

REVISED 09-14 - CHANGED REFERENCE TO THE BARRIER RAIL & OPEN RAIL TO THE J40-14 STANDARDS INSTEAD OF J40-06 STANDARDS.

### BILL OF REINFORCING STEEL FOR SUPERSTRUCTURE - 100' BRIDGE

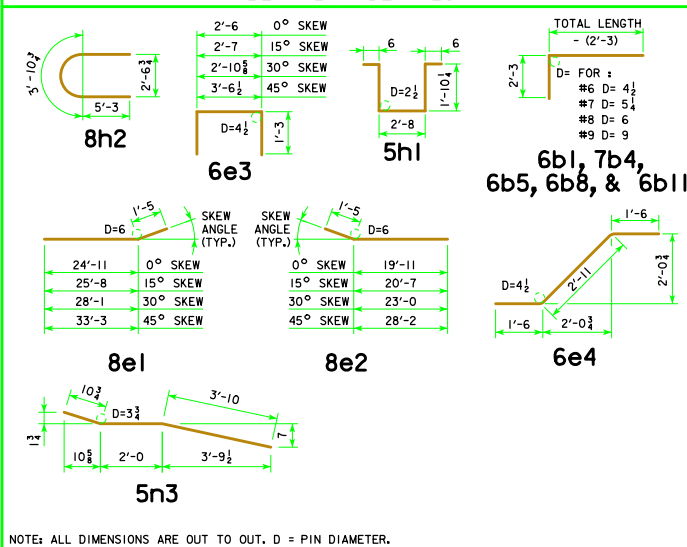
LOCATION	SKEW	SHAPE	0°				15°				30°				45°			
			BAR NO.	LENGTH	WEIGHT		BAR NO.	LENGTH	WEIGHT		BAR NO.	LENGTH	WEIGHT		BAR NO.	LENGTH	WEIGHT	
SLAB LONGITUDINAL BOTTOM			801	53	22'-3	3149	53	22'-3	3149	53	22'-3	3149	53	22'-3	3149	53	22'-3	3149
SLAB LONGITUDINAL BOTTOM			802	53	33'-6	4741	53	33'-6	4741	53	33'-6	4741	53	33'-6	4741	53	33'-6	4741
SLAB LONGITUDINAL BOTTOM			803	53	31'-6	4458	53	31'-6	4458	53	31'-6	4458	53	31'-6	4458	53	31'-6	4458
SLAB LONGITUDINAL BOTTOM			904	56	28'-9	5083	52	28'-9	5083	52	28'-9	5083	52	28'-9	5083	52	28'-9	5083
SLAB LONGITUDINAL BOTTOM			905	26	32'-0	2829	26	32'-0	2829	26	32'-0	2829	26	32'-0	2829	26	32'-0	2829
SLAB LONGITUDINAL BOTTOM, AT RAIL			806	8	35'-9	764	8	35'-9	764	8	35'-9	764	8	35'-9	764	8	35'-9	764
SLAB LONGITUDINAL BOTTOM, AT RAIL			807	4	37'-4	399	4	37'-4	399	4	37'-4	399	4	37'-4	399	4	37'-4	399
SLAB LONGITUDINAL BOTTOM, AT RAIL			808	8	25'-0	534	8	25'-0	534	8	25'-0	534	8	25'-0	534	8	25'-0	534
SLAB LONGITUDINAL BOTTOM, AT RAIL			809	4	22'-6	241	4	22'-6	241	4	22'-6	241	4	22'-6	241	4	22'-6	241
SLAB LONGITUDINAL TOP			601	53	7'-0	558	53	7'-0	558	53	7'-0	558	53	7'-0	558	53	7'-0	558
SLAB LONGITUDINAL TOP			10b2	53	26'-9	6101	53	26'-9	6101	53	26'-9	6101	53	26'-9	6101	53	26'-9	6101
SLAB LONGITUDINAL TOP			10b3	53	27'-6	6272	53	27'-6	6272	53	27'-6	6272	53	27'-6	6272	53	27'-6	6272
SLAB LONGITUDINAL TOP			7b4	53	16'-6	1788	53	16'-6	1788	53	16'-6	1788	53	16'-6	1788	53	16'-6	1788
SLAB LONGITUDINAL TOP			6b5	52	13'-9	1074	52	13'-9	1074	52	13'-9	1074	52	13'-9	1074	52	13'-9	1074
SLAB LONGITUDINAL TOP			9b6	52	22'-9	4023	52	22'-9	4023	52	22'-9	4023	52	22'-9	4023	52	22'-9	4023
SLAB LONGITUDINAL TOP			6b7	26	26'-10	1048	26	26'-10	1048	26	26'-10	1048	26	26'-10	1048	26	26'-10	1048
SLAB LONGITUDINAL TOP, AT RAIL			6b8	8	25'-6	307	8	25'-6	307	8	25'-6	307	8	25'-6	307	8	25'-6	307
SLAB LONGITUDINAL TOP, AT RAIL			9b9	8	23'-6	640	8	23'-6	640	8	23'-6	640	8	23'-6	640	8	23'-6	640
SLAB LONGITUDINAL TOP, AT RAIL			6b10	4	21'-0	127	4	21'-0	127	4	21'-0	127	4	21'-0	127	4	21'-0	127
SLAB LONGITUDINAL TOP, AT RAIL			6b11	8	27'-6	331	8	27'-6	331	8	27'-6	331	8	27'-6	331	8	27'-6	331
SLAB LONGITUDINAL TOP, AT RAIL			10b12	8	19'-0	655	8	19'-0	655	8	19'-0	655	8	19'-0	655	8	19'-0	655
SLAB TRANSVERSE BOTTOM			6c1	97	23'-5	3412	97	24'-3	3534	88	23'-5	3096	78	23'-5	2744			
SLAB TRANSVERSE BOTTOM			6c2	97	21'-3	3096	97	22'-0	3206	89	21'-3	2841	81	21'-3	2586			
SLAB TRANSVERSE ENDS, BOTTOM			6c3	-	-	-	-	-	-	12	VARIES	233	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	97	23'-9	2403	97	24'-7	2488	88	23'-9	2180	78	23'-9	1933			
SLAB TRANSVERSE TOP			5d2	97	21'-3	2150	97	22'-0	2226	89	21'-3	1973	81	21'-3	1796			
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	60	7'-5	465	60	7'-5	465	80	7'-5	619	100	7'-5	774			
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	192	8'-6	1703	192	8'-6	1703	182	8'-6	1614	176	8'-6	1561			
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.						64,305			64,828			65,329			66,344			
BARRIER RAIL - SEE LIST ON RAIL SHEET J40-46-14						4194			4194			4194			4194			
OPEN RAIL - SEE LIST ON RAIL SHEET J40-49-14						4446			4446			4446			4446			
EPOXY COATED RAIL TOTAL - LBS.						68,449			69,022			69,523			70,538			
WITH MONOLITHIC PIER CAP						68,751			69,274			69,775			70,790			
EPOXY COATED RAIL TOTAL - LBS.						66,402			66,875			67,069			67,595			
WITH MONOLITHIC PIER CAP						66,654			67,127			67,321			67,847			
SAME AS ABOVE EXCEPT ALL "h" BARS DELETED																		
STAINLESS STEEL RAIL TOTAL - LBS.						2267			2267			2267			2267			
WITH BARRIER RAIL						2348			2348			2348			2348			
WITH OPEN RAIL																		

### ESTIMATED QUANTITIES FOR SUPERSTRUCTURE - 100' BRIDGE

ITEM	SKEW	WITH MONOLITHIC PIER CAP				WITH NON-MONOLITHIC PIER CAP			
		0°	15°	30°	45°	0°	15°	30°	45°
*STRUCTURAL CONCRETE (BRIDGE)	C.Y.	264.9	265.9	269.3	276.6	258.8	259.6	262.3	268.2
REINF. STEEL EPOXY COATED	LBS.	68,449	69,022	69,523	70,538	66,402	66,875	67,069	67,595
REINF. STEEL STAINLESS STEEL	LBS.	2267	2267	2267	2267	2267	2267	2267	2267
CONCRETE BARRIER OR OPEN RAIL	LIN. FT.	222.0	222.2	222.9	224.5	222.0	222.2	222.9	224.5
*STRUCTURAL CONCRETE (BRIDGE)	C.Y.	264.7	265.7	269.1	276.4	258.7	259.5	262.2	268.0
REINF. STEEL EPOXY COATED	LBS.	68,751	69,274	69,775	70,790	66,654	67,127	67,321	67,847
REINF. STEEL STAINLESS STEEL	LBS.	2348	2348	2348	2348	2348	2348	2348	2348

\* 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. Dwyer</i> APPROVED BY BRIDGE ENGINEER	
	STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES <b>CONTINUOUS CONCRETE SLAB BRIDGES</b> JULY, 2014
	<b>SUPERSTRUCTURE DETAILS</b> <b>100'-0 BRIDGE</b>

J40-09-14