

REVISED 09-14 - CHANGED REFERENCE TO THE BARRIER RAIL & OPEN RAIL TO THE J44-14 STANDARDS INSTEAD OF J44-06 STANDARDS.  
 REVISED 03-2016 - REVISION FOR ADDITION OF PAVING NOTCH BAR 8u1 IN ESTIMATED QUANTITIES TABLE.  
 REVISED 04-2016 - REVISION TO INCLUDE PAVING NOTCH BAR 8u1 WEIGHT IN ESTIMATED QUANTITIES TABLE.

### BILL OF REINFORCING STEEL FOR SUPERSTRUCTURE - 120' BRIDGE

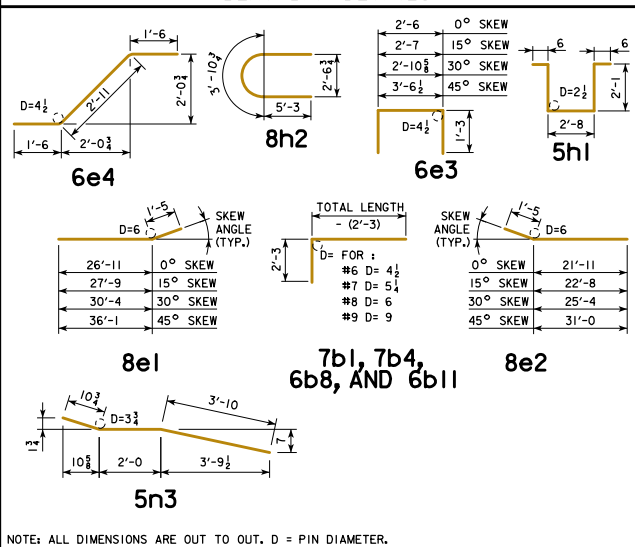
LOCATION	SKEW	SHAPE	0°				15°				30°				45°						
			BAR NO.	LENGTH	WEIGHT		BAR NO.	LENGTH	WEIGHT		BAR NO.	LENGTH	WEIGHT		BAR NO.	LENGTH	WEIGHT				
SLAB LONGITUDINAL BOTTOM			901	58	27'-0	5325	58	27'-0	5325	58	27'-0	5325	58	27'-0	5325	58	27'-0	5325	58	27'-0	5325
SLAB LONGITUDINAL BOTTOM			902	58	41'-3	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			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	96	25'-5	3665	96	25'-5	3665
SLAB TRANSVERSE BOTTOM			6c2	117	23'-3	4086	117	24'-1	4233	108	23'-3	3772	99	23'-3	3458	99	23'-3	3458	99	23'-3	3458
SLAB TRANSVERSE ENDS, BOTTOM			6c3	-	-	-	-	-	-	14	VARIES	303	22	VARIES	485	22	VARIES	485	22	VARIES	485
SLAB TRANSVERSE ENDS, BOTTOM			6c4	-	-	-	-	-	-	12	VARIES	255	22	VARIES	458	22	VARIES	458	22	VARIES	458
SLAB TRANSVERSE ENDS, BOTTOM			6c5	-	-	-	-	-	-	12	VARIES	208	20	VARIES	366	20	VARIES	366	20	VARIES	366
SLAB TRANSVERSE ENDS, BOTTOM			6c6	-	-	-	-	-	-	12	VARIES	227	19	VARIES	376	19	VARIES	376	19	VARIES	376
SLAB TRANSVERSE TOP			5d1	117	25'-9	3143	117	26'-8	3255	106	25'-9	2847	96	25'-9	2579	96	25'-9	2579	96	25'-9	2579
SLAB TRANSVERSE TOP			5d2	117	23'-3	2838	117	24'-1	2939	108	23'-3	2619	99	23'-3	2401	99	23'-3	2401	99	23'-3	2401
SLAB TRANSVERSE ENDS, TOP			5d3	-	-	-	-	-	-	14	VARIES	210	22	VARIES	337	22	VARIES	337	22	VARIES	337
SLAB TRANSVERSE ENDS, TOP			5d4	-	-	-	-	-	-	12	VARIES	177	22	VARIES	318	22	VARIES	318	22	VARIES	318
SLAB TRANSVERSE ENDS, TOP			5d5	-	-	-	-	-	-	12	VARIES	144	20	VARIES	254	20	VARIES	254	20	VARIES	254
SLAB TRANSVERSE ENDS, TOP			5d6	-	-	-	-	-	-	12	VARIES	158	19	VARIES	261	19	VARIES	261	19	VARIES	261
SLAB TRANSVERSE AT ABUTMENT			8e1	18	28'-4	1362	18	29'-2	1402	18	31'-9	1526	18	37'-6	1803	18	37'-6	1803	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	18	32'-5	1558	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	100	6'-1	914	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	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	104	7'-10	850	104	7'-10	850
PIER CAP ENDS			8h2	4	14'-5	154	4	14'-5	154	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	8	37'-10	809	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	8	29'-8	634	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	4	38'-11	416	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	4	31'-6	337	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	224	8'-6	1986	224	8'-6	1986
WING, VERTICAL			5m1	40	4'-5	185	40	4'-5	185	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	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	24	6'-9	169	24	6'-9	169
SUB EPOXY COATED TOTAL - LBS.						86,980			87,546			87,875			89,074			89,074			89,074
BARRIER RAIL - SEE LIST ON RAIL SHEET J44-46-14						4860			4860			4860			4860			4860			4860
OPEN RAIL - SEE LIST ON RAIL SHEET J44-49-14						5304			5304			5304			5304			5304			5304
EPOXY COATED RAIL TOTAL - LBS.						91,740			92,406			92,735			93,934			93,934			93,934
			WITH MONOLITHIC PIER CAP			92,184			92,850			93,179			94,378			94,378			94,378
			WITH BARRIER RAIL			89,341			89,951			90,112			90,734			90,734			90,734
EPOXY COATED RAIL TOTAL - LBS.			WITH BARRIER RAIL			89,341			89,951			90,112			90,734			90,734			90,734
SAME AS ABOVE EXCEPT ALL "h" BARS DELETED			WITH OPEN RAIL			89,785			90,395			90,556			91,178			91,178			91,178
STAINLESS STEEL RAIL TOTAL - LBS.			WITH BARRIER RAIL			2676			2676			2676			2676			2676			2676
			WITH OPEN RAIL			2757			2757			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		382.7	383.8	387.3	395.1	376.3	377.2	380.0	386.2
REINF. STEEL EPOXY COATED		91,740	92,406	92,735	93,934	89,341	89,951	90,112	90,734
REINF. STEEL STAINLESS STEEL		2921	2921	2921	2921	2921	2921	2921	2921
CONCRETE BARRIER OR OPEN RAIL		262.0	262.2	262.9	264.5	262.0	262.2	262.9	264.5
WITH OPEN RAIL		382.5	383.5	387.1	394.9	376.1	376.9	379.8	386.0
REINF. STEEL EPOXY COATED		92,184	92,850	93,179	94,378	89,785	90,395	90,556	91,178
REINF. STEEL STAINLESS STEEL		3002	3002	3002	3002	3002	3002	3002	3002

\* INCLUDES 4 WINGS @ 0.68 C.Y. EACH; EXCLUDES RAIL CONNECTION.  
 Δ INCLUDES ABUTMENT PAVING NOTCH BAR WEIGHT.

### BENT BAR DETAILS



### STAINLESS STEEL REINFORCING FOR SUPERSTRUCTURE - BRIDGE

LOCATION	ALL SKEWS			
	SHAPE	BAR NO.	LENGTH	WEIGHT
ABUTMENT PAVING NOTCH BAR	8u1	44	2'-1	245
8u1 BARS SHALL BE PAID FOR UNDER THE BID ITEM "REINFORCING STEEL, STAINLESS STEEL".				WEIGHT = LBS.

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.

04-2016  
 LATEST REVISION DATE  
 Approved by: *Thomas E. McQuinn*  
 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**