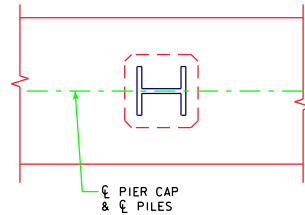


PILE BENT NOTES:

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.

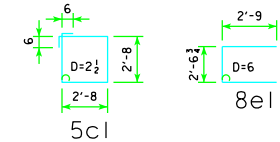


PILE ORIENTATION DETAIL FOR
TYPE 3 TRESTLE BENT PILES

REINFORCING BAR LIST AND ESTIMATED QUANTITIES - PER PILE BENT

BAR	LENGTH	SHAPE	10 PILE BENT			12 PILE BENT			14 PILE BENT			16 PILE BENT			18 PILE BENT		
			NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT
q1	47'-2		8	9	1283	8	9	1283	6	9	962	6	9	962	6	9	962
q2	47'-2		4	8	504	4	8	504	4	8	504	4	8	504	4	8	504
b1	47'-2		4	9	641	4	9	641	4	9	641	4	9	641	4	9	641
5c1	11'-8		47	5	572	57	5	694	67	5	815	62	5	754	53	5	645
8e1	8'-1		4	8	86	4	8	86	4	8	86	4	8	86	4	8	86
① REINFORCING STEEL (LB.)			3086			3208			3008			2947			2838		
② PILE TYPE			1, 2			16.5			16.4			16.3			16.2		
STRUCTURAL CONCRETE (CY)			3			17.0			17.0			17.0			17.0		

BENT BAR DETAILS

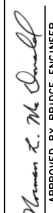


NOTE: ALL DIMENSIONS ARE
OUT TO OUT. D=PIN DIAMETER.

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)	
160'-0	14	14	30	86		10	HP10x57	42	121	
	12	16	35	101		10	HP12x53	42	121	
180'-0	14	14	33	94		10	HP10x57	46	132	
	14	16	33	94		10	HP12x53	46	132	
200'-0	16	14	31	89		10	HP10x57	49	143	
	14	16	35	102		12	HP12x53	41	119	
220'-0	18	14	30	87		12	HP10x57	45	130	
	16	16	34	97		12	HP12x53	45	130	
240'-0	18	14	33	95		12	HP10x57	49	142	
	16	16	37	107		14	HP12x53	42	122	
260'-0	18	16	35	103		14	HP10x57	45	132	
						14	HP12x53	45	132	
280'-0	--	--	--	--		14	HP10x57	49	142	
						16	HP12x53	43	124	
300'-0	--	--	--	--		16	HP10x57	46	133	
						16	HP12x53	46	133	
320'-0	--	--	--	--		16	HP10x57	49	142	
						18	HP12x53	43	126	
340'-0	--	--	--	--		18	HP10x57	46	133	
						18	HP12x53	46	133	

- SEE SHEET RS40-168-10 FOR STEP REINFORCING STEEL QUANTITIES AND DETAILS.
- 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.
- SEE STANDARD PIOL FOR "K" DIMENSION.
- FOR DETERMINING ACTUAL PILE LENGTHS IN FIELD.
- 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.

LATEST REVISION DATE	 APPROVED BY BRIDGE ENGINEER	 Iowa Department of Transportation Highway Division	
		STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES ROLLED STEEL BEAM BRIDGES JUNE, 2010	
		PILE BENT PIERS 30° SKEW	RS40-109-10