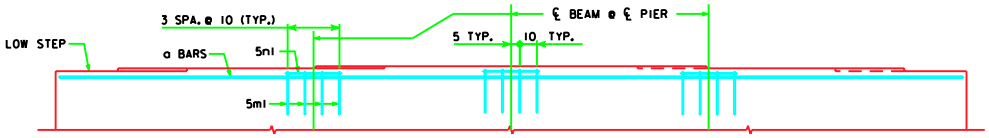
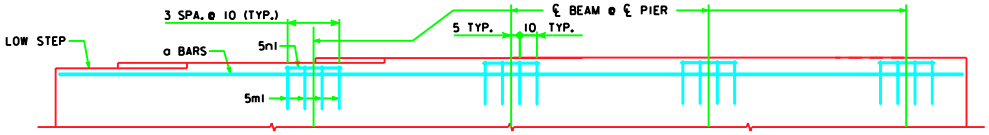


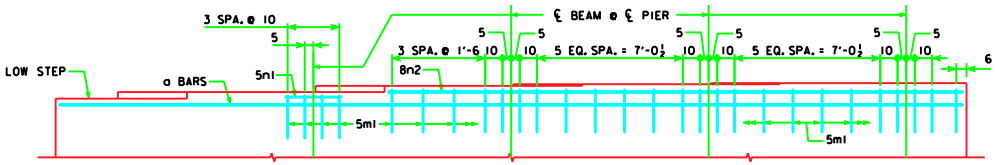
PART ELEVATION VIEW OF PIER CAP

GRADE (G): G <= 0.5%



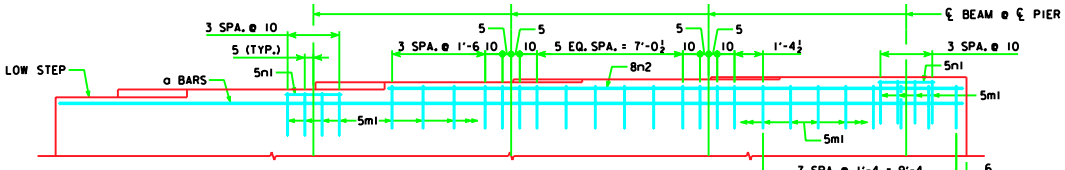
PART ELEVATION VIEW OF PIER CAP

GRADE (G): 0.5% < G <= 1.9%



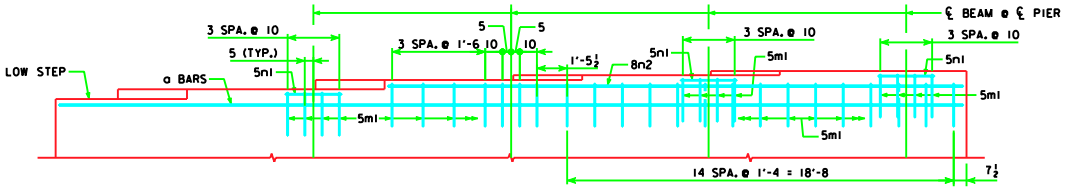
PART ELEVATION VIEW OF PIER CAP

GRADE (G): 1.9% < G <= 2.8%



PART ELEVATION VIEW OF PIER CAP

GRADE (G): 2.8% < G <= 3.6%



PART ELEVATION VIEW OF PIER CAP

GRADE (G): 3.6% < G <= 5.0%

STEP REINFORCING BAR LIST - ONE TEE PIER

			G <= 0.5%			0.5% < G <= 1.9%			1.9% < G <= 2.8%			2.8% < G <= 3.6%			3.6% < G <= 5.0%		
BAR	LENGTH	SHAPE	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT
5m1	7'-2		12	5	90	16	5	120	28	5	209	31	5	232	34	5	254
5n1	2'-8		12	5	33	16	5	45	4	5	11	8	5	22	12	5	33
*8n2	VARIES		--	--	--	--	--	--	4	8	313	4	8	313	4	8	313
TOTAL (LB.)					123			165			533			567			600

G = GRADE (%)

*8n2 BARS VARY FROM 27'-11 TO 30'-8

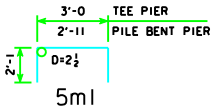
STEP REINFORCING BAR LIST - ONE PILE BENT PIER

			G <= 0.5%			0.5% < G <= 1.9%			1.9% < G <= 2.8%			2.8% < G <= 3.6%			3.6% < G <= 5.0%		
BAR	LENGTH	SHAPE	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT
5m1	7'-1		12	5	89	16	5	118	28	5	207	31	5	229	34	5	251
5n1	2'-8		12	5	33	16	5	45	4	5	11	8	5	22	12	5	33
*8n2	VARIES		--	--	--	--	--	--	4	8	313	4	8	313	4	8	313
TOTAL (LB.)					122			163			531			564			597

G = GRADE (%)

*8n2 BARS VARY FROM 27'-11 TO 30'-8

BENT BAR DETAILS



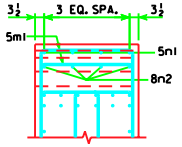
NOTE: ALL DIMENSIONS ARE OUT TO OUT.
D = PIN DIAMETER.

NOTES:

THE TABLE BELOW LISTS THE ADDITIONAL CONCRETE VOLUME REQUIRED IN EACH ABUTMENT FOOTING/PIER CAP BASED ON THE ROADWAY GRADE AT EACH ABUTMENT FOOTING/PIER CAP. ADDITIONAL CONCRETE SHOULD BE ADDED TO THE PLANS FOR EACH ABUTMENT FOOTING/PIER CAP THAT HAS 0.5 CU. YDS. OR MORE OF ADDITIONAL CONCRETE. VALUES IN THE TABLE BELOW HAVE BEEN EXCLUDED FOR SCENARIOS THAT HAVE LESS THAN 0.5 CU. YDS. OF ADDITIONAL CONCRETE PER SUBSTRUCTURE UNIT. VALUES MAY BE INTERPOLATED FOR GRADES BETWEEN THE VALUES SHOWN IN THE TABLE.

ADDITIONAL CONCRETE VOLUME PER SUBSTRUCTURE UNIT (C.Y.)

	ROADWAY GRADE AT SUBSTRUCTURE UNIT				
	1%	2%	3%	4%	5%
EACH ABUTMENT FOOTING					
A, B BEAMS	0.5	1.2	1.9	2.6	3.2
C BEAMS	0.6	1.4	2.2	3.1	3.9
EACH TEE PIER CAP - ALL BEAMS	0.5	1.3	2.1	2.9	3.8
EACH PILE BENT PIER - ALL BEAMS	0.5	1.2	2.1	2.9	3.7



TYPICAL SECTION

LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 30' ROADWAY, THREE SPAN BRIDGES

PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES

HL93 SUPERSTRUCTURE DECEMBER, 2006 HS25 SUBSTRUCTURE

ADDITIONAL QUANTITIES
45° SKEW

H30-31-06