

TO HALEIWA

Footbridge Steel Bracket Spacing

Ramp Down

Conc. Pedestal Spacing

Conc. 5'-0"

Approach Conc. Landing

Type "A"

Type "B"

2'-0 1/4"

5'-0"

12"

Exist. curb line

Metal guard rail

4 x 4 rail post. See Det.

2 3/4"

Metal guard rail connector. See Typ. Det. Sht. # 3

Ref. line -  $\pm 5/8"$  anchor bolt

Metal Guard Rail Post & Space Block 6'-3" o.c. See Hwy. drawings

TO KAHUKU

Span

10 spcs. @ 6'-0" = 60'-0"

5'-0"

4'-0"

4'-0"

4'-0"

Ref. - edge of exist. conc. bridge deck

Metal guard rail connector. See Typ. Detail Sht. 3

22'-0 1/4"  $\pm$  Exist. Conc. Rail

Ref. line -  $\pm 5/8"$  anchor bolt

LAYOUT PLAN - PEDESTRIAN FOOTBRIDGE ALONG MAKAI HANDRAIL - BAUNANI BRIDGE

Scale:  $\frac{1}{4}'' = 1'-0''$



Scale: 1" = 1'-0"

DESIGN SPECIFICATIONS:  
Standard Specifications for Highway Bridges (12th Edition) with subsequent Interim Specifications (AASHTO).

1. All concrete shall be Class B.
2. All timber shall be Douglas Fir select structural grade S4S, Sec. Spec. Provision
3. All brackets shall be hot dip galvanized after fabrication.
4. All connection bolts, angles, plates, nuts, washers, spikes and expansion shields shall be galvanized.
5. Terminal connectors shall be fabricated from 10 gage steel sheets conforming to the requirements of AASHTO M180.
6. All anchor bolts for the terminal connectors shall conform to ASTM A325.
7. All terminal connectors with required metal spacers, anchor bolts, nuts and washers shall be galvanized.
8. Except as otherwise noted, all welds shall be a  $\frac{5}{16}$ " fillet weld continuous all around at all contact edges of shapes and plates.
9. Painting - see Special Provisions.
10. Poured joint sealer shall conform to the requirements of Section 705.04(A).

1. See Standard Specifications for Road & Bridge Construction (Hawaii, 1976) & Special Provisions.
2. Large impacting or vibratory type of equipment will not be permitted for drilling.
3. It shall be the responsibility of the Contractor to verify the locations of all existing utility lines and details of existing concrete bridge structure before fabrication of steel brackets, terminal connector metal spacer and connecting members.
4. The Contractor shall verify the location of all existing utility lines on or near the structure and notify their respective owners before commencing work.
5. The contractor shall field verify all existing dimensions and grades.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
LAND TRANSPORTATION FACILITIES DIVISION

KAMEHAMEHA HIGHWAY  
PEDESTRIAN FOOTBRIDGE  
AT PAUMALU BRIDGE

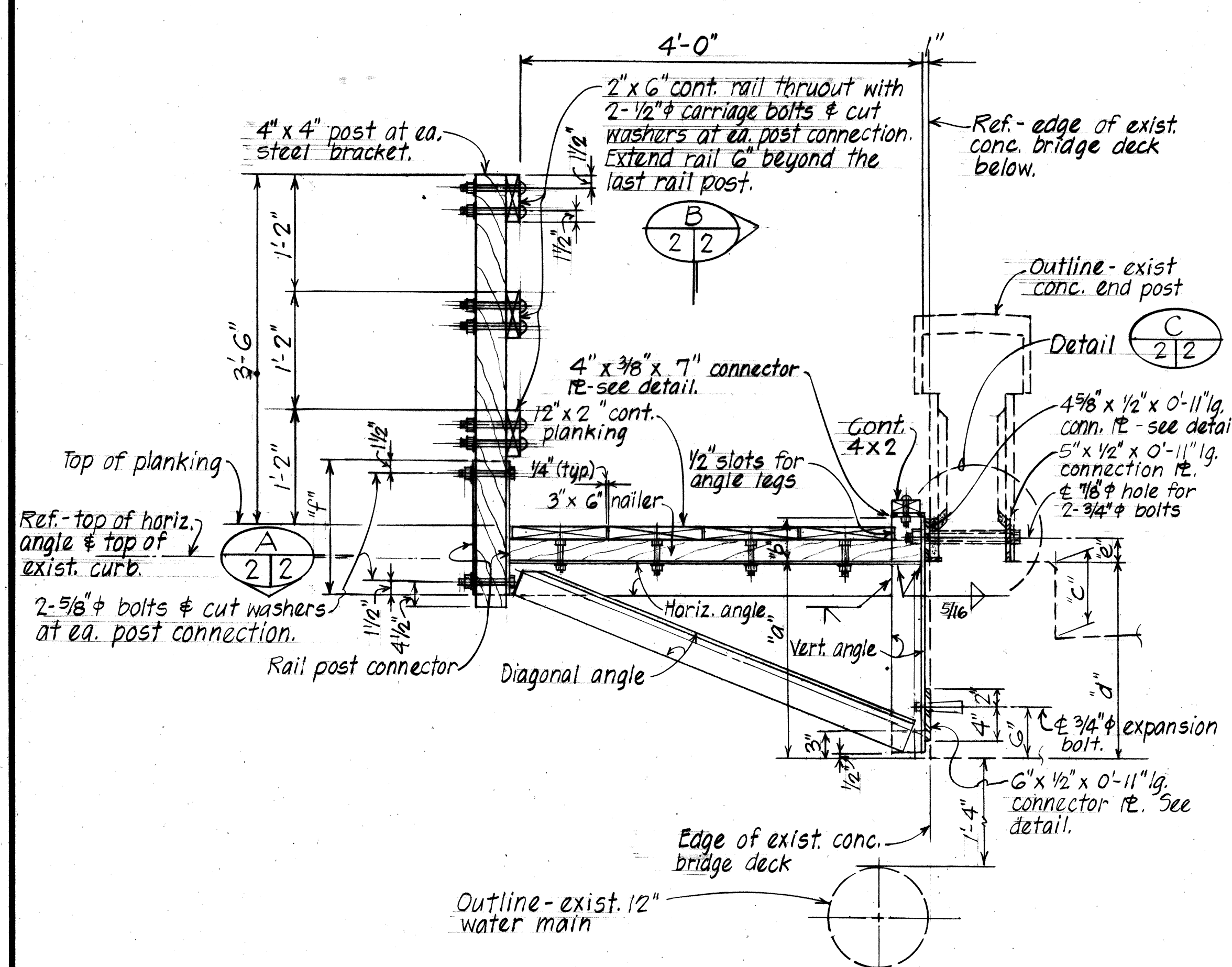
PROJ. NO. 83B-01-83

Scale: As Noted Date: March 1983

SHEET NO. 1 OF 3 SHEETS



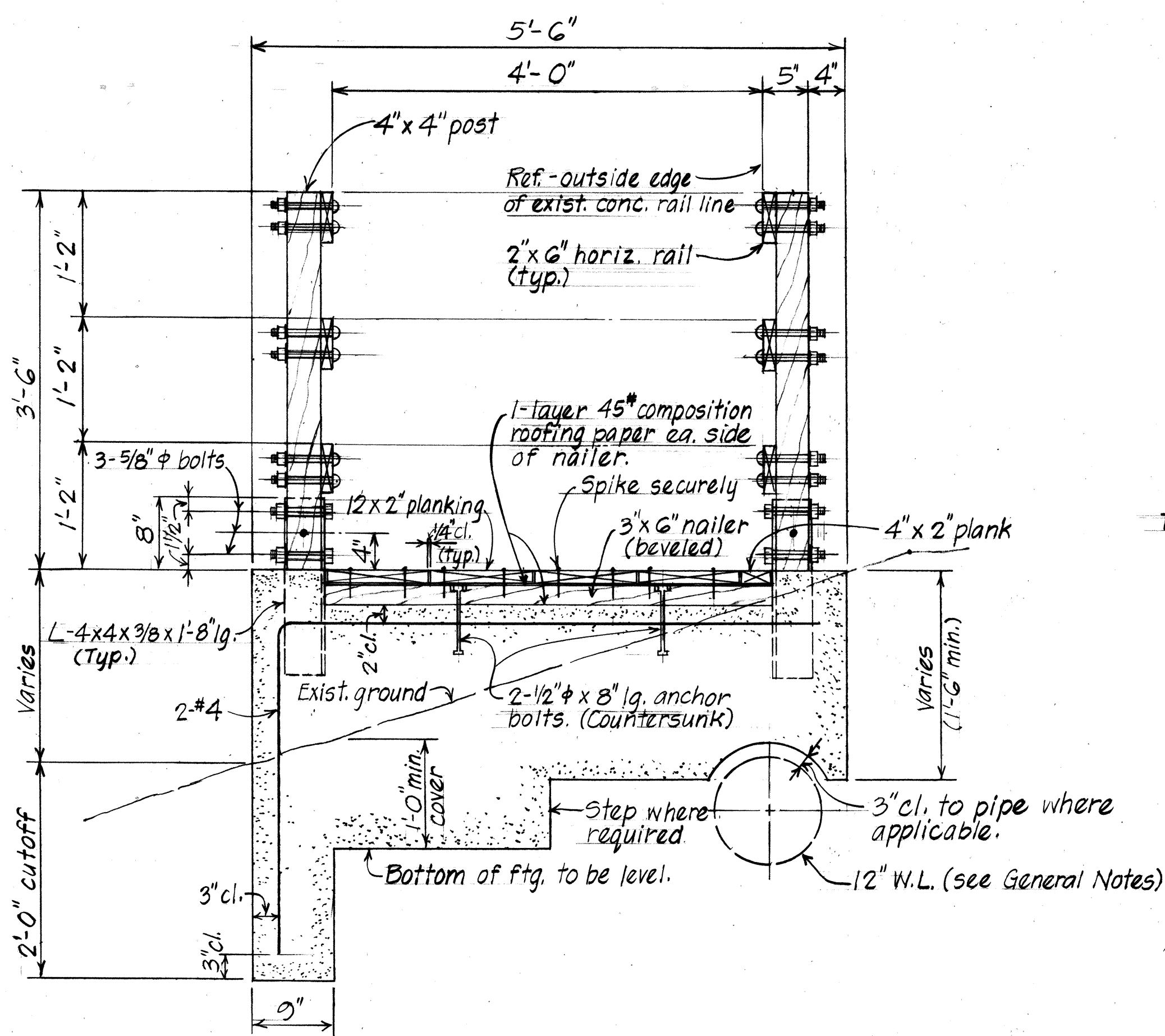
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-----------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 83B-01-83 | 1984        | 4         | 11           |



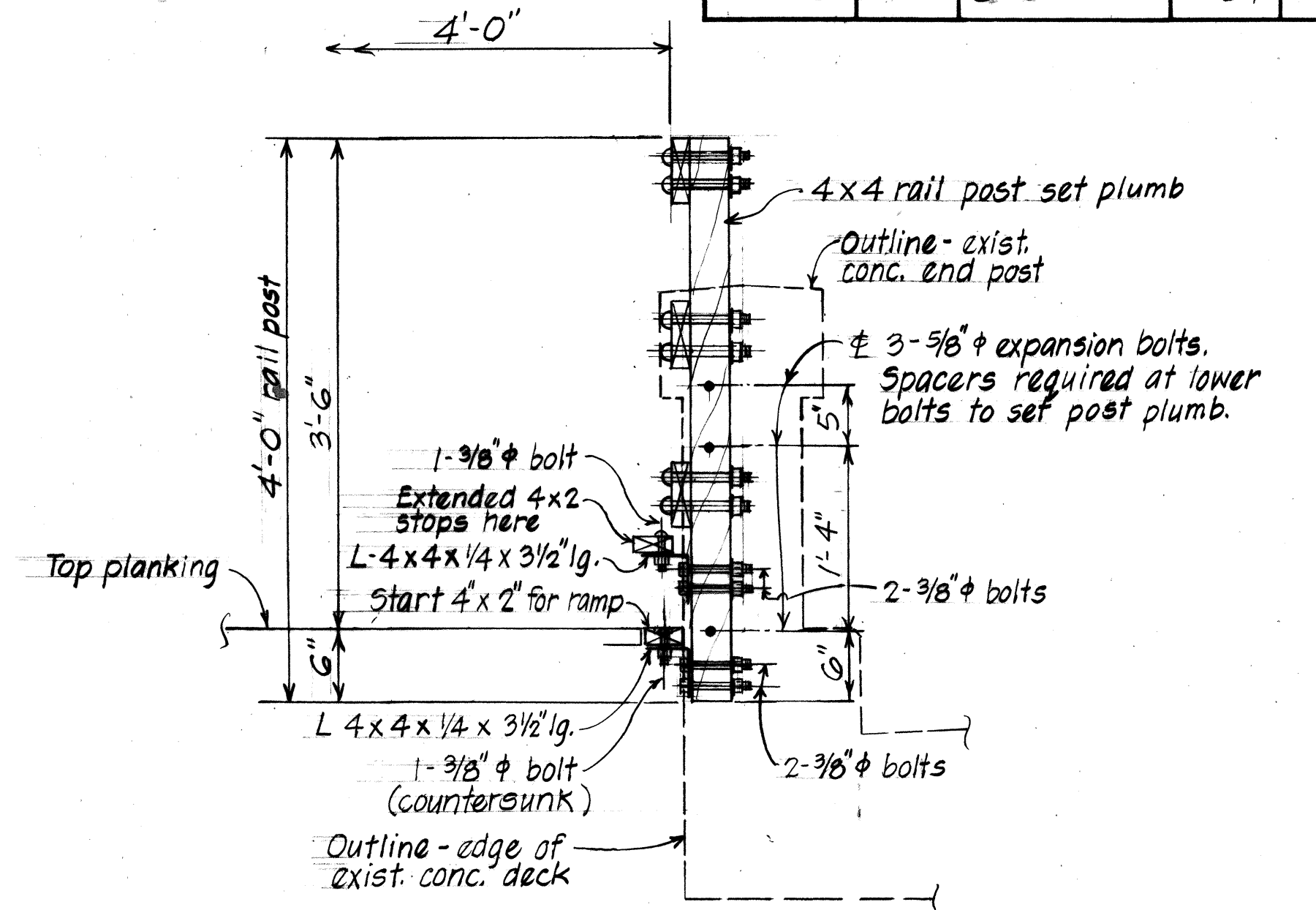
**TYPICAL DETAIL - PEDESTRIAN FOOTBRIDGE FOR BRIDGE**  
Scale: 1" = 1'-0"

| ITEM          | PEDESTRIAN WALKWAY SCHEDULE |        |     |            |        |                      |             |            |            |                      |
|---------------|-----------------------------|--------|-----|------------|--------|----------------------|-------------|------------|------------|----------------------|
|               | DIMENSIONS                  |        |     |            |        | STEEL BRACKET ANGLES |             |            |            |                      |
|               | "a"                         | "b"    | "c" | "d"        | "e"    | "f"                  | Horizontal* | Diagonal   | Vertical   | Rail Post Connection |
| Steel Bracket | 1'-11 1/2"                  | 5 1/2" | 0"  | 1'-11 1/2" | 2 3/4" | 1'-4"                | 4"x4"x3/8"  | 4"x4"x3/8" | 4"x4"x3/8" | 4"x4"x3/8"           |

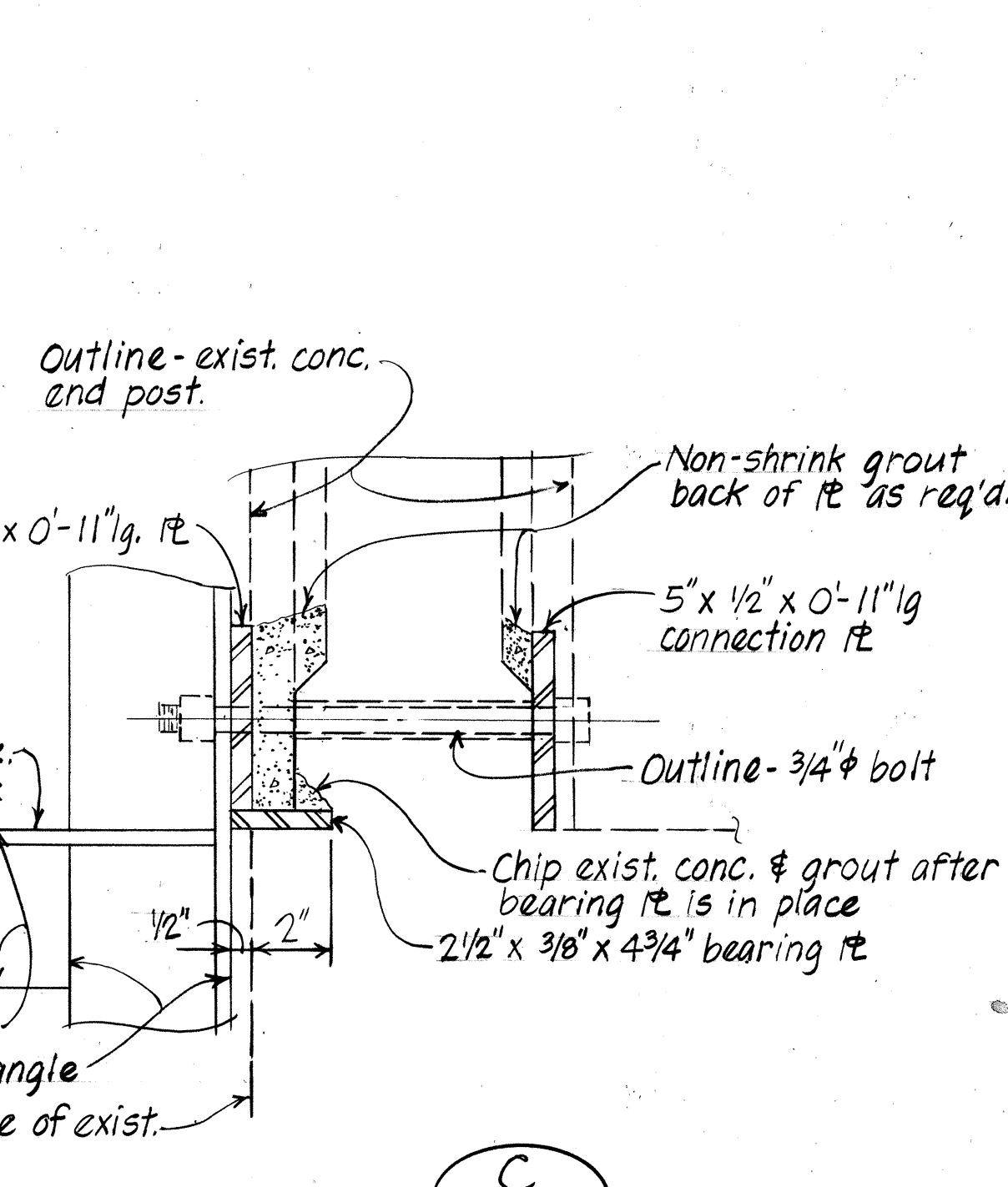
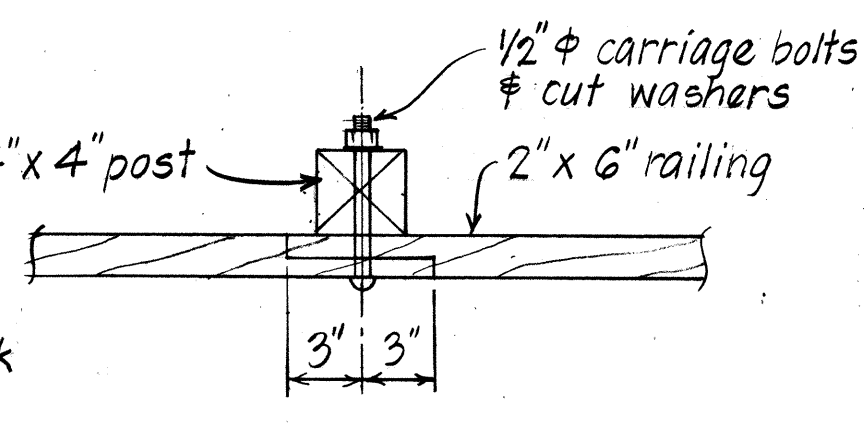
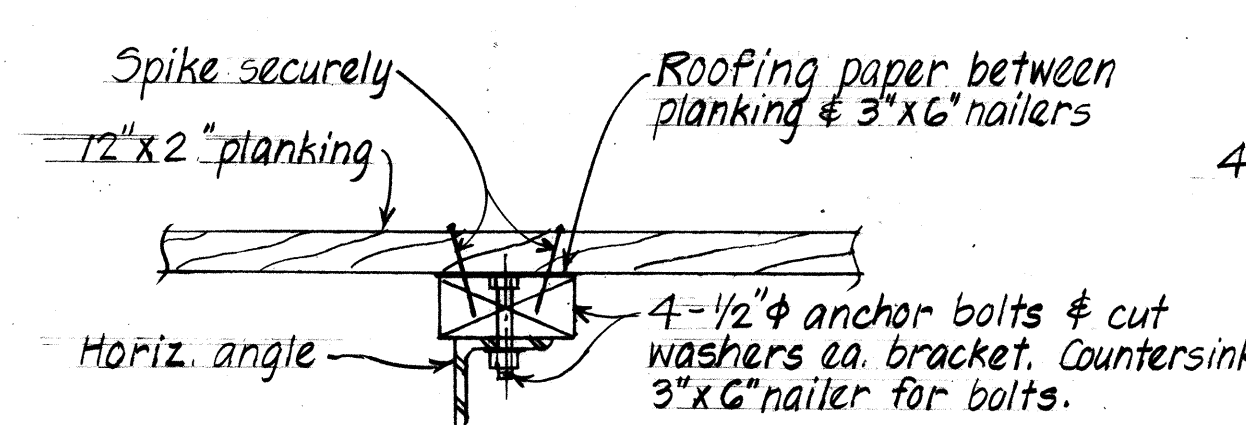
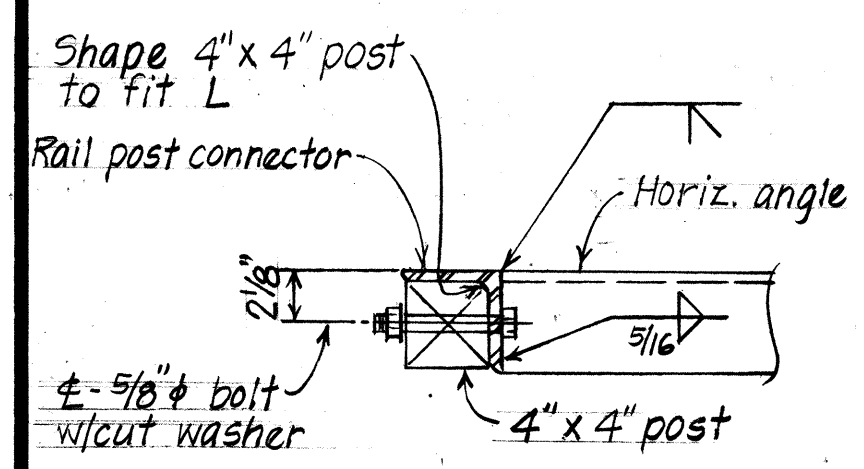
\* Shape to fit vertical leg.



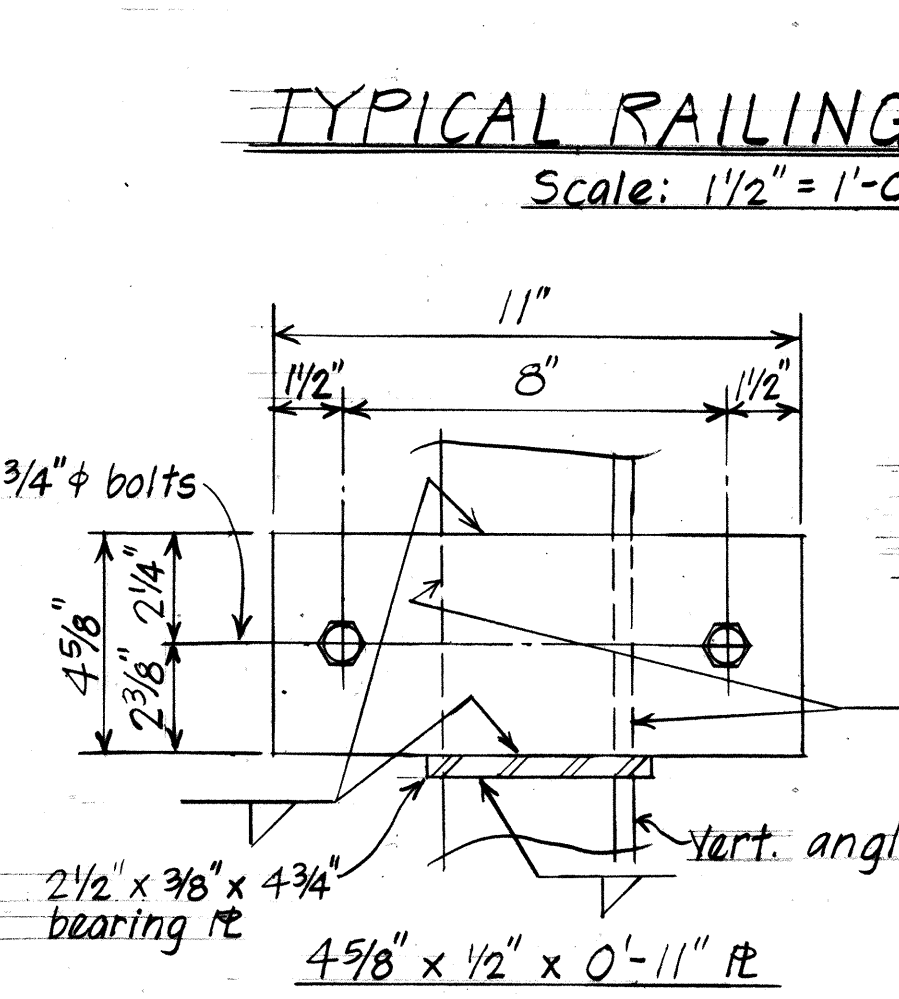
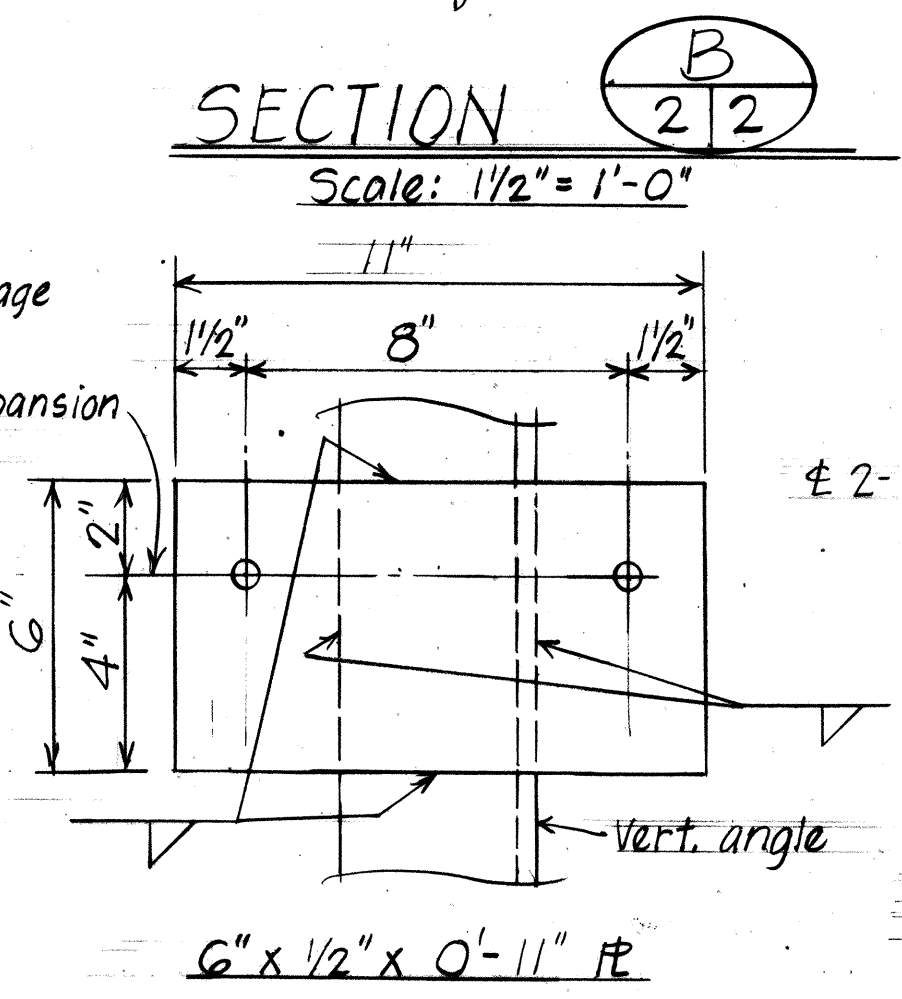
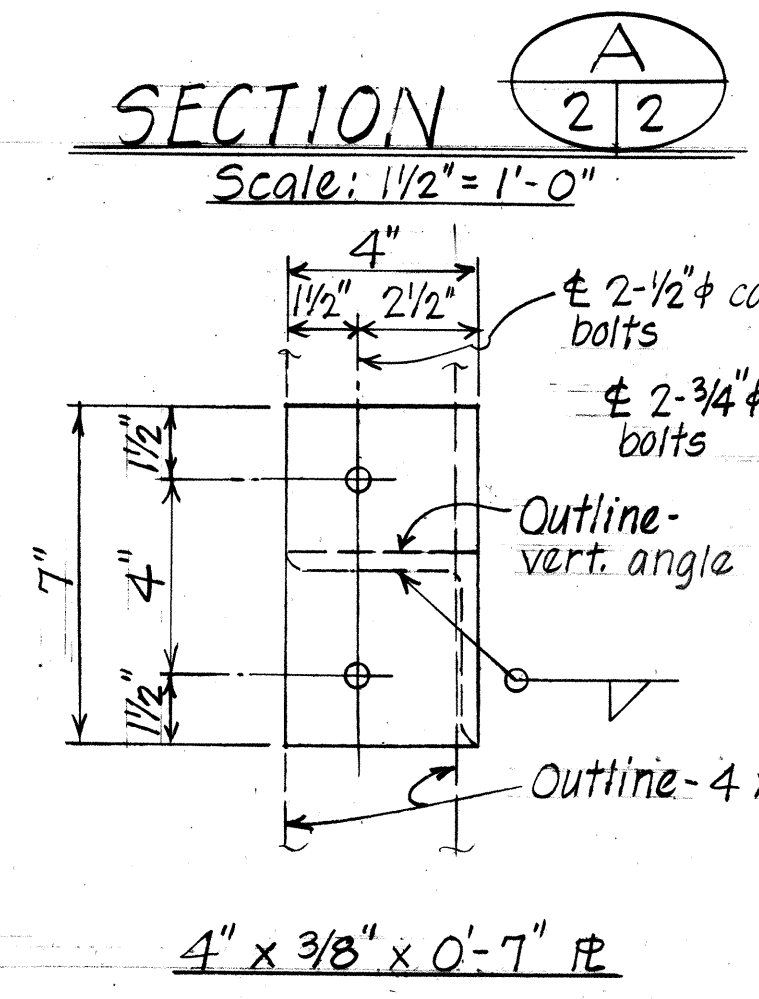
**TYPICAL ELEVATION CONCRETE PEDESTAL**  
Scale: 1" = 1'-0"



**RAIL POST CONNECTION DETAIL AT EXISTING CONCRETE END POST**  
Scale: 1" = 1'-0"



**DETAIL C**  
Scale: 3" = 1'-0"



**CONNECTOR PLATE DETAILS**  
Scale: 3" = 1'-0"

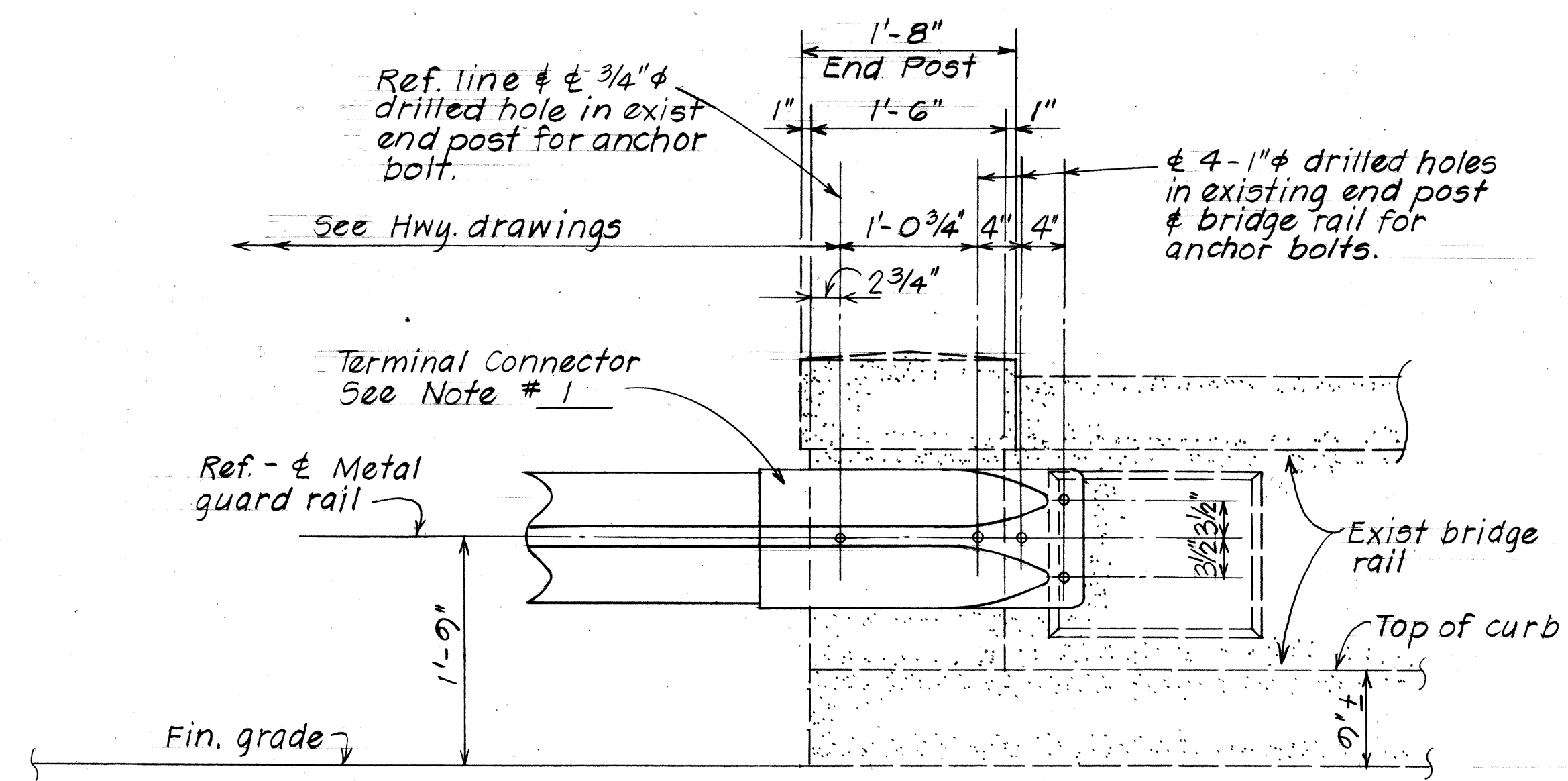
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
LAND TRANSPORTATION FACILITIES DIVISION

**TYPICAL DETAILS**  
KAMEHAMEHA HIGHWAY  
PEDESTRIAN FOOTBRIDGE  
AT PAUMALU BRIDGE  
PROJ. NO. 83B-01-83  
Scale: As Noted Date: March 1983  
SHEET NO. 2 OF 3 SHEETS

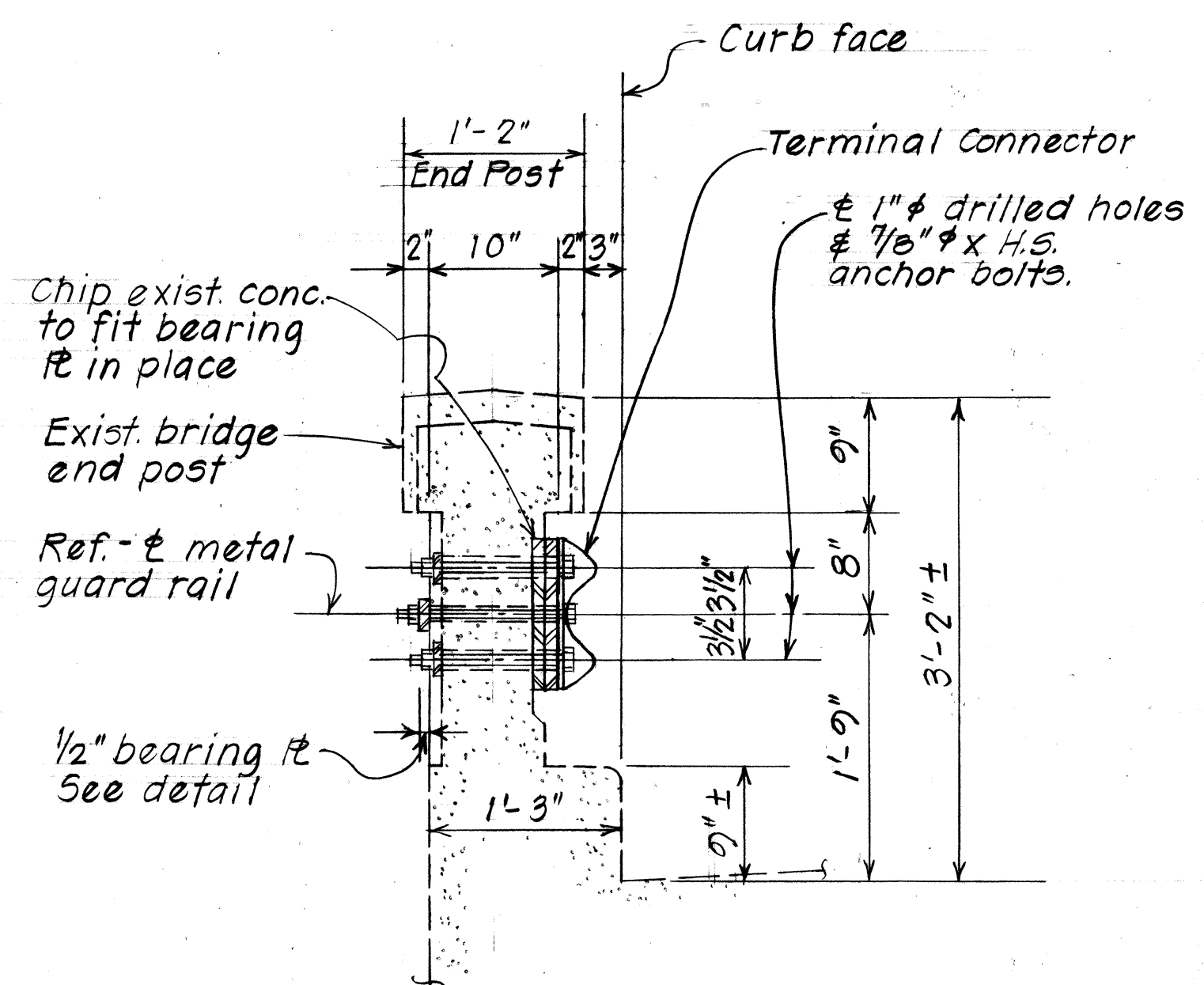
|             |                 |
|-------------|-----------------|
| DATE        | 2/83            |
| DESIGNED BY | S.A.            |
| CHECKED BY  | D.C.O. & C.R.Y. |
| NO.         | 2/83            |



| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-----------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 83B-01-83 | 1984        | 5         | 11           |

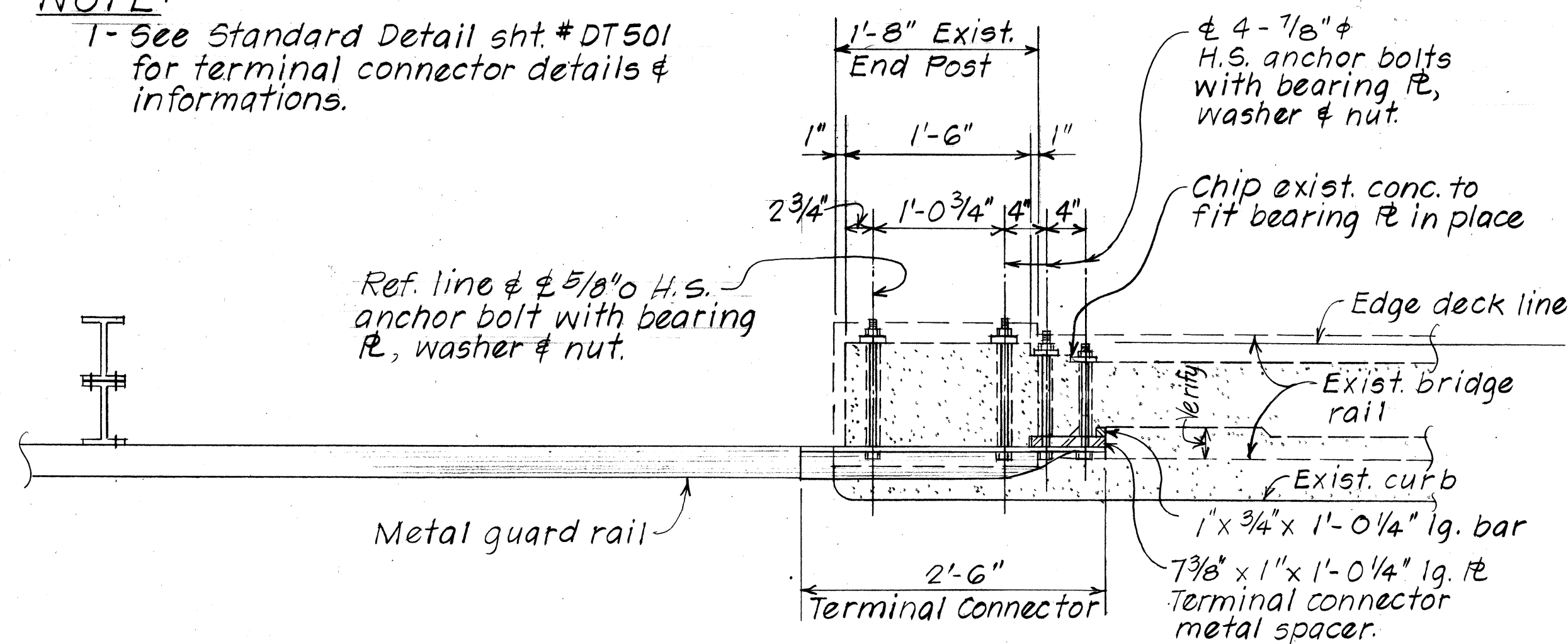


**ELEVATION**  
Scale: 1" = 1'-0"

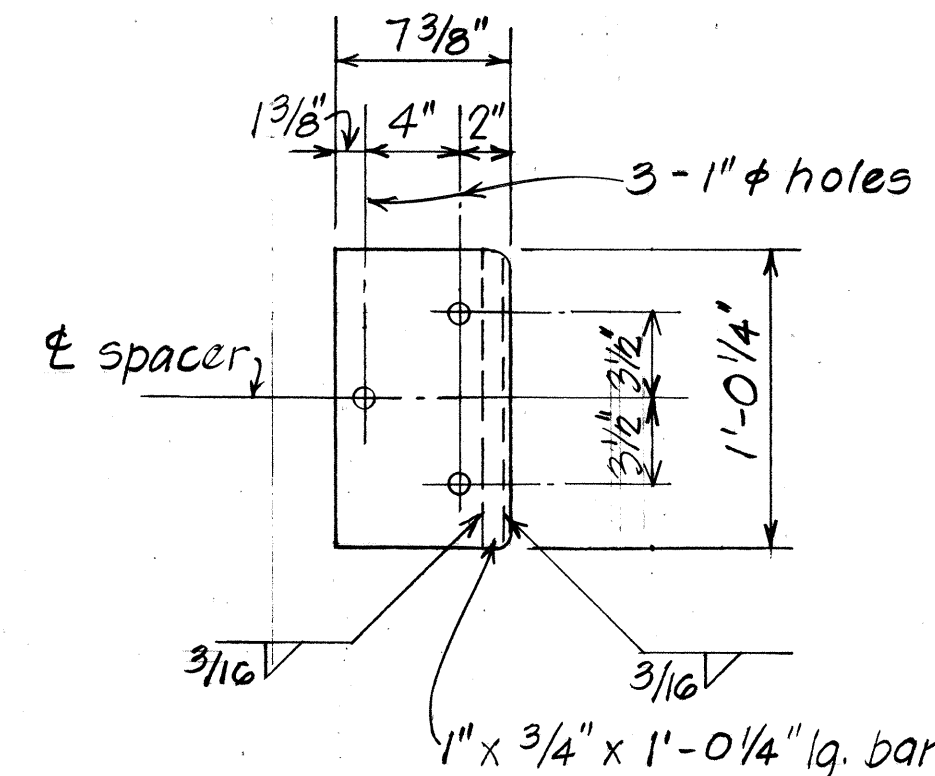


**TYPICAL SECTION**  
Scale: 1" = 1'-0"

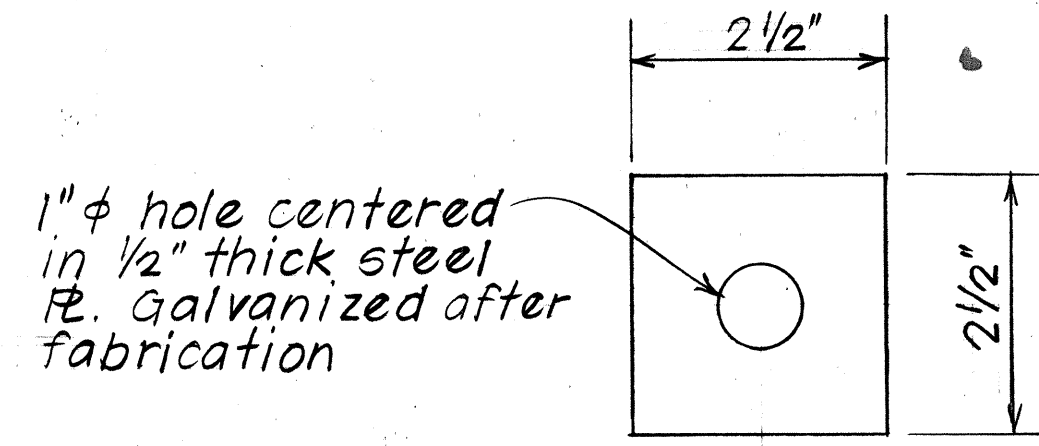
**NOTE:**  
1- See Standard Detail sht. # DT501 for terminal connector details & informations.



**PLAN**  
Scale: 1" = 1'-0"



**TERMINAL CONNECTOR METAL SPACER**  
Scale: 1 1/2" = 1'-0"



**BEARING PLATE DETAIL**  
Not to scale

|               |      |
|---------------|------|
| ORIGINAL PLAN | DATE |
| DESIGNED BY   | 2/83 |
| QUANTITIES BY | 2/83 |
| CHECKED BY    | 2/83 |

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
LAND TRANSPORTATION FACILITIES DIVISION

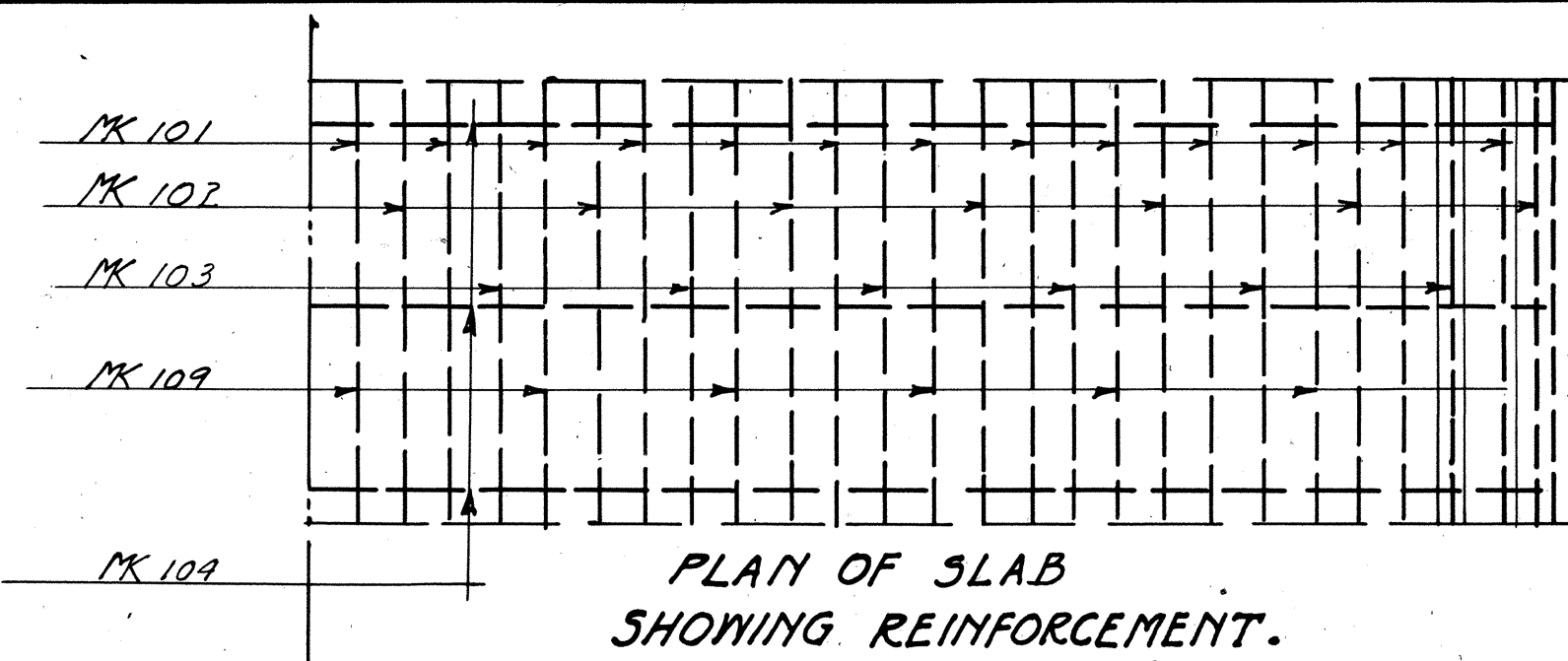
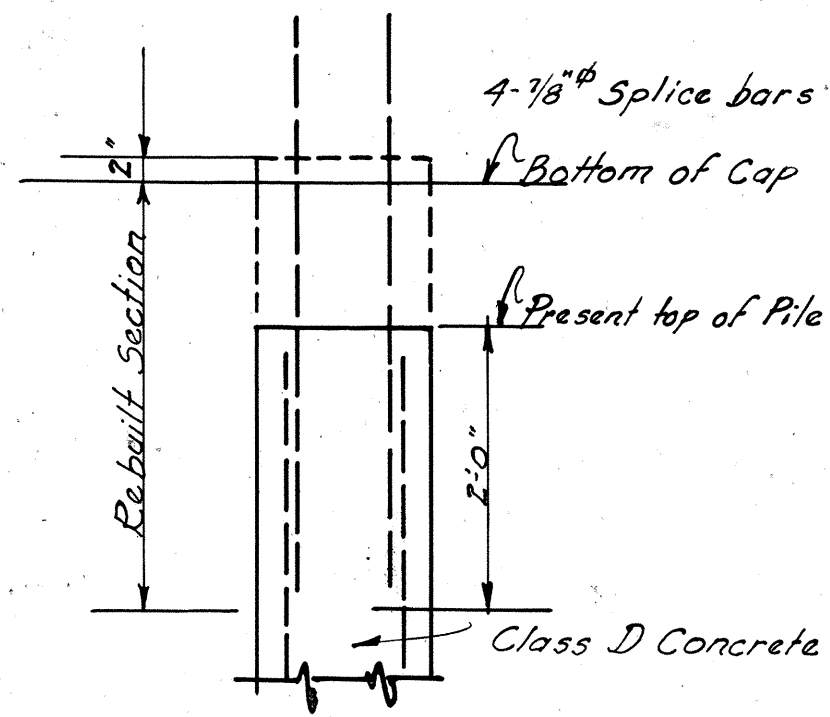
**METAL GUARD RAIL CONNECTION**  
KAMEHAMEHA HIGHWAY  
PEDESTRIAN FOOTBRIDGE  
AT PAUMALU BRIDGE

PROJ. NO. 83B-01-83  
Scale: As Noted Date: March 1983  
SHEET NO. 3 OF 3 SHEETS

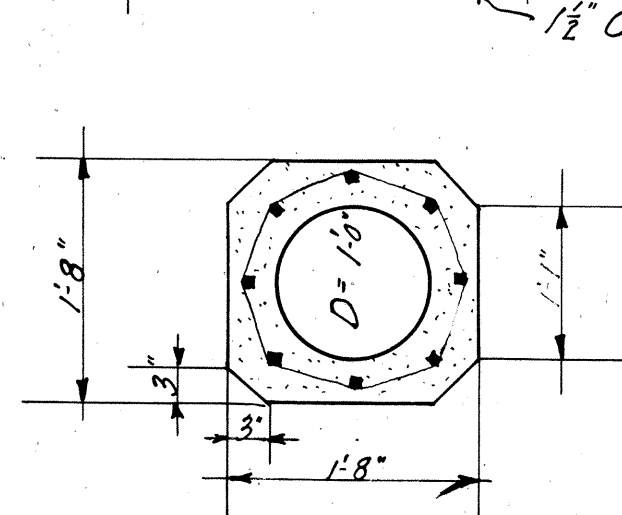
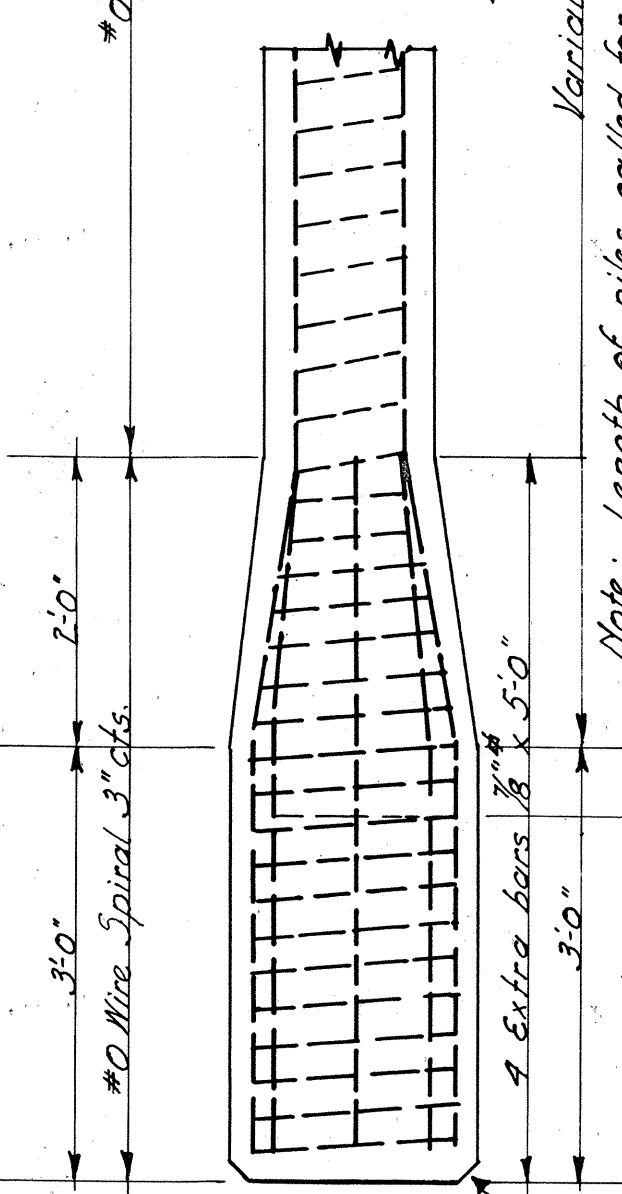
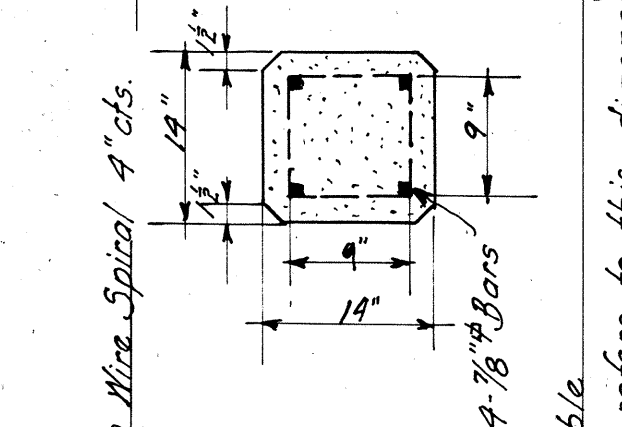
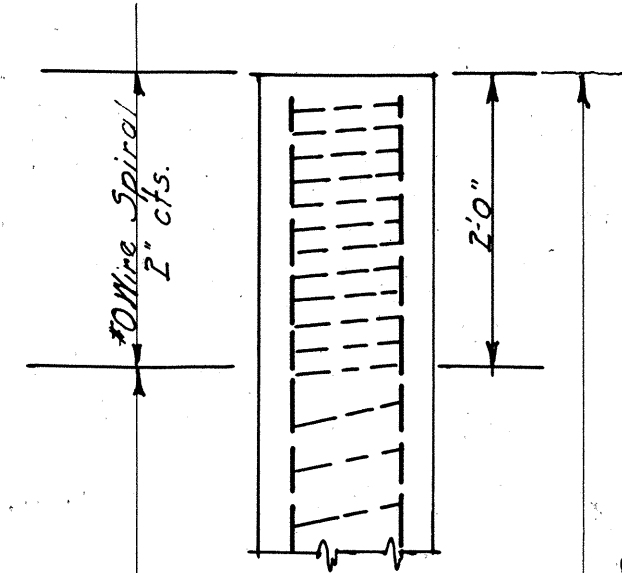


Note: Where piles are driven below grade or to such an elevation that when broken off to grade they will have less than 18" of the pile reinforcement projecting into the cap, the concrete must be removed for a distance of two feet and  $\frac{7}{8}$ " splice bars must be wired to their reinforcement of sufficient length to project 18" in the cap. New spiral hooping of #0 wire on 4" centers shall be added and the pile rebuilt to grade. These splices to be at the Contractor's expense. No steel has been included in the bending schedule for this purpose.

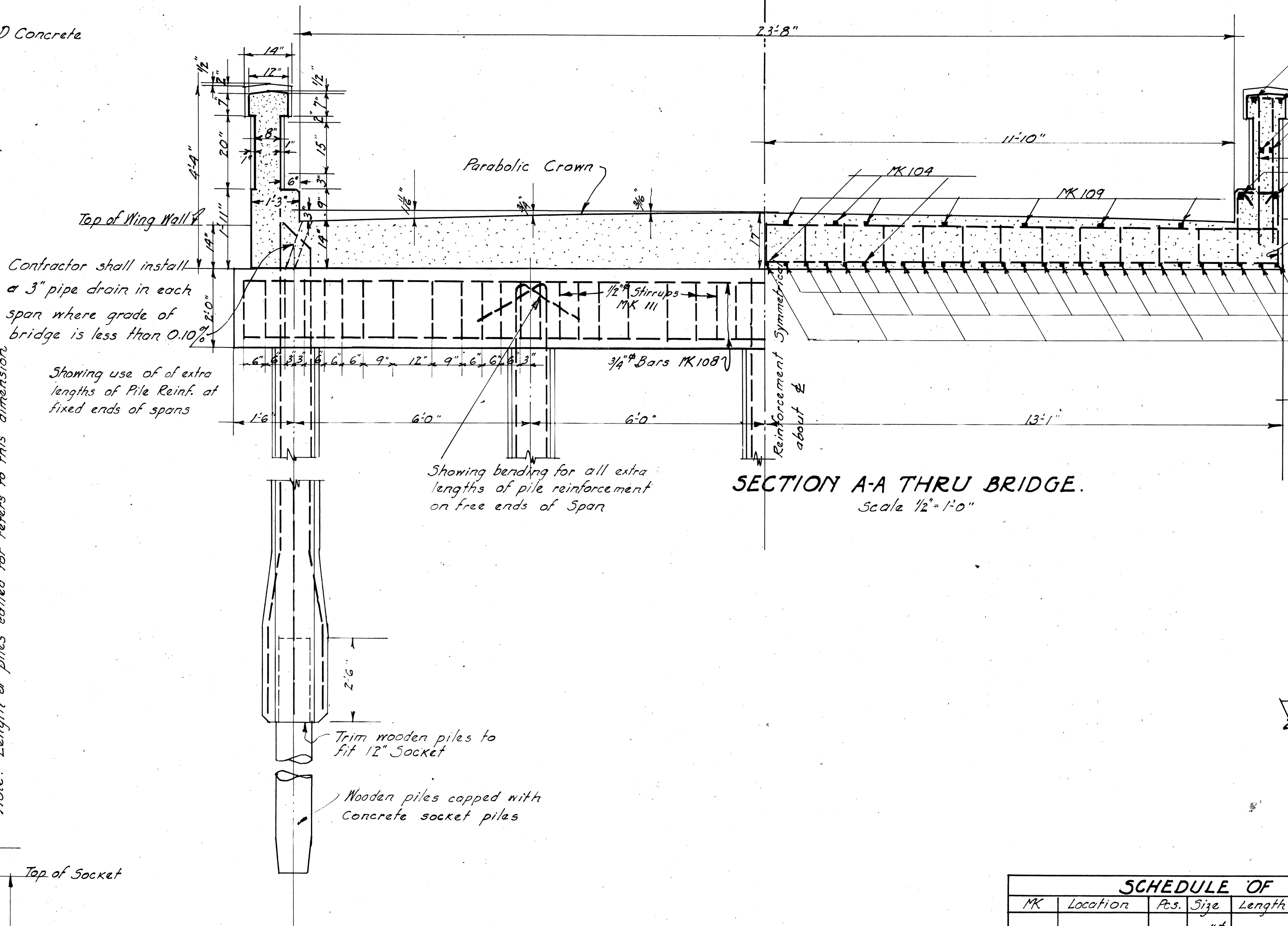
### CONCRETE SOCKET PILE SPLICES.



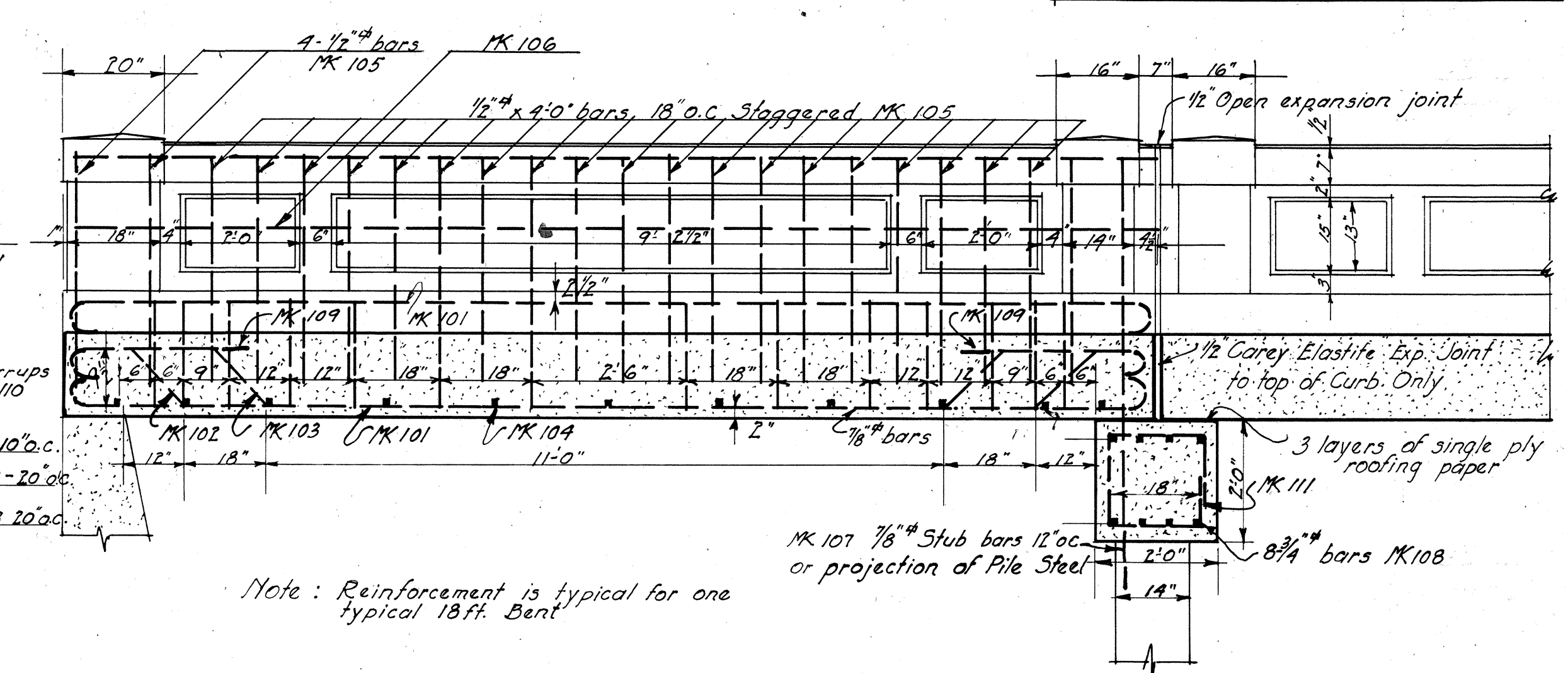
| SCHEDULE OF REINFORCEMENT FOR PILE CAP. |          |      |                 |         |              |                               |                        |
|-----------------------------------------|----------|------|-----------------|---------|--------------|-------------------------------|------------------------|
| MK                                      | Location | Pos. | Size            | Length  | Total Length | Bending                       | Wt. # Ft. Total Weight |
| 108                                     | Cap      | 8    | $\frac{3}{4}$ " | 26'-10" | 214'-8"      |                               | 1.913 410.70           |
| 107                                     | "        | 26   | $\frac{7}{8}$ " | 3'-0"   | 78'-0"       | Omit when pile steel is used. | 2.603 203.00           |
| 111                                     | "        | 46   | $\frac{1}{2}$ " | 7'-6"   | 345'-0"      |                               | 0.85 293.30            |
| Total Weight                            |          |      |                 |         |              |                               | 907.00                 |



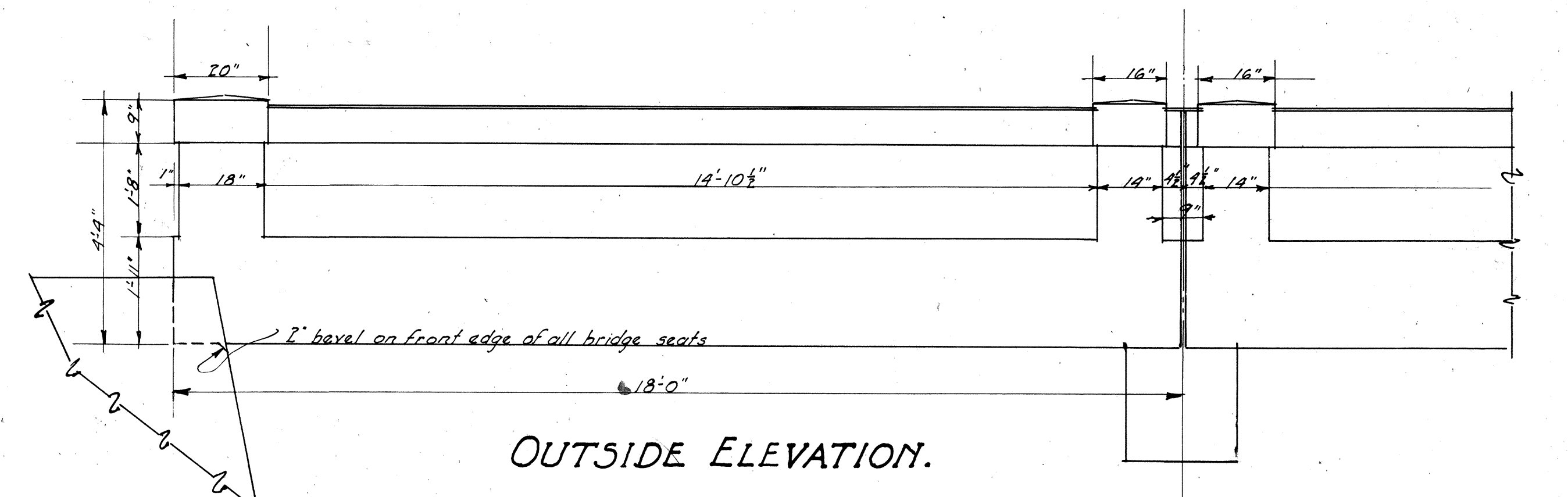
DETAIL OF SOCKET PILE



SECTION A-A THRU BRIDGE.  
Scale 1/2" = 1'-0"

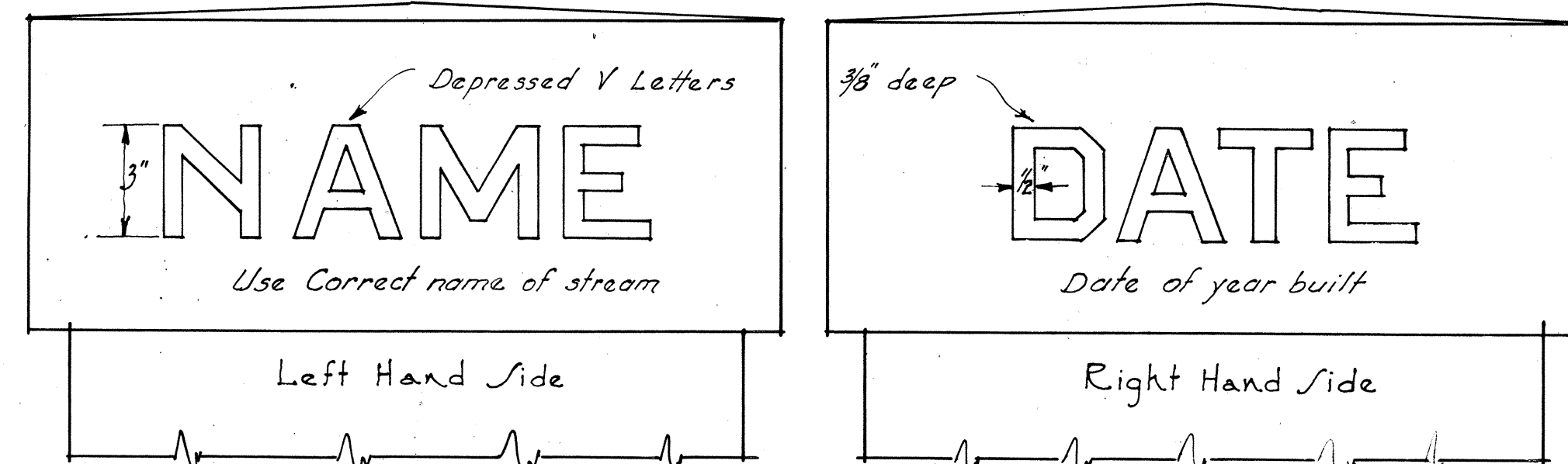


LONGITUDINAL SECTION THRU 1/2 OF ROAD.  
Scale 1/2" = 1'-0"



OUTSIDE ELEVATION.

| SCHEDULE OF REINFORCEMENT FOR ONE TYPICAL 18 FT. SPAN. |          |      |                 |        |              |         |                        |
|--------------------------------------------------------|----------|------|-----------------|--------|--------------|---------|------------------------|
| MK                                                     | Location | Pos. | Size            | Length | Total Length | Bending | Wt. # Ft. Total Weight |
| 101                                                    | Slab     | 30   | $\frac{7}{8}$ " | 19'-6" | 585'-0"      |         | 2.603 1522.80          |
| 102                                                    | "        | 14   | $\frac{7}{8}$ " | 20'-2" | 282'-4 1/2"  |         | 2.603 735.10           |
| 103                                                    | "        | 13   | $\frac{7}{8}$ " | 20'-2" | 262'-2 1/2"  |         | 2.603 682.50           |
| 104                                                    | "        | 15   | $\frac{1}{2}$ " | 26'-0" | 390'-0"      |         | 0.85 331.50            |
| 109                                                    | "        | 12   | $\frac{7}{8}$ " | 4'-6"  | 54'-0"       |         | 2.603 140.56           |
| 105                                                    | Rail     | 54   | $\frac{1}{2}$ " | 4'-0"  | 216'-0"      |         | 0.85 183.60            |
| 106                                                    | "        | 8    | $\frac{1}{2}$ " | 17'-6" | 140'-0"      |         | 0.85 119.00            |
| 110                                                    | "        | 28   | $\frac{1}{2}$ " | 5'-0"  | 140'-0"      |         | 0.85 119.00            |
| TOTAL WEIGHT                                           |          |      |                 |        |              |         | 3834.06                |



DETAIL LETTERS & FIGURES.  
Scale 3" = 1'

Existing Paumalu Bridge  
For information only.  
Reduction not to scale.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**EXISTING PAUMALU BRIDGE**

KAMEHAMEHA HIGHWAY  
AT PAUMALU BRIDGE  
PROJ. NO. 83B-01-83

Scale: As Noted Date: March 1983

SHEET No. EBI OF 1 SHEETS