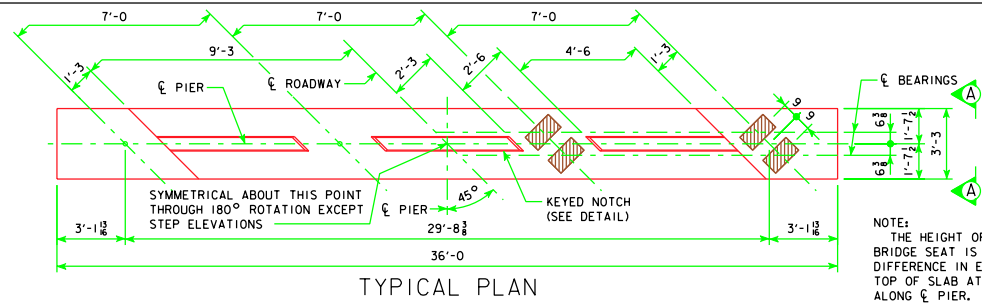


REVISED 01-10 - SHEET WAS REVISED TO MEET LRFD SPECIFICATIONS.



TYPICAL PLAN

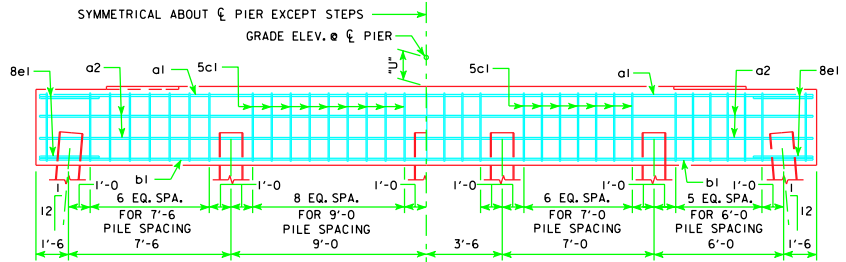
NOTE:  
THE HEIGHT OF THE STEPS ON THE  
BRIDGE SEAT IS EQUAL TO THE  
DIFFERENCE IN ELEVATIONS OF THE  
TOP OF SLAB AT ADJACENT BEAMS  
ALONG  $\phi$  PIER.  
SEE SHEET H24-29-06 FOR "U"  
DIMENSION.

PILE BENT NOTES:

THESE PIER BENTS ARE DESIGNED FOR USE IN LOCATIONS WHERE  
ICE AND DRIFT CONDITIONS ARE NOT SEVERE.

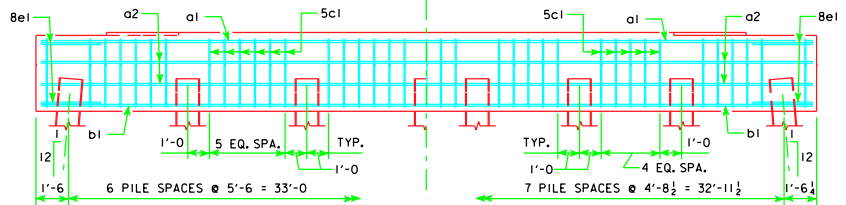
FOR DETAILS OF TRESTLE PILES, SEE STANDARD PIOL.

MINIMUM CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR REINFORCING  
BAR SHALL BE 2 INCHES UNLESS OTHERWISE NOTED OR SHOWN.



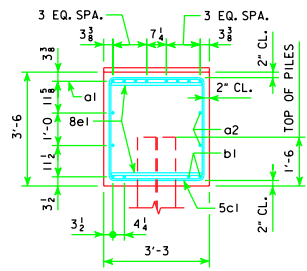
5 PILE BENT

6 PILE BENT

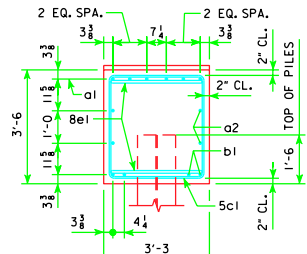


7 PILE BENT

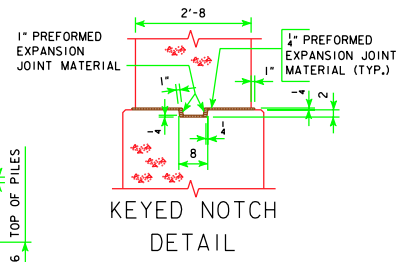
8 PILE BENT



VIEW A-A  
FOR 5, 6 & 7 PILE BENTS



VIEW A-A  
FOR 8 PILE BENT

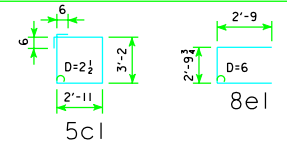


KEYED NOTCH  
DETAIL

REINFORCING BAR LIST AND ESTIMATED  
QUANTITIES - PER PILE BENT

| BAR                       | LENGTH | SHAPE | 5 PILE BENT |      |        | 6 PILE BENT |      |        | 7 PILE BENT |      |        | 8 PILE BENT |      |        |
|---------------------------|--------|-------|-------------|------|--------|-------------|------|--------|-------------|------|--------|-------------|------|--------|
|                           |        |       | NO.         | SIZE | WEIGHT | NO.         | SIZE | WEIGHT | NO.         | SIZE | WEIGHT | NO.         | SIZE | WEIGHT |
| a1                        | 35'-8" |       | 8           | 9    | 970    | 8           | 9    | 970    | 8           | 9    | 970    | 6           | 9    | 728    |
| a2                        | 35'-8" |       | 4           | 8    | 381    | 4           | 8    | 381    | 4           | 8    | 381    | 4           | 8    | 381    |
| b1                        | 35'-8" |       | 4           | 8    | 381    | 4           | 10   | 614    | 4           | 9    | 485    | 4           | 8    | 381    |
| c1                        | 13'-2" |       | 34          | 5    | 467    | 35          | 5    | 481    | 38          | 5    | 522    | 37          | 5    | 508    |
| d1                        | 8'-4"  |       | 4           | 8    | 89     | 4           | 8    | 89     | 4           | 8    | 89     | 4           | 8    | 89     |
| ① REINFORCING STEEL (LB.) |        |       | 2288        |      |        | 2535        |      |        | 2447        |      |        | 2087        |      |        |
| STRUCTURAL CONCRETE (CY)  |        |       | 15.8        |      |        | 15.8        |      |        | 15.8        |      |        | 15.8        |      |        |

BENT BAR DETAILS



NOTE: ALL DIMENSIONS ARE  
OUT TO OUT. D=PIN DIAMETER.

FRICTION OR POINT BEARING PILING

| $\phi$ - $\phi$<br>ABUTMENT<br>BEARING | PIOL TYPE 3                |              |                               |                               |
|----------------------------------------|----------------------------|--------------|-------------------------------|-------------------------------|
|                                        | NUMBER OF<br>TRESTLE PILES | PILE<br>SIZE | ② DES.<br>PILE BRG.<br>(TONS) | ③ LRFD<br>DES. BRG.<br>(KIPS) |
| 138'-10"                               | 5                          | HP14x73      | 62                            | 180                           |
| 151'-4"                                | 5                          | HP14x89      | 62                            | 180                           |
| 163'-10"                               | 6                          | HP14x73      | 54                            | 157                           |
| 176'-4"                                | 5                          | HP14x89      | 65                            | 189                           |
| 188'-10"                               | 6                          | HP14x73      | 58                            | 169                           |
| 201'-4"                                | 5                          | HP14x89      | 70                            | 203                           |
| 213'-10"                               | 6                          | HP14x73      | 61                            | 177                           |
| 226'-4"                                | 5                          | HP14x89      | 73                            | 212                           |
| 238'-10"                               | 6                          | HP14x73      | 63                            | 184                           |
| 251'-4"                                | 5                          | HP14x89      | 76                            | 221                           |
| 263'-10"                               | 7                          | HP14x73      | 60                            | 174                           |
| 276'-4"                                | 6                          | HP14x89      | 70                            | 203                           |
| 288'-10"                               | 7                          | HP14x73      | 63                            | 182                           |
| 301'-4"                                | 6                          | HP14x89      | 73                            | 213                           |
| 313'-10"                               | 8                          | HP14x73      | 58                            | 168                           |
| 326'-4"                                | 6                          | HP14x89      | 77                            | 224                           |
| 338'-10"                               | 8                          | HP14x73      | 61                            | 176                           |
| 351'-4"                                | 7                          | HP14x89      | 69                            | 202                           |

- ① SEE SHEET H24-31-06 FOR STEP REINFORCING STEEL QUANTITIES AND DETAILS.
- ② FOR DETERMINING ACTUAL PILE LENGTHS IN FIELD.
- ③ FOR ESTIMATING PILE LENGTHS USING AASHTO LRFD SPECIFICATIONS.

NOTE: FRICTION BEARING INCLUDES SIDE FRICTION AND END BEARING IN SOIL.  
POINT BEARING INCLUDES SIDE FRICTION AND POINT BEARING IN ROCK.

LATEST REVISION DATE  
01-10

APPROVED BY BRIDGE ENGINEER  
*Thomas E. McQuinn*

STANDARD DESIGN - 24' ROADWAY, THREE SPAN BRIDGE  
PRETENSIONED PRESTRESSED  
CONCRETE BEAM BRIDGES  
DECEMBER, 2006

PILE BENT PIERS  
HP14 PILES  
45° SKEW

H24-49-06