

PILE BENT NOTES:

THESE PIER BENTS ARE DESIGNED FOR USE WITH STANDARD H40-06 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES IN LOCATIONS WHERE ICE AND DRIFT CONDITIONS ARE NOT SEVERE.

PIER PILES ARE TO BE DRIVEN TO THE DESIGN BEARING VALUE W/O IMPACT.

FOR DETAILS OF TRESTLE PILES, TYPES 1, 2 AND 3, SEE STANDARD P10A.

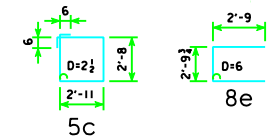
DETAILS SHOWN FOR CONCRETE PILES. FOR ORIENTATION OF STEEL PILES, SEE STANDARD P10A.

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

REINFORCING BAR LIST AND ESTIMATED QUANTITIES - PER PILE BENT

		9 PILE BENT			11 PILE BENT			13 PILE BENT			15 PILE BENT			17 PILE BENT			19 PILE BENT			21 PILE BENT			23 PILE BENT		
BAR	SHAPE	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT
9a		8	57'-8"	1569	8	57'-8"	1569	8	57'-8"	1569	6	57'-8"	1176	6	57'-8"	1176	4	57'-8"	784	4	57'-8"	784	4	57'-8"	784
8b		8	57'-8"	1232	8	57'-8"	1232	8	57'-8"	1232	8	57'-8"	1232	8	57'-8"	1232	8	57'-8"	1232	8	57'-8"	1232	8	57'-8"	1232
5c		50	12'-2"	634	52	12'-2"	660	62	12'-2"	787	72	12'-2"	914	50	12'-2"	634	56	12'-2"	711	62	12'-2"	787	46	12'-2"	584
8e		4	8'-4"	89	4	8'-4"	89	4	8'-4"	89	4	8'-4"	89	4	8'-4"	89	4	8'-4"	89	4	8'-4"	89	4	8'-4"	89
④ REINFORCING STEEL (LB.)		3524			3550			3677			3411			3131			2816			2892			2689		
		② PILE TYPE																							
STRUCTURAL CONCRETE (CY)		1, 2			-----			22.1			22.0			21.9			21.8			21.8			21.7		
		3			22.7			22.7			22.7			22.7			-----			-----			-----		

BENT BAR DETAILS



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

E-E ABUTMENT BEARING	FRICTION BEARING PILING				FRICTION OR POINT BEARING PILING			
	P10A TYPE 1 OR 2				P10A TYPE 3			
	NUMBER OF TRESTLE PILES AND SPACING	① "K" (INCHES)	DES. PILE BRG.(TONS) W/O IMPACT	DES. PILE BRG.(TONS) W/O IMPACT	NUMBER OF TRESTLE PILES AND SPACING	① "K" (INCHES)	DES. PILE BRG.(TONS) W/O IMPACT	DES. PILE BRG.(TONS) W/O IMPACT
138'-10	15 PILES @ 3'-11 CTRS.	14	28	26	9 PILES @ 6'-10½ CTRS.	16	46	43
	13 PILES @ 4'-7 CTRS.	16	32	30	9 PILES @ 6'-10½ CTRS.	18	46	43
151'-4	15 PILES @ 3'-11 CTRS.	14	29	27	9 PILES @ 6'-10½ CTRS.	16	48	45
	13 PILES @ 4'-7 CTRS.	16	34	31	11 PILES @ 5'-6 CTRS.	18	40	37
163'-10	17 PILES @ 3'-5 CTRS.	14	28	26	11 PILES @ 5'-6 CTRS.	16	43	40
	15 PILES @ 3'-11 CTRS.	16	32	30	11 PILES @ 5'-6 CTRS.	18	43	40
176'-4	17 PILES @ 3'-5 CTRS.	14	30	28	11 PILES @ 5'-6 CTRS.	16	45	42
	15 PILES @ 3'-11 CTRS.	16	33	31	11 PILES @ 5'-6 CTRS.	18	45	42
188'-10	19 PILES @ 3'-0½ CTRS.	14	28	26	11 PILES @ 5'-6 CTRS.	16	48	44
	15 PILES @ 3'-11 CTRS.	16	35	33	13 PILES @ 4'-7 CTRS.	18	40	38
201'-4	21 PILES @ 2'-9 CTRS.	14	28	27	13 PILES @ 4'-7 CTRS.	16	45	43
	17 PILES @ 3'-5 CTRS.	16	35	33	13 PILES @ 4'-7 CTRS.	18	45	43
213'-10	21 PILES @ 2'-9 CTRS.	14	30	28	13 PILES @ 4'-7 CTRS.	16	47	45
	17 PILES @ 3'-5 CTRS.	16	36	34	15 PILES @ 3'-11 CTRS.	18	41	39
226'-4	23 PILES @ 2'-6 CTRS.	14	28	27	13 PILES @ 4'-7 CTRS.	16	49	47
	19 PILES @ 3'-0½ CTRS.	16	34	32	15 PILES @ 3'-11 CTRS.	18	43	41
243'-0	23 PILES @ 2'-6 CTRS.	14	29	28	15 PILES @ 3'-11 CTRS.	16	45	42
	19 PILES @ 3'-0½ CTRS.	16	35	34	15 PILES @ 3'-11 CTRS.	18	45	42

- SEE STANDARD P10A FOR "K" DIMENSION.
- CONCRETE QUANTITIES SHOWN HAVE HAD THE VOLUME OF EMBEDDED PILES DEDUCTED FOR TYPES 1 AND 2 BASED ON 0.8 FT³ PER FOOT OF EMBEDMENT. THE CONCRETE QUANTITIES FOR TYPE 3 PILES DO NOT REQUIRE REDUCTION FOR PILE EMBEDMENT.
- FOR ESTIMATING PILE LENGTHS AND FOR DETERMINING ACTUAL PILE LENGTHS IN FIELD.
- SEE SHEET H40-31-06 FOR STEP REINFORCING STEEL QUANTITIES AND DETAILS.

LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER



Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 40' ROADWAY, THREE SPAN BRIDGE
PRETENSIONED PRESTRESSED
CONCRETE BEAM BRIDGES
HL93 SUPERSTRUCTURE DECEMBER, 2006 HS25 SUBSTRUCTURE

PILE BENT DETAILS
45° SKEW

H40-52-06