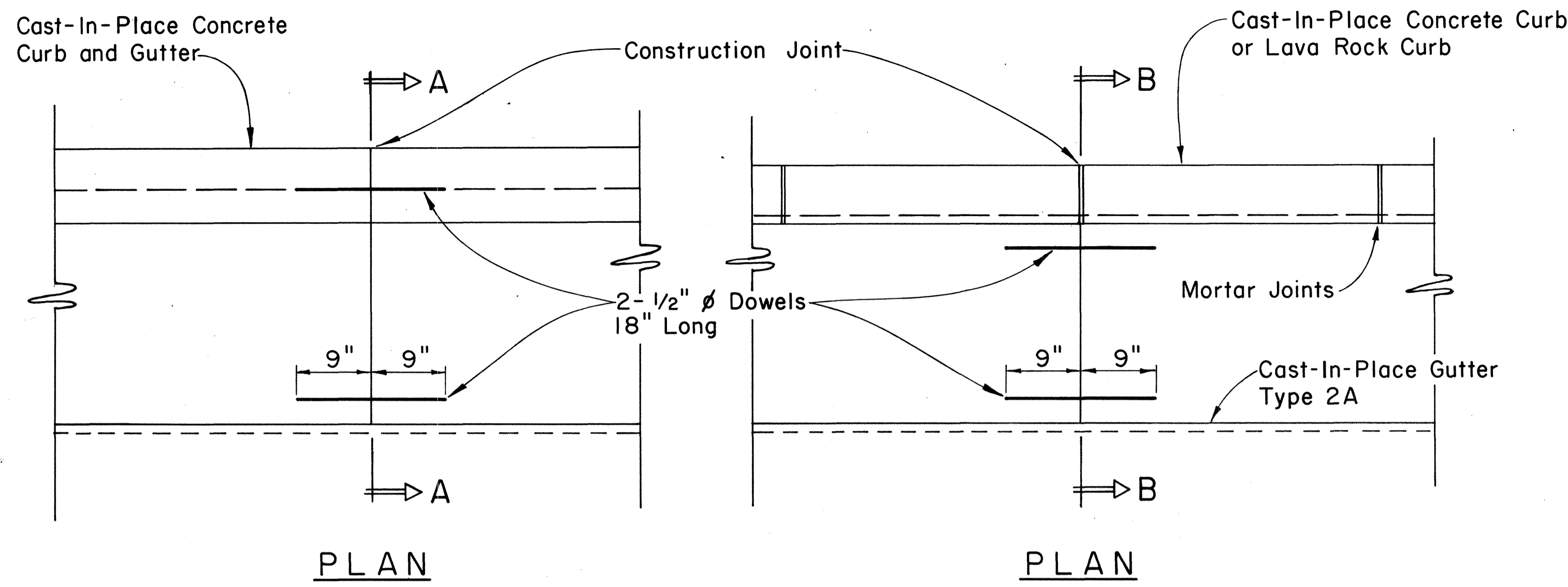
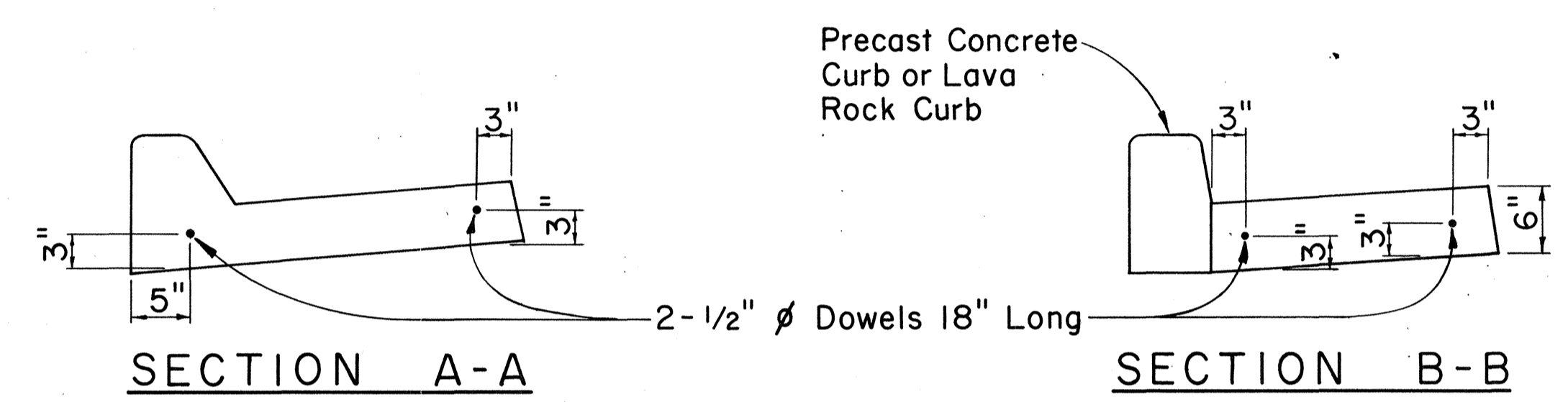
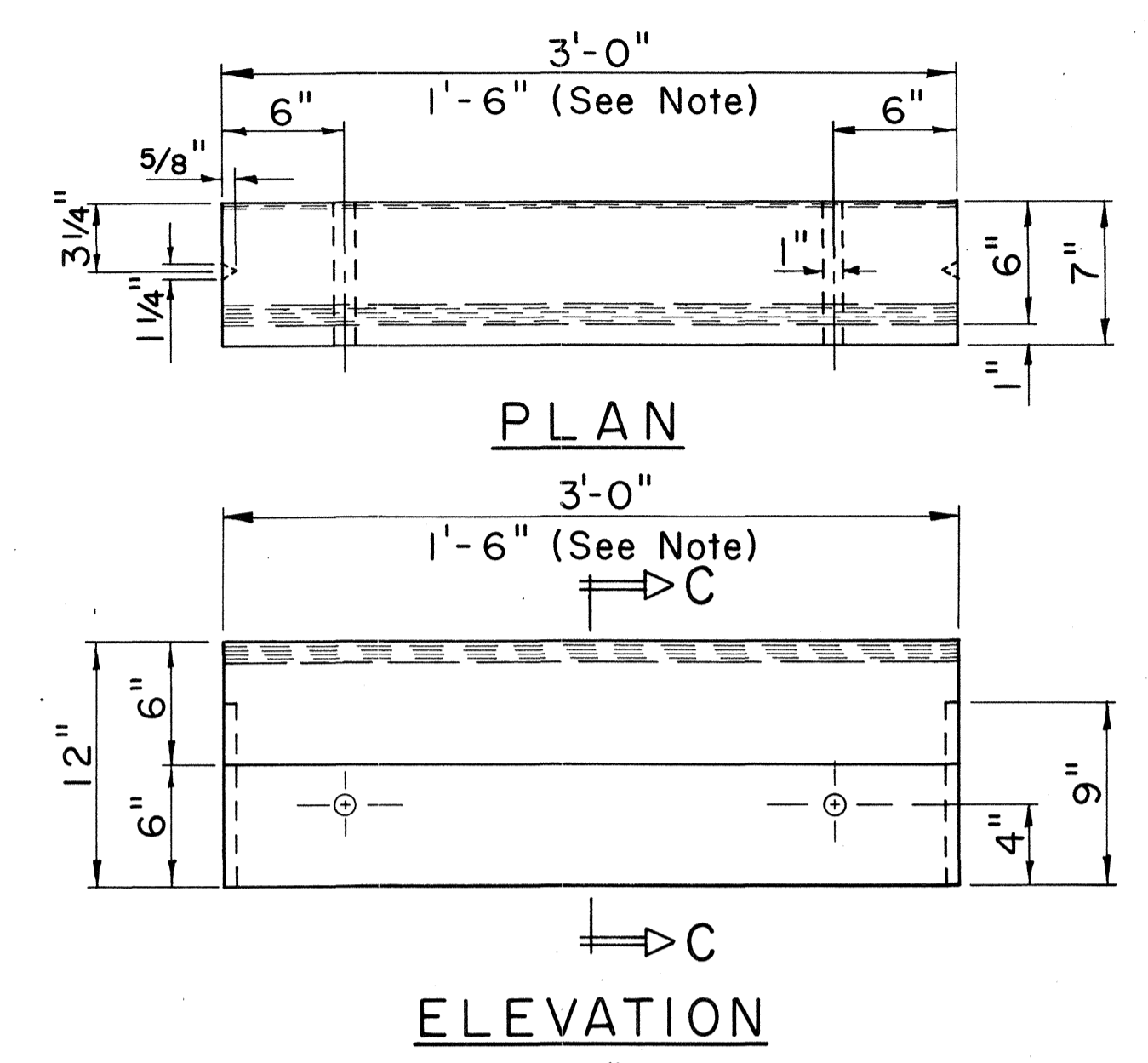


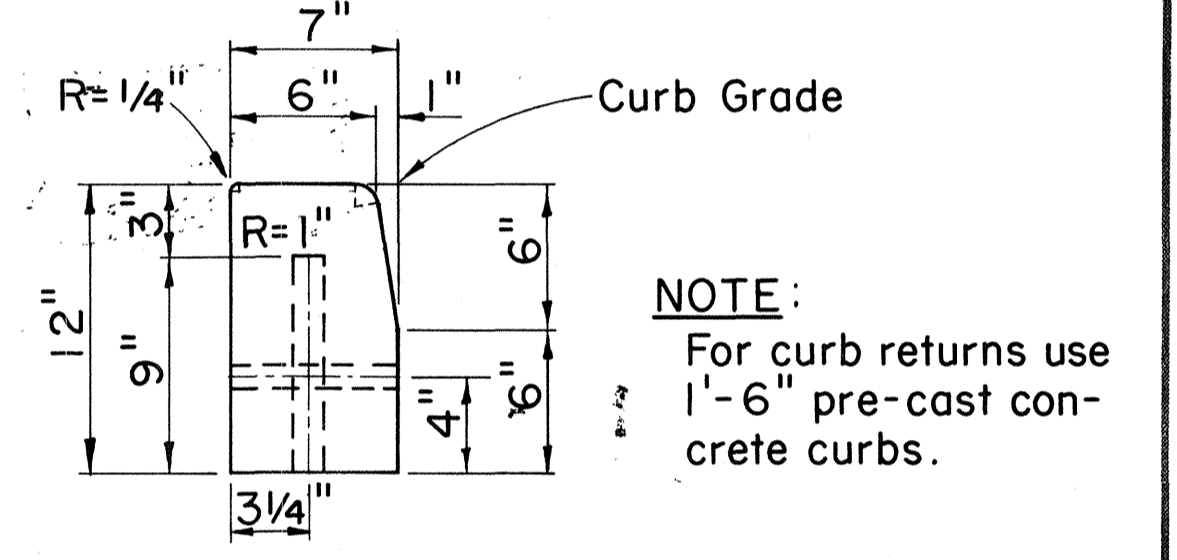
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	T40A-01-70	1970	10	40



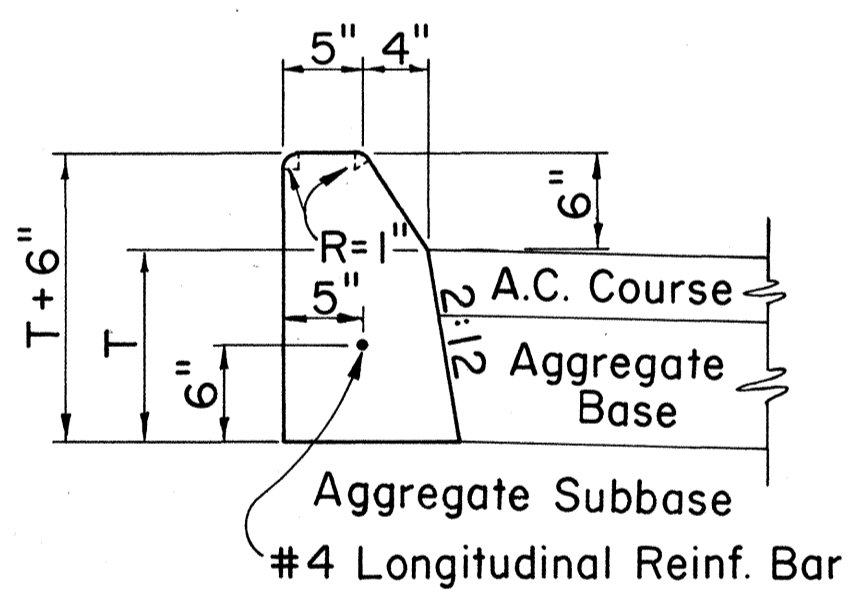
**CURB, TYPE 6**  
**BITUMINOUS CURB**  
 Scale: 1 1/2" = 1'-0"



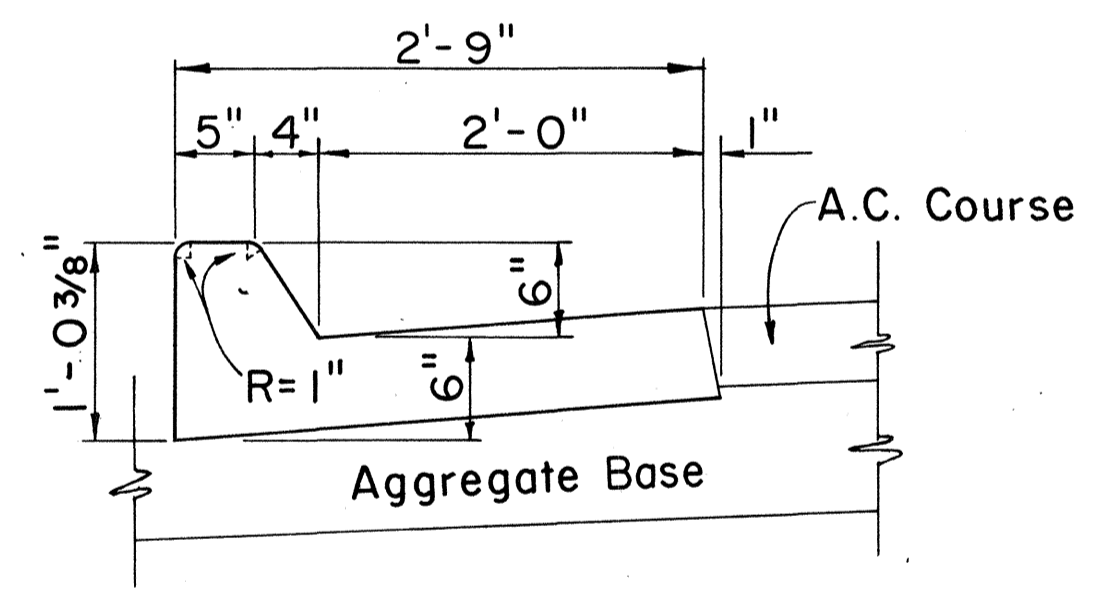
**CAST-IN-PLACE CURB & GUTTER**      **CAST-IN-PLACE GUTTER**  
**CONSTRUCTION JOINT DETAIL**  
 Scale: 1" = 1'-0"



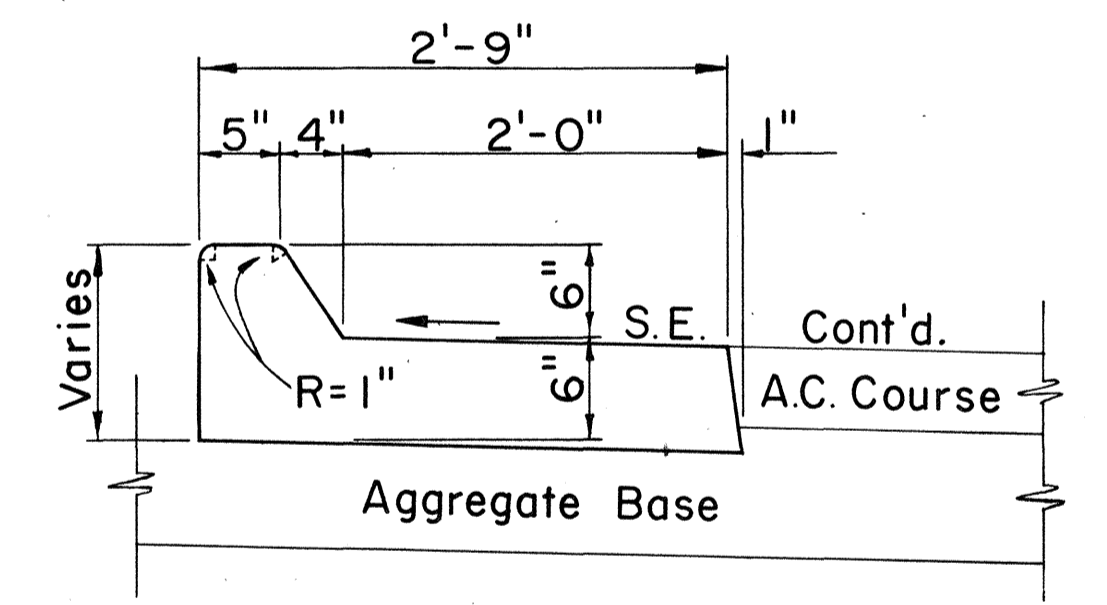
**CURB, TYPE 3D**  
**PRE-CAST CONC. CURB**  
 Scale: 1 1/2" = 1'-0"



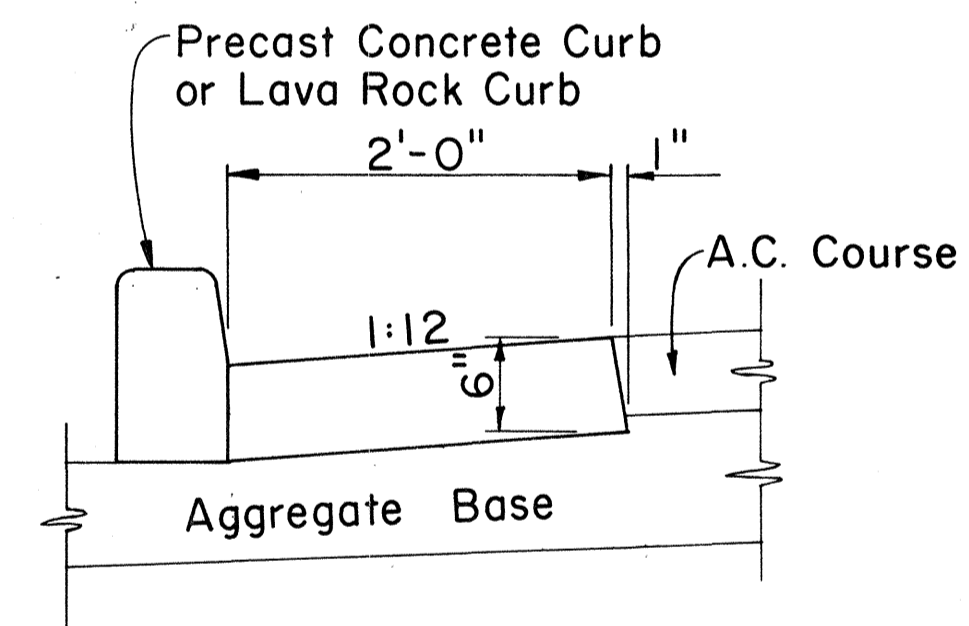
**CURB, TYPE 2A**



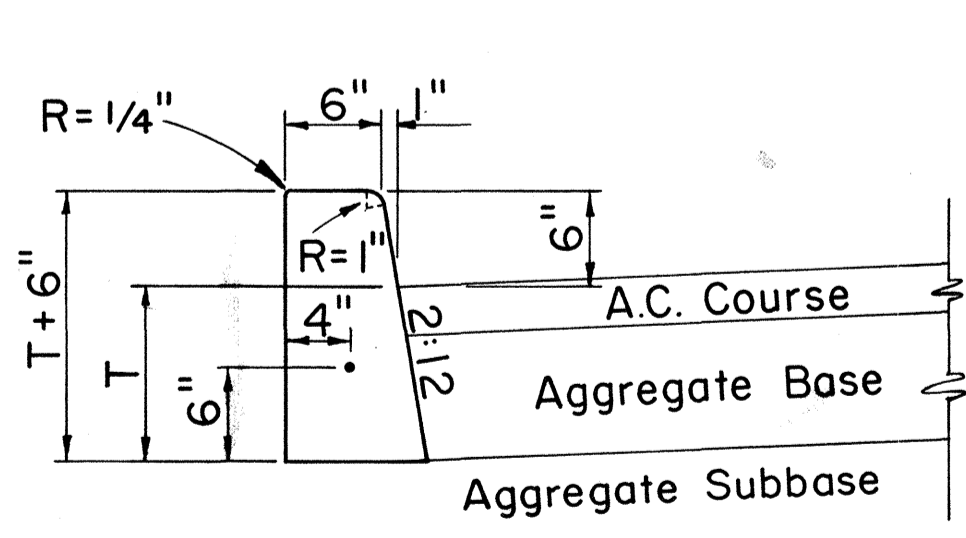
**CURB & GUTTER, TYPE 2AG**



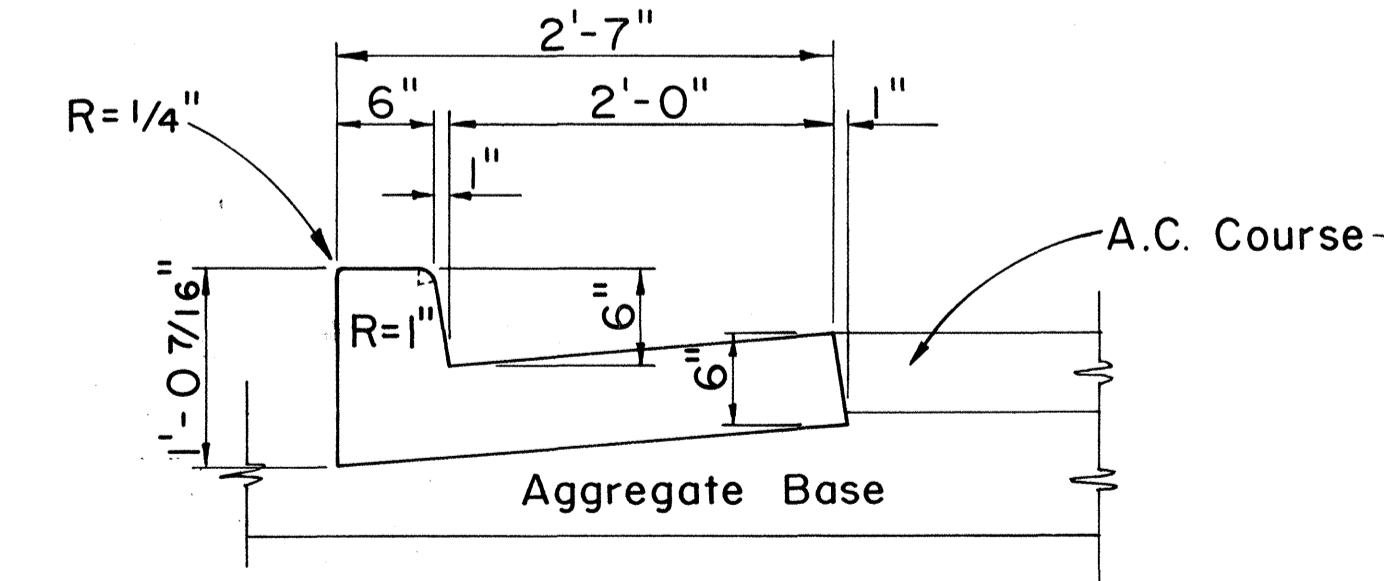
**CURB & GUTTER, TYPE 2AGM**



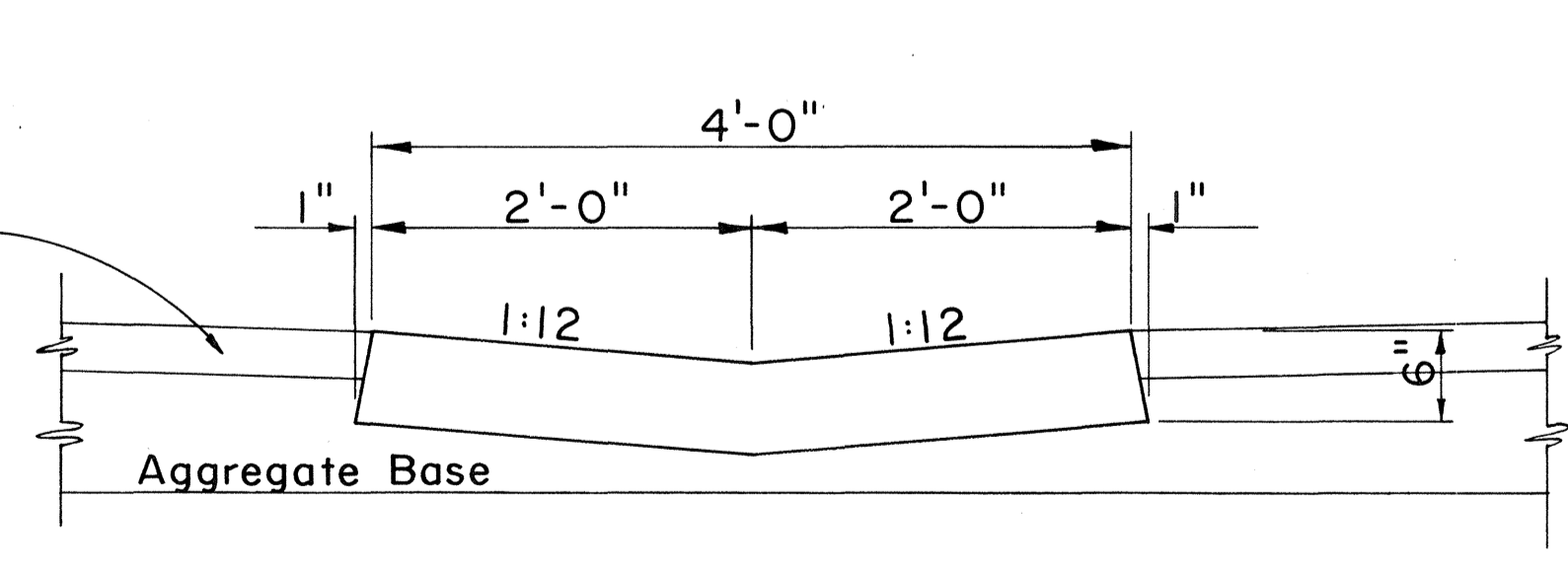
**GUTTER, TYPE 2A**



**CURB, TYPE 2D**



**CURB & GUTTER, TYPE 2DG**



**GUTTER, TYPE 2G**

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

NO.	REVISION	APPROVED BY	DATE

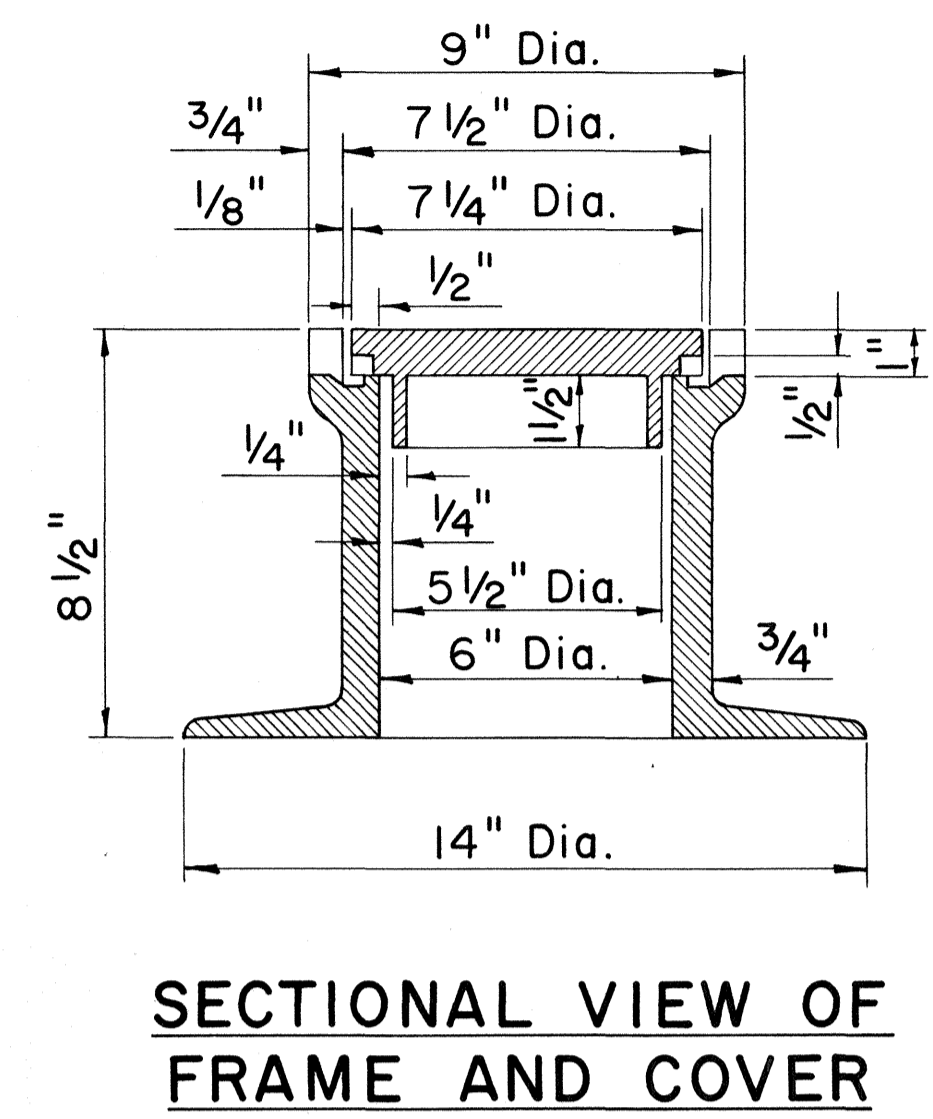
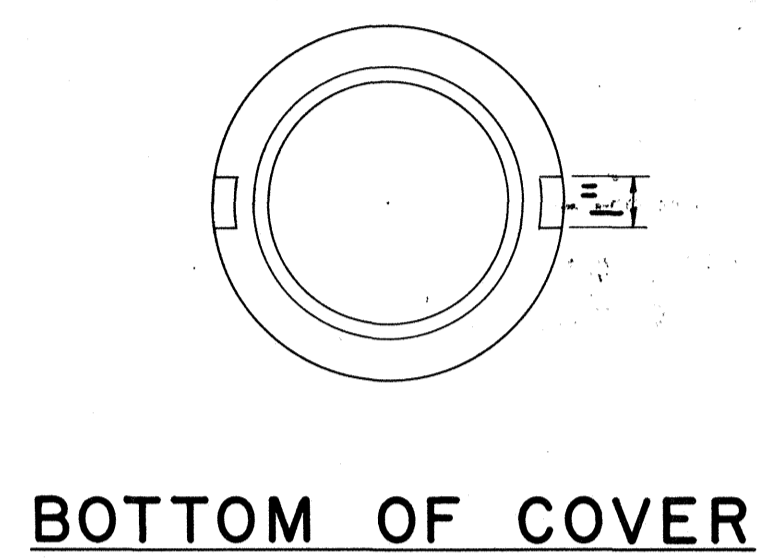
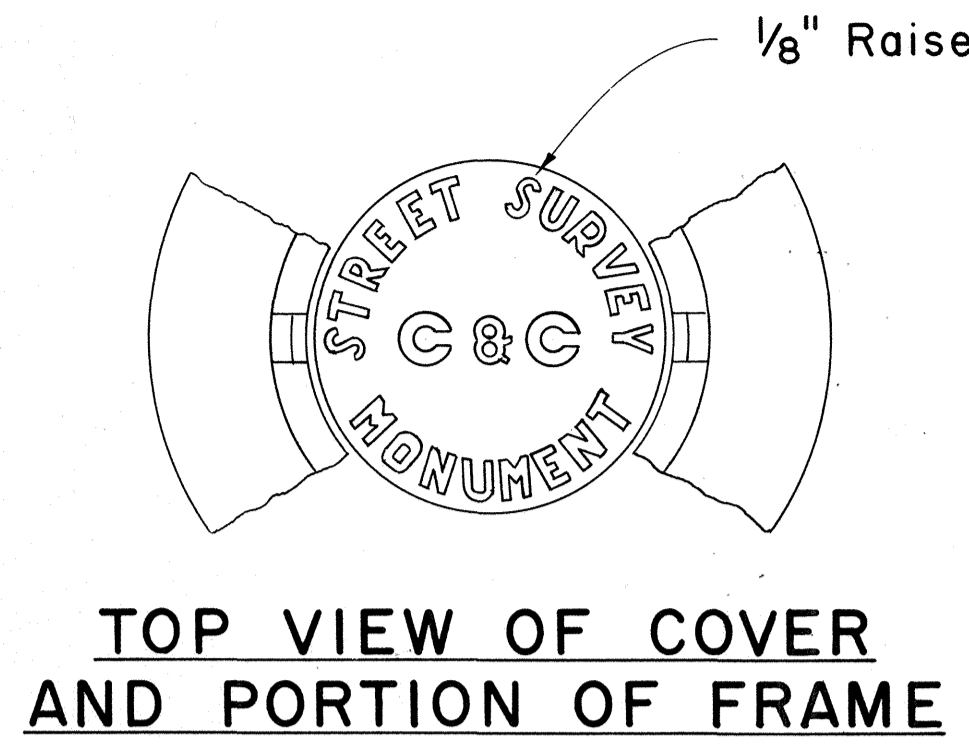
APPROVAL RECOMMENDED:  
 HIGHWAY DESIGN ENGINEER      12-4-69      DATE

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

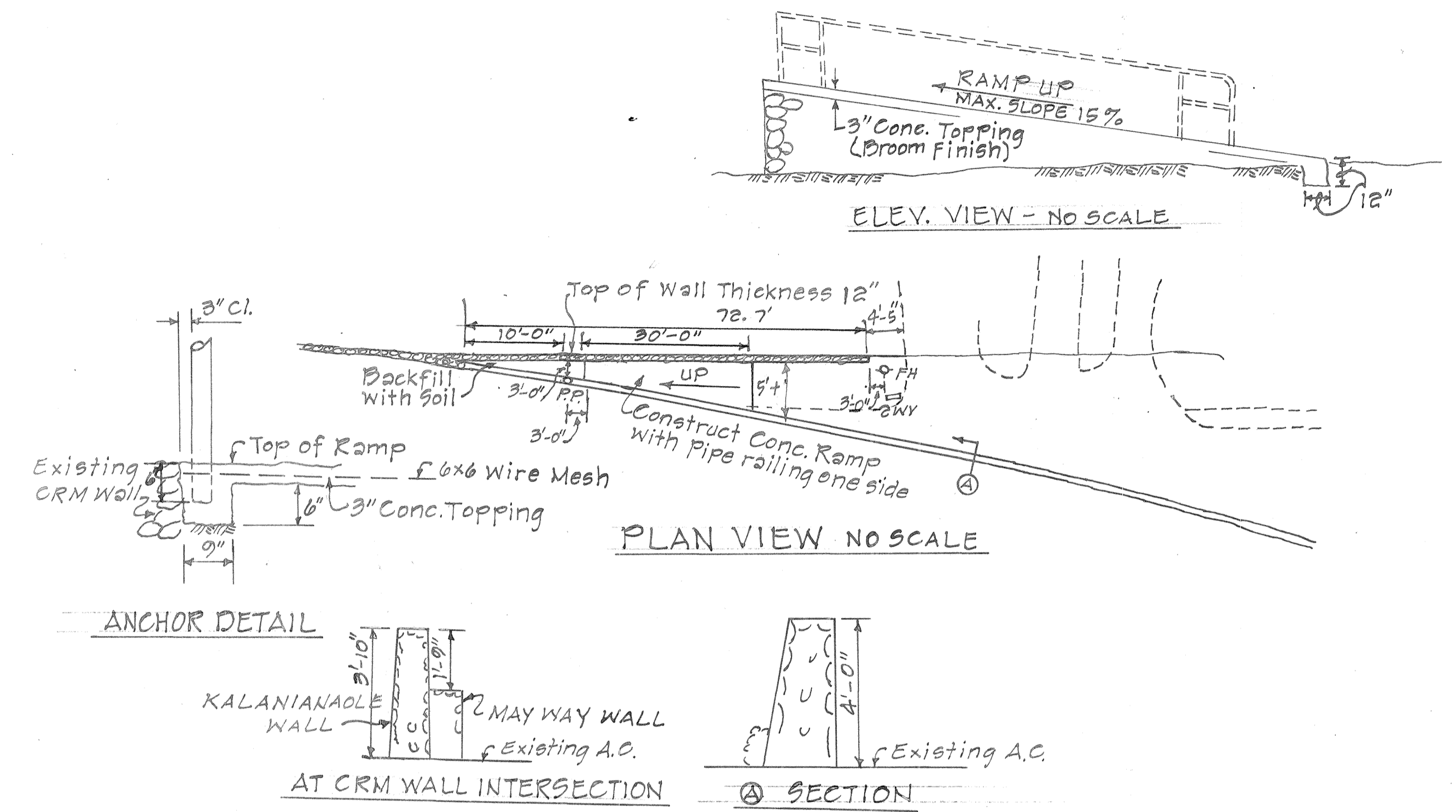
STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**STANDARD DETAILS**  
**TYPICAL DETAILS OF CURB**  
**AND/OR GUTTERS**

SURVEY PLOTTED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 ORIGINAL PLAN: \_\_\_\_\_  
 DESIGNED BY: \_\_\_\_\_  
 NOTE BOOK: \_\_\_\_\_  
 QUANTITIES BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 No. \_\_\_\_\_

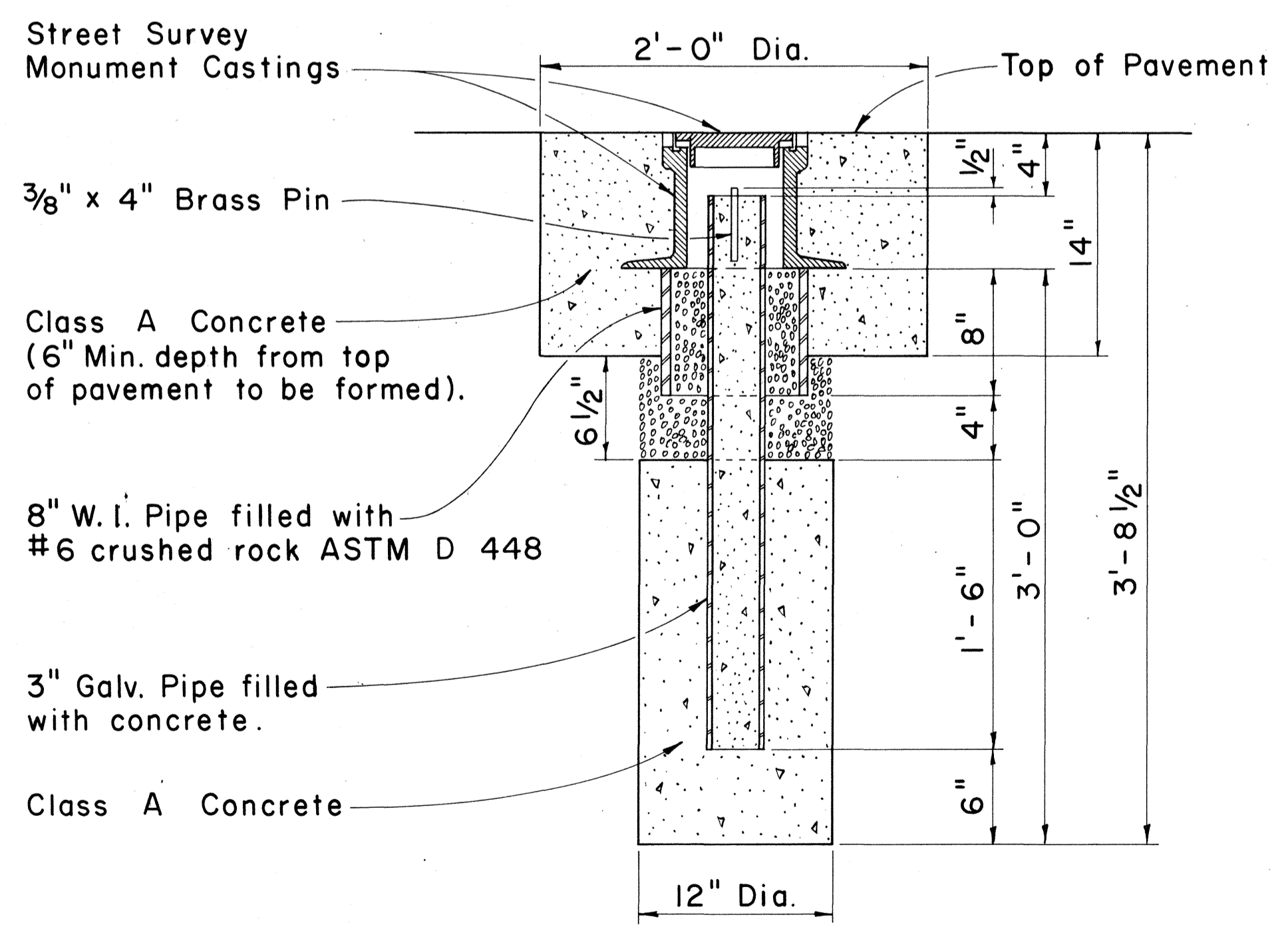
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	740A-01-70	1970	11	40



**STREET SURVEY MONUMENT CASTINGS**  
Scale: 3" = 1'-0"

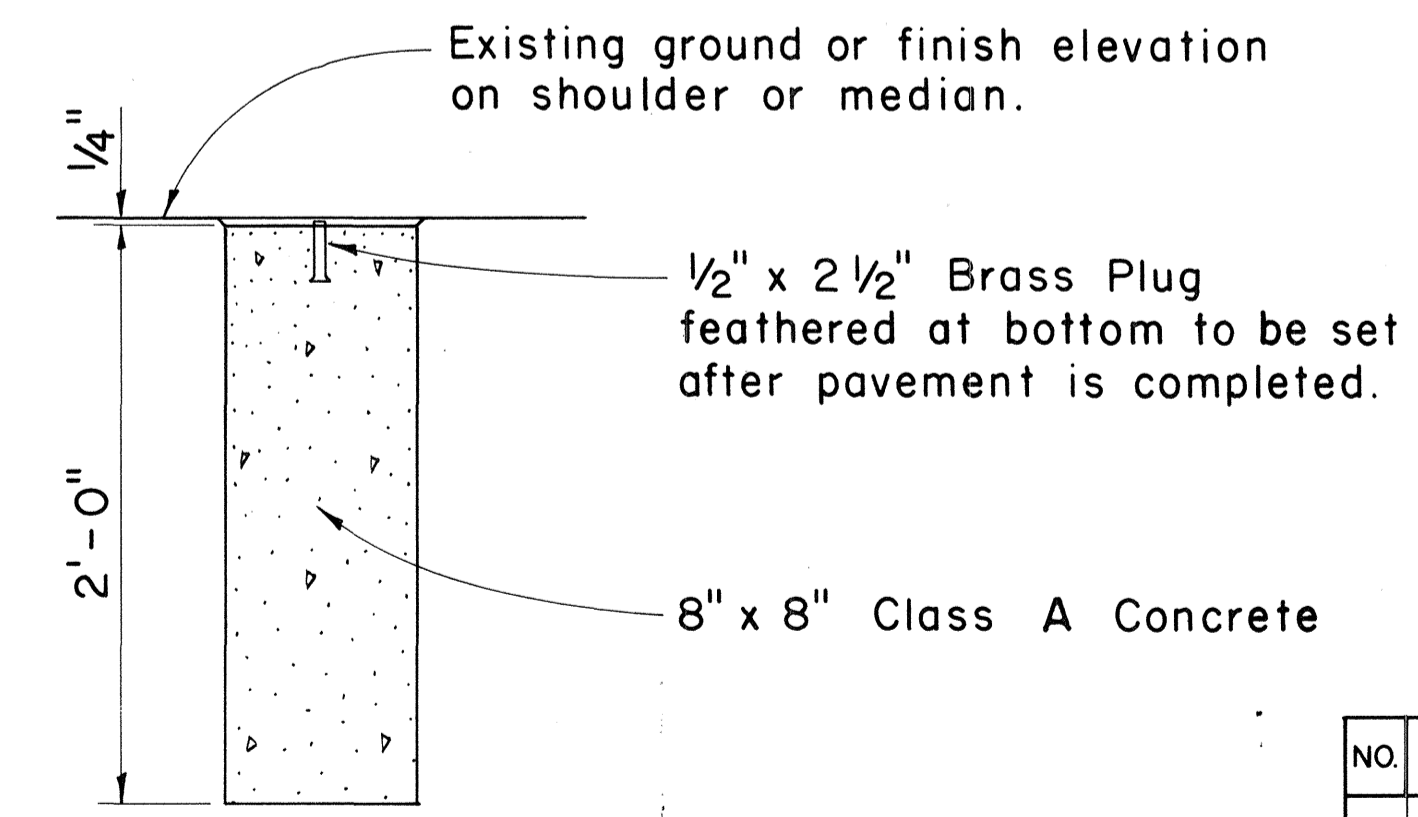


**CHANGE ORDER**



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"

NO.	REVISION	APPROVED BY	DATE

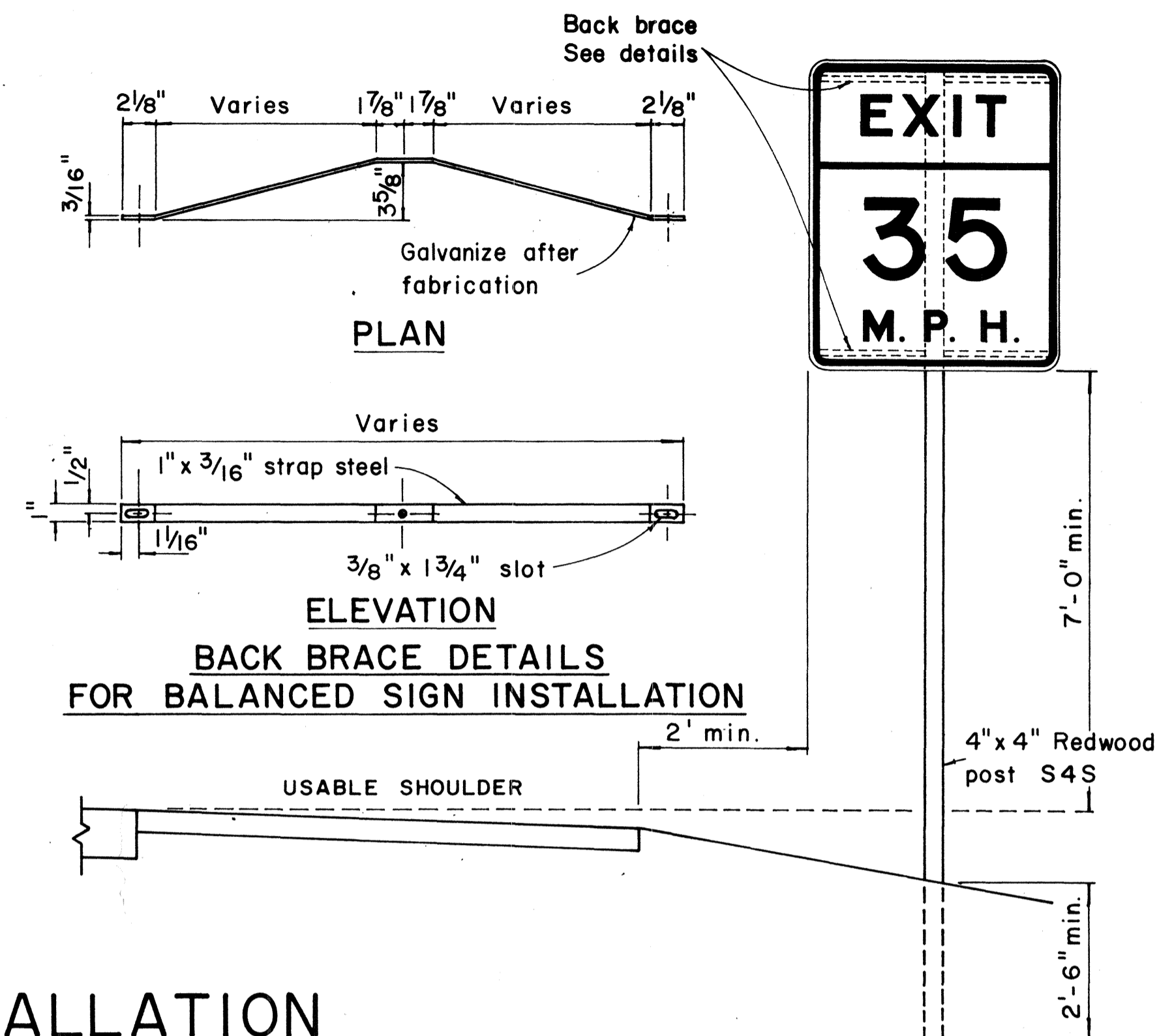
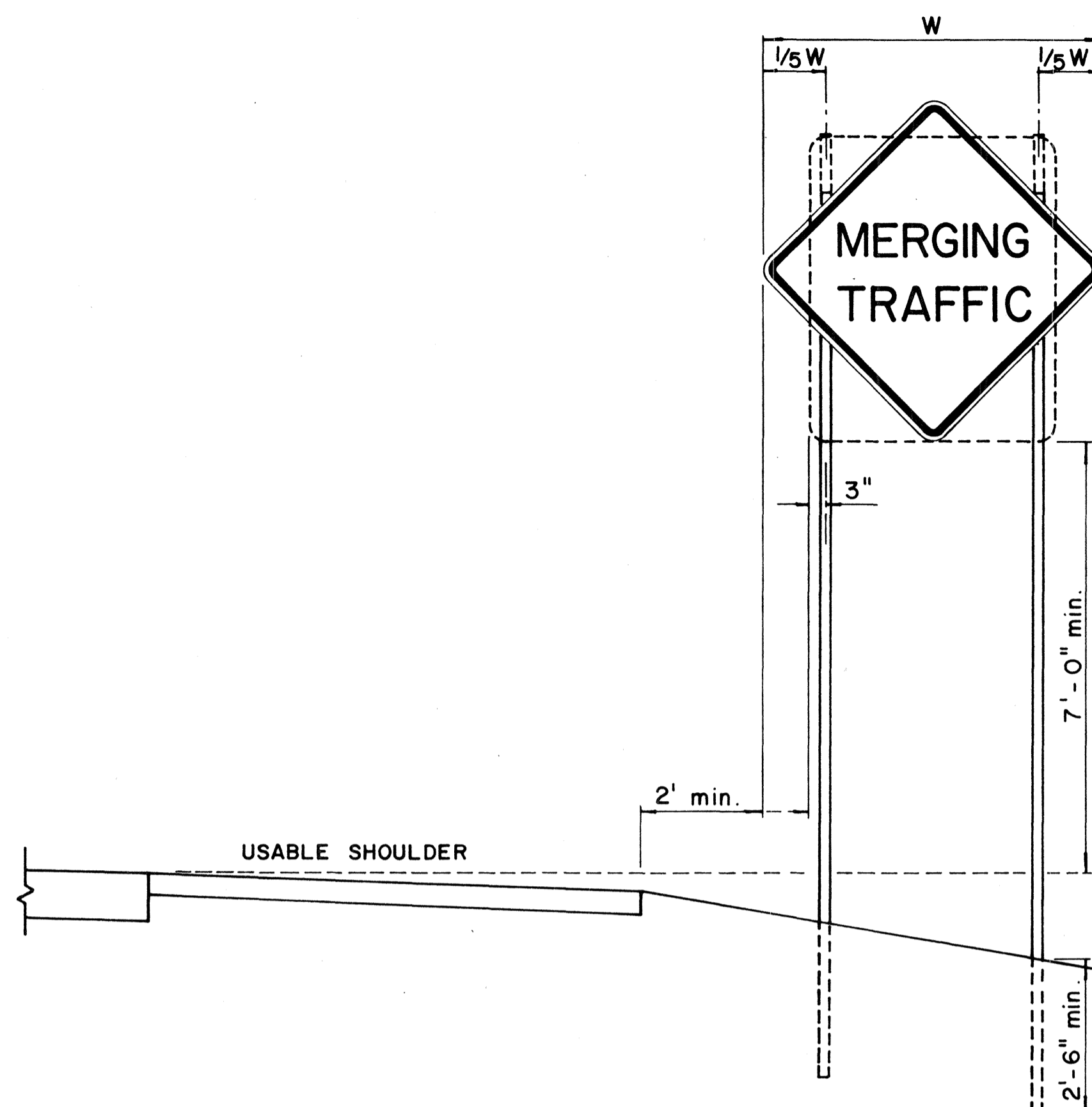
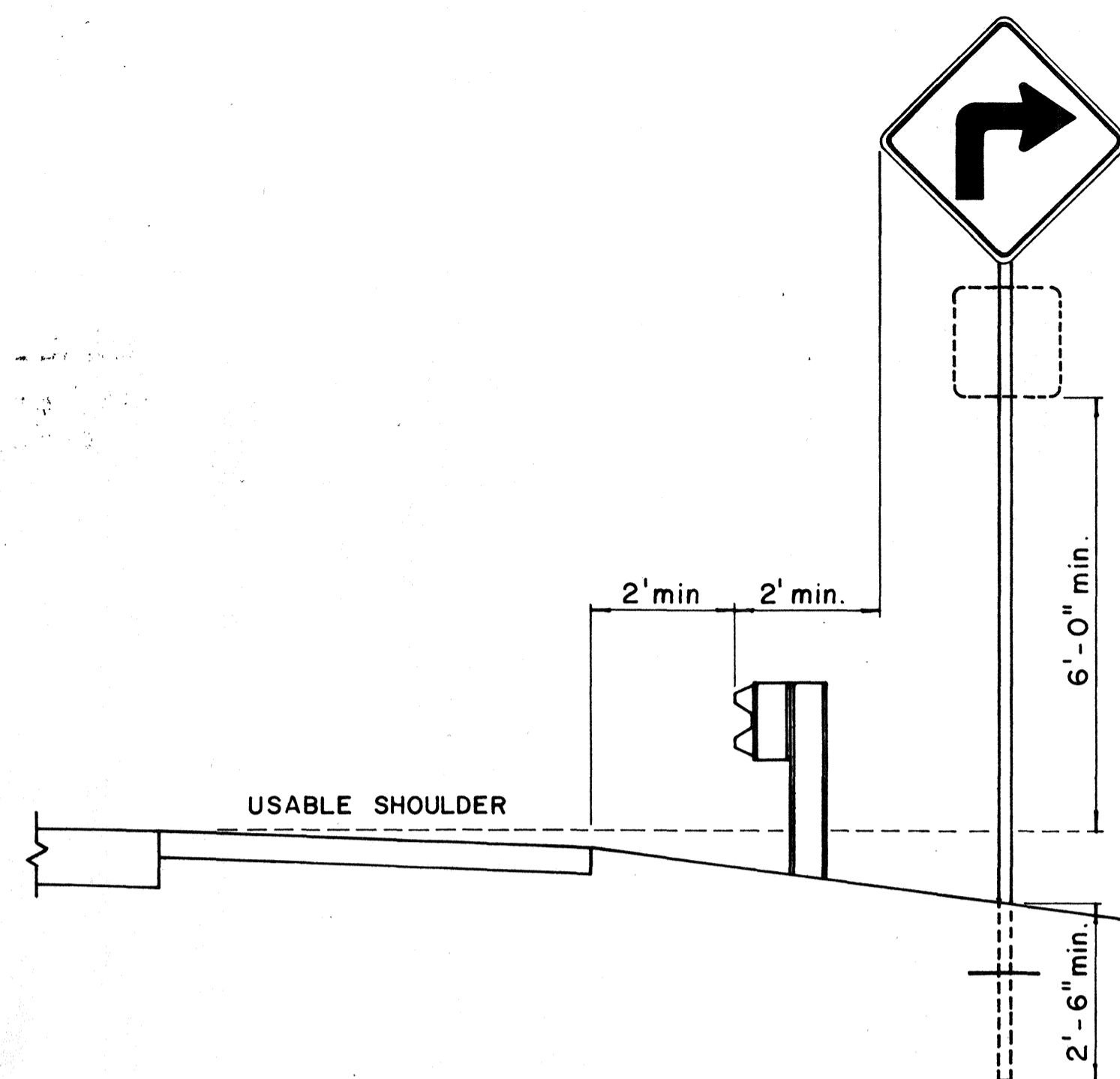
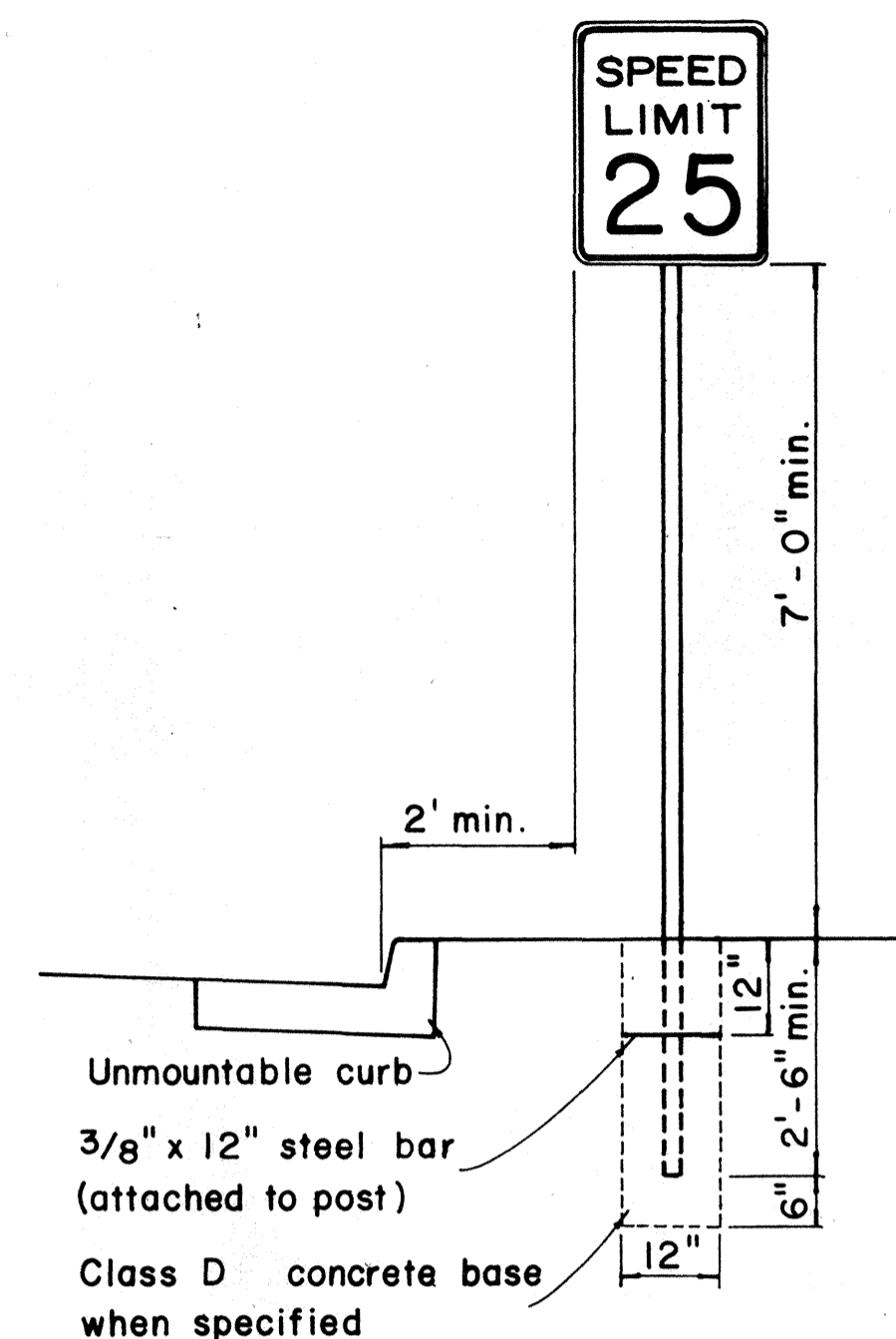
APPROVAL RECOMMENDED:  
*M. Hirozawa*  
HIGHWAY DESIGN ENGINEER 12-4-69 DATE

APPROVED:  
*John J. Schuler*  
ASSISTANT CHIEF, ENGINEERING 12-10-69 DATE

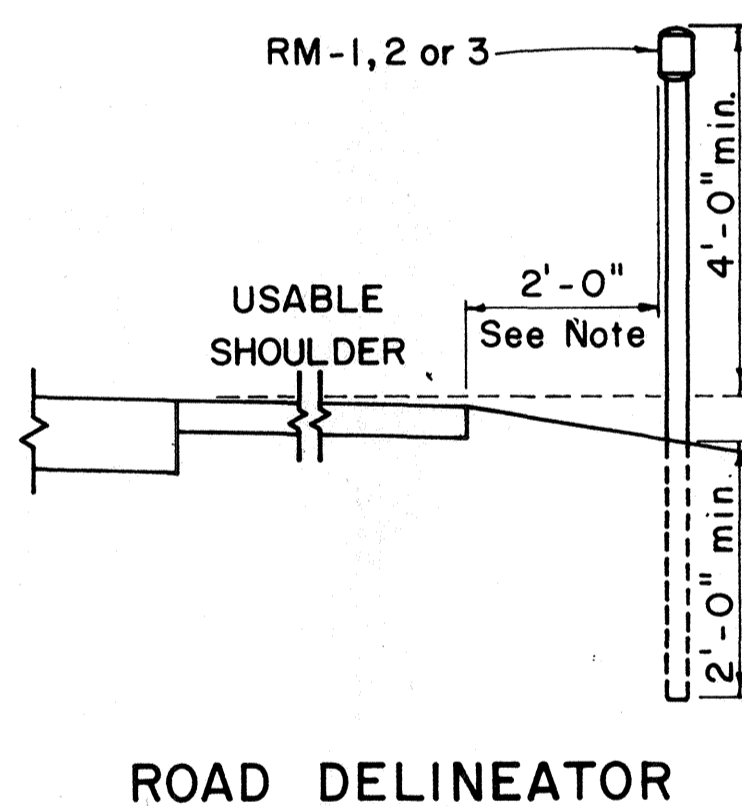
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**STANDARD DETAILS**  
CENTERLINE, REFERENCE SURVEY  
AND C & C STREET SURVEY  
MONUMENTS  
Scale: As Shown

DATE: \_\_\_\_\_  
SURVEY PLOTTED BY: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_  
ORIGINAL PLAN NO. \_\_\_\_\_  
NOTE BOOK NO. \_\_\_\_\_

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	740A-01-70	1970	12	40

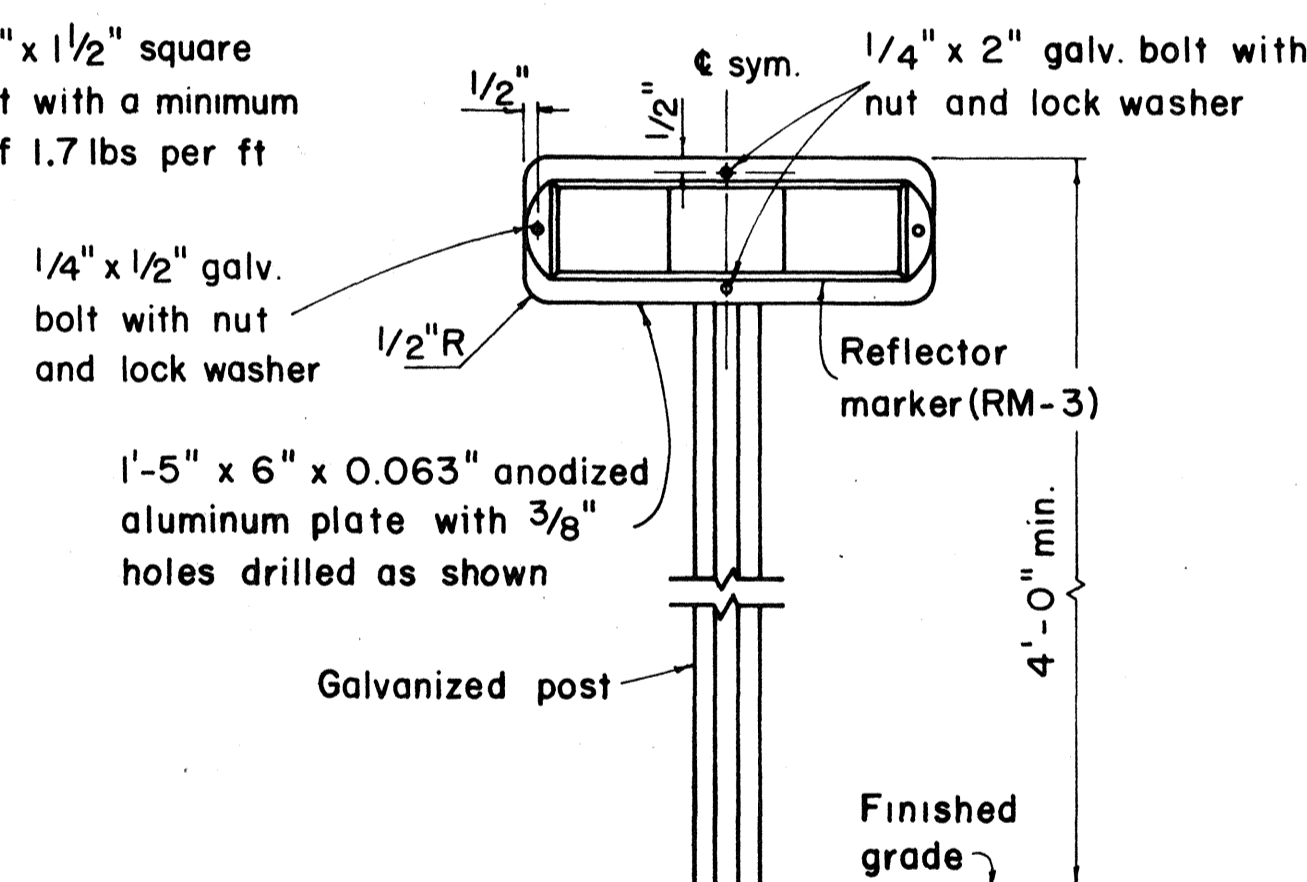
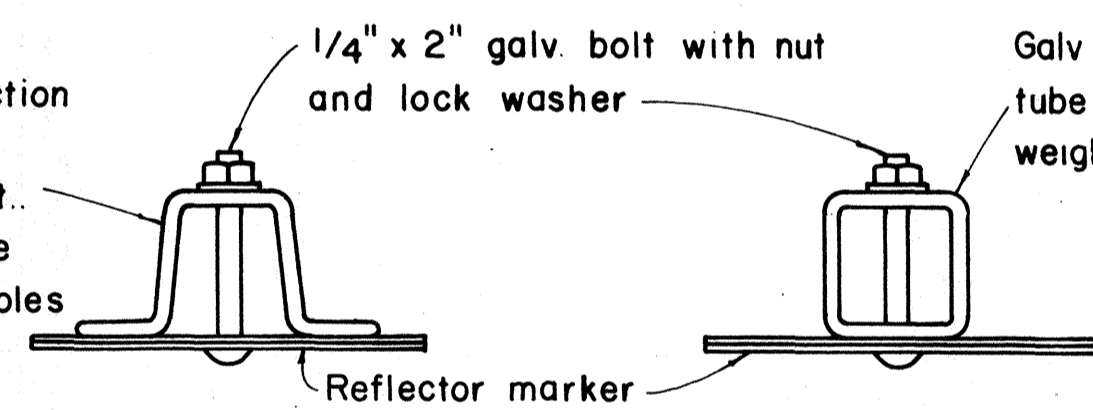


## HEIGHT AND LATERAL LOCATION OF SIGNS - TYPICAL INSTALLATION

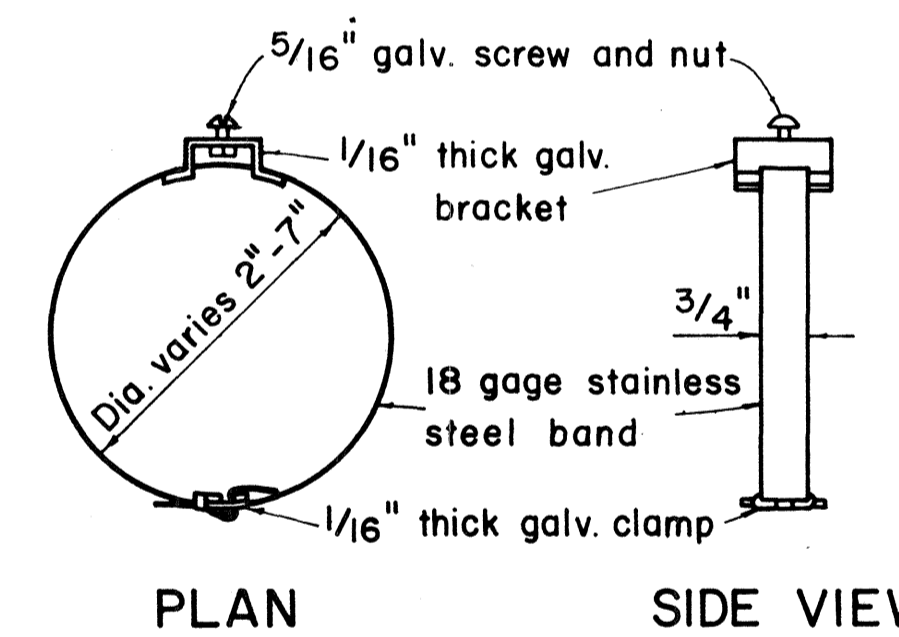


Galv. flanged channel 1/8" x 3 1/16" rolled section post with a minimum weight of 2 lbs. per ft. Upper 2 ft. shall have a single row of 3/8" holes centered in the web at 1" o.c.

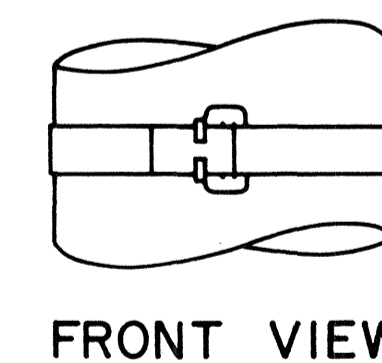
TYPICAL SECTION OF ROAD DELINEATOR



TYPICAL DETAIL  
HORIZONTAL REFLECTOR MARKER  
RM-3H



PLAN SIDE VIEW



FRONT VIEW

### 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:  
*Eiichi Tanaka* 12/29/69  
TRAFFIC ENGINEER DATE

APPROVED:  
*Arthur S. S. S.* 12-30-69  
ASSISTANT CHIEF, ENGINEERING DATE

### TYPICAL BAND BRACKET FOR MOUNTING TRAFFIC SIGNS

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

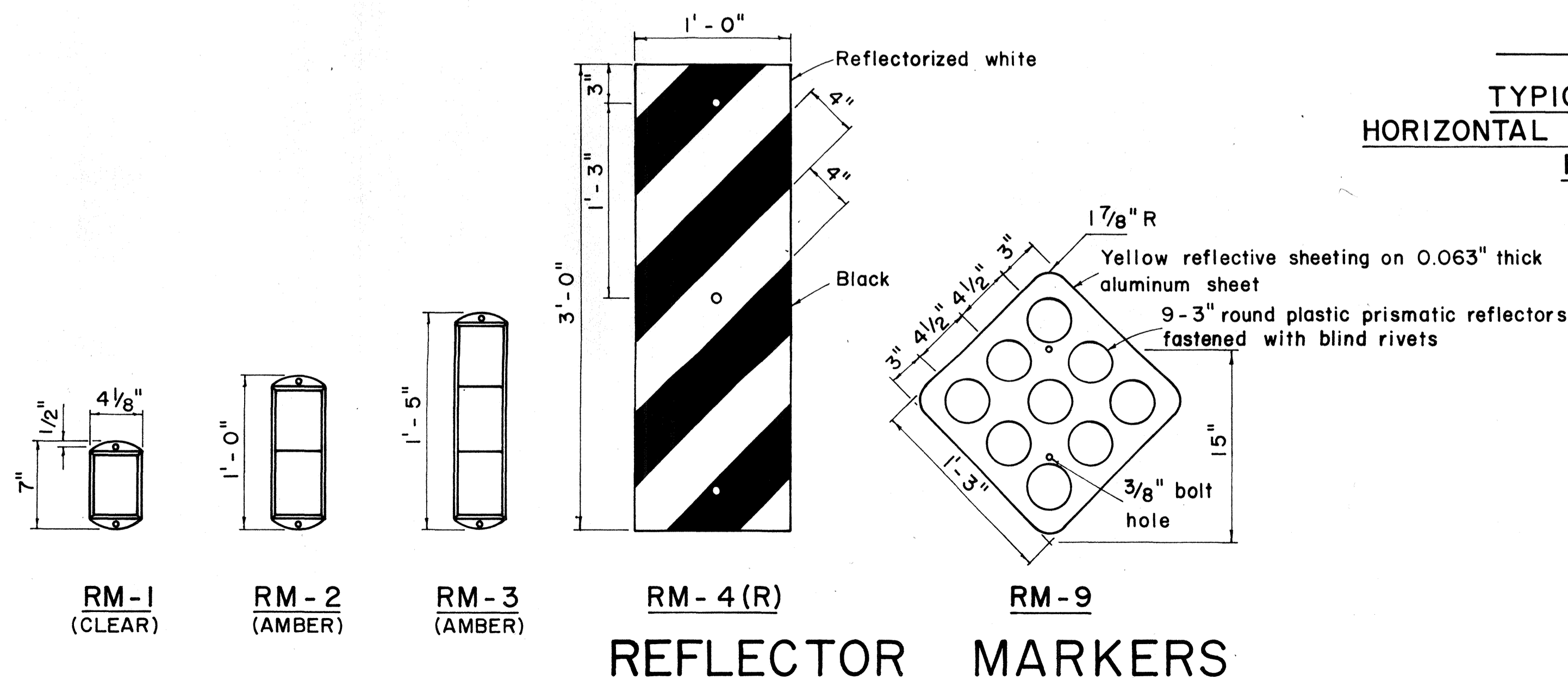
## STANDARD DETAILS

### MISCELLANEOUS SIGN DETAILS


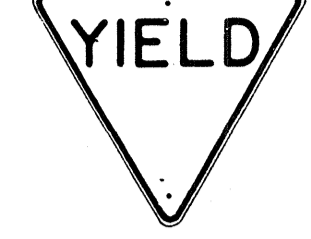

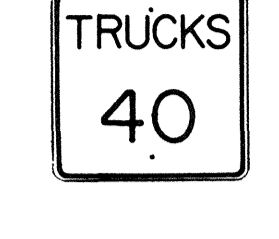

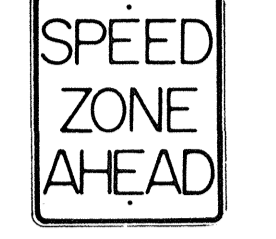
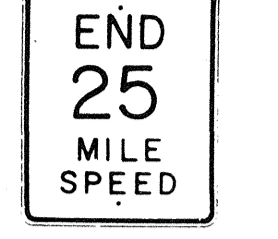

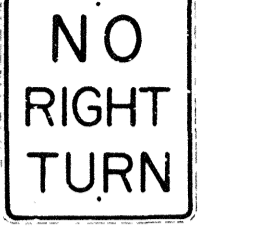




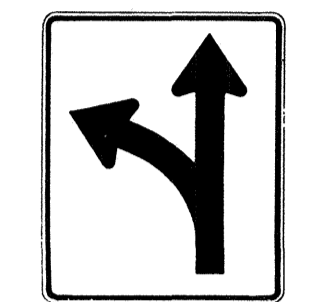




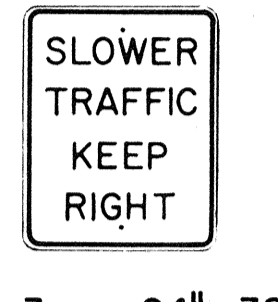

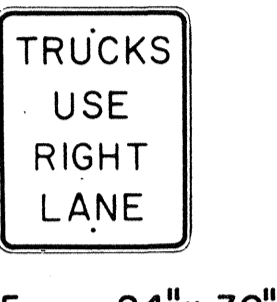


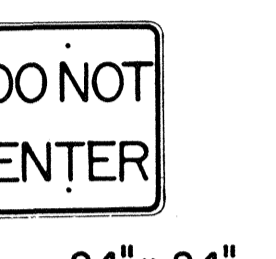
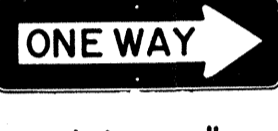

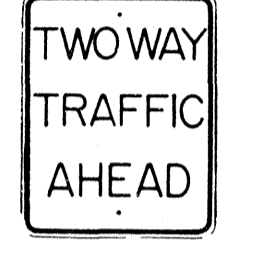



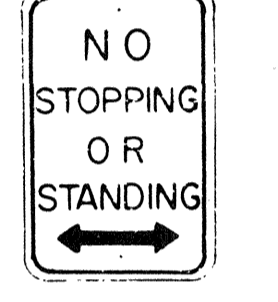

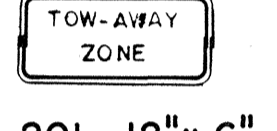





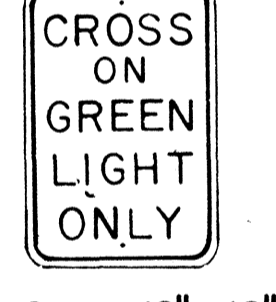



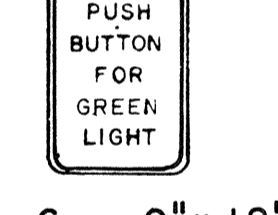
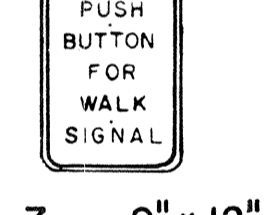
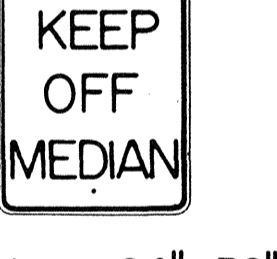
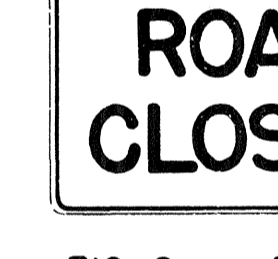
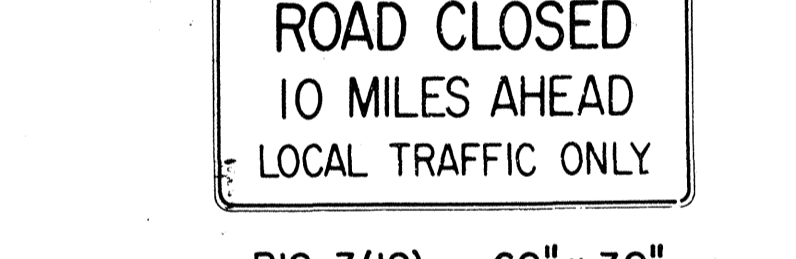
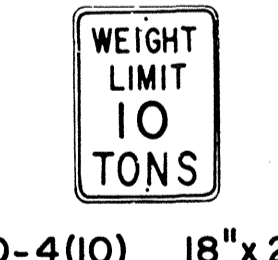
Not to scale March, 1968

SHEET No. 3 OF 12 SHEETS DT 100

SURVEY PLOTTED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_  
 DESIGNED BY: \_\_\_\_\_  
 NOTE BOOK: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_




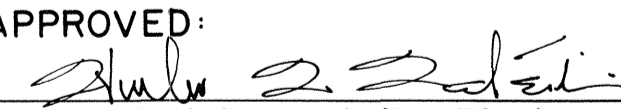
REFLECTOR MARKERS

 R1-1 30"x 30"	 R1-2 36"x36"x36" R1-2-E 48"x48"x48" R1-2-I 60"x60"x60"	 R2-1(50) 24"x 30" R2-1(50)-E 36"x48" R2-1(50)-I 48"x60"	 R2-2(40) 24"x 24" R2-2(40)-E 36"x 36" R2-2(40)-I 48"x 48"	 R2-4(40) 24"x 30" R2-4(40)-E 36"x48" R2-4(40)-I 48"x60"	 R2-5 24"x 30" R2-5-E 36"x 48" R2-5-I 48"x 60"	 R2-6(25) 24"x 30" R2-6(25)-E 36"x 48" R2-6(25)-I 48"x 60"	 R2-7 24"x 30" R2-7-E 36"x 48" R2-7-I 48"x 60"	 R3-1 24"x 30" R3-1-E 36"x 48"	 R3-2 24"x 30" R3-2-E 36"x 48"	 R3-3 24"x 24"	 R3-4 24"x 30" R3-4-E 36"x 48" R3-4-I 48"x 60"
 R3-5(L) 30"x 36"	 R3-6(L) 30"x 36"	 R3-7(R) 30"x 30"	 R3-8(L) 30"x 30"	 R4-1 24"x 30"	 R4-2 24"x 30"	 R4-3 24"x 30" R4-3-E 36"x 48" R4-3-I 48"x 60"	 R4-4 24"x 30" R4-4-E 36"x 48" R4-4-I 48"x 60"	 R4-5 24"x 30" R4-5-E 36"x 48"	 R4-6 24"x 30" R4-6-E 36"x 48"	 R4-7(R) 24"x 30" R4-7(R)-E 36"x 48"	 R5-1 24"x 24"
 R6-1(R) 36"x 12"	 R6-2(R) 18"x 24"	 R6-3 24"x 30"	 R6-4 24"x 30"	 R6-5 24"x 30"	 R7-1 12"x 18"	 R7-4 12"x 18" R7-4-E 24"x 30"	 R7-107(R) 12"x 18"	 R7-201 12"x 6"	 R8-1 24"x 30" R8-1-E 36"x 48" R8-1-I 48"x 60"	 R8-2 24"x 30" R8-2-E 36"x 48"	 R8-3 24"x 30" R8-3-E 36"x 48"
 R8-4 24"x 30" R8-4-E 36"x 48" R8-4-I 48"x 36"	 R9-1 18"x 24"	 R9-2 12"x 18"	 R9-3 12"x 18"	 R9-4 12"x 18"	 R9-5 12"x 18"	 R9-6 9"x 12"	 R9-7 9"x 12"	 RIO-1 24"x 30" RIO-1-E 36"x 48" RIO-1-I 48"x 60"	 RIO-2 48"x 30"	 RIO-3(10) 60"x 30"	
 RIO-4(10) 18"x 24"											

**NOTE:**

- The shape, color, dimensions, symbols, wording, lettering and reflectorization of all signs shall be in accordance with the "Manual on Uniform Traffic Control Devices for Streets and Highways," dated June 1961 and the BPR manual "Standard Highway Signs," dated September 1961 unless otherwise specified.
- All regulatory signs shall be reflectorized unless otherwise specified.
- All regulatory signs shall have  $\frac{3}{8}$ " bolt holes drilled at appropriate locations unless otherwise noted.
- The suffix "E" denotes Expressway signs and "I" denotes Interstate signs.
- For R2 signs, number in ( ) indicates speed and shall be as shown on the plans.
- (R) or (L) indicates right or left and shall be as shown on the plans.
- For RIO-4 sign, number in ( ) indicates weight and shall be as shown on the plan.

APPROVAL RECOMMENDED:  
  
 TRAFFIC ENGINEER 12/29/69  
 DATE

APPROVED:  
  
 ASSISTANT CHIEF, ENGINEERING 12-30-69  
 DATE

NO.	REVISION	APPROVED BY	DATE

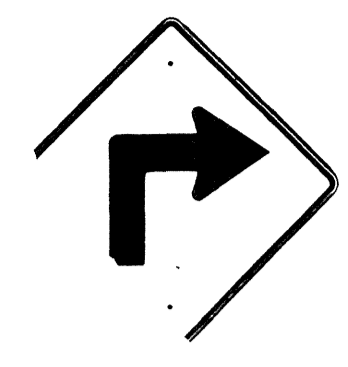
STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**STANDARD DETAILS**  
**REGULATORY SIGNS**

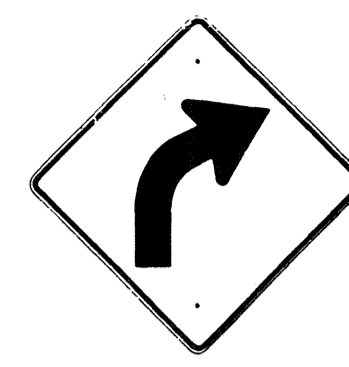
NOT TO SCALE

ORIGINAL PLAN  
 SURVEY PLOTTED BY  
 DRAWN BY  
 TRACED BY  
 QUANTITIES BY  
 CHECKED BY  
 No.

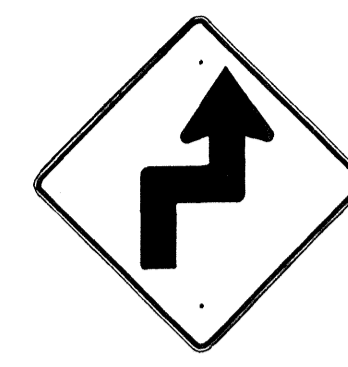
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	740A-01-70	1970	14	40



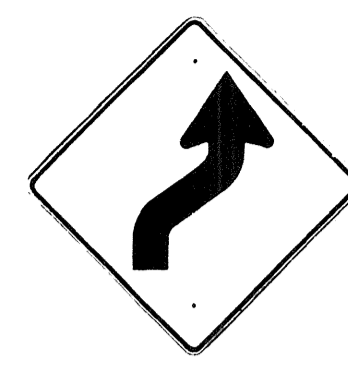
WI-1(R) 30" x 30"



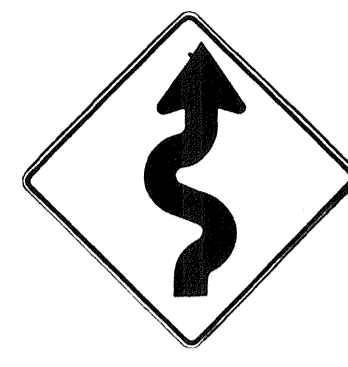
WI-2(R) 30" x 30"



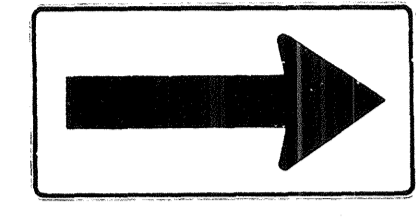
WI-3(R) 30" x 30"



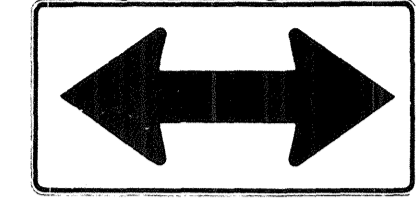
WI-4(R) 30" x 30"



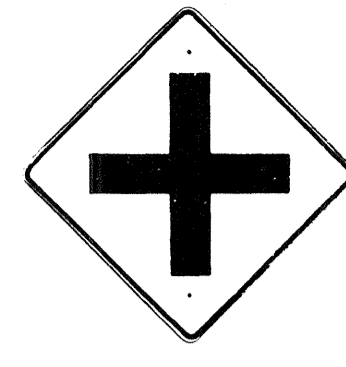
WI-5(R) 30" x 30"



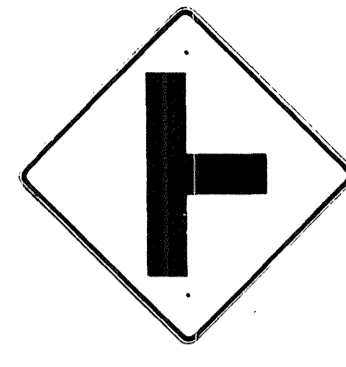
WI-6 48" x 24"



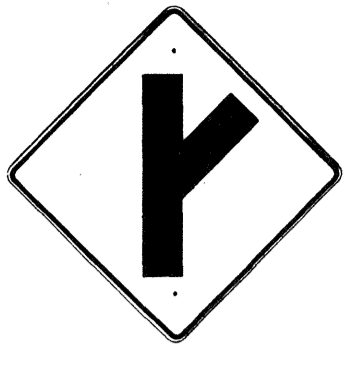
WI-7 48" x 24"



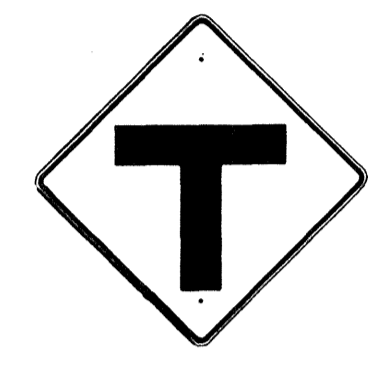
W2-1 30" x 30"



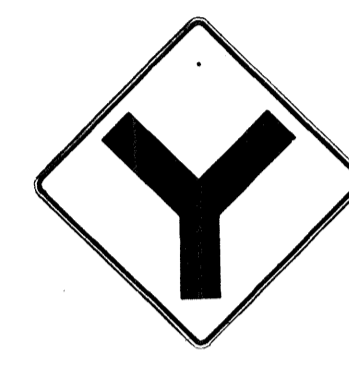
W2-2 30" x 30"



W2-3(R) 30" x 30"



W2-4 30" x 30"



W2-5 30" x 30"



W3-1 30" x 30"



W3-2 30" x 30"



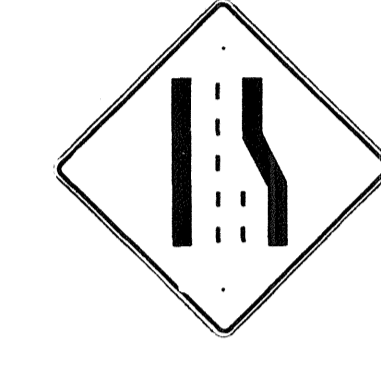
W3-3 36" x 36"



W4-1 30" x 30"

W4-1-E 36" x 36"

W4-1-I 48" x 48"



W4-2 30" x 30"

W4-2-E 36" x 36"



W5-1 30" x 30"

W5-1-E 36" x 36"



W5-2 30" x 30"



W5-3 30" x 30"



W6-1 36" x 36"



W6-2 36" x 36"



W7-1 30" x 30"



W8-1 30" x 30"



W8-2 30" x 30"



W8-3 30" x 30"



W8-4 30" x 30"



W8-5 30" x 30"



W9-1 30" x 30"



W9-2 30" x 30"



W10-1 36" DIAMETER



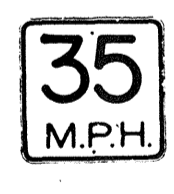
W11-1 30" x 30"



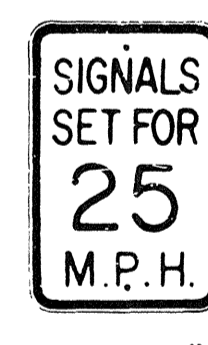
W11-5 30" x 30"



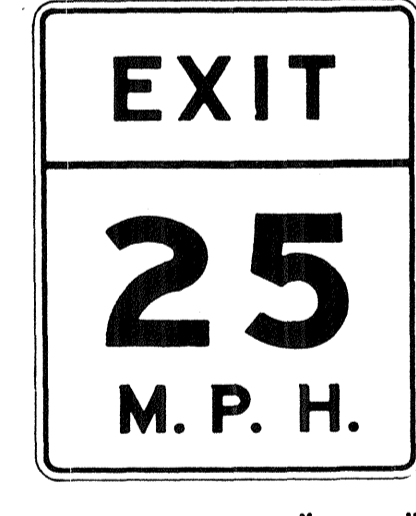
W12-2 36" x 36"



W13-1(35) 18" x 18"  
W13-1(35)-E 24" x 24"



W13-2(25) 12" x 18"



W13-3(25) 48" x 60"

NOTE:

1. The shape, color, dimensions, symbols, wording, lettering and reflectorization of all signs shall be in accordance with the "Manual on Uniform Traffic Control Devices for Streets and Highways," dated June 1961 and the BPR manual "Standard Highway Signs," dated September 1961 unless otherwise specified.
2. All warning signs shall be reflectorized unless otherwise specified.
3. All warning signs shall have 3/8" bolt holes drilled at appropriate locations unless otherwise noted.
4. (R) or (L) indicates right or left and shall be as shown on the plan.
5. The suffix "E" denotes Expressway signs and "I" denotes Interstate signs.
6. For W13 sign, number in ( ) indicates speed and shall be as shown on the plans.

SURVEY PLOTTED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 DRAWN BY \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_  
 ORIGINAL PLAN \_\_\_\_\_  
 NOTE BOOK \_\_\_\_\_  
 No. \_\_\_\_\_

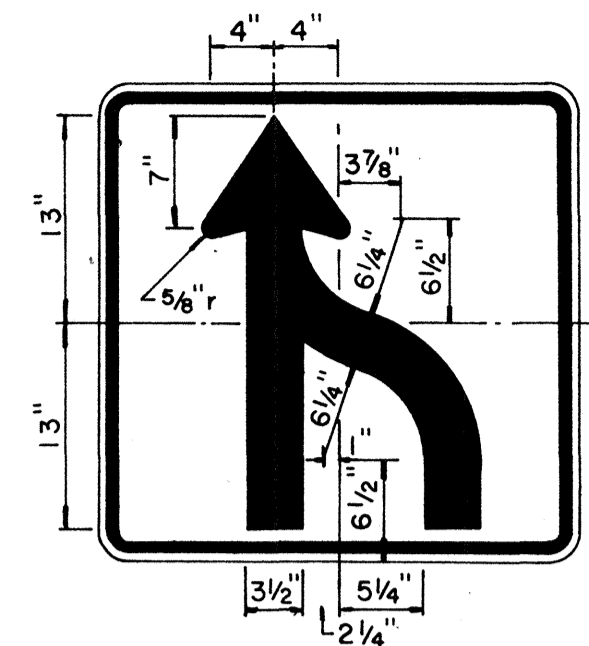
APPROVAL RECOMMENDED:  
*Euski Tanaka* 12/29/69  
 TRAFFIC ENGINEER DATE

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

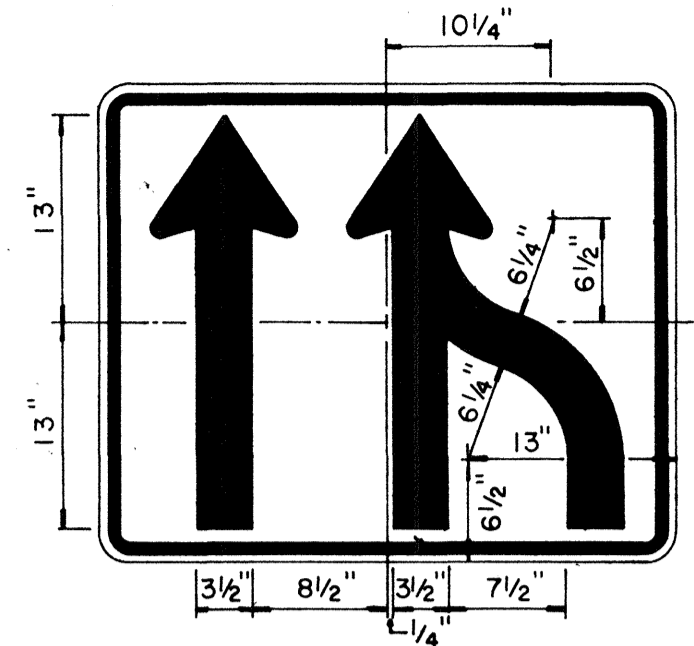
NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
  
**STANDARD DETAILS**  
**WARNING SIGNS**  
 NOT TO SCALE  
 SHEET No. 5 OF 12 SHEETS DT 102

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	740A-01-70	1970	15	40



R3-9 30" x 30"



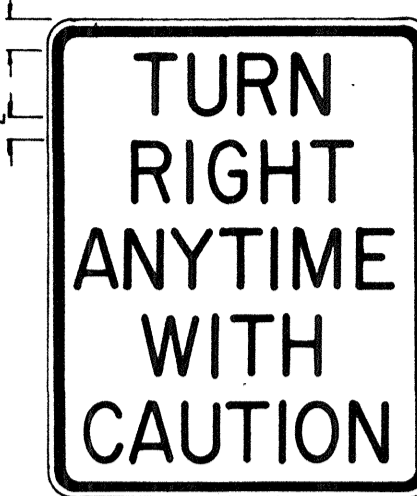
R3-10 36" x 30"



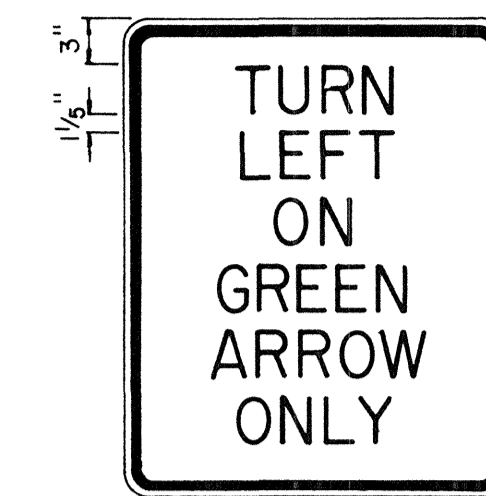
R5-5(1) 24" x 18"

R5-5(2) 36" x 24"

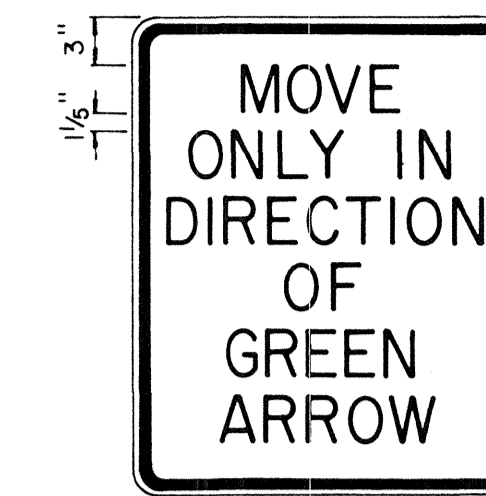
NOTE:  
White legend and border  
on Red background.



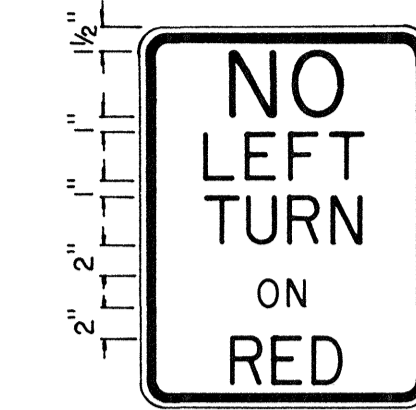
R15-1 24" x 30"



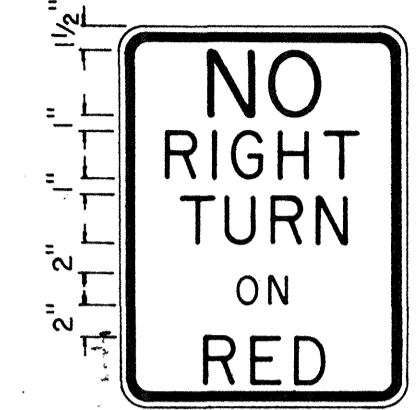
R16-1 24" x 30"



R16-2 24" x 30"



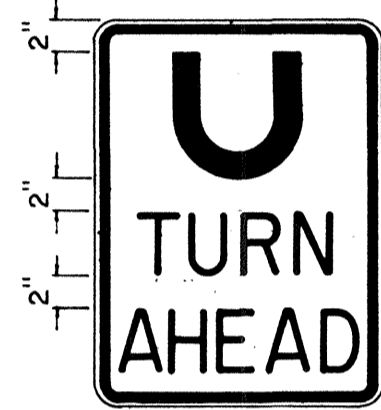
R17-1 18" x 24"



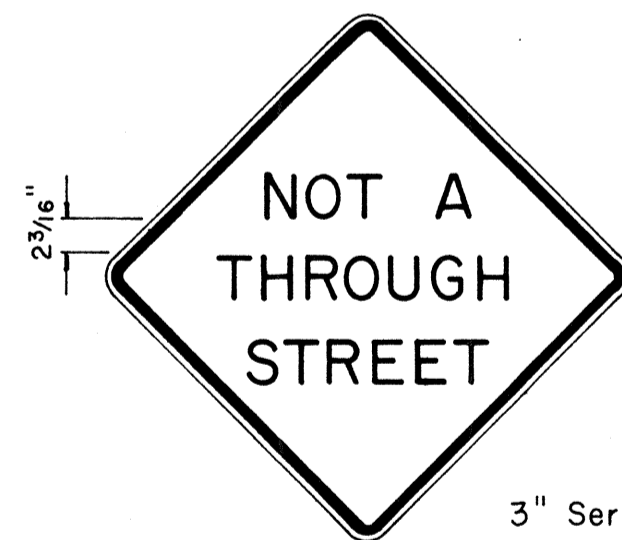
R17-2 18" x 24"



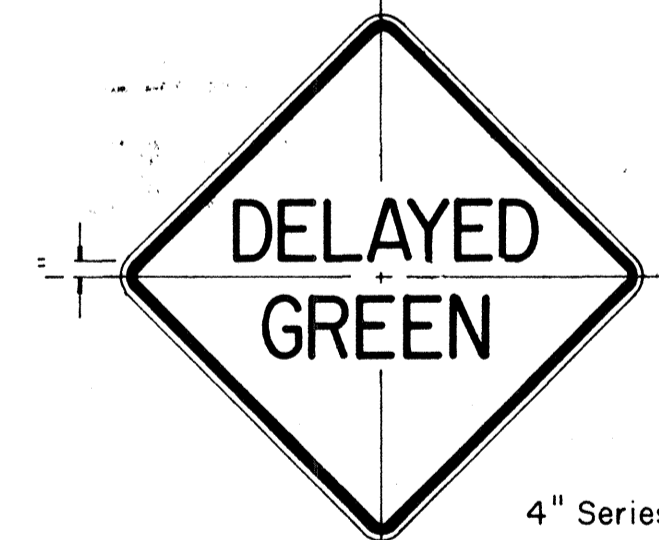
R18-1 36" x 30"



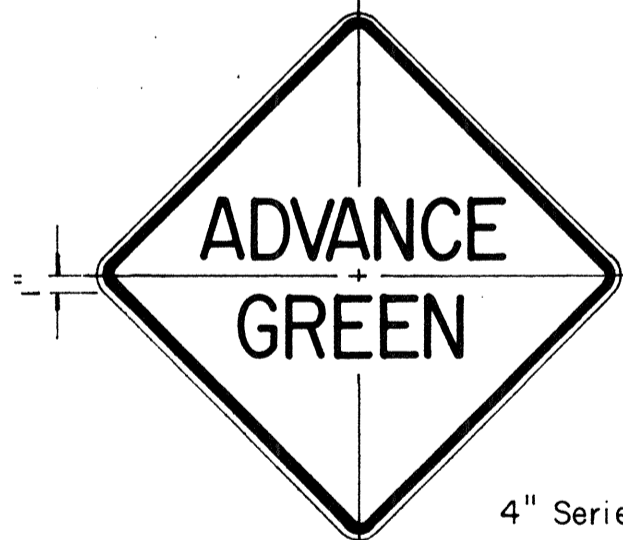
R19-1 18" x 24"



W13-4 24" x 24"



W15-1 24" x 24"



W15-2 24" x 24"

- NOTE:
- The shape, color, plate details, lettering and reflectorization of Regulatory signs (Prefix R) and Warning signs (Prefix W) shall be in accordance with the "Manual on Uniform Traffic Control Devices for Streets and Highways," dated June 1961 and the BPR manual "Standard Highway Signs," dated September 1961 unless otherwise specified.
  - All regulatory and warning signs shall be reflectorized unless otherwise specified.
  - All regulatory and warning signs shall have 3/8" bolt holes drilled at appropriate locations unless otherwise specified.

APPROVAL RECOMMENDED:  
*Etsuki Tanaka* 12/29/69  
TRAFFIC ENGINEER DATE

APPROVED:  
*Paul S. Selen* 12-30-69  
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**STANDARD DETAILS**  
MISCELLANEOUS  
REGULATORY & WARNING SIGNS

Scale: 1" = 1' - 0"

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.	740A-01-70	1970	16	40



W7-2 48"x48"



W8-7 30"x30"



W14-1 30"x30"



W20-1a 48"x48"



W20-2d 48"x48"



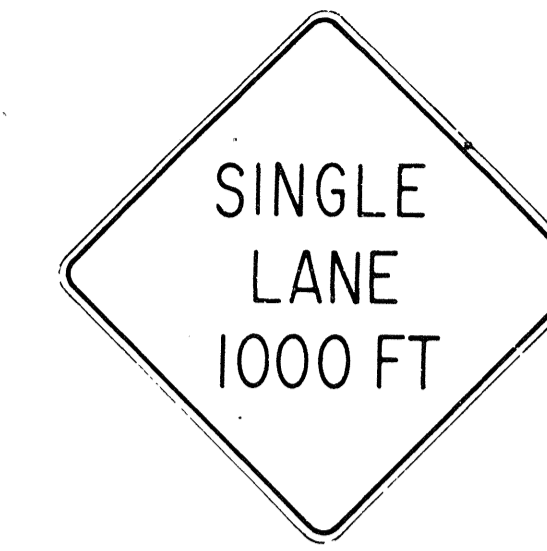
W20-3b 48"x48"



W20-4d 48"x48"



W20-5d(L) 48"x48"



W20-6b 48"x48"



W20-7c 48"x48"



W21-1 30"x30"



W21-2 24"x24"



W21-3 36"x36"



W21-4 30"x30"



W21-5 30"x30"



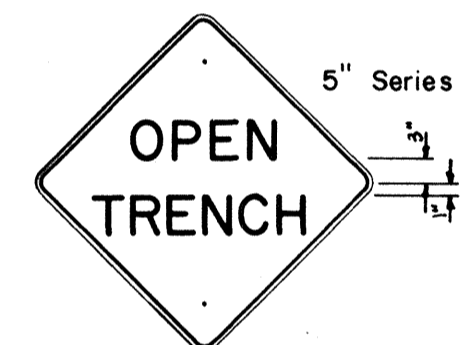
W21-6 30"x30"



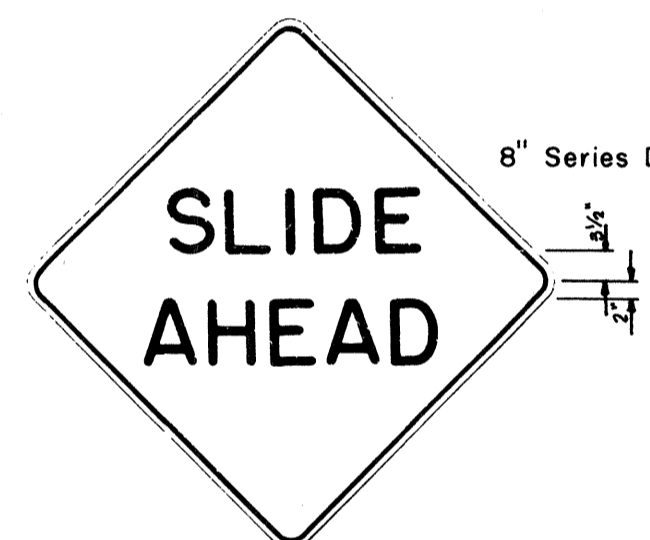
W22-1 30"x30"



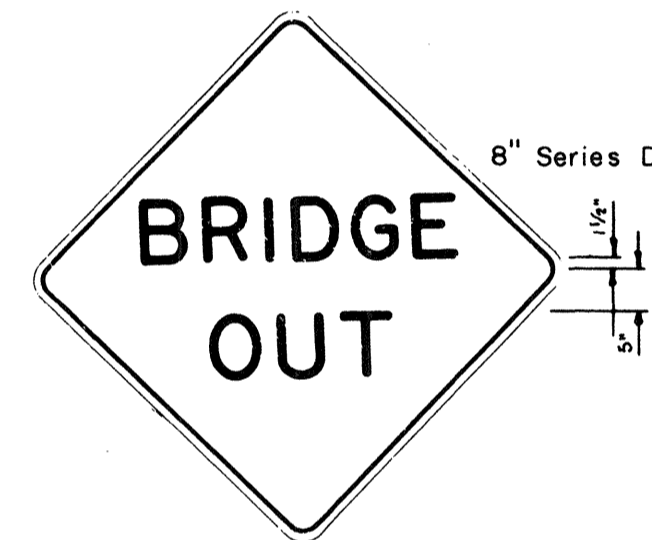
W22-2 30"x30"



W22-3 30"x30"



W22-4 48"x48"



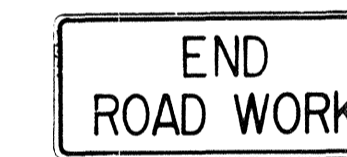
W22-5 48"x48"



G20-1(5) 60"x36"



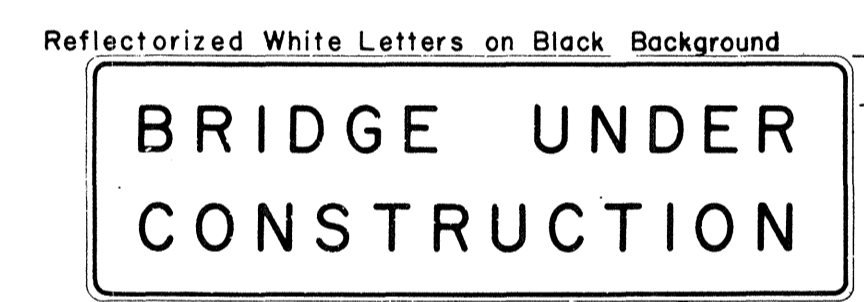
G20-2 60"x24"



G20-3 42"x18"



M5-7(L) 48"x18"



CW-1 96"x30"

NOTE:

- The shape, color, dimensions, symbols, wording, lettering and reflectorization of all signs shall be in accordance with the "Manual on Uniform Traffic Control Devices for Streets and Highways," dated June 1961 and the BPR manual "Standard Highway Signs," dated September 1961 unless otherwise specified.
- All signs shall be reflectorized unless otherwise specified.
- All signs shall have 3/8" bolt holes drilled at appropriate locations unless otherwise noted.
- For W20 series signs, suffixes a,b,c and d are as follows a 1500 FT, b 1000 FT, c 500 FT and d AHEAD
- (R) or (L) indicates right or left and shall be as shown on the plans.
- Number in ( ) indicates miles and shall be as shown on the plans.

ORIGINAL PLAN	DATE
NO. _____	_____
SURVEY PLOTTED BY	DATE
TRACED BY	_____
DESIGNED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____

APPROVAL RECOMMENDED:  
*Eishi Tanaka*  
 TRAFFIC ENGINEER 12/29/69 DATE

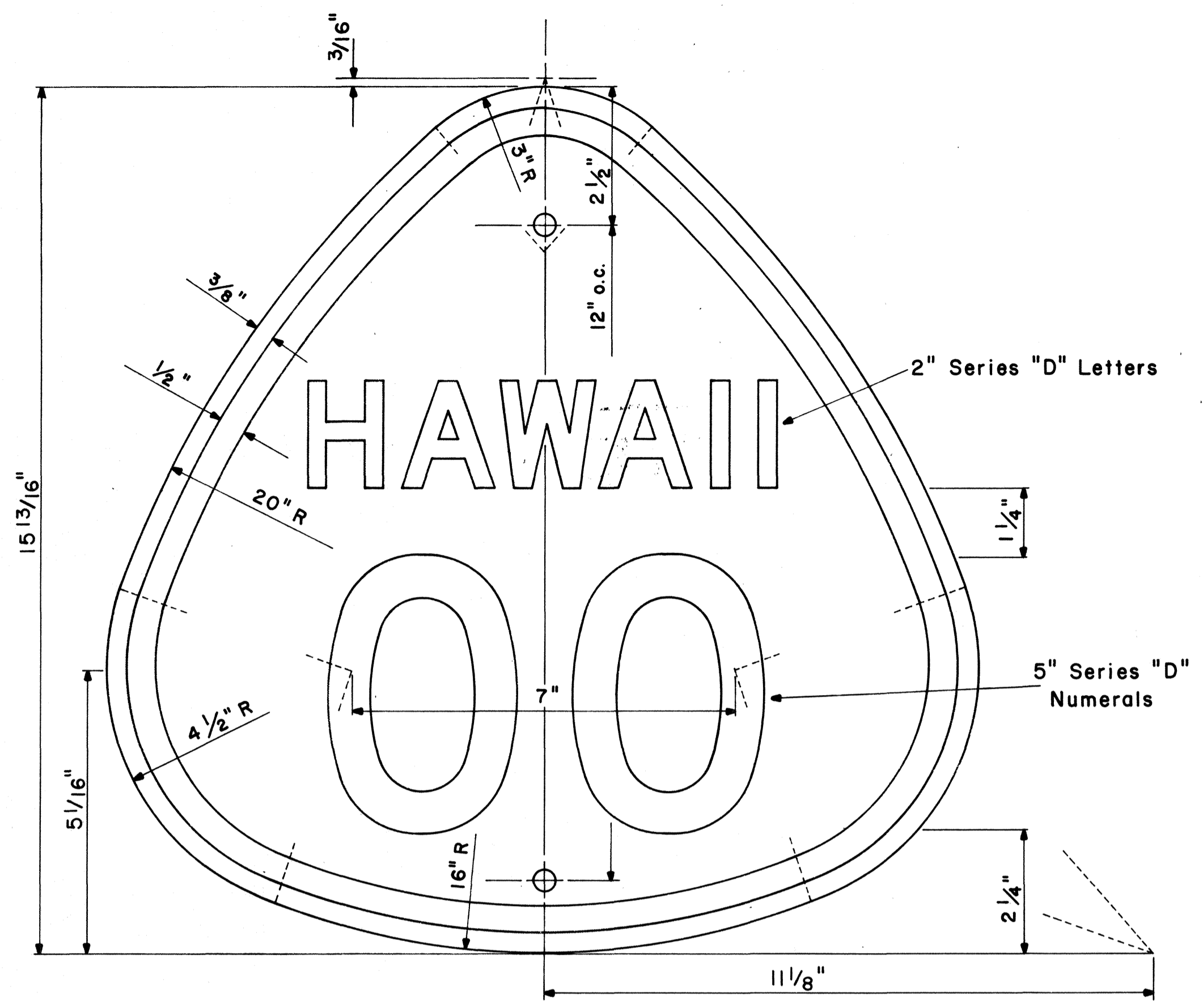
APPROVED:  
*Shelby S. Dean*  
 ASSISTANT CHIEF, ENGINEERING 12-30-69 DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

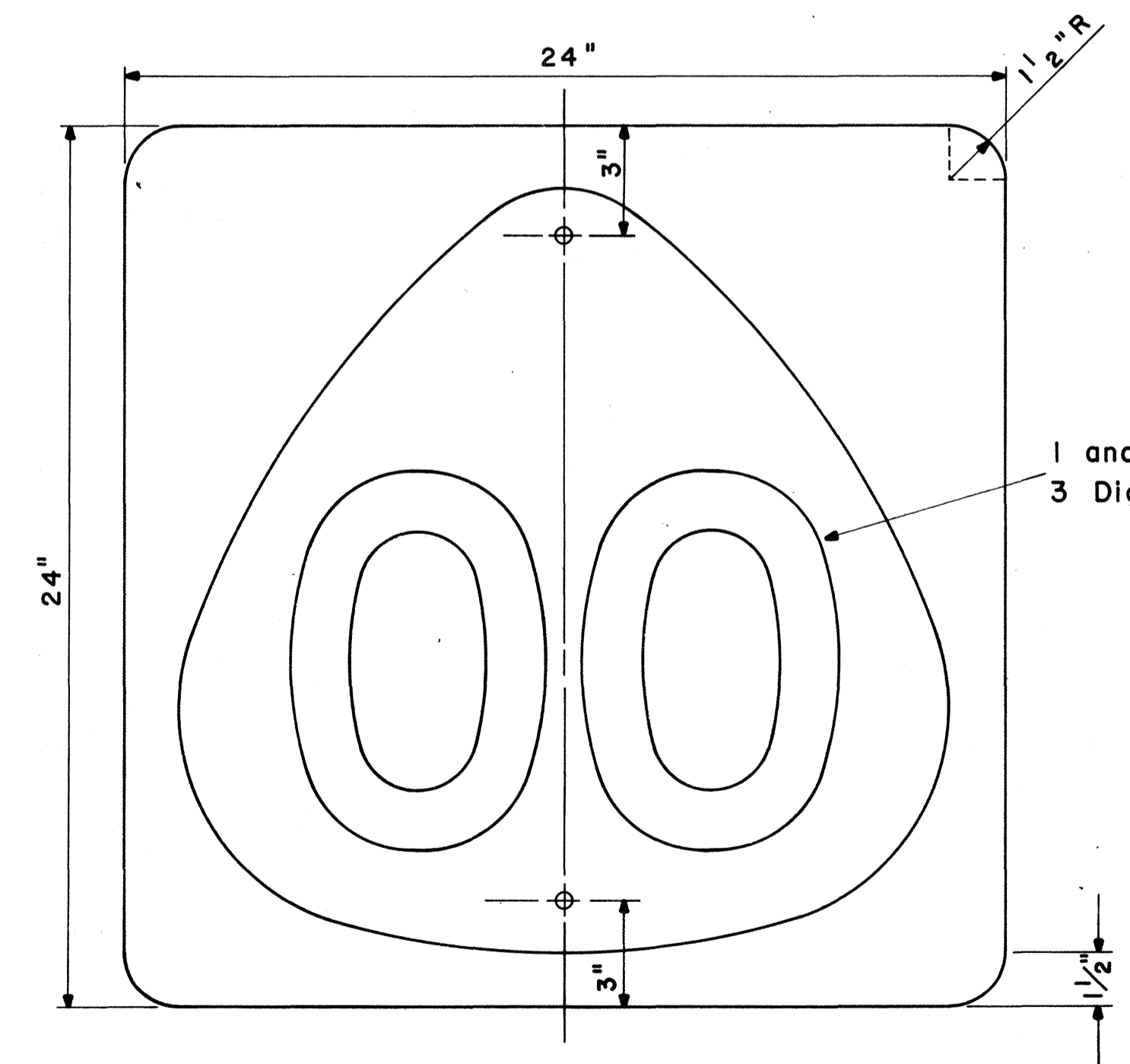
**STANDARD DETAILS**  
**CONSTRUCTION SIGNS**

NOT TO SCALE



**STATE ROUTE MARKER  
MI-3(OO)**

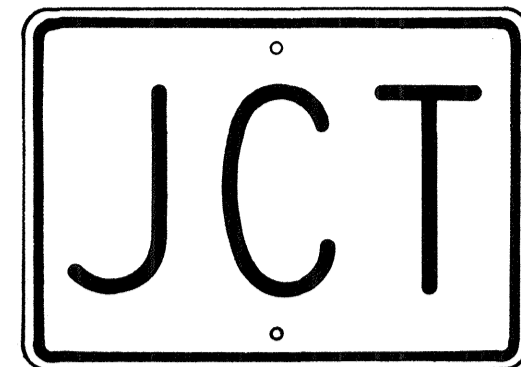
Scale: 1/2" = 1"



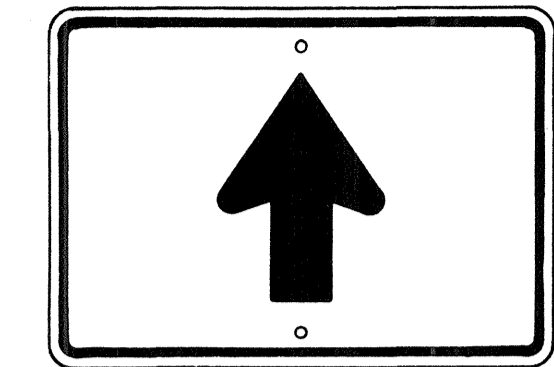
**STATE ROUTE MARKER  
MI-4(OO)**

Scale: 1/4" = 1"

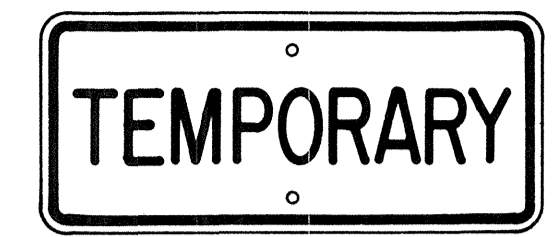
NOTE:  
Multiply all dimensions of State Route Marker MI-3 by 1.3 for the dimensions of the shield for MI-4.



M2-1  
21" x 15"



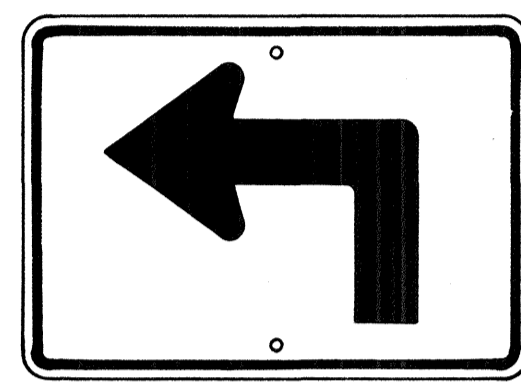
M4-3  
21" x 15"



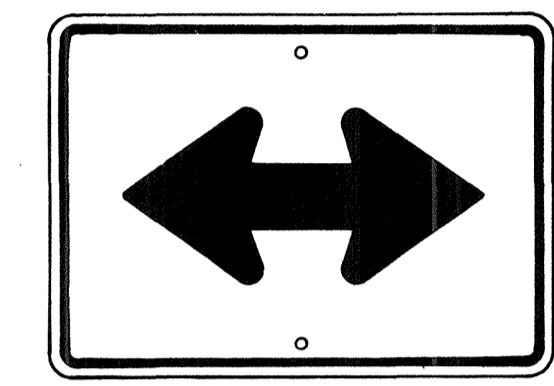
M5-1  
21" x 9"



M5-2  
21" x 9"



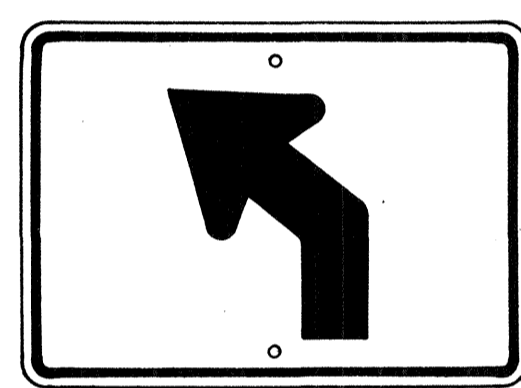
M3-1-L  
\* M3-1-R ↗  
21" x 15"



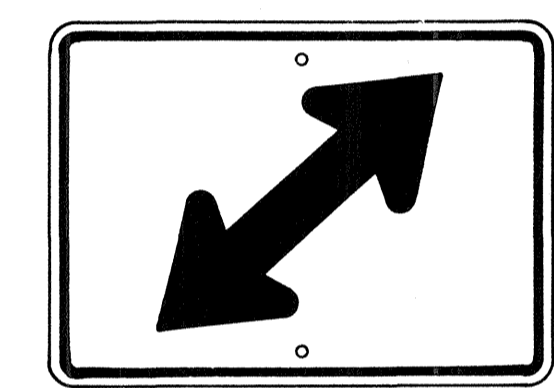
M4-4  
21" x 15"



M5-3  
21" x 9"



M3-2-L  
\* M3-2-R ↗  
21" x 15"



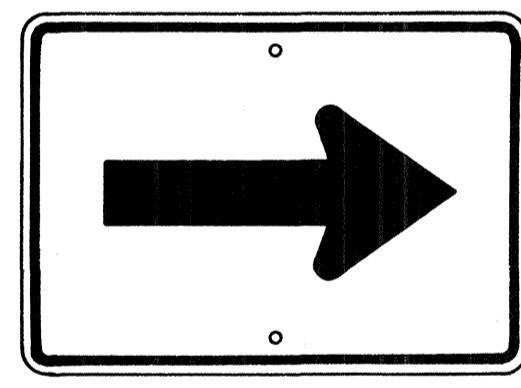
M4-5-R  
\* M4-5-L ↙  
21" x 15"



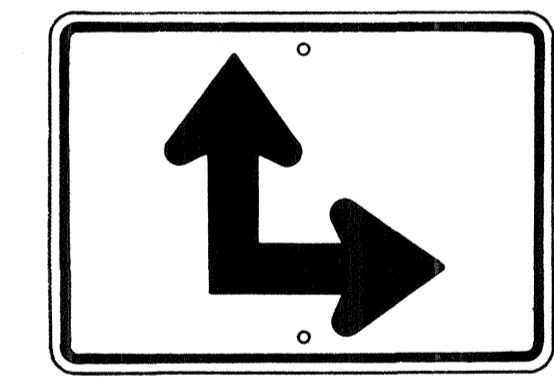
M5-4  
21" x 9"



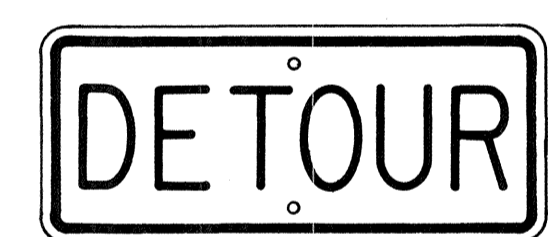
M5-5  
21" x 9"



M4-1  
21" x 15"



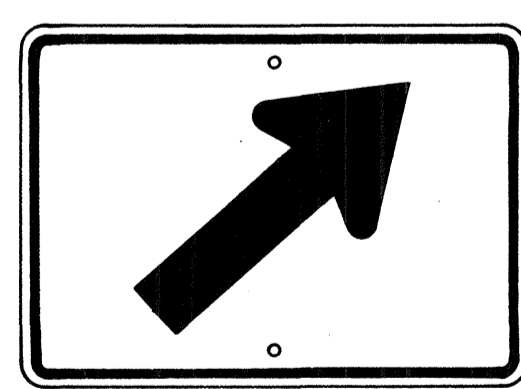
M4-6-R  
\* M4-6-L ↙  
21" x 15"



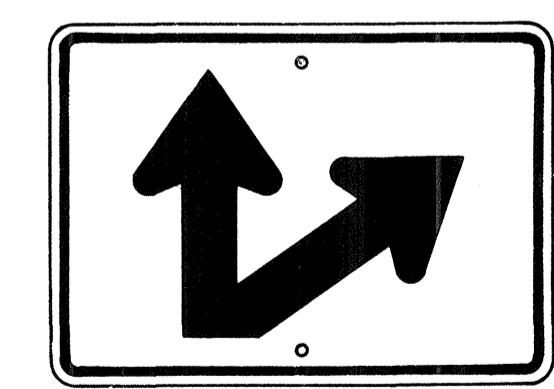
M5-6  
21" x 9"



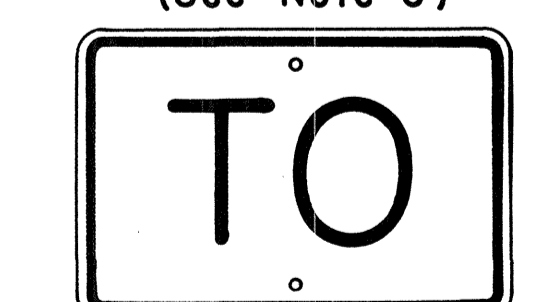
M6-1-N  
21" x 9"  
(See Note 6)



M4-2-R  
\* M4-2-L ↙  
21" x 15"



M4-7-R  
\* M4-7-L ↙  
21" x 15"



M7-1  
18" x 12"

**AUXILIARY MARKERS**

Scale: 1/8" = 1"

\* NOTE:  
Signs shall be similar but opposite in direction.

**GENERAL NOTES**

- The shape, color, dimensions, symbols, wording, lettering and reflectorizing of all signs shall be in accordance with the "Manual on Uniform Traffic Control Devices for Streets and Highways," dated June 1961 and the BPR manual "Standard Highway Signs," dated September 1961, unless otherwise specified.
- All letters and figures shall conform to the manual "Standard Alphabets for Highway Signs," Dept. of Commerce, Bureau of Public Roads, 1966
- All markers shall be reflectorized unless otherwise specified.
- All markers shall have 3/8" bolt holes drilled at appropriate locations unless otherwise specified.
- All markers shall have a black legend on a white background unless otherwise specified.
- Sign message of Cardinal Direction Marker (M6-1) shall be denoted by the following suffixes:  
M6-1-N : NORTH  
M6-1-E : EAST  
M6-1-S : SOUTH  
M6-1-W : WEST
- Auxiliary markers denoted with the suffix "I": (M4-1-I) shall have a white legend on a blue background.
- Cardinal Direction Marker (M6-1) with suffix I (3) shall have a white legend on a blue background and shall be 30" x 15" in size.
- For MI-3 and MI-4 signs, number in ( ) indicates route number and shall be as shown on the plan.

APPROVAL RECOMMENDED:  
*Eishi Tanaka* 12/20/69  
TRAFFIC ENGINEER DATE

APPROVED:  
*Arthur S. Patel* 12-20-69  
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

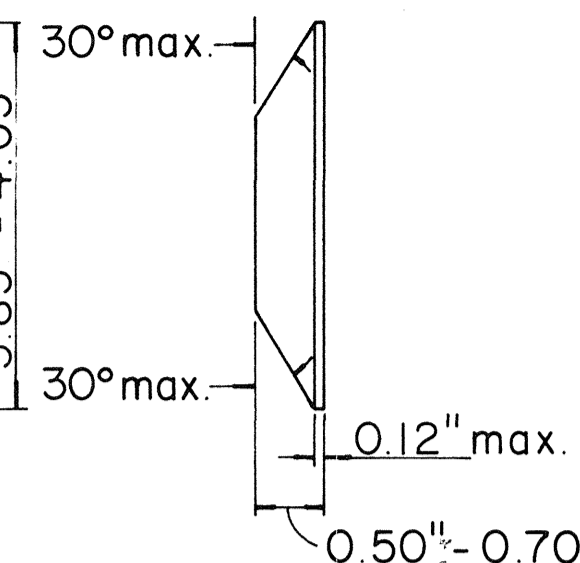
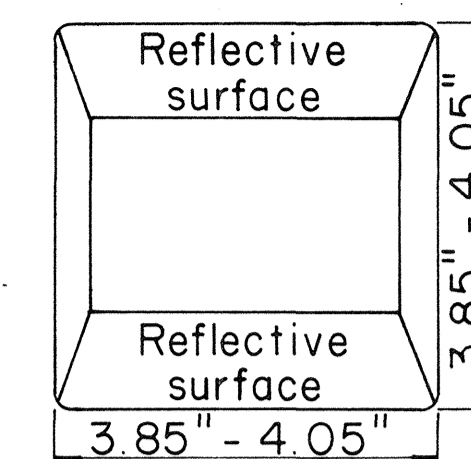
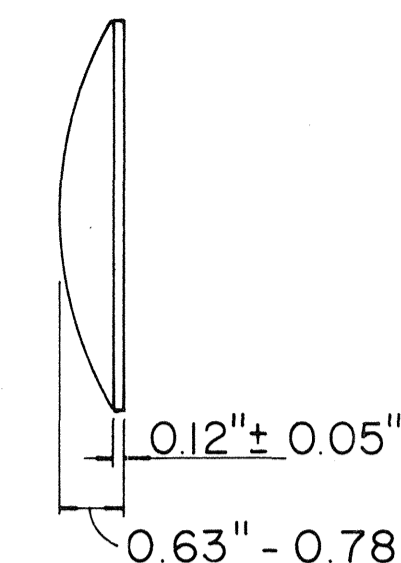
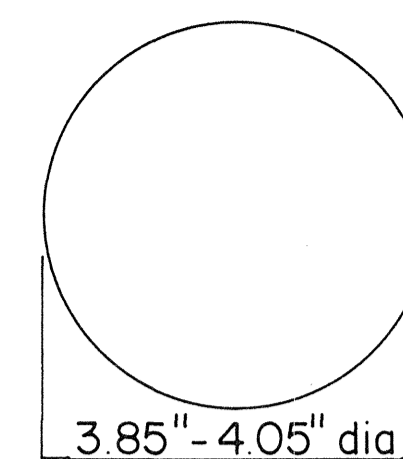
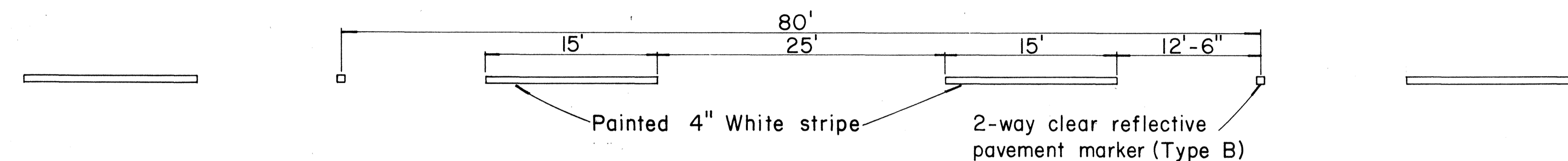
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**STANDARD DETAILS**  
STATE ROUTE MARKERS  
AND  
AUXILIARY MARKERS  
Scale: As Noted  
SHEET No. 8 OF 12 SHEETS DT105

ORIGINAL PLAN  
NOTE BOOK  
NO.

DATE  
DRAWN BY  
DESIGNED BY  
QUANTITIES BY  
CHECKED BY



### ① CENTER LINES ON TWO - LANE RURAL ROADS AND CITY STREETS



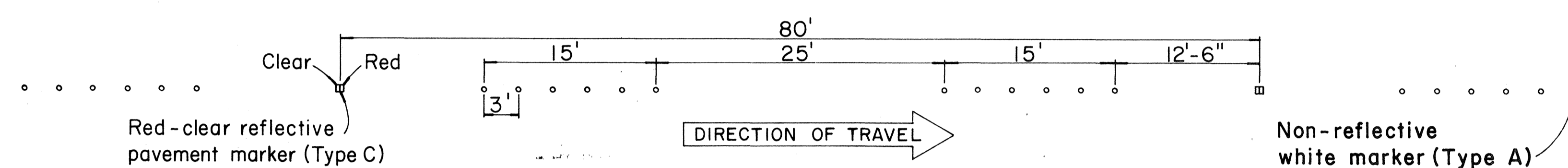
#### TYPE A

Non-reflective white marker

#### TYPE B

2-way clear reflective surface

### ② LANE LINES



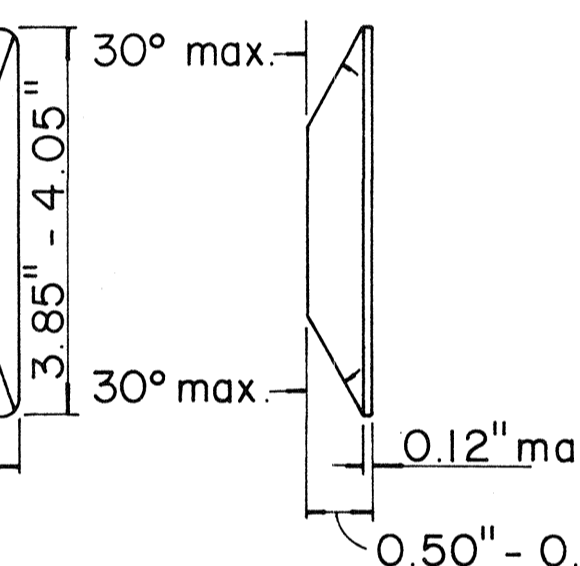
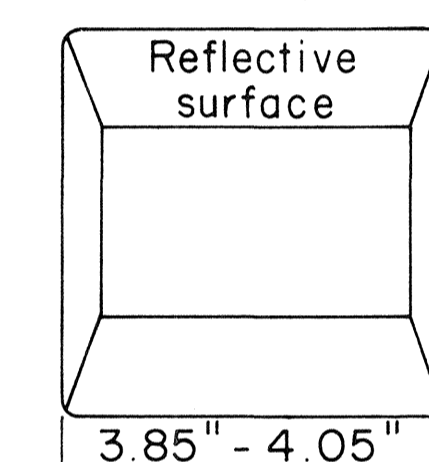
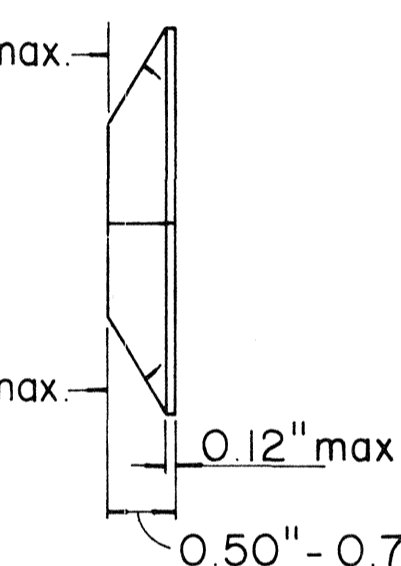
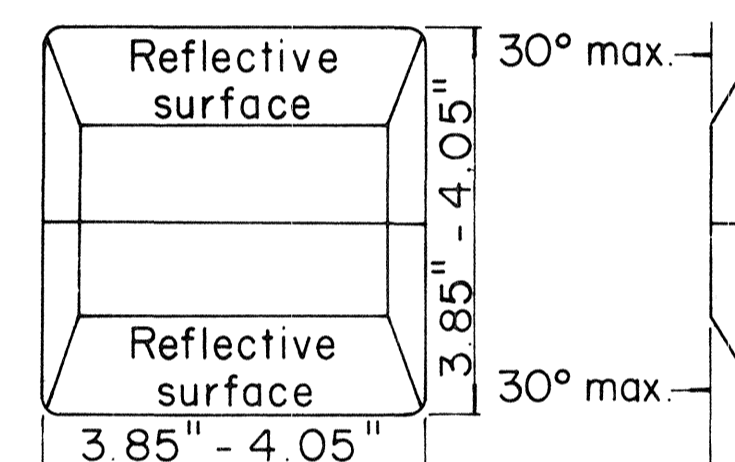
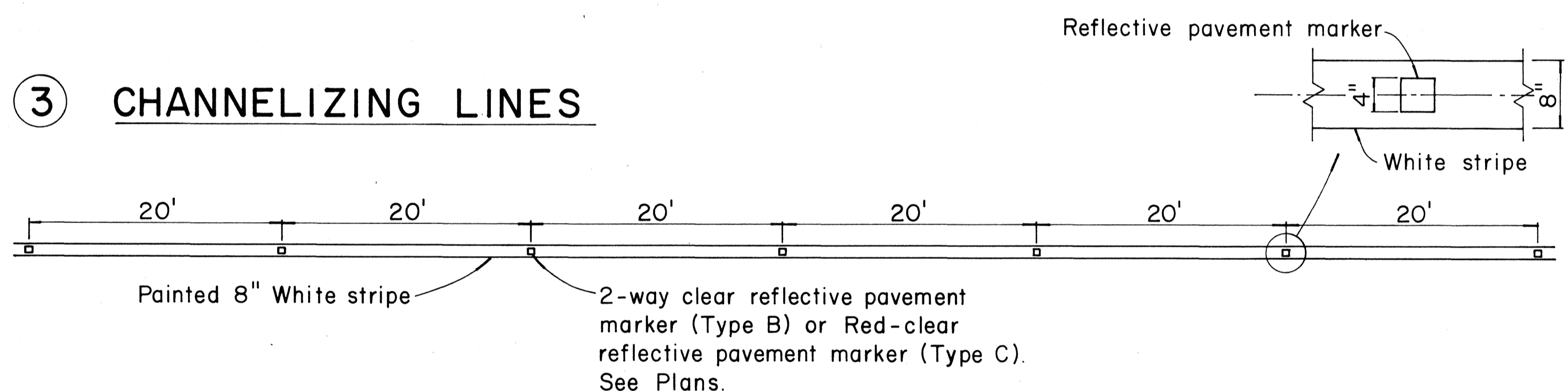
#### TYPE J

Non-reflective yellow marker

#### TYPE D

2-way yellow reflective surface

### ③ CHANNELIZING LINES



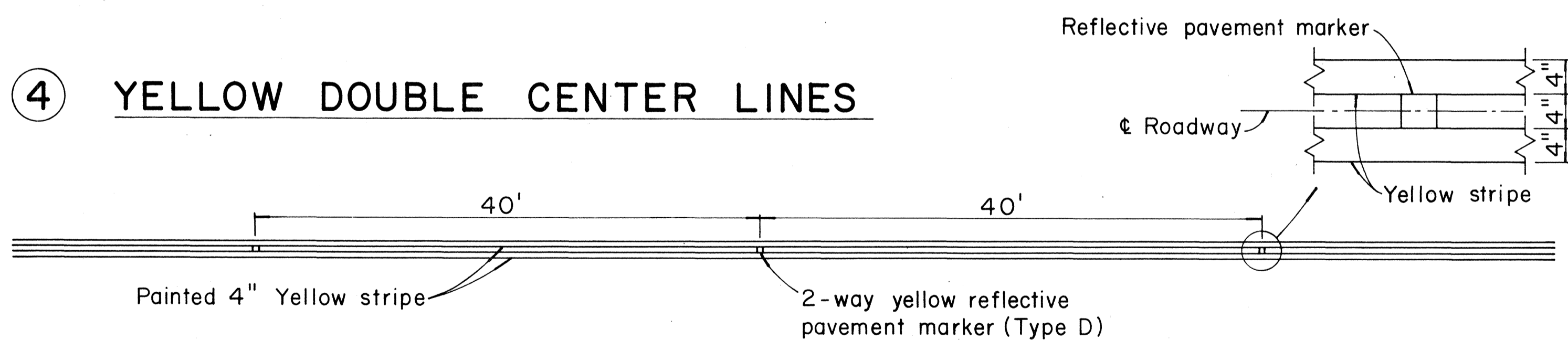
#### TYPE C

Red - clear reflective surface

#### TYPE H

One-way yellow reflective surface

### ④ YELLOW DOUBLE CENTER LINES



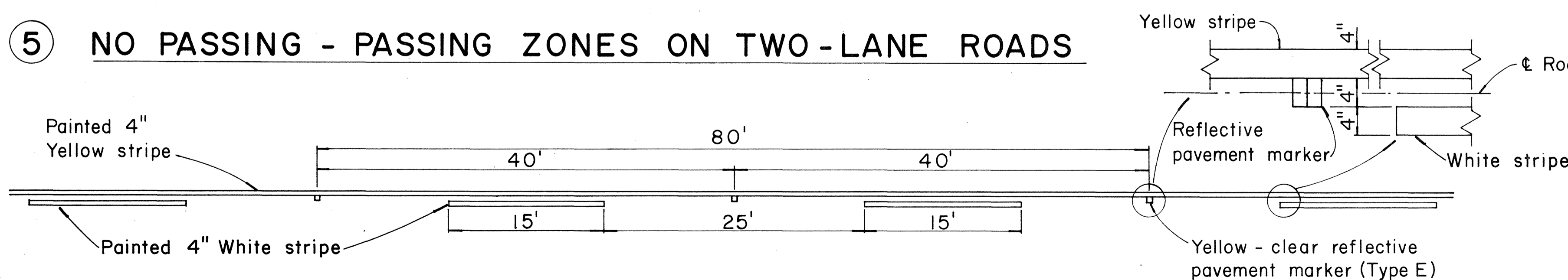
#### TYPE E

Yellow - clear reflective surface

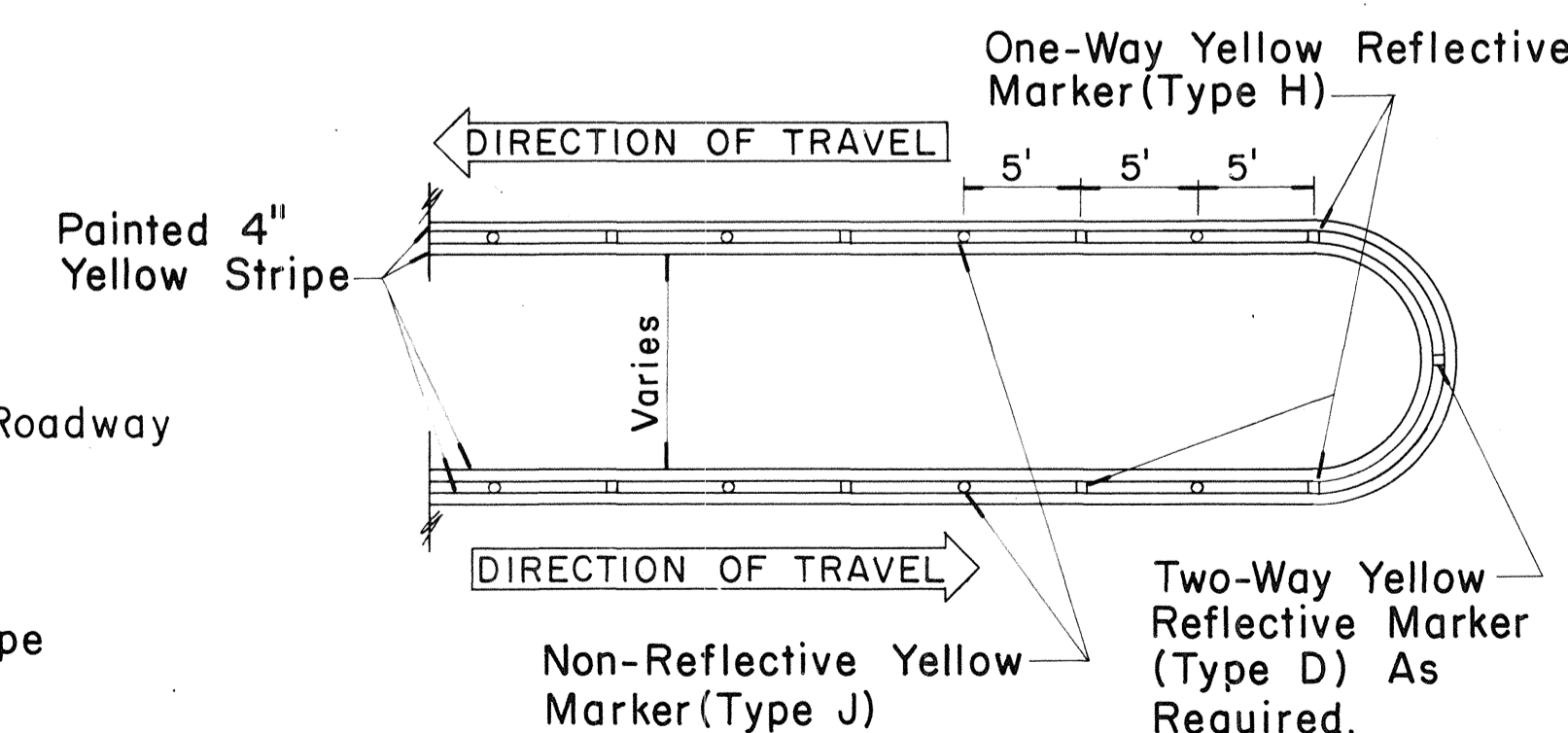
#### TYPE G

One-way clear reflective surface

### ⑤ NO PASSING - PASSING ZONES ON TWO-LANE ROADS



### ⑥ MEDIAN NOSE DELINEATION



#### NOTE

Painted stripes to be done by State forces.

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

### STANDARD DETAILS RAISED PAVEMENT MARKERS

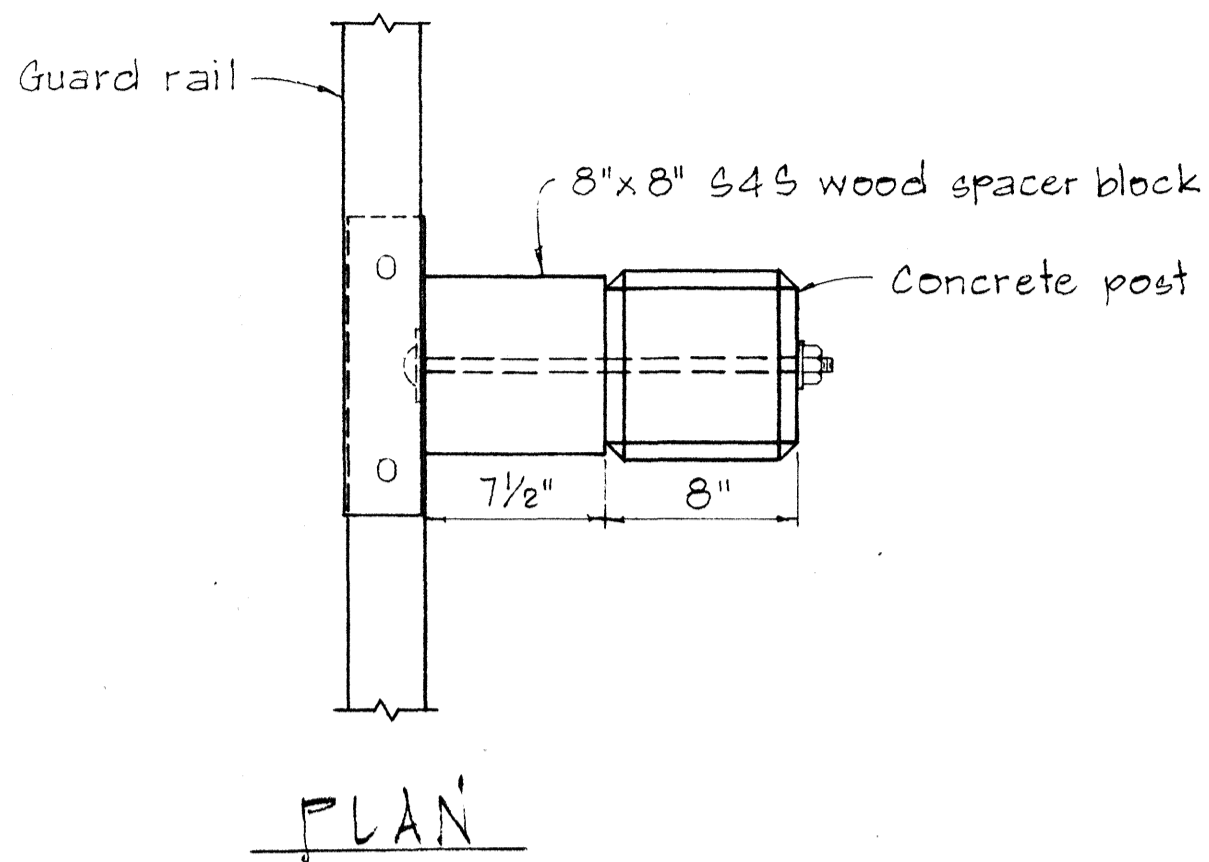
Not to Scale

Sept., 1967

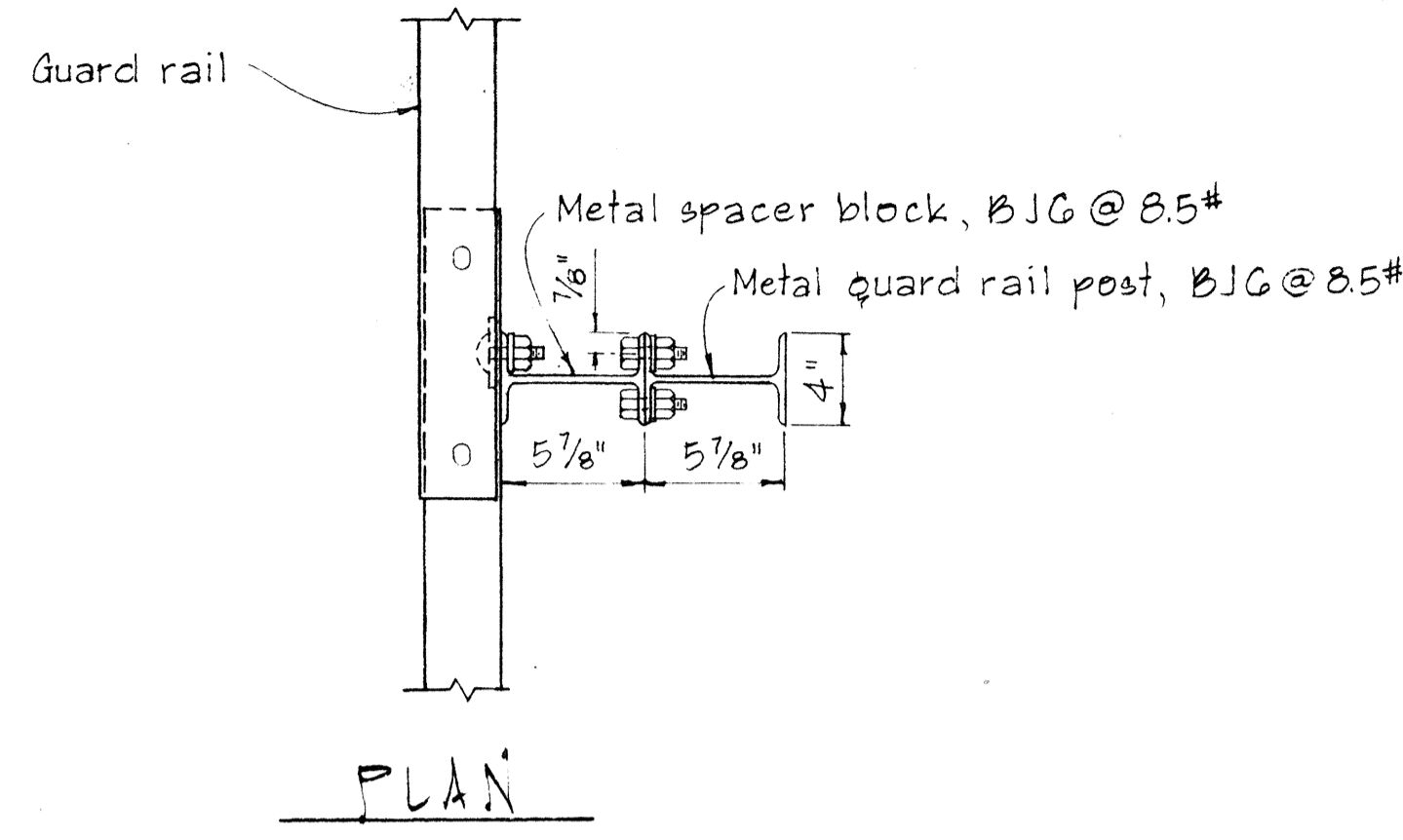
SHEET No. 9 OF 12 SHEETS DT 300

DATE  
DRAWN BY  
DESIGNED BY  
CHECKED BY  
NO.

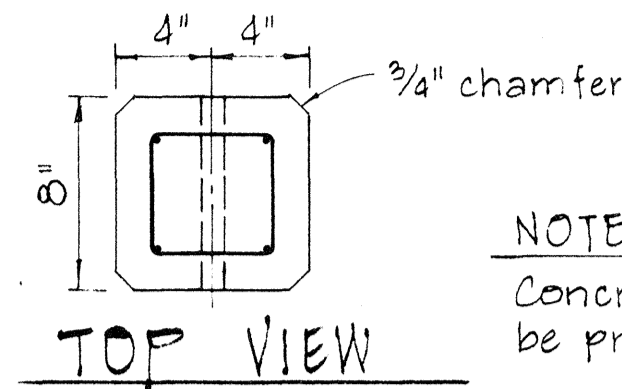
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	740A-01-70	1970	10	40



PLAN

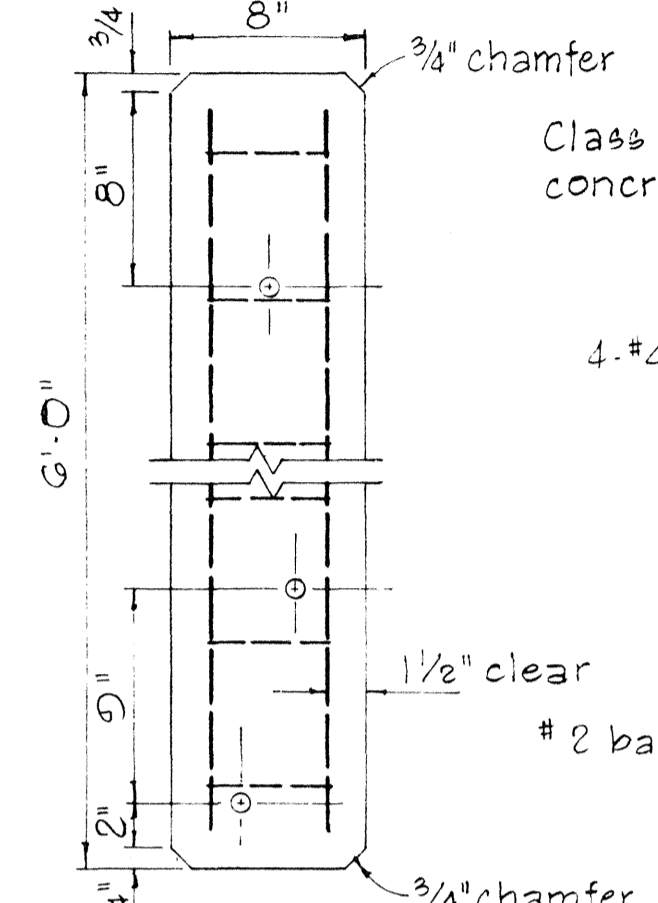


PLAN

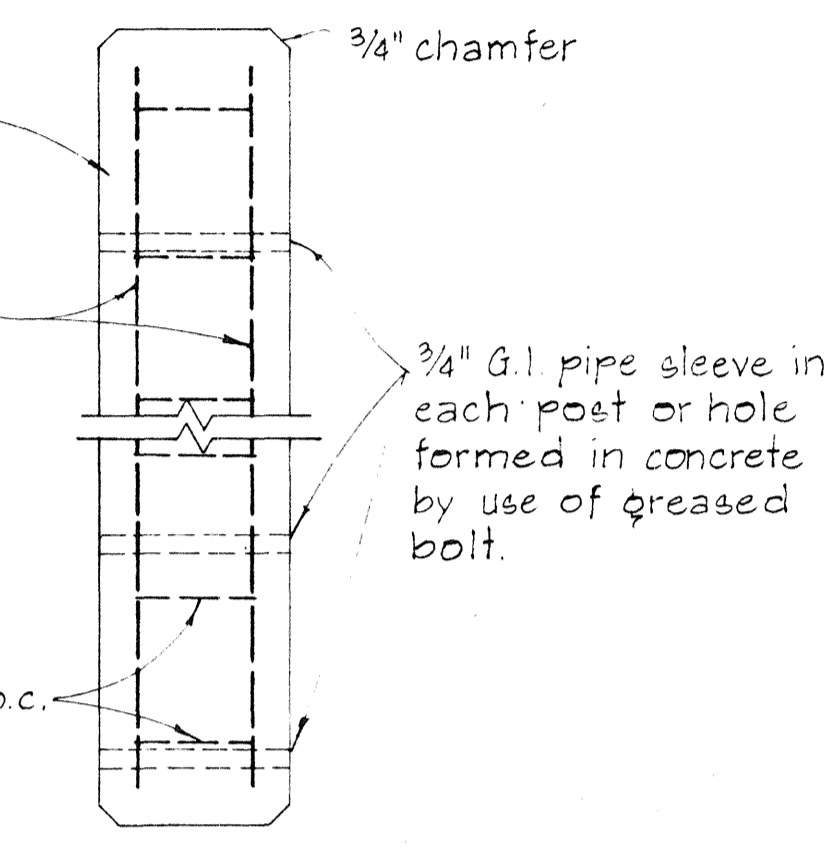


TOP VIEW

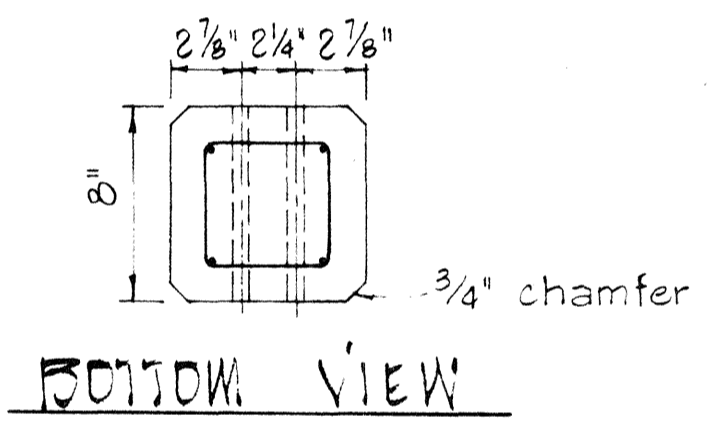
NOTE:  
Concrete post shall be precast



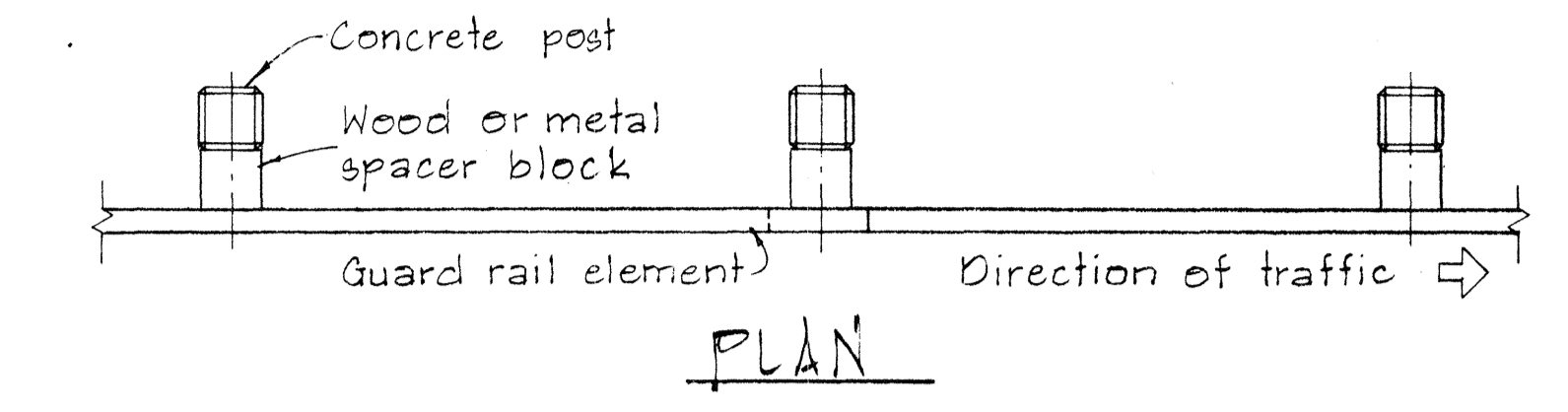
FRONT VIEW



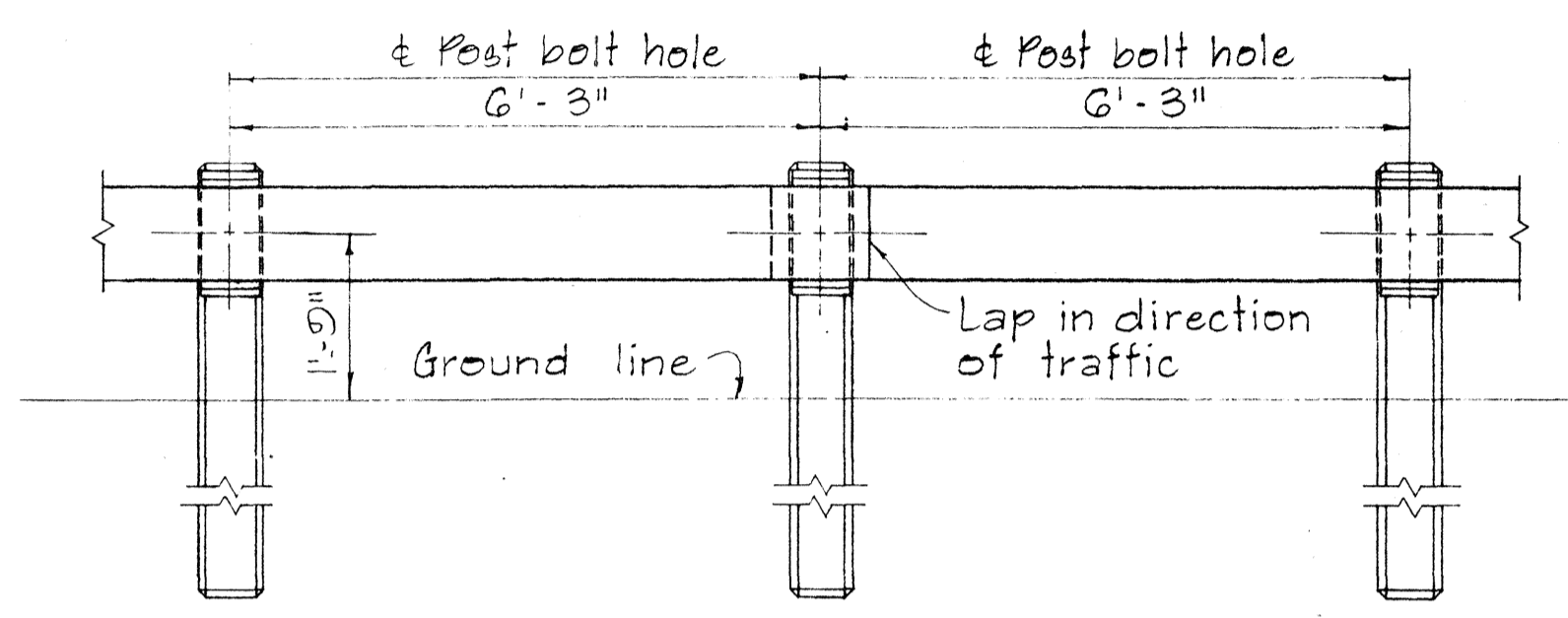
SIDE VIEW



BOTTOM VIEW



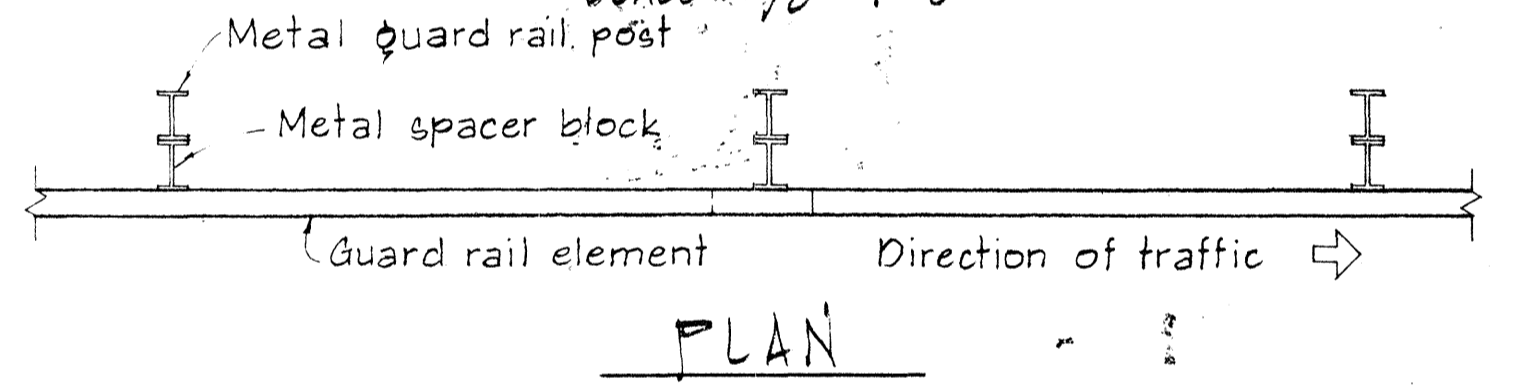
PLAN



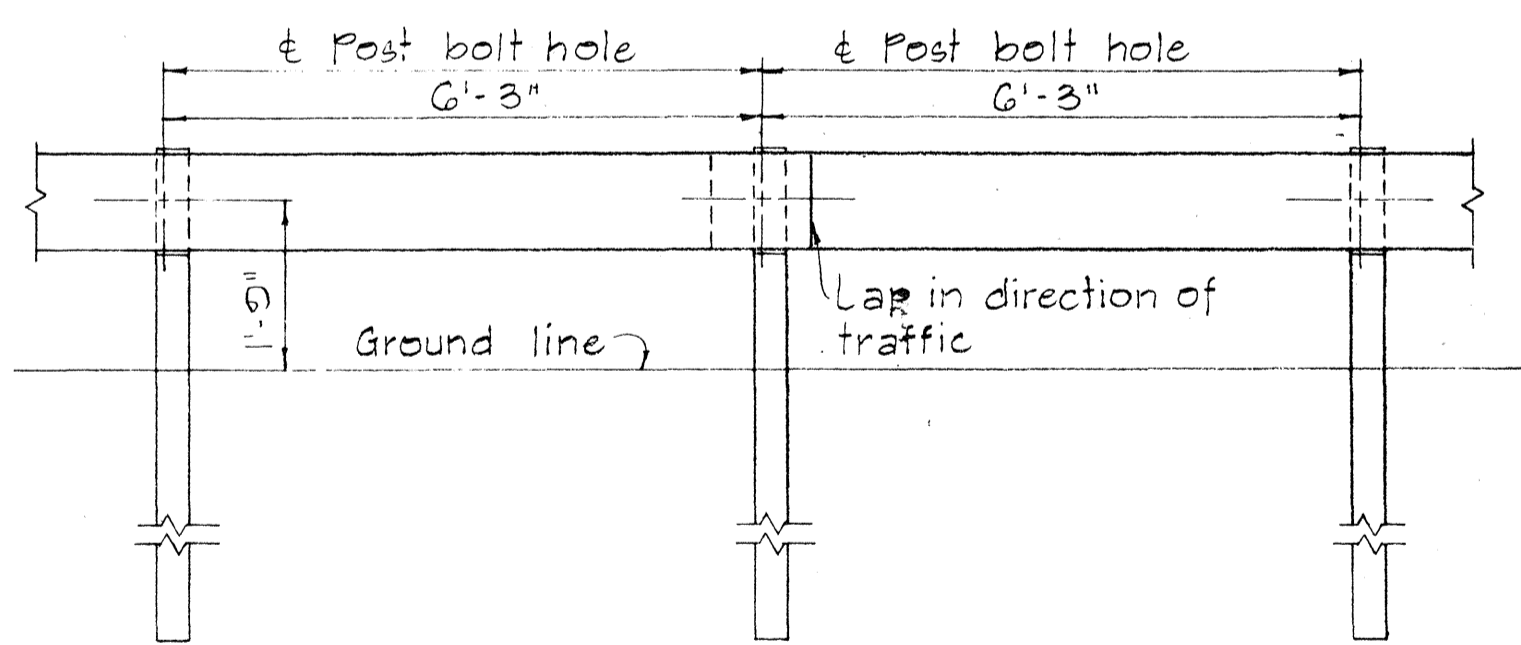
ELEVATION

METAL GUARD RAIL ON CONCRETE POSTS WITH WOOD OR METAL SPACER BLOCK.

SCALE: 1/2\"/>



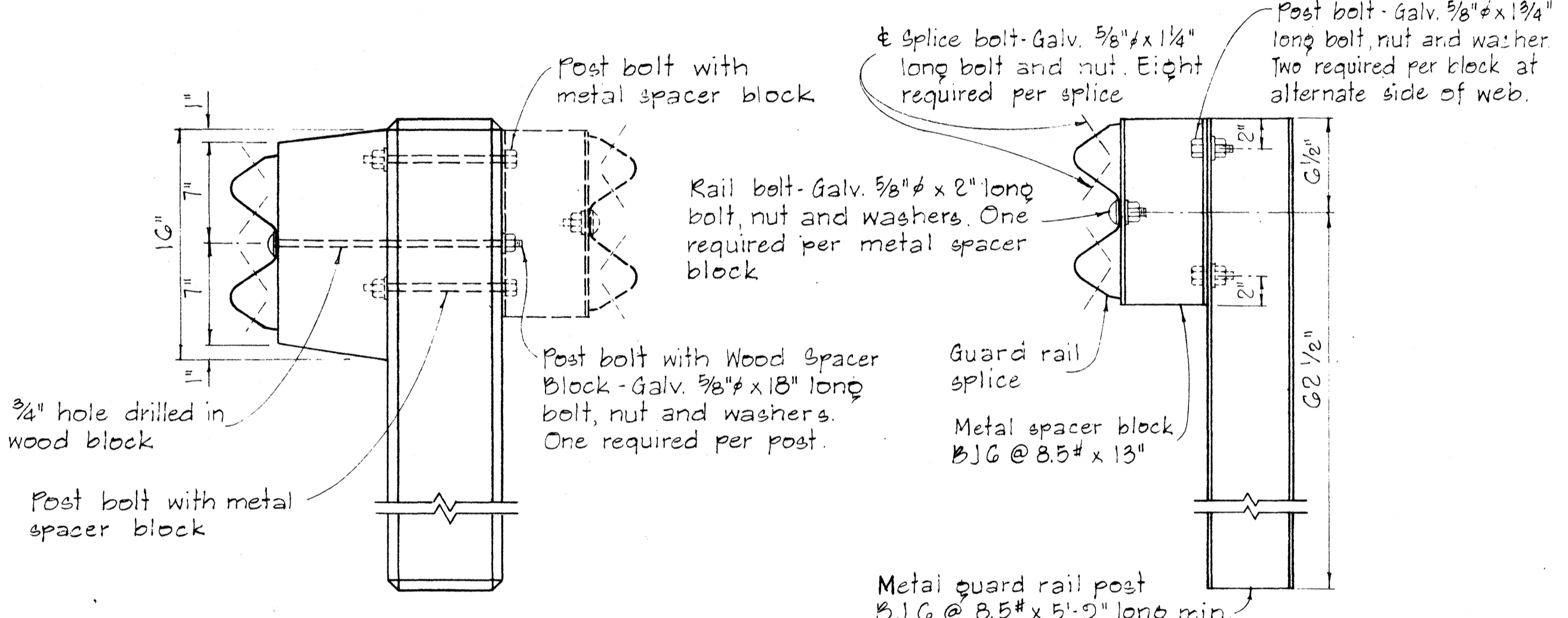
PLAN



ELEVATION

METAL GUARD RAIL ON METAL POSTS WITH METAL SPACER BLOCK.

SCALE: 1/2\"/>

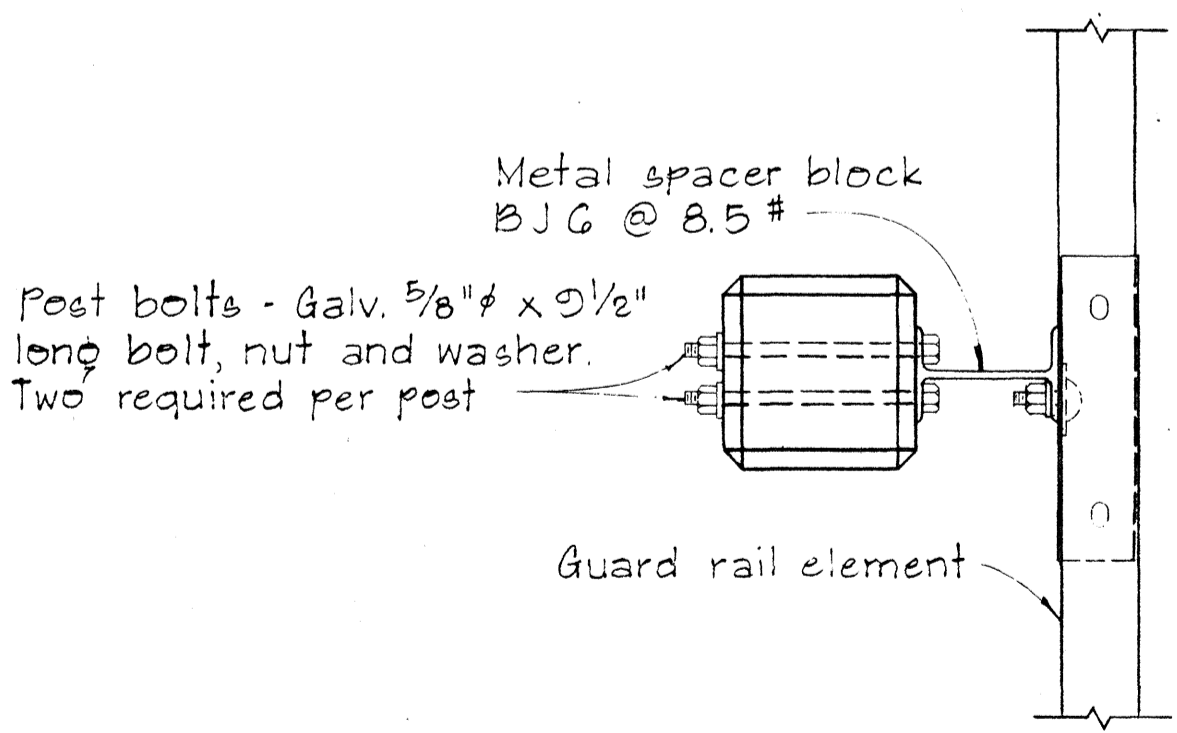


DETAIL OF CONCRETE POST

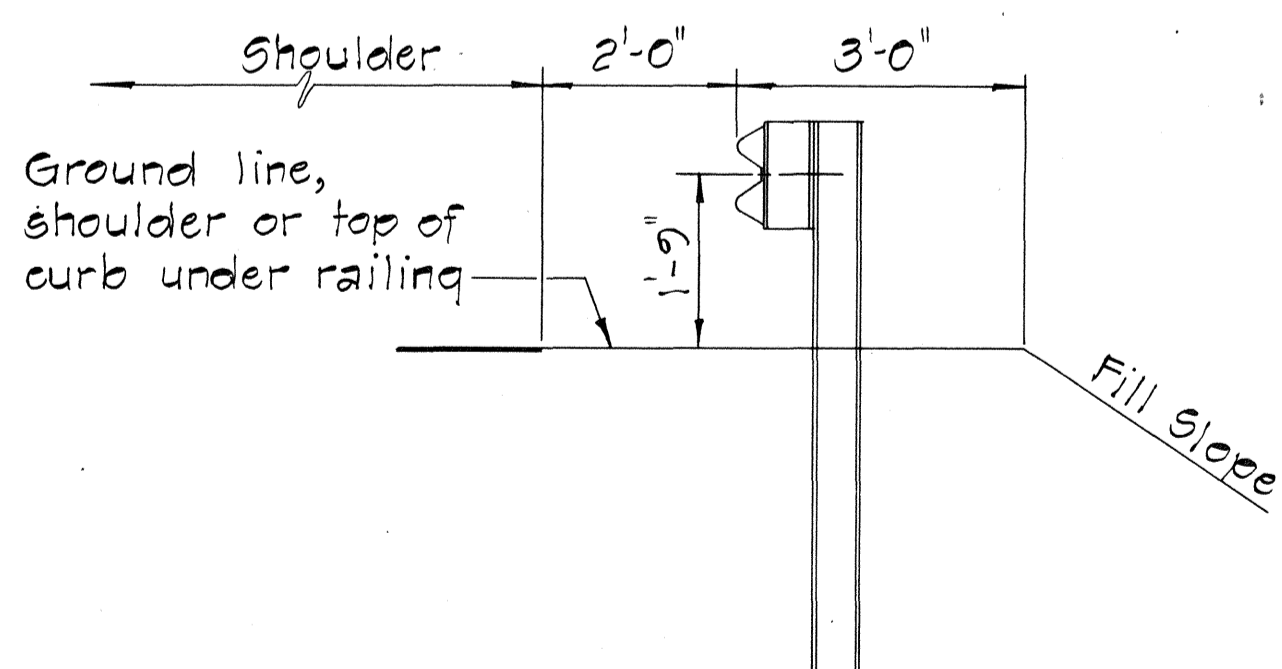
SCALE: 1 1/2\"/>

SINGLE METAL GUARD RAIL ON METAL POST WITH METAL SPACER BLOCK

SCALE: 1 1/2\"/>



PLAN



AT SHOULDER SECTION

SINGLE METAL GUARD RAIL ON PRECAST CONCRETE POST WITH WOOD OR METAL SPACER BLOCK.

SCALE: 1 1/2\"/>

TYPICAL METAL GUARD RAIL DETAIL

SCALE: 1/2\"/>

APPROVAL RECOMMENDED:  
*Evelyn Tanaka*  
TRAFFIC ENGINEER 12/22/69 DATE

APPROVED:  
*Hubert J. Zehner*  
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

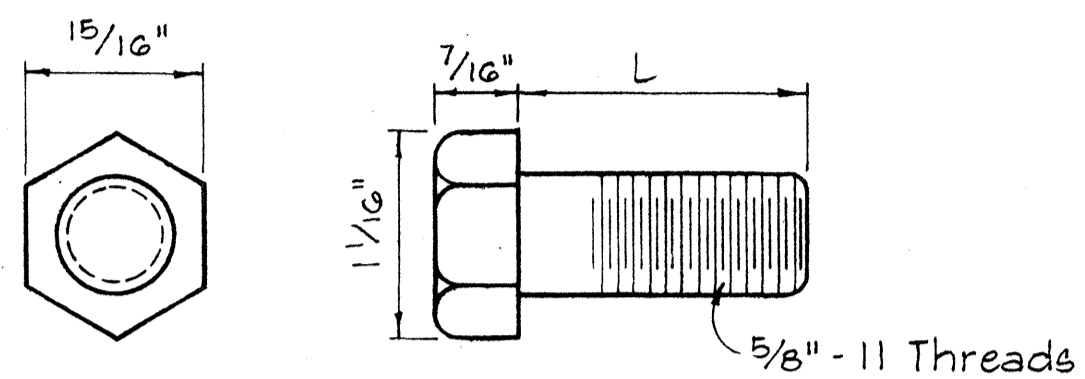
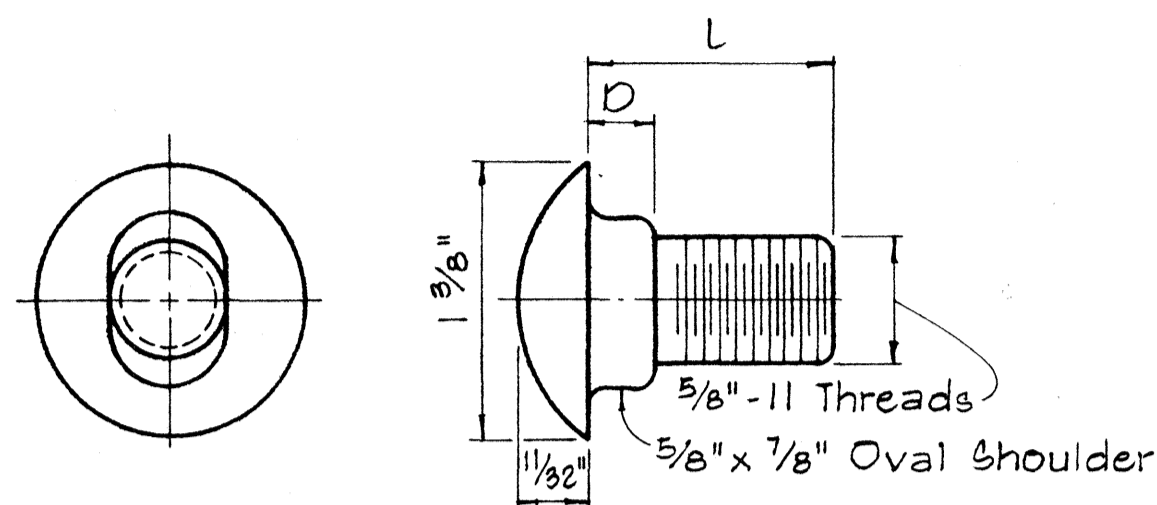
SCALE: AS SHOWN NOV. 1968

ORIGINAL PLAN  
DATE  
SURVEY PLOTTED BY  
DRAWN BY  
TRACED BY  
INSURED BY  
CHECKED BY  
No.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	740A-01-70	1970	20	40

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 1/2"
Post Bolt for Metal Post w/ Metal Block		1 3/4"



TYPE A BOLT

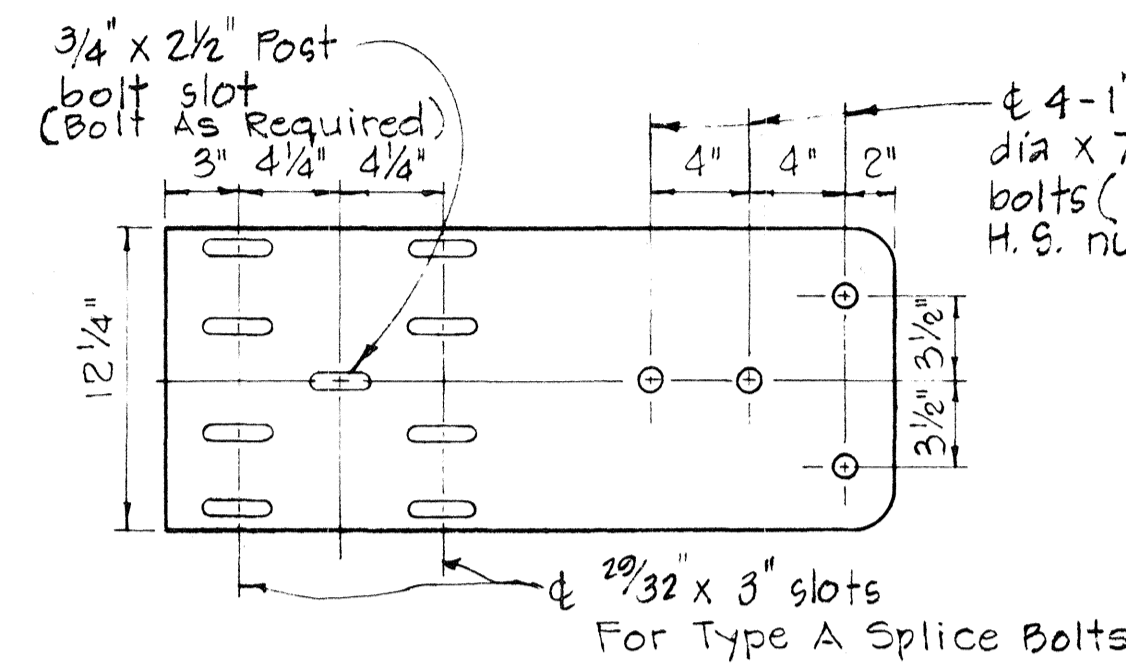
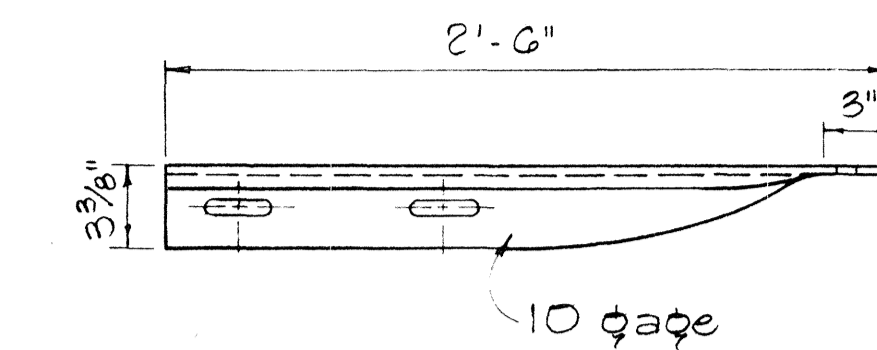
TYPE B BOLT

SPlice RAIL AND POST BOLTS

Scale: Full Size

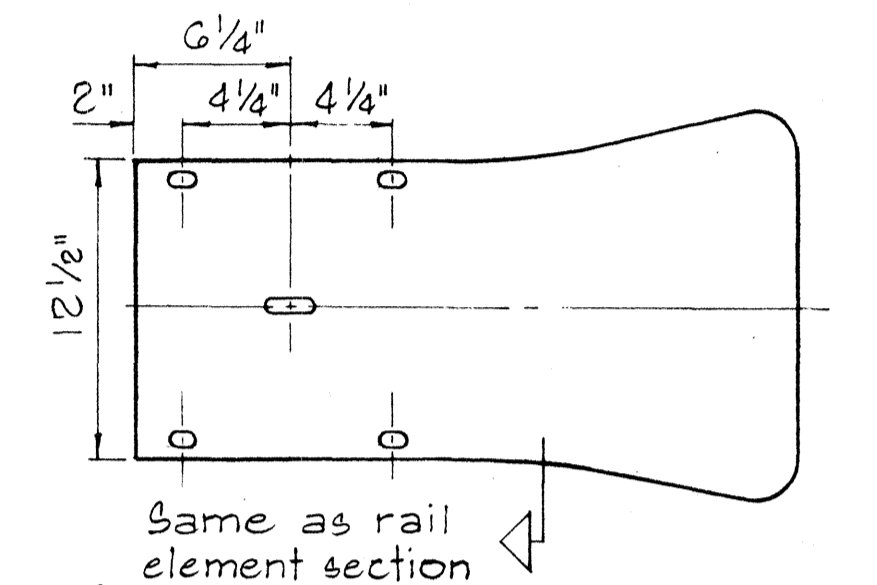
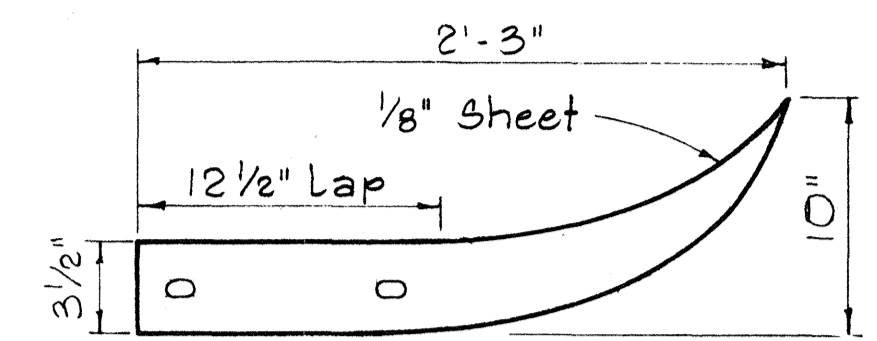
HEXAGON NUT

Scale: Full Size



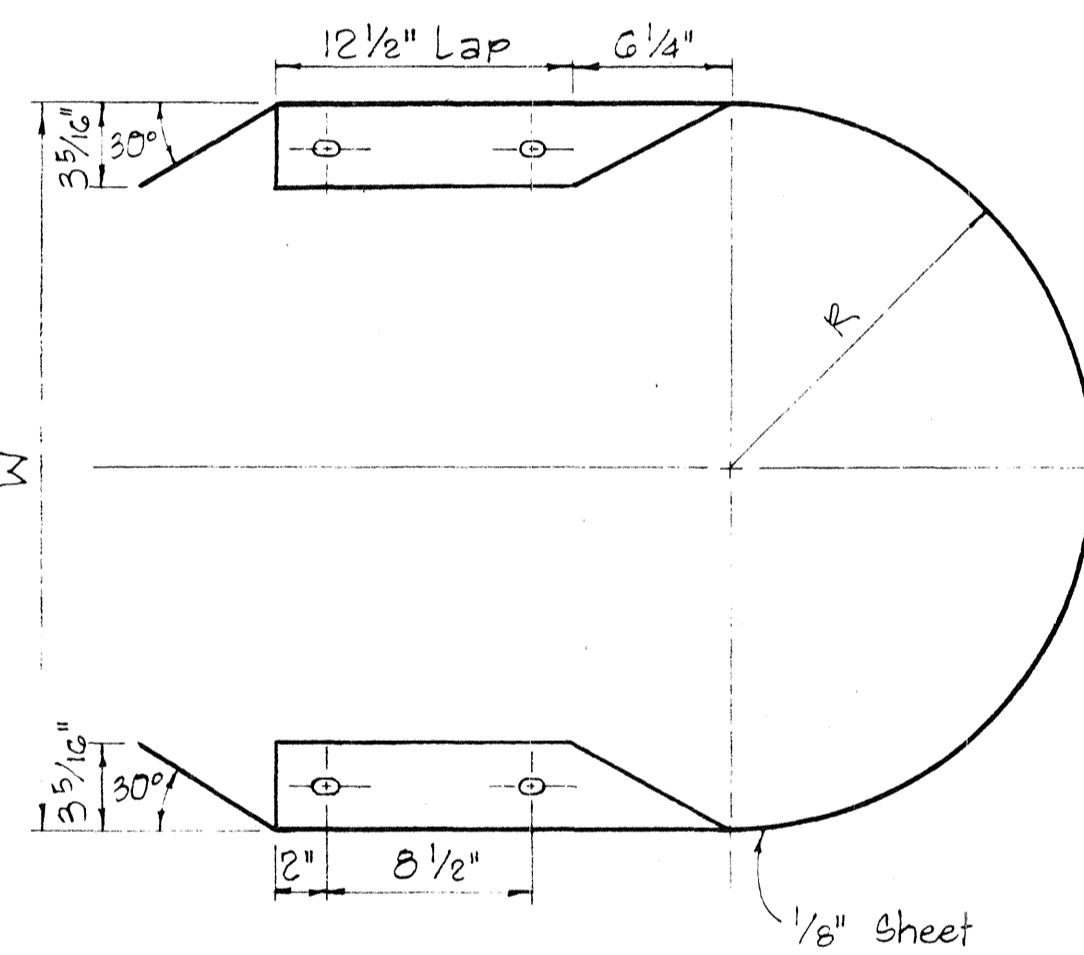
SPECIAL END SHOE

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



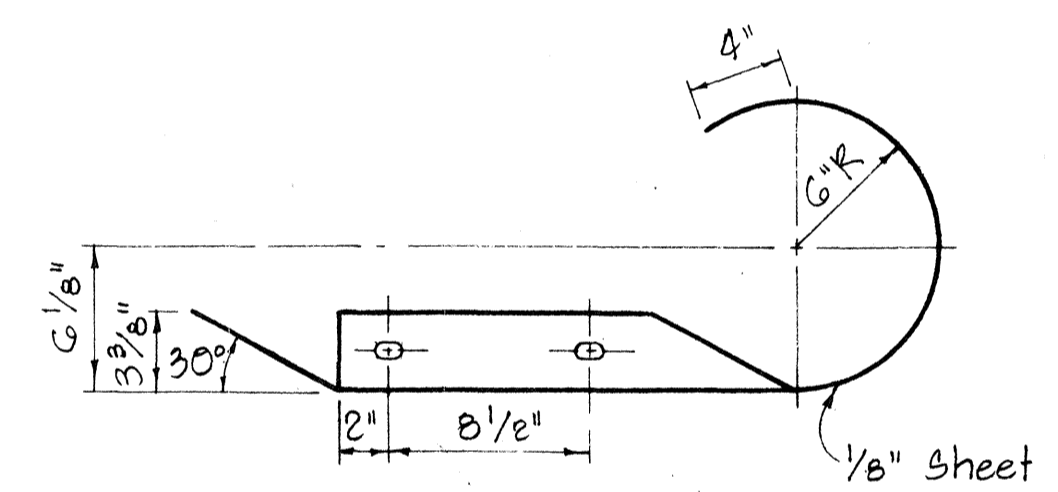
FLARED END

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



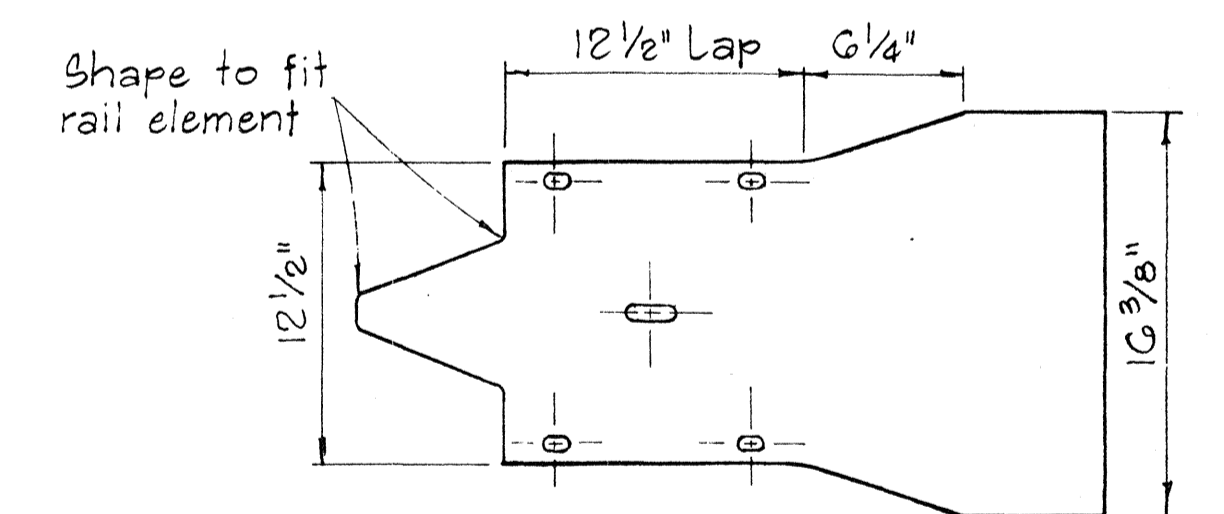
MEDIAN END

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



CURVED END

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

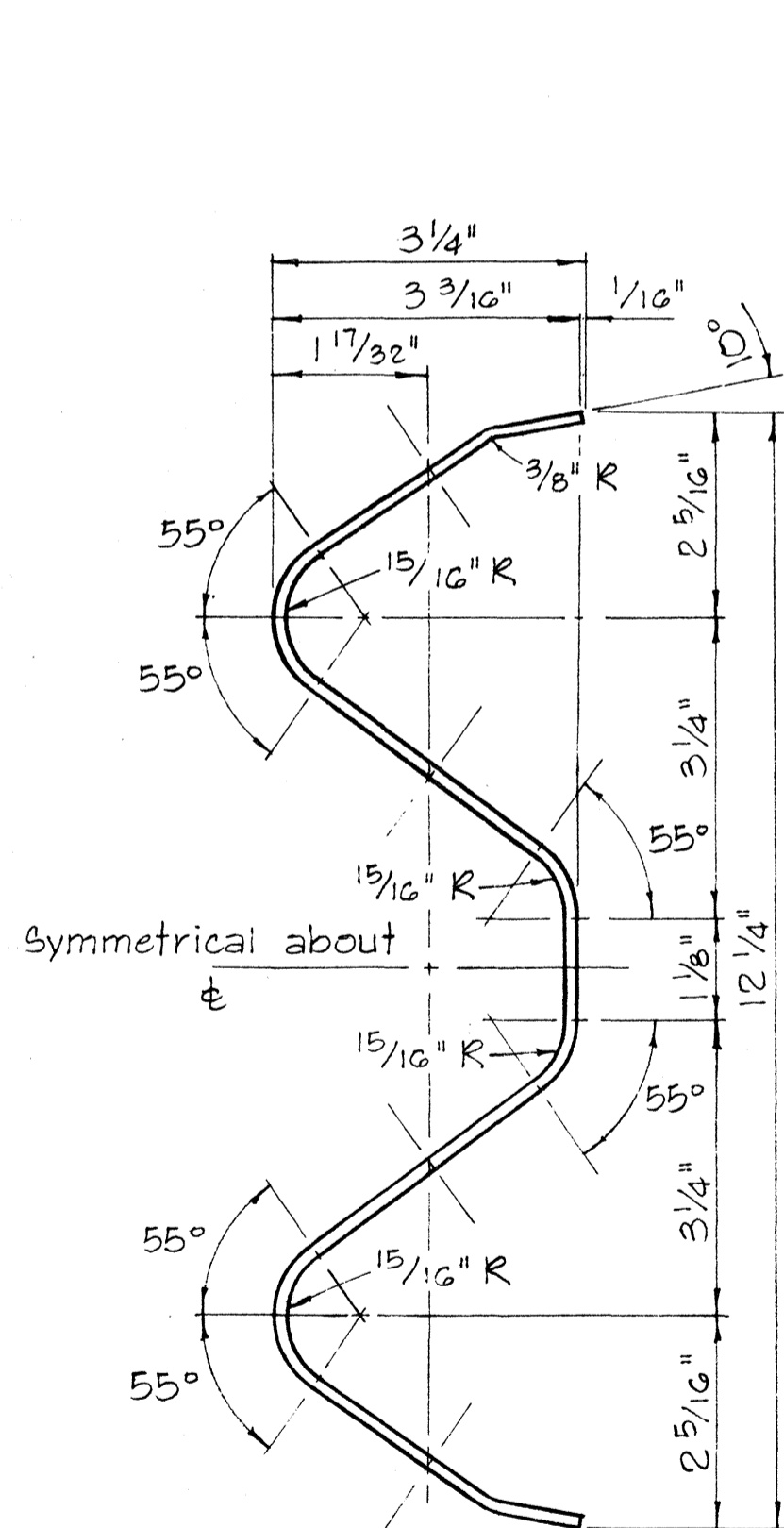


APPROVAL RECOMMENDED: *Eiichi Tanaka* 12/29/69  
TRAFFIC ENGINEER DATE  
APPROVED: *John J. Seiler* 12-20-69  
ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

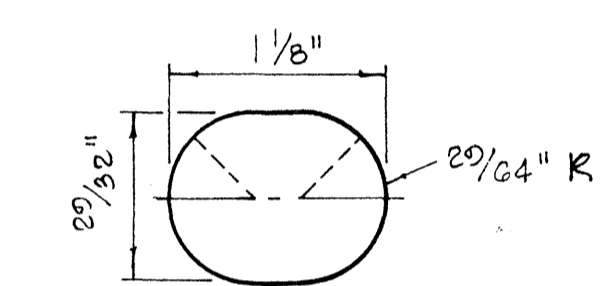
**STANDARD DETAILS**  
METAL GUARD RAIL

Scale: As Noted August, 1968  
SHEET No. 11 OF 12 SHEETS DT 501



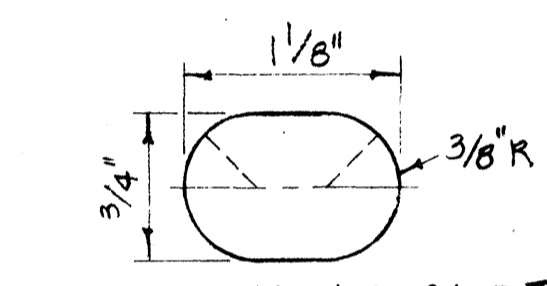
RAIL ELEMENT SECTION

Scale: 6" = 1'-0"

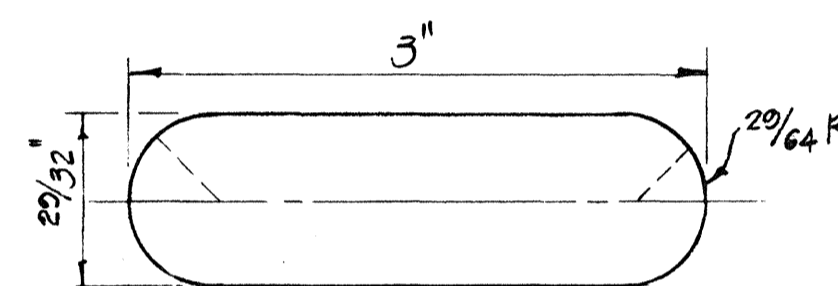


SPlice BOLT SLOT FOR ALL ENDS

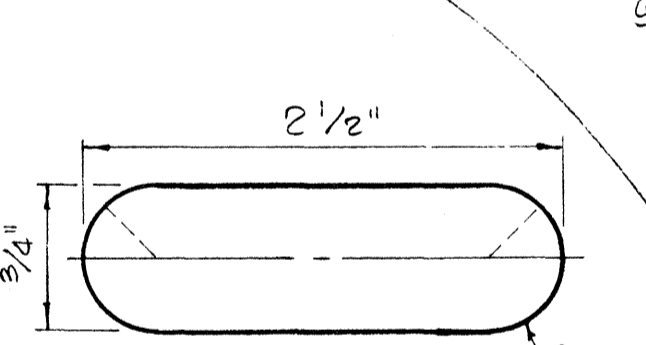
Scale: Full Size



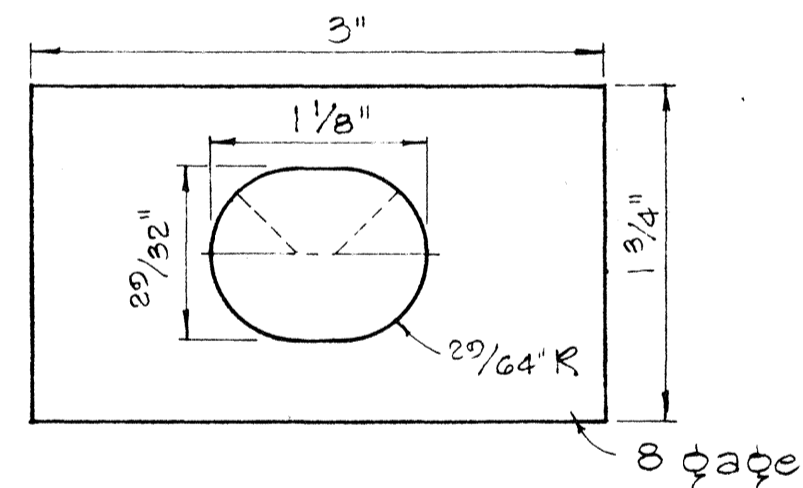
SPlice BOLT SLOT FOR SPECIAL END SHOE



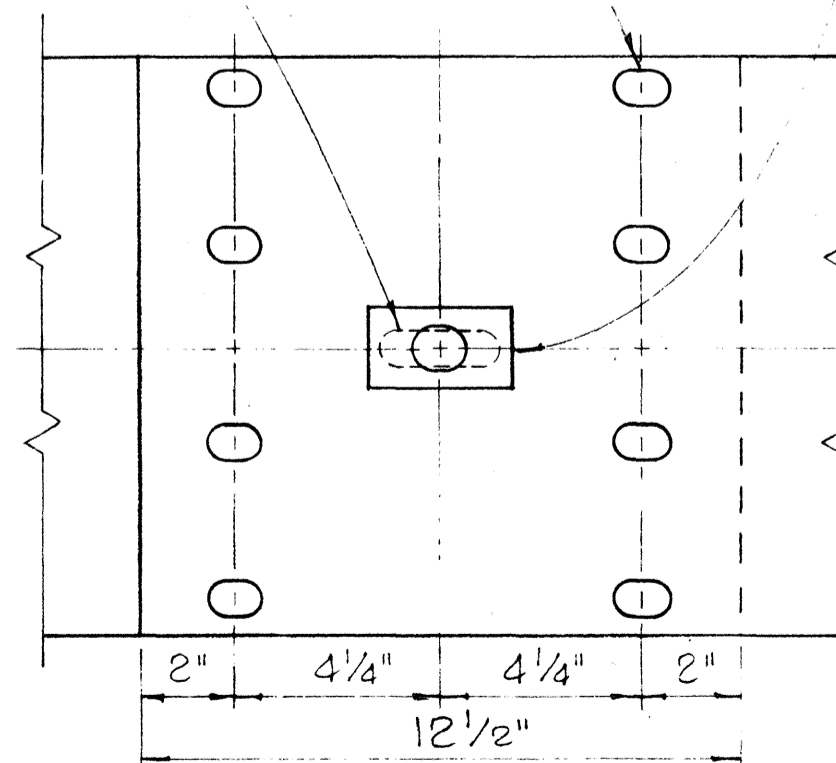
SPlice BOLT SLOT FOR SPECIAL END SHOE



POST BOLT SLOT



RAIL WASHER



RAIL SPLICE

Scale: 3" = 1'-0"

NOTES:

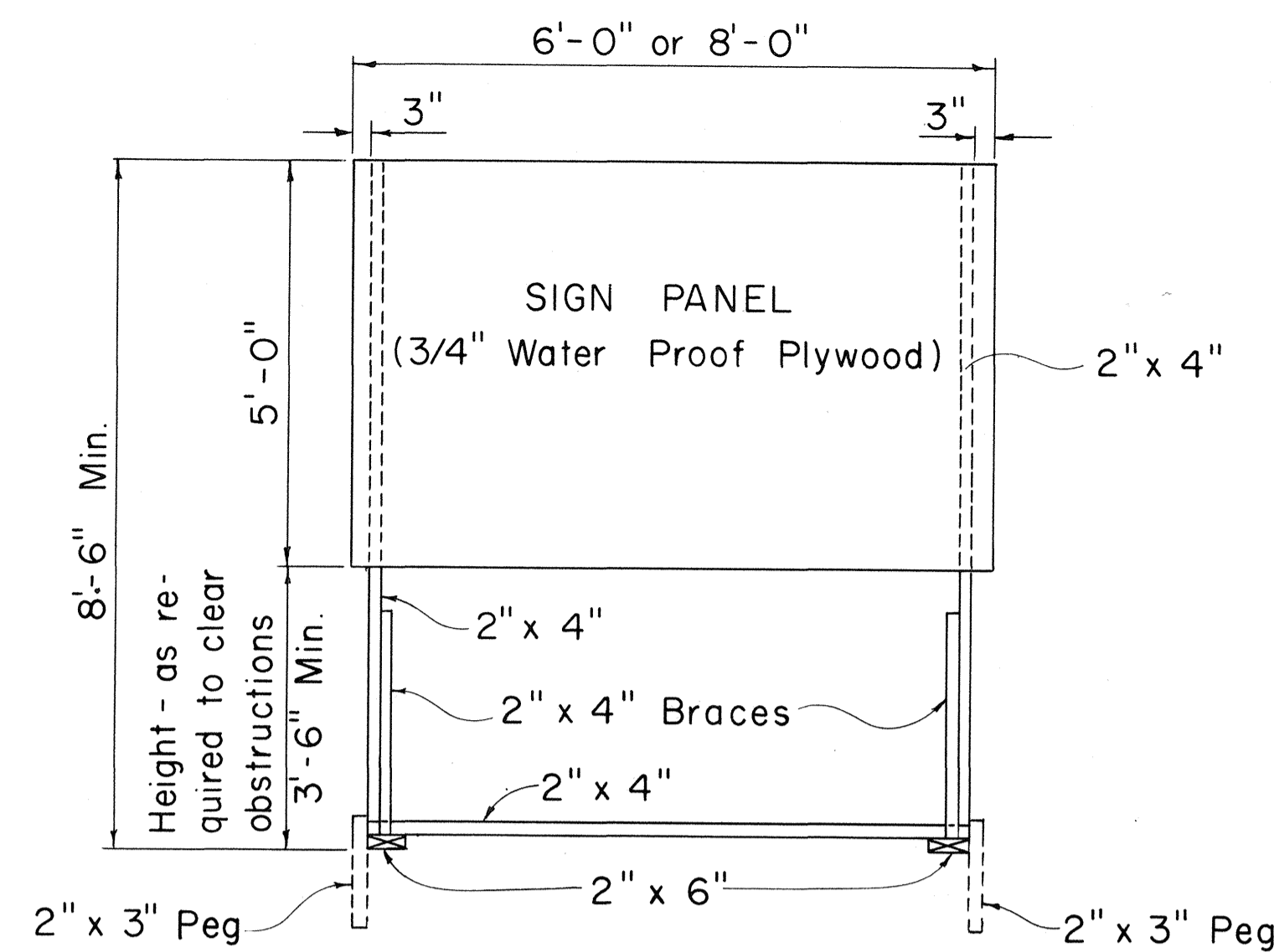
- H.S. Bolts shall conform to the requirements of ASTM A 325.
- Special End Shoe shall be fabricated from 10 Gage steel conforming to the requirements of AASHTO 180.

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"

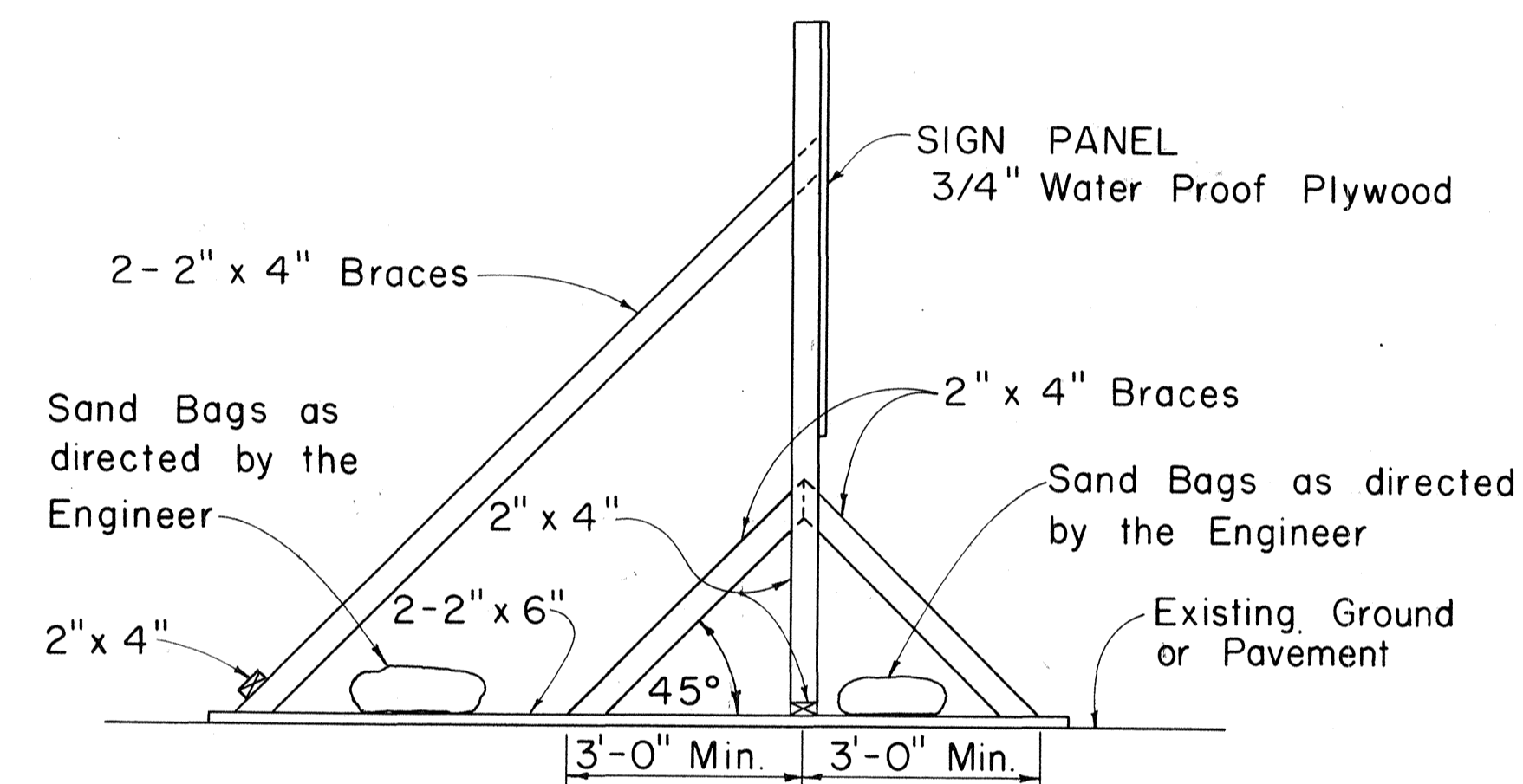
NO	REVISION	APPROVED BY	DATE

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

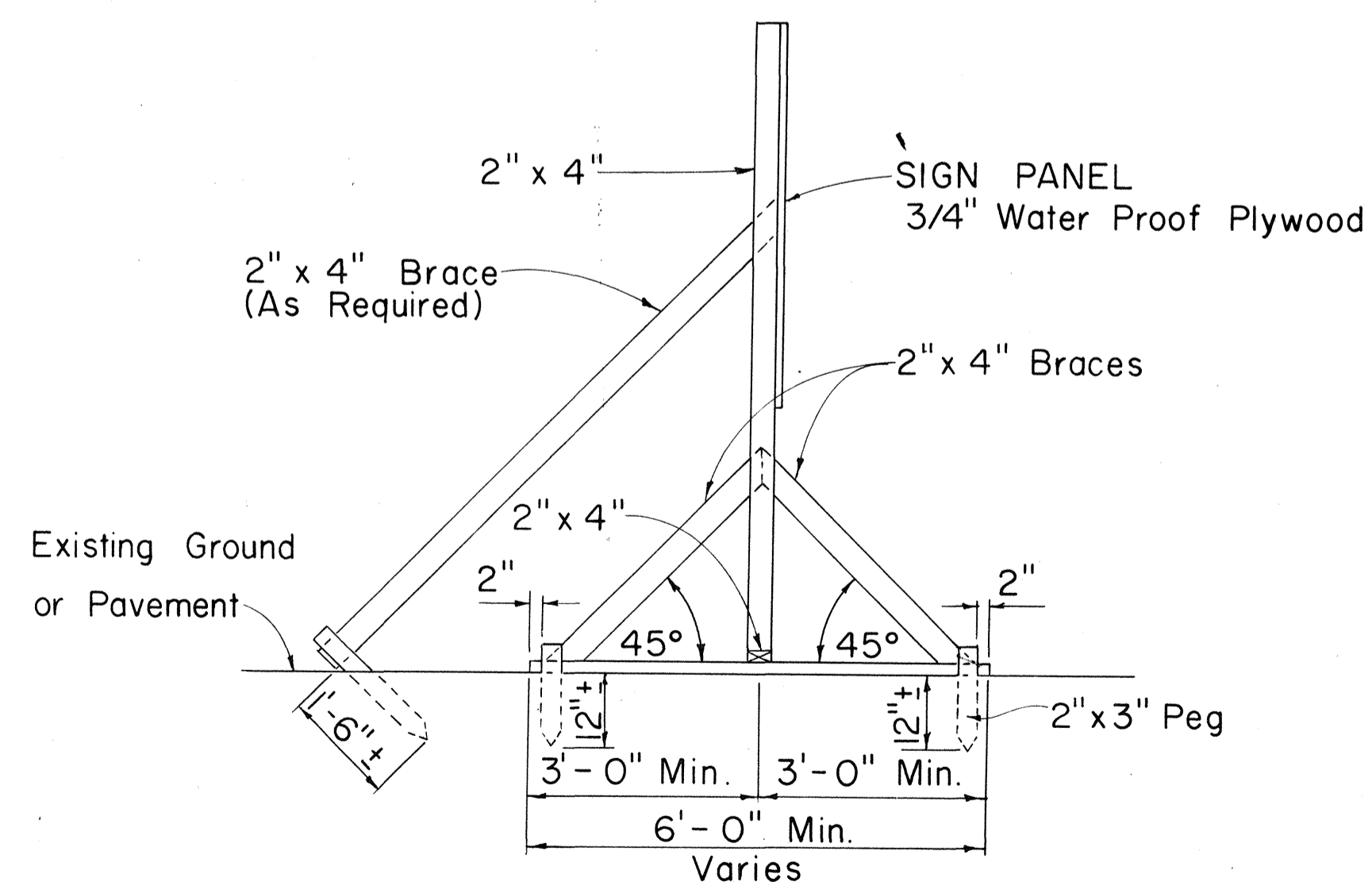
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	740A-01-70	1970	21	40



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

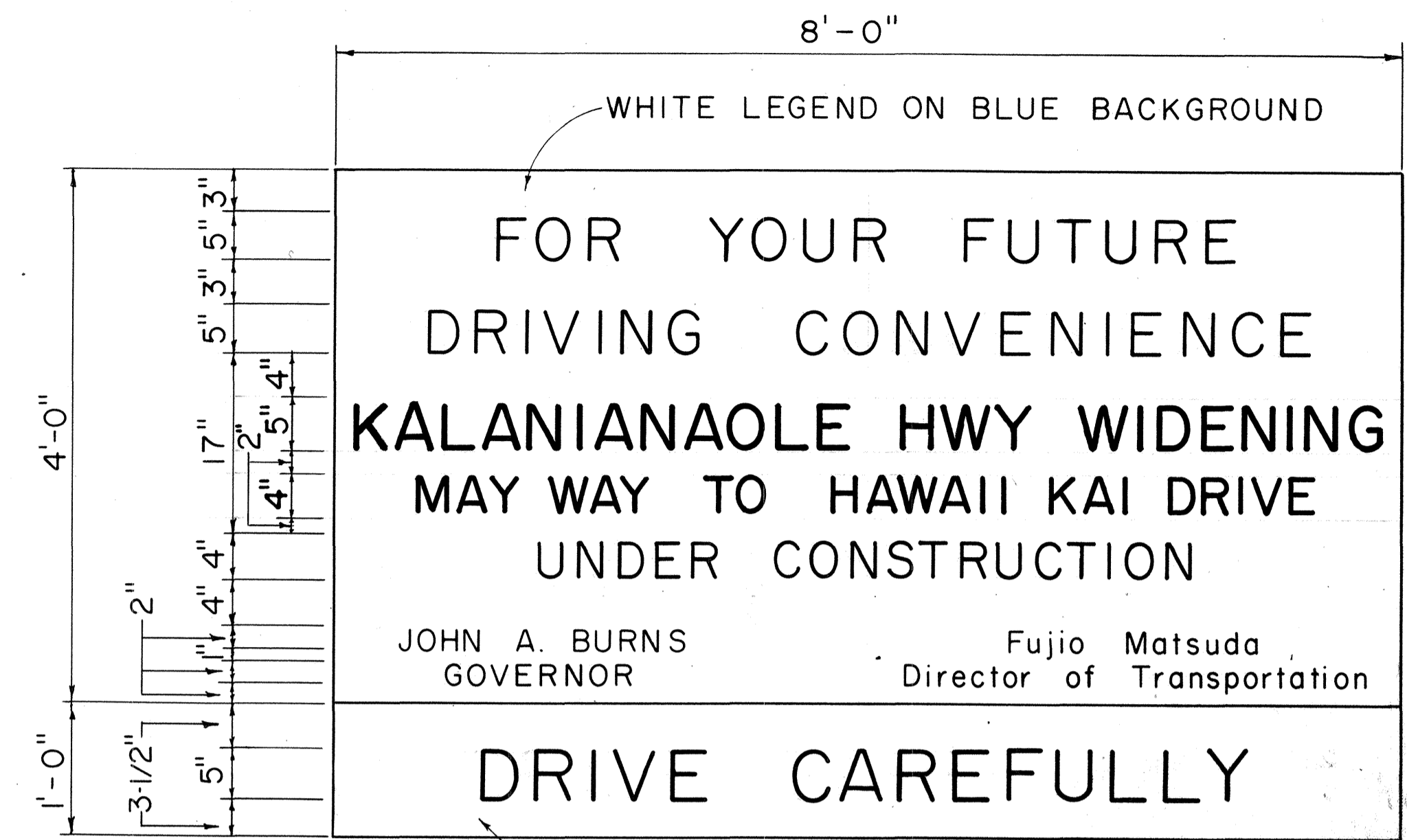


SIDE VIEW  
(SIGN SUPPORT AND FRAME WEIGHTED DOWN)  
Scale: 1/2" = 1'-0"



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

**SIGN SUPPORT AND FRAME**  
Scale: As Shown



BLACK LEGEND ON YELLOW BACKGROUND  
USE SERIES "D" LETTERS

**GENERAL NOTES**

1. The sign panels will be constructed by the State and will be available for pick up by the Contractor from the State Highway Maintenance Yard.
2. The Contractor shall construct the sign supports and frames and install the sign panels at the locations shown on the plans and as ordered by the Engineer.
3. At the end of construction the Contractor shall remove the sign panels and return it to the State Highway Maintenance Yard. Sign supports and frames shall be removed and cleared from the project site.

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

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TYPICAL DETAILS**

PROJECT INFORMATION SIGN

Scale: As Shown Date: Oct, 1970  
SHEET No. 12 OF 12 SHEETS