

REVISED 09-14 - CHANGED REFERENCE TO THE BARRIER RAIL & OPEN RAIL TO THE J44-14 STANDARDS INSTEAD OF J44-06 STANDARDS.

BILL OF REINFORCING STEEL FOR SUPERSTRUCTURE - 120' BRIDGE

LOCATION	SKEW	SHAPE	0°				15°				30°				45°						
			BAR NO.	LENGTH	WEIGHT		BAR NO.	LENGTH	WEIGHT		BAR NO.	LENGTH	WEIGHT		BAR NO.	LENGTH	WEIGHT				
SLAB LONGITUDINAL BOTTOM			901	58	27'-0	5325	58	27'-0	5325	58	27'-0	5325	58	27'-0	5325	58	27'-0	5325	58	27'-0	5325
SLAB LONGITUDINAL BOTTOM, AT RAIL			902	58	41'-3	8135	58	41'-3	8135	58	41'-3	8135	58	41'-3	8135	58	41'-3	8135	58	41'-3	8135
SLAB LONGITUDINAL BOTTOM			903	58	38'-9	7642	58	38'-9	7642	58	38'-9	7642	58	38'-9	7642	58	38'-9	7642	58	38'-9	7642
SLAB LONGITUDINAL BOTTOM, AT RAIL			804	58	29'-3	4530	58	29'-3	4530	58	29'-3	4530	58	29'-3	4530	58	29'-3	4530	58	29'-3	4530
SLAB LONGITUDINAL BOTTOM			905	29	36'-6	3599	29	36'-6	3599	29	36'-6	3599	29	36'-6	3599	29	36'-6	3599	29	36'-6	3599
SLAB LONGITUDINAL BOTTOM, AT RAIL			906	8	36'-1	982	8	36'-1	982	8	36'-1	982	8	36'-1	982	8	36'-1	982	8	36'-1	982
SLAB LONGITUDINAL BOTTOM, AT RAIL			907	8	12'-0	327	8	12'-0	327	8	12'-0	327	8	12'-0	327	8	12'-0	327	8	12'-0	327
SLAB LONGITUDINAL BOTTOM, AT RAIL			908	4	45'-8	622	4	45'-8	622	4	45'-8	622	4	45'-8	622	4	45'-8	622	4	45'-8	622
SLAB LONGITUDINAL BOTTOM, AT RAIL			809	8	25'-6	545	8	25'-6	545	8	25'-6	545	8	25'-6	545	8	25'-6	545	8	25'-6	545
SLAB LONGITUDINAL BOTTOM, AT RAIL			8010	4	25'-6	273	4	25'-6	273	4	25'-6	273	4	25'-6	273	4	25'-6	273	4	25'-6	273
SLAB LONGITUDINAL TOP			701	58	9'-0	1067	58	9'-0	1067	58	9'-0	1067	58	9'-0	1067	58	9'-0	1067	58	9'-0	1067
SLAB LONGITUDINAL TOP			10b2	58	29'-6	7363	58	29'-6	7363	58	29'-6	7363	58	29'-6	7363	58	29'-6	7363	58	29'-6	7363
SLAB LONGITUDINAL TOP			10b3	58	26'-9	6677	58	26'-9	6677	58	26'-9	6677	58	26'-9	6677	58	26'-9	6677	58	26'-9	6677
SLAB LONGITUDINAL TOP			7b4	58	23'-3	2757	58	23'-3	2757	58	23'-3	2757	58	23'-3	2757	58	23'-3	2757	58	23'-3	2757
SLAB LONGITUDINAL TOP			11b5	58	30'-3	9322	58	30'-3	9322	58	30'-3	9322	58	30'-3	9322	58	30'-3	9322	58	30'-3	9322
SLAB LONGITUDINAL TOP			6b6	29	28'-4	1235	29	28'-4	1235	29	28'-4	1235	29	28'-4	1235	29	28'-4	1235	29	28'-4	1235
SLAB LONGITUDINAL TOP, AT RAIL			6b8	8	29'-0	349	8	29'-0	349	8	29'-0	349	8	29'-0	349	8	29'-0	349	8	29'-0	349
SLAB LONGITUDINAL TOP, AT RAIL			10b9	8	29'-0	999	8	29'-0	999	8	29'-0	999	8	29'-0	999	8	29'-0	999	8	29'-0	999
SLAB LONGITUDINAL TOP, AT RAIL			6b10	4	23'-0	139	4	23'-0	139	4	23'-0	139	4	23'-0	139	4	23'-0	139	4	23'-0	139
SLAB LONGITUDINAL TOP, AT RAIL			6b11	8	31'-6	379	8	31'-6	379	8	31'-6	379	8	31'-6	379	8	31'-6	379	8	31'-6	379
SLAB LONGITUDINAL TOP, AT RAIL			11b12	8	23'-0	978	8	23'-0	978	8	23'-0	978	8	23'-0	978	8	23'-0	978	8	23'-0	978
SLAB TRANSVERSE BOTTOM			6c1	117	25'-5	4467	117	26'-4	4628	106	25'-5	4047	96	25'-5	3665						
SLAB TRANSVERSE BOTTOM			6c2	117	23'-3	4086	117	24'-1	4233	108	23'-3	3772	99	23'-3	3458						
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	117	25'-9	3143	117	26'-8	3255	106	25'-9	2847	96	25'-9	2579						
SLAB TRANSVERSE TOP			5d2	117	23'-3	2838	117	24'-1	2939	108	23'-3	2619	99	23'-3	2401						
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	78	7'-10	638	78	7'-10	638	78	7'-10	638	104	7'-10	850						
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	232	8'-6	2057	232	8'-6	2057	226	8'-6	2004	224	8'-6	1986						
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						

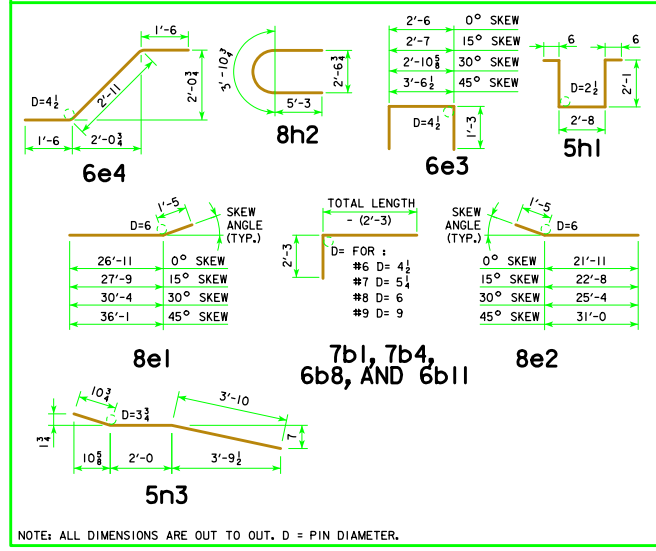
SUB EPOXY COATED TOTAL - LBS.					86,880				87,546					87,875				89,074
BARRIER RAIL - SEE LIST ON RAIL SHEET J44-46-14					4860				4860					4860				4860
OPEN RAIL - SEE LIST ON RAIL SHEET J44-49-14					5304				5304					5304				5304
EPOXY COATED RAIL TOTAL - LBS.					91,740				92,406					92,735				93,934
					92,184				92,850					93,179				94,378
EPOXY COATED RAIL TOTAL - LBS. WITH MONOLITHIC PIER CAP					89,341				89,951					90,112				90,734
SAME AS ABOVE EXCEPT ALL "h" BARS DELETED					89,785				90,395					90,556				91,178
STAINLESS STEEL RAIL TOTAL - LBS.					2676				2676					2676				2676
					2757				2757					2757				2757

ESTIMATED QUANTITIES FOR SUPERSTRUCTURE - 120' BRIDGE

ITEM	SKEW	WITH MONOLITHIC PIER CAP				WITH NON-MONOLITHIC PIER CAP															
		0°	15°	30°	45°	0°	15°	30°	45°												
WITH BARRIER RAIL																					
*STRUCTURAL CONCRETE (BRIDGE) C.Y.		382.7	383.8	387.3	395.1	376.3	377.2	380.0	386.2												
REINF. STEEL EPOXY COATED LBS.		91,740	92,406	92,735	93,934	89,341	89,951	90,112	90,734												
REINF. STEEL STAINLESS STEEL LBS.		2676	2676	2676	2676	2676	2676	2676	2676												
CONCRETE BARRIER OR OPEN RAIL LIN. FT.		262.0	262.2	262.9	264.5	262.0	262.2	262.9	264.5												
WITH OPEN RAIL																					
*STRUCTURAL CONCRETE (BRIDGE) C.Y.		382.5	383.5	387.1	394.9	376.1	376.9	379.8	386.0												
REINF. STEEL EPOXY COATED LBS.		92,184	92,850	93,179	94,378	89,785	90,395	90,556	91,178												
REINF. STEEL STAINLESS STEEL LBS.		2757	2757	2757	2757	2757	2757	2757	2757												

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

BENT BAR DETAILS



NOTES:

ALL BARRIER RAIL REINFORCING STEEL IS TO BE EITHER EPOXY COATED OR STAINLESS STEEL AS SHOWN OR NOTED. THE STAINLESS STEEL REINFORCING STEEL SHALL BE DEFORMED BAR GRADE 60 MEETING THE REQUIREMENTS OF MATERIALS I.M.452.

ALL OTHER REINFORCING STEEL IS TO 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.

09-14 LATEST REVISION DATE <i>Thomas E. M. Donnell</i> APPROVED BY BRIDGE ENGINEER	
	STANDARD DESIGN - 44' ROADWAY, 3 SPAN BRIDGES CONTINUOUS CONCRETE SLAB BRIDGES JULY, 2014
	SUPERSTRUCTURE DETAILS 120'-0 BRIDGE

J44-13-14