

### BILL OF REINFORCING STEEL - ONE ABUTMENT - 0° SKEW

BRIDGE LENGTH		QUANTITY													
MARK	LOCATION	SHAPE	LENGTH	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"			
8r1	ABUTMENT FOOTING LONGITUDINAL		28'-4"	7	530	7	530	7	530	7	530	7	530	7	530
8r2	ABUTMENT FOOTING LONGITUDINAL		23'-4"	7	436	7	436	7	436	7	436	7	436	7	436
5s1	ABUTMENT FOOTING HOOPS		11'-0"	46	528	46	528	46	528	46	528	44	505	44	505
6t1	FOOTING TO SLAB DOWELS		5'-0"	50	376	50	376	50	376	50	376	50	376	50	376
6t2	FOOTING TO SLAB DOWELS		5'-7"	50	419	50	419	50	419	50	419	50	419	50	419
#2	PILE SPIRAL		38'-6"	7	45	7	45	7	45	7	45	8	51	9	58
	SPIRAL SPACERS, L <sub>1</sub> x L <sub>2</sub> x L <sub>3</sub> x 0.70		1'-10"	21	27	21	27	21	27	21	27	24	31	37	35
REINFORCING STEEL EPOXY COATED - TOTAL (LBS.)				2361	2361	2361	2361	2361	2361	2371	2359	2359			

### BILL OF REINFORCING STEEL - ONE ABUTMENT - 15° SKEW

BRIDGE LENGTH		QUANTITY													
MARK	LOCATION	SHAPE	LENGTH	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"			
8r1	ABUTMENT FOOTING LONGITUDINAL		29'-2"	7	545	7	545	7	545	7	545	7	545	7	545
8r2	ABUTMENT FOOTING LONGITUDINAL		24'-1"	7	450	7	450	7	450	7	450	7	450	7	450
5s1	ABUTMENT FOOTING HOOPS		11'-0"	42	482	42	482	42	482	42	482	40	459	40	459
5s2	ABUTMENT FOOTING HOOPS		11'-3"	4	47	4	47	4	47	4	47	4	47	4	47
6t1	FOOTING TO SLAB DOWELS		5'-0"	50	376	50	376	50	376	50	376	50	376	50	376
6t2	FOOTING TO SLAB DOWELS		5'-7"	50	419	50	419	50	419	50	419	50	419	50	419
#2	PILE SPIRAL		38'-6"	7	45	7	45	7	45	7	45	8	51	9	58
	SPIRAL SPACERS, L <sub>1</sub> x L <sub>2</sub> x L <sub>3</sub> x 0.70		1'-10"	21	27	21	27	21	27	21	27	24	31	27	35
REINFORCING STEEL EPOXY COATED - TOTAL (LBS.)				2391	2391	2391	2391	2391	2401	2401	2389	2389			

### BILL OF REINFORCING STEEL - ONE ABUTMENT - 30° SKEW

BRIDGE LENGTH		QUANTITY													
MARK	LOCATION	SHAPE	LENGTH	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"			
8r1	ABUTMENT FOOTING LONGITUDINAL		31'-9"	7	593	7	593	7	593	7	593	7	593	7	593
8r2	ABUTMENT FOOTING LONGITUDINAL		26'-9"	7	500	7	500	7	500	7	500	7	500	7	500
5s1	ABUTMENT FOOTING HOOPS		11'-0"	49	562	49	562	49	562	49	562	48	551	45	516
5s2	ABUTMENT FOOTING HOOPS		11'-11"	4	50	4	50	4	50	4	50	4	50	4	50
6t1	FOOTING TO SLAB DOWELS		5'-0"	50	376	50	376	50	376	50	376	50	376	50	376
6t2	FOOTING TO SLAB DOWELS		5'-7"	50	419	50	419	50	419	50	419	50	419	50	419
#2	PILE SPIRAL		38'-6"	8	51	8	51	8	51	8	51	9	58	10	64
	SPIRAL SPACERS, L <sub>1</sub> x L <sub>2</sub> x L <sub>3</sub> x 0.70		1'-10"	24	31	24	31	24	31	24	31	27	35	30	39
REINFORCING STEEL EPOXY COATED - TOTAL (LBS.)				2582	2582	2582	2582	2582	2582	2582	2582	2582	2557		

### BILL OF REINFORCING STEEL - ONE ABUTMENT - 45° SKEW

BRIDGE LENGTH		QUANTITY													
MARK	LOCATION	SHAPE	LENGTH	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"			
8r1	ABUTMENT FOOTING LONGITUDINAL		37'-6"	7	701	7	701	7	701	7	701	7	701	7	701
8r2	ABUTMENT FOOTING LONGITUDINAL		32'-5"	7	606	7	606	7	606	7	606	7	606	7	606
5s1	ABUTMENT FOOTING HOOPS		11'-0"	56	642	56	642	56	642	56	642	54	620	54	620
5s2	ABUTMENT FOOTING HOOPS		13'-6"	4	56	4	56	4	56	4	56	4	56	4	56
6t1	FOOTING TO SLAB DOWELS		5'-0"	50	376	50	376	50	376	50	376	50	376	50	376
6t2	FOOTING TO SLAB DOWELS		5'-7"	50	419	50	419	50	419	50	419	50	419	50	419
#2	PILE SPIRAL		38'-6"	9	58	9	58	9	58	9	58	10	64	10	64
	SPIRAL SPACERS, L <sub>1</sub> x L <sub>2</sub> x L <sub>3</sub> x 0.70		1'-10"	27	35	27	35	27	35	27	35	30	39	30	39
REINFORCING STEEL EPOXY COATED - TOTAL (LBS.)				2893	2893	2893	2893	2893	2893	2893	2893	2881	2881		

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.	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	
REINFORCING STEEL EPOXY COATED	LBS.	2361	2361	2361	2361	2361	2361	2371	2359	2359	
STEEL PILING HP 10x42	NO.	7	7	7	7	7	7	8	9	9	
PREBORE HOLES	FT.	-	-	-	-	-	-	-	90	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.	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	
REINFORCING STEEL EPOXY COATED	LBS.	2391	2391	2391	2391	2391	2391	2401	2389	2389	
STEEL PILING HP 10x42	NO.	7	7	7	7	7	7	8	9	9	
PREBORE HOLES	FT.	-	-	-	-	-	-	-	90	90	

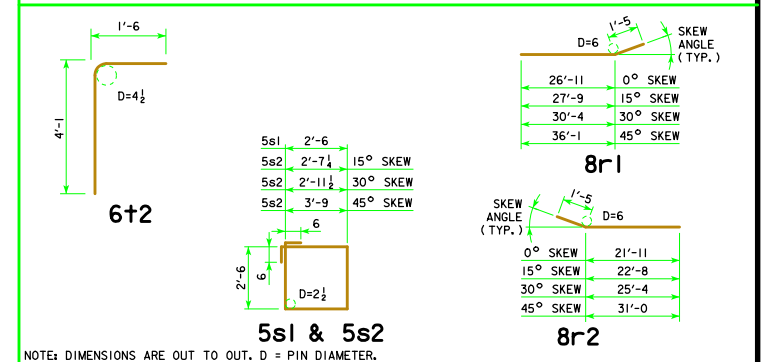
### ESTIMATED QUANTITIES - ONE ABUT. - 30° SKEW

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.	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	
REINFORCING STEEL EPOXY COATED	LBS.	2582	2582	2582	2582	2582	2582	2582	2582	2557	
STEEL PILING HP 10x42	NO.	8	8	8	8	8	8	8	9	10	
PREBORE HOLES	FT.	-	-	-	-	-	-	-	90	100	

### 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.	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	
REINFORCING STEEL EPOXY COATED	LBS.	2893	2893	2893	2893	2893	2893	2893	2881	2881	
STEEL PILING HP 10x42	NO.	9	9	9	9	9	9	9	10	10	
PREBORE HOLES	FT.	-	-	-	-	-	-	-	100	100	

### BENT BAR DETAILS



LATEST REVISION DATE

*Thomas E. M. Donnell*  
APPROVED BY BRIDGE ENGINEER

**IOWA DOT** Highway Division

STANDARD DESIGN - 44' ROADWAY, 3 SPAN BRIDGES

**CONTINUOUS CONCRETE  
SLAB BRIDGES**

JULY, 2014

**ABUTMENT DETAILS  
STEEL PILING**

**J44-44-14**