



HALF SECTION BELOW SLAB

NOTE: NUMBER OF PILES AND STIRRUPS SHOWN ARE FOR A 70'-0 BRIDGE. CAP DIMENSIONS ARE TYPICAL FOR ALL BRIDGES.

REACTION, PILE SPACING, NUMBER AND BEARING

BRIDGE LENGTH	70'-0	80'-0	90'-0	100'-0	110'-0	120'-0	130'-0	140'-0	150'-0
0° SKEW	6 SPA. @ 4'-9	6 SPA. @ 4'-9	7 SPA. @ ABOUT 4'-11 (-)	7 SPA. @ ABOUT 4'-11 (-)	8 SPA. @ ABOUT 3'-7 (-)	9 SPA. @ 3'-2	10 SPA. @ ABOUT 2'-10 (+)	11 SPA. @ ABOUT 2'-7 (+)	11 SPA. @ ABOUT 2'-7 (+)
15° SKEW	6 SPA. @ ABOUT 4'-11 (+)	6 SPA. @ ABOUT 4'-11 (+)	7 SPA. @ ABOUT 4'-3 (-)	7 SPA. @ ABOUT 4'-3 (-)	8 SPA. @ ABOUT 3'-8 (+)	9 SPA. @ ABOUT 3'-3 (+)	10 SPA. @ ABOUT 2'-11 (+)	11 SPA. @ ABOUT 2'-8 (+)	11 SPA. @ ABOUT 2'-8 (+)
30° SKEW	6 SPA. @ ABOUT 5'-6 (-)	6 SPA. @ ABOUT 5'-6 (-)	7 SPA. @ ABOUT 4'-8 (+)	7 SPA. @ ABOUT 4'-8 (+)	8 SPA. @ ABOUT 4'-1 (+)	9 SPA. @ ABOUT 3'-8 (-)	10 SPA. @ ABOUT 3'-3 (+)	11 SPA. @ ABOUT 3'-0 (-)	11 SPA. @ ABOUT 3'-0 (-)
45° SKEW	6 SPA. @ ABOUT 6'-9 (-)	6 SPA. @ ABOUT 6'-9 (-)	7 SPA. @ ABOUT 5'-9 (+)	7 SPA. @ ABOUT 5'-9 (+)	8 SPA. @ ABOUT 5'-0 (+)	9 SPA. @ ABOUT 4'-6 (-)	10 SPA. @ ABOUT 4'-0 (+)	11 SPA. @ ABOUT 3'-8 (-)	11 SPA. @ ABOUT 3'-8 (-)
① REACTION	412 KIPS	458 KIPS	512 KIPS	572 KIPS	630 KIPS	699 KIPS	768 KIPS	840 KIPS	921 KIPS
① BEARING	30T	33T	32T	36T	35T	35T	35T	35T	39T
②③ BEARING	27T	30T	30T	33T	33T	33T	33T	33T	37T
* PILING (NO.)	7	7	8	8	9	10	11	12	12

- ① VALUE INCLUDES DEAD LOAD (PIER CAP WEIGHT IS BASED ON 45° SKEW), LIVE LOAD AND LIVE LOAD IMPACT.
- ② VALUE INCLUDES DEAD LOAD (PIER CAP WEIGHT IS BASED ON 45° SKEW), AND LIVE LOAD, WITHOUT IMPACT.
- ③ FOR ESTIMATING PILE LENGTHS AND FOR DETERMINING ACTUAL PILE LENGTHS IN FIELD.
- * USE PILES AS SHOWN ON P10A STANDARD PILE DRAWING. TYPE, SIZE, AND LENGTH OF PILES SHALL BE SPECIFIED ON THE PLAN. THE LARGER PILE SIZE SHOWN ON P10A STANDARD PILE DRAWING SHALL BE USED IF EITHER THE ACTUAL "H" DIMENSION OR THE REQUIRED BEARING EXCEEDS THE MAXIMUM "H" OR MAXIMUM BEARING CAPACITY SHOWN FOR THE PILE.

PIER NOTES:

- ALL MONOLITHIC PIER CAP REINFORCING AND CONCRETE IS INCLUDED IN SUPERSTRUCTURE ESTIMATE OF QUANTITIES.
- THE MINIMUM CLEAR DISTANCE FROM THE FACE OF THE CONCRETE TO NEAR REINFORCING BAR IS TO BE 2" UNLESS OTHERWISE NOTED OR SHOWN.
- THE PIER PILES ARE TO BE DRIVEN TO FULL PENETRATION, IF PRACTICABLE, BUT IN NO CASE TO A BEARING VALUE LESS THAN THE PILE BEARING REQUIRED FOR EACH BRIDGE LENGTH AS SHOWN ON THIS SHEET.
- CAP STEEL AS DETAILED ON P10A STANDARD PILE DRAWING IS REQUIRED FOR MONOLITHIC PIER CAPS.
- THE CONCRETE QUANTITIES ARE BASED ON THE USE OF TYPE 3 PILING. IF TYPE 1 OR TYPE 2 IS USED, THE CONCRETE QUANTITIES MAY BE ADJUSTED TO ACCOUNT FOR THE CONCRETE DISPLACED BY THE PILING.
- ALL REINFORCING STEEL IS TO BE GRADE 60.
- PIER PILING WAS DESIGNED FOR HS25 LOADING WITH AN ALLOWANCE FOR 20 LBS. PER SQ. FT. FUTURE WEARING SURFACE.

LATEST REVISION DATE	 APPROVED BY BRIDGE ENGINEER	 Iowa Department of Transportation Highway Division
		STANDARD DESIGN - 30' ROADWAY, 3 SPAN BRIDGES CONTINUOUS CONCRETE SLAB BRIDGES NOVEMBER, 2006
		MONOLITHIC PIER CAP DETAILS ALL BRIDGES

J30-23-06
SHEET 1 OF 2