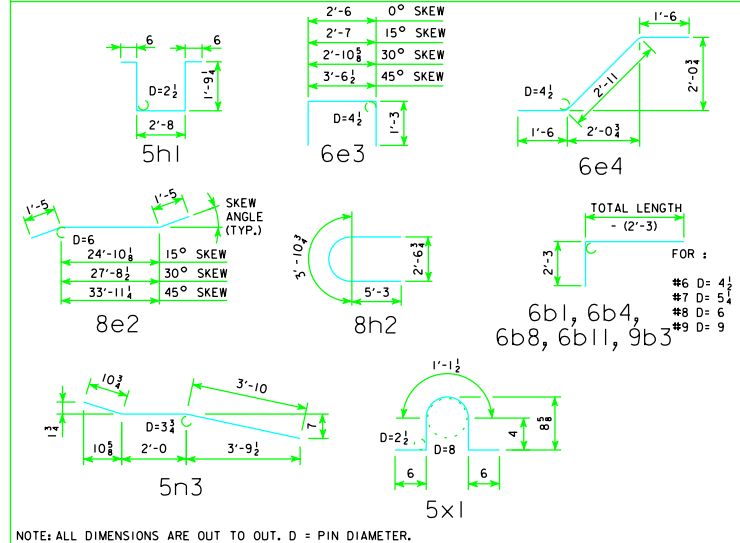


BILL OF REINFORCING STEEL FOR SUPERSTRUCTURE - 90' BRIDGE

LOCATION	SKEW	SHAPE	BAR NO.	0°		15°		30°		45°					
				LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	
SLAB LONGITUDINAL BOTTOM			8a1	31	19'-0	1573	31	19'-0	1573	31	19'-0	1573	31	19'-0	1573
SLAB LONGITUDINAL BOTTOM			8a2	31	28'-3	2339	31	28'-3	2339	31	28'-3	2339	31	28'-3	2339
SLAB LONGITUDINAL BOTTOM			8a3	31	26'-6	2194	31	26'-6	2194	31	26'-6	2194	31	26'-6	2194
SLAB LONGITUDINAL BOTTOM			8a4	32	24'-6	2094	32	24'-6	2094	32	24'-6	2094	32	24'-6	2094
SLAB LONGITUDINAL BOTTOM			8a5	16	27'-0	1154	16	27'-0	1154	16	27'-0	1154	16	27'-0	1154
SLAB LONGITUDINAL BOTTOM, AT RAIL			8a6	8	32'-3	689	8	32'-3	689	8	32'-3	689	8	32'-3	689
SLAB LONGITUDINAL BOTTOM, AT RAIL			8a7	4	31'-8	339	4	31'-8	339	4	31'-8	339	4	31'-8	339
SLAB LONGITUDINAL BOTTOM, AT RAIL			8a8	8	21'-9	465	8	21'-9	465	8	21'-9	465	8	21'-9	465
SLAB LONGITUDINAL BOTTOM, AT RAIL			8a9	4	19'-0	203	4	19'-0	203	4	19'-0	203	4	19'-0	203
SLAB LONGITUDINAL TOP			6b1	31	7'-9	361	31	7'-9	361	31	7'-9	361	31	7'-9	361
SLAB LONGITUDINAL TOP			9b2	31	21'-3	2240	31	21'-3	2240	31	21'-3	2240	31	21'-3	2240
SLAB LONGITUDINAL TOP			9b3	31	34'-3	3610	31	34'-3	3610	31	34'-3	3610	31	34'-3	3610
SLAB LONGITUDINAL TOP			6b4	32	12'-9	613	32	12'-9	613	32	12'-9	613	32	12'-9	613
SLAB LONGITUDINAL TOP			9b5	32	26'-0	2829	32	26'-0	2829	32	26'-0	2829	32	26'-0	2829
SLAB LONGITUDINAL TOP			6b6	16	17'-6	421	16	17'-6	421	16	17'-6	421	16	17'-6	421
SLAB LONGITUDINAL TOP, AT RAIL			6b8	8	26'-2	315	8	26'-2	315	8	26'-2	315	8	26'-2	315
SLAB LONGITUDINAL TOP, AT RAIL			9b9	8	18'-0	490	8	18'-0	490	8	18'-0	490	8	18'-0	490
SLAB LONGITUDINAL TOP, AT RAIL			6b10	4	18'-4	111	4	18'-4	111	4	18'-4	111	4	18'-4	111
SLAB LONGITUDINAL TOP, AT RAIL			6b11	8	28'-8	345	8	28'-8	345	8	28'-8	345	8	28'-8	345
SLAB LONGITUDINAL TOP, AT RAIL			10b12	8	11'-9	405	8	11'-9	405	8	11'-9	405	8	11'-9	405
SLAB TRANSVERSE, BOTTOM			6c1	87	26'-10	3507	87	27'-9	3627	76	26'-10	3064	66	26'-10	2661
SLAB TRANSVERSE ENDS, BOTTOM			6c2	-	-	-	-	-	24 VARIES	579	44	VARIES	970	-	-
SLAB TRANSVERSE, TOP			5d1	87	26'-10	2435	87	27'-9	2519	76	26'-10	2128	66	26'-10	1848
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	7'-3	273	36	7'-3	273	48	7'-3	363	60	7'-3	454
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	172	8'-6	1525	172	8'-6	1525	172	8'-6	1525	170	8'-6	1508
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.						34,301		34,580		34,962		35,579			
OPEN RAIL - SEE LIST ON RAIL SHEET J24-41-06						6330		6330		6330		6330			
TOTAL - LBS. WITH MONOLITHIC PIER CAP AND OPEN RAIL						40,631		40,910		41,292		41,909			
TOTAL - LBS. WITH NON-MONOLITHIC PIER CAP AND OPEN RAIL						39,407		39,659		39,856		40,176			
SAME AS ABOVE EXCEPT ALL "h" BARS DELETED															

BENT BAR DETAILS



ESTIMATED QUANTITIES FOR SUPERSTRUCTURE - 90' 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.	144.8	145.5	147.8	152.7	140.6	141.1	143.0	146.9
OPEN RAIL	REINFORCING STEEL LBS.	40,631	40,910	41,292	41,909	39,407	39,659	39,856	40,176
OPEN RAIL	LIN. FT.	202.0	202.2	202.9	204.5	202.0	202.2	202.9	204.5

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

07-09 LATEST REVISION DATE	M. R. M. [Signature] APPROVED BY BRIDGE ENGINEER	<p>Iowa Department of Transportation Highway Division</p>
		STANDARD DESIGN - 24' ROADWAY, 3 SPAN BRIDGES CONTINUOUS CONCRETE SLAB BRIDGES NOVEMBER, 2006
		SUPERSTRUCTURE DETAILS 90'-0 BRIDGE

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