

**BILL OF REINFORCING STEEL FOR SUPERSTRUCTURE - 140' BRIDGE**

LOCATION	SKEW	SHAPE	0°				15°				30°				45°			
			BAR NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	
SLAB LONGITUDINAL BOTTOM		9a1	31	29'-3	3083	31	29'-3	3083	31	29'-3	3083	31	29'-3	3083	31	29'-3	3083	
SLAB LONGITUDINAL BOTTOM		10a2	31	45'-4	6048	31	45'-4	6048	31	45'-4	6048	31	45'-4	6048	31	45'-4	6048	
SLAB LONGITUDINAL BOTTOM		9a3	31	41'-3	4348	31	41'-3	4348	31	41'-3	4348	31	41'-3	4348	31	41'-3	4348	
SLAB LONGITUDINAL BOTTOM		10a4	32	33'-9	4648	32	33'-9	4648	32	33'-9	4648	32	33'-9	4648	32	33'-9	4648	
SLAB LONGITUDINAL BOTTOM		9a5	16	40'-6	2204	16	40'-6	2204	16	40'-6	2204	16	40'-6	2204	16	40'-6	2204	
SLAB LONGITUDINAL BOTTOM, AT RAIL		9a6	8	39'-10	1084	8	39'-10	1084	8	39'-10	1084	8	39'-10	1084	8	39'-10	1084	
SLAB LONGITUDINAL BOTTOM, AT RAIL		9a7	8	13'-0	354	8	13'-0	354	8	13'-0	354	8	13'-0	354	8	13'-0	354	
SLAB LONGITUDINAL BOTTOM, AT RAIL		9a8	4	49'-2	669	4	49'-2	669	4	49'-2	669	4	49'-2	669	4	49'-2	669	
SLAB LONGITUDINAL BOTTOM, AT RAIL		9a9	8	33'-0	898	8	33'-0	898	8	33'-0	898	8	33'-0	898	8	33'-0	898	
SLAB LONGITUDINAL BOTTOM, AT RAIL		10a10	4	29'-8	511	4	29'-8	511	4	29'-8	511	4	29'-8	511	4	29'-8	511	
SLAB LONGITUDINAL TOP		6b1	31	7'-6	350	31	7'-6	350	31	7'-6	350	31	7'-6	350	31	7'-6	350	
SLAB LONGITUDINAL TOP		11b2	31	23'-6	3871	31	23'-6	3871	31	23'-6	3871	31	23'-6	3871	31	23'-6	3871	
SLAB LONGITUDINAL TOP		11b3	31	29'-3	4818	31	29'-3	4818	31	29'-3	4818	31	29'-3	4818	31	29'-3	4818	
SLAB LONGITUDINAL TOP		7b4	31	25'-11	1643	31	25'-11	1643	31	25'-11	1643	31	25'-11	1643	31	25'-11	1643	
SLAB LONGITUDINAL TOP		11b5	32	26'-6	4506	32	26'-6	4506	32	26'-6	4506	32	26'-6	4506	32	26'-6	4506	
SLAB LONGITUDINAL TOP		6b6	16	36'-0	866	16	36'-0	866	16	36'-0	866	16	36'-0	866	16	36'-0	866	
SLAB LONGITUDINAL TOP, AT RAIL		6b8	8	33'-5	402	8	33'-5	402	8	33'-5	402	8	33'-5	402	8	33'-5	402	
SLAB LONGITUDINAL TOP, AT RAIL		11b9	8	31'-6	1339	8	31'-6	1339	8	31'-6	1339	8	31'-6	1339	8	31'-6	1339	
SLAB LONGITUDINAL TOP, AT RAIL		6b10	4	26'-10	162	4	26'-10	162	4	26'-10	162	4	26'-10	162	4	26'-10	162	
SLAB LONGITUDINAL TOP, AT RAIL		7b11	8	38'-8	633	8	38'-8	633	8	38'-8	633	8	38'-8	633	8	38'-8	633	
SLAB LONGITUDINAL TOP, AT RAIL		11b12	8	21'-9	925	8	21'-9	925	8	21'-9	925	8	21'-9	925	8	21'-9	925	
SLAB TRANSVERSE, BOTTOM		6c1	137	26'-10	5522	137	27'-9	5711	126	26'-10	5079	116	26'-10	4676				
SLAB TRANSVERSE ENDS, BOTTOM		6c2	-	-	-	-	-	24	VARIES	579	44	VARIES	970					
SLAB TRANSVERSE, TOP		5d1	137	26'-10	3835	137	27'-9	3966	126	26'-10	3527	116	26'-10	3247				
SLAB TRANSVERSE ENDS, TOP		5d2	-	-	-	-	-	24	VARIES	402	44	VARIES	674					
SLAB, TRANSVERSE AT ABUTMENT		8e1	18	26'-10	1290	-	-	-	-	-	-	-	-					
SLAB, TRANSVERSE AT ABUTMENT		8e2	-	-	-	18	27'-8	1330	18	30'-7	1470	18	36'-9	1767				
SLAB, HAIRPINS, AT ABUTMENT		6e3	60	5'-0	451	60	5'-1	459	60	5'-5	489	60	6'-1	549				
SLAB, DIAGONALS, AT ABUTMENT		6e4	60	5'-11	534	60	5'-11	534	60	5'-11	534	60	5'-11	534				
PIER CAP HOOPS		5h1	36	8'-3	310	36	8'-3	310	36	8'-3	310	36	8'-3	310	36	8'-3	465	
PIER CAP ENDS		8h2	4	14'-5	154	4	14'-5	154	4	14'-5	154	4	14'-5	154				
PIER CAP, BOTTOM LONGITUDINAL		8h3	8	23'-10	510	8	24'-8	527	8	27'-6	588	8	33'-8	720				
PIER CAP, TOP LONGITUDINAL		8h4	4	26'-10	287	4	27'-9	297	4	30'-11	331	4	37'-11	405				
TOP OF SLAB, TRANSVERSE, AT RAIL		5j1	272	8'-6	2412	272	8'-6	2412	272	8'-6	2412	270	8'-6	2394				
WING, VERTICAL		5m1	40	4'-5	185	40	4'-5	185	40	4'-5	185	40	4'-5	185				
WING, HORIZONTAL BACK FACE		5n1	24	6'-8	167	24	6'-8	167	24	6'-8	167	24	6'-8	167				
WING, HORIZONTAL TRAFFIC FACE		5n3	24	6'-9	169	24	6'-9	169	24	6'-9	169	24	6'-9	169				
PAVING BLOCK LIFTING HOOPS		5x1	8	2'-10	24	8	2'-10	24	8	2'-10	24	8	2'-10	24				

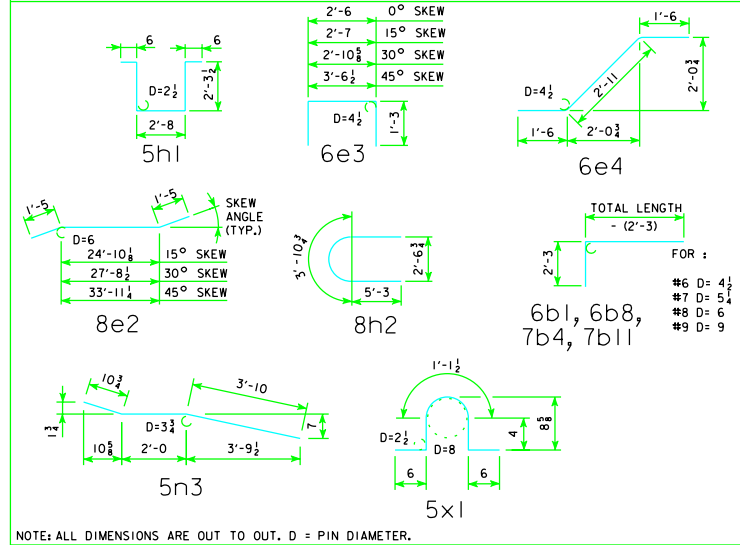
SUB TOTAL - LBS.		59,212	59,607	59,782	60,462
OPEN RAIL - SEE LIST ON RAIL SHEET J24-41-06		9057	9057	9057	9057
TOTAL - LBS. WITH MONOLITHIC PIER CAP AND OPEN RAIL		68,269	68,664	68,839	69,519
TOTAL - LBS. WITH NON-MONOLITHIC PIER CAP AND OPEN RAIL		67,008	67,376	67,456	67,775
SAME AS ABOVE EXCEPT ALL "h" BARS DELETED					

**ESTIMATED QUANTITIES FOR SUPERSTRUCTURE - 140' BRIDGE**

ITEM	SKEW	WITH MONOLITHIC PIER CAP				WITH NON-MONOLITHIC PIER CAP			
		0°	15°	30°	45°	0°	15°	30°	45°
OPEN RAIL	*STRUCTURAL CONCRETE (BRIDGE) C.Y.	284.7	285.3	287.5	291.9	280.5	281.0	282.7	286.1
OPEN RAIL	REINFORCING STEEL LBS.	68,269	68,664	68,839	69,519	67,008	67,376	67,456	67,775
OPEN RAIL	LIN. FT.	302.0	302.2	302.9	304.5	302.0	302.2	302.9	304.5

\* INCLUDES 4 WINGS @ 0.68 C.Y. EACH AND 2 TEMPORARY PAVING BLOCKS; EXCLUDES RAIL CONCRETE.

**BENT BAR DETAILS**



07-09 LATEST REVISION DATE	<i>Thomas C. McQuinn</i> APPROVED BY BRIDGE ENGINEER	<p><b>Iowa Department of Transportation</b> Highway Division</p>
		<p>STANDARD DESIGN - 24' ROADWAY, 3 SPAN BRIDGES</p> <p><b>CONTINUOUS CONCRETE</b> <b>SLAB BRIDGES</b></p> <p>NOVEMBER, 2006</p>
		<p>SUPERSTRUCTURE DETAILS 140'-0 BRIDGE</p>

J24-17-06

REVISED 07-09 - OPEN RAIL REINFORCING QUANTITIES CHANGED WHICH CHANGED TOTAL REINFORCING QUANTITIES.