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, TYPES 1, 2 AND 3, SEE STANDARD PIOL.

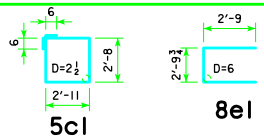
MINIMUM CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR REINFORCING BAR SHALL BE 2 INCHES UNLESS OTHERWISE NOTED OR SHOWN.

PIER PILES SHALL BE DRIVEN TO VALUES SHOWN IN DESIGN PLANS.

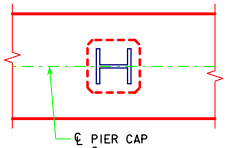
REINFORCING BAR LIST AND ESTIMATED QUANTITIES - PER PILE BENT

			7 PILE BENT			8 PILE BENT			9 PILE BENT			10 PILE BENT			11 PILE BENT			12 PILE BENT			13 PILE BENT			14 PILE BENT		
BAR	LENGTH	SHAPE	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT
a1	35'-8		8	9	970	6	9	728	6	9	728	6	9	728	6	9	728	6	9	728	6	9	728	6	9	728
a2	35'-8		4	8	381	4	8	381	4	8	381	4	8	381	4	8	381	4	8	381	4	8	381	4	8	381
b1	35'-8		4	9	485	4	9	485	4	9	485	4	9	485	4	9	485	4	9	485	4	9	485	4	8	381
5c1	12'-2		32	5	406	30	5	381	34	5	431	38	5	482	42	5	533	35	5	444	38	5	482	28	5	355
8e1	8'-4		4	8	89	4	8	89	4	8	89	4	8	89	4	8	89	4	8	89	4	8	89	4	8	89
(1) REINFORCING STEEL (LB.)			2331			2064			2114			2165			2216			2127			2061			1934		
STRUCTURAL CONCRETE (CY) (2)	PILE TYPE																									
	1, 2		-----			-----			13.3			13.3			13.2			13.2			13.1			13.1		
	3		13.7			13.7			13.7			13.7			13.7			13.7			-----			-----		

BENT BAR DETAILS



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



PILE ORIENTATION DETAIL FOR TYPE 3 TRESTLE BENT PILES

℄-℄ ABUTMENT BEARING	FRICTION BEARING PILING			FRICTION OR POINT BEARING PILING		
	PIOL TYPE 1 OR 2			PIOL TYPE 3		
	NUMBER OF TRESTLE PILES	(3) "K" (INCHES)	(4) LRFD Pu, STRENGTH I, DES. LOAD (KIPS)	NUMBER OF TRESTLE PILES	PILE SIZE	(4) LRFD Pu, STRENGTH I, DES. LOAD (KIPS)
138'-10	11	14	88	7	HP10x57	138
	9	16	107	8	HP12x53	121
151'-4	11	14	92	7	HP10x57	145
	10	16	101	8	HP12x53	127
163'-10	12	14	92	8	HP10x57	137
	----	--	----	9	HP12x53	122
176'-4	----	--	----	8	HP10x57	144
	----	--	----	9	HP12x53	128
188'-10	----	--	----	9	HP10x57	133
	----	--	----	9	HP12x53	133
201'-4	----	--	----	10	HP10x57	134
				10	HP12x53	134
213'-10	----	--	----	10	HP10x57	140
				11	HP12x53	128
226'-4	----	--	----	11	HP10x57	134
				11	HP12x53	134
243'-0	----	--	-----	11	HP10x57	141
				12	HP12x53	129

(1) SEE SHEET H30-24-06 FOR STEP REINFORCING STEEL QUANTITIES AND DETAILS.

(2) CONCRETE QUANTITIES SHOWN HAVE HAD THE VOLUME OF EMBEDDED PILES DEDUCTED FOR TYPES 1 AND 2 BASED ON 0.8 FT^3 PER FOOT OF EMBEDMENT. THE CONCRETE QUANTITIES FOR TYPE 3 PILES DO NOT REQUIRE REDUCTION FOR PILE EMBEDMENT.

(3) SEE STANDARD PIOL FOR "K" DIMENSION.

(4) NOTE: PU, STRENGTH I DESIGN LOAD (KIPS) IS NOT THE VALUE USED IN THE FIELD FOR DRIVING PILES.

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

04-13
LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 30' ROADWAY, THREE SPAN BRIDGES

PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES

DECEMBER, 2006

PILE BENT PIERS

30° SKEW

H30-52-06

REVISED 04-13 - REVISION FOR LRFD PILE DESIGN.