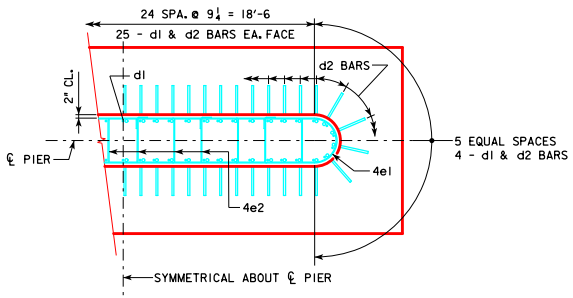
H IN FT.	℄ - ℄ ABUT. BRG.	PILING (HP10x57) NO. & LAYOUT	PILING (HP10x57) ① LRFD Pu, STRENGTH I, DES. LOAD (KIPS)	FOOTING SIZE
16 TO 18	160'-0	10A	211	4' x 8' x 26'
	180'-0	11A	213	
	200'-0	12A	208	
	220'-0	13A	215	
	240'-0	14A	215	4' x 9' x 26'
	260'-0	14D	211	4' x 11' x 28'
	280'-0	15A	216	
	300'-0	16A	217	
	320'-0	16B	217	4' x 12' x 28'
	340'-0	17A	218	
19 TO 21	160'-0	10B	215	4' x 9' x 26'
	180'-0	11B	216	
	200'-0	12B	211	4' x 10' x 26'
	220'-0	13B	214	
	240'-0	14B	218	4' x 11' x 28'
	260'-0	14D	216	
	280'-0	16A	210	
	300'-0	16B	211	4' x 12' x 28'
	320'-0	17A	213	
	340'-0	18A	212	
22 TO 24	160'-0	11B	209	4' x 9' x 26'
	180'-0	12B	205	
	200'-0	12C	214	4' x 10' x 26'
	220'-0	13C	217	4' x 11' x 26'
	240'-0	14D	208	
	260'-0	15A	211	4' x 11' x 28'
	280'-0	16A	214	
	300'-0	16B	215	
	320'-0	17A	217	4' x 12' x 28'
	340'-0	18A	216	
25 TO 27	160'-0	11C	212	
	180'-0	12C	207	4' x 10' x 26'
	200'-0	12C	219	
	220'-0	14C	211	4' x 11' x 26'
	240'-0	14D	212	
	260'-0	15A	216	4' x 11' x 28'
	280'-0	16A	218	
	300'-0	16B	219	
	320'-0	18A	211	4' x 12' x 28'
	340'-0	18A	220	
28 TO 30	160'-0	11C	217	
	180'-0	12C	212	4' x 10' x 26'
	200'-0	13B	214	
	220'-0	14C	215	4' x 11' x 26'
	240'-0	14D	216	4' x 11' x 28'
	260'-0	15A	219	
	280'-0	16B	210	
	300'-0	17A	213	4' x 12' x 28'
	320'-0	18A	214	
	340'-0	19A	215	
31 TO 33	160'-0	12D	202	
	180'-0	12D	214	4' x 11' x 26'
	200'-0	13C	216	
	220'-0	14C	219	
	240'-0	14D	219	4' x 11' x 28'
	260'-0	16A	211	
	280'-0	16B	213	
	300'-0	17A	216	4' x 12' x 28'
	320'-0	18A	216	
	340'-0	19A	218	
34 TO 36	160'-0	12D	207	4' x 11' x 26'
	180'-0	12D	219	
	200'-0	13D	213	
	220'-0	14D	209	4' x 11' x 28'
	240'-0	15A	214	
	260'-0	16A	214	
	280'-0	16B	216	
	300'-0	17A	219	4' x 12' x 28'
	320'-0	18A	219	
	340'-0	19B	218	4' x 13' x 28'

H IN FT.	℄ - ℄ ABUT. BRG.	PILING (HP10x57) NO. & LAYOUT	PILING (HP10x57) ① LRFD Pu, STRENGTH I, DES. LOAD (KIPS)	FOOTING SIZE
37 TO 40	160'-0	12E	205	4' x 11' x 28'
	180'-0	12E	217	
	200'-0	13D	218	
	220'-0	14D	214	
	240'-0	15A	218	
	260'-0	16A	218	
	280'-0	16B	219	4' x 12' x 28'
	300'-0	18A	212	
	320'-0	19A	215	
	340'-0	20A	214	4' x 13' x 28'

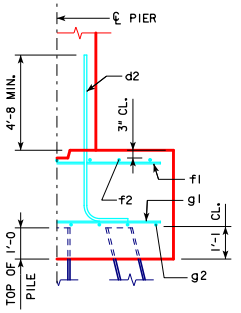
FOOTING SIZE	REINFORCING STEEL (ONE FOOTING) BAR	NO., SIZE & SPACING	LENGTH	WEIGHT (LB.)	TOTAL WEIGHT (LB.)	STRUCTURAL CONCRETE (CY)
4' x 8' x 26'	d2	58 - #9 AS SHOWN	9'-1	1791	3299	30.8
	f1	26 - #5 @ 1'-0	7'-8	208		
	f2	8 - #5 @ 1'-0	25'-8	214		
	g1	26 - #6 @ 1'-0	7'-8	299		
	g2	15 - #7 @ 0'-6	25'-8	787		
4' x 9' x 26'	d2	58 - #9 AS SHOWN	9'-1	1791	3445	34.7
	f1	26 - #5 @ 1'-0	8'-8	235		
	f2	9 - #5 @ 1'-0	25'-8	241		
	g1	30 - #6 @ 0'-10½	8'-8	391		
	g2	15 - #7 @ 0'-7	25'-8	787		
4' x 10' x 26'	d2	58 - #9 AS SHOWN	9'-1	1791	3716	38.5
	f1	26 - #5 @ 1'-0	9'-8	262		
	f2	10 - #5 @ 1'-0	25'-8	268		
	g1	29 - #7 @ 0'-10½	9'-8	573		
	g2	12 - #8 @ 0'-10	25'-8	822		
4' x 11' x 26'	d2	58 - #9 AS SHOWN	9'-1	1791	3965	42.4
	f1	26 - #5 @ 1'-0	10'-8	289		
	f2	11 - #5 @ 1'-0	25'-8	294		
	g1	27 - #8 @ 0'-11½	10'-8	769		
	g2	12 - #8 @ 0'-11	25'-8	822		
4' x 11' x 28'	d2	58 - #9 AS SHOWN	9'-1	1791	4705	45.6
	f1	28 - #5 @ 1'-0	10'-8	312		
	f2	11 - #5 @ 1'-0	27'-8	317		
	g1	34 - #8 @ 0'-10	10'-8	968		
	g2	14 - #9 @ 0'-9½	27'-8	1317		
4' x 12' x 28'	d2	58 - #9 AS SHOWN	9'-1	1791	5198	49.8
	f1	28 - #5 @ 1'-0	11'-8	341		
	f2	12 - #5 @ 1'-0	27'-8	346		
	g1	33 - #9 @ 0'-10	11'-8	1309		
	g2	15 - #9 @ 0'-9½	27'-8	1411		
4' x 13' x 28'	d2	58 - #9 AS SHOWN	9'-1	1791	5505	53.9
	f1	28 - #5 @ 1'-0	12'-8	370		
	f2	13 - #5 @ 1'-0	27'-8	375		
	g1	34 - #9 @ 0'-10	12'-8	1464		
	g2	16 - #9 @ 0'-10	27'-8	1505		

① NOTE: PU, STRENGTH I DESIGN LOAD (KIPS) IS NOT THE VALUE USED IN THE FIELD FOR DRIVING PILES.

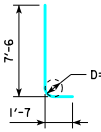


d2 BAR LAYOUT

(SEE SECTION A-A ON SHEET RS40-136-14.)



TYPICAL SECTION



d2

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

NOTE: THE REINFORCING STEEL QUANTITY IS TO BE INCLUDED ON THE SUMMARY QUANTITIES SHEET IN THE PLAN.

NOTE: THE CONCRETE QUANTITY IS TO BE INCLUDED ON THE SUMMARY QUANTITIES SHEET IN THE PLAN.

NOTE: THE PILE TYPE IS TO BE INCLUDED ON THE SUMMARY QUANTITIES SHEET IN THE PLAN.

FOOTING NOTES:

THESE FOOTINGS ARE DESIGNED AND DETAILED TO BE USED WITH THE CAP AND COLUMN DETAILS OF THE TEE PIERS AS SHOWN ON SHEET RS40-136-14.

BATTER PILES IN EXTERIOR ROWS 1:4 IN THE DIRECTION SHOWN.

STEEL PILING USED AS POINT BEARING SHALL HAVE A MINIMUM DISTANCE OF APPROXIMATELY 10 FEET FROM BOTTOM OF FOOTING TO TOP OF BEARING ROCK. THE PILE LAYOUTS ARE SUCH THAT THE DISTANCE CENTER TO CENTER OF ADJACENT PILING SHALL NOT EXCEED 8'-0.

PIER PILES SHALL BE DRIVEN TO VALUES SHOWN IN DESIGN PLANS.

REVISED 02-2017 - CHANGED VERTICAL CLEARANCE OF REBAR "f2" TO TOP OF PIER FOOTING TO 3" (WAS 2").

02-2017
LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

IOWADOT Highway Division

STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES

ROLLED STEEL BEAM BRIDGES

OCTOBER, 2014

TEE PIER-HP10x57 SRL-2 STEEL PILE FOOTINGS

20° SKEW - SHEET 1

RS40-141-14