

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 - 140' BRIDGE

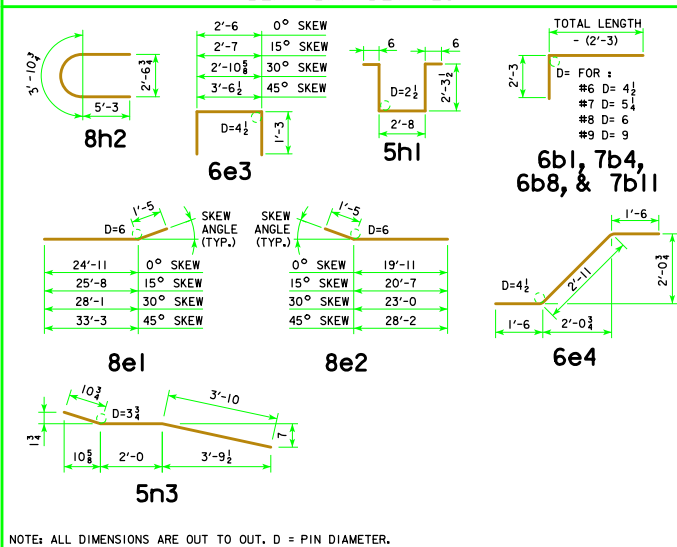
LOCATION	SKEW	SHAPE	0°				15°				30°				45°				
			BAR NO.	LENGTH	WEIGHT		BAR NO.	LENGTH	WEIGHT		BAR NO.	LENGTH	WEIGHT		BAR NO.	LENGTH	WEIGHT		
SLAB LONGITUDINAL BOTTOM			901	53	30'-6	5497	53	30'-6	5497	53	30'-6	5497	53	30'-6	5497	53	30'-6	5497	
SLAB LONGITUDINAL BOTTOM			1002	53	48'-6	11,061	53	48'-6	11,061	53	48'-6	11,061	53	48'-6	11,061	53	48'-6	11,061	
SLAB LONGITUDINAL BOTTOM			903	53	43'-9	7884	53	43'-9	7884	53	43'-9	7884	53	43'-9	7884	53	43'-9	7884	
SLAB LONGITUDINAL BOTTOM			1004	52	35'-3	7888	52	35'-3	7888	52	35'-3	7888	52	35'-3	7888	52	35'-3	7888	
SLAB LONGITUDINAL BOTTOM			905	26	43'-0	3802	26	43'-0	3802	26	43'-0	3802	26	43'-0	3802	26	43'-0	3802	
SLAB LONGITUDINAL BOTTOM, AT RAIL			906	8	41'-7	1132	8	41'-7	1132	8	41'-7	1132	8	41'-7	1132	8	41'-7	1132	
SLAB LONGITUDINAL BOTTOM, AT RAIL			907	8	13'-0	354	8	13'-0	354	8	13'-0	354	8	13'-0	354	8	13'-0	354	
SLAB LONGITUDINAL BOTTOM, AT RAIL			908	4	52'-8	717	4	52'-8	717	4	52'-8	717	4	52'-8	717	4	52'-8	717	
SLAB LONGITUDINAL BOTTOM, AT RAIL			909	8	34'-3	932	8	34'-3	932	8	34'-3	932	8	34'-3	932	8	34'-3	932	
SLAB LONGITUDINAL BOTTOM, AT RAIL			10010	4	33'-0	568	4	33'-0	568	4	33'-0	568	4	33'-0	568	4	33'-0	568	
SLAB LONGITUDINAL TOP			6b1	53	7'-9	617	53	7'-9	617	53	7'-9	617	53	7'-9	617	53	7'-9	617	
SLAB LONGITUDINAL TOP			11b2	53	26'-0	7322	53	26'-0	7322	53	26'-0	7322	53	26'-0	7322	53	26'-0	7322	
SLAB LONGITUDINAL TOP			11b3	53	31'-9	8941	53	31'-9	8941	53	31'-9	8941	53	31'-9	8941	53	25'-6	8941	
SLAB LONGITUDINAL TOP			7b4	53	25'-6	2763	53	25'-6	2763	53	25'-6	2763	53	25'-6	2763	53	29'-0	2763	
SLAB LONGITUDINAL TOP			11b5	52	29'-0	8013	52	29'-0	8013	52	29'-0	8013	52	29'-0	8013	52	34'-4	8013	
SLAB LONGITUDINAL TOP			6b6	26	34'-4	1341	26	34'-4	1341	26	34'-4	1341	26	26'-0	1341	26	26'-0	1341	
SLAB LONGITUDINAL TOP, AT RAIL			6b8	8	32'-9	394	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	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	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	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	8	24'-3	1031	
SLAB TRANSVERSE BOTTOM			6c1	137	23'-5	4819	137	24'-3	4991	128	23'-5	4502	118	23'-5	4151				
SLAB TRANSVERSE BOTTOM			6c2	137	21'-3	4373	137	22'-0	4528	129	21'-3	4118	121	21'-3	3863				
SLAB TRANSVERSE ENDS, BOTTOM			6c3	-	-	-	-	-	-	12	VARIES	223	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	137	23'-9	3394	137	24'-7	3513	128	23'-9	3171	118	23'-9	2924				
SLAB TRANSVERSE TOP			5d2	137	21'-3	3037	137	22'-0	3144	129	21'-3	2860	121	21'-3	2682				
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	8'-3	517	60	8'-3	517	60	8'-3	517	90	8'-3	775				
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	272	8'-6	2412	272	8'-6	2412	262	8'-6	2323	256	8'-6	2270				
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.						96,989			97,672			97,858			98,976				
BARRIER RAIL - SEE LIST ON RAIL SHEET J40-46-14						5483			5483			5483			5483				
OPEN RAIL - SEE LIST ON RAIL SHEET J40-49-14						5953			5953			5953			5953				
EPOXY COATED RAIL TOTAL - LBS.			WITH MONOLITHIC PIER CAP	WITH BARRIER RAIL		102,472			103,155			103,341			104,459				
EPOXY COATED RAIL TOTAL - LBS.			WITH MONOLITHIC PIER CAP	WITH OPEN RAIL		102,942			103,625			103,811			104,929				
EPOXY COATED RAIL TOTAL - LBS.			WITH BARRIER RAIL	WITH NON-MONOLITHIC PIER CAP		100,323			100,956			100,989			101,515				
SAME AS ABOVE EXCEPT ALL "h" BARS DELETED			WITH OPEN RAIL			100,793			101,426			101,459			101,985				
STAINLESS STEEL RAIL TOTAL - LBS.			WITH BARRIER RAIL			3119			3119			3119			3119				
			WITH OPEN RAIL			3104			3104			3104			3104				

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 BARRIER RAIL	*STRUCTURAL CONCRETE (BRIDGE) C.Y.	449.5	450.4	453.5	460.4	443.4	444.2	446.6	452.0
	REINF. STEEL EPOXY COATED LBS.	102,472	103,155	103,341	104,459	100,323	100,956	100,989	101,515
	REINF. STEEL STAINLESS STEEL LBS.	3119	3119	3119	3119	3119	3119	3119	3119
CONCRETE BARRIER OR OPEN RAIL	LIN. FT.	302.0	302.2	302.9	304.5	302.0	302.2	302.9	304.5
WITH OPEN RAIL	*STRUCTURAL CONCRETE (BRIDGE) C.Y.	449.2	450.1	453.3	460.1	443.2	443.9	446.4	451.7
	REINF. STEEL EPOXY COATED LBS.	102,942	103,625	103,811	104,929	100,793	101,426	101,459	101,985
	REINF. STEEL STAINLESS STEEL LBS.	3104	3104	3104	3104	3104	3104	3104	3104

* 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. McQuill</i> APPROVED BY BRIDGE ENGINEER	
	STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES CONTINUOUS CONCRETE SLAB BRIDGES JULY, 2014
	SUPERSTRUCTURE DETAILS 140'-0 BRIDGE

J40-17-14