

**BILL OF REINFORCING STEEL FOR SUPERSTRUCTURE - 150' BRIDGE**

LOCATION	SKEW	SHAPE	BAR NO.	0°		15°		30°		45°			
				LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH
SLAB LONGITUDINAL BOTTOM			10a1	31	31'-3	4169	31	31'-3	4169	31	31'-3	4169	
SLAB LONGITUDINAL BOTTOM			10a2	31	48'-4	6448	31	48'-4	6448	31	48'-4	6448	
SLAB LONGITUDINAL BOTTOM			10a3	31	45'-4	6048	31	45'-4	6048	31	45'-4	6048	
SLAB LONGITUDINAL BOTTOM			9a4	32	35'-0	3808	32	35'-0	3808	32	35'-0	3808	
SLAB LONGITUDINAL BOTTOM			9a5	16	42'-6	2312	16	42'-6	2312	16	42'-6	2312	
SLAB LONGITUDINAL BOTTOM, AT RAIL			9a6	8	42'-10	1166	8	42'-10	1166	8	42'-10	1166	
SLAB LONGITUDINAL BOTTOM, AT RAIL			9a7	8	13'-0	354	8	13'-0	354	8	13'-0	354	
SLAB LONGITUDINAL BOTTOM, AT RAIL			9a8	4	53'-2	724	4	53'-2	724	4	53'-2	724	
SLAB LONGITUDINAL BOTTOM, AT RAIL			10a9	8	36'-0	1240	8	36'-0	1240	8	36'-0	1240	
SLAB LONGITUDINAL BOTTOM, AT RAIL			10a10	4	32'-0	551	4	32'-0	551	4	32'-0	551	
SLAB LONGITUDINAL TOP			6b1	31	7'-6	350	31	7'-6	350	31	7'-6	350	
SLAB LONGITUDINAL TOP			11b2	31	30'-3	4983	31	30'-3	4983	31	30'-3	4983	
SLAB LONGITUDINAL TOP			11b3	31	26'-0	4283	31	26'-0	4283	31	26'-0	4283	
SLAB LONGITUDINAL TOP			8b4	31	33'-4	2759	31	33'-4	2759	31	33'-4	2759	
SLAB LONGITUDINAL TOP			11b5	32	27'-6	4676	32	27'-6	4676	32	27'-6	4676	
SLAB LONGITUDINAL TOP			6b6	16	39'-0	938	16	39'-0	938	16	39'-0	938	
SLAB LONGITUDINAL TOP, AT RAIL			6b8	8	35'-8	429	8	35'-8	429	8	35'-8	429	
SLAB LONGITUDINAL TOP, AT RAIL			11b9	8	33'-0	1403	8	33'-0	1403	8	33'-0	1403	
SLAB LONGITUDINAL TOP, AT RAIL			6b10	4	29'-4	177	4	29'-4	177	4	29'-4	177	
SLAB LONGITUDINAL TOP, AT RAIL			7b11	8	41'-2	674	8	41'-2	674	8	41'-2	674	
SLAB LONGITUDINAL TOP, AT RAIL			11b12	8	23'-0	978	8	23'-0	978	8	23'-0	978	
SLAB TRANSVERSE, BOTTOM			6c1	147	26'-10	5925	147	27'-9	6128	136	26'-10	5482	
SLAB TRANSVERSE ENDS, BOTTOM			6c2	-	-	-	-	-	24	VARIES	579	44	VARIES
SLAB TRANSVERSE, TOP			5d1	147	26'-10	4115	147	27'-9	4255	136	26'-10	3807	
SLAB TRANSVERSE ENDS, TOP			5d2	-	-	-	-	-	24	VARIES	402	44	VARIES
SLAB, TRANSVERSE AT ABUTMENT			8e1	18	26'-10	1290	-	-	-	-	-	-	-
SLAB, TRANSVERSE AT ABUTMENT			8e2	-	-	-	18	27'-8	1330	18	30'-7	1470	
SLAB, HAIRPINS, AT ABUTMENT			6e3	60	5'-0	451	60	5'-1	459	60	5'-5	489	
SLAB, DIAGONALS, AT ABUTMENT			6e4	60	5'-11	534	60	5'-11	534	60	5'-11	534	
PIER CAP HOOPS			5h1	36	8'-6	320	36	8'-6	320	36	8'-6	320	
PIER CAP ENDS			8h2	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	
PIER CAP, TOP LONGITUDINAL			8h4	4	26'-10	287	4	27'-9	297	4	30'-11	331	
TOP OF SLAB, TRANSVERSE, AT RAIL			5j1	292	8'-6	2589	292	8'-6	2589	292	8'-6	2589	
WING, VERTICAL			5m1	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	
WING, HORIZONTAL TRAFFIC FACE			5n3	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	

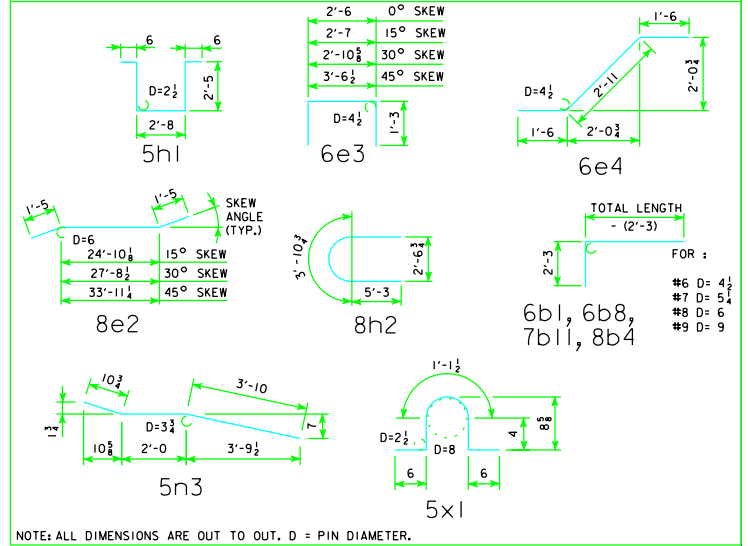
SUB TOTAL - LBS.		65,190	65,608	65,760	66,444
OPEN RAIL - SEE LIST ON RAIL SHEET J24-41-06		9605		9605	
TOTAL - LBS. WITH MONOLITHIC PIER CAP AND OPEN RAIL		74,795	75,213	75,365	76,049
TOTAL - LBS. WITH NON-MONOLITHIC PIER CAP AND OPEN RAIL		73,524	73,915	73,972	74,291
SAME AS ABOVE EXCEPT ALL "h" BARS DELETED					

**ESTIMATED QUANTITIES FOR SUPERSTRUCTURE - 150' 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.	322.1	322.7	324.8	329.1	317.9	318.3	320.0	323.3
	REINFORCING STEEL LBS.	74,795	75,213	75,365	76,049	73,524	73,915	73,972	74,291
OPEN RAIL	LIN. FT.	322.0	322.2	322.9	324.5	322.0	322.2	322.9	324.5

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

**BENT BAR DETAILS**



REVISED 07-09 - OPEN RAIL REINF. QTY'S. CHANGED WHICH CHANGED TOTAL REINF. QTY'S.

07-09 LATEST REVISION DATE  <i>Thomas C. McQuinn</i> APPROVED BY BRIDGE ENGINEER	<p><b>Iowa Department of Transportation</b> Highway Division</p>
	STANDARD DESIGN - 24' ROADWAY, 3 SPAN BRIDGES <b>CONTINUOUS CONCRETE</b> <b>SLAB BRIDGES</b> NOVEMBER, 2006
	SUPERSTRUCTURE DETAILS 150'-0 BRIDGE