

PILE BENT NOTES:

THESE PIER BENTS ARE DESIGNED FOR USE IN LOCATIONS WHERE ICE AND DRIFT CONDITIONS ARE NOT SEVERE.

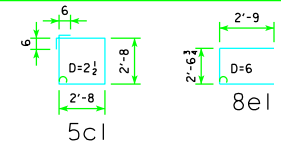
FOR DETAILS OF TRESTLE PILES, TYPES 1, 2 AND 3, SEE STANDARD PIOL.

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

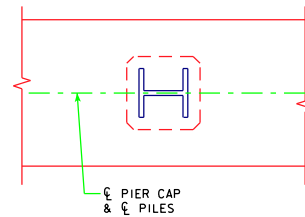
REINFORCING BAR LIST AND ESTIMATED QUANTITIES - PER PILE BENT

BAR	LENGTH	SHAPE	9 PILE BENT			11 PILE BENT			13 PILE BENT			15 PILE BENT			17 PILE BENT		
			NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT
a1	43'-8"		6	9	891	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
b1	43'-8"		4	9	594	4	9	594	4	9	594	4	9	594	4	9	594
5c1	11'-8"		42	5	511	52	5	633	50	5	608	58	5	706	50	5	608
8e1	8'-1"		4	8	86	4	8	86	4	8	86	4	8	86	4	8	86
REINFORCING STEEL (L.B.)			2548			2670			2645			2743			2645		
STRUCTURAL			1, 2			15.2			15.1			15.0			14.9		
CONCRETE (CY)			3			15.7			15.7			15.7			15.7		

BENT BAR DETAILS



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



PILE ORIENTATION DETAIL FOR TYPE 3 TRESTLE BENT PILES

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"	13	14	32	93	9	HP10x57	46	134
	11	16	38	109	9	HP12x53	46	134
180'-0"	15	14	30	88	11	HP10x57	41	119
	13	16	35	101	11	HP12x53	41	119
200'-0"	15	14	33	95	11	HP10x57	45	129
	13	16	38	109	11	HP12x53	45	129
220'-0"	17	14	32	91	11	HP10x57	49	141
	15	16	36	104	13	HP12x53	41	120
240'-0"	17	16	35	100	13	HP10x57	45	131
					13	HP12x53	45	131
260'-0"	17	16	37	108	15	HP10x57	49	142
					15	HP12x53	42	123
280'-0"	--	--	--	--	15	HP10x57	45	132
					15	HP12x53	45	132
300'-0"	--	--	--	--	15	HP10x57	49	142
					17	HP12x53	43	125
320'-0"	--	--	--	--	17	HP10x57	46	133
					17	HP12x53	46	133
340'-0"	--	--	--	--	17	HP10x57	48	140

- SEE SHEET RS40-167-10 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
Thomas L. McDaniel



Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES
ROLLED STEEL BEAM BRIDGES

JUNE, 2010

PILE BENT PIERS

20° SKEW

RS40-105-10