

### 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"	NO.	WEIGHT	
8r1	ABUTMENT FOOTING LONGITUDINAL	—	26'-4"	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
5s1	ABUTMENT FOOTING HOOPS	⊠	11'-0"	39	447	39	447	39	447	40	459	40	459	39	447
6+1	FOOTING TO SLAB DOWELS	—	5'-0"	46	345	46	345	46	345	46	345	46	345	46	345
6+2	FOOTING TO SLAB DOWELS	—	5'-7"	46	386	46	386	46	386	46	386	46	386	46	386
#2	PILE SPIRAL	⊠	38'-6"	6	39	6	39	6	39	7	45	7	45	8	51
	SPIRAL SPACERS - L 1/8 X 1/8 X 1/8 X 0.70	—	1'-10"	18	24	18	24	18	24	18	24	21	27	21	27
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		QUANTITY													
MARK	LOCATION	SHAPE	LENGTH	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"	NO.	WEIGHT	
8r1	ABUTMENT FOOTING LONGITUDINAL	—	27'-2"	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
5s1	ABUTMENT FOOTING HOOPS	⊠	11'-0"	36	413	36	413	36	413	36	413	35	402	40	459
5s2	ABUTMENT FOOTING HOOPS	⊠	11'-3"	4	47	4	47	4	47	4	47	4	47	4	47
6+1	FOOTING TO SLAB DOWELS	—	5'-0"	46	345	46	345	46	345	46	345	46	345	46	345
6+2	FOOTING TO SLAB DOWELS	—	5'-7"	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	8	51	9	58
	SPIRAL SPACERS - L 1/8 X 1/8 X 1/8 X 0.70	—	1'-10"	21	27	21	27	21	27	21	27	24	31	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		QUANTITY													
MARK	LOCATION	SHAPE	LENGTH	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"	NO.	WEIGHT	
8r1	ABUTMENT FOOTING LONGITUDINAL	—	29'-6"	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
5s1	ABUTMENT FOOTING HOOPS	⊠	11'-0"	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
6+1	FOOTING TO SLAB DOWELS	—	5'-0"	46	345	46	345	46	345	46	345	46	345	46	345
6+2	FOOTING TO SLAB DOWELS	—	5'-7"	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	8	51	9	58
	SPIRAL SPACERS - L 1/8 X 1/8 X 1/8 X 0.70	—	1'-10"	21	27	21	27	21	27	21	27	24	31	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		QUANTITY													
MARK	LOCATION	SHAPE	LENGTH	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"	NO.	WEIGHT	
8r1	ABUTMENT FOOTING LONGITUDINAL	—	34'-8"	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
5s1	ABUTMENT FOOTING HOOPS	⊠	11'-0"	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
6+1	FOOTING TO SLAB DOWELS	—	5'-0"	46	345	46	345	46	345	46	345	46	345	46	345
6+2	FOOTING TO SLAB DOWELS	—	5'-7"	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	10	64
	SPIRAL SPACERS - L 1/8 X 1/8 X 1/8 X 0.70	—	1'-10"	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	2151	2151	2128	
STEEL PILING HP 10 X 42	NO.	6	6	6	6	7	7	8	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	

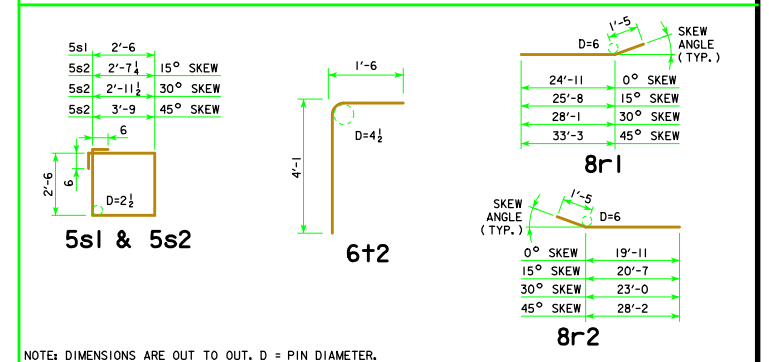
### ESTIMATED QUANTITIES - ONE ABUT. - 30° SKEW

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	2340	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



LATEST REVISION DATE

Approved by BRIDGE ENGINEER

**IOWA DOT** Highway Division

STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES

**CONTINUOUS CONCRETE  
SLAB BRIDGES**

JULY, 2014

**ABUTMENT DETAILS  
STEEL PILING**

**J40-44-14**