BILL OF REINFORCING STEEL FOR SUPERSTRUCTURE - 130' BRIDGE

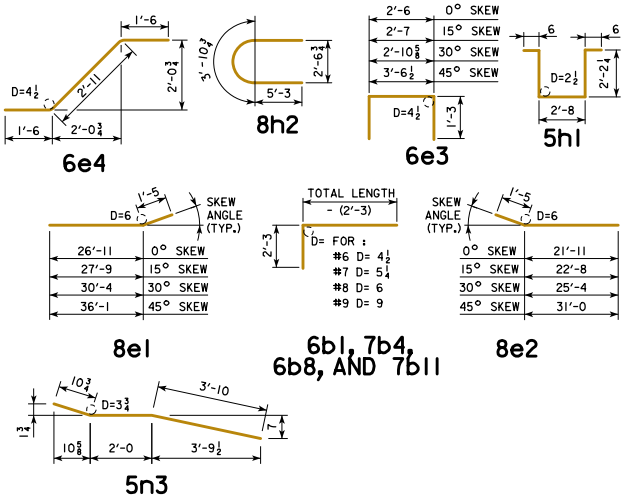
LOCATION \ SKEW	SHAPE	BAR	0° NO.	0° LENGTH	0° WEIGHT	15° NO.	15° LENGTH	15° WEIGHT	30° NO.	30° LENGTH	30° WEIGHT	45° NO.	45° LENGTH	45° WEIGHT
SLAB LONGITUDINAL BOTTOM		9a1	58	28'-9	5670	58	28'-9	5670	58	28'-9	5670	58	28'-9	5670
SLAB LONGITUDINAL BOTTOM		9a2	58	44'-6	8776	58	44'-6	8776	58	44'-6	8776	58	44'-6	8776
SLAB LONGITUDINAL BOTTOM		9a3	58	41'-3	8135	58	41'-3	8135	58	41'-3	8135	58	41'-3	8135
SLAB LONGITUDINAL BOTTOM		9a4	58	32'-9	6459	58	32'-9	6459	58	32'-9	6459	58	32'-9	6459
SLAB LONGITUDINAL BOTTOM		10a5	29	41'-0	5117	29	41'-0	5117	29	41'-0	5117	29	41'-0	5117
SLAB LONGITUDINAL BOTTOM, AT RAIL		9a6	8	38'-7	1050	8	38'-7	1050	8	38'-7	1050	8	38'-7	1050
SLAB LONGITUDINAL BOTTOM, AT RAIL		9a7	8	13'-0	354	8	13'-0	354	8	13'-0	354	8	13'-0	354
SLAB LONGITUDINAL BOTTOM, AT RAIL		9a8	4	48'-8	662	4	48'-8	662	4	48'-8	662	4	48'-8	662
SLAB LONGITUDINAL BOTTOM, AT RAIL		8a9	8	31'-3	668	8	31'-3	668	8	31'-3	668	8	31'-3	668
SLAB LONGITUDINAL BOTTOM, AT RAIL		9a10	4	29'-0	395	4	29'-0	395	4	29'-0	395	4	29'-0	395
SLAB LONGITUDINAL TOP		6b1	58	7'-9	676	58	7'-9	676	58	7'-9	676	58	7'-9	676
SLAB LONGITUDINAL TOP		11b2	58	28'-9	8860	58	28'-9	8860	58	28'-9	8860	58	28'-9	8860
SLAB LONGITUDINAL TOP		11b3	58	30'-6	9399	58	30'-6	9399	58	30'-6	9399	58	30'-6	9399
SLAB LONGITUDINAL TOP		7b4	58	23'-9	2816	58	23'-9	2816	58	23'-9	2816	58	23'-9	2816
SLAB LONGITUDINAL TOP		10b5	58	25'-6	6365	58	25'-6	6365	58	25'-6	6365	58	25'-6	6365
SLAB LONGITUDINAL TOP		6b6	29	34'-4	1496	29	34'-4	1496	29	34'-4	1496	29	34'-4	1496
SLAB LONGITUDINAL TOP, AT RAIL		6b8	8	30'-3	364	8	30'-3	364	8	30'-3	364	8	30'-3	364
SLAB LONGITUDINAL TOP, AT RAIL		11b9	8	32'-9	1393	8	32'-9	1393	8	32'-9	1393	8	32'-9	1393
SLAB LONGITUDINAL TOP, AT RAIL		6b10	4	23'-0	139	4	23'-0	139	4	23'-0	139	4	23'-0	139
SLAB LONGITUDINAL TOP, AT RAIL		7b11	8	35'-6	581	8	35'-6	581	8	35'-6	581	8	35'-6	581
SLAB LONGITUDINAL TOP, AT RAIL		11b12	8	23'-9	1010	8	23'-9	1010	8	23'-9	1010	8	23'-9	1010
SLAB TRANSVERSE BOTTOM		6c1	127	25'-5	4849	127	26'-4	5024	116	25'-5	4429	106	25'-5	4047
SLAB TRANSVERSE BOTTOM		6c2	127	23'-3	4436	127	24'-1	4594	118	23'-3	4121	109	23'-3	3807
SLAB TRANSVERSE ENDS, BOTTOM		6c3	-	-	-	-	-	-	14	VARIES	303	22	VARIES	485
SLAB TRANSVERSE ENDS, BOTTOM		6c4	-	-	-	-	-	-	12	VARIES	255	22	VARIES	458
SLAB TRANSVERSE ENDS, BOTTOM		6c5	-	-	-	-	-	-	12	VARIES	208	20	VARIES	366
SLAB TRANSVERSE ENDS, BOTTOM		6c6	-	-	-	-	-	-	12	VARIES	227	19	VARIES	376
SLAB TRANSVERSE TOP		5d1	127	25'-9	3411	127	26'-8	3533	116	25'-9	3116	106	25'-9	2847
SLAB TRANSVERSE TOP		5d2	127	23'-3	3080	127	24'-1	3191	118	23'-3	2862	109	23'-3	2644
SLAB TRANSVERSE ENDS, TOP		5d3	-	-	-	-	-	-	14	VARIES	210	22	VARIES	337
SLAB TRANSVERSE ENDS, TOP		5d4	-	-	-	-	-	-	12	VARIES	177	22	VARIES	318
SLAB TRANSVERSE ENDS, TOP		5d5	-	-	-	-	-	-	12	VARIES	144	20	VARIES	254
SLAB TRANSVERSE ENDS, TOP		5d6	-	-	-	-	-	-	12	VARIES	158	19	VARIES	261
SLAB, TRANSVERSE AT ABUTMENT		8e1	18	28'-4	1362	18	29'-2	1402	18	31'-9	1526	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
SLAB, HAIRPINS, AT ABUTMENT		6e3	100	5'-0	751	100	5'-1	764	100	5'-5	814	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
PIER CAP HOOPS		5h1	60	8'-1	506	60	8'-1	506	90	8'-1	759	90	8'-1	759
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	27'-5	586	8	28'-8	613	8	31'-8	677	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
PIER CAP, TOP LONGITUDINAL		8h5	4	28'-2	301	4	29'-6	316	4	32'-8	349	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
TOP OF SLAB, TRANSVERSE, AT RAIL		5j1	252	8'-6	2235	252	8'-6	2235	246	8'-6	2181	244	8'-6	2164
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.					95,308			96,019			96,556			97,543
BARRIER RAIL - SEE LIST ON RAIL SHEET J44-46-14					5172			5172			5172			5172
OPEN RAIL - SEE LIST ON RAIL SHEET J44-49-14					5628			5628			5628			5628
EPOXY COATED RAIL TOTAL - LBS. WITH MONOLITHIC PIER CAP		WITH BARRIER RAIL			100,480			101,191			101,728			102,715
		WITH OPEN RAIL			100,936			101,647			102,184			103,171
EPOXY COATED RAIL TOTAL - LBS. WITH NON-MONOLITHIC PIER CAP		WITH BARRIER RAIL			98,213			98,868			98,984			99,606
SAME AS ABOVE EXCEPT ALL "h" BARS DELETED		WITH OPEN RAIL			98,669			99,324			99,440			100,062
STAINLESS STEEL RAIL TOTAL - LBS.		WITH BARRIER RAIL			2882			2882			2882			2882
		WITH OPEN RAIL			2945			2945			2945			2945

ESTIMATED QUANTITIES FOR SUPERSTRUCTURE - 130' BRIDGE

ITEM		SKEW	WITH MONOLITHIC PIER CAP 0°	15°	30°	45°	WITH NON-MONOLITHIC PIER CAP 0°	15°	30°	45°
WITH BARRIER RAIL	✱ STRUCTURAL CONCRETE (BRIDGE)	C.Y.	435.0	436.0	439.5	447.1	428.6	429.4	432.2	438.2
	REINF. STEEL EPOXY COATED	LBS.	100,480	101,191	101,728	102,715	98,213	98,868	98,984	99,606
	Δ REINF. STEEL STAINLESS STEEL	LBS.	3127	3127	3127	3127	3127	3127	3127	3127
CONCRETE BARRIER OR OPEN RAIL		LIN. FT.	282.0	282.2	282.9	284.5	282.0	282.2	282.9	284.5
WITH OPEN RAIL	✱ STRUCTURAL CONCRETE (BRIDGE)	C.Y.	434.7	435.8	439.3	446.9	428.3	429.1	431.9	438.0
	REINF. STEEL EPOXY COATED	LBS.	100,936	101,647	102,184	103,171	98,669	99,324	99,440	100,062
	Δ REINF. STEEL STAINLESS STEEL	LBS.	3190	3190	3190	3190	3190	3190	3190	3190

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

BENT BAR DETAILS



NOTE: ALL DIMENSIONS ARE OUT TO OUT. D = PIN DIAMETER.

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 BRIDGE ENGINEER

IOWADOT Highway Division

STANDARD DESIGN - 44' ROADWAY, 3 SPAN BRIDGES

CONTINUOUS CONCRETE SLAB BRIDGES

JULY, 2014

SUPERSTRUCTURE DETAILS 130'-0 BRIDGE

J44-15-14

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.
REVISED 04-2016 - REVISION TO INCLUDE PAVING NOTCH BAR 8u1 WEIGHT IN ESTIMATED QUANTITIES TABLE.