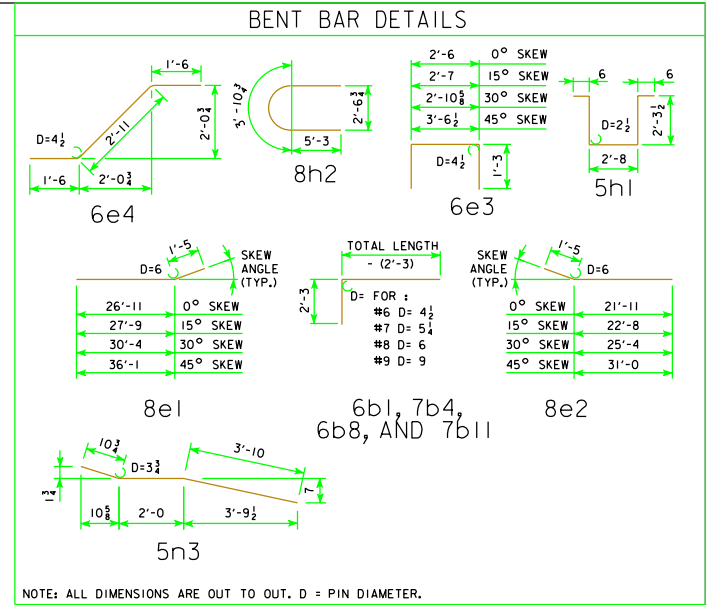


REVISED 07-09 - OPEN RAIL REINF. QTY'S. CHANGED WHICH CHANGED TOTAL REINF. QTY'S.

BILL OF REINFORCING STEEL FOR SUPERSTRUCTURE - 140' BRIDGE															
LOCATION	SKEW	SHAPE	BAR NO.	0°		15°		30°		45°					
				LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT			NO.	LENGTH
SLAB LONGITUDINAL BOTTOM			9a1	58	30'-6	6015	58	30'-6	6015	58	30'-6	6015	58	30'-6	6015
SLAB LONGITUDINAL BOTTOM			10a2	58	48'-6	12,105	58	48'-6	12,105	58	48'-6	12,105	58	48'-6	12,105
SLAB LONGITUDINAL BOTTOM			9a3	58	43'-9	8628	58	43'-9	8628	58	43'-9	8628	58	43'-9	8628
SLAB LONGITUDINAL BOTTOM			10a4	58	35'-3	8798	58	35'-3	8798	58	35'-3	8798	58	35'-3	8798
SLAB LONGITUDINAL BOTTOM			9a5	29	43'-0	4240	29	43'-0	4240	29	43'-0	4240	29	43'-0	4240
SLAB LONGITUDINAL BOTTOM, AT RAIL			9a6	8	41'-7	1132	8	41'-7	1132	8	41'-7	1132	8	41'-7	1132
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	52'-8	717	4	52'-8	717	4	52'-8	717	4	52'-8	717
SLAB LONGITUDINAL BOTTOM, AT RAIL			9a9	8	34'-3	932	8	34'-3	932	8	34'-3	932	8	34'-3	932
SLAB LONGITUDINAL BOTTOM, AT RAIL			10a10	4	33'-0	568	4	33'-0	568	4	33'-0	568	4	33'-0	568
SLAB LONGITUDINAL TOP			6b1	58	7'-9	676	58	7'-9	676	58	7'-9	676	58	7'-9	676
SLAB LONGITUDINAL TOP			11b2	58	26'-0	8013	58	26'-0	8013	58	26'-0	8013	58	26'-0	8013
SLAB LONGITUDINAL TOP			11b3	58	31'-9	9784	58	31'-9	9784	58	31'-9	9784	58	31'-9	9784
SLAB LONGITUDINAL TOP			7b4	58	25'-6	3024	58	25'-6	3024	58	25'-6	3024	58	25'-6	3024
SLAB LONGITUDINAL TOP			11b5	58	29'-0	8937	58	29'-0	8937	58	29'-0	8937	58	29'-0	8937
SLAB LONGITUDINAL TOP			6b6	29	34'-4	1496	29	34'-4	1496	29	34'-4	1496	29	34'-4	1496
SLAB LONGITUDINAL TOP, AT RAIL			6b8	8	32'-9	394	8	32'-9	394	8	32'-9	394	8	32'-9	394
SLAB LONGITUDINAL TOP, AT RAIL			11b9	8	34'-0	1446	8	34'-0	1446	8	34'-0	1446	8	34'-0	1446
SLAB LONGITUDINAL TOP, AT RAIL			6b10	4	25'-6	154	4	25'-6	154	4	25'-6	154	4	25'-6	154
SLAB LONGITUDINAL TOP, AT RAIL			7b11	8	38'-3	626	8	38'-3	626	8	38'-3	626	8	38'-3	626
SLAB LONGITUDINAL TOP, AT RAIL			11b12	8	24'-3	1031	8	24'-3	1031	8	24'-3	1031	8	24'-3	1031
SLAB TRANSVERSE BOTTOM			6c1	137	25'-5	5231	137	26'-4	5419	126	25'-5	4811	116	25'-5	4429
SLAB TRANSVERSE BOTTOM			6c2	137	23'-3	4785	137	24'-1	4956	128	23'-3	4470	119	23'-3	4156
SLAB TRANSVERSE ENDS, BOTTOM			6c3	-	-	-	-	-	14	VARIES	303	22	VARIES	485	
SLAB TRANSVERSE ENDS, BOTTOM			6c4	-	-	-	-	-	12	VARIES	255	22	VARIES	458	
SLAB TRANSVERSE ENDS, BOTTOM			6c5	-	-	-	-	-	12	VARIES	208	20	VARIES	366	
SLAB TRANSVERSE ENDS, BOTTOM			6c6	-	-	-	-	-	12	VARIES	227	19	VARIES	376	
SLAB TRANSVERSE TOP			5d1	137	25'-9	3680	137	26'-8	3811	126	25'-9	3385	116	25'-9	3116
SLAB TRANSVERSE TOP			5d2	137	23'-3	3323	137	24'-1	3442	128	23'-3	3104	119	23'-3	2886
SLAB TRANSVERSE ENDS, TOP			5d3	-	-	-	-	-	14	VARIES	210	22	VARIES	337	
SLAB TRANSVERSE ENDS, TOP			5d4	-	-	-	-	-	12	VARIES	177	22	VARIES	318	
SLAB TRANSVERSE ENDS, TOP			5d5	-	-	-	-	-	12	VARIES	144	20	VARIES	254	
SLAB TRANSVERSE ENDS, TOP			5d6	-	-	-	-	-	12	VARIES	158	19	VARIES	261	
SLAB, TRANSVERSE AT ABUTMENT			8e1	18	28'-4	1362	18	29'-2	1402	18	31'-9	1526	18	37'-6	1803
SLAB, TRANSVERSE AT ABUTMENT			8e2	18	23'-4	1122	18	24'-1	1158	18	26'-9	1286	18	32'-5	1558
SLAB, HAIRPINS, AT ABUTMENT			6e3	100	5'-0	751	100	5'-1	764	100	5'-5	814	100	6'-1	914
SLAB, DIAGONALS, AT ABUTMENT			6e4	100	5'-11	889	100	5'-11	889	100	5'-11	889	100	5'-11	889
PIER CAP HOOPS			5h1	64	8'-3	551	64	8'-3	551	96	8'-3	827	96	8'-3	827
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	27'-5	586	8	28'-8	613	8	31'-8	677	8	37'-10	809
PIER CAP, BOTTOM LONGITUDINAL			8h4	8	21'-11	469	8	22'-4	478	8	24'-6	524	8	29'-8	634
PIER CAP, TOP LONGITUDINAL			8h5	4	28'-2	301	4	29'-6	316	4	32'-8	349	4	38'-11	416
PIER CAP, TOP LONGITUDINAL			8h6	4	23'-5	251	4	23'-11	256	4	26'-3	281	4	31'-6	337
TOP OF SLAB, TRANSVERSE, AT RAIL			5j1	272	8'-6	2412	272	8'-6	2412	266	8'-6	2359	264	8'-6	2341
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.						105,458			106,212			106,729			107,715
BARRIER RAIL - SEE LIST ON RAIL SHEET J44-46-06						8602			8602			8602			8602
OPEN RAIL - SEE LIST ON RAIL SHEET J44-49-06						9057			9057			9057			9057
TOTAL - LBS.			WITH MONOLITHIC PIER CAP			114,060			114,814			115,331			116,317
			WITH OPEN RAIL			114,515			115,269			115,786			116,772
TOTAL - LBS.			WITH NON-MONOLITHIC PIER CAP			111,748			112,446			112,519			113,140
SAME AS ABOVE EXCEPT ALL "h" BARS DELETED			WITH OPEN RAIL			112,203			112,901			112,974			113,595

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°
WITH *STRUCTURAL CONCRETE (BRIDGE) C.Y.		490.8	491.9	495.3	502.8	484.5	485.3	488.0	493.9
BARRIER RAIL REINFORCING STEEL EPOXY COATED LBS.		114,060	114,814	115,331	116,317	111,748	112,446	112,519	113,140
CONCRETE BARRIER OR OPEN RAIL LIN. FT.		302.0	302.2	302.9	304.5	302.0	302.2	302.9	304.5
WITH *STRUCTURAL CONCRETE (BRIDGE) C.Y.		490.6	491.6	495.0	502.5	484.2	485.0	487.7	493.6
OPEN RAIL REINFORCING STEEL EPOXY COATED LBS.		114,515	115,269	115,786	116,772	112,203	112,901	112,974	113,595

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



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.

07-09 LATEST REVISION DATE  <i>Thomas C. McQuinn</i> APPROVED BY BRIDGE ENGINEER	 <b>Iowa Department of Transportation</b> Highway Division
	STANDARD DESIGN - 44' ROADWAY, 3 SPAN BRIDGES <b>CONTINUOUS CONCRETE</b> <b>SLAB BRIDGES</b> NOVEMBER, 2006
	<div style="text-align: center;"> <b>SUPERSTRUCTURE DETAILS</b>          140'-0 BRIDGE       </div> <div style="text-align: right;"> <b>J44-17-06</b> </div>