

PILE BENT NOTES:

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

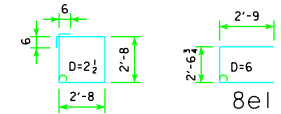
FOR DETAILS OF TRESTLE PILES, TYPES 1, 2 AND 3, SEE STANDARD PIOL.

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

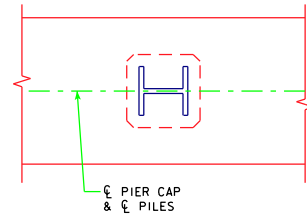
REINFORCING BAR LIST AND ESTIMATED QUANTITIES - PER PILE BENT

BAR	LENGTH	SHAPE	9 PILE BENT			10 PILE BENT			11 PILE BENT			12 PILE BENT			13 PILE BENT			14 PILE BENT			15 PILE BENT			16 PILE BENT		
			NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT
q1	41'-8"		8	9	1133	6	9	850	6	9	850	6	9	850	6	9	850	6	9	850	6	9	850	6	9	850
q2	41'-8"		4	8	445	4	8	445	4	8	445	4	8	445	4	8	445	4	8	445	4	8	445	4	8	445
b1	41'-8"		4	9	567	4	9	567	4	9	567	4	9	567	4	9	567	4	9	567	4	9	567	4	9	567
5c1	11'-8"		42	5	511	38	5	462	42	5	511	46	5	560	50	5	608	54	5	657	44	5	535	47	5	572
8e1	8'-1"		4	8	86	4	8	86	4	8	86	4	8	86	4	8	86	4	8	86	4	8	86	4	8	86
① REINFORCING STEEL (LB.)			2742			2410			2459			2508			2556			2605			2483			2520		
STRUCTURAL CONCRETE (CY)	② PILE TYPE		-----			-----			14.4			14.4			14.3			14.3			14.2			14.2		
	1, 2 3		14.9			14.9			14.9			14.9			14.9			14.9			14.9			14.9		

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	92	9	HP10x57	46	133
	11	16	38	109	9	HP12x53	46	133
180'-0"	14	14	32	94	9	HP10x57	50	146
	12	16	38	109	10	HP12x53	45	131
200'-0"	15	14	33	94	10	HP10x57	49	142
	13	16	38	109	11	HP12x53	44	129
220'-0"	15	16	36	103	11	HP10x57	49	141
					12	HP12x53	45	129
240'-0"	16	16	37	106	12	HP10x57	49	142
					13	HP12x53	45	131
260'-0"	--	--	--	--	13	HP10x57	49	141
					14	HP12x53	45	131
280'-0"	--	--	--	--	14	HP10x57	49	141
					15	HP12x53	45	132
300'-0"	--	--	--	--	15	HP10x57	49	141
					16	HP12x53	46	133
320'-0"	--	--	--	--	16	HP10x57	49	141
340'-0"	--	--	--	--	--	--	--	--

- ① SEE SHEET RS40-166-10 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.

LATEST REVISION DATE	APPROVED BY BRIDGE ENGINEER <i>Thomas L. McQuinn</i>	 Iowa Department of Transportation Highway Division
STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES ROLLED STEEL BEAM BRIDGES JUNE, 2010		
PILE BENT PIERS 10° SKEW		RS40-101-10