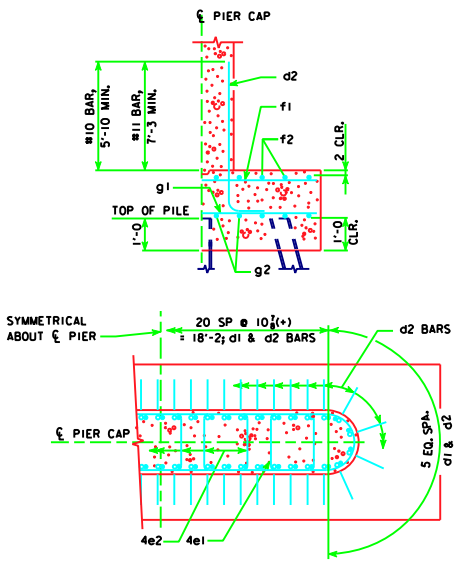
| ℄-℄ ABUT. BEARING | HEIGHT (FT) | PILING NO. & LAYOUT | PILING DES. BRG. (TONS) | FTG. SIZE | STRUCTURAL CONCRETE (C.Y.) |
|---|---|---|---|---|---|
| 160 ft | 16 | 16B | 36 | 4' x 7' x 25' | 25.9 |
| | 19 | 16B | 37 | | |
| | 22 | 18D | 34 | | |
| | 25 | 18D | 36 | | |
| | 28 | 18C | 36 | 4' x 8' x 25' | 29.6 |
| | 31 | 20D | 36 | | |
| | 34 | 20C | 37 | 4' x 9' x 25' | 33.3 |
| | 37 | 20B | 37 | 4' x 10' x 25' | 37.0 |
| | 40 | 22A | 34 | 4' x 11' x 26' | 42.4 |
| 180 ft | 16 | 18D | 36 | 4' x 7' x 25' | 25.9 |
| | 19 | 18D | 36 | | |
| | 22 | 18D | 37 | | |
| | 25 | 18C | 37 | 4' x 8' x 25' | 29.6 |
| | 28 | 20D | 37 | | |
| | 31 | 20C | 37 | 4' x 9' x 25' | 33.3 |
| | 34 | 20B | 37 | 4' x 10' x 25' | 37.0 |
| | 37 | 22B | 36 | | |
| | 40 | 22A | 36 | 4' x 11' x 26' | 42.4 |
| 200 ft | 16 | 18C | 37 | 4' x 8' x 25' | 29.6 |
| | 19 | 19A | 36 | | |
| | 22 | 19A | 37 | | |
| | 25 | 20C | 36 | 4' x 9' x 25' | 33.3 |
| | 28 | 21A | 37 | | |
| | 31 | 22C | 36 | | |
| | 34 | 22B | 36 | 4' x 10' x 25' | 37.0 |
| | 37 | 22A | 36 | 4' x 11' x 26' | 42.4 |
| | 40 | 22A | 37 | | |
| 220 ft | 16 | 20D | 36 | 4' x 8' x 25' | 29.6 |
| | 19 | 20D | 37 | | |
| | 22 | 21A | 36 | 4' x 9' x 25' | 33.3 |
| | 25 | 22C | 36 | | |
| | 28 | 22C | 37 | | |
| | 31 | 22B | 37 | 4' x 10' x 25' | 37.0 |
| | 34 | 24A | 34 | 4' x 11' x 26' | 42.4 |
| | 37 | 24A | 34 | | |
| | 40 | 24A | 37 | | |
| 240 ft | 16 | 21A | 37 | 4' x 9' x 25' | 33.3 |
| | 19 | 22C | 36 | | |
| | 22 | 22C | 37 | | |
| | 25 | 23A | 36 | 4' x 10' x 25' | 37.0 |
| | 28 | 23A | 37 | | |
| | 31 | 24A | 35 | 4' x 11' x 26' | 42.4 |
| | 34 | 24A | 36 | | |
| | 37 | 25A | 37 | | |
| | 40 | 26B | 37 | | |
| 260 ft | 16 | 23A | 37 | 4' x 10' x 25' | 37.0 |
| | 19 | 23A | 37 | | |
| | 22 | 24A | 35 | 4' x 11' x 26' | 42.4 |
| | 25 | 24A | 36 | | |
| | 28 | 24A | 37 | | |
| | 31 | 24A | 37 | | |
| | 34 | 26B | 37 | | |
| | 37 | 26A | 37 | 4' x 12' x 26' | 46.2 |
| | 40 | 28A | 37 | | |
| 280 ft | 16 | 24A | 36 | 4' x 11' x 26' | 42.4 |
| | 19 | 24A | 37 | | |
| | 22 | 25A | 36 | | |
| | 25 | 25A | 37 | | |
| | 28 | 25A | 37 | | |
| | 31 | 26B | 37 | | |
| | 34 | 27A | 37 | 4' x 12' x 26' | 46.2 |
| | 37 | 30B | 36 | | |
| | 40 | 30B | 37 | | |
| 300 ft | 16 | 25A | 37 | 4' x 11' x 26' | 42.4 |
| | 19 | 26B | 36 | | |
| | 22 | 26B | 37 | | |
| | 25 | 27A | 36 | 4' x 12' x 26' | 46.2 |
| | 28 | 27A | 37 | | |
| | 31 | 28A | 37 | | |
| | 34 | 30B | 36 | | |
| | 37 | 30A | 36 | 4' x 12' x 28' | 49.8 |
| | 40 | 32A | 36 | | |

| REINFORCING STEEL (ONE FOOTING) | | | | | |
|---|---|---|---|---|---|
| FTG. SIZE | BAR | NO. SIZE & SPC. | LENGTH | WEIGHT LB. | TOTAL WEIGHT LB. |
| 4' x 7' x 25' | d2 | SEE NOTE | -- | -- | |
| | f1 | 25 #5 @ 1'-0 | 6'-8 | 174 | |
| | f2 | 7 #5 @ 1'-0 | 24'-8 | 180 | |
| | g1 | 25 #5 @ 1'-0 | 6'-8 | 174 | |
| | g2 | 8 #6 @ 11 | 24'-8 | 296 | 824 |
| 4' x 8' x 25' | d2 | SEE NOTE | -- | -- | |
| | f1 | 25 #5 @ 1'-0 | 7'-8 | 200 | |
| | f2 | 8 #5 @ 1'-0 | 24'-8 | 206 | |
| | g1 | 25 #6 @ 1'-0 | 7'-8 | 288 | |
| | g2 | 9 #7 @ 11 | 24'-8 | 454 | 1148 |
| 4' x 9' x 25' | d2 | SEE NOTE | -- | -- | |
| | f1 | 25 #5 @ 1'-0 | 8'-8 | 226 | |
| | f2 | 9 #5 @ 1'-0 | 24'-8 | 232 | |
| | g1 | 25 #8 @ 1'-0 | 8'-8 | 579 | |
| | g2 | 9 #7 @ 1'-0 | 24'-8 | 454 | 1491 |
| 4' x 10' x 25' | d2 | SEE NOTE | -- | -- | |
| | f1 | 25 #5 @ 1'-0 | 9'-8 | 252 | |
| | f2 | 10 #5 @ 1'-0 | 24'-8 | 257 | |
| | g1 | 25 #9 @ 1'-0 | 9'-8 | 822 | |
| | g2 | 12 #6 @ 10 | 24'-8 | 445 | 1776 |
| 4' x 11' x 26' | d2 | SEE NOTE | -- | -- | |
| | f1 | 26 #5 @ 1'-0 | 10'-8 | 289 | |
| | f2 | 11 #5 @ 1'-0 | 25'-8 | 294 | |
| | g1 | 24 #10 @ 1'-1 | 10'-8 | 1102 | |
| | g2 | 13 #8 @ 10 | 25'-8 | 891 | 2576 |
| 4' x 12' x 26' | d2 | SEE NOTE | -- | -- | |
| | f1 | 26 #5 @ 1'-0 | 11'-8 | 316 | |
| | f2 | 12 #5 @ 1'-0 | 25'-8 | 321 | |
| | g1 | 24 #11 @ 1'-1 | 11'-8 | 1488 | |
| | g2 | 13 #8 @ 11 | 25'-8 | 891 | 3016 |
| 4' x 12' x 28' | d2 | SEE NOTE | -- | -- | |
| | f1 | 28 #5 @ 1'-0 | 11'-8 | 341 | |
| | f2 | 12 #5 @ 1'-0 | 27'-8 | 346 | |
| | g1 | 26 #11 @ 1'-1 | 11'-8 | 1612 | |
| | g2 | 13 #10 @ 11 | 27'-8 | 1548 | 3847 |

NOTE: SEE RS40-05-04 FOR DETAILS.




d2 BAR LAYOUT

## FOOTING NOTES:

1. THESE FOOTINGS ARE DESIGNED AND DETAILED TO BE USED WITH RS40-05-04.
2. PIER PILES (HP10x42) ARE TO BE DRIVEN TO THE DESIGN BEARING VALUE.
3. STEEL PILING USED AS POINT BEARING SHALL HAVE A MINIMUM DISTANCE OF APPROXIMATELY 10 FEET FROM BOTTOM OF FOOTING TO TOP OF BEARING ROCK. BATTER PILES IN EXTERIOR ROWS 1:4 IN THE DIRECTION SHOWN.

03-07
LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES

ROLLED STEEL BEAM BRIDGES

FEBRUARY, 2004

T PIER 0° SKEW
STEEL PILE FOOTINGS
SHEET 1 OF 3

RS40-06-04

REVISION - 03-07 - PAGE REFERENCES UPDATED.