BILL OF REINFORCING STEEL - ONE ABUTMENT - 0° SKEW

BRIDGE LENGTH				70'-0		80'-0		90'-0		100'-0		110'-0		120'-0		130'-0		140'-0		150'-0	
MARK	LOCATION	SHAPE	LENGTH	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT
8r1	ABUTMENT FOOTING LONGITUDINAL		26'-4	7	492	7	492	7	492	7	492	7	492	7	492	7	492	7	492	7	492
8r2	ABUTMENT FOOTING LONGITUDINAL		21'-4	7	399	7	399	7	399	7	399	7	399	7	399	7	399	7	399	7	399
5s1	ABUTMENT FOOTING HOOPS		11'-0	39	447	39	447	39	447	39	447	40	459	40	459	40	459	39	447	36	413
6t1	FOOTING TO SLAB DOWELS		5'-0	46	345	46	345	46	345	46	345	46	345	46	345	46	345	46	345	46	345
6t2	FOOTING TO SLAB DOWELS		5'-7	46	386	46	386	46	386	46	386	46	386	46	386	46	386	46	386	46	386
#2	PILE SPIRAL		38'-6	6	39	6	39	6	39	6	39	7	45	7	45	7	45	8	51	9	58
	SPIRAL SPACERS - L $\frac{7}{8}$ X $\frac{7}{8}$ X $\frac{1}{8}$ X 0.70		1'-10	18	24	18	24	18	24	18	24	21	27	21	27	21	27	24	31	27	35
REINFORCING STEEL EPOXY COATED - TOTAL (LBS.)					2132		2132		2132		2132		2153		2153		2153		2151		2128

BILL OF REINFORCING STEEL - ONE ABUTMENT - 15° SKEW

BRIDGE LENGTH				70'-0		80'-0		90'-0		100'-0		110'-0		120'-0		130'-0		140'-0		150'-0	
MARK	LOCATION	SHAPE	LENGTH	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT
8r1	ABUTMENT FOOTING LONGITUDINAL		27'-2	7	508	7	508	7	508	7	508	7	508	7	508	7	508	7	508	7	508
8r2	ABUTMENT FOOTING LONGITUDINAL		22'-1	7	413	7	413	7	413	7	413	7	413	7	413	7	413	7	413	7	413
5s1	ABUTMENT FOOTING HOOPS		11'-0	36	413	36	413	36	413	36	413	36	413	36	413	35	402	40	459	40	459
5s2	ABUTMENT FOOTING HOOPS		11'-3	4	47	4	47	4	47	4	47	4	47	4	47	4	47	4	47	4	47
6t1	FOOTING TO SLAB DOWELS		5'-0	46	345	46	345	46	345	46	345	46	345	46	345	46	345	46	345	46	345
6t2	FOOTING TO SLAB DOWELS		5'-7	46	386	46	386	46	386	46	386	46	386	46	386	46	386	46	386	46	386
#2	PILE SPIRAL		38'-6	7	45	7	45	7	45	7	45	7	45	7	45	8	51	9	58	9	58
	SPIRAL SPACERS - L $\frac{7}{8}$ X $\frac{7}{8}$ X $\frac{1}{8}$ X 0.70		1'-10	21	27	21	27	21	27	21	27	21	27	21	27	24	31	27	35	27	35
REINFORCING STEEL EPOXY COATED - TOTAL (LBS.)					2184		2184		2184		2184		2184		2184		2183		2251		2251

BILL OF REINFORCING STEEL - ONE ABUTMENT - 30° SKEW

BRIDGE LENGTH				70'-0		80'-0		90'-0		100'-0		110'-0		120'-0		130'-0		140'-0		150'-0	
MARK	LOCATION	SHAPE	LENGTH	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT
8r1	ABUTMENT FOOTING LONGITUDINAL		29'-6	7	551	7	551	7	551	7	551	7	551	7	551	7	551	7	551	7	551
8r2	ABUTMENT FOOTING LONGITUDINAL		24'-5	7	456	7	456	7	456	7	456	7	456	7	456	7	456	7	456	7	456
5s1	ABUTMENT FOOTING HOOPS		11'-0	42	482	42	482	42	482	42	482	42	482	42	482	42	482	40	459	40	459
5s2	ABUTMENT FOOTING HOOPS		11'-11	4	50	4	50	4	50	4	50	4	50	4	50	4	50	4	50	4	50
6t1	FOOTING TO SLAB DOWELS		5'-0	46	345	46	345	46	345	46	345	46	345	46	345	46	345	46	345	46	345
6t2	FOOTING TO SLAB DOWELS		5'-7	46	386	46	386	46	386	46	386	46	386	46	386	46	386	46	386	46	386
#2	PILE SPIRAL		38'-6	7	45	7	45	7	45	7	45	7	45	7	45	8	51	9	58	9	58
	SPIRAL SPACERS - L $\frac{7}{8}$ X $\frac{7}{8}$ X $\frac{1}{8}$ X 0.70		1'-10	21	27	21	27	21	27	21	27	21	27	21	27	24	31	27	35	27	35
REINFORCING STEEL EPOXY COATED - TOTAL (LBS.)					2342		2342		2342		2342		2342		2342		2352		2340		2340

BILL OF REINFORCING STEEL - ONE ABUTMENT - 45° SKEW

BRIDGE LENGTH				70'-0		80'-0		90'-0		100'-0		110'-0		120'-0		130'-0		140'-0		150'-0	
MARK	LOCATION	SHAPE	LENGTH	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT
8r1	ABUTMENT FOOTING LONGITUDINAL		34'-8	7	648	7	648	7	648	7	648	7	648	7	648	7	648	7	648	7	648
8r2	ABUTMENT FOOTING LONGITUDINAL		29'-7	7	553	7	553	7	553	7	553	7	553	7	553	7	553	7	553	7	553
5s1	ABUTMENT FOOTING HOOPS		11'-0	56	642	56	642	56	642	56	642	56	642	56	642	56	642	56	642	54	620
5s2	ABUTMENT FOOTING HOOPS		13'-6	4	56	4	56	4	56	4	56	4	56	4	56	4	56	4	56	4	56
6t1	FOOTING TO SLAB DOWELS		5'-0	46	345	46	345	46	345	46	345	46	345	46	345	46	345	46	345	46	345
6t2	FOOTING TO SLAB DOWELS		5'-7	46	386	46	386	46	386	46	386	46	386	46	386	46	386	46	386	46	386
#2	PILE SPIRAL		38'-6	9	58	9	58	9	58	9	58	9	58	9	58	9	58	9	58	10	64
	SPIRAL SPACERS - L $\frac{7}{8}$ X $\frac{7}{8}$ X $\frac{1}{8}$ X 0.70		1'-10	27	35	27	35	27	35	27	35	27	35	27	35	27	35	27	35	30	39
REINFORCING STEEL EPOXY COATED - TOTAL (LBS.)					2723		2723		2723		2723		2723		2723		2723		2723		2711

NOTE: THE PILE SPIRALS AND SPIRAL SPACERS ARE TO BE NON-COATED REINFORCING BUT MAY BE EPOXY COATED AT THE CONTRACTORS OPTION AND EXPENSE.

ESTIMATED QUANTITIES - ONE ABUT. - 0° SKEW

LOCATION	UNIT	QUANTITY								
BRIDGE LENGTH		70'-0	80'-0	90'-0	100'-0	110'-0	120'-0	130'-0	140'-0	150'-0
STRUCTURAL CONCRETE (BRIDGE)	C.Y.	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4
REINFORCING STEEL EPOXY COATED	LBS.	2132	2132	2132	2132	2153	2153	2153	2151	2128
STEEL PILING HP 10 X 42	NO.	6	6	6	6	7	7	7	8	9
PREBORE HOLES	FT.	-	-	-	-	-	-	-	80	90

ESTIMATED QUANTITIES - ONE ABUT. - 15° SKEW

LOCATION	UNIT	QUANTITY								
BRIDGE LENGTH		70'-0	80'-0	90'-0	100'-0	110'-0	120'-0	130'-0	140'-0	150'-0
STRUCTURAL CONCRETE (BRIDGE)	C.Y.	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9
REINFORCING STEEL EPOXY COATED	LBS.	2184	2184	2184	2184	2184	2184	2183	2251	2251
STEEL PILING HP 10 X 42	NO.	7	7	7	7	7	7	8	9	9
PREBORE HOLES	FT.	-	-	-	-	-	-	-	90	90

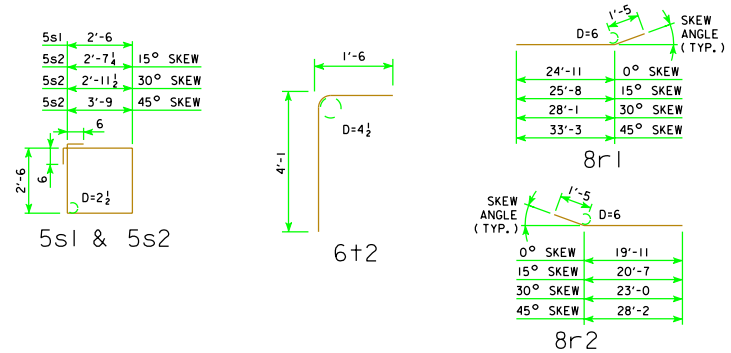
ESTIMATED QUANTITIES - ONE ABUT. - 30° SKEW

LOCATION	UNIT	QUANTITY								
BRIDGE LENGTH		70'-0	80'-0	90'-0	100'-0	110'-0	120'-0	130'-0	140'-0	150'-0
STRUCTURAL CONCRETE (BRIDGE)	C.Y.	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6
REINFORCING STEEL EPOXY COATED	LBS.	2342	2342	2342	2342	2342	2342	2352	2340	2340
STEEL PILING HP 10 X 42	NO.	7	7	7	7	7	7	8	9	9
PREBORE HOLES	FT.	-	-	-	-	-	-	-	90	90

ESTIMATED QUANTITIES - ONE ABUT. - 45° SKEW

LOCATION	UNIT	QUANTITY								
BRIDGE LENGTH		70'-0	80'-0	90'-0	100'-0	110'-0	120'-0	130'-0	140'-0	150'-0
STRUCTURAL CONCRETE (BRIDGE)	C.Y.	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4
REINFORCING STEEL EPOXY COATED	LBS.	2723	2723	2723	2723	2723	2723	2723	2723	2711
STEEL PILING HP 10 X 42	NO.	9	9	9	9	9	9	9	9	10
PREBORE HOLES	FT.	-	-	-	-	-	-	-	90	100

BENT BAR DETAILS



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

REVISED 07-09 - CONCRETE QUANTITIES CHANGED.

07-09
LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES

CONTINUOUS CONCRETE SLAB BRIDGES

NOVEMBER, 2006

ABUTMENT DETAILS
STEEL PILING

J40-44-06