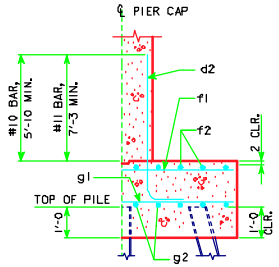
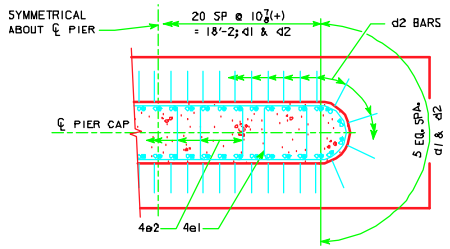
℄-℄ ABUT. BEARING	HEIGHT (FT)	PILING NO. & LAYOUT	PILING DES. BRG. (TONS)	FTG. SIZE	STRUCTURAL CONCRETE (C.Y.)
160 ft	16	16B	36	4' x 7' x 25'	25.9
	19	16B	37		
	22	18D	35		
	25	18D	36		
	28	19A	36	4' x 8' x 25'	29.6
	31	20D	37		
	34	20C	37	4' x 9' x 25'	33.3
	37	20B	36	4' x 10' x 25'	37.0
	40	20B	37		
180 ft	16	18D	36	4' x 7' x 25'	25.9
	19	18D	37		
	22	18C	37	4' x 8' x 25'	29.6
	25	19A	37		
	28	20C	37	4' x 9' x 25'	33.3
	31	20B	36	4' x 10' x 25'	37.0
	34	20B	37		
	37	22B	36		
	40	23A	37		
200 ft	16	18C	37	4' x 8' x 25'	29.6
	19	19A	36		
	22	20D	37		
	25	20C	37	4' x 9' x 25'	33.3
	28	22C	36		
	31	22B	36	4' x 10' x 25'	37.0
	34	22B	37		
	37	24B	37		
	40	24A	35	4' x 11' x 26'	42.4
220 ft	16	20D	37	4' x 8' x 25'	29.6
	19	20D	37		
	22	22C	36	4' x 9' x 25'	33.3
	25	22C	37		
	28	22B	37	4' x 10' x 25'	37.0
	31	24A	34	4' x 11' x 26'	42.4
	34	24A	35		
	37	24A	36		
	40	25A	37		
240 ft	16	22C	36	4' x 9' x 25'	33.3
	19	22C	37		
	22	22B	37	4' x 10' x 25'	37.0
	25	23A	37		
	28	24B	37		
	31	24A	36	4' x 11' x 26'	42.4
	34	24A	37		
	37	26B	37		
	40	26A	37	4' x 12' x 26'	46.2
260 ft	16	23A	37	4' x 10' x 25'	37.0
	19	24B	36		
	22	24B	37		
	25	24A	36	4' x 11' x 26'	42.4
	28	24A	37		
	31	25A	37		
	34	26A	37	4' x 12' x 26'	46.2
	37	28A	37		
	40	30B	36		
280 ft	16	24A	37	4' x 11' x 26'	42.4
	19	24A	37		
	22	25A	37		
	25	25A	37		
	28	26B	37		
	31	27A	37	4' x 12' x 26'	46.2
	34	30B	36		
	37	30B	37		
	40	32A	35	4' x 12' x 28'	49.8
300 ft	16	26B	36	4' x 11' x 26'	42.4
	19	26B	37		
	22	26B	37		
	25	27A	37	4' x 12' x 26'	46.2
	28	28A	37		
	31	30A	35	4' x 12' x 28'	49.8
	34	30A	36		
	37	32A	36		
	40	32A	37		

REINFORCING STEEL (ONE FOOTING)					
FTG. SIZE	BAR	NO. SIZE & SPC.	LENGTH	WEIGHT LB.	TOTAL WEIGHT LB.
4' x 7' x 25'	d2	SEE NOTE	--	--	
	f1	25 #5 @ 1'-0	6'-8	174	
	f2	7 #5 @ 1'-0	24'-8	180	
	g1	26 #5 @ 11½	6'-8	181	
	g2	8 #6 @ 11	24'-8	296	831
4' x 8' x 25'	d2	SEE NOTE	--	--	
	f1	25 #5 @ 1'-0	7'-8	200	
	f2	8 #5 @ 1'-0	24'-8	206	
	g1	25 #6 @ 1'-0	7'-8	288	
	g2	12 #6 @ 8	24'-8	445	1139
4' x 9' x 25'	d2	SEE NOTE	--	--	
	f1	25 #5 @ 1'-0	8'-8	226	
	f2	9 #5 @ 1'-0	24'-8	232	
	g1	25 #8 @ 1'-0	8'-8	579	
	g2	12 #6 @ 9	24'-8	445	1482
4' x 10' x 25'	d2	SEE NOTE	--	--	
	f1	25 #5 @ 1'-0	9'-8	252	
	f2	10 #5 @ 1'-0	24'-8	257	
	g1	25 #9 @ 1'-0	9'-8	822	
	g2	12 #6 @ 10	24'-8	445	1776
4' x 11' x 26'	d2	SEE NOTE	--	--	
	f1	26 #5 @ 1'-0	10'-8	289	
	f2	11 #5 @ 1'-0	25'-8	294	
	g1	31 #9 @ 10	10'-8	1124	
	g2	13 #8 @ 10	25'-8	891	2598
4' x 12' x 26'	d2	SEE NOTE	--	--	
	f1	26 #5 @ 1'-0	11'-8	316	
	f2	12 #5 @ 1'-0	25'-8	321	
	g1	37 #9 @ 8½	11'-8	1468	
	g2	13 #8 @ 11	25'-8	891	2996
4' x 12' x 28'	d2	SEE NOTE	--	--	
	f1	28 #5 @ 1'-0	11'-8	341	
	f2	12 #5 @ 1'-0	27'-8	346	
	g1	42 #9 @ 8	11'-8	1666	
	g2	17 #9 @ 8½	27'-8	1599	3952

NOTE: SEE RS40-PR5-04 FOR DETAILS.





d2 BAR LAYOUT

FOOTING NOTES :

1. THESE FOOTINGS ARE DESIGNED AND DETAILED TO BE USED WITH RS40-PR5-04.
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.

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 10° SKEW
STEEL PILE FOOTINGS
SHEET 1 OF 3

RS40-PR6-04