BILL OF REINFORCING STEEL FOR SUPERSTRUCTURE - 90' BRIDGE

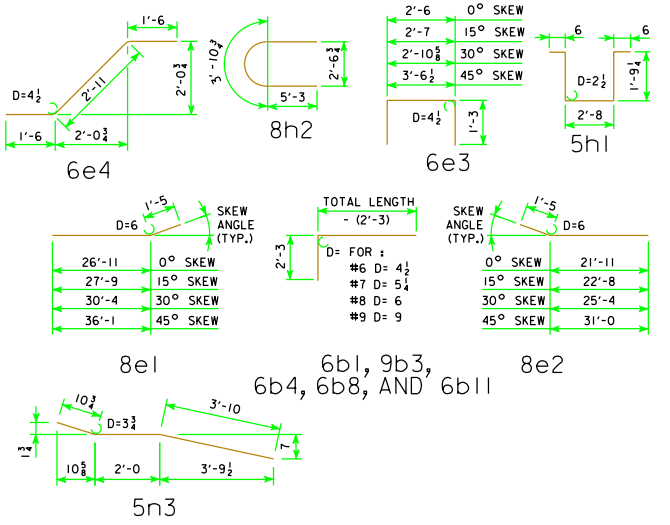
LOCATION	SHAPE	BAR	0° NO.	0° LENGTH	0° WEIGHT	15° NO.	15° LENGTH	15° WEIGHT	30° NO.	30° LENGTH	30° WEIGHT	45° NO.	45° LENGTH	45° WEIGHT
SLAB LONGITUDINAL BOTTOM		8a1	58	20'-0	3098	58	20'-0	3098	58	20'-0	3098	58	20'-0	3098
SLAB LONGITUDINAL BOTTOM		8a2	58	30'-3	4685	58	30'-3	4685	58	30'-3	4685	58	30'-3	4685
SLAB LONGITUDINAL BOTTOM		8a3	58	28'-6	4414	58	28'-6	4414	58	28'-6	4414	58	28'-6	4414
SLAB LONGITUDINAL BOTTOM		8a4	58	25'-6	3949	58	25'-6	3949	58	25'-6	3949	58	25'-6	3949
SLAB LONGITUDINAL BOTTOM		8a5	29	28'-0	2169	29	28'-0	2169	29	28'-0	2169	29	28'-0	2169
SLAB LONGITUDINAL BOTTOM, AT RAIL		8a6	8	32'-3	689	8	32'-3	689	8	32'-3	689	8	32'-3	689
SLAB LONGITUDINAL BOTTOM, AT RAIL		8a7	4	34'-4	367	4	34'-4	367	4	34'-4	367	4	34'-4	367
SLAB LONGITUDINAL BOTTOM, AT RAIL		8a8	8	22'-9	486	8	22'-9	486	8	22'-9	486	8	22'-9	486
SLAB LONGITUDINAL BOTTOM, AT RAIL		8a9	4	21'-0	225	4	21'-0	225	4	21'-0	225	4	21'-0	225
SLAB LONGITUDINAL TOP		6b1	58	8'-0	697	58	8'-0	697	58	8'-0	697	58	8'-0	697
SLAB LONGITUDINAL TOP		9b2	58	22'-9	4487	58	22'-9	4487	58	22'-9	4487	58	22'-9	4487
SLAB LONGITUDINAL TOP		9b3	58	35'-0	6902	58	35'-0	6902	58	35'-0	6902	58	35'-0	6902
SLAB LONGITUDINAL TOP		6b4	58	13'-0	1133	58	13'-0	1133	58	13'-0	1133	58	13'-0	1133
SLAB LONGITUDINAL TOP		9b5	58	27'-6	5423	58	27'-6	5423	58	27'-6	5423	58	27'-6	5423
SLAB LONGITUDINAL TOP		6b6	29	16'-10	734	29	16'-10	734	29	16'-10	734	29	16'-10	734
SLAB LONGITUDINAL TOP, AT RAIL		6b8	8	26'-0	313	8	26'-0	313	8	26'-0	313	8	26'-0	313
SLAB LONGITUDINAL TOP, AT RAIL		9b9	8	19'-6	531	8	19'-6	531	8	19'-6	531	8	19'-6	531
SLAB LONGITUDINAL TOP, AT RAIL		6b10	4	18'-0	109	4	18'-0	109	4	18'-0	109	4	18'-0	109
SLAB LONGITUDINAL TOP, AT RAIL		6b11	8	28'-6	343	8	28'-6	343	8	28'-6	343	8	28'-6	343
SLAB LONGITUDINAL TOP, AT RAIL		10b12	8	13'-3	457	8	13'-3	457	8	13'-3	457	8	13'-3	457
SLAB TRANSVERSE BOTTOM		6c1	87	25'-5	3322	87	26'-4	3442	76	25'-5	2902	66	25'-5	2520
SLAB TRANSVERSE BOTTOM		6c2	87	23'-3	3039	87	24'-1	3148	78	23'-3	2724	69	23'-3	2410
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	87	25'-9	2337	87	26'-8	2420	76	25'-9	2042	66	25'-9	1773
SLAB TRANSVERSE TOP		5d2	87	23'-3	2110	87	24'-1	2186	78	23'-3	1892	69	23'-3	1674
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	80	7'-3	605	80	7'-3	605	80	7'-3	605	120	7'-3	908
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	172	8'-6	1525	172	8'-6	1525	166	8'-6	1472	164	8'-6	1454
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 TOTAL - LBS.					60,555			61,088			61,551			62,840
BARRIER RAIL - SEE LIST ON RAIL SHEET J44-46-06					5950			5950			5950			5950
OPEN RAIL - SEE LIST ON RAIL SHEET J44-49-06					6330			6330			6330			6330
TOTAL - LBS. WITH MONOLITHIC PIER CAP		WITH BARRIER RAIL			66,505			67,038			67,501			68,790
		WITH OPEN RAIL			66,885			67,418			67,881			69,170
TOTAL - LBS. WITH NON-MONOLITHIC PIER CAP		WITH BARRIER RAIL			64,139			64,616			64,911			65,532
SAME AS ABOVE EXCEPT ALL "h" BARS DELETED		WITH OPEN RAIL			64,519			64,996			65,291			65,912

ESTIMATED QUANTITIES FOR SUPERSTRUCTURE - 90' 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.	247.8	248.9	252.7	260.9	241.4	242.3	245.4	252.0
	REINFORCING STEEL EPOXY COATED	LBS.	66,505	67,038	67,501	68,790	64,139	64,616	64,911	65,532
CONCRETE BARRIER OR OPEN RAIL		LIN. FT.	202.0	202.2	202.9	204.5	202.0	202.2	202.9	204.5
WITH OPEN RAIL	*STRUCTURAL CONCRETE (BRIDGE)	C.Y.	247.7	248.8	252.5	260.7	241.3	242.2	245.2	251.8
	REINFORCING STEEL EPOXY COATED	LBS.	66,885	67,418	67,881	69,170	64,519	64,996	65,291	65,912

* INCLUDES 4 WINGS @ 0.68 C.Y. EACH; EXCLUDES RAIL CONCRETE.

BENT BAR DETAILS



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

NOTES:

ALL REINFORCING STEEL SHALL 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.

REVISED 07-09 - OPEN RAIL REINF. QTYS. CHANGED WHICH CHANGED TOTAL REINF. QTYS.

07-09
LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 44' ROADWAY, 3 SPAN BRIDGES

CONTINUOUS CONCRETE SLAB BRIDGES

NOVEMBER, 2006

SUPERSTRUCTURE DETAILS
90'-0 BRIDGE

J44-07-06