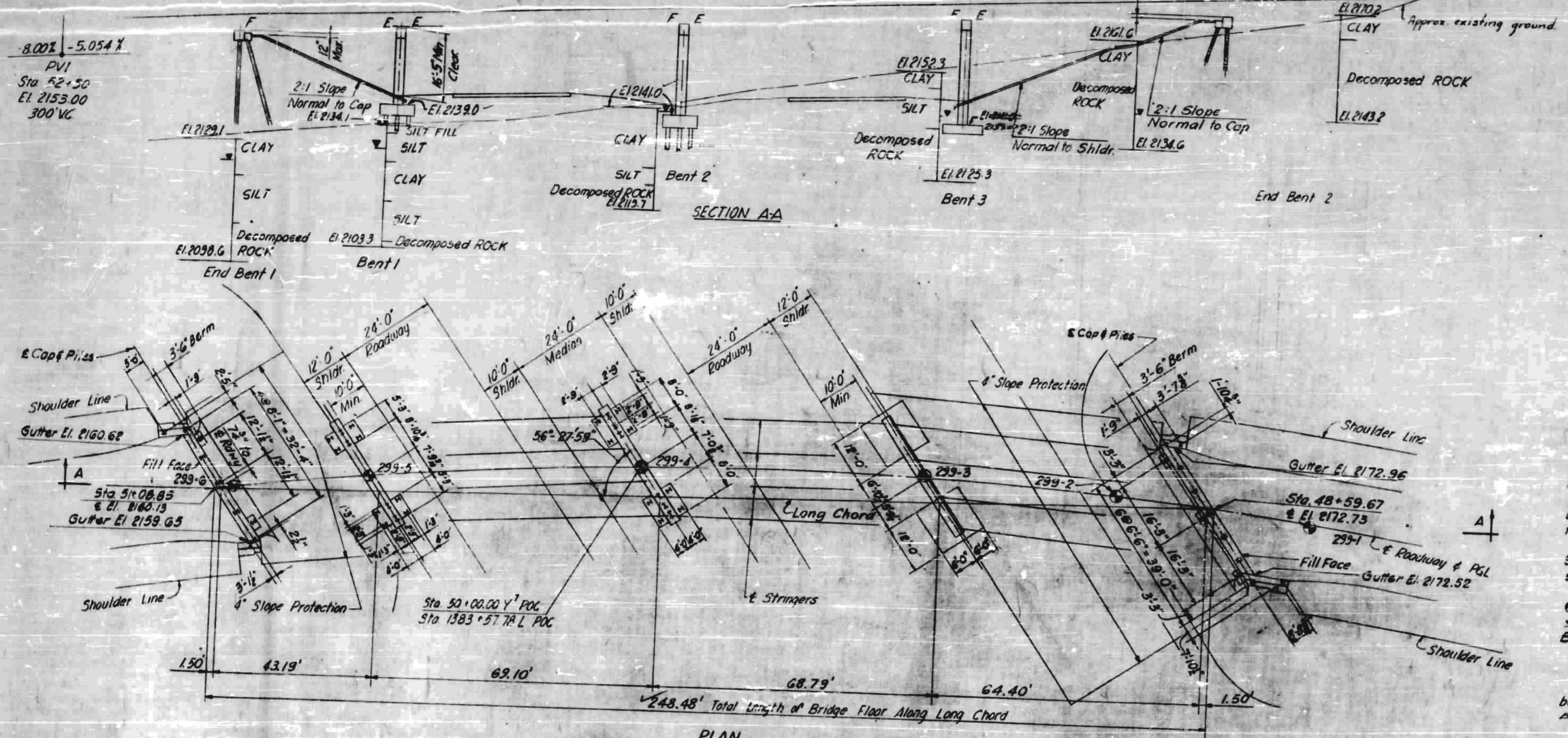


SPAN A      SPAN B      SPAN C      SPAN D

|             |           |
|-------------|-----------|
| DESIGN NO.  | 818293    |
| PROJECT NO. | 1-86-1672 |
| DATE        | 4-1-65    |
| BY          | 565       |



**NOTES:**

Loading: AASHTO H15-S12-44  
 Future surfacing: 20 lb. per sq. ft.  
 Roadway width: 28'-0" curb to curb.  
 For other design data and general notes, see General Notes Sheet.

Concrete surfaces shall be given a surface finish in accordance with the specifications.

The Contractor will be required to drive one 12B55 steel test pile in place of Bent 1 and End Bent 2. The test piles shall be paid for as linear feet of 12B55 Steel Piles. The order lengths for all piles shall be given after the test piles have been driven.

All piles at End Bent 1 shall be driven through the roadway fill.

Piles for Bents 1 & 2 and End Bents shall be driven to a minimum bearing capacity of 90 tons.

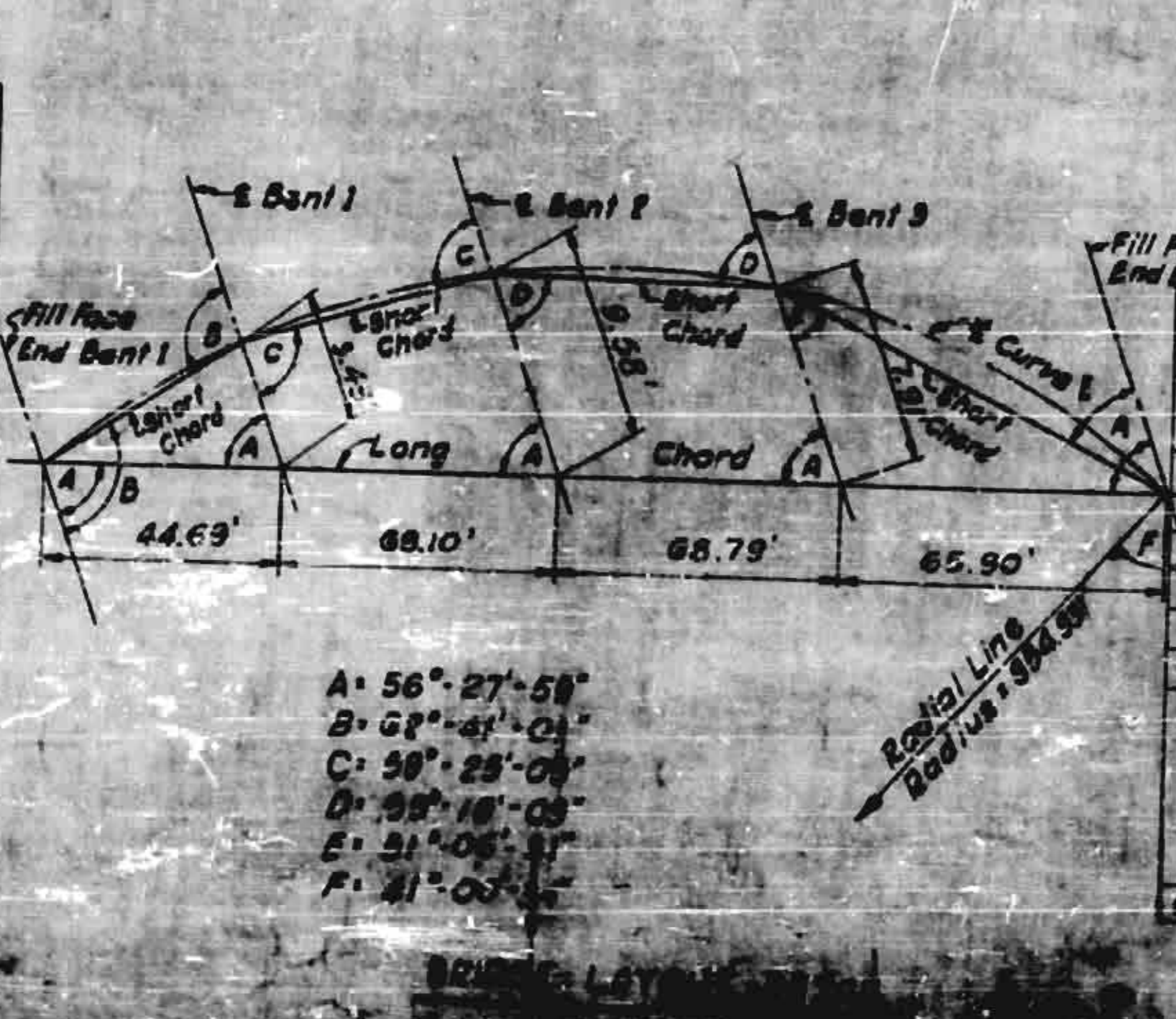
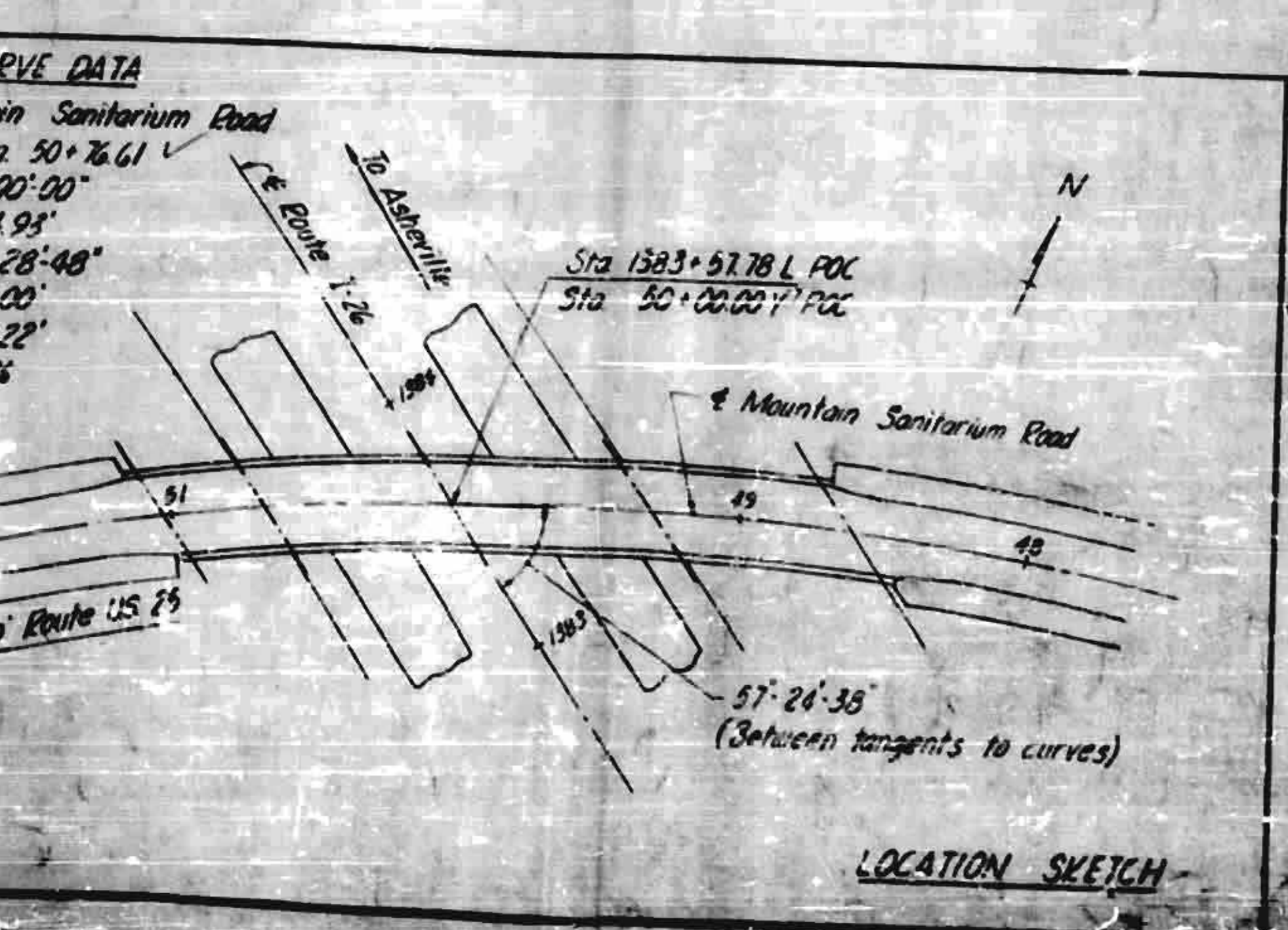
Work is not to be started on Bents 2 & 3 until after roadway section has been excavated.

Unclassified Structure Excavation shall be measured from surface of roadway cut.

Soil Bearing footings at Bent 3 shall be designed for a soil pressure of 2 1/2 tons max.

⊕ Indicates 2 1/2" cased hole boring.  
 ⊖ Indicates groundwater.  
 Benchmark: A.R. Spikes in Pile # 317, Sta. 1383+130, 100' Left of E. Line, Elev. 2100.12.

Test piles at Bent 1 and End Bent 2 shall be 40' & 25' long respectively.  
 Benchmark: Nail in base of Wood, 120' L. E. B. # 1, Elev. 2140.72.



| Class           | Quantity | Unit     | Approx. Lbs. | Approx. Cu. Yds. | Approx. Sq. Yds. | Approx. Lin. Ft. |
|-----------------|----------|----------|--------------|------------------|------------------|------------------|
| Summ. Structure | 252.9    | Cu. Yds. | 52,052       | 194,300          | 1,477.4          | 22,816.0         |
| End Bent #1     | 20.0     | Cu. Yds. | 3,168        | 9                | 518              | 220              |
| Bent #1         | 29.6     | Cu. Yds. | 4,457        | 12               | 720              | 350              |
| Bent #2         | 35.2     | Cu. Yds. | 5,376        | 14               | 840              | 400              |
| Bent #3         | 52.2     | Cu. Yds. | 8,427        | 21               | 1,170            | 550              |
| End Bent #2     | 24.8     | Cu. Yds. | 3,804        | 10               | 570              | 270              |
| Approach Curbs  | 8.2      | Cu. Yds. | 76           | 12               | 660              | 400              |
| Totals          | 175.9    | Cu. Yds. | 37,322       | 114,300          | 847.4            | 11,306.0         |

I certify that this Structure Was built according to Plans except as noted.

RESIDENT ENGINEER

PROJECT NO. 818293

HENDERSON COUNTY

STATION 1383+53 L 50+00Y

| NO. | BY     | DATE    | NO. | BY | DATE |
|-----|--------|---------|-----|----|------|
| 1.  | C.B.P. | 4-1-65  | 3.  |    |      |
| 2.  | D.W.O. | 6-18-65 | 4.  |    |      |

STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 GENERAL DRAWING  
 BRIDGE OVER PROPOSED  
 INTERSTATE ROUTE 26  
 ON MOUNTAIN SANITARUM ROAD

| Column 1<br>bottom<br>of overhang |         | Column 2<br>top<br>of curb |       | Column 3<br>E of Beam |       | Column 4<br>E of Roadway |         | Column 5<br>E of Beam |       | Column 6<br>Top of curb |       | Column 7<br>Bottom of Overhang |         |
|-----------------------------------|---------|----------------------------|-------|-----------------------|-------|--------------------------|---------|-----------------------|-------|-------------------------|-------|--------------------------------|---------|
| Dist.                             | Elev.   | Dist.                      | Elev. | Dist.                 | Elev. | Dist.                    | Elev.   | Dist.                 | Elev. | Dist.                   | Elev. | Dist.                          | Elev.   |
| 3'-0"                             | 217.670 | 40+50.00                   |       |                       |       | 0'-0"                    | 217.720 |                       |       |                         |       | 7'-6"                          | 217.284 |
| 9'-10"                            | 217.173 | +80.00                     |       |                       |       | 0'-0"                    | 217.711 | 48+80.00              |       |                         |       | 10'-10"                        | 217.190 |
| 9'-10"                            | 217.667 | +70.00                     |       |                       |       | 10'-0"                   | 217.205 | +70.00                |       |                         |       | 10'-10"                        | 217.190 |
| 9'-10"                            | 217.152 | +80.00                     |       |                       |       | 10'-0"                   | 217.200 | +80.00                |       |                         |       | 10'-10"                        | 217.190 |
| 9'-10"                            | 216.656 | +80.00                     |       |                       |       | 10'-0"                   | 217.191 | +80.00                |       |                         |       | 10'-10"                        | 217.190 |
| 9'-10"                            | 216.151 | 49+00.00                   |       |                       |       | 10'-0"                   | 217.189 | 49+00.00              |       |                         |       | 10'-10"                        | 217.190 |
| 9'-10"                            | 216.646 | 49+10.00                   |       |                       |       | 10'-0"                   | 217.186 | +70.00                |       |                         |       | 10'-10"                        | 217.190 |
| 9'-10"                            | 216.138 | 49+20.00                   |       |                       |       | 10'-0"                   | 217.186 | +70.00                |       |                         |       | 10'-10"                        | 217.190 |
| 9'-10"                            | 216.633 | +30.00                     |       |                       |       | 10'-0"                   | 217.183 | +30.00                |       |                         |       | 10'-10"                        | 217.190 |
| 9'-10"                            | 216.129 | +40.00                     |       |                       |       | 10'-0"                   | 217.182 | +30.00                |       |                         |       | 10'-10"                        | 217.190 |
| 9'-10"                            | 216.624 | +50.00                     |       |                       |       | 10'-0"                   | 217.182 | +30.00                |       |                         |       | 10'-10"                        | 217.190 |
| 9'-10"                            | 216.119 | +50.00                     |       |                       |       | 10'-0"                   | 217.181 | +30.00                |       |                         |       | 10'-10"                        | 217.190 |
| 9'-10"                            | 216.613 | +70.00                     |       |                       |       | 10'-0"                   | 217.181 | +30.00                |       |                         |       | 10'-10"                        | 217.190 |
| 9'-10"                            | 216.103 | +80.00                     |       |                       |       | 10'-0"                   | 217.180 | +30.00                |       |                         |       | 10'-10"                        | 217.190 |
| 9'-10"                            | 216.602 | 49+90.00                   |       |                       |       | 10'-0"                   | 217.180 | 49+90.00              |       |                         |       | 10'-10"                        | 217.190 |
| 9'-10"                            | 216.097 | 50+00.00                   |       |                       |       | 10'-0"                   | 217.180 | 50+00.00              |       |                         |       | 10'-10"                        | 217.190 |
| 9'-10"                            | 216.592 | +10.00                     |       |                       |       | 10'-0"                   | 217.179 | 50+10.00              |       |                         |       | 10'-10"                        | 217.190 |
| 9'-10"                            | 216.086 | +20.00                     |       |                       |       | 10'-0"                   | 217.179 | +20.00                |       |                         |       | 10'-10"                        | 217.190 |
| 9'-10"                            | 216.581 | +30.00                     |       |                       |       | 10'-0"                   | 217.179 | +30.00                |       |                         |       | 10'-10"                        | 217.190 |
| 9'-10"                            | 216.075 | +40.00                     |       |                       |       | 10'-0"                   | 217.179 | +40.00                |       |                         |       | 10'-10"                        | 217.190 |
| 9'-10"                            | 216.570 | 50+80.00                   |       |                       |       | 10'-0"                   | 217.179 | 50+80.00              |       |                         |       | 10'-10"                        | 217.190 |
| 9'-10"                            | 216.065 | 50+80.00                   |       |                       |       | 10'-0"                   | 217.179 | 50+80.00              |       |                         |       | 10'-10"                        | 217.190 |
| 9'-10"                            | 216.559 | +70.00                     |       |                       |       | 10'-0"                   | 217.179 | +70.00                |       |                         |       | 10'-10"                        | 217.190 |
| 9'-10"                            | 216.054 | +80.00                     |       |                       |       | 10'-0"                   | 217.179 | +80.00                |       |                         |       | 10'-10"                        | 217.190 |
| 9'-10"                            | 216.548 | +90.00                     |       |                       |       | 10'-0"                   | 217.179 | +90.00                |       |                         |       | 10'-10"                        | 217.190 |
| 9'-10"                            | 216.043 | 51+00.00                   |       |                       |       | 10'-0"                   | 217.179 | 51+00.00              |       |                         |       | 10'-10"                        | 217.190 |
| 9'-10"                            | 216.537 | Fill Face                  |       |                       |       | 10'-0"                   | 217.179 | Fill Face             |       |                         |       | 10'-10"                        | 217.190 |

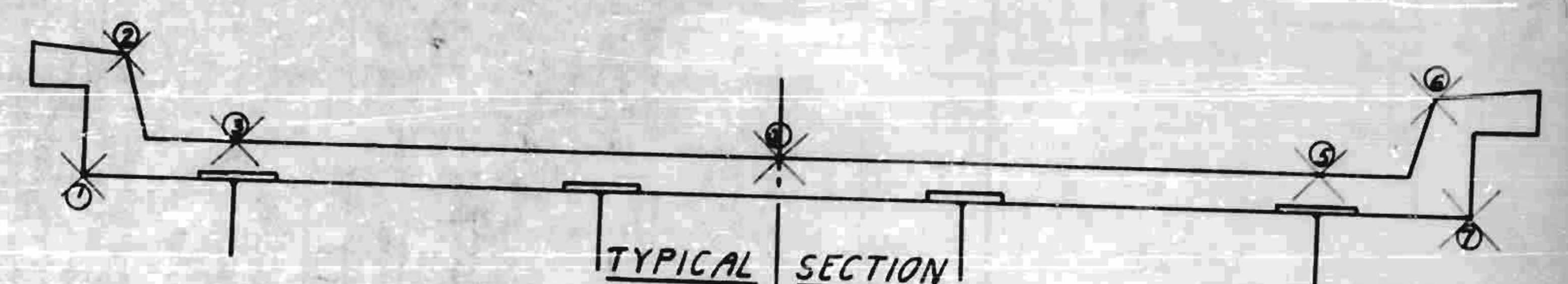
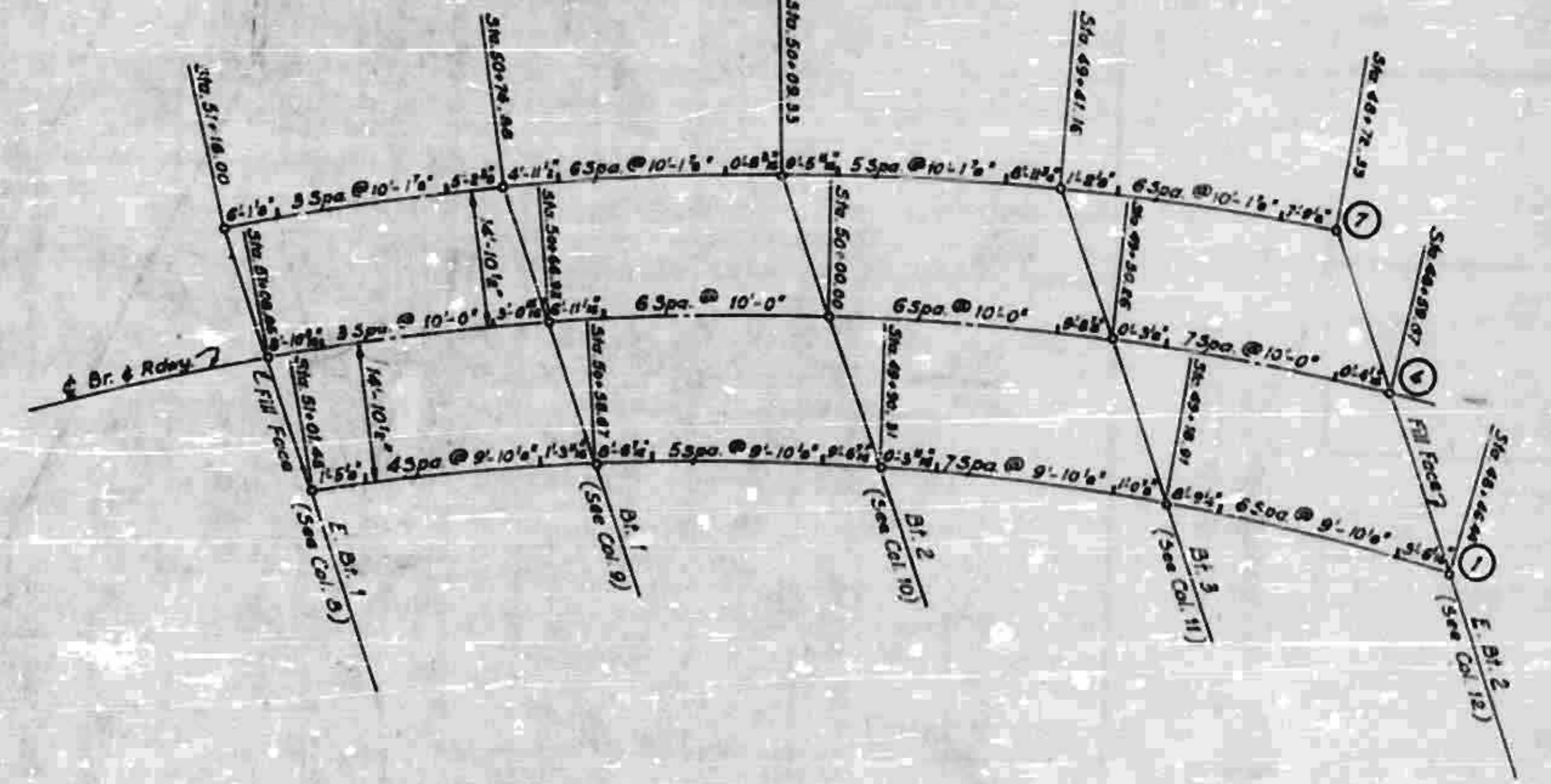
**GRADE DATA**

$-0.00\%$        $-0.05\%$   
 $-0.00\%$

P.I. Sta. 58+80  
 P.I. Elev. 2153.00  
 Length of Curve 300'  
 G1 = -0.054%    G2 = -0.00%

| NO. | BY | DATE | NO. | BY | DATE |
|-----|----|------|-----|----|------|
| 1   |    |      | 3   |    |      |
| 2   |    |      | 4   |    |      |

491 56



Elevations shown in these tables are final required elevations of the completed structure. In setting up form elevations and screed elevations, provisions must be made for deflections where required.

For columns 8 thru 12, points are at 2'-0" intervals normal to E of roadway from left gutter line to right gutter line.

| Int. | SPAN | SPAN | SPAN | SPAN |
|------|------|------|------|------|
| Int. |      |      |      |      |
| Ext. |      |      |      |      |

Note: For Defl. see Struct. Steel Sheet 5-113

**HEADERS**

| Column 8<br>Fill Face of Beat 1 |          | Column 9<br>E of Beat 1 |          | Column 10<br>E of Beat 2 |          | Column 11<br>E of Beat 3 |          | Column 12<br>Fill Face of Beat 2 |          |
|---------------------------------|----------|-------------------------|----------|--------------------------|----------|--------------------------|----------|----------------------------------|----------|
| Point                           | Elev.    | Point                   | Elev.    | Point                    | Elev.    | Point                    | Elev.    | Point                            | Elev.    |
| Rt. Gutter                      | 2160.621 | Rt. Gutter              | 2168.718 | Rt. Gutter               | 2168.081 | Rt. Gutter               | 2168.141 | Rt. Gutter                       | 2172.085 |
| 2'-2 1/2"                       | .551     | 2'-3"                   | .607     | 2'-6"                    | .816     | 2'-5"                    | .787     | 2'-7"                            | .839     |
| 2'-5"                           | .480     | 2'-6"                   | .515     | 2'-8"                    | .659     | 2'-8"                    | .641     | 2'-7 1/2"                        | .804     |
| 2'-7 1/2"                       | .410     | 2'-8"                   | .469     | 2'-10"                   | .603     | 2'-10"                   | .595     | 2'-7"                            | .800     |
| 2'-10"                          | .340     | 2'-10"                  | .404     | 2'-12"                   | .746     | 2'-12"                   | .746     | 2'-7 1/2"                        | .806     |
| 2'-12"                          | .270     | 2'-12"                  | .334     | 2'-14"                   | .889     | 2'-14"                   | .889     | 2'-7 1/2"                        | .793     |
| 2'-14"                          | .200     | 2'-14"                  | .264     | 2'-16"                   | 1.032    | 2'-16"                   | 1.032    | 2'-7 1/2"                        | .780     |
| 2'-16"                          | .130     | 2'-16"                  | .194     | 2'-18"                   | 1.175    | 2'-18"                   | 1.175    | 2'-7 1/2"                        | .767     |
| 2'-18"                          | .060     | 2'-18"                  | .124     | 2'-20"                   | 1.318    | 2'-20"                   | 1.318    | 2'-7 1/2"                        | .754     |
| 2'-20"                          | .000     | 2'-20"                  | .060     | 2'-22"                   | 1.461    | 2'-22"                   | 1.461    | 2'-7 1/2"                        | .741     |
| 2'-22"                          | .000     | 2'-22"                  | .000     | 2'-24"                   | 1.604    | 2'-24"                   | 1.604    | 2'-7 1/2"                        | .728     |
| 2'-24"                          | .000     | 2'-24"                  | .000     | 2'-26"                   | 1.747    | 2'-26"                   | 1.747    | 2'-7 1/2"                        | .715     |
| 2'-26"                          | .000     | 2'-26"                  | .000     | 2'-28"                   | 1.890    | 2'-28"                   | 1.890    | 2'-7 1/2"                        | .702     |
| 2'-28"                          | .000     | 2'-28"                  | .000     | 2'-30"                   | 2.033    | 2'-30"                   | 2.033    | 2'-7 1/2"                        | .689     |
| 2'-30"                          | .000     | 2'-30"                  | .000     | 2'-32"                   | 2.176    | 2'-32"                   | 2.176    | 2'-7 1/2"                        | .676     |
| 2'-32"                          | .000     | 2'-32"                  | .000     | 2'-34"                   | 2.319    | 2'-34"                   | 2.319    | 2'-7 1/2"                        | .663     |
| 2'-34"                          | .000     | 2'-34"                  | .000     | 2'-36"                   | 2.462    | 2'-36"                   | 2.462    | 2'-7 1/2"                        | .650     |
| 2'-36"                          | .000     | 2'-36"                  | .000     | 2'-38"                   | 2.605    | 2'-38"                   | 2.605    | 2'-7 1/2"                        | .637     |
| 2'-38"                          | .000     | 2'-38"                  | .000     | 2'-40"                   | 2.748    | 2'-40"                   | 2.748    | 2'-7 1/2"                        | .624     |
| 2'-40"                          | .000     | 2'-40"                  | .000     | 2'-42"                   | 2.891    | 2'-42"                   | 2.891    | 2'-7 1/2"                        | .611     |
| 2'-42"                          | .000     | 2'-42"                  | .000     | 2'-44"                   | 3.034    | 2'-44"                   | 3.034    | 2'-7 1/2"                        | .598     |
| 2'-44"                          | .000     | 2'-44"                  | .000     | 2'-46"                   | 3.177    | 2'-46"                   | 3.177    | 2'-7 1/2"                        | .585     |
| 2'-46"                          | .000     | 2'-46"                  | .000     | 2'-48"                   | 3.320    | 2'-48"                   | 3.320    | 2'-7 1/2"                        | .572     |
| 2'-48"                          | .000     | 2'-48"                  | .000     | 2'-50"                   | 3.463    | 2'-50"                   | 3.463    | 2'-7 1/2"                        | .559     |
| 2'-50"                          | .000     | 2'-50"                  | .000     | 2'-52"                   | 3.606    | 2'-52"                   | 3.606    | 2'-7 1/2"                        | .546     |
| 2'-52"                          | .000     | 2'-52"                  | .000     | 2'-54"                   | 3.749    | 2'-54"                   | 3.749    | 2'-7 1/2"                        | .533     |
| 2'-54"                          | .000     | 2'-54"                  | .000     | 2'-56"                   | 3.892    | 2'-56"                   | 3.892    | 2'-7 1/2"                        | .520     |
| 2'-56"                          | .000     | 2'-56"                  | .000     | 2'-58"                   | 4.035    | 2'-58"                   | 4.035    | 2'-7 1/2"                        | .507     |
| 2'-58"                          | .000     | 2'-58"                  | .000     | 2'-60"                   | 4.178    | 2'-60"                   | 4.178    | 2'-7 1/2"                        | .494     |
| 2'-60"                          | .000     | 2'-60"                  | .000     | 2'-62"                   | 4.321    | 2'-62"                   | 4.321    | 2'-7 1/2"                        | .481     |
| 2'-62"                          | .000     | 2'-62"                  | .000     | 2'-64"                   | 4.464    | 2'-64"                   | 4.464    | 2'-7 1/2"                        | .468     |
| 2'-64"                          | .000     | 2'-64"                  | .000     | 2'-66"                   | 4.607    | 2'-66"                   | 4.607    | 2'-7 1/2"                        | .455     |
| 2'-66"                          | .000     | 2'-66"                  | .000     | 2'-68"                   | 4.750    | 2'-68"                   | 4.750    | 2'-7 1/2"                        | .442     |
| 2'-68"                          | .000     | 2'-68"                  | .000     | 2'-70"                   | 4.893    | 2'-70"                   | 4.893    | 2'-7 1/2"                        | .429     |
| 2'-70"                          | .000     | 2'-70"                  | .000     | 2'-72"                   | 5.036    | 2'-72"                   | 5.036    | 2'-7 1/2"                        | .416     |
| 2'-72"                          | .000     | 2'-72"                  | .000     | 2'-74"                   | 5.179    | 2'-74"                   | 5.179    | 2'-7 1/2"                        | .403     |
| 2'-74"                          | .000     | 2'-74"                  | .000     | 2'-76"                   | 5.322    | 2'-76"                   | 5.322    | 2'-7 1/2"                        | .390     |
| 2'-76"                          | .000     | 2'-76"                  | .000     | 2'-78"                   | 5.465    | 2'-78"                   | 5.465    | 2'-7 1/2"                        | .377     |
| 2'-78"                          | .000     | 2'-78"                  | .000     | 2'-80"                   | 5.608    | 2'-80"                   | 5.608    | 2'-7 1/2"                        | .364     |
| 2'-80"                          | .000     | 2'-80"                  | .000     | 2'-82"                   | 5.751    | 2'-82"                   | 5.751    | 2'-7 1/2"                        | .351     |
| 2'-82"                          | .000     | 2'-82"                  | .000     | 2'-84"                   | 5.894    | 2'-84"                   | 5.894    | 2'-7 1/2"                        | .338     |
| 2'-84"                          | .000     | 2'-84"                  | .000     | 2'-86"                   | 6.037    | 2'-86"                   | 6.037    | 2'-7 1/2"                        | .325     |
| 2'-86"                          | .000     | 2'-86"                  | .000     | 2'-88"                   | 6.180    | 2'-88"                   | 6.180    | 2'-7 1/2"                        | .312     |
| 2'-88"                          | .000     | 2'-88"                  | .000     | 2'-90"                   | 6.323    | 2'-90"                   | 6.323    | 2'-7 1/2"                        | .299     |
| 2'-90"                          | .000     | 2'-90"                  | .000     | 2'-92"                   | 6.466    | 2'-92"                   | 6.466    | 2'-7 1/2"                        | .286     |
| 2'-92"                          | .000     | 2'-92"                  | .000     | 2'-94"                   | 6.609    | 2'-94"                   | 6.609    | 2'-7 1/2"                        | .273     |
| 2'-94"                          | .000     | 2'-94"                  | .000     | 2'-96"                   | 6.752    | 2'-96"                   | 6.752    | 2'-7 1/2"                        | .260     |
| 2'-96"                          | .000     | 2'-96"                  | .000     | 2'-98"                   | 6.895    | 2'-98"                   | 6.895    | 2'-7 1/2"                        | .247     |
| 2'-98"                          | .000     | 2'-98"                  | .000     | 2'-100"                  | 7.038    | 2'-100"                  | 7.038    | 2'-7 1/2"                        | .234     |
| 2'-100"                         | .000     | 2'-100"                 | .000     |                          |          |                          |          |                                  |          |

PROJECT No. 8.18293  
Henderson COUNTY  
STATION: 1383+58 L  
50+00 Y'

STATE OF NORTH CAROLINA  
**STATE HIGHWAY COMMISSION**  
RALEIGH  
ELEVATIONS FOR  
SETTING UP  
FORMS AND SCREEDS

REVISIONS

| NO. | BY | DATE | NO. | BY | DATE |
|-----|----|------|-----|----|------|
| 1   |    |      | 3   |    |      |
| 2   |    |      | 4   |    |      |

APR 26 1961

DESIGNED BY: Charles R. Cottler    DATE: Mar. 19, 1963  
CHECKED BY:    DATE: Mar. 26, 1963



**BILL OF MATERIALS — SPAN B**

| BAR | NO. BARS | SIZE | TYPE | LENGTH | WEIGHT | BAR | NO. BARS | SIZE | TYPE      | LENGTH | WEIGHT |
|-----|----------|------|------|--------|--------|-----|----------|------|-----------|--------|--------|
| Q1  | 100      | 5    | 2    | 30-7   | 3189   | Q61 | 2        | 5    | 4         | 23-10  | 50     |
| Q2  | 99       | 3    | 3    | 31-9   | 327    | Q62 | 2        | 4    | 4         | 26-5   | 53     |
| Q3  | 2        | 1    | 1    | 3-6    | 7      | Q63 | 2        | 4    | 4         | 27-0   | 56     |
| Q4  |          |      |      | 5-3    | 11     | Q64 | 2        | 4    | 4         | 27-0   | 56     |
| Q5  |          |      |      | 7-0    | 15     | Q65 | 1        | 5    | Str.      | 31-6   | 60     |
| Q6  |          |      |      | 8-9    | 18     | Q66 | 1        | 5    | Str.      | 32-6   | 33     |
| Q7  |          |      |      | 10-6   | 22     | Q67 | 4        | 5    | Fieldband | 2-7    | 34     |
| Q8  |          |      |      | 12-3   | 26     |     |          |      |           |        |        |
| Q9  |          |      |      | 14-0   | 29     |     |          |      |           |        |        |
| Q10 |          |      |      | 15-9   | 33     |     |          |      |           |        |        |
| Q11 |          |      |      | 17-6   | 37     |     |          |      |           |        |        |
| Q12 |          |      |      | 19-3   | 40     |     |          |      |           |        |        |
| Q13 |          |      |      | 21-0   | 44     | b1  | 243      | 4    | Str.      | 23-0   | 3793   |
| Q14 |          |      |      | 22-9   | 47     |     |          |      |           |        |        |
| Q15 |          |      |      | 24-5   | 51     |     |          |      |           |        |        |
| Q16 |          |      |      | 26-1   | 54     |     |          |      |           |        |        |
| Q17 |          |      |      | 27-9   | 58     | f1  | 24       | 4    | Str.      | 23-0   | 369    |
| Q18 |          |      |      | 4-7    | 10     |     |          |      |           |        |        |
| Q19 |          |      |      | 6-4    | 13     |     |          |      |           |        |        |
| Q20 |          |      |      | 8-1    | 17     |     |          |      |           |        |        |
| Q21 |          |      |      | 9-10   | 21     | g1  | 135      | 4    | 6         | 5-7    | 503    |
| Q22 |          |      |      | 11-7   | 24     | g2  | 179      | 4    | 5         | 5-5    | 648    |
| Q23 |          |      |      | 13-4   | 28     | g3  | 68       | 4    | Str.      | 2-4    | 106    |
| Q24 |          |      |      | 15-1   | 31     |     |          |      |           |        |        |
| Q25 |          |      |      | 16-10  | 35     |     |          |      |           |        |        |
| Q26 |          |      |      | 18-7   | 39     |     |          |      |           |        |        |
| Q27 |          |      |      | 20-4   | 42     | k1  | 2        | 4    | Str.      | 31-6   | 42     |
| Q28 |          |      |      | 22-1   | 46     | k2  | 2        | 6    | Str.      | 31-6   | 95     |
| Q29 |          |      |      | 23-10  | 50     | k3  | 2        | 4    | Str.      | 32-6   | 43     |
| Q30 |          |      |      | 25-6   | 53     | k4  | 2        | 6    | Str.      | 32-6   | 98     |
| Q31 |          |      |      | 27-2   | 57     |     |          |      |           |        |        |
| Q32 |          |      |      | 28-10  | 60     |     |          |      |           |        |        |
| Q33 |          |      |      | 3-0    | 6      |     |          |      |           |        |        |
| Q34 |          |      |      | 4-8    | 10     | s2  | 60       | 4    | 6         | 6-5    | 257    |
| Q35 |          |      |      | 6-4    | 13     | s4  | 65       | 4    | 4         | 3-1    | 134    |
| Q36 |          |      |      | 8-0    | 17     |     |          |      |           |        |        |
| Q37 |          |      |      | 9-8    | 20     |     |          |      |           |        |        |
| Q38 |          |      |      | 11-4   | 24     |     |          |      |           |        |        |
| Q39 |          |      |      | 13-0   | 27     |     |          |      |           |        |        |
| Q40 |          |      |      | 14-8   | 31     |     |          |      |           |        |        |
| Q41 |          |      |      | 16-4   | 34     |     |          |      |           |        |        |
| Q42 |          |      |      | 18-0   | 38     |     |          |      |           |        |        |
| Q43 |          |      |      | 19-7   | 41     |     |          |      |           |        |        |
| Q44 |          |      |      | 21-2   | 44     |     |          |      |           |        |        |
| Q45 |          |      |      | 22-9   | 47     |     |          |      |           |        |        |
| Q46 |          |      |      | 24-4   | 51     |     |          |      |           |        |        |
| Q47 |          |      |      | 25-11  | 54     |     |          |      |           |        |        |
| Q48 |          |      |      | 27-6   | 57     |     |          |      |           |        |        |
| Q49 |          |      |      | 4-1    | 9      |     |          |      |           |        |        |
| Q50 |          |      |      | 5-9    | 12     |     |          |      |           |        |        |
| Q51 |          |      |      | 7-5    | 15     |     |          |      |           |        |        |
| Q52 |          |      |      | 9-1    | 19     |     |          |      |           |        |        |
| Q53 |          |      |      | 10-9   | 22     |     |          |      |           |        |        |
| Q54 |          |      |      | 12-5   | 26     |     |          |      |           |        |        |
| Q55 |          |      |      | 14-1   | 29     |     |          |      |           |        |        |
| Q56 |          |      |      | 15-9   | 33     |     |          |      |           |        |        |
| Q57 |          |      |      | 17-5   | 36     |     |          |      |           |        |        |
| Q58 |          |      |      | 19-1   | 40     |     |          |      |           |        |        |
| Q59 |          |      |      | 20-8   | 43     |     |          |      |           |        |        |
| Q60 | 2        | 5    | 4    | 22-3   | 46     |     |          |      |           |        |        |

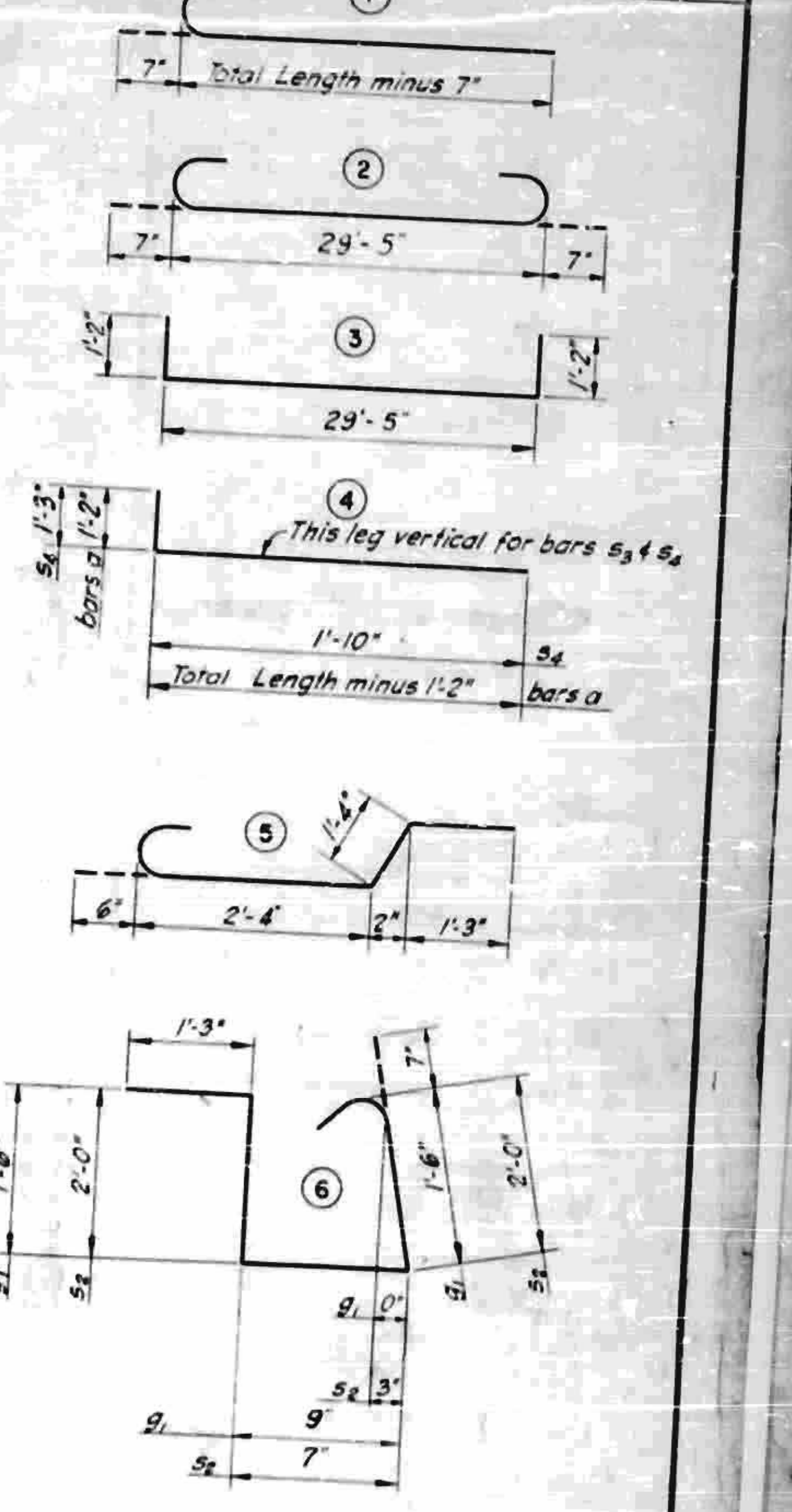
Reinforcing Steel - Lbs. 11,703 ✓  
 Class "A" Concrete - C.Y. 66.3 ✓  
 Single Bar Metal Rail - Lin. Ft. 134.02 ✓

**BILL OF MATERIALS — SPAN C**

| BAR | NO. BARS | SIZE | TYPE | LENGTH | WEIGHT | BAR | NO. BARS | SIZE | TYPE | LENGTH | WEIGHT |
|-----|----------|------|------|--------|--------|-----|----------|------|------|--------|--------|
| Q1  | 101      | 5    | 2    | 30-7   | 3221   | Q61 | 2        | 5    | 4    | 7-7    | 16     |
| Q2  | 100      | 3    | 3    | 31-9   | 3312   | Q62 | 2        | 4    | 4    | 9-0    | 19     |
| Q3  | 2        | 1    | 1    | 2-6    | 5      | Q63 | 2        | 4    | 4    | 10-5   | 22     |
| Q4  |          |      |      | 4-0    | 8      | Q64 | 2        | 4    | 4    | 11-10  | 25     |
| Q5  |          |      |      | 5-6    | 11     | Q65 | 2        | 4    | 4    | 13-3   | 28     |
| Q6  |          |      |      | 7-0    | 15     | Q66 | 2        | 4    | 4    | 14-8   | 31     |
| Q7  |          |      |      | 8-6    | 18     | Q67 | 2        | 4    | 4    | 16-1   | 34     |
| Q8  |          |      |      | 10-0   | 21     | Q68 | 2        | 4    | 4    | 17-6   | 37     |
| Q9  |          |      |      | 11-6   | 24     | Q69 | 2        | 4    | 4    | 18-11  | 39     |
| Q10 |          |      |      | 13-0   | 27     | Q70 | 2        | 4    | 4    | 20-0   | 42     |
| Q11 |          |      |      | 14-6   | 30     | Q71 | 2        | 4    | 4    | 21-9   | 45     |
| Q12 |          |      |      | 16-0   | 33     | Q72 | 2        | 4    | 4    | 23-2   | 48     |
| Q13 |          |      |      | 17-6   | 37     | Q73 | 2        | 4    | 4    | 24-7   | 51     |
| Q14 |          |      |      | 19-0   | 40     | Q74 | 2        | 4    | 4    | 26-0   | 54     |
| Q15 |          |      |      | 20-6   | 43     | Q75 | 2        | 4    | 4    | 27-5   | 57     |
| Q16 |          |      |      | 22-0   | 46     | Q76 | 2        | 4    | 4    | 28-10  | 60     |
| Q17 |          |      |      | 23-6   | 49     | Q77 | 2        | 4    | 4    | 29-7   | 63     |
| Q18 |          |      |      | 25-0   | 52     | Q78 | 2        | 4    | 4    | 31-0   | 66     |
| Q19 |          |      |      | 26-6   | 55     | Q79 | 2        | 4    | 4    | 32-7   | 69     |
| Q20 |          |      |      | 28-0   | 58     | Q80 | 2        | 4    | 4    | 34-0   | 72     |
| Q21 |          |      |      | 3-5    | 7      | Q81 | 2        | 4    | 4    | 35-7   | 75     |
| Q22 |          |      |      | 4-11   | 10     | Q82 | 2        | 4    | 4    | 37-0   | 78     |
| Q23 |          |      |      | 6-5    | 13     | b1  | 243      | 4    | Str. | 24-0   | 3596   |
| Q24 |          |      |      | 7-11   | 17     |     |          |      |      |        |        |
| Q25 |          |      |      | 9-5    | 20     |     |          |      |      |        |        |
| Q26 |          |      |      | 10-11  | 23     |     |          |      |      |        |        |
| Q27 |          |      |      | 12-5   | 26     | f1  | 24       | 4    | Str. | 24-0   | 385    |
| Q28 |          |      |      | 13-11  | 29     |     |          |      |      |        |        |
| Q29 |          |      |      | 15-5   | 32     |     |          |      |      |        |        |
| Q30 |          |      |      | 16-11  | 35     |     |          |      |      |        |        |
| Q31 |          |      |      | 18-5   | 38     | g1  | 141      | 4    | 6    | 5-7    | 526    |
| Q32 |          |      |      | 19-11  | 42     | g2  | 187      | 4    | 5    | 5-5    | 677    |
| Q33 |          |      |      | 21-5   | 45     | g3  | 72       | 4    | Str. | 2-4    | 112    |
| Q34 |          |      |      | 22-11  | 48     |     |          |      |      |        |        |
| Q35 |          |      |      | 24-5   | 51     |     |          |      |      |        |        |
| Q36 |          |      |      | 25-11  | 54     |     |          |      |      |        |        |
| Q37 |          |      |      | 27-5   | 57     | k1  | 2        | 4    | Str. | 32-7   | 44     |
| Q38 |          |      |      | 28-11  | 60     | k2  | 2        | 6    | Str. | 32-7   | 98     |
| Q39 |          |      |      | 2-4    | 5      | k3  | 2        | 4    | Str. | 34-7   | 46     |
| Q40 |          |      |      | 3-9    | 8      | k4  | 2        | 6    | Str. | 34-7   | 104    |
| Q41 |          |      |      | 5-2    | 11     |     |          |      |      |        |        |
| Q42 |          |      |      | 6-7    | 14     |     |          |      |      |        |        |
| Q43 |          |      |      | 8-0    | 17     |     |          |      |      |        |        |
| Q44 |          |      |      | 9-5    | 20     | s2  | 60       | 4    | 6    | 6-5    | 257    |
| Q45 |          |      |      | 10-10  | 23     | s4  | 68       | 4    | 4    | 3-1    | 140    |
| Q46 |          |      |      | 12-3   | 26     |     |          |      |      |        |        |
| Q47 |          |      |      | 13-8   | 29     |     |          |      |      |        |        |
| Q48 |          |      |      | 15-1   | 31     |     |          |      |      |        |        |
| Q49 |          |      |      | 16-6   | 34     |     |          |      |      |        |        |
| Q50 |          |      |      | 17-11  | 37     |     |          |      |      |        |        |
| Q51 |          |      |      | 19-4   | 40     |     |          |      |      |        |        |
| Q52 |          |      |      | 20-9   | 43     |     |          |      |      |        |        |
| Q53 |          |      |      | 22-2   | 46     |     |          |      |      |        |        |
| Q54 |          |      |      | 23-7   | 49     |     |          |      |      |        |        |
| Q55 |          |      |      | 25-0   | 52     |     |          |      |      |        |        |
| Q56 |          |      |      | 26-5   | 55     |     |          |      |      |        |        |
| Q57 |          |      |      | 27-10  | 58     |     |          |      |      |        |        |
| Q58 |          |      |      | 3-4    | 7      |     |          |      |      |        |        |
| Q59 |          |      |      | 4-9    | 10     |     |          |      |      |        |        |
| Q60 | 2        | 5    | 4    | 6-2    | 13     |     |          |      |      |        |        |

Reinforcing Steel - Lbs. 15,384 ✓  
 Class "A" Concrete - C.Y. 69.1 ✓  
 Single Bar Metal Rail - Lin. Ft. 139.69 ✓

PROJECT NO. 8.18293  
 HENDERSON COUNTY  
 STATION 1383 + 58 L  
 50 + 00 Y



**BENT BAR TYPES**  
 (All dimensions are out-to-out of bar)

PROJECT NO. 8.18293  
 HENDERSON COUNTY  
 STATION 1383 + 58 L  
 50 + 00 Y

STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 RALEIGH

**SUPERSTRUCTURE  
 BAR LISTS**

**TOTAL SUPERSTRUCTURE QUANTITIES**

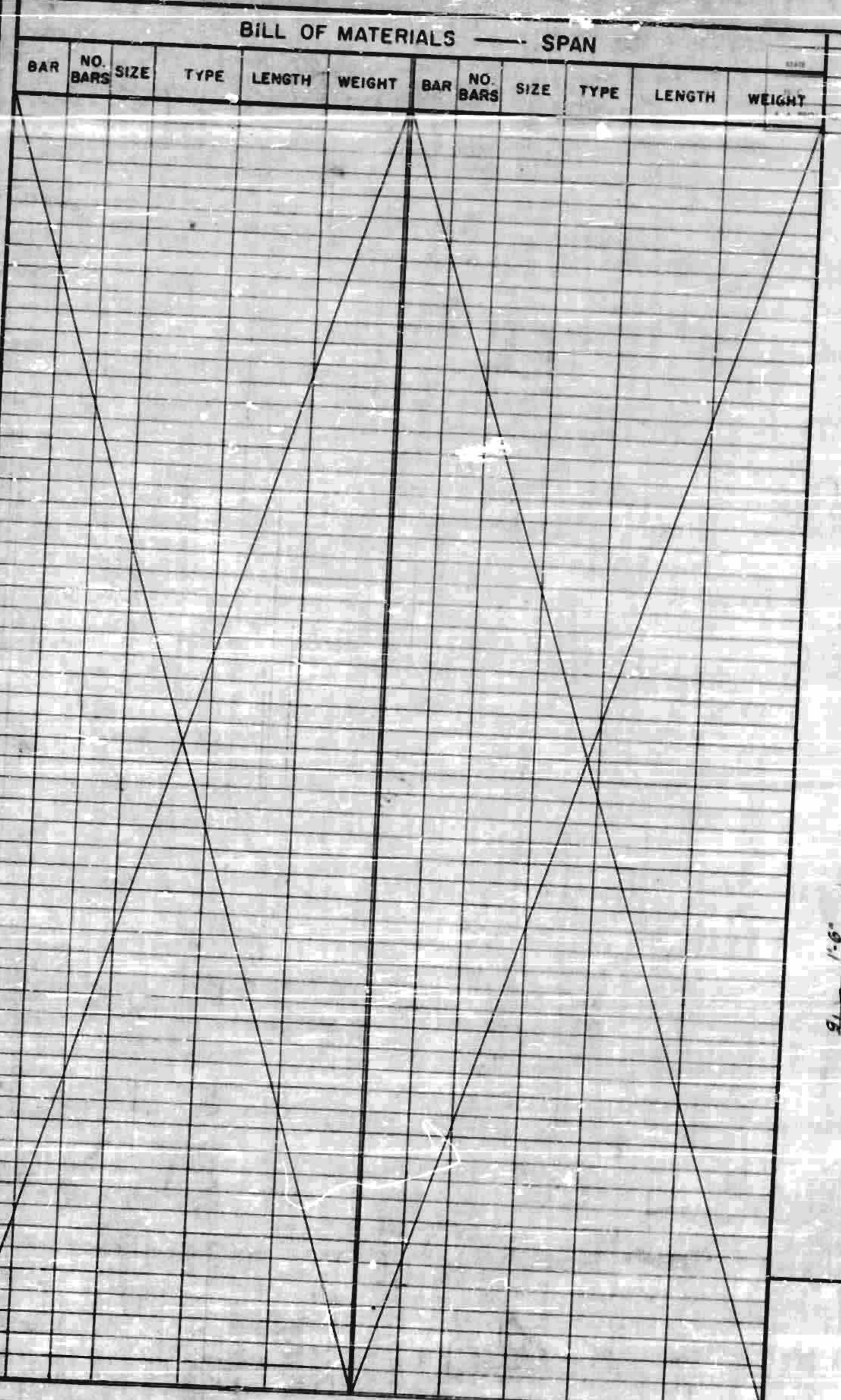
|                          |         |          |
|--------------------------|---------|----------|
| Class "A" Concrete       | 252.9   | Cu. Yds. |
| Reinforcing Steel        | 52,052  | Lbs.     |
| Structural Steel         | 194,300 | Lbs.     |
| Single Bar Metal Railing | 508.72  | Lin. Ft. |

Revision No. 2 To change length of metal rail.  
 Revision No. 1 To change "b" bars in Bill of Mat.

| BILL OF MATERIALS — SPAN D |          |      |      |        |        |      |          |      |      |        |        |
|----------------------------|----------|------|------|--------|--------|------|----------|------|------|--------|--------|
| BAR                        | NO. BARS | SIZE | TYPE | LENGTH | WEIGHT | BAR  | NO. BARS | SIZE | TYPE | LENGTH | WEIGHT |
| Q1                         | 90       | 5    | 2    | 30-7   | 2871   | Q101 | 3        | 5    | 4    | 27-2   | 85     |
| Q2                         | 89       | 1    | 3    | 31-9   | 2947   | Q102 | 1        | 5    | 4    | 29-0   | 30     |
| Q3                         | 7        | 1    | 4    | 29-0   | 212    | Q103 | 1        | 5    | Str. | 34-6   | 36     |
| Q4                         | 7        | 1    | 4    | 29-7   | 216    | Q104 | 1        | 5    | Str. | 36-8   | 38     |
| Q5                         | 3        | 1    | 1    | 3-8    | 10     | Q105 | 3        | 5    | Str. | 2-4    | 7      |
| Q6                         | 1        | 1    | 1    | 5-1    | 16     |      |          |      |      |        |        |
| Q7                         |          |      |      | 6-11   | 22     |      |          |      |      |        |        |
| Q8                         |          |      |      | 8-9    | 27     |      |          |      |      |        |        |
| Q9                         |          |      |      | 10-7   | 33     | D1   | 219      | 4    | Str. | 24-6   | 3524   |
| Q10                        |          |      |      | 12-5   | 39     | D2   | 24       | 4    | Str. | 23-0   | 369    |
| Q11                        |          |      |      | 14-3   | 45     |      |          |      |      |        |        |
| Q12                        |          |      |      | 16-1   | 50     |      |          |      |      |        |        |
| Q13                        |          |      |      | 17-11  | 56     |      |          |      |      |        |        |
| Q14                        |          |      |      | 19-9   | 62     | F1   | 12       | 4    | Str. | 24-6   | 196    |
| Q15                        |          |      |      | 21-7   | 68     | F2   | 12       | 4    | Str. | 23-0   | 184    |
| Q16                        | 1        |      |      | 23-5   | 73     |      |          |      |      |        |        |
| Q17                        | 3        |      |      | 25-3   | 79     |      |          |      |      |        |        |
| Q18                        | 2        |      |      | 27-0   | 56     |      |          |      |      |        |        |
| Q19                        | 3        |      |      | 4-2    | 13     | Q1   | 139      | 4    | 6    | 5-7    | 518    |
| Q20                        | 1        |      |      | 6-0    | 19     | Q2   | 185      | 4    | 5    | 5-5    | 669    |
| Q21                        | 1        |      |      | 7-10   | 25     | Q3   | 71       | 4    | Str. | 2-4    | 111    |
| Q22                        |          |      |      | 9-8    | 30     |      |          |      |      |        |        |
| Q23                        |          |      |      | 11-6   | 36     |      |          |      |      |        |        |
| Q24                        |          |      |      | 13-4   | 42     |      |          |      |      |        |        |
| Q25                        |          |      |      | 15-2   | 47     | K1   | 2        | 4    | Str. | 34-6   | 46     |
| Q26                        |          |      |      | 17-0   | 53     | K2   | 2        | 6    | Str. | 34-6   | 104    |
| Q27                        |          |      |      | 19-0   | 59     | K3   | 4        | 4    | Str. | 36-8   | 98     |
| Q28                        |          |      |      | 20-8   | 65     | K4   | 2        | 6    | Str. | 36-8   | 110    |
| Q29                        |          |      |      | 22-6   | 70     |      |          |      |      |        |        |
| Q30                        | 1        |      |      | 24-4   | 76     |      |          |      |      |        |        |
| Q31                        | 3        |      |      | 26-2   | 82     |      |          |      |      |        |        |
| Q32                        | 2        |      |      | 27-11  | 58     | S1   | 35       | 4    | 6    | 8-7    | 201    |
| Q33                        | 3        |      |      | 3-4    | 10     | S2   | 31       | 4    | 6    | 6-5    | 133    |
| Q34                        | 1        |      |      | 5-1    | 16     | S3   | 37       | 4    | 4    | 3-5    | 85     |
| Q35                        | 1        |      |      | 6-11   | 22     | S4   | 35       | 4    | 4    | 3-1    | 72     |
| Q36                        |          |      |      | 8-8    | 27     |      |          |      |      |        |        |
| Q37                        |          |      |      | 10-6   | 33     |      |          |      |      |        |        |
| Q38                        |          |      |      | 12-3   | 38     |      |          |      |      |        |        |
| Q39                        |          |      |      | 14-1   | 44     |      |          |      |      |        |        |
| Q40                        |          |      |      | 15-10  | 50     |      |          |      |      |        |        |
| Q41                        |          |      |      | 17-8   | 55     |      |          |      |      |        |        |
| Q42                        |          |      |      | 19-6   | 61     |      |          |      |      |        |        |
| Q43                        |          |      |      | 21-2   | 66     |      |          |      |      |        |        |
| Q44                        |          |      |      | 22-11  | 72     |      |          |      |      |        |        |
| Q45                        | 1        |      |      | 24-8   | 77     |      |          |      |      |        |        |
| Q46                        | 3        |      |      | 26-4   | 82     |      |          |      |      |        |        |
| Q47                        | 1        |      |      | 28-2   | 29     |      |          |      |      |        |        |
| Q48                        | 3        |      |      | 4-2    | 13     |      |          |      |      |        |        |
| Q49                        | 1        |      |      | 5-11   | 19     |      |          |      |      |        |        |
| Q50                        |          |      |      | 7-9    | 24     |      |          |      |      |        |        |
| Q51                        |          |      |      | 9-6    | 30     |      |          |      |      |        |        |
| Q52                        |          |      |      | 11-4   | 35     |      |          |      |      |        |        |
| Q53                        |          |      |      | 13-1   | 41     |      |          |      |      |        |        |
| Q54                        |          |      |      | 14-11  | 47     |      |          |      |      |        |        |
| Q55                        |          |      |      | 16-8   | 52     |      |          |      |      |        |        |
| Q56                        |          |      |      | 18-6   | 58     |      |          |      |      |        |        |
| Q57                        |          |      |      | 20-3   | 63     |      |          |      |      |        |        |
| Q58                        |          |      |      | 22-0   | 69     |      |          |      |      |        |        |
| Q59                        | 1        |      |      | 23-9   | 74     |      |          |      |      |        |        |
| Q60                        | 3        | 5    | 4    | 25-6   | 80     |      |          |      |      |        |        |

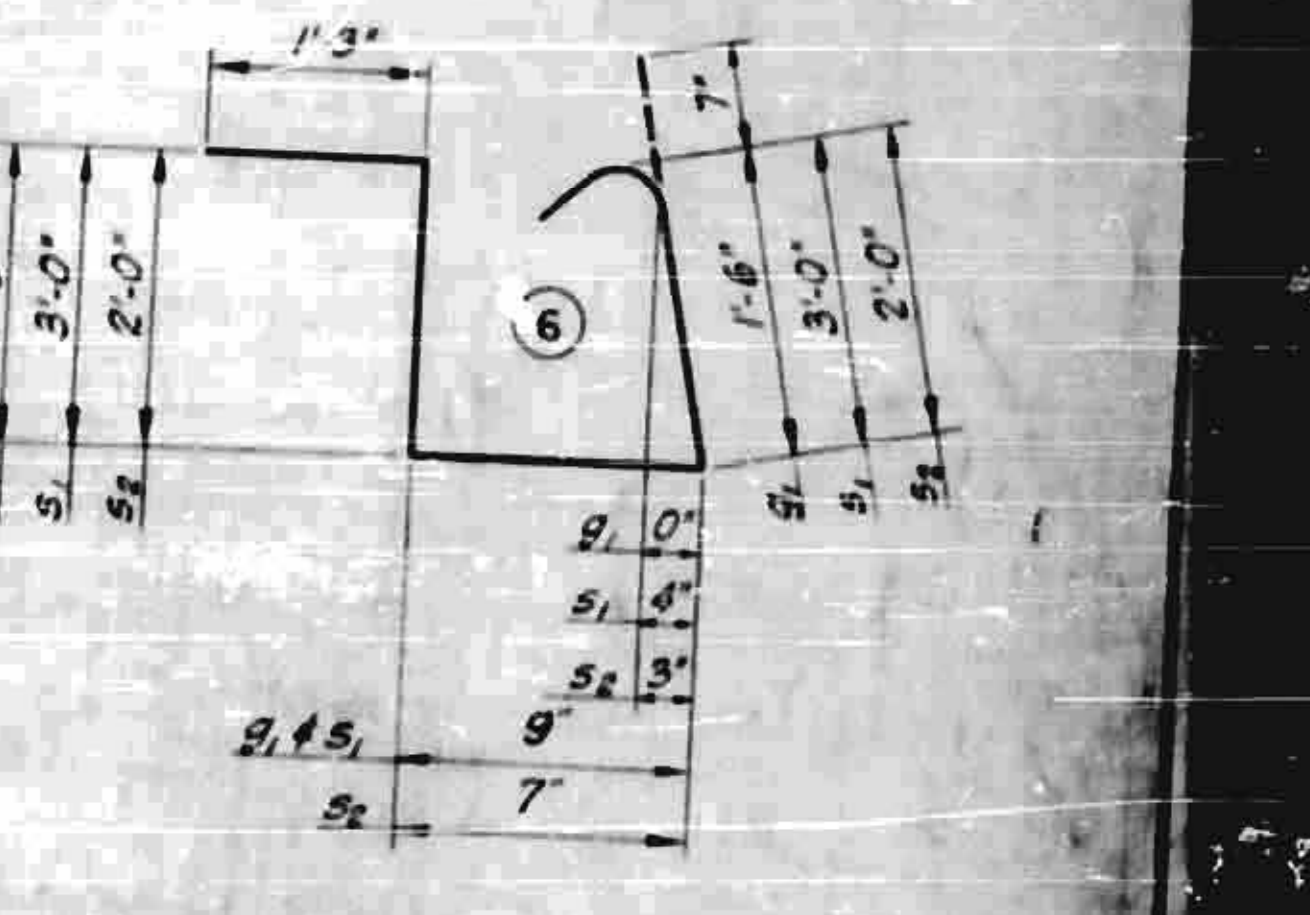
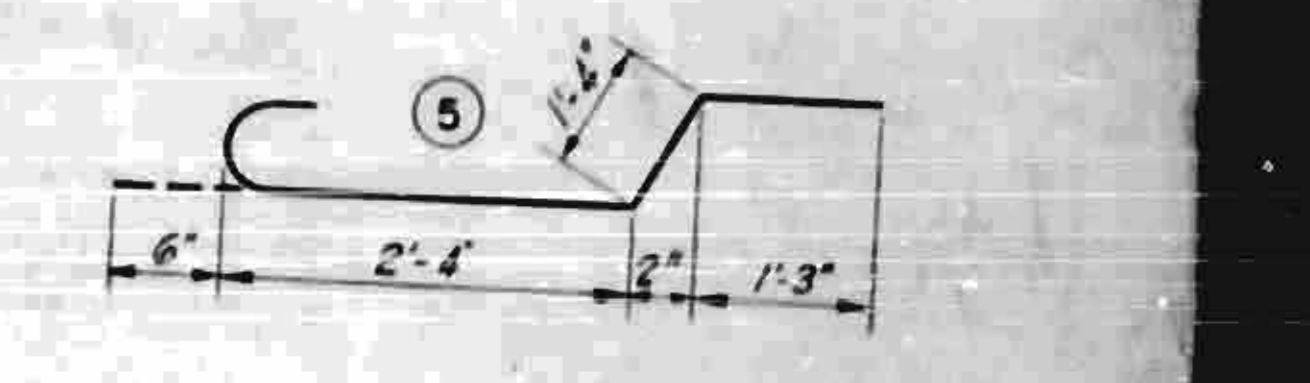
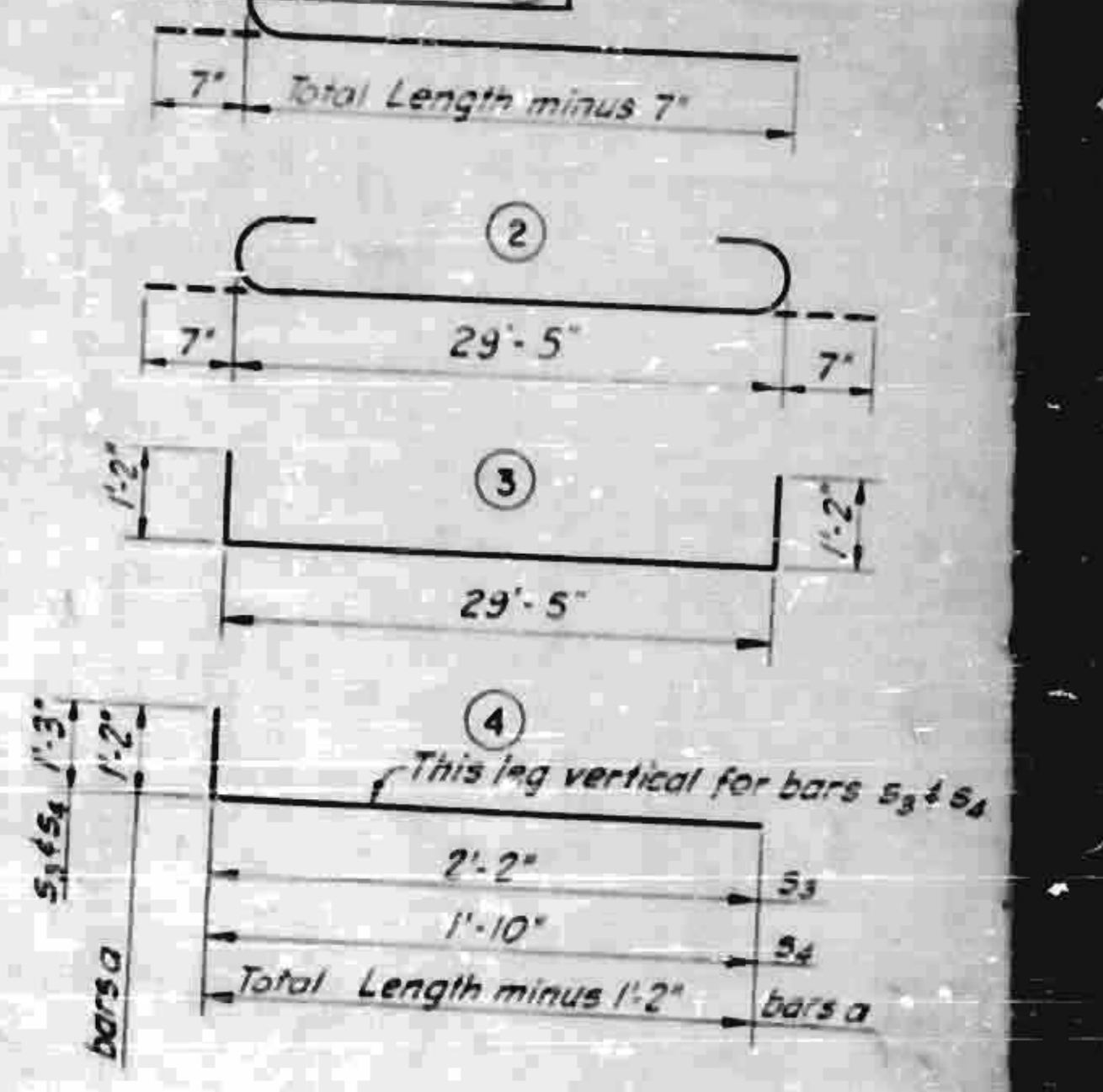
Reinforcing Steel - Lbs. 15320 ✓  
 Class "A" Concrete - C.Y. 72.8 ✓  
 Single Bar Metal Rail - Lin. Ft. 149.66 ✓

Revision No. 2 To change length of metal rail.  
 Revision No. 1 To change b. bars in Bill of Mat.



BILL OF MATERIALS — SPAN

PROJECT NO. 8.18293  
 HENDERSON COUNTY  
 STATION 130.3 + 58 L  
 50+00 Y

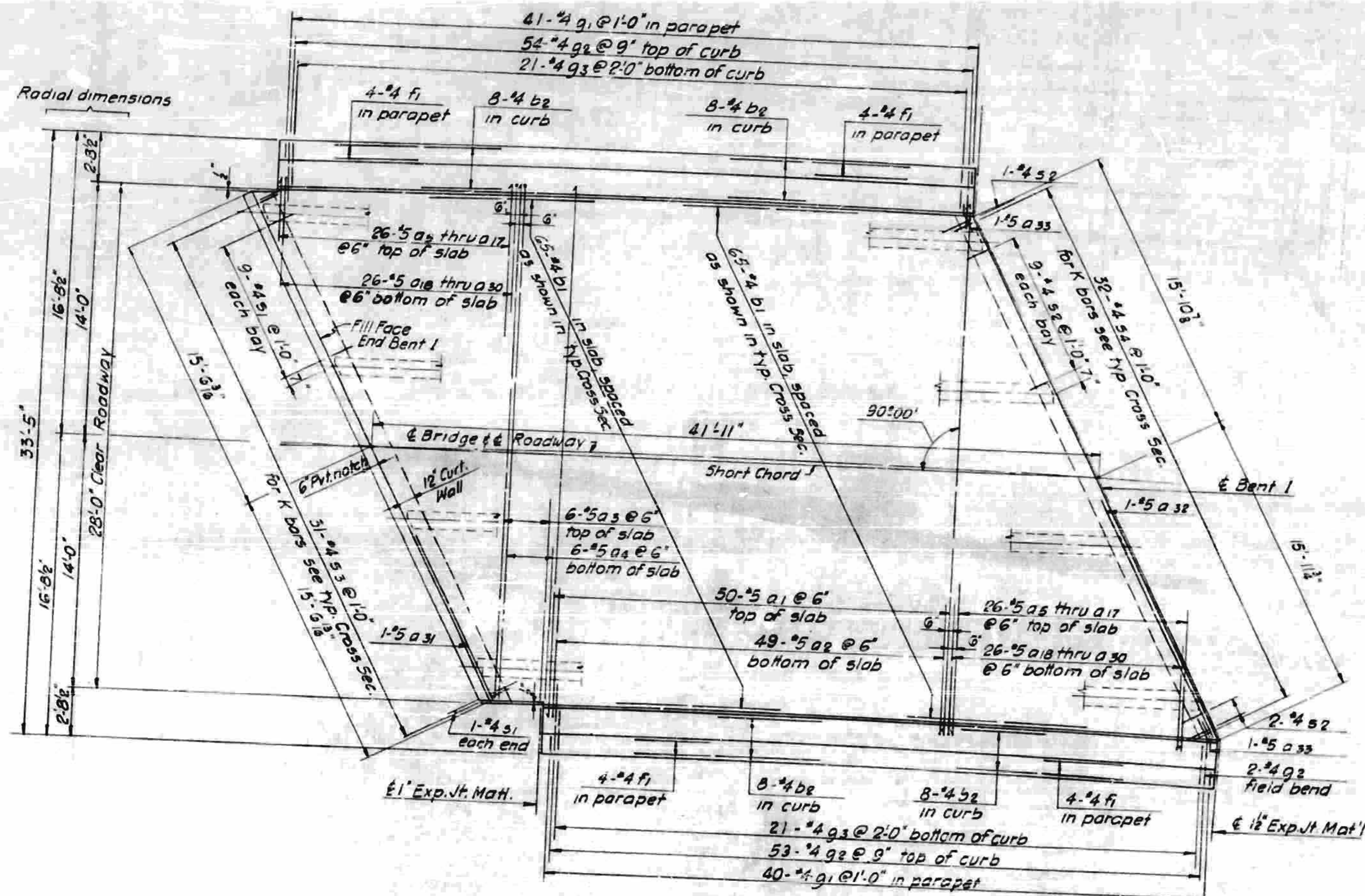


BENT BAR TYPES  
 (All dimensions are out-to-out of bar)

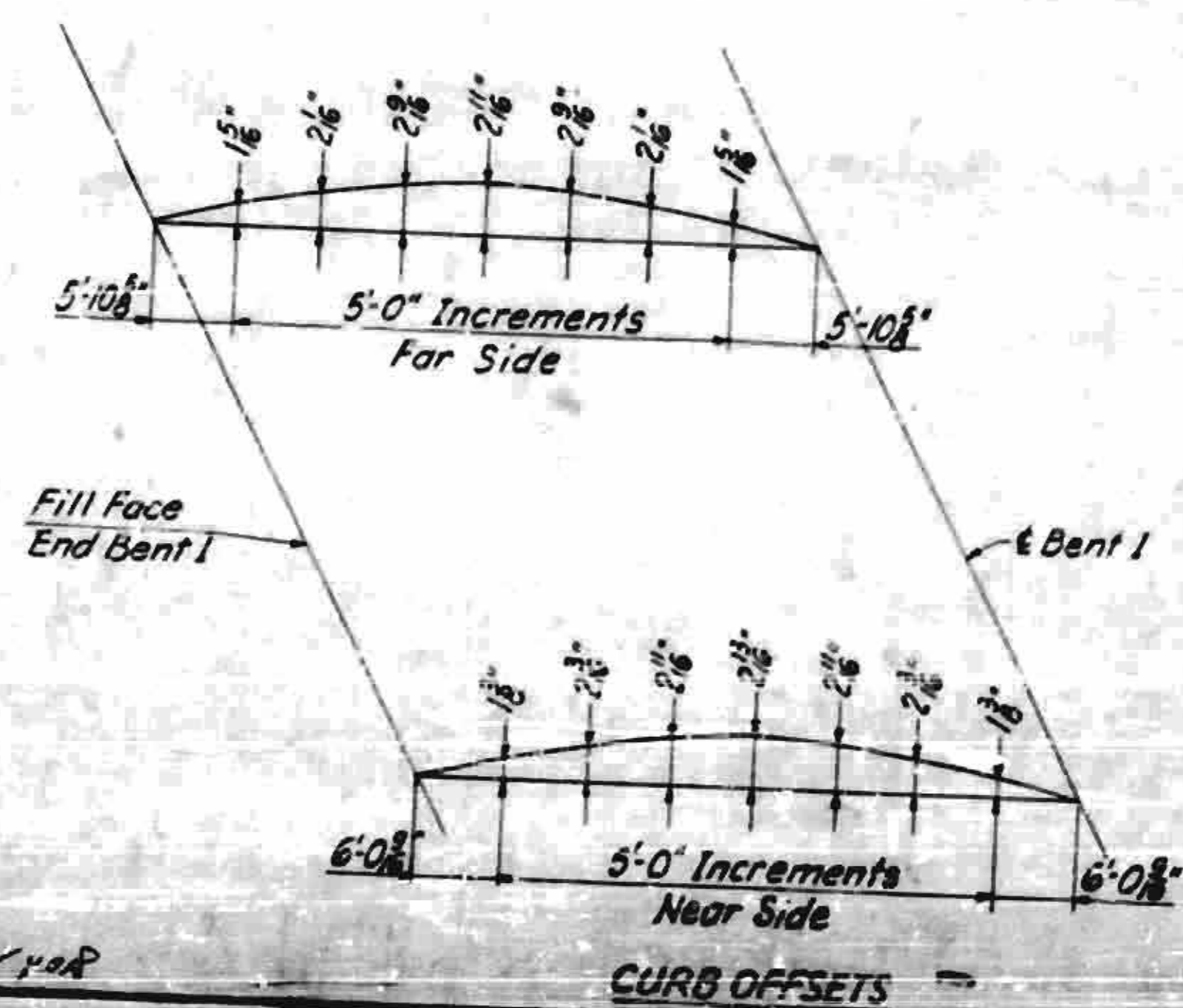
PROJECT NO. 8.18293  
 HENDERSON COUNTY  
 STATION 130.3 + 58 L  
 50+00 Y

STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 RALEIGH  
 SUPERSTRUCTURE  
 BAR LISTS

| NO. | DATE    | BY           | REVISIONS |
|-----|---------|--------------|-----------|
| 1   | 4-18-53 | W. H. HARRIS | REVISED   |



PLAN



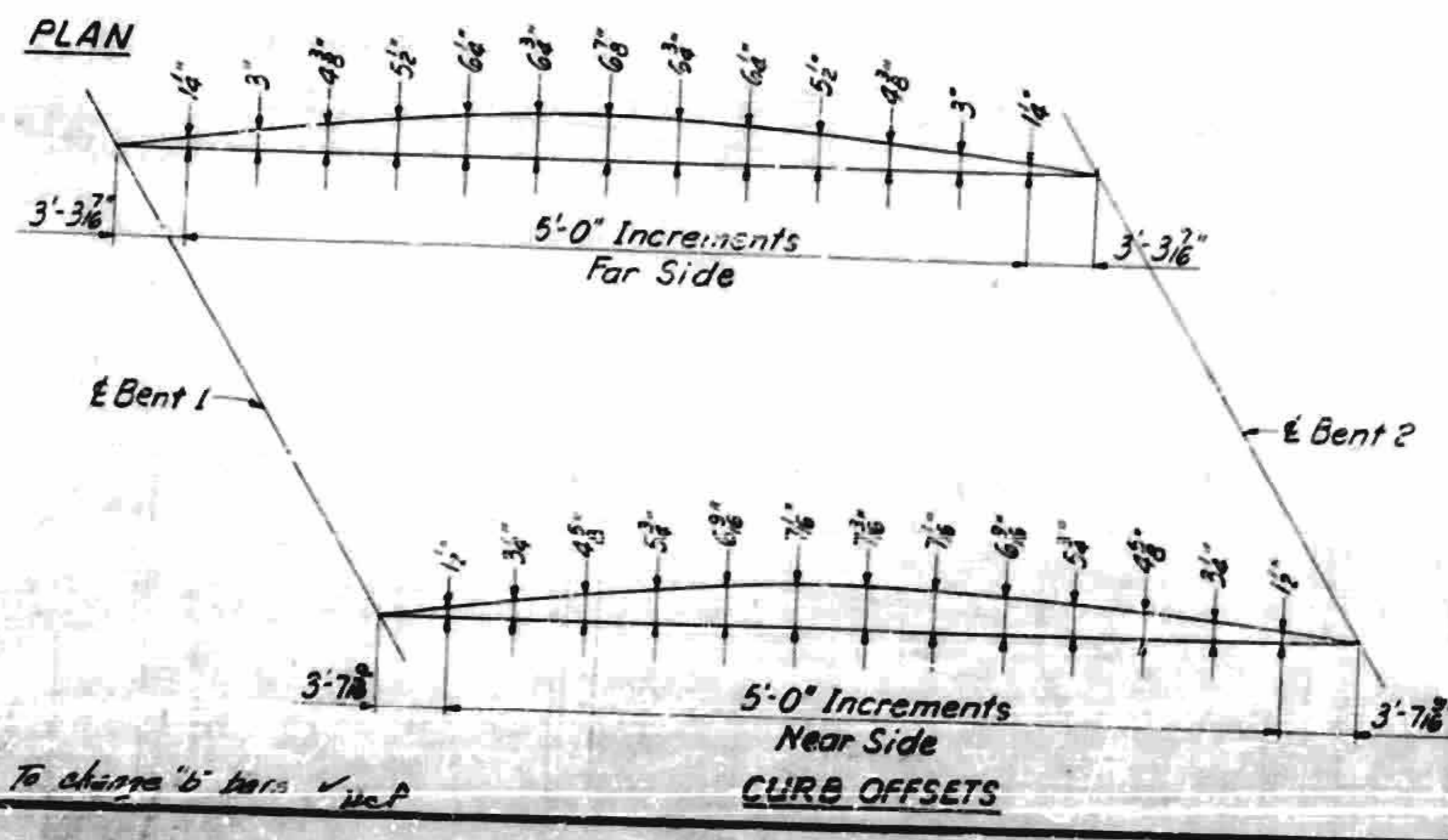
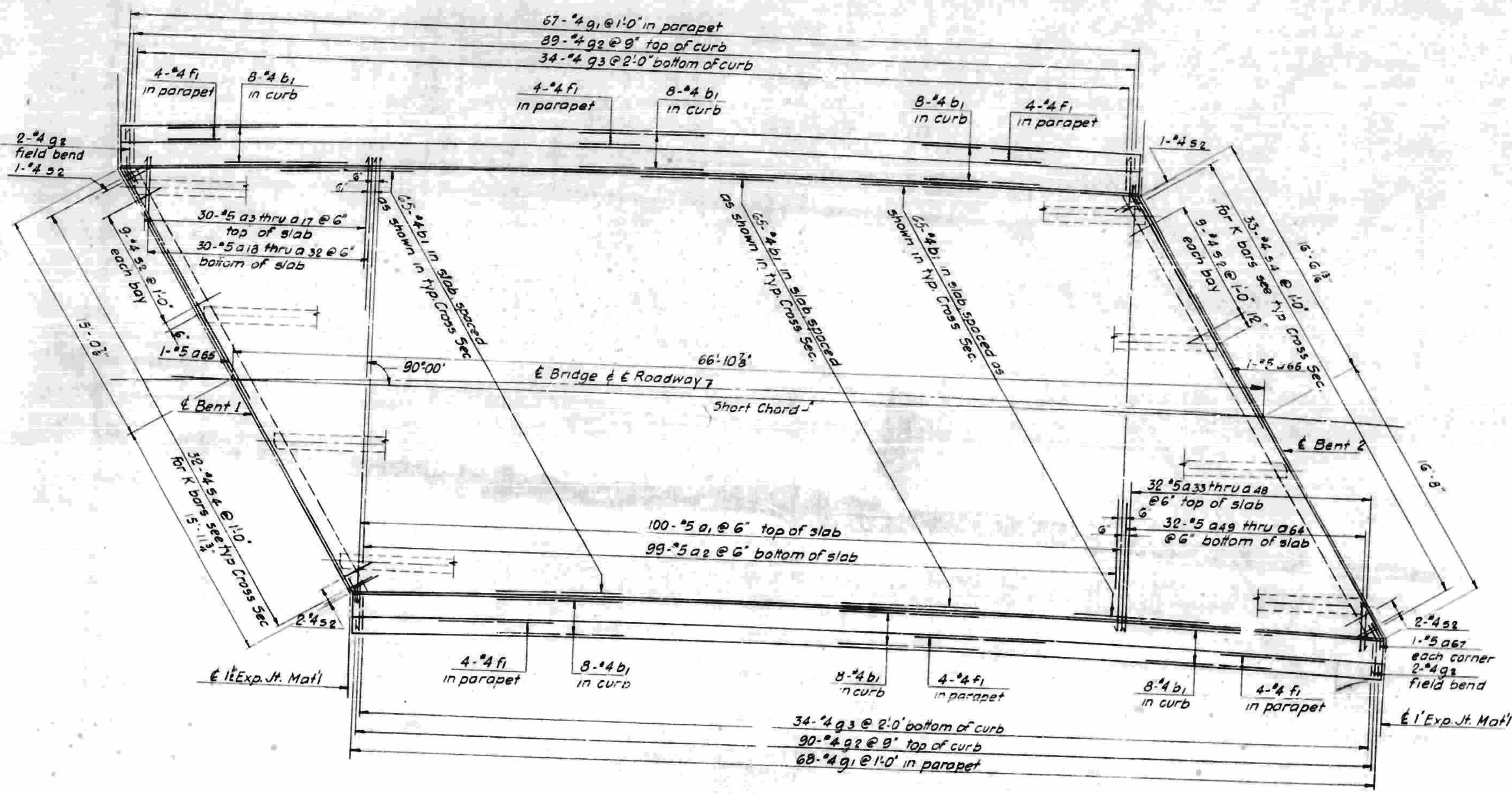
Revision No. 1: To change 'b' bars to #4

PROJECT NO. 8-18293  
 HENDERSON COUNTY  
 STATION 1363 + 56 L  
 50 + 00 V

| NO. | DATE    | BY | REVISIONS |
|-----|---------|----|-----------|
| 1   | 11-2-53 |    |           |

STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 DIVISION

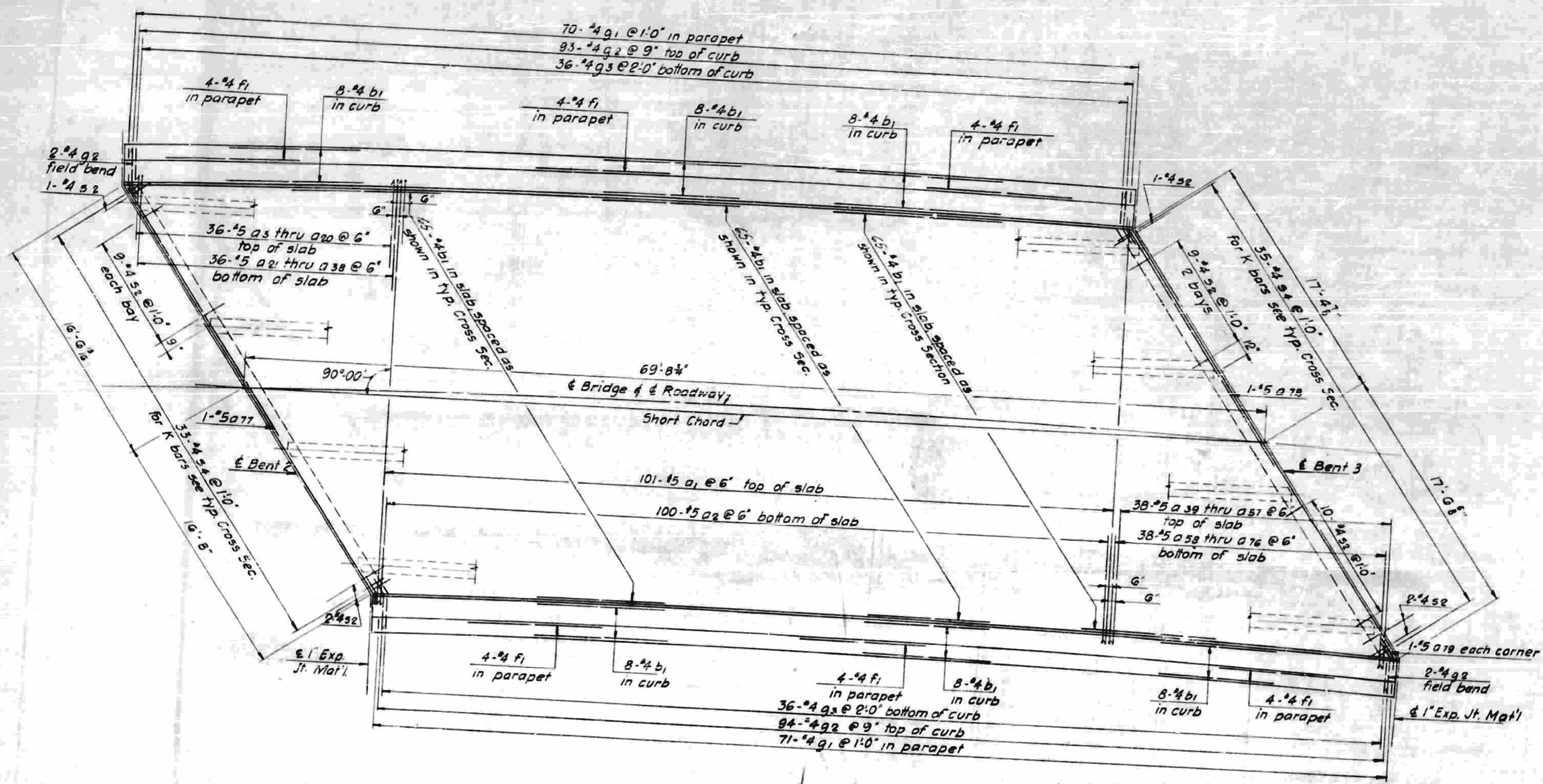
SUPERSTRUCTURE  
 SPAN A



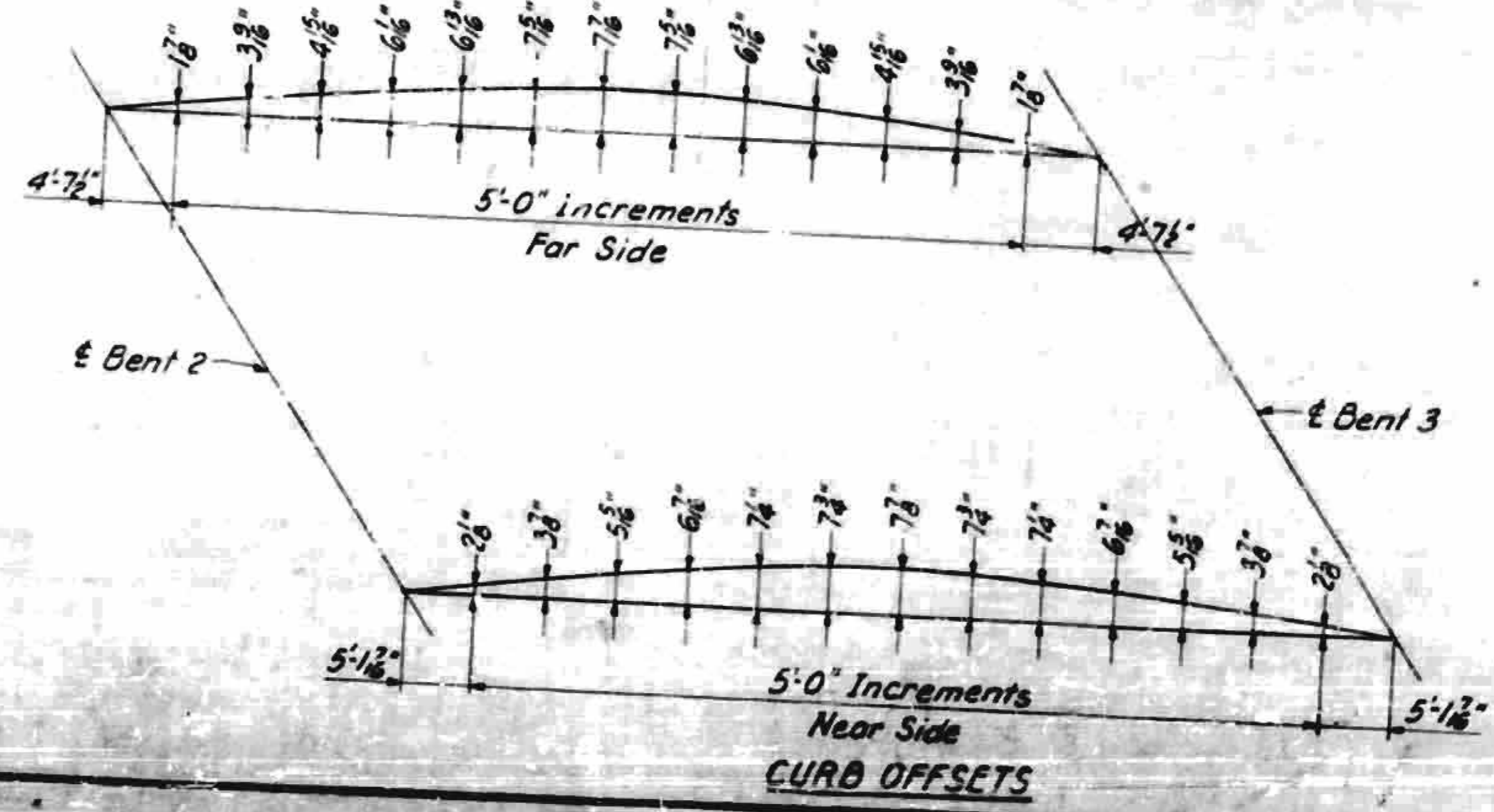
PROJECT NO. 8-18292  
 HENDERSON COUNTY  
 STATION 1383 + 58 L  
 50 + 00 Y'

|  |    |
|--|----|
| STATE OF NORTH CAROLINA<br>STATE HIGHWAY COMMISSION<br>RALEIGH |    |
| SUPERSTRUCTURE<br>SPAN B                                       |    |
| DATE   | BY |
| DATE   | BY |
| DATE   | BY |
| DATE   | BY |

|                     |       |                 |
|---------------------|-------|-----------------|
| FED. ROAD DIST. NO. | STATE | PROJ. DIST. NO. |
| 3                   | N. C. | 8 18293         |
| SHEET NO. 497 569   |       |                 |



PLAN

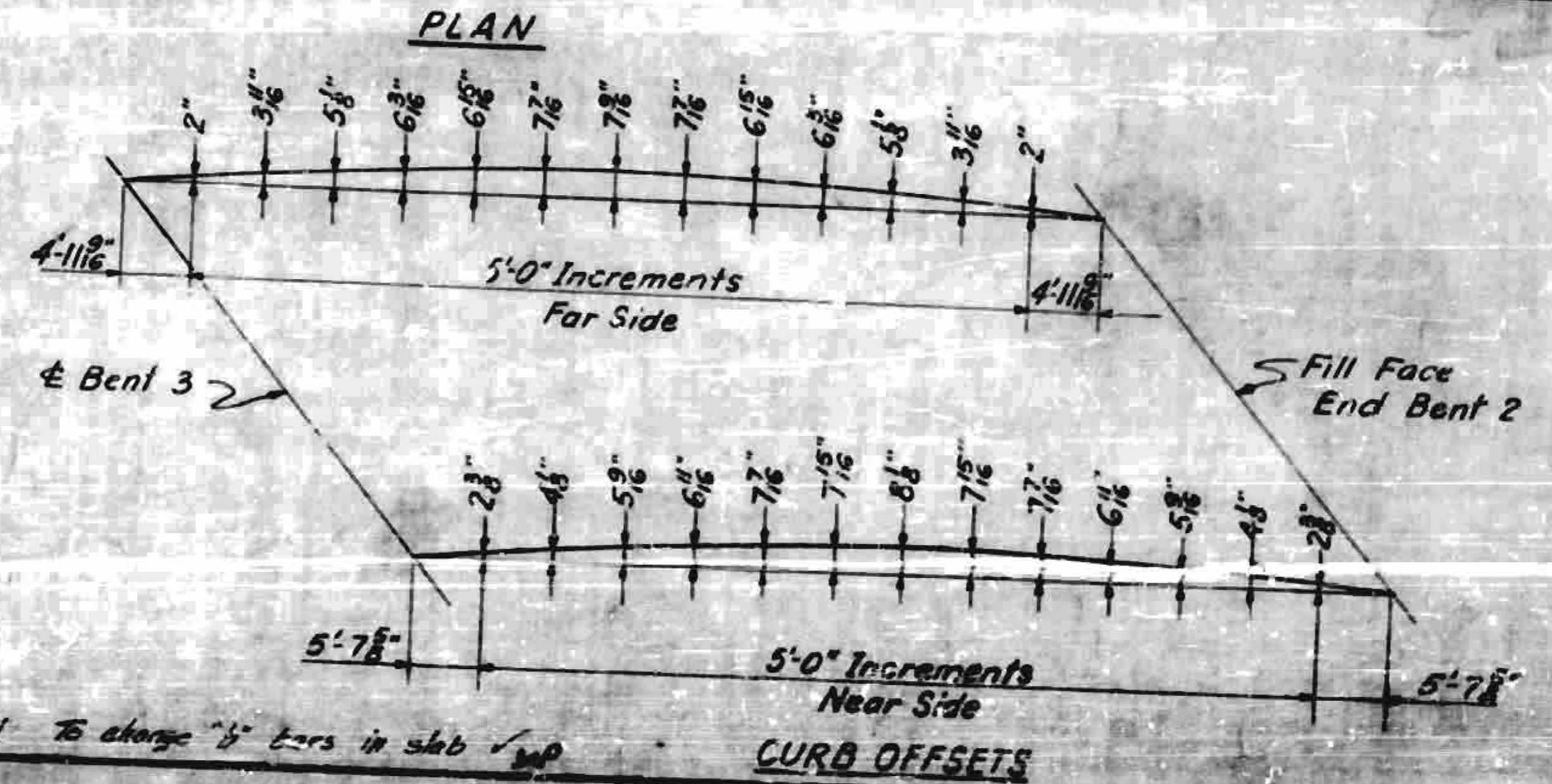
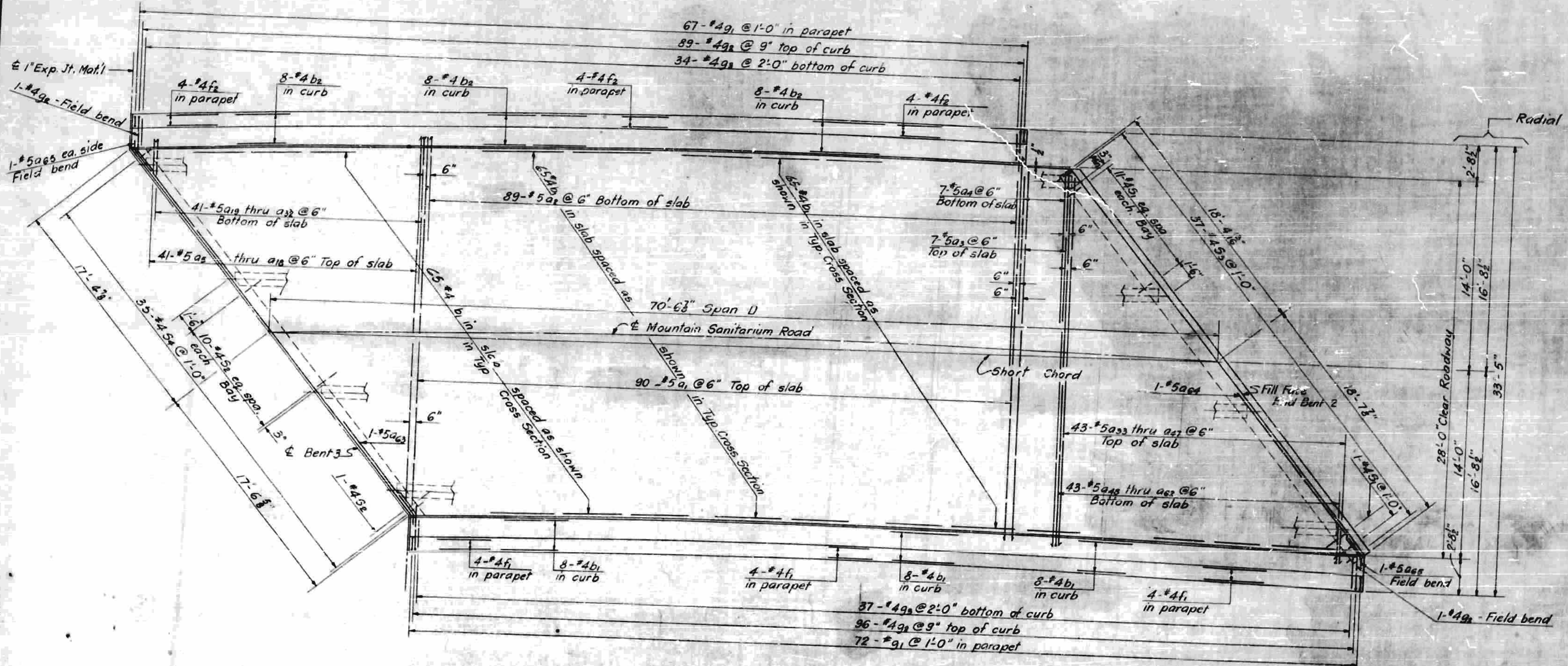


Revision N<sup>o</sup> 1 - To change 'b' bars in slab to 'a'

PROJECT NO. 8 18293  
 HENDERSON COUNTY  
 STATION 1383 + 58.4  
 50' 00"

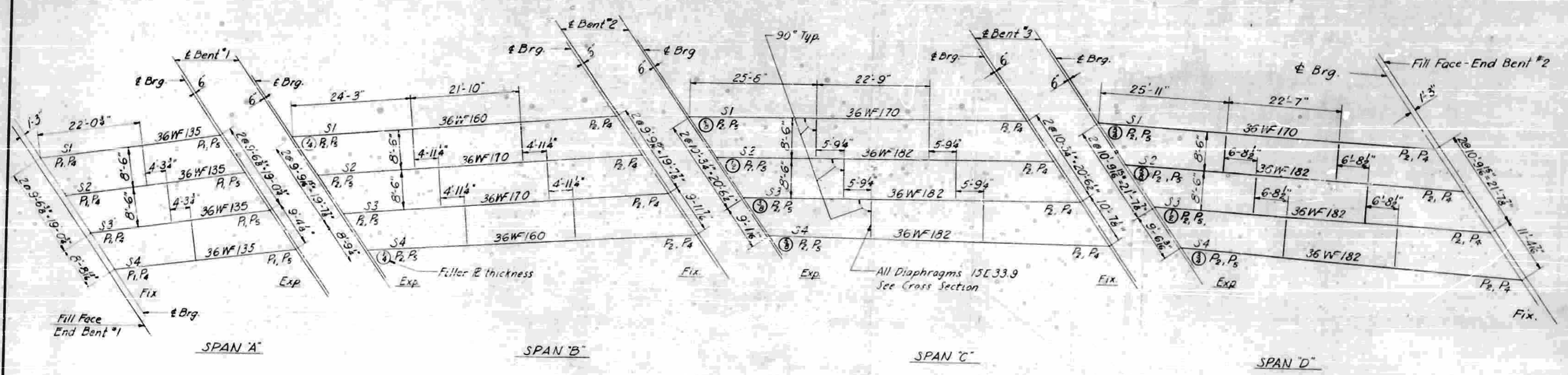
|  |             |
|--|-------------|
| STATE OF NORTH CAROLINA<br>STATE HIGHWAY COMMISSION<br>RALEIGH |             |
| SUPERSTRUCTURE<br>SPAN C                                       |             |
| DATE   | BY          |
| 4-2-53   | [Signature] |





PROJECT NO. B. 18293  
 HENDERSON COUNTY  
 STATION 1383 + 58.4  
 50 + 00 V

|  |  |
|--|--|
| DATE   |  |
| BY   |  |
| CHECKED  |  |
| APPROVED   |  |
| STATE OF NORTH CAROLINA<br>STATE HIGHWAY COMMISSION<br>RAILTON |  |
| SUPERSTRUCTURE<br>SPAN D                                       |  |



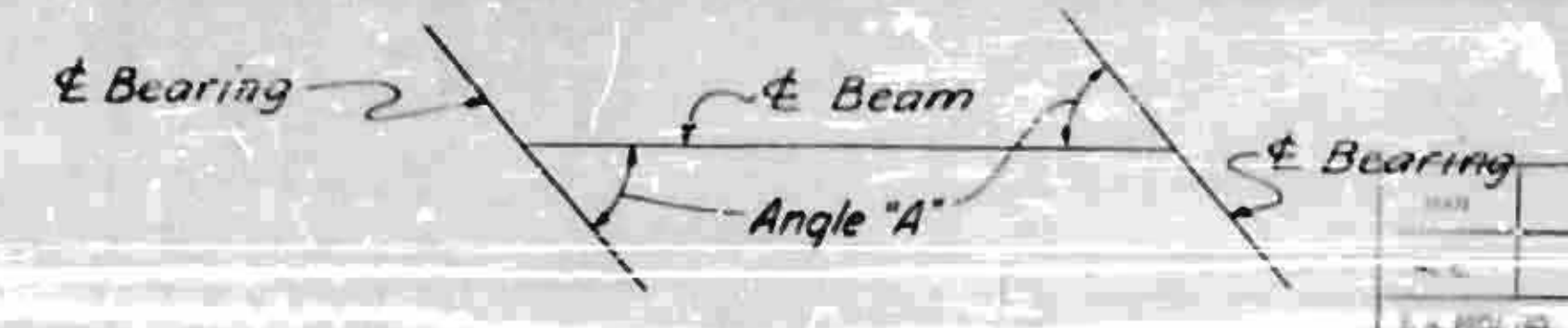
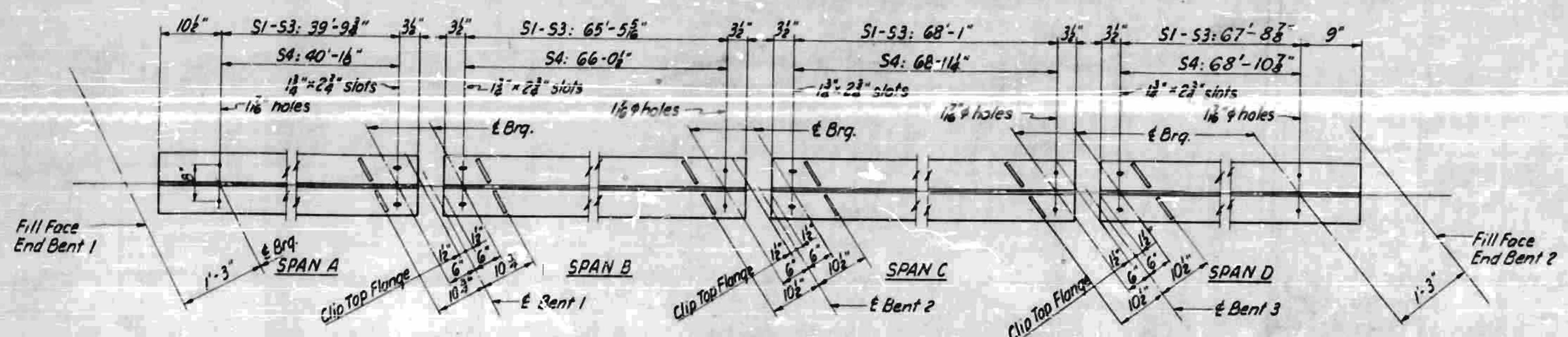
PROJECT NO. 818293  
 HENDERSON COU  
 STATION 1333 + 50 L  
 50 + 00 Y

|      |    |           |
|------|----|-----------|
| DATE | BY | REVISIONS |
|      |    |           |
|      |    |           |
|      |    |           |
|      |    |           |

STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMM  
 RALEIGH

STRUCTURAL STEEL

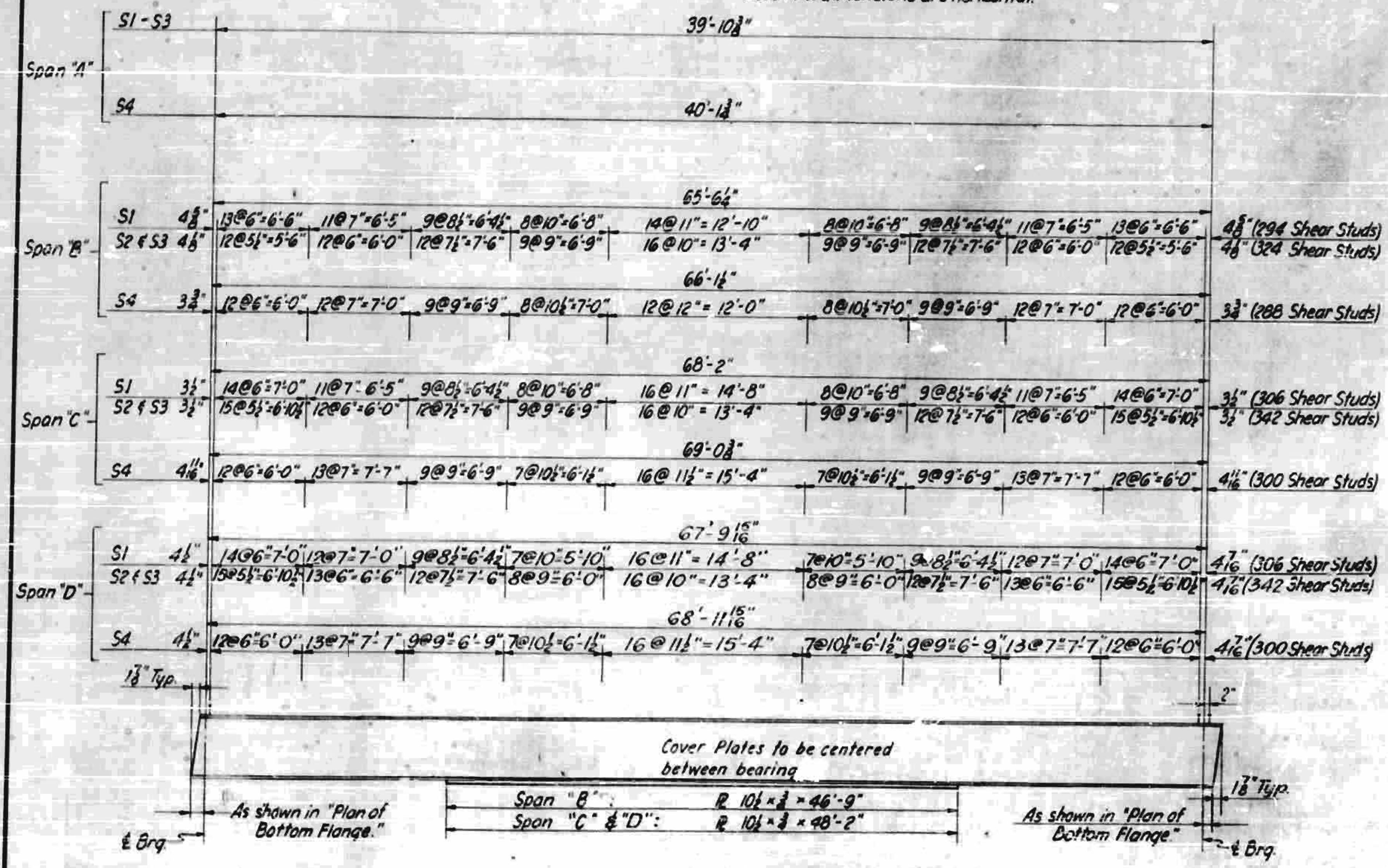
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|------|--------------|-----------|-------|
| DATE | REVISION NO. | SHEET NO. | TOTAL |
|      |              | 500       | 567   |



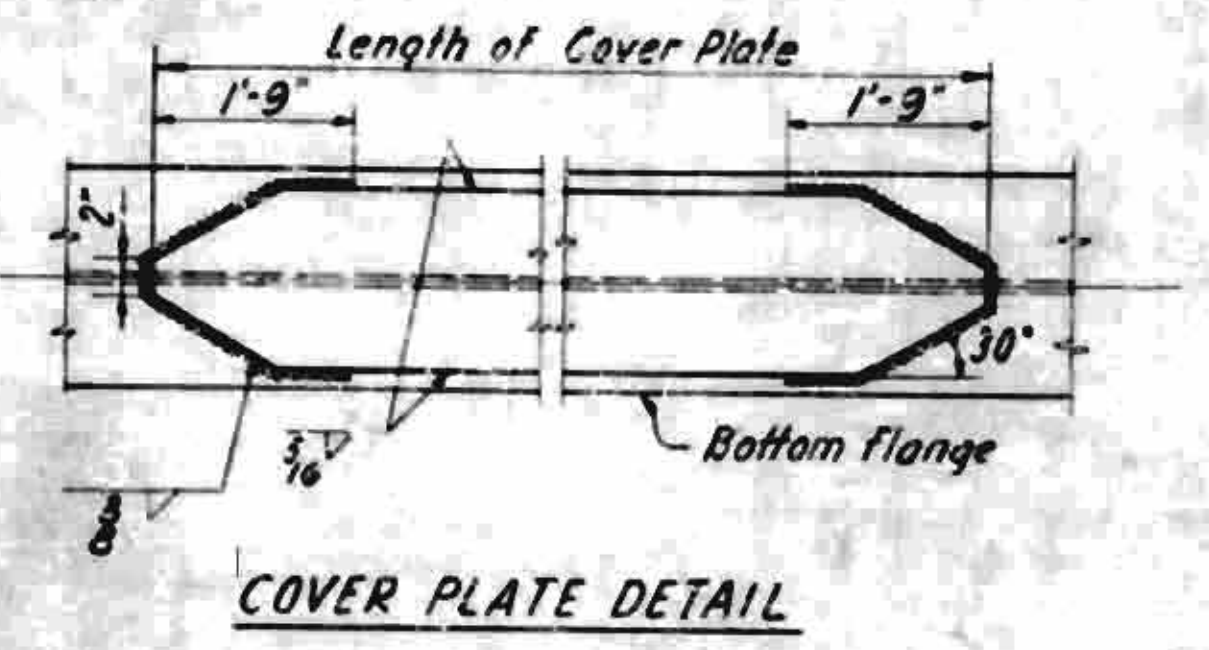
ANGLE "A"

|       | SPAN "A"    | SPAN "B"    | SPAN "C"    | SPAN "D"    |
|-------|-------------|-------------|-------------|-------------|
| S1-S3 | 63'-04"-44" | 59'-52"-15" | 55'-50"-54" | 51'-43"-30" |
| S4    | 62'-18"-20" | 58'-59"-07" | 54'-46"-39" | 50'-30"-55" |

PLAN OF BOTTOM FLANGE  
Note: All dimensions are horizontal.

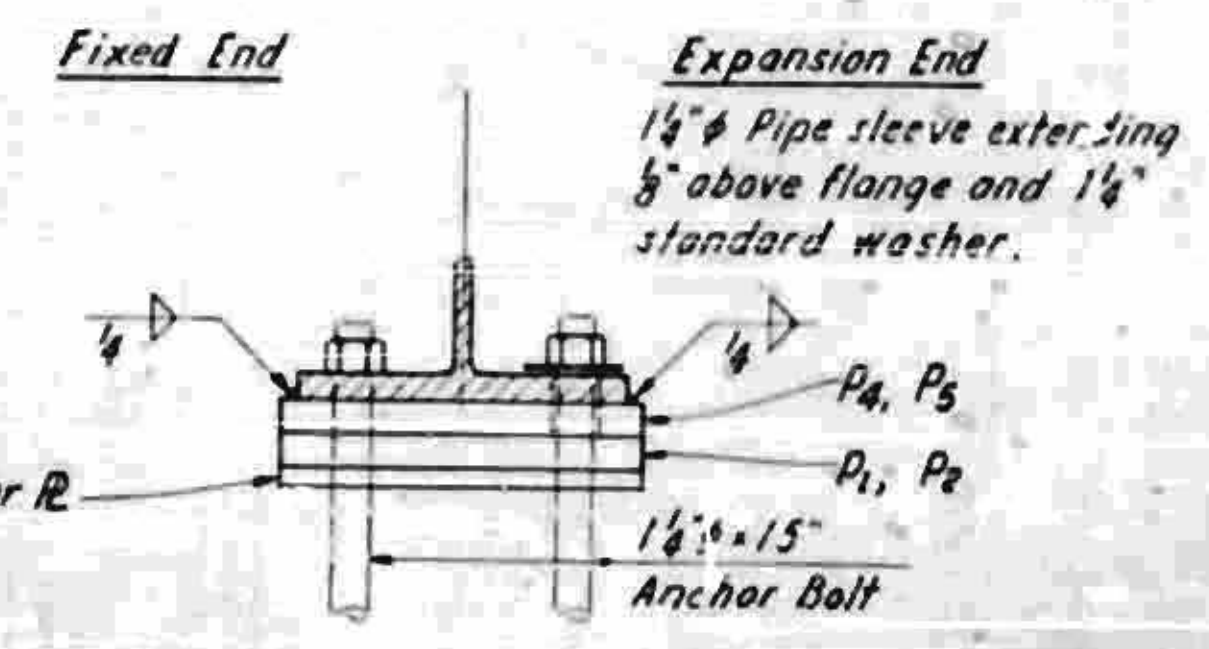
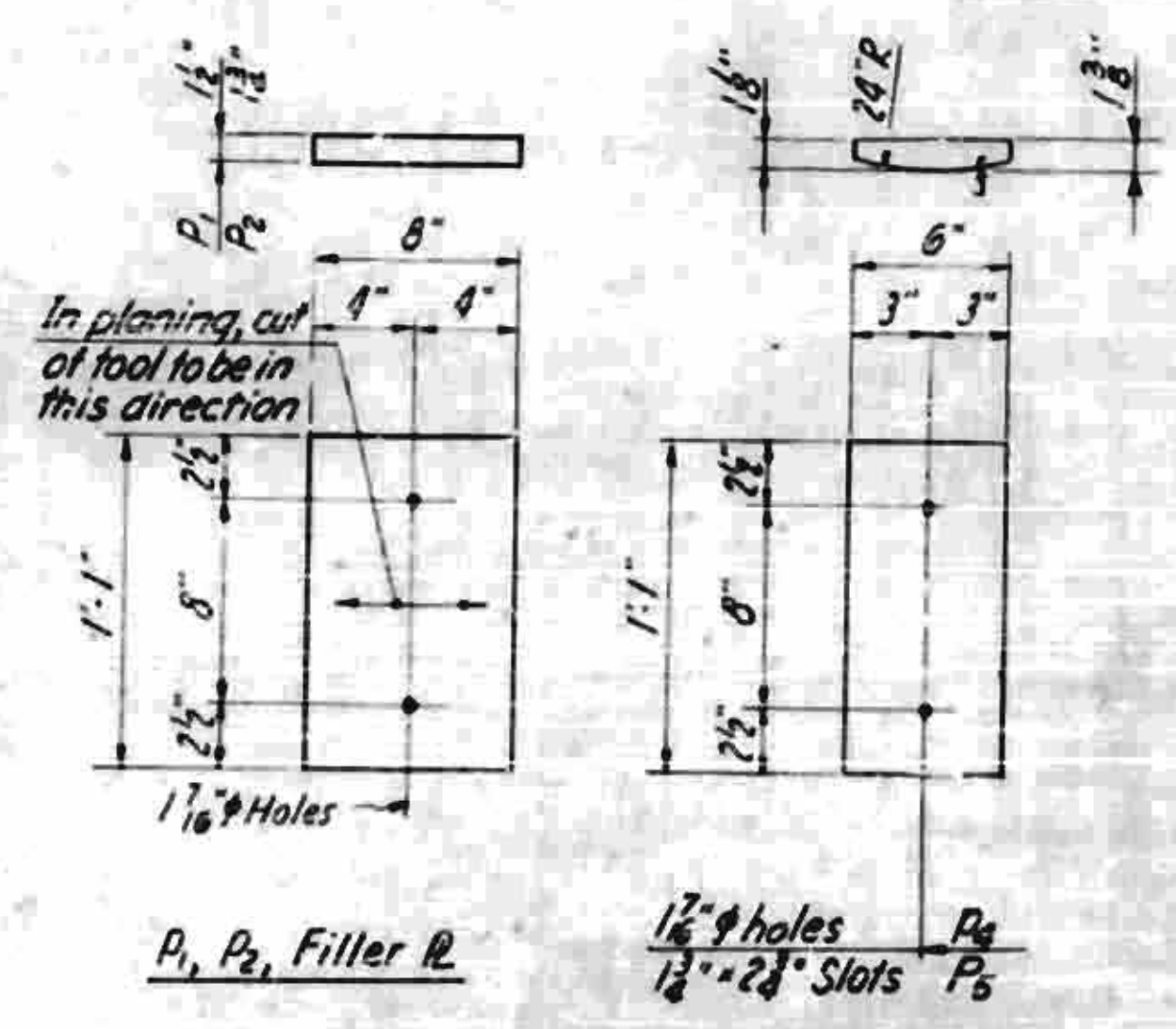


SHEAR STUD SPACING AND COVER PLATE LENGTH  
Note: All dimensions are given along beam grade.



Note:  
At the Contractor's option, 3C6 may be substituted for the stud shown. See Sheet 5-N

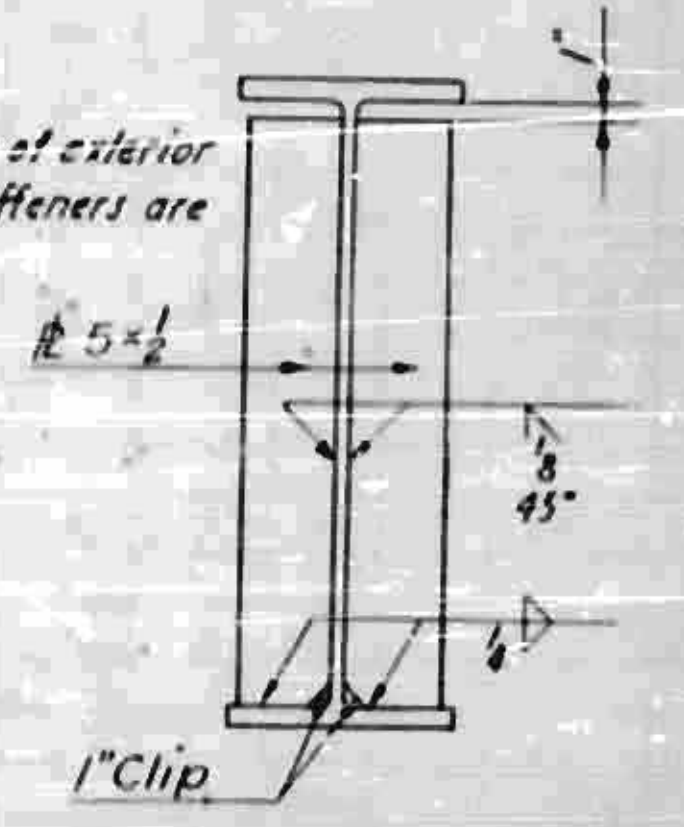
COVER PLATE DETAIL



SECTION THRU BEARING

BEARING PLATE DETAILS  
Note: For Filler R Thickness, see Framing Plan

Note: Omit stiffeners on outside of exterior beams at End Bents. Stiffeners are to be vertical.



STIFFENER DETAIL

DEFLECTION TABLE

|                | SPAN "A" |         | SPAN "B" |         | SPAN "C" |         | SPAN "D" |         |
|----------------|----------|---------|----------|---------|----------|---------|----------|---------|
|                | Ext. Bm  | Int. Bm | Ext. Bm  | Int. Bm | Ext. Bm  | Int. Bm | Ext. Bm  | Int. Bm |
| Steel          | 1/16     | 1/16    | 1/16     | 1/16    | 1/16     | 1/16    | 1/16     | 1/16    |
| Concrete       | 1/8      | 1/8     | 1/8      | 1/8     | 1/8      | 1/8     | 1/8      | 1/8     |
| Total DL Defl  | 1/4      | 1/4     | 1/4      | 1/4     | 1/4      | 1/4     | 1/4      | 1/4     |
| Vertical Curve | -        | -       | -        | -       | -        | -       | -        | -       |
| Total Camber   | 1/8      | 1/8     | 1/8      | 1/8     | 1/8      | 1/8     | 1/8      | 1/8     |

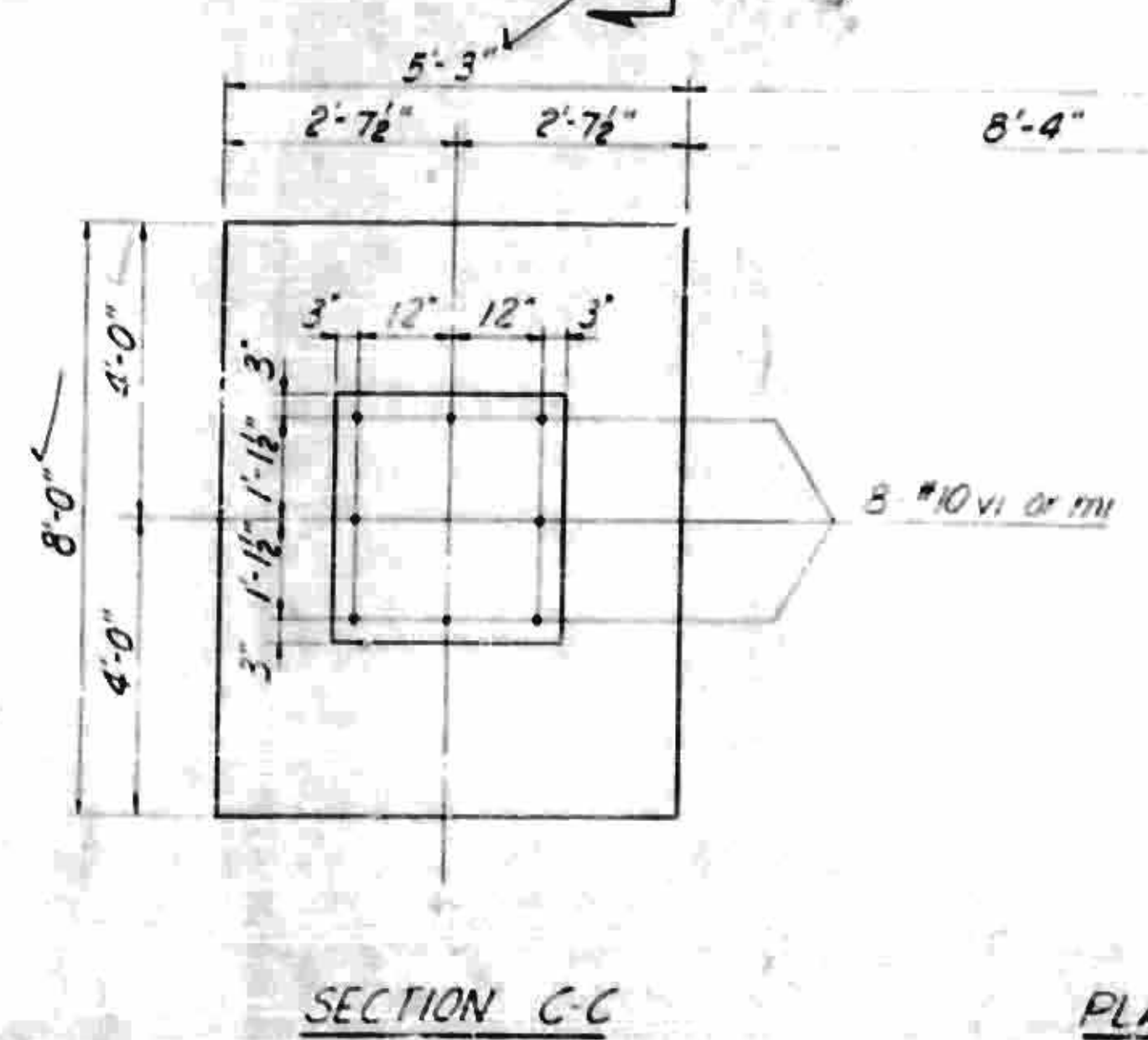
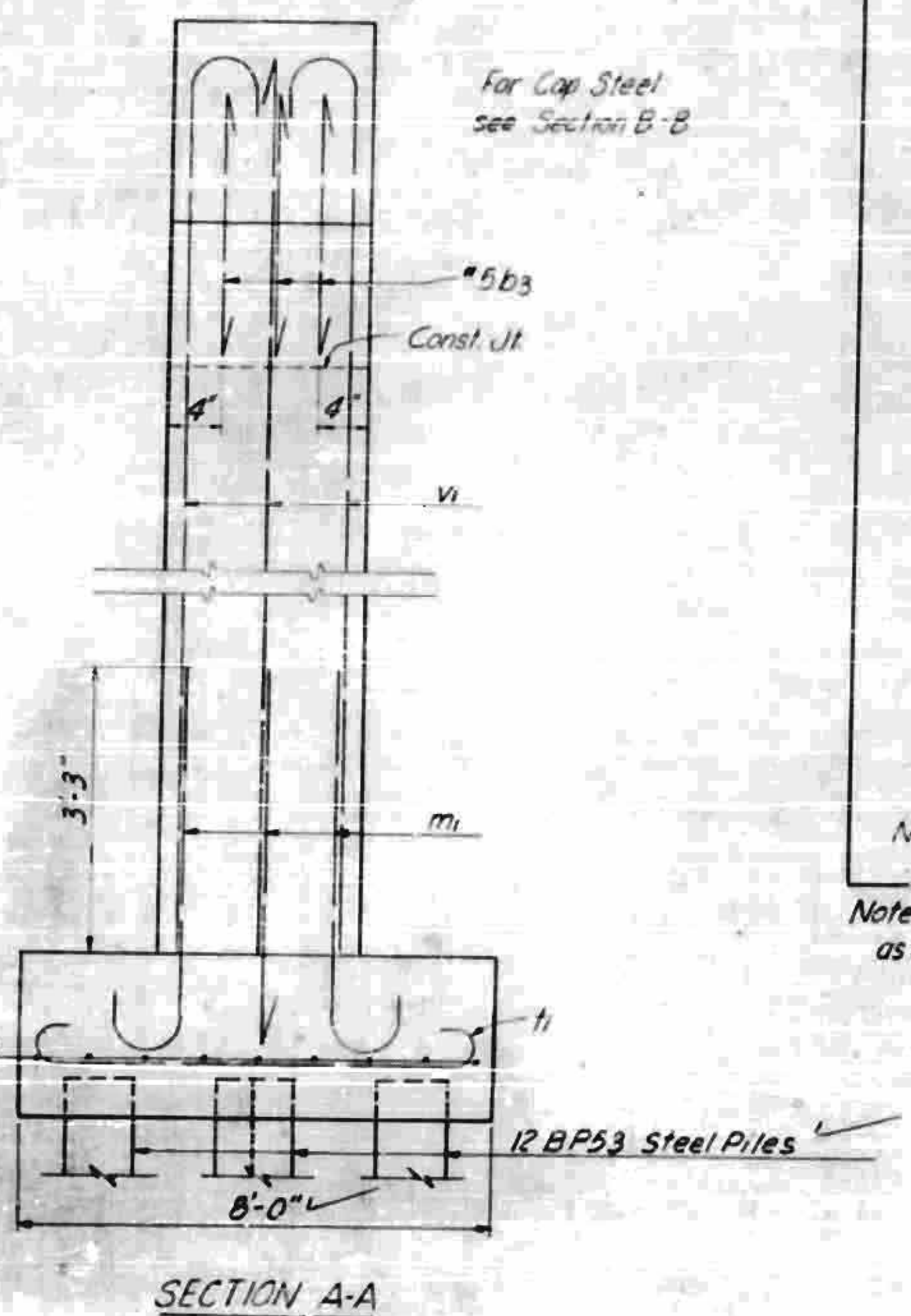
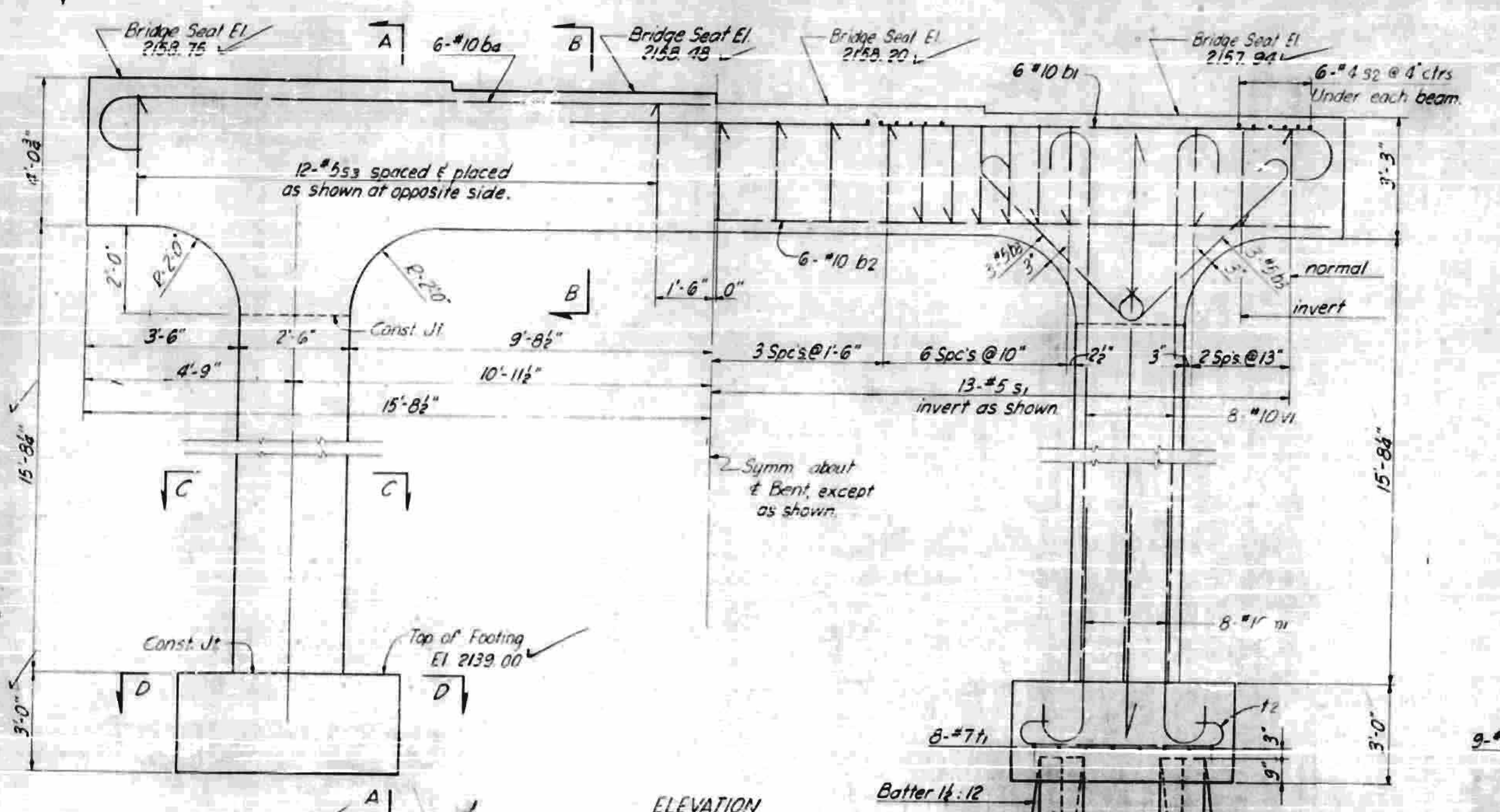
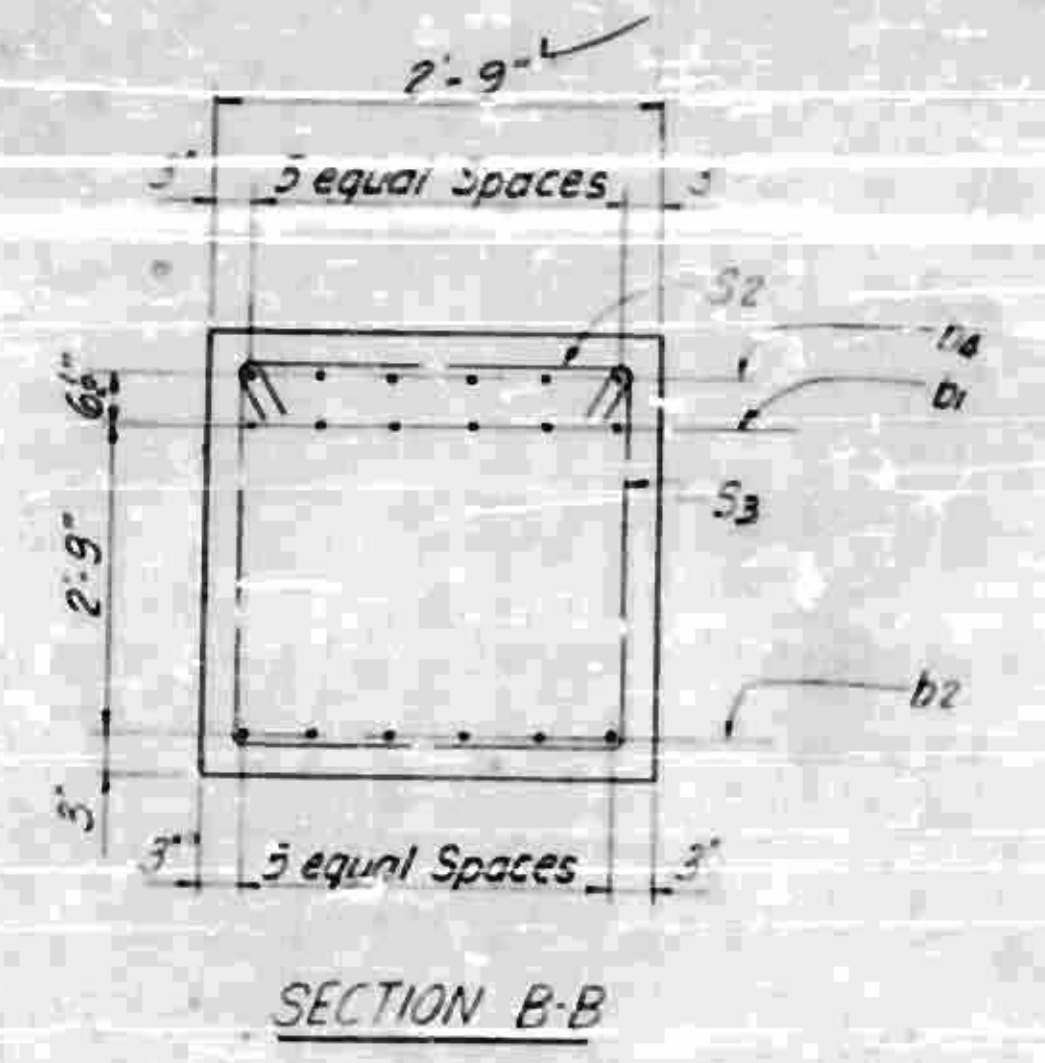
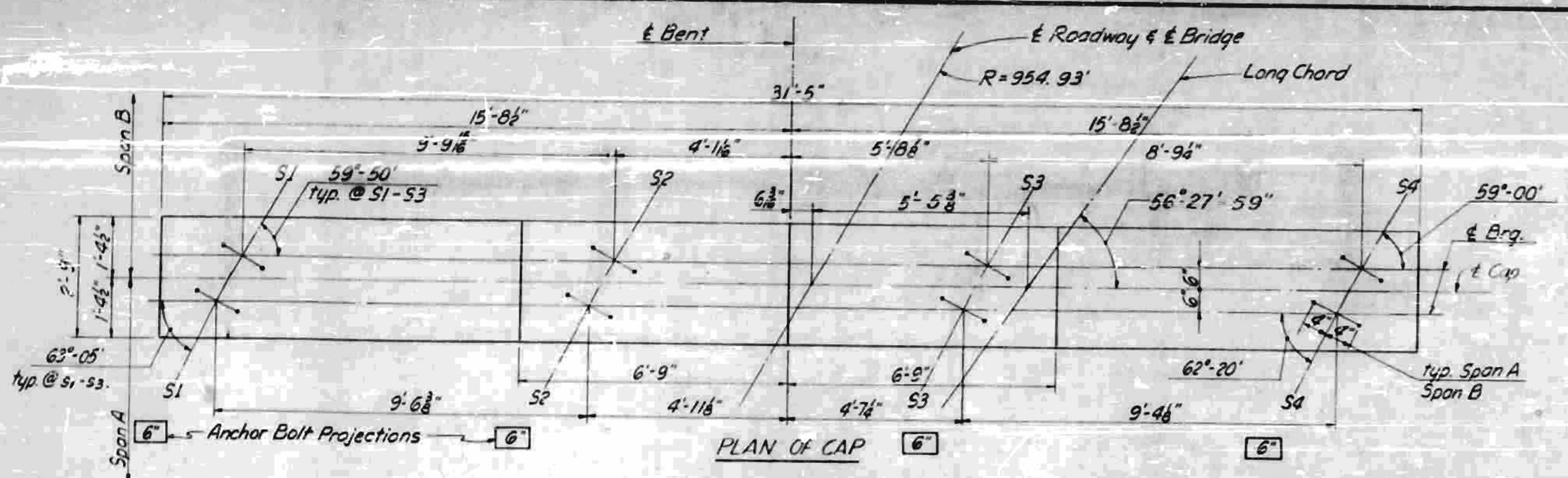
NOTE: All beams, cover plates and channel shear connectors shall be of either ASTM A 36 or A 373 grade structural steel. See Sheet 5-N.  
Stress in extreme fiber of structural steel = 18,000 lbs. per sq. in.

PROJECT NO. 8.18293  
HENDERSON COUNTY  
STATION 1383+59L  
50+00 Y

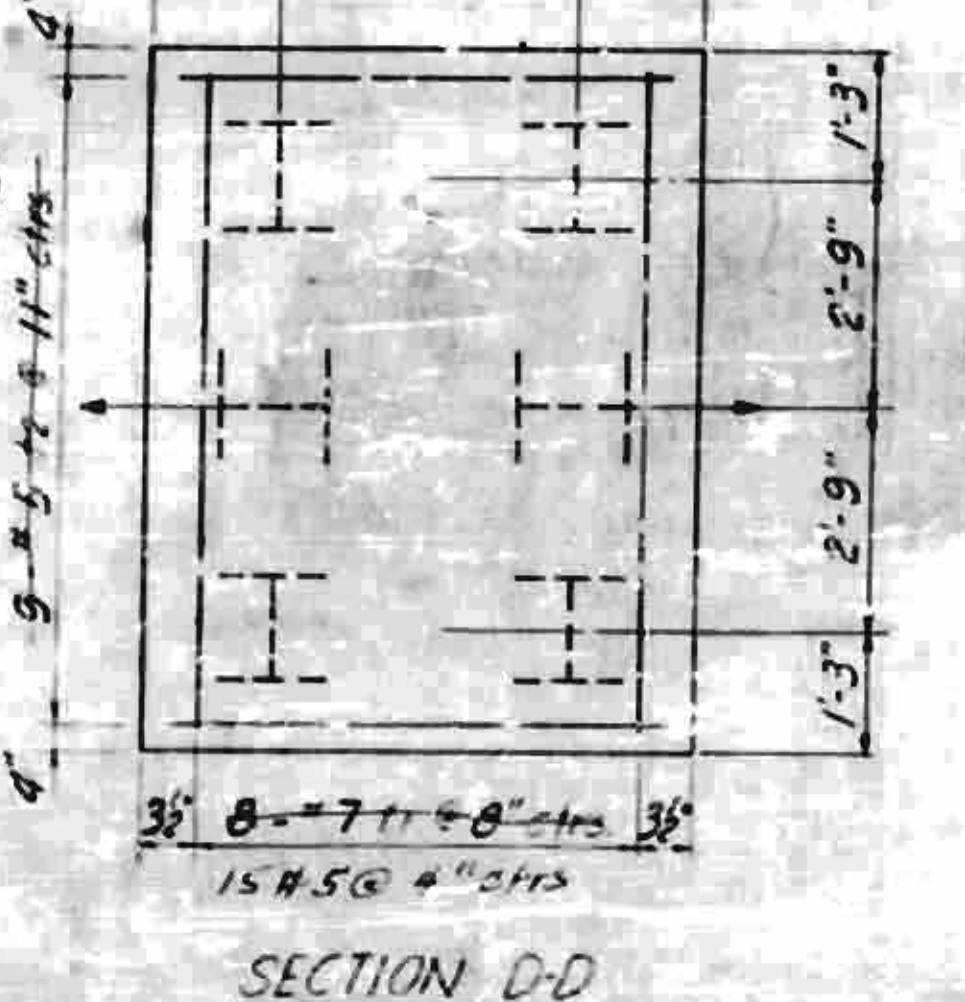
|      |    |          |
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| DATE | BY | REVISION |
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STATE OF NORTH CAROLINA  
STATE HIGHWAY COMMISSION  
RALEIGH

STRUCTURAL STEEL

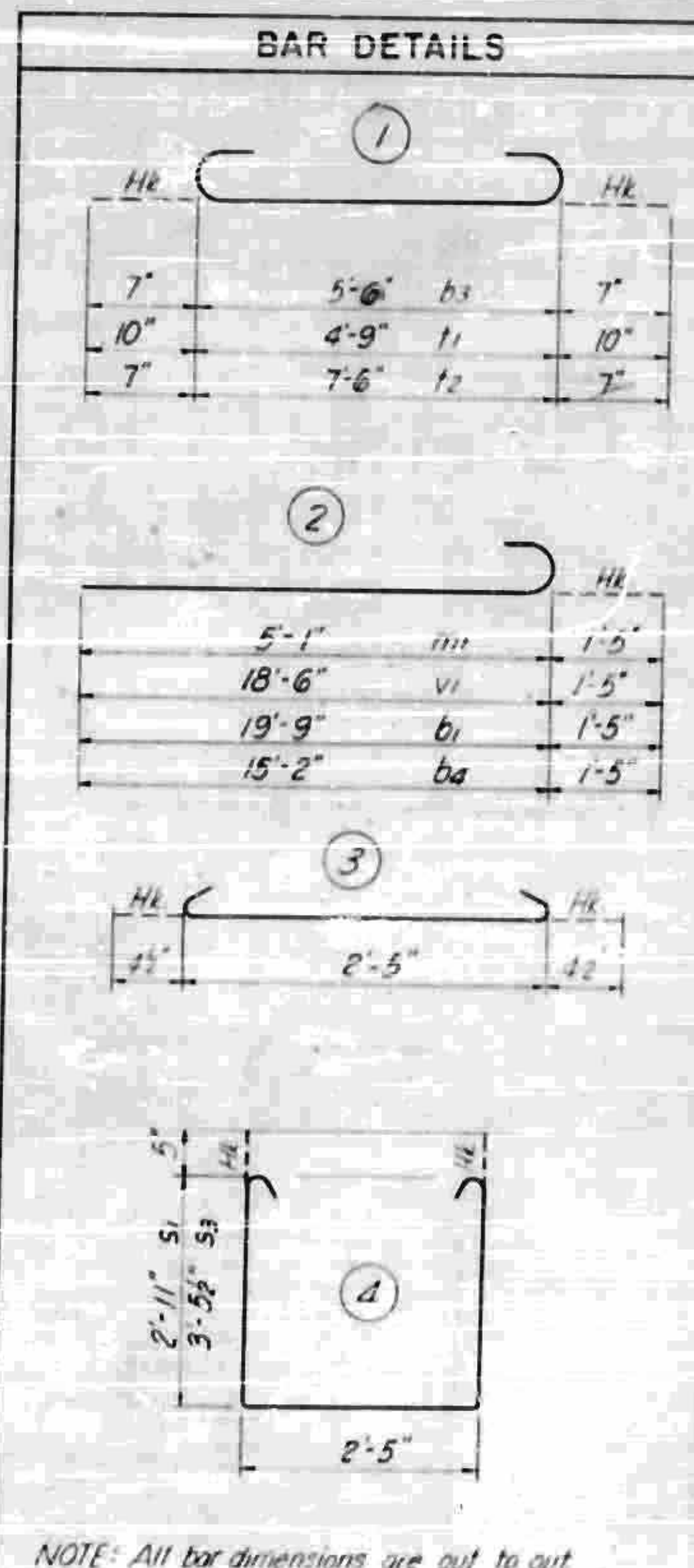


PLAN OF FOOTINGS



SECTION D-D

Note: 4 vert. & 2 batt piles each Footing.  
 \* See Const. Engrs. report for June 6, 1963 for changes in Reinf. Steel in Figs



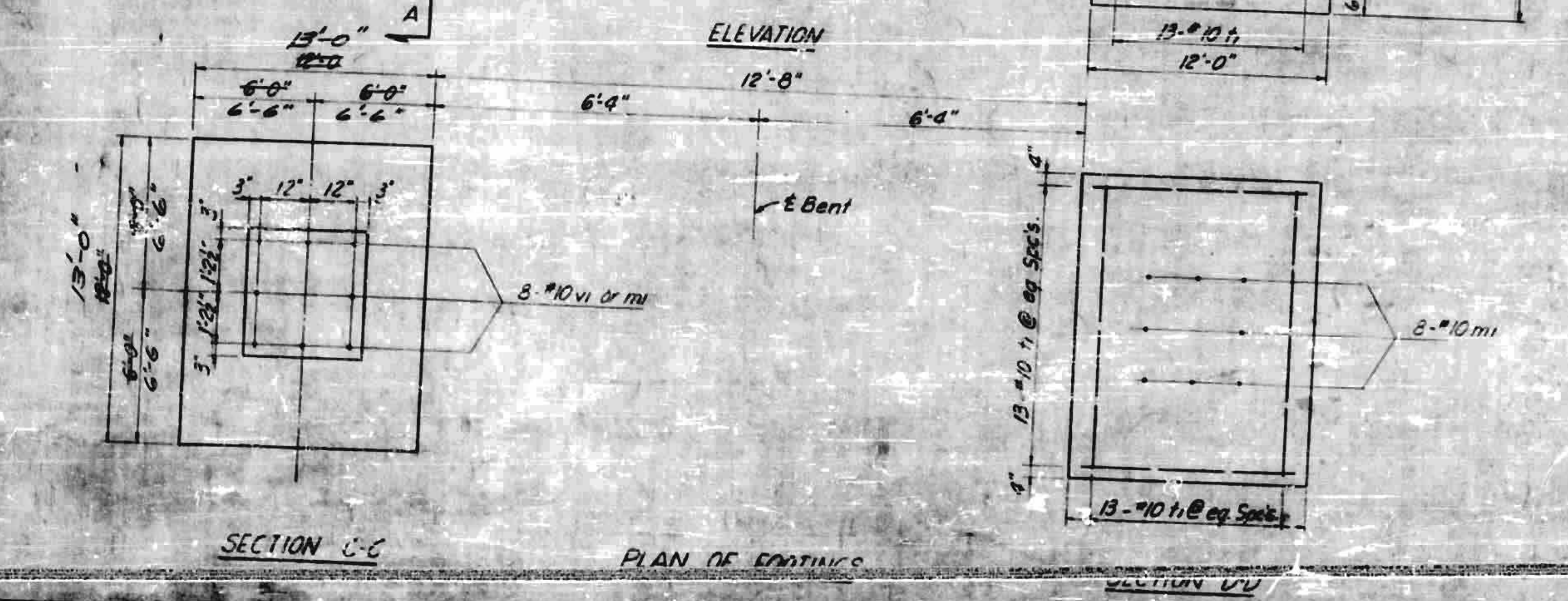
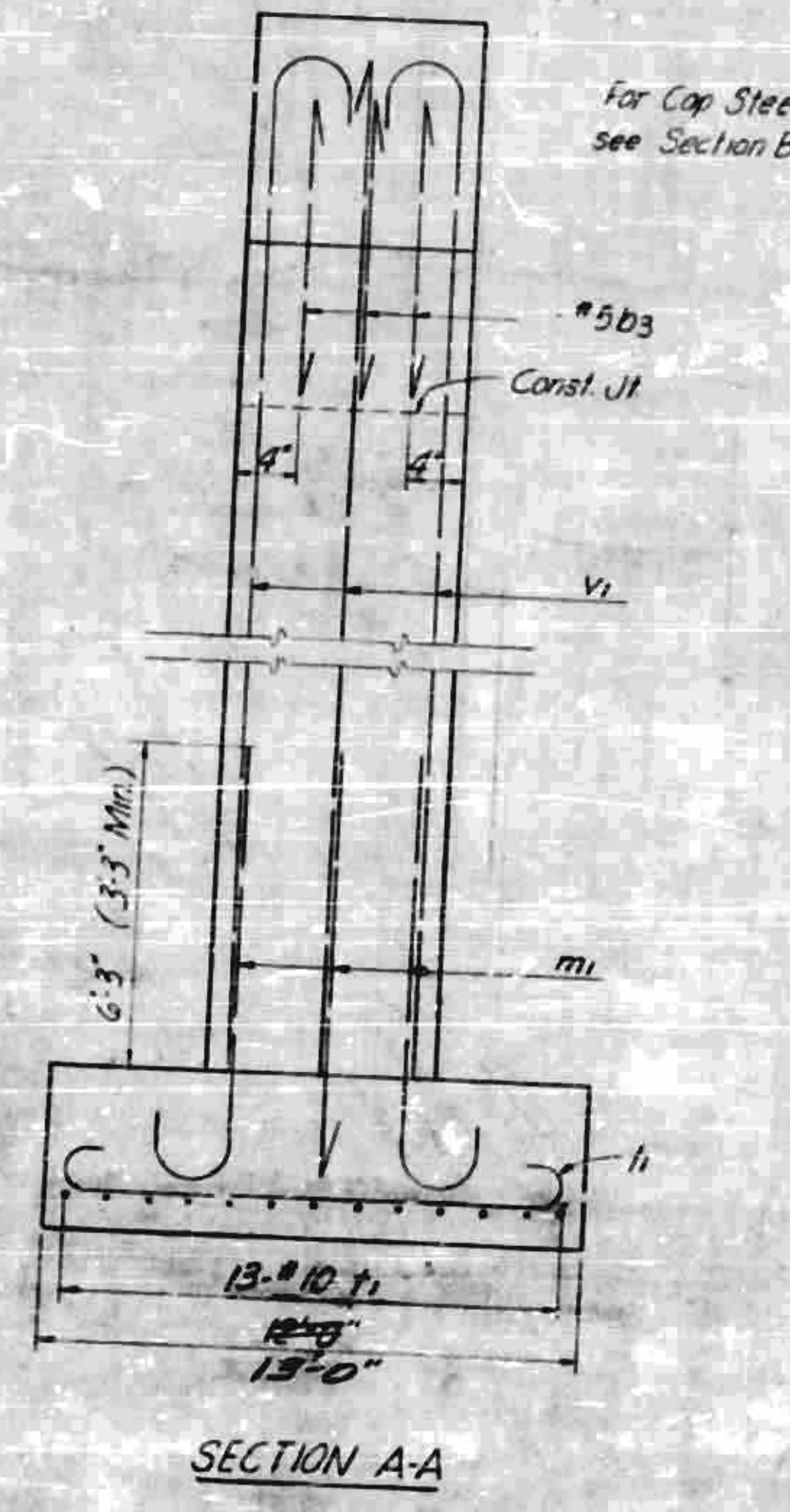
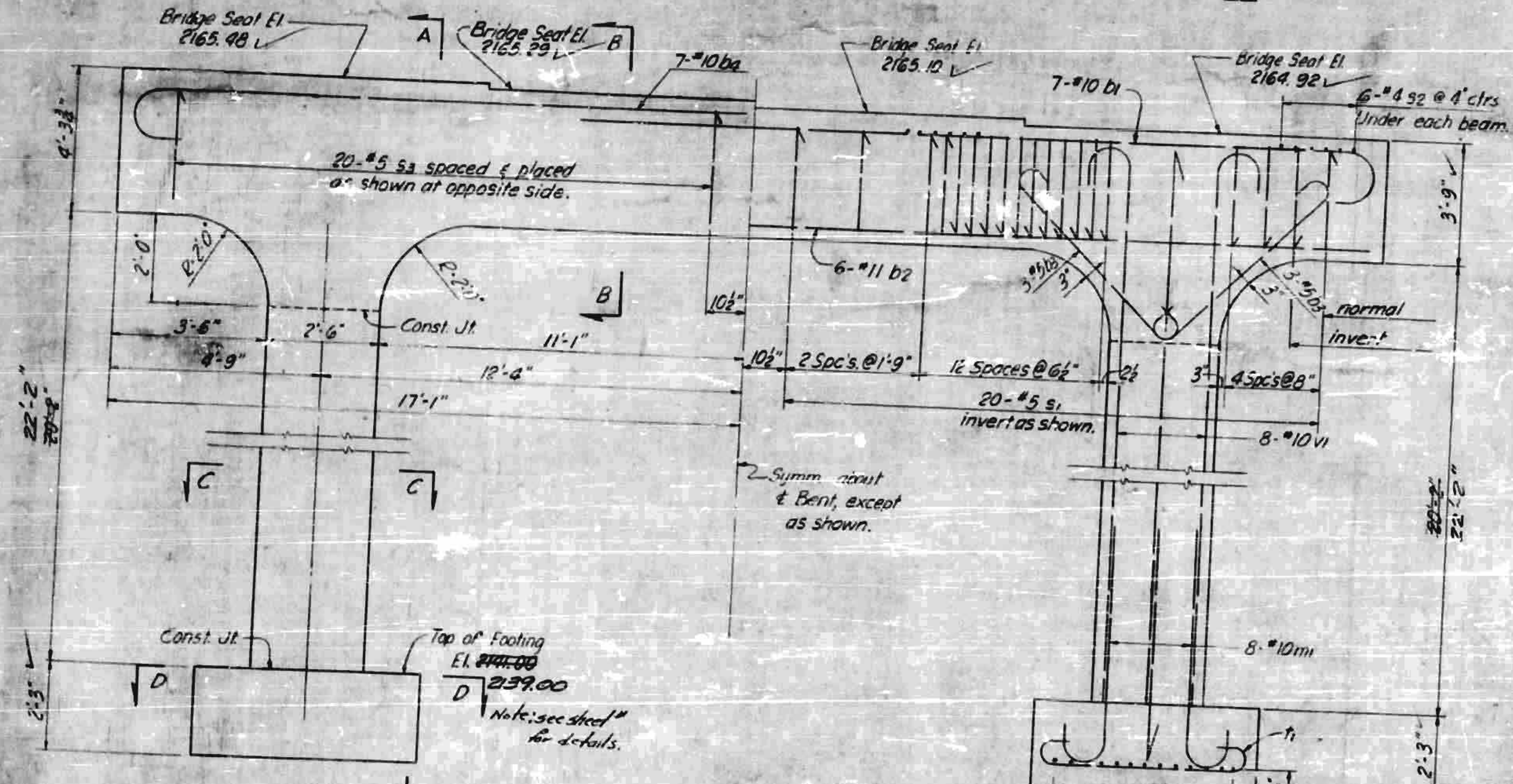
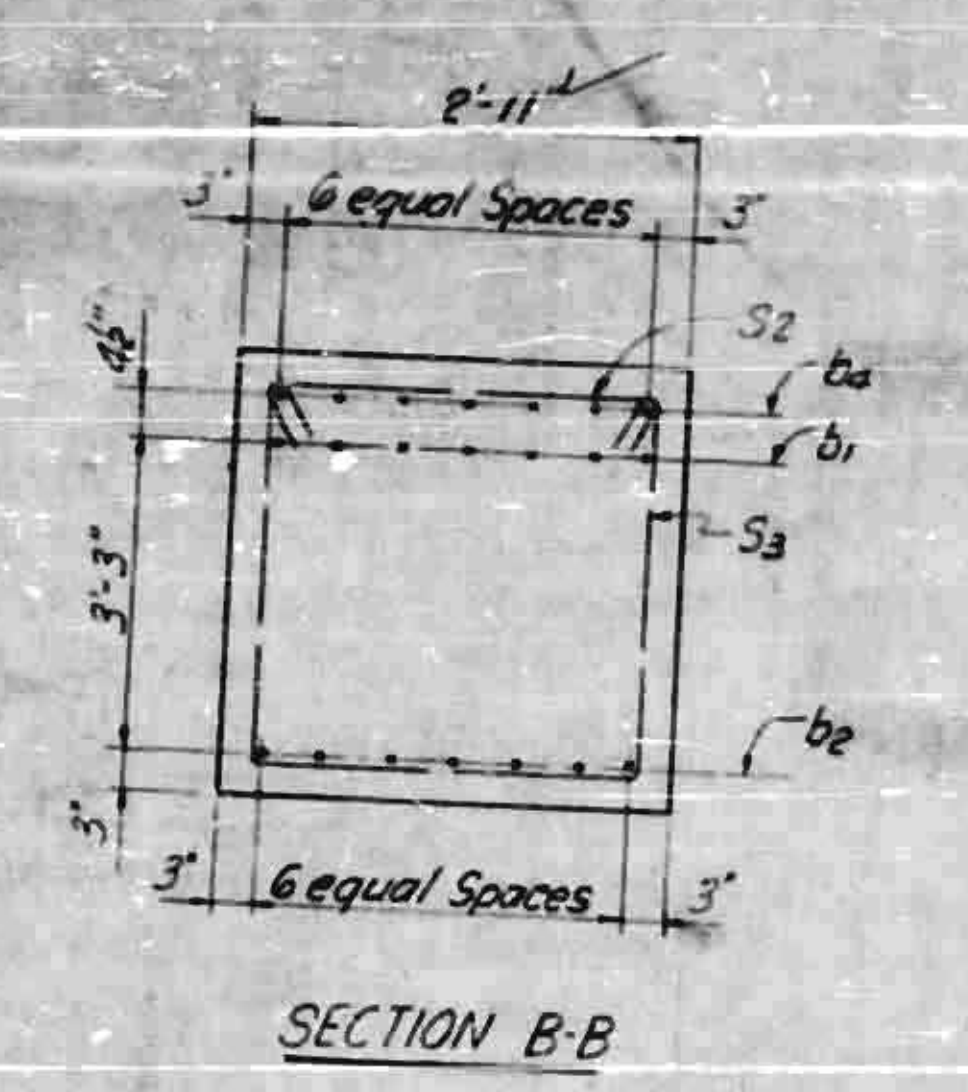
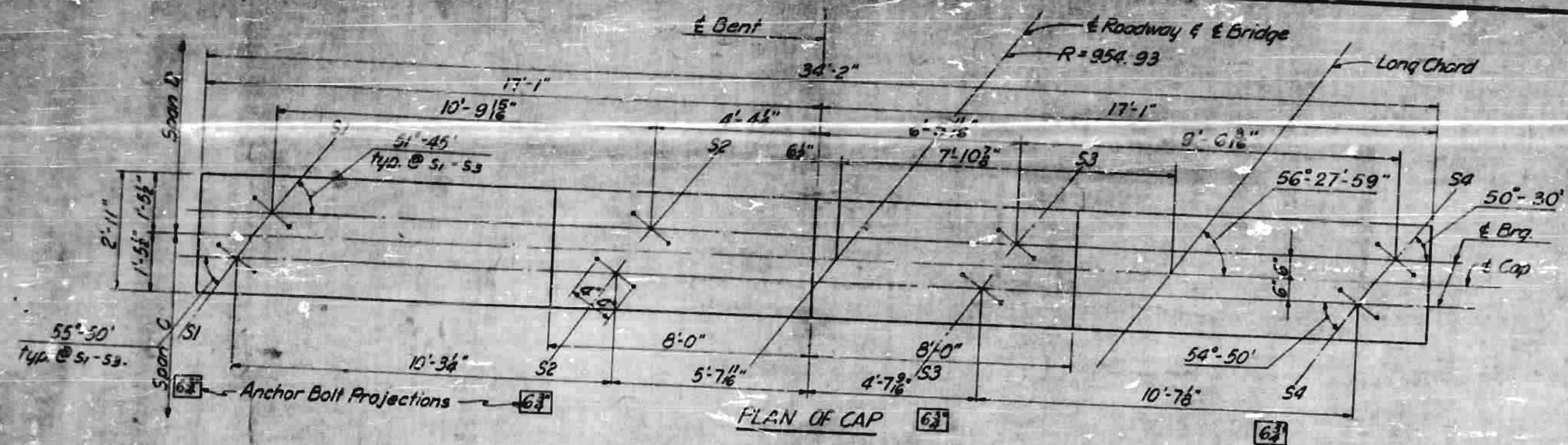
NOTE: All bar dimensions are out to out.  
 Note: Reinforcing Steel in top of cap may be shifted as necessary to clear Anchor Bolts.

| BILL OF MATERIAL             |    |      |       |         |        |
|------------------------------|----|------|-------|---------|--------|
| BAR                          | NO | SIZE | TYPE  | LENGTH  | WEIGHT |
| b1                           | 6  | #10  | 2     | 21'-2"  | 544    |
| b2                           | 6  | #10  | Str   | 30'-11" | 796    |
| b3                           | 12 | #5   | 1     | 6'-8"   | 83     |
| b4                           | 6  | #10  | 2     | 16'-7"  | 428    |
|                              |    |      |       |         |        |
| m1                           | 16 | #10  | 2     | 6'-6"   | 448    |
|                              |    |      |       |         |        |
| s1                           | 18 | #5   | 4     | 9'-1"   | 123    |
| s2                           | 24 | #4   | 3     | 3'-2"   | 51     |
| s3                           | 12 | #5   | 4     | 10'-2"  | 121    |
|                              |    |      |       |         |        |
| t1                           | 16 | #7   | 1     | 6'-5"   | 210    |
| t2                           | 18 | #5   | 1     | 8'-8"   | 163    |
|                              |    |      |       |         |        |
| v1                           | 16 | #10  | 2     | 19'-11" | 1371   |
| * 12                         | #5 | 2    | 8'-8" | 107     |        |
|                              |    |      |       |         |        |
| Reinforcing Steel Lbs        |    |      |       |         | 4457   |
| Class A Concrete Cuyds       |    |      |       |         | 29.4   |
| 12 BP53 Steel Piles No.      |    |      |       |         | 12     |
| 12 BP53 Steel Piles Lin. Ft. |    |      |       |         | 440    |
|                              |    |      |       |         | 752-11 |

PROJECT NO. 8.18293  
 HENDERSON COUNTY  
 STATION 1383+58 L  
 30-00Y7

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|--------------------------|----|
| STATE OF NORTH CAROLINA  |    |
| STATE HIGHWAY COMMISSION |    |
| BENT I                   |    |
| DATE                     | BY |
|                          |    |
| DATE                     | BY |
|                          |    |





| BAR DETAILS |    |      | BILL OF MATERIAL  |        |        |     |    |      |      |        |        |    |   |     |   |        |     |    |   |     |      |        |      |    |    |    |   |       |    |    |   |     |   |        |     |    |    |     |   |       |     |    |    |    |   |        |     |    |    |    |   |       |    |    |    |    |   |        |     |    |    |     |   |        |      |    |    |     |   |        |      |
|-------------|----|------|---|--------|--------|-----|----|------|------|--------|--------|----|---|-----|---|--------|-----|----|---|-----|------|--------|------|----|----|----|---|-------|----|----|---|-----|---|--------|-----|----|----|-----|---|-------|-----|----|----|----|---|--------|-----|----|----|----|---|-------|----|----|----|----|---|--------|-----|----|----|-----|---|--------|------|----|----|-----|---|--------|------|
|             |    |      | <table border="1"> <thead> <tr> <th>BAR</th> <th>NO</th> <th>SIZE</th> <th>TYPE</th> <th>LENGTH</th> <th>WEIGHT</th> </tr> </thead> <tbody> <tr> <td>b1</td> <td>7</td> <td>#10</td> <td>2</td> <td>22'-6"</td> <td>670</td> </tr> <tr> <td>b2</td> <td>6</td> <td>#11</td> <td>Str.</td> <td>33'-8"</td> <td>1073</td> </tr> <tr> <td>b3</td> <td>12</td> <td>#5</td> <td>1</td> <td>7'-2"</td> <td>90</td> </tr> <tr> <td>b4</td> <td>7</td> <td>#10</td> <td>2</td> <td>18'-0"</td> <td>542</td> </tr> <tr> <td>mi</td> <td>16</td> <td>#10</td> <td>2</td> <td>9'-3"</td> <td>627</td> </tr> <tr> <td>s1</td> <td>20</td> <td>#5</td> <td>4</td> <td>10'-3"</td> <td>214</td> </tr> <tr> <td>s2</td> <td>28</td> <td>#4</td> <td>3</td> <td>3'-0"</td> <td>53</td> </tr> <tr> <td>s3</td> <td>20</td> <td>#5</td> <td>4</td> <td>11'-0"</td> <td>229</td> </tr> <tr> <td>vi</td> <td>52</td> <td>#10</td> <td>1</td> <td>10'-4"</td> <td>3207</td> </tr> <tr> <td>vi</td> <td>16</td> <td>#10</td> <td>2</td> <td>24'-9"</td> <td>1704</td> </tr> </tbody> </table> |        |        | BAR | NO | SIZE | TYPE | LENGTH | WEIGHT | b1 | 7 | #10 | 2 | 22'-6" | 670 | b2 | 6 | #11 | Str. | 33'-8" | 1073 | b3 | 12 | #5 | 1 | 7'-2" | 90 | b4 | 7 | #10 | 2 | 18'-0" | 542 | mi | 16 | #10 | 2 | 9'-3" | 627 | s1 | 20 | #5 | 4 | 10'-3" | 214 | s2 | 28 | #4 | 3 | 3'-0" | 53 | s3 | 20 | #5 | 4 | 11'-0" | 229 | vi | 52 | #10 | 1 | 10'-4" | 3207 | vi | 16 | #10 | 2 | 24'-9" | 1704 |
| BAR         | NO | SIZE | TYPE  | LENGTH | WEIGHT |     |    |      |      |        |        |    |   |     |   |        |     |    |   |     |      |        |      |    |    |    |   |       |    |    |   |     |   |        |     |    |    |     |   |       |     |    |    |    |   |        |     |    |    |    |   |       |    |    |    |    |   |        |     |    |    |     |   |        |      |    |    |     |   |        |      |
| b1          | 7  | #10  | 2   | 22'-6" | 670    |     |    |      |      |        |        |    |   |     |   |        |     |    |   |     |      |        |      |    |    |    |   |       |    |    |   |     |   |        |     |    |    |     |   |       |     |    |    |    |   |        |     |    |    |    |   |       |    |    |    |    |   |        |     |    |    |     |   |        |      |    |    |     |   |        |      |
| b2          | 6  | #11  | Str.  | 33'-8" | 1073   |     |    |      |      |        |        |    |   |     |   |        |     |    |   |     |      |        |      |    |    |    |   |       |    |    |   |     |   |        |     |    |    |     |   |       |     |    |    |    |   |        |     |    |    |    |   |       |    |    |    |    |   |        |     |    |    |     |   |        |      |    |    |     |   |        |      |
| b3          | 12 | #5   | 1   | 7'-2"  | 90     |     |    |      |      |        |        |    |   |     |   |        |     |    |   |     |      |        |      |    |    |    |   |       |    |    |   |     |   |        |     |    |    |     |   |       |     |    |    |    |   |        |     |    |    |    |   |       |    |    |    |    |   |        |     |    |    |     |   |        |      |    |    |     |   |        |      |
| b4          | 7  | #10  | 2   | 18'-0" | 542    |     |    |      |      |        |        |    |   |     |   |        |     |    |   |     |      |        |      |    |    |    |   |       |    |    |   |     |   |        |     |    |    |     |   |       |     |    |    |    |   |        |     |    |    |    |   |       |    |    |    |    |   |        |     |    |    |     |   |        |      |    |    |     |   |        |      |
| mi          | 16 | #10  | 2   | 9'-3"  | 627    |     |    |      |      |        |        |    |   |     |   |        |     |    |   |     |      |        |      |    |    |    |   |       |    |    |   |     |   |        |     |    |    |     |   |       |     |    |    |    |   |        |     |    |    |    |   |       |    |    |    |    |   |        |     |    |    |     |   |        |      |    |    |     |   |        |      |
| s1          | 20 | #5   | 4   | 10'-3" | 214    |     |    |      |      |        |        |    |   |     |   |        |     |    |   |     |      |        |      |    |    |    |   |       |    |    |   |     |   |        |     |    |    |     |   |       |     |    |    |    |   |        |     |    |    |    |   |       |    |    |    |    |   |        |     |    |    |     |   |        |      |    |    |     |   |        |      |
| s2          | 28 | #4   | 3   | 3'-0"  | 53     |     |    |      |      |        |        |    |   |     |   |        |     |    |   |     |      |        |      |    |    |    |   |       |    |    |   |     |   |        |     |    |    |     |   |       |     |    |    |    |   |        |     |    |    |    |   |       |    |    |    |    |   |        |     |    |    |     |   |        |      |    |    |     |   |        |      |
| s3          | 20 | #5   | 4   | 11'-0" | 229    |     |    |      |      |        |        |    |   |     |   |        |     |    |   |     |      |        |      |    |    |    |   |       |    |    |   |     |   |        |     |    |    |     |   |       |     |    |    |    |   |        |     |    |    |    |   |       |    |    |    |    |   |        |     |    |    |     |   |        |      |    |    |     |   |        |      |
| vi          | 52 | #10  | 1   | 10'-4" | 3207   |     |    |      |      |        |        |    |   |     |   |        |     |    |   |     |      |        |      |    |    |    |   |       |    |    |   |     |   |        |     |    |    |     |   |       |     |    |    |    |   |        |     |    |    |    |   |       |    |    |    |    |   |        |     |    |    |     |   |        |      |    |    |     |   |        |      |
| vi          | 16 | #10  | 2   | 24'-9" | 1704   |     |    |      |      |        |        |    |   |     |   |        |     |    |   |     |      |        |      |    |    |    |   |       |    |    |   |     |   |        |     |    |    |     |   |       |     |    |    |    |   |        |     |    |    |    |   |       |    |    |    |    |   |        |     |    |    |     |   |        |      |    |    |     |   |        |      |
|             |    |      |   |        |        |     |    |      |      |        |        |    |   |     |   |        |     |    |   |     |      |        |      |    |    |    |   |       |    |    |   |     |   |        |     |    |    |     |   |       |     |    |    |    |   |        |     |    |    |    |   |       |    |    |    |    |   |        |     |    |    |     |   |        |      |    |    |     |   |        |      |
|             |    |      |   |        |        |     |    |      |      |        |        |    |   |     |   |        |     |    |   |     |      |        |      |    |    |    |   |       |    |    |   |     |   |        |     |    |    |     |   |       |     |    |    |    |   |        |     |    |    |    |   |       |    |    |    |    |   |        |     |    |    |     |   |        |      |    |    |     |   |        |      |
|             |    |      |   |        |        |     |    |      |      |        |        |    |   |     |   |        |     |    |   |     |      |        |      |    |    |    |   |       |    |    |   |     |   |        |     |    |    |     |   |       |     |    |    |    |   |        |     |    |    |    |   |       |    |    |    |    |   |        |     |    |    |     |   |        |      |    |    |     |   |        |      |

NOTE: All bar dimensions are out to out

Note: Reinforcing Steel in top of cap may be shifted as necessary to clear Anchor Bolts.

Reinforcing Steel Lbs 8421

Class A Concrete Cu Yds 385

55.748

PROJECT NO. B 10299

HENDERSON COUNTY

STATION 1323+53.4

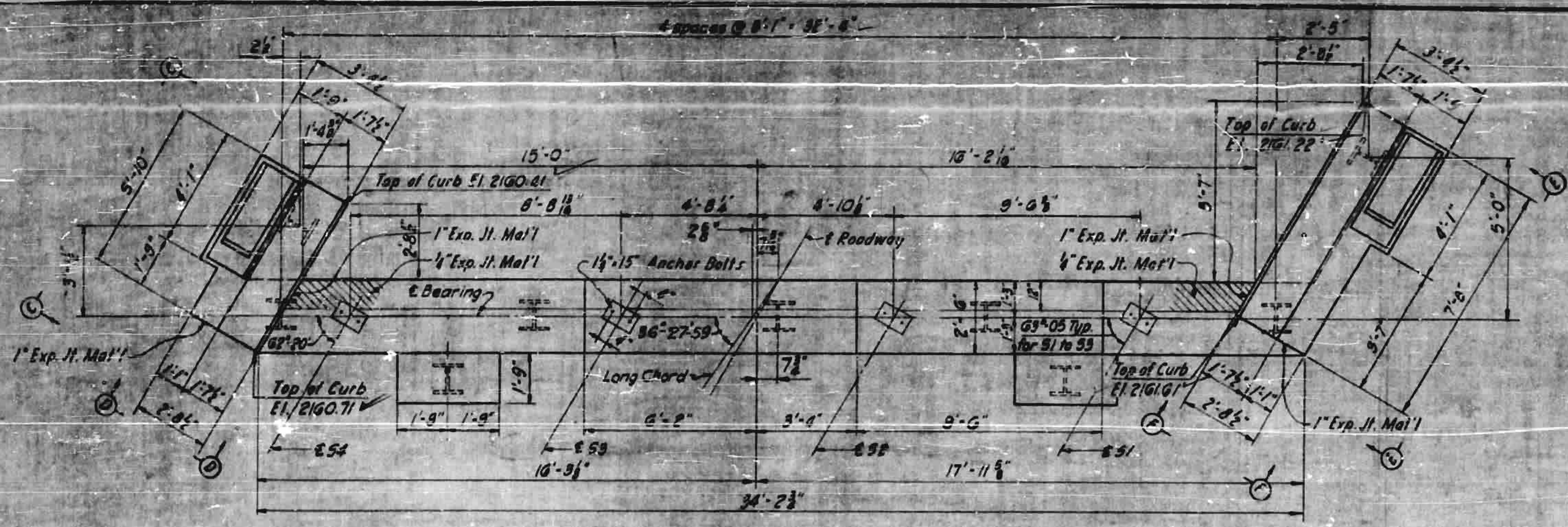
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STATE OF NORTH CAROLINA

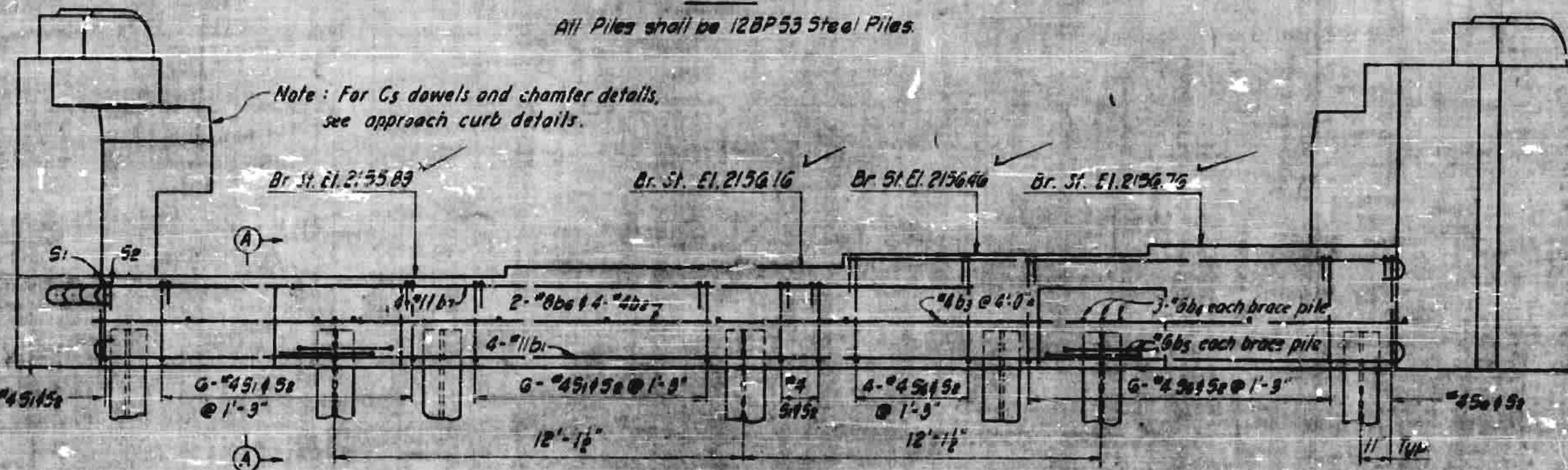
STATE HIGHWAY COMMISSION

DALLEN

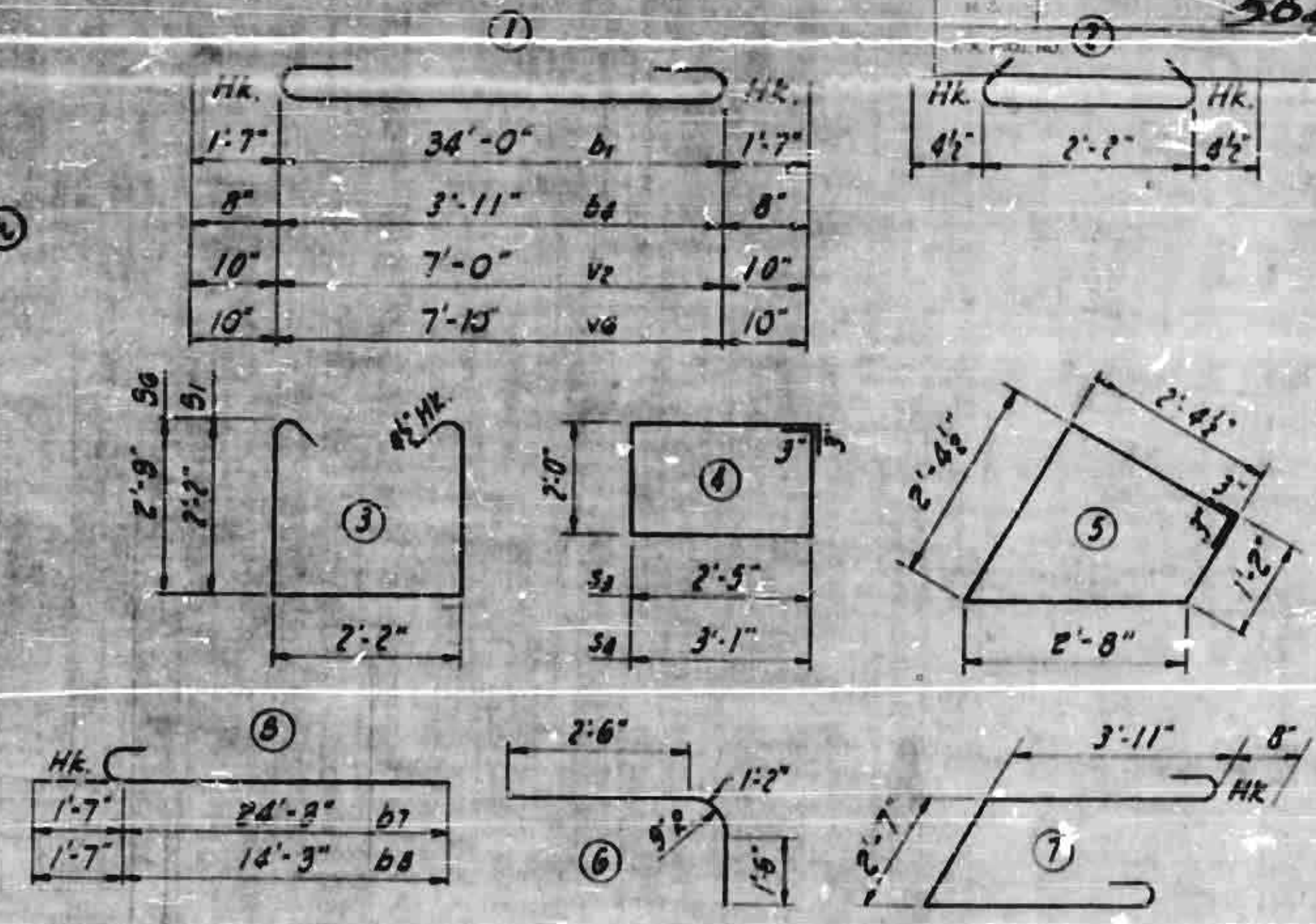
BENT 3



**PLAN** All Anchor Bolt projections = 5"  
 All Piles shall be 12BP53 Steel Piles.



**ELEVATION**



**BAR TYPES**  
 All dimensions are out to out.

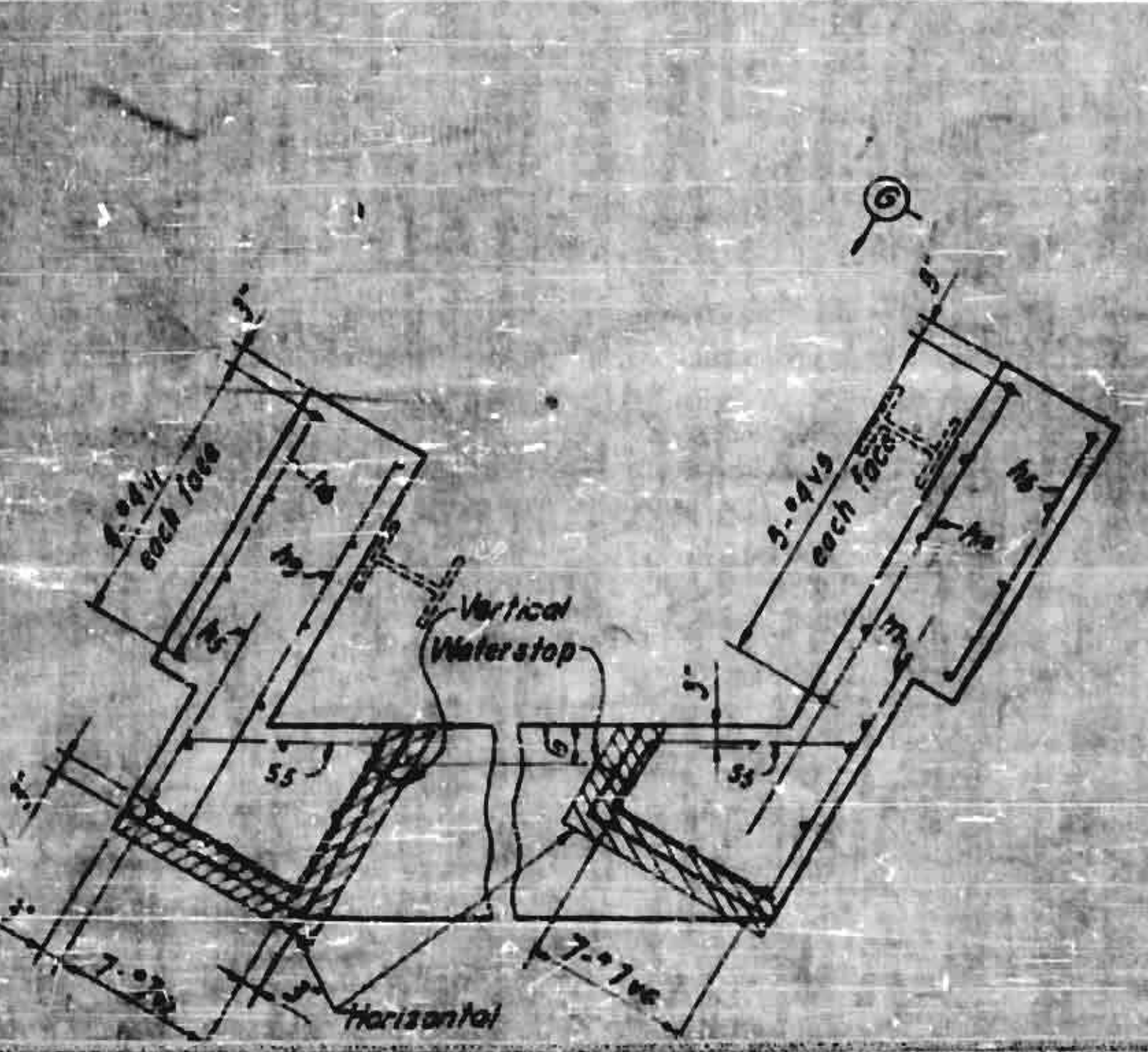
**BILL OF MATERIAL**  
**END BENT #1**

| BAR NO. | SIZE  | TYPE | LENGTH  | WEIGHT |
|---------|-------|------|---------|--------|
| b1      | 4 #11 | 1    | 37'-2"  | 76     |
| b2      | 4 #8  | str  | 85'-2"  | 9      |
| b3      | 8 #4  | str  | 2'-2"   | 1      |
| b4      | 6 #6  | 1    | 5'-3"   | 4      |
| b5      | 4 #6  | 7    | 11'-8"  | 7      |
| b6      | 2 #8  | str  | 34'-0"  | 18     |
| b7      | 4 #11 | 8    | 25'-10" | 54     |
| b8      | 4 #11 | 8    | 15'-10" | 35     |
| e1      | 4 #6  | 6    | 5'-2"   | 1      |
| h1      | 4 #4  | str  | 3'-5"   | 1      |
| h2      | 10 #6 | str  | 5'-6"   | 8      |
| h3      | 8 #6  | str  | 3'-9"   | 4      |
| h4      | 10 #6 | str  | 7'-4"   | 11     |
| h5      | 5 #4  | str  | 2'-6"   | 1      |
| h6      | 11 #4 | str  | 3'-9"   | 2      |
| h7      | 6 #4  | str  | 4'-6"   | 1      |
| h8      | 6 #4  | str  | 6'-7"   | 2      |
| h9      | 5 #4  | str  | 5'-0"   | 1      |
| s1      | 15 #4 | 3    | 7'-3"   | 7      |
| s2      | 26 #4 | 2    | 2'-11"  | 5      |
| s3      | 6 #4  | 4    | 9'-4"   | 3      |
| s4      | 6 #4  | 4    | 10'-8"  | 3      |
| s5      | 8 #4  | 5    | 9'-1"   | 4      |
| s6      | 11 #4 | 3    | 8'-5"   | 6      |
| v1      | 8 #4  | str  | 8'-0"   | 4      |
| v2      | 7 #4  | 1    | 8'-8"   | 12     |
| v3      | 12 #4 | str  | 2'-3"   | 1      |
| v4      | 8 #4  | str  | 2'-6"   | 1      |
| v5      | 10 #4 | str  | 8'-10"  | 5      |
| v6      | 7 #4  | 1    | 9'-6"   | 18     |

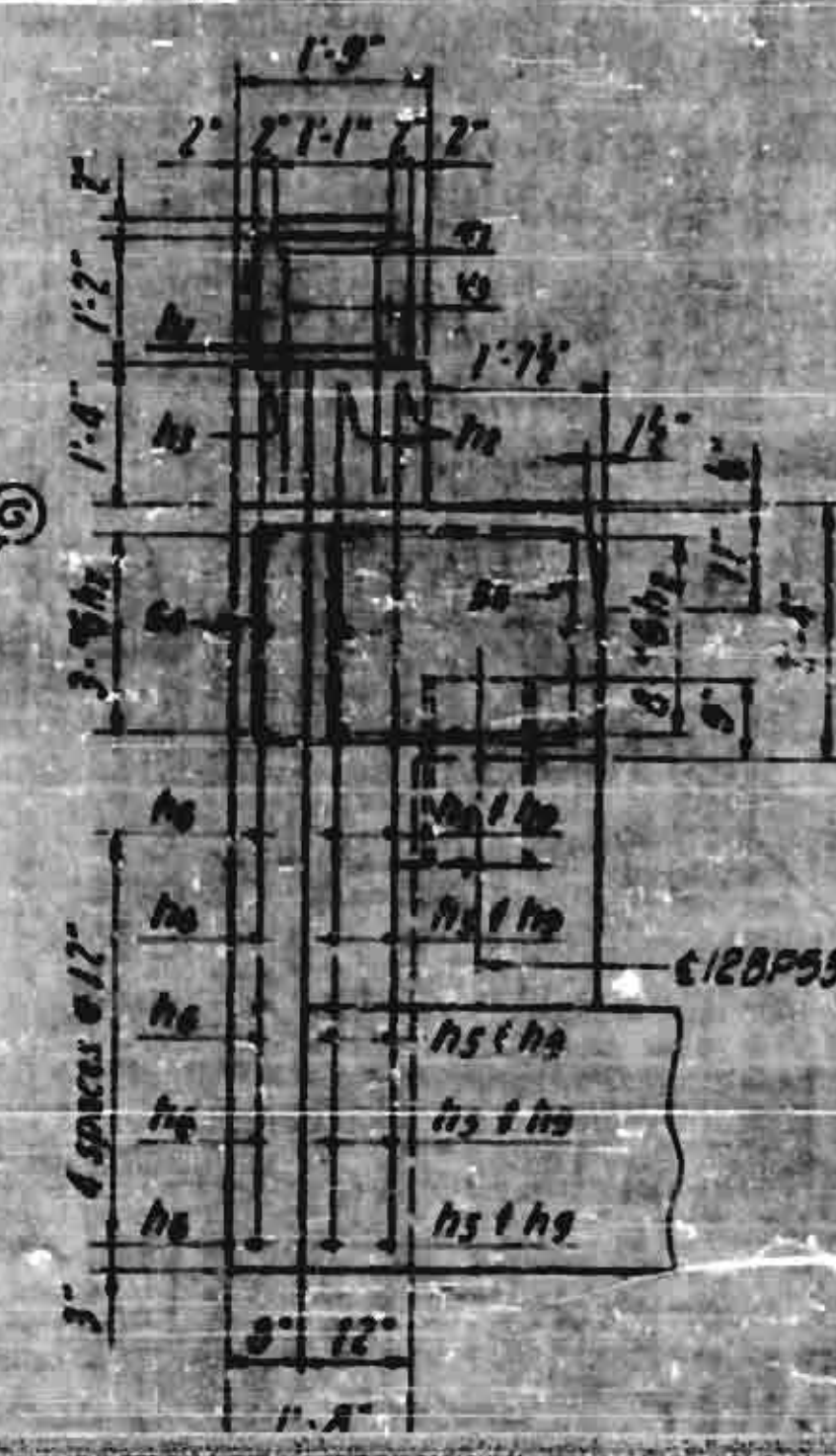
Reinforcing Steel lbs. 9140  
 Class A Concrete cu.yds. 200  
 12BP53 Steel Piles no. 9  
 12BP53 Steel Piles lin.ft. 437'-4"

\* Concrete displaced by pile heads has been deducted.

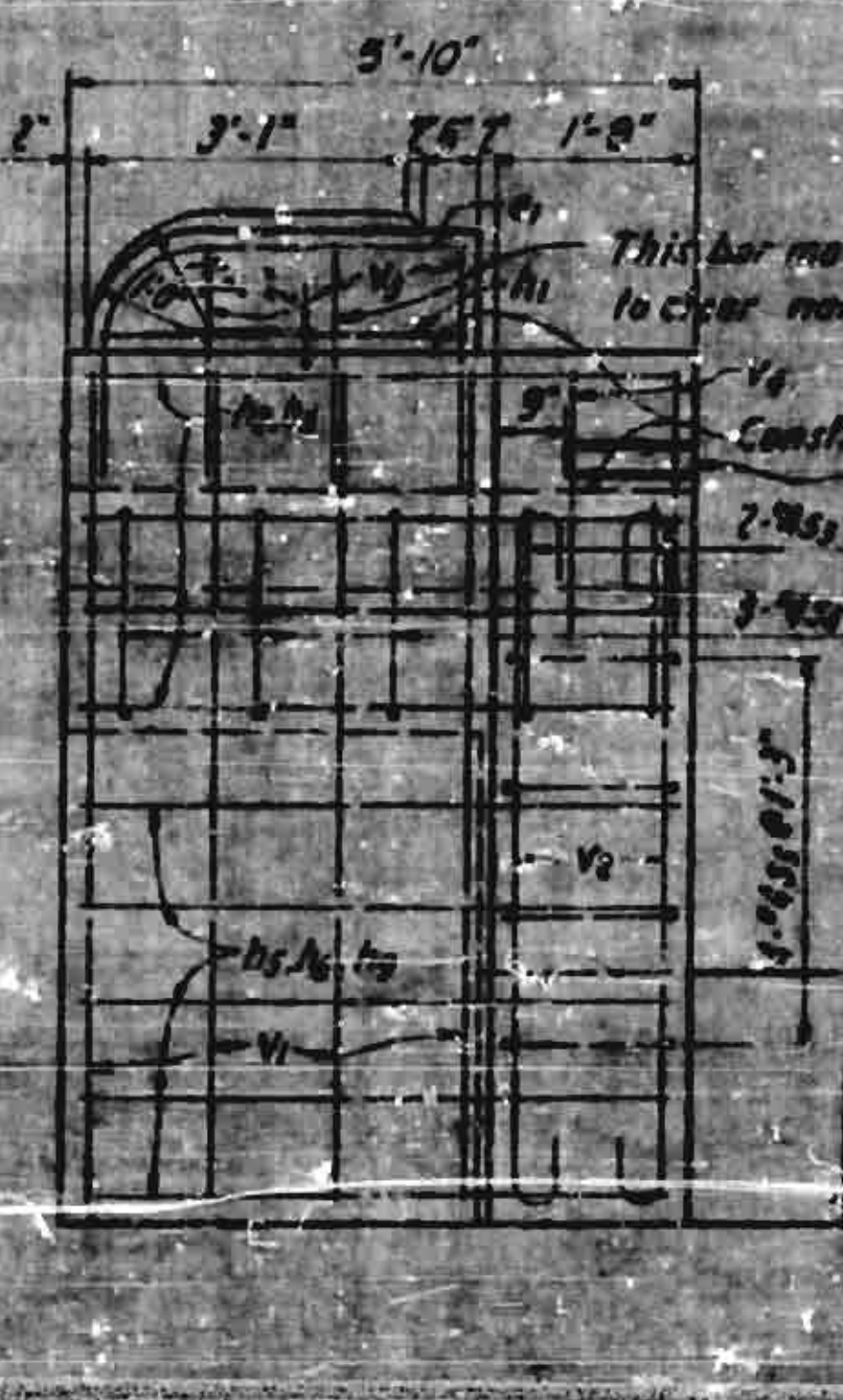
PROJECT NO. 818293  
 HENDERSON COUNTY  
 STATION 1363+90.4  
 50+00.7



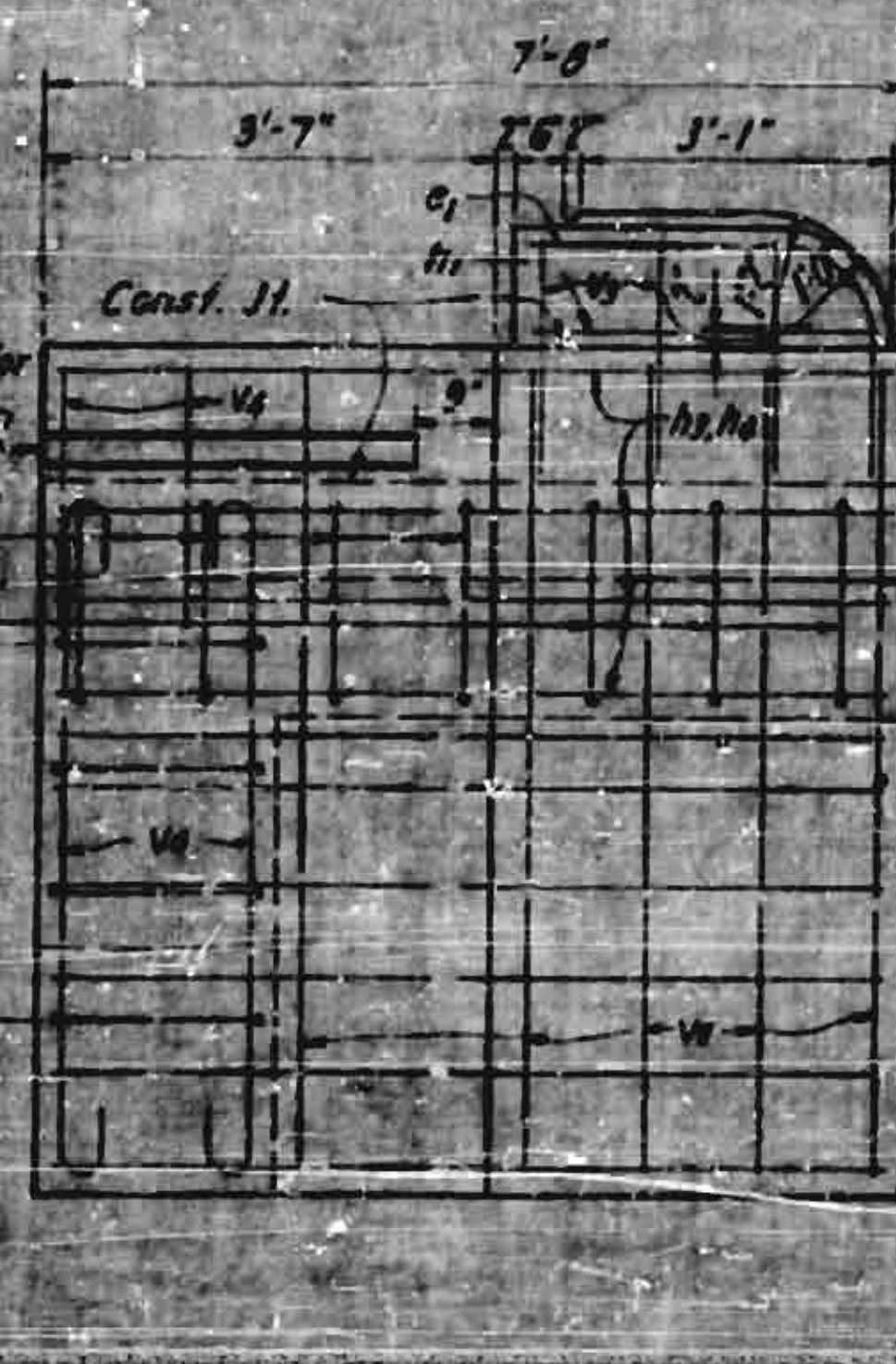
**SECTION B-B**



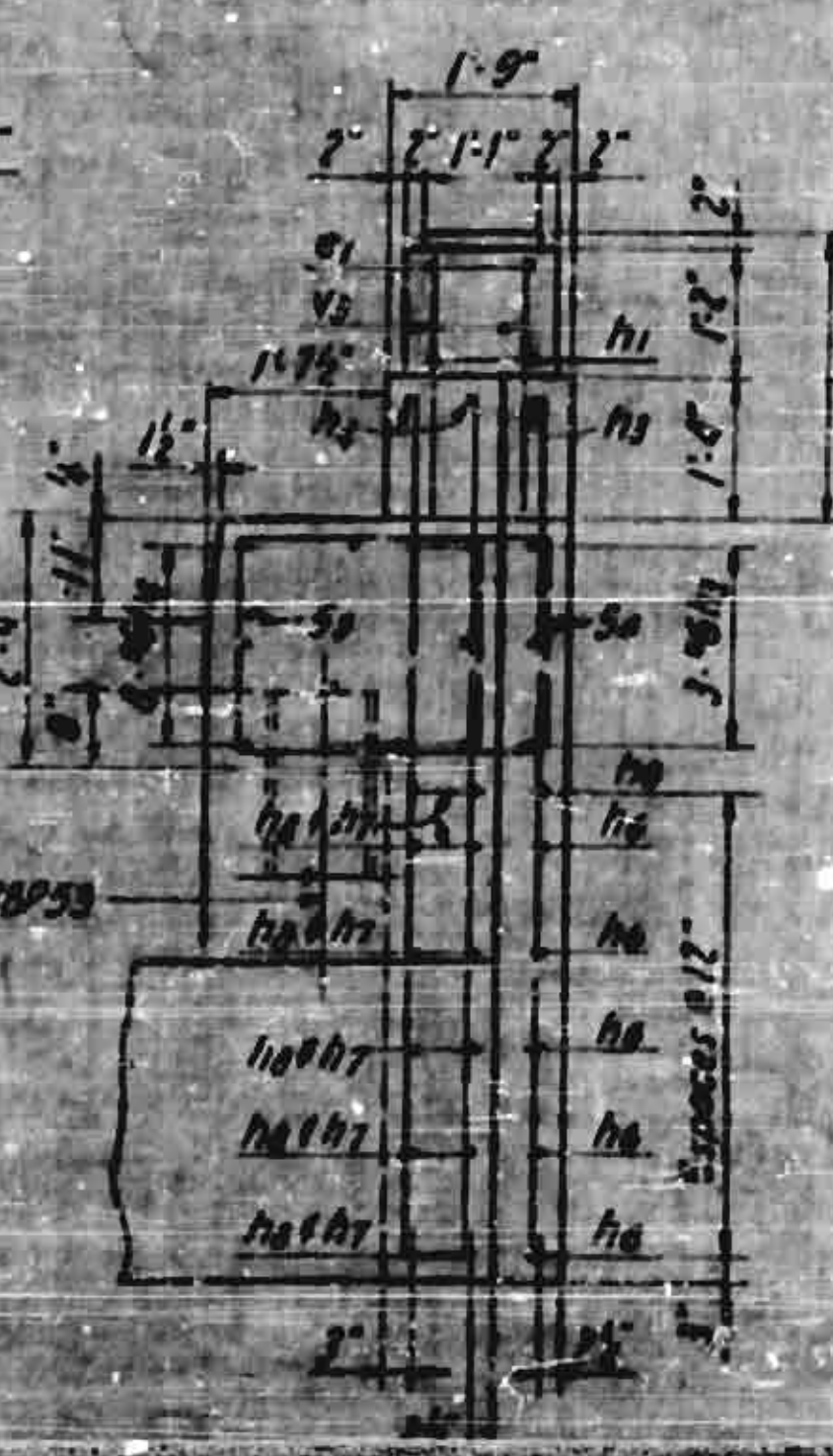
**VIEW C-C**



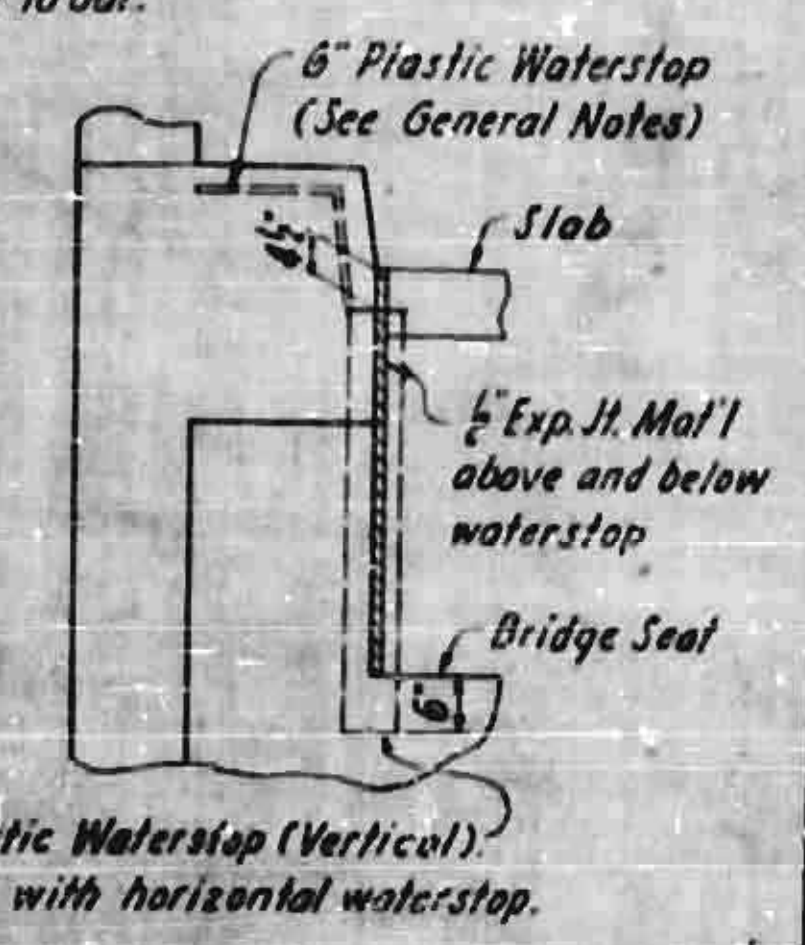
**VIEW D-D**



**VIEW E-E**



**VIEW F-F**



**VIEW G-G**

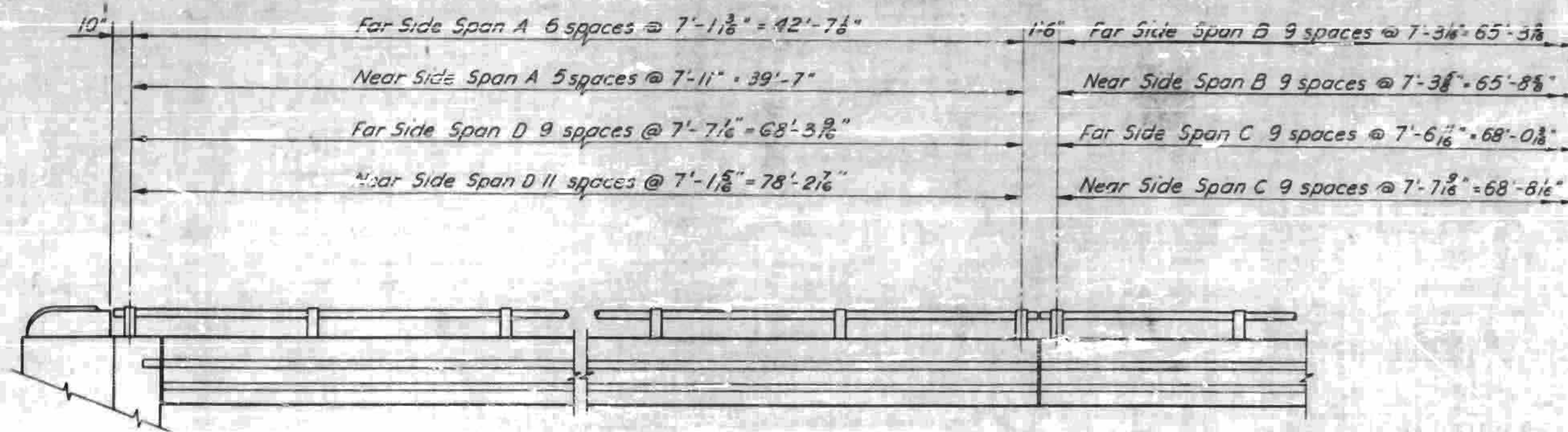
**END BENT I**





|                             |       |             |              |
|-----------------------------|-------|-------------|--------------|
| FED. ROAD DIST. NO.         | STATE | PROJECT NO. | TOTAL SHEETS |
| 5                           | N. C. | 818293      |              |
| FED. AID PROJ. 1-56-1 (E)73 |       |             |              |

|      |             |           |       |
|------|-------------|-----------|-------|
| DATE | PROJECT NO. | SHEET NO. | TITLE |
|      |             | 506       | 569   |
|      |             |           |       |



**PARAPET AND RAILING ELEVATION**  
 Note: Railing post spacings given at @ parapet and parallel to grade.

**NOTES:**

Unless noted on the plans, maximum length of rail section to be the panels plus stick thru.

End of rail clear face of concrete End Post by 1/2".

For double panel runs of rail, set screws shall be set tight at center post and at ends to allow for expansion.

For single panel runs, set screw to be tight at one end and snug at the other end.

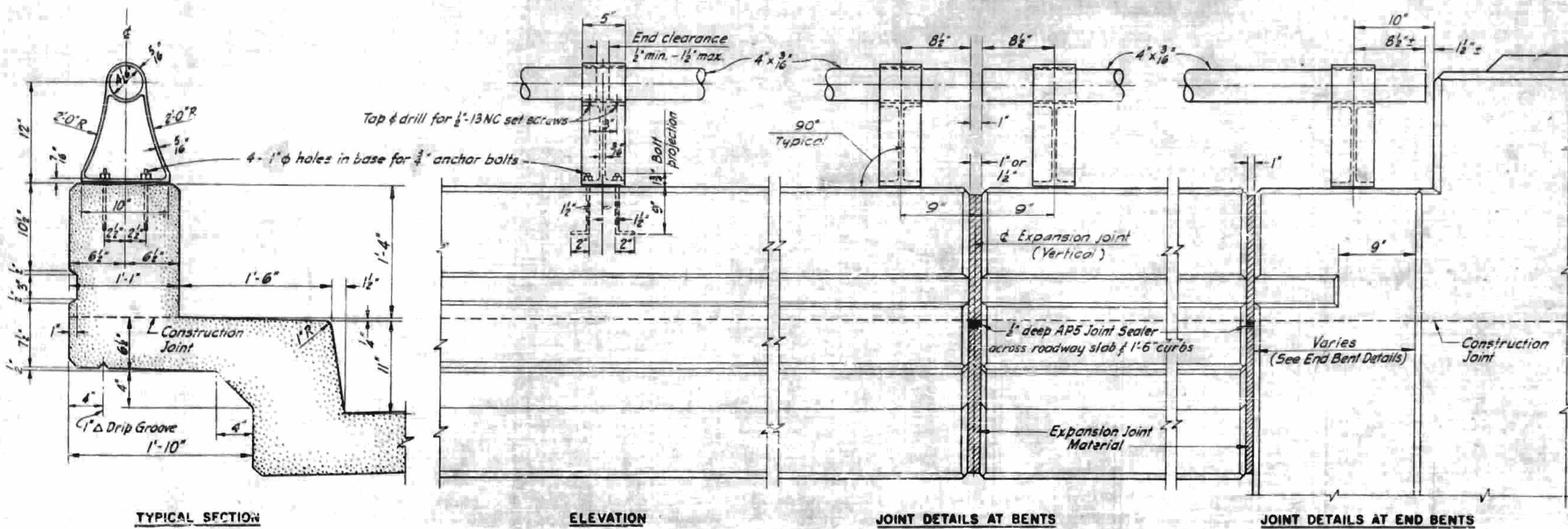
3/8" Anchor bolts, hex nuts, and washers to be steel galvanized in accordance with ASTM A-153 and painted with 2 coats of aluminum paint after erection.

Cast posts to be as shown or an approved equal.

Certified mill reports are required for rails and posts. Shop inspection is not required.

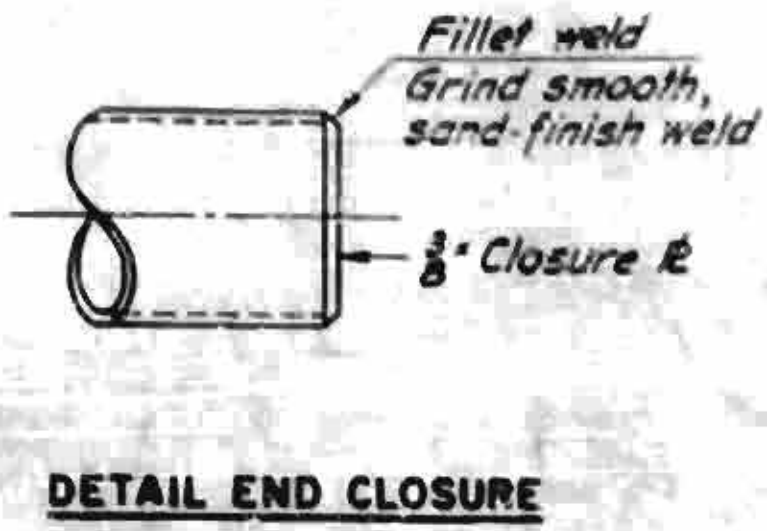
Metal Rail Posts to be set normal to curb grade.

Method of measurement of Metal Rail: Unless otherwise stated, the length of Metal rail to be paid for shall be the continuous horizontal length measured from end to end of rail, excepting concrete posts, but without deduction for space between rail sections.



**PARAPET AND RAILING DETAILS**

PROJECT NO. 818293  
 Henderson COUNTY  
 STATION 1383+58 L  
 50+00 Y



At the Contractors option, metal rail may be either Aluminum or Galvanized Steel in accordance with the requirements of the general notes and the following specifications for the alternate material; however, the Contractor will be required to use the same rail material on all structures on the project for which metal rail is designated.

**ALUMINUM RAILS**  
 Aluminum alloys are to be as follows:  
 Cast Rail Posts A956-T6  
 Round Tubular Rails 6061-T6 or 6062-T6  
 Set Screws 2024-T3  
 Closure Plates 6061-T6 or 6062-T6  
 Round Tubular Rails are to be of 4 OD with 1/8 minimum wall thickness.  
 The base of rail posts or any other aluminum surface in contact with concrete shall be thoroughly coated with an aluminum impregnated caulking compound of approved quality.

**GALVANIZED STEEL RAILS**  
 Materials and galvanizing are to conform to the following specification:  
 Cast Rail Post Malleable cast iron ASTM A-171  
 Grade 350R Galvanized to ASTM A-123  
 Set Screws 2024-T3  
 Closure Plates Standard 3/8" Steel Pipe ASTM A-53 Galvanized  
 Round Tubular Rails Galvanized to ASTM A-123  
 Standard Steel Cap Screws Galvanized to ASTM A-153

The cut ends of galvanized pipe railing, the end closure plate weld after grinding smooth and areas adjacent to the weld where spatter coating has been burned by welding shall be thoroughly cleaned by wire brushing to remove all traces of welding flux and loose or cracked spatter. Two coats of zinc paint meeting the requirements of Federal Specification MIL-P-4915 (USK) type 1.

|      |    |       |
|------|----|-------|
| DATE | BY | SCALE |
|      |    |       |
|      |    |       |

STATE OF NORTH CAROLINA  
 STATE HIGHWAY COMMISSION  
 RALEIGH

**PARAPET AND RAILING DETAILS**