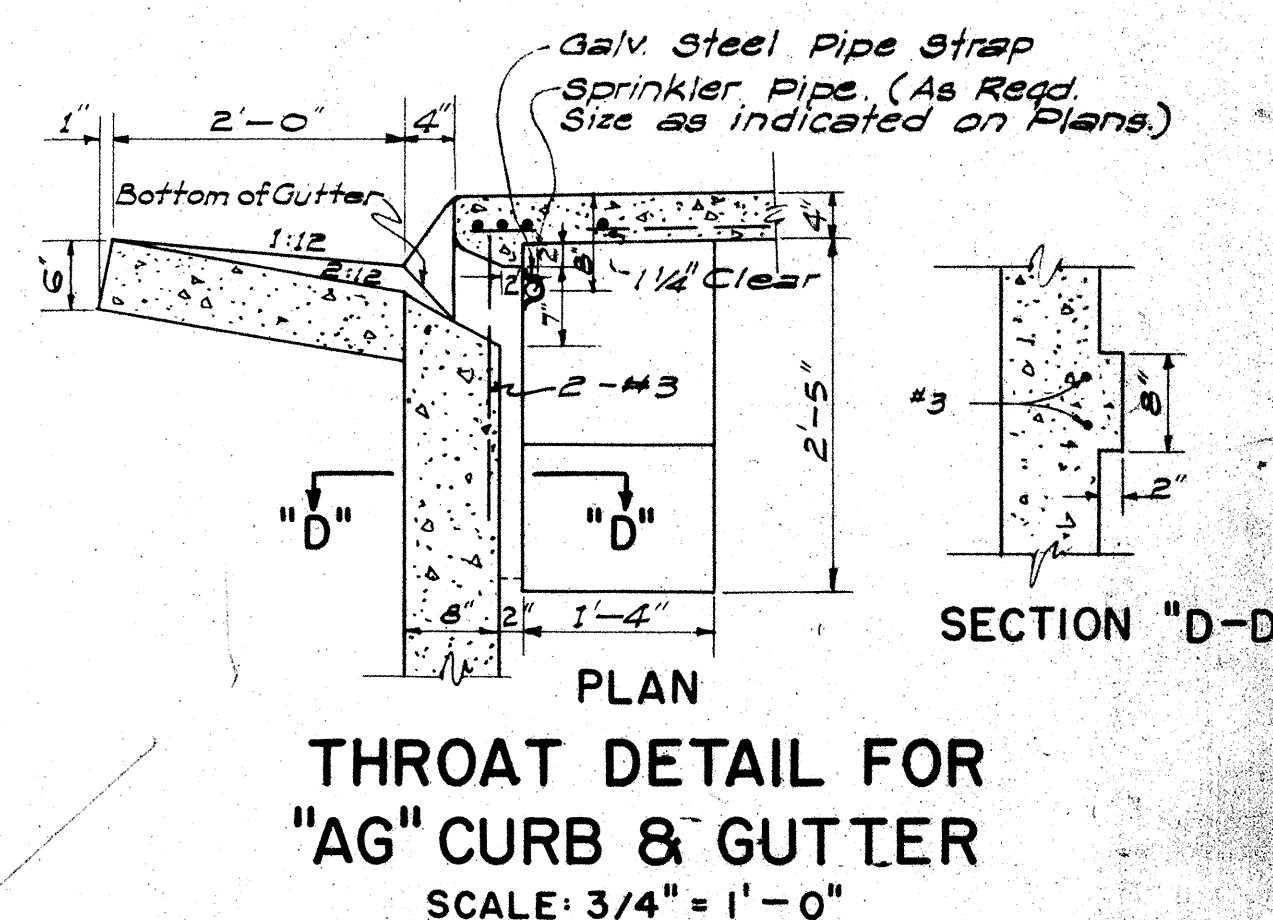
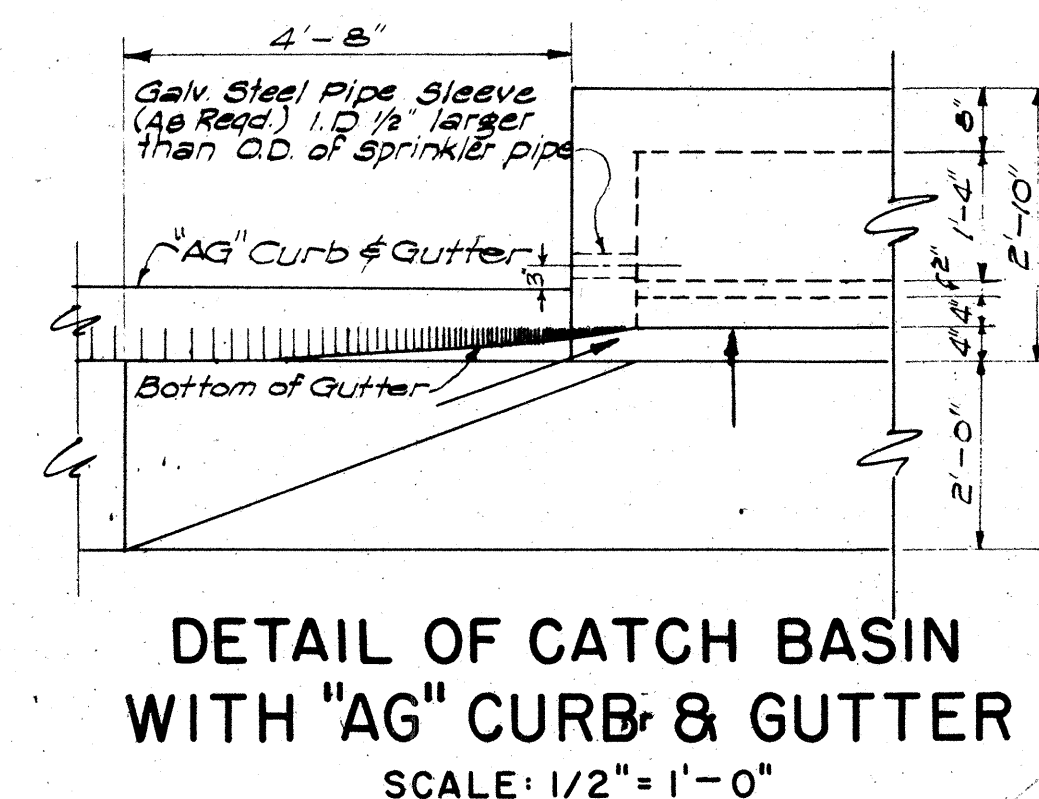
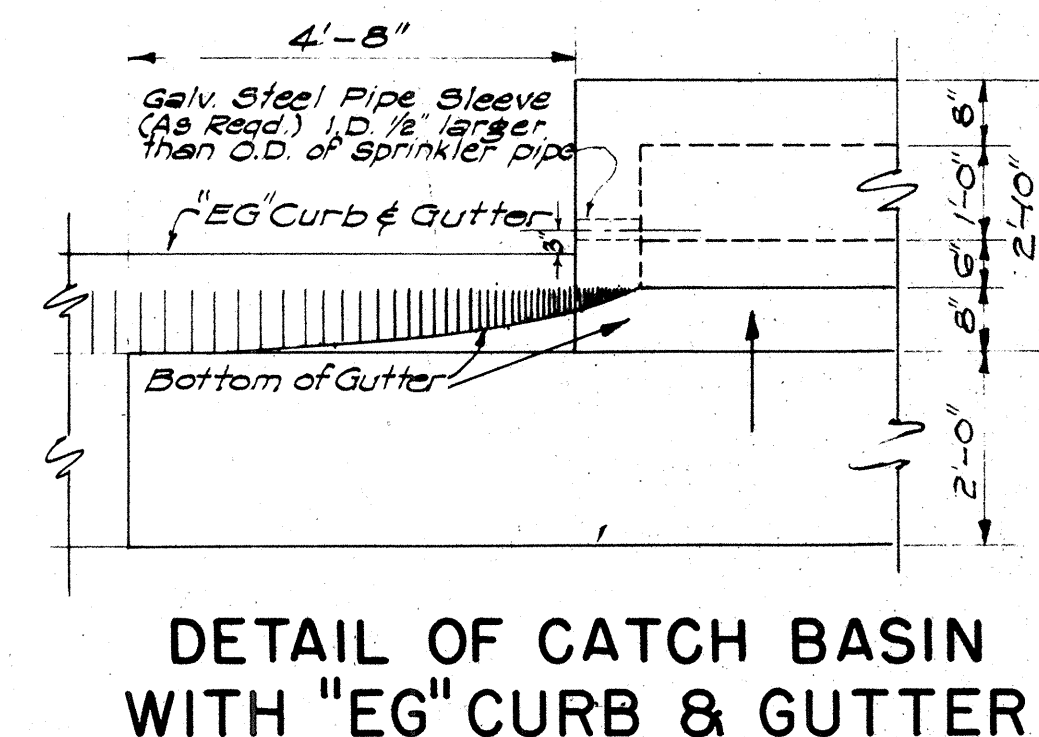
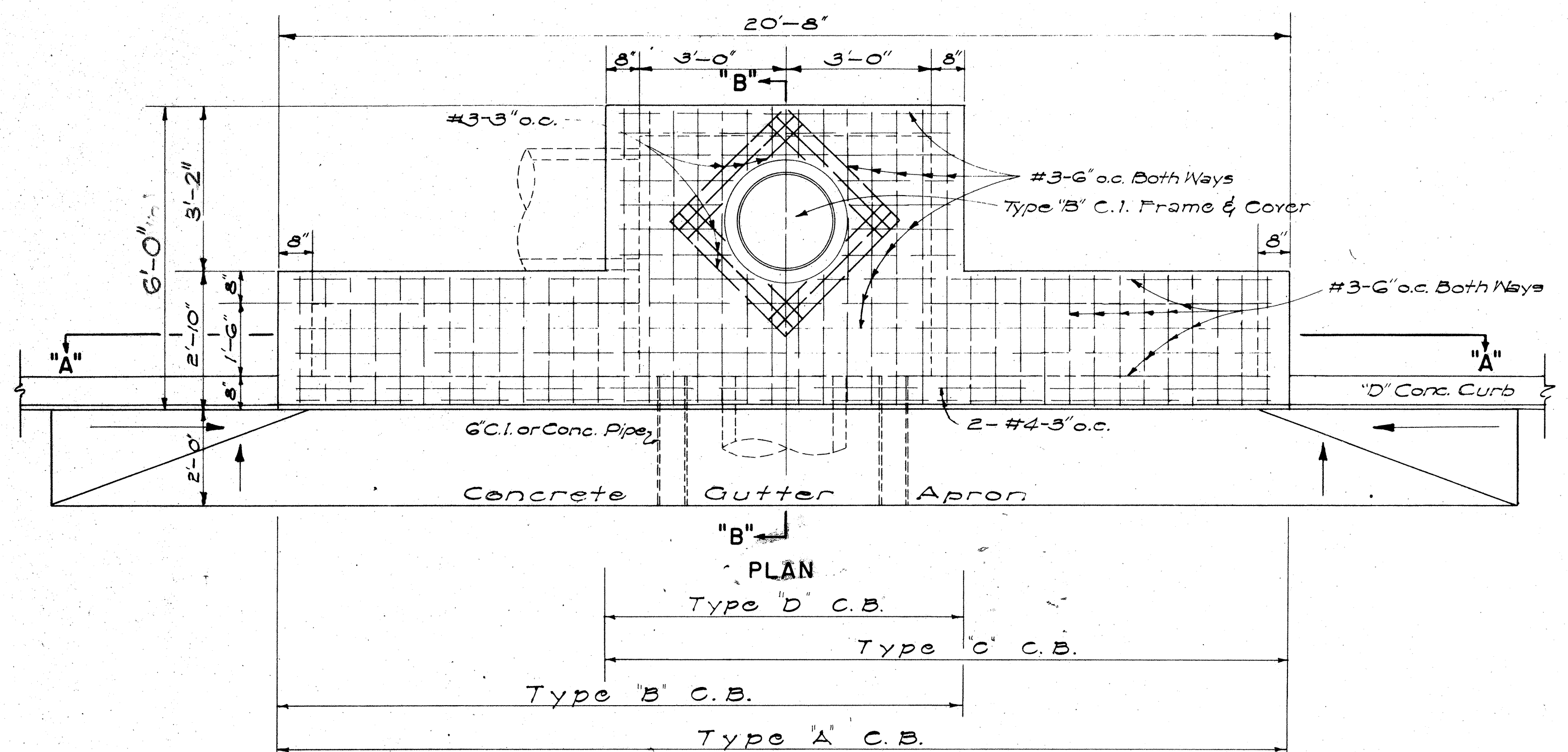
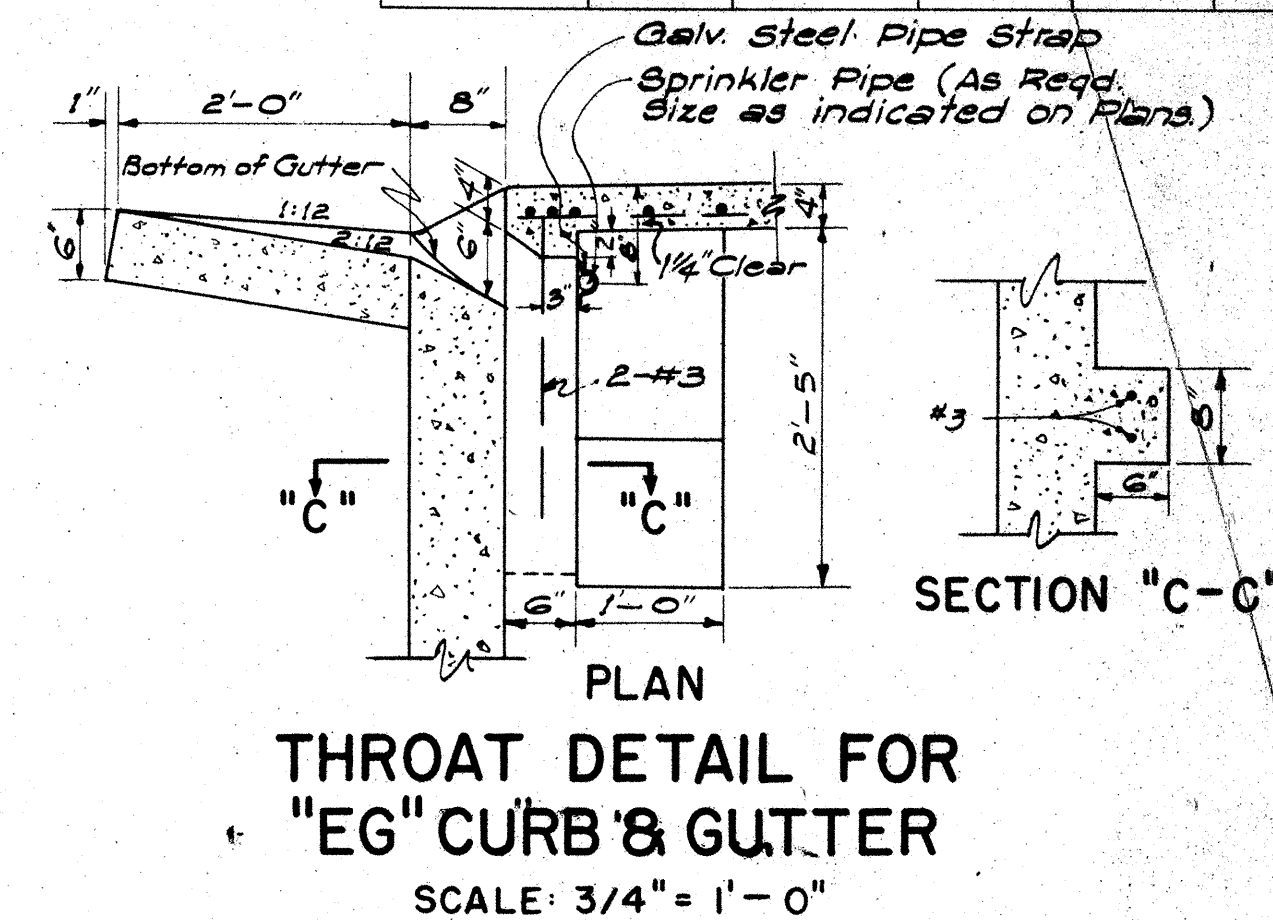
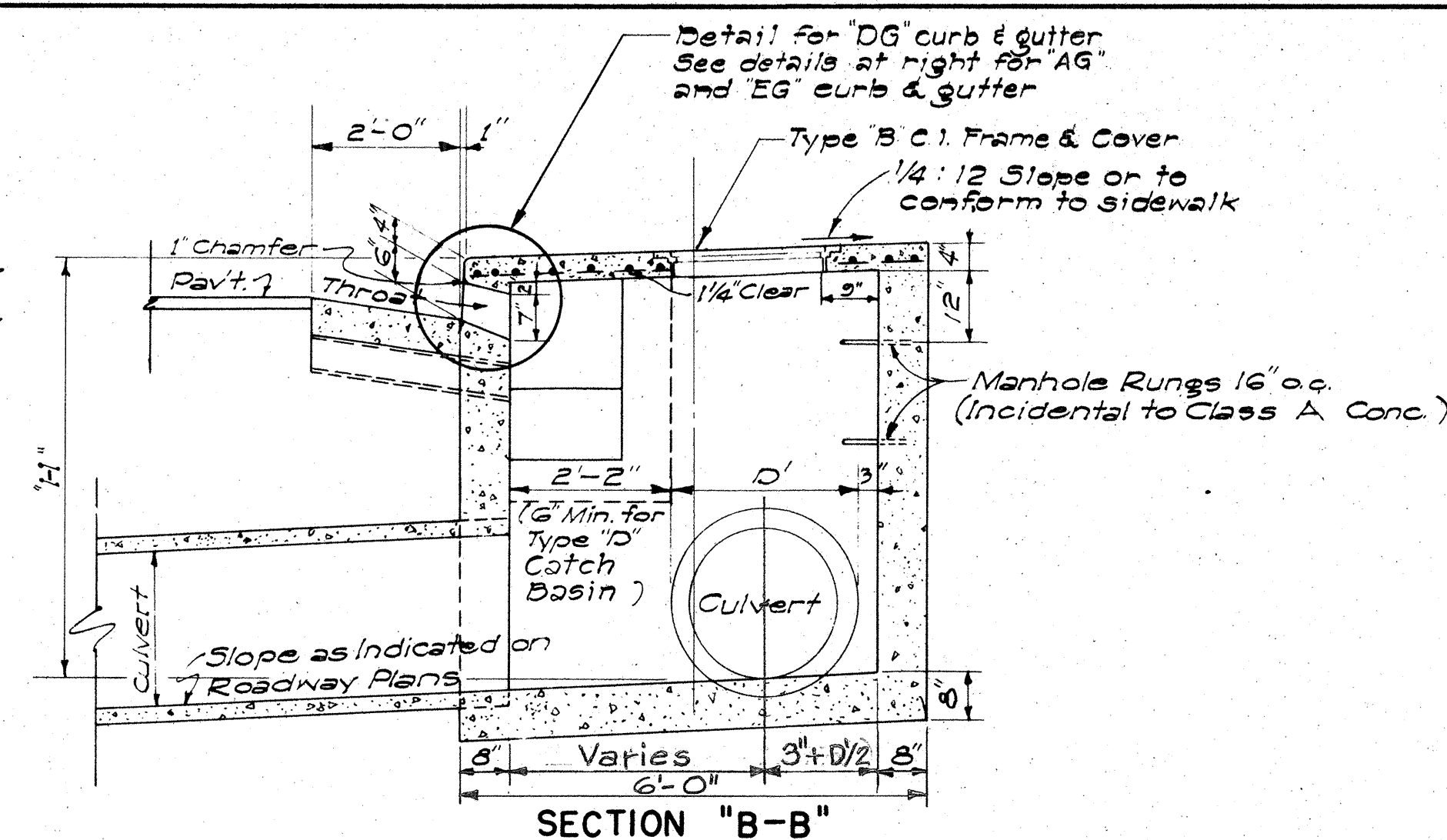
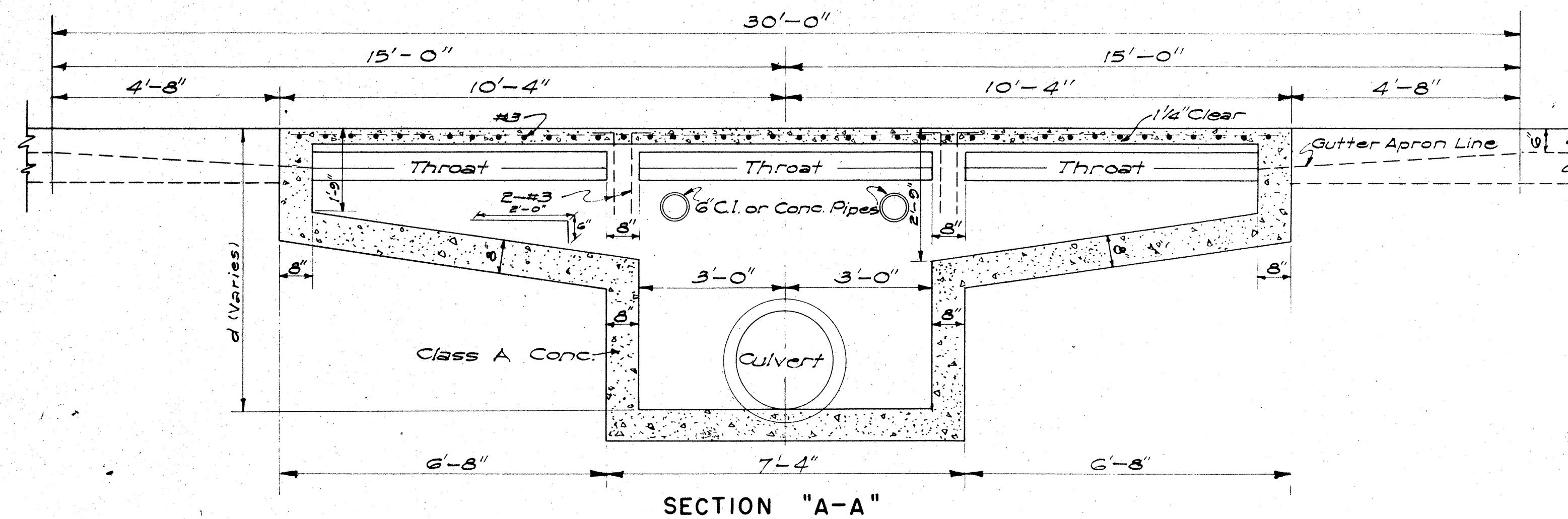
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

FIELD OFFICE
&
PROJECT SITE LABORATORY

Scale: As Noted

2/17/59

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56A-01-74	1974	28	53



DETAILS OF TYPES "A", "B", "C" AND "D" CATCH BASINS
SCALE: 1/2" = 1'-0"

GENERAL NOTES

1. Quantities based on $d = 5.75'$ and $D = 30'$.
2. Quantities do not include concrete for Gutter Apron.
3. The Contractor shall install two 6" Cast Iron or Concrete Pipes as incidental to Class A Concrete for Construction Drainage. The Engineer shall determine the exact location in the field.
4. Culvert shall leave C.B. from any position and any direction indicated by plans or ordered by the Engineer. Culvert may both enter and leave C.B. so that C.B. will also act as Manhole.
5. The Contractor shall install Galvanized Steel Pipe Sleeves and Straps as incidental to Sprinkler System.
6. The type of curb and/or gutter (Type 1, 2, 3, etc.) shall conform to the type specified on the roadway plans.
7. Manhole Rungs (16" o.c.) are required when "H" is greater than 4 feet 6 inches. Only one rung (12 inches from the bottom) is required if "H" is 4 feet 6 inches or less. Type "B" Cast Iron Frame and Cover and Manhole Rungs may be placed at any location as ordered by the Engineer.

ESTIMATED QUANTITIES

Type	Class A Conc. Struct. Exc.	Reinf. Steel	Gutter Length
"A"	7.5 c.y.	24.7 c.y.	145 lb.
"B"	6.0 c.y.	21.5 c.y.	108 lb.
"C"	6.0 c.y.	21.5 c.y.	108 lb.
"D"	4.0 c.y.	16.5 c.y.	77 lb.

NO.	REVISION	APPROVED BY	DATE

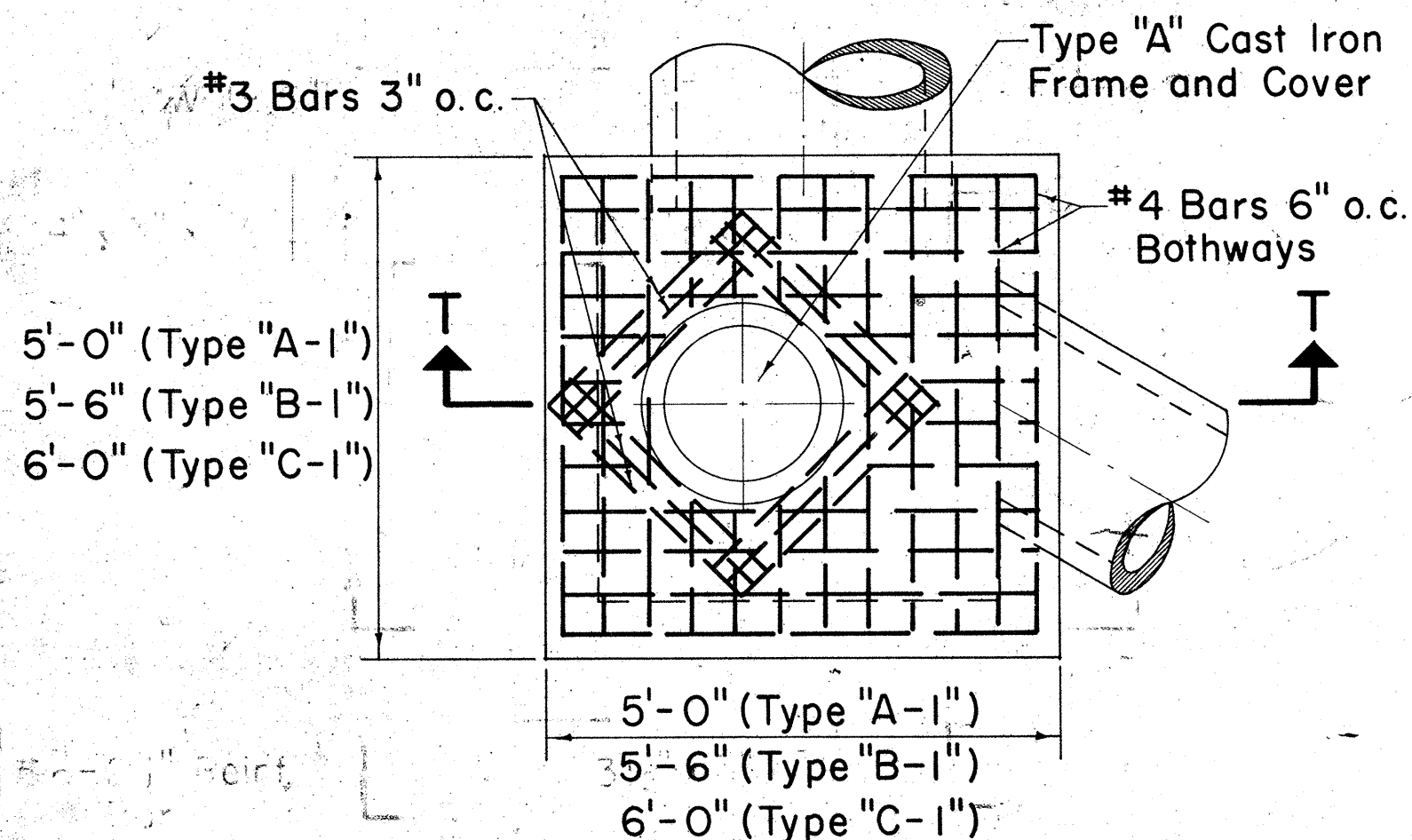
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CATCH BASINS

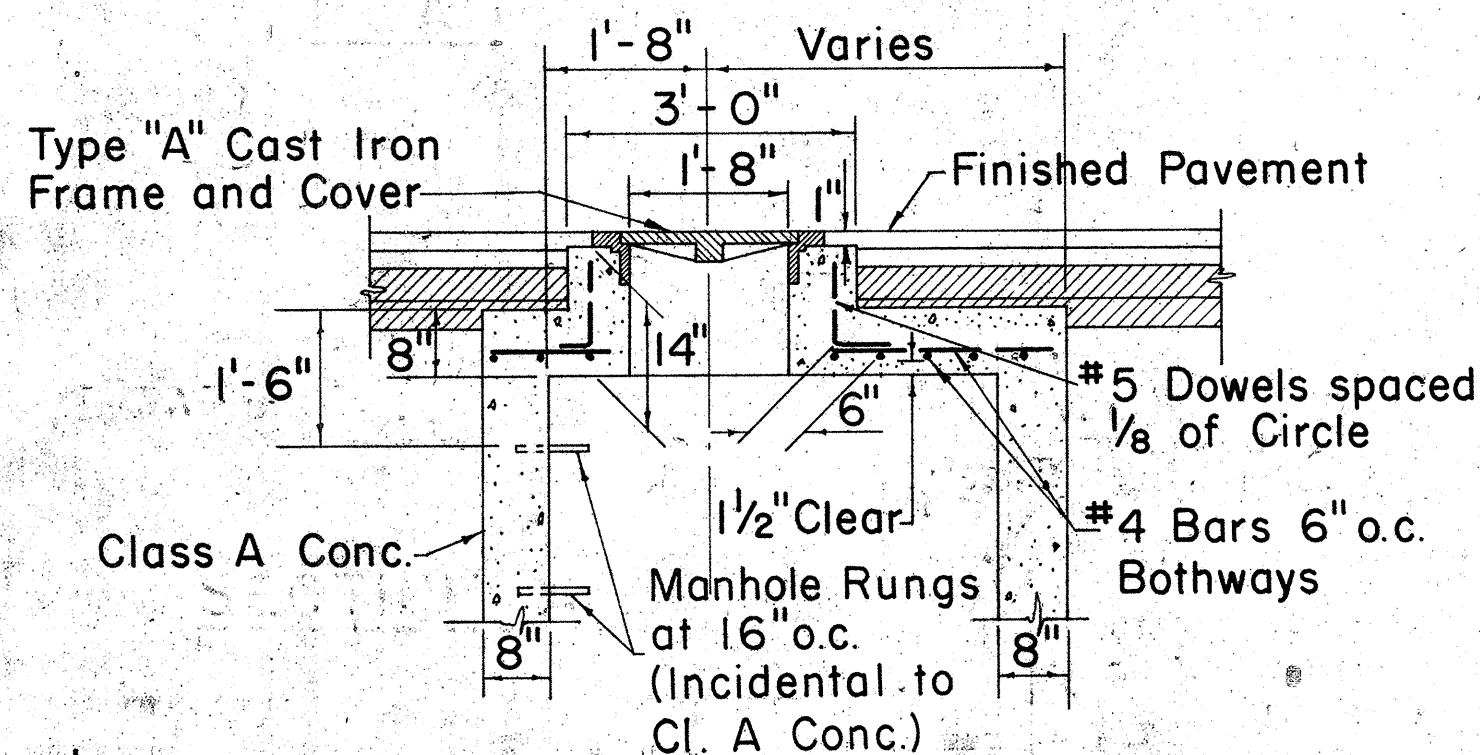
Scale: As Noted Date: July, 1969
SHEET NO. 8 OF 20 SHEETS

SURVEY PLOTTED BY: DATE: 2/17/59
DESIGNED BY: C.A.
DRAWN BY: C.A.
CHECKED BY: C.A.
ORIGINAL PLAN
NOTE BOOK
No.

FED. ROAD DIST. NO.	STATE	PROJECT	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	56A-01-74	1974	27	53



PLAN



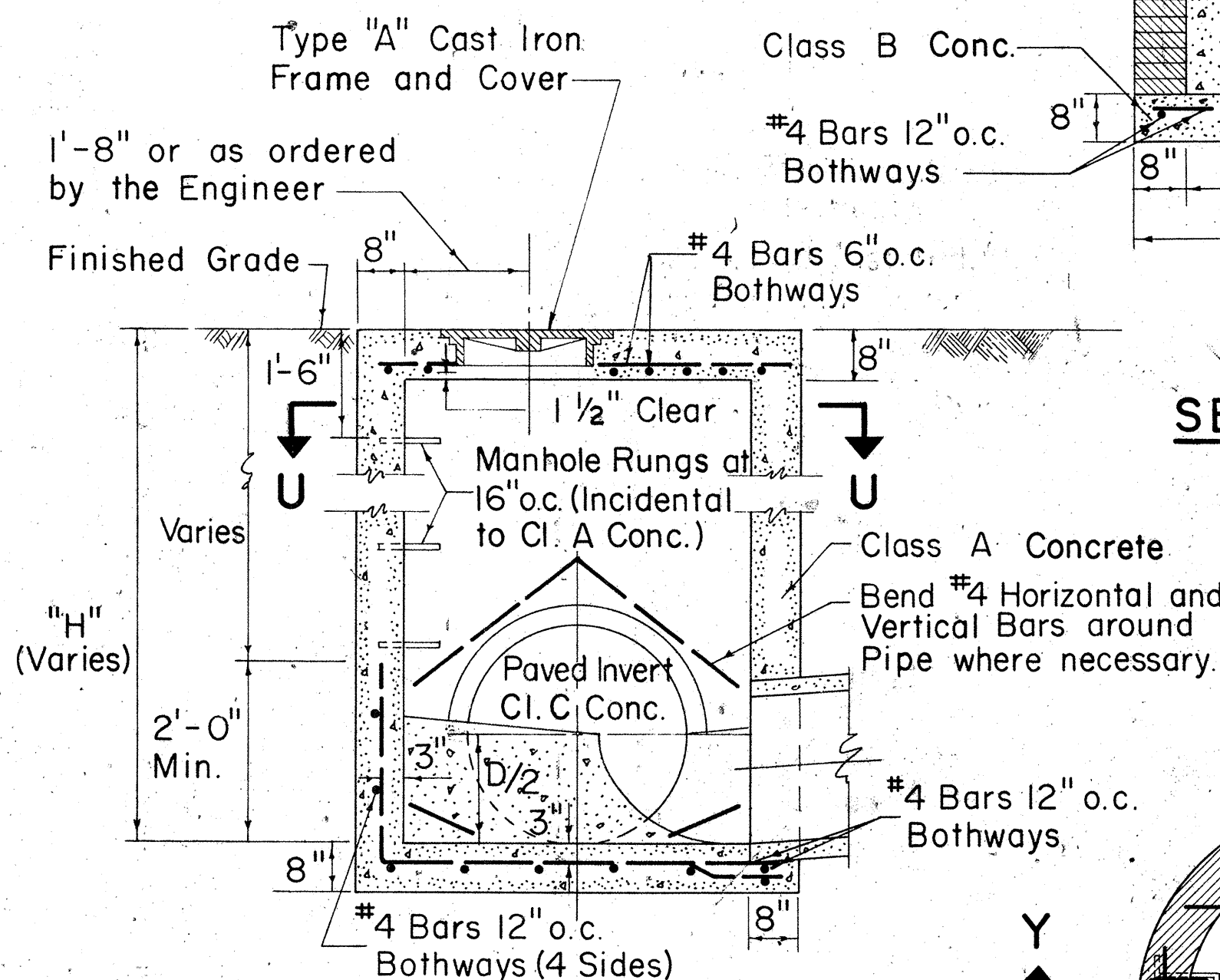
SECTION T-T

TYPE "A-1", "B-1", & "C-1"
STORM DRAIN MANHOLE
TOP DETAIL UNDER PAVEMENT
Scale: 1/2" = 1'-0"

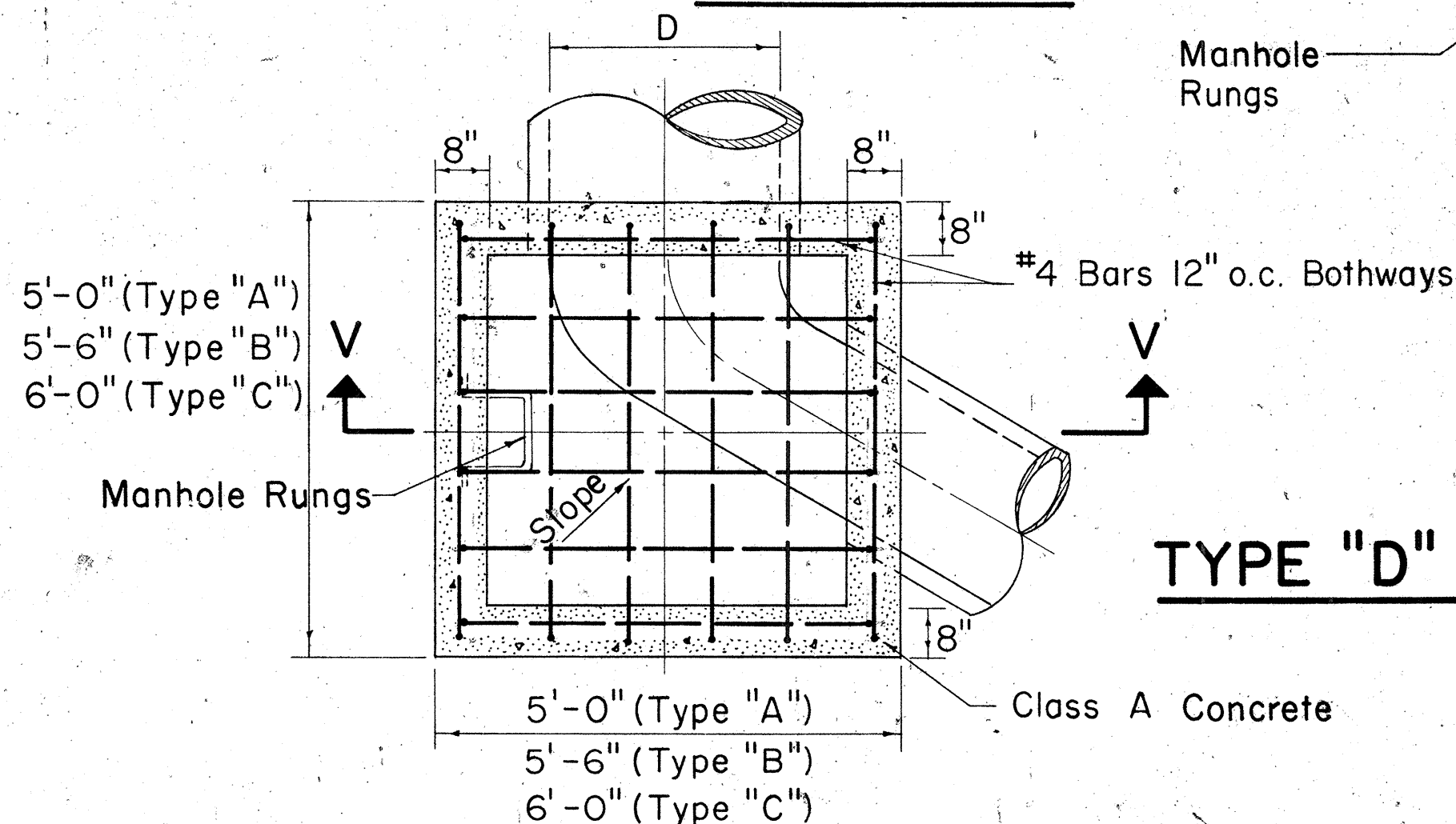
Note
Bottom detail similar to
Type "A", "B", & "C"

GENERAL NOTES

- Culvert shall enter and leave S.D.M.H. from any position and in the direction indicated by the plans or ordered by the Engineer.
- Manhole Rungs (16" o.c.) are required when "H" is greater than 4'-6". Only one rung (12" from the bottom) is required if "H" is 4'-6" or less. Type "A" C.I. Frame and Cover and Manhole Rungs may be placed at any location as ordered by the Engineer.

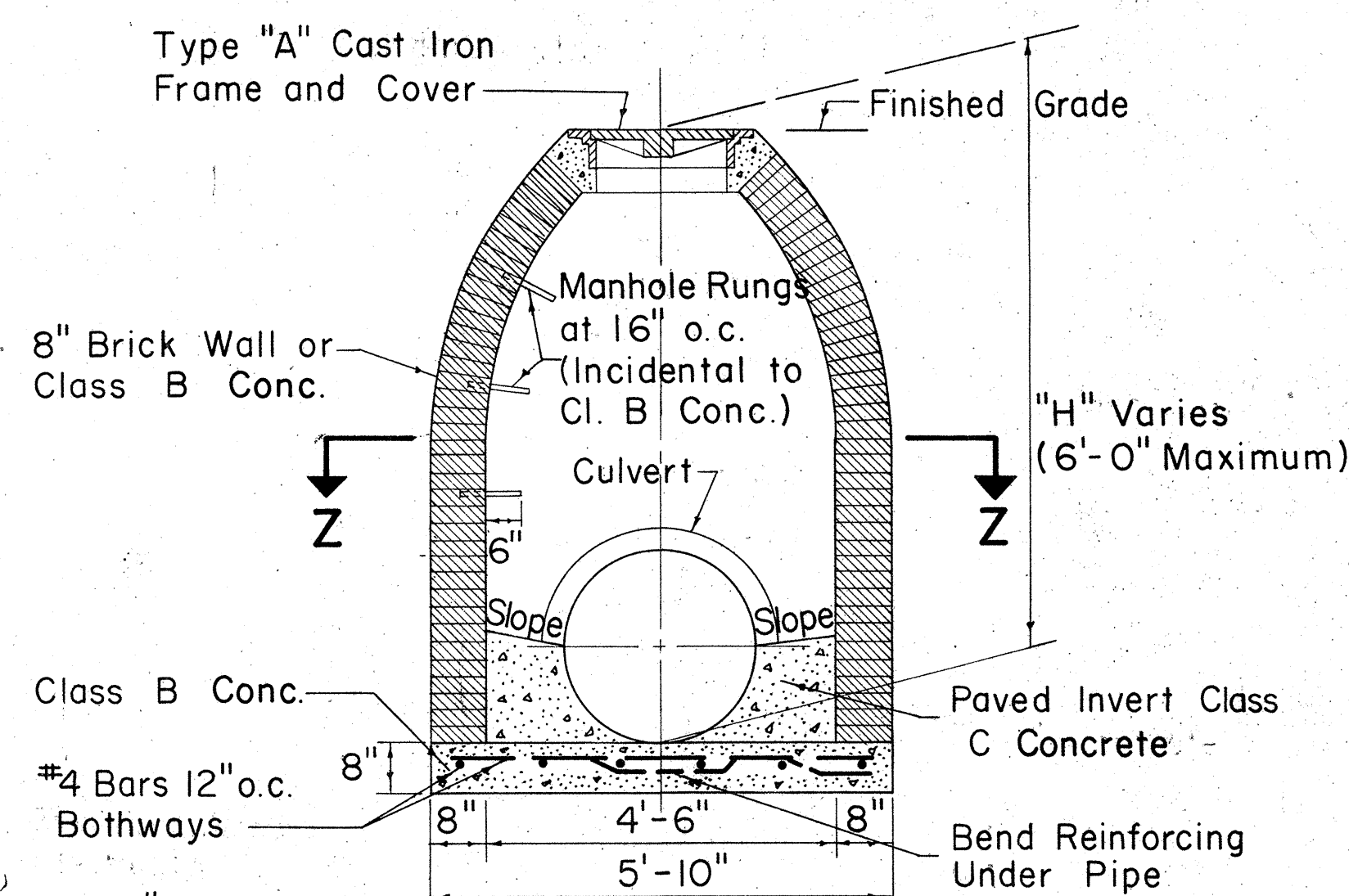


SECTION V-V

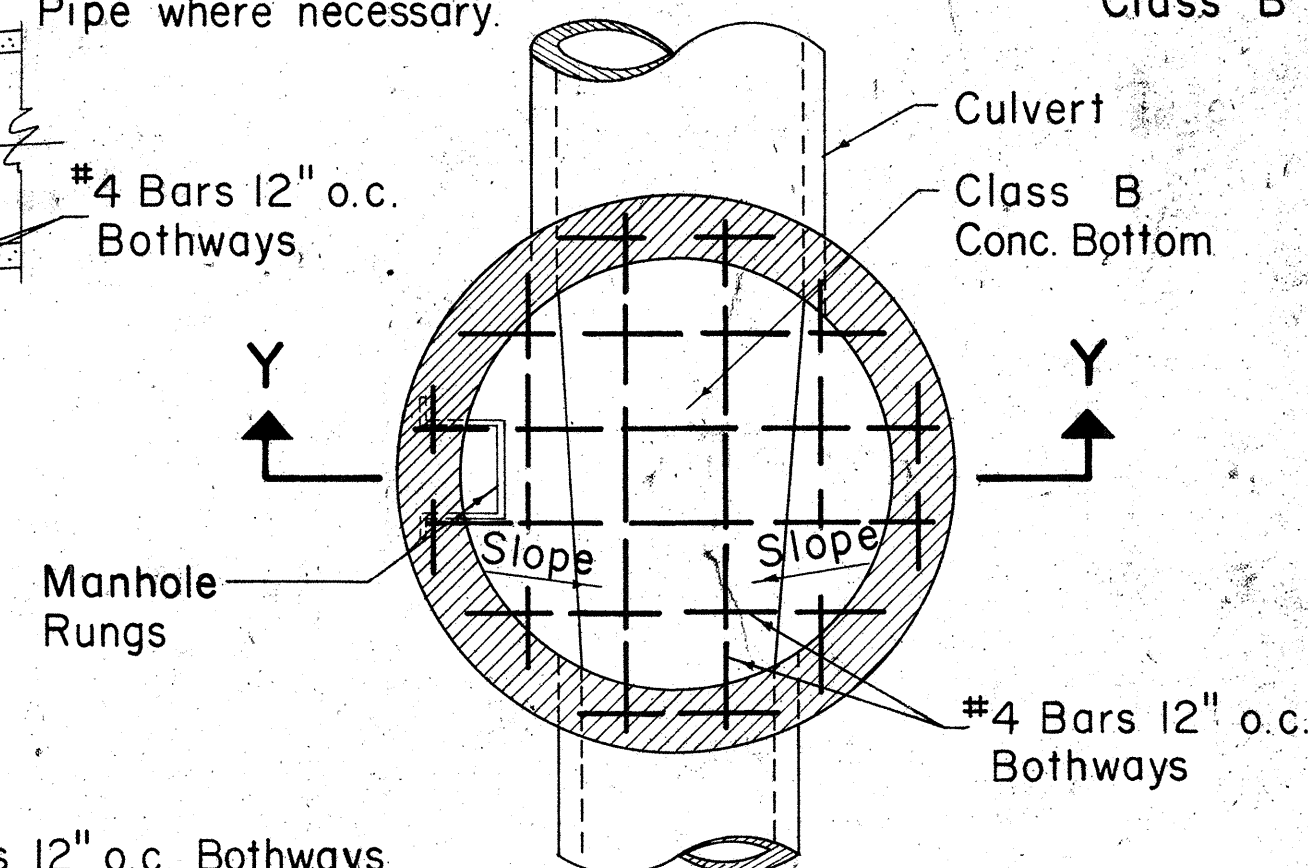


SECTION U-U

TYPE "A", "B", & "C"
S.D.M.H.
Scale: 1/2" = 1'-0"

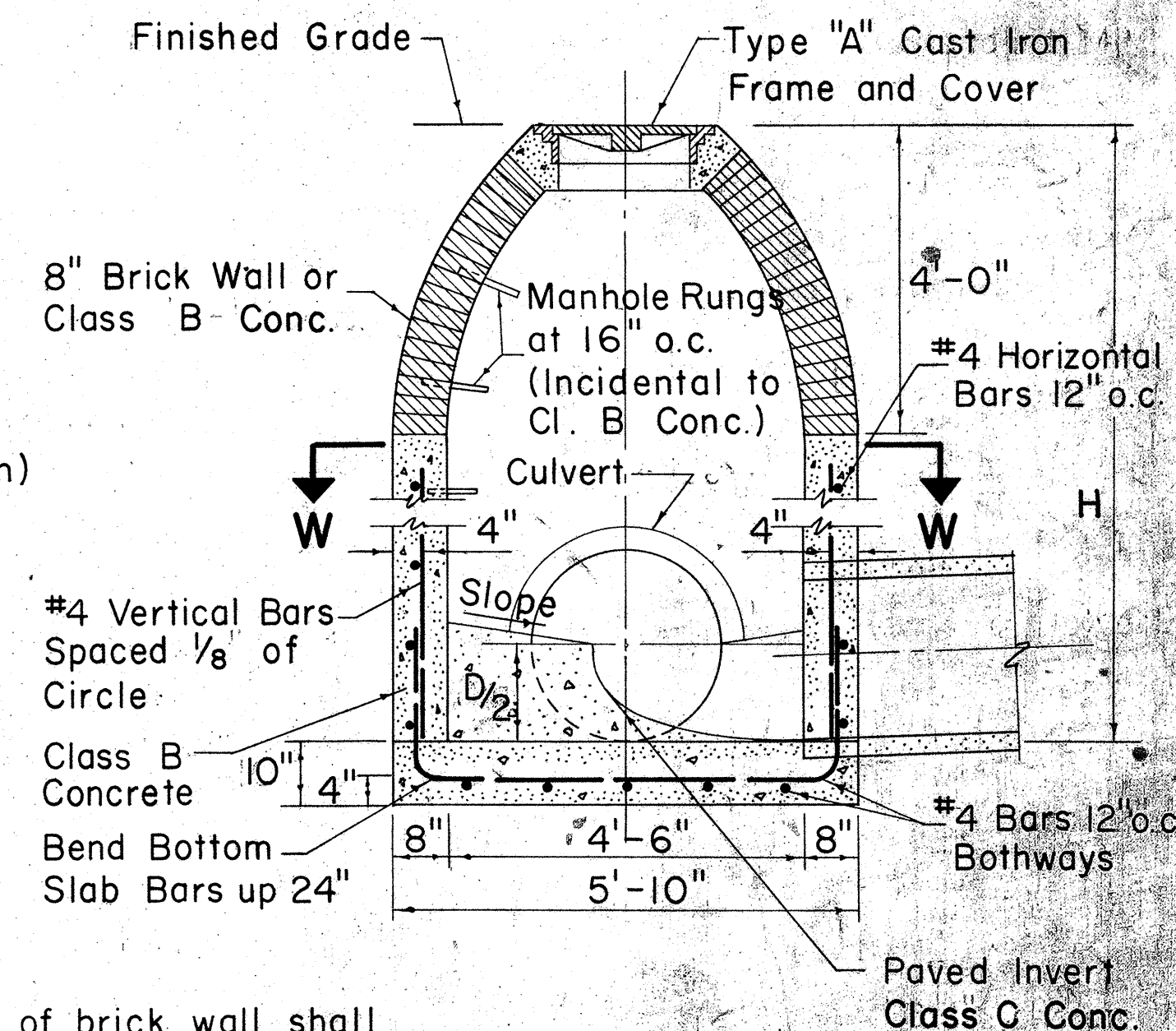


SECTION Y-Y

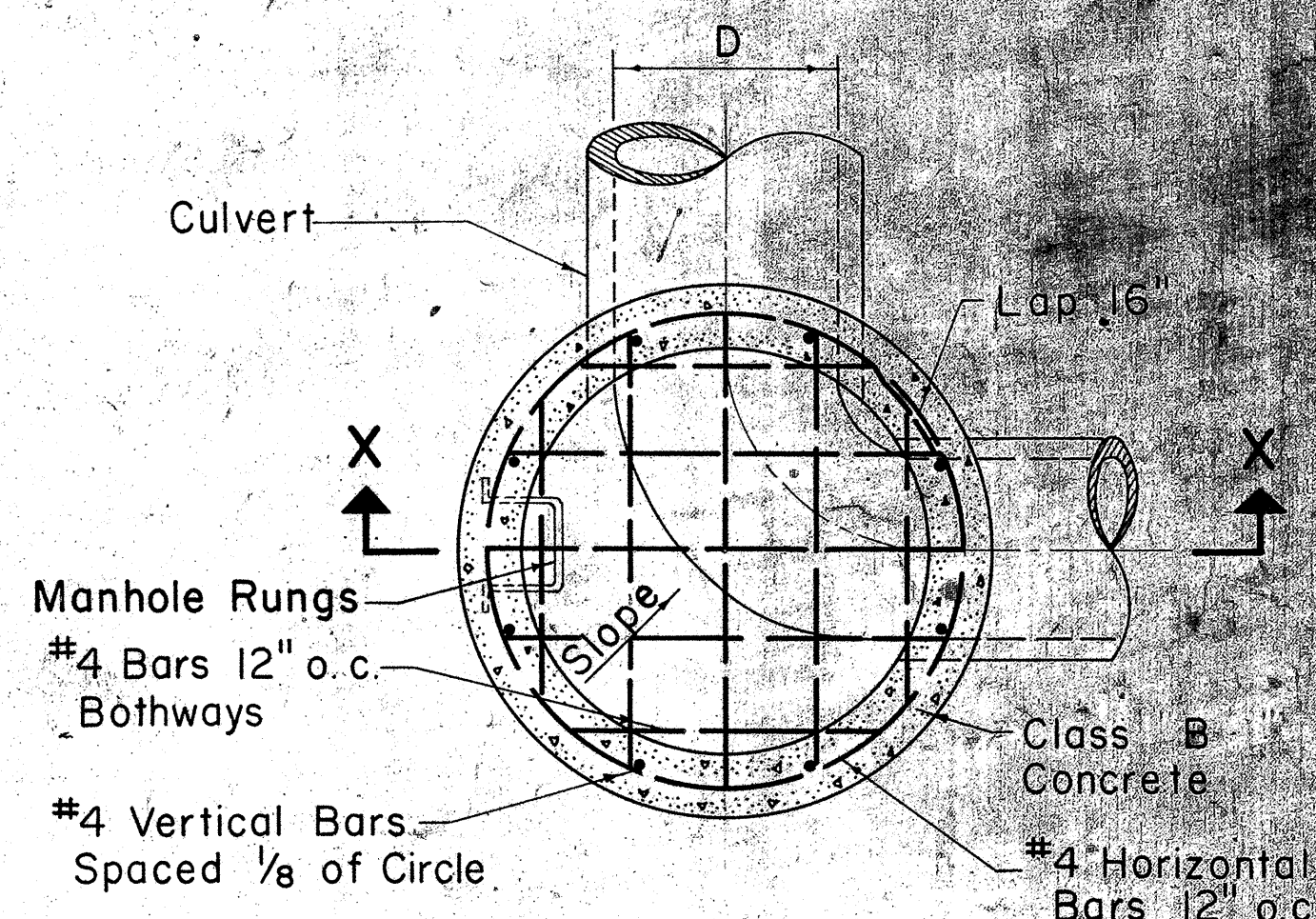


SECTION Z-Z

TYPE "D" STORM DRAIN MANHOLE
Scale: 1/2" = 1'-0"



SECTION X-X



SECTION W-W

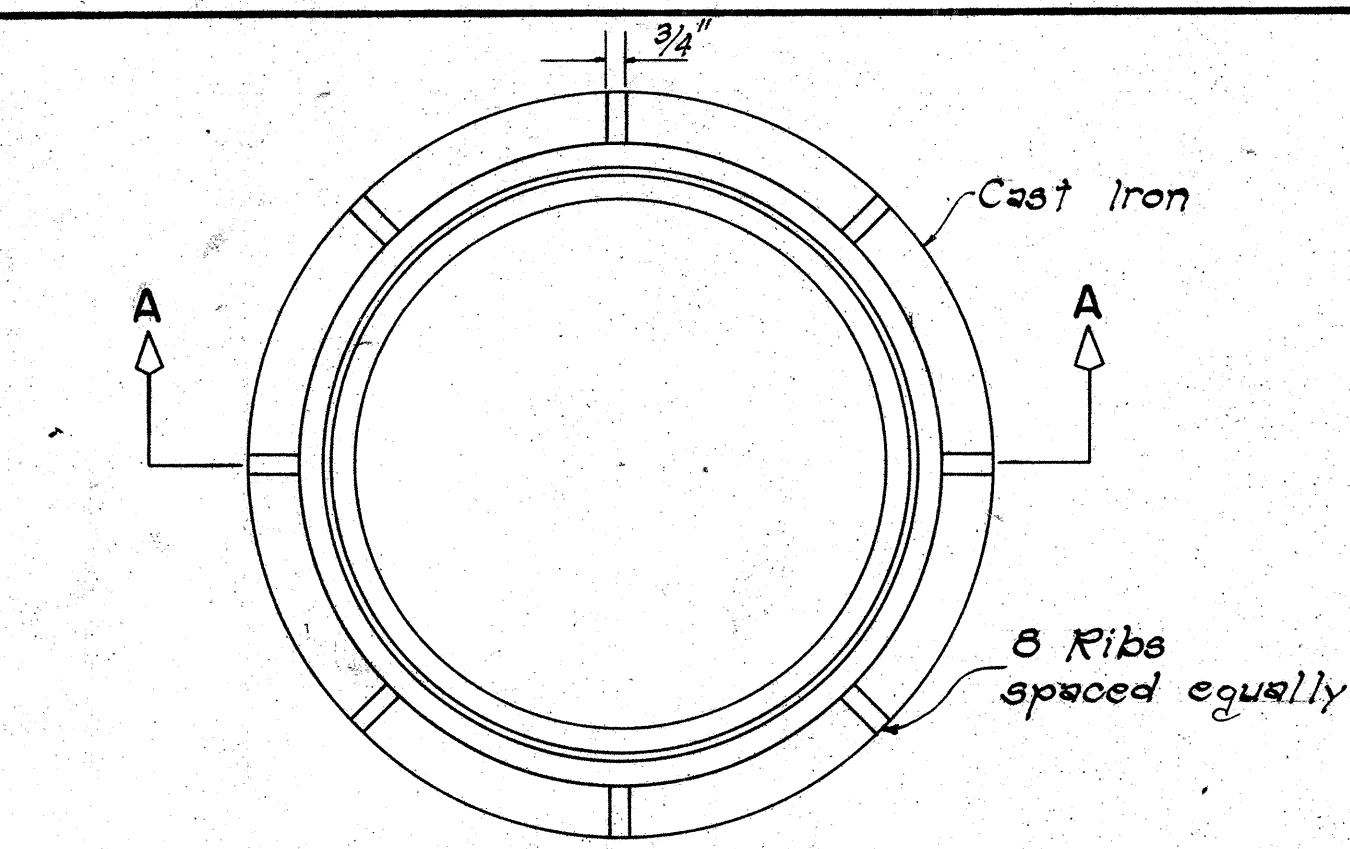
TYPE "E" STORM DRAIN MANHOLE
Scale: 1/2" = 1'-0"

APPROVAL RECOMMENDED:
HYDRAULIC DESIGN ENGINEER 12-17-69 DATE
APPROVED:
ASST. CHIEF, ENGINEERING 12-17-69 DATE

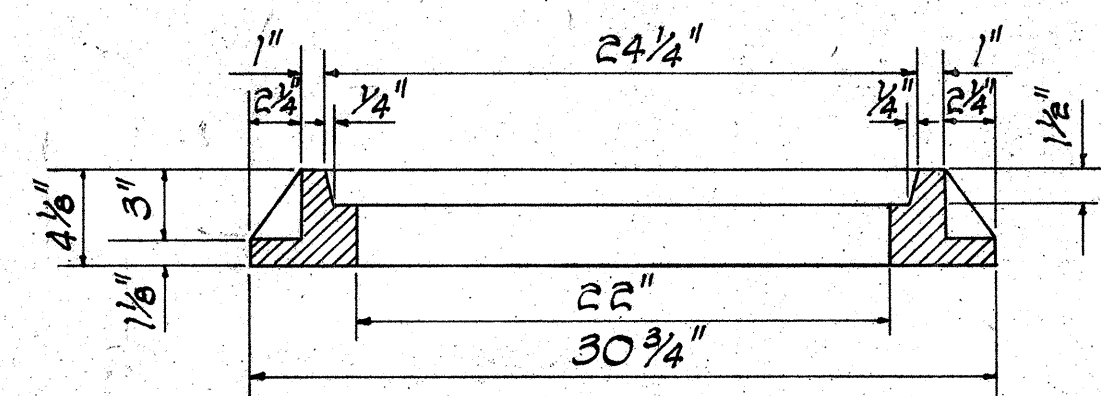
NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION STANDARD DETAILS STORM DRAIN MANHOLES Scales: As Noted Date: July 1, 1969
--

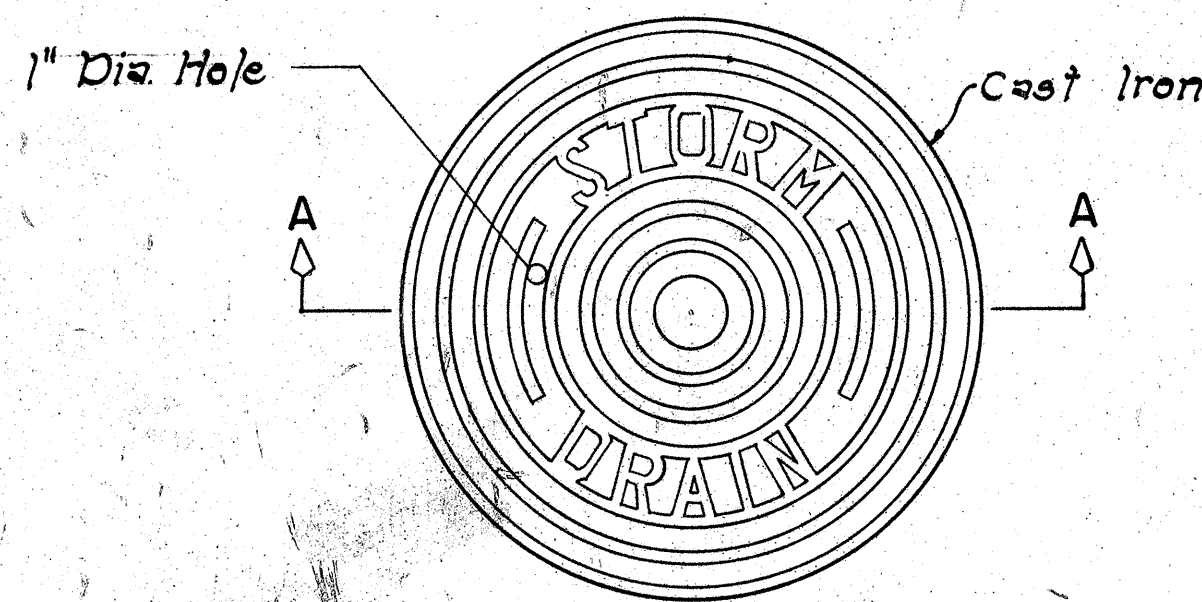
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56A-01-74	1974	30	52



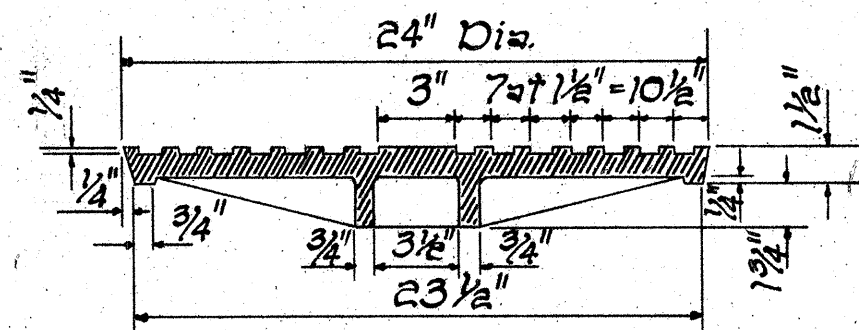
PLAN



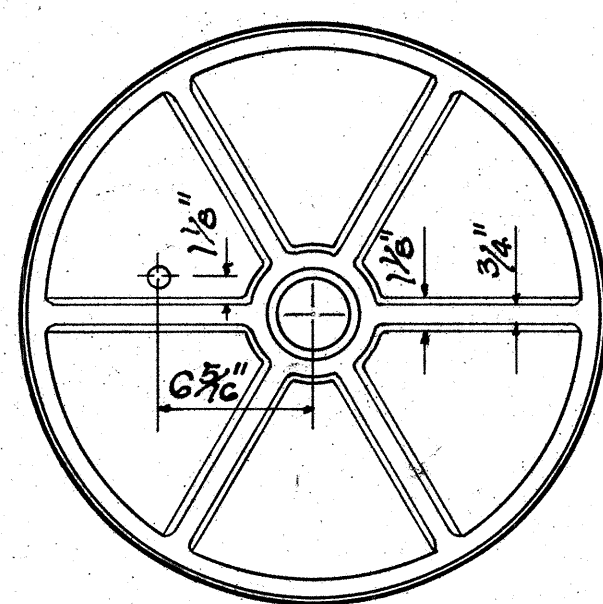
SECTION A-A



PLAN



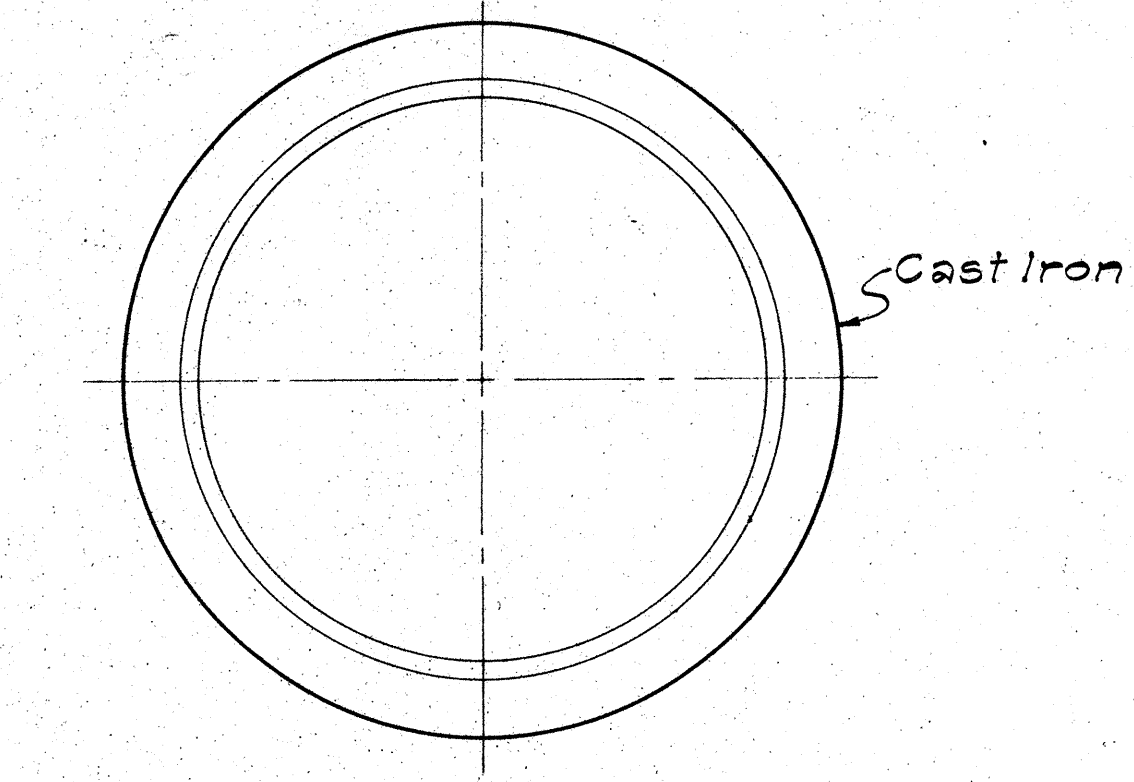
SECTION A-A



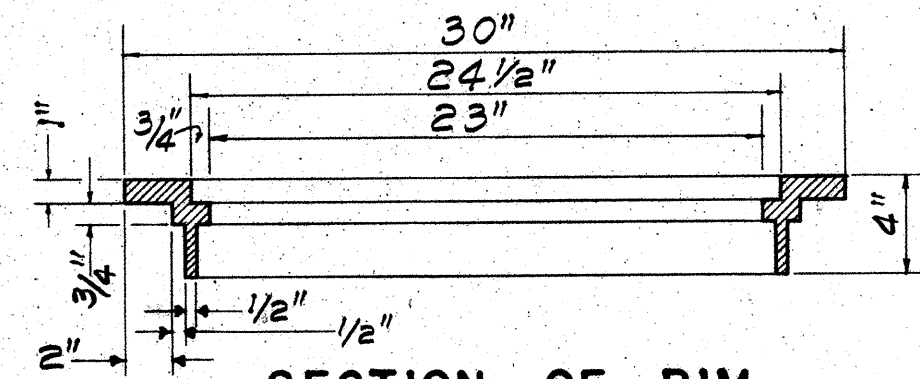
BOTTOM VIEW OF COVER

DETAILS OF TYPE "P"
CAST IRON FRAME AND COVER

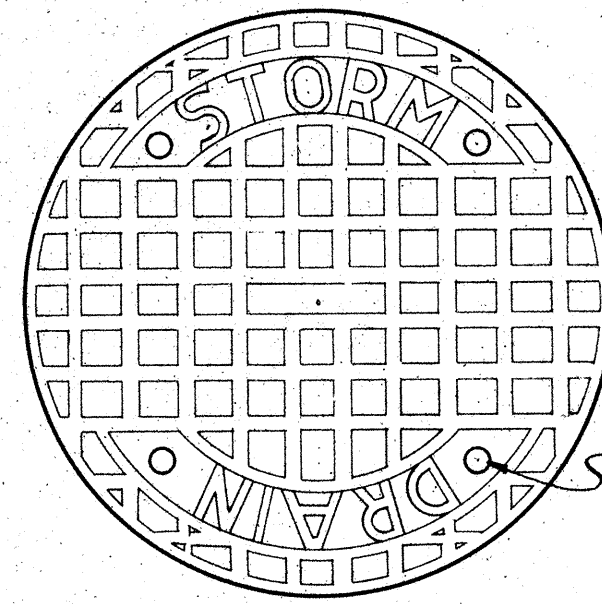
SCALE: 1-1/2" = 1'-0"



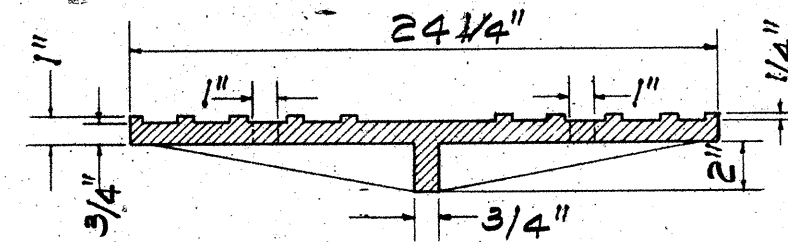
PLAN OF RIM



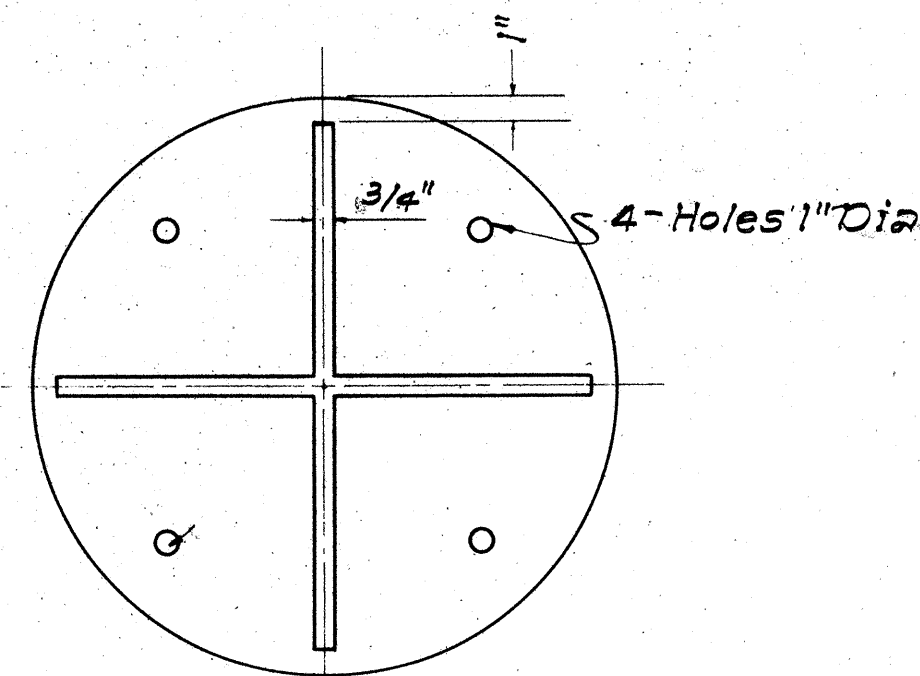
SECTION OF RIM



TOP VIEW OF COVER



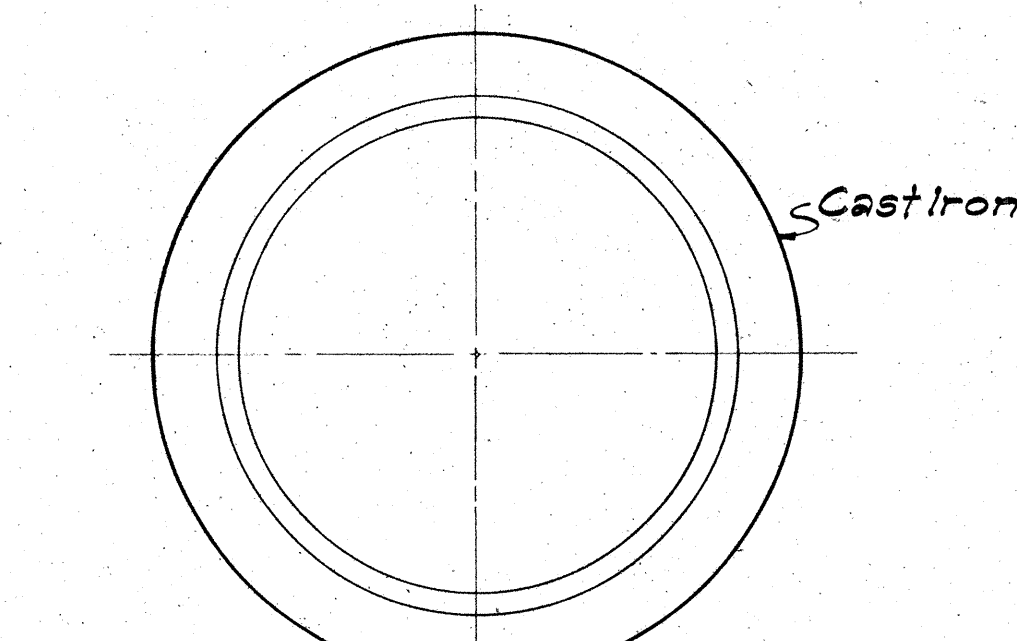
SECTION



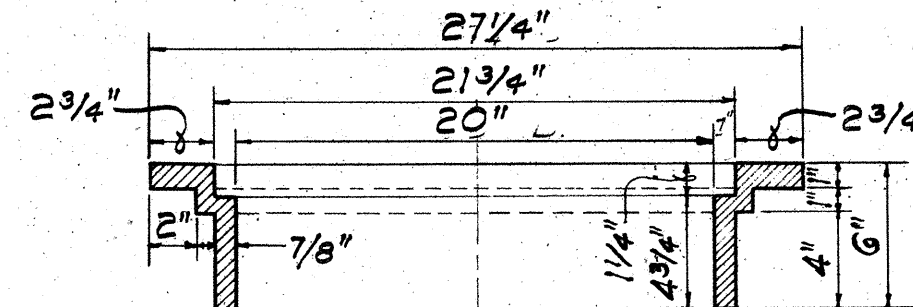
BOTTOM VIEW OF COVER

DETAILS OF TYPE "B"
CAST IRON FRAME AND COVER

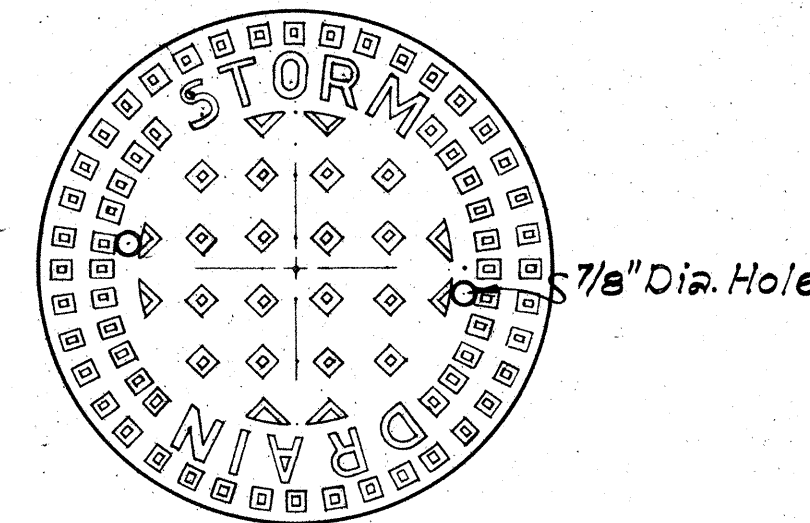
SCALE: 1-1/2" = 1'-0"



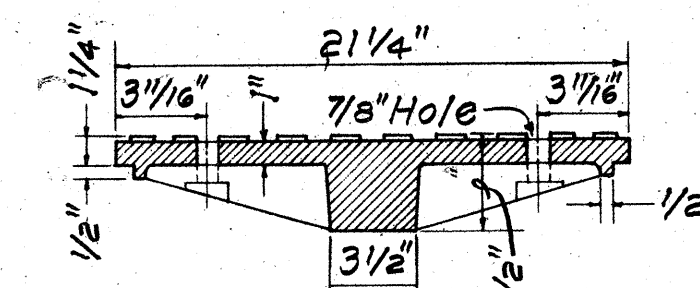
PLAN OF RIM



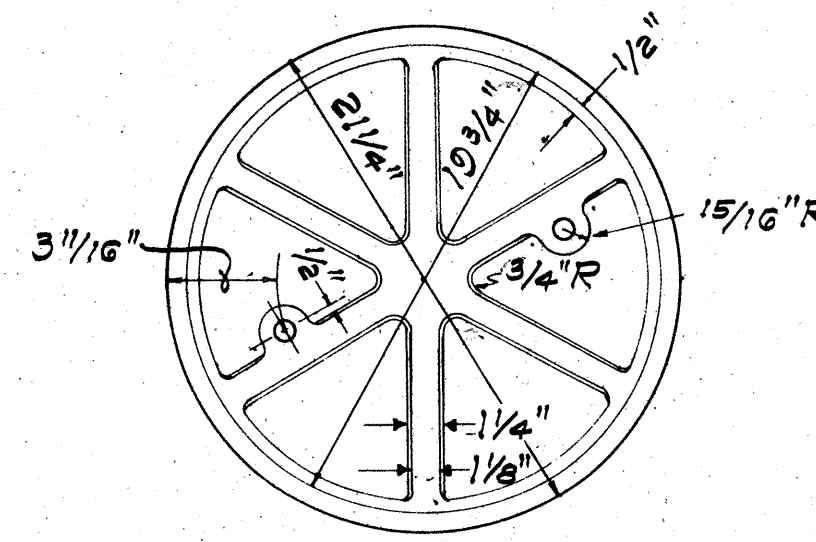
SECTION OF RIM



TOP VIEW OF COVER



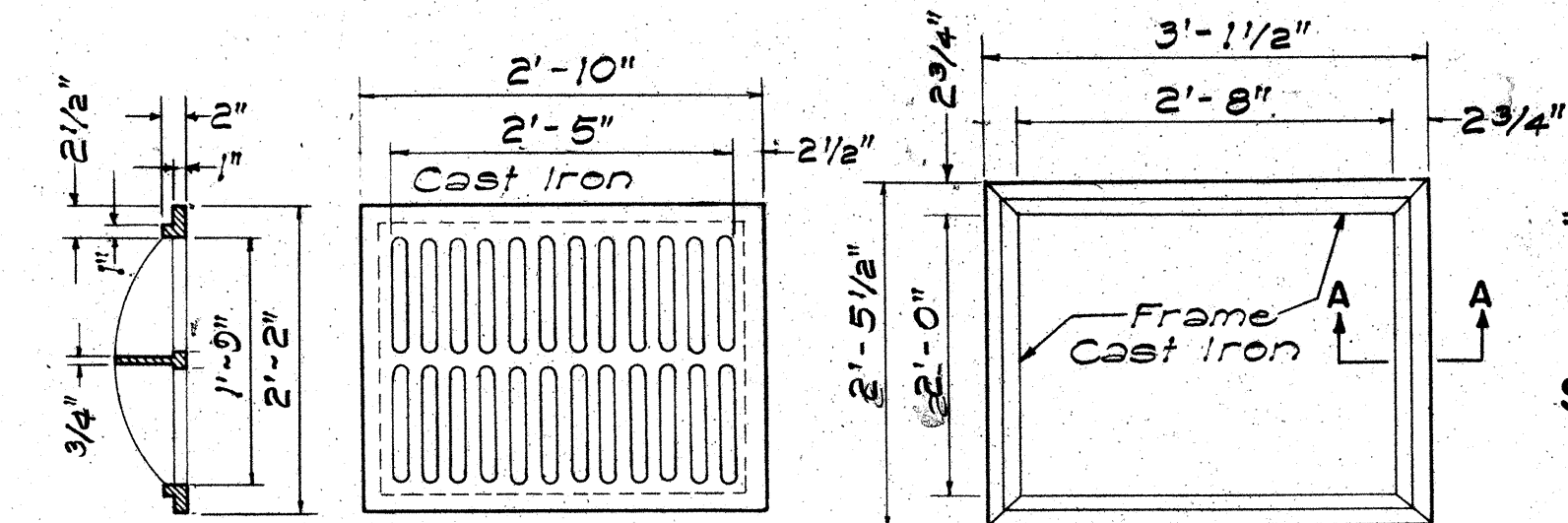
SECTION



BOTTOM VIEW OF COVER

DETAILS OF TYPE "A"
CAST IRON FRAME AND COVER

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



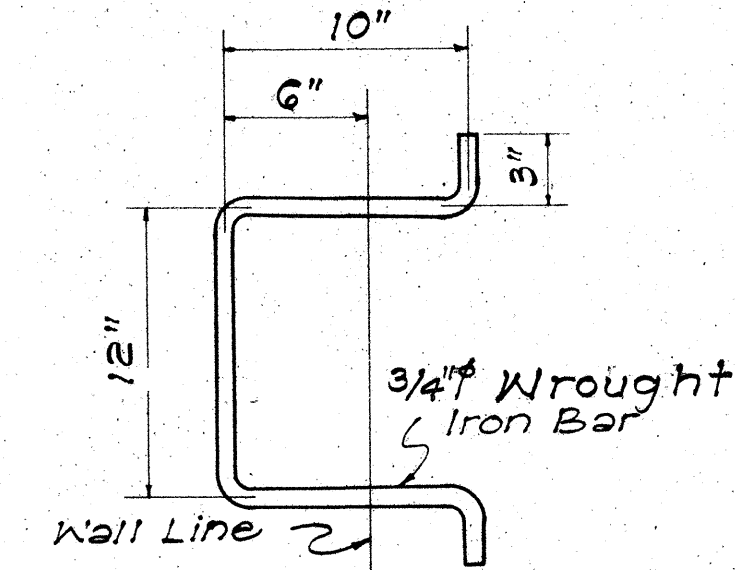
SECTION

TOP VIEW

TOP VIEW

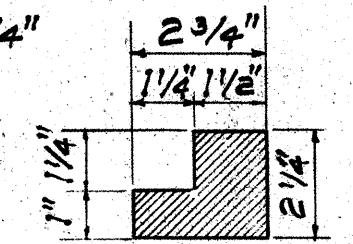
TYPE C C.I. FRAME AND GRATE

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



MANHOLE RUNG

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



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

APPROVAL RECOMMENDED:
John P. Pabano 12-17-69
HYDRAULIC DESIGN ENGINEER DATE

APPROVED:
John P. Pabano 12-17-69
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1.	Detail of Type "P" Cast Iron Frame and Cover	H.T.	1-6-71

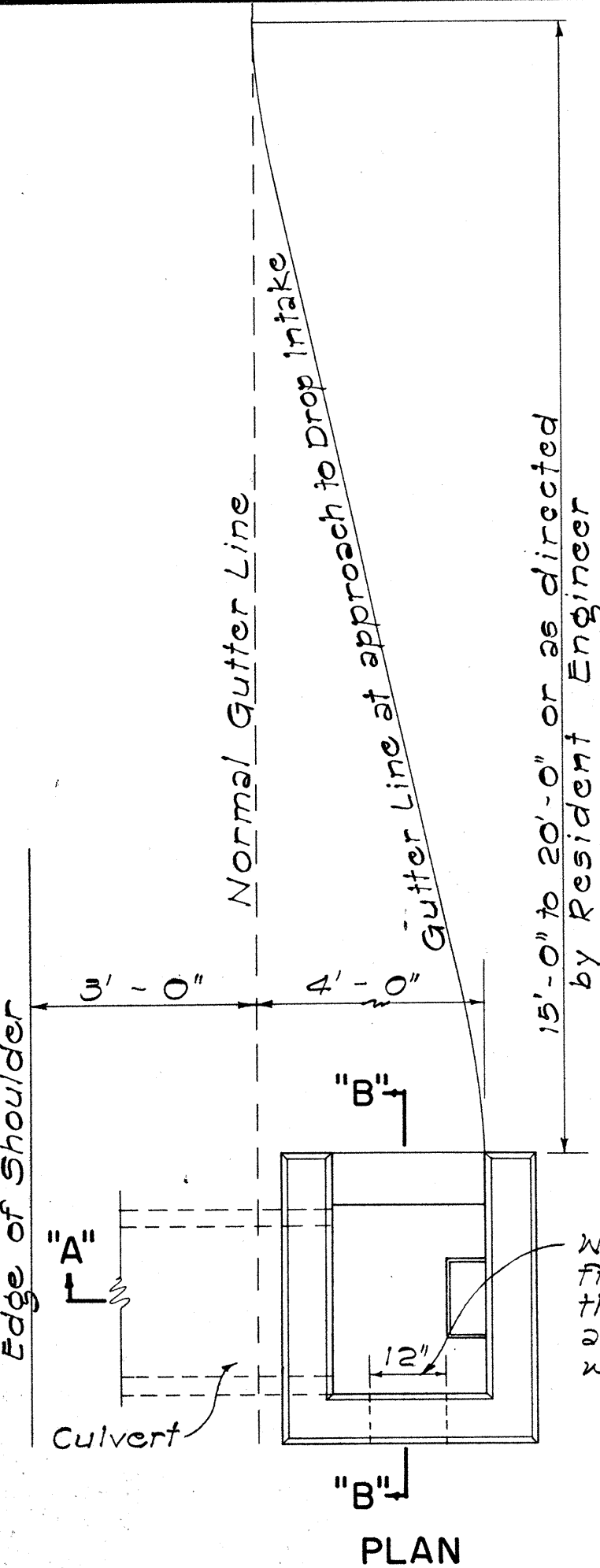
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
CATCH BASIN AND
MANHOLE CASTINGS

Scale: As Noted Date: July, 1969
SHEET No 10 OF 20 SHEETS DH 6

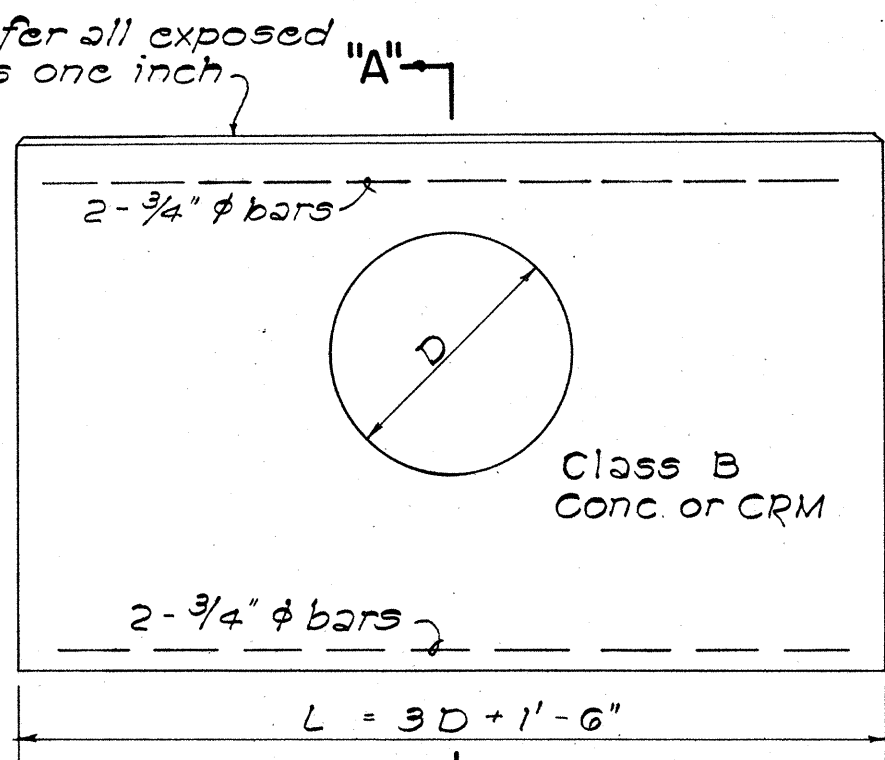
ORIGINAL SURVEY PLOTTED BY: DATE: _____
DESIGNED BY: _____
DRAWN BY: J. Calistro
CHECKED BY: _____
NO. _____

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56A-01-74	1974	32	50

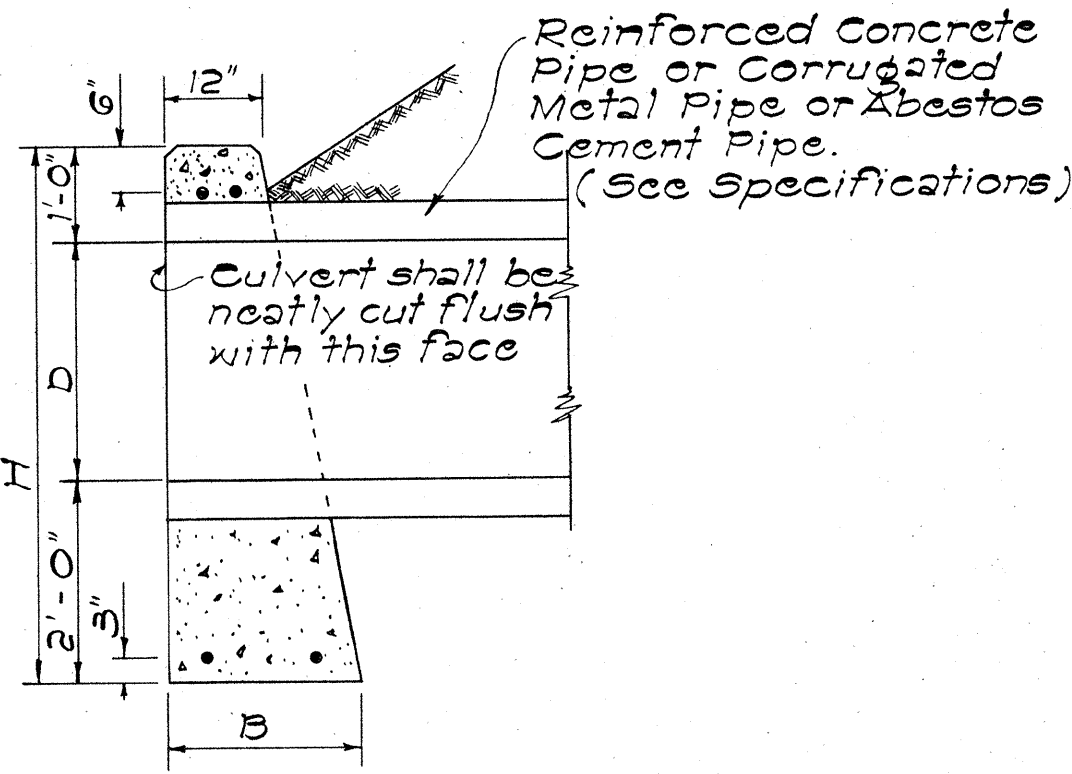


DATA - CONC. DROP INTAKE						Where Variable Equals
D'	D	L-D'+6"	S	Cu. Yds.		
23"	18"	2'-3"	8"	1.41		4'-6"
30"	24"	3'-0"	8"	1.72		5'-0"
37"	30"	3'-7"	9"	2.32		5'-6"
44"	36"	4'-2"	9"	2.73		6'-0"
51"	42"	4'-9"	10"	3.54		6'-6"
58"	48"	5'-4"	10"	4.01		7'-0"

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



ELEVATION



SECTION "A-A"

DATA FOR CONC. HEADWALL				CL. B CONC. FOR R.C.P.	CL. B CONC. FOR C.M.P.	Steel For One Headwall		
D	B	L	H	Cu. Yd.	Cu. Yd.	No. of Bars	Size	Length Lbs.
18"	1'-6"	6'-0"	4'-6"	1.12	1.17	4	3/4"	5'-6" 33
24"	1'-6"	7'-6"	5'-0"	1.52	1.60	4	3/4"	7'-0" 42
30"	2'-0"	9'-0"	5'-6"	2.36	2.49	4	3/4"	8'-6" 51
36"	2'-0"	10'-6"	6'-0"	2.94	3.13	4	3/4"	10'-0" 60
42"	2'-6"	12'-0"	6'-6"	4.19	4.47	4	3/4"	11'-6" 69
48"	2'-6"	13'-6"	7'-0"	5.01	5.36	4	3/4"	13'-0" 78

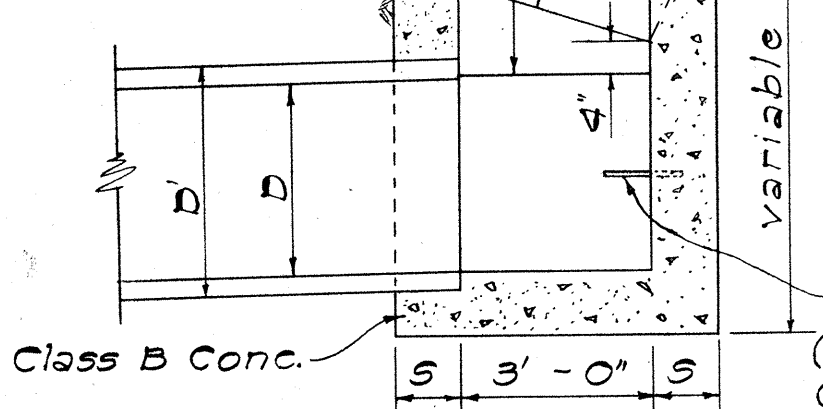
DATA - MASONRY HEADWALL				CRM FOR R.C.P.	CRM FOR C.M.P.
D	B	L	H	Cu. Yd.	Cu. Yd.
18"	1'-0"	6'-0"	4'-6"	1.24	1.29
24"	2'-0"	7'-6"	5'-0"	1.83	1.92
30"	2'-3"	9'-0"	5'-6"	2.56	2.70
36"	2'-6"	10'-6"	6'-0"	3.43	3.66

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

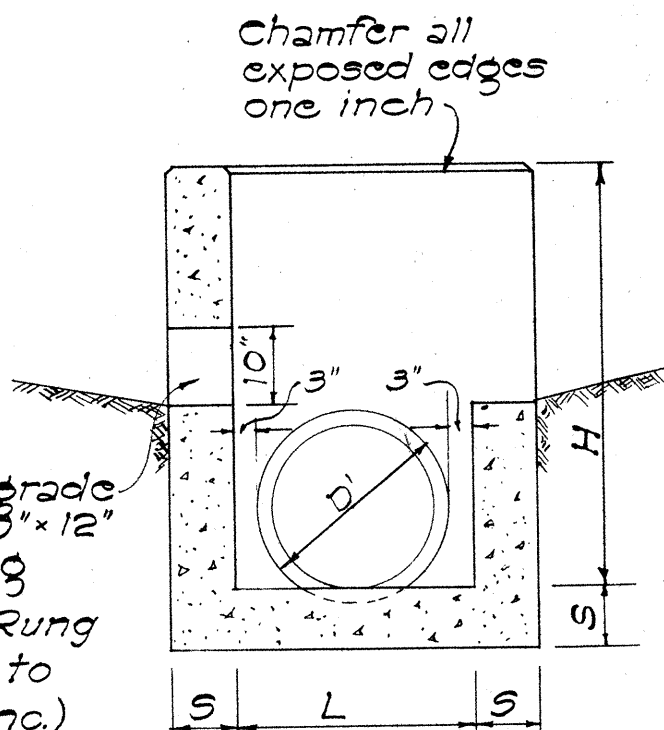
Excavate recess in roadway excavation slope for inlet to dimensions and form designated by the Engineer. This is "Unclassified Excavation".

Top limits of structure excavation other than at bridges

12" unless otherwise noted

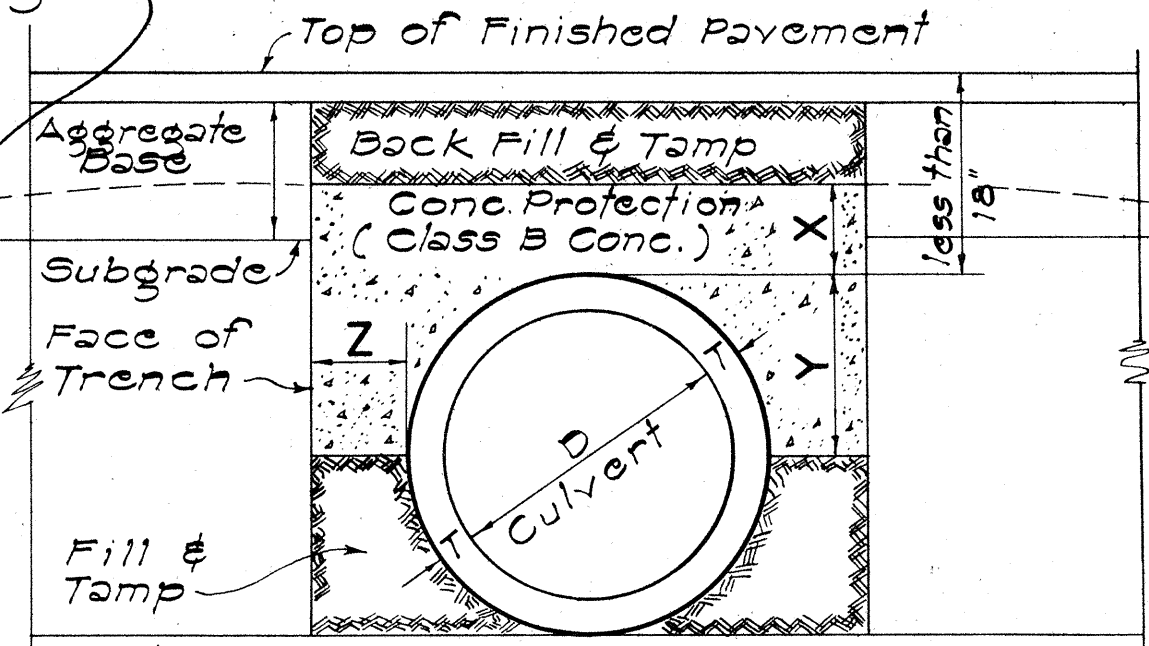


SECTION "A-A"



SECTION "B-B"

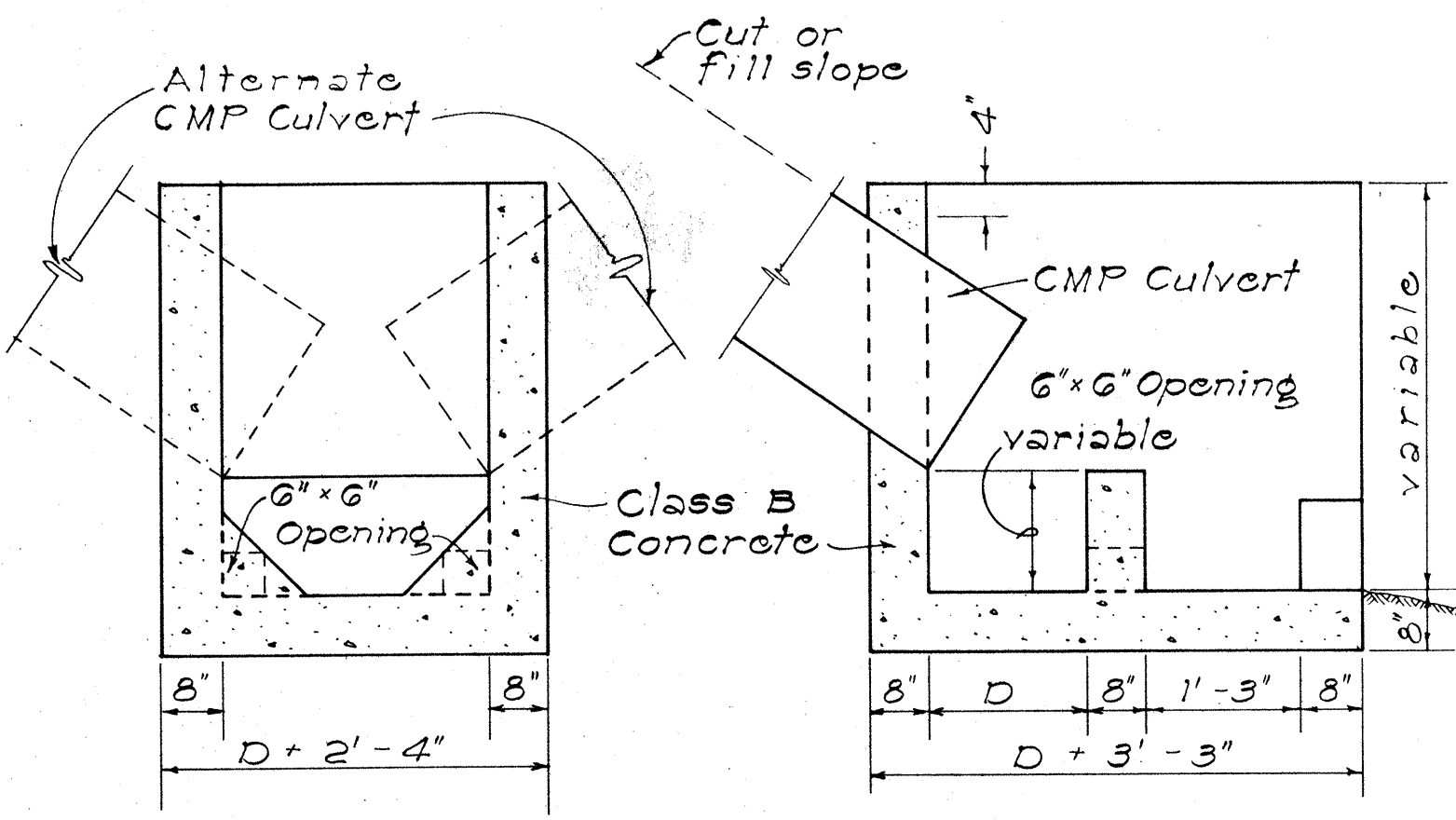
Note: When subgrade is below top of jacket, it shall be fully compacted to this line and then re-excavated (struc. exc.) to proper subgrade. This surface shall be rolled again.



Note: To be used when cover is less than 18"

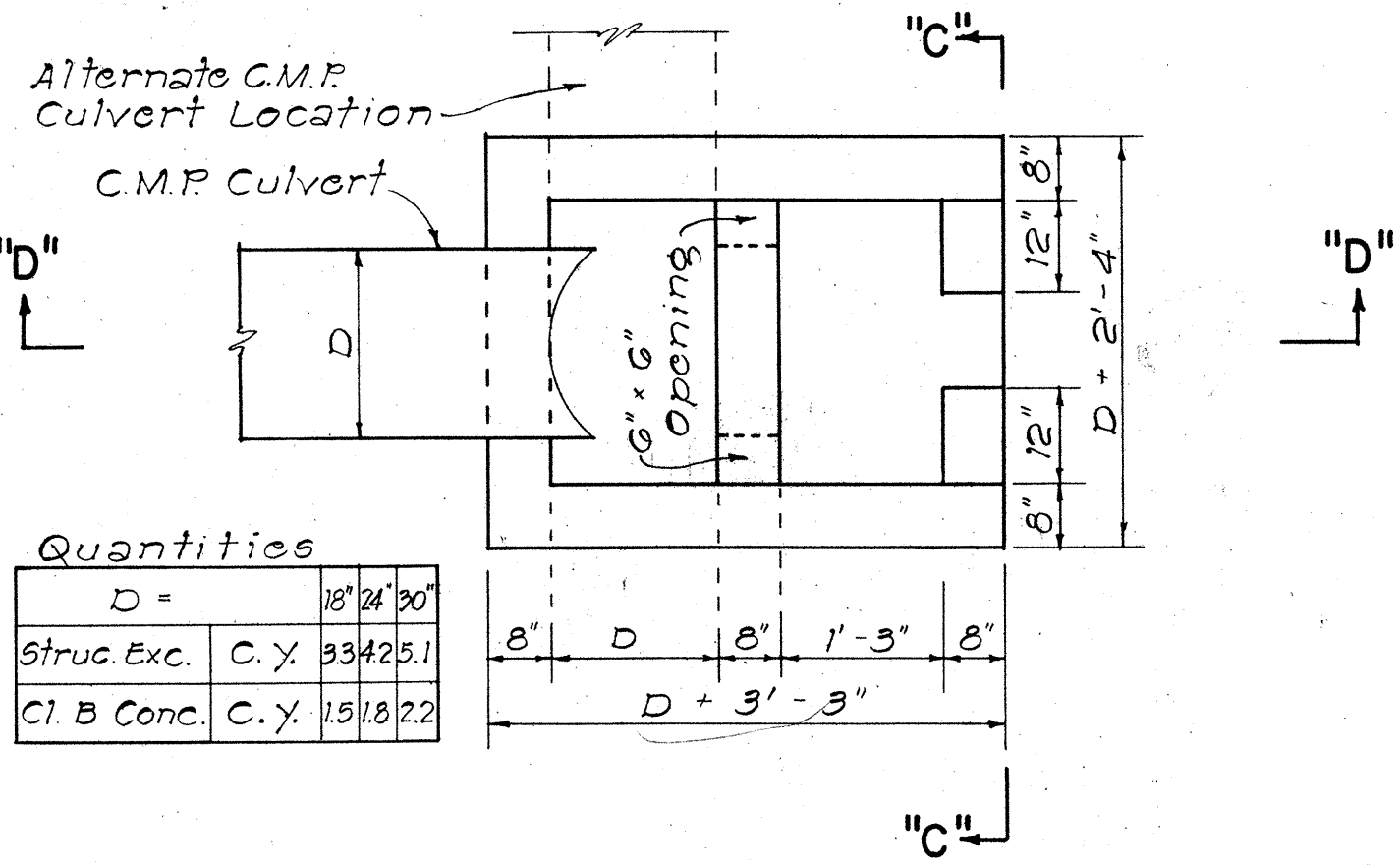
DATA FOR CONCRETE PROTECTION OVER CULVERTS		
X	Y	Z
6" for 18" D.	$\frac{D}{2} + T$	Z must be from pipe to face of trench
7" for 24" D.		
8" for 30" D.		
9" for 36" D.		Minimum = X
10" for 42" D.		
11" for 48" D.		Maximum pay quantity will be Z = 12"
12 for 54" D.		

SECT. OF CULVERT WITH CONC. PROTECTION
Scale: 1" = 1'-0"



SECTION "C-C"

SECTION "D-D"



PLAN

DETAILS OF CONC. DROP BOX AT
OUTLET OF CULVERT PIPE
NOT TO SCALE

APPROVAL RECOMMENDED:
[Signature] 12-17-69
HYDRAULIC DESIGN ENGINEER DATE

APPROVED:
[Signature] 12-17-69
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
DROP INTAKE, HEADWALL &
CONCRETE PROTECTION

Scale: As Noted Date: Aug. 1967
SHEET No. 12 OF 20 SHEETS DH 10

DATE	
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

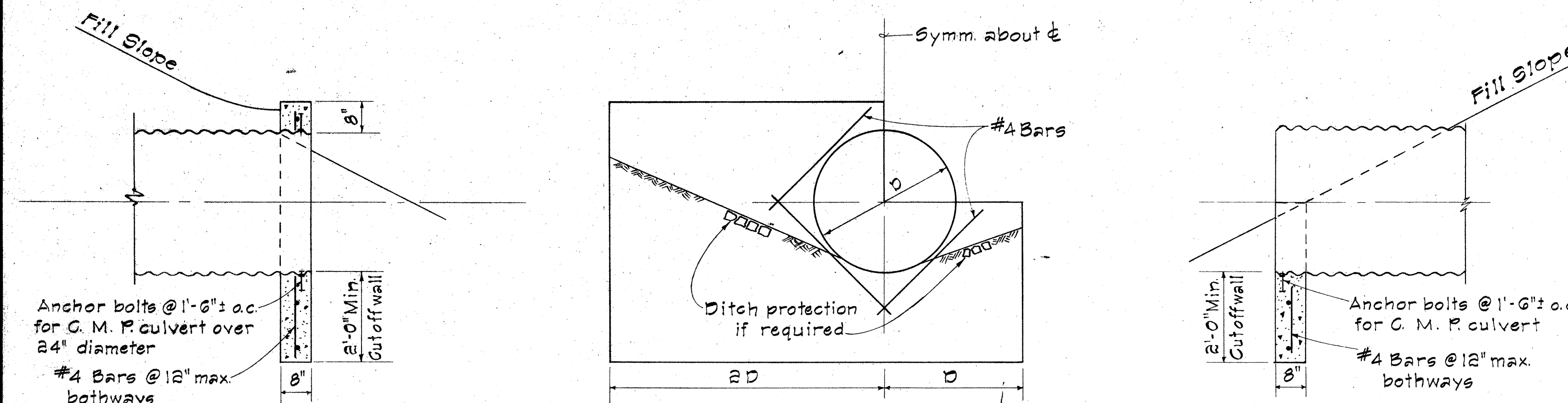
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56A-01-74	1974	32	53

GENERAL NOTES

- Concrete: All concrete shall be Class A.
- Cutoff Wall: The depth of wall shown on the plan may be reduced if rock is encountered at a higher elevation.
- Multiple Pipe Installations: To permit careful placing and tamping of back fill material, clear spacing for multiple pipe installations shall be not less than one-half the diameter of the larger pipe between sides of adjacent pipes, but not required to exceed three feet, and in no case less than one foot.
- Anchor Bolts: Anchor Bolts are not required for concrete pipe.

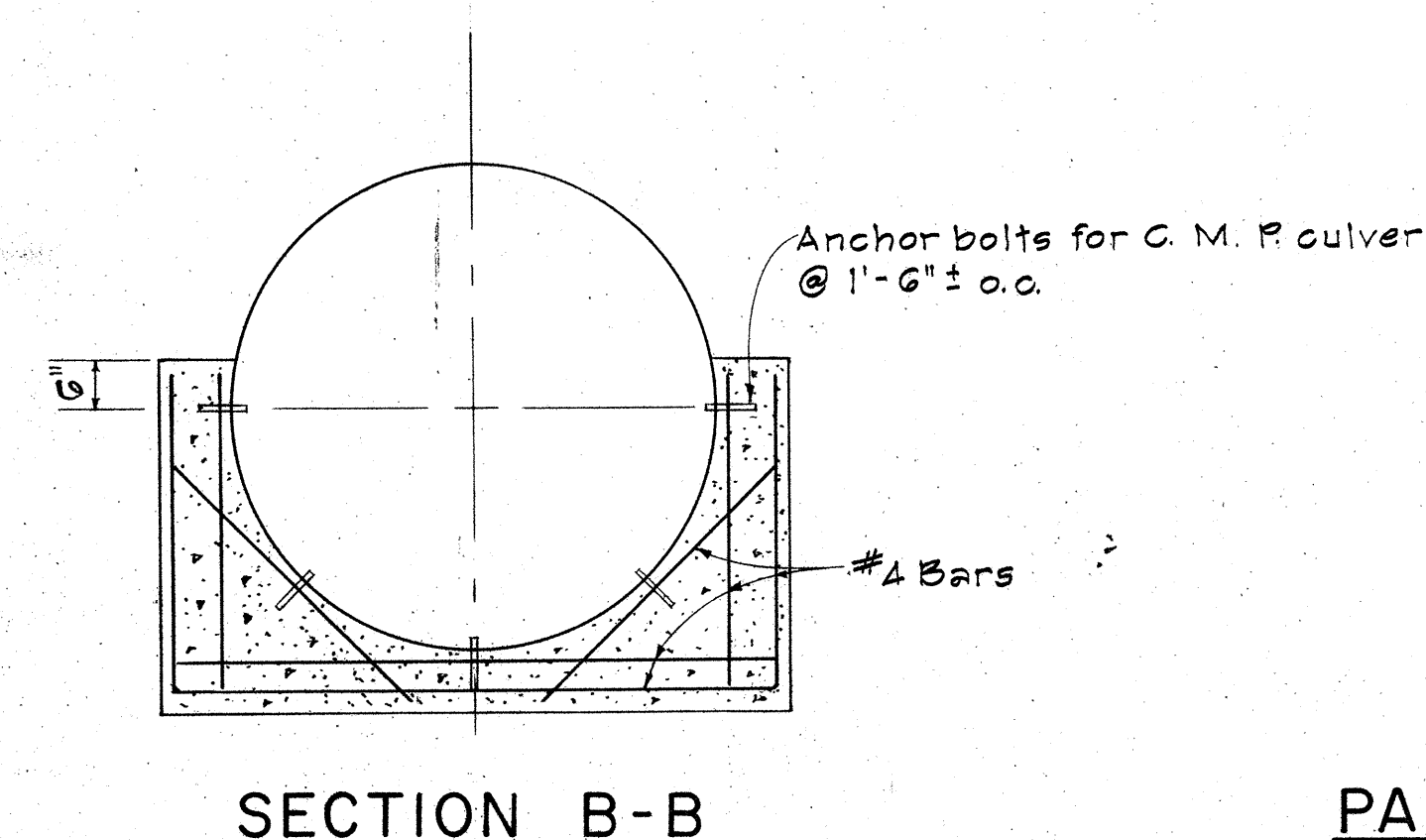
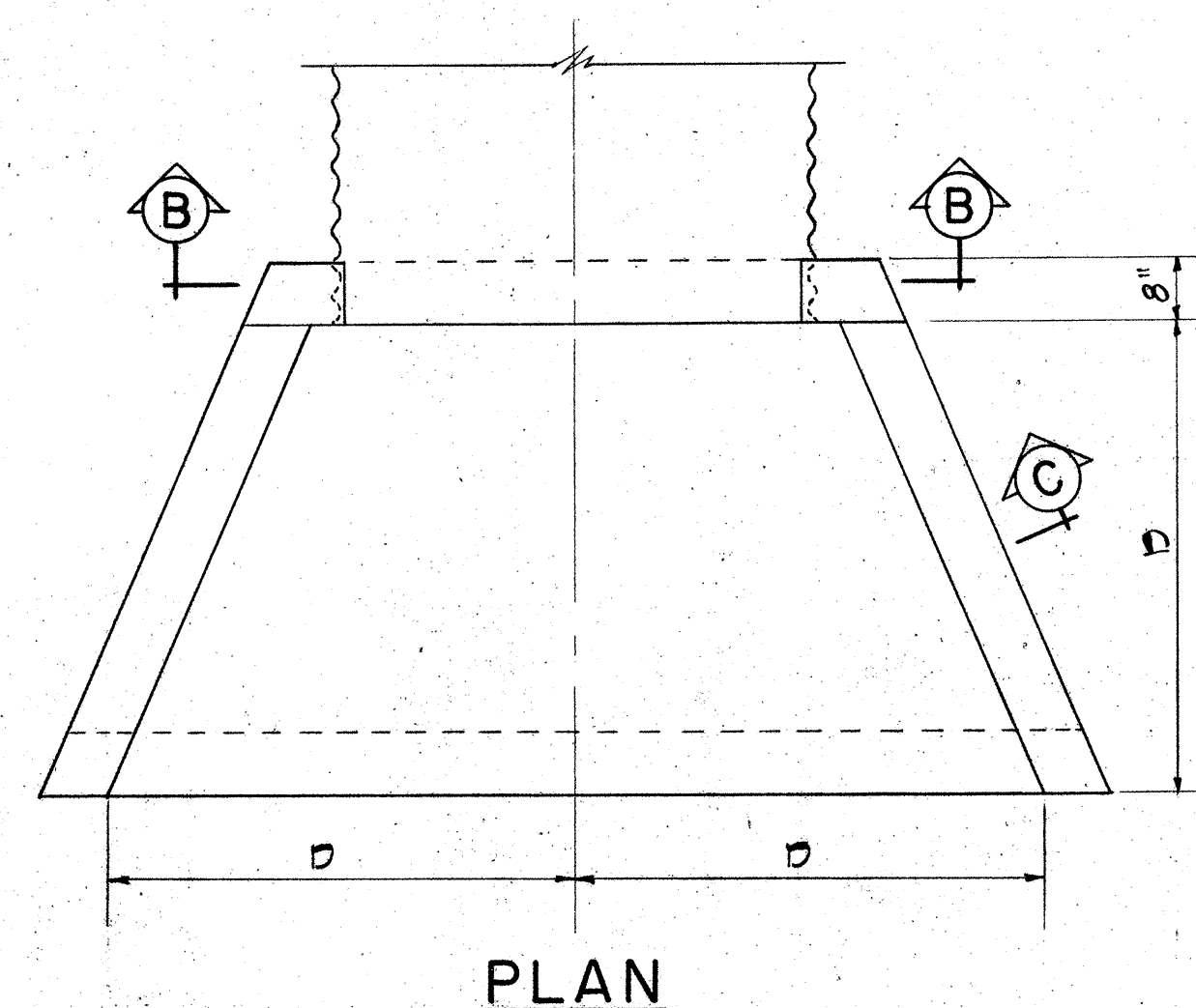
Culvert Dia. (inches)	Full Headwall		Half Headwall	
	Concrete (Cu. Yd)	Reinf. Steel (Lbs)	Concrete (Cu. Yd)	Reinf. Steel (Lbs)
18	0.57	45	0.18	15
24	0.85	65	0.26	20
30	1.15	85	0.34	25
36	1.50	115	0.43	35

Note: Quantities shown are for C.M.P. culvert.

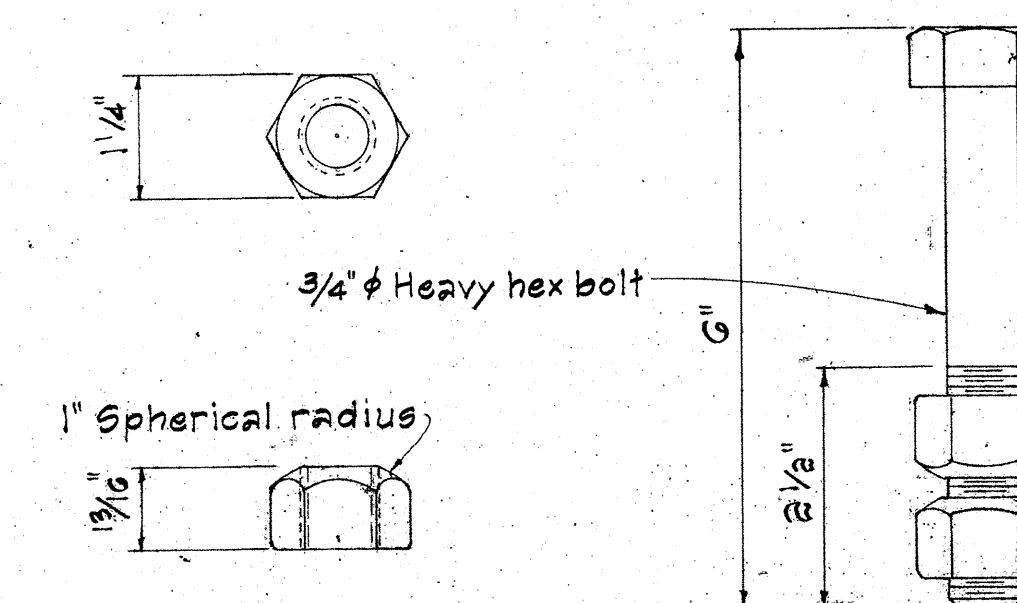


SECTION HALF ELEVATION HALF ELEVATION SECTION
FULL HEADWALL HALF HEADWALL

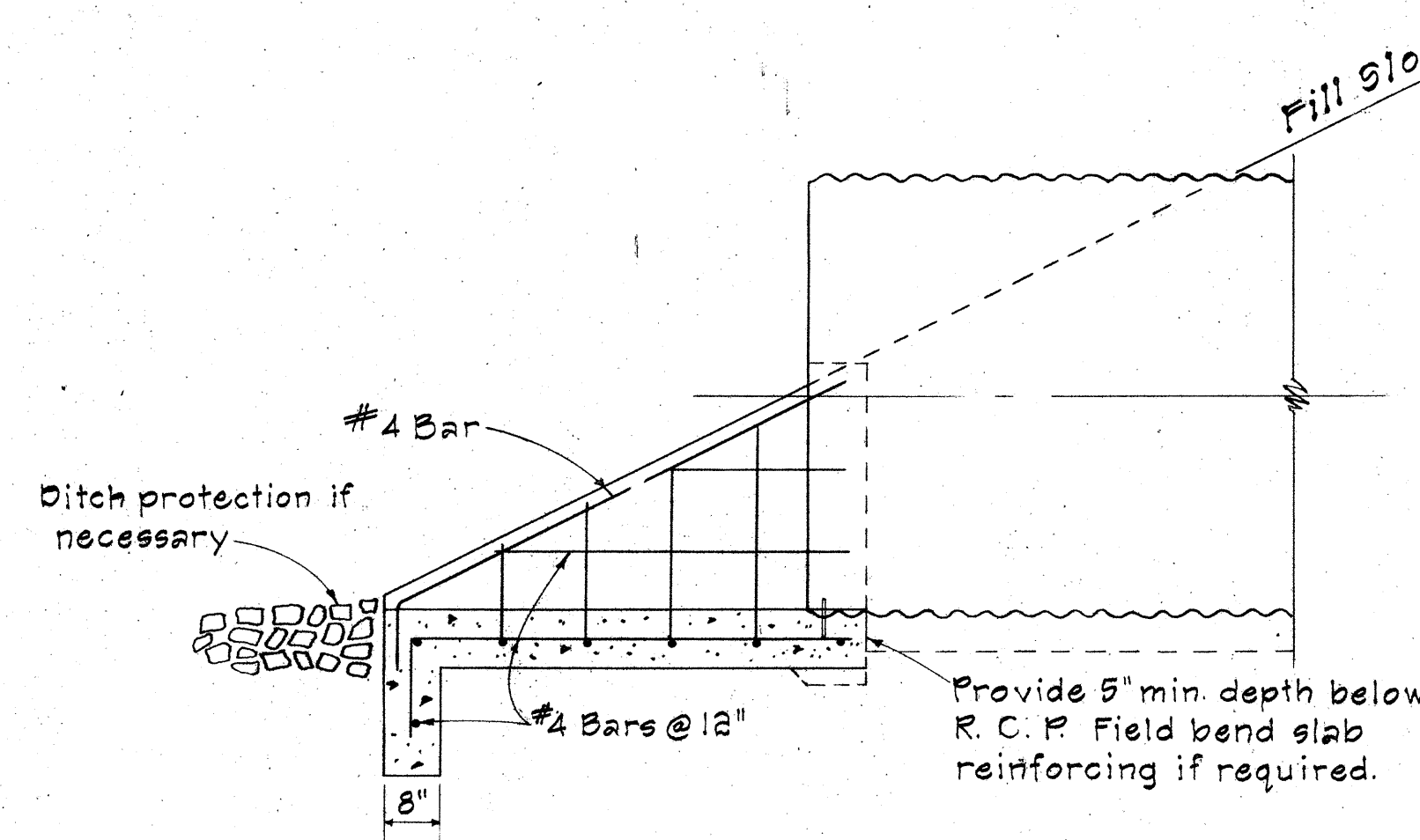
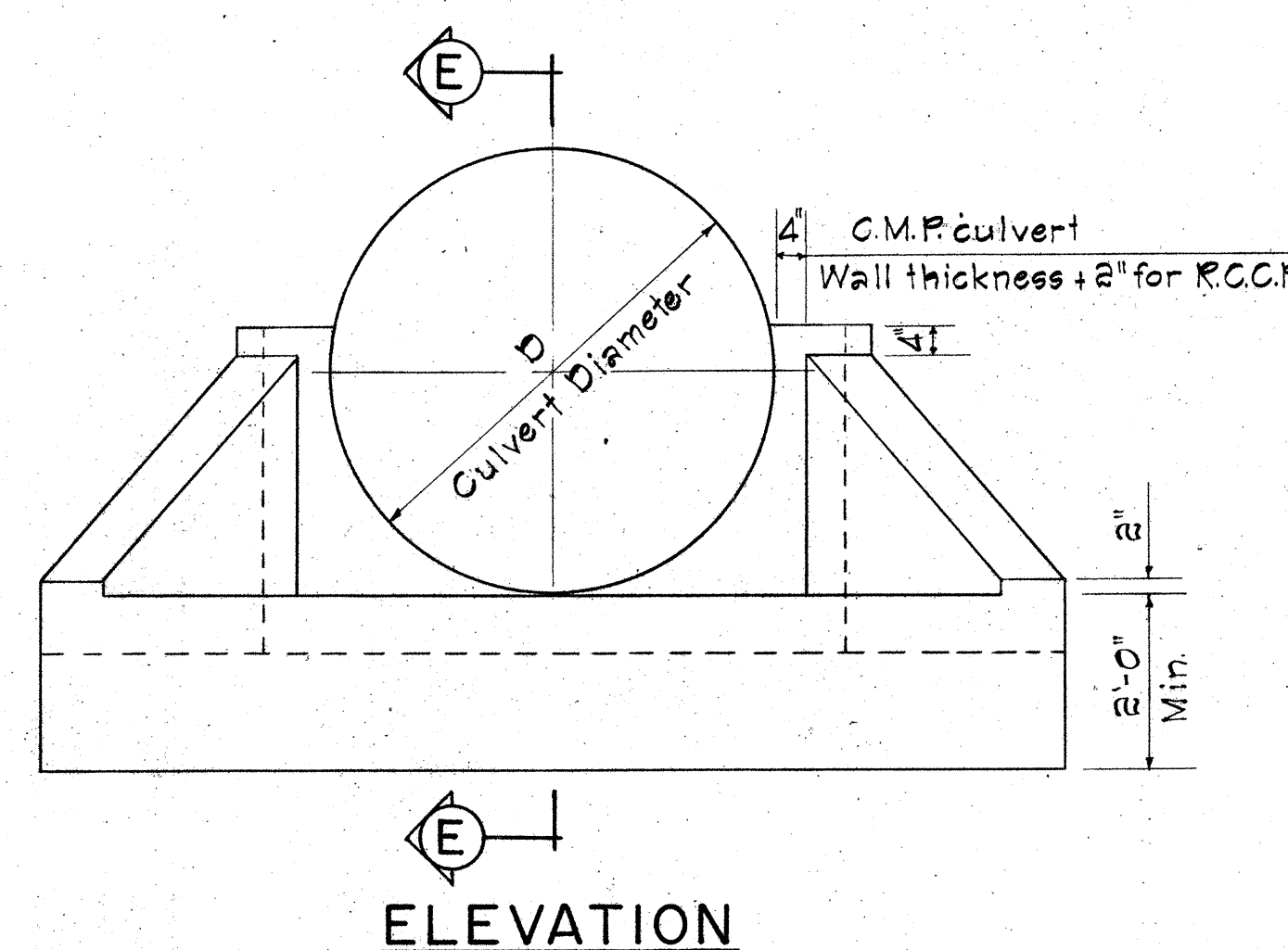
OUTLET STRUCTURE FOR CULVERT SIZES 18 IN. TO 36 IN. DIAMETER



PARTIAL SECTION C



ANCHOR BOLT DETAIL



SECTION E-E

OUTLET STRUCTURE FOR CULVERT SIZES 36 IN. TO 60 IN. DIAMETER

SUMMARY OF QUANTITIES		
Culvert Dia. (inches)	Concrete (Cu. Yd)	Reinf. Steel (Lbs)
36	1.0	70
42	1.2	90
48	1.5	100
54	1.7	125
60	2.1	140

Note: Quantities shown are for C.M.P. culvert.

APPROVAL RECOMMENDED:

HYDRAULIC DESIGN ENGINEER

12-17-69
DATE

APPROVED:

ASSISTANT CHIEF, ENGINEERING

12-17-69
DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS

OUTLET STRUCTURES

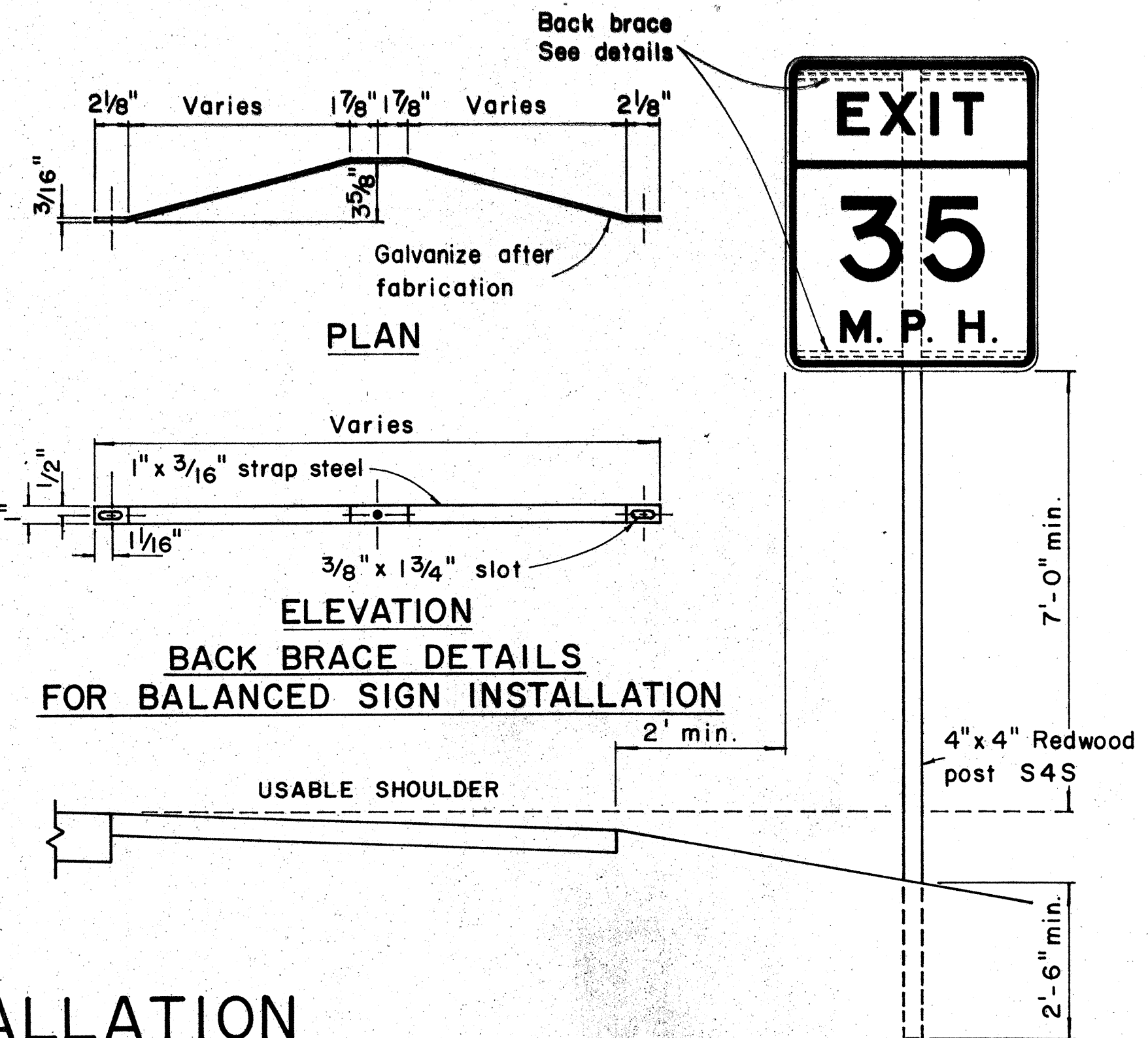
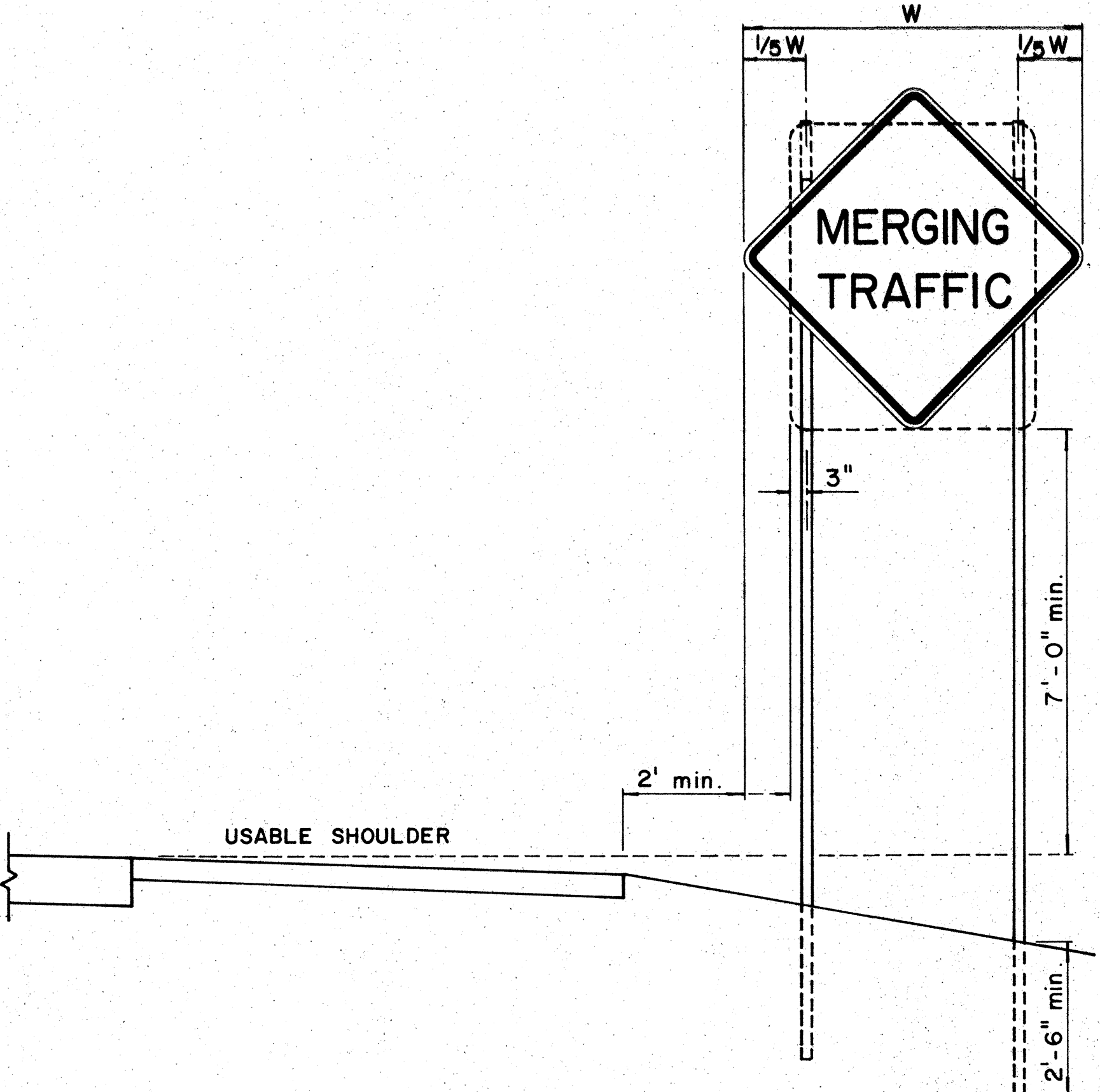
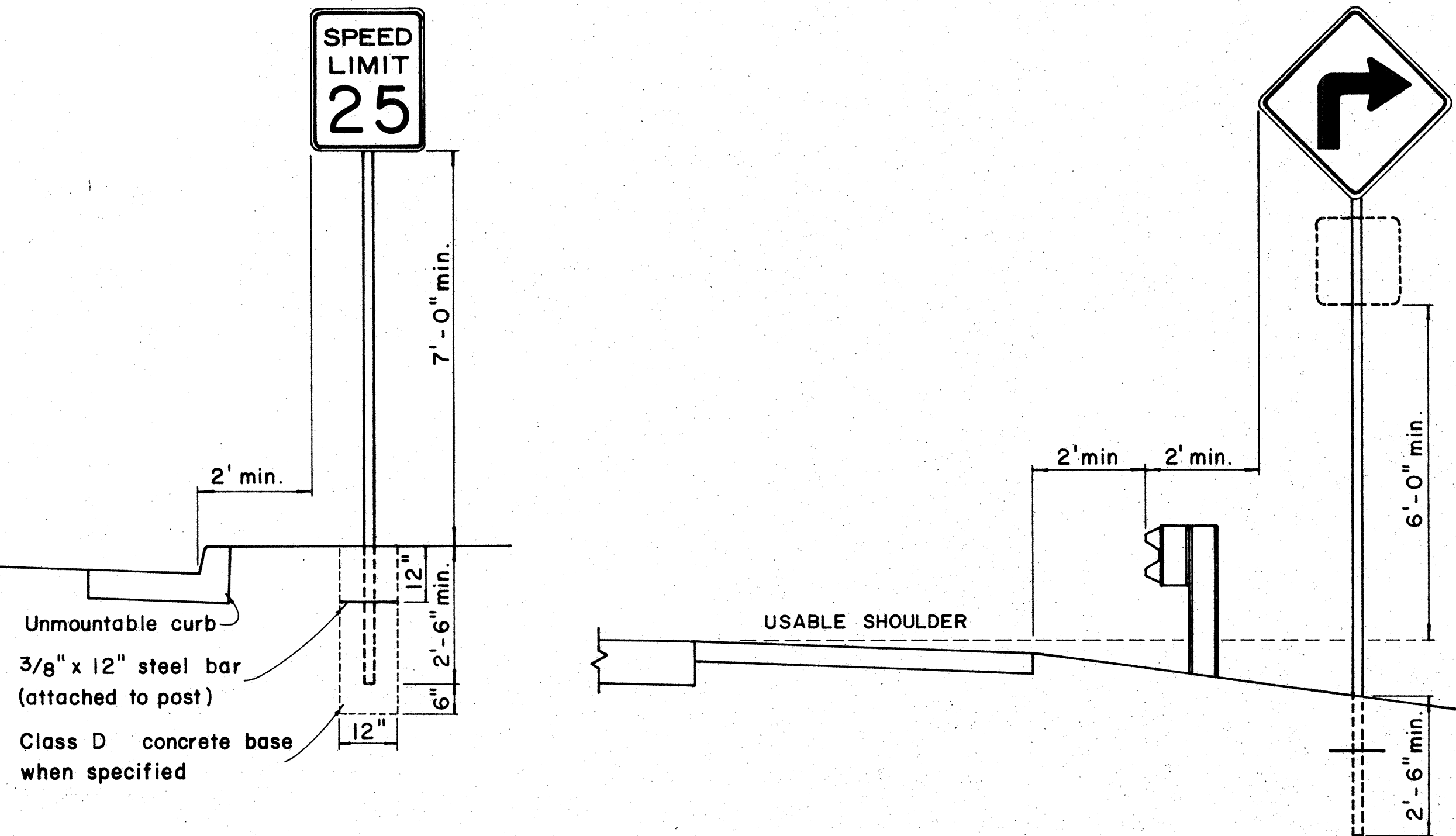
Not To Scale

Date: July, 1969

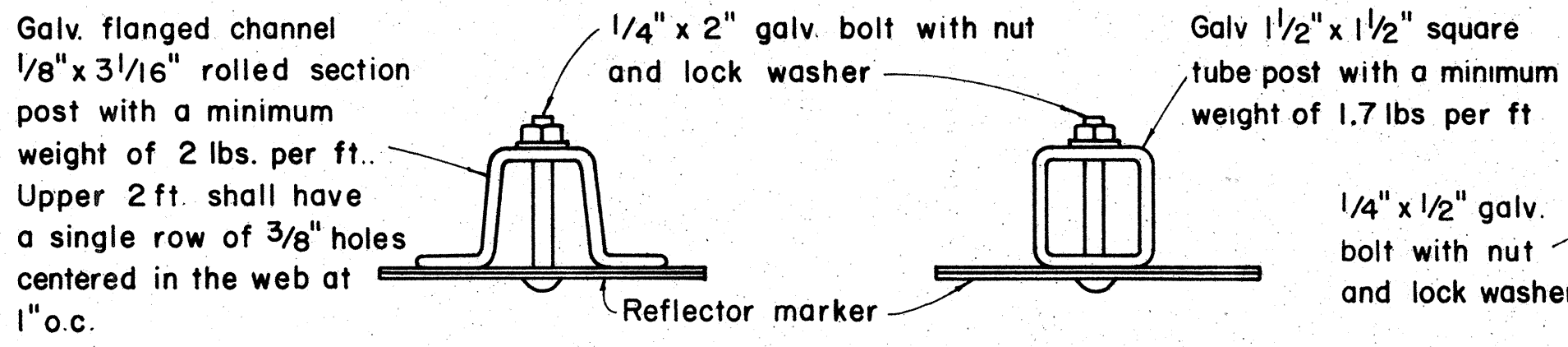
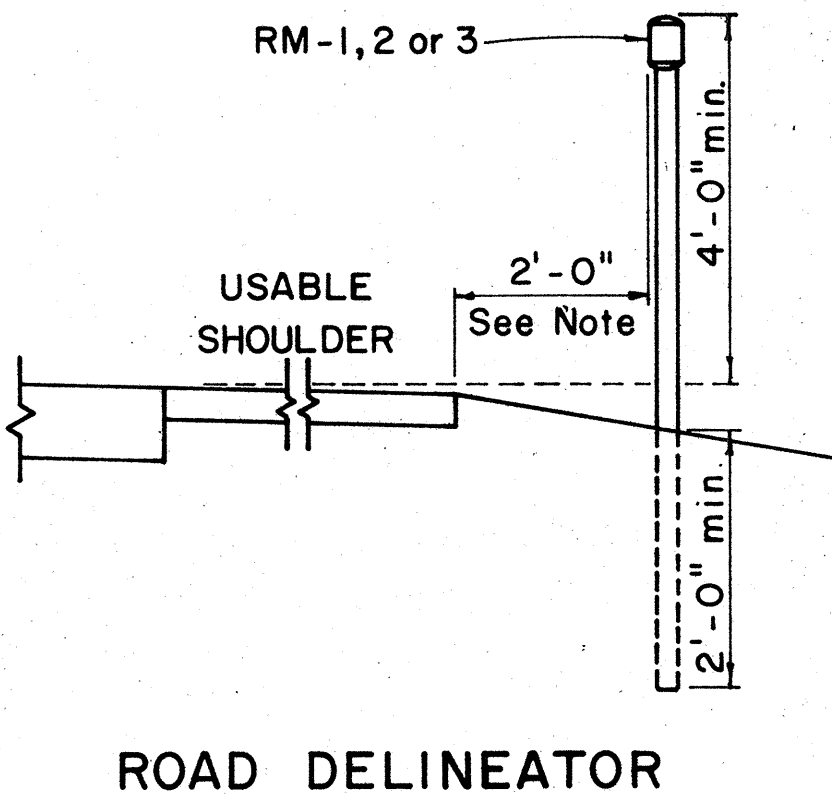
SHEET No. 12 OF 20 SHEETS DH 14

DATE	DESIGNED BY	CHECKED BY
PLAN	NOTED BY	QUANTITIES BY
NO.		

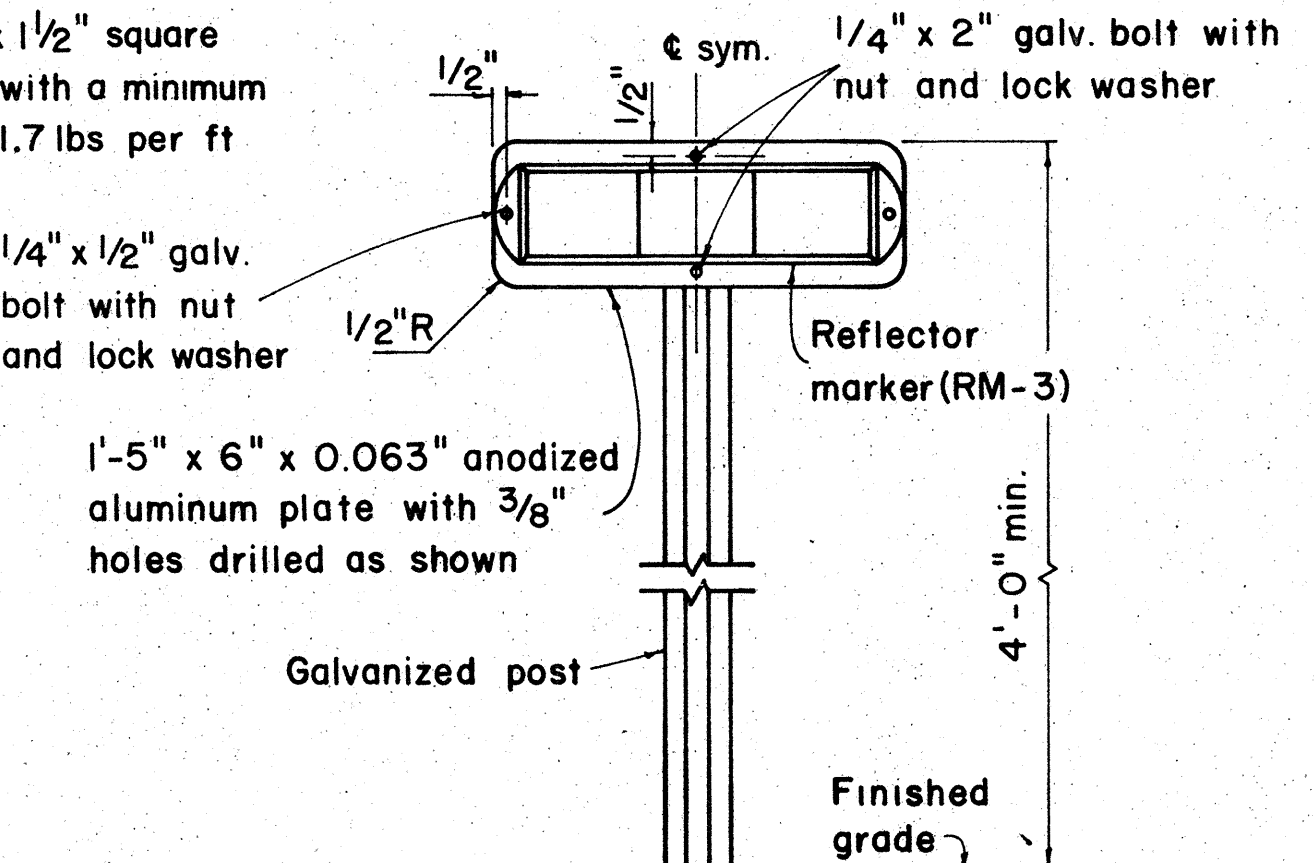
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56A-01-74	1974	34	53



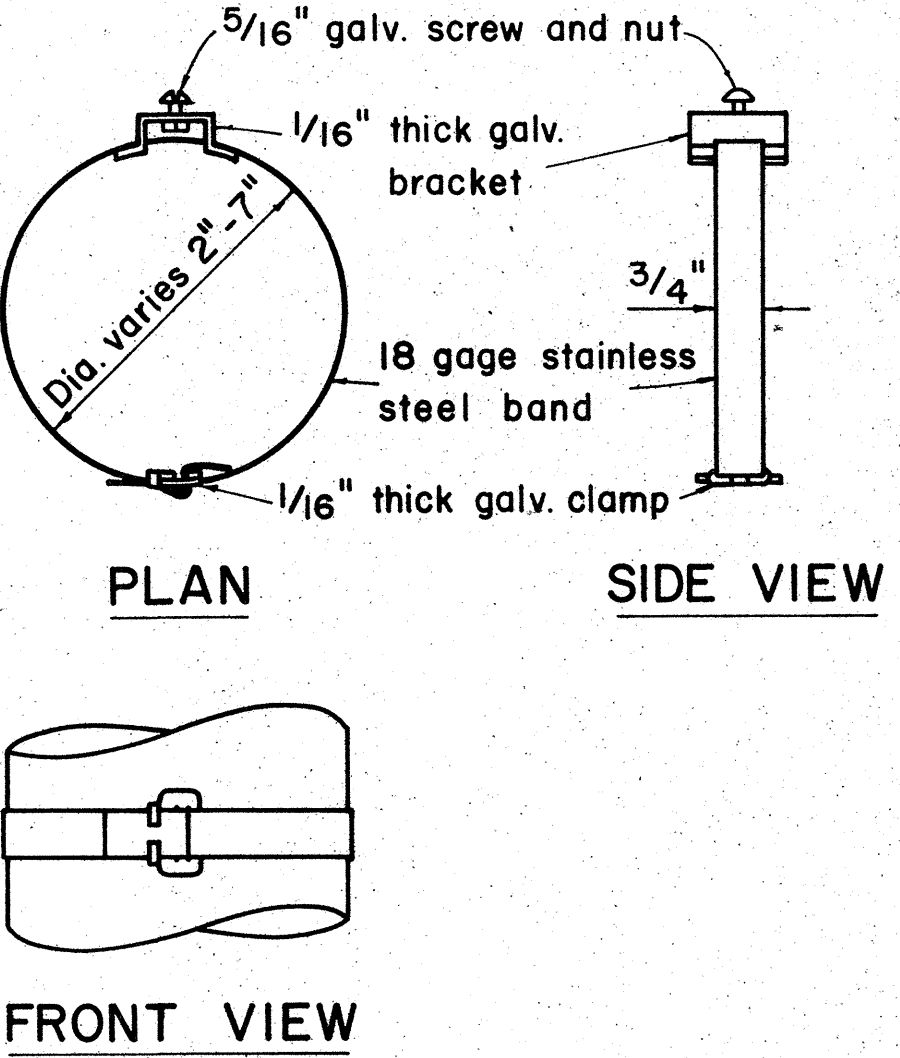
HEIGHT AND LATERAL LOCATION OF SIGNS - TYPICAL INSTALLATION



TYPICAL SECTION OF ROAD DELINEATOR



TYPICAL DETAIL HORIZONTAL REFLECTOR MARKER RM-3H



TYPICAL BAND BRACKET FOR MOUNTING TRAFFIC SIGNS

- GENERAL NOTES:
- Sign posts shall be 2" galv. standard pipe or 2" x 2" galv. sq. tube post.
 - Signs 48" and wider or larger than 10 sq. ft. in area shall be mounted on two 2" galv. standard pipe or two 2" x 2" galv. sq. tube post or 4" x 4" redwood post S4S.
 - Signs shall be attached to post with 5/16" galv. bolts with nuts and 7/8" x 0.06 stainless steel washers with neoprene rubber gasket.
 - Sign posts shall extend 3 1/2" above sign where required for City and County street name signs.
 - Reflector markers RM-1, 2, 3 shall be glass sphere reflector markers with 4" x 5" reflector units (as shown) or plastic prismatic reflector markers with 3" diameter reflector units.
 - Clearance markers (RM-3, RM-4) shall be installed with the edge of the marker in line with the inner edge of the obstruction.
 - (R) or (L) indicates right or left and shall be as shown on the plans.

APPROVAL RECOMMENDED:
E. J. Tanaka 12/29/69
 TRAFFIC ENGINEER DATE

APPROVED:
[Signature] 12-30-69
 ASSISTANT CHIEF, ENGINEERING DATE

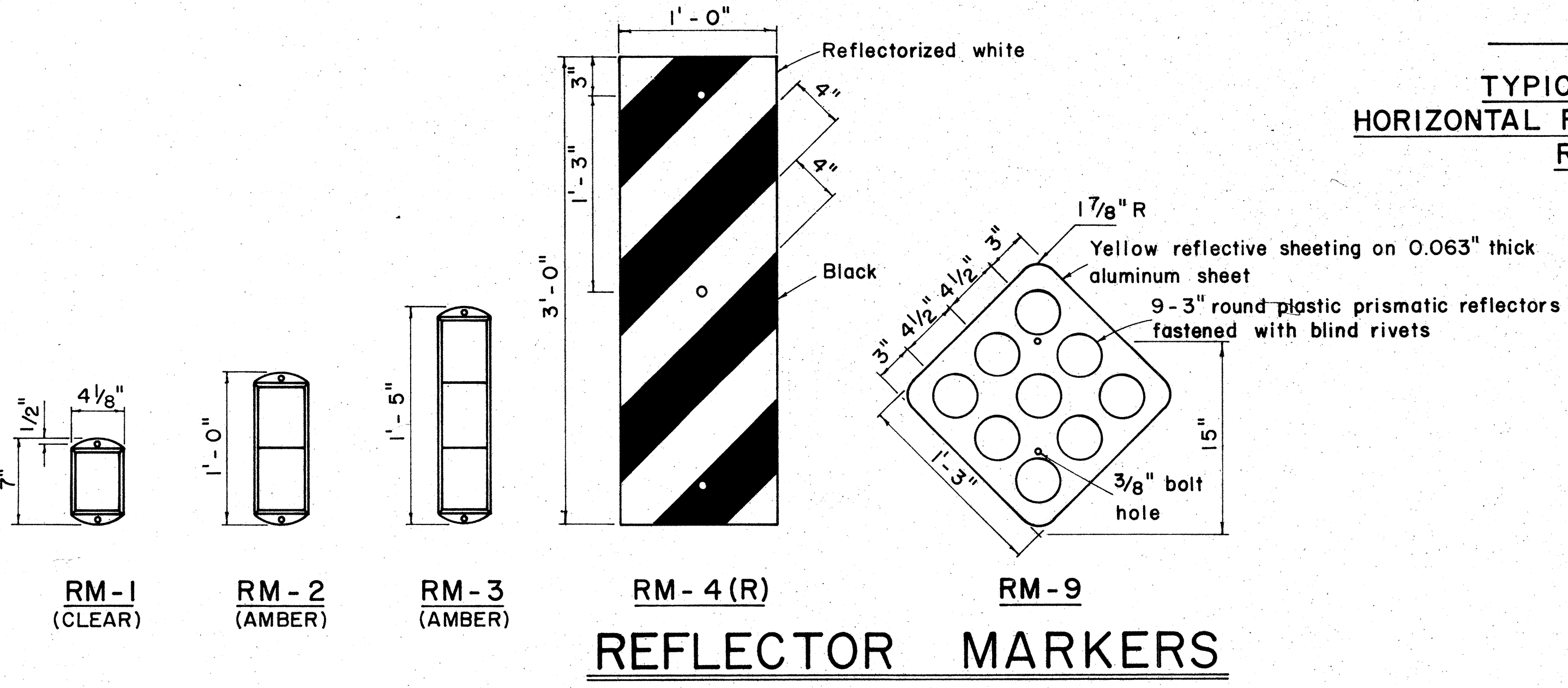
NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS
MISCELLANEOUS SIGN DETAILS

Not to scale March, 1968

DATE	
DESIGNED BY	
CHECKED BY	
NO.	



REFLECTOR MARKERS

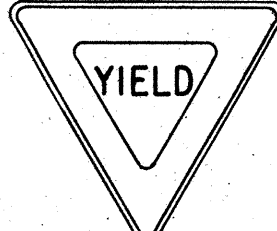
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56A-01-74	1974	35	53



R1-1 30" x 30"
R1-1-A 36" x 36"

4-WAY

R1-3 12" x 6"
R1-3-A 18" x 9"



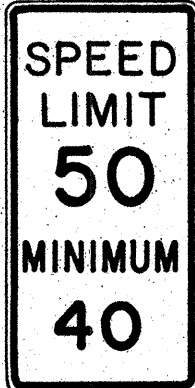
R1-2 36" x 36" x 36"
R1-2-A 48" x 48" x 48"



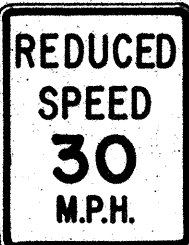
R2-1(50) 24" x 30"
R2-1(50)-A 48" x 60"



R2-2(40) 24" x 24"
R2-2(40)-A 48" x 48"



R2-4a(50/40) 24" x 48"
R2-4a(50/40)-A 48" x 96"



R2-5b(30) 24" x 30"
R2-5b(30)-A 48" x 60"



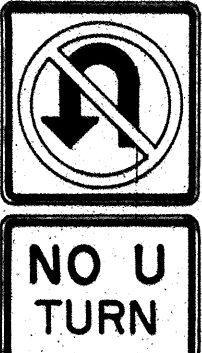
R3-1 24" x 24"
24" x 18"
R3-1-A 48" x 48"
48" x 36"



R3-2 24" x 24"
24" x 18"
R3-2-A 48" x 48"
48" x 36"



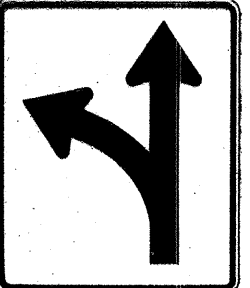
R3-3 24" x 24"
R3-3-A 48" x 48"



R3-4 24" x 24"
24" x 18"
R3-4-A 48" x 48"
48" x 36"



R3-5(L) 30" x 36"
R3-5(L)-A 48" x 60"



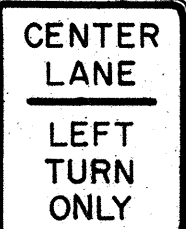
R3-6(L) 30" x 36"
R3-6(L)-A 48" x 60"



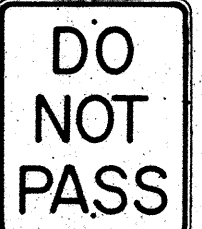
R3-7(R) 30" x 30"
R3-7(R)-A 48" x 48"



R3-8(L) 30" x 30"
R3-8(L)-A 36" x 36"
R3-8(L)-B 48" x 48"



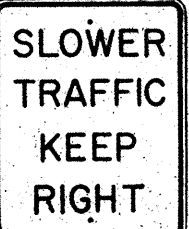
R3-9 24" x 30"



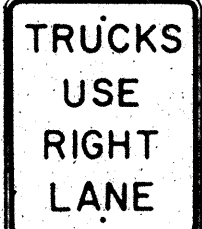
R4-1 24" x 30"



R4-2 24" x 30"



R4-3 24" x 30"
R4-3-A 48" x 60"



R4-5 24" x 30"



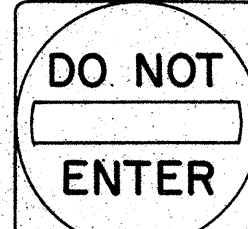
R4-6(500) 24" x 30"



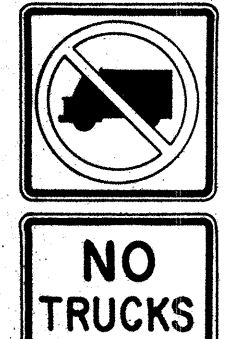
R4-7 24" x 30"
24" x 18"



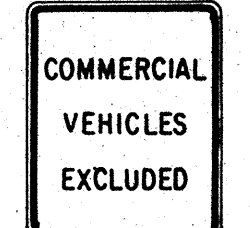
R4-8 24" x 30"
24" x 18"



R5-1 30" x 30"
R5-1-A 48" x 48"



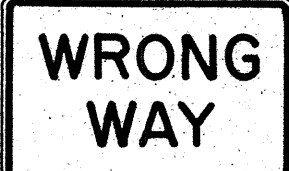
R5-2 24" x 24"
24" x 18"



R5-4 24" x 30"



R5-6 24" x 24"
24" x 18"



R5-9 36" x 24"



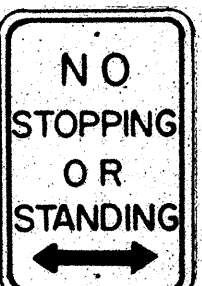
R6-1 (R) 36" x 12"



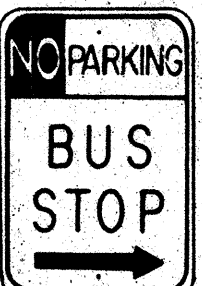
R6-2(R) 18" x 24"



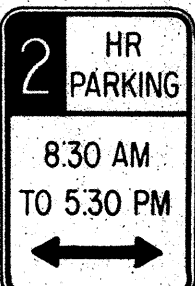
R7-1 12" x 18"
R7-1-A 24" x 30"



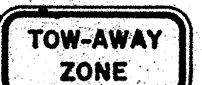
R7-4 12" x 18"
R7-4-A 24" x 30"



R7-107(R) 12" x 18"



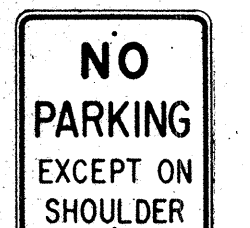
R7-108 12" x 18"



R7-201 12" x 6"
R7-201-A 24" x 12"



R8-1 24" x 30"



R8-2 24" x 30"



R8-3 24" x 30"



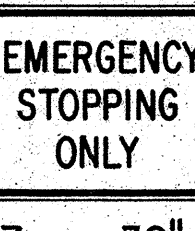
R8-4 30" x 24"
R8-4-A 48" x 36"



R8-5 24" x 30"



R8-6 24" x 30"



R8-7 30" x 24"
R8-7-A 48" x 36"



R9-1 18" x 24"



R9-2 12" x 18"



R9-3 12" x 18"



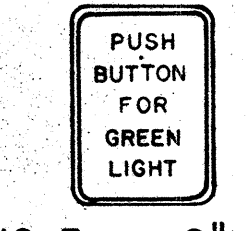
R9-4 18" x 24"



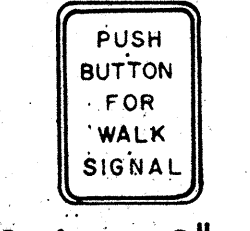
R10-1 12" x 18"



R10-2 12" x 18"



R10-3 9" x 12"



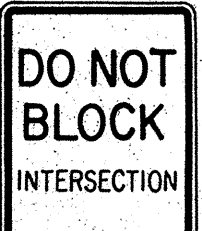
R10-4 9" x 12"



R10-5 24" x 30"



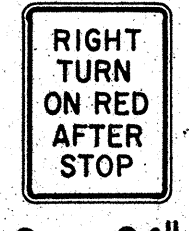
R10-6 24" x 36"



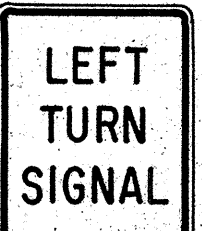
R10-7 24" x 30"



R10-8 24" x 30"



R10-9 24" x 30"



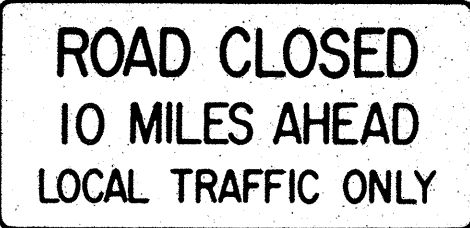
R10-10 24" x 30"



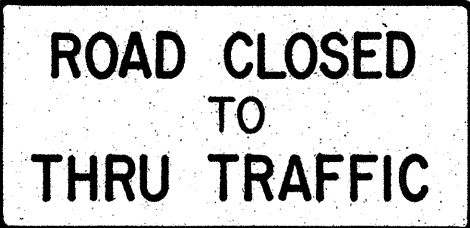
R11-1 24" x 30"



R11-2 48" x 30"



R11-3(10) 60" x 30"



R11-4 60" x 30"



R12-1(10) 24" x 30"

GENERAL NOTES

- Sign details shall conform to the FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," 1971, and "Standard Highway Signs."
- All regulatory signs shall be reflectorized unless otherwise specified.
- All regulatory signs shall have 3/8" bolt holes drilled at appropriate locations.
- Numerals in () indicates numerals to be inserted for sign message. (R) or (L) indicates right or left.

APPROVAL RECOMMENDED:

Eushe Tanaka

TRAFFIC ENGINEER

3/11/72

DATE

APPROVED:

Hubert Zolner

ASSISTANT CHIEF, ENGINEERING

3-20-72

DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 101 Approved 12-30-69	H.C.	3/20/72

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

STANDARD DETAILS

REGULATORY SIGNS

NOT TO SCALE

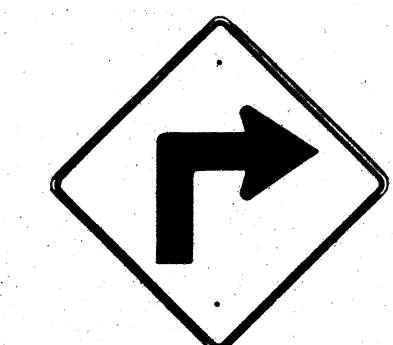
SHEET No. 15 OF 20 SHEETS DT 101

SURVEY PLOTTED BY	DATE
DESIGNED BY	
TRACED BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	

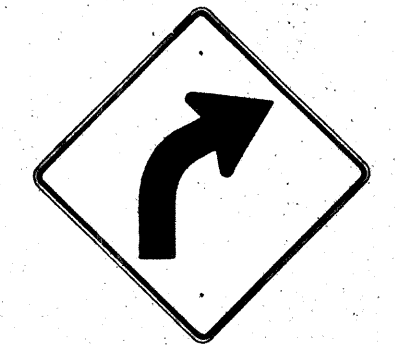
35

53

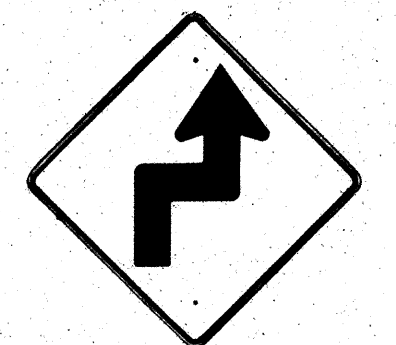
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56A-01-74	1974	36	53



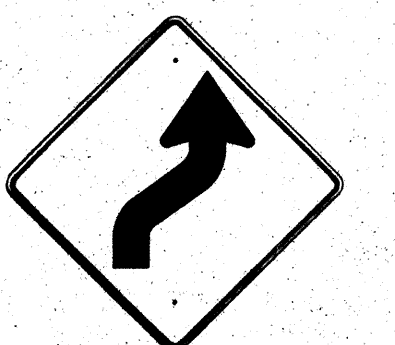
W1-1(R) 30"x 30"
W1-1(R)-A 48"x 48"



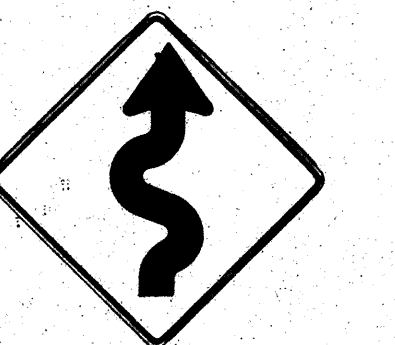
W1-2(R) 30"x 30"
W1-2(R)-A 48"x 48"



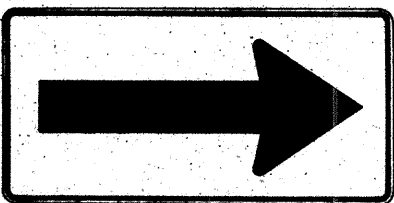
W1-3(R) 30"x 30"
W1-3(R)-A 48"x 48"



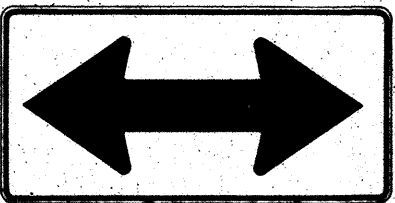
W1-4(R) 30"x 30"
W1-4(R)-A 48"x 48"



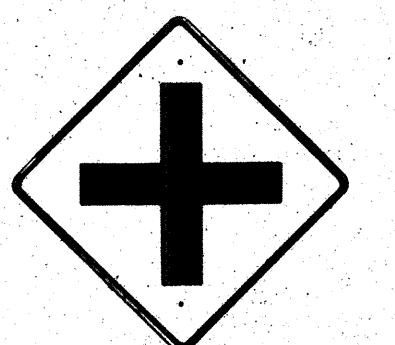
W1-5(R) 30"x 30"
W1-5(R)-A 48"x 48"



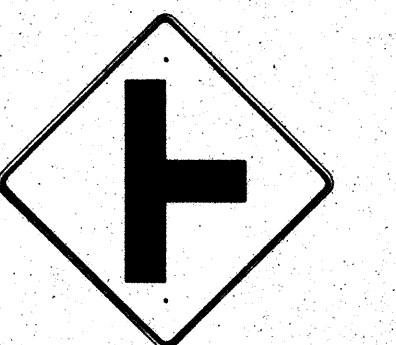
W1-6 48"x 24"



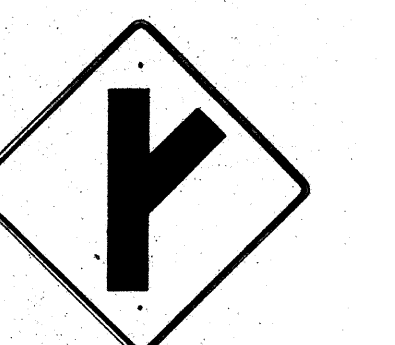
W1-7 48"x 24"



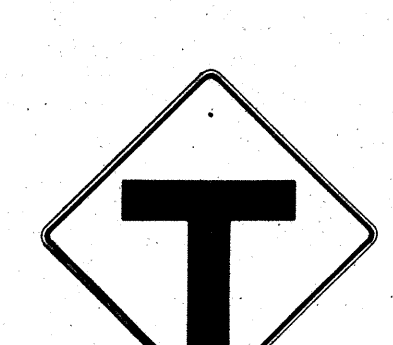
W2-1 30"x 30"
W2-1-A 48"x 48"



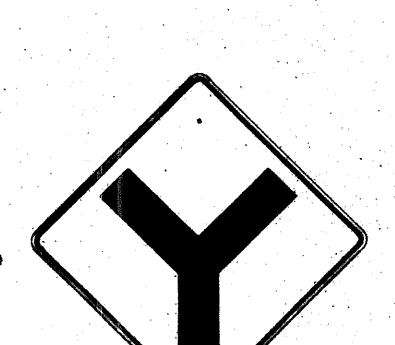
W2-2 30"x 30"
W2-2-A 48"x 48"



W2-3(R) 30"x 30"
W2-3(R)-A 48"x 48"



W2-4 30"x 30"
W2-4-A 48"x 48"



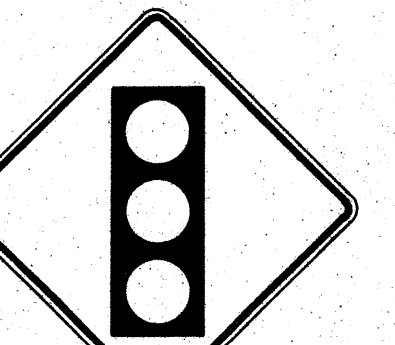
W2-5 30"x 30"
W2-5-A 48"x 48"



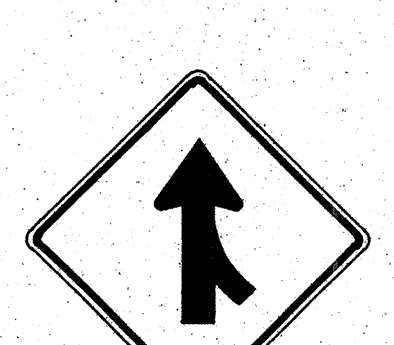
W3-1 30"x 30"
W3-1-A 36"x 36"



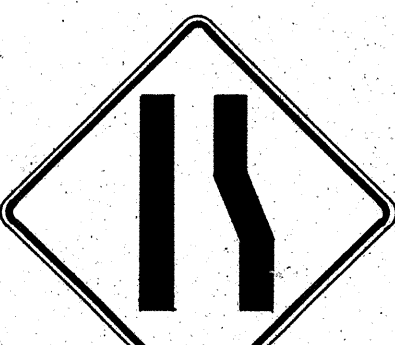
W3-2 30"x 30"
W3-2-A 36"x 36"



W3-3 36"x 36"
24"x 18"



W4-1(R) 30"x 30"
24"x 18"
W4-1(R)-A 48"x 48"
24"x 18"



W4-2(R) 36"x 36"
W4-2(R)-A 48"x 48"



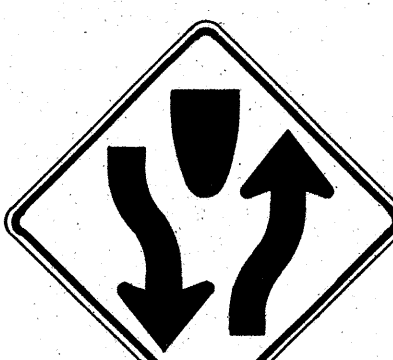
W5-1 36"x 36"



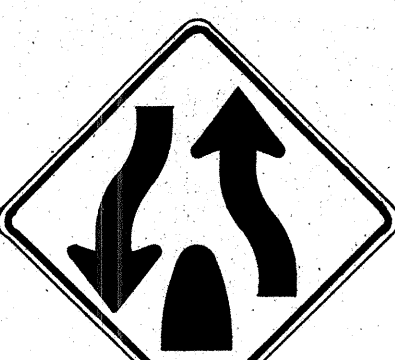
W5-2 30"x 30"
W5-2-A 36"x 36"



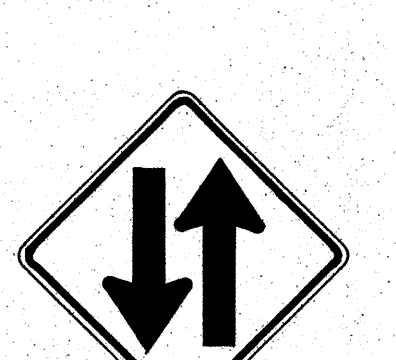
W5-3 36"x 36"



W6-1 36"x 36"
24"x 18"



W6-2 36"x 36"
24"x 18"



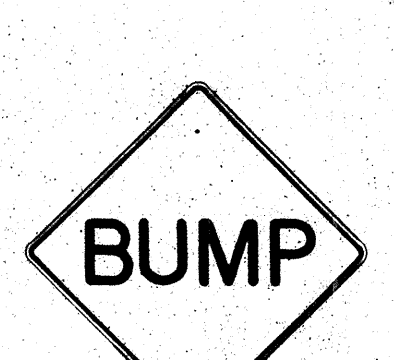
W6-3 30"x 30"
24"x 18"
W6-3-A 36"x 36"
24"x 18"
W6-3-B 48"x 48"
24"x 18"



W7-1 30"x 30"
24"x 18"
W7-1-A 36"x 36"
24"x 18"



W7-2 24"x 18"



W8-1 30"x 30"
W8-1-A 36"x 36"



W8-2 30"x 30"
W8-2-A 36"x 36"



W8-3 30"x 30"
W8-3-A 36"x 36"



W8-4 30"x 30"
W8-4-A 36"x 36"



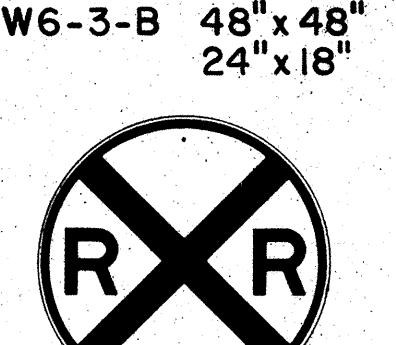
W8-5 30"x 30"
24"x 18"
W8-5-A 36"x 36"
24"x 18"



W9-1(R) 30"x 30"
W9-1(R)-A 36"x 36"
W9-1(R)-B 48"x 48"



W9-2(L) 36"x 36"
W9-2(L)-A 48"x 48"



W10-1 36" Diameter



W11-1 30"x 30"
24"x 18"
W11-1-A 36"x 36"
24"x 18"



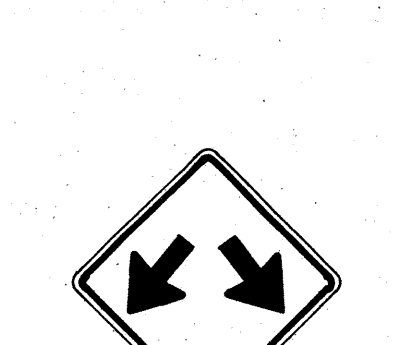
W11-2 30"x 30"
24"x 18"
W11-2-A 36"x 36"
24"x 18"



W11-4 30"x 30"
24"x 18"
W11-4-A 36"x 36"
24"x 18"



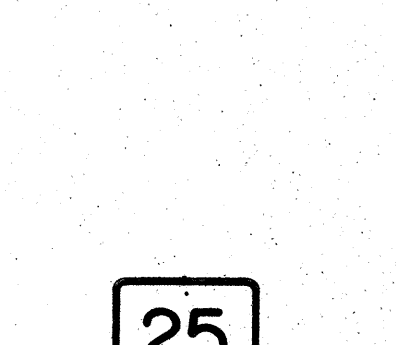
W11-5 30"x 30"
24"x 18"
W11-5-A 36"x 36"
24"x 18"



W12-1 24"x 24"
W12-1-A 36"x 36"
W12-1-B 48"x 48"



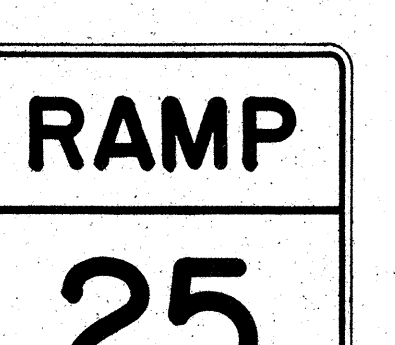
W12-2(12'-6") 36"x 36"
24"x 18"



W13-1(25) 18"x 18"
W13-1(25)-A 24"x 24"



W13-2(25) 48"x 60"



W13-3(25) 48"x 60"



W14-1 30"x 30"



W14-3 36"x 48" x 48"

GENERAL NOTES

- Sign details shall conform to the FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," 1971, and "Standard Highway Signs."
- All warning signs shall be reflectorized unless otherwise specified.
- All warning signs shall have 3/8" bolt holes drilled at appropriate locations.
- Numerals in () indicates numerals to be inserted for sign message. (R) or (L) indicates right or left.
- Signs prefixed with "CW" on the plans shall indicate orange and black construction signs.

APPROVAL RECOMMENDED:
E. Tanaka 3/17/72
TRAFFIC ENGINEER DATE

APPROVED:
W. Davis 3-20-72
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 102 Approved 12-30-69	H.T.	2/20/72

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
WARNING SIGNS

NOT TO SCALE
SHEET No. 16 OF 20 SHEETS DT 102

DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
No.	_____

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56A-01-74	1074	37	53



CW20-1a 48" x 48"



CW20-2d 48" x 48"



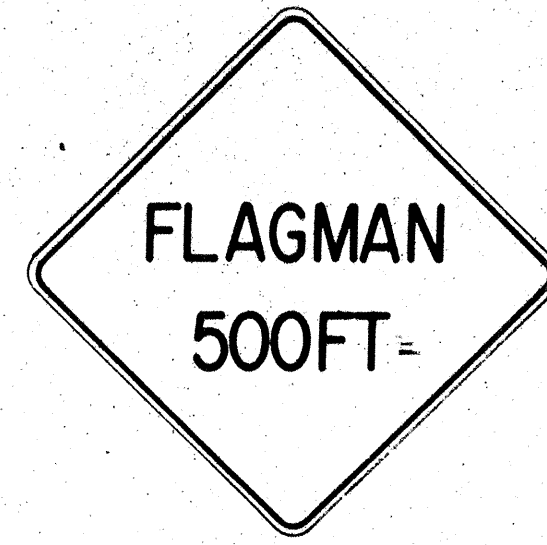
CW20-3b 48" x 48"



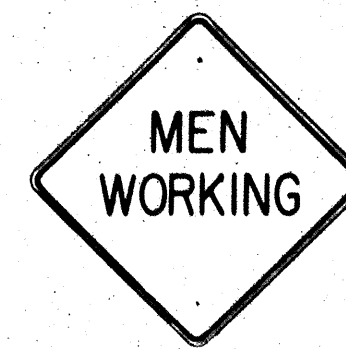
CW20-4d 48" x 48"



CW20-5d(L) 48" x 48"



CW20-7c 48" x 48"



CW21-1 30" x 30"



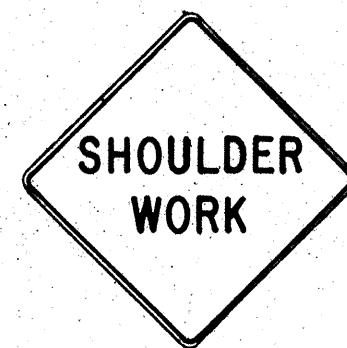
CW21-2 30" x 30"



CW21-3 36" x 36"



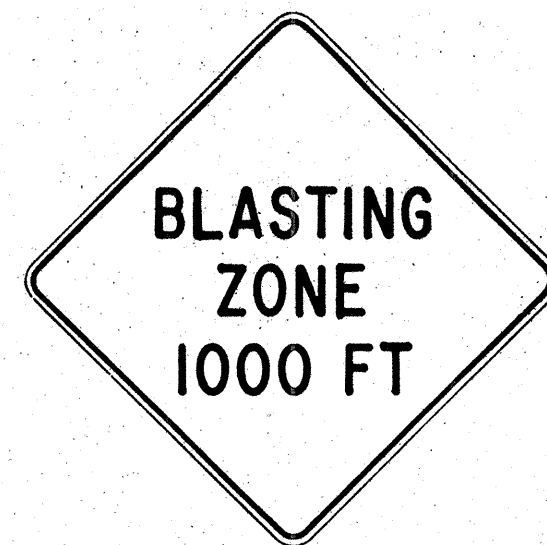
CW21-4 36" x 36"



CW21-5 30" x 30"



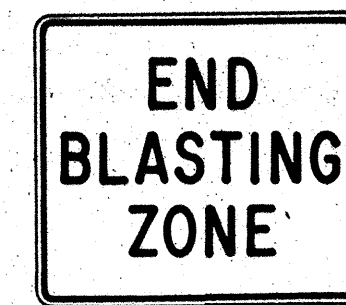
CW21-6 30" x 30"



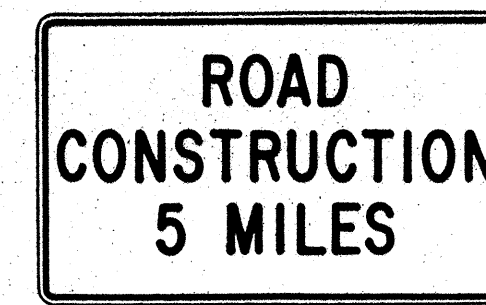
CW22-1b 48" x 48"



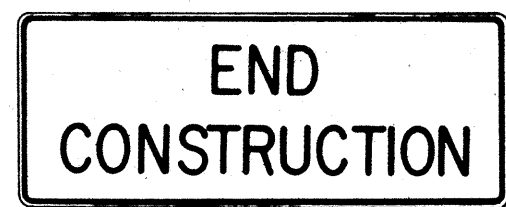
CW22-2 42" x 36"



CW22-3 42" x 36"



CG20-1(5) 60" x 36"



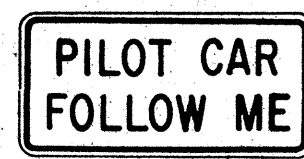
CG20-2 60" x 24"



CM4-9(R) 30" x 24"



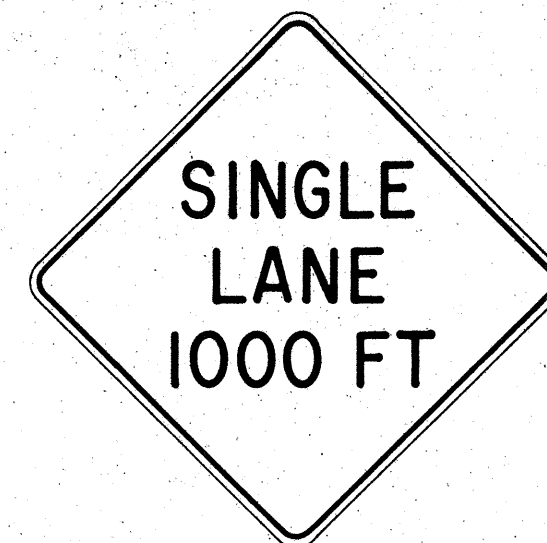
CM4-10(R) 48" x 18"



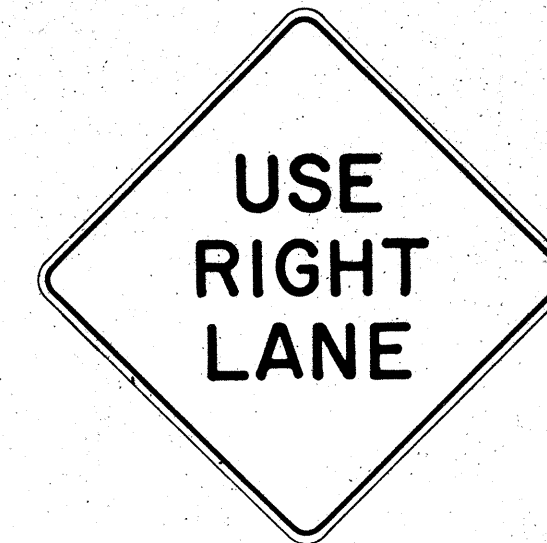
CG20-4 36" x 18"



CW23-1 36" x 36"



CW23-2b 48" x 48"



CW23-3(R) 48" x 48"

GENERAL NOTES

- Sign details shall conform to the FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," 1971, and "Standard Highway Signs."
- All construction signs shall be reflectorized unless otherwise specified.
- All construction signs shall have 3/8" bolt holes drilled at appropriate locations.
- Numerals in () indicates numerals to be inserted for sign message. (R) or (L) indicates right or left.
- For "CW" series signs, suffixes a,b,c and d are as follows:
a-1500 FT, b-1000 FT,
c-500 FT and d-AHEAD.

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 104 Approved 12-30-69	H.T.	3/23/72

APPROVAL RECOMMENDED:

Erich Tanaka
TRAFFIC ENGINEER

3/21/72
DATE

APPROVED:

Shirley Salsich
ASSISTANT CHIEF, ENGINEERING

3/23/72
DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
CONSTRUCTION SIGNS

NOT TO SCALE

SHEET No. 17 OF 20 SHEETS DT 104

ORIGINAL PLAN	DESIGNED BY	CHECKED BY	DATE
NOTE BOOK	QUANTITIES BY		
No.			

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56A-01-74	1974	38	53

GENERAL NOTES

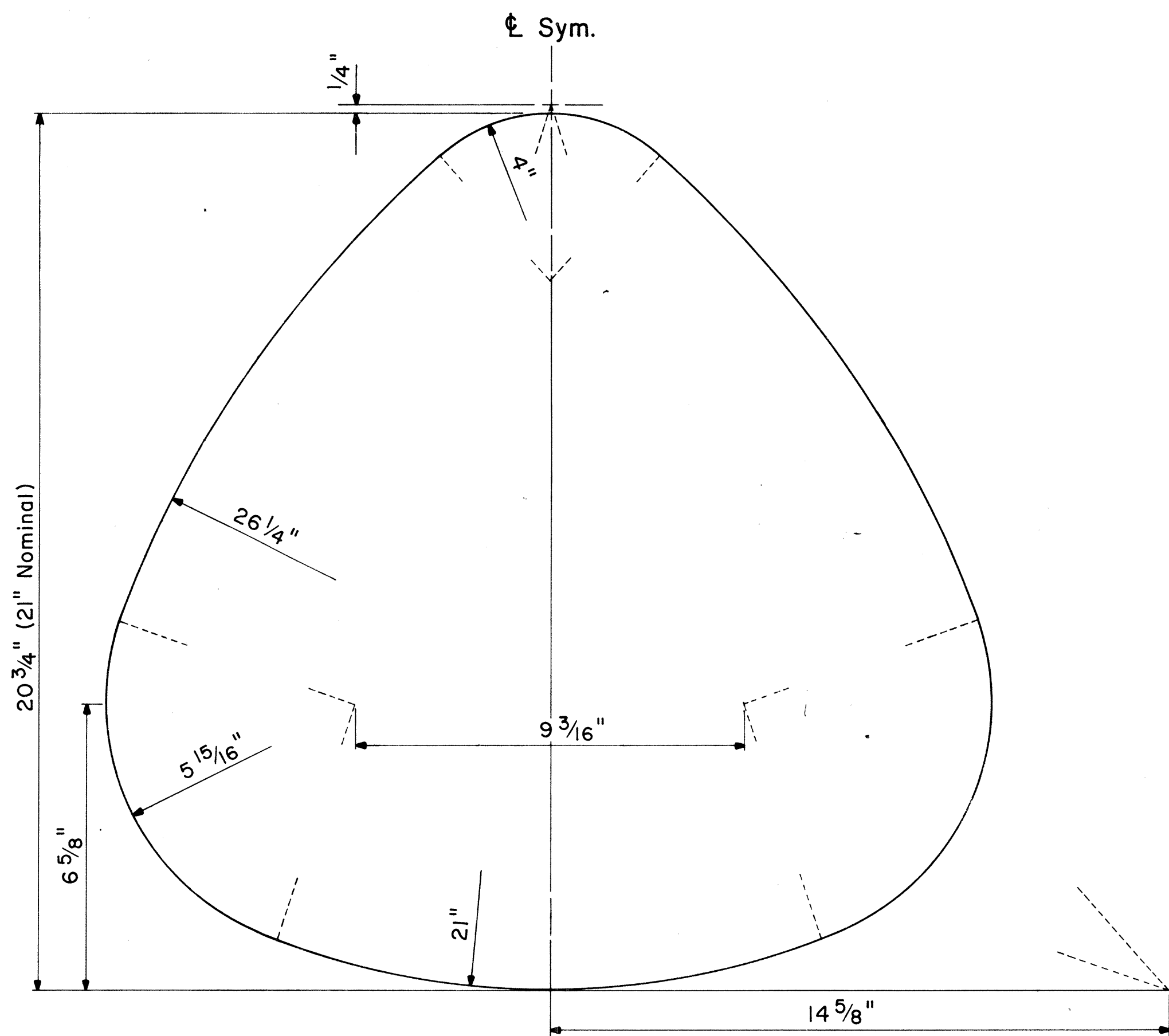
- Marker details shall conform to the FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," 1971, "Standard Alphabets for Highway Signs," 1966 and "Standard Highway Signs."
- All markers shall be reflectorized unless otherwise specified.
- All markers shall have $\frac{3}{8}$ " bolt holes drilled at appropriate locations.
- Numerals in () indicates numerals to be inserted for marker message. (R) or (L) indicates right or left.
- Sign message of Cardinal Direction Marker (M3 series) shall be denoted by the following:

M3-1 : NORTH

M3-2 : EAST

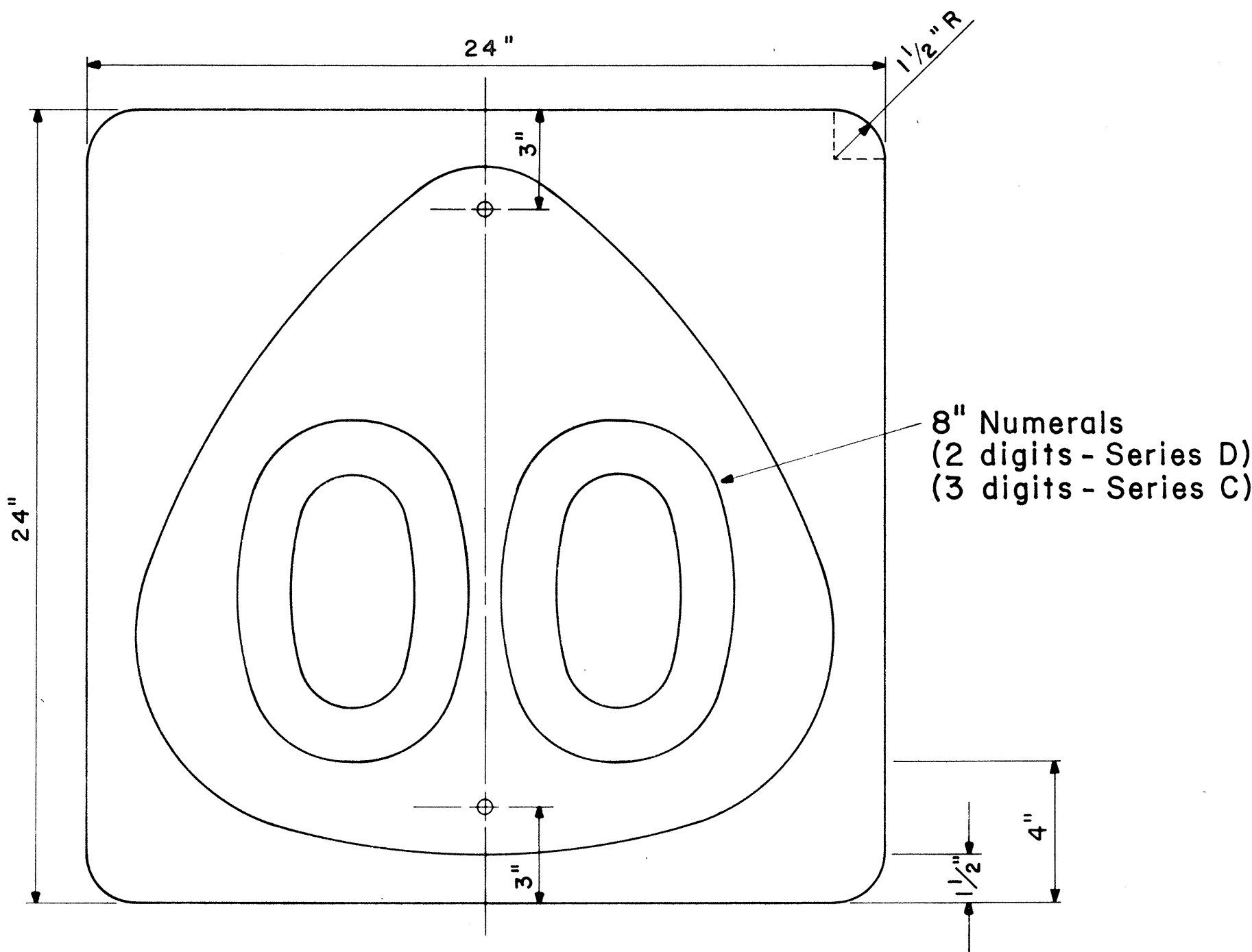
M3-3 : SOUTH

M3-4 : WEST
- Markers prefixed with "IM" on the plans shall have a white legend on a blue background.



STATE ROUTE MARKER DETAIL

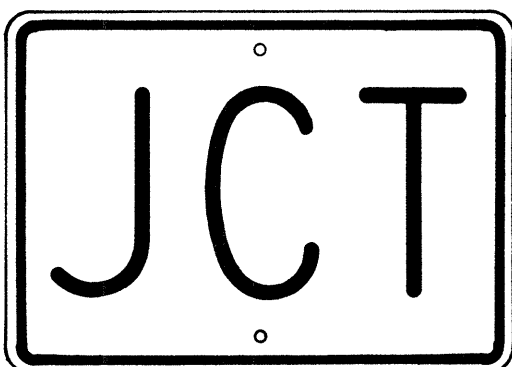
Not to Scale



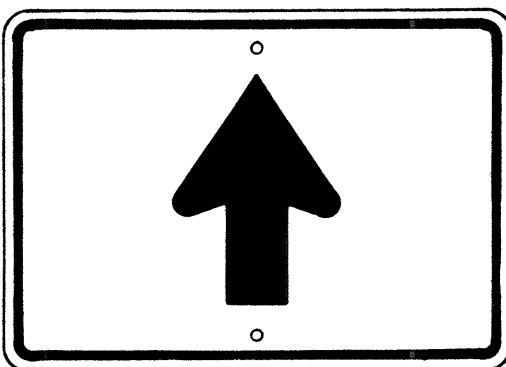
STATE ROUTE MARKER

MI-6 (00) 24" x 24"

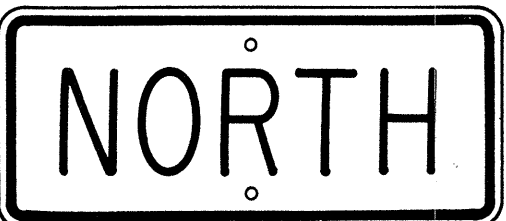
Scale: $\frac{1}{4}$ " = 1"



M2-1 21" x 15"



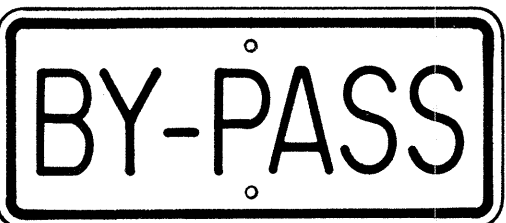
M6-3 21" x 15"



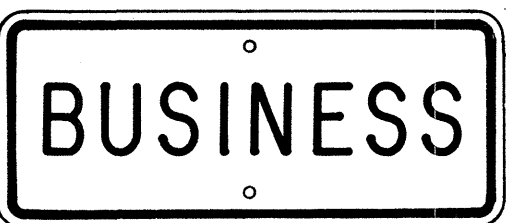
M3-1 24" x 12"
M3-1-A 36" x 18"



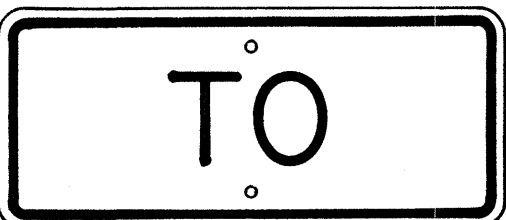
M4-1 24" x 12"



M4-2 24" x 12"



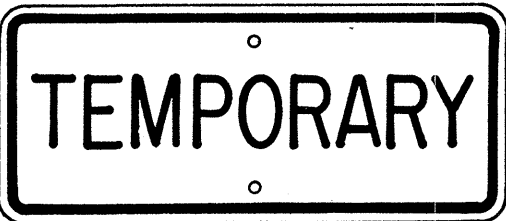
M4-3 24" x 12"



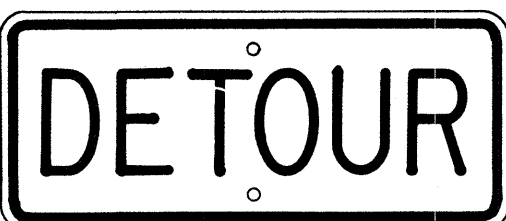
M4-5 24" x 12"



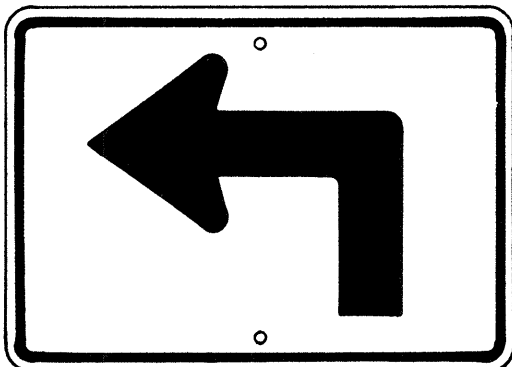
M4-6 24" x 12"



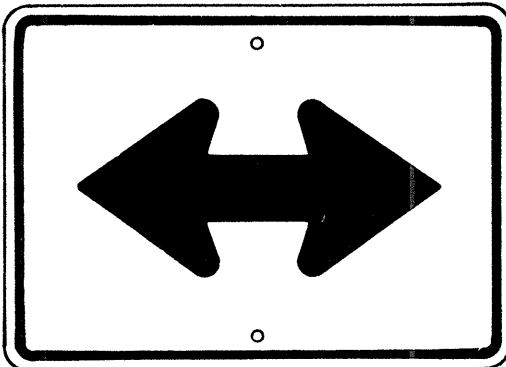
M4-7 24" x 12"



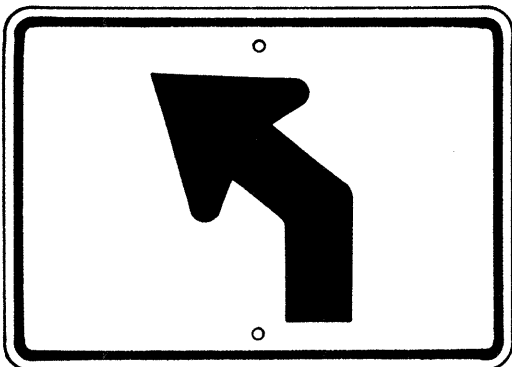
M4-8 24" x 12"



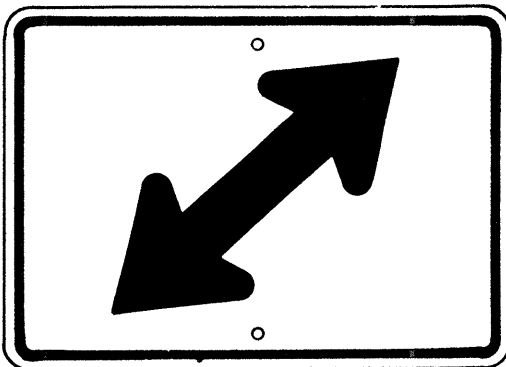
M5-1(L) 21" x 15"



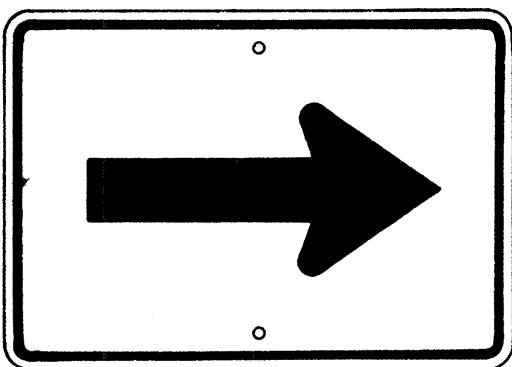
M6-4 21" x 15"



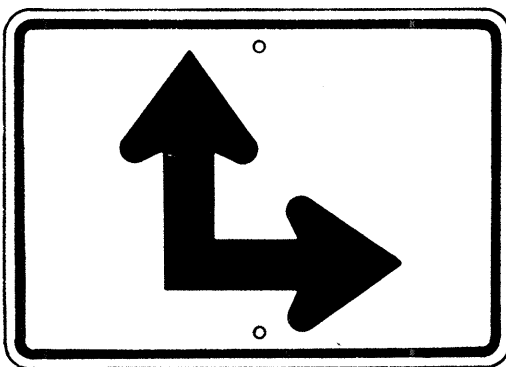
M5-2(L) 21" x 15"



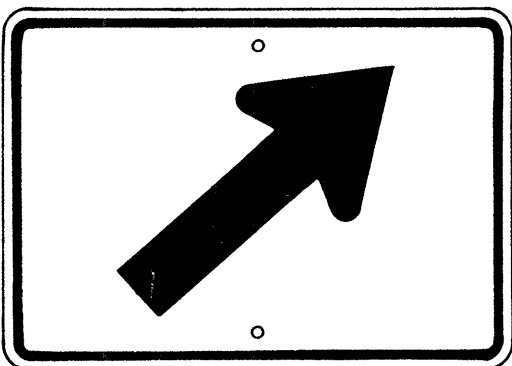
M6-5(R) 21" x 15"



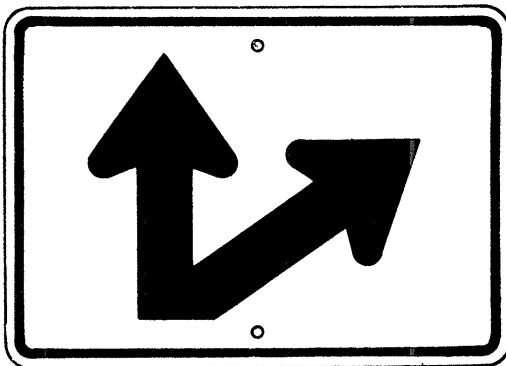
M6-1 21" x 15"



M6-6(R) 21" x 15"



M6-2(R) 21" x 15"



M6-7(R) 21" x 15"

AUXILIARY MARKERS

Not to Scale

APPROVAL RECOMMENDED:

Erich Tanaka 6/6/72
TRAFFIC ENGINEER DATE

APPROVED:

Robert S. DeFina 6-1-72
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 105 Approved 12-30-69	H.C.	6/1/72

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

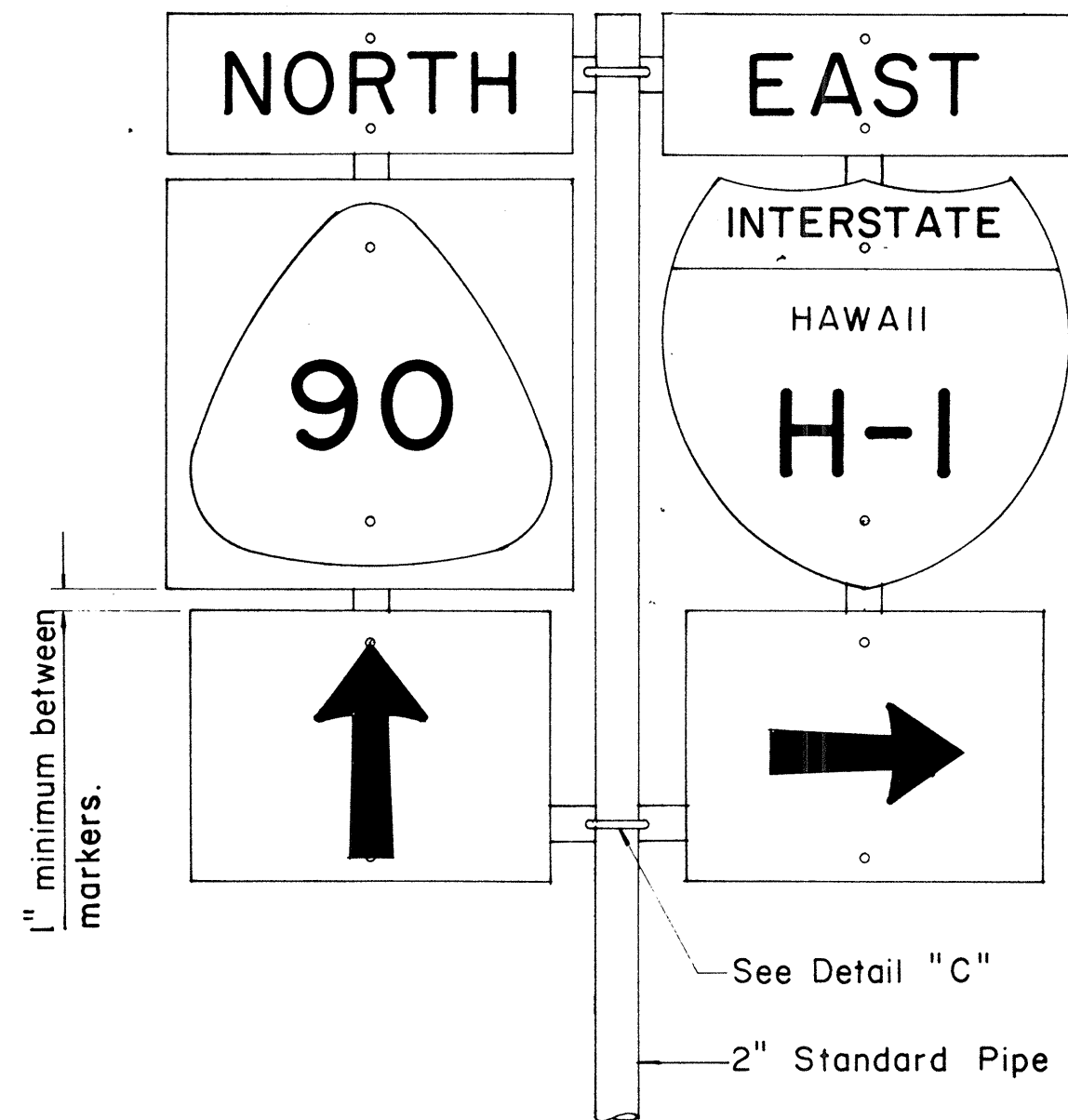
STANDARD DETAILS
STATE ROUTE MARKER
AND AUXILIARY MARKERS

Scale: As Shown

SHEET NO 18 OF 20 SHEETS DT 105

ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	
No.	

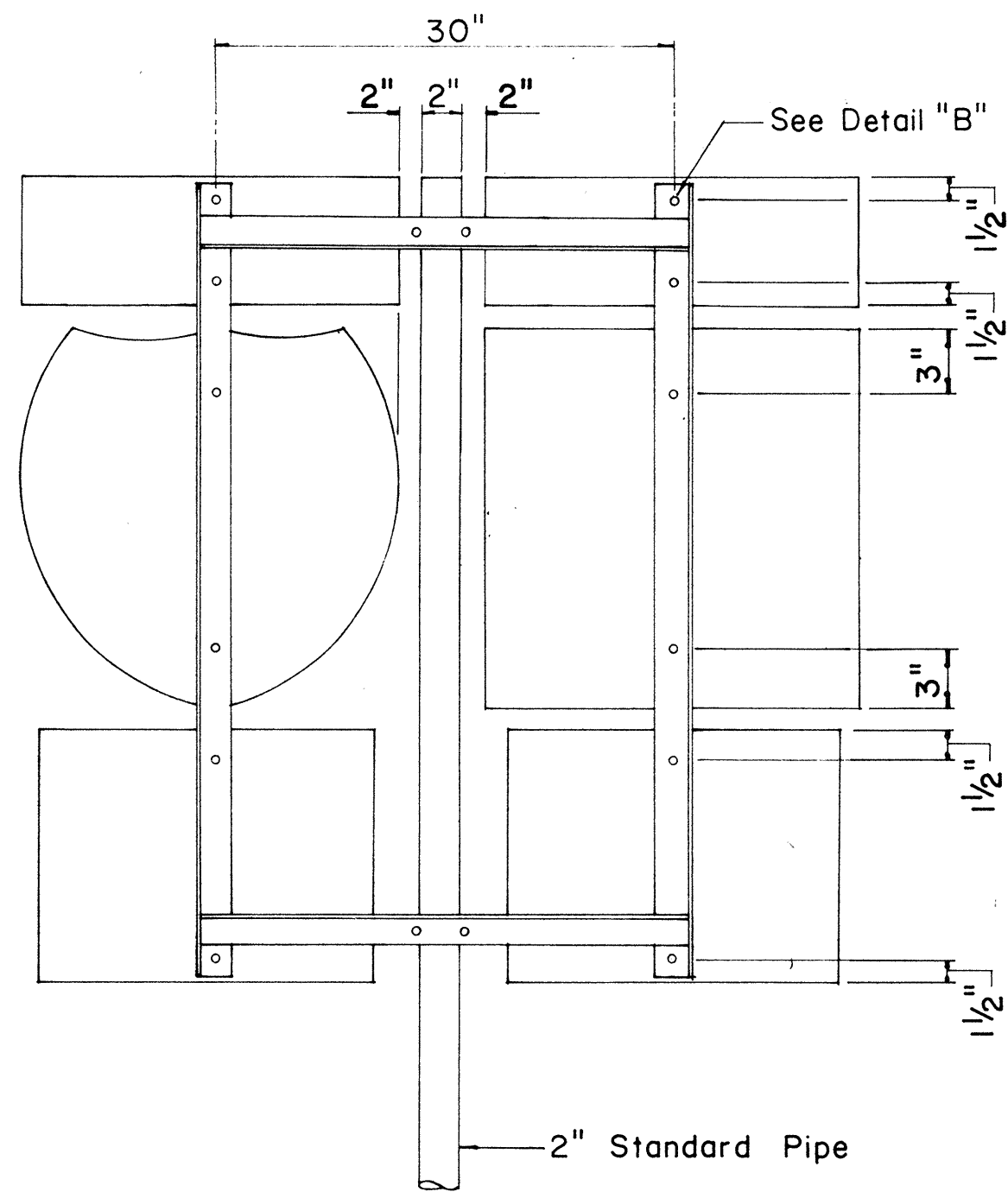
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56A-01-74	1974	39	53



FRONT ELEVATION

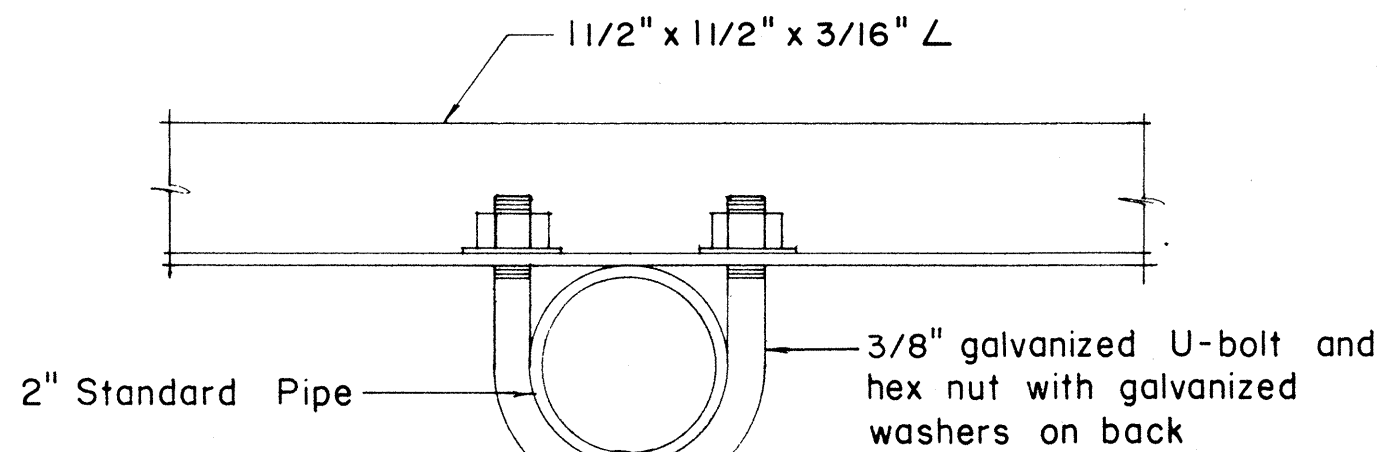
TYPE "B" ASSEMBLY

Not to Scale

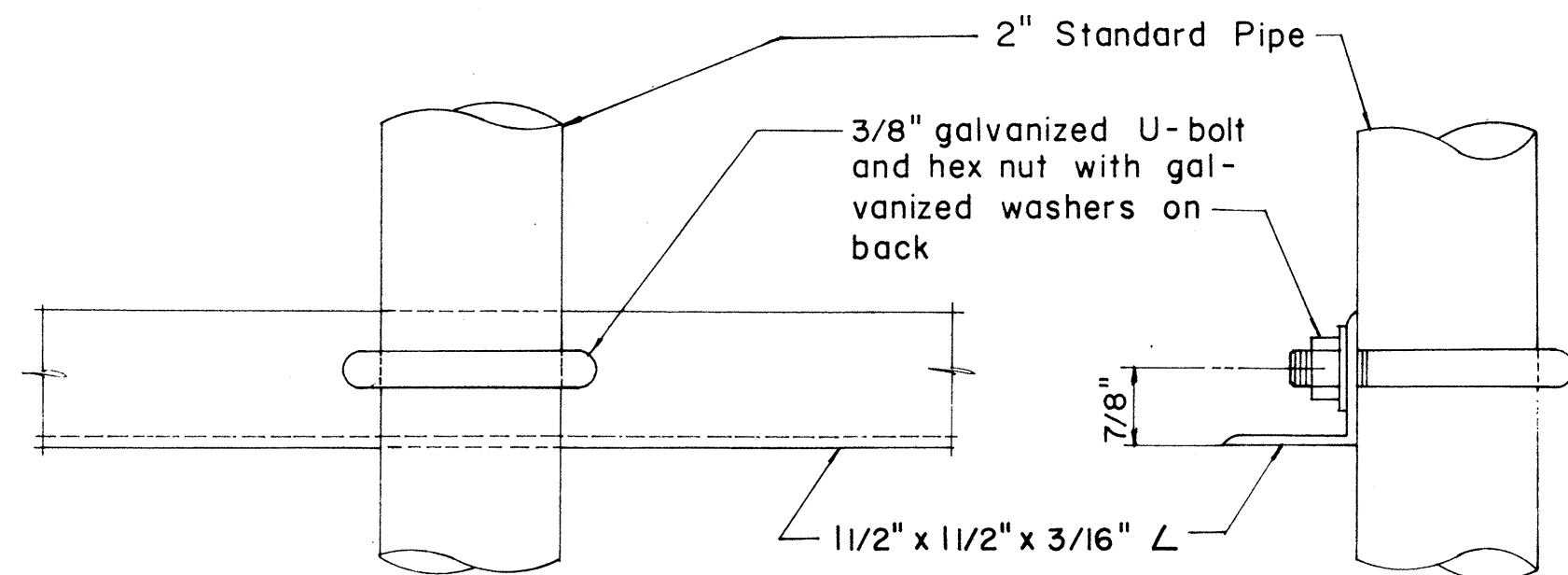


REAR ELEVATION

- NOTE:
- Minimum clearance between markers shall be one inch. (Larger clearances shall be in multiples of one inch.)
 - Pipe post for Type "A" & Type "B" Assembly shall be 2" Standard Pipe.



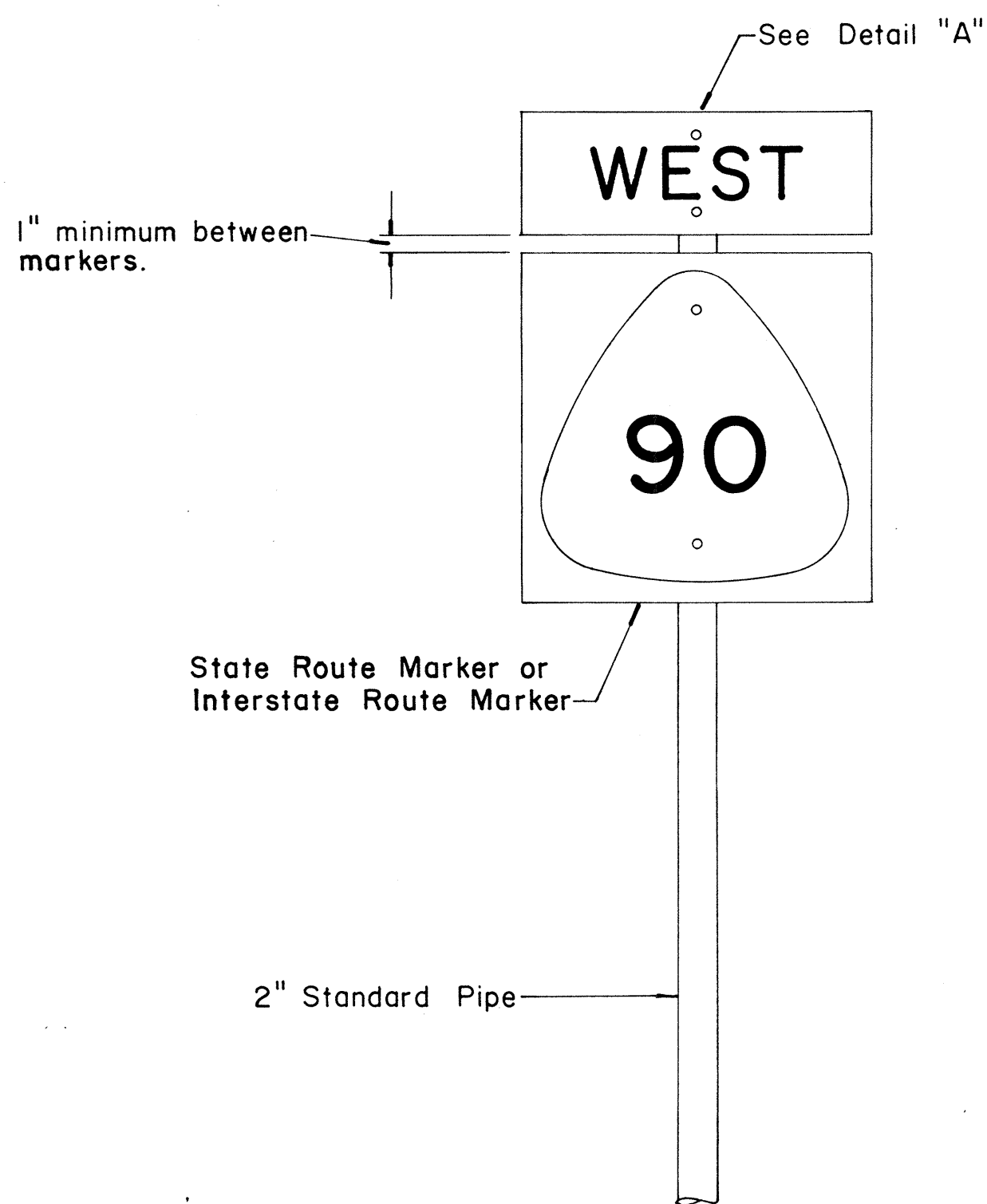
PLAN



FRONT ELEVATION

SIDE ELEVATION

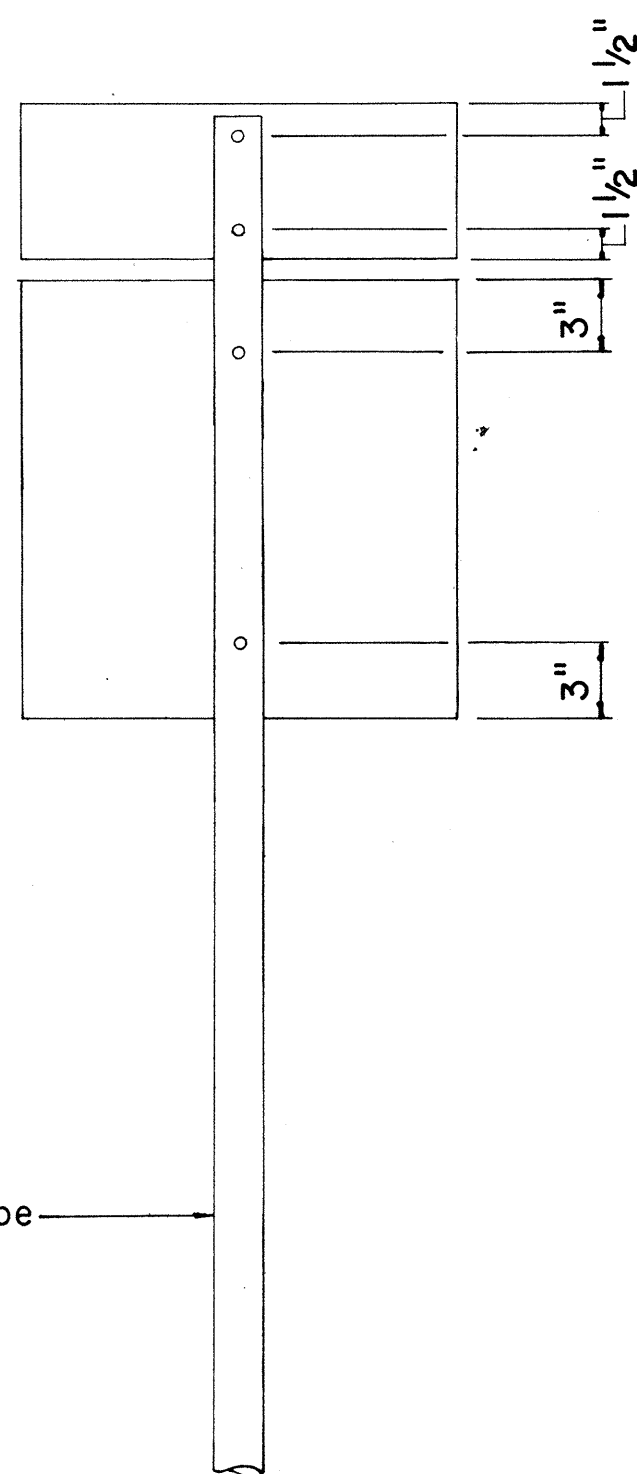
DETAIL "C"



FRONT ELEVATION

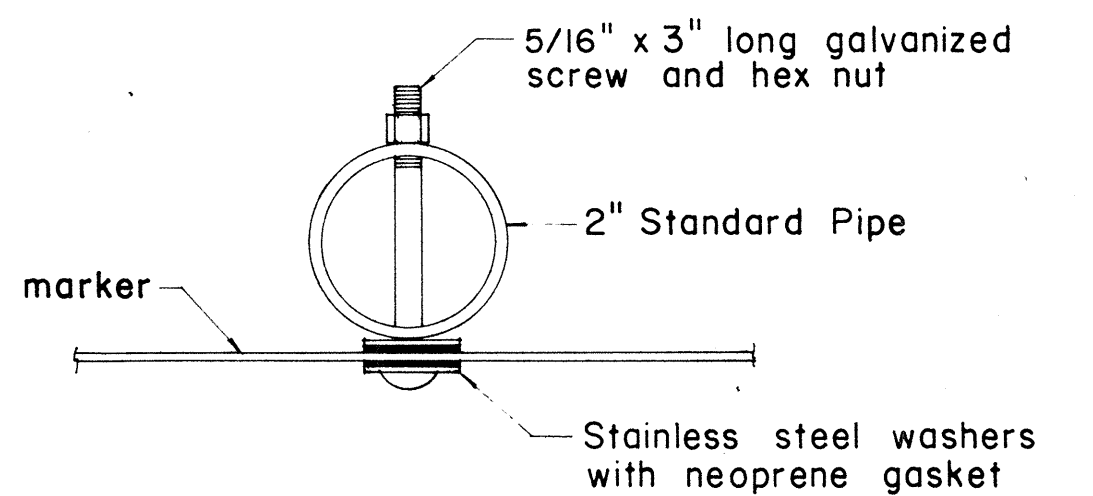
TYPE "A" ASSEMBLY

Not to Scale

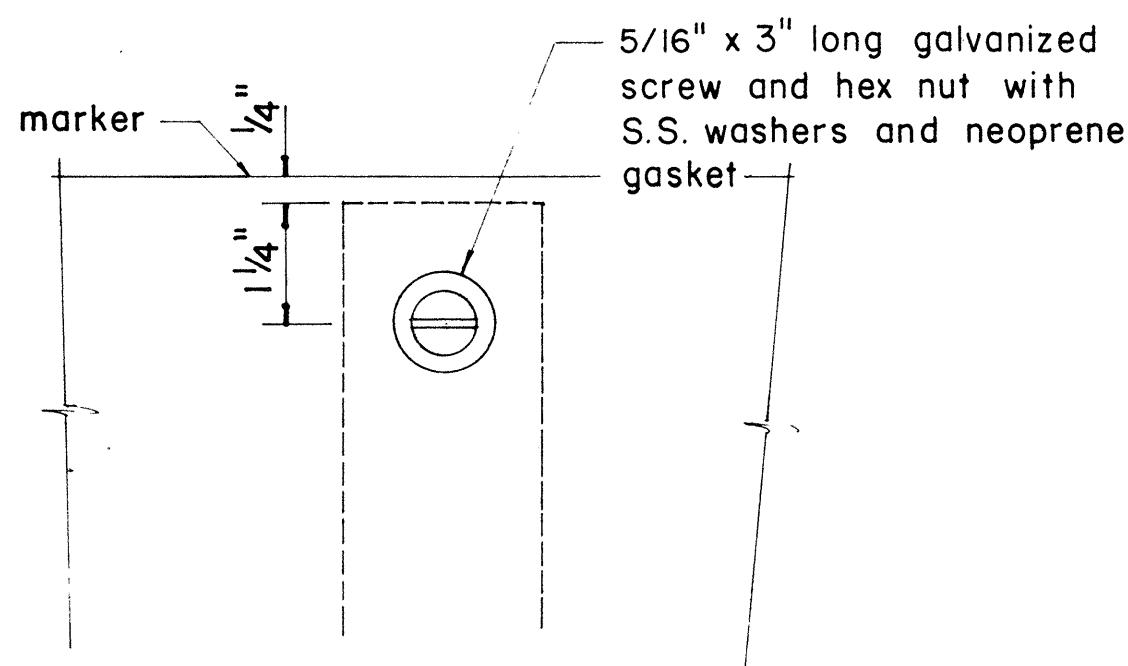


REAR ELEVATION

- NOTE:
- For height and lateral location of Route Marker Assembly, see plan sheet DT 100.

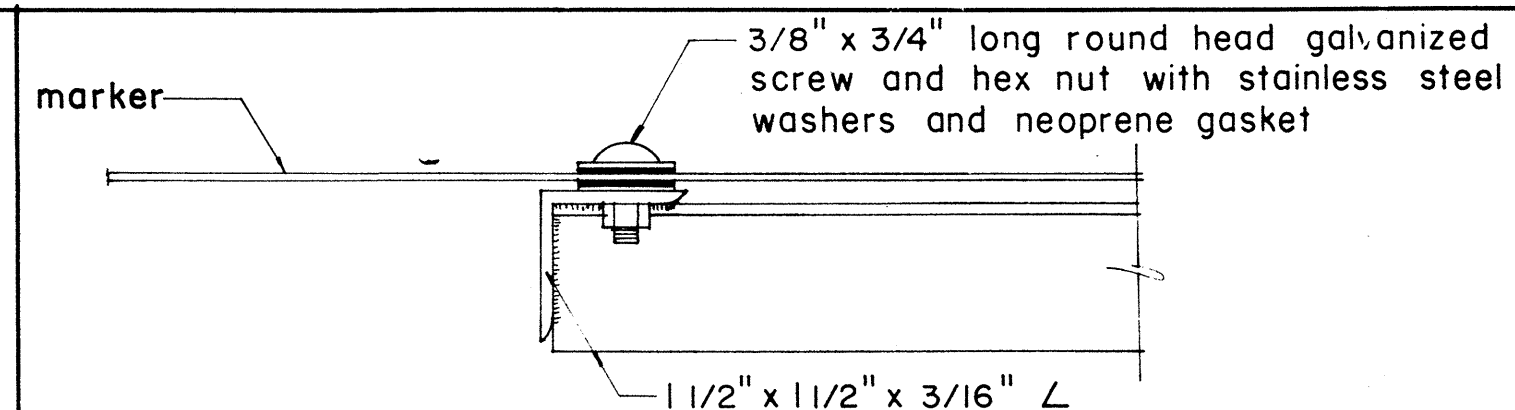


PLAN

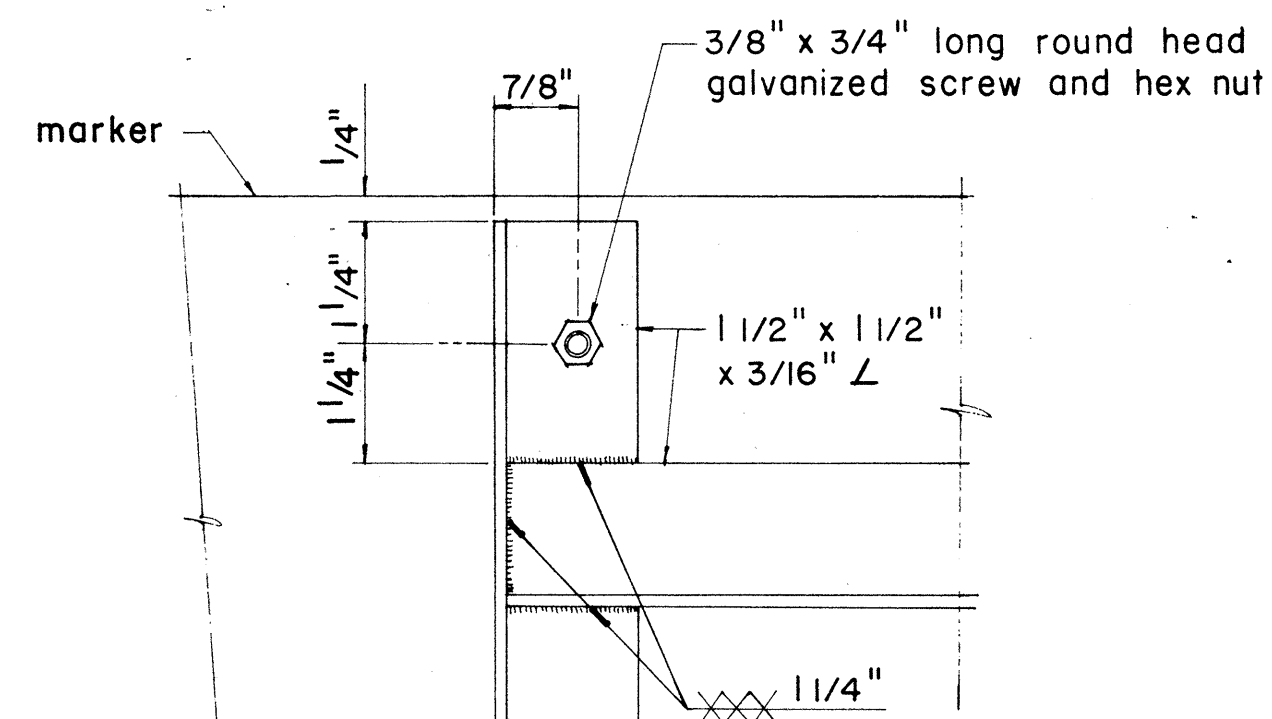


FRONT ELEVATION

DETAIL "A"

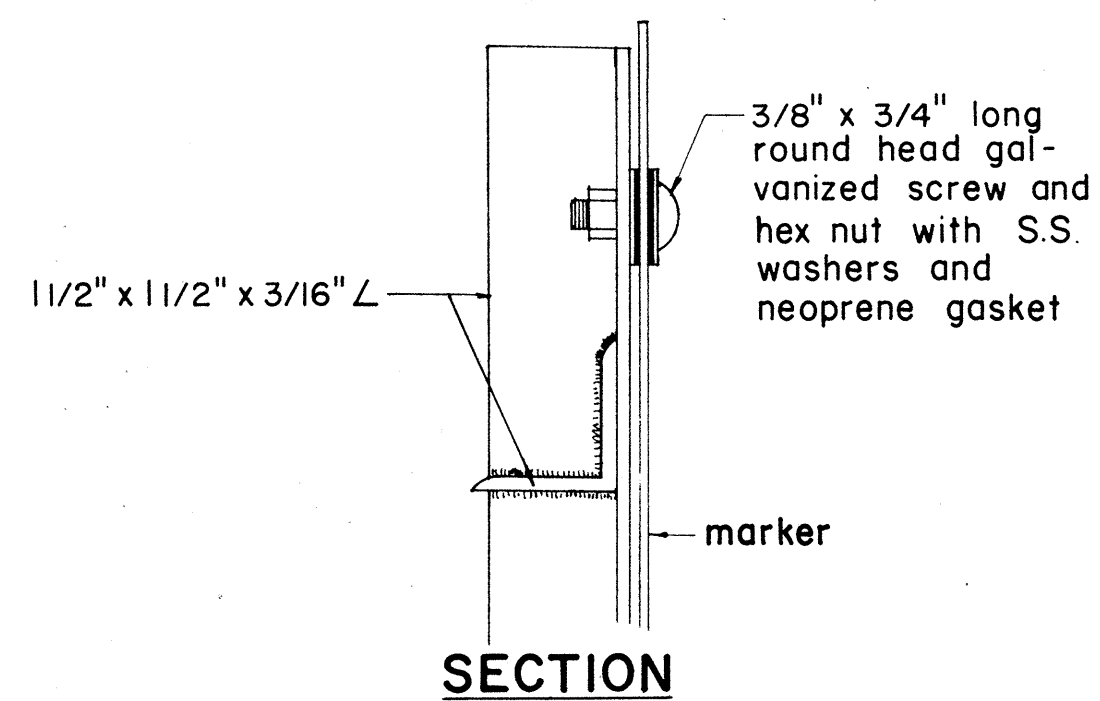


PLAN



ELEVATION

DETAIL "B"



SECTION

APPROVAL RECOMMENDED:
Enoch Tanaka
 TRAFFIC ENGINEER
 12/29/69
 DATE

APPROVED:
John J. Doherty
 ASSISTANT CHIEF, ENGINEERING
 12-30-69
 DATE

NO.	REVISION	APPROVED BY	DATE
1	Revisions to Route Marker Assemblies.	HT	6/1/72

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

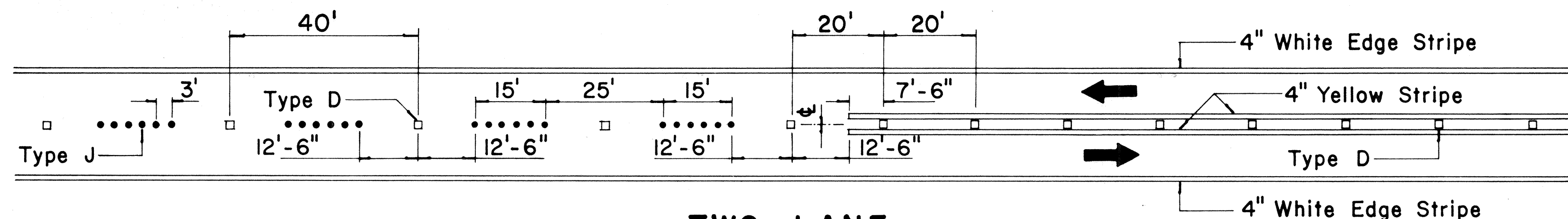
STANDARD DETAILS
 ROUTE MARKER ASSEMBLIES

Scale: As Shown

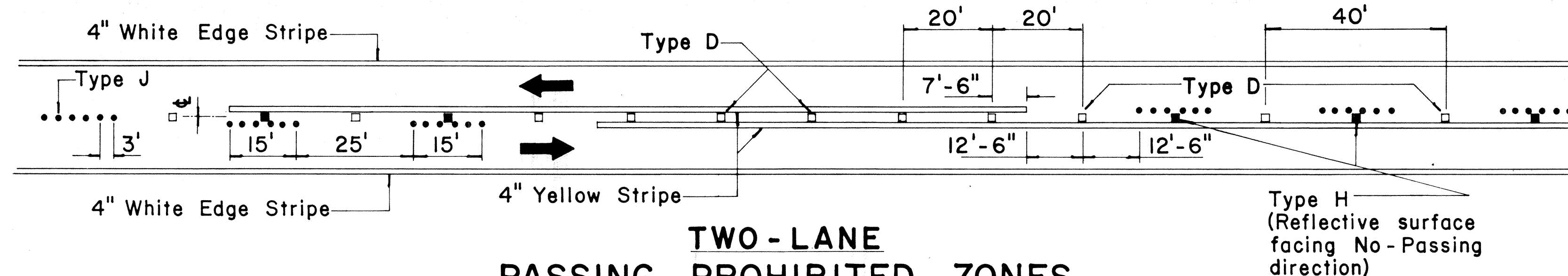
SHEET No. 19 OF 20 SHEETS DT 107

ORIGINAL PLAN	DATE
DESIGNED BY	
NOTED BY	
QUANTITIES BY	
CHECKED BY	

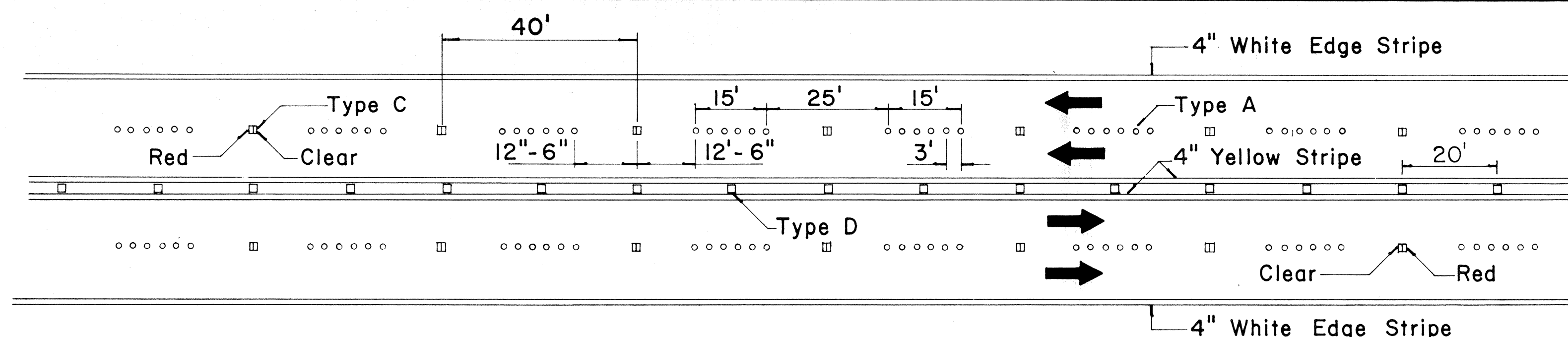
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56A-0174	1974	40	53



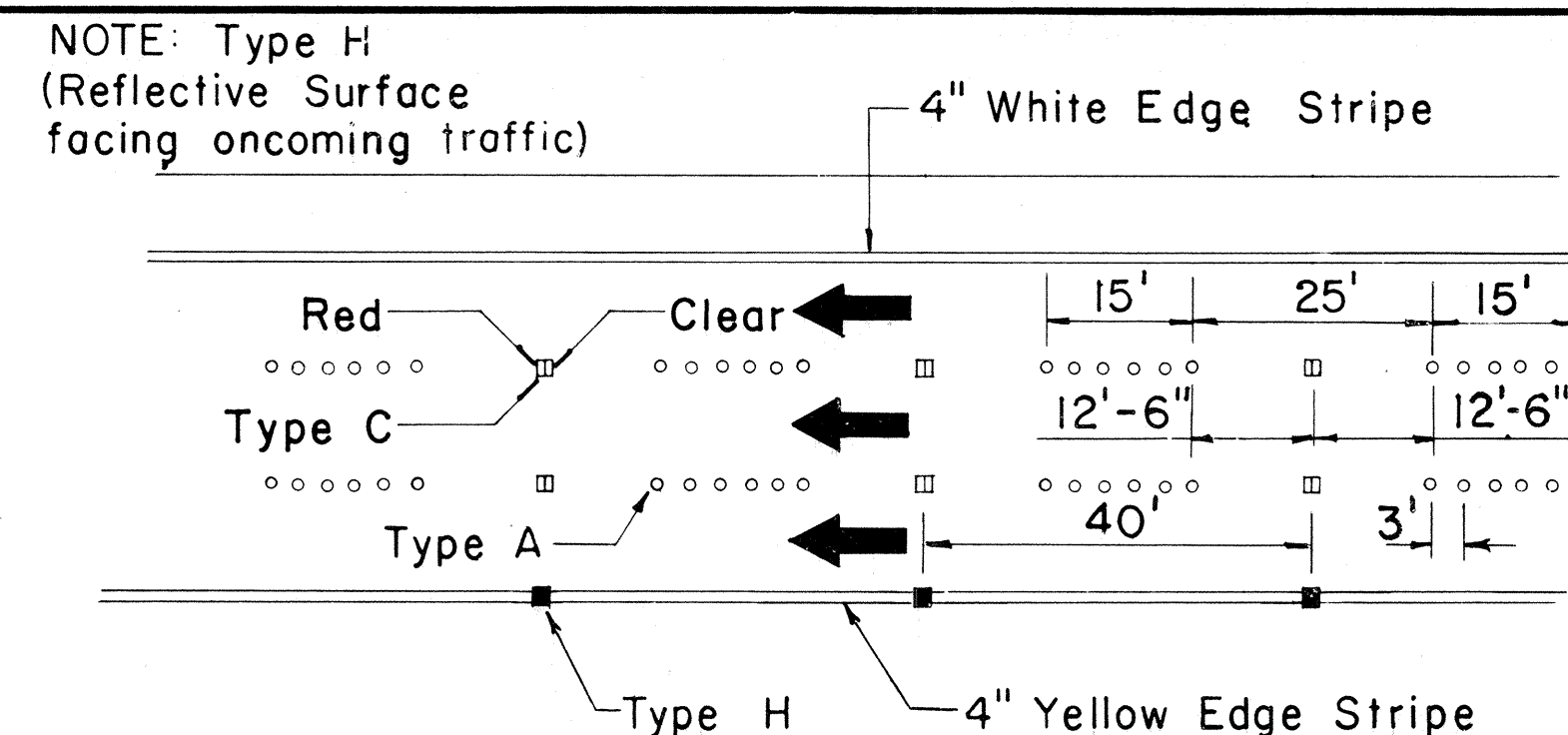
**TWO - LANE
PASSING PERMITTED AND PASSING PROHIBITED**



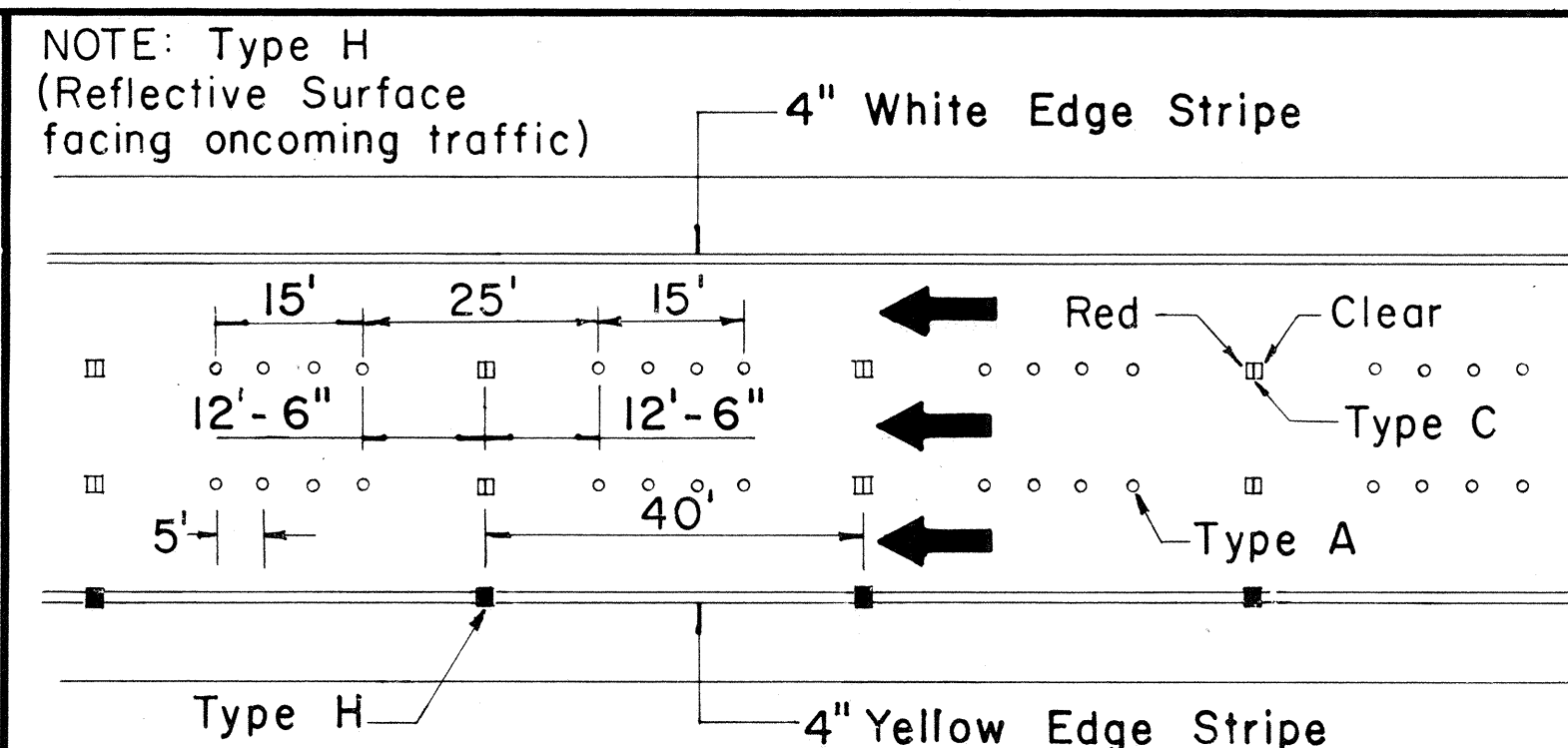
**TWO - LANE
PASSING PROHIBITED ZONES**



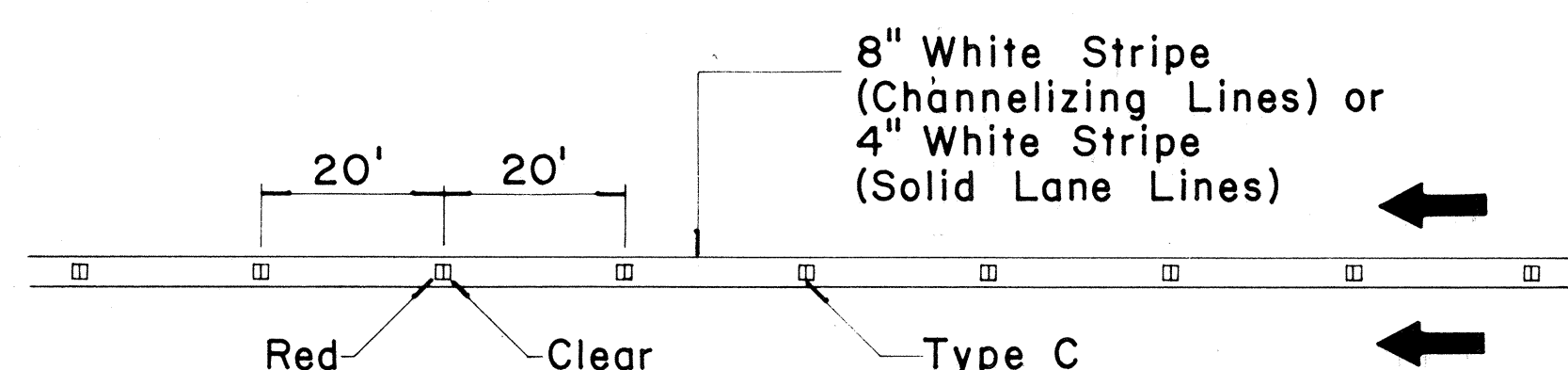
**MULTI - LANE
LANE LINES AND CENTER LINE**



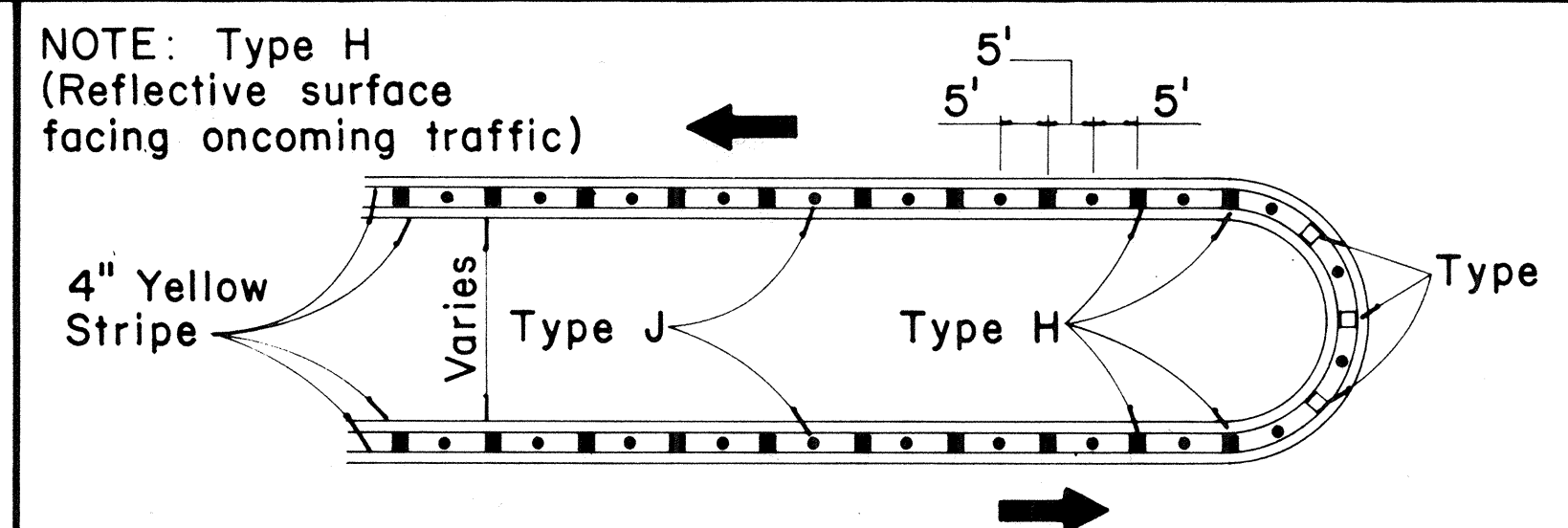
DIVIDED HIGHWAY LANE LINES



FREEWAY LANE LINES



**CHANNELIZING LINES
OR SOLID LANE LINES**



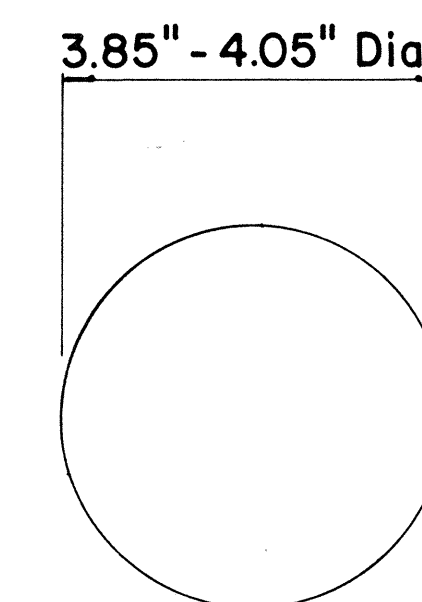
MEDIAN NOSE DELINEATION

TWO - LANE

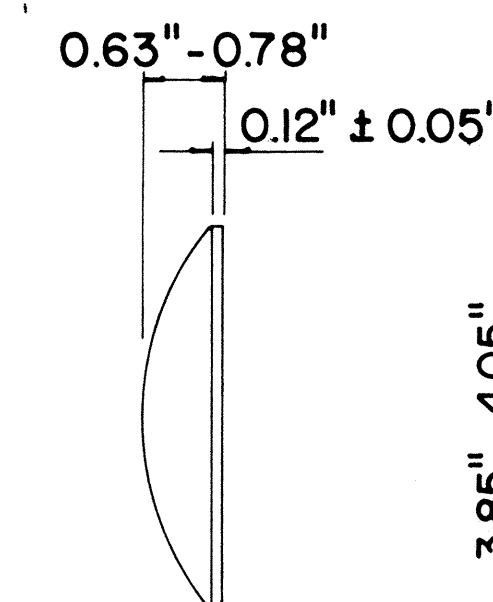
MULTI - LANE

**DIVIDED HIGHWAY
AND
FREEWAY**

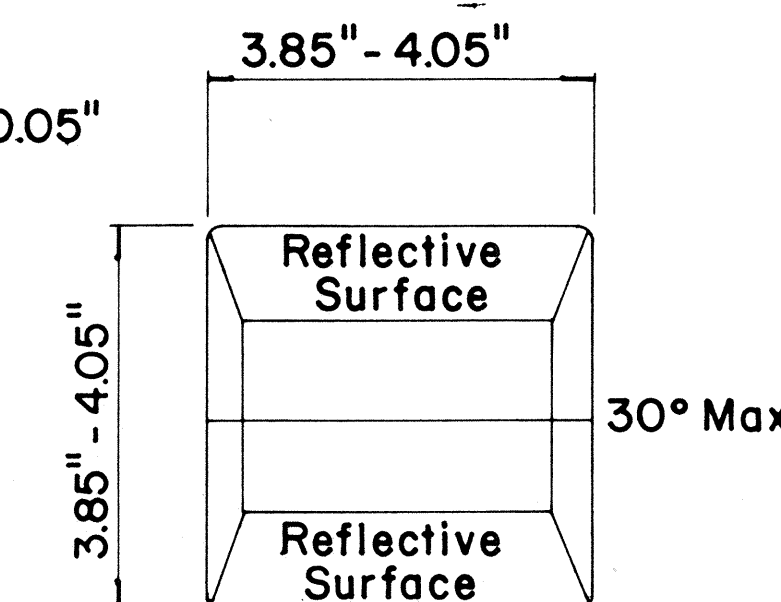
MISCELLANEOUS



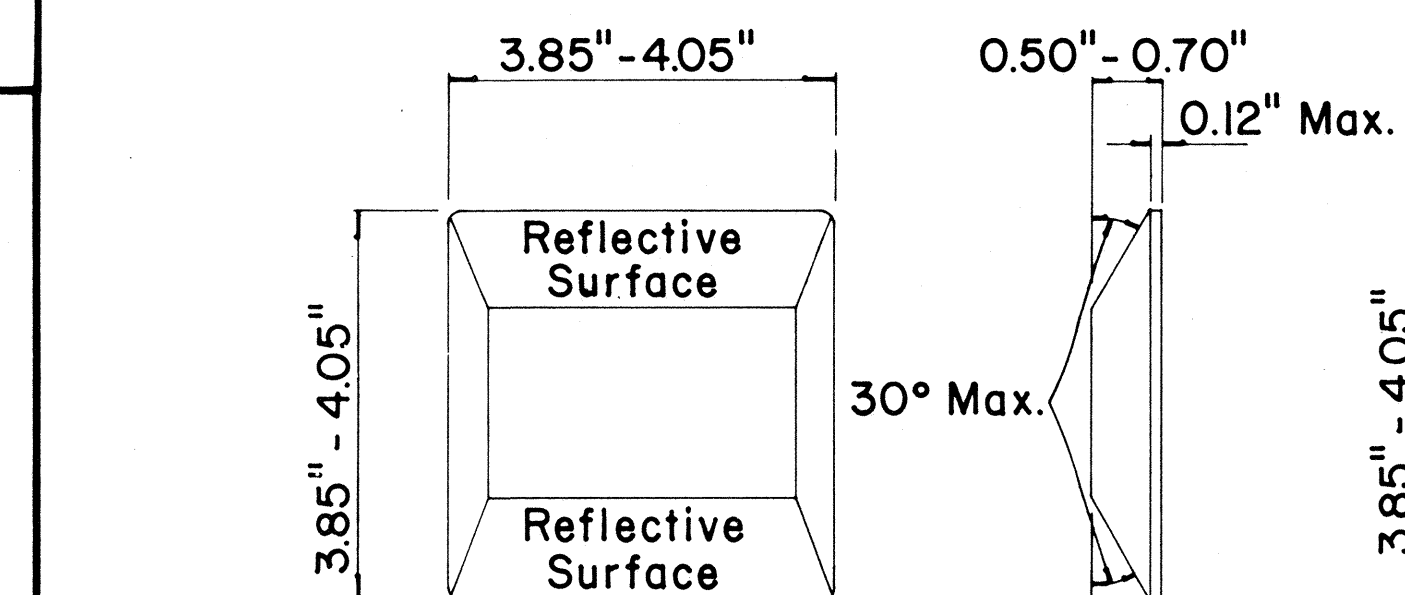
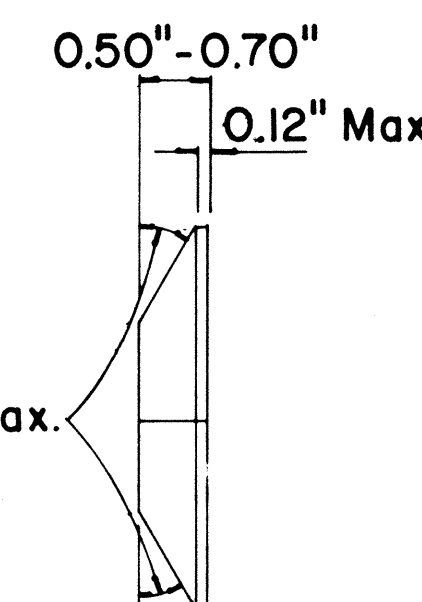
**TYPE A
NON - REFLECTIVE WHITE MARKER**



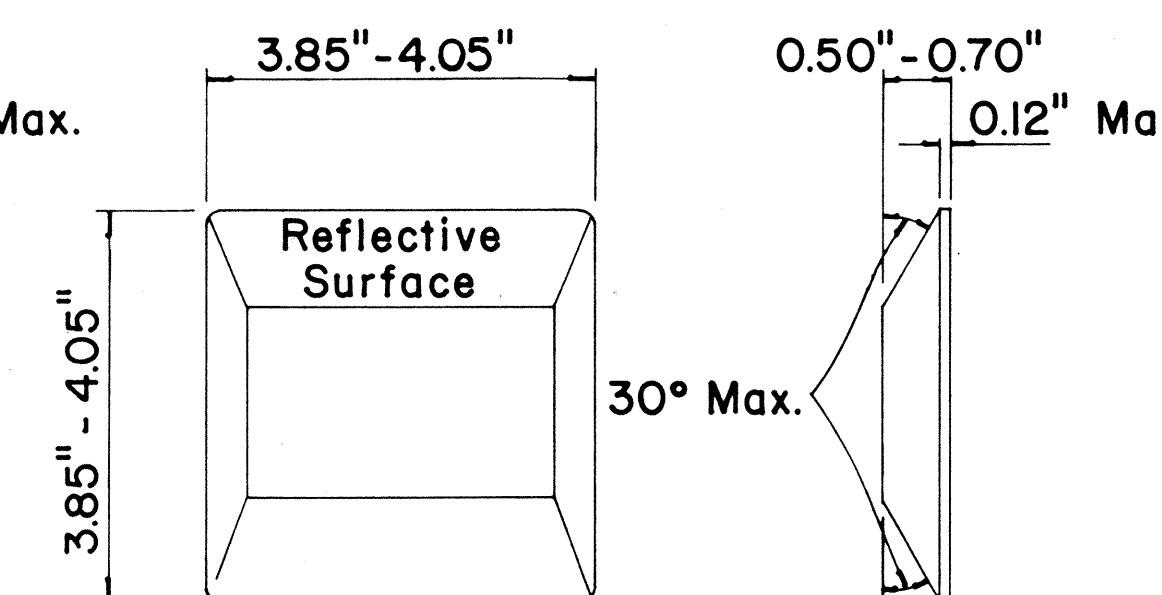
**TYPE J
NON - REFLECTIVE YELLOW MARKER**



**TYPE C
RED - CLEAR REFLECTIVE MARKER**



**TYPE D
TWO - WAY YELLOW REFLECTIVE MARKER**



**TYPE H
ONE - WAY YELLOW REFLECTIVE MARKER**

GENERAL NOTES

1. Painted stripes to be done by Contractor unless otherwise specified.

LEGEND

- Type A
- Type C
- Type D
- Type H
- Type J

APPROVAL RECOMMENDED:

E. I. Tanaka
TRAFFIC ENGINEER

11/18/71
DATE

APPROVED:

Shirley S. Sato
ASSISTANT CHIEF, ENGINEERING

11/18/71
DATE

No.	REVISION	APPROVED BY	DATE
1	Add reflector marker in each line gap.	H.C.	10-21-72
2	Revised General Notes.	H.C.	10-21-72
3	Change 4" white edge stripe to 4" solid yellow edge stripe to left edge of a travel path and Add Type H Reflector Marker	H.C.	5-22-74

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**STANDARD DETAILS
RAISED PAVEMENT MARKERS**

Not to Scale
October 1971
SHEET No. 20 OF 20 SHEETS DT 300

DATE	
DESIGNED BY	
TRACED BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	