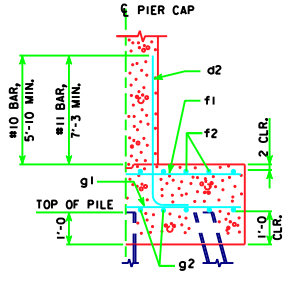
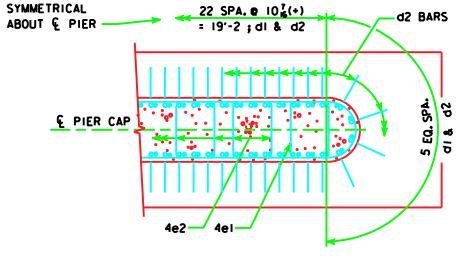
℄-℄ ABUT. BEARING	HEIGHT (FT)	PILING NO. & LAYOUT	PILING DES. BRG. (TONS)	FTG. SIZE	STRUCTURAL CONCRETE (C.Y.)
160 ft	16	17A	36	4' x 8' x 27'	32.0
	19	17A	37		
	22	18B	35		
	25	18B	35		
	28	18B	37		
	31	19A	36	4' x 9' x 28'	37.3
	34	19A	37		
	37	20B	37		
	40	20A	37	4' x 10' x 29'	43.0
180 ft	16	18B	35	4' x 8' x 27'	32.0
	19	18B	36		
	22	18B	37		
	25	19A	36	4' x 9' x 28'	37.3
	28	19A	37		
	31	20B	37		
	34	21B	37	4' x 10' x 29'	43.0
	37	22B	35		
	40	22B	37		
200 ft	16	19B	36	4' x 8' x 27'	32.0
	19	19B	37		
	22	20B	36	4' x 9' x 28'	37.3
	25	20B	36		
	28	21B	37		
	31	22B	35	4' x 10' x 29'	43.0
	34	22B	36		
	37	23B	37		
	40	24B	37		
220 ft	16	20B	36	4' x 9' x 28'	37.3
	19	20B	37		
	22	21B	36		
	25	21B	37		
	28	22B	36	4' x 10' x 29'	43.0
	31	22B	37		
	34	24B	36		
	37	25B	37		
	40	25A	37	4' x 11' x 30'	48.9
240 ft	16	22B	36	4' x 10' x 29'	43.0
	19	22B	37		
	22	22B	37		
	25	23B	36		
	28	23B	37		
	31	24B	37		
	34	26B	37		
	37	26A	37	4' x 11' x 30'	48.9
	40	28B	36		
260 ft	16	23B	37	4' x 10' x 29'	43.0
	19	23B	37		
	22	24B	36		
	25	24B	37		
	28	25B	37		
	31	26A	37	4' x 11' x 30'	48.9
	34	27A	37		
	37	28B	37		
	40	29A	37	4' x 12' x 31'	55.1
280 ft	16	24B	37	4' x 10' x 29'	43.0
	19	25B	37		
	22	25B	37		
	25	26B	37		
	28	26A	37	4' x 11' x 30'	48.9
	31	28B	37		
	34	29A	37	4' x 12' x 31'	55.1
	37	30A	37		
	40	32A	36		
300 ft	16	26B	37	4' x 10' x 29'	43.0
	19	26B	37		
	22	27A	36	4' x 11' x 30'	48.9
	25	27A	37		
	28	28B	37		
	31	29A	37	4' x 12' x 31'	55.1
	34	32A	35		
	37	32A	37		
	40	33A	37		

REINFORCING STEEL (ONE FOOTING)

FTG. SIZE	BAR	NO. SIZE & SPC.	LENGTH	WEIGHT LB.	TOTAL WEIGHT LB.
4' x 8' x 27'	d2	SEE NOTE	--	--	
	f1	27 #5 @ 1'-0	7'-8	216	
	f2	8 #5 @ 1'-0	26'-8	223	
	g1	30 #6 @ 11	7'-8	345	
	g2	10 #8 @ 10	26'-8	712	1496
4' x 9' x 28'	d2	SEE NOTE	--	--	
	f1	28 #5 @ 1'-0	8'-8	253	
	f2	9 #5 @ 1'-0	27'-8	260	
	g1	31 #7 @ 11	8'-8	549	
	g2	12 #8 @ 9	27'-8	886	1948
4' x 10' x 29'	d2	SEE NOTE	--	--	
	f1	29 #5 @ 1'-0	9'-8	292	
	f2	10 #5 @ 1'-0	28'-8	299	
	g1	35 #8 @ 10	9'-8	904	
	g2	13 #9 @ 9	28'-8	1267	2761
4' x 11' x 30'	d2	SEE NOTE	--	--	
	f1	30 #5 @ 1'-0	10'-8	334	
	f2	11 #5 @ 1'-0	29'-8	340	
	g1	33 #9 @ 11	10'-8	1197	
	g2	16 #10 @ 8	29'-8	2042	3913
4' x 12' x 31'	d2	SEE NOTE	--	--	
	f1	31 #5 @ 1'-0	11'-8	377	
	f2	12 #5 @ 1'-0	30'-8	384	
	g1	41 #9 @ 9	11'-8	1626	
	g2	16 #11 @ 9	30'-8	2607	4994

NOTE: SEE RS40-13-04 FOR DETAILS.





d2 BAR LAYOUT

FOOTING NOTES :

1. THESE FOOTINGS ARE DESIGNED AND DETAILED TO BE USED WITH RS40-13-04.
2. PIER PILES (HP10x42) ARE TO BE DRIVEN TO THE DESIGN BEARING VALUE.
3. STEEL PILING USED AS POINT BEARING SHALL HAVE A MINIMUM DISTANCE OF APPROXIMATELY 10 FEET FROM BOTTOM OF FOOTING TO TOP OF BEARING ROCK. BATTER PILES IN EXTERIOR ROWS 1:4 IN THE DIRECTION SHOWN.

03-07
LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES

ROLLED STEEL BEAM BRIDGES

FEBRUARY, 2004

T PIER 20° SKEW
STEEL PILE FOOTINGS
SHEET 1 OF 3

RS40-14-04