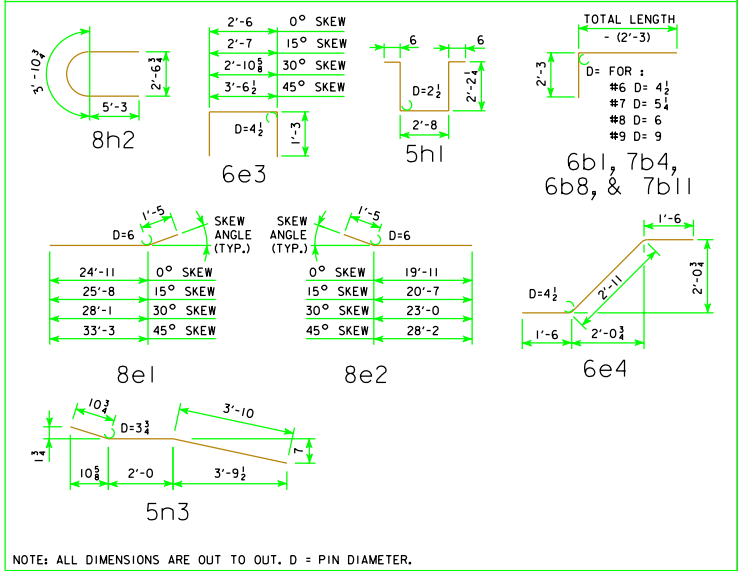


**BILL OF REINFORCING STEEL FOR SUPERSTRUCTURE - 130' BRIDGE**

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	53	28'-9	5181	53	28'-9	5181	53	28'-9	5181	53	28'-9	5181			
SLAB LONGITUDINAL BOTTOM			9a2	53	44'-6	8019	53	44'-6	8019	53	44'-6	8019	53	44'-6	8019			
SLAB LONGITUDINAL BOTTOM			9a3	53	41'-3	7434	53	41'-3	7434	53	41'-3	7434	53	41'-3	7434			
SLAB LONGITUDINAL BOTTOM			9a4	52	32'-9	5791	52	32'-9	5791	52	32'-9	5791	52	32'-9	5791			
SLAB LONGITUDINAL BOTTOM			10a5	26	41'-0	4587	26	41'-0	4587	26	41'-0	4587	26	41'-0	4587			
SLAB LONGITUDINAL BOTTOM, AT RAIL			9a6	8	38'-7	1050	8	38'-7	1050	8	38'-7	1050	8	38'-7	1050			
SLAB LONGITUDINAL BOTTOM, AT RAIL			9a7	8	13'-0	354	8	13'-0	354	8	13'-0	354	8	13'-0	354			
SLAB LONGITUDINAL BOTTOM, AT RAIL			9a8	4	48'-8	662	4	48'-8	662	4	48'-8	662	4	48'-8	662			
SLAB LONGITUDINAL BOTTOM, AT RAIL			8a9	8	31'-3	668	8	31'-3	668	8	31'-3	668	8	31'-3	668			
SLAB LONGITUDINAL BOTTOM, AT RAIL			9a10	4	29'-0	395	4	29'-0	395	4	29'-0	395	4	29'-0	395			
SLAB LONGITUDINAL TOP			6b1	53	7'-9	617	53	7'-9	617	53	7'-9	617	53	7'-9	617			
SLAB LONGITUDINAL TOP			11b2	53	28'-9	8096	53	28'-9	8096	53	28'-9	8096	53	28'-9	8096			
SLAB LONGITUDINAL TOP			11b3	53	30'-6	8589	53	30'-6	8589	53	30'-6	8589	53	30'-6	8589			
SLAB LONGITUDINAL TOP			7b4	53	23'-9	2573	53	23'-9	2573	53	23'-9	2573	53	23'-9	2573			
SLAB LONGITUDINAL TOP			10b5	52	25'-6	5706	52	25'-6	5706	52	25'-6	5706	52	25'-6	5706			
SLAB LONGITUDINAL TOP			6b6	26	34'-4	1341	26	34'-4	1341	26	34'-4	1341	26	34'-4	1341			
SLAB LONGITUDINAL TOP, AT RAIL			6b8	8	30'-3	364	8	30'-3	364	8	30'-3	364	8	30'-3	364			
SLAB LONGITUDINAL TOP, AT RAIL			11b9	8	32'-9	1393	8	32'-9	1393	8	32'-9	1393	8	32'-9	1393			
SLAB LONGITUDINAL TOP, AT RAIL			6b10	4	23'-0	139	4	23'-0	139	4	23'-0	139	4	23'-0	139			
SLAB LONGITUDINAL TOP, AT RAIL			7b11	8	35'-6	581	8	35'-6	581	8	35'-6	581	8	35'-6	581			
SLAB LONGITUDINAL TOP, AT RAIL			11b12	8	23'-9	1010	8	23'-9	1010	8	23'-9	1010	8	23'-9	1010			
SLAB TRANSVERSE BOTTOM			6c1	127	23'-5	4467	127	24'-3	4626	118	23'-5	4151	108	23'-5	3799			
SLAB TRANSVERSE BOTTOM			6c2	127	21'-3	4054	127	22'-0	4197	119	21'-3	3799	111	21'-3	3543			
SLAB TRANSVERSE ENDS, BOTTOM			6c3	-	-	-	-	-	-	12	VARIES	223	20	VARIES	411			
SLAB TRANSVERSE ENDS, BOTTOM			6c4	-	-	-	-	-	-	11	VARIES	219	20	VARIES	386			
SLAB TRANSVERSE ENDS, BOTTOM			6c5	-	-	-	-	-	-	11	VARIES	176	18	VARIES	302			
SLAB TRANSVERSE ENDS, BOTTOM			6c6	-	-	-	-	-	-	11	VARIES	190	17	VARIES	311			
SLAB TRANSVERSE TOP			5d1	127	23'-9	3146	127	24'-7	3257	118	23'-9	2924	108	23'-9	2676			
SLAB TRANSVERSE TOP			5d2	127	21'-3	2815	127	22'-0	2915	119	21'-3	2638	111	21'-3	2461			
SLAB TRANSVERSE ENDS, TOP			5d3	-	-	-	-	-	-	12	VARIES	155	20	VARIES	286			
SLAB TRANSVERSE ENDS, TOP			5d4	-	-	-	-	-	-	11	VARIES	152	20	VARIES	268			
SLAB TRANSVERSE ENDS, TOP			5d5	-	-	-	-	-	-	11	VARIES	122	18	VARIES	210			
SLAB TRANSVERSE ENDS, TOP			5d6	-	-	-	-	-	-	11	VARIES	132	17	VARIES	216			
SLAB, TRANSVERSE AT ABUTMENT			8e1	18	26'-4	1266	18	27'-1	1302	18	29'-6	1418	18	34'-8	1667			
SLAB, TRANSVERSE AT ABUTMENT			8e2	18	21'-4	1026	18	22'-0	1058	18	24'-5	1174	18	29'-7	1422			
SLAB, HAIRPINS, AT ABUTMENT			6e3	92	5'-0	691	92	5'-1	703	92	5'-5	749	92	6'-1	841			
SLAB, DIAGONALS, AT ABUTMENT			6e4	92	5'-11	818	92	5'-11	818	92	5'-11	818	92	5'-11	818			
PIER CAP HOOPS			5h1	84	8'-1	709	84	8'-1	709	84	8'-1	709	112	8'-1	945			
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	25'-5	543	8	26'-7	568	8	29'-4	627	8	35'-0	748			
PIER CAP, BOTTOM LONGITUDINAL			8h4	8	19'-11	426	8	20'-3	433	8	22'-2	474	8	26'-10	574			
PIER CAP, TOP LONGITUDINAL			8h5	4	26'-2	280	4	27'-5	293	4	30'-4	324	4	36'-1	386			
PIER CAP, TOP LONGITUDINAL			8h6	4	21'-5	229	4	21'-10	234	4	23'-11	256	4	28'-8	307			
TOP OF SLAB, TRANSVERSE, AT RAIL			5j1	252	8'-6	2235	252	8'-6	2235	242	8'-6	2146	236	8'-6	2093			
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			
SUB TOTAL - LBS.						87,930			88,573			88,801			89,895			
BARRIER RAIL - SEE LIST ON RAIL SHEET J40-46-06						8054			8054			8054			8054			
OPEN RAIL - SEE LIST ON RAIL SHEET J40-49-06						8573			8573			8573			8573			
TOTAL - LBS.			WITH MONOLITHIC PIER CAP			95,984			96,627			96,855			97,949			
			WITH OPEN RAIL			96,503			97,146			97,374			98,468			
TOTAL - LBS.			WITH NON-MONOLITHIC PIER CAP			93,643			94,236			94,311			94,835			
SAME AS ABOVE EXCEPT ALL "h" BARS DELETED			WITH OPEN RAIL			94,162			94,835			94,830			95,354			

**BENT BAR DETAILS**



NOTES:  
 ALL REINFORCING STEEL SHALL BE EPOXY COATED.  
 THE TRANSVERSE REBARS ARE DETAILED WITH A SPLICE LAP.  
 AT THE CONTRACTOR'S OPTION, THIS LAP MAY BE ELIMINATED  
 BY FURNISHING FULL LENGTH BARS WITH NO REDUCTION IN  
 PAY WEIGHT FOR SAME.

**ESTIMATED QUANTITIES FOR SUPERSTRUCTURE - 130' BRIDGE**

ITEM	SKEW	WITH MONOLITHIC PIER CAP				WITH NON-MONOLITHIC PIER CAP			
		0°	15°	30°	45°	0°	15°	30°	45°
WITH *STRUCTURAL CONCRETE (BRIDGE) C.Y.		398.3	399.3	402.5	409.4	392.3	393.0	395.6	401.1
BARRIER RAIL REINFORCING STEEL EPOXY COATED LBS.		95,984	96,627	96,855	97,949	93,643	94,236	94,311	94,835
CONCRETE BARRIER OR OPEN RAIL LIN. FT.		282.0	282.2	282.9	284.5	282.0	282.2	282.9	284.5
WITH *STRUCTURAL CONCRETE (BRIDGE) C.Y.		398.1	399.0	402.2	409.2	392.0	392.8	395.3	400.8
OPEN RAIL REINFORCING STEEL EPOXY COATED LBS.		96,503	97,146	97,374	98,468	94,162	94,835	94,830	94,435

\* INCLUDES 4 WINGS @ 0.68 C.Y. EACH; EXCLUDES RAIL CONCRETE.

LATEST REVISION DATE	 APPROVED BY BRIDGE ENGINEER	 <b>Iowa Department of Transportation</b> Highway Division
		STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES <b>CONTINUOUS CONCRETE</b> <b>SLAB BRIDGES</b> NOVEMBER, 2006
		SUPERSTRUCTURE DETAILS 130'-0 BRIDGE

J40-15-06

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