

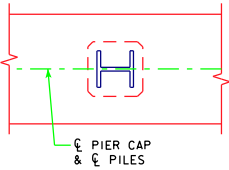
REVISED 07-10 - SHEET WAS REVISED TO MEET LRFD SPECIFICATIONS. PILE ORIENTATION DETAIL ADDED.

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.

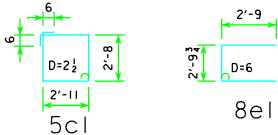


PILE ORIENTATION DETAIL FOR TYPE 3 TRESTLE BENT PILES

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	43'-8"		8	9	1188	8	9	1188	8	9	1188	8	9	1188	6	9	891	6	9	891	6	9	891	6	9	891
a2	43'-8"		4	8	466	4	8	466	4	8	466	4	8	466	4	8	466	4	8	466	4	8	466	4	8	466
b1	43'-8"		4	10	752	4	9	594	4	9	594	4	9	594	4	10	752	4	9	594	4	9	594	4	9	594
5c1	12'-2"		38	5	482	37	5	470	42	5	533	56	5	711	62	5	787	57	5	723	50	5	634	54	5	685
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.)			2977			2807			2870			3048			2985			2763			2674			2725		
STRUCTURAL			② PILE TYPE																							
CONCRETE (CY)			1, 2			-----			-----			16.4			16.4			16.3			16.3			16.2		
			3			16.9			16.9			16.9			16.9			16.9			-----			-----		

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				
	PIOL TYPE 1 OR 2					PIOL TYPE 3				
	NUMBER OF TRESTLE PILES	③ "K" (INCHES)	④ DES. PILE BRG. (TONS)	⑤ LRFD DES. BRG. (KIPS)		NUMBER OF TRESTLE PILES	PILE SIZE	④ DES. PILE BRG. (TONS)	⑤ LRFD DES. BRG. (KIPS)	
138'-10	11	14	31	90		7	HP10x57	49	142	
	10	16	34	99		8	HP12x53	43	124	
151'-4	11	14	33	95		8	HP10x57	45	130	
	10	16	36	104		8	HP12x53	45	130	
163'-10	12	14	32	94		8	HP10x57	49	141	
	11	16	35	102		9	HP12x53	43	125	
176'-4	13	14	31	91		9	HP10x57	45	131	
	11	16	37	107		9	HP12x53	45	131	
188'-10	13	14	33	94		9	HP10x57	47	136	
	12	16	35	102		10	HP12x53	42	123	
201'-4	13	16	36	105		10	HP10x57	47	137	
						11	HP12x53	43	124	
213'-10	14	16	35	102		10	HP10x57	49	143	
						11	HP12x53	45	130	
226'-4	14	16	37	108		11	HP10x57	47	137	
						12	HP12x53	43	126	
243'-0	----	--	--	--		11	HP10x57	50	144	
						12	HP12x53	45	132	

- ① SEE SHEET H30-31-06 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 FT³ 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 FOR DETERMINING ACTUAL PILE LENGTHS IN FIELD.
- ⑤ 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.

07-10
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

45° SKEW

H30-55-06