

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. SEE WEIGHT IN ESTIMATED QUANTITIES TABLE.
 REVISED 04-2016 - REVISION TO INCLUDE PAVING NOTCH BAR. SEE WEIGHT IN ESTIMATED QUANTITIES TABLE.

BILL OF REINFORCING STEEL FOR SUPERSTRUCTURE - 80' BRIDGE

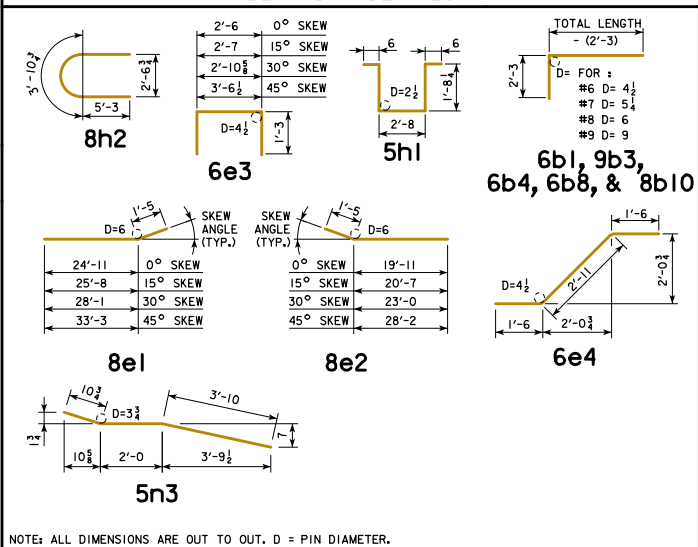
LOCATION	SKEW	SHAPE	0°				15°				30°				45°			
			BAR NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	
SLAB LONGITUDINAL BOTTOM			801	53	18'-3	2583	53	18'-3	2583	53	18'-3	2583	53	18'-3	2583	53	18'-3	2583
SLAB LONGITUDINAL BOTTOM			802	53	27'-0	3821	53	27'-0	3821	53	27'-0	3821	53	27'-0	3821	53	27'-0	3821
SLAB LONGITUDINAL BOTTOM			803	53	28'-0	3963	53	28'-0	3963	53	28'-0	3963	53	28'-0	3963	53	28'-0	3963
SLAB LONGITUDINAL BOTTOM			704	52	23'-0	2445	52	23'-0	2445	52	23'-0	2445	52	23'-0	2445	52	23'-0	2445
SLAB LONGITUDINAL BOTTOM			705	26	24'-6	1303	26	24'-6	1303	26	24'-6	1303	26	24'-6	1303	26	24'-6	1303
SLAB LONGITUDINAL BOTTOM, AT RAIL			706	8	28'-9	471	8	28'-9	471	8	28'-9	471	8	28'-9	471	8	28'-9	471
SLAB LONGITUDINAL BOTTOM, AT RAIL			707	4	29'-4	240	4	29'-4	240	4	29'-4	240	4	29'-4	240	4	29'-4	240
SLAB LONGITUDINAL BOTTOM, AT RAIL			808	8	20'-9	444	8	20'-9	444	8	20'-9	444	8	20'-9	444	8	20'-9	444
SLAB LONGITUDINAL BOTTOM, AT RAIL			809	4	25'-6	273	4	25'-6	273	4	25'-6	273	4	25'-6	273	4	25'-6	273
SLAB LONGITUDINAL TOP			601	53	19'-6	1553	53	19'-6	1553	53	19'-6	1553	53	19'-6	1553	53	19'-6	1553
SLAB LONGITUDINAL TOP			902	53	21'-9	3920	53	21'-9	3920	53	21'-9	3920	53	21'-9	3920	53	21'-9	3920
SLAB LONGITUDINAL TOP			903	53	32'-0	5767	53	32'-0	5767	53	32'-0	5767	53	32'-0	5767	53	32'-0	5767
SLAB LONGITUDINAL TOP			604	52	7'-6	586	52	7'-6	586	52	7'-6	586	52	7'-6	586	52	7'-6	586
SLAB LONGITUDINAL TOP			805	52	21'-3	2951	52	21'-3	2951	52	21'-3	2951	52	21'-3	2951	52	21'-3	2951
SLAB LONGITUDINAL TOP			606	26	16'-4	638	26	16'-4	638	26	16'-4	638	26	16'-4	638	26	16'-4	638
SLAB LONGITUDINAL TOP, AT RAIL			608	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			909	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			8010	8	34'-0	727	8	34'-0	727	8	34'-0	727	8	34'-0	727	8	34'-0	727
SLAB TRANSVERSE BOTTOM			601	77	23'-5	2709	77	24'-3	2805	68	23'-5	2392	58	23'-5	2040			
SLAB TRANSVERSE BOTTOM			602	77	21'-3	2458	77	22'-0	2545	69	21'-3	2203	61	21'-3	1947			
SLAB TRANSVERSE ENDS, BOTTOM			603	-	-	-	-	-	-	12	VARIES	219	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	77	23'-9	1908	77	24'-7	1975	68	23'-9	1685	58	23'-9	1437			
SLAB TRANSVERSE TOP			502	77	21'-3	1707	77	22'-0	1767	69	21'-3	1530	61	21'-3	1352			
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	72	7'-1	532	72	7'-1	532	72	7'-1	532	108	7'-1	798			
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	8	19'-11	426	8	20'-3	433	8	22'-2	474	8	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	152	8'-6	1348	152	8'-6	1348	142	8'-6	1259	136	8'-6	1206			
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.						49,248			49,688			50,117			51,240			
BARRIER RAIL - SEE LIST ON RAIL SHEET J40-46-14						3571			3571			3571			3571			
OPEN RAIL - SEE LIST ON RAIL SHEET J40-49-14						3725			3725			3725			3725			
EPOXY COATED RAIL TOTAL - LBS.						52,819			53,259			53,688			54,811			
WITH MONOLITHIC PIER CAP						52,973			53,413			53,842			54,965			
EPOXY COATED RAIL TOTAL - LBS.						50,655			51,045			51,321			51,844			
SAME AS ABOVE EXCEPT ALL "h" BARS DELETED						50,809			51,199			51,475			51,998			
WITH BARRIER RAIL						1893			1893			1893			1893			
WITH OPEN RAIL						2074			2074			2074			2074			
STAINLESS STEEL RAIL TOTAL - LBS.																		

ESTIMATED QUANTITIES FOR SUPERSTRUCTURE - 80' 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.		195.1	196.2	199.6	207.2	189.1	189.9	192.7	198.8
REINF. STEEL EPOXY COATED LBS.		52,819	53,259	53,688	54,811	50,655	51,045	51,321	51,844
REINF. STEEL STAINLESS STEEL LBS.		2116	2116	2116	2116	2116	2116	2116	2116
CONCRETE BARRIER OR OPEN RAIL LIN. FT.		182.0	182.2	182.9	184.5	162.0	162.2	162.9	164.5
WITH OPEN RAIL									
* STRUCTURAL CONCRETE (BRIDGE) C.Y.		195.0	196.0	199.5	207.1	188.9	189.8	192.6	198.7
REINF. STEEL EPOXY COATED LBS.		52,973	53,413	53,842	54,965	50,809	51,199	51,475	51,998
REINF. STEEL STAINLESS STEEL LBS.		2297	2297	2297	2267	2297	2297	2267	2297

* 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				
	SHAPE	BAR NO.	LENGTH	WEIGHT	
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.

LATEST REVISION DATE 04-2016 <i>Thomas E. McQuillan</i> APPROVED BY BRIDGE ENGINEER	IOWA DOT Highway Division
	STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES CONTINUOUS CONCRETE SLAB BRIDGES JULY, 2014
	SUPERSTRUCTURE DETAILS 80'-0 BRIDGE
	J40-05-14