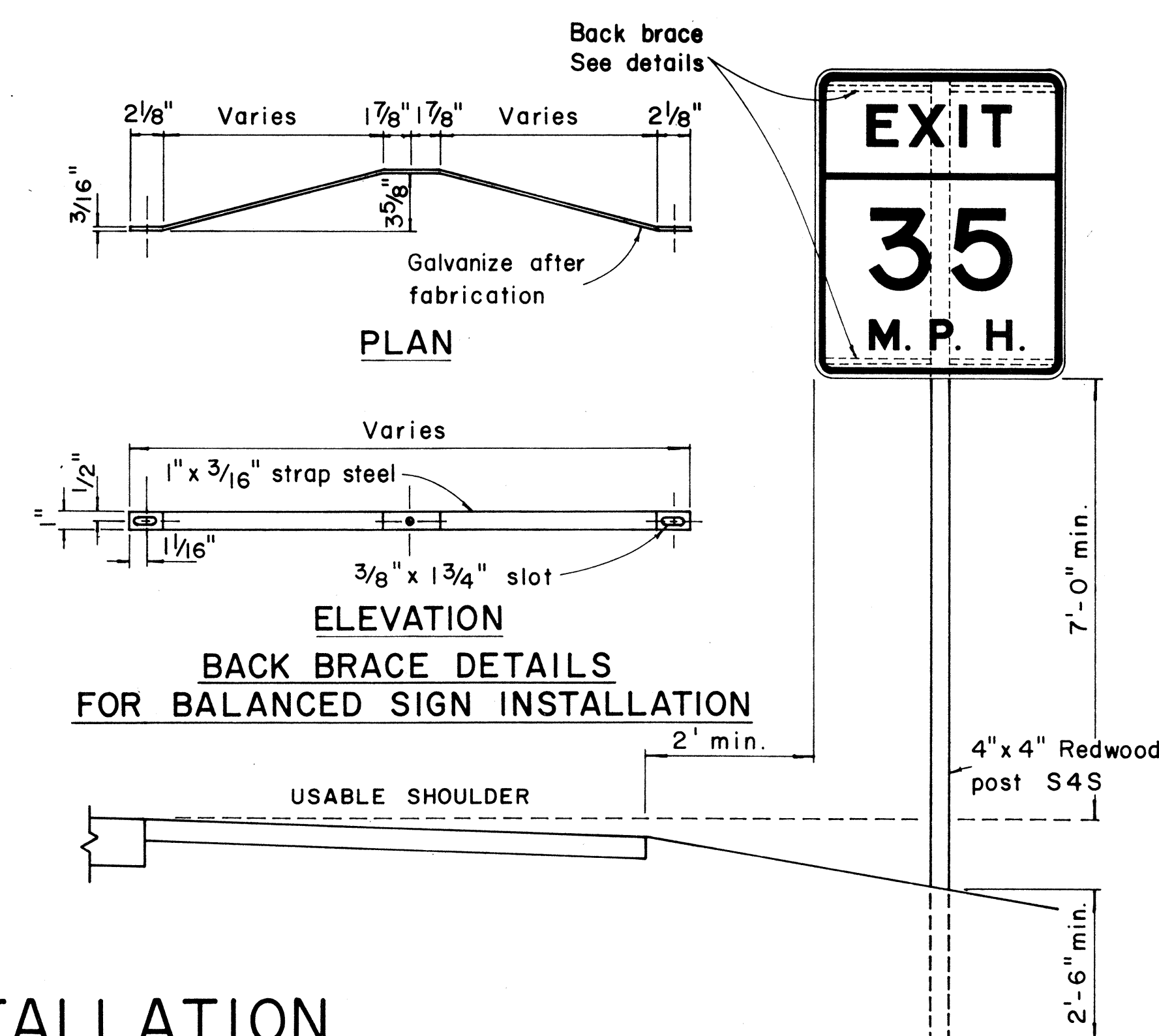
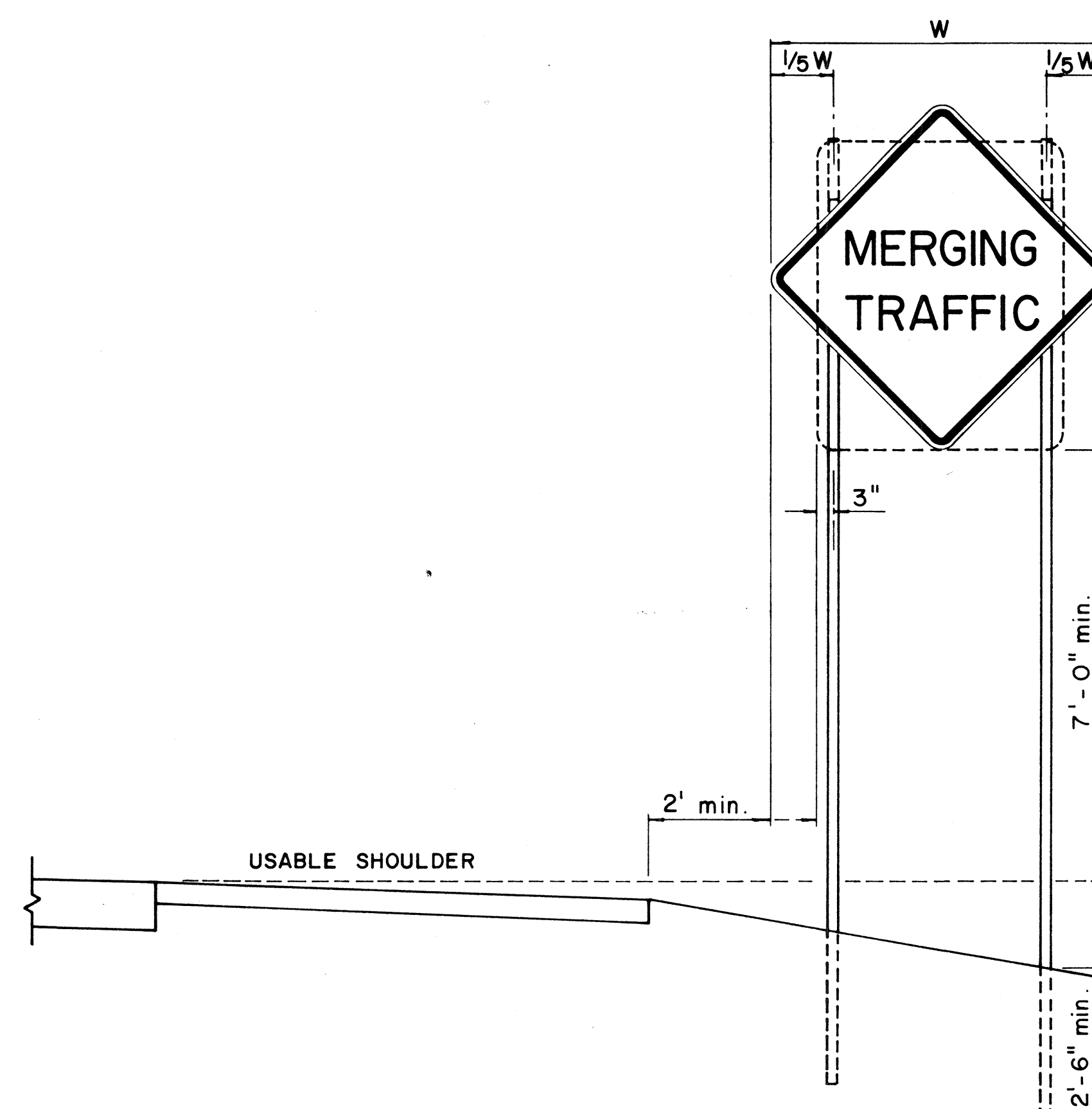
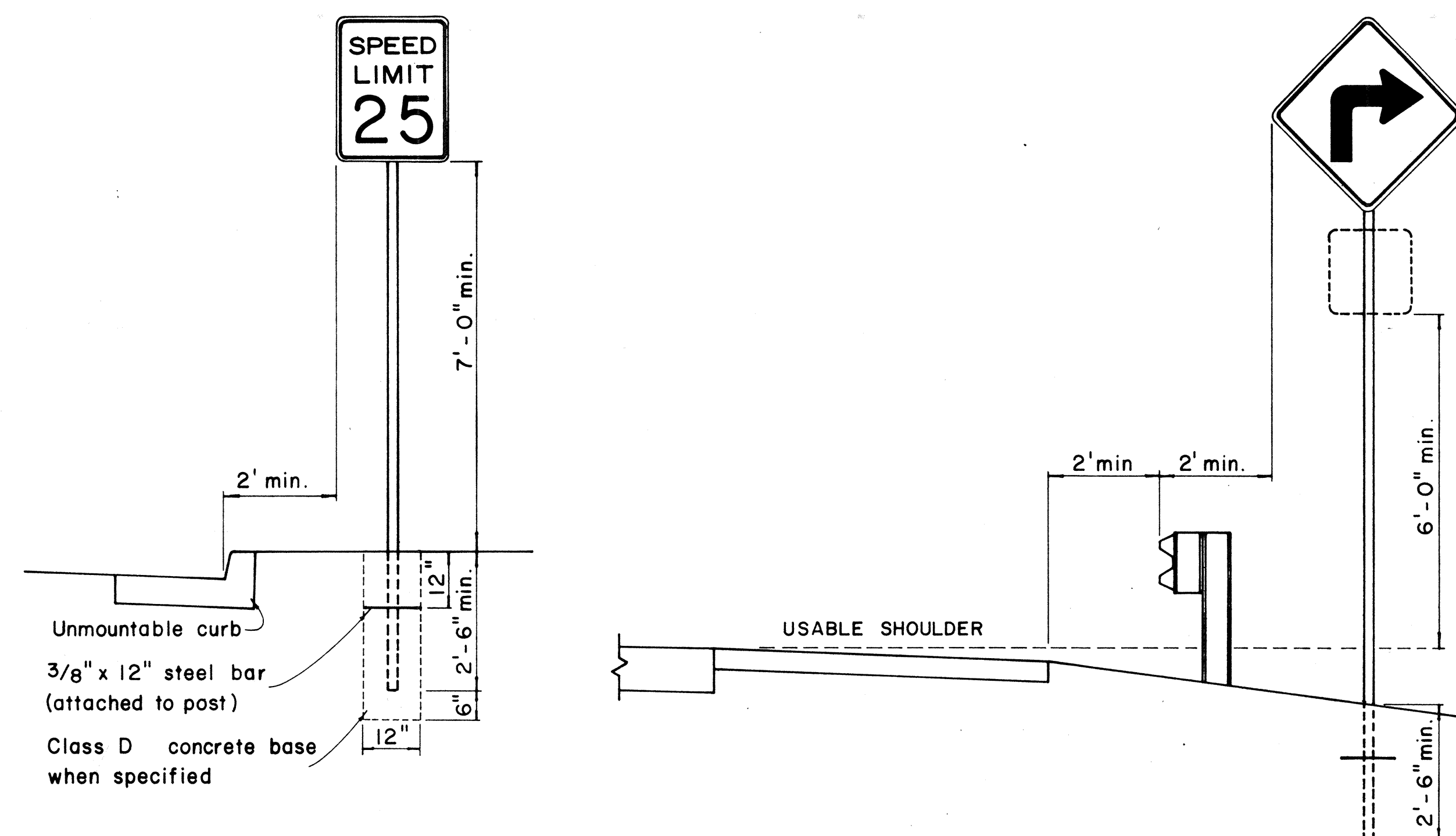
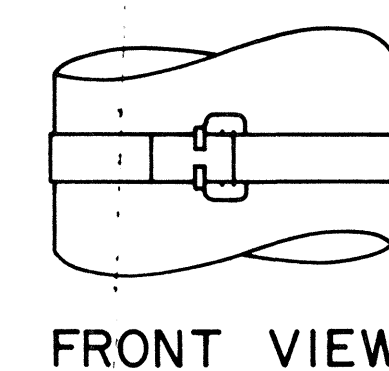
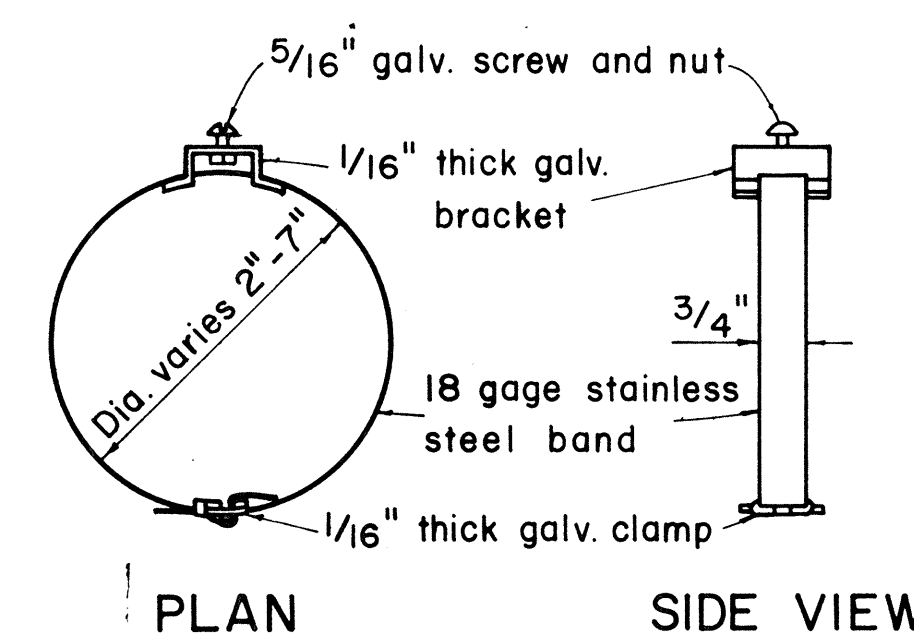
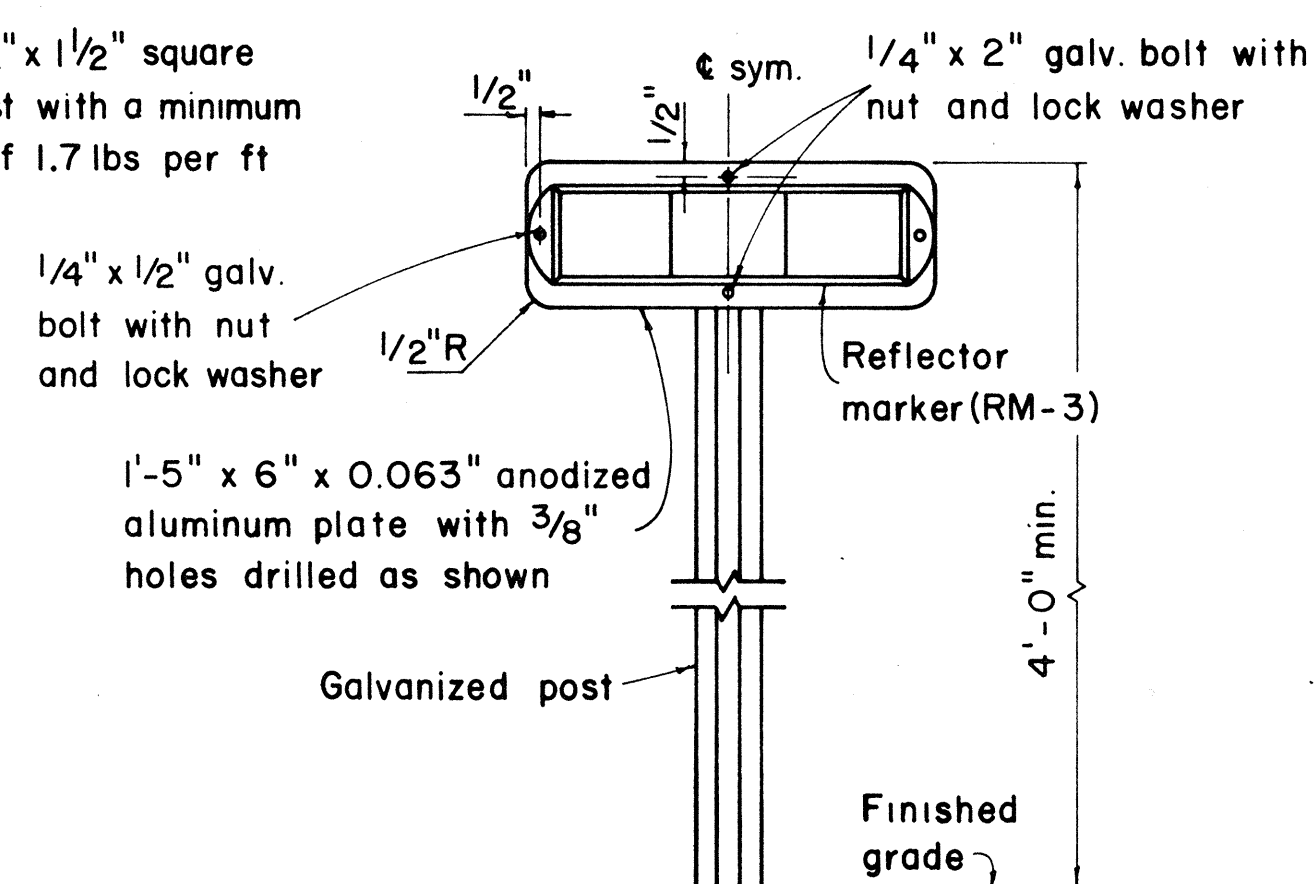
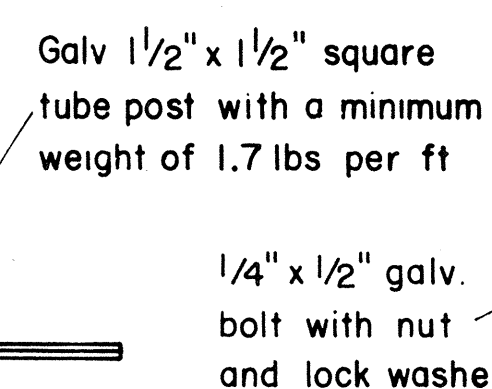
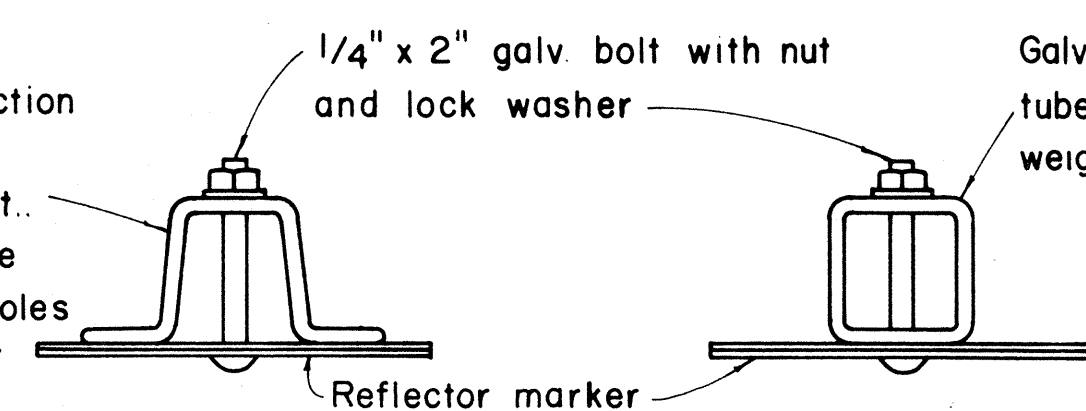
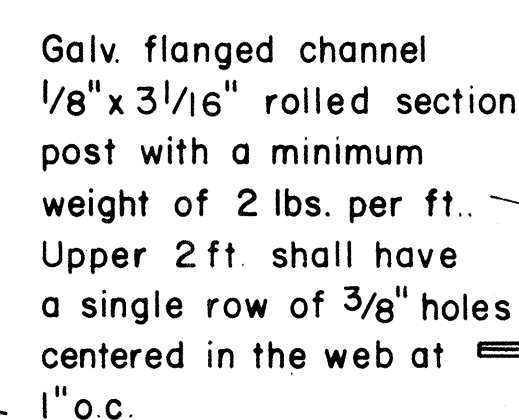
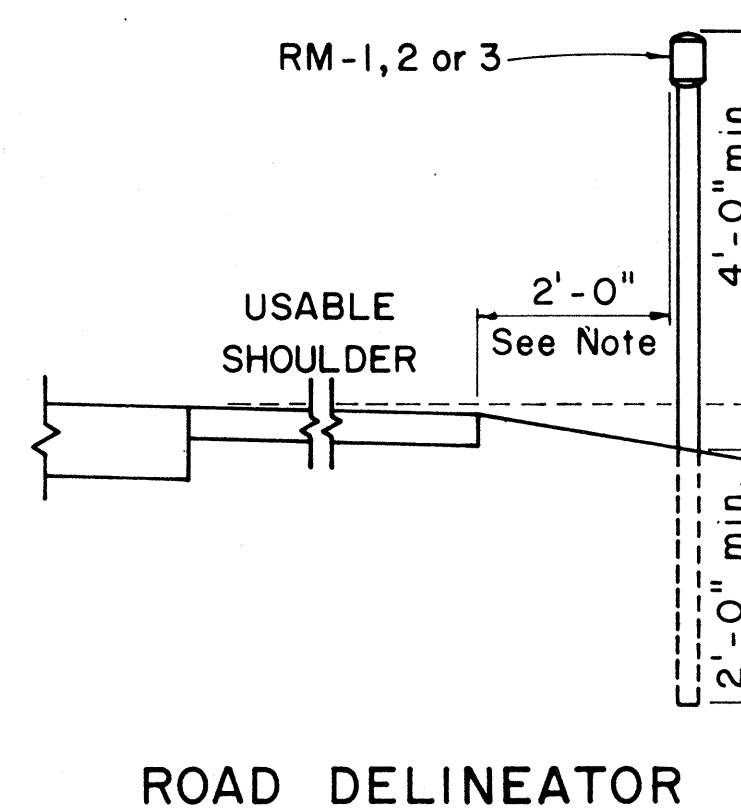


| FED. ROAD<br>DIST. NO. | STATE | FED. AID<br>PROJ. NO. | FISCAL<br>YEAR | SHEET<br>NO. | TOTAL<br>SHEETS |
|------------------------|-------|-----------------------|----------------|--------------|-----------------|
| HAWAII                 | HAW.  | RF-056-1(10)          | 1971           | 19           | 74              |



## HEIGHT AND LATERAL LOCATION OF SIGNS - TYPICAL INSTALLATION



GENERAL NOTES:

1. Sign posts shall be 2" galv. standard pipe or 2" x 2" galv. sq. tube post.
2. 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.
3. 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.
4. Sign posts shall extend 3 1/2" above sign where required for City and County street name signs.
5. 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.
6. Clearance markers (RM-3, RM-4) shall be installed with the edge of the marker in line with the inner edge of the obstruction.
7. (R) or (L) indicates right or left and shall be as shown on the plans.

APPROVAL RECOMMENDED:

Eiichi Tanaka 12/29/6  
TRAFFIC ENGINEER DATE

APPROVED:





ASSISTANT CHIEF, ENGINEERING

12-30-66

DATE

| NO. | REVISION | APPROVED<br>BY | DATE |
|-----|----------|----------------|------|
|     |          |                |      |

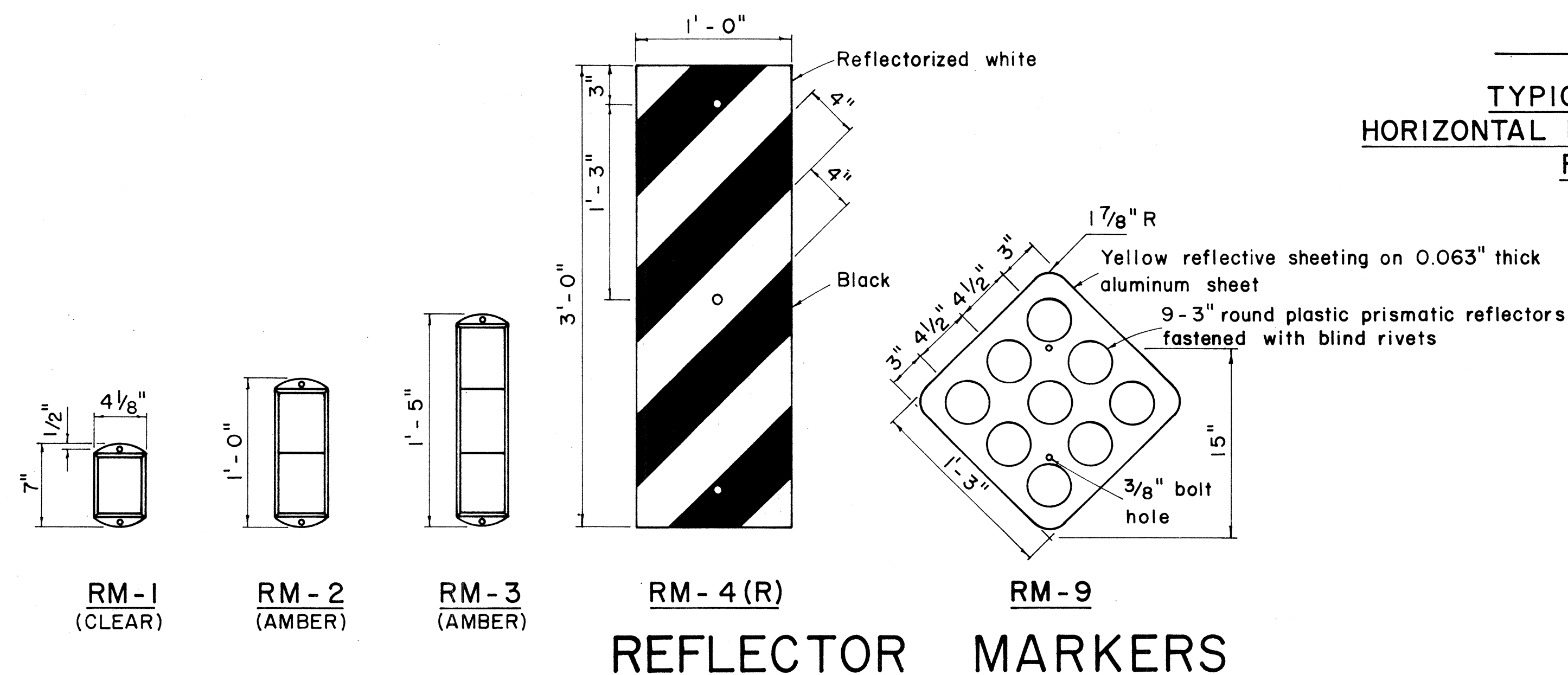
**STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION**

## STANDARD DETAILS

### MISCELLANEOUS SIGN DETAILS

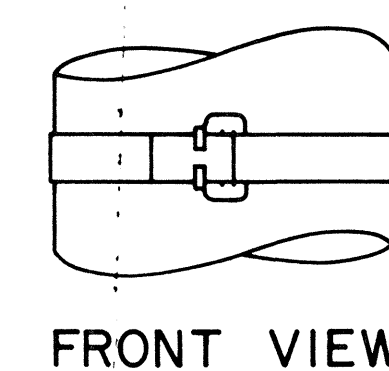
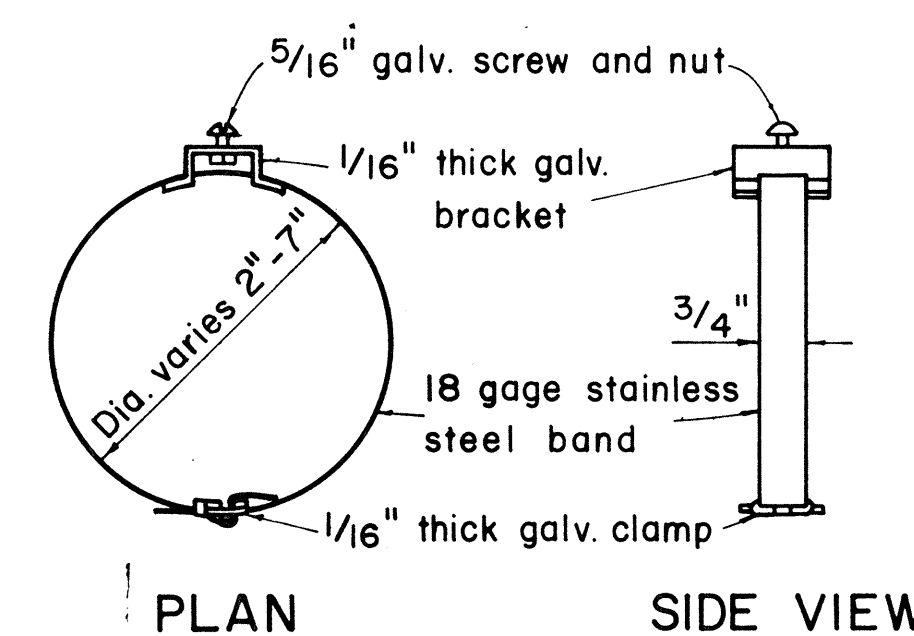
Not to scale March, 1968

**SHEET No. 1 OF 14 SHEETS DT 100**



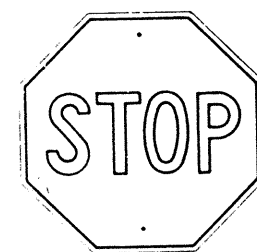
## REFLECTOR MARKERS

## TYPICAL BAND BRACKET FOR MOUNTING TRAFFIC SIGNS

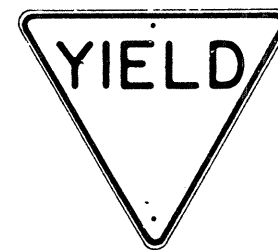


|                  |                         |            |
|------------------|-------------------------|------------|
| ORIGINAL<br>PLAN | SURVEY PLOTTED BY _____ | DATE _____ |
| NOTE BOOK        | DRAWN BY _____          | _____      |
|                  | TRACED BY _____         | _____      |
|                  | DESIGNED BY _____       | _____      |
|                  | QUANTITIES BY _____     | _____      |
| No. _____        | CHECKED BY _____        | _____      |

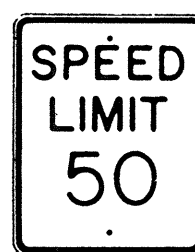
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | RF-056-1(10)       | 1971        | 20        | 74           |



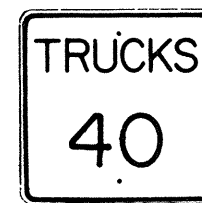
R1-1 30"x 30"



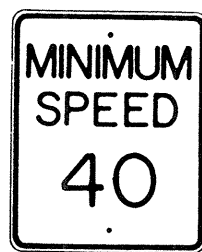
R1-2 36"x 36"x 36"  
R1-2-E 48"x 48"x 48"  
R1-2-I 60"x 60"x 60"



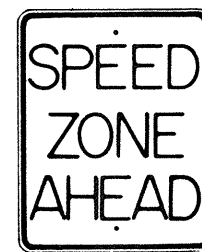
R2-1(50) 24"x 30"  
R2-1(50)-E 36"x 48"  
R2-1(50)-I 48"x 60"



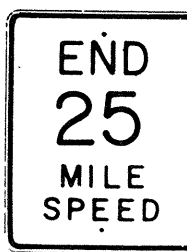
R2-2(40) 24"x 24"  
R2-2(40)-E 36"x 36"  
R2-2(40)-I 48"x 48"



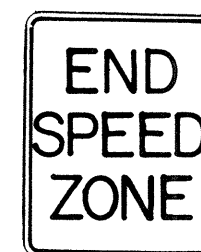
R2-4(40) 24"x 30"  
R2-4(40)-E 36"x 48"  
R2-4(40)-I 48"x 60"



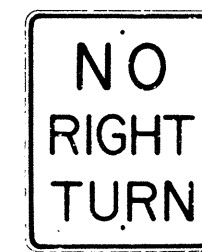
R2-5 24"x 30"  
R2-5-E 36"x 48"  
R2-5-I 48"x 60"



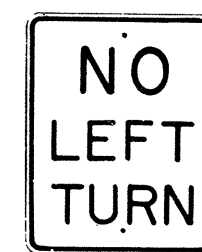
R2-6(25) 24"x 30"  
R2-6(25)-E 36"x 48"  
R2-6(25)-I 48"x 60"



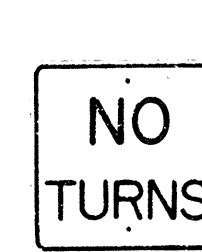
R2-7 24"x 30"  
R2-7-E 36"x 48"  
R2-7-I 48"x 60"



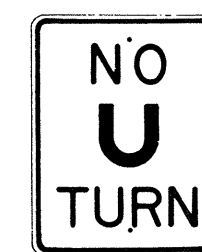
R3-1 24"x 30"  
R3-1-E 36"x 48"



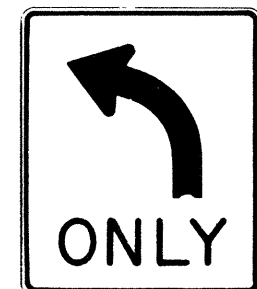
R3-2 24"x 30"  
R3-2-E 36"x 48"



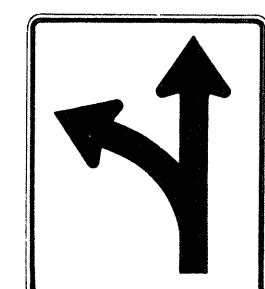
R3-3 24"x 24"



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"



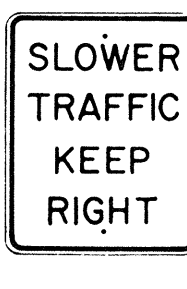
R3-8(L) 30"x 30"



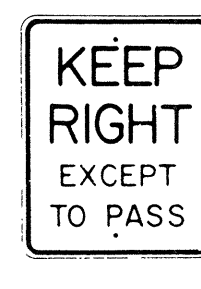
R4-1 24"x 30"



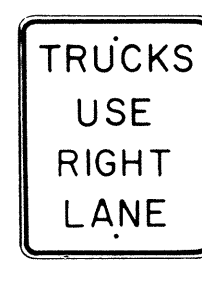
R4-2 24"x 30"



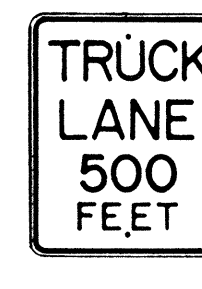
R4-3 24"x 30"  
R4-3-E 36"x 48"  
R4-3-I 48"x 60"



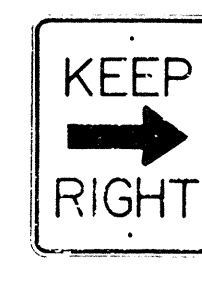
R4-4 24"x 30"  
R4-4-E 36"x 48"  
R4-4-I 48"x 60"



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"



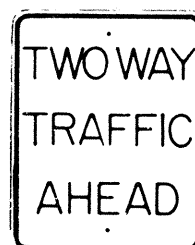
R5-1 24"x 24"



R6-1(R) 36"x 12"



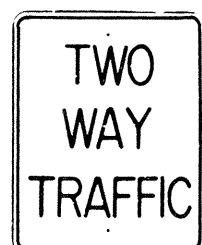
R6-2(R) 18"x 24"



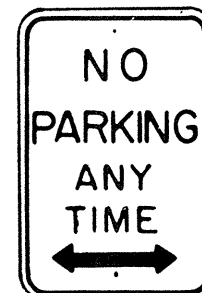
R6-3 24"x 30"



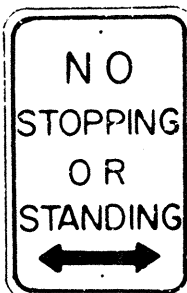
R6-4 24"x 30"



R6-5 24"x 30"



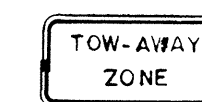
R7-1 12"x 18"



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



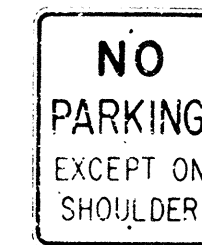
R7-107(R) 12"x 18"



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"



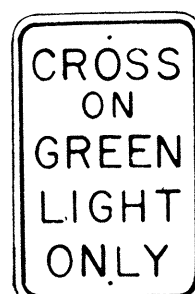
R8-3 24"x 30"  
R8-3-E 36"x 48"



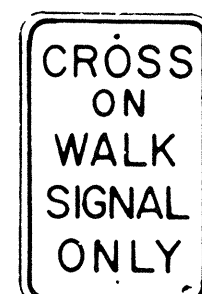
R8-4 24"x 30"  
R8-4-E 36"x 48"  
R8-4-I 48"x 36"



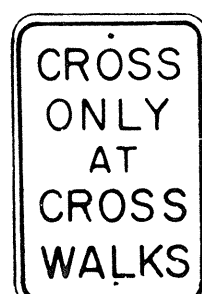
R9-1 18"x 24"



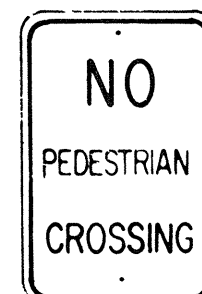
R9-2 12"x 18"



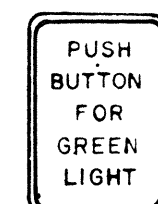
R9-3 12"x 18"



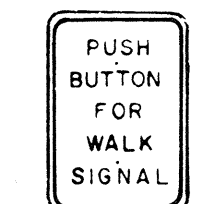
R9-4 12"x 18"



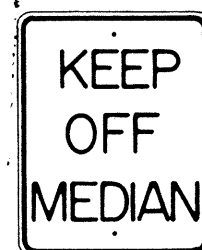
R9-5 12"x 18"



R9-6 9"x 12"



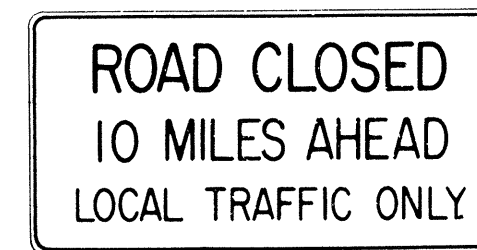
R9-7 9"x 12"



R10-1 24"x 30"  
R10-1-E 36"x 48"  
R10-1-I 48"x 60"



R10-2 48"x 30"



R10-3(10) 60"x 30"



R10-4(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 R10-4 sign, number in ( ) indicates weight and shall be as shown on the plan.

APPROVAL RECOMMENDED:

*Eishi Tanaka* 12/29/69  
TRAFFIC ENGINEER DATE

APPROVED:

*Arthur J. Delia* 12-30-69  
ASSISTANT CHIEF, ENGINEERING DATE

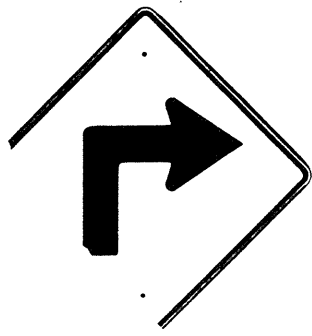
| NO. | REVISION | APPROVED BY | DATE |
|-----|----------|-------------|------|
|     |          |             |      |

|                                                                      |
|----------------------------------------------------------------------|
| STATE OF HAWAII<br>DEPARTMENT OF TRANSPORTATION<br>HIGHWAYS DIVISION |
| <b>STANDARD DETAILS</b>                                              |
| <b>REGULATORY SIGNS</b>                                              |
| NOT TO SCALE                                                         |

SHEET No. 2 OF 14 SHEETS DT 101

|               |               |
|---------------|---------------|
| ORIGINAL PLAN | DATE          |
| NOTE BOOK     | DESIGNED BY   |
|               | TRACED BY     |
|               | QUANTITIES BY |
|               | CHECKED BY    |

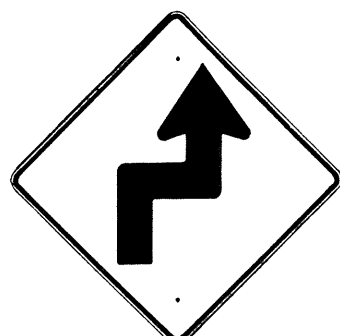
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | RF-050-100         | 1971        | 21        | 74           |



W1-1(R) 30" x 30"



W1-2(R) 30" x 30"



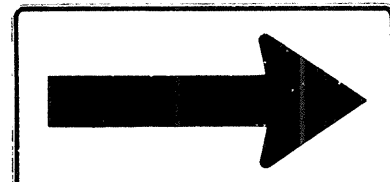
W1-3(R) 30" x 30"



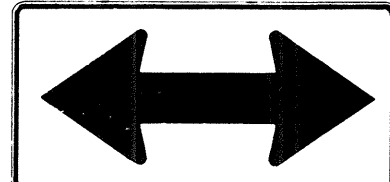
W1-4(R) 30" x 30"



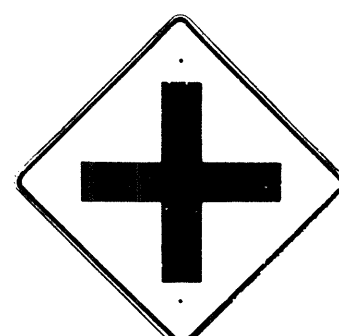
W1-5(R) 30" x 30"



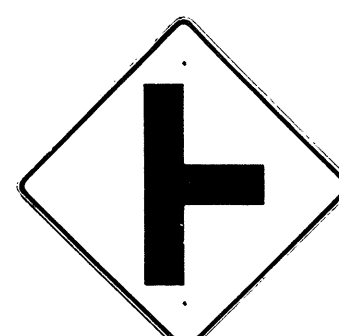
W1-6 48" x 24"



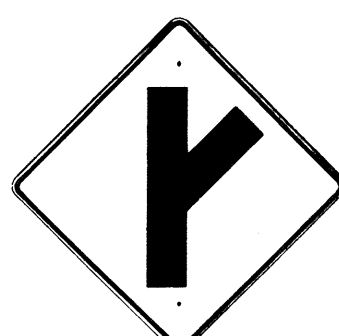
W1-7 48" x 24"



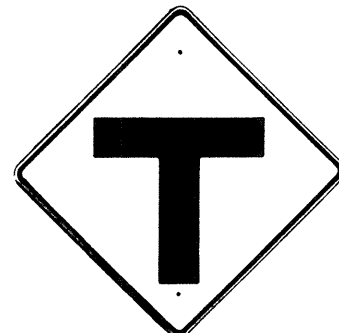
W2-1 30" x 30"



W2-2 30" x 30"



W2-3(R) 30" x 30"



W2-4 30" x 30"



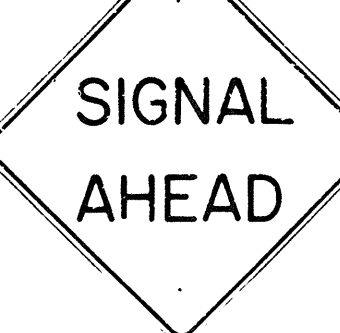
W2-5 30" x 30"



W3-1 30" x 30"



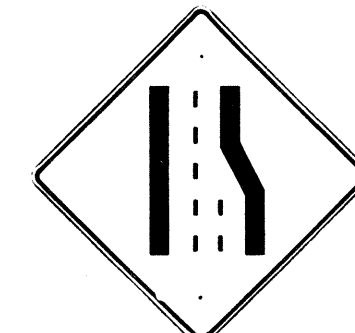
W3-2 30" x 30"



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"



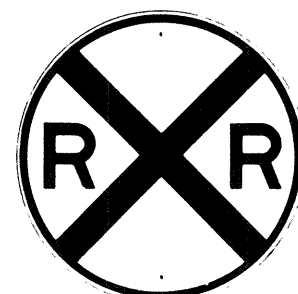
W8-5 30" x 30"



W9-1 30" x 30"



W9-2 30" x 30"



W10-1 36" DIAMETER



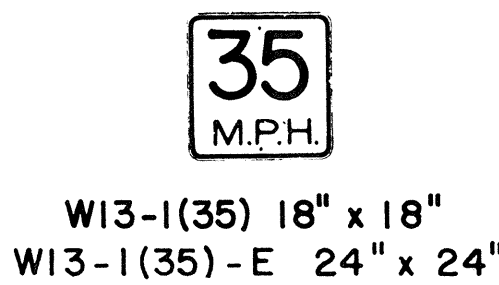
W11-1 30" x 30"



W11-5 30" x 30"



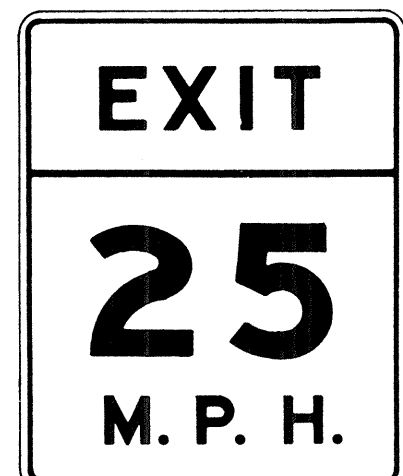
W12-2 36" x 36"



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:
- 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 warning signs shall be reflectorized unless otherwise specified.
  - All warning signs shall have  $\frac{3}{8}$ " bolt holes drilled at appropriate locations unless otherwise noted.
  - (R) or (L) indicates right or left and shall be as shown on the plan.
  - The suffix "E" denotes Expressway signs and "I" denotes Interstate signs.
  - For W13 sign, number in ( ) indicates speed and shall be as shown on the plans.

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

APPROVED:  
*2.2.2.2*  
 ASSISTANT CHIEF, ENGINEERING  
 DATE 12-30-69

| NO. | REVISION | APPROVED BY | DATE |
|-----|----------|-------------|------|
|     |          |             |      |

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

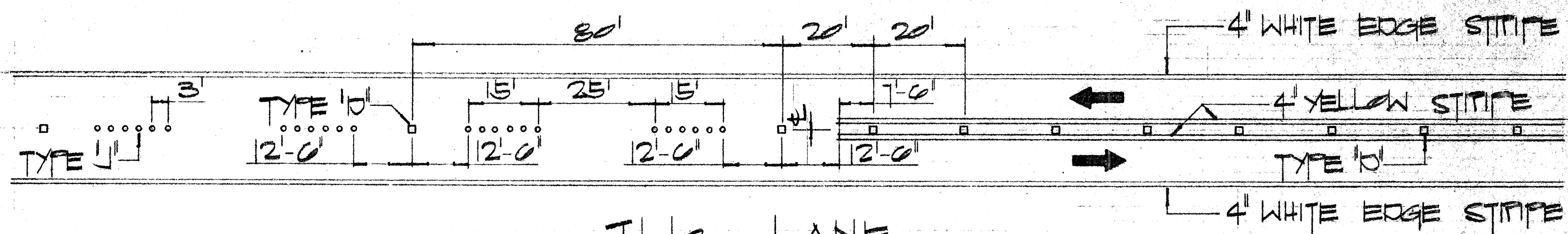
**STANDARD DETAILS**

**WARNING SIGNS**

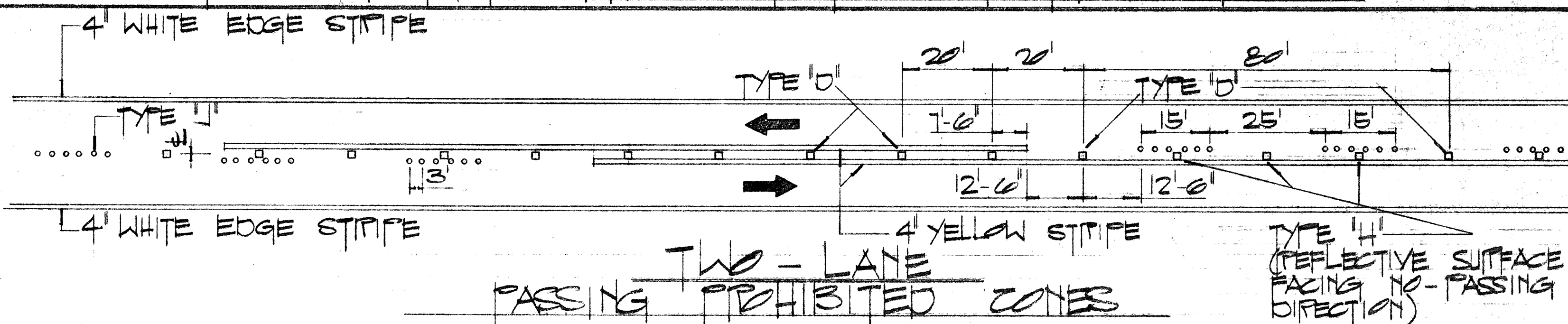
NOT TO SCALE

SHEET No. 3 OF 14 SHEETS DT 102

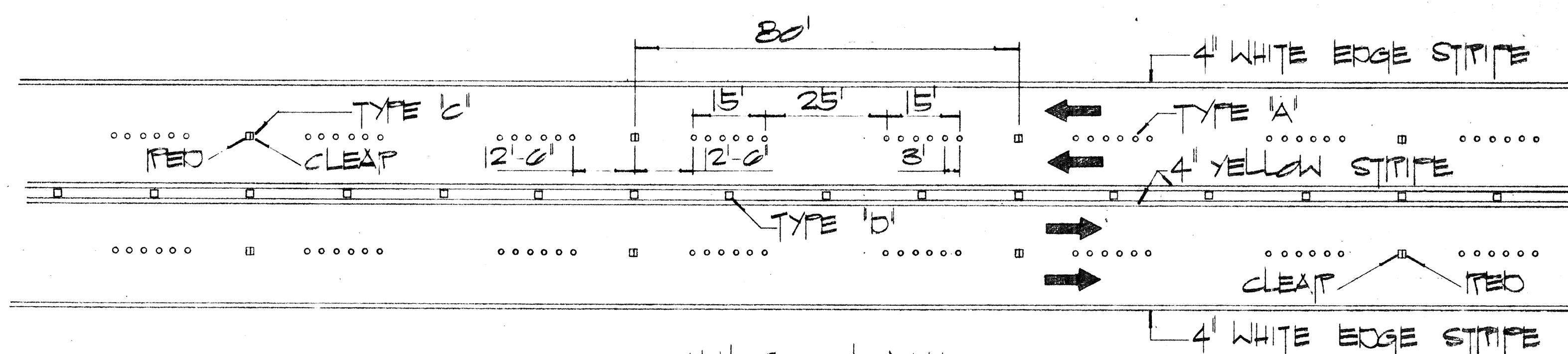
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | RF-056-1 (10)      | 1971        | 21A       | 74           |



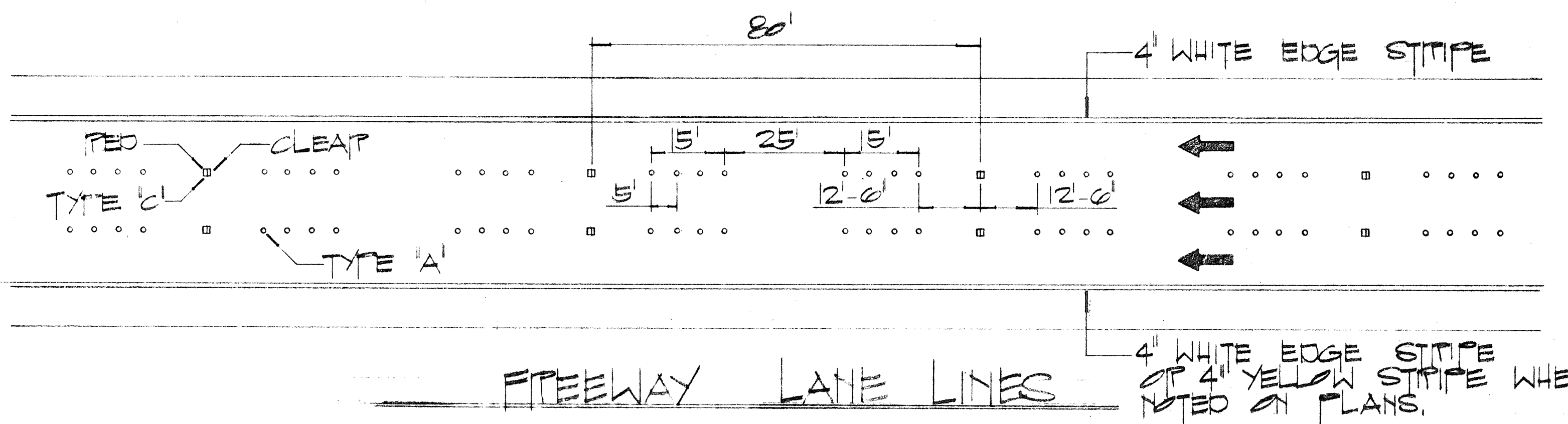
TWO-LANE  
PASSING PERMITTED



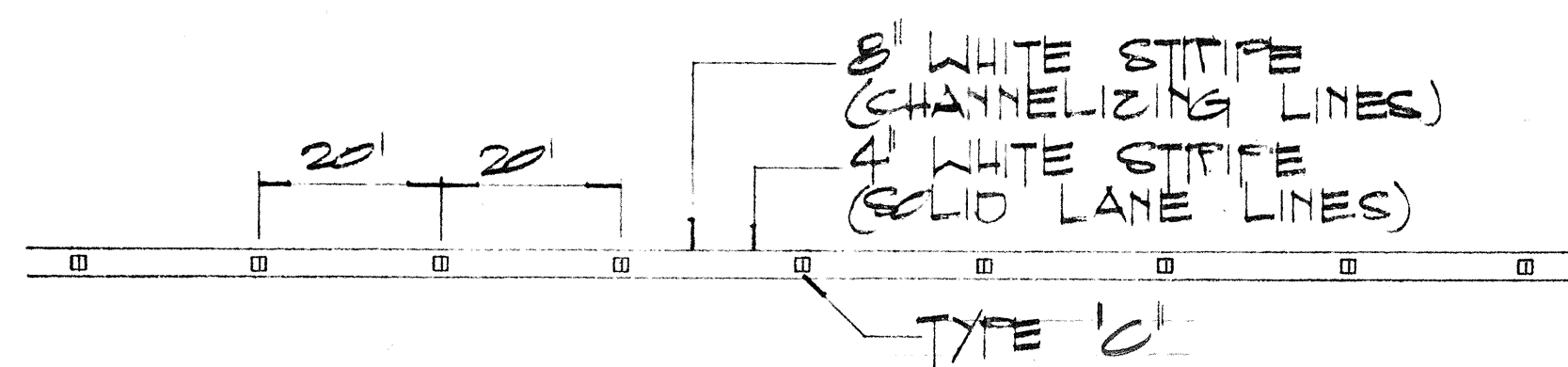
TWO-LANE  
PASSING PROHIBITED



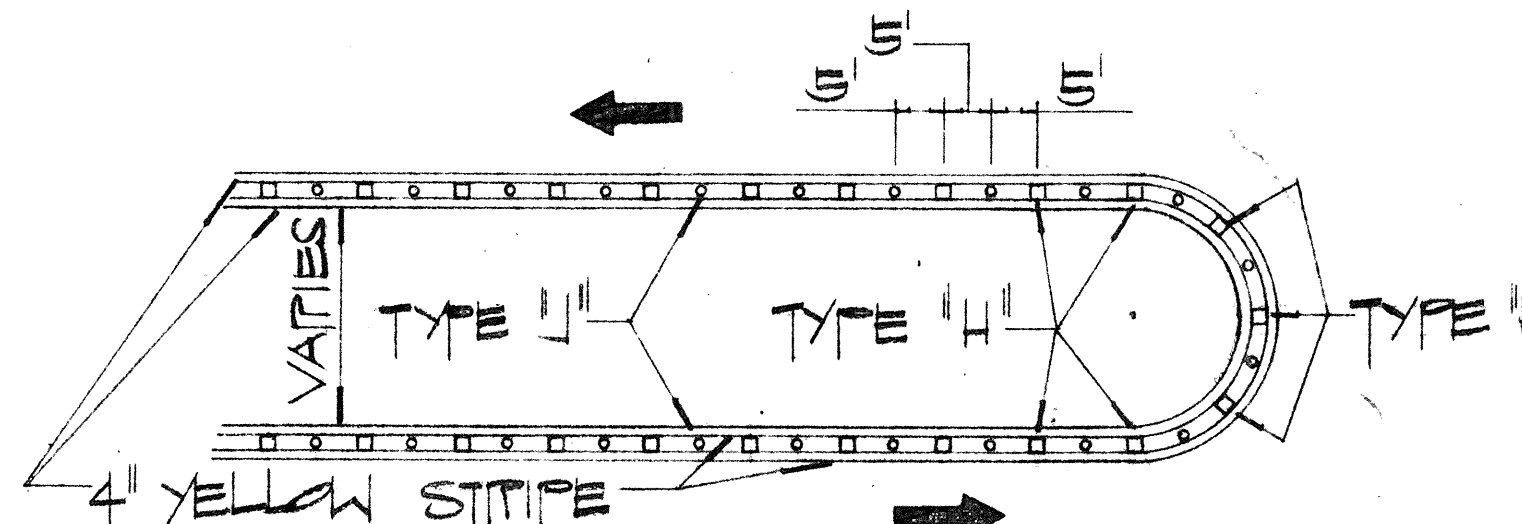
MULTI-LANE  
LANE LINES & CENTER LINE



FREEWAY LANE LINES



CHANNELIZING LINES  
OR SOLID LANE LINES



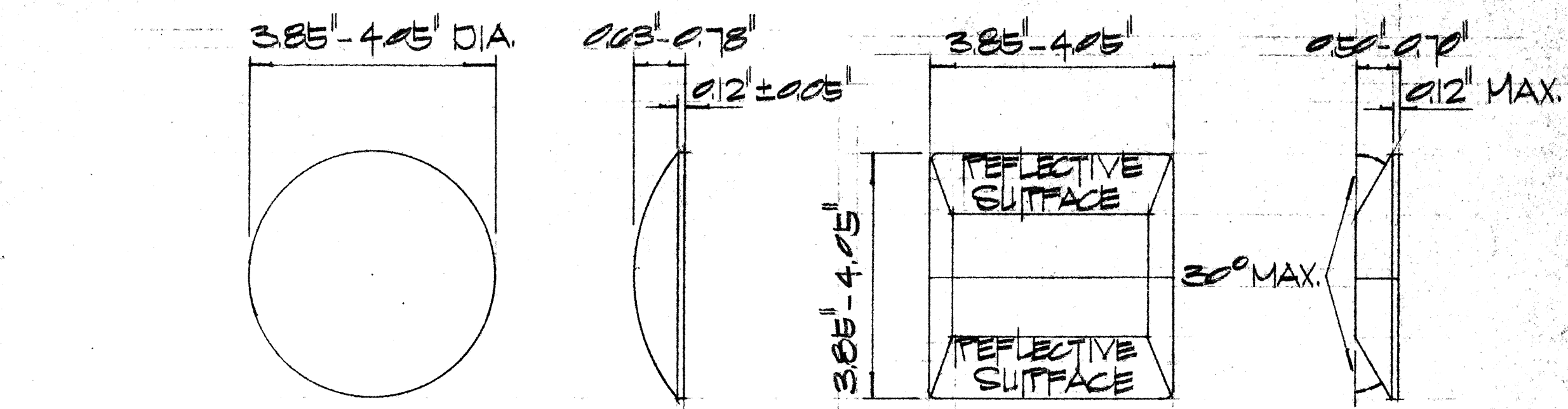
MEDIAN NOSE DELINEATION

TWO-LANE

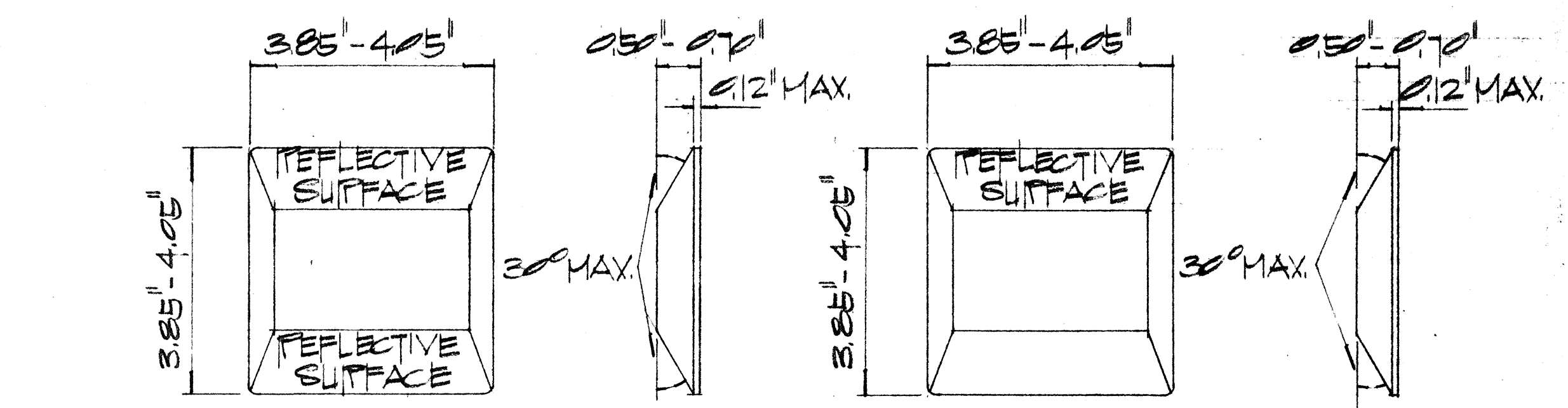
MULTI-LANE

FREEWAY

MISCELLANEOUS



TYPE A  
NON-REFLECTIVE WHITE MARKER  
TYPE C  
NON-REFLECTIVE YELLOW MARKER  
REFLECTIVE SURFACE  
REFLECTIVE SURFACE  
30° MAX.



TYPE D  
2-WAY YELLOW REFLECTIVE SURFACE  
TYPE H  
ONE-WAY YELLOW REFLECTIVE SURFACE

### GENERAL NOTES

1. PAINTED STRIPES TO BE DONE BY STATE FORCES.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

TYPICAL DETAILS  
RAISED PAVEMENT MARKERS

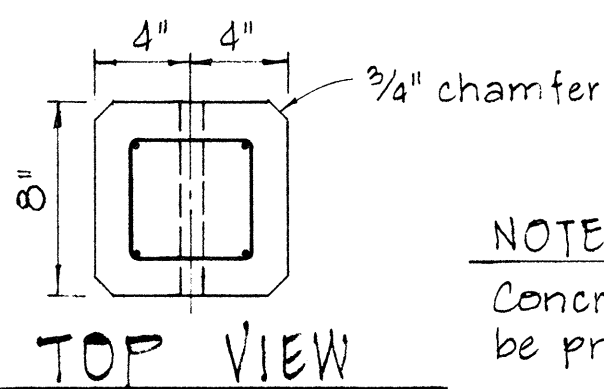
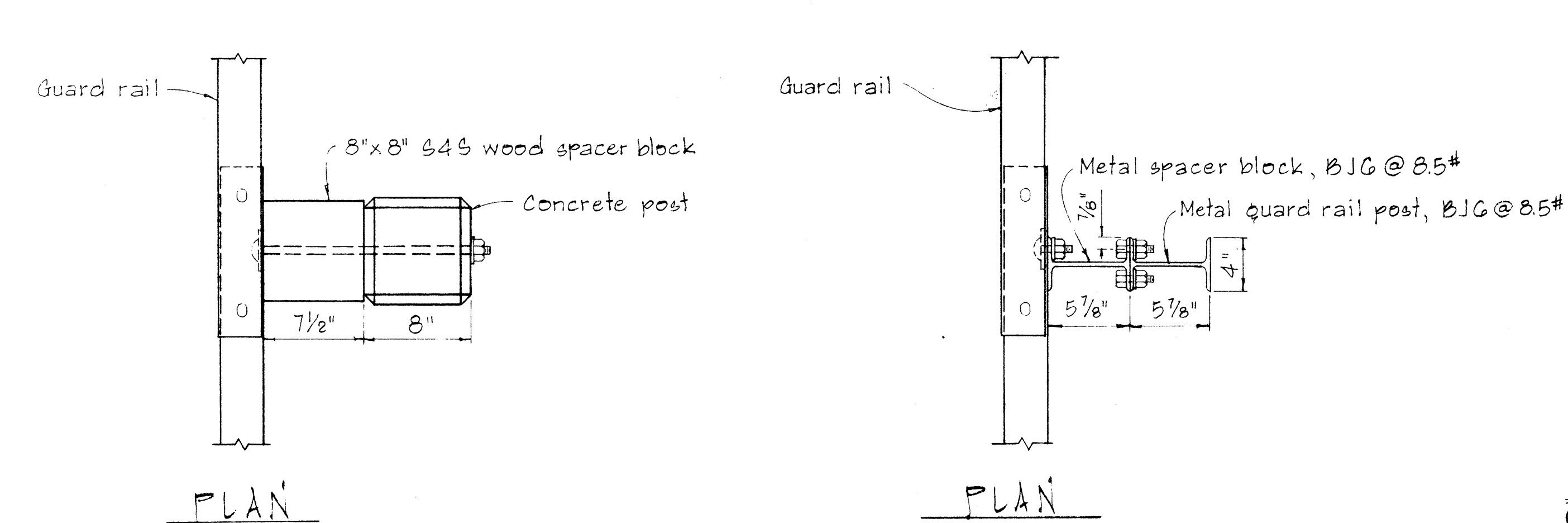
Not to Scale June 1971

SHEET No. 4 OF 14 SHEETS

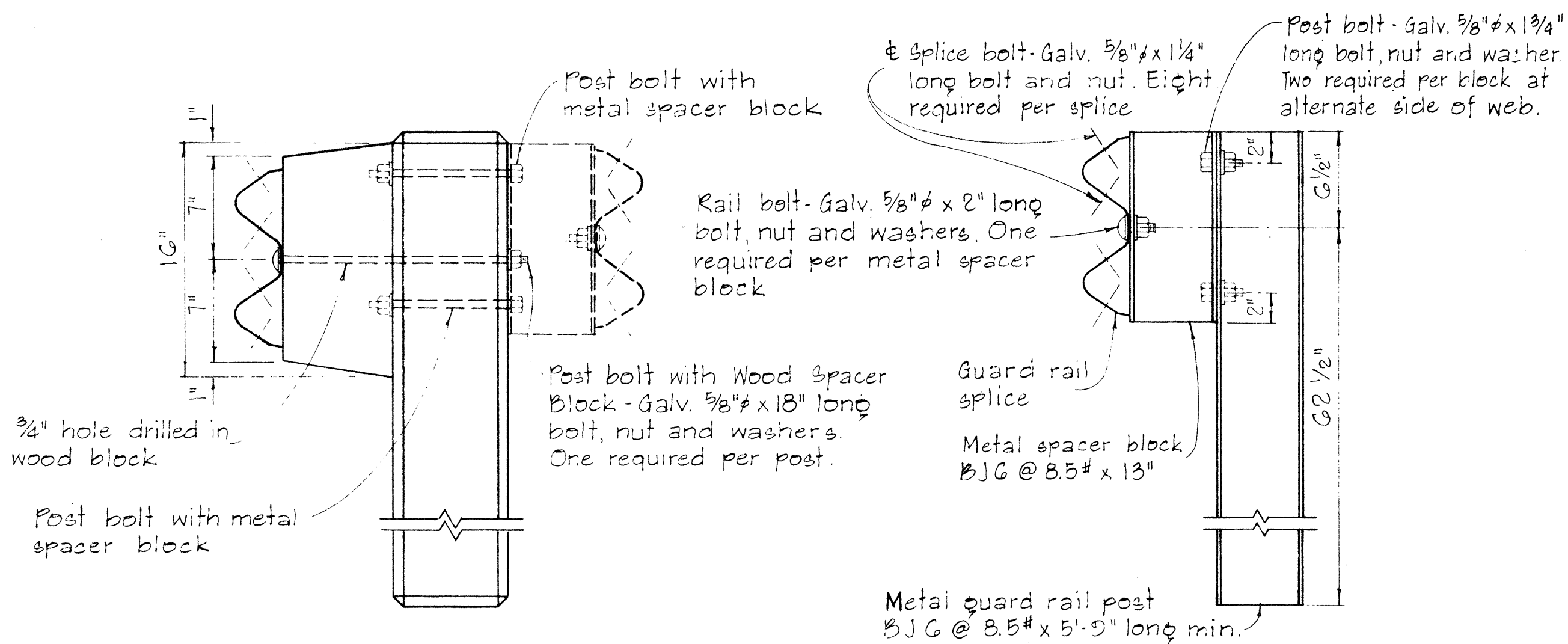
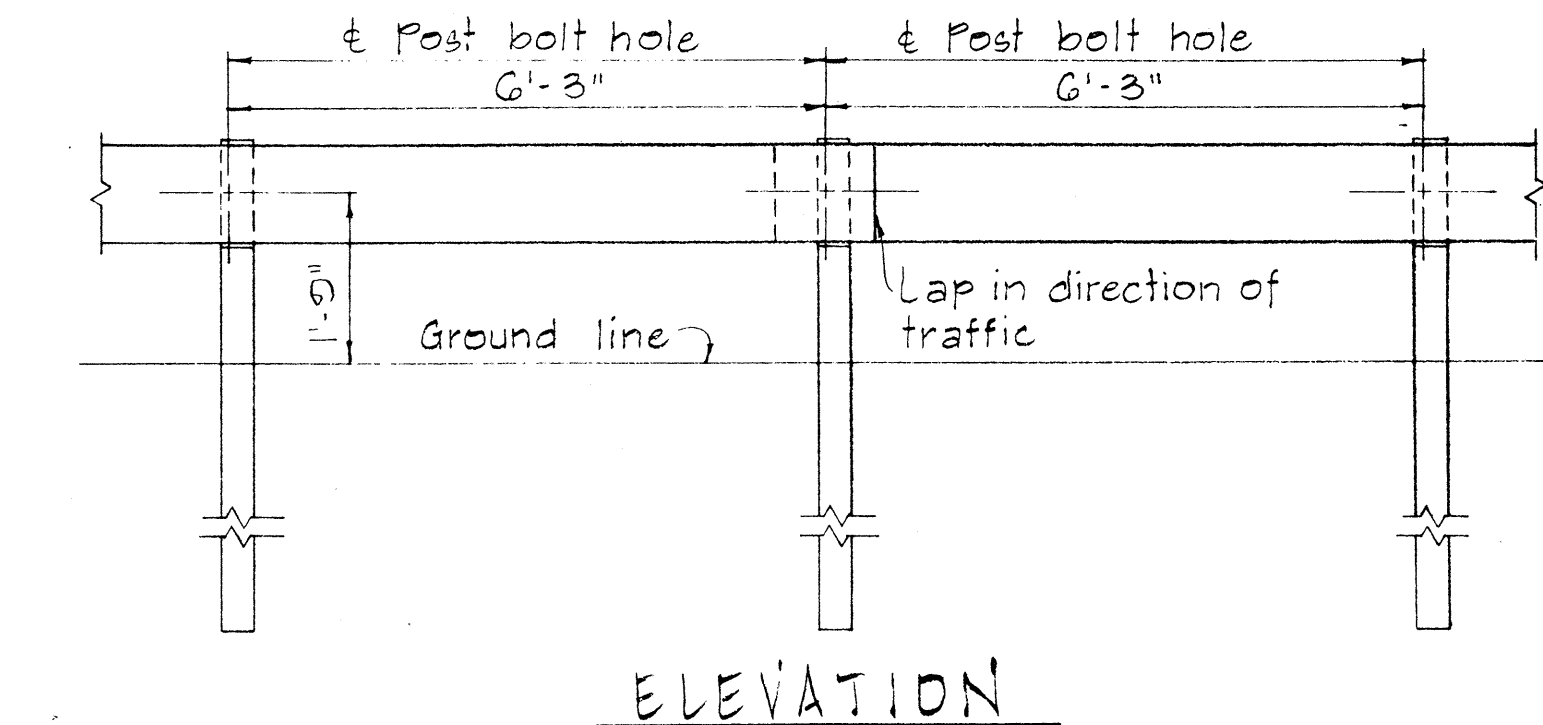
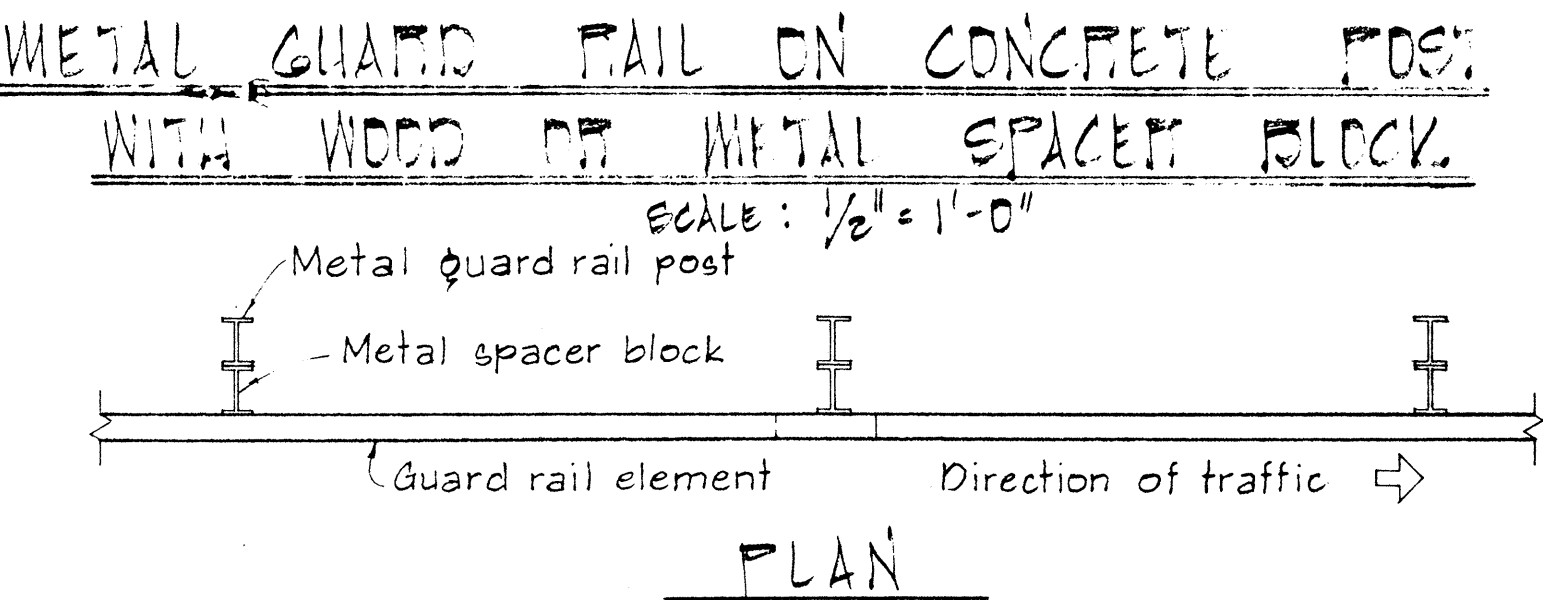
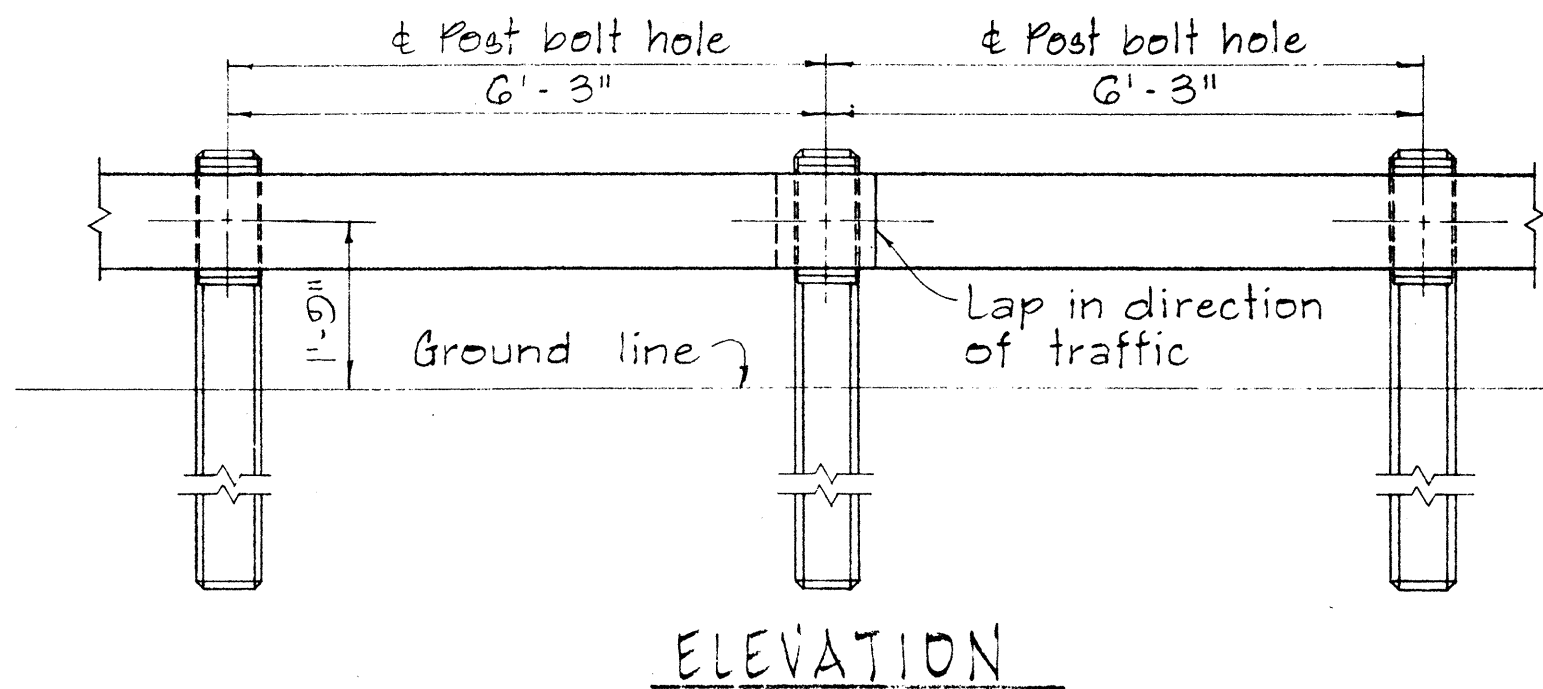
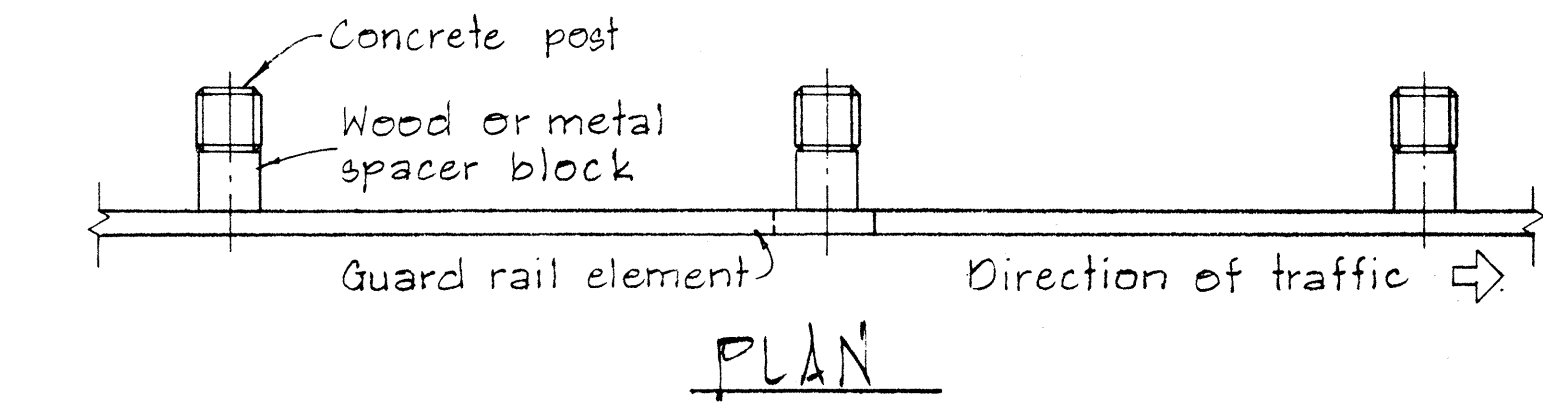
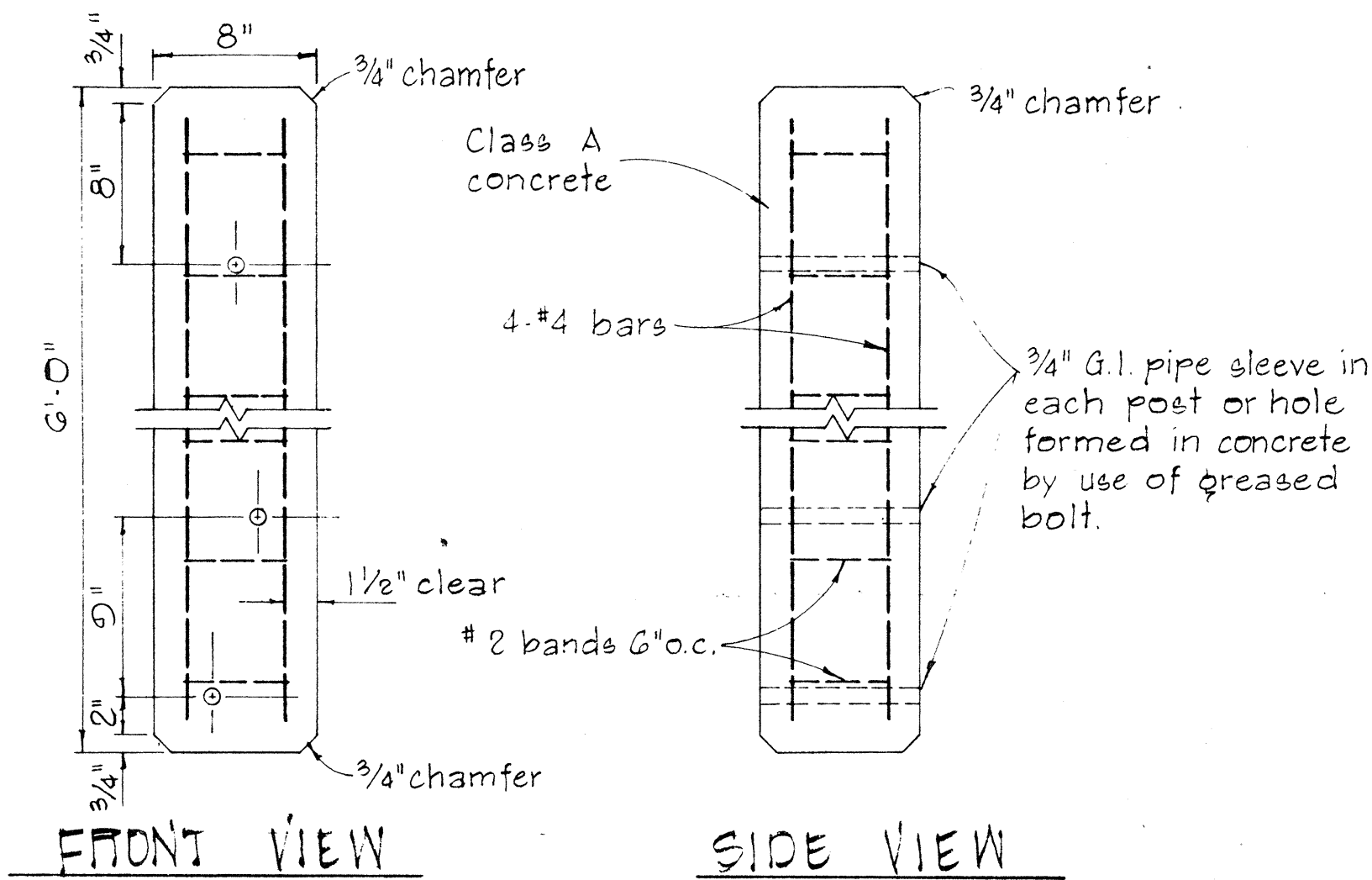
21A

|             |      |
|-------------|------|
| SURVEYED BY | DATE |
| DRAWN BY    |      |
| DESIGNED BY |      |
| NOTED BY    |      |
| CHECKED BY  |      |

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | RF-056-1(10)       | 1971        | 22        | 74           |

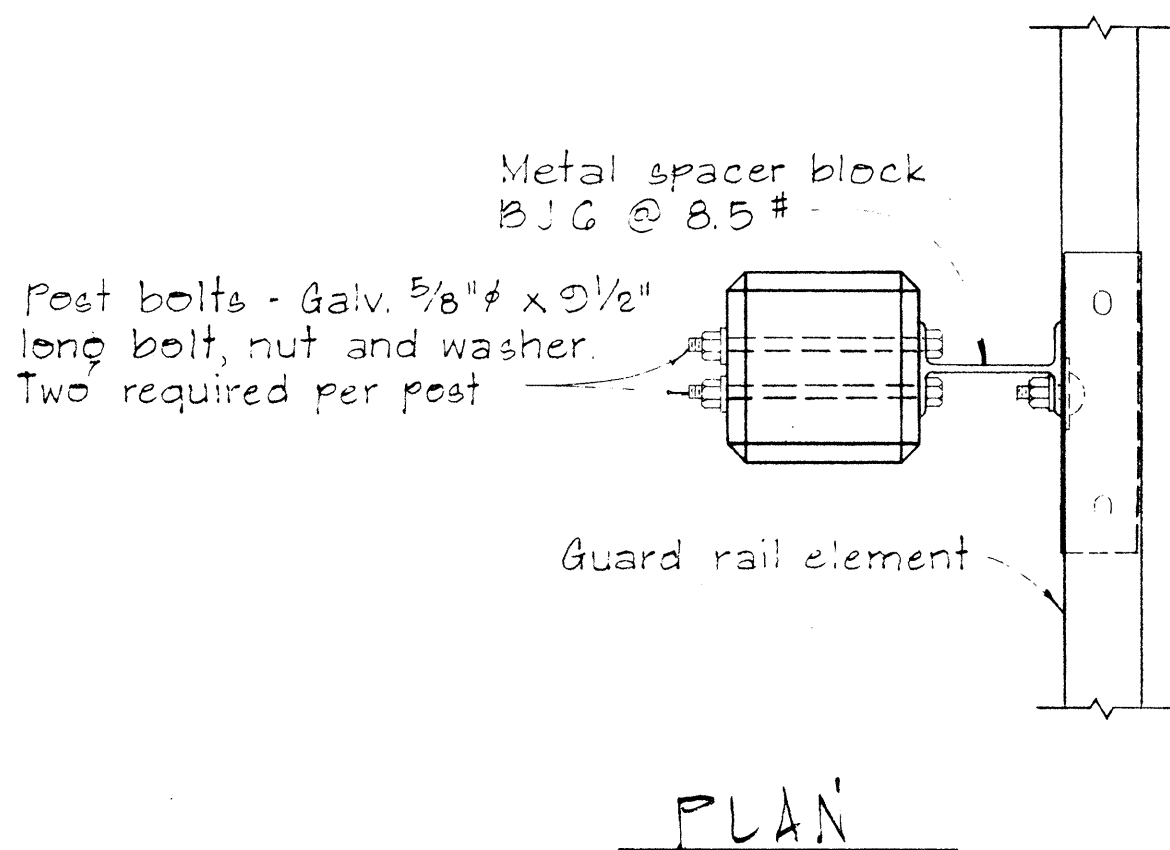


NOTE:  
Concrete post shall be precast

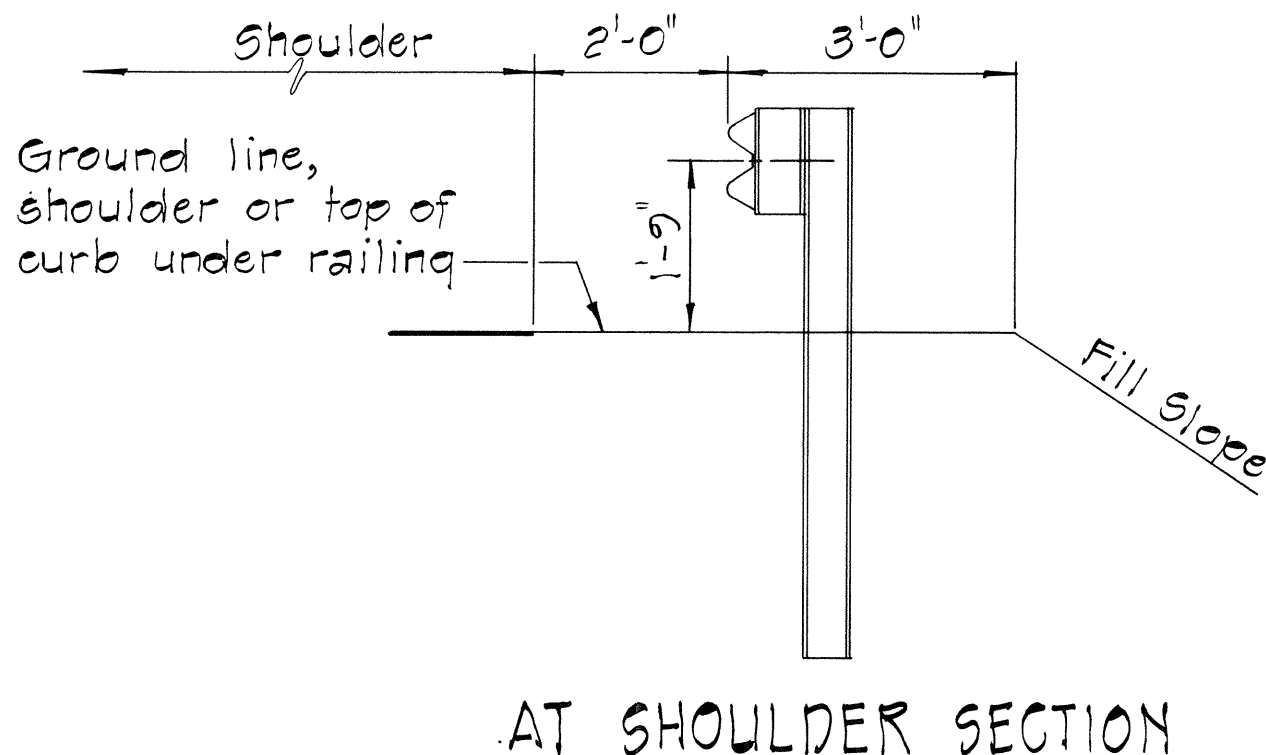


DETAIL OF CONCRETE POST  
SCALE: 1 1/2" = 1'-0"

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



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



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

APPROVAL RECOMMENDED:  
*Erich Tanaka*  
TRAFFIC ENGINEER

12/29/62  
DATE

APPROVED:  
*Shelton J. Deland*  
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

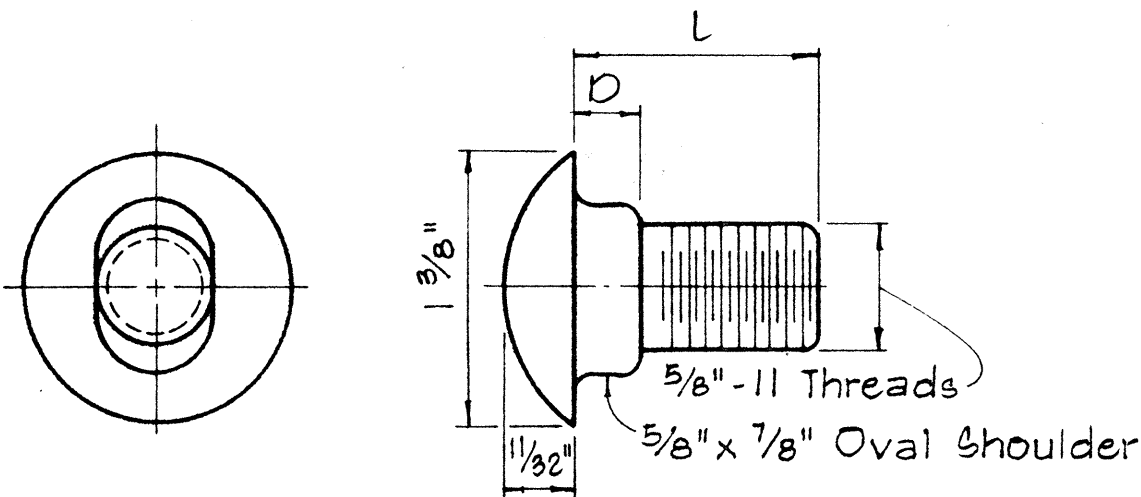
SHEET No. 9 OF 14 SHEETS DT 500

|                   |  |
|-------------------|--|
| DATE              |  |
| SURVEY PLOTTED BY |  |
| DRAWN BY          |  |
| DESIGNED BY       |  |
| QUANTITIES BY     |  |
| CHECKED BY        |  |
| ORIGINAL PLAN     |  |
| NOTE BOOK         |  |
| NO.               |  |

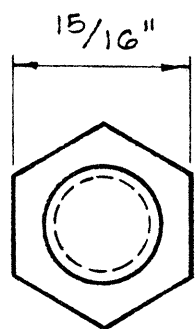
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | RF-056-100         | 1971        | 23        | 74           |

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

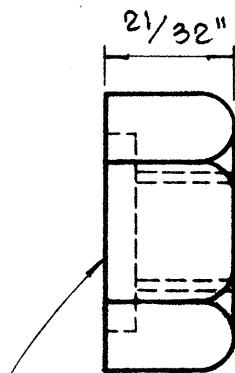
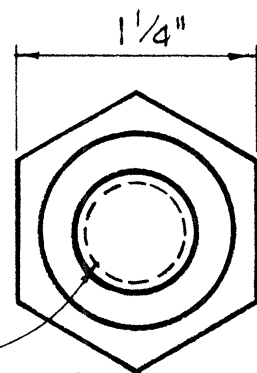
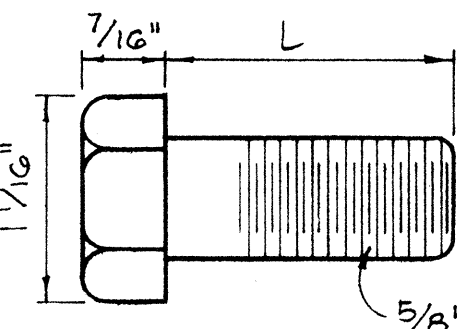
| BOLT DIMENSIONS                          |        |  |
|------------------------------------------|--------|--|
| TYPE B BOLT                              |        |  |
| Post Bolt for Conc. Post w/ Metal Blocks | L      |  |
| Post Bolt for Metal Post w/ Metal Block  | 1 3/4" |  |



TYPE A BOLT

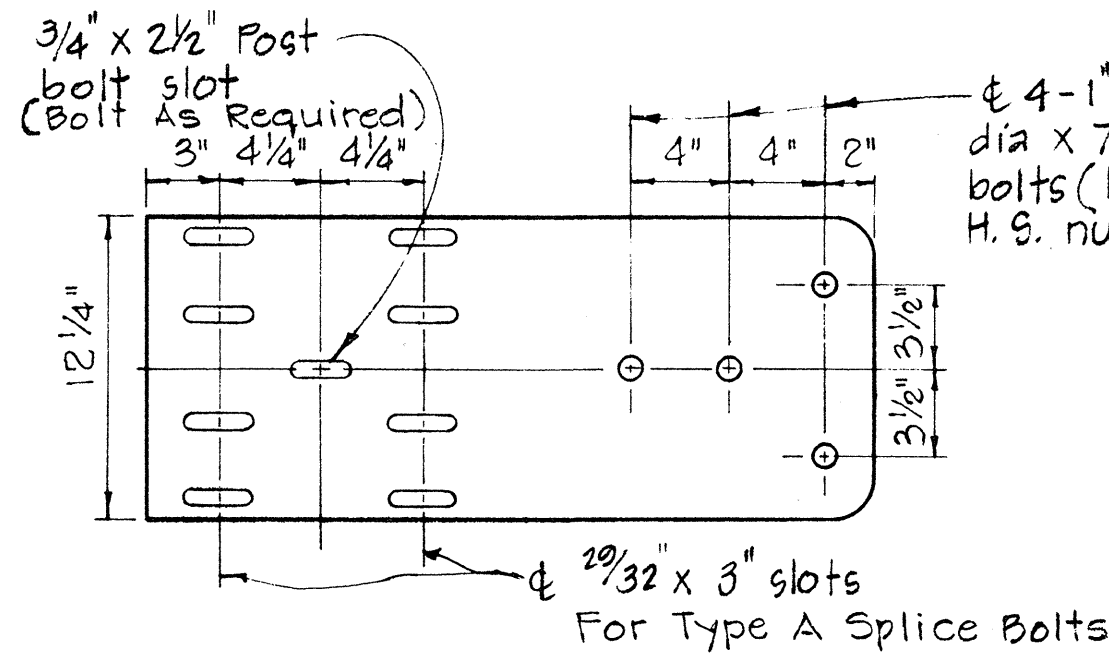
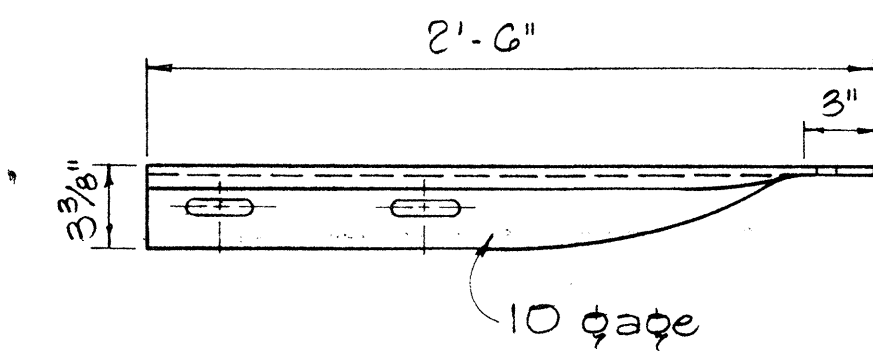


TYPE B BOLT



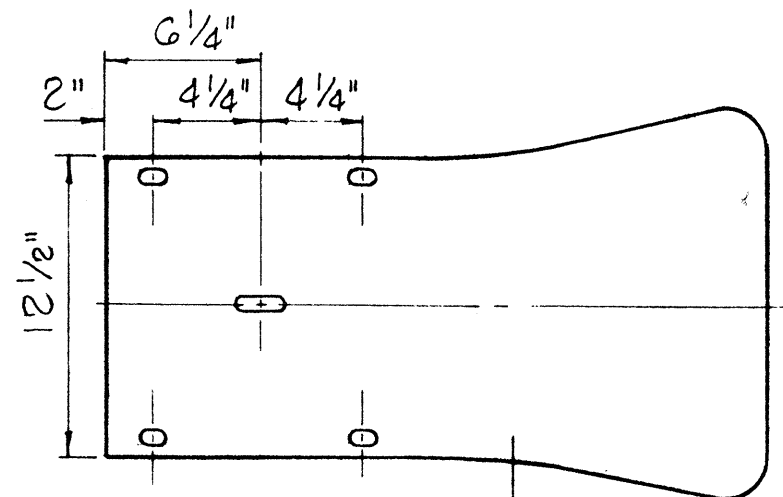
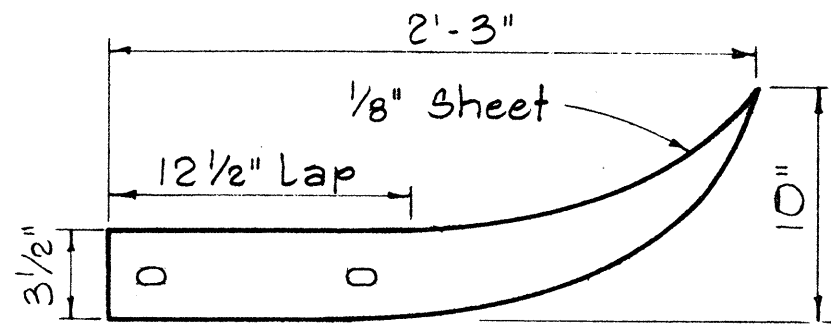
5/32" Deep x 15/16" Dia. C' Bore for Type A Bolt only.  
Plain nut for Type B Bolt.

HEXAGON NUT



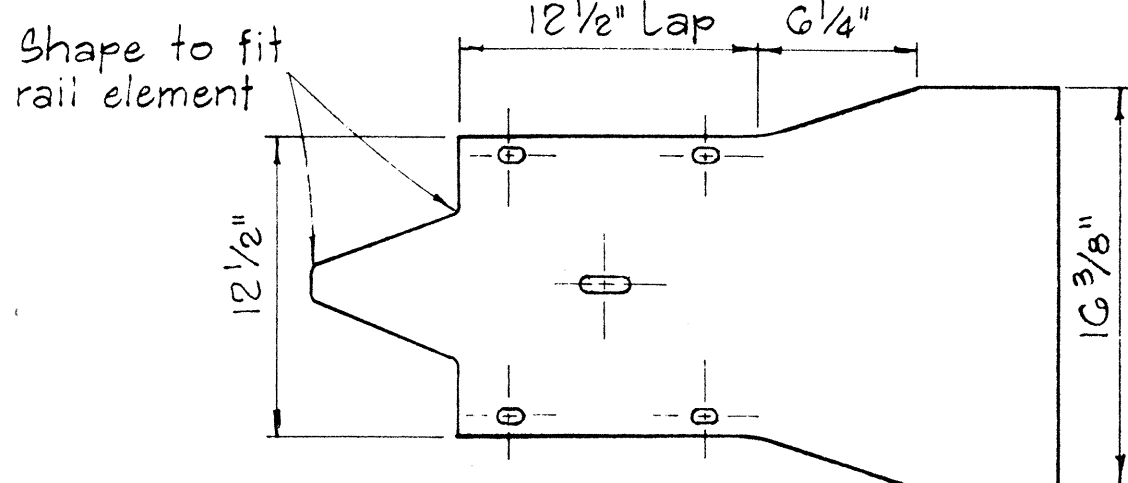
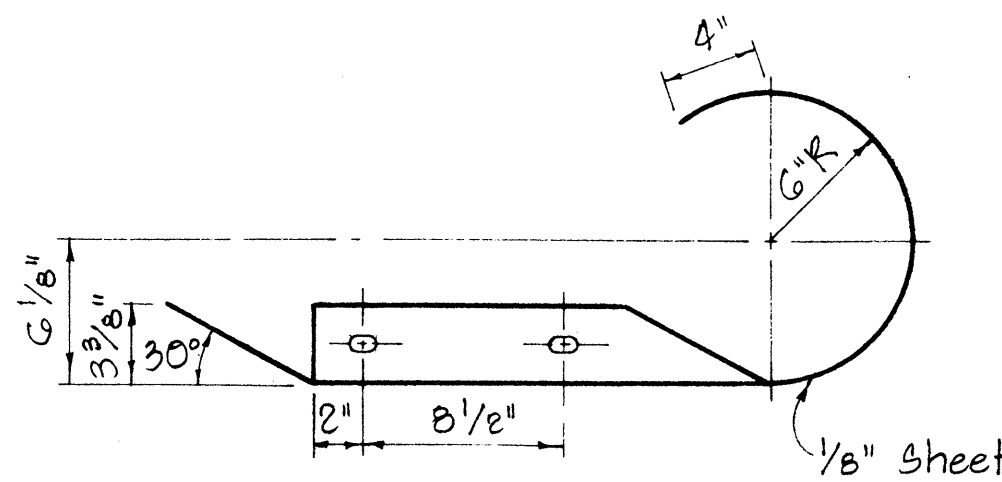
SPECIAL END SHOE

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



FLARED END

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



CURVED END

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

APPROVAL RECOMMENDED:

TRAFFIC ENGINEER

APPROVED:

ASSISTANT CHIEF, ENGINEERING

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

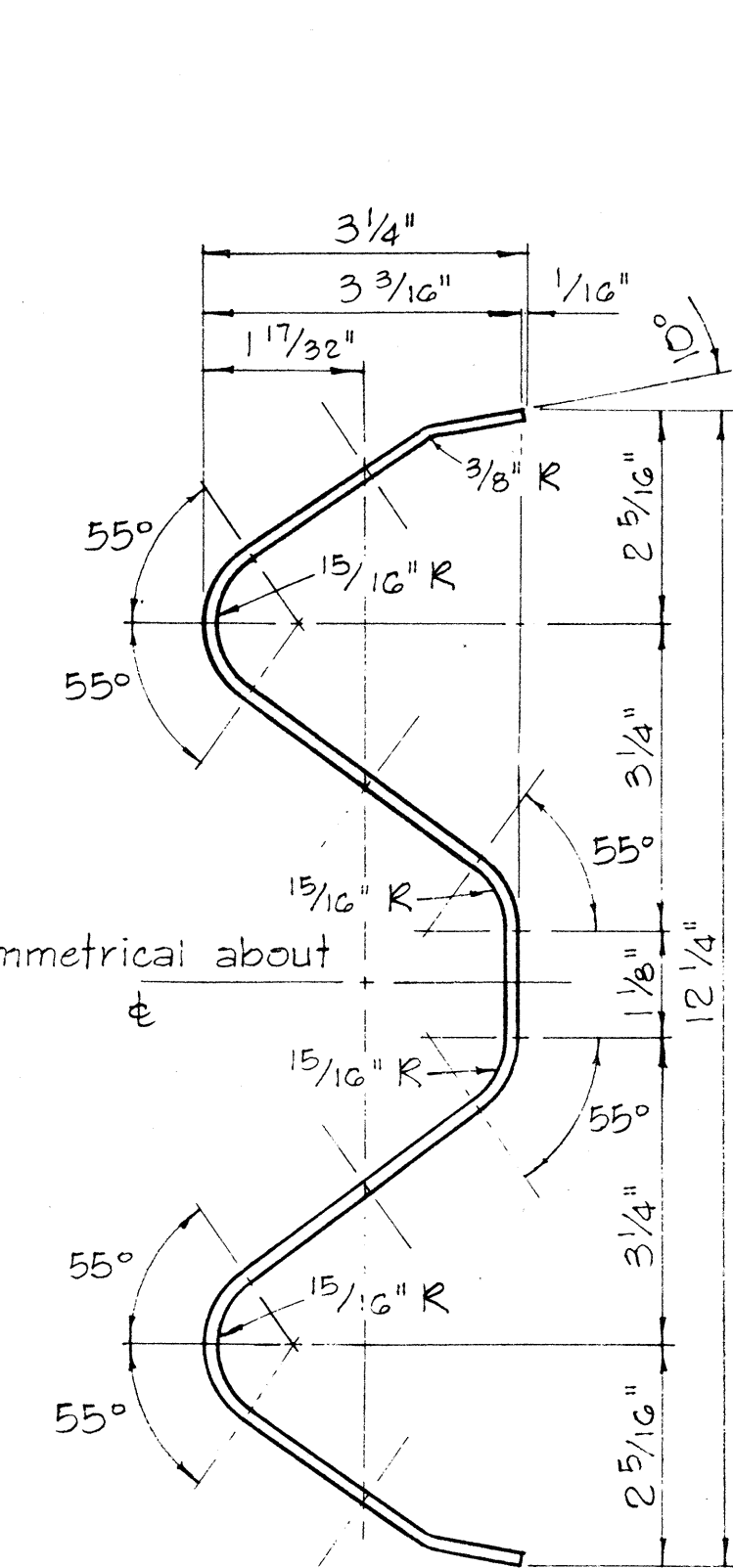
DATE

DATE

DATE

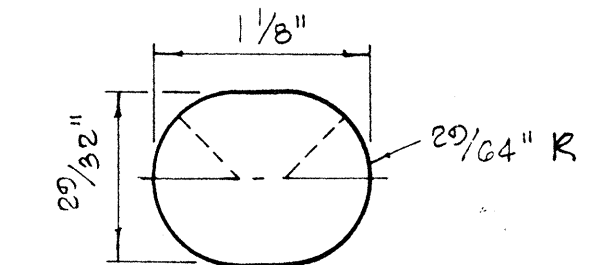
DATE

DATE



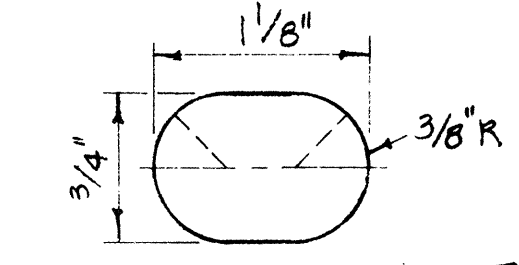
RAIL ELEMENT SECTION

Scale: 6" = 1'-0"

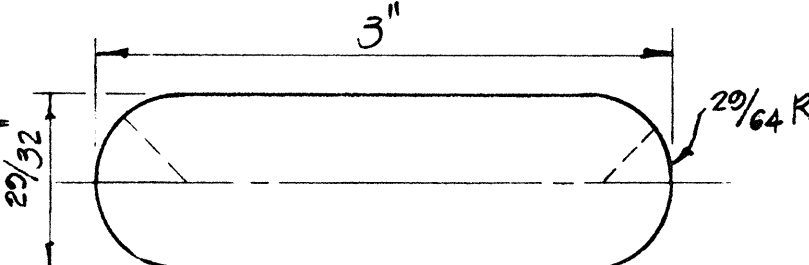


SPlice BOLT SLOT

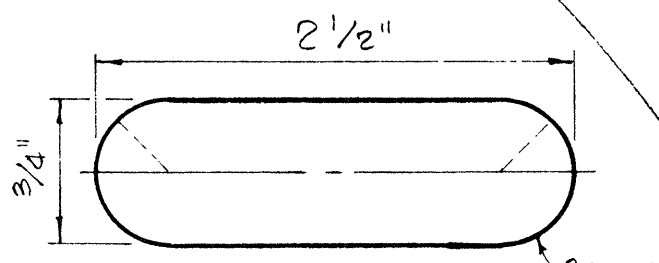
Scale: Full Size



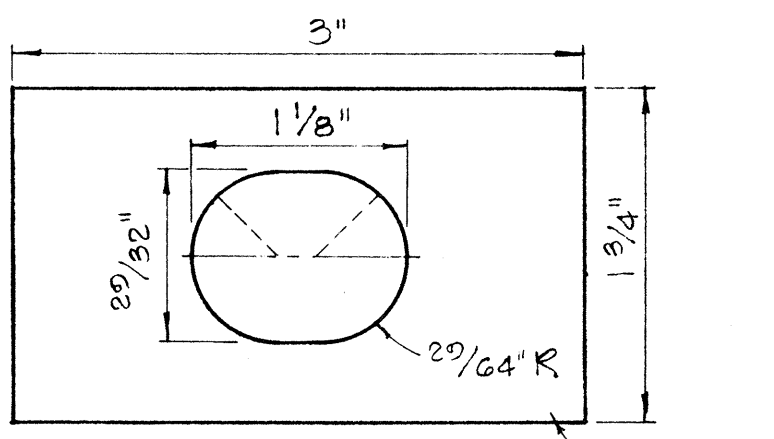
SPlice BOLT SLOT FOR ALL ENDS



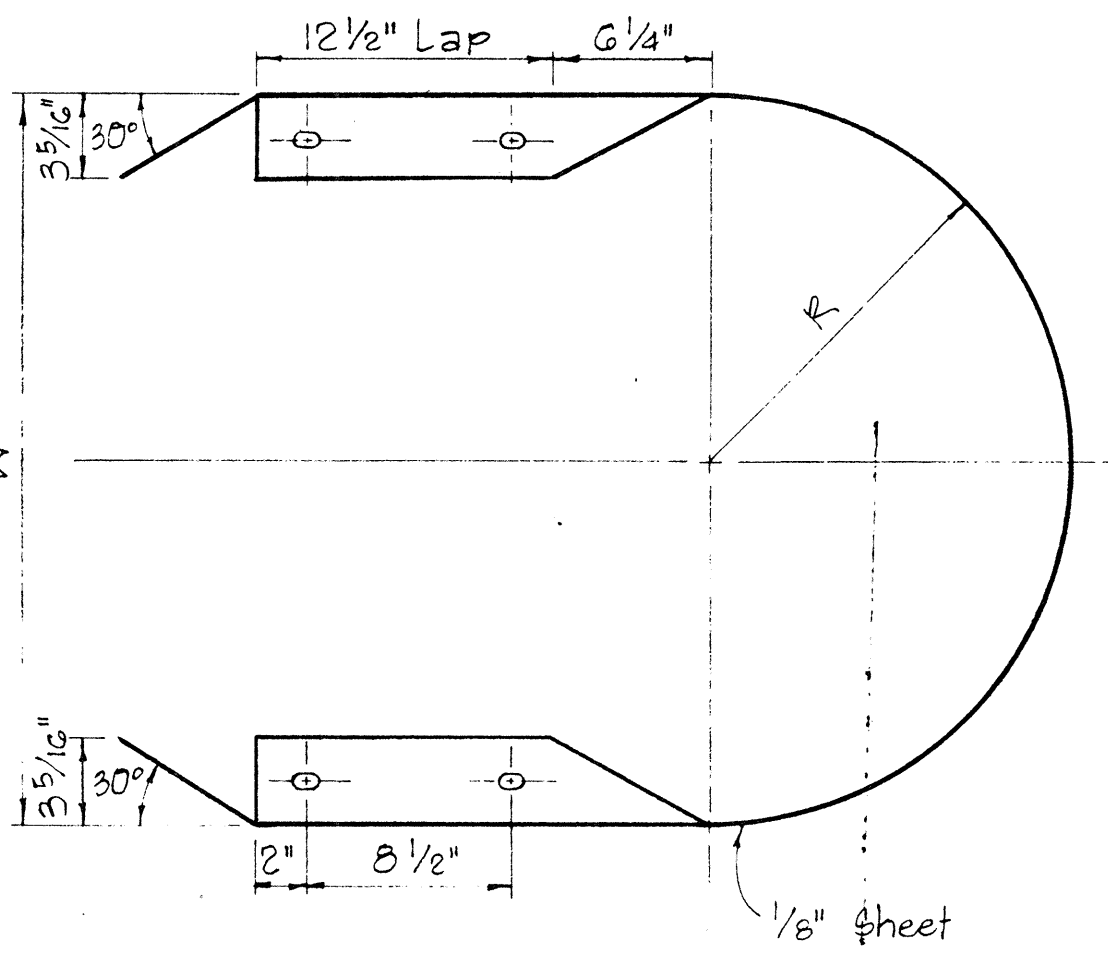
SPlice BOLT SLOT FOR SPECIAL END SHOE



POST BOLT SLOT



RAIL WASHER



MEDIAN END

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

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 3/8"  |
| 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 |
|----|----------|-------------|------|
|    |          |             |      |
|    |          |             |      |
|    |          |             |      |
|    |          |             |      |

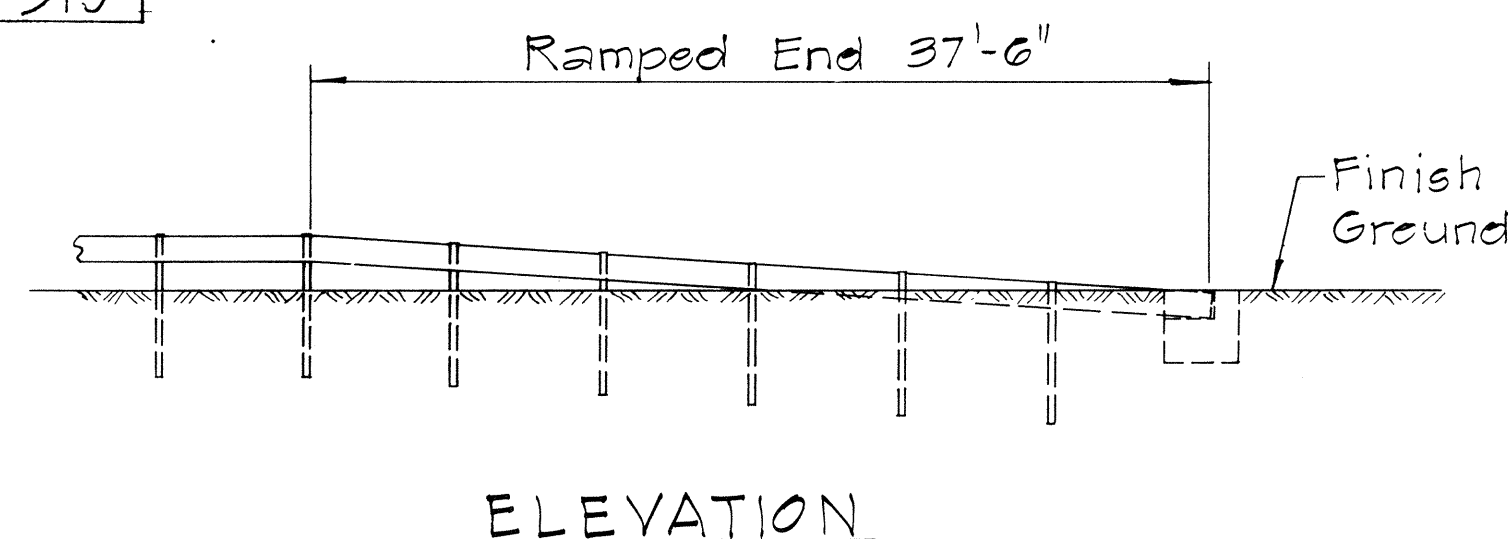
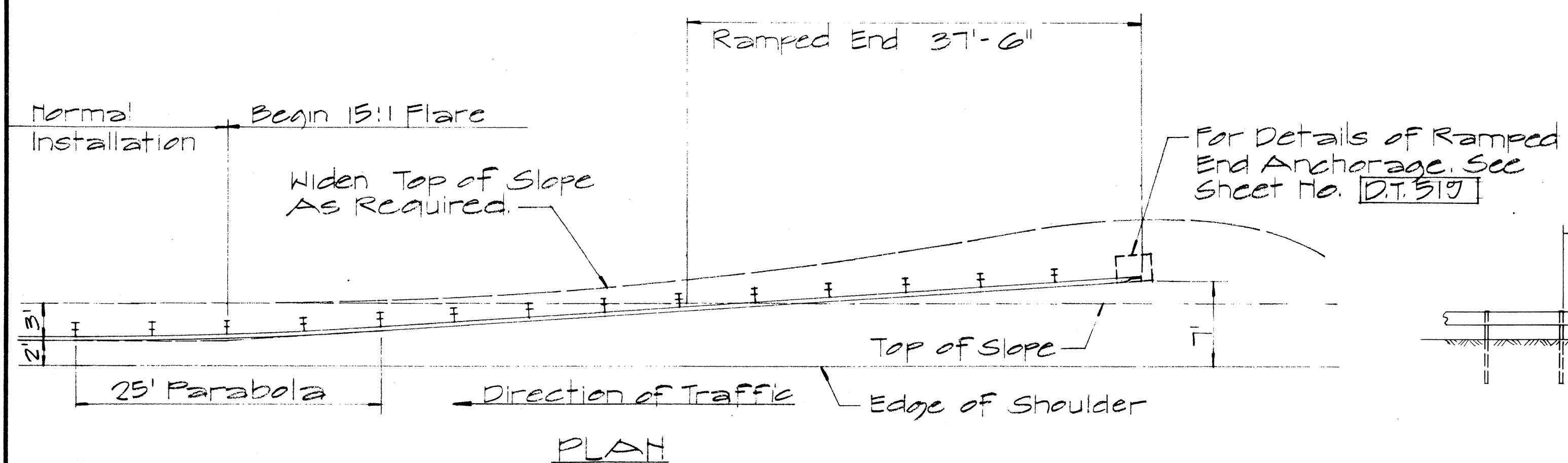
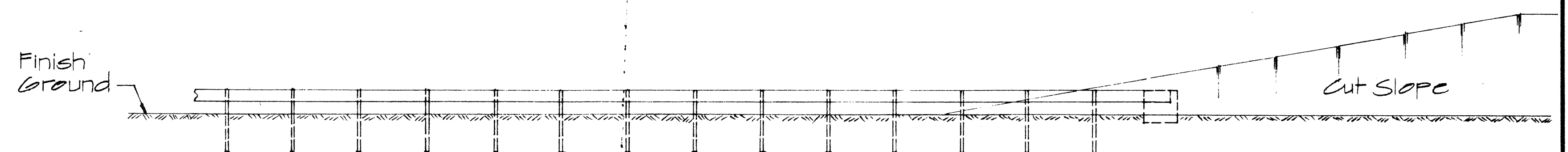
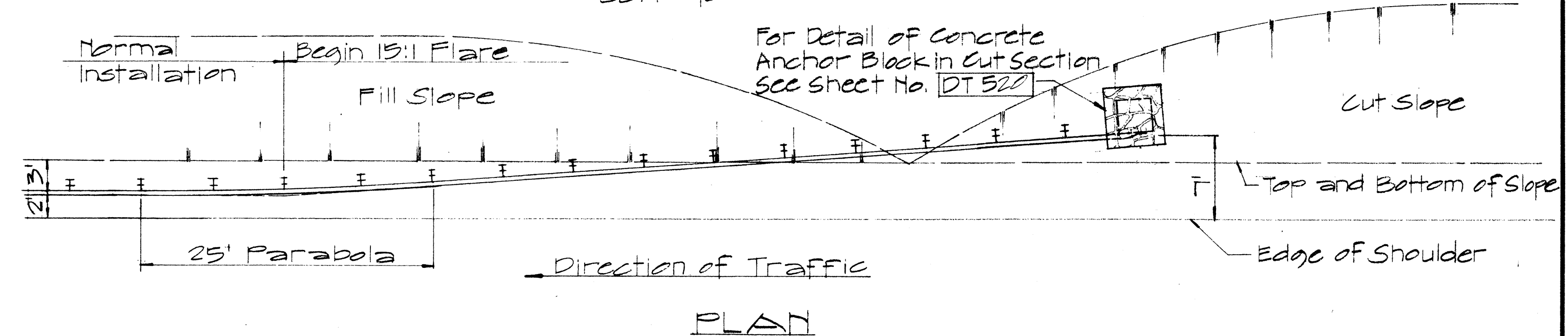
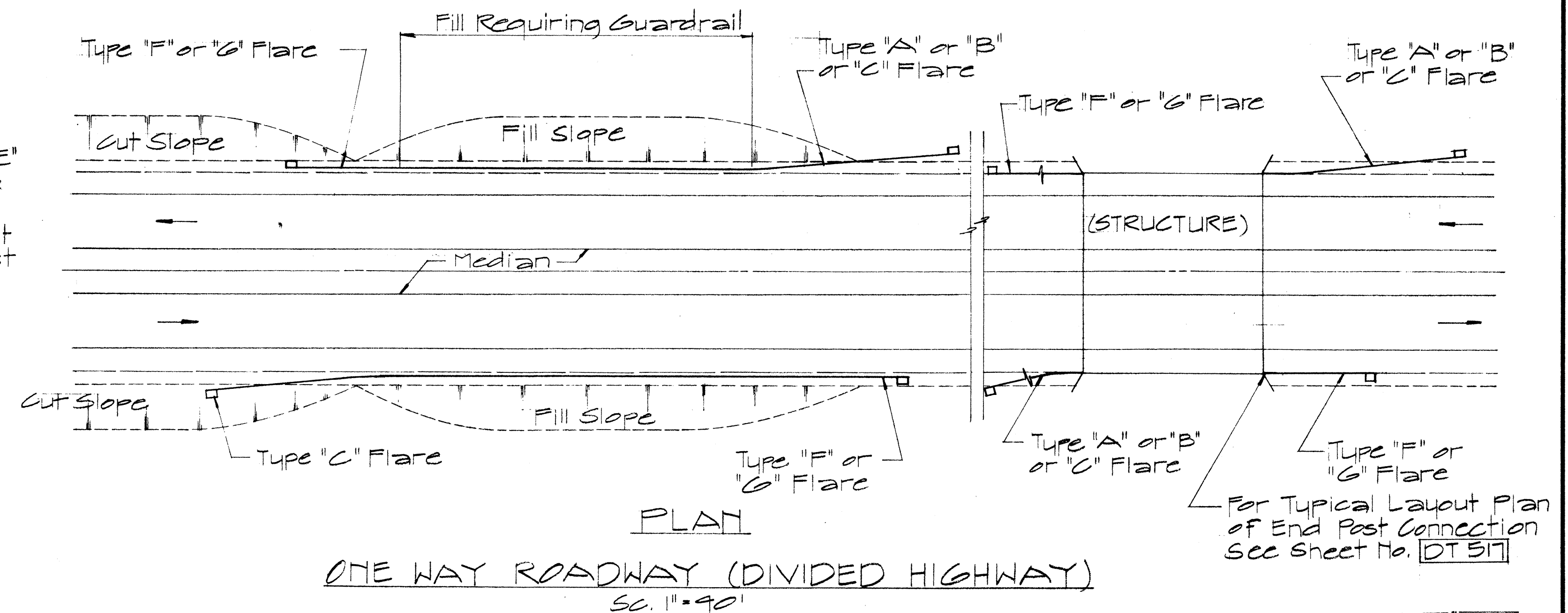
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
STANDARD DETAILS  
METAL GUARD RAIL

Scale: As Noted August, 1968

SHEET No. 6 OF 14 SHEETS DT 501

|             |  |
|-------------|--|
| DATE        |  |
| DESIGNED BY |  |
| CHECKED BY  |  |
| NOTED BY    |  |
| NO.         |  |

**NOTE:**  
Metal guard rail connection to structures requires End Post Connection. See structure plans.



ELEVATION  
TYPE "C" FLARE  
SC. 1/8" = 1'-0"

| NO. | REVISION | APPROVED<br>BY | DATE |
|-----|----------|----------------|------|
|     |          |                |      |

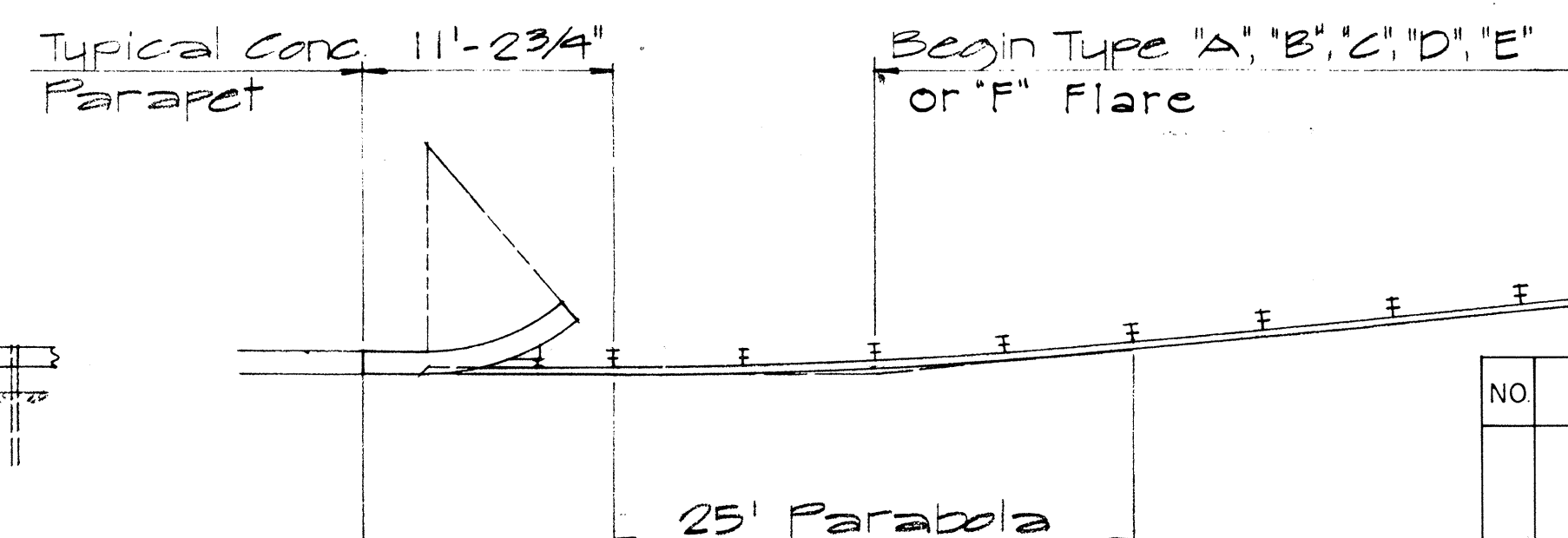
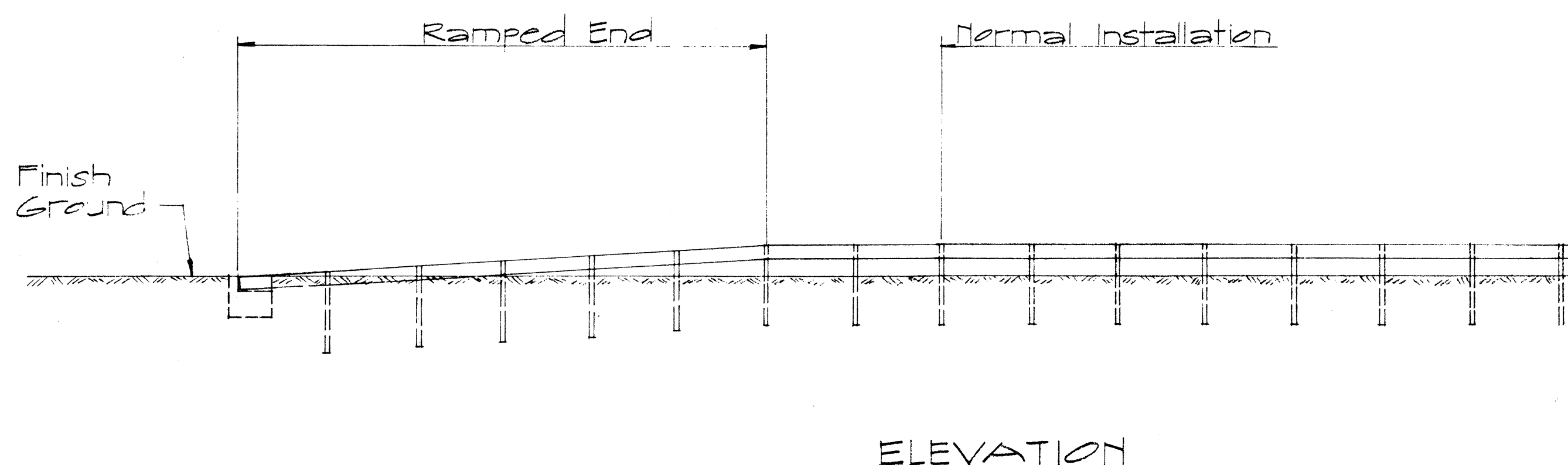
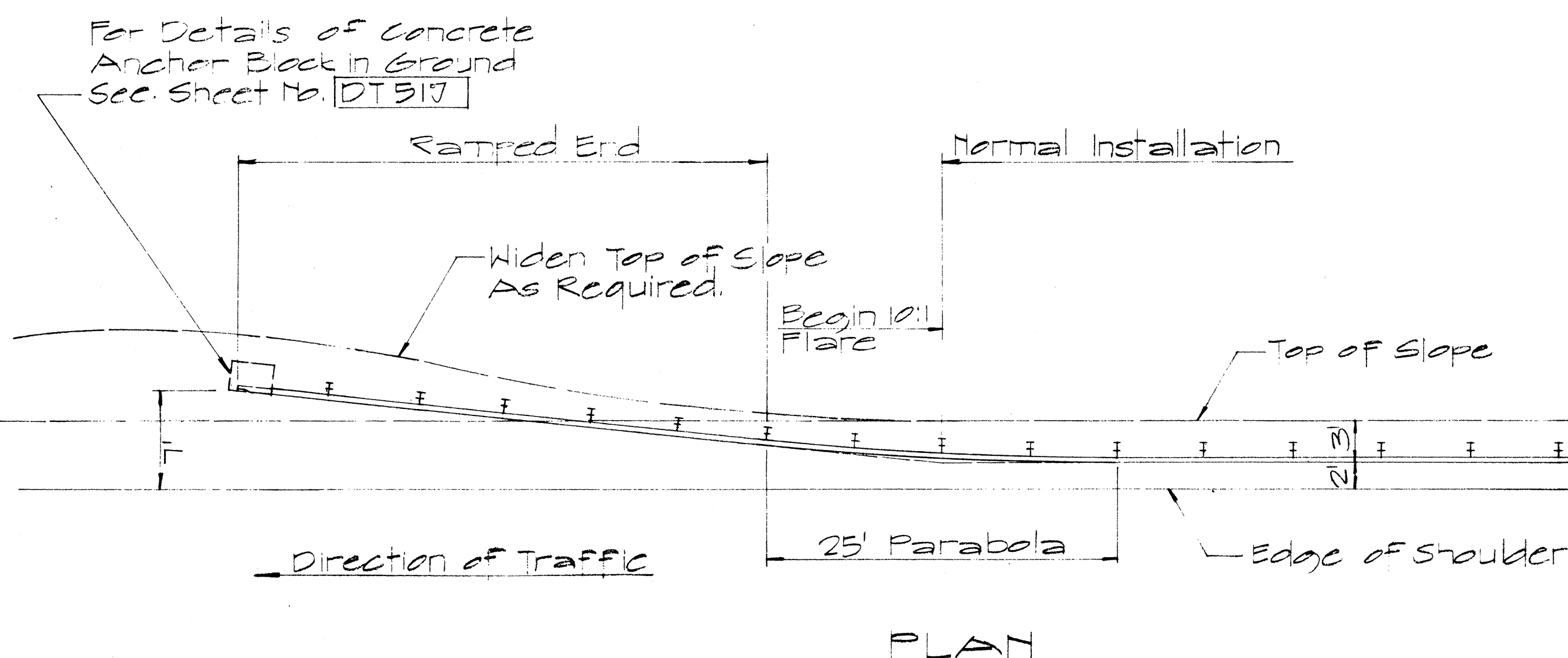
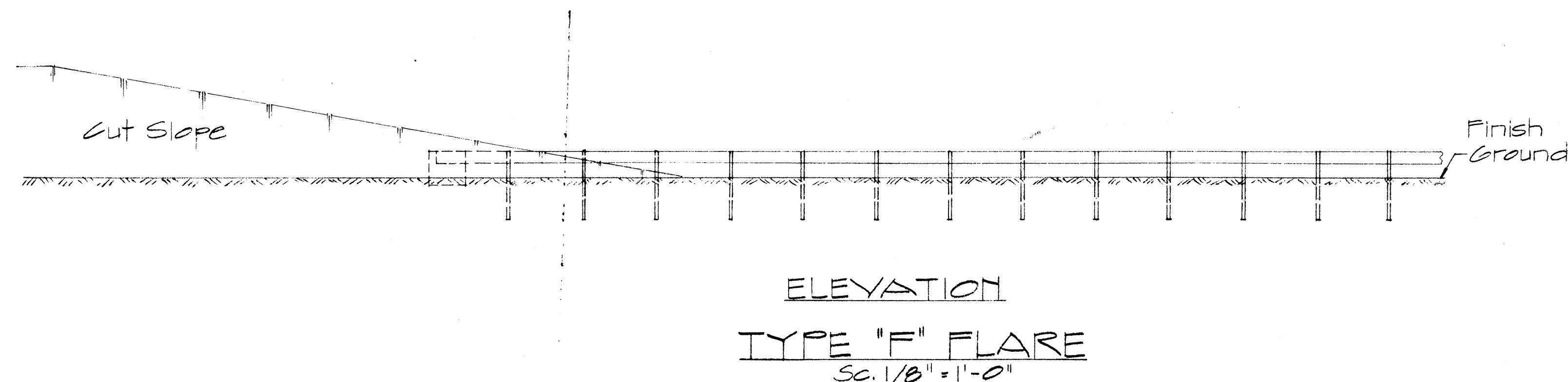
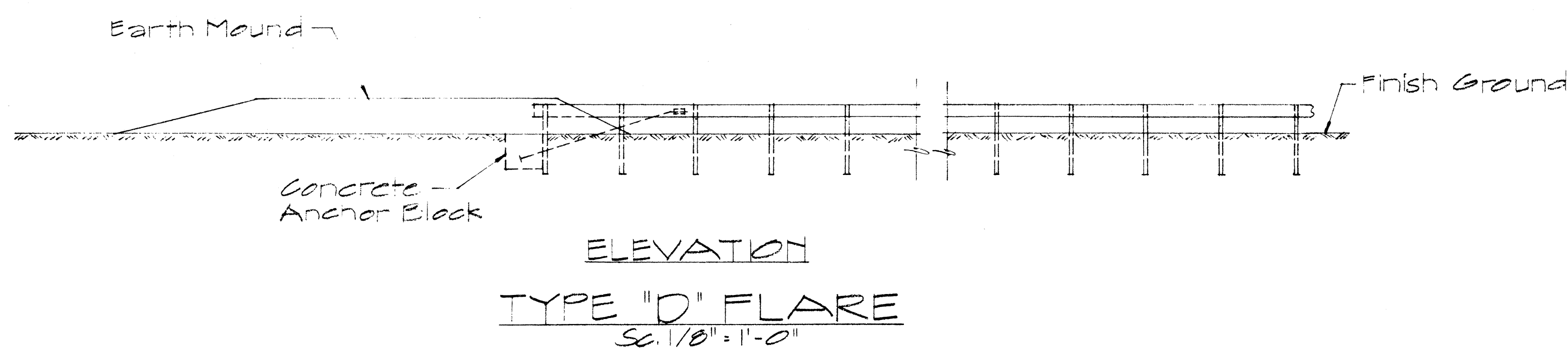
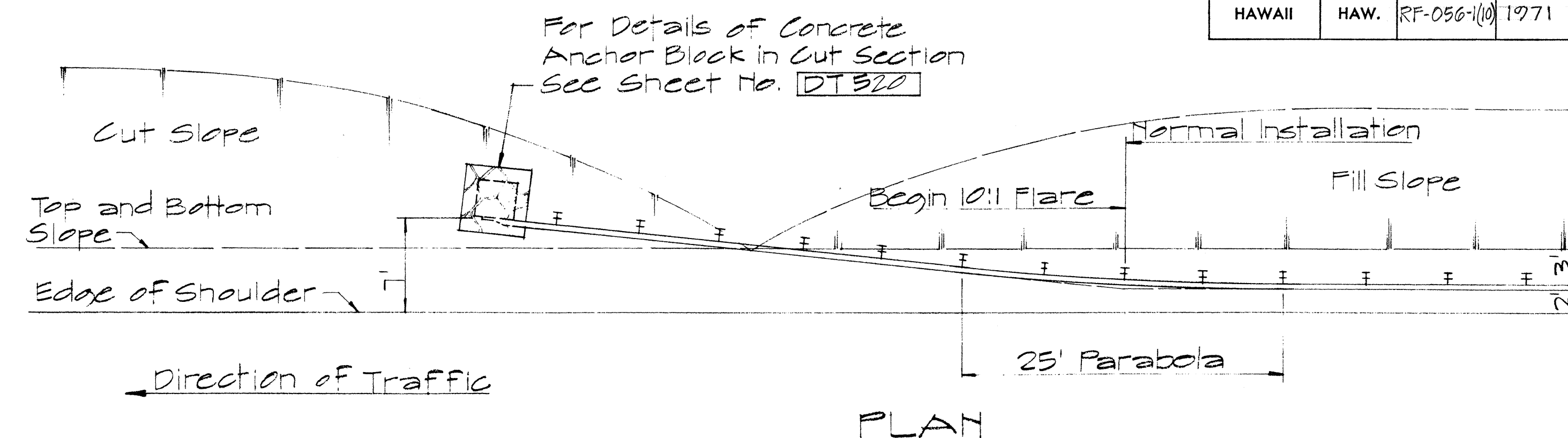
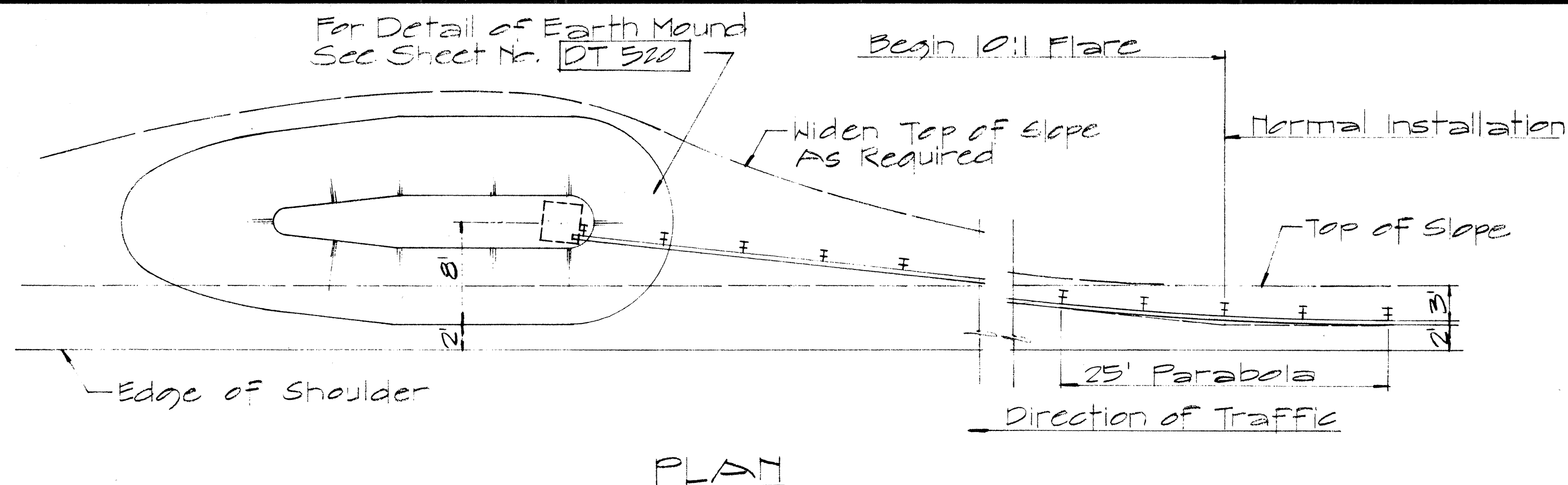
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

STANDARD DETAILS  
OF APPROACH END  
FLARE - ONE & TWO  
WAY ROADWAY

SC. AS NOTED April 1960

SHEET No. 7 OF 14 SHEETS DT 516

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | RF-056-1(10)       | 1971        | 25        | 74           |



TYPICAL LAYOUT PLAN OF END POST CONNECTION

Sc. 1/8" = 1'-0"

| NO | REVISION | APPROVED BY | DATE |
|----|----------|-------------|------|
|    |          |             |      |

APPROVAL RECOMMENDED:

*Eishi Tanaka* 12/29/69  
TRAFFIC ENGINEER DATE

APPROVED:

*Wm. S. Sal.* 12-29-69  
ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

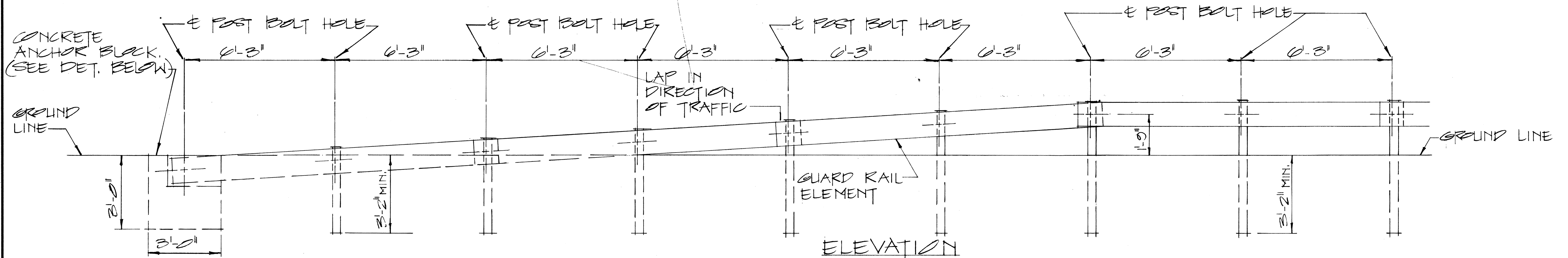
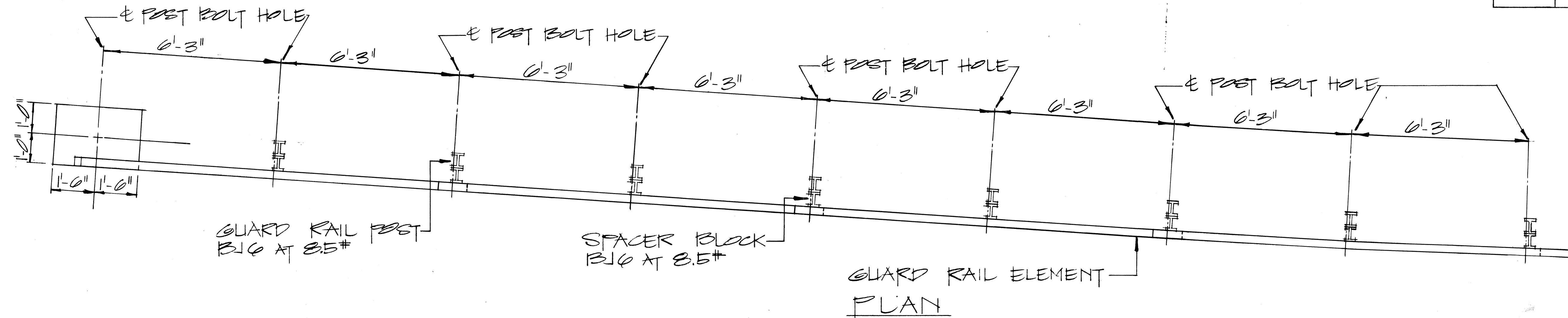
STANDARD DETAILS  
OF TRAILING END  
FLARE - ONE & TWO  
WAY ROADWAY

Sc. As Noted APRIL 1969

SHEET No. 8 OF 14 SHEETS DT 517

|                   |  |
|-------------------|--|
| DATE              |  |
| SURVEY PLOTTED BY |  |
| DESIGNED BY       |  |
| QUANTITIES BY     |  |
| CHECKED BY        |  |
| ORIGINAL PLAN     |  |
| NOTE BOOK         |  |
| NO.               |  |

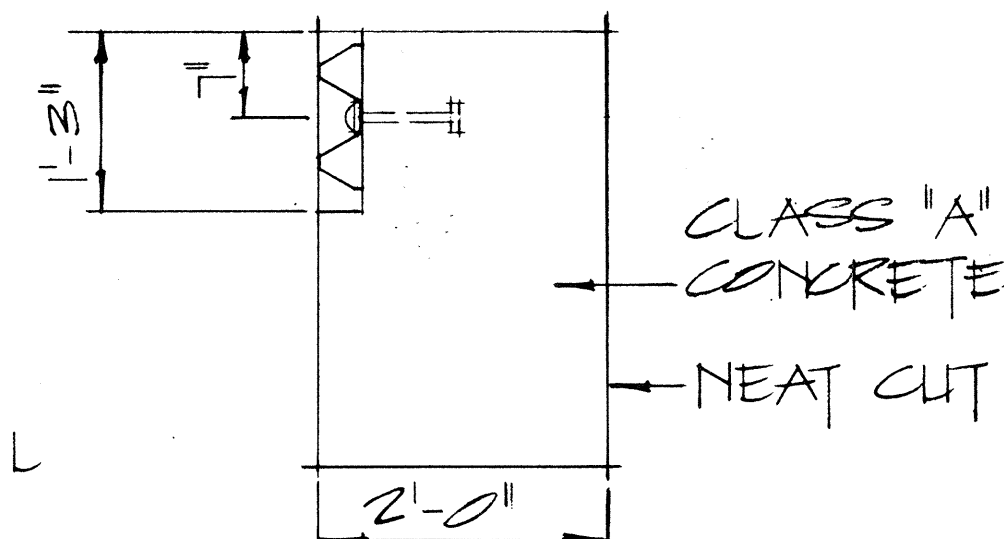
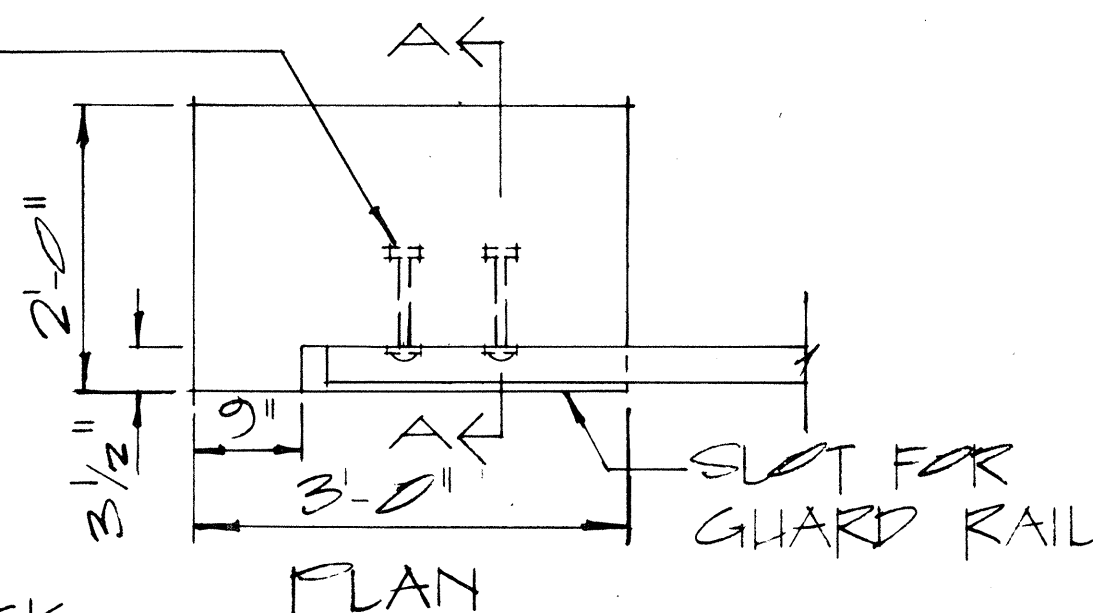
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | RF-056-1(0)        | 1971        | 26        | 74           |



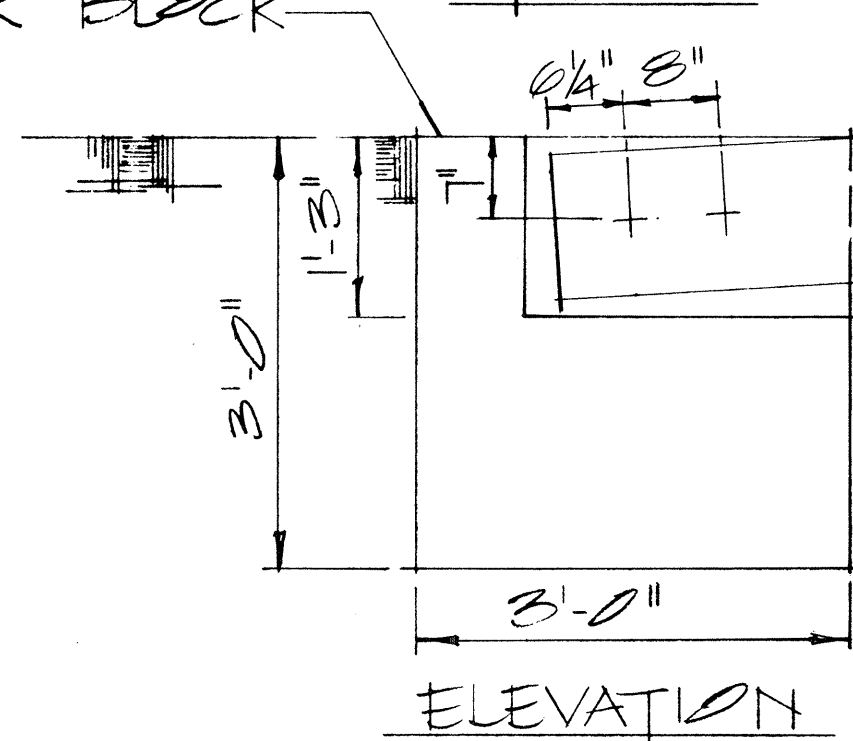
## RAMP END ANCHORAGE

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

2-5/8" x 7/4" LONG BOLTS, W/ NUTS & WASHERS INCIDENTAL TO METAL GUARD RAIL. ALL METAL PIECES SHALL BE GALVANIZED.



TOP OF ANCHOR BLOCK TO BE FLUSH 1/4" GROUND.



NOTE: CONCRETE, EXCAVATION AND MISCELLANEOUS APPURTENANCES NECESSARY TO ANCHOR THE GUARD RAIL ENDS, SHALL BE INCIDENTAL TO THE METAL GUARD RAIL.

## CONCRETE ANCHOR BLOCK

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

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

APPROVED:  
Assistant Chief, Engineering  
12-30-69  
DATE

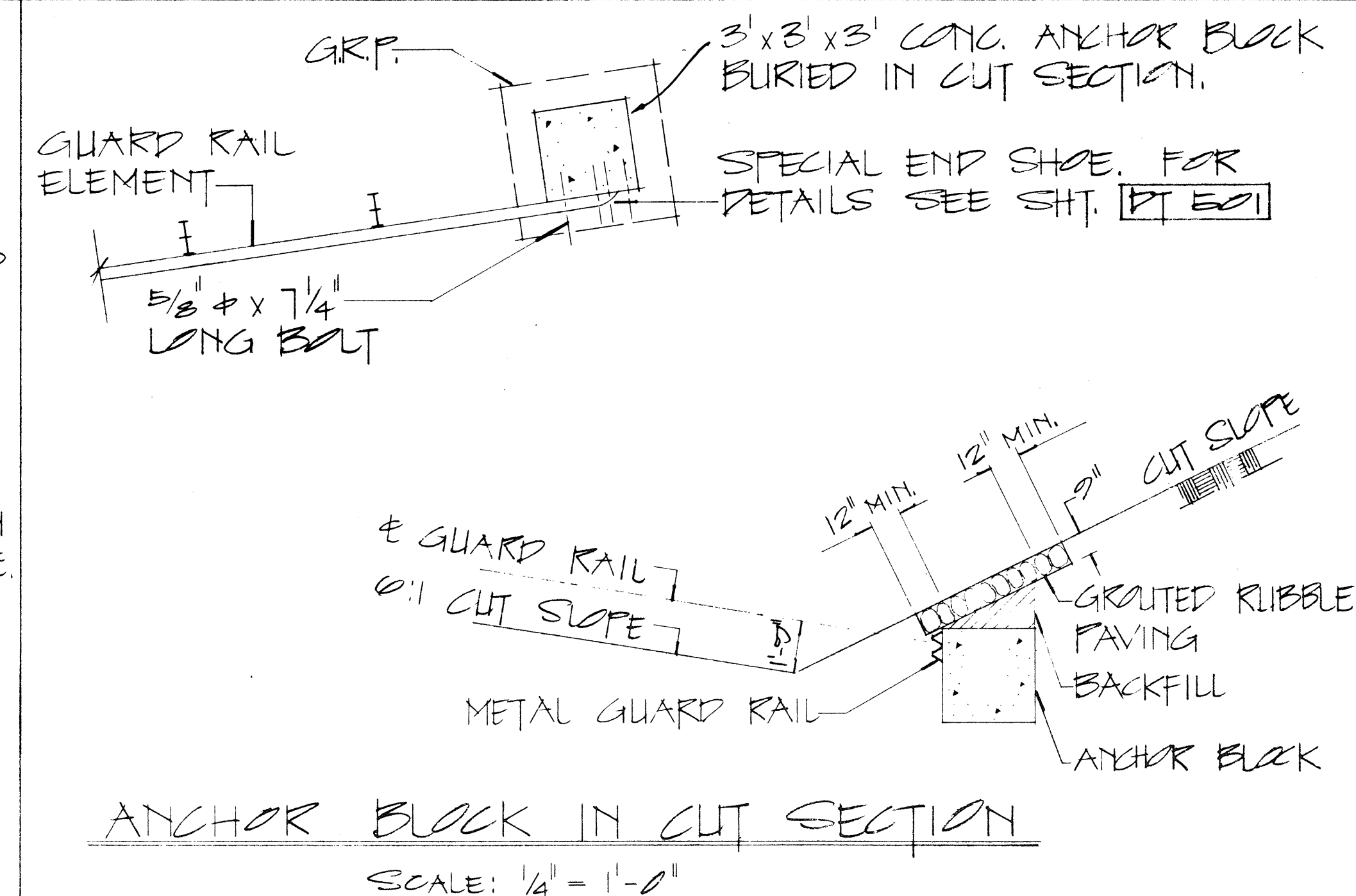
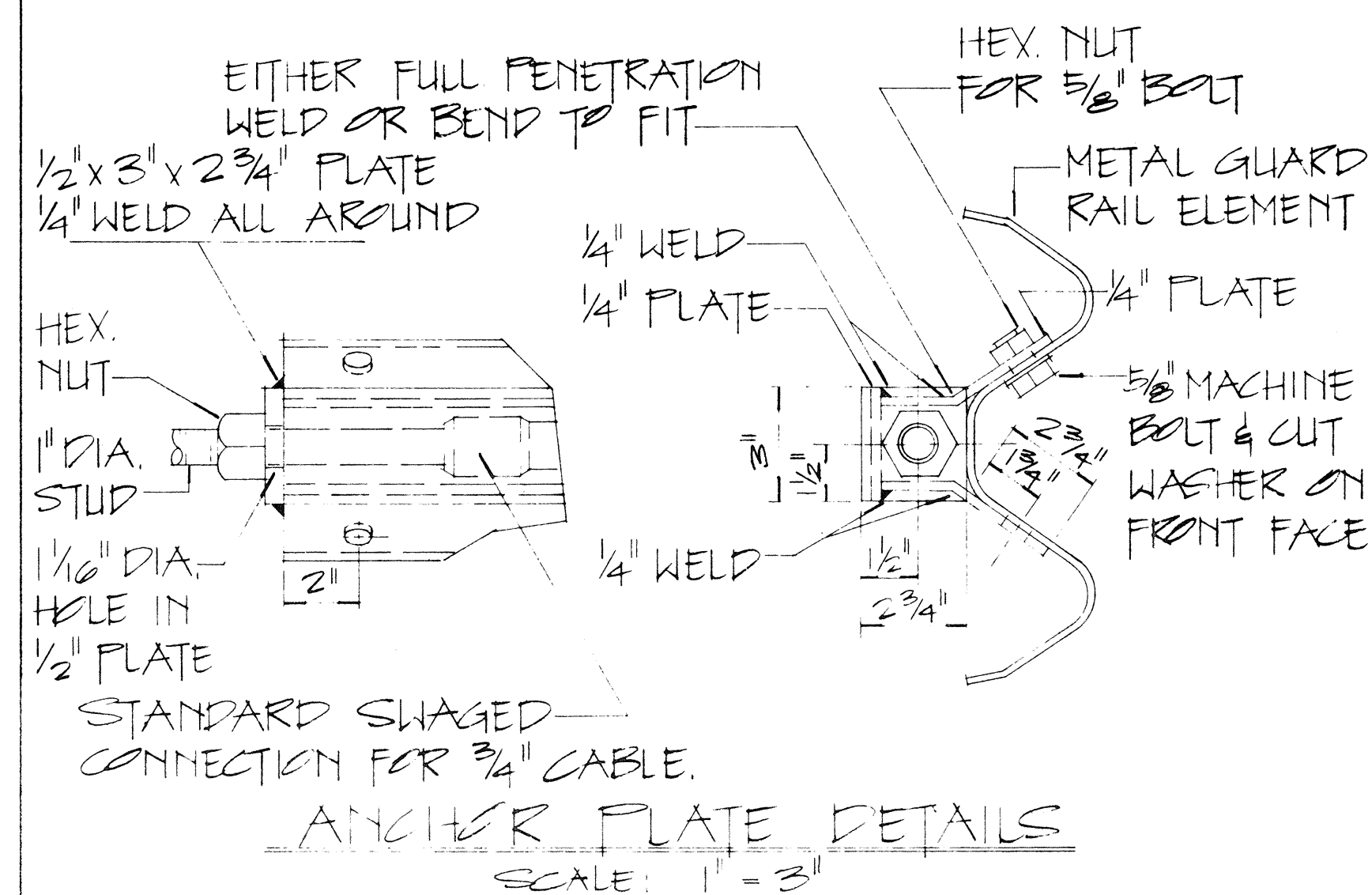
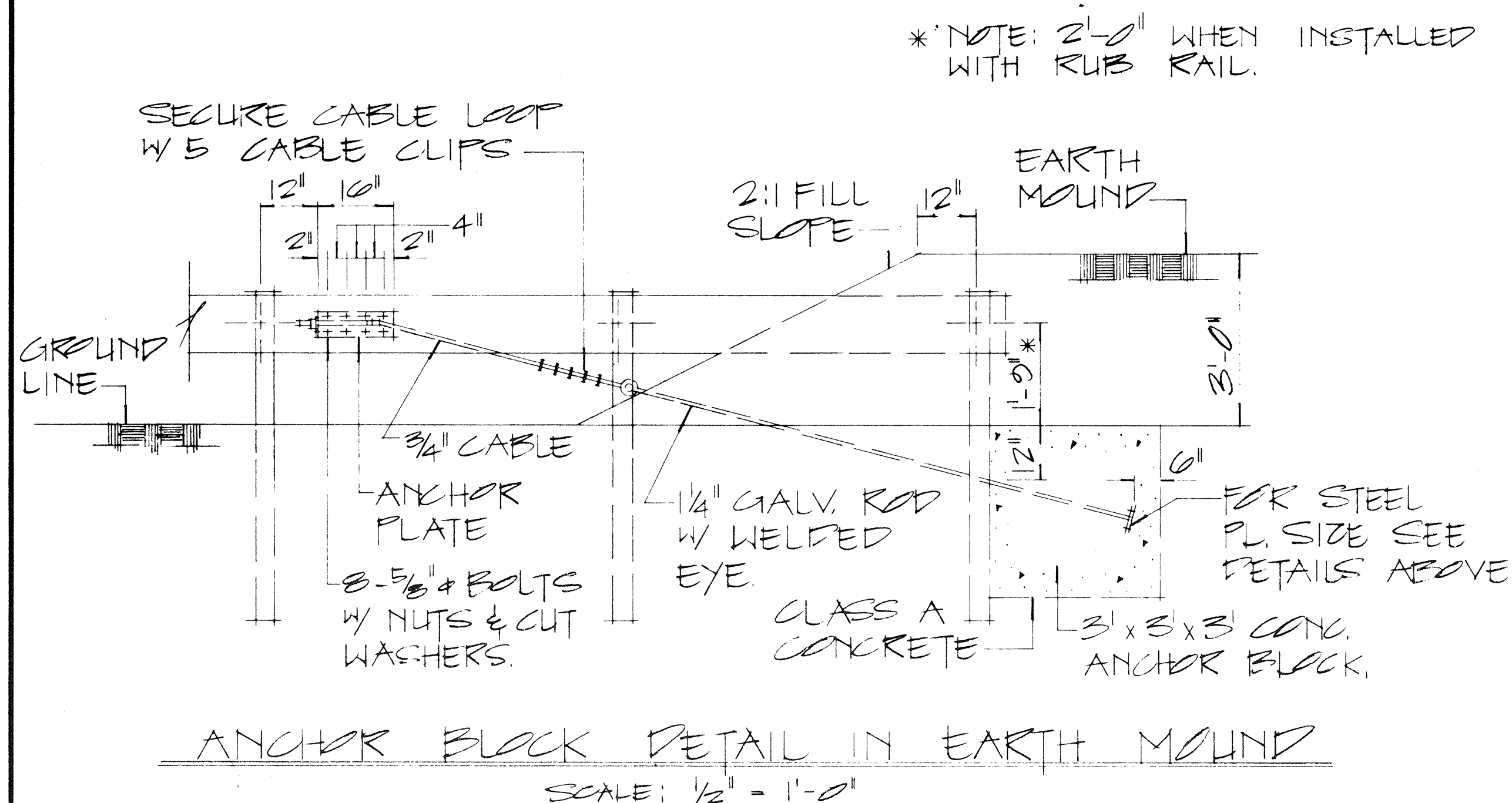
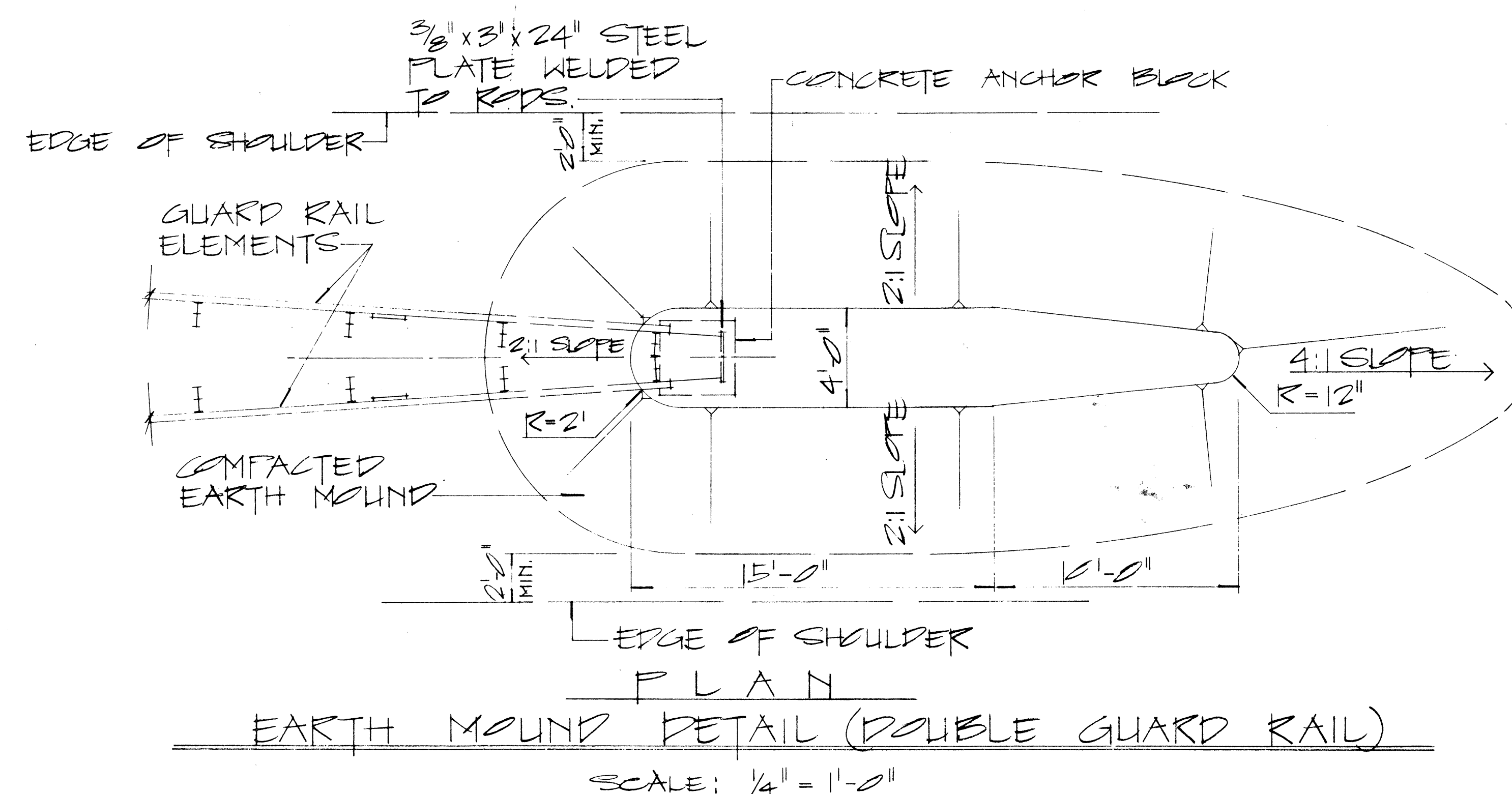
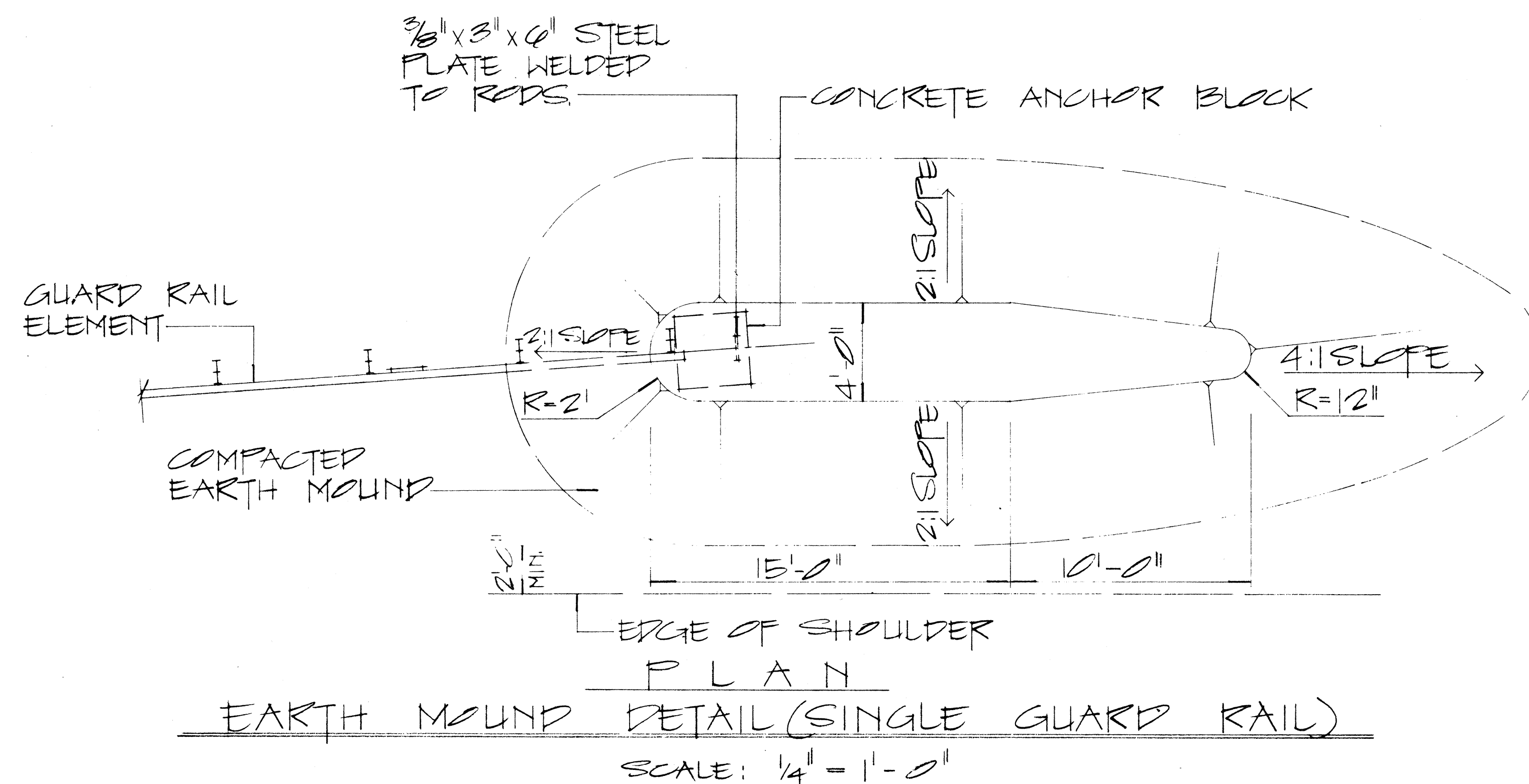
| NO. | REVISION | APPROVED BY | DATE |
|-----|----------|-------------|------|
|     |          |             |      |

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

STANDARD DETAILS  
GUARD RAIL, TYPE 3  
RAMP END ANCHORAGE

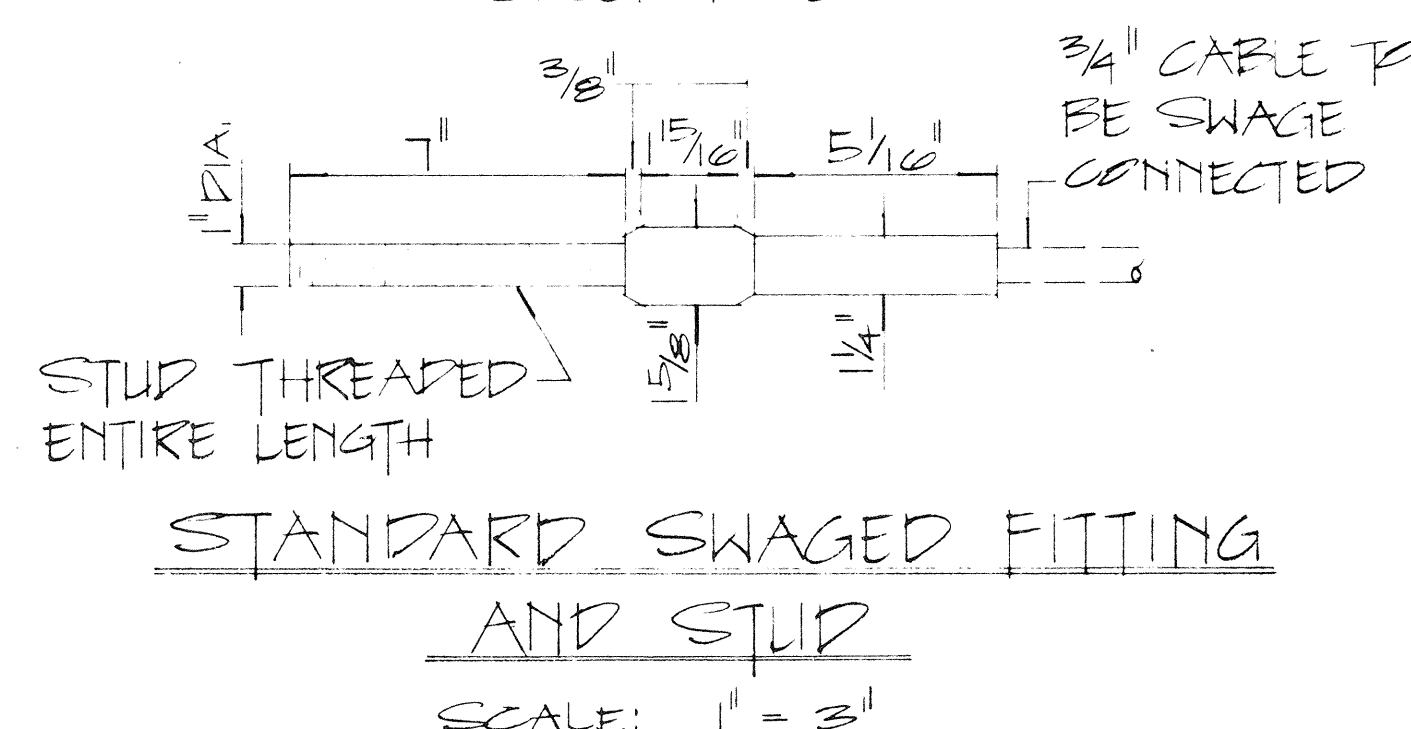
SCALE: AS SHOWN  
SHEET No. 9 OF 14 SHEETS DT512

| FED. ROAD<br>DIST. NO. | STATE | FED. AID<br>PROJ. NO. | FISCAL<br>YEAR | SHEET<br>NO. | TOTAL<br>SHEETS |
|------------------------|-------|-----------------------|----------------|--------------|-----------------|
| HAWAII                 | HAW.  | RF-056-1(10)          | 1971           | 27           | 74              |



NOTE:

1. GALVANIZED ANCHOR ROD, METAL GUARD RAIL AND POST BURIED IN GROUND SHALL BE COVERED WITH A Min. 20-Mil Thickness of Coal TAR ENAMEL, Conforming to AWWA Standard: C 203
2. CONCRETE, GRP, EXCAVATION, EARTH MOUND, ANCHOR RODS AND MISCELLANEOUS APPURTENANCES NECESSARY TO ANCHOR THE GUARD RAIL ENDS SHALL BE INCIDENTAL TO THE METAL GUARD RAIL.



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

APPROVED:  
Wm. J. O'Neil 12-30-69  
ASSISTANT CHIEF, ENGINEERING DATE

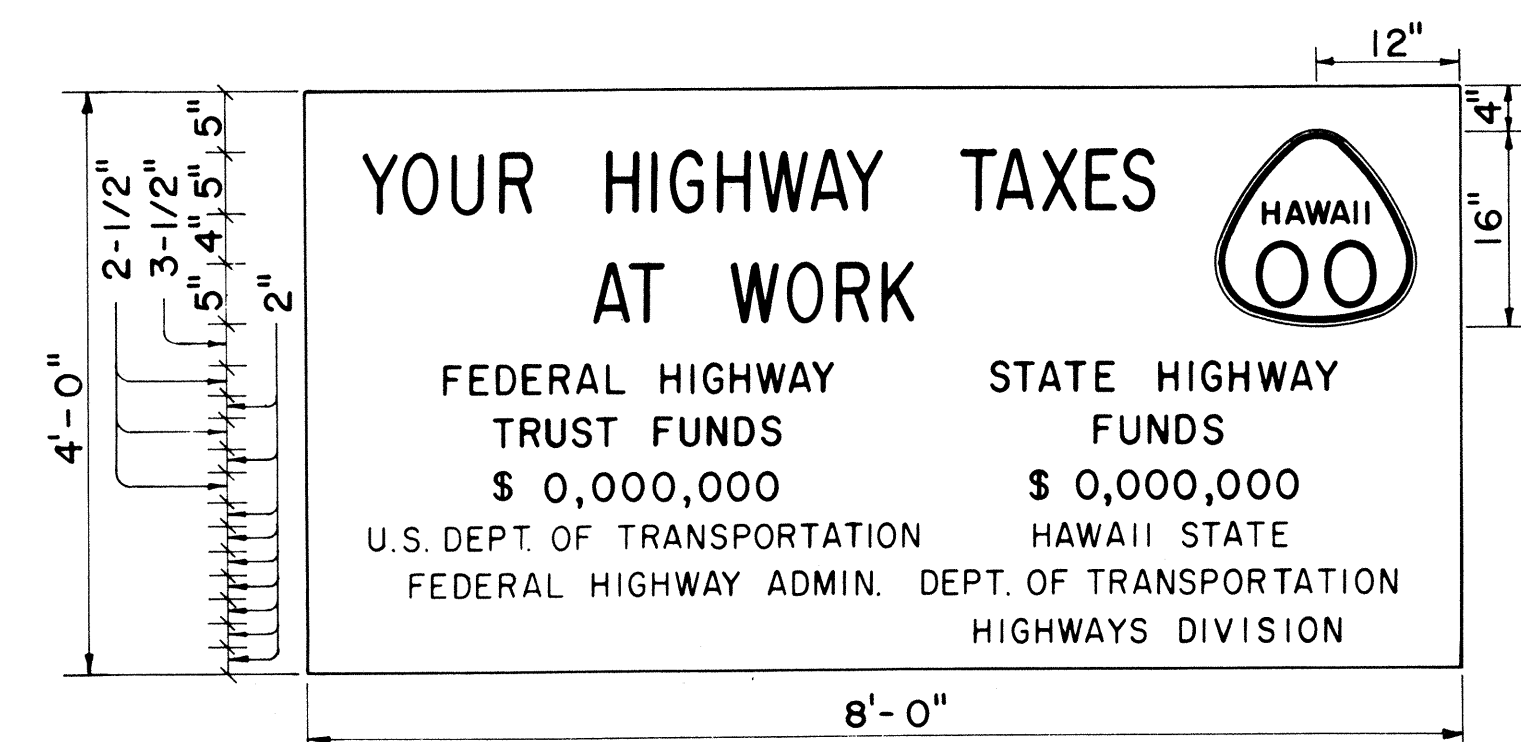
| NO. | REVISION | APPROVED<br>By | DATE |
|-----|----------|----------------|------|
|     |          |                |      |

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

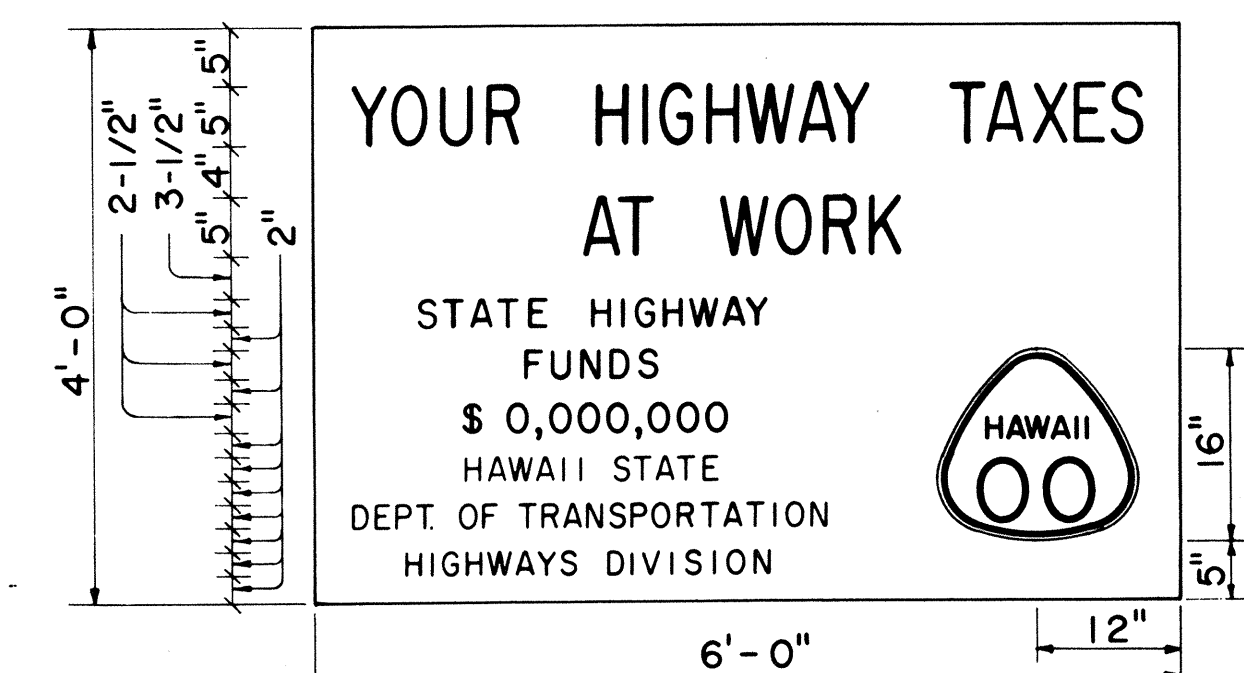
STANDARD DETAILS  
EARTH MOUND AND  
ANCHOR BLOCK DETAILS

SCALE! AS SHOWN AT 1967  
SHEET No. 10 OF 14 SHEETS DT 520

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | RF-056-1(10)       | 1971        | 28        | 74           |



**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 with the "Standard Alphabet for Highway Signs", Bureau of Public Roads, 1966
- The Contractor shall fill in the proper numerals in place of ciphers as ordered by the Engineer.

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

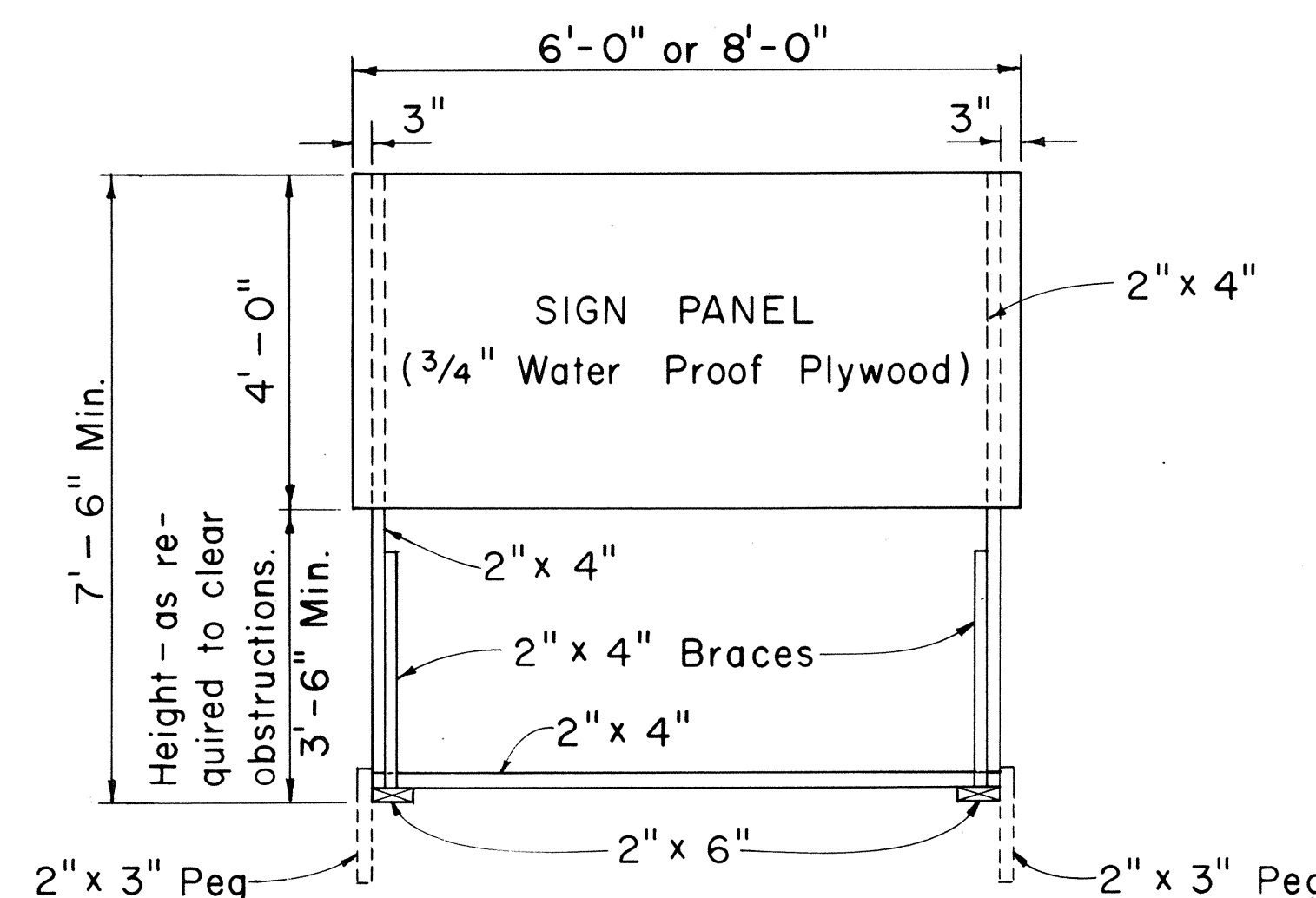
APPROVED:  
*John J. S. S.* 12/30/69  
ASSISTANT CHIEF, ENGINEERING DATE

| 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  |

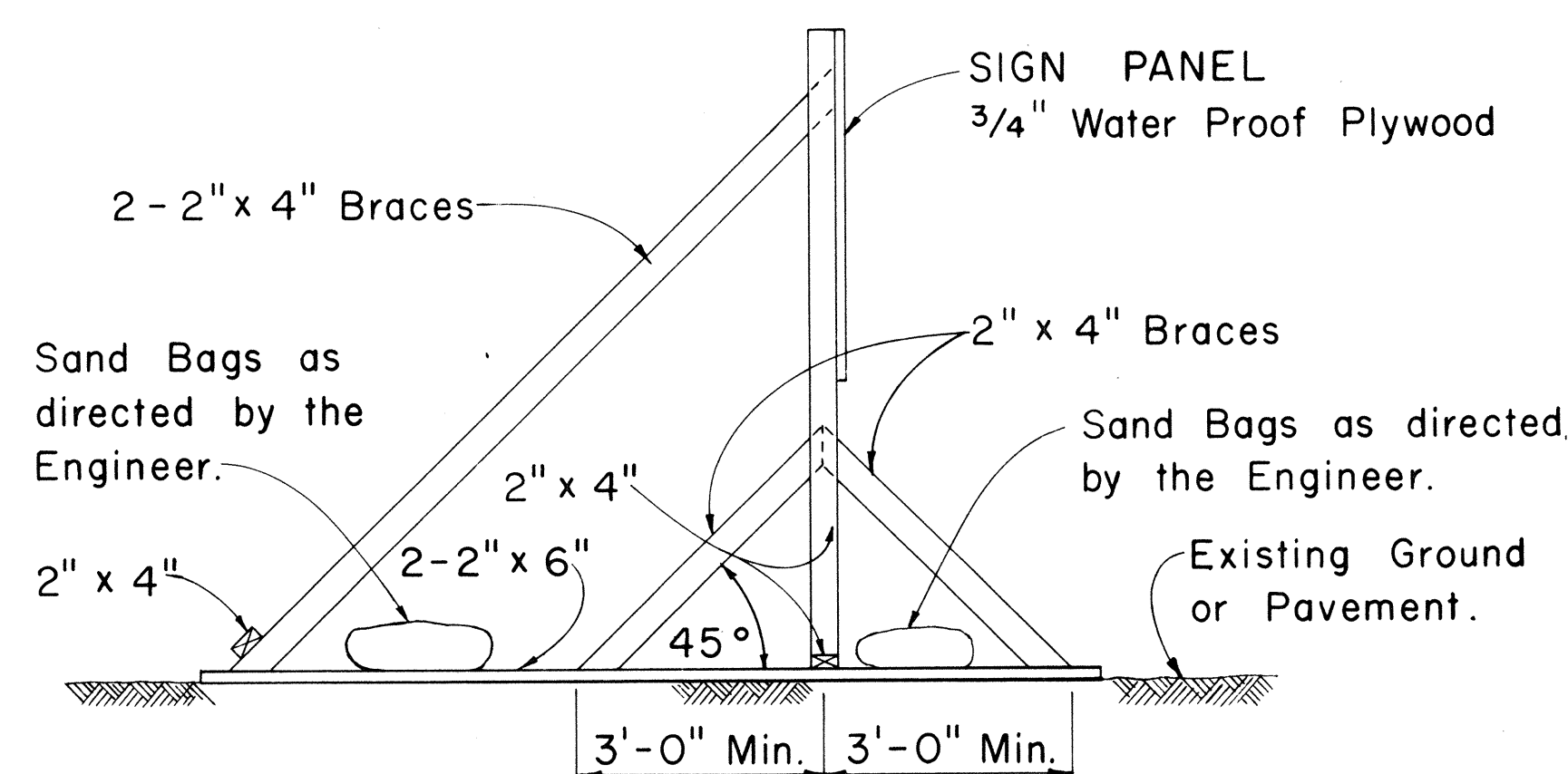
|                                                                      |       |
|----------------------------------------------------------------------|-------|
| STATE OF HAWAII<br>DEPARTMENT OF TRANSPORTATION<br>HIGHWAYS DIVISION |       |
| <b>TYPICAL DETAILS</b>                                               |       |
| CONSTRUCTION IDENTIFICATION SIGN<br>AND<br>WOOD BARRICADES           |       |
| Scale: As Shown                                                      | Date: |
| SHEET No. 11 OF 14 SHEETS DT 801                                     |       |

### GENERAL NOTES

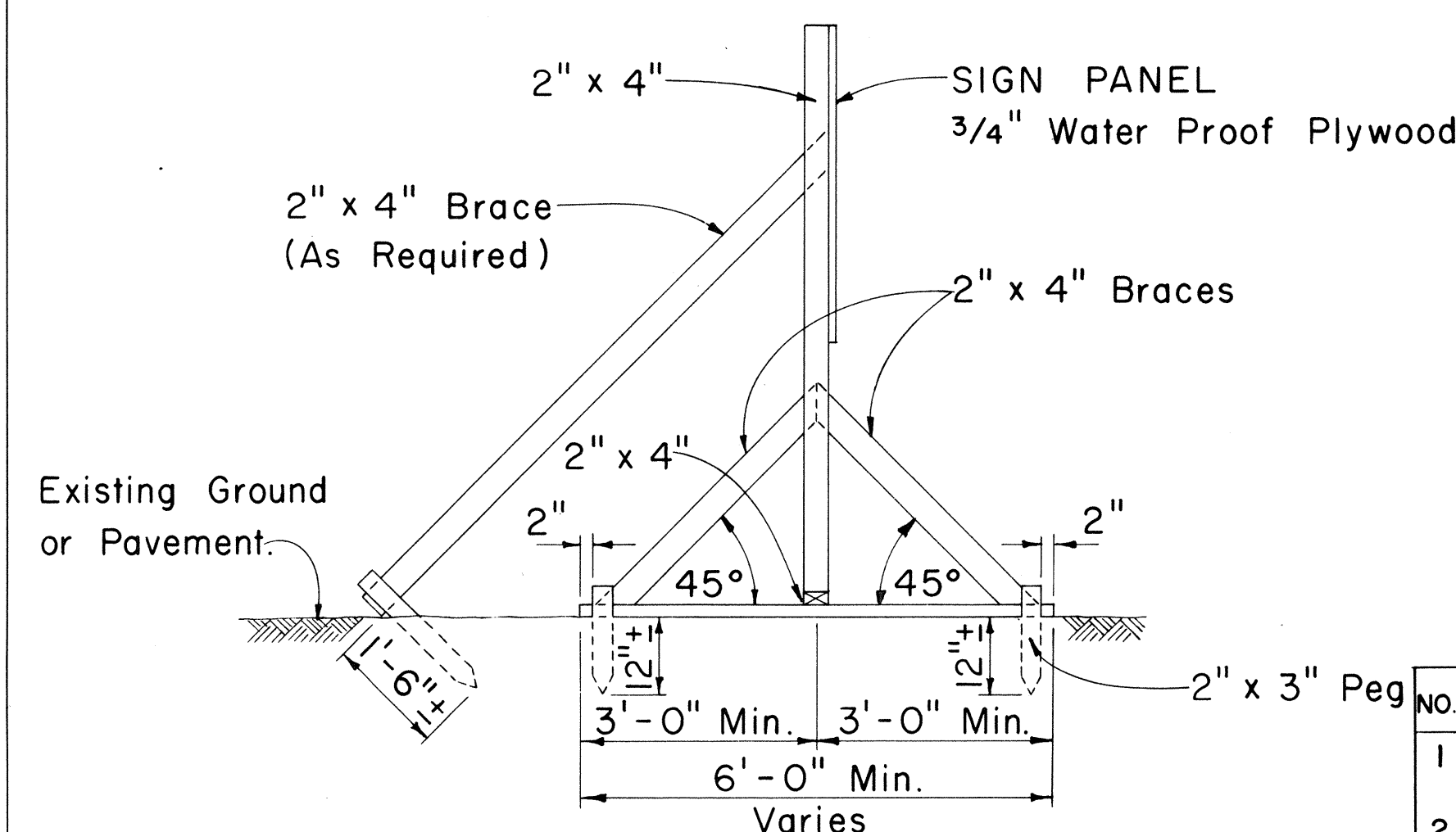
- The Contractor shall construct, install and maintain the wood barricades at the locations shown on the Plans.
- The permanent wood barricades shall be left in place or relocated upon completion of the project as ordered by the Engineer and are to become State property.
- The black and white stripes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



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

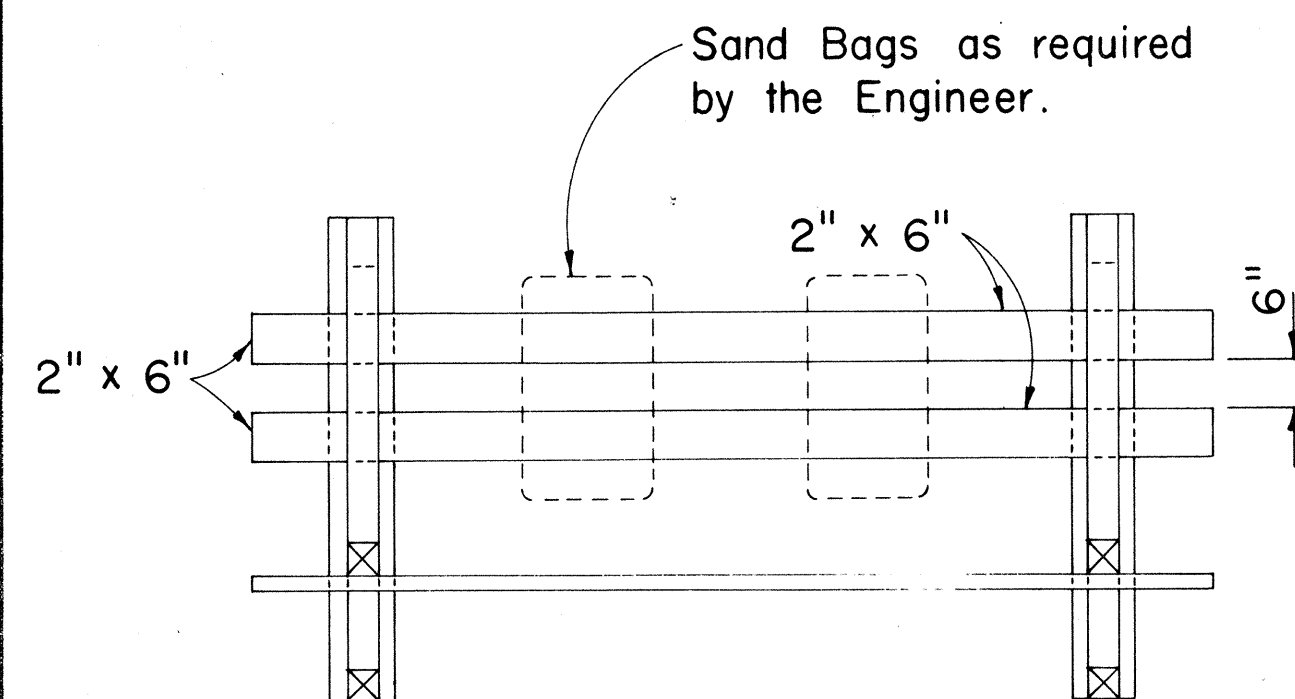


**SIDE VIEW**  
(SIGN FRAME WEIGHTED DOWN)  
Scale: 1/2" = 1'-0"

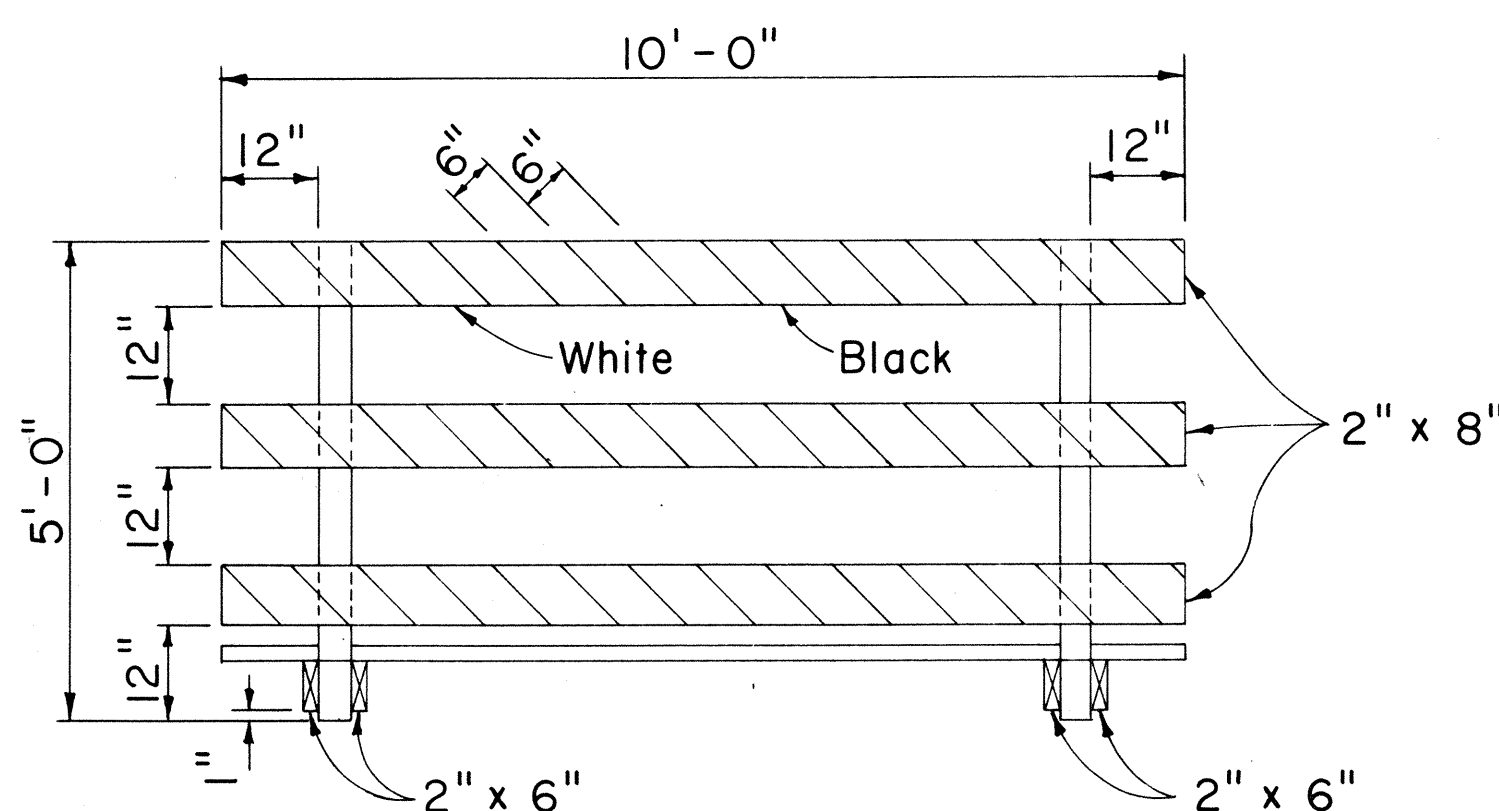


**SIDE VIEW**  
(SIGN FRAME ANCHORED IN GROUND)  
Scale: 1/2" = 1'-0"

**CONSTRUCTION IDENTIFICATION SIGN**  
Scale: As Shown

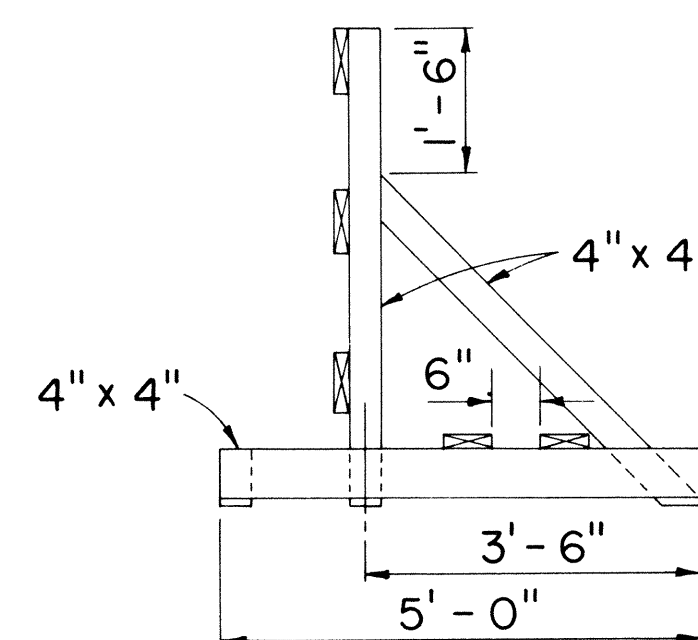


**PLAN VIEW**

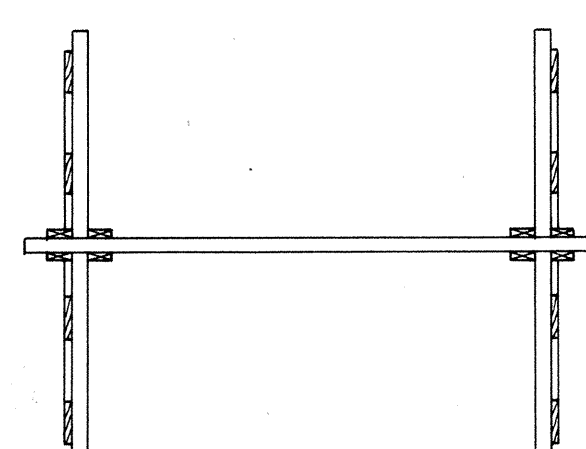


**FRONT VIEW**

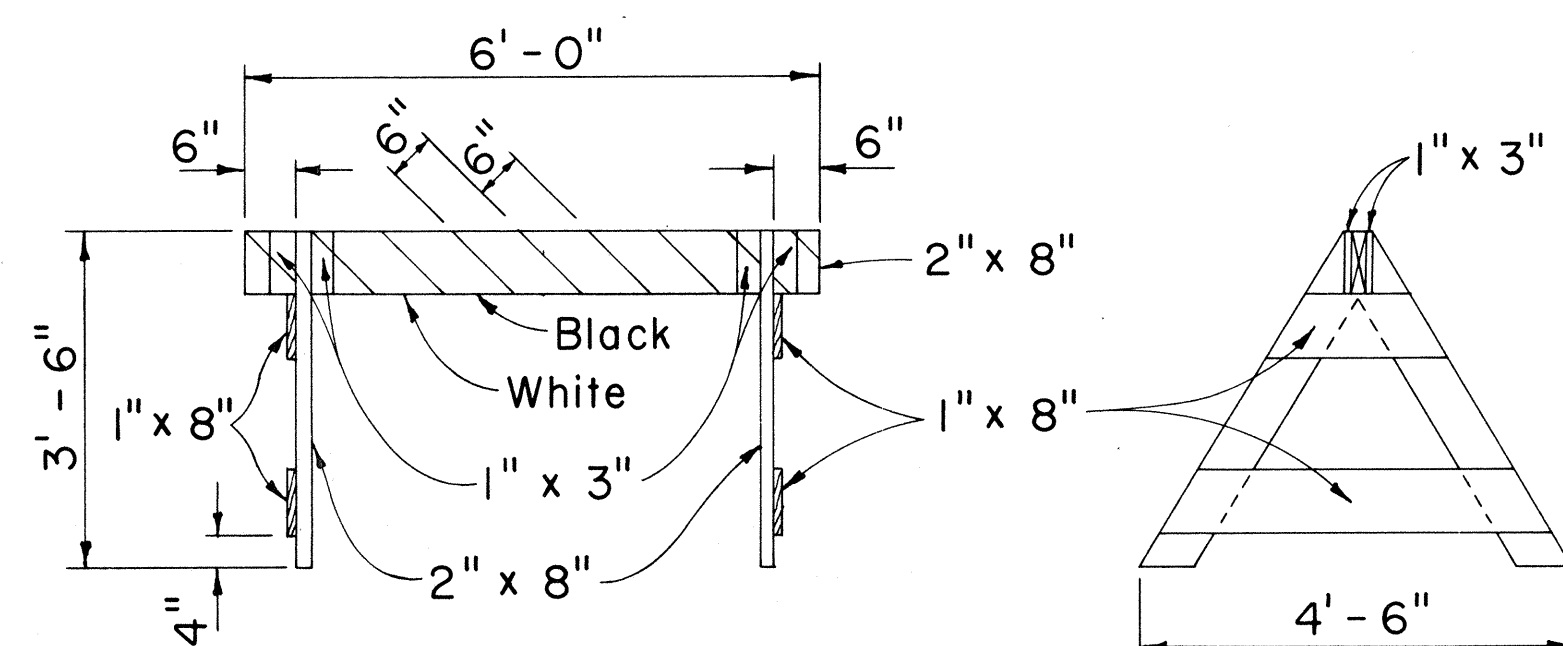
**CLASS I BARRICADE**  
Scale: 1/2" = 1'-0"



**END VIEW**

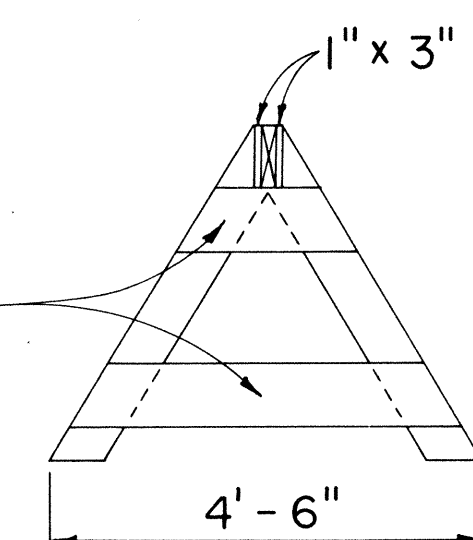


**PLAN VIEW**



**FRONT VIEW**

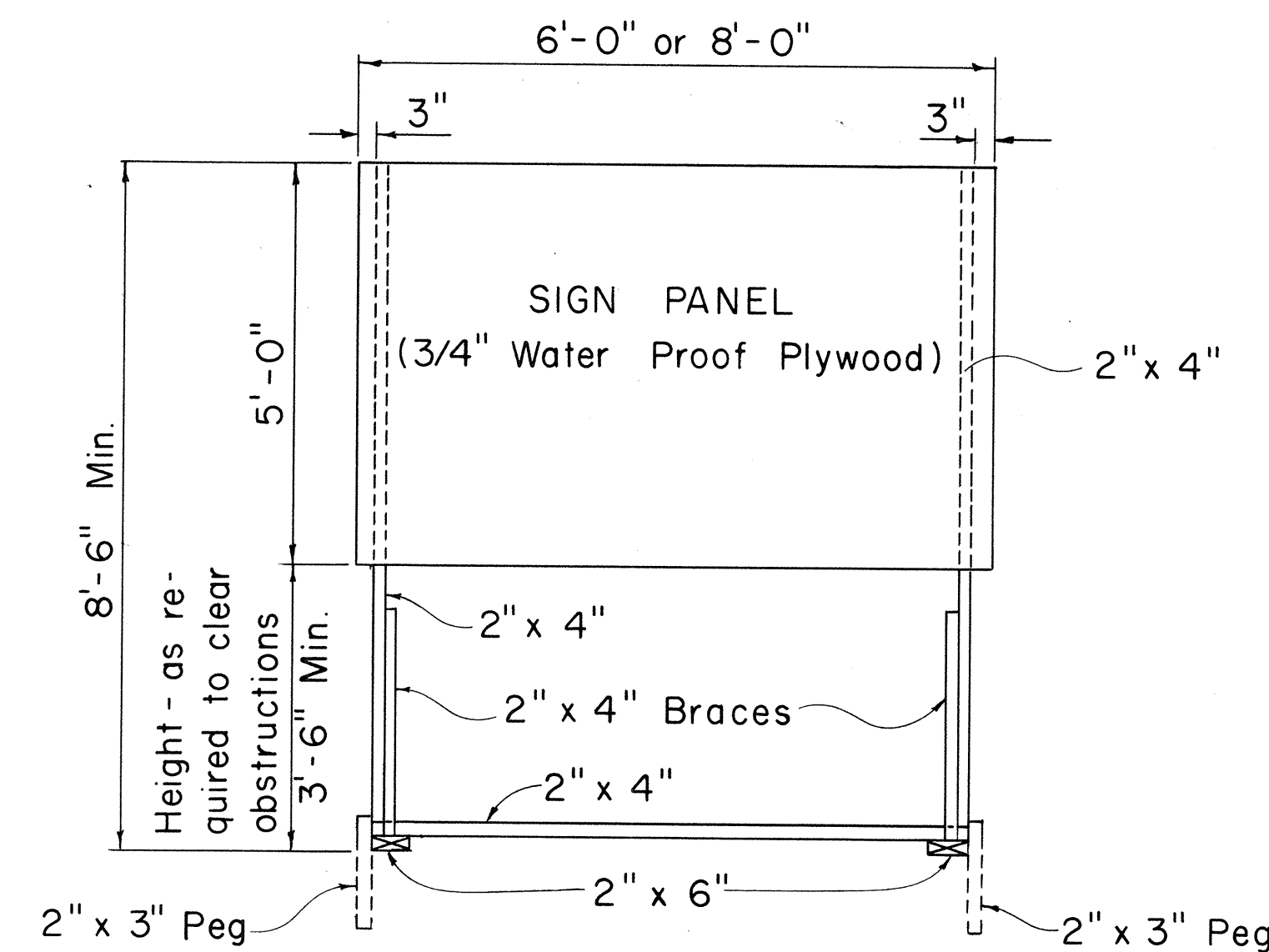
**CLASS II BARRICADE**  
Scale: 1/2" = 1'-0"



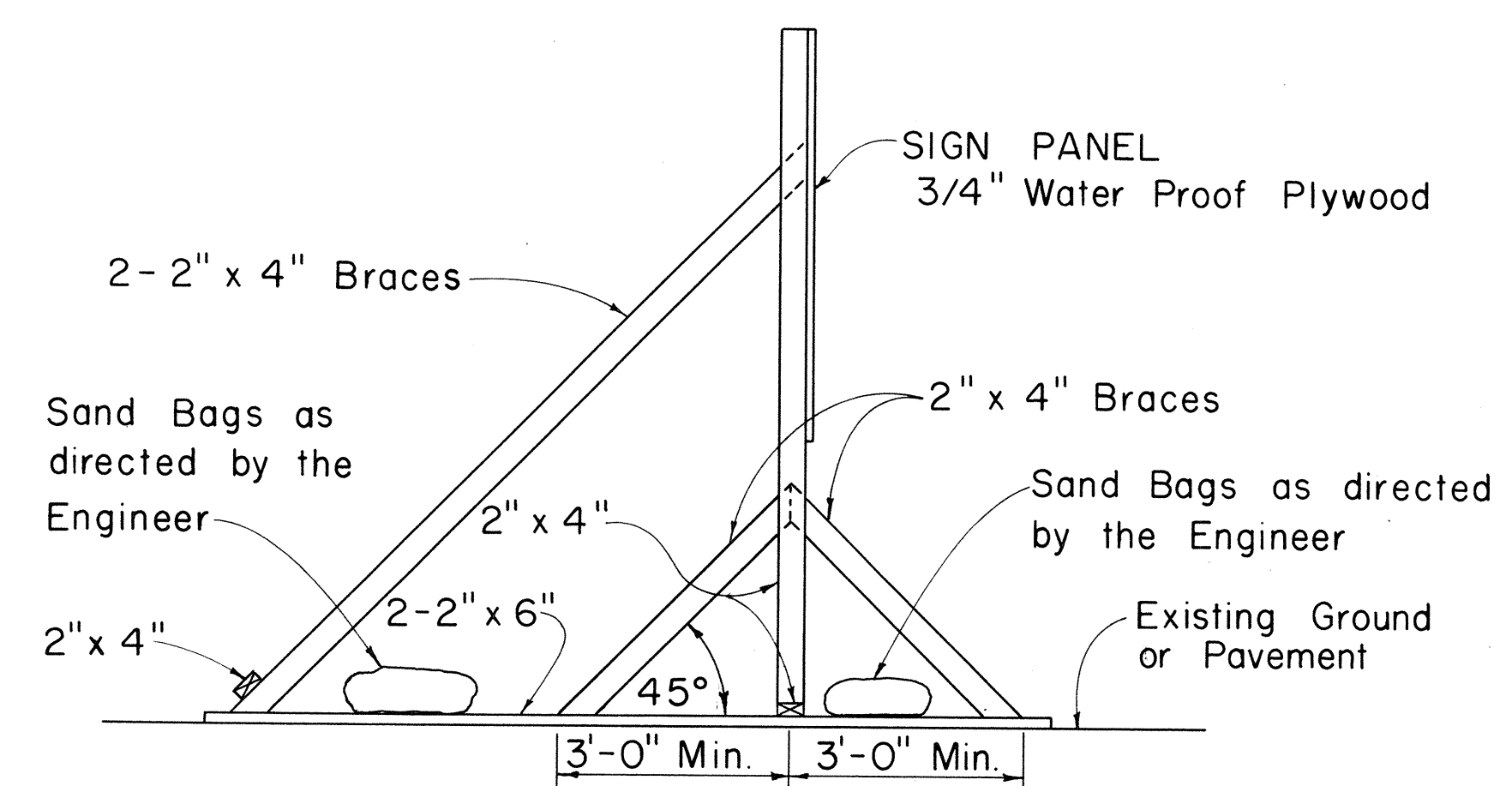
**END VIEW**

|                   |             |
|-------------------|-------------|
| SURVEY PLOTTED BY | DATE        |
| DRAWN BY          | DESIGNED BY |
| NOTE BOOK         | CHECKED BY  |
| No.               |             |

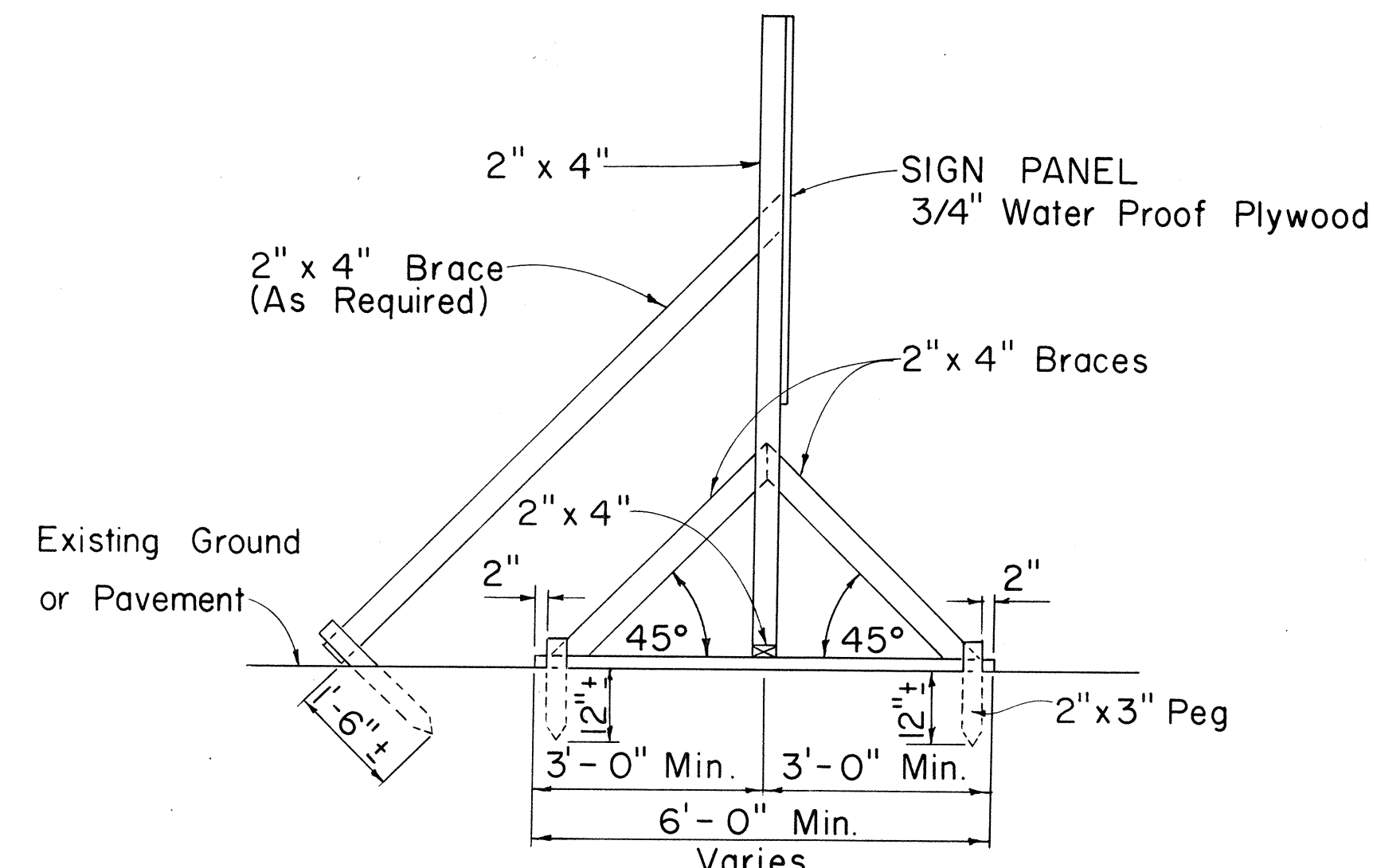
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | RF-056-1(10)       | 1971        | 29        | 74           |



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

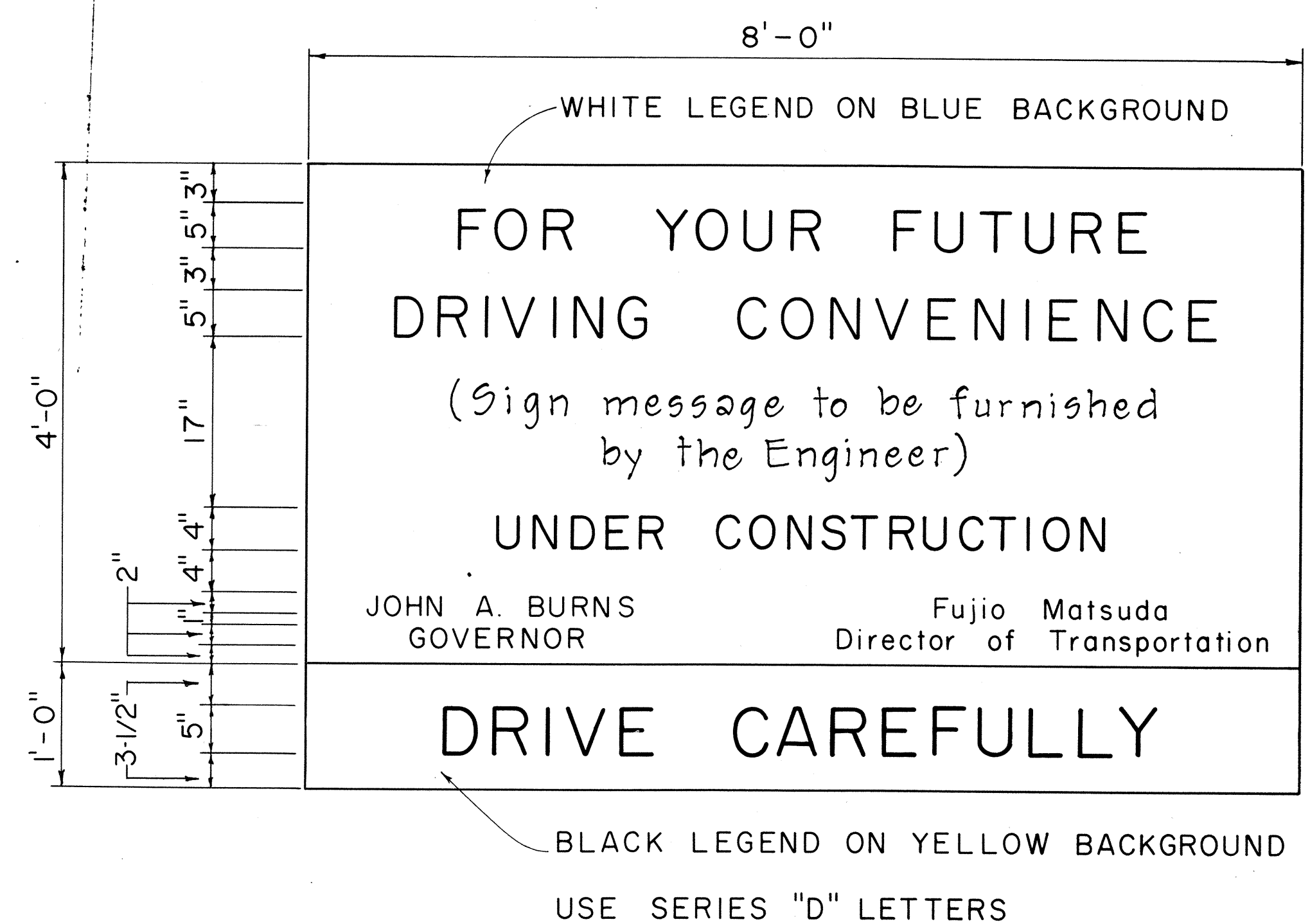


SIDE VIEW  
(SIGN SUPPORT AND FRAME WEIGHTED DOWN)  
Scale: 1/2" = 1'-0"



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

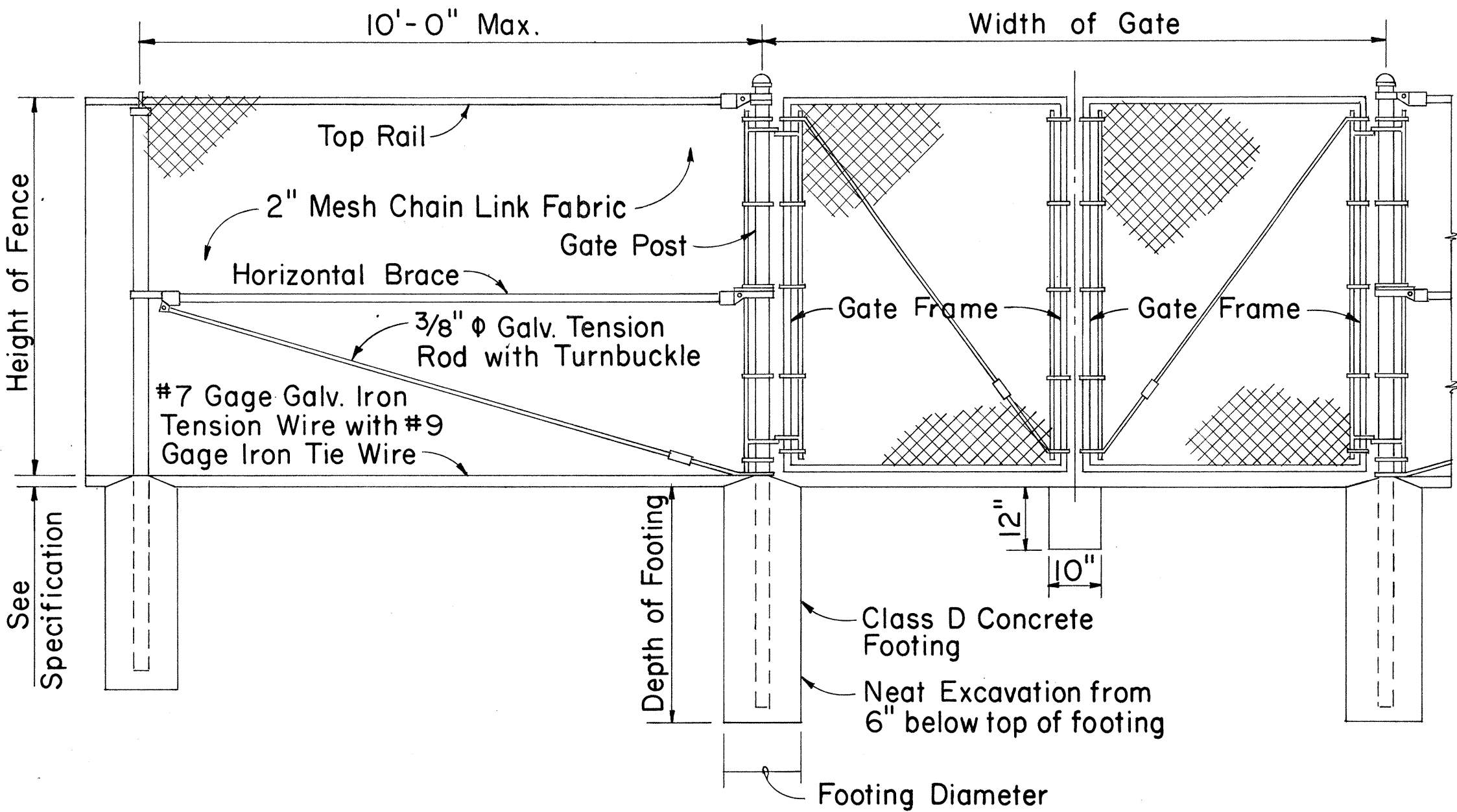
**SIGN SUPPORT AND FRAME**  
Scale: As Shown



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
  
TYPICAL DETAILS  
  
PROJECT INFORMATION SIGN  
  
Scale: As Shown  
SHEET No. 12 OF 14 SHEETS

29

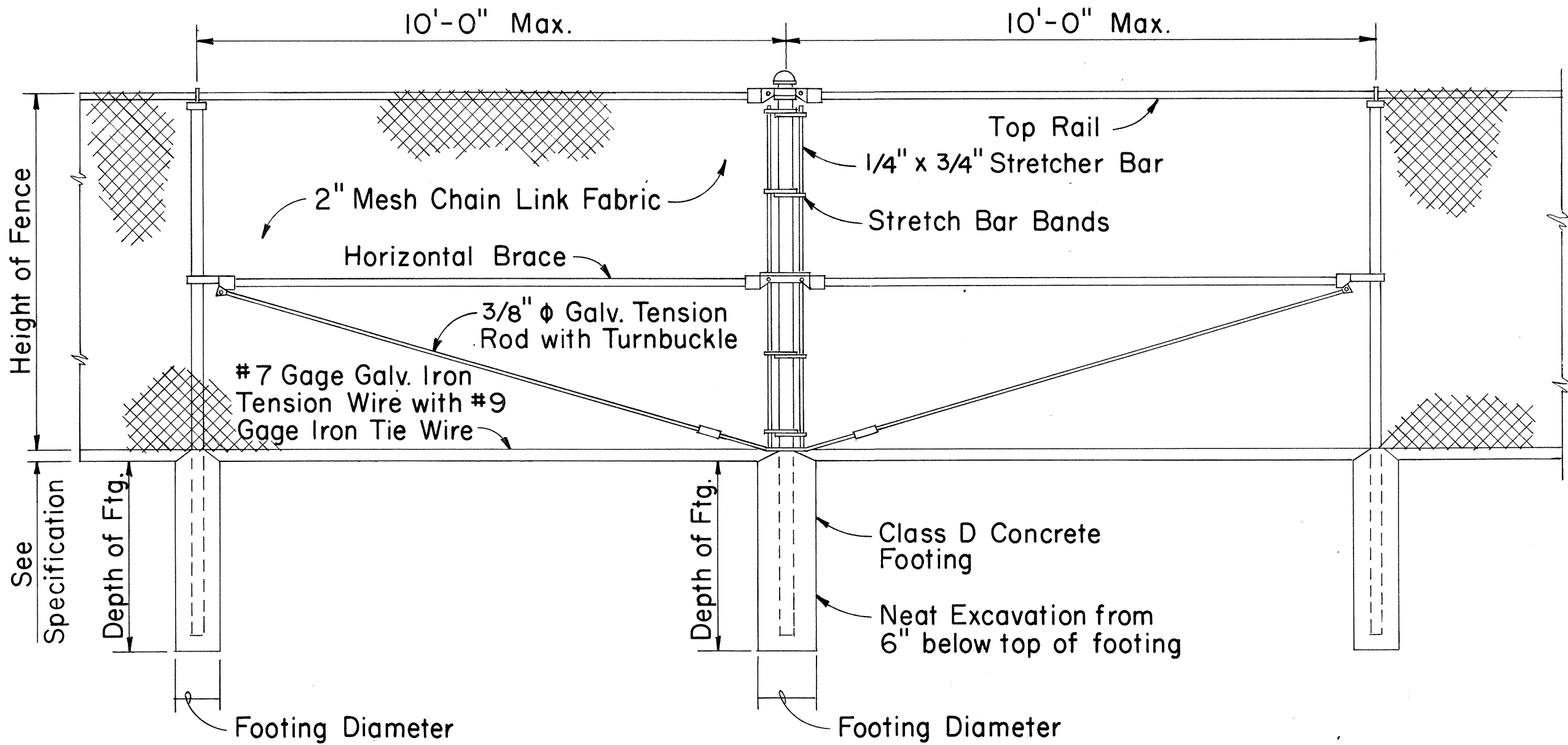
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | RF-056-1(10)       | 1971        | 30        | 74           |



LINE POST

GATE POST

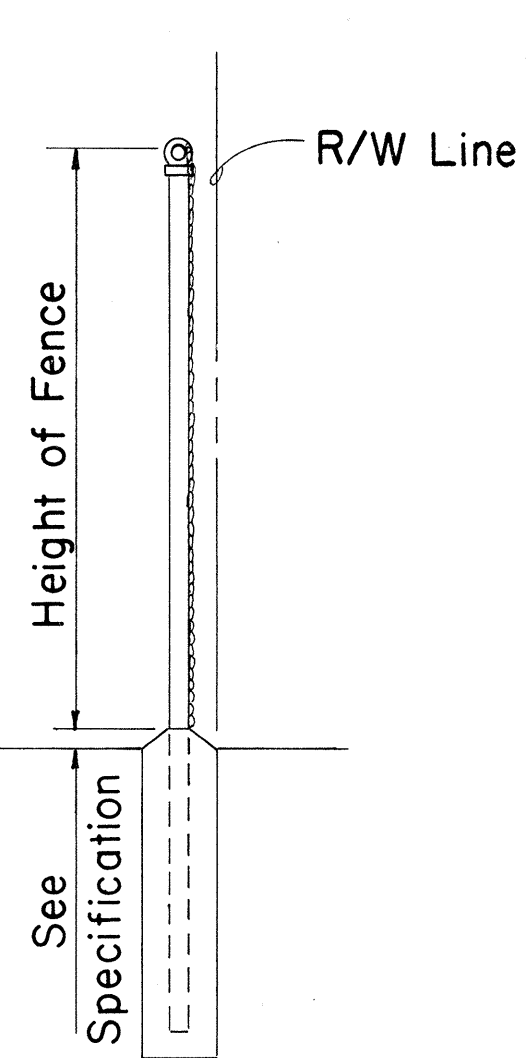
GATE POST



LINE POST

PULL POST

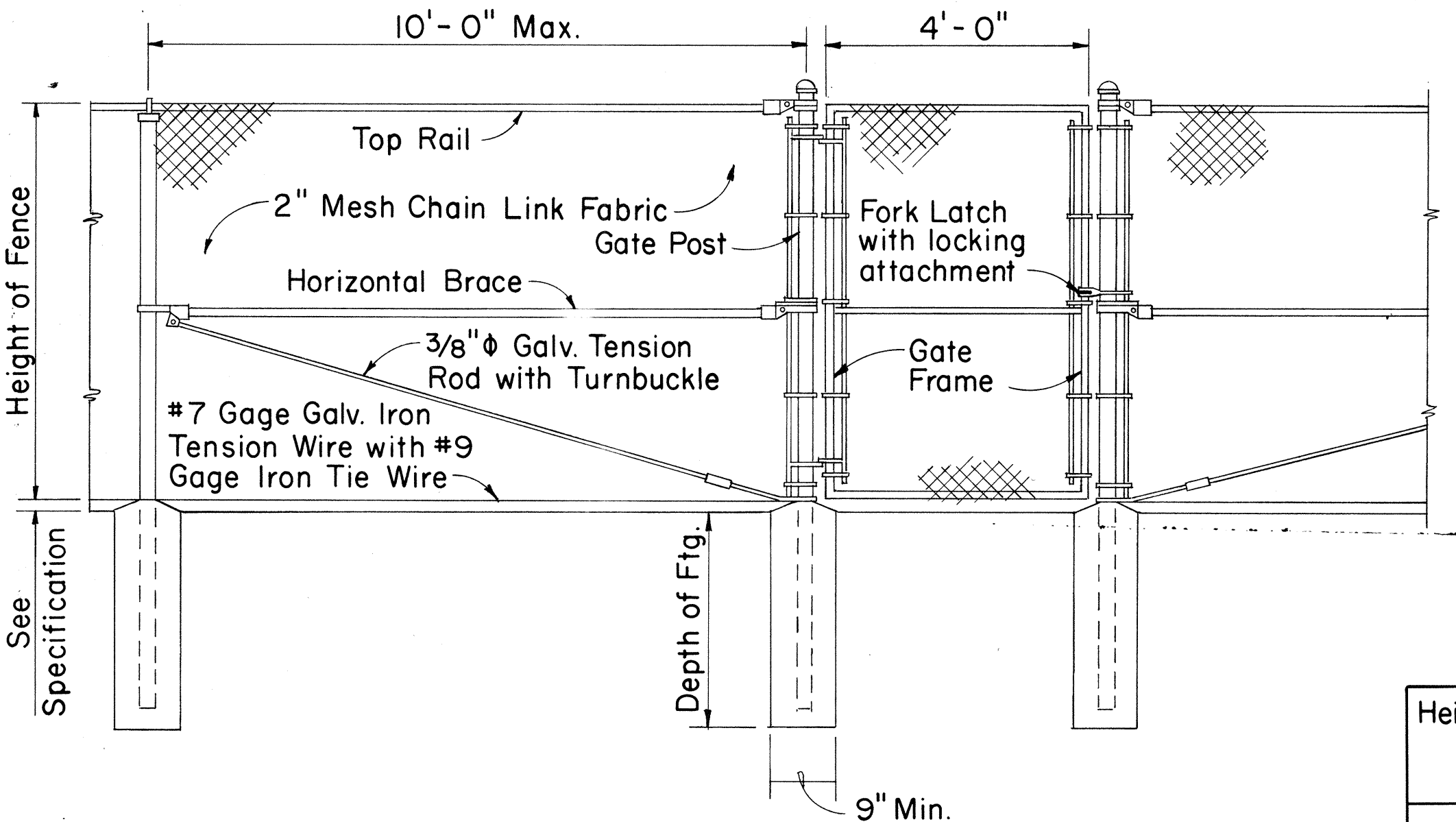
LINE POST



TYPICAL SECTION  
(WITH CONCRETE FOOTING)

### DETAIL OF CHAIN LINK GATE

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

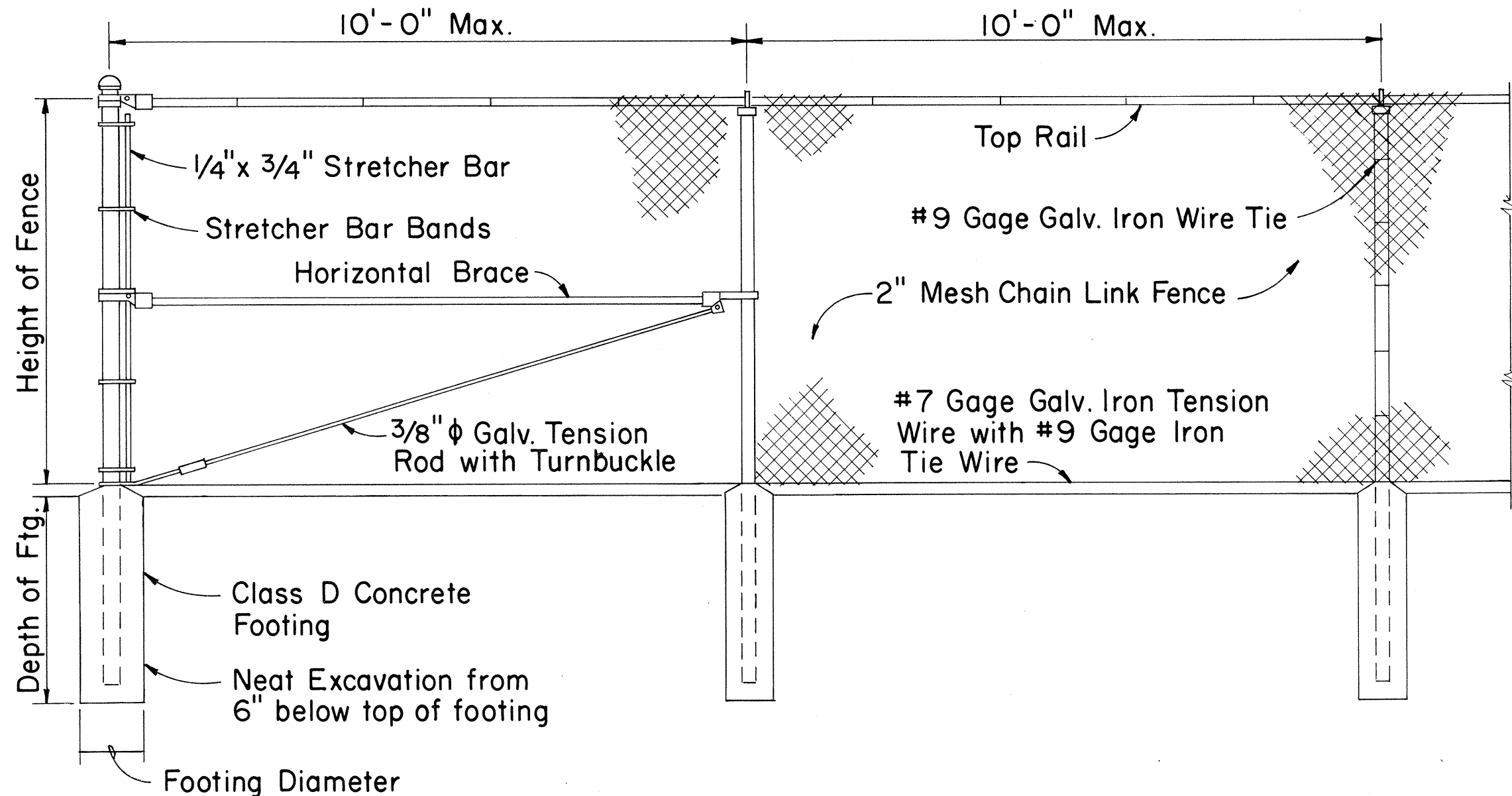


LINE POST

GATE POST

GATE POST

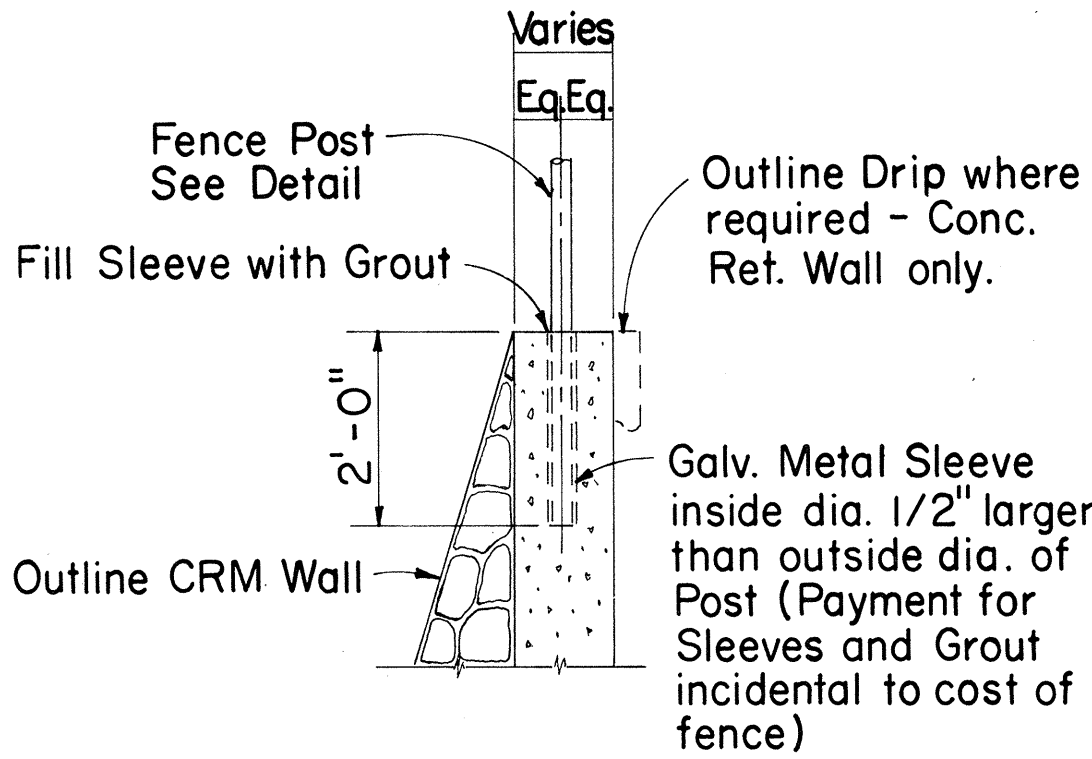
### DETAIL OF 4 FT. CHAIN LINK GATE



END POST

LINE POST

LINE POST



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

### CHAIN LINK FENCE DETAILS

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

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

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

| NO. | REVISION | APPROVED BY | DATE |
|-----|----------|-------------|------|
|     |          |             |      |

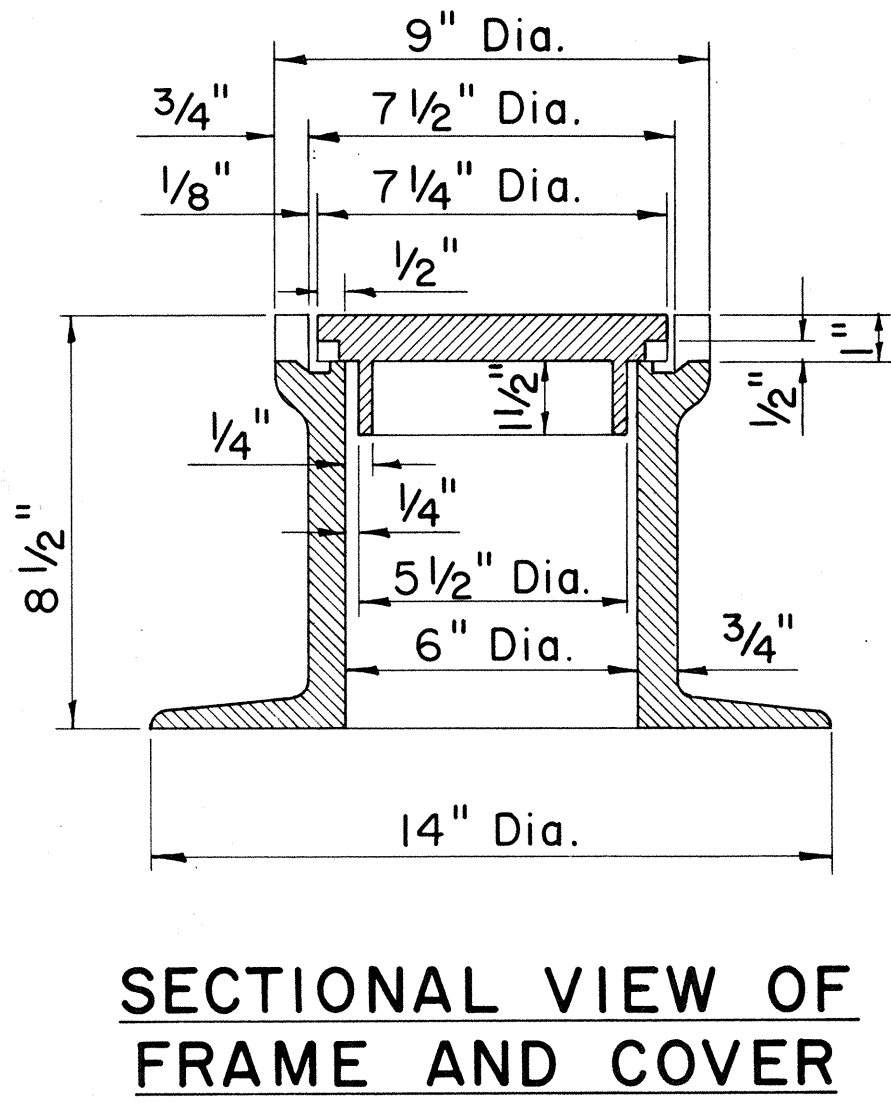
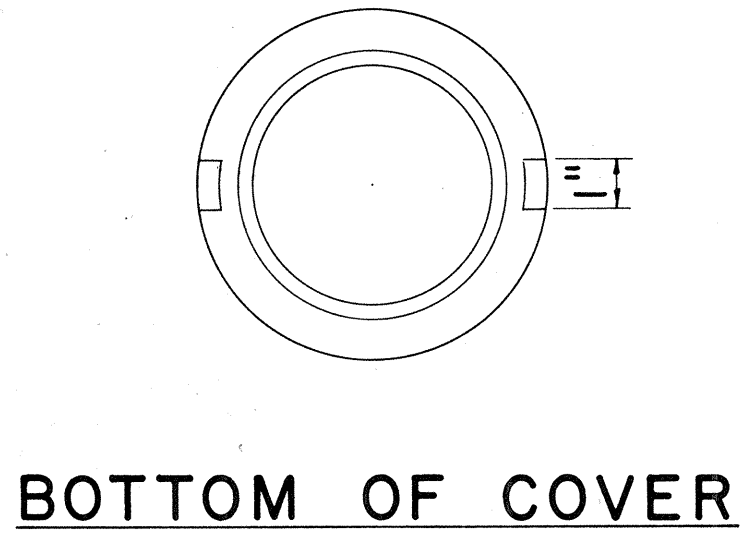
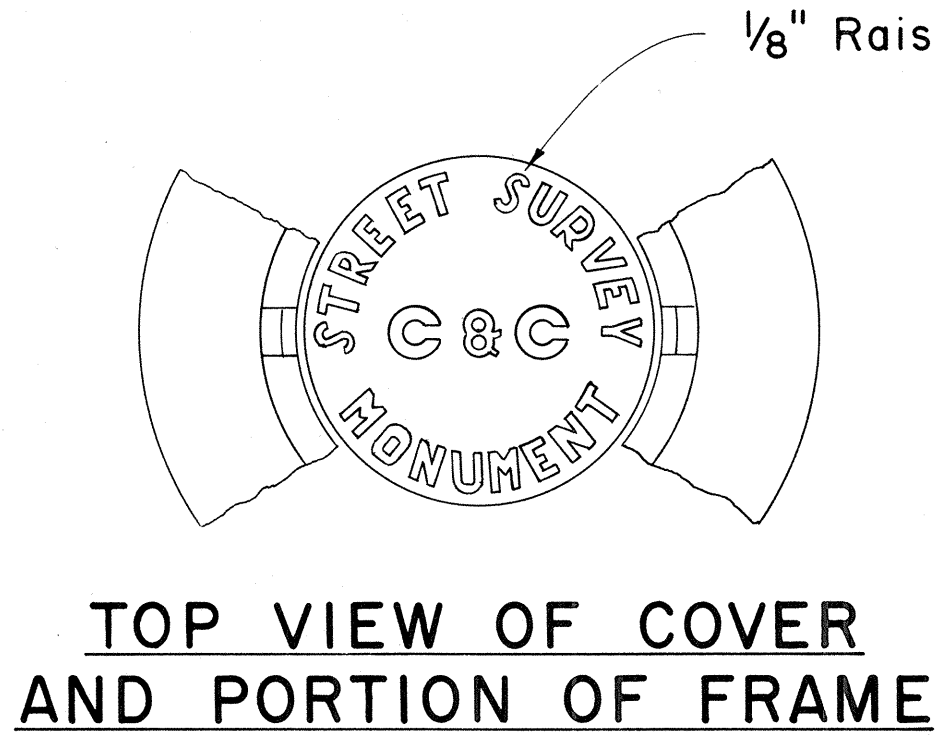
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**STANDARD DETAILS**

**CHAIN LINK FENCE**  
(WITH TOPRAIL)

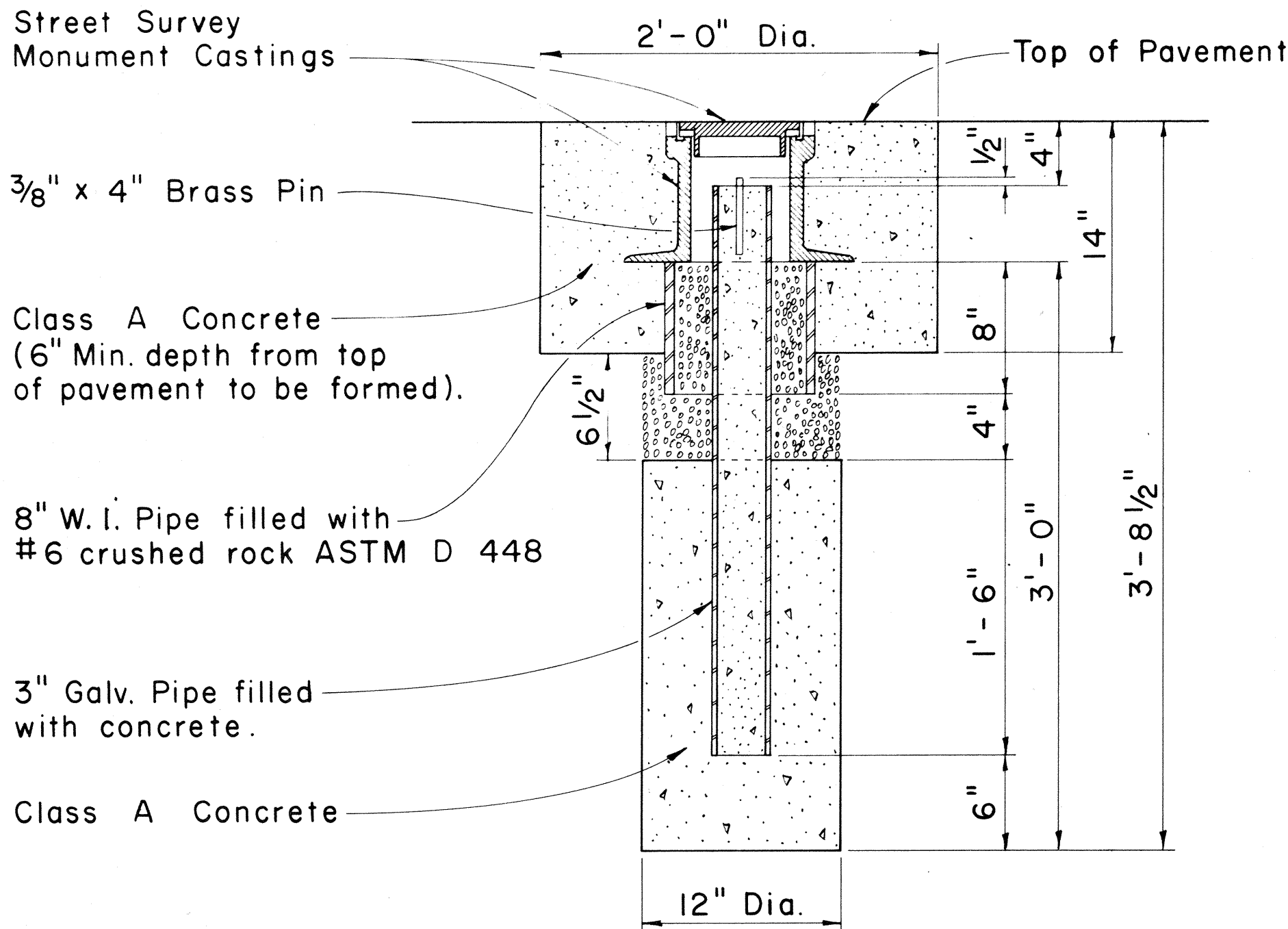
Scale: 1/2" = 1'-0" Date:

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | RF-056-1(10)       | 1971        | 31        | 74           |



### STREET SURVEY MONUMENT CASTINGS

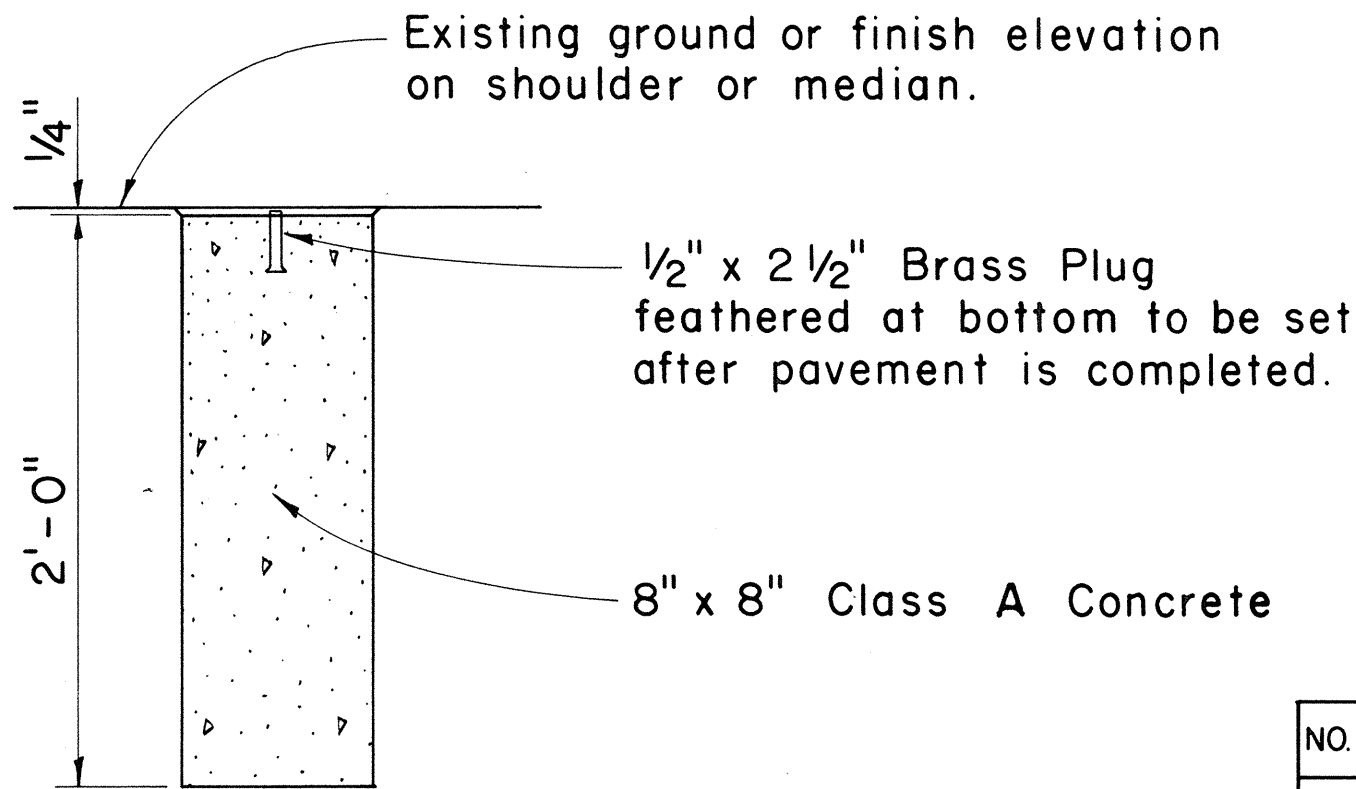
Scale: 3" = 1'-0"



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 CENTERLINE AND REFERENCE SURVEY MONUMENT

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

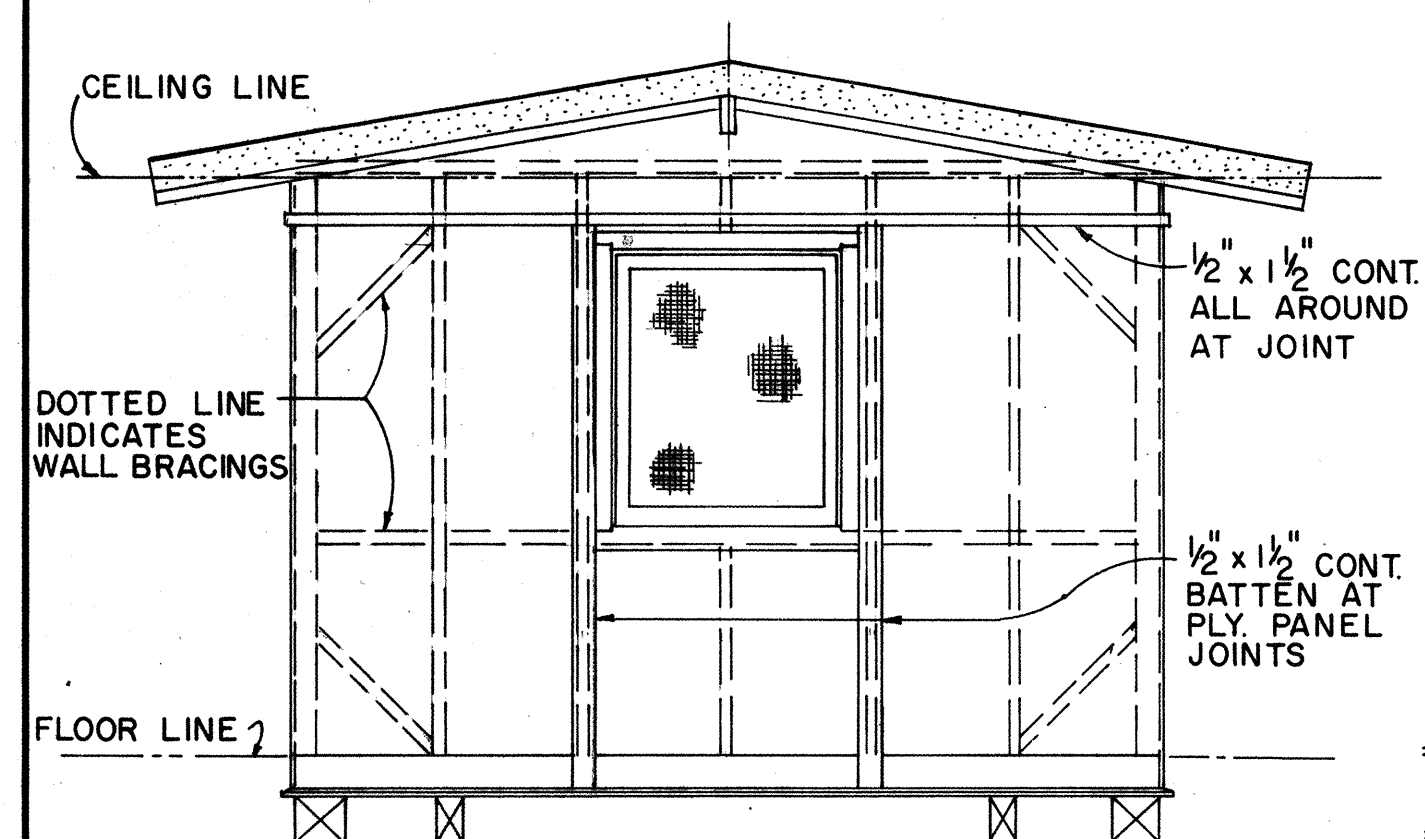
APPROVAL RECOMMENDED:  
HIGHWAY DESIGN ENGINEER 12-4-69 DATE

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

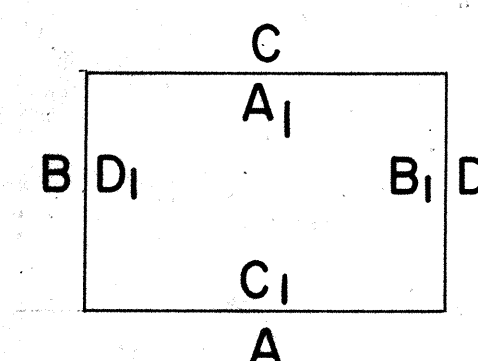
| NO. | REVISION | APPROVED BY | DATE |
|-----|----------|-------------|------|
|     |          |             |      |

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

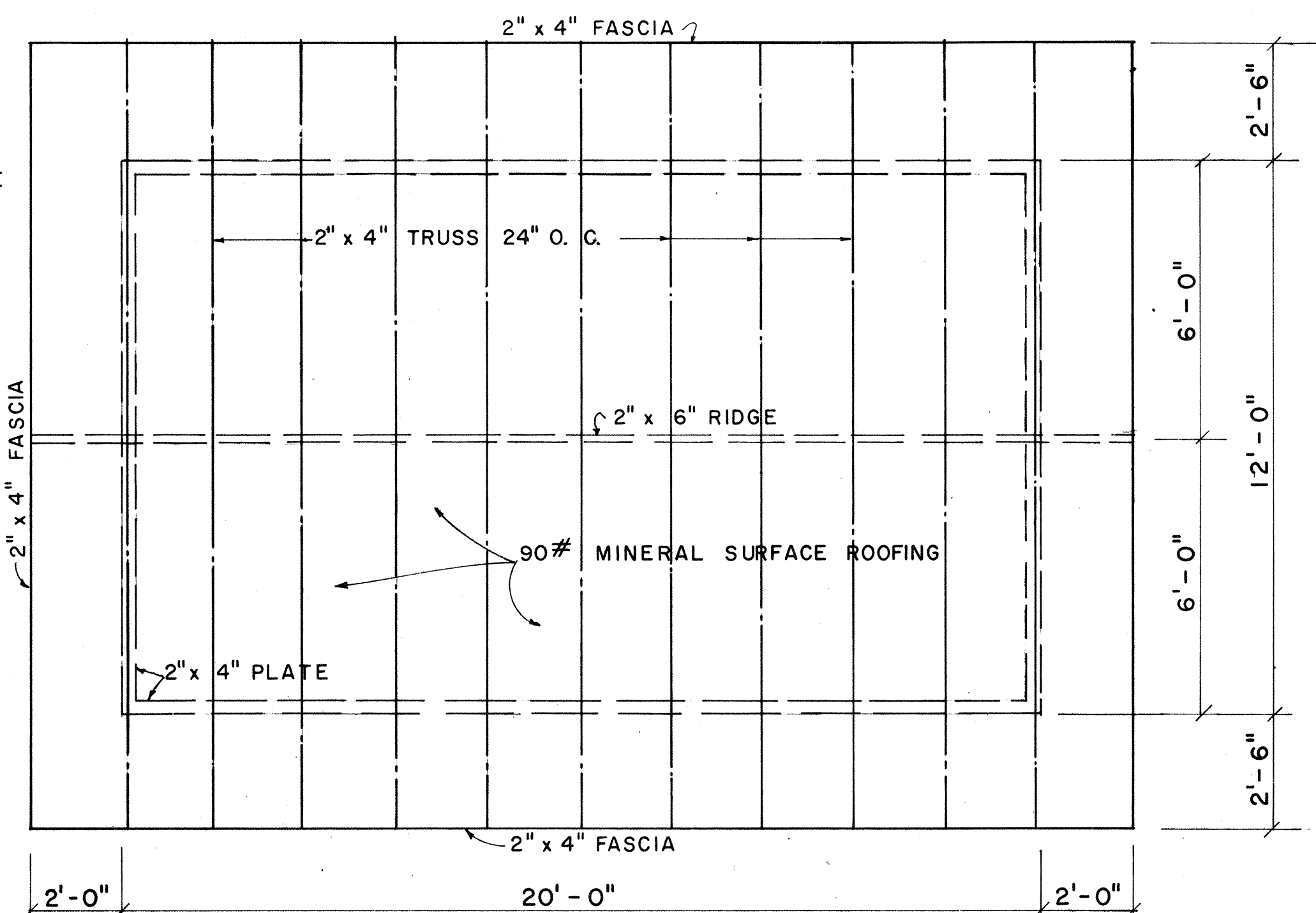
| FED.ROAD<br>DIST. NO. | STATE  | FED. AID<br>PROJ. NO. | FISCAL<br>YEAR | SHEET<br>NO. | TOTAL<br>SHEETS |
|-----------------------|--------|-----------------------|----------------|--------------|-----------------|
| HAWAII                | HAWAII | RF-056-1(10)          | 1971           | 32           | 74              |



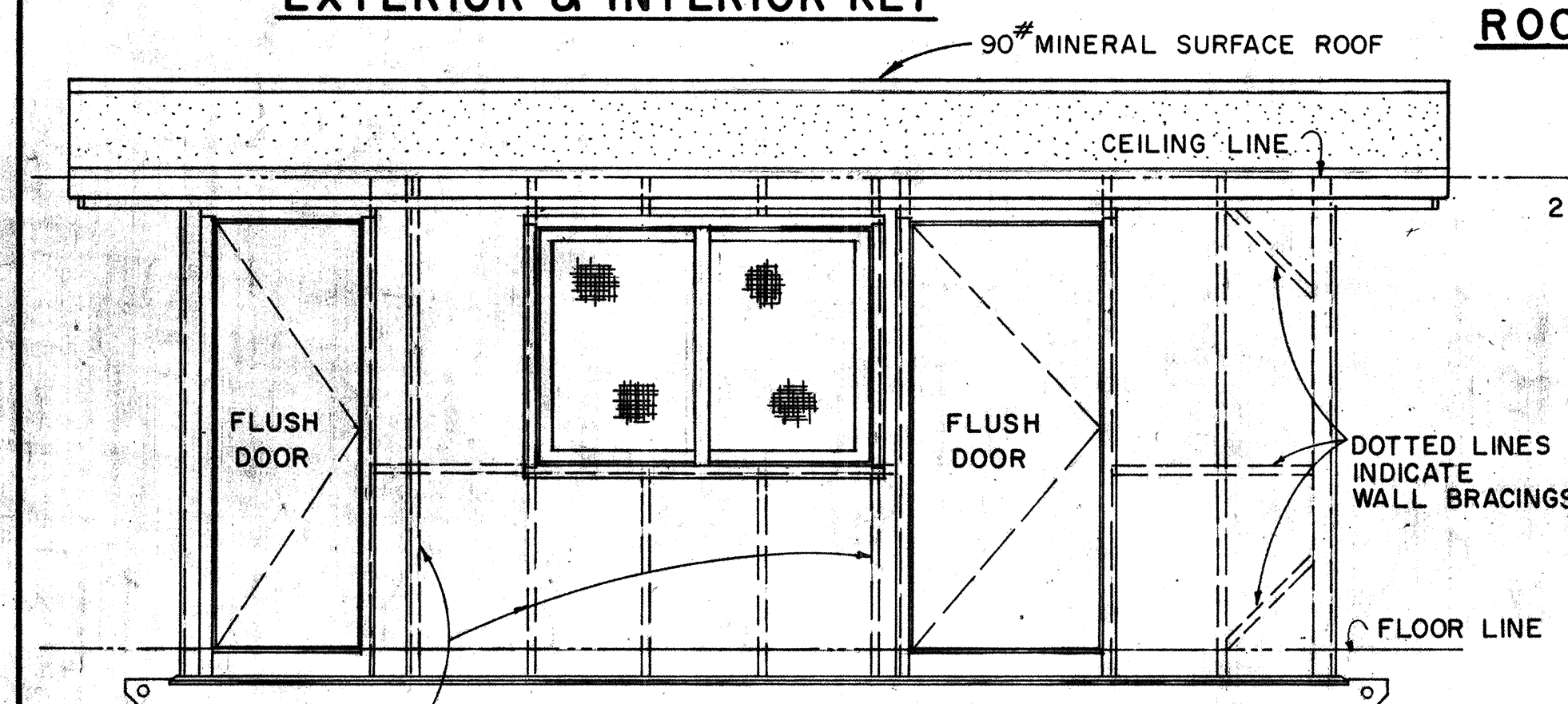
ELEVATION (B)  
ELEVATION (D) SIMILAR  
SCALE:  $3/8" = 1'-0"$



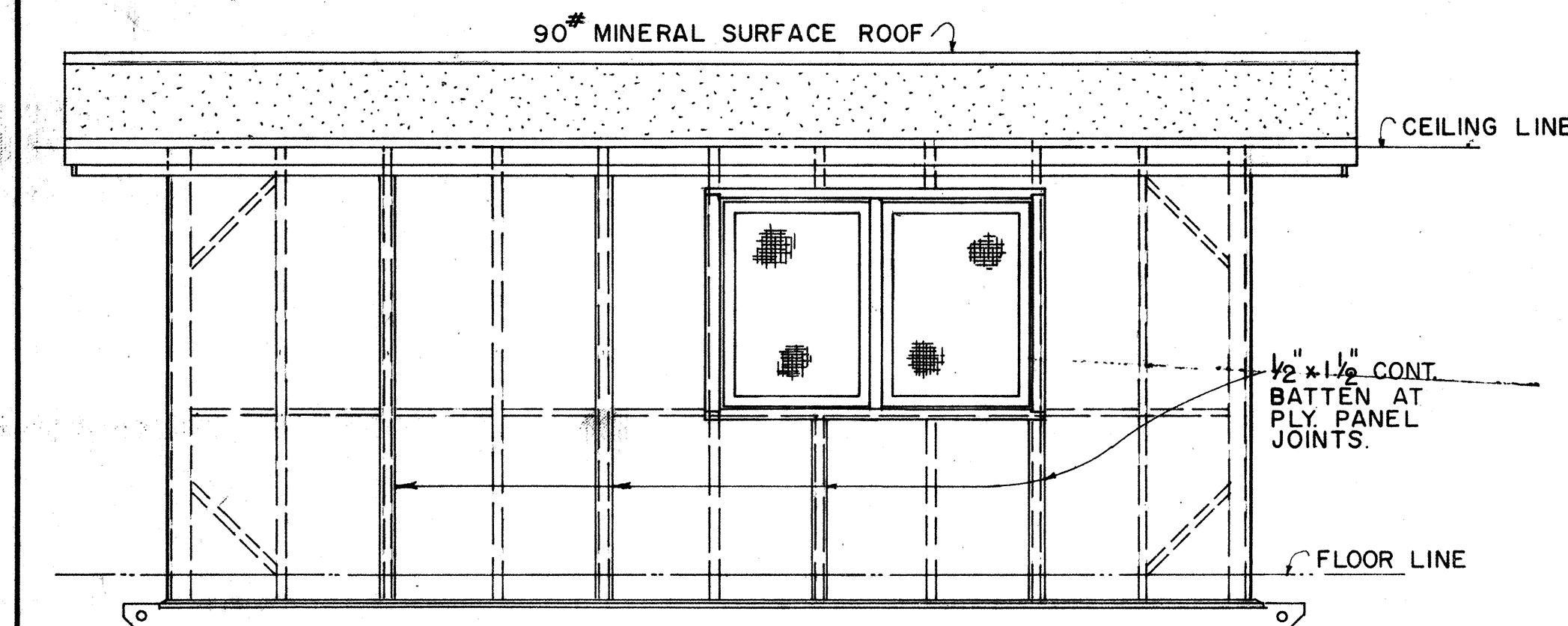
## EXTERIOR & INTERIOR KEY



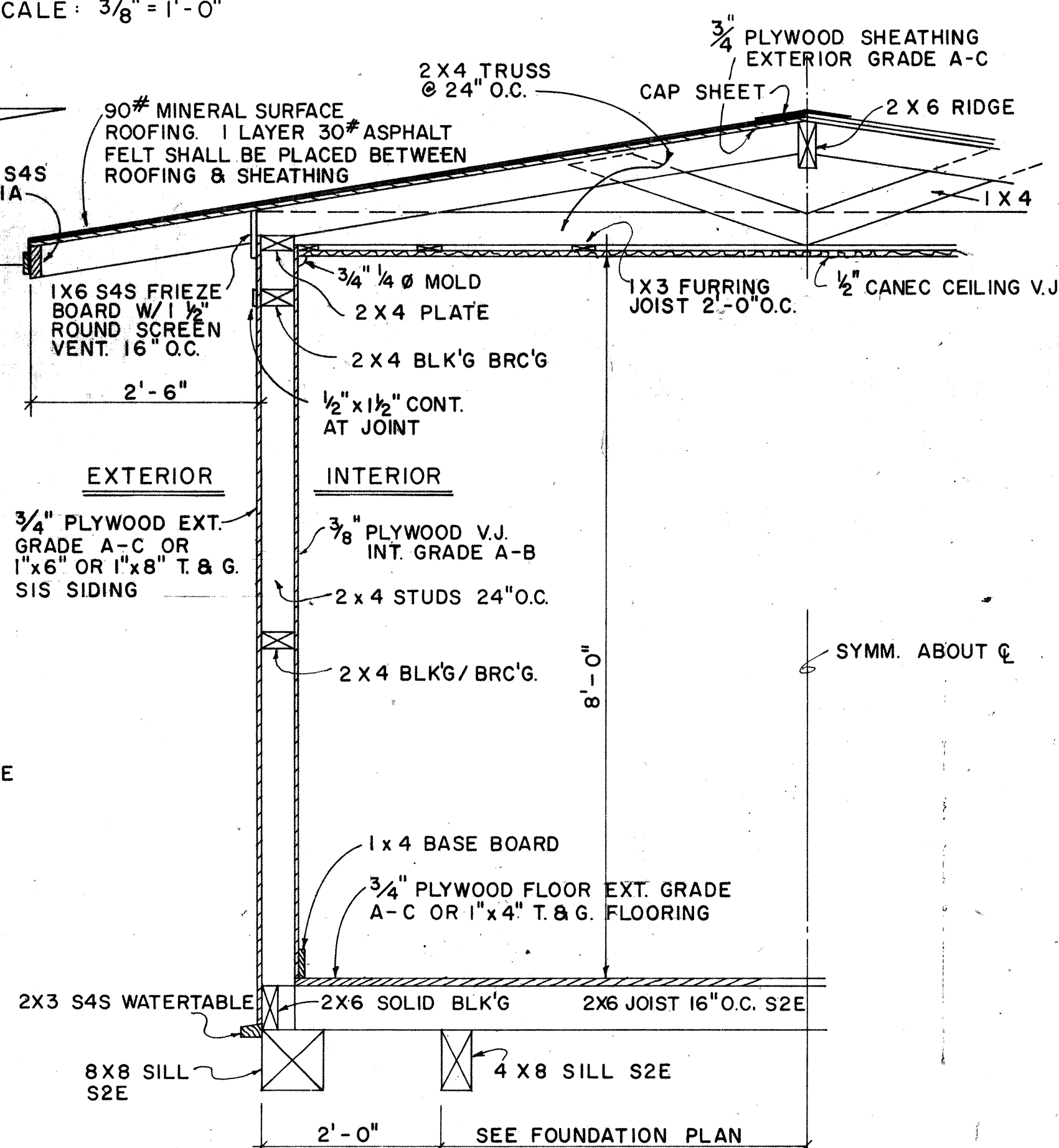
**ROOF FRAMING PLAN**  
SCALE:  $\frac{3}{8}" = 1'-0"$



**ELEVATION** **(A)**  
SCALE:  $\frac{3}{8}" = 1' - 0"$



**ELEVATION (C)**  
SCALE:  $\frac{3}{8}" = 1'-0"$



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

APPROVAL ~~RECOMMENDED~~:

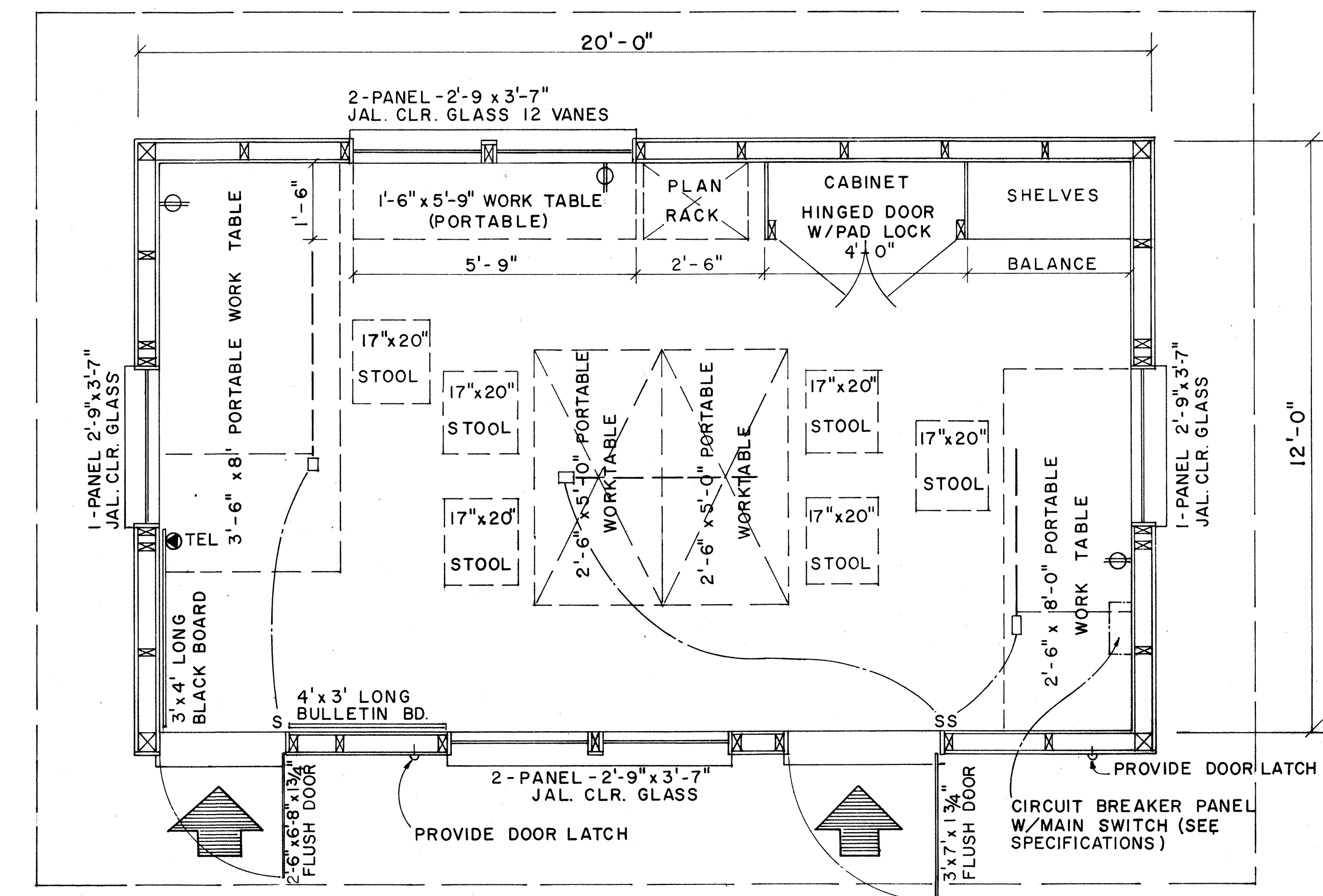
HIGHWAY DESIGN ENGINEER

12-4-69  
DATE

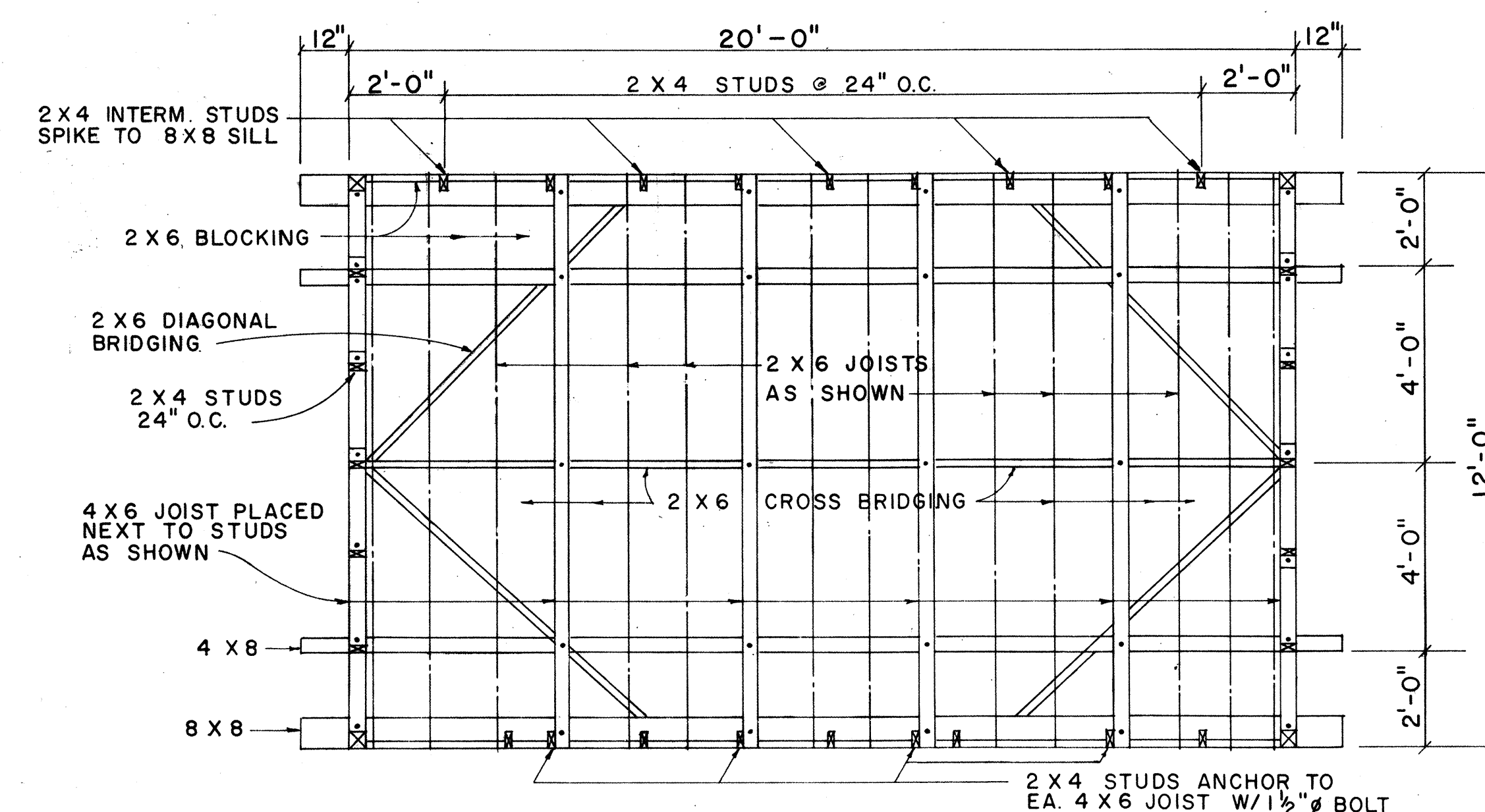
APPROVED:

ASSISTANT CHIEF, ENGINEERING

12-10-60  
DATE



**FLOOR PLAN**  
SCALE: 1/2" = 1' - 0"



**FOUNDATION FRAMING PLAN**  
SCALE:  $\frac{3}{8}" = 1' - 0"$

| NO. | REVISION | APPROVED BY | DATE |
|-----|----------|-------------|------|
|     |          |             |      |

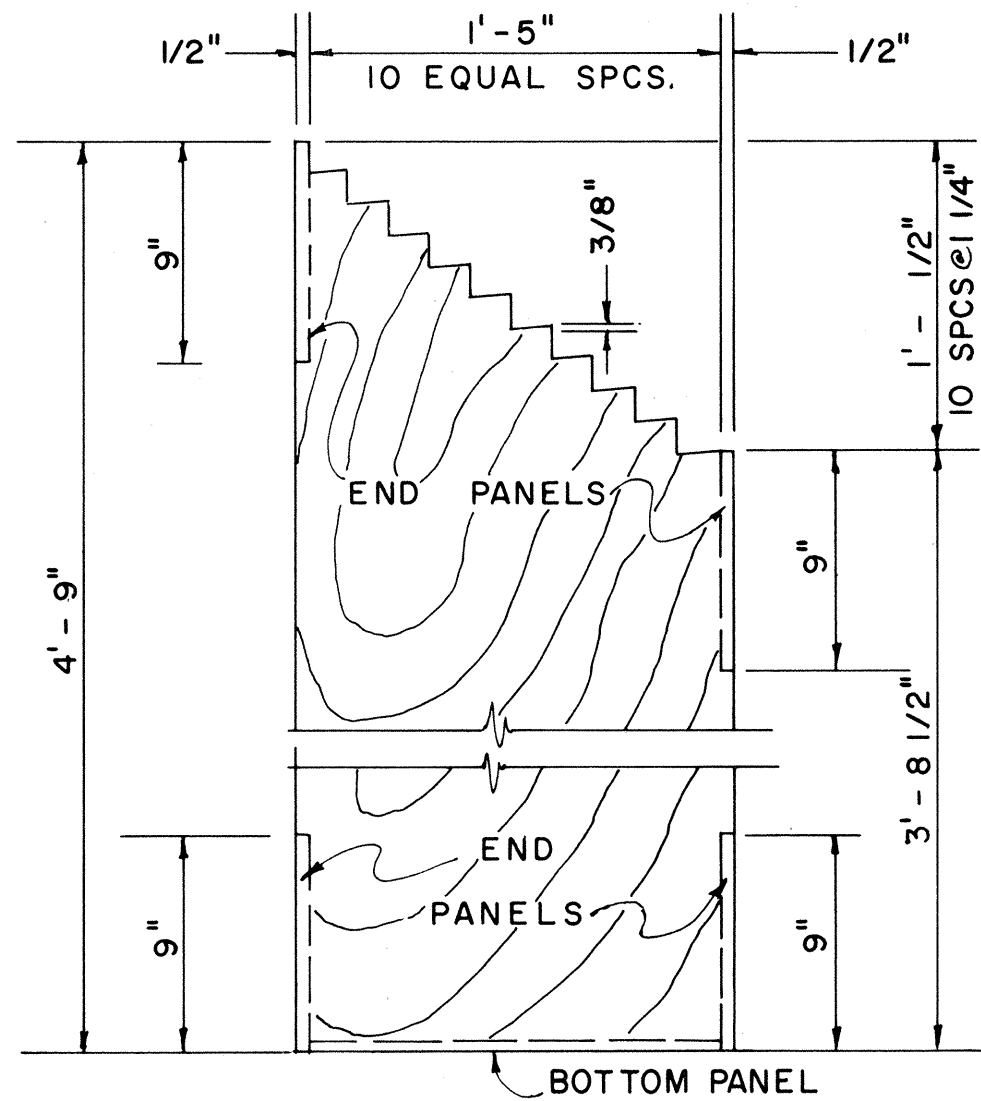
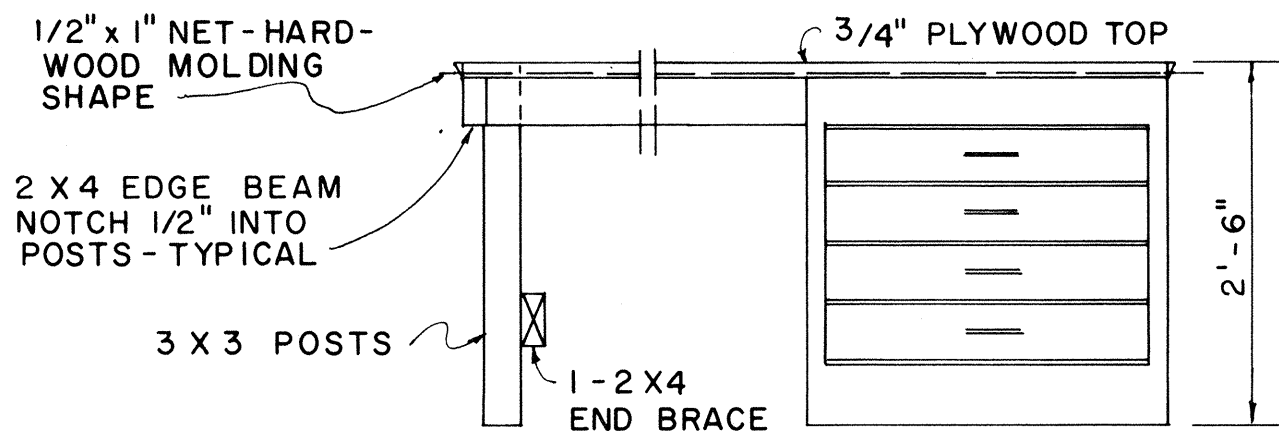
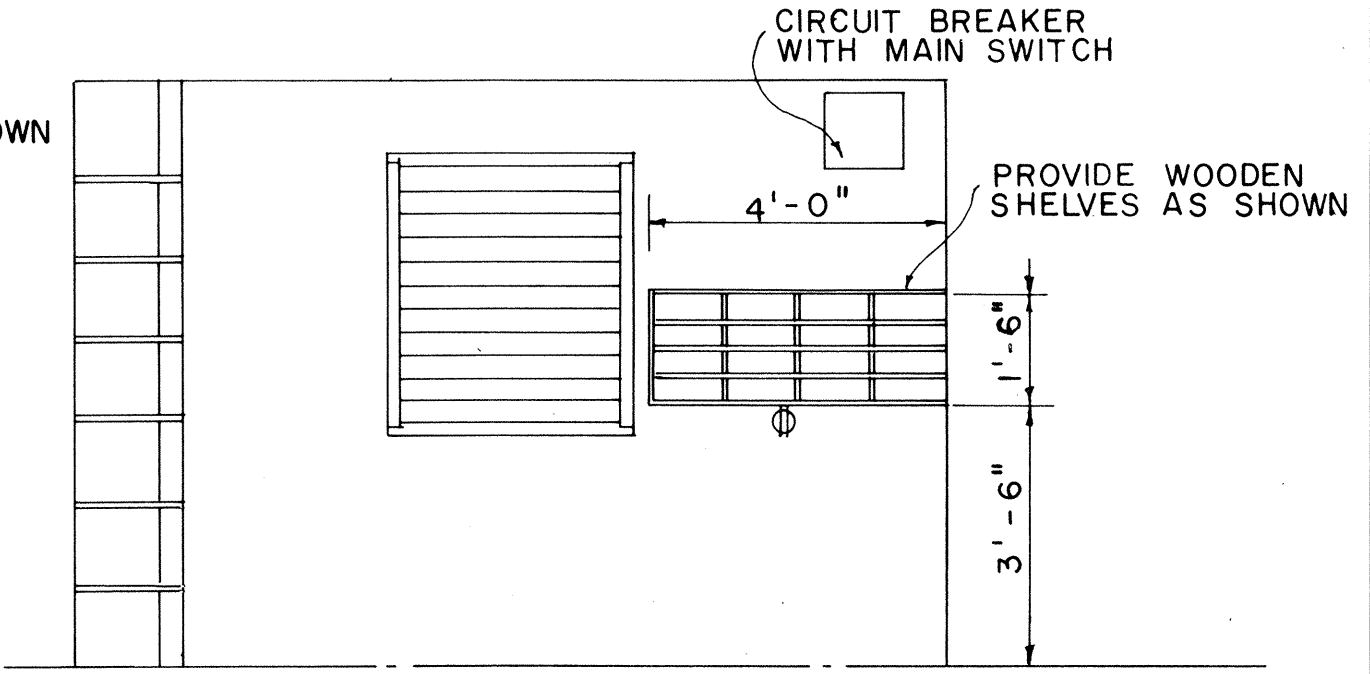
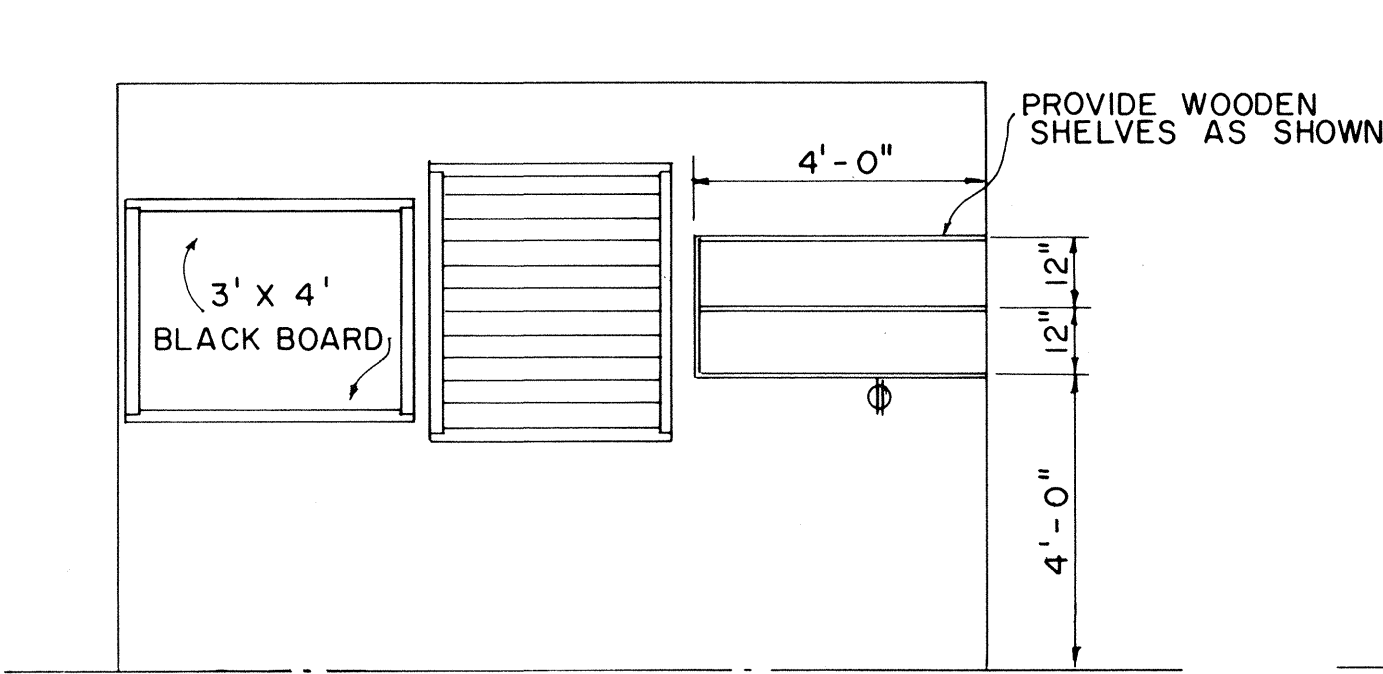
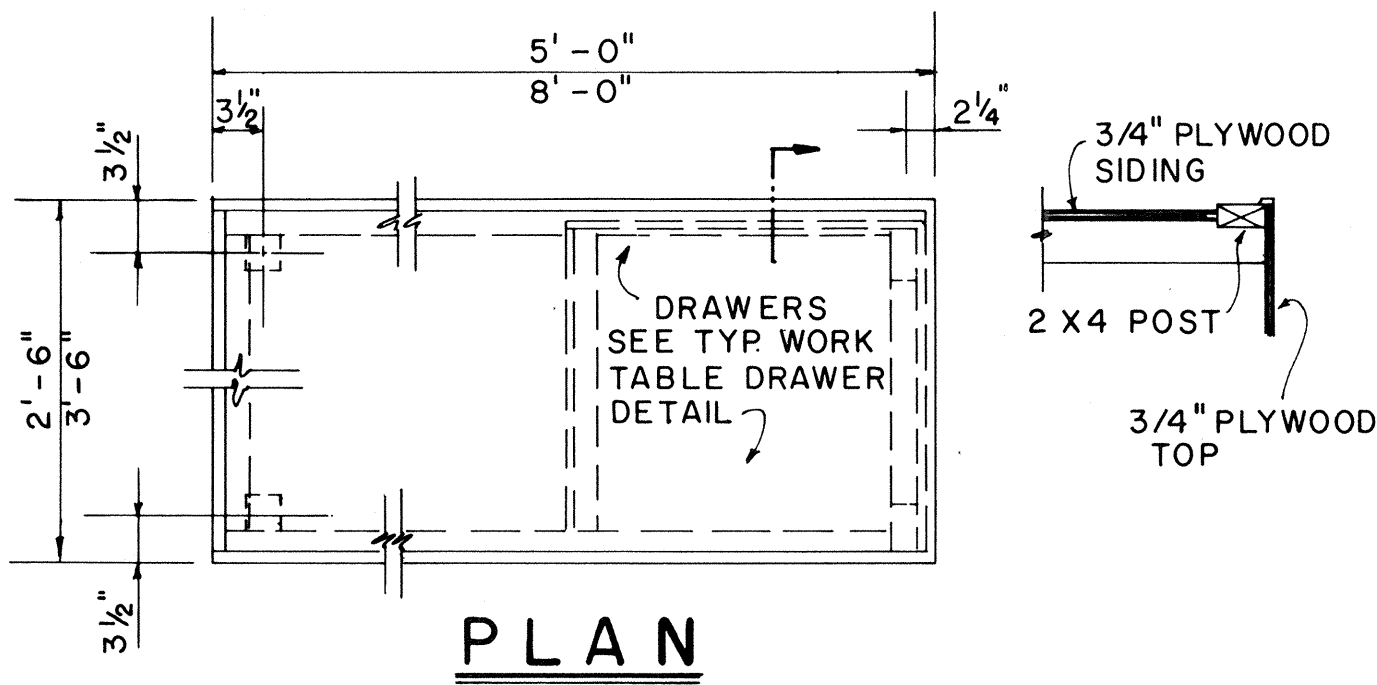
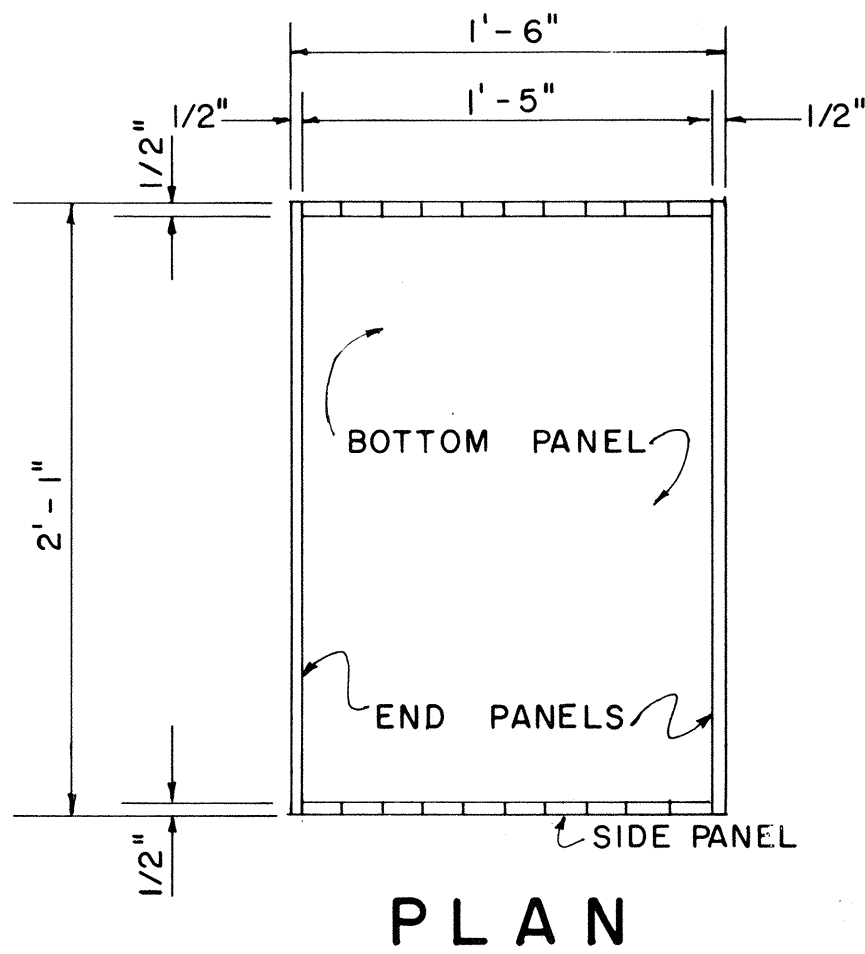
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION

FIELD OFFICE

Scale : As Noted

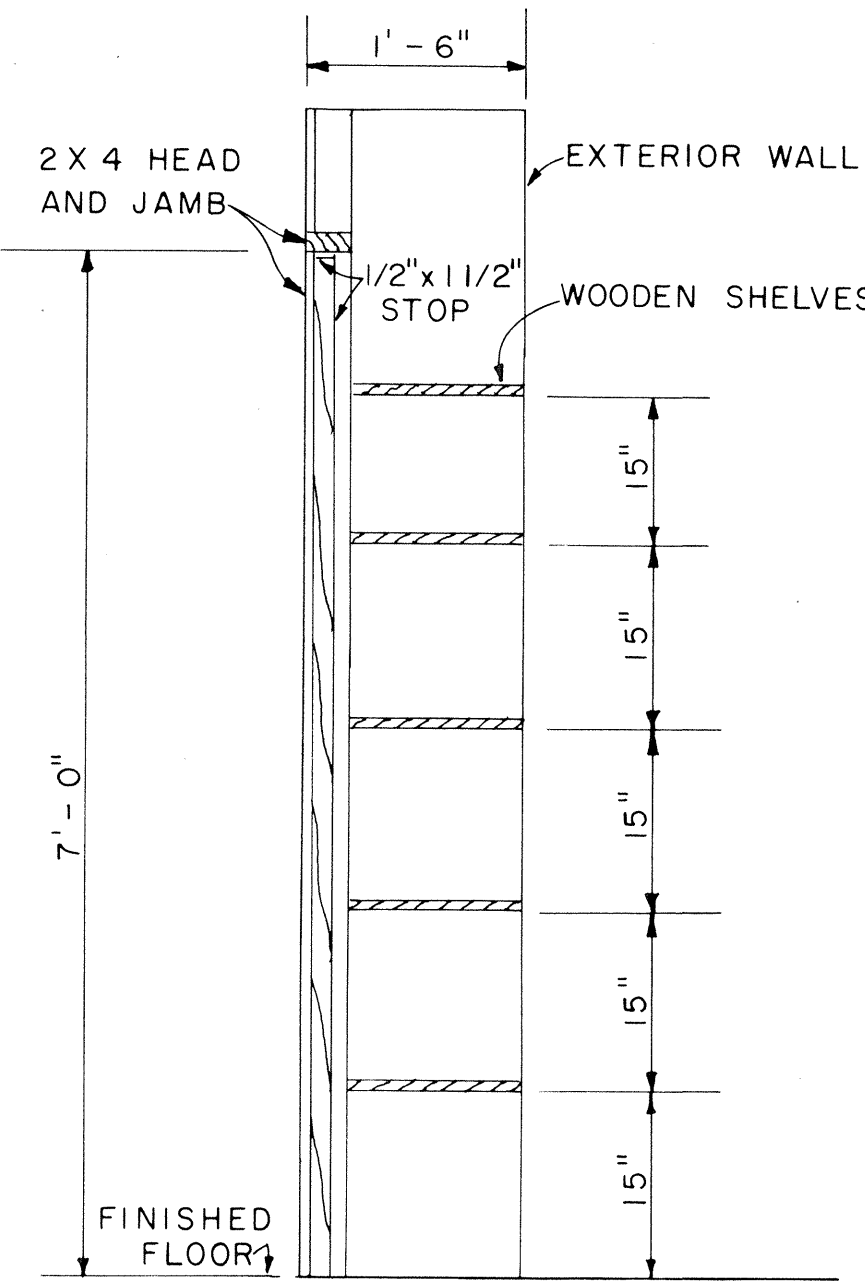
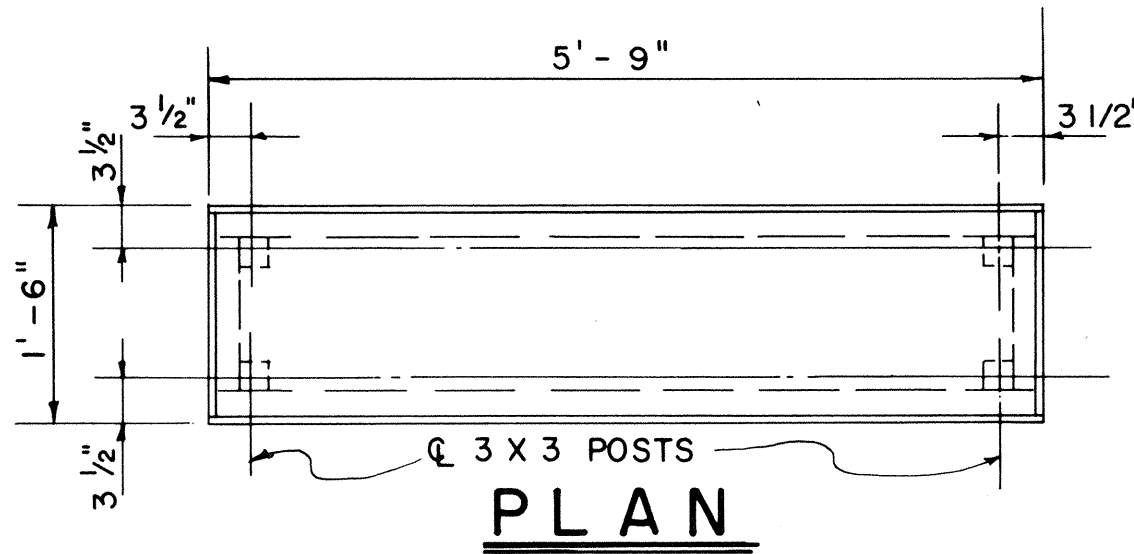
|          |  |             |          |
|----------|--|-------------|----------|
| SHEET NO |  | OF 5 SHEETS | DD 636.1 |
|----------|--|-------------|----------|

| FED. ROAD DIST. NO. | STATE  | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|--------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAWAII | RF-056-1(10)       | 1971        | 33        | 74           |

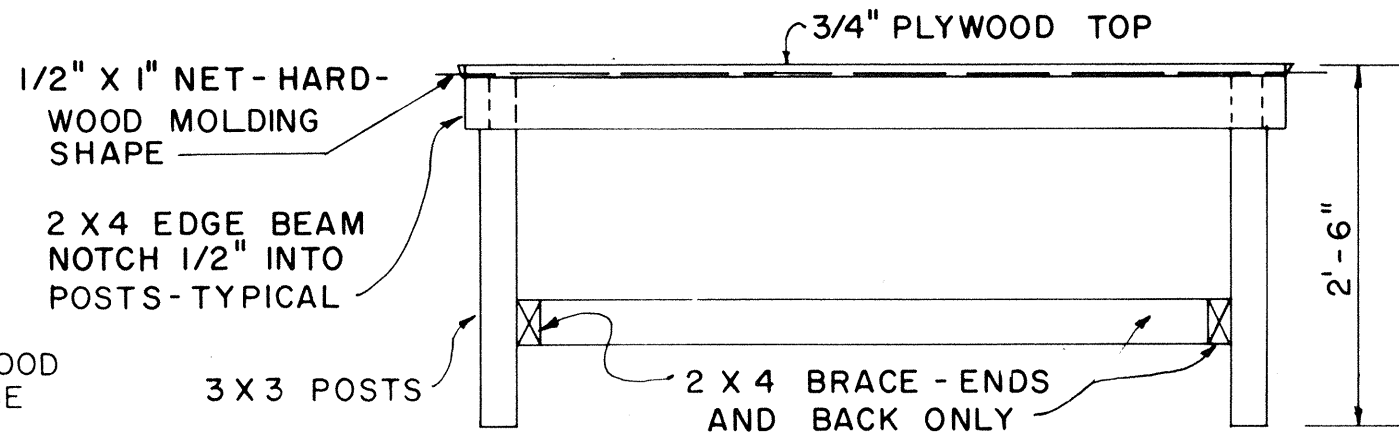


**ELEVATION**  
 2'-6" x 5'-0" 2 REQ'D  
 3'-6" x 8'-0" 1 REQ'D  
 2'-6" x 8'-0" 1 REQ'D

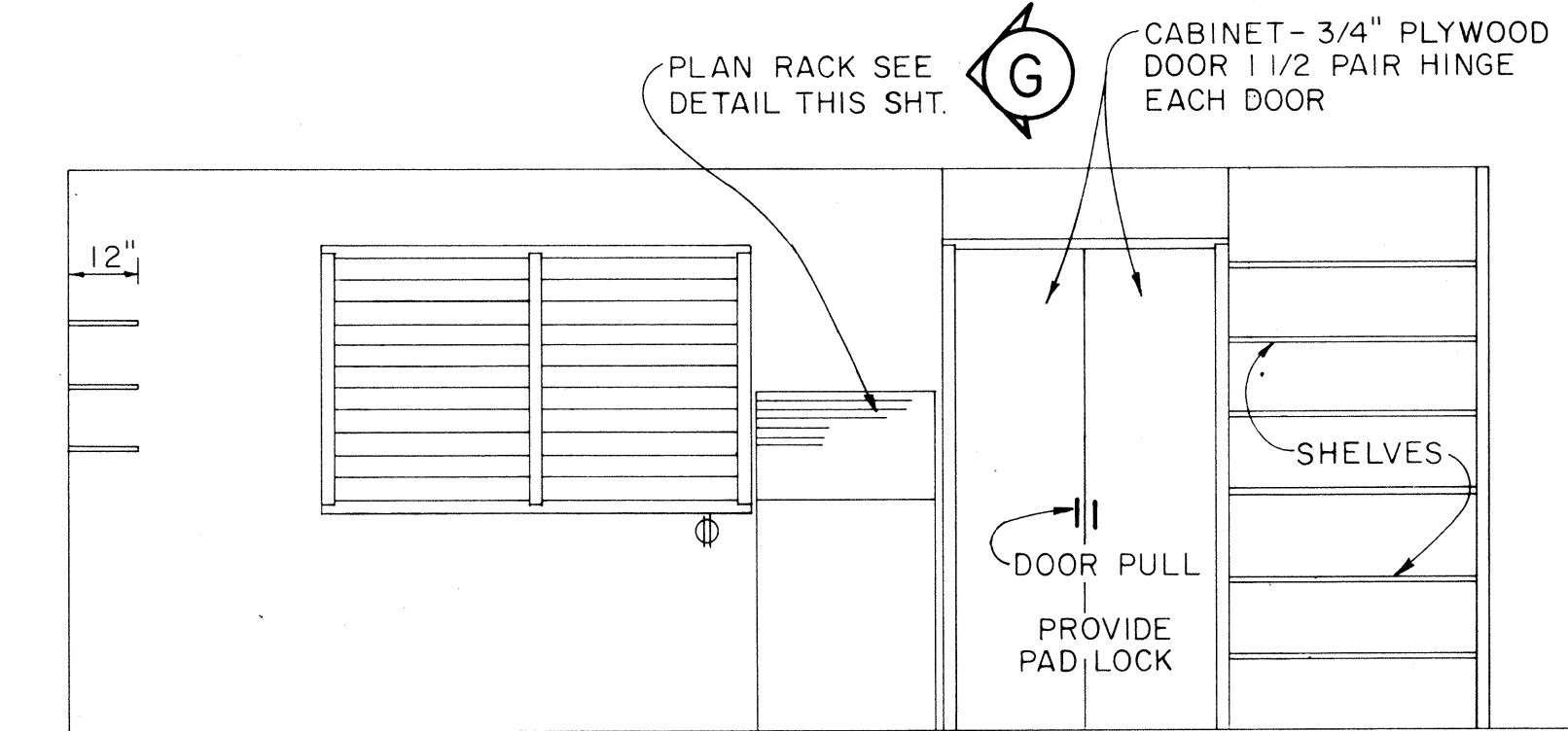
**PORTABLE WORK TABLE DETAIL**  
 SCALE: 3/4" = 1'-0"



**END ELEVATION**  
**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"



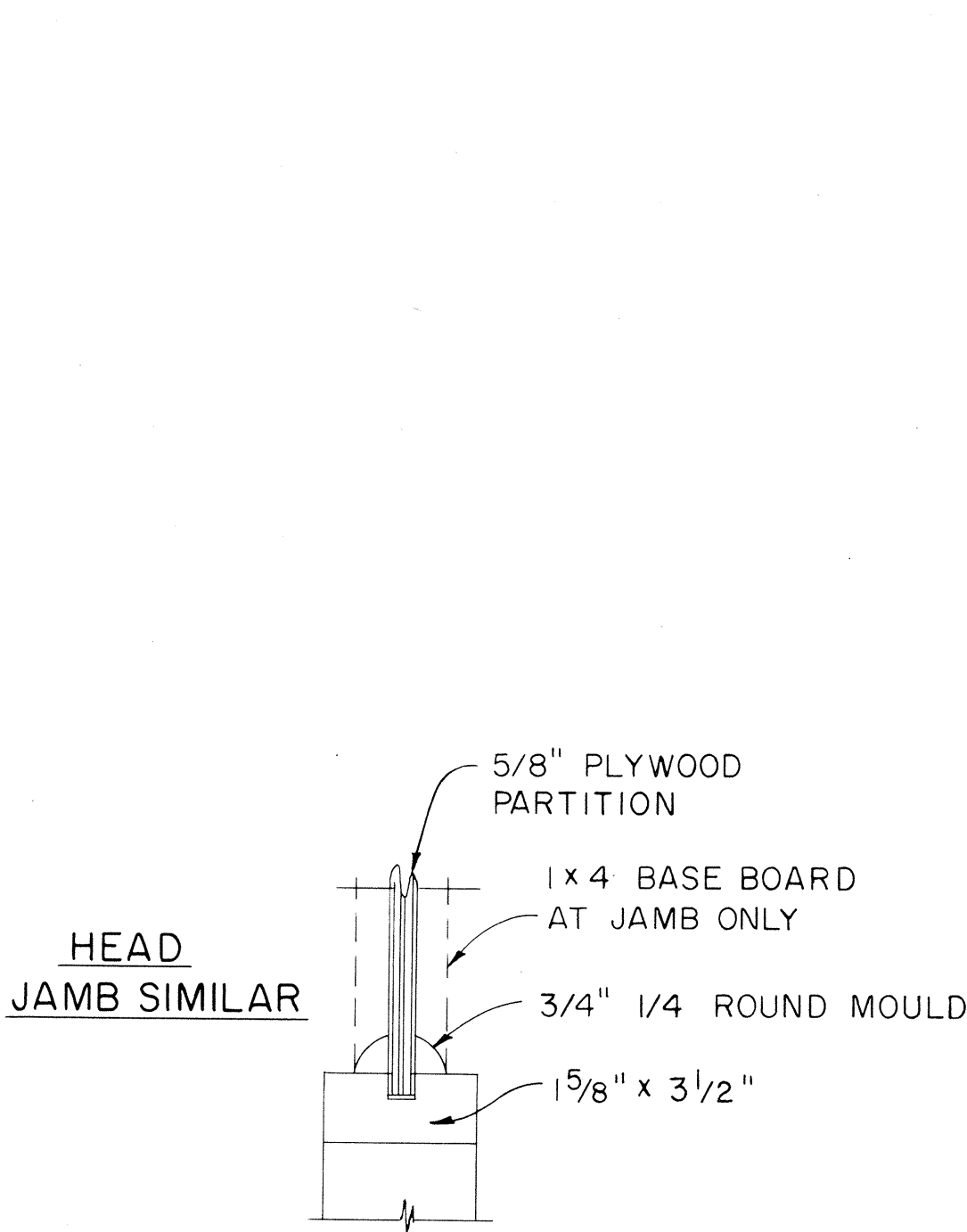
APPROVAL RECOMMENDED:  
 HIGHWAY DESIGN ENGINEER 12-4-69 DATE  
 APPROVED:  
 ASSISTANT CHIEF, ENGINEERING 12-10-69 DATE

| NO. | REVISION | APPROVED BY | DATE |
|-----|----------|-------------|------|
|     |          |             |      |

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
 FIELD OFFICE  
 Scale: As Noted

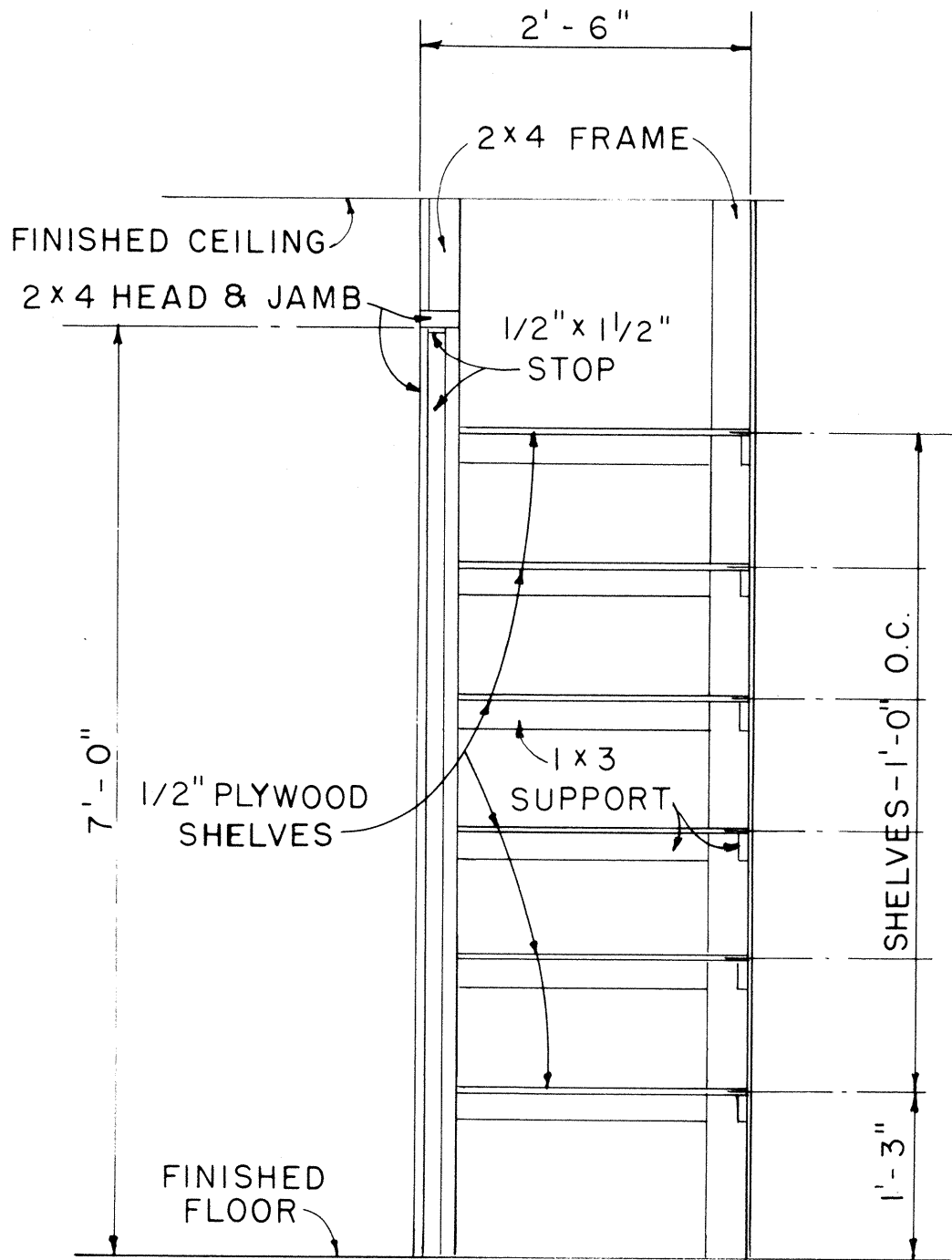


| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | RF-056-1(10)       | 1971        | 35        | 74           |



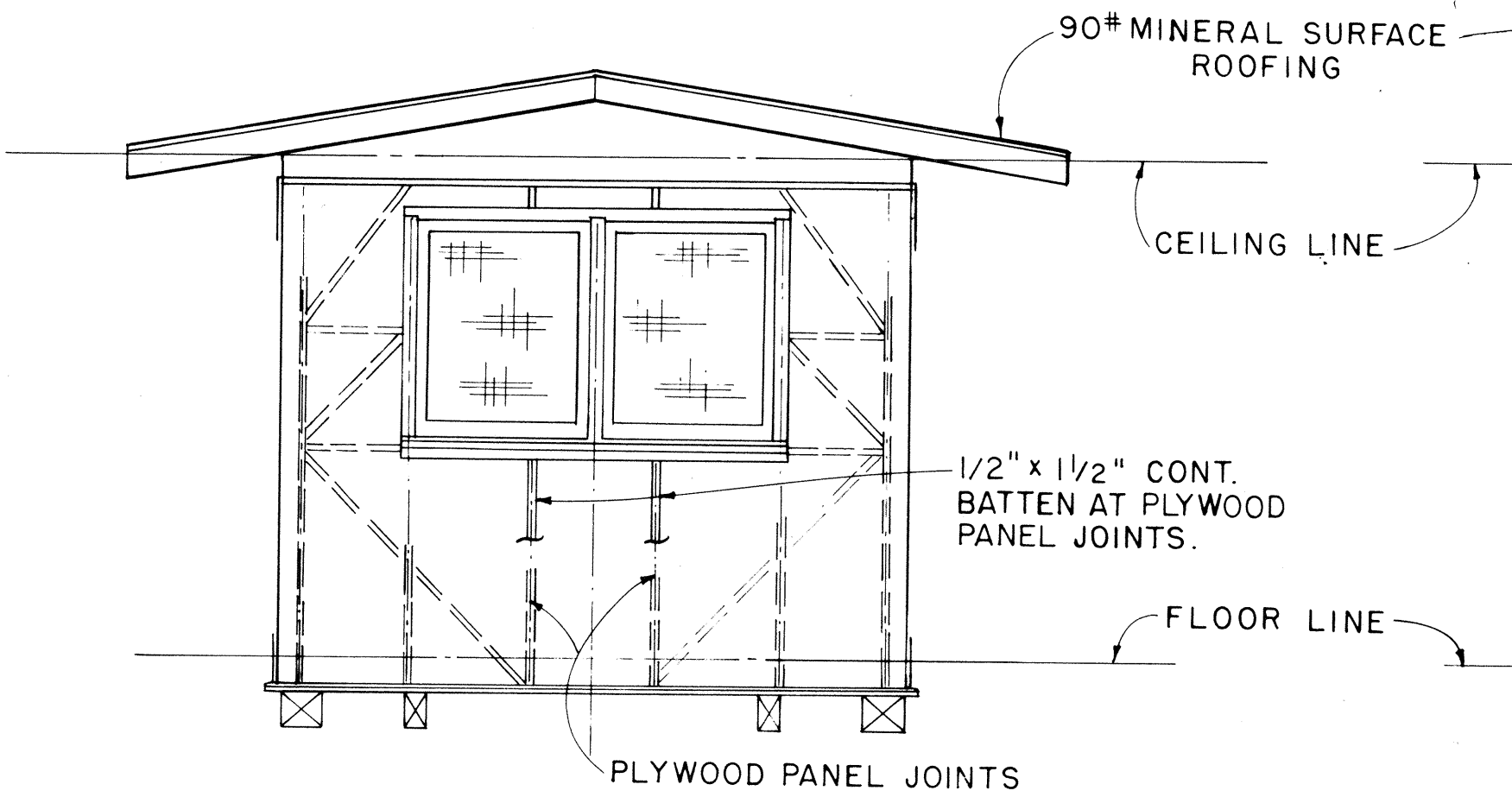
CASEMENT DETAIL

SCALE: 3" = 1'-0"



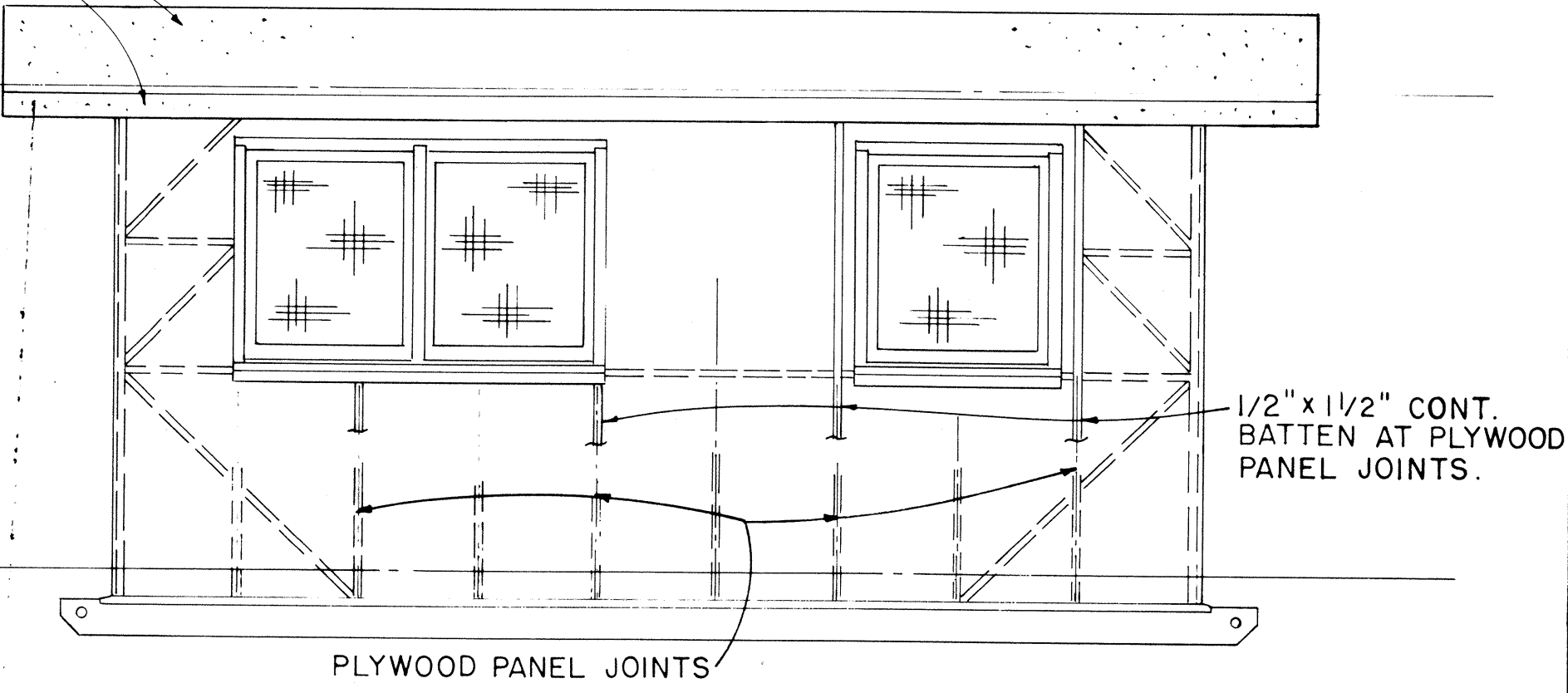
CABINET DETAIL

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



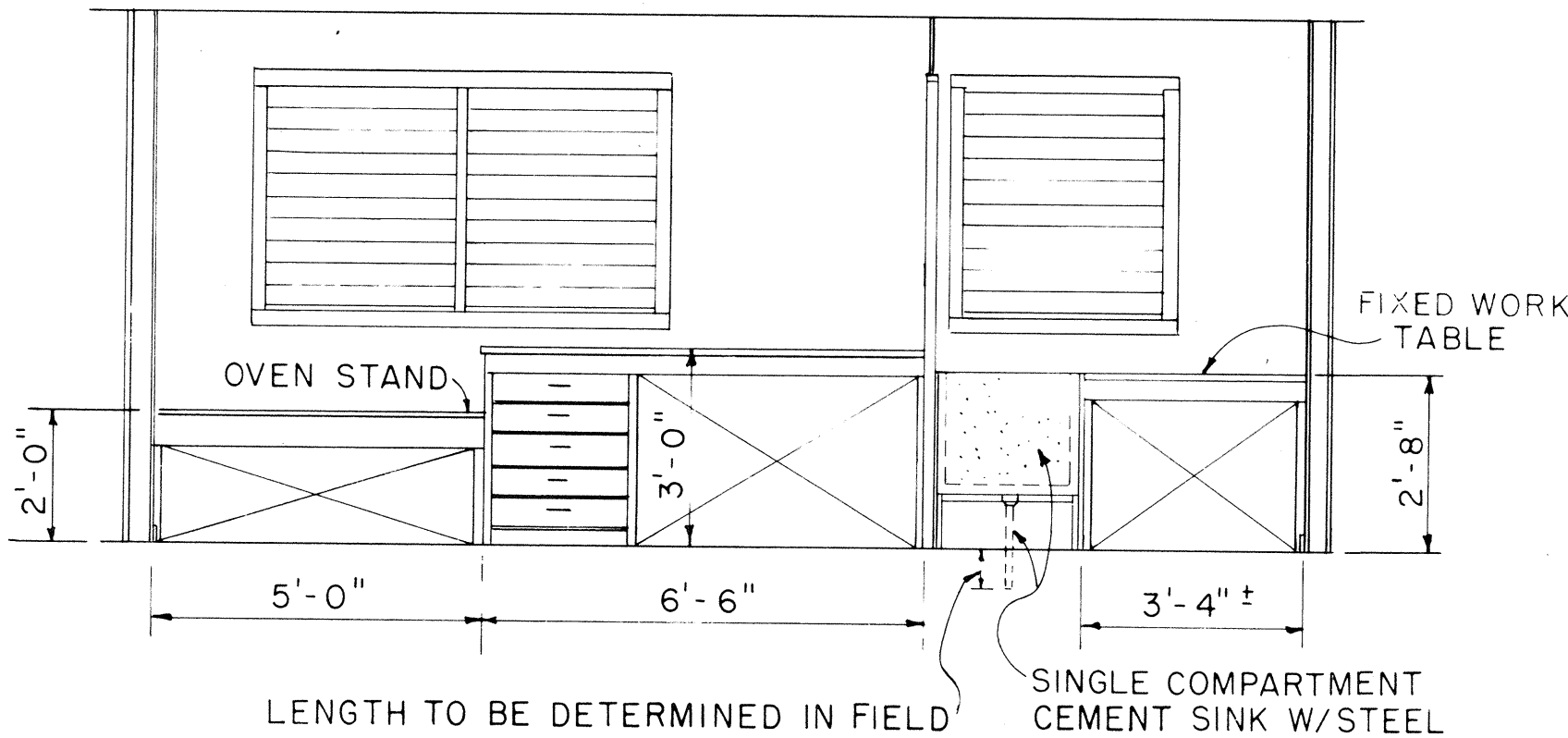
ELEVATION D

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



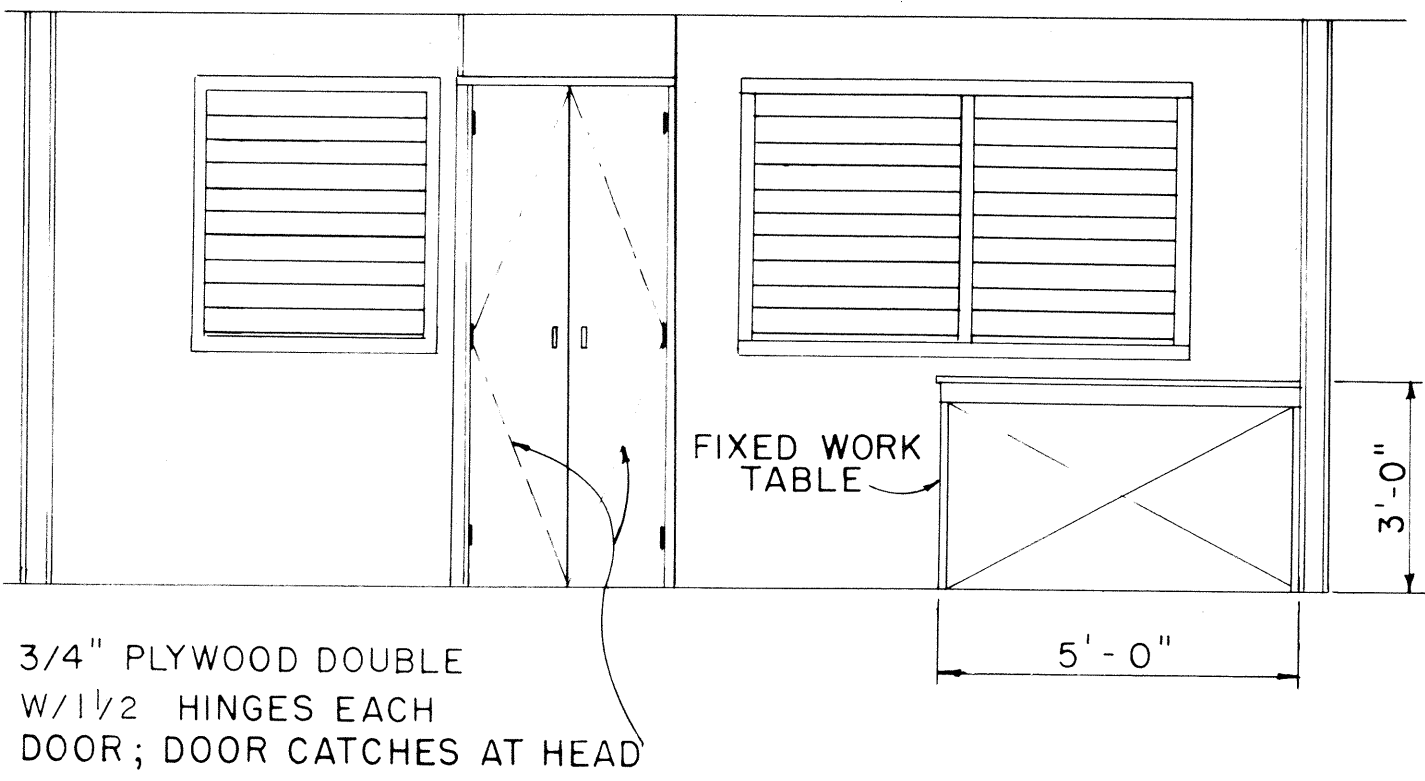
ELEVATION C

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



ELEVATION C1

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



ELEVATION A1

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

|               |                   |      |
|---------------|-------------------|------|
| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
| NOTE BOOK     | DRAWN BY          |      |
|               | DESIGNED BY       |      |
|               | CHECKED BY        |      |
|               |                   |      |

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

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

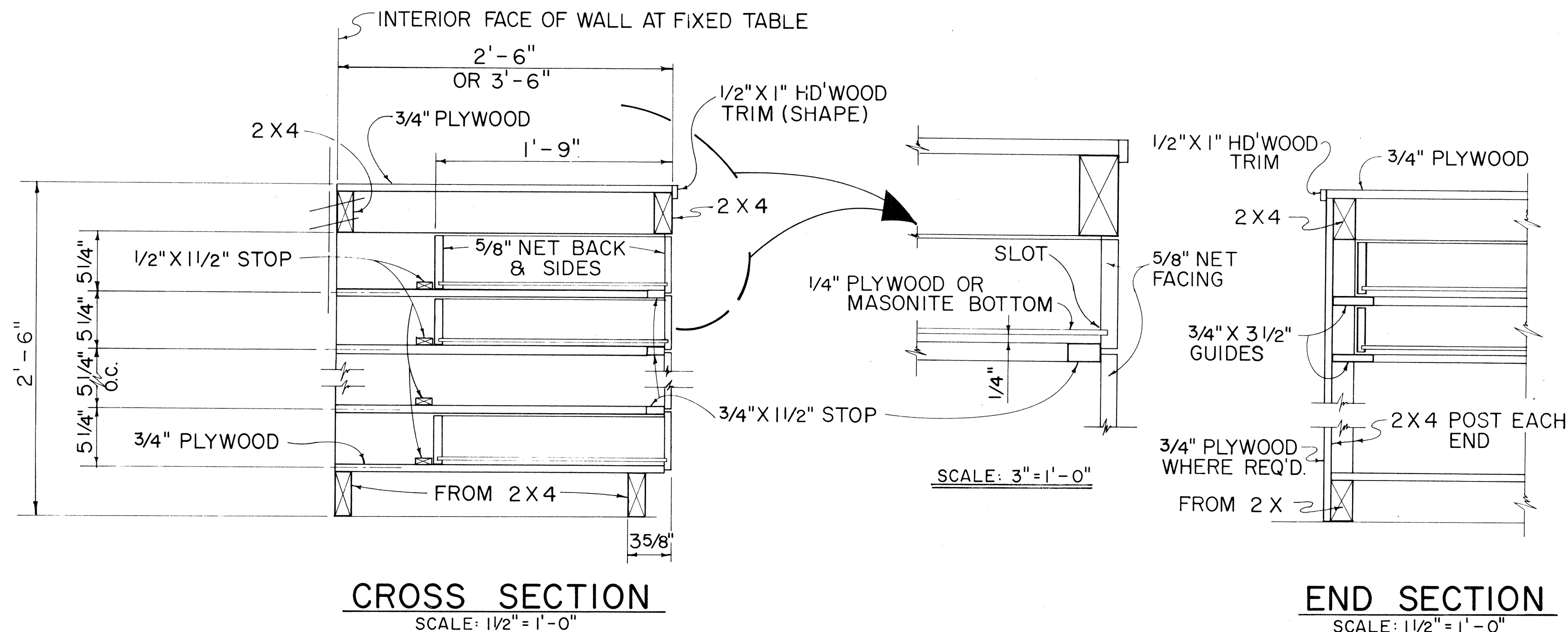
| NO. | REVISION | APPROVED BY | DATE |
|-----|----------|-------------|------|
|     |          |             |      |

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

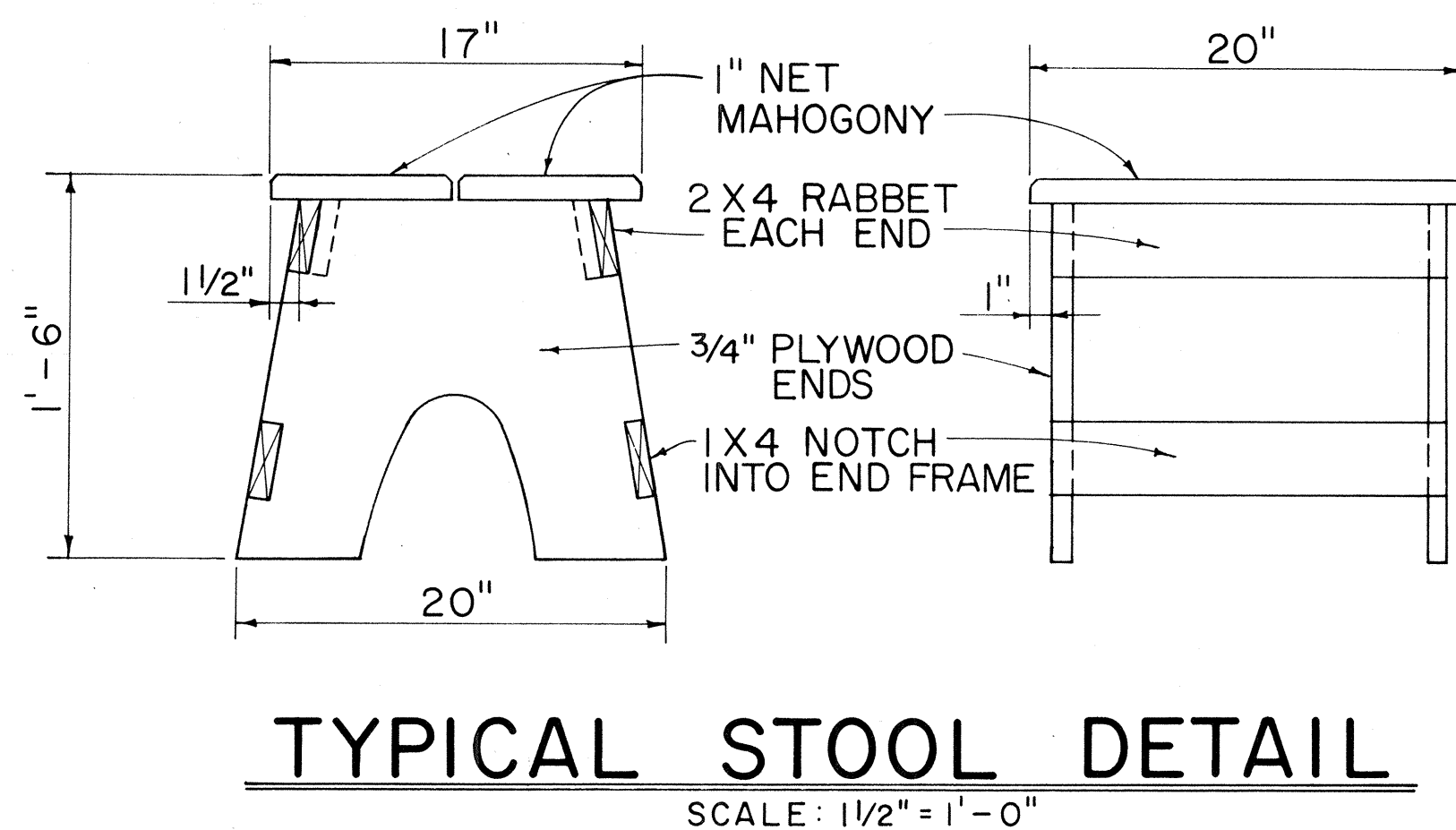
PROJECT SITE LABORATORY

Scale: As Noted

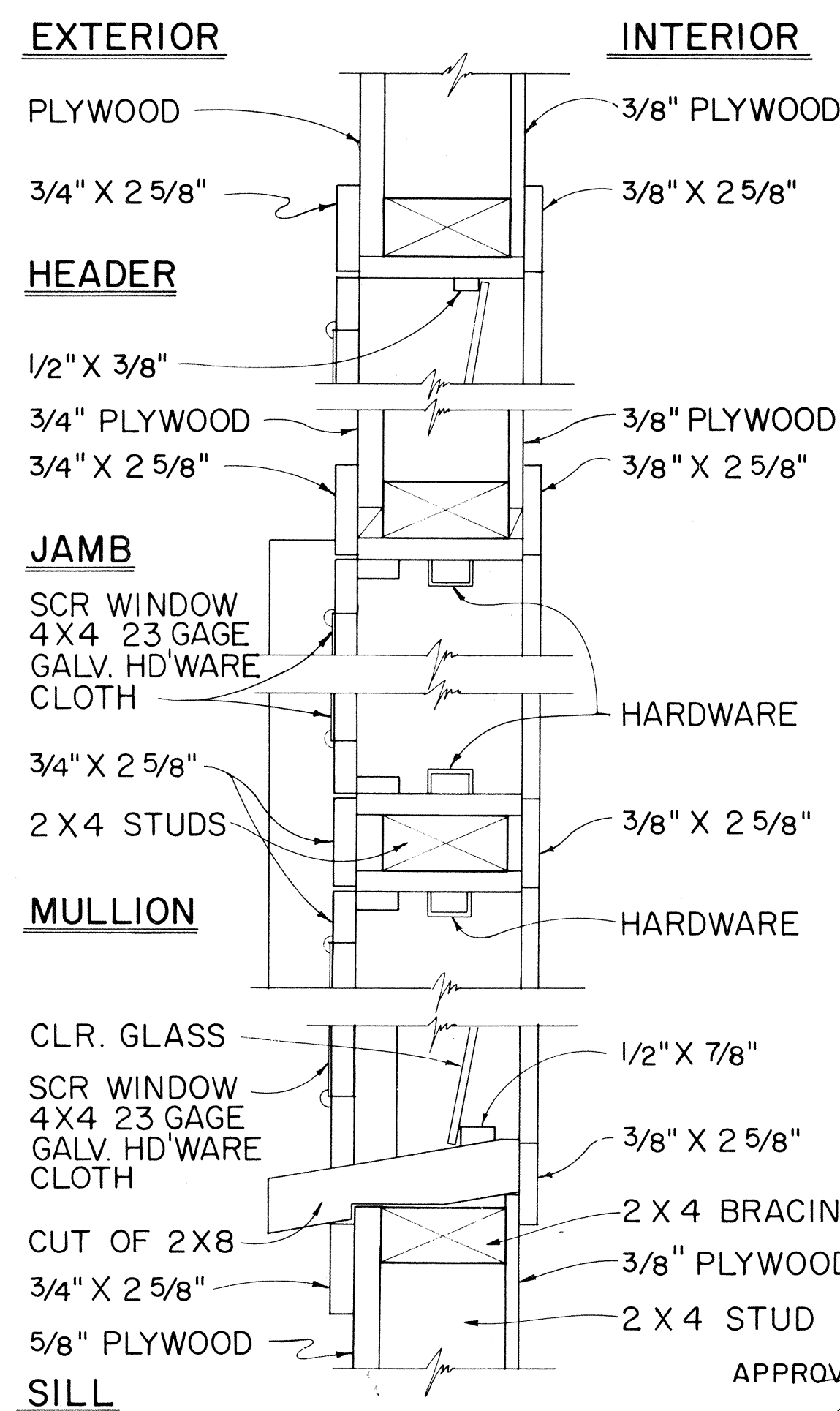
| FED. ROAD DIST. NO. | STATE  | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|--------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAWAII | RF-050-1(10)       | 1971        | 36        | 74           |



TYPICAL WORK TABLE DRAWER DETAIL



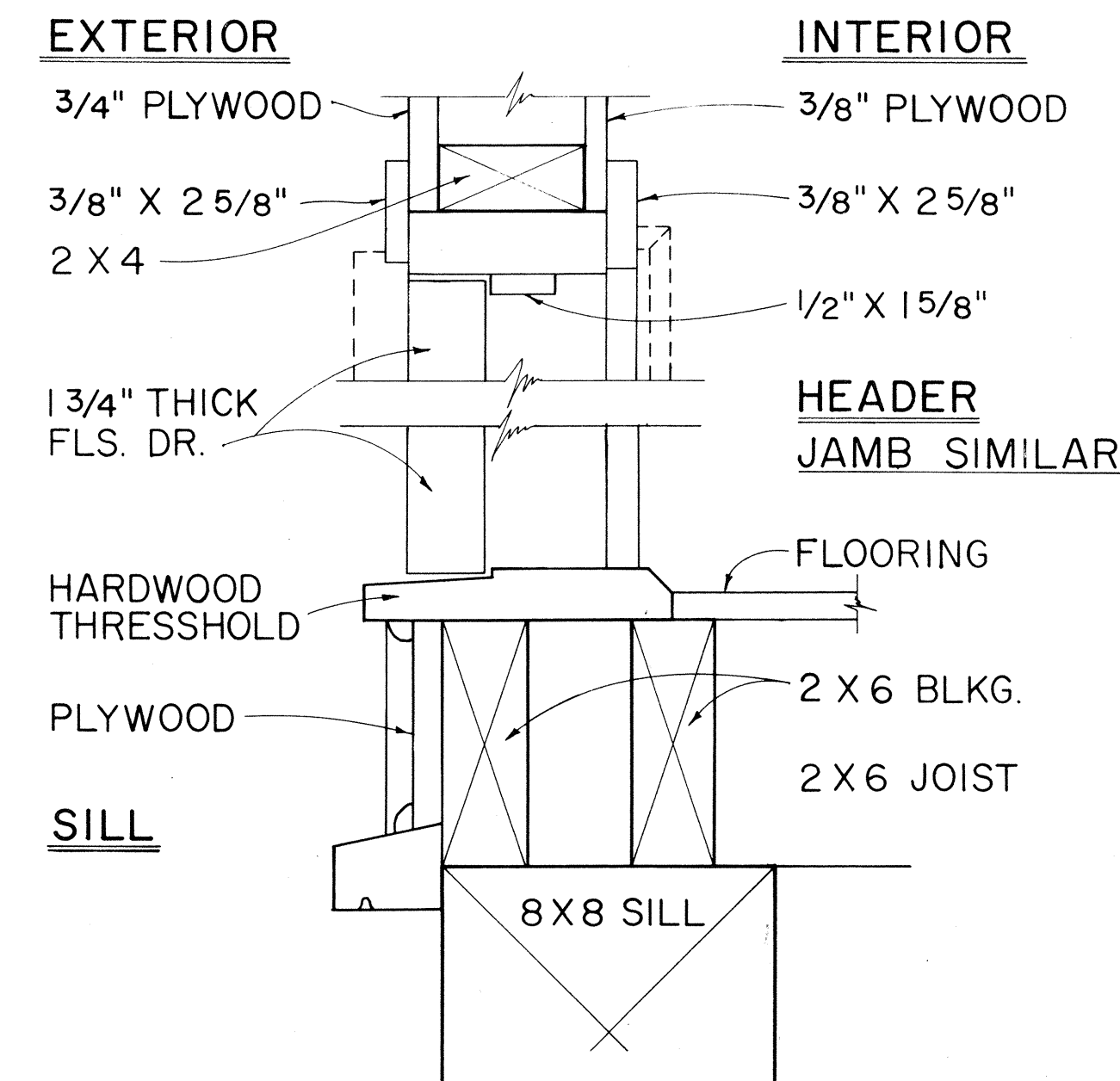
NOTE: CONTRACTOR MAY WITH THE APPROVAL OF THE ENGINEER FURNISH THE FIELD OFFICE OR PROJECT SITE LABORATORY WITH STOOLS OTHER THAN THE TYPE SHOWN IN THE DETAIL.



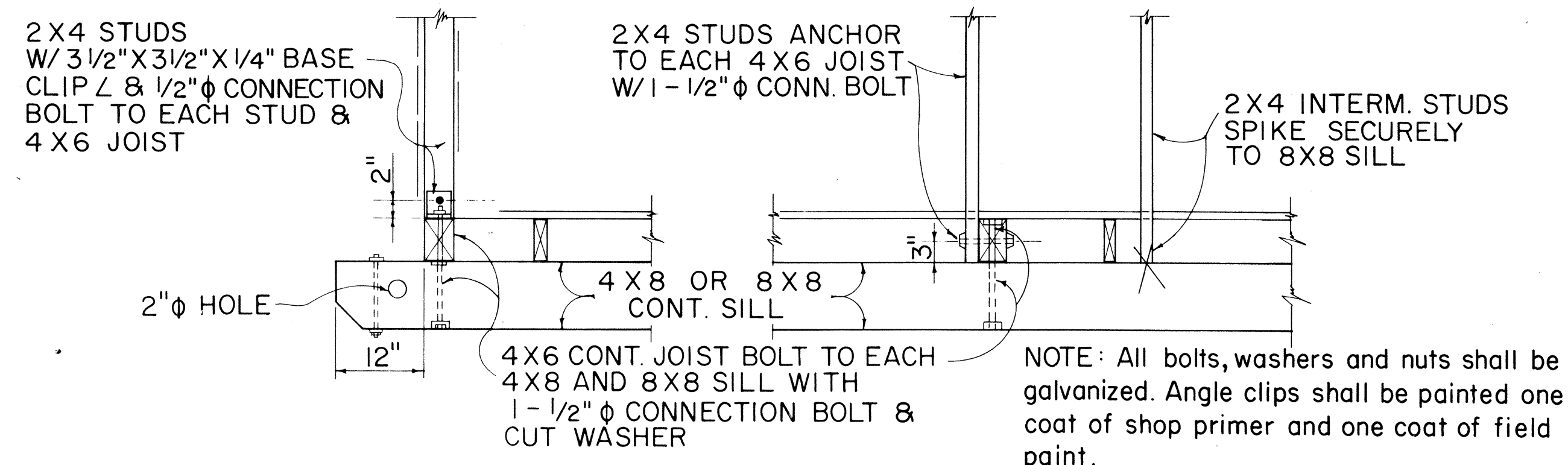
TYPICAL DETAIL JALOUSIES WINDOWS  
SCALE: 3" = 1'-0"

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

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



TYP. SWING OUT DOOR  
TYPICAL SINGLE OR DOUBLE EXTERIOR DOOR DETAIL



AT ENDS OF BLDG. ALONG SIDES OF BLDG.

TYPICAL 2X4 STUD & 4X6 FLOOR JOIST BASE CONNECTION DETAILS

| NO. | REVISION | APPROVED BY | DATE |
|-----|----------|-------------|------|
|     |          |             |      |

|                                                                      |
|----------------------------------------------------------------------|
| STATE OF HAWAII<br>DEPARTMENT OF TRANSPORTATION<br>HIGHWAYS DIVISION |
| FIELD OFFICE<br>&<br>PROJECT SITE LABORATORY                         |
| Scale: As Noted                                                      |