

Diagram illustrating a cross-section of a manhole structure. The structure consists of a concrete wall (Class D Concrete) and a concrete floor (10" Dia.). A steel plunger bar (1/2" Ø Steel Plunger Bar, 39" long) is shown extending from the top of the wall down to the floor. The plunger bar is secured by a nut and washer at the top. The concrete wall has a thickness of 6". The concrete floor has a thickness of 12". The total height of the concrete structure is 12" o.c. (on center). The concrete floor is labeled "Fin. Grade". The concrete wall is labeled "Imbed 3/4" I.D. Galv. Pipe".

9" Min.
22" Max.

8'-0"

4'-6"

3'-6"

10'-0"

10'-0"

660' Max.

8'-0"

Brace

Class D Conc. Footing

Neat Excavation

18" sq. or 20" dia.

Minimum

12" (14" Max.)

Anchor Plate

Min. Wt. 0.67 lbs.

6 Ga. G.S. Wire

@ 10" O.C.

2'-6"

4'-6"

7'-0"

2"

10"

10"

10"

10"

Technical drawing of a roof structure showing a cross-section. The drawing includes the following dimensions and labels:

- Roof slope: 8'-0"
- Roof slope: 8'-0"
- Roof slope: 12" Min.
- Brace
- Ground Line
- Class D Conc. Footing
- Neat Excavation
- 18" sq. or 20" dia. Minimum
- 2"
- 3'-6"
- 4'-6"
- 4" Min.
- 2" Min.
- 9" Min. 22" Max.

Technical drawing of a mechanical part showing a cross-section and a side view. The cross-section is a circle with a central hole. Dimensions include a $\frac{1}{2}$ inch outer radius, a $\frac{3}{8}$ inch hole diameter, and a $\frac{1}{4}$ inch wall thickness. A note indicates the hole is drilled.

1 5/8" O.D. Pipe
2.27 #/ft.

1/8"

1/2" ϕ

3/8" ϕ

1 3/8"

Top Strand of Fence

3/8"

5/8"

7/8" 7/8"

1/2" ϕ Bolt, USS Thread,
2" long, Hex. Head w/ Nut

DETAIL

1. Gate Hinge Blades and Plunger bar guides shall be chamfered $\frac{1}{32}$ " all around and as required to prevent conflict between moving parts.
2. All parts of Gates shall be galvanized after fabrication.
3. All holes shall be reamed as necessary to admit hinge bolts or plunger bars.
4. Gate panels shall be strung with 7 ga. smooth fence wire spaced to conform to spacing of adjacent fence strands.
5. One plunger bar required per set of double-hung gates. None required for single-hung gate.

Drill $\frac{17}{32}$ " ϕ for $\frac{1}{2}$ " ϕ Bolt

$\frac{1}{4}$

$\frac{5}{8}$ " R

$\frac{1}{4}$

$\frac{5}{8}$ "

TUBULAR

CHANNEL

TEE

U - BAR

Y - BAR

NO.	REVISION	APPROVED BY	DATE

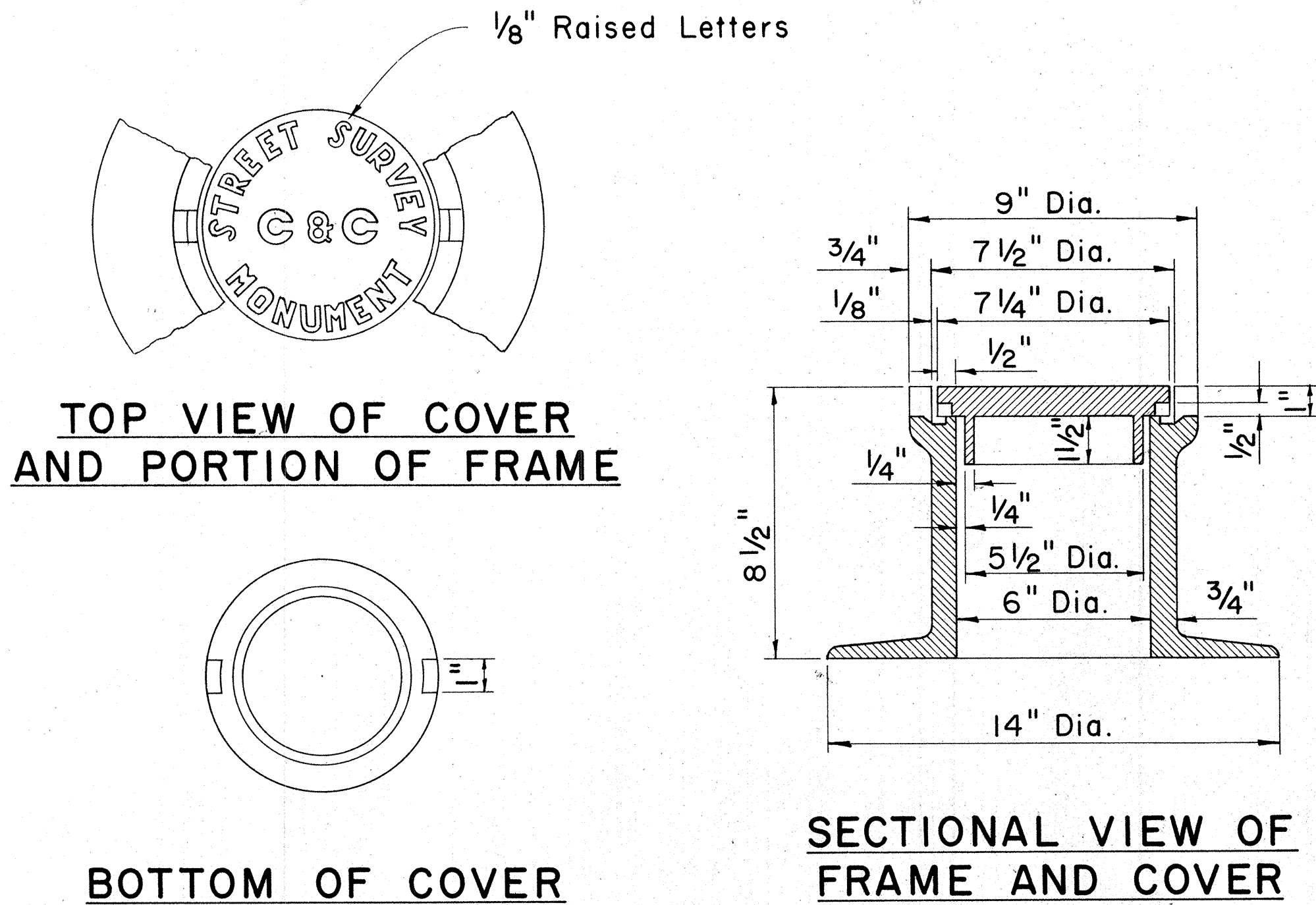
STANDARD DETAILS

WIRE FENCE WITH METAL POSTS

Scale: As Noted

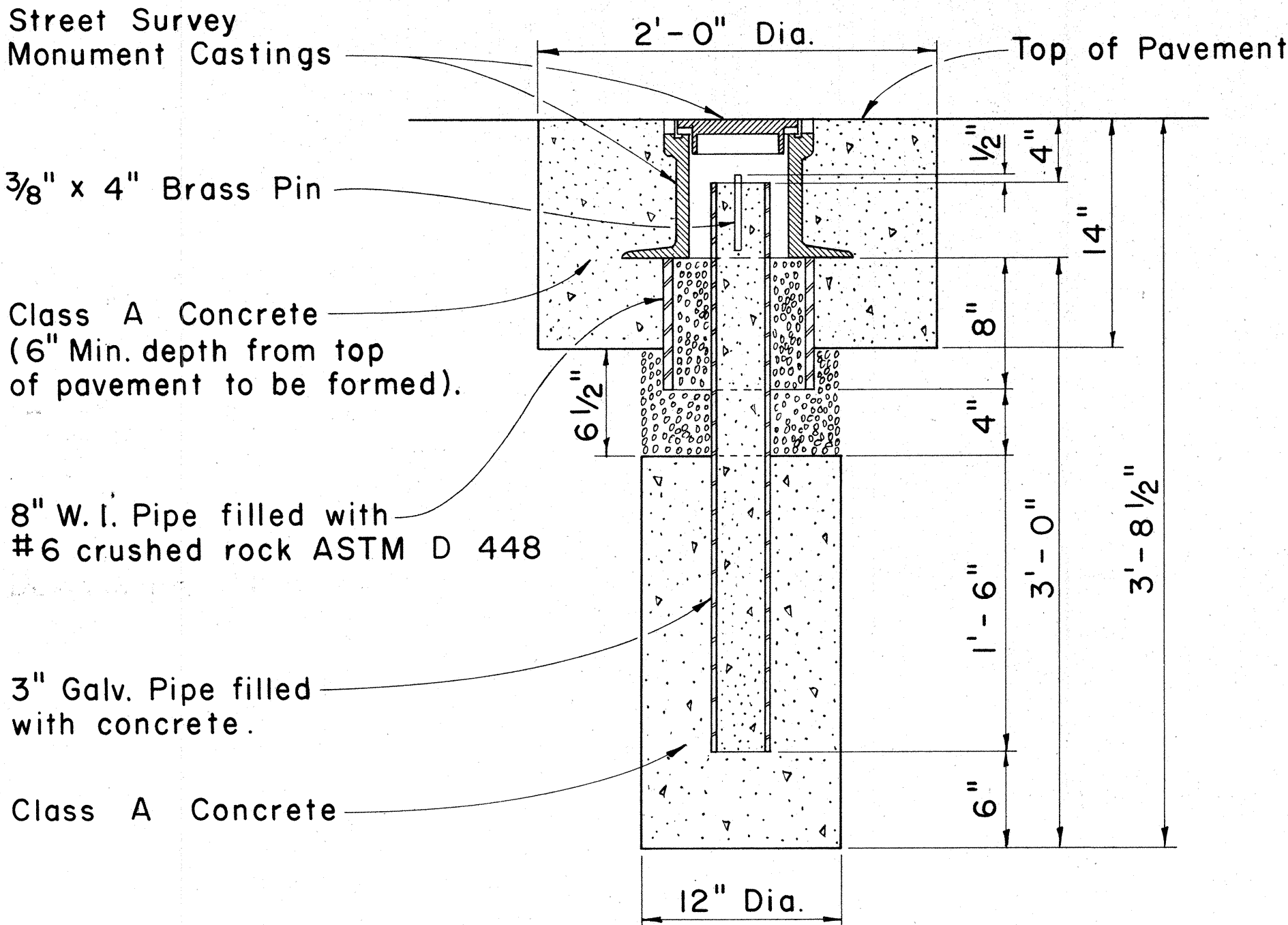
SHEET No. 1 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-011-2(11)	1973	25	87



STREET SURVEY MONUMENT CASTINGS

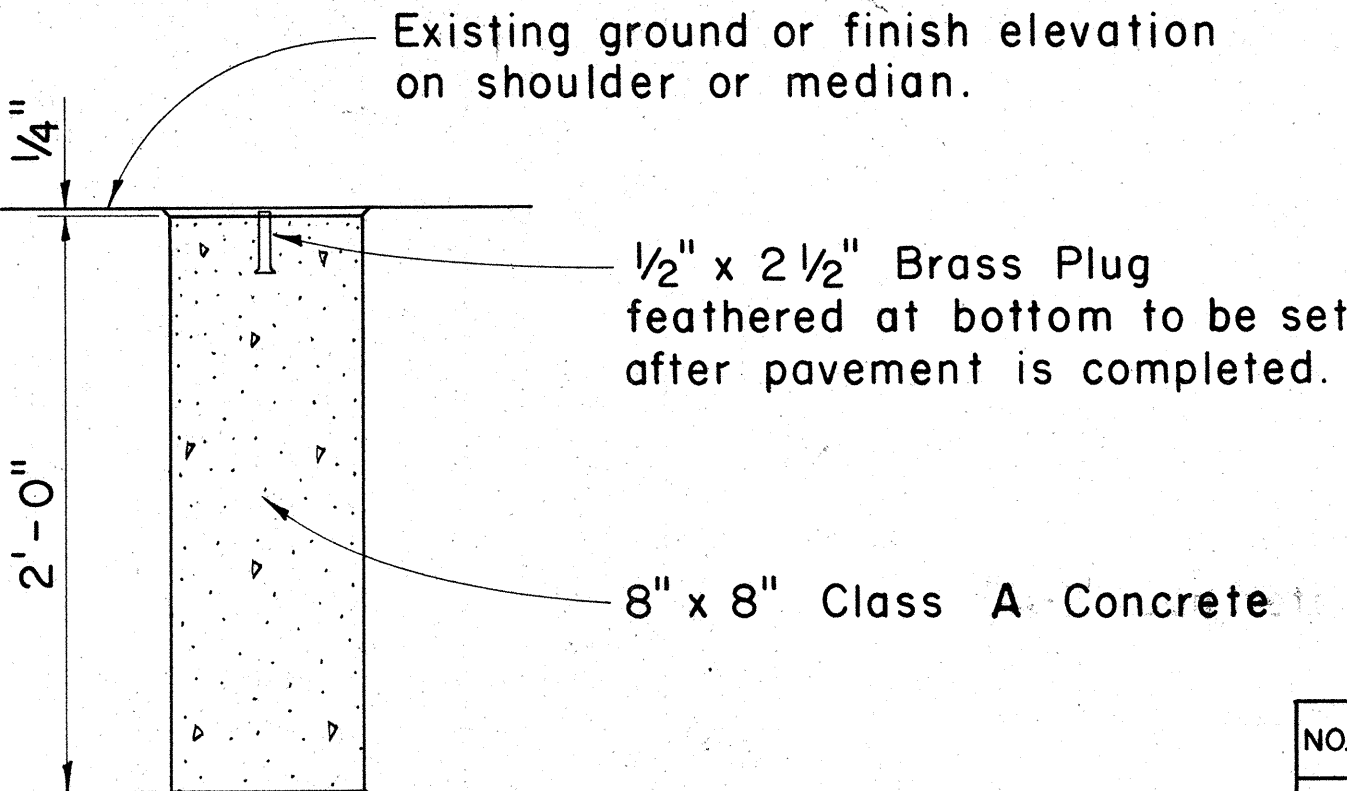
Scale: 3" = 1'-0"



NOTE:
Where the excavation extends into solid rock the depth may be decreased if approved by the Engineer.

STREET SURVEY MONUMENT

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



DETAIL FOR
C AND REFERENCE
SURVEY MONUMENT

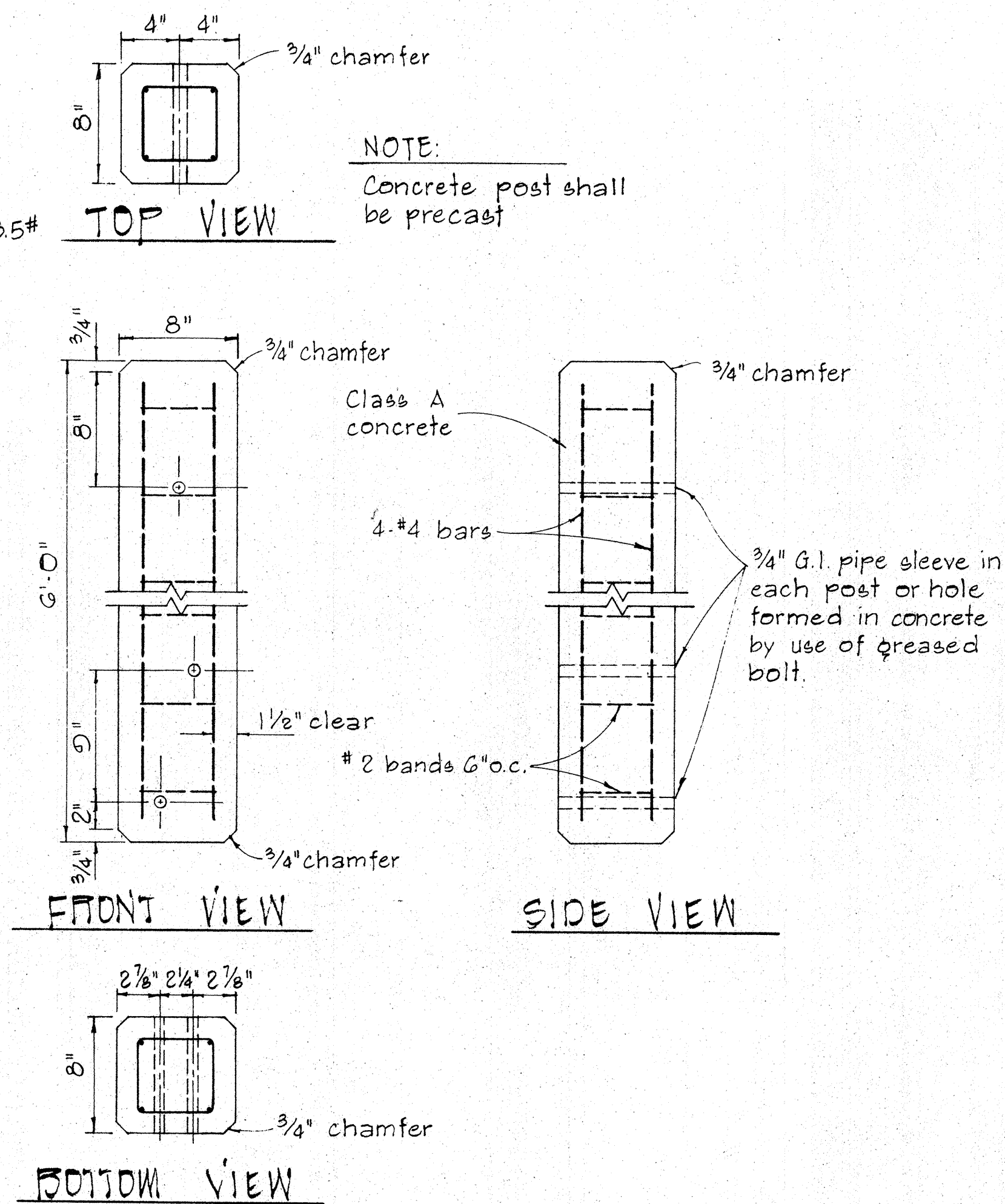
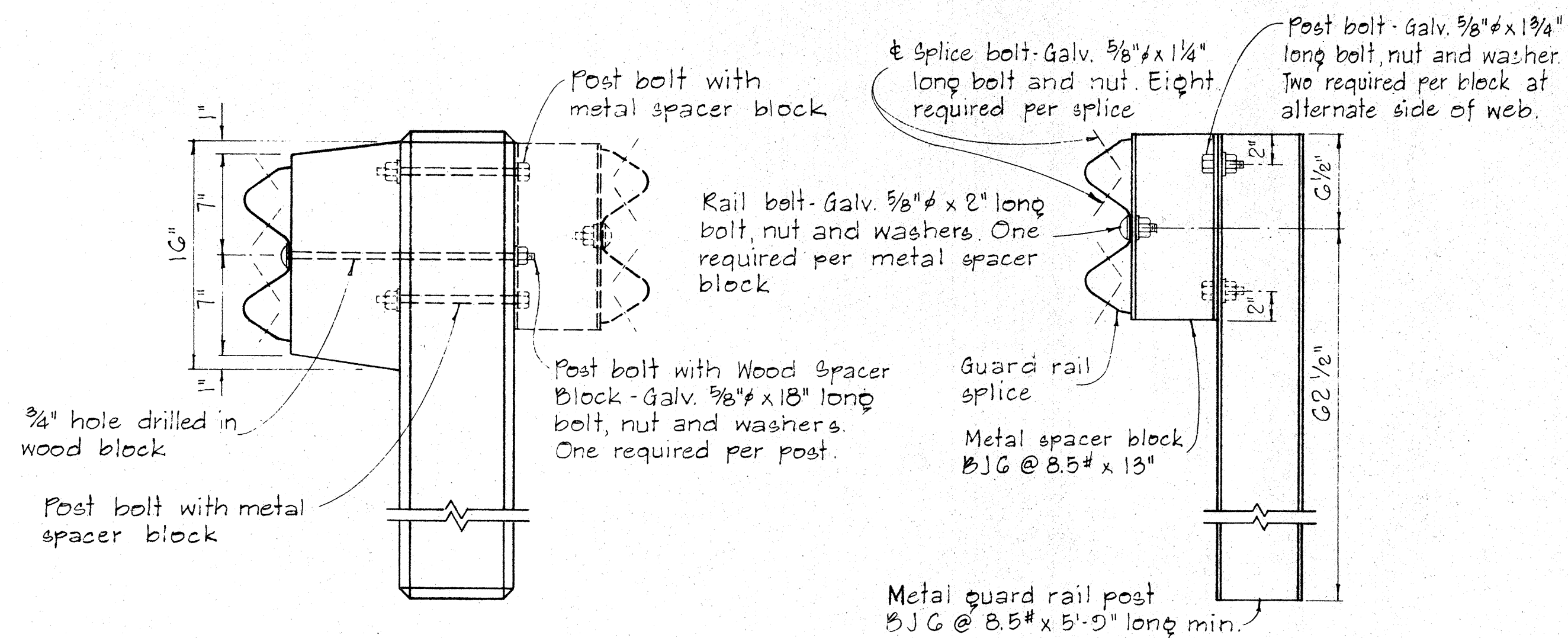
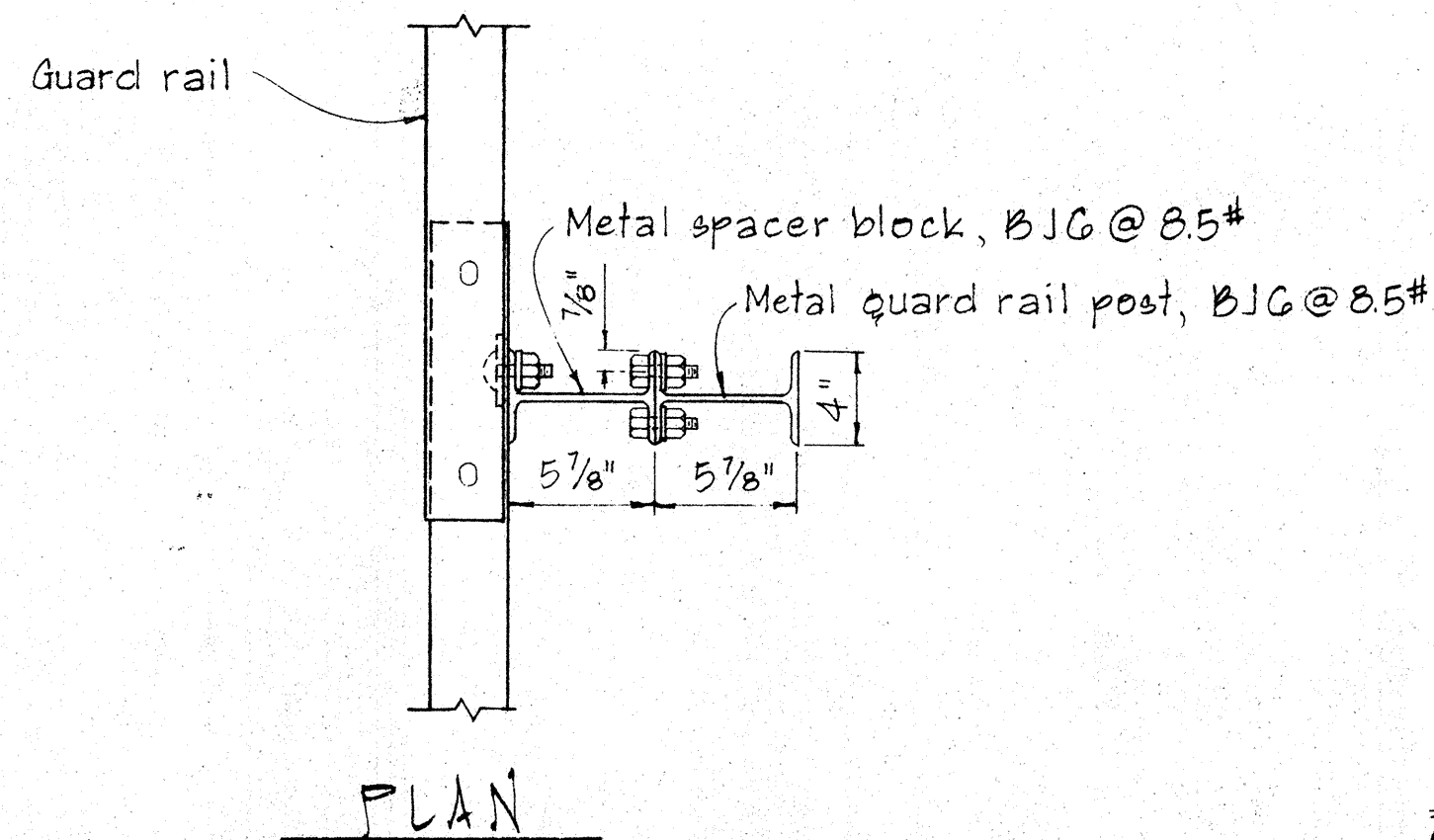
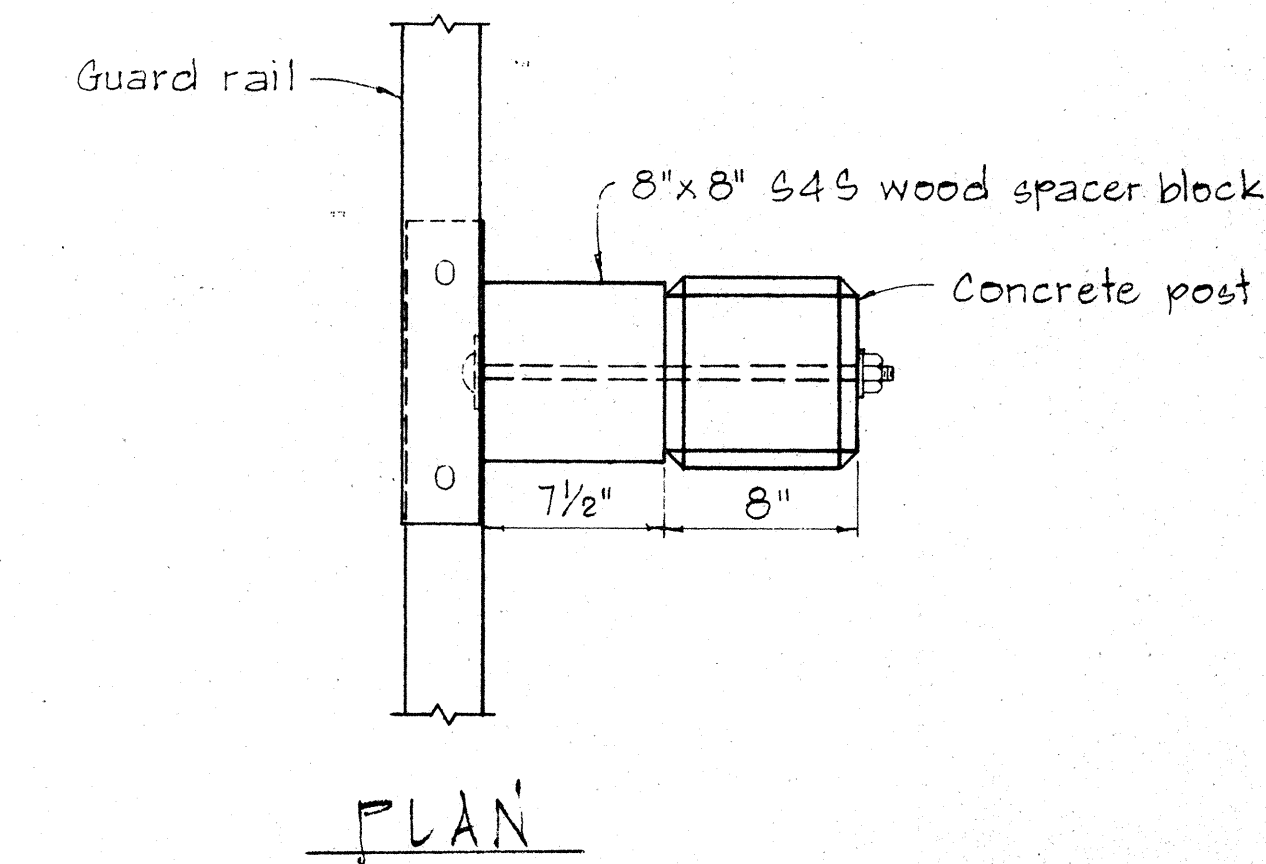
Scale: 1 1/2" = 1'-0"

APPROVAL RECOMMENDED:
M. Hironaka 12-4-69
HIGHWAY DESIGN ENGINEER DATE
APPROVED:
Robert S. Salas 12-10-69
ASSISTANT CHIEF, ENGINEERING DATE

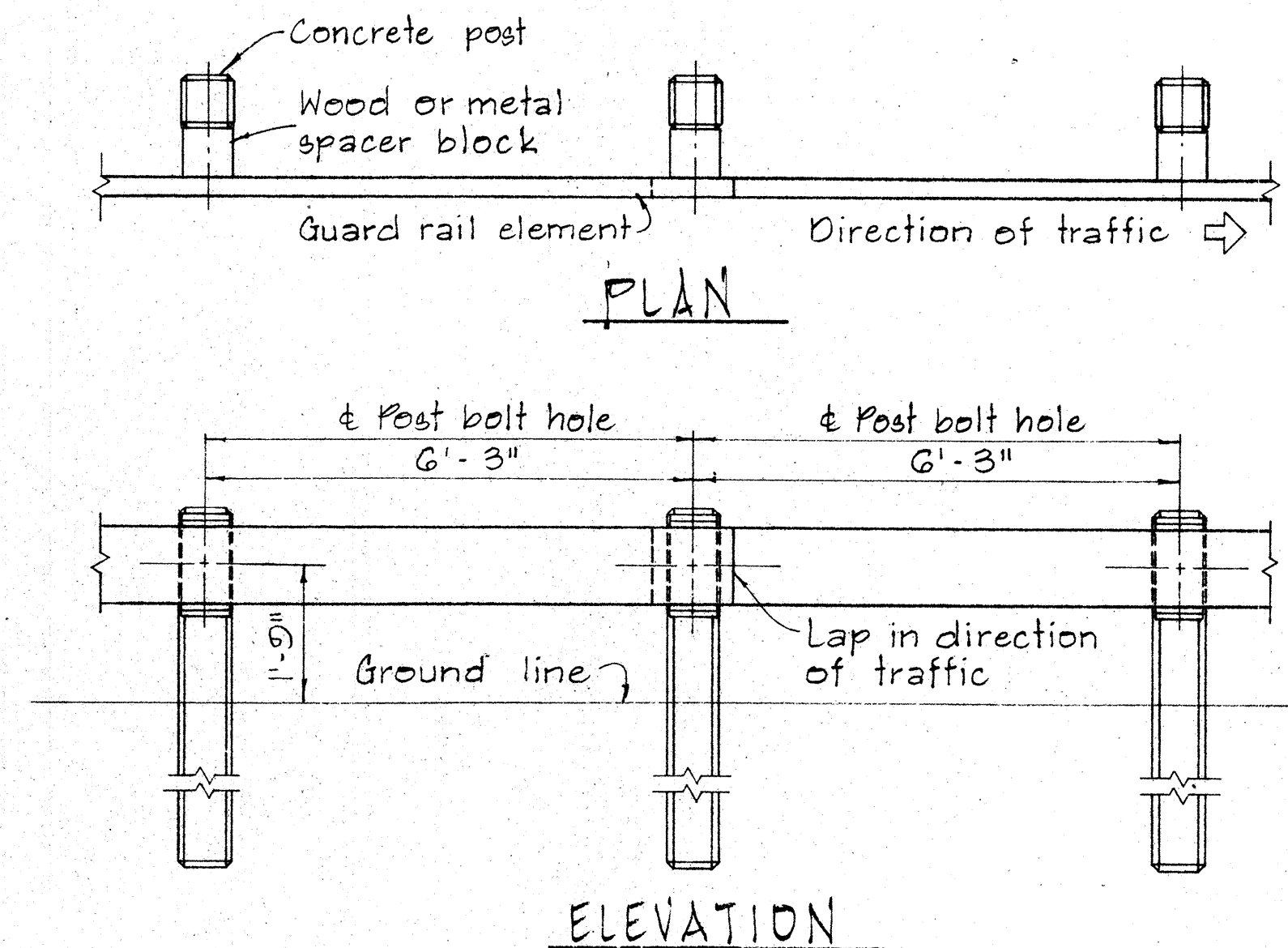
NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS
CENTERLINE, REFERENCE SURVEY
AND C & C STREET SURVEY
MONUMENTS
Scale: As Shown

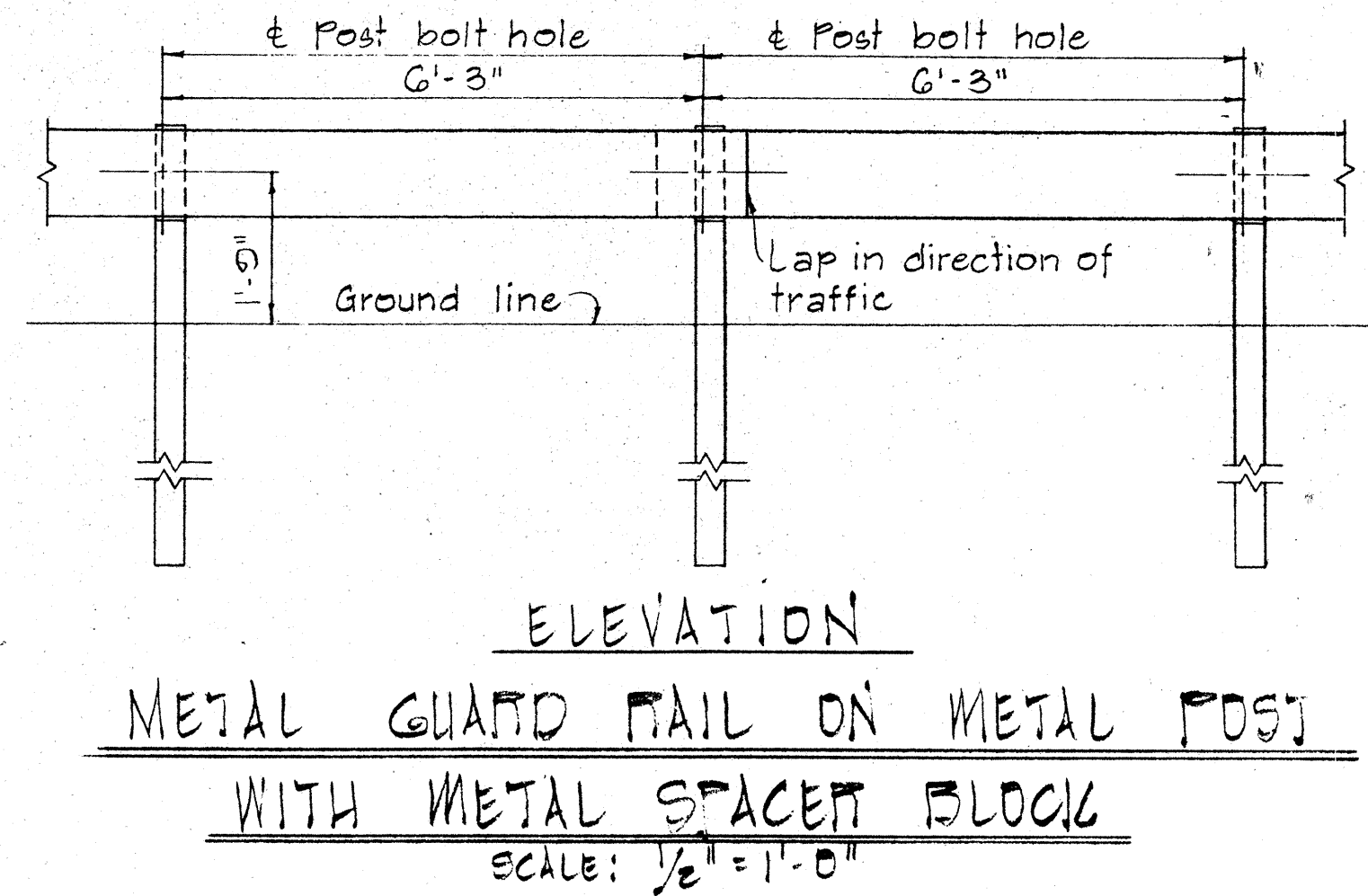
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-011-2(11)	1973	26	87



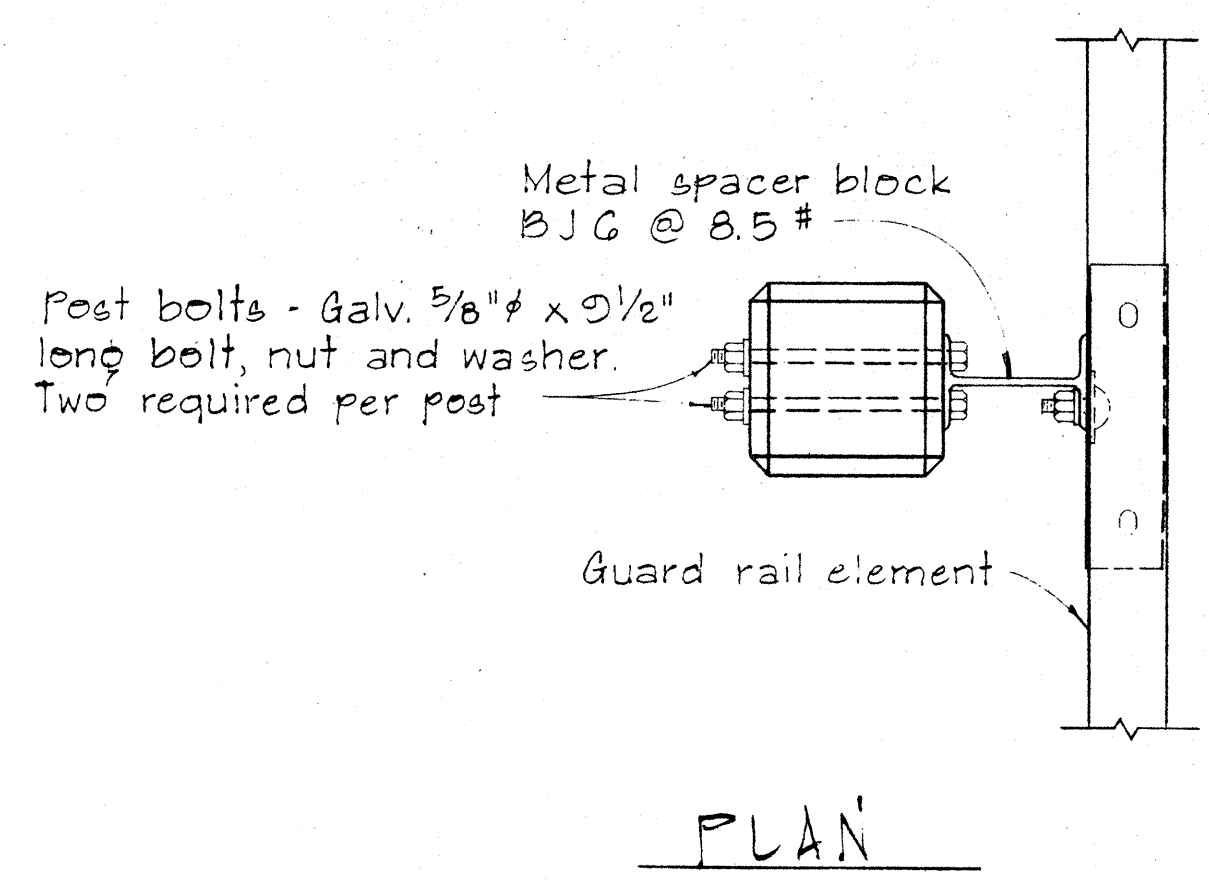
DETAIL OF CONCRETE POST
SCALE: 1 1/2" = 1'-0"



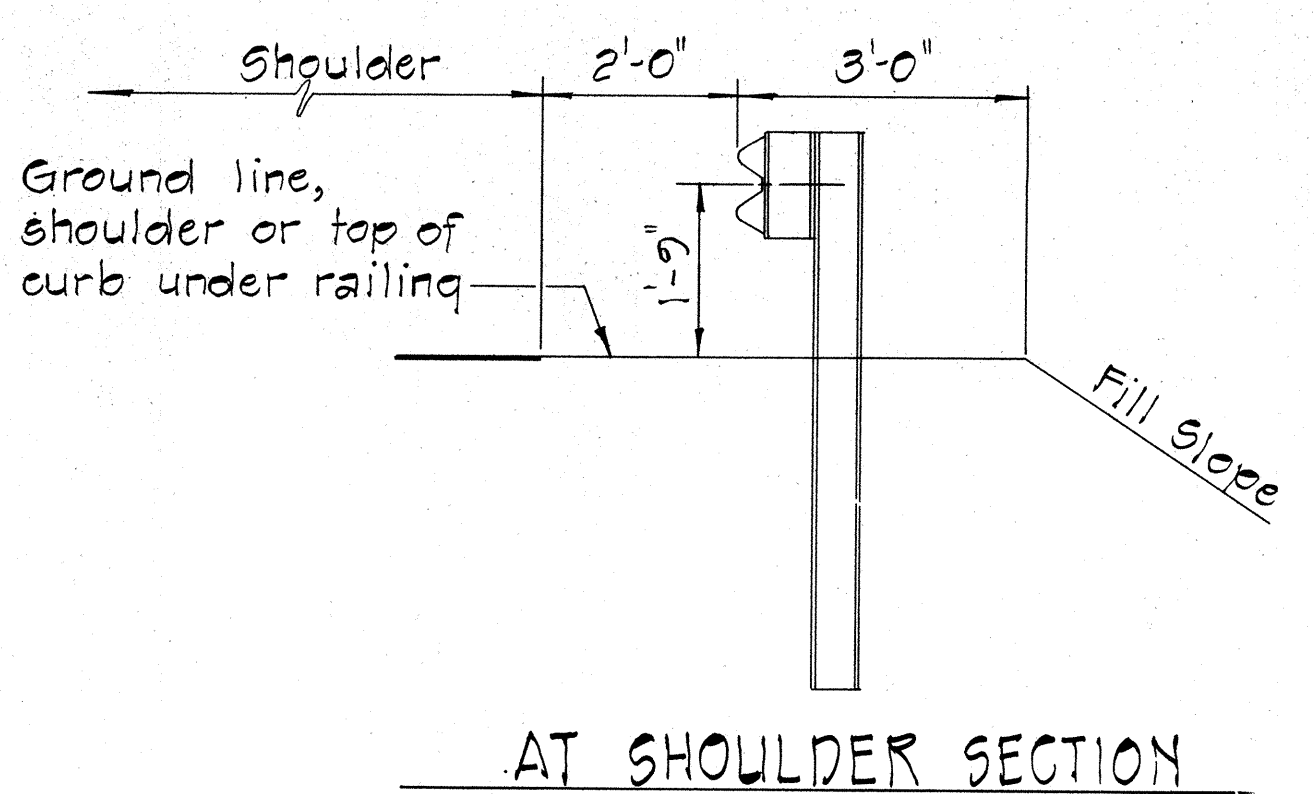
METAL GUARD RAIL ON CONCRETE POST WITH WOOD OR METAL SPACER BLOCK.
SCALE: 1/2" = 1'-0"



METAL GUARD RAIL ON METAL POST WITH METAL SPACER BLOCK
SCALE: 1/2" = 1'-0"



SINGLE METAL GUARD RAIL ON PRECAST CONCRETE POST WITH WOOD OR METAL SPACER BLOCK.
SCALE: 1 1/2" = 1'-0"



TYPICAL METAL GUARD RAIL DETAIL
SCALE: 1/2" = 1'-0"

APPROVAL RECOMMENDED:
Eddie Tanaka
TRAFFIC ENGINEER
12/29/62
DATE

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

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
METAL GUARD RAIL

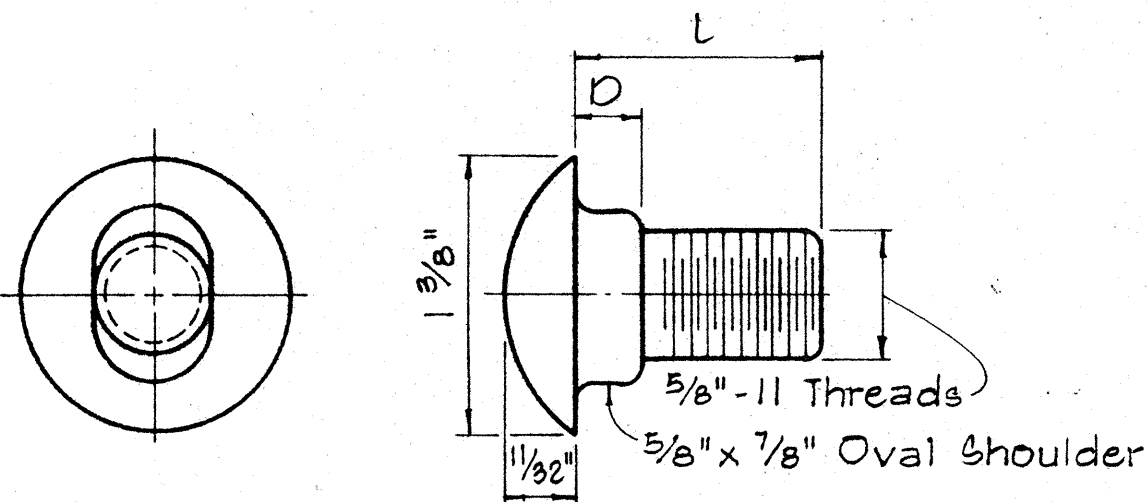
SCALE: AS SHOWN NOV. 1968

SHEET NO. 3 OF 18 SHEETS DT 500

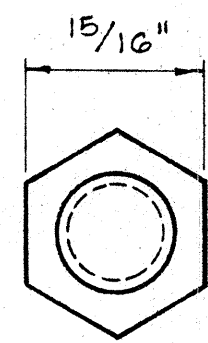
BOLT DIMENSIONS		
TYPE A BOLT		
Splice Bolt	5/16"	1 1/4"
Post Bolt for Conc. Post w/ Double Wood Blocks	3/32"	24"
Post Bolt for Conc. Post w/ Single Wood Block	3/32"	18"
Rail Bolt for Metal Block	3/32"	2"

BOLT DIMENSIONS	
TYPE B BOLT	
Post Bolt for Conc. Post w/ Metal Blocks	5/16"
Post Bolt for Metal Post w/ Metal Block	1 3/4"

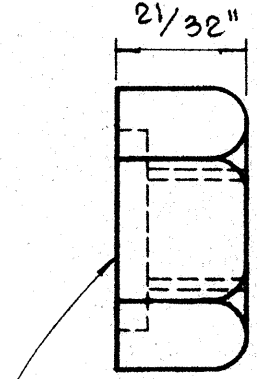
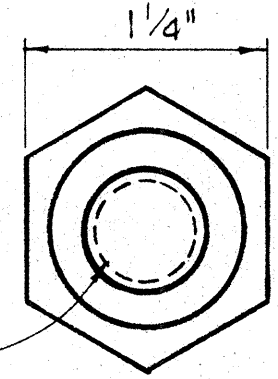
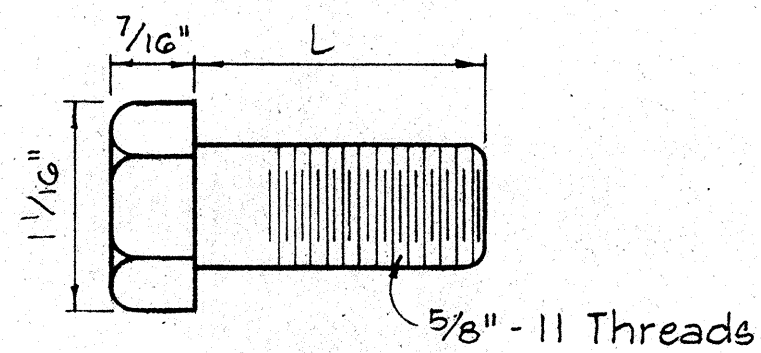
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-011-2(11)	1973	27	87



TYPE A BOLT

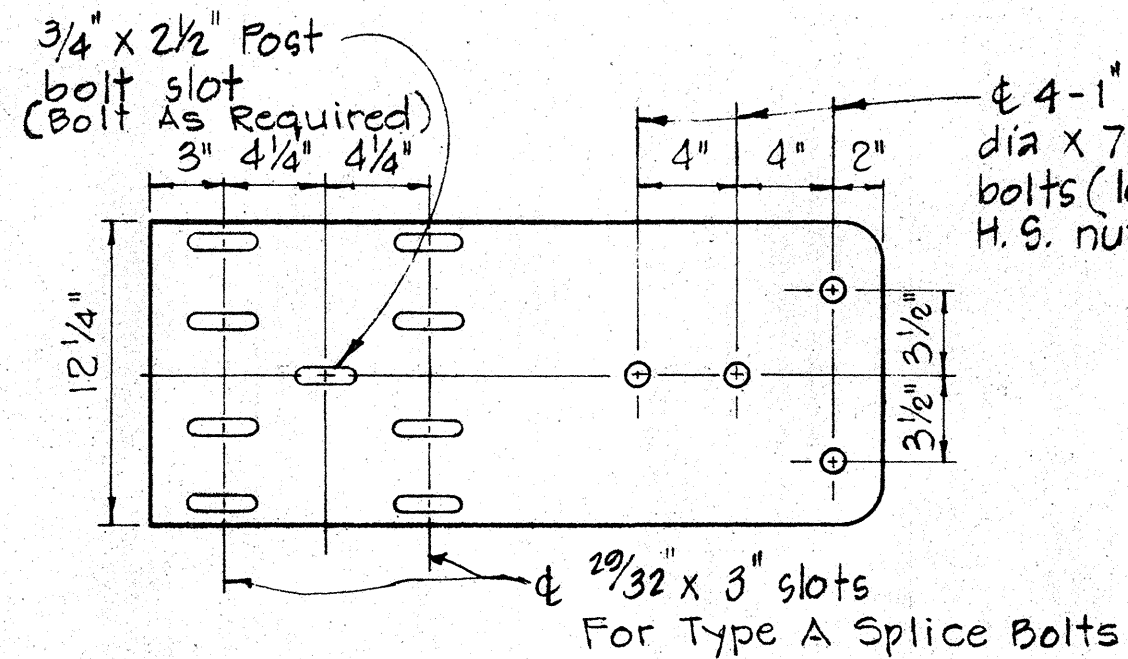
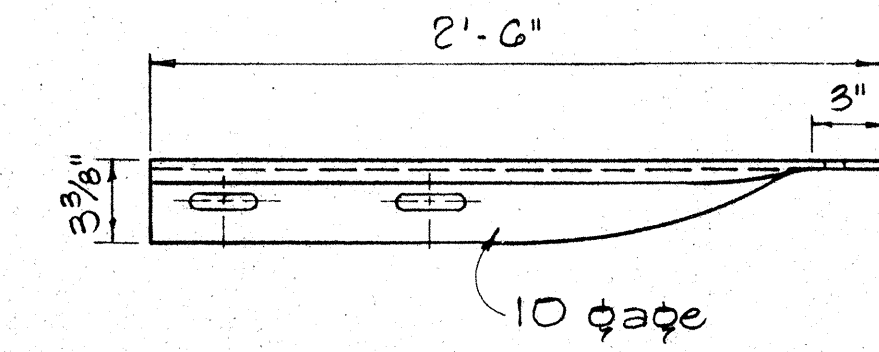


TYPE B BOLT



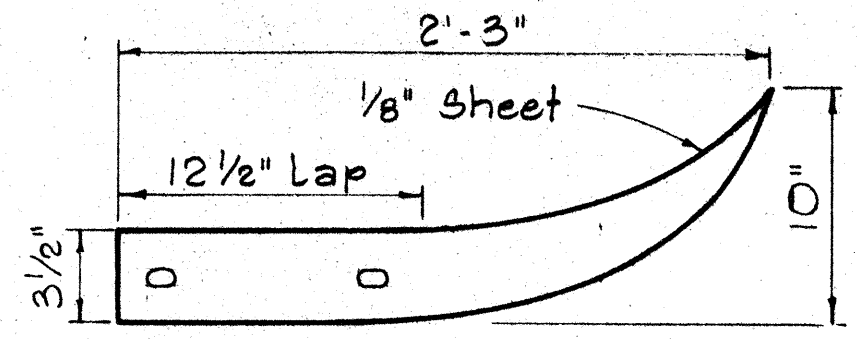
5/32" Deep x 15/16" Dia. C' Bore for Type A Bolt only. Plain nut for Type B Bolt.

HEXAGON NUT



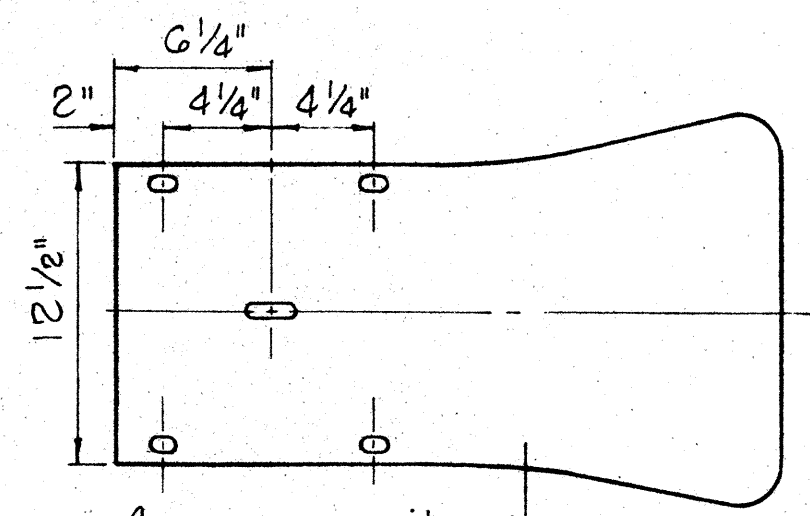
SPECIAL END SHOE

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

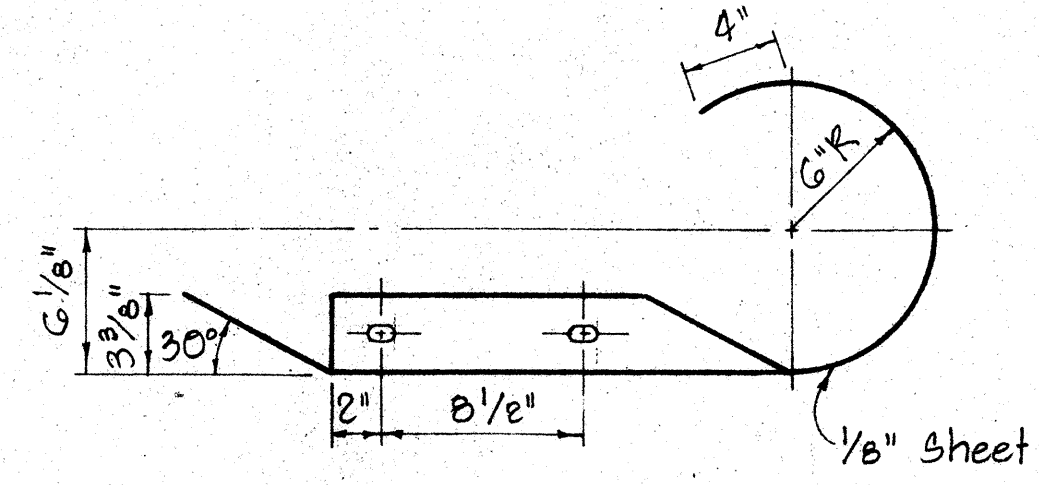


FLARED END

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

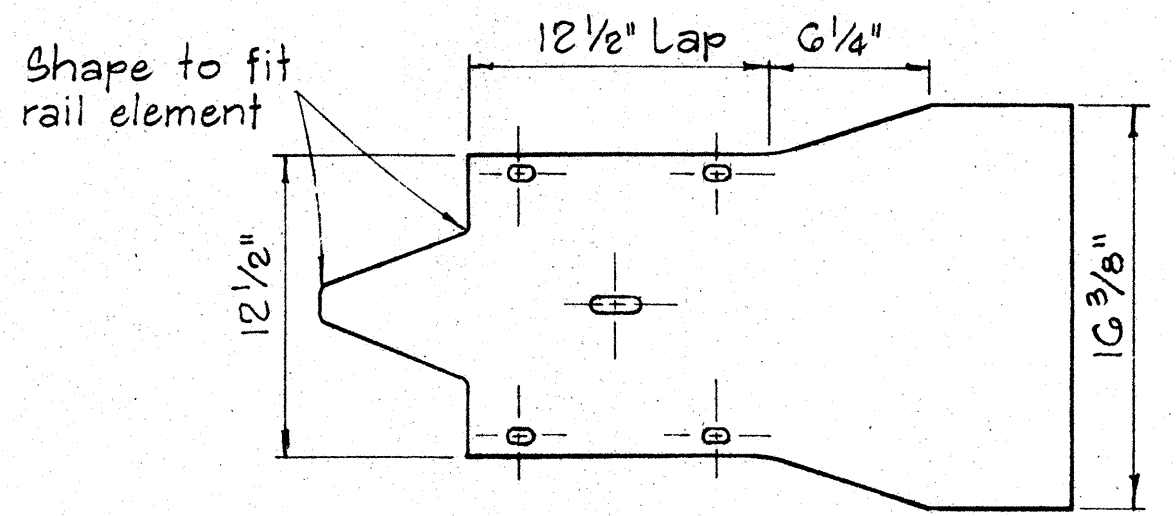


Same as rail element section

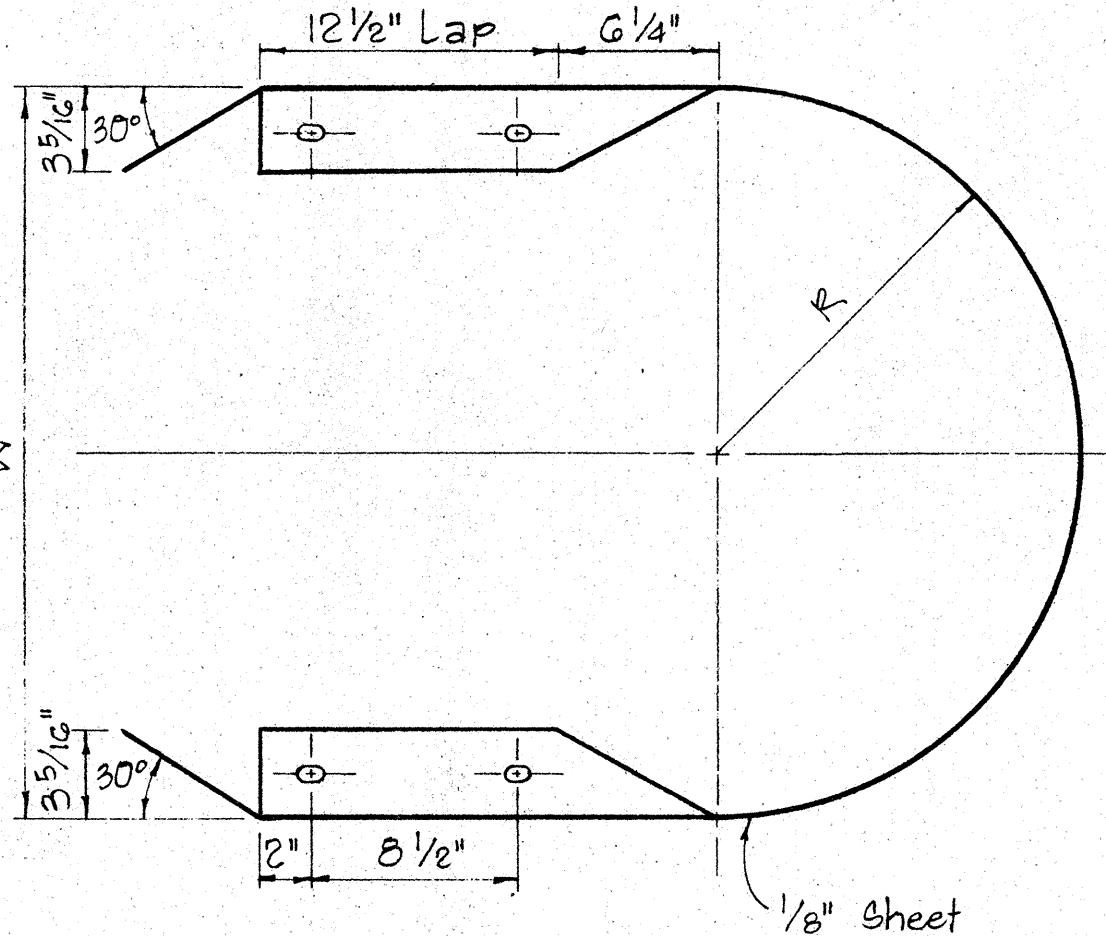


CURVED END

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

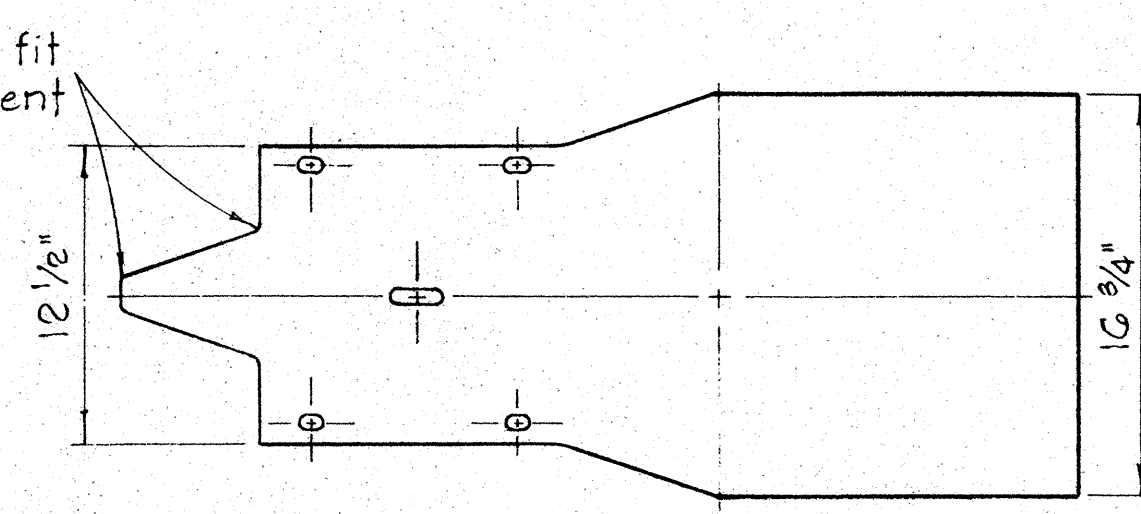


Shape to fit rail element



MEDIAN END

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



Shape to fit rail element

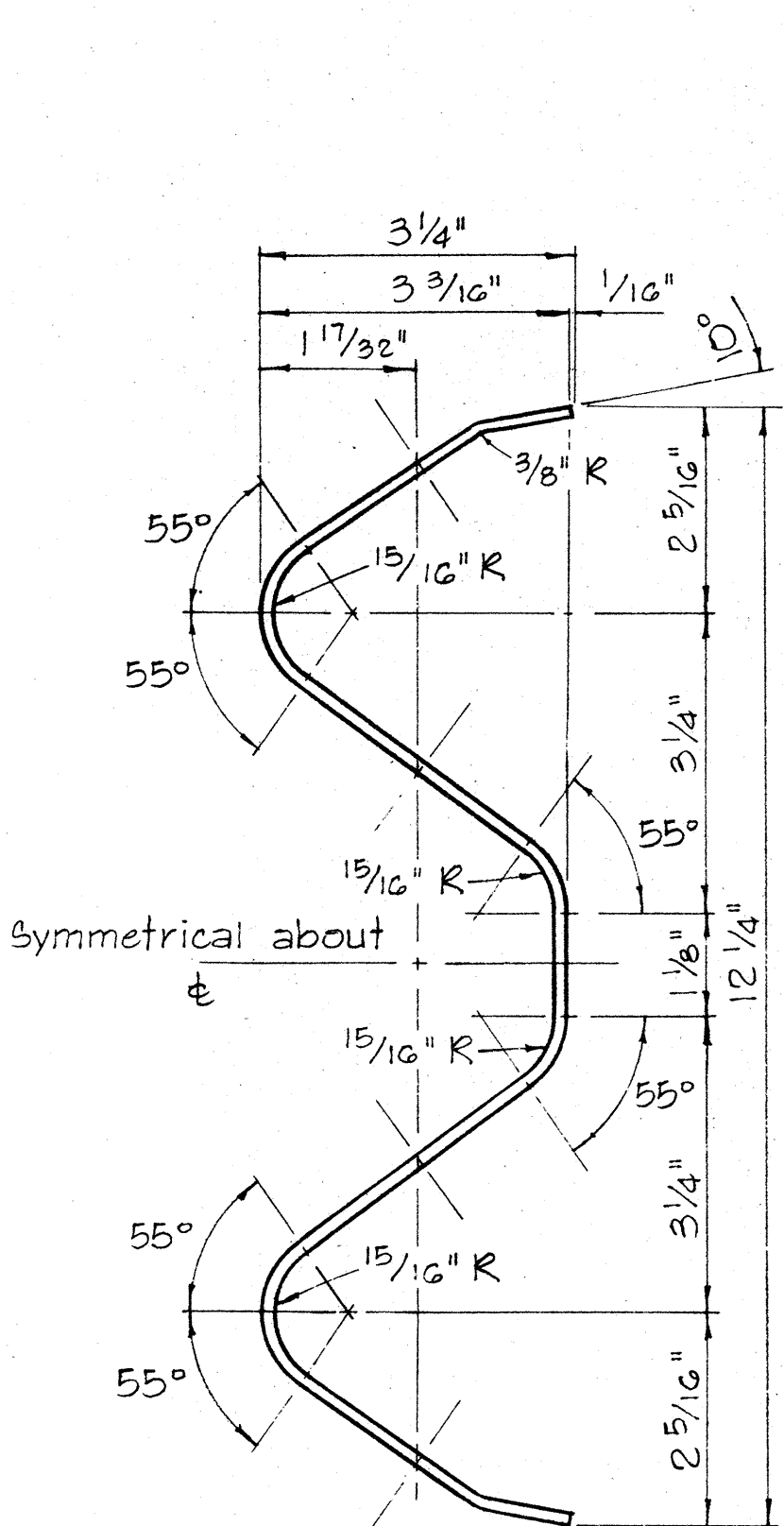
- NOTES:
1. H.S. Bolts shall conform to the requirements of ASTM A 325.
 2. Special End Shoe shall be fabricated from 10 Gage steel conforming to the requirements of AASHTO 180.

MEDIAN END DIMENSIONS		
TYPE OF POST AND BLOCK	W	R
Double Metal Guard Rail on Concrete Post with Wood Blocks	29 3/4"	14 7/8"
Double Metal Guard Rail on Concrete Post with Metal Blocks (BJG)	26 1/2"	13 1/4"
Double Metal Guard Rail on Metal Post with Metal Blocks (BJG)	24 3/8"	12 3/16"

NO.	REVISION	APPROVED BY	DATE

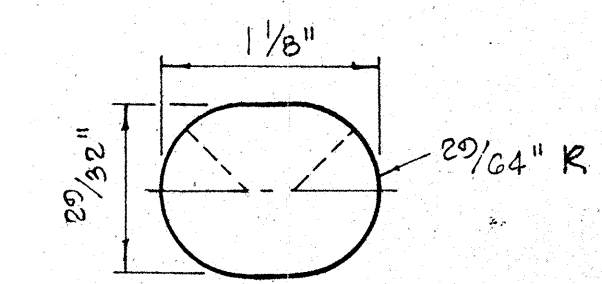
APPROVAL RECOMMENDED:
 TRAFFIC ENGINEER
 APPROVED:
 ASSISTANT CHIEF, ENGINEERING

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
 STANDARD DETAILS
 METAL GUARD RAIL
 Scale: As Noted August, 1968
 SHEET No. 4 OF 18 SHEETS DT 501



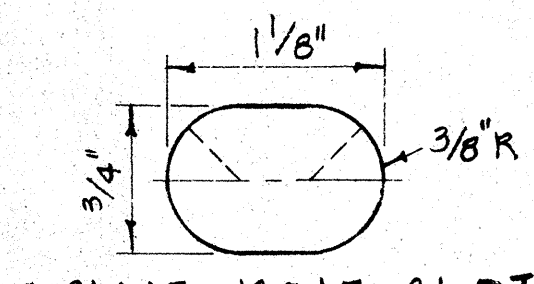
RAIL ELEMENT SECTION

Scale: 6" = 1'-0"

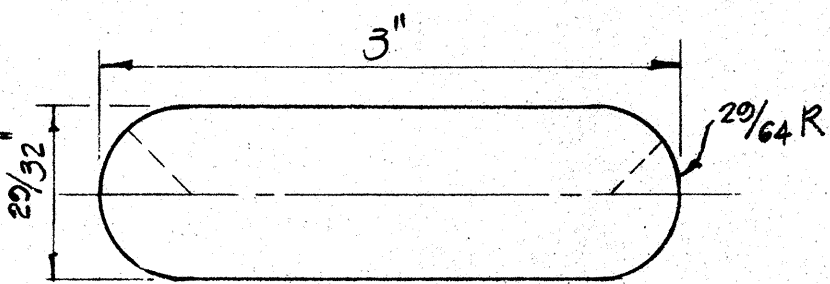


SPlice BOLT SLOT FOR ALL ENDS

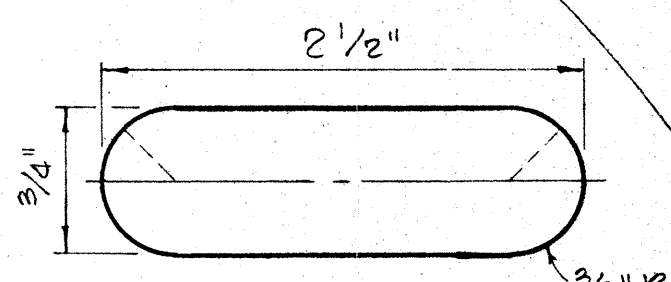
Scale: Full Size



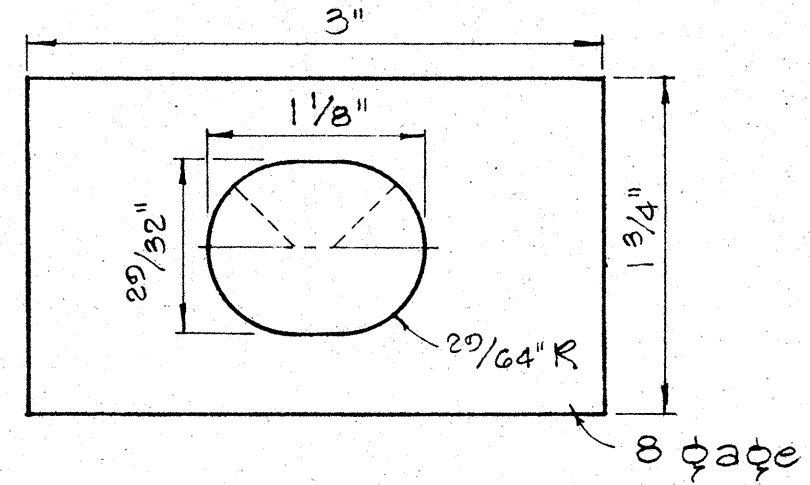
SPlice BOLT SLOT FOR SPECIAL END SHOE



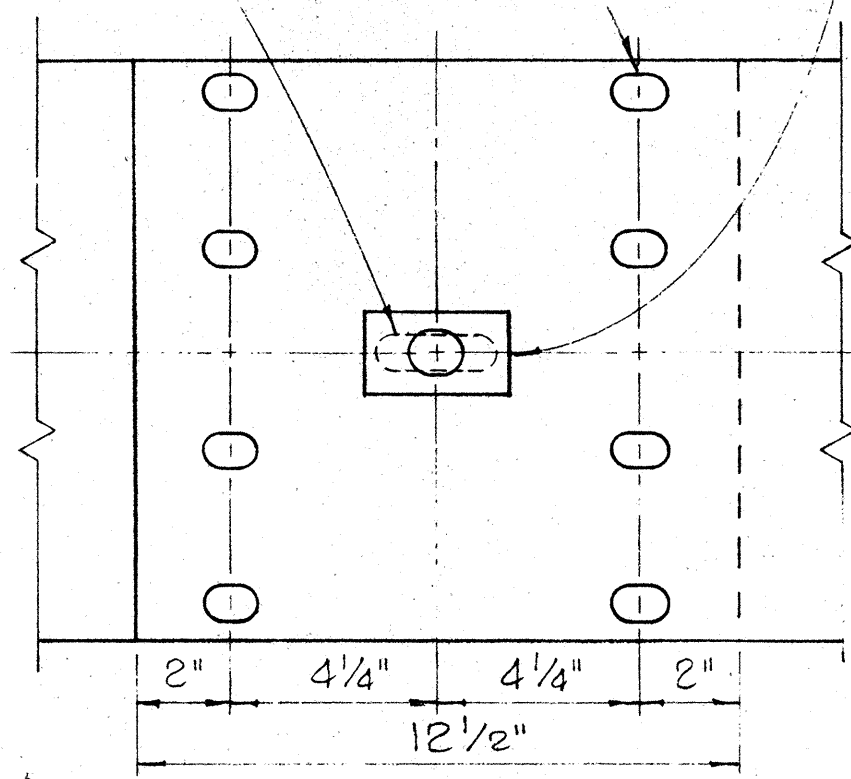
SPlice BOLT SLOT FOR SPECIAL END SHOE



POST BOLT SLOT



RAIL WASHER

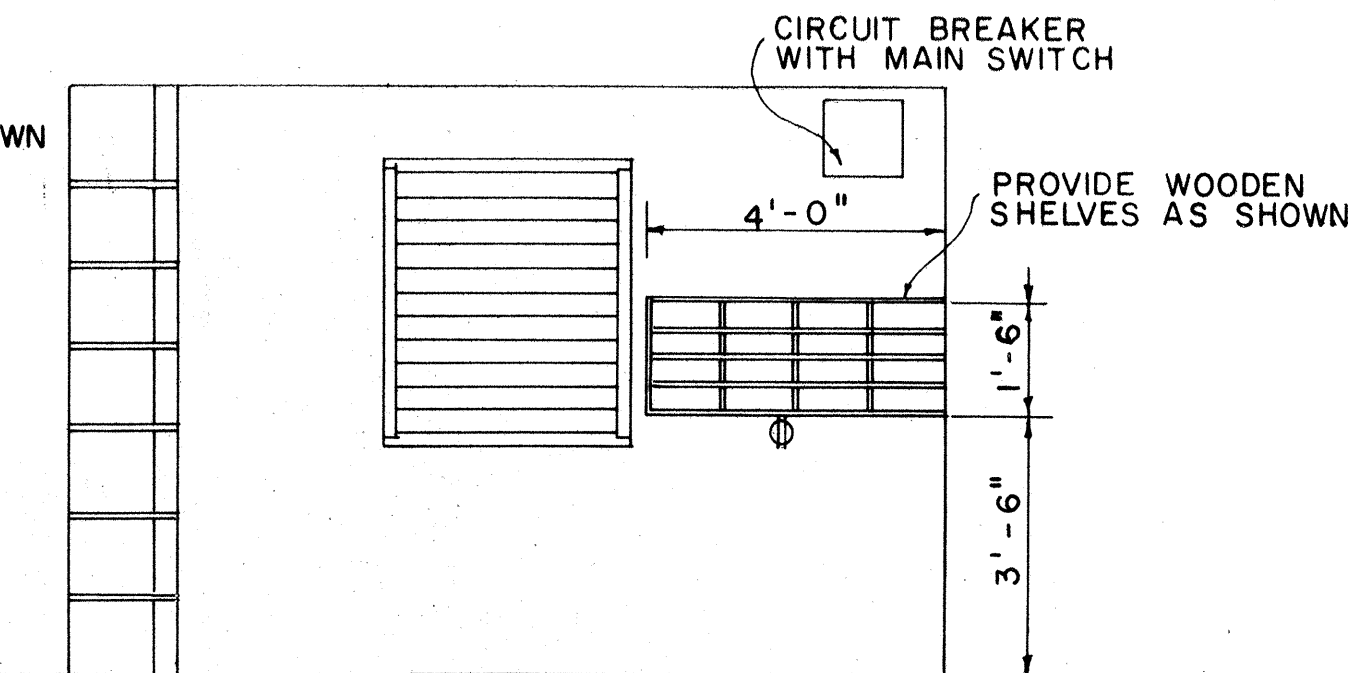
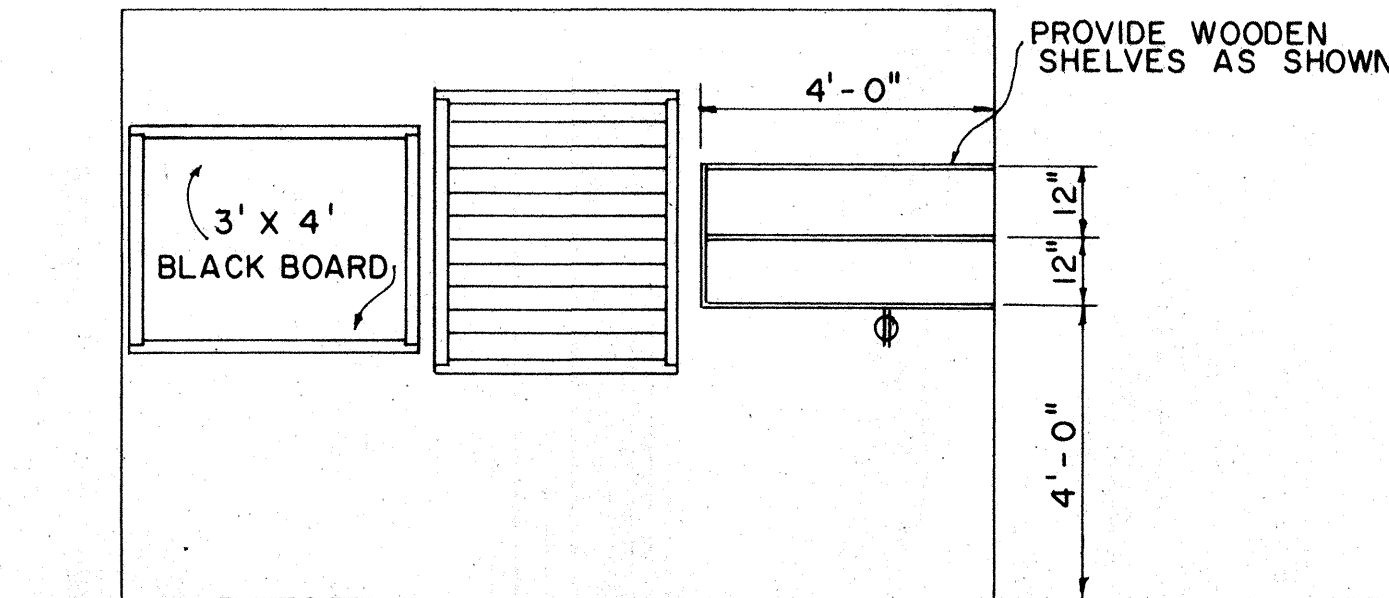
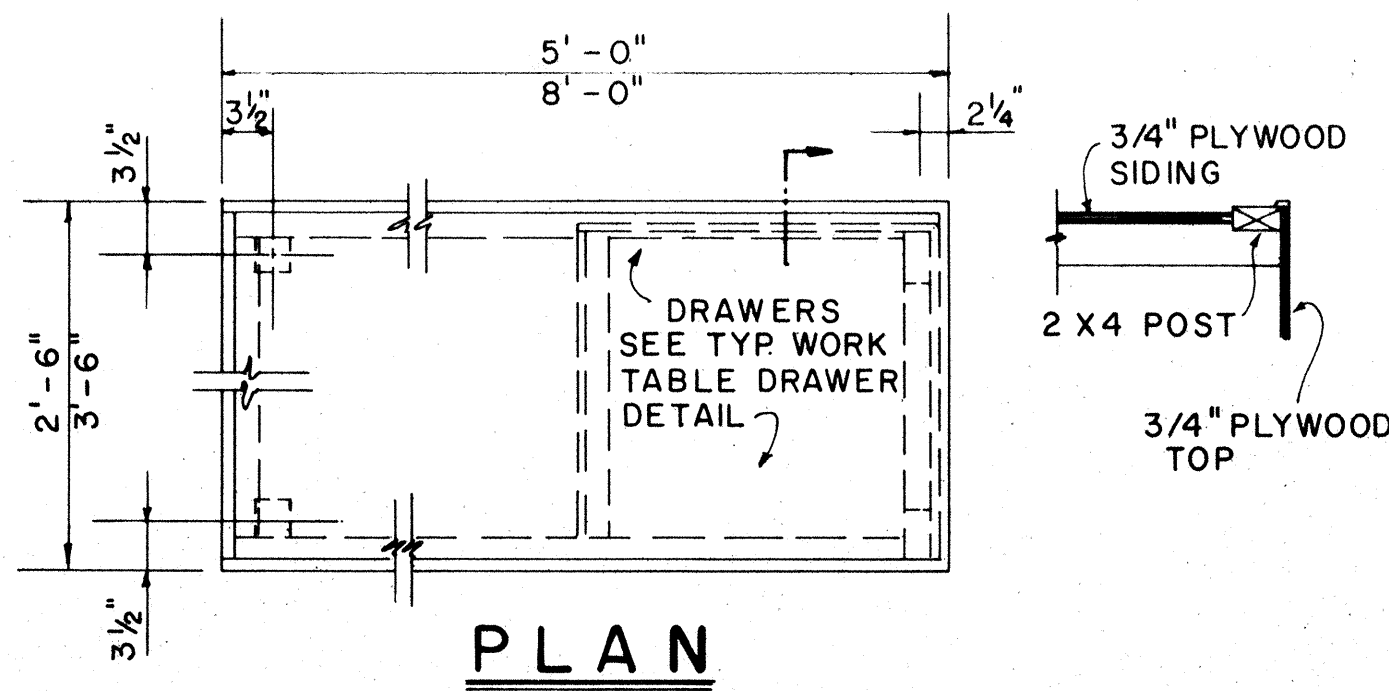
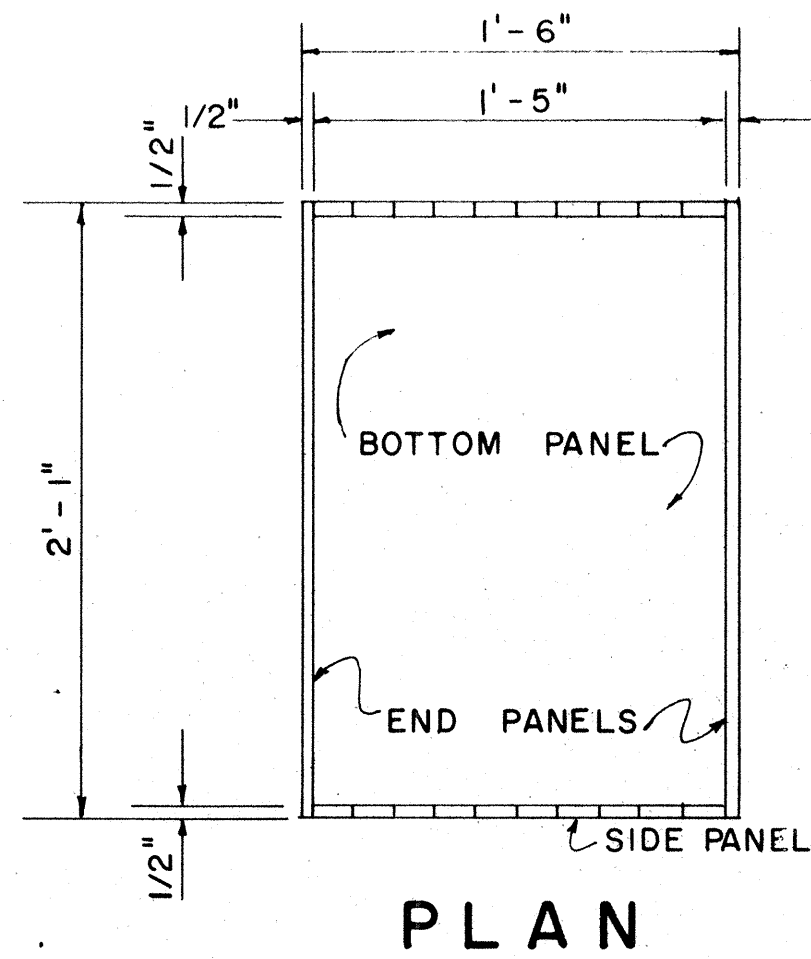


RAIL SPLICE

Scale: 3" = 1'-0"

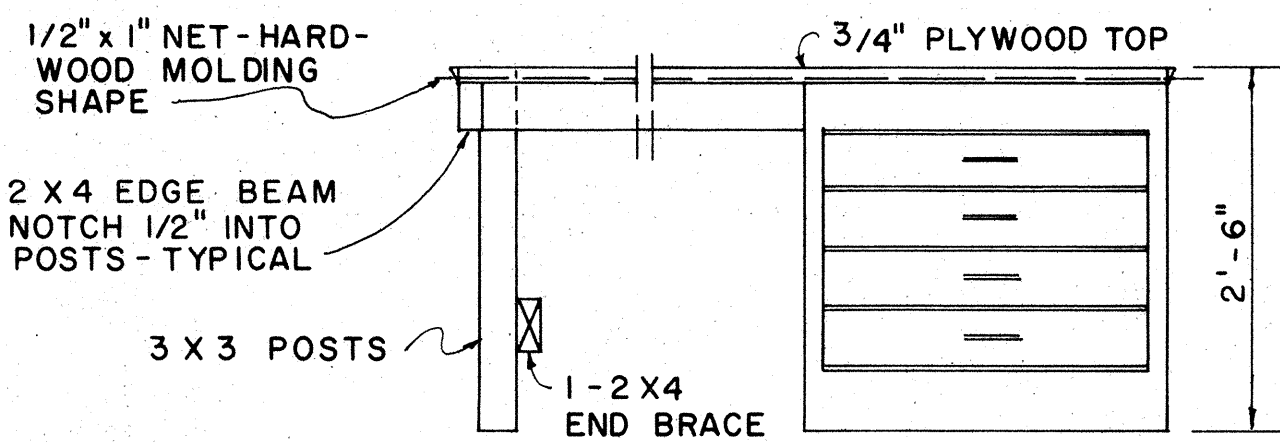
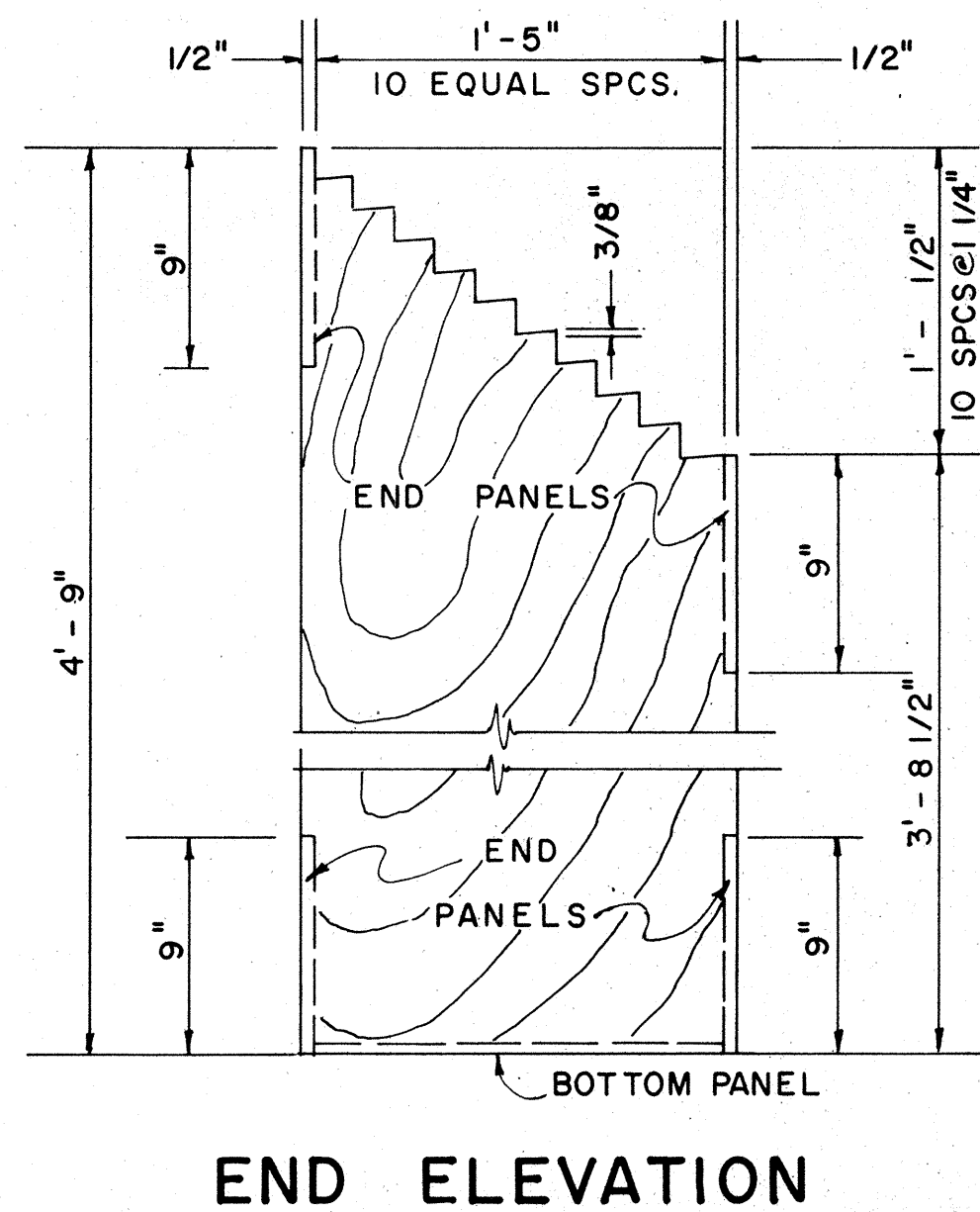
DATE	
DESIGNED BY	
CHECKED BY	
QUANTITIES BY	
NOTE BOOK	
ORIGINAL PLAN	
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	F-011-2(11)	1973	29	87

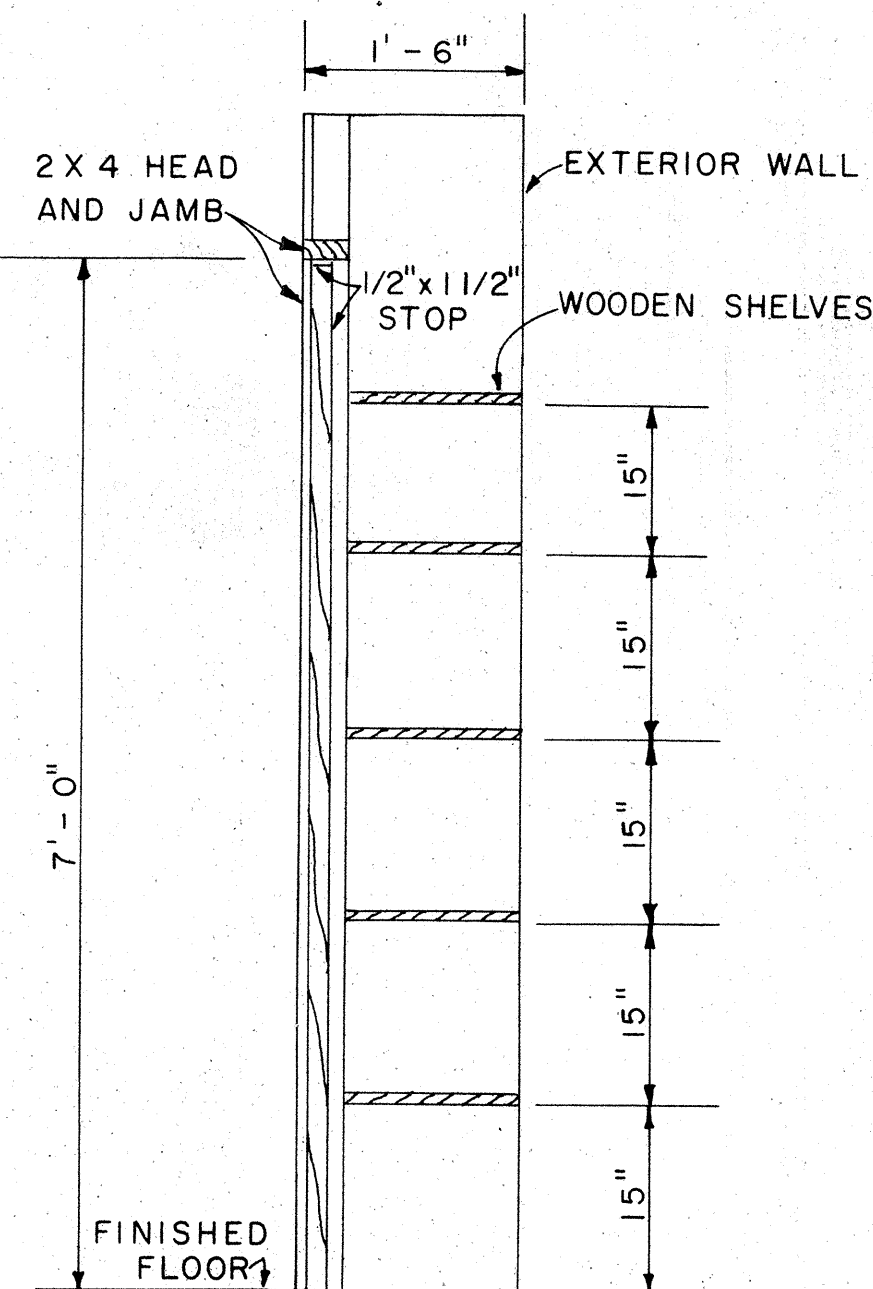


ELEVATION D1
SCALE: 3/8" = 1'-0"

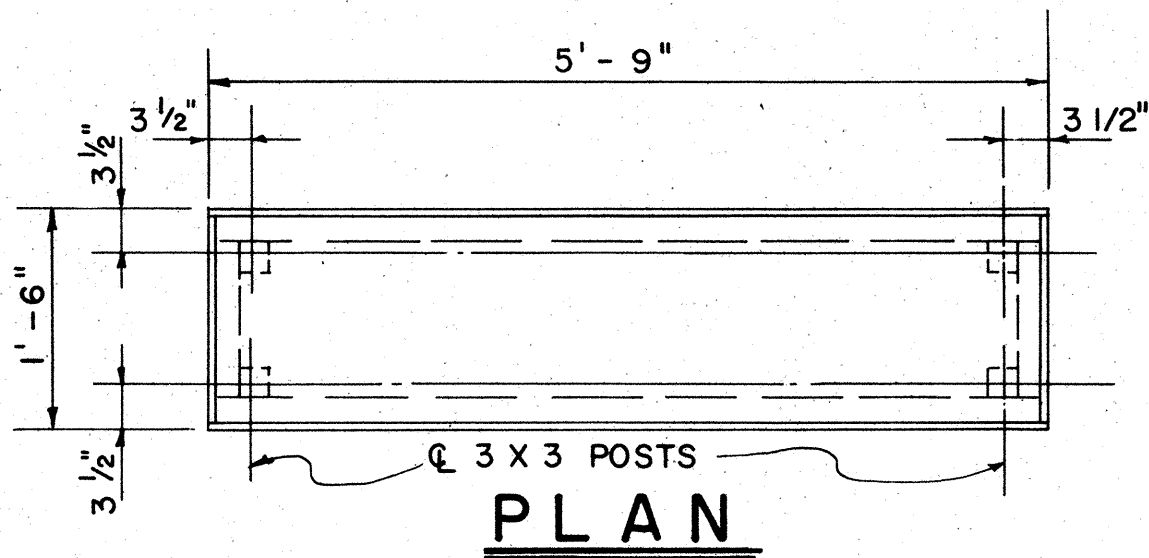
ELEVATION B1
SCALE: 3/8" = 1'-0"



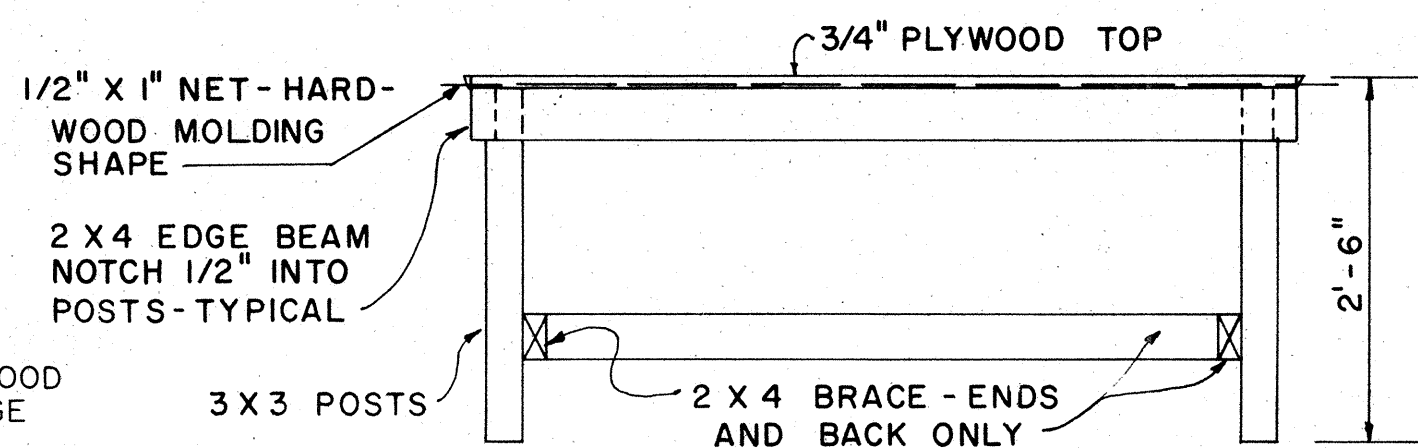
ELEVATION
2'-6" x 5'-0" 2 REQ'D.
3'-6" x 8'-0" 1 REQ'D
2'-6" x 8'-0" 1 REQ'D
PORTABLE WORK TABLE DETAIL
SCALE: 3/4" = 1'-0"



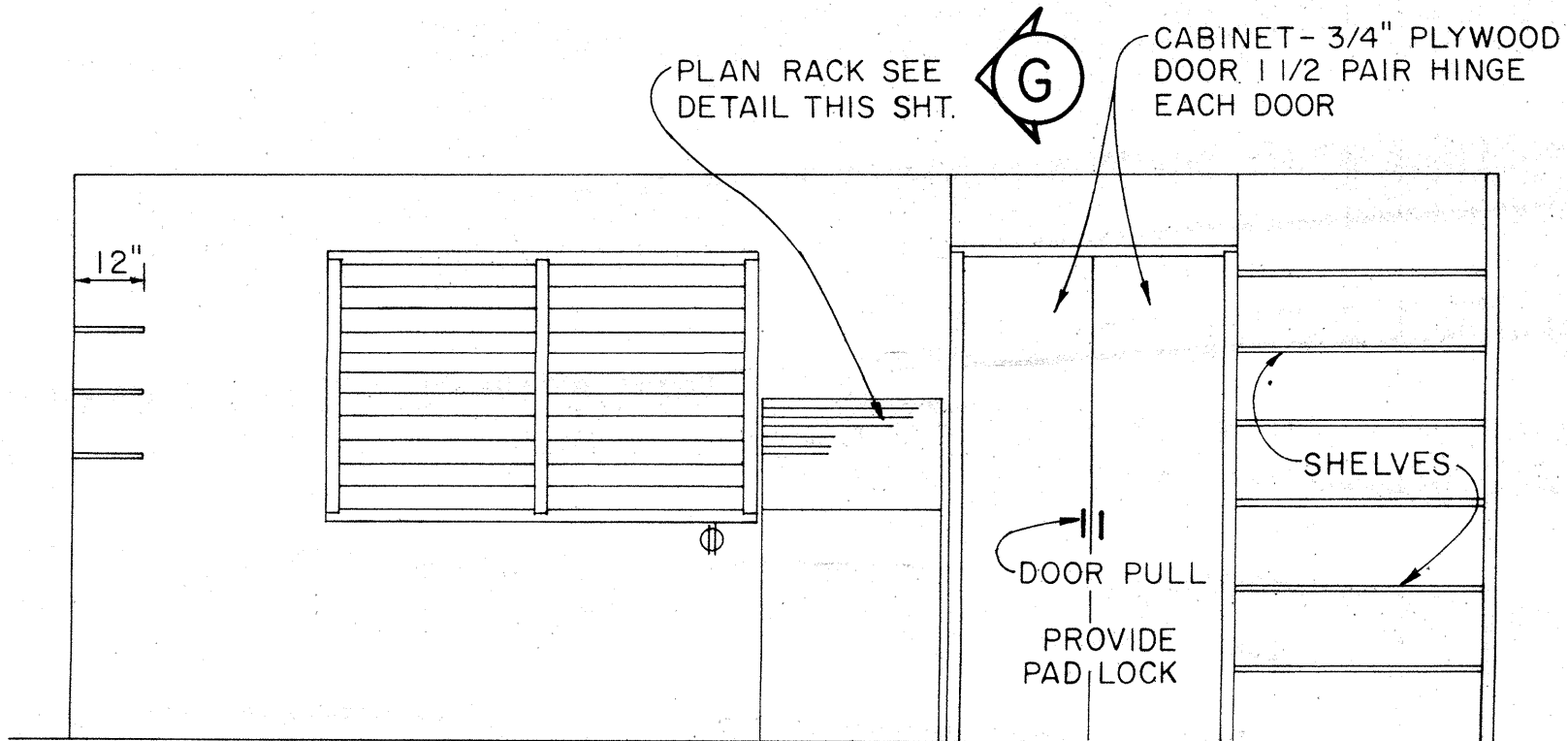
SECTION G
SCALE: 3/4" = 1'-0"



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



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



ELEVATION A1
SCALE: 3/8" = 1'-0"

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

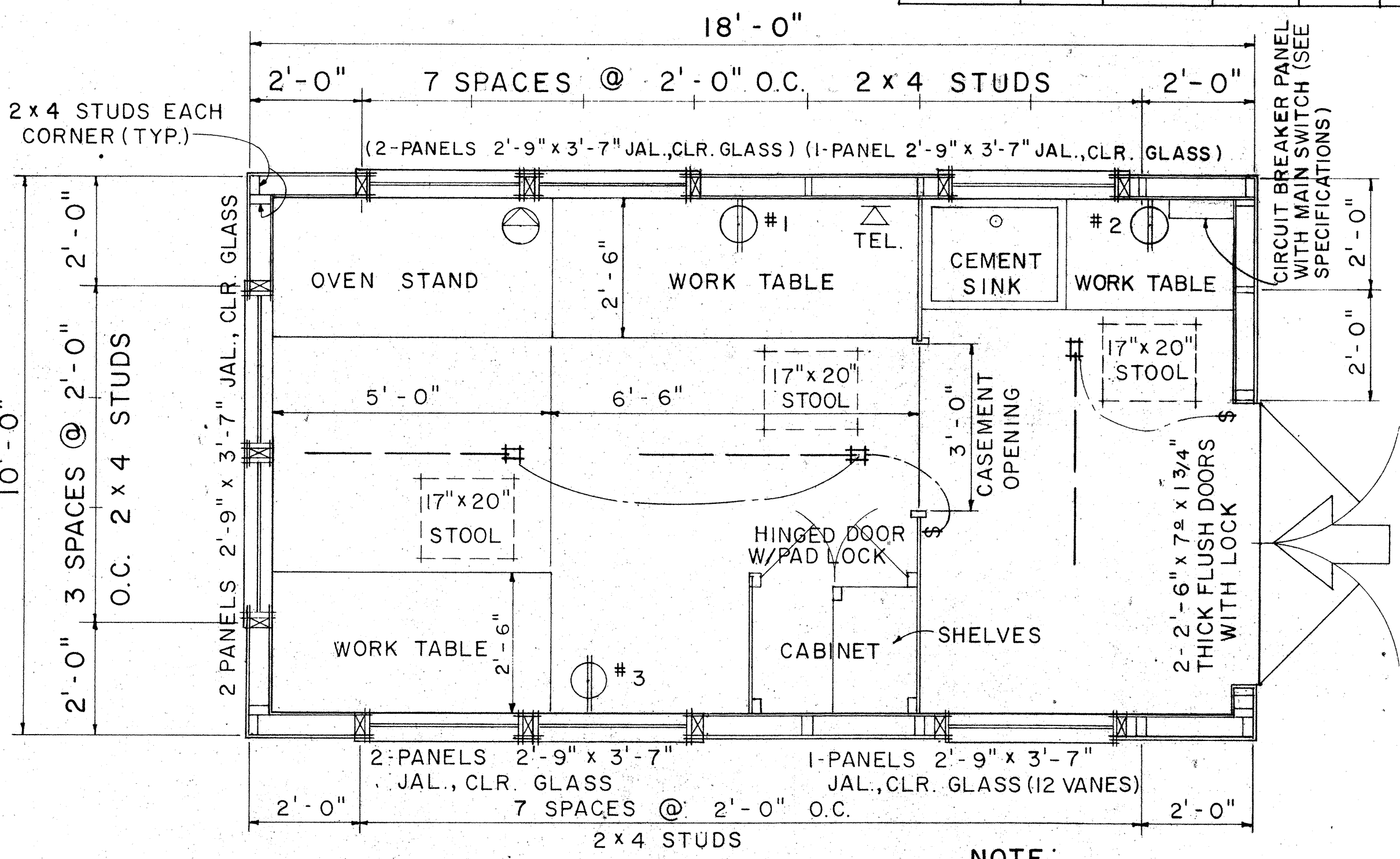
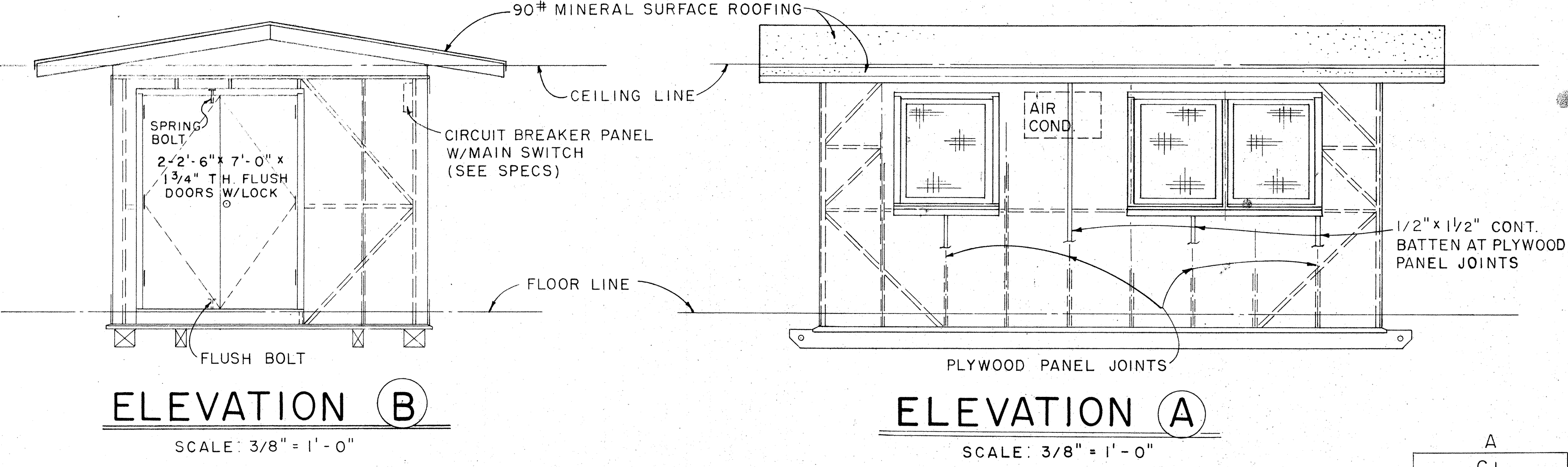
APPROVED:
[Signature] 12-10-69
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

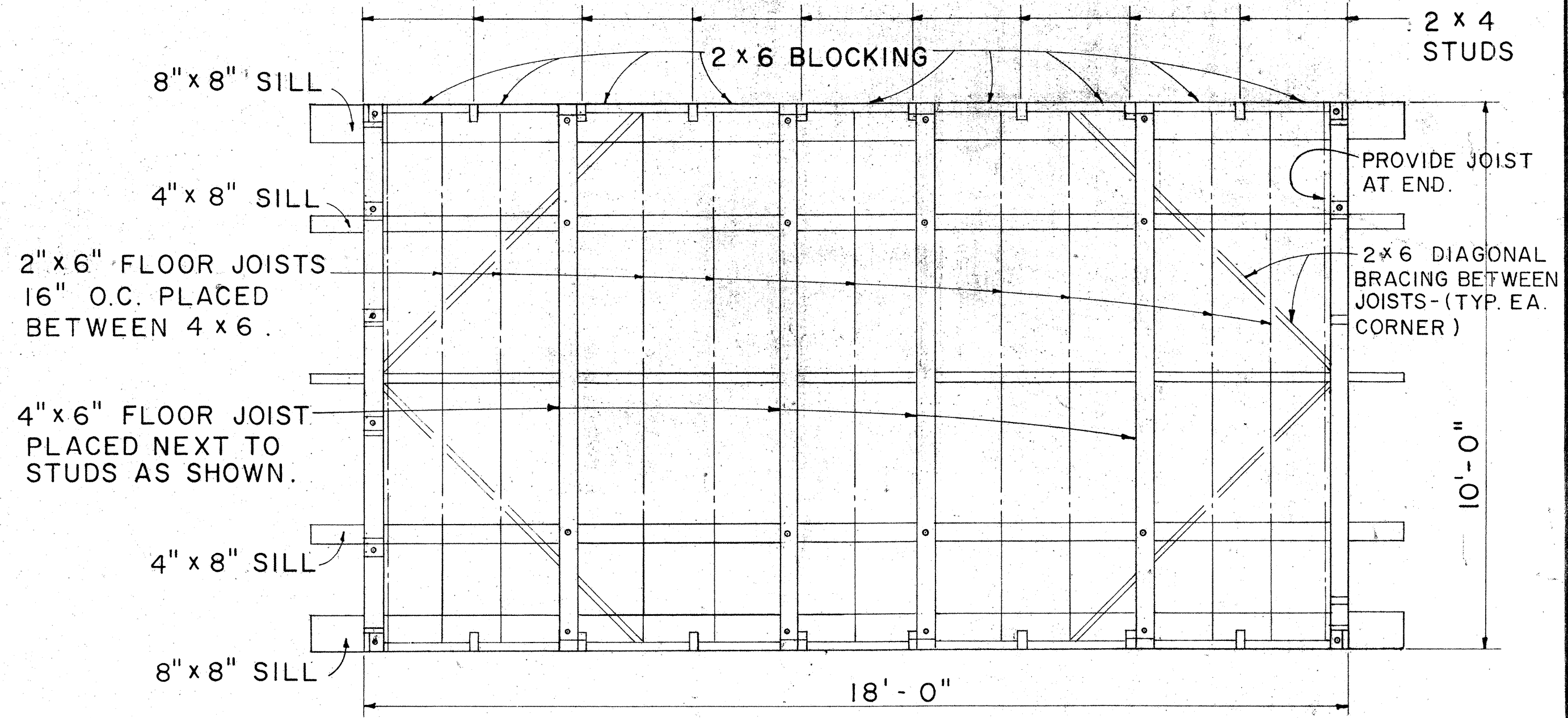
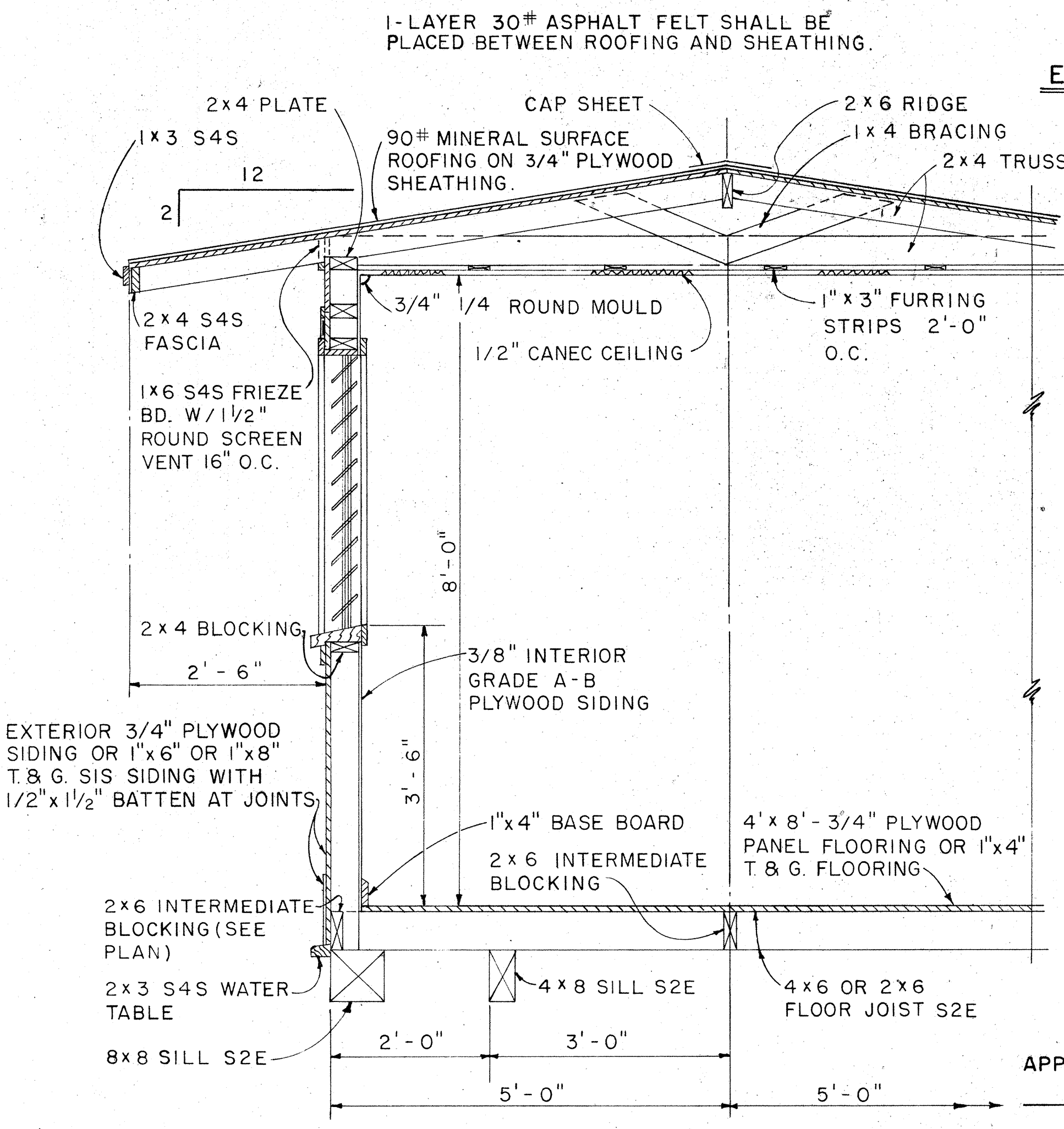
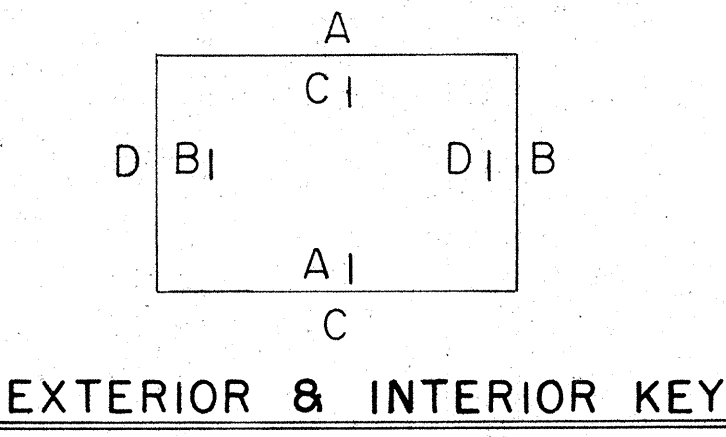
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

FIELD OFFICE

Scale: As Noted



- NOTE:
1. FLUORESCENT FIXTURE SHALL BE 48", 2 LAMP, 40 WATT, RAPID START.
 2. TELEPHONE AND WALL OUTLET 4'-0" ABOVE FLOOR.



NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

PROJECT SITE LABORATORY

Scale: As Noted

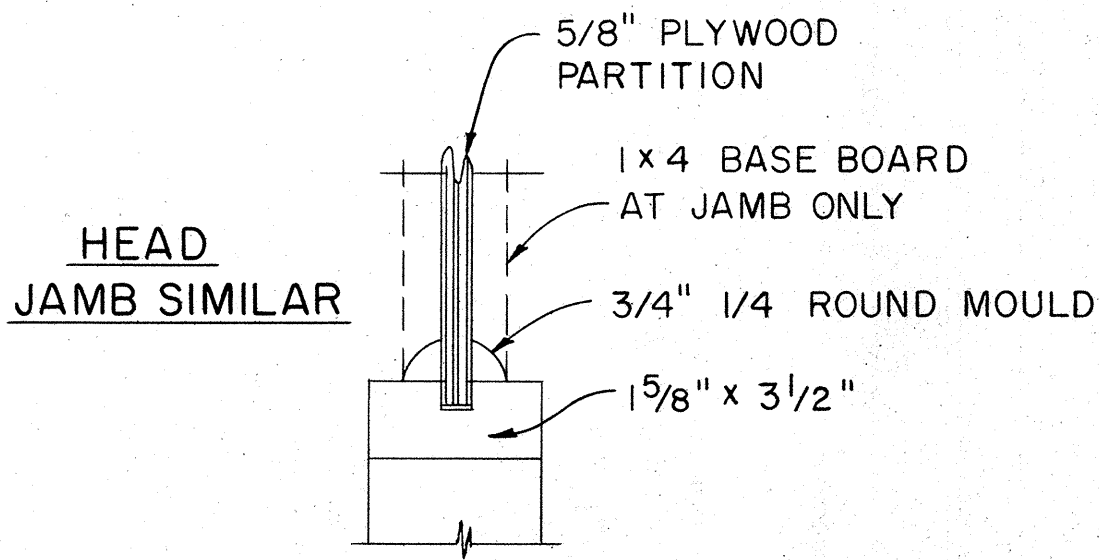
NOTE:
ALL 3/4" PLYWOOD SHALL BE EXTERIOR GRADE A-C OR BETTER.

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

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

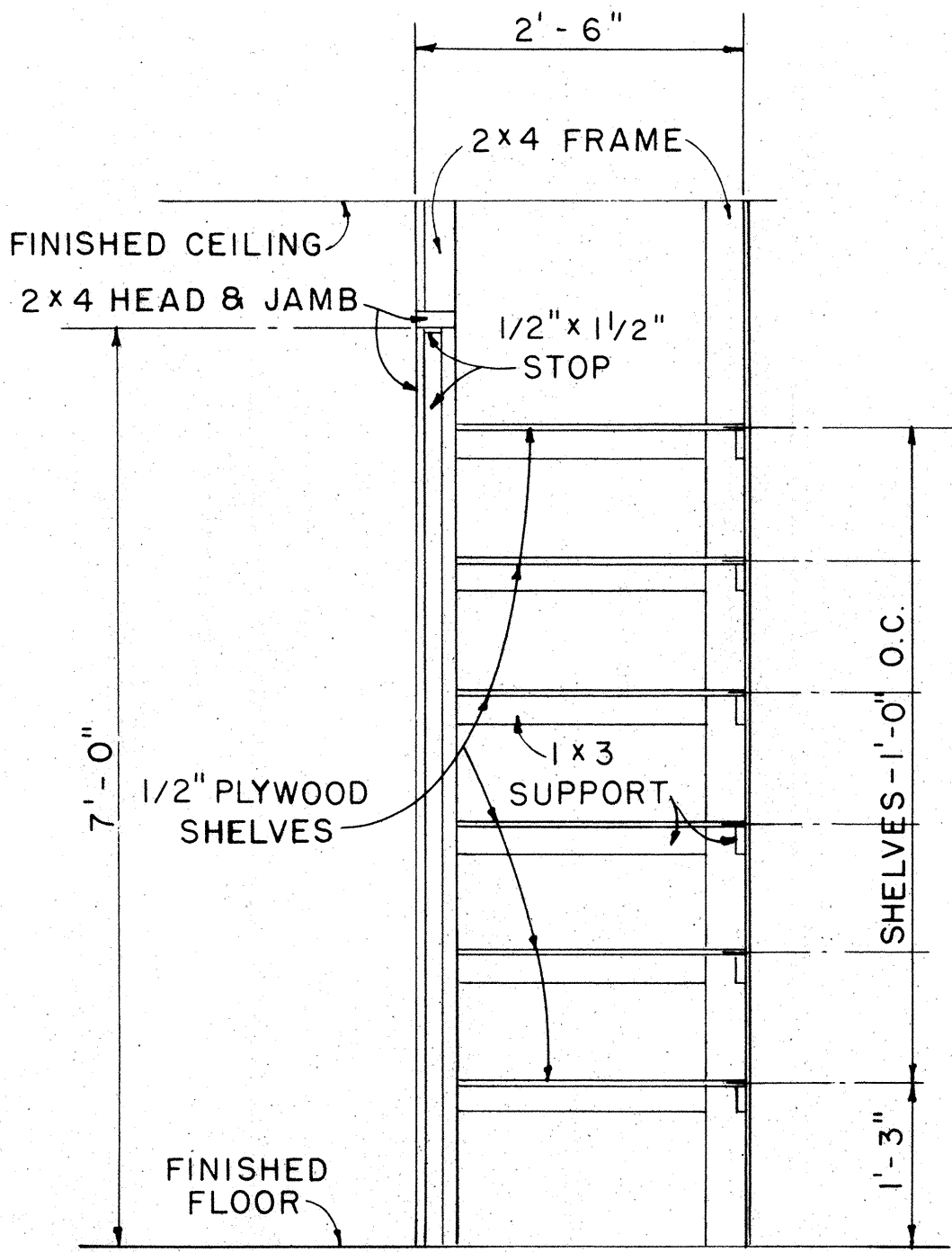
APPROVED:
[Signature]
ASSISTANT CHIEF, ENGINEERING
12-10-69
DATE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-011-2(11)	1973	31	87



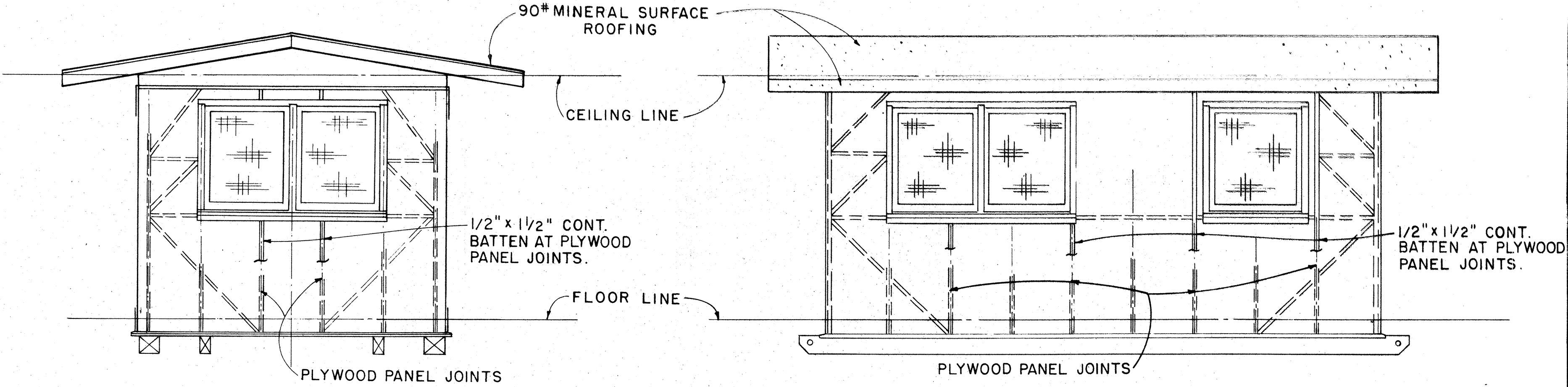
CASEMENT DETAIL

SCALE: 3" = 1'-0"



CABINET DETAIL

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

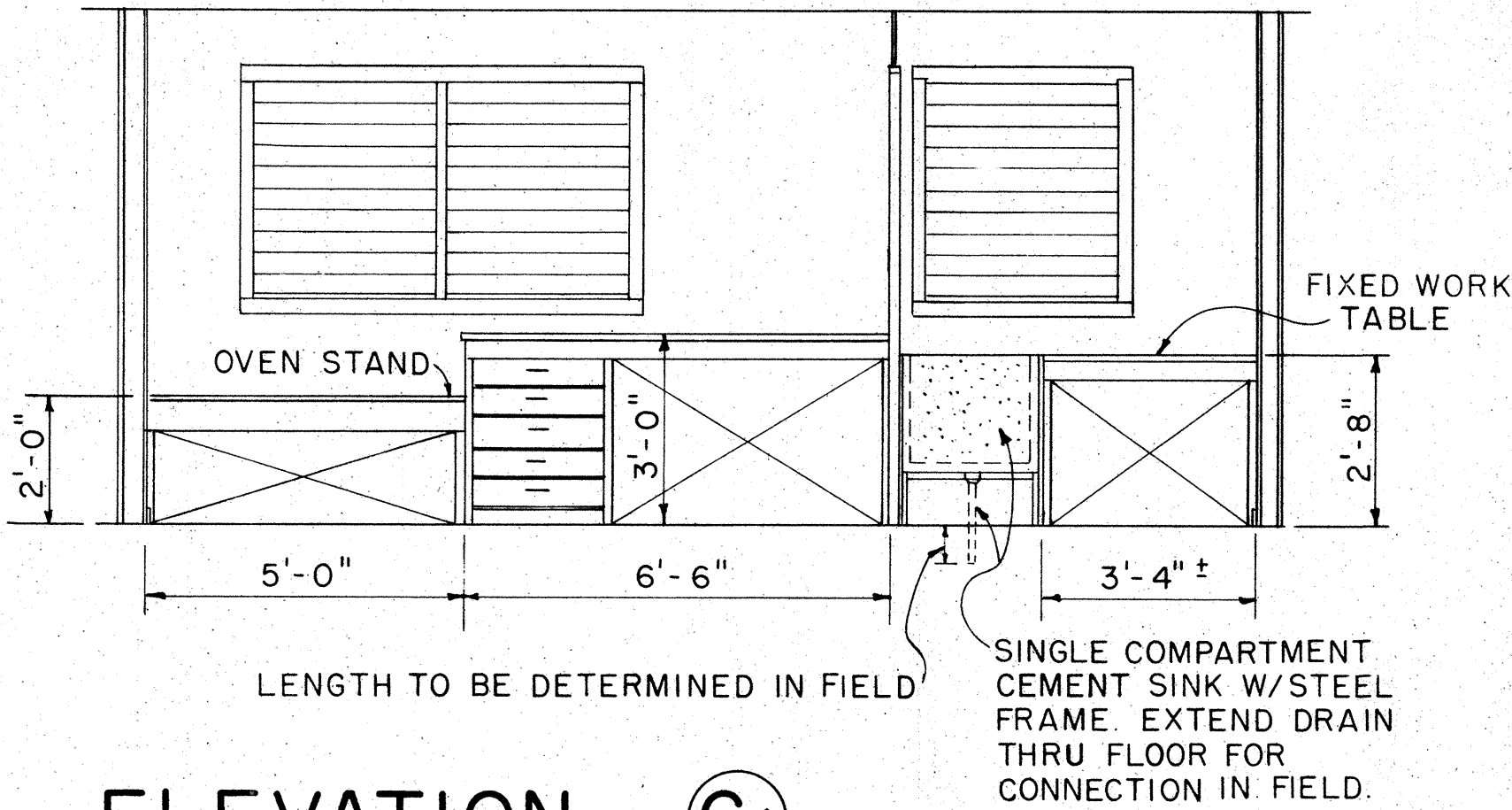


ELEVATION D

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

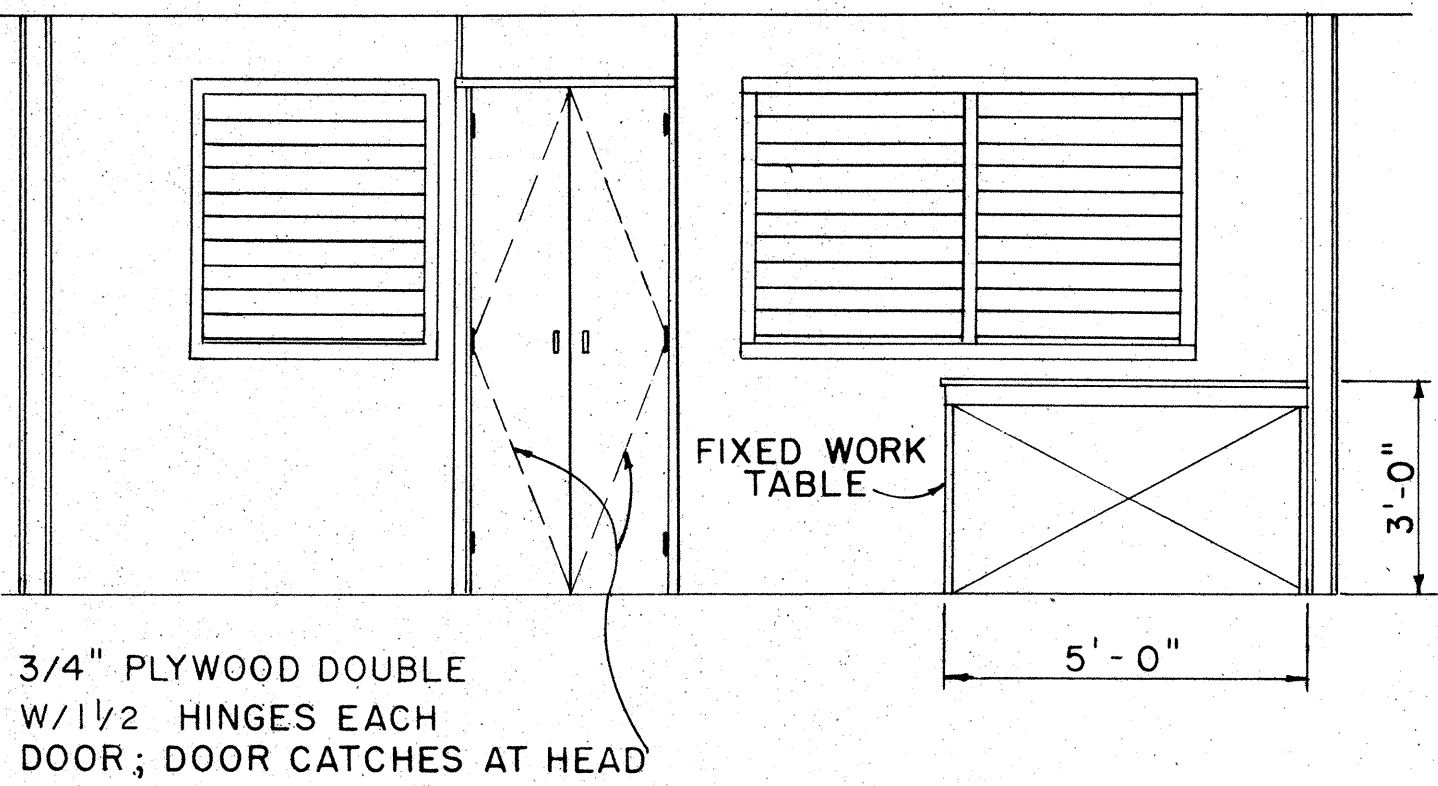
ELEVATION C

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



ELEVATION C1

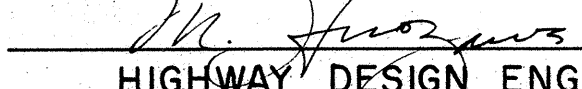
SCALE: 3/8" = 1'-0"

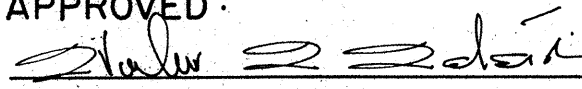


ELEVATION A1

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

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

APPROVAL RECOMMENDED:

HIGHWAY DESIGN ENGINEER
12-4-69
DATE

APPROVED:

ASSISTANT CHIEF, ENGINEERING
12-10-69
DATE

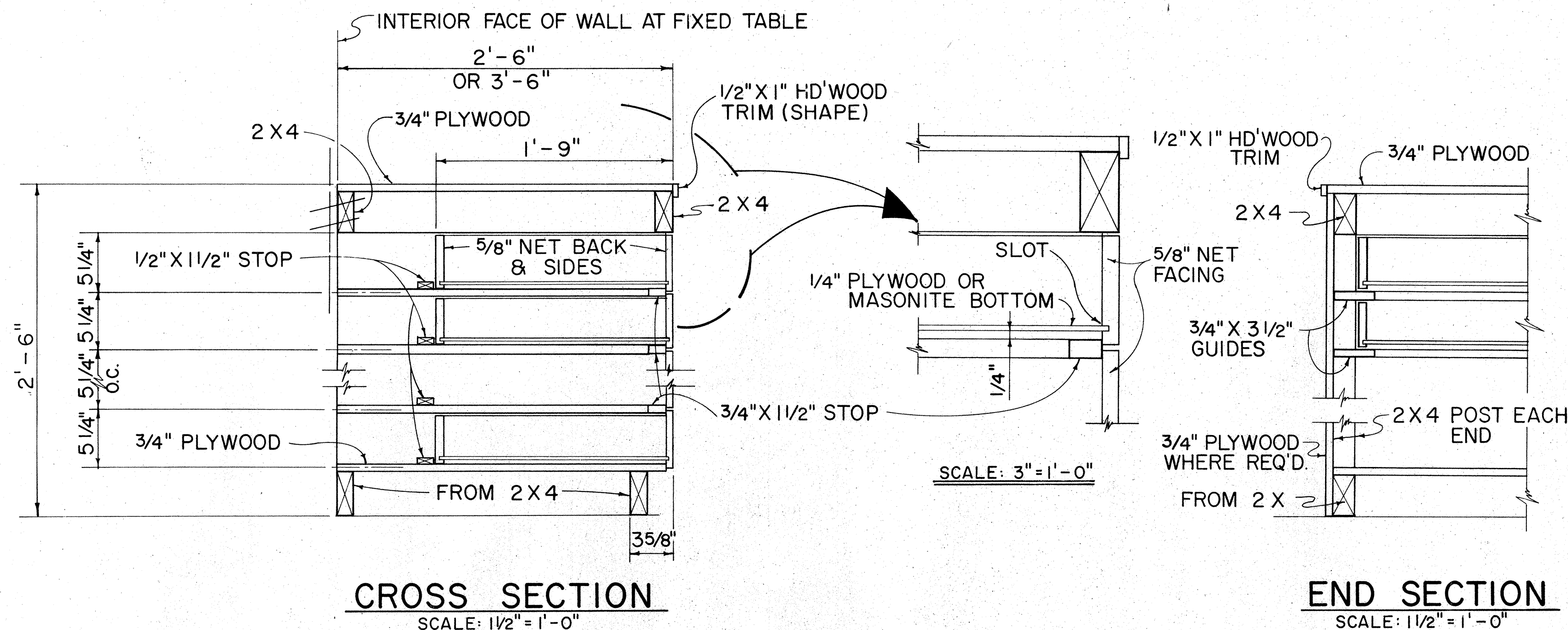
NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

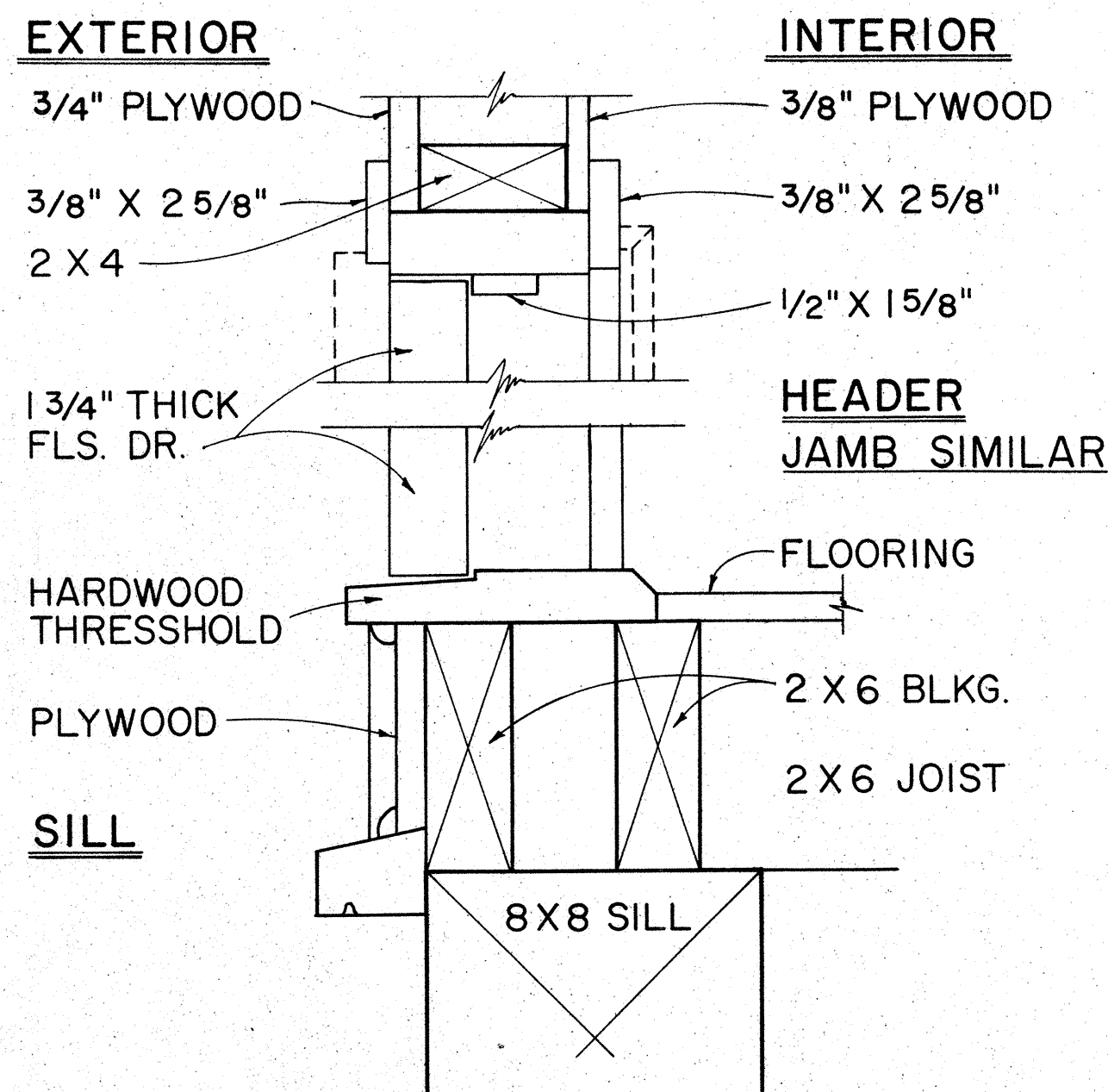
PROJECT SITE LABORATORY

Scale: As Noted
SHEET No. 8 OF 18 SHEETS DD 636.4

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	F-011-2(11)	1973	32	87

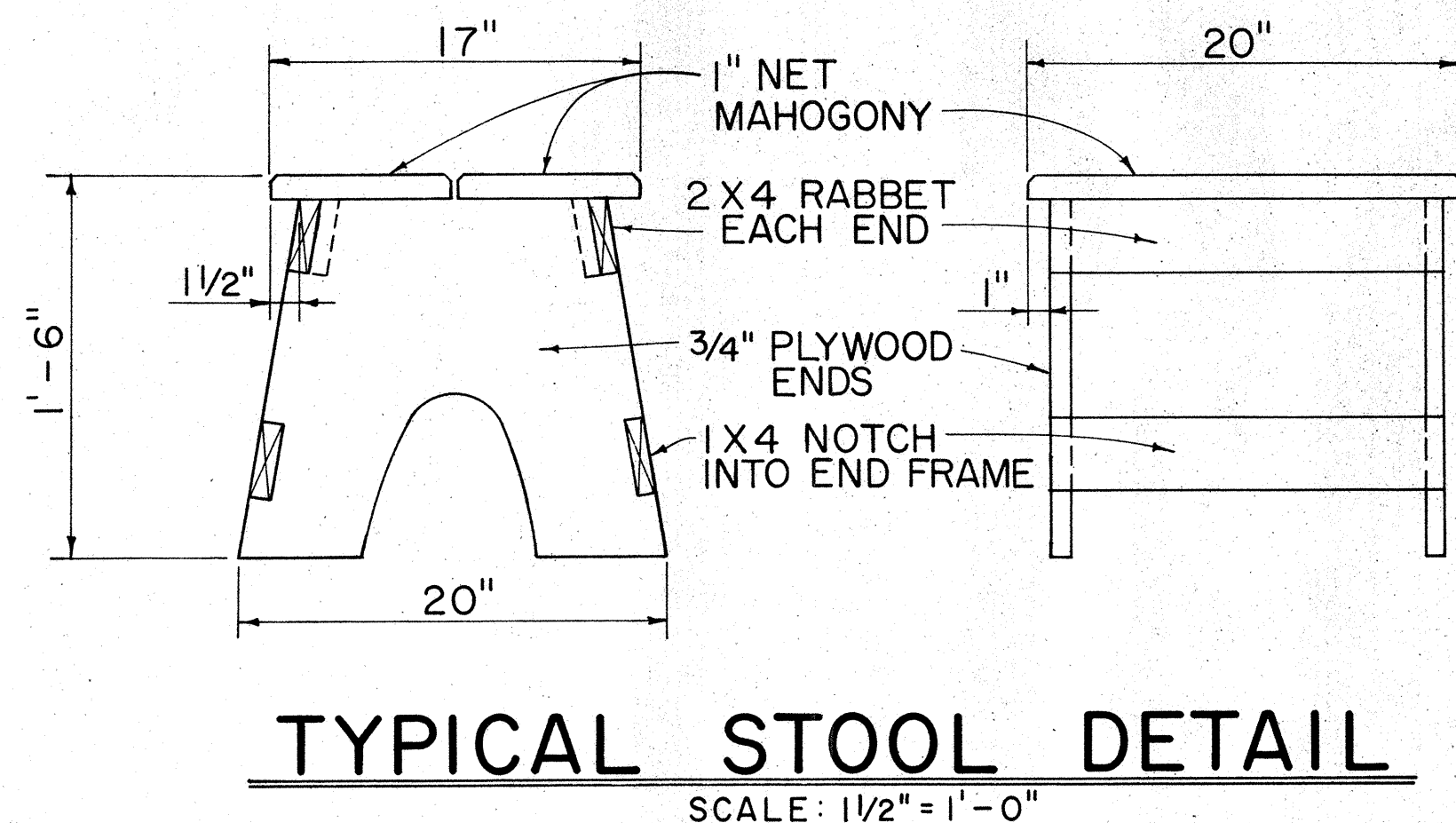


TYPICAL WORK TABLE DRAWER DETAIL

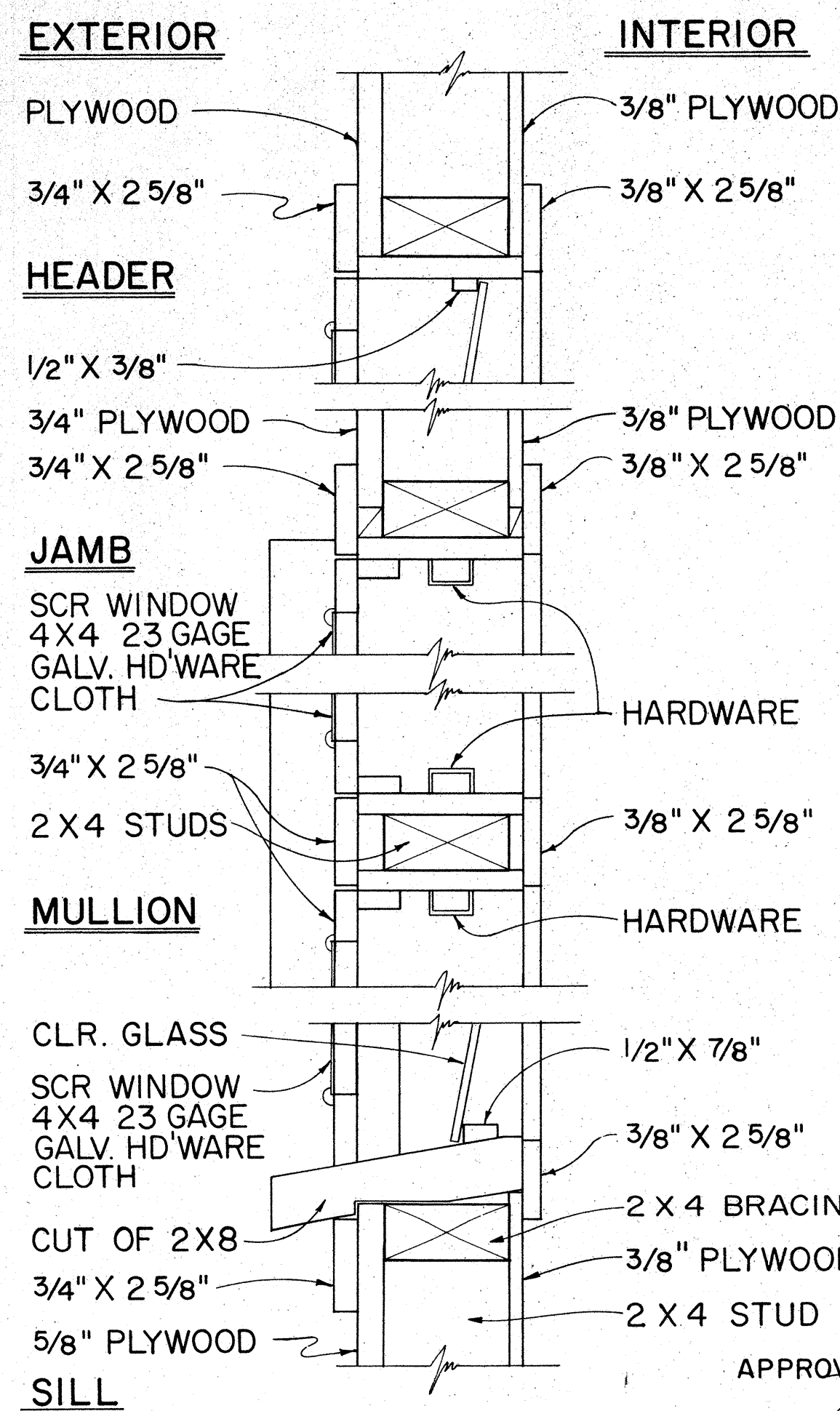


TYP. SWING OUT DOOR

TYPICAL SINGLE OR DOUBLE EXTERIOR DOOR DETAIL



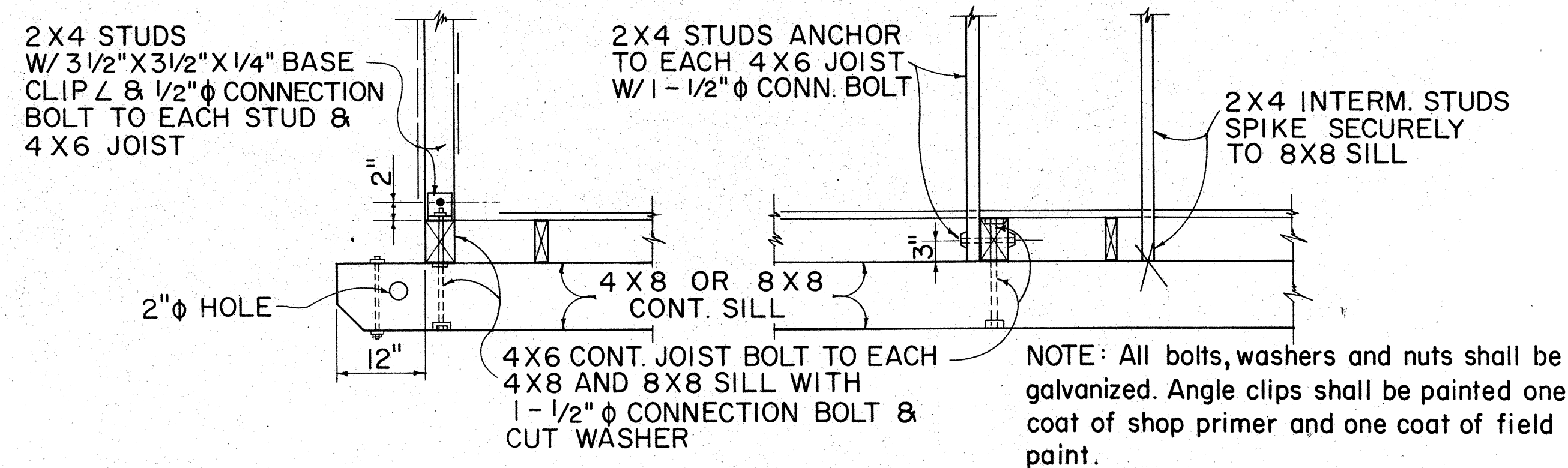
NOTE: CONTRACTOR MAY WITH THE APPROVAL OF THE ENGINEER FURNISH THE FIELD OFFICE OR PROJECT SITE LABORATORY WITH STOOLS OTHER THAN THE TYPE SHOWN IN THE DETAIL.



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

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

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



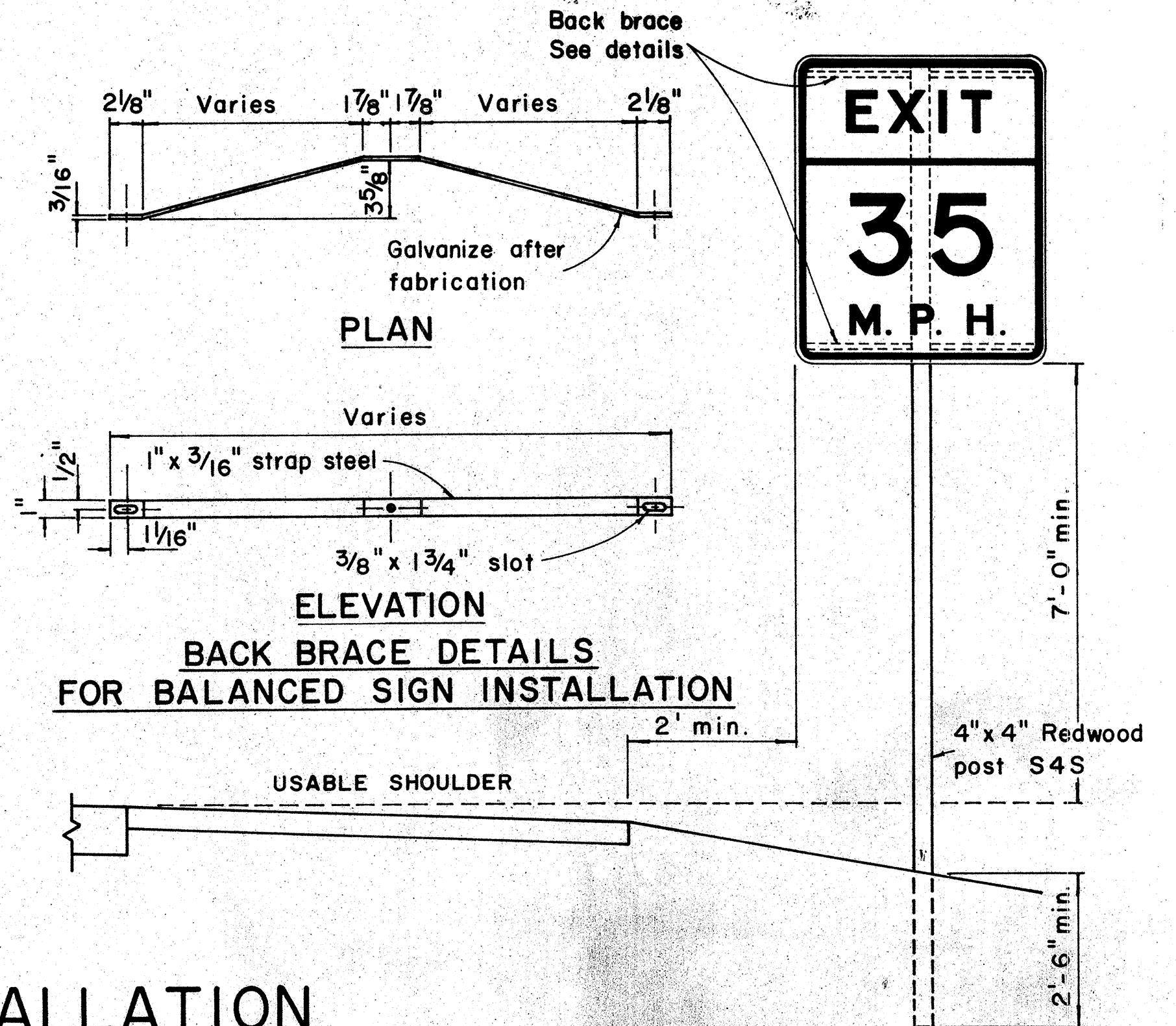
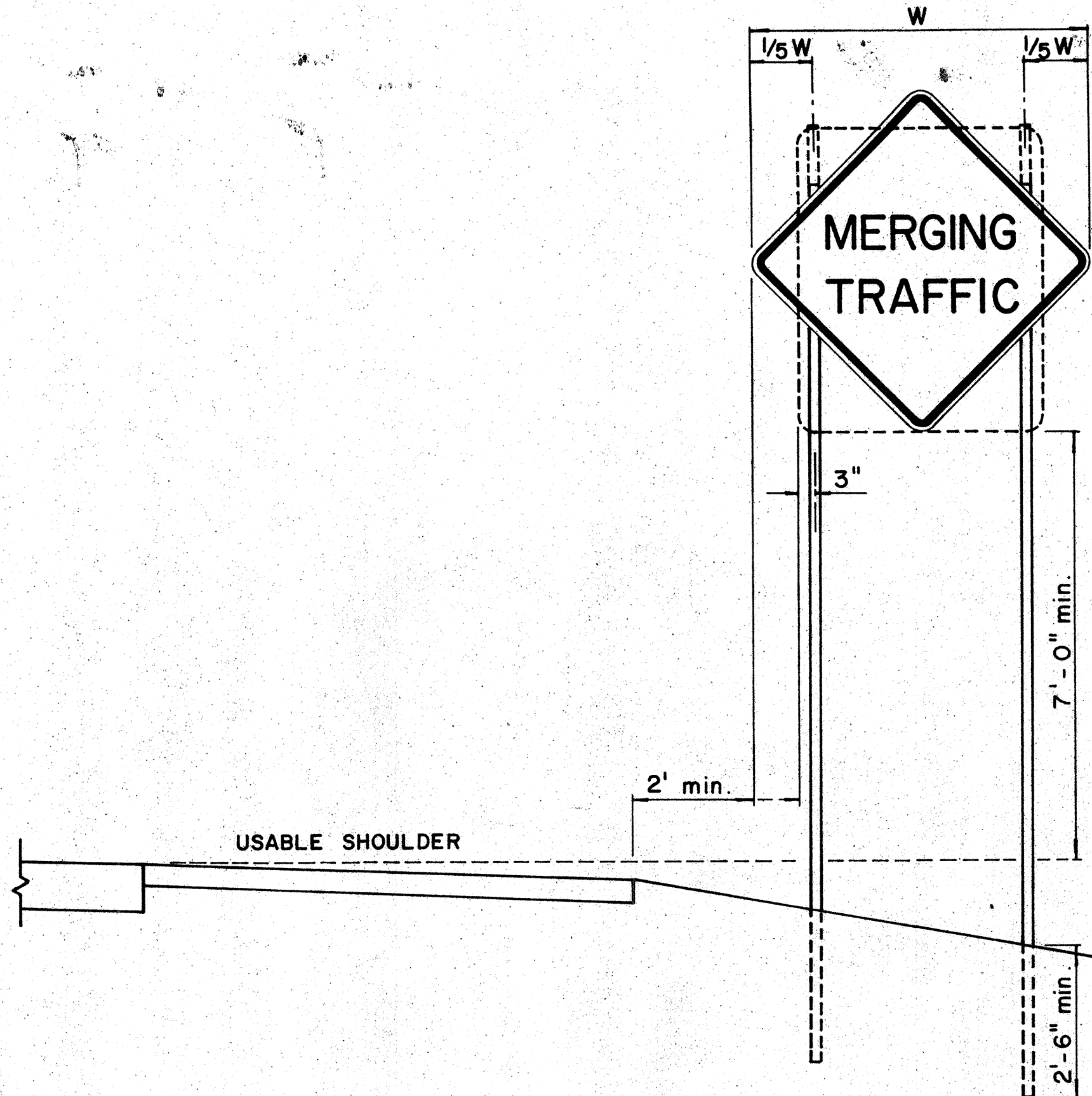
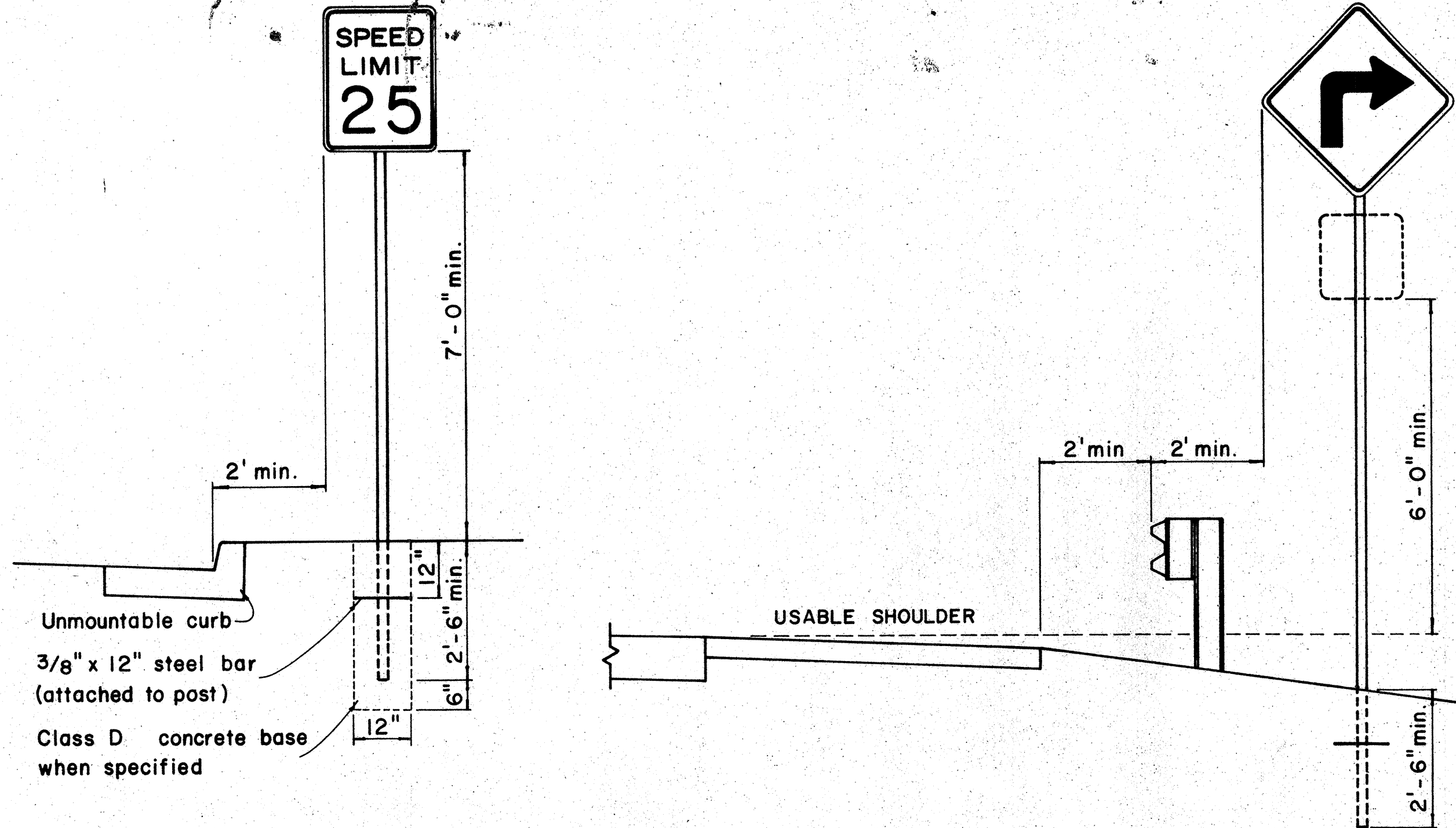
AT ENDS OF BLDG. ALONG SIDES OF BLDG.

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

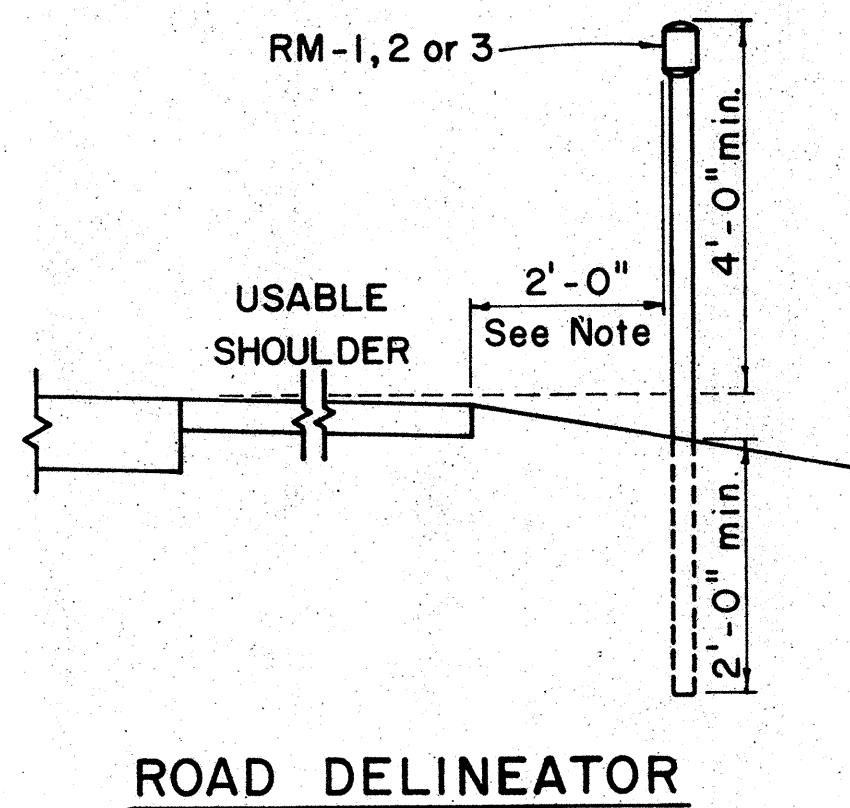
NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION FIELD OFFICE & PROJECT SITE LABORATORY Scale: As Noted	SHEET No. 9 OF 18 SHEETS DD 636.5
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-011-2(11)	1973	34	87

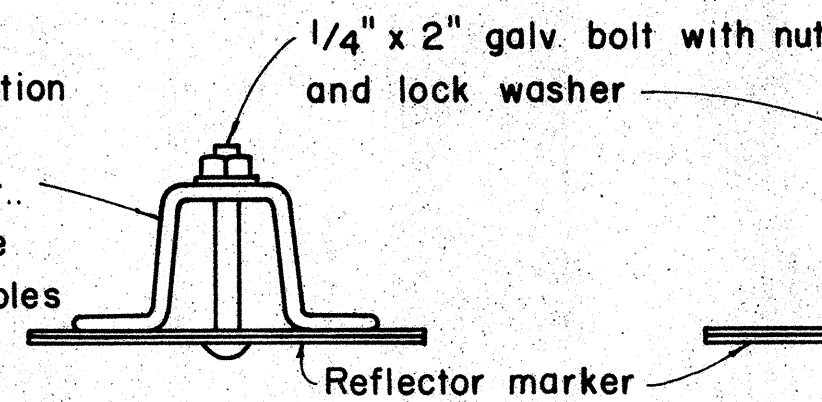


HEIGHT AND LATERAL LOCATION OF SIGNS - TYPICAL INSTALLATION



Galv. flanged channel
1/8" x 3 1/16" rolled section
post with a minimum
weight of 2 lbs. per ft.
Upper 2 ft. shall have
a single row of 3/8" holes
centered in the web at
1" o.c.

TYPICAL SECTION OF ROAD DELINEATOR



Galv. 1/2" x 1 1/2" square
tube post with a minimum
weight of 1.7 lbs per ft

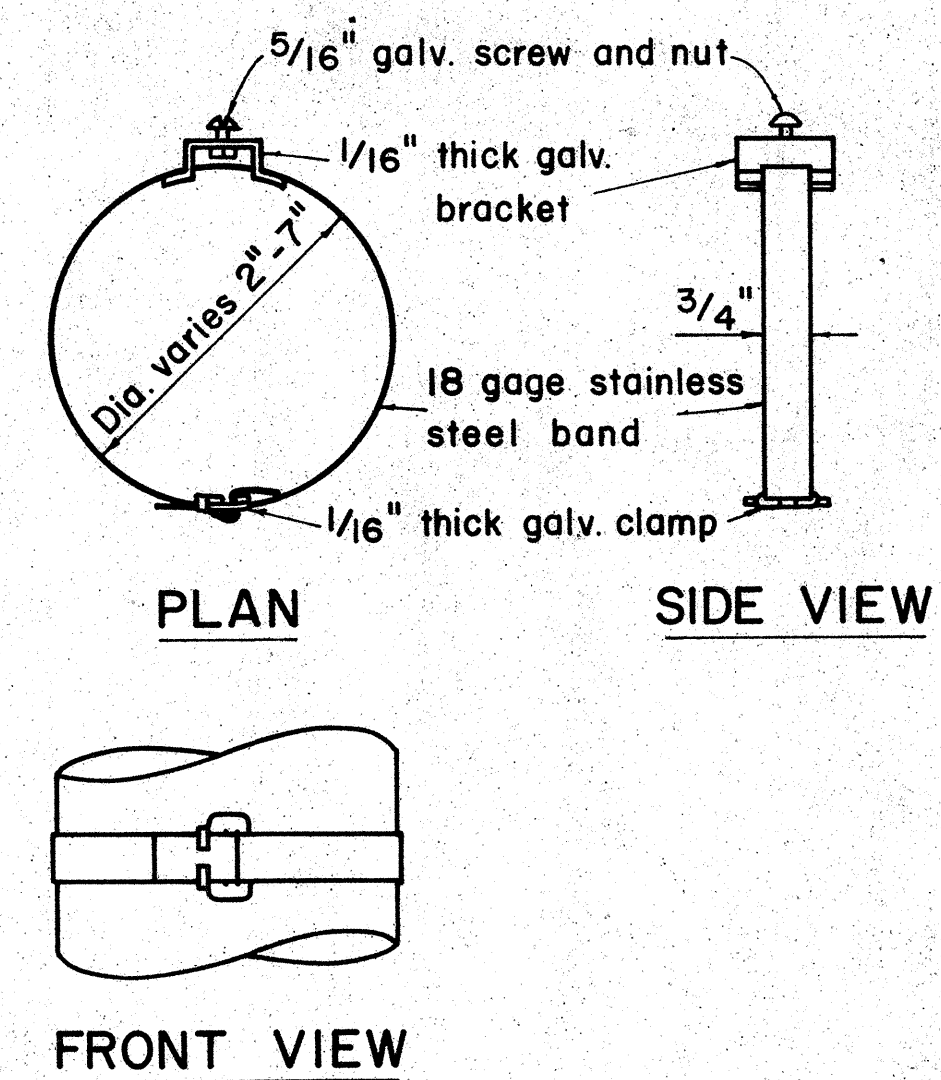
1/4" x 1/2" galv.
bolt with nut
and lock washer

1'-5" x 6" x 0.063" anodized
aluminum plate with 3/8"
holes drilled as shown

Galvanized post

Finished
grade

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. Ichi Tanaka 12/22/62
TRAFFIC ENGINEER DATE

APPROVED:
W. J. S. S. S. 12-20-69
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

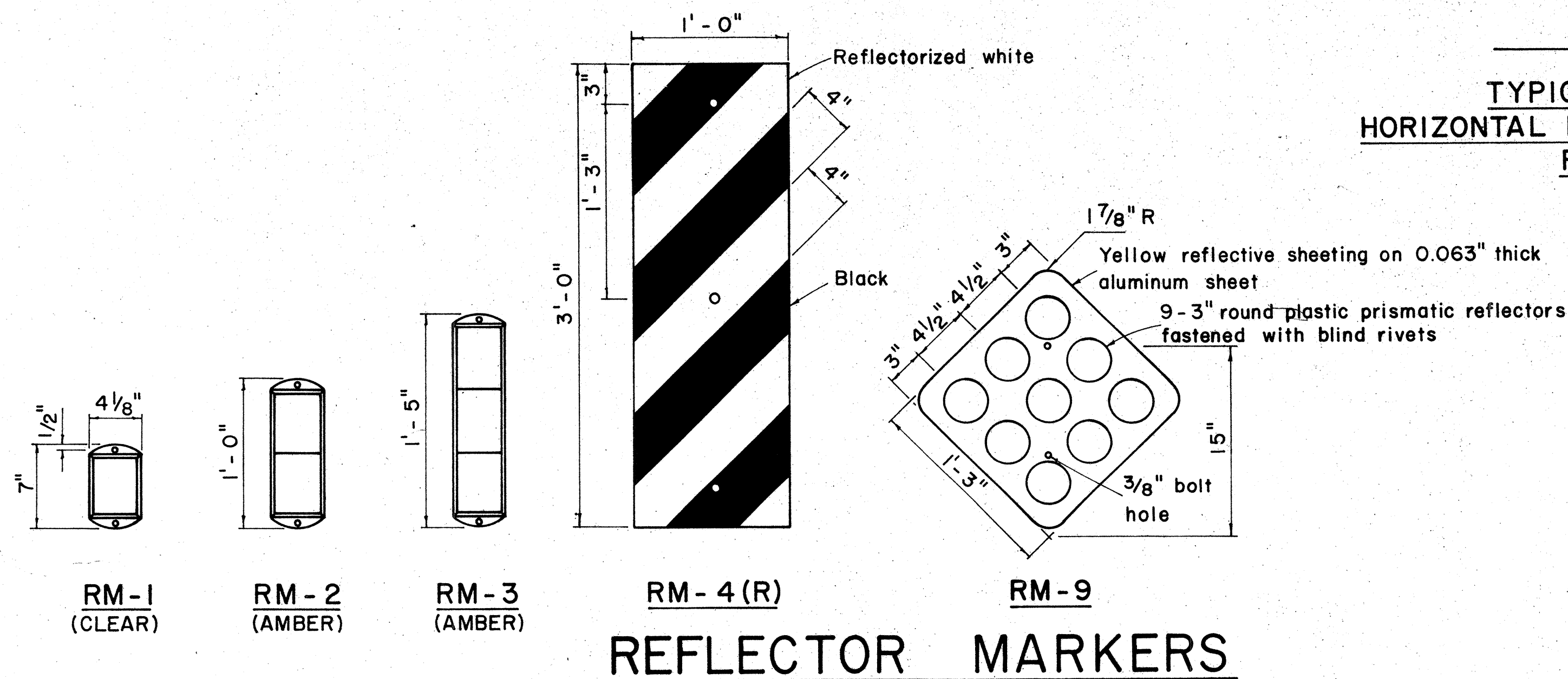
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
MISCELLANEOUS SIGN DETAILS

Not to scale March, 1968

SHEET No. 11 OF 18 SHEETS DT 100

DATE	
ORIGINAL PLAN	
NO. BOOK	
NO.	

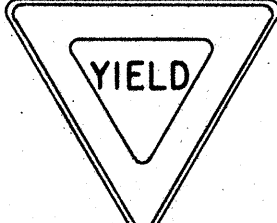


REFLECTOR MARKERS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-011-2(1)	1973	35	87



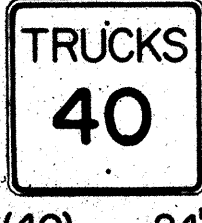
R1-1 30" x 30"
R1-1-A 36" x 36"
4-WAY
R1-3 12" x 6"
R1-3-A 18" x 9"



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



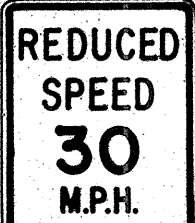
R2-1(50) 24" x 30"
R2-1(50)-A 48" x 60"



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"



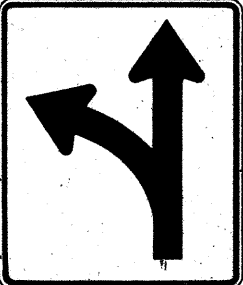
R3-3 24" x 24"
R3-3-A 48" x 48"



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



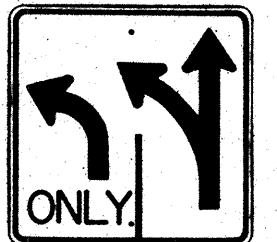
R3-5(L) 30" x 36"
R3-5(L)-A 48" x 60"



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



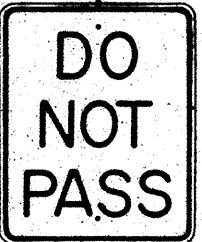
R3-7(R) 30" x 30"
R3-7(R)-A 48" x 48"



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



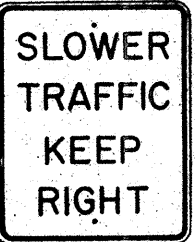
R3-9 24" x 30"



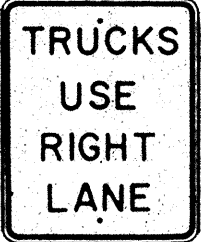
R4-1 24" x 30"



R4-2 24" x 30"



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



R4-5 24" x 30"



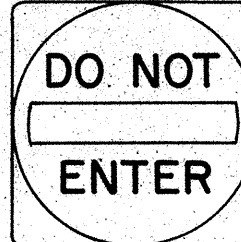
R4-6(500) 24" x 30"



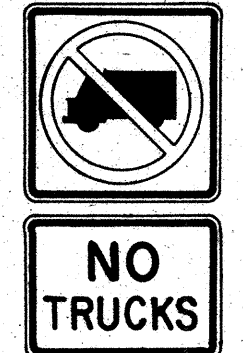
R4-7 24" x 30"
24" x 18"



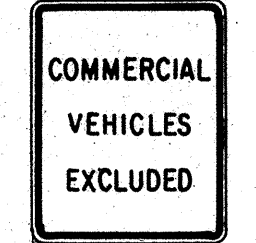
R4-8 24" x 30"
24" x 18"



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



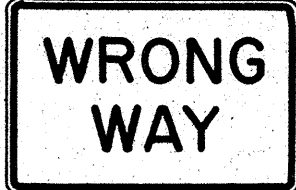
R5-2 24" x 24"
24" x 18"



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"



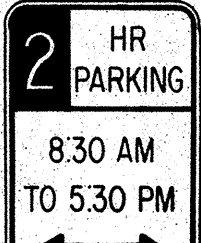
R7-1 12" x 18"
R7-1-A 24" x 30"



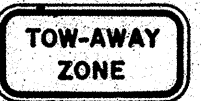
R7-4 12" x 18"
R7-4-A 24" x 30"



R7-107(R) 12" x 18"



R7-108 12" x 18"



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



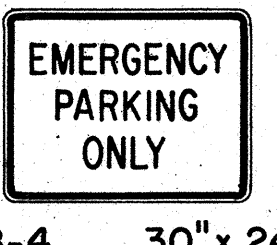
R8-1 24" x 30"



R8-2 24" x 30"



R8-3 24" x 30"



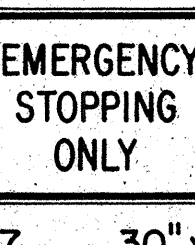
R8-4 30" x 24"
R8-4-A 48" x 36"



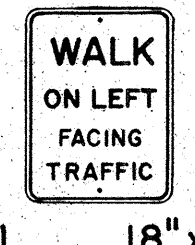
R8-5 24" x 30"



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"



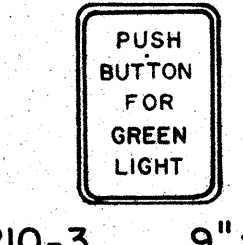
R9-4 18" x 24"



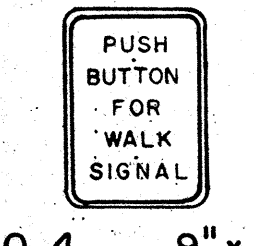
R10-1 12" x 18"



R10-2 12" x 18"



R10-3 9" x 12"



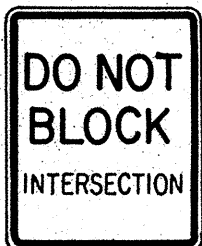
R10-4 9" x 12"



R10-5 24" x 30"



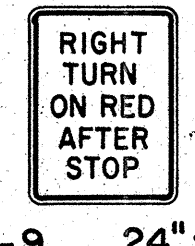
R10-6 24" x 36"



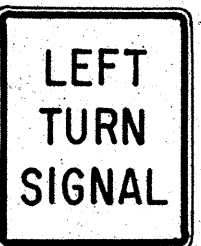
R10-7 24" x 30"



R10-8 24" x 30"



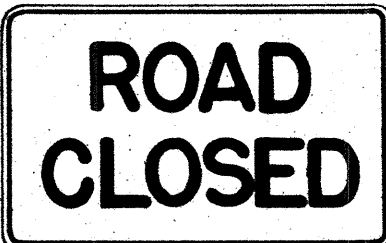
R10-9 24" x 30"



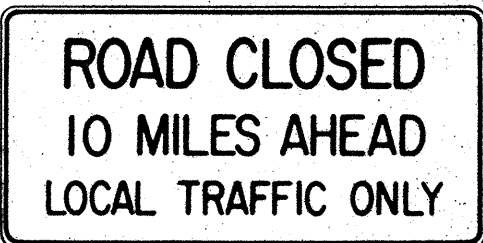
R10-10 24" x 30"



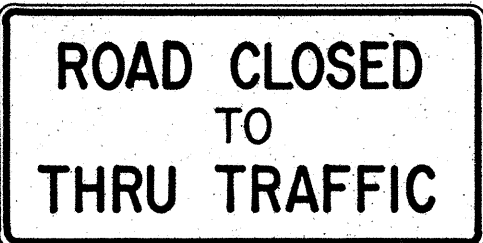
R11-1 24" x 30"



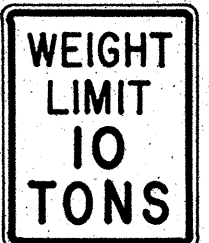
R11-2 48" x 30"



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:
Eishi Tanaka 3/17/72
TRAFFIC ENGINEER DATE

APPROVED:
Robert J. ... 3-20-72
ASSISTANT CHIEF, ENGINEERING DATE

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

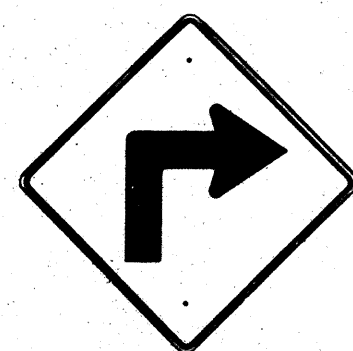
STANDARD DETAILS
REGULATORY SIGNS

NOT TO SCALE

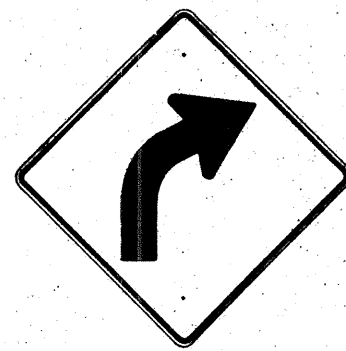
SHEET No. 12 OF 18 SHEETS DT 101

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

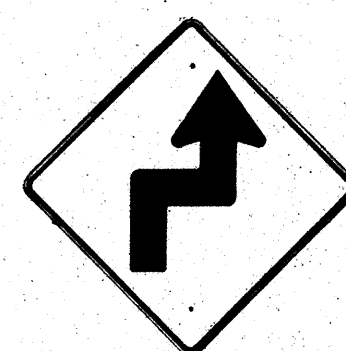
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-011-2(11)	1973	30	87



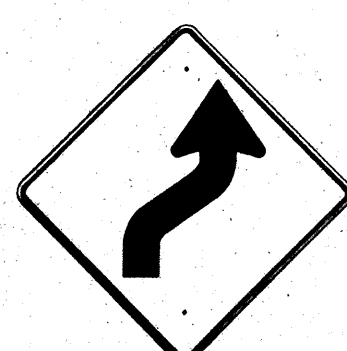
W1-1(R) 30"x30"
W1-1(R)-A 48"x48"



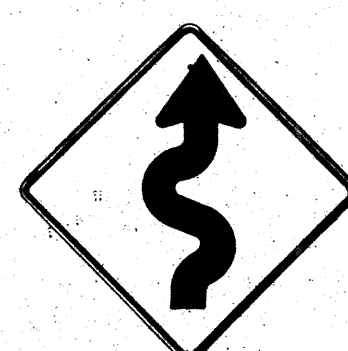
W1-2(R) 30"x30"
W1-2(R)-A 48"x48"



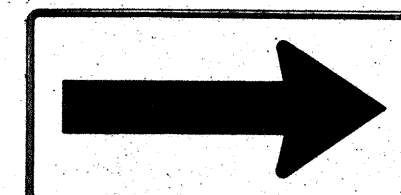
W1-3(R) 30"x30"
W1-3(R)-A 48"x48"



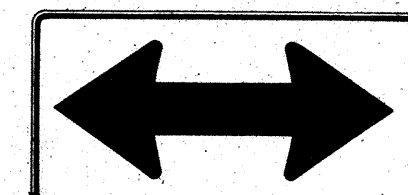
W1-4(R) 30"x30"
W1-4(R)-A 48"x48"



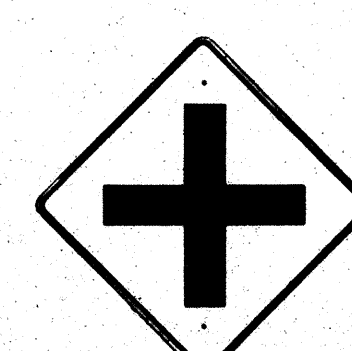
W1-5(R) 30"x30"
W1-5(R)-A 48"x48"



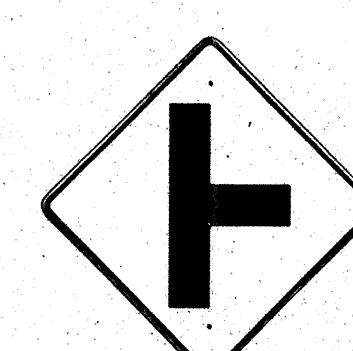
W1-6 48"x24"



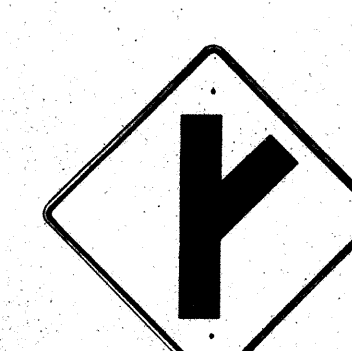
W1-7 48"x24"



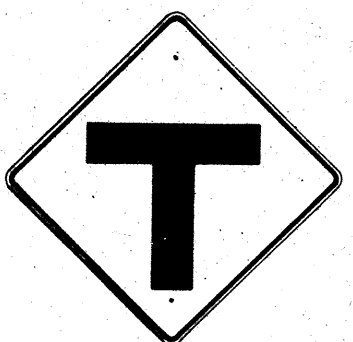
W2-1 30"x30"
W2-1-A 48"x48"



W2-2 30"x30"
W2-2-A 48"x48"



W2-3(R) 30"x30"
W2-3(R)-A 48"x48"



W2-4 30"x30"
W2-4-A 48"x48"



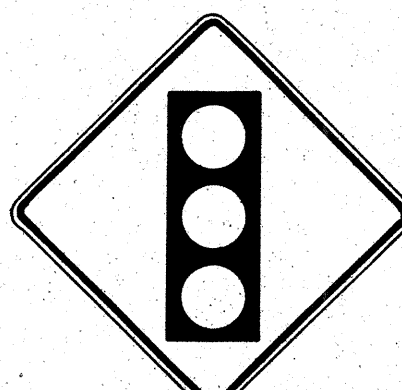
W2-5 30"x30"
W2-5-A 48"x48"



W3-1 30"x30"
W3-1-A 36"x36"



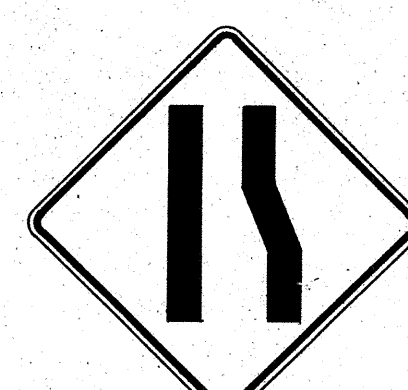
W3-2 30"x30"
W3-2-A 36"x36"



SIGNAL
AHEAD
W3-3 36"x36"
24"x18"



MERGE
W4-1(R) 30"x30"
24"x18"
W4-1(R)-A 48"x48"
24"x18"



W4-2(R) 36"x36"
W4-2(R)-A 48"x48"



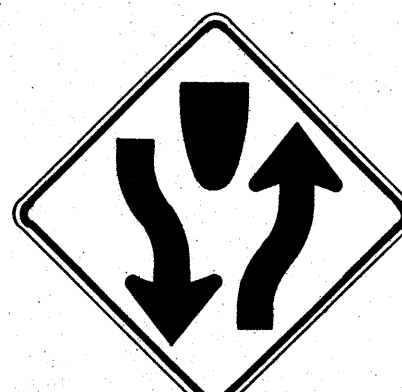
W5-1 36"x36"



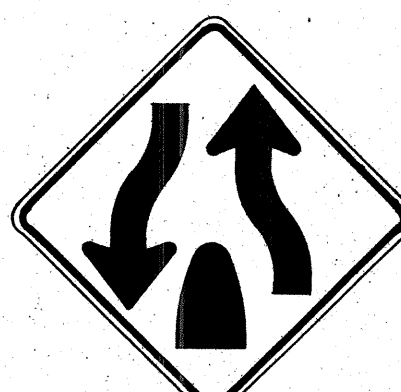
W5-2 30"x30"
W5-2-A 36"x36"



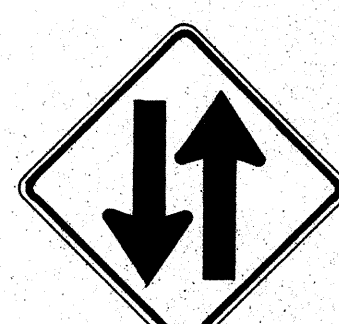
W5-3 36"x36"



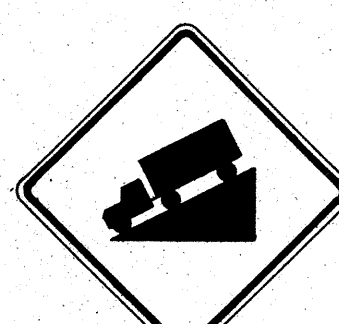
DIVIDED
HIGHWAY
W6-1 36"x36"
24"x18"



DIVIDED
HIGHWAY
ENDS
W6-2 36"x36"
24"x18"



TWO WAY
TRAFFIC
W6-3 30"x30"
24"x18"
W6-3-A 36"x36"
24"x18"
W6-3-B 48"x48"
24"x18"



HILL
W7-1 30"x30"
24"x18"
W7-1-A 36"x36"
24"x18"



USE LOW
GEAR
W7-2 24"x18"



W8-1 30"x30"
W8-1-A 36"x36"



W8-2 30"x30"
W8-2-A 36"x36"



W8-3 30"x30"
W8-3-A 36"x36"



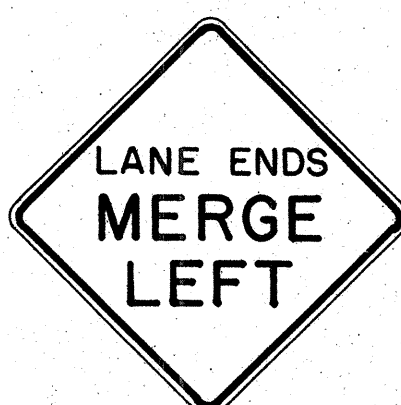
W8-4 30"x30"
W8-4-A 36"x36"



SLIPPERY
WHEN WET
W8-5 30"x30"
24"x18"
W8-5-A 36"x36"
24"x18"



W9-1(R) 30"x30"
W9-1(R)-A 36"x36"
W9-1(R)-B 48"x48"



W9-2(L) 36"x36"
W9-2(L)-A 48"x48"



W10-1 36" Diameter



BIKE
XING
W11-1 30"x30"
24"x18"
W11-1-A 36"x36"
24"x18"



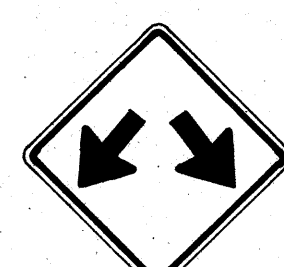
PED
XING
W11-2 30"x30"
24"x18"
W11-2-A 36"x36"
24"x18"



CATTLE
XING
W11-4 30"x30"
24"x18"
W11-4-A 36"x36"
24"x18"



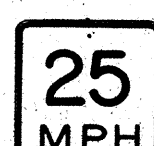
FARM
MACHINERY
W11-5 30"x30"
24"x18"
W11-5-A 36"x36"
24"x18"



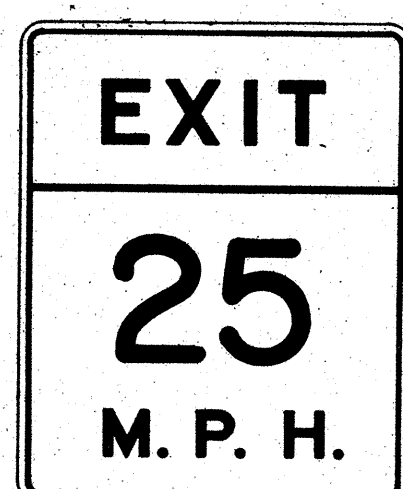
W12-1 24"x24"
W12-1-A 36"x36"
W12-1-B 48"x48"



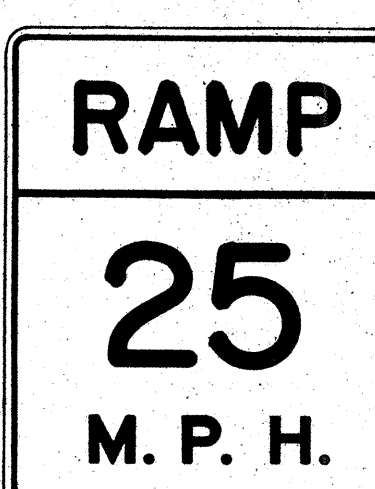
LOW
CLEARANCE
W12-2(12'-6") 36"x36"
24"x18"



W13-1(25) 18"x18"
W13-1(25)-A 24"x24"



W13-2(25) 48"x60"



W13-3(25) 48"x60"



W14-1 30"x30"



W14-3 36"x48"x48"

GENERAL NOTES

1. Sign details shall conform to the FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," 1971, and "Standard Highway Signs."

2. All warning signs shall be reflectorized unless otherwise specified.

3. All warning signs shall have 3/8" bolt holes drilled at appropriate locations.

4. Numerals in () indicates numerals to be inserted for sign message. (R) or (L) indicates right or left.

5. Signs prefixed with "CW" on the plans shall indicate orange and black construction signs.

APPROVAL RECOMMENDED:
TRAFFIC ENGINEER

3/17/12
DATE

APPROVED:
ASSISTANT CHIEF, ENGINEERING

3-20-12
DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 102 Approved 12-30-69	H.T.	3/20/12

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS WARNING SIGNS

NOT TO SCALE

SHEET No. 13 OF 18 SHEETS DT 102

36

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-011-2(11)	1973	37	87



CW20-1a 48" x 48"



CW20-2d 48" x 48"



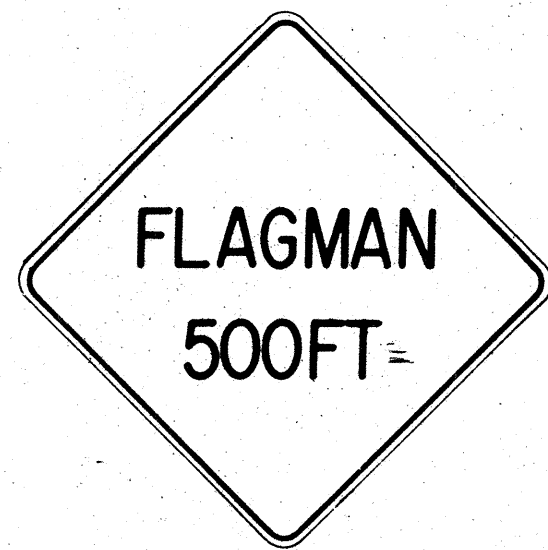
CW20-3b 48" x 48"



CW20-4d 48" x 48"



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



CW20-7c 48" x 48"



CW21-1 30" x 30"



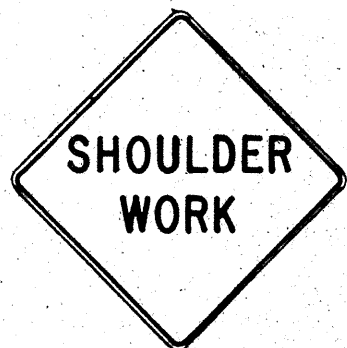
CW21-2 30" x 30"



CW21-3 36" x 36"



CW21-4 36" x 36"



CW21-5 30" x 30"



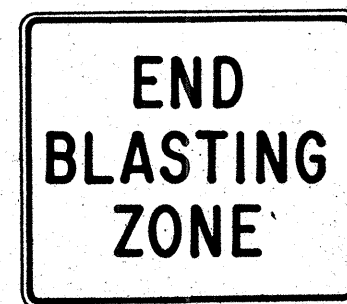
CW21-6 30" x 30"



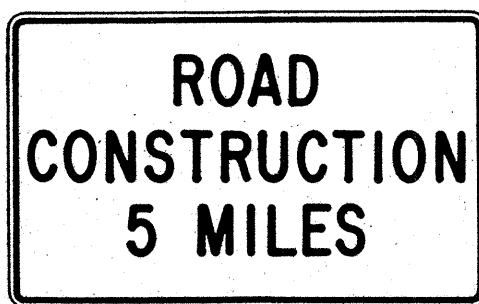
CW22-1b 48" x 48"



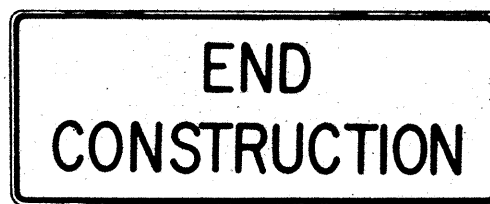
CW22-2 42" x 36"



CW22-3 42" x 36"



CG20-1(5) 60" x 36"



CG20-2 60" x 24"



CM4-9(R) 30" x 24"



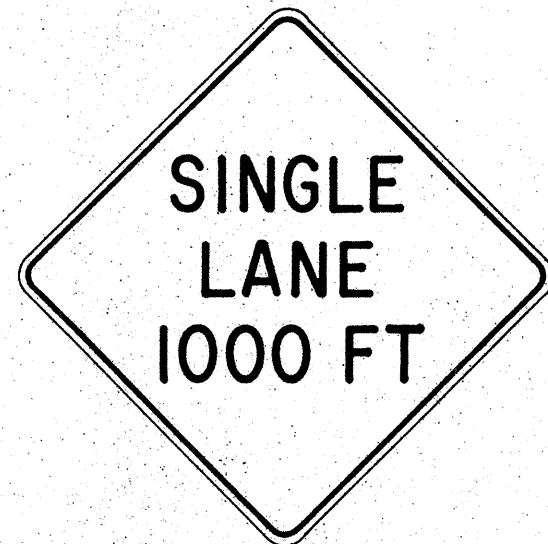
CM4-10(R) 48" x 18"



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

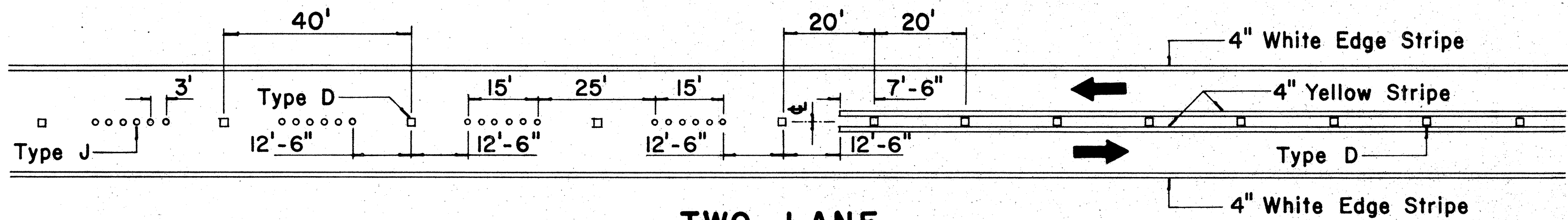
APPROVAL RECOMMENDED:
Erich Tanaka 3/21/72
TRAFFIC ENGINEER DATE

APPROVED:
Arthur Sakai 3/23/72
ASSISTANT CHIEF, ENGINEERING DATE

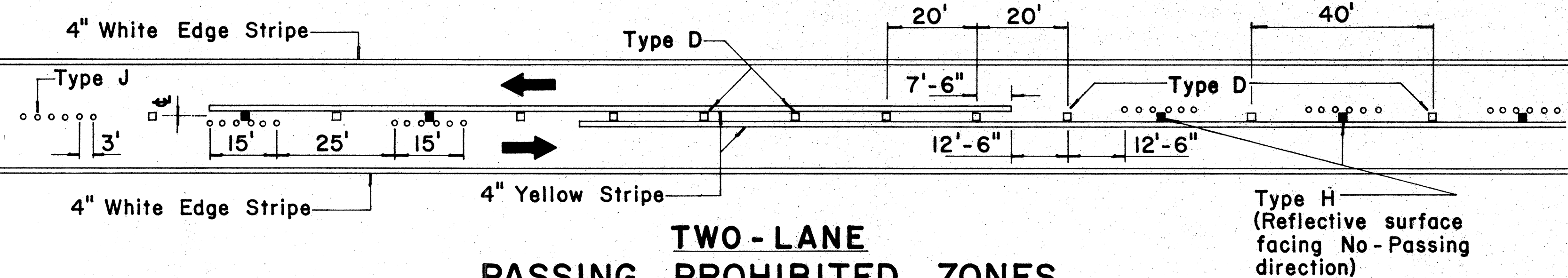
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
STANDARD DETAILS CONSTRUCTION SIGNS
NOT TO SCALE
SHEET No. 14 OF 18 SHEETS DT 104

DESIGNED BY	DATE
CHECKED BY	
NOTED BY	
PLANNED BY	
ORIGINAL FILED	
NOTE BOOK	
No.	

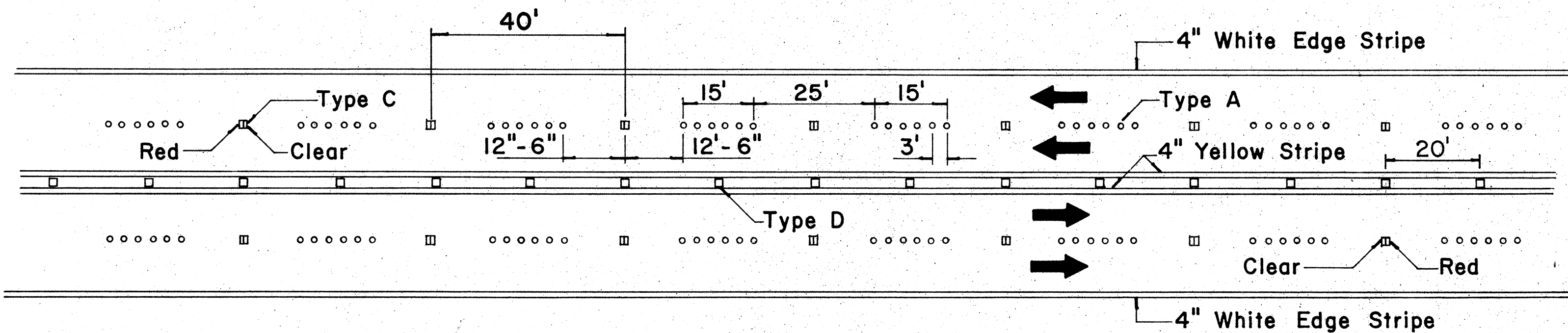
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-011-2(11)	1973	38	87



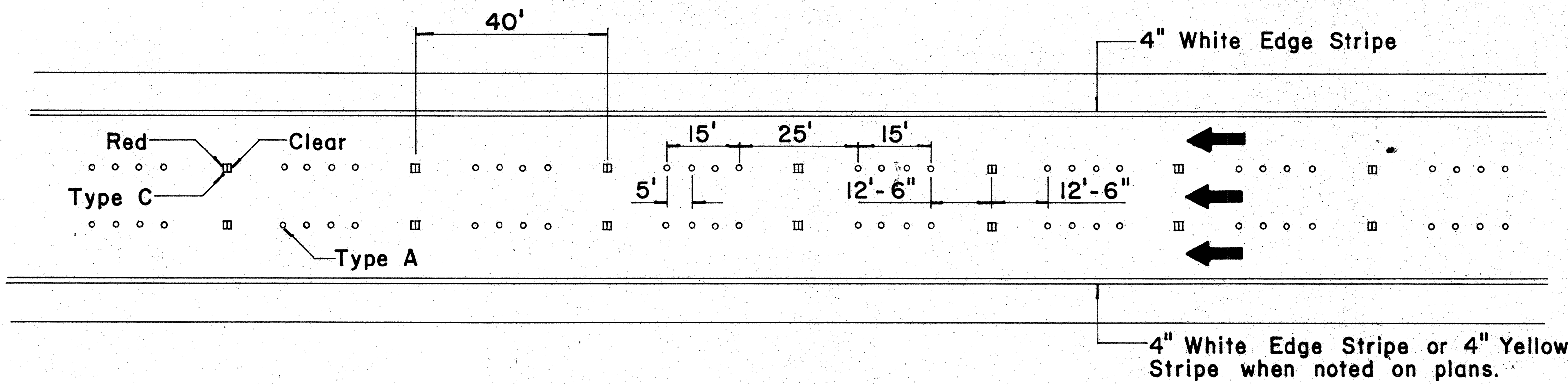
**TWO - LANE
PASSING PERMITTED AND PASSING PROHIBITED**



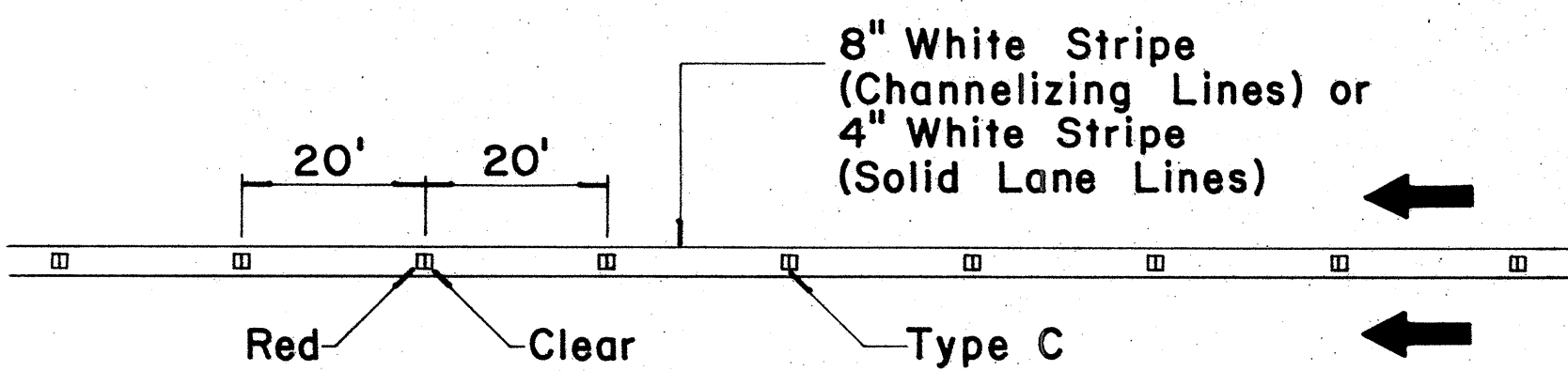
**TWO - LANE
PASSING PROHIBITED ZONES**



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

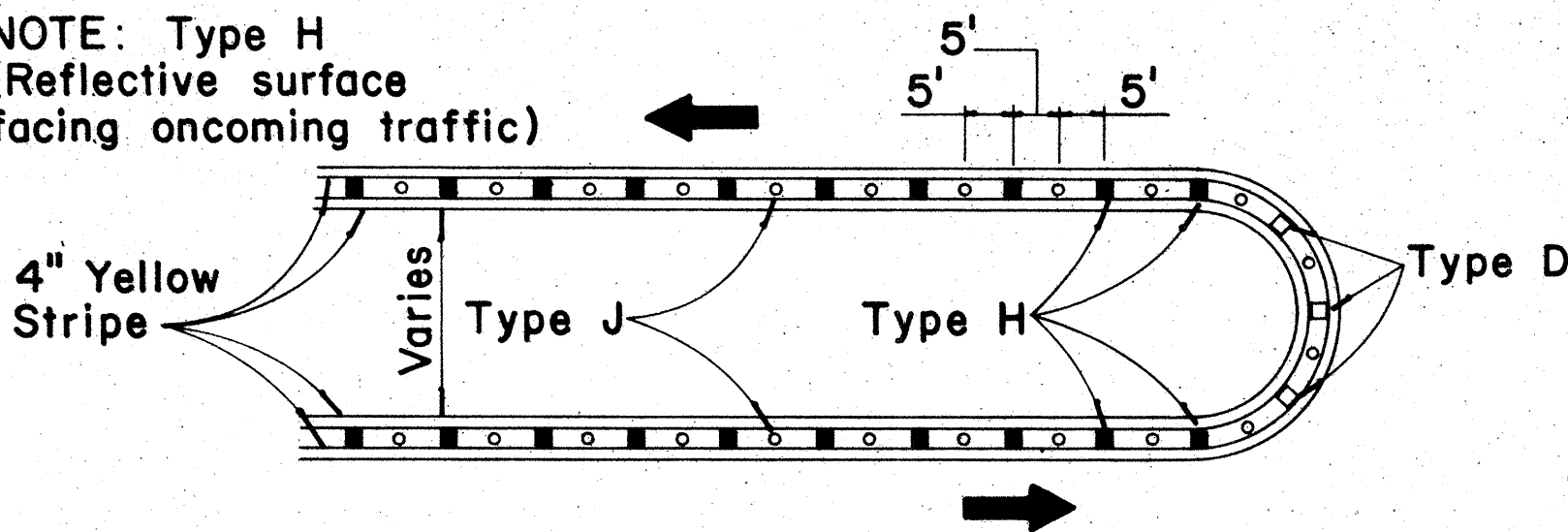


FREEWAY LANE LINES



**CHANNELIZING LINES
OR SOLID LANE LINES**

NOTE: Type H
(Reflective surface
facing oncoming traffic)



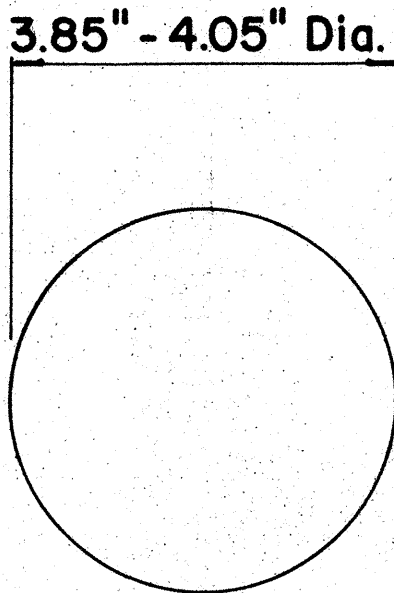
MEDIAN NOSE DELINEATION

TWO - LANE

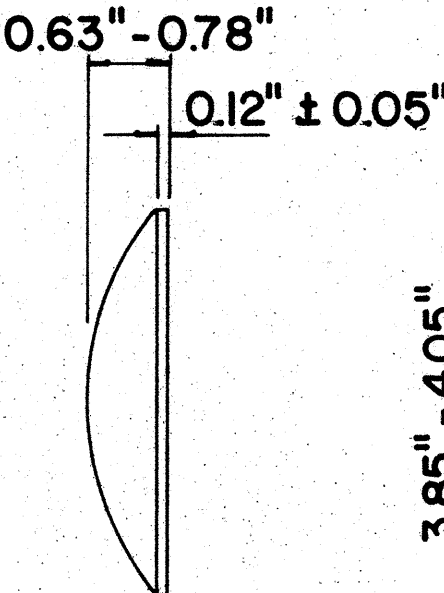
MULTI - LANE

FREEWAY

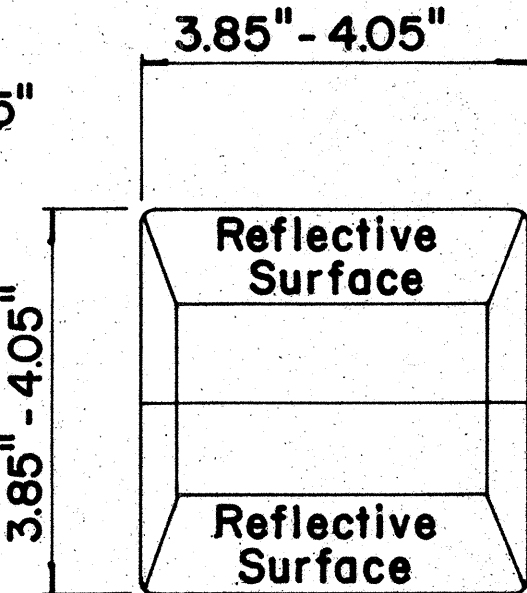
MISCELLANEOUS



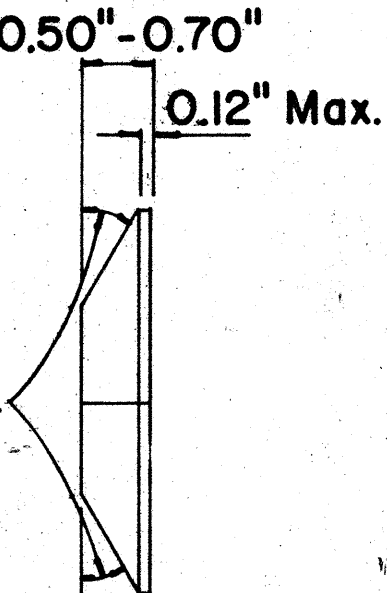
**TYPE A
NON - REFLECTIVE WHITE MARKER**



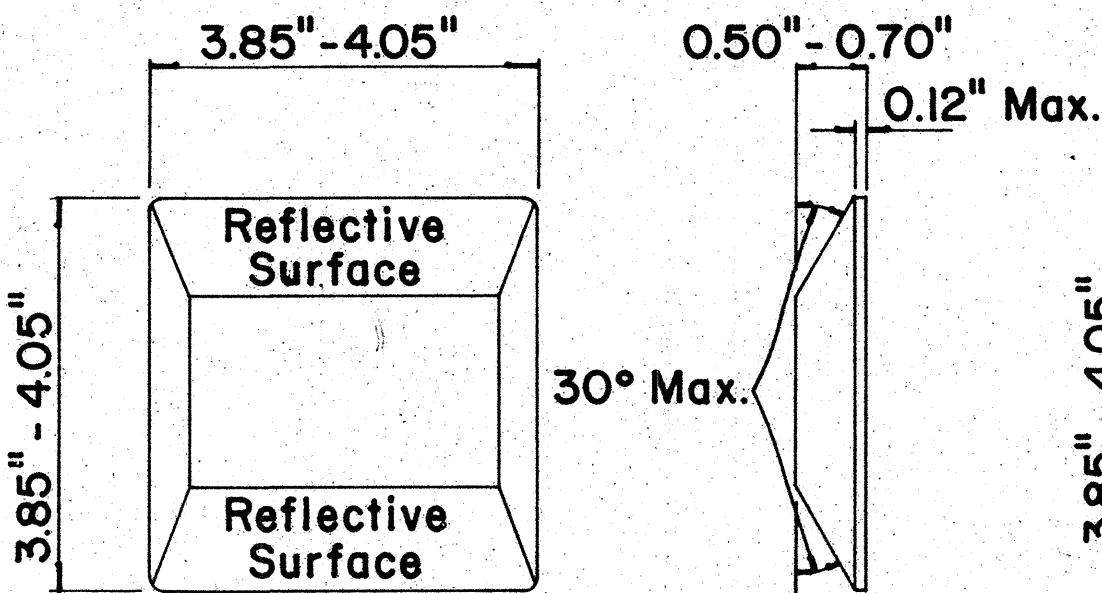
**TYPE J
NON - REFLECTIVE YELLOW MARKER**



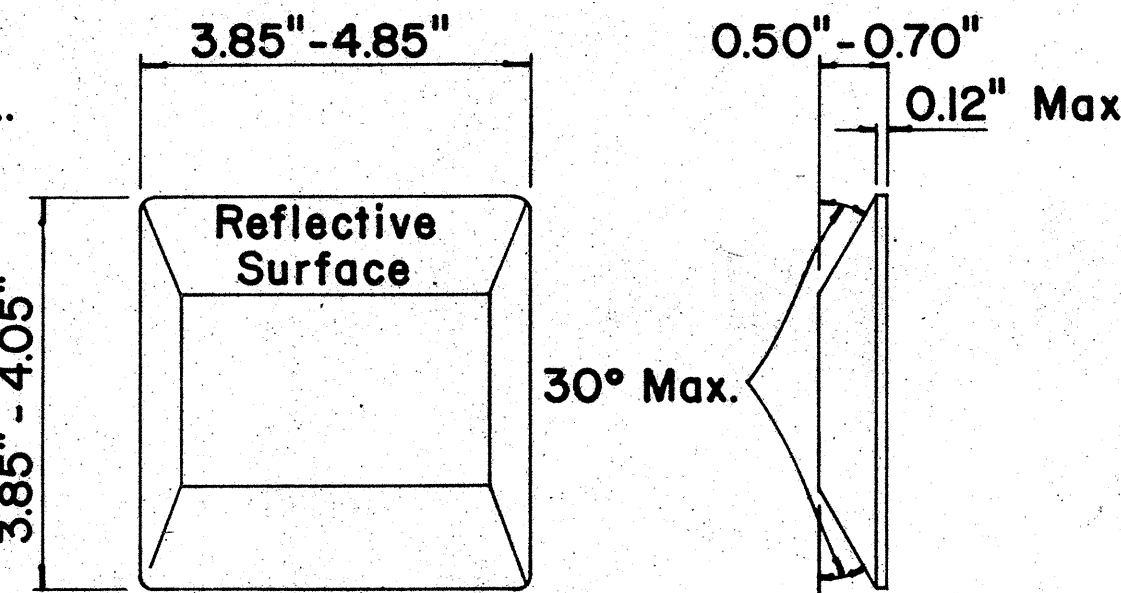
**TYPE C
RED - CLEAR REFLECTIVE MARKER**



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



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



GENERAL NOTES

1. Painted stripes to be done by State forces
unless otherwise specified.

APPROVAL RECOMMENDED:
Eishi Tanaka 11/18/71
TRAFFIC ENGINEER DATE

APPROVED:
Shelton Rakeish 11/18/71
ASSISTANT CHIEF, ENGINEERING DATE

No.	REVISION	APPROVED BY	DATE
1	Add reflector marker in each line gap.	H.T.	10-27-72
2	Revised General Notes.	H.T.	10-27-72

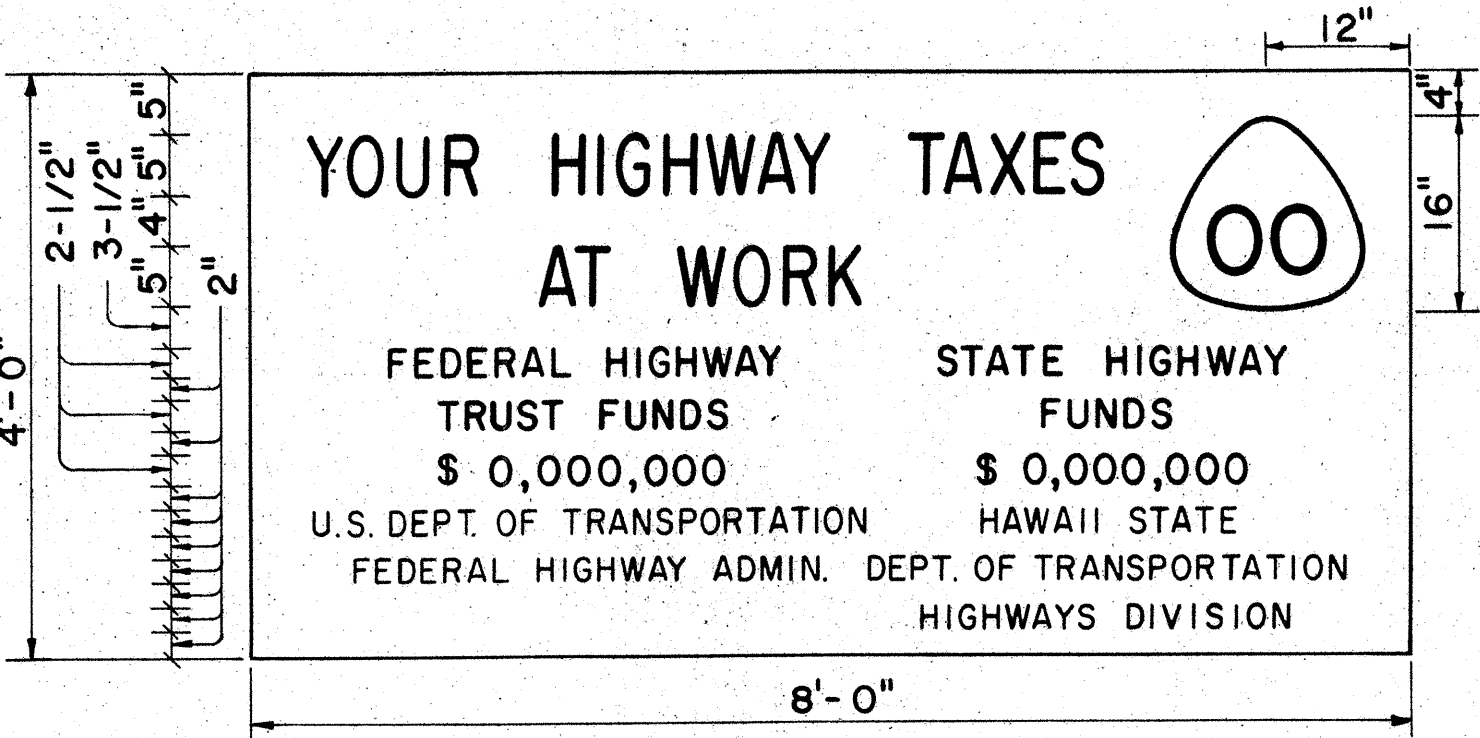
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
RAISED PAVEMENT MARKERS

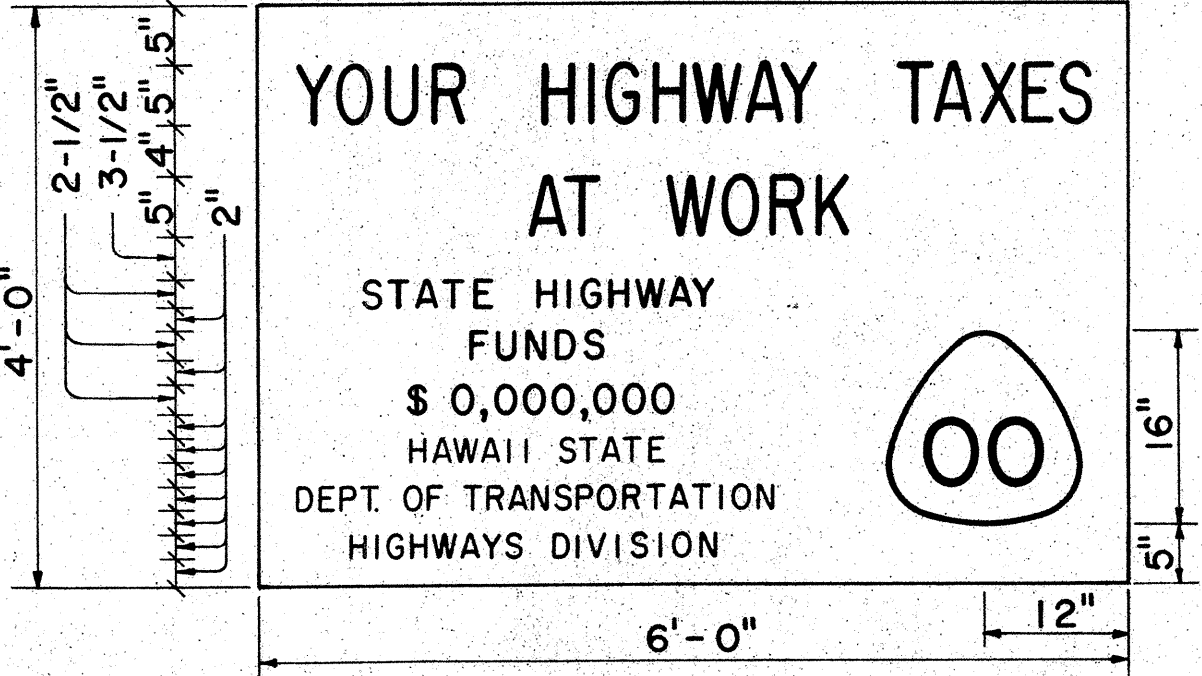
Not to Scale
October 1971
SHEET No. 15 OF 18 SHEETS DT 300

DATE	11/18/71
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-011-2(1)	1973	39	87



SIGN PANEL
PRIMARY AND SECONDARY SYSTEMS
Scale: 3/4" = 1'-0"



SIGN PANEL
NON-FEDERAL AID PROJECT
Scale: 3/4" = 1'-0"

GENERAL NOTES

- The sign legend shall be black on white background.
- The Contractor shall construct, install and maintain the project signs at the locations shown on the plans and as ordered by the Engineer.
- Letters shall be Series "C" of the sizes shown on the plan and shall conform to the FHWA publication "Standard Alphabets for Highway Signs," 1966.
- The Contractor shall fill in the proper numerals in place of ciphers as ordered by the Engineer.
- For State Route Marker detail, see shd. DT 209. Include 1/2" black border around edge of marker.

APPROVAL RECOMMENDED:
Erich Tanaka 12/23/69
TRAFFIC ENGINEER DATE

APPROVED:
John J. S. S. S. 12/30/69
ASSISTANT CHIEF, ENGINEERING DATE

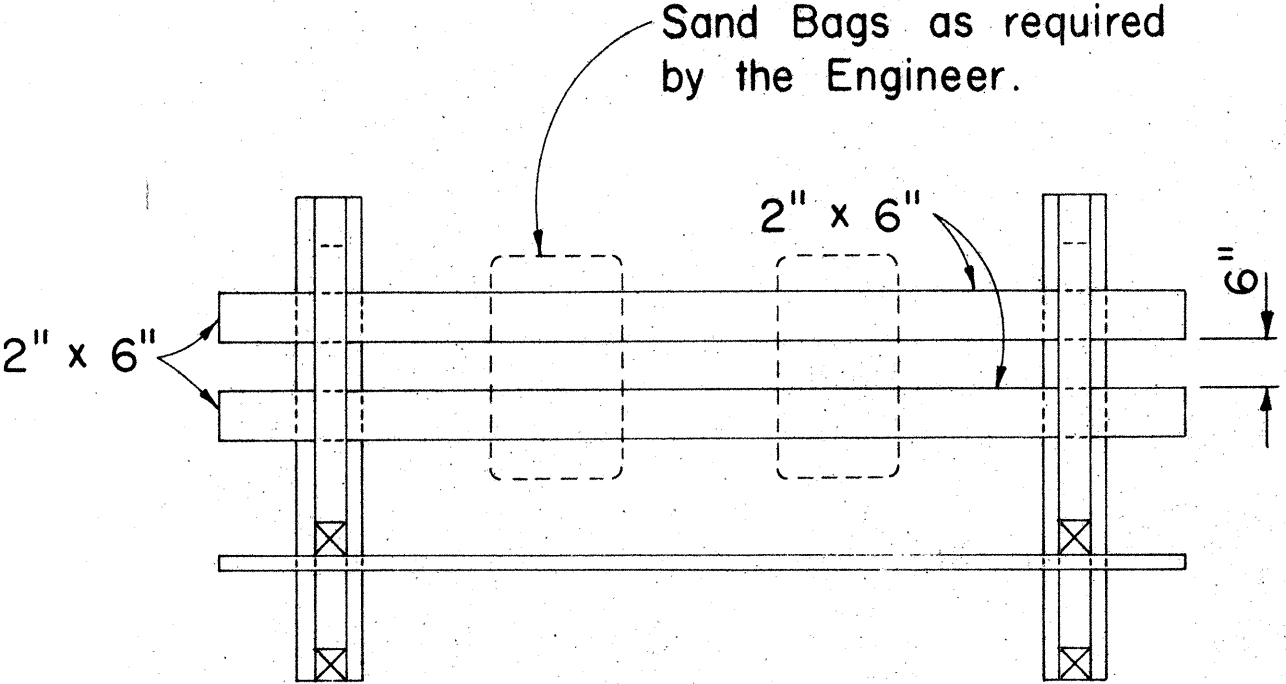
NO.	REVISION	APPROVED BY	DATE
1	Delete "Bureau of Public Roads"	H.T.	9-29-70
2	Add Note No.3 for Barricades	H.T.	5-4-71
3	Revise Route Marker	H.T.	4-12-72
4	Revise stripe color for Barricades.	H.T.	10-21-72

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS
CONSTRUCTION IDENTIFICATION SIGN
AND
WOOD BARRICADES

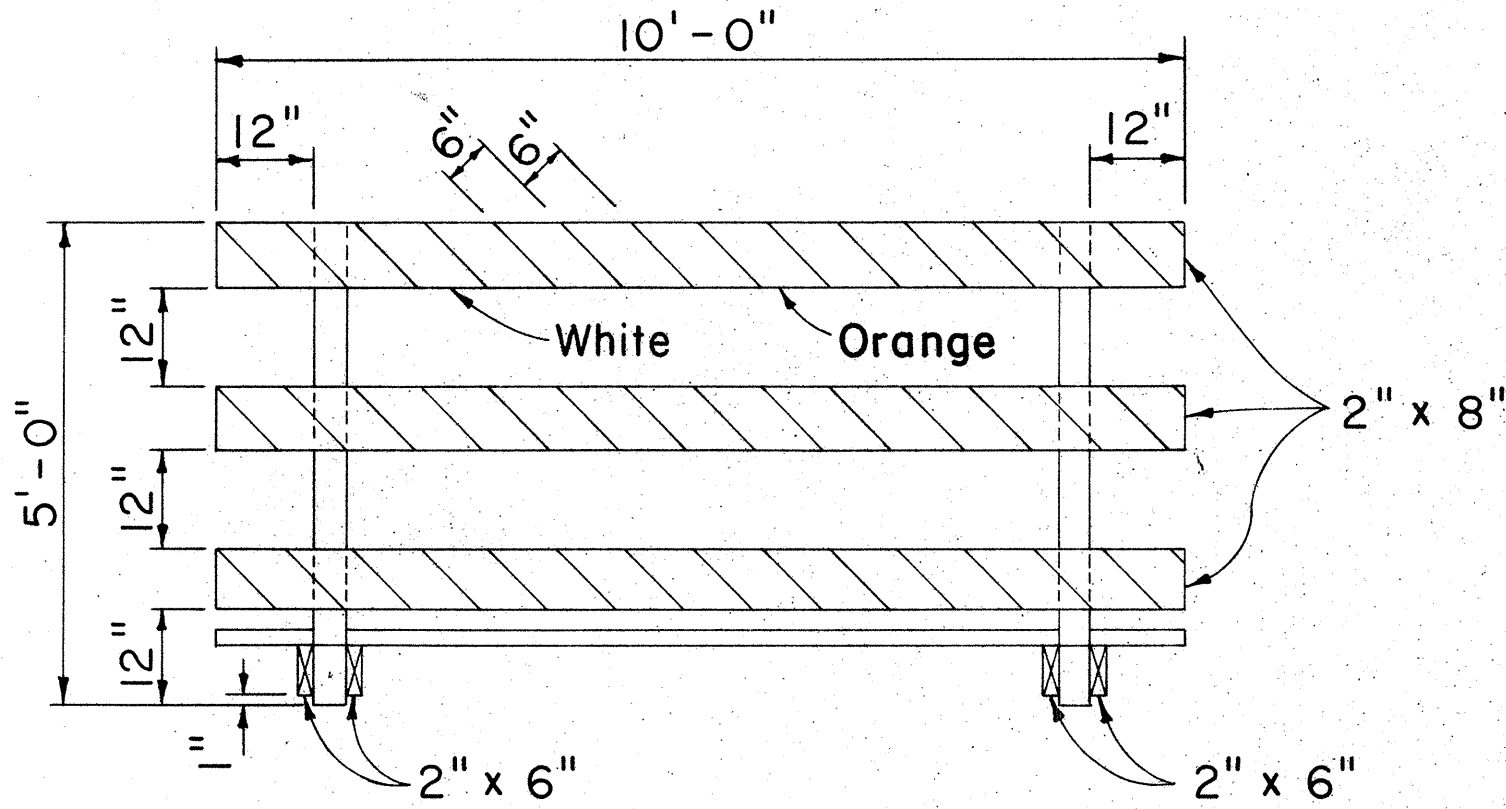
Scale: As Shown
SHEET No. 16 OF 18 SHEETS DT 801

GENERAL NOTES

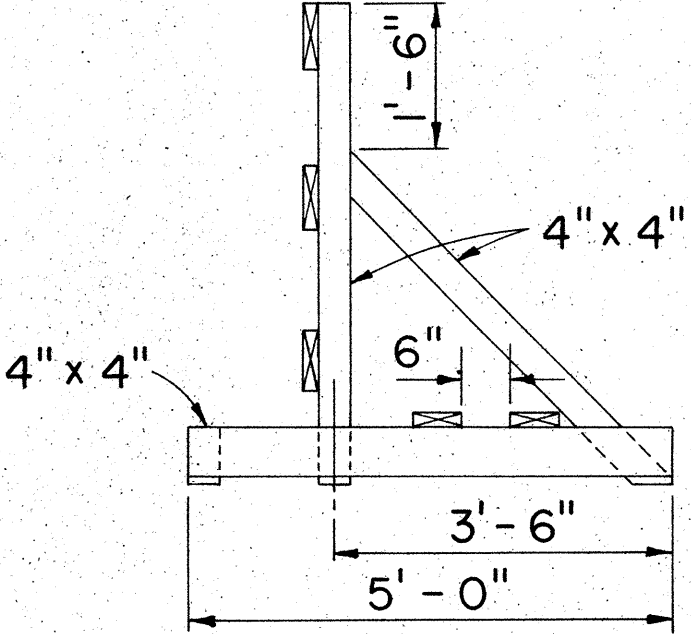
- The Contractor shall construct, install and maintain the wood barricades at the locations shown on the Plans.
- The permanent wood barricades shall be left in place or relocated upon completion of the project as ordered by the Engineer and are to become State property.
- The orange and white stripes shall slant downward toward the side on which traffic is to pass and shall be reflectorized.



PLAN VIEW

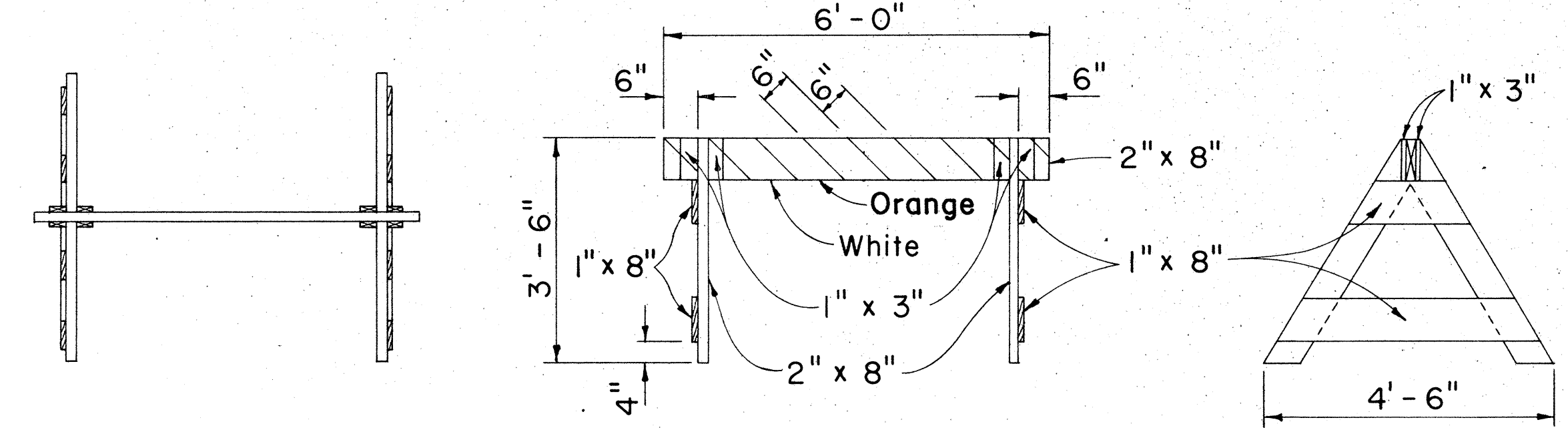


FRONT VIEW



END VIEW

CLASS I BARRICADE
Scale: 1/2" = 1'-0"

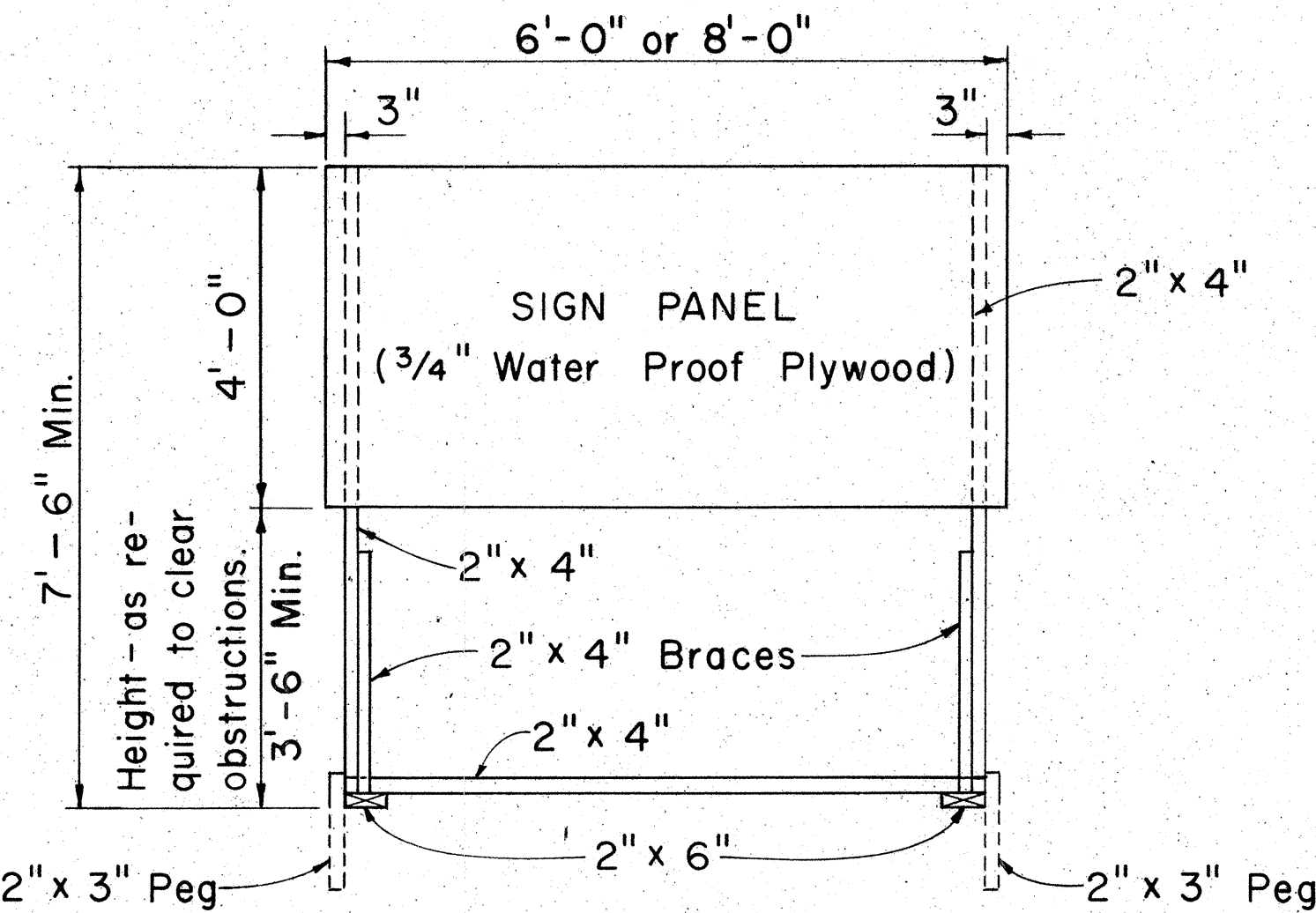


PLAN VIEW

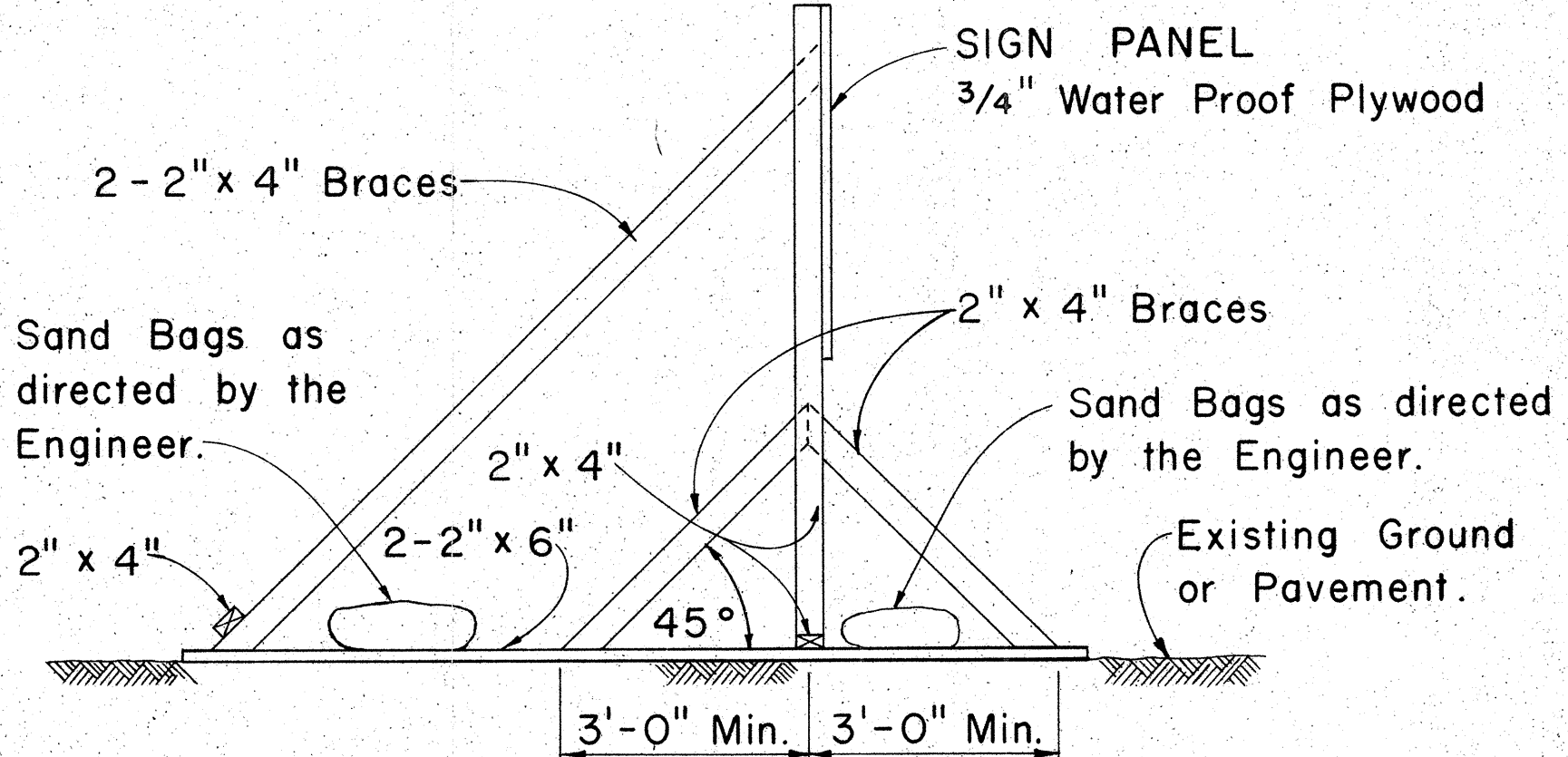
FRONT VIEW

END VIEW

CLASS II BARRICADE
Scale: 1/2" = 1'-0"

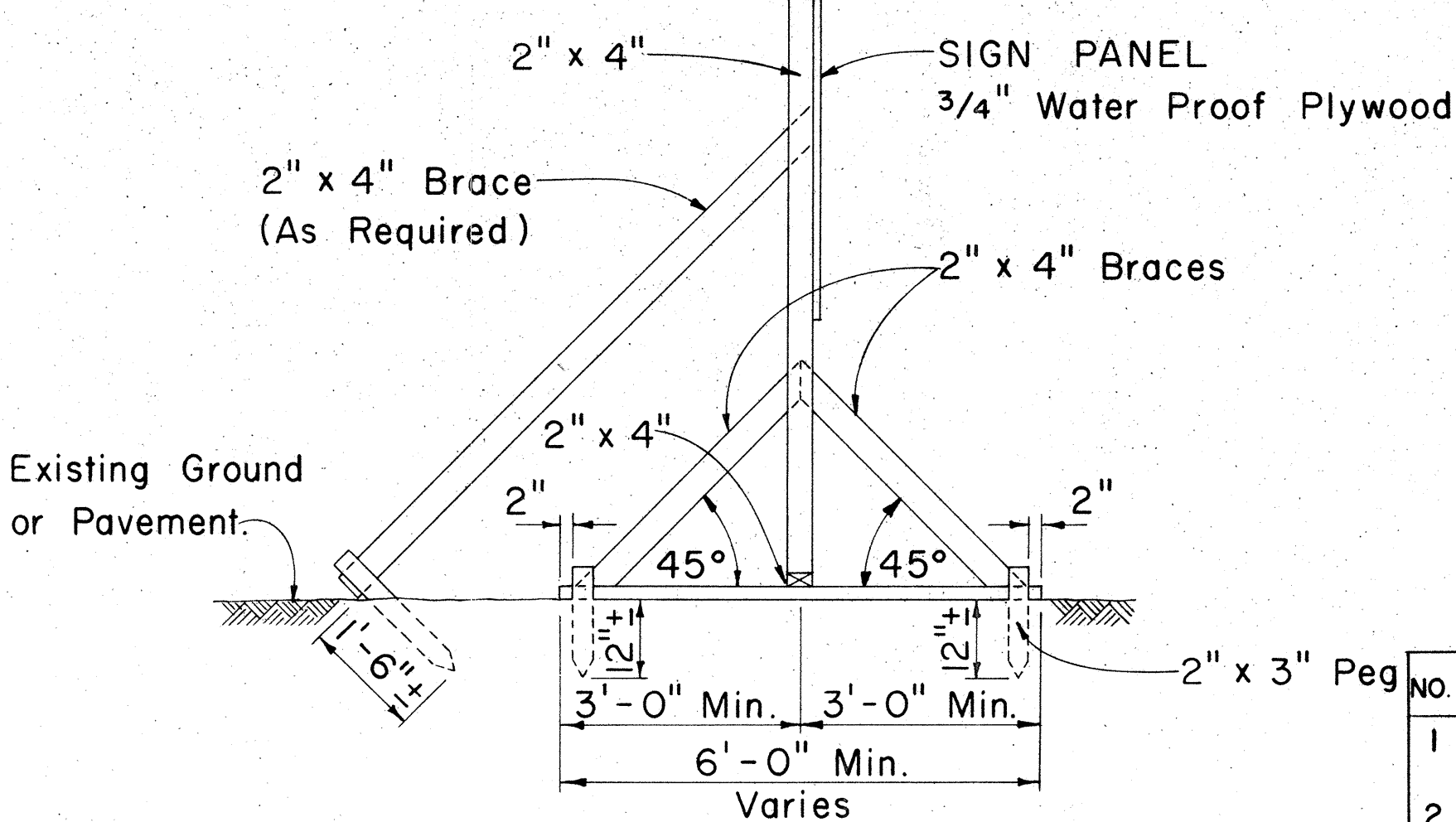


FRONT VIEW
Scale: 1/2" = 1'-0"



SIDE VIEW

(SIGN FRAME WEIGHTED DOWN)
Scale: 1/2" = 1'-0"



SIDE VIEW

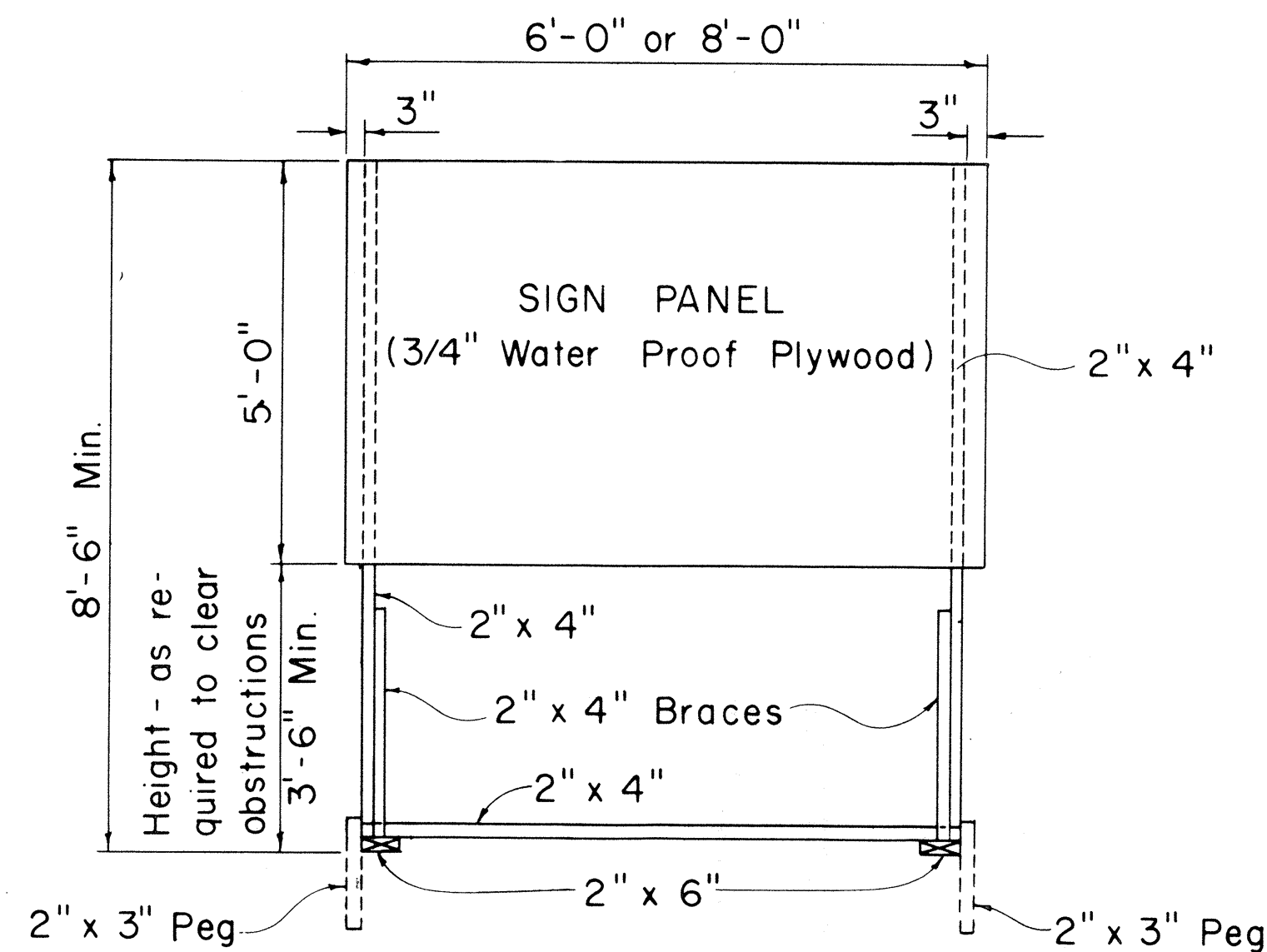
(SIGN FRAME ANCHORED IN GROUND)
Scale: 1/2" = 1'-0"

CONSTRUCTION IDENTIFICATION SIGN

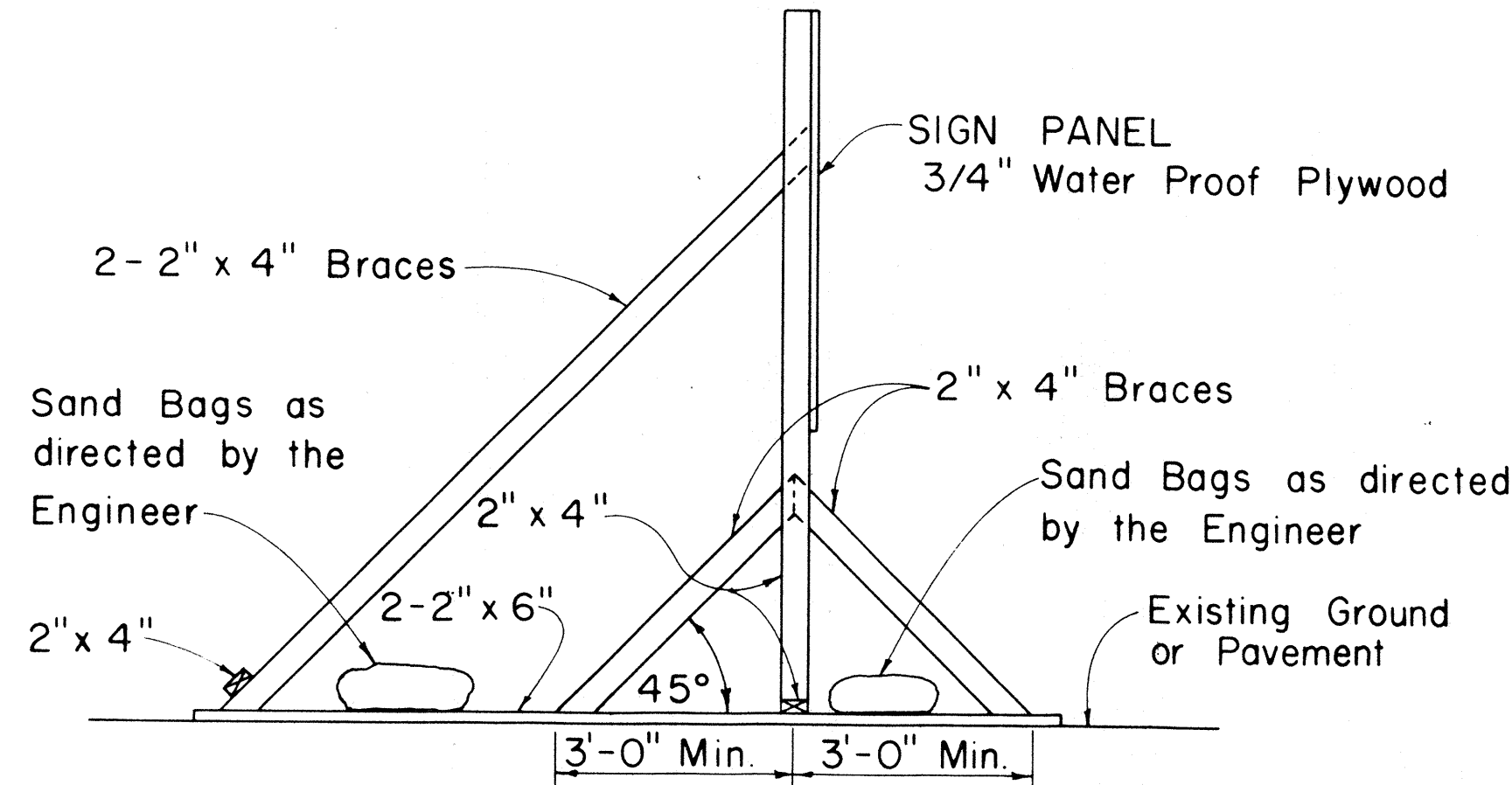
Scale: As Shown

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

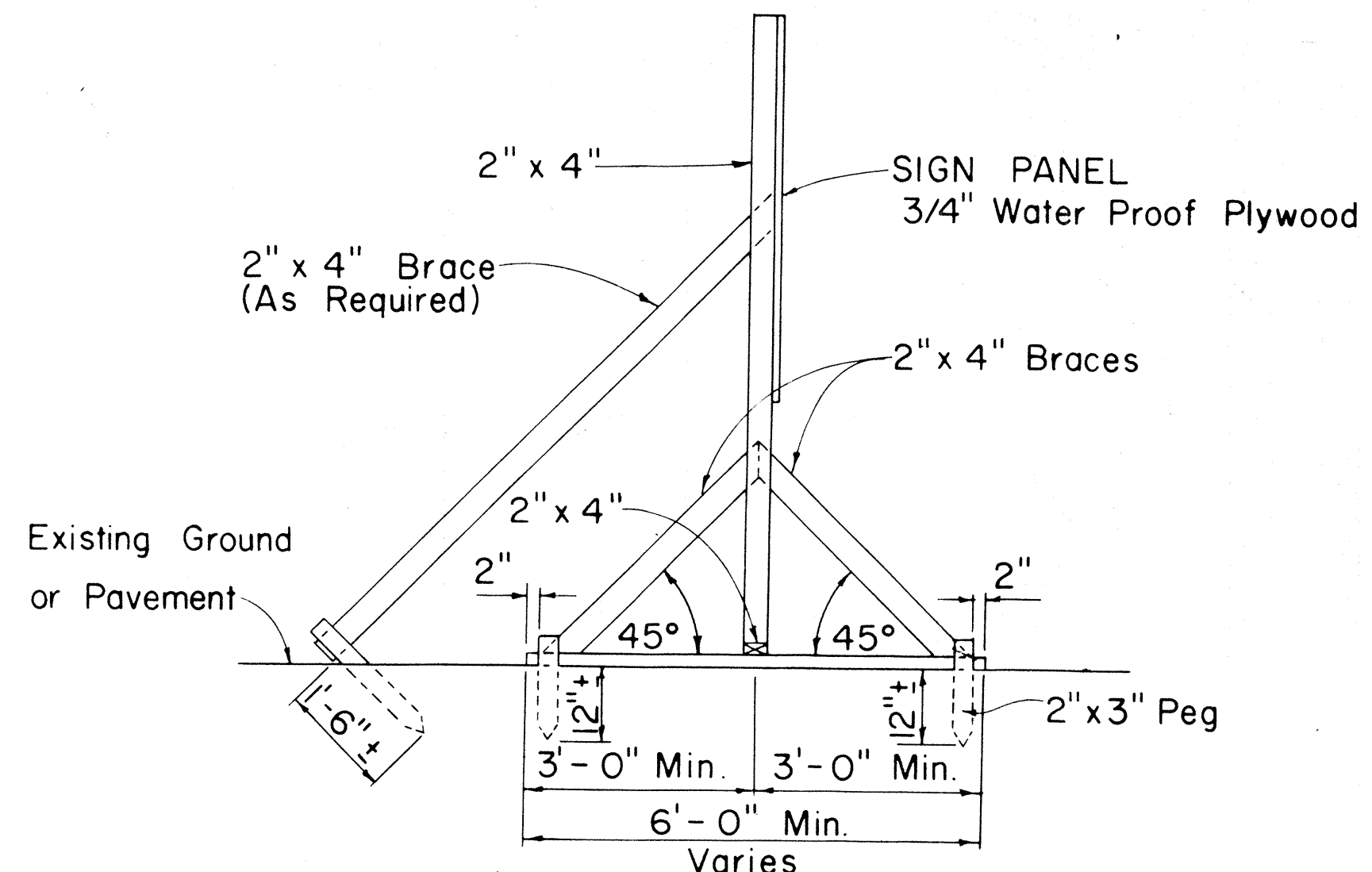
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-011-2(11)	1973	40	87



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

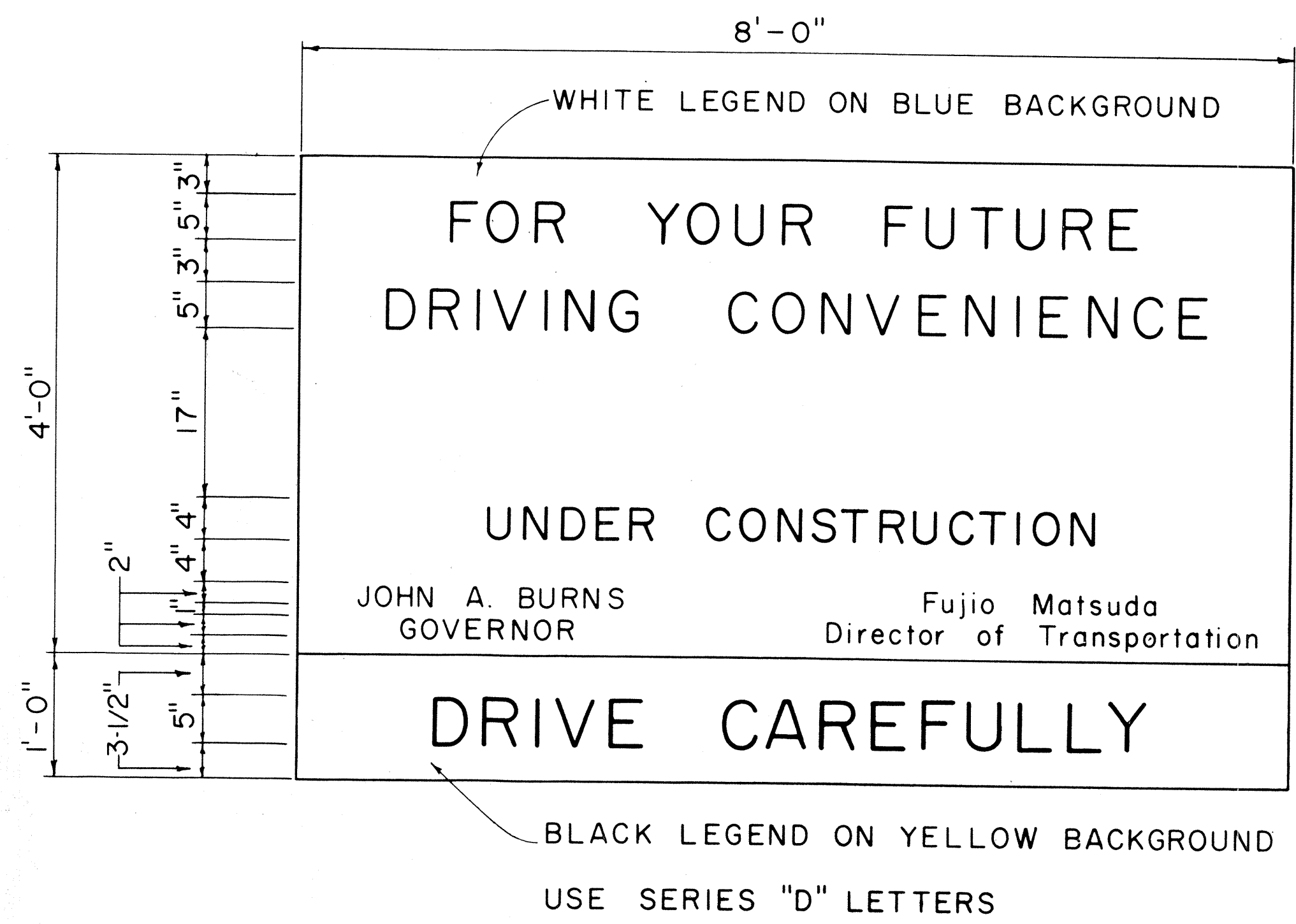


SIDE VIEW
(SIGN SUPPORT AND FRAME WEIGHTED DOWN)
Scale: 1/2" = 1'-0"



SIDE VIEW
(SIGN SUPPORT AND FRAME ANCHORED IN GROUND)
Scale: 1/2" = 1'-0"

SIGN SUPPORT AND FRAME
Scale: As Shown



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
TYPICAL DETAILS
PROJECT INFORMATION SIGN
Scale: As Shown
SHEET No. 17 OF 18 SHEETS

4

ORIGINAL PLAN	DATE
DESIGNED BY	
NOTED BY	
CHECKED BY	
NO.	

