

REVISED 09-14 - CHANGED REFERENCE TO THE BARRIER RAIL & OPEN RAIL TO THE J40-14 STANDARDS INSTEAD OF J40-06 STANDARDS.
 REVISED 03-2016 - REVISION FOR ADDITION OF PAVING NOTCH BAR. BUJ WEIGHT IN ESTIMATED QUANTITIES TABLE.
 REVISED 04-2016 - REVISION TO INCLUDE PAVING NOTCH BAR BUJ WEIGHT IN ESTIMATED QUANTITIES TABLE.

BILL OF REINFORCING STEEL FOR SUPERSTRUCTURE - 120' BRIDGE

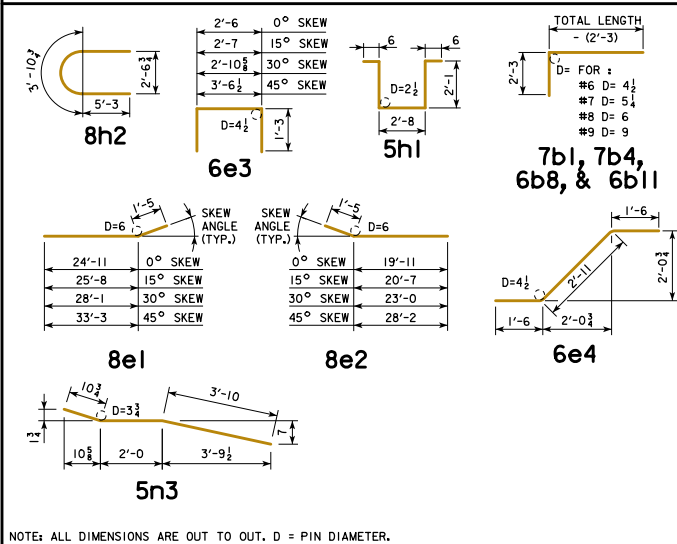
LOCATION	SKEW	SHAPE	0°				15°				30°				45°			
			BAR NO.	LENGTH	WEIGHT		BAR NO.	LENGTH	WEIGHT		BAR NO.	LENGTH	WEIGHT		BAR NO.	LENGTH	WEIGHT	
SLAB LONGITUDINAL BOTTOM			901	53	27'-0	4866	53	27'-0	4866	53	27'-0	4866	53	27'-0	4866	53	27'-0	4866
SLAB LONGITUDINAL BOTTOM			902	53	41'-3	7434	53	41'-3	7434	53	41'-3	7434	53	41'-3	7434	53	41'-3	7434
SLAB LONGITUDINAL BOTTOM			903	53	38'-9	6983	53	38'-9	6983	53	38'-9	6983	53	38'-9	6983	53	38'-9	6983
SLAB LONGITUDINAL BOTTOM			804	52	29'-3	4062	52	29'-3	4062	52	29'-3	4062	52	29'-3	4062	52	29'-3	4062
SLAB LONGITUDINAL BOTTOM			905	26	36'-6	3227	26	36'-6	3227	26	36'-6	3227	26	36'-6	3227	26	36'-6	3227
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
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
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
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
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
SLAB LONGITUDINAL TOP			701	53	9'-0	975	53	9'-0	975	53	9'-0	975	53	9'-0	975	53	9'-0	975
SLAB LONGITUDINAL TOP			1002	53	29'-6	6728	53	29'-6	6728	53	29'-6	6728	53	29'-6	6728	53	29'-6	6728
SLAB LONGITUDINAL TOP			1003	53	26'-9	6101	53	26'-9	6101	53	26'-9	6101	53	26'-9	6101	53	26'-9	6101
SLAB LONGITUDINAL TOP			704	53	23'-3	2519	53	23'-3	2519	53	23'-3	2519	53	23'-3	2519	53	23'-3	2519
SLAB LONGITUDINAL TOP			1105	52	30'-3	8358	52	30'-3	8358	52	30'-3	8358	52	30'-3	8358	52	30'-3	8358
SLAB LONGITUDINAL TOP			606	26	28'-4	1107	26	28'-4	1107	26	28'-4	1107	26	28'-4	1107	26	28'-4	1107
SLAB LONGITUDINAL TOP, AT RAIL			608	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			1009	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			6010	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			6011	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			11012	8	23'-0	978	8	23'-0	978	8	23'-0	978	8	23'-0	978	8	23'-0	978
SLAB TRANSVERSE BOTTOM			601	117	23'-5	4116	117	24'-3	4262	108	23'-5	3799	98	23'-5	3447			
SLAB TRANSVERSE BOTTOM			602	117	21'-3	3735	117	22'-0	3867	109	21'-3	3480	101	21'-3	3224			
SLAB TRANSVERSE ENDS, BOTTOM			603	-	-	-	-	-	-	12	VARIES	223	20	VARIES	411			
SLAB TRANSVERSE ENDS, BOTTOM			604	-	-	-	-	-	-	11	VARIES	219	20	VARIES	386			
SLAB TRANSVERSE ENDS, BOTTOM			605	-	-	-	-	-	-	11	VARIES	176	18	VARIES	302			
SLAB TRANSVERSE ENDS, BOTTOM			606	-	-	-	-	-	-	11	VARIES	190	17	VARIES	311			
SLAB TRANSVERSE TOP			501	117	23'-9	2899	117	24'-7	3000	108	23'-9	2676	98	23'-9	2428			
SLAB TRANSVERSE TOP			502	117	21'-3	2594	117	22'-0	2685	109	21'-3	2416	101	21'-3	2239			
SLAB TRANSVERSE ENDS, TOP			503	-	-	-	-	-	-	12	VARIES	155	20	VARIES	286			
SLAB TRANSVERSE ENDS, TOP			504	-	-	-	-	-	-	11	VARIES	152	20	VARIES	268			
SLAB TRANSVERSE ENDS, TOP			505	-	-	-	-	-	-	11	VARIES	122	18	VARIES	210			
SLAB TRANSVERSE ENDS, TOP			506	-	-	-	-	-	-	11	VARIES	132	17	VARIES	216			
SLAB TRANSVERSE AT ABUTMENT			801	18	26'-4	1266	18	27'-1	1302	18	29'-6	1418	18	34'-8	1667			
SLAB TRANSVERSE AT ABUTMENT			802	18	21'-4	1026	18	22'-0	1058	18	24'-5	1174	18	29'-7	1422			
SLAB, HAIRPINS, AT ABUTMENT			603	92	5'-0	691	92	5'-1	703	92	5'-5	749	92	6'-1	841			
SLAB, DIAGONALS, AT ABUTMENT			604	92	5'-11	818	92	5'-11	818	92	5'-11	818	92	5'-11	818			
PIER CAP HOOPS			501	52	7'-10	425	52	7'-10	425	78	7'-10	638	104	7'-10	850			
PIER CAP ENDS			802	4	14'-5	154	4	14'-5	154	4	14'-5	154	4	14'-5	154			
PIER CAP, BOTTOM LONGITUDINAL			803	8	25'-5	543	8	26'-7	568	8	29'-4	627	8	35'-0	748			
PIER CAP, BOTTOM LONGITUDINAL			804	4	19'-11	426	4	20'-3	433	4	22'-2	474	4	26'-10	574			
PIER CAP, TOP LONGITUDINAL			805	4	26'-2	280	4	27'-5	293	4	30'-4	324	4	36'-1	386			
PIER CAP, TOP LONGITUDINAL			806	4	21'-5	229	4	21'-10	234	4	23'-11	256	4	28'-8	307			
TOP OF SLAB, TRANSVERSE, AT RAIL			501	232	8'-6	2057	232	8'-6	2057	222	8'-6	1969	216	8'-6	1915			
WING, VERTICAL			501	40	4'-5	185	40	4'-5	185	40	4'-5	185	40	4'-5	185			
WING, HORIZONTAL BACK FACE			501	24	6'-8	167	24	6'-8	167	24	6'-8	167	24	6'-8	167			
WING, HORIZONTAL TRAFFIC FACE			503	24	6'-9	169	24	6'-9	169	24	6'-9	169	24	6'-9	169			
SUB EPOXY COATED TOTAL - LBS.						79,733			80,333			80,815			81,884			
BARRIER RAIL - SEE LIST ON RAIL SHEET J40-46-14						4860			4860			4860			4860			
OPEN RAIL - SEE LIST ON RAIL SHEET J40-49-14						5304			5304			5304			5304			
EPOXY COATED RAIL TOTAL - LBS.						84,593			85,193			85,675			86,744			
						85,037			85,637			86,119			87,188			
EPOXY COATED RAIL TOTAL - LBS.						82,536			83,086			83,202			83,725			
SAME AS ABOVE EXCEPT ALL "h" BARS DELETED						82,980			83,530			83,646			84,169			
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.		350.5	351.5	354.7	361.8	344.5	345.2	347.8	353.4
REINF. STEEL EPOXY COATED LBS.		84,593	85,193	85,675	86,744	82,536	83,086	83,202	83,725
REINF. STEEL STAINLESS STEEL LBS.		2899	2899	2899	2899	2899	2899	2899	2899
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.		350.3	351.2	354.5	361.6	344.3	345.0	347.6	353.2
REINF. STEEL EPOXY COATED LBS.		85,037	85,637	86,119	87,188	82,980	83,530	83,646	84,169
REINF. STEEL STAINLESS STEEL LBS.		2980	2980	2980	2980	2980	2980	2980	2980

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

BENT BAR DETAILS



STAINLESS STEEL REINFORCING FOR SUPERSTRUCTURE - BRIDGE

LOCATION	ALL SKEWS		BAR NO.	LENGTH	WEIGHT	
	SHAPE	BAR NO.				
ABUTMENT PAVING NOTCH BAR			8u1	40	2'-1	223

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.

IOWA DOT Highway Division

STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES

CONTINUOUS CONCRETE SLAB BRIDGES

JULY, 2014

LATEST REVISION DATE

04-2016

Thomas E. McQuillan

APPROVED BY BRIDGE ENGINEER

SUPERSTRUCTURE DETAILS

120'-0 BRIDGE

J40-13-14