BILL OF REINFORCING STEEL FOR SUPERSTRUCTURE - 90' BRIDGE

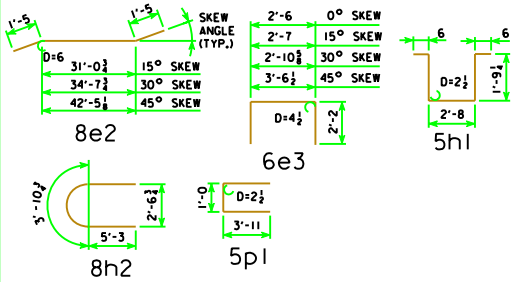
LOCATION \ SKEW	SHAPE	BAR	0° NO.	0° LENGTH	0° WEIGHT	15° NO.	15° LENGTH	15° WEIGHT	30° NO.	30° LENGTH	30° WEIGHT	45° NO.	45° LENGTH	45° WEIGHT
SLAB LONGITUDINAL BOTTOM		8a1	39	21'-1	2196	39	21'-1	2196	39	21'-1	2196	39	21'-1	2196
SLAB LONGITUDINAL BOTTOM		8a2	39	30'-3	3150	39	30'-3	3150	39	30'-3	3150	39	30'-3	3150
SLAB LONGITUDINAL BOTTOM		8a3	39	28'-6	2968	39	28'-6	2968	39	28'-6	2968	39	28'-6	2968
SLAB LONGITUDINAL BOTTOM		8a4	40	26'-7	2840	40	26'-7	2840	40	26'-7	2840	40	26'-7	2840
SLAB LONGITUDINAL BOTTOM		8a5	20	28'-0	1496	20	28'-0	1496	20	28'-0	1496	20	28'-0	1496
SLAB LONGITUDINAL BOTTOM, AT RAIL		8a6	8	33'-4	712	8	33'-4	712	8	33'-4	712	8	33'-4	712
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	23'-10	510	8	23'-10	510	8	23'-10	510	8	23'-10	510
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	39	6'-10	401	39	6'-10	401	39	6'-10	401	39	6'-10	401
SLAB LONGITUDINAL TOP		9b2	39	22'-9	3017	39	22'-9	3017	39	22'-9	3017	39	22'-9	3017
SLAB LONGITUDINAL TOP		9b3	39	33'-10	4487	39	33'-10	4487	39	33'-10	4487	39	33'-10	4487
SLAB LONGITUDINAL TOP		6b4	40	11'-10	711	40	11'-10	711	40	11'-10	711	40	11'-10	711
SLAB LONGITUDINAL TOP		9b5	40	27'-6	3740	40	27'-6	3740	40	27'-6	3740	40	27'-6	3740
SLAB LONGITUDINAL TOP		6b6	20	16'-10	506	20	16'-10	506	20	16'-10	506	20	16'-10	506
SLAB LONGITUDINAL TOP, AT RAIL		6b8	8	24'-10	299	8	24'-10	299	8	24'-10	299	8	24'-10	299
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	27'-4	329	8	27'-4	329	8	27'-4	329	8	27'-4	329
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	32'-10	4291	87	34'-0	4443	76	32'-10	3748	64	32'-10	3157
SLAB TRANSVERSE ENDS, BOTTOM		6c2	-	-	-	-	-	-	28	VARIES	800	52	VARIES	1426
SLAB TRANSVERSE, TOP		5d1	87	32'-10	2980	87	34'-0	3086	76	32'-10	2603	64	32'-10	2192
SLAB TRANSVERSE ENDS, TOP		5d2	-	-	-	-	-	-	28	VARIES	555	52	VARIES	990
SLAB, TRANSVERSE AT ABUTMENT		8e1	20	32'-10	1754	-	-	-	-	-	-	-	-	-
SLAB, TRANSVERSE AT ABUTMENT		8e2	-	-	-	20	33'-11	1812	20	37'-6	2003	20	45'-4	2421
SLAB HAIRPINS, AT ABUTMENT		6e3	72	6'-10	739	72	6'-11	748	72	7'-3	785	72	7'-11	857
PIER CAP HOOPS		5h1	56	7'-3	424	56	7'-3	424	56	7'-3	424	70	7'-3	530
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	29'-10	638	8	30'-11	661	8	34'-5	736	8	42'-2	901
PIER CAP,TOP LONGITUDINAL		8h4	4	32'-10	351	4	34'-0	364	4	37'-11	405	4	46'-6	497
TOP OF SLAB, TRANSVERSE, AT RAIL		5j1	172	8'-6	1525	172	8'-6	1525	172	8'-6	1525	170	8'-6	1508
WING VERTICAL		5m1-4	32	SHOWN	117	32	SHOWN	117	32	SHOWN	117	32	SHOWN	117
WING, HORIZONTAL		5n1	24	6'-8	167	24	6'-8	167	24	6'-8	167	24	6'-8	167
PAVING SUPPORT, TRANSVERSE		5p1	30	8'-10	277	32	8'-10	295	34	8'-10	314	42	8'-10	387
PAVING SUPPORT, LONGITUDINAL		5p3	6	30'-2	189	6	31'-3	196	6	34'-10	218	6	42'-7	267
SUB TOTAL - LBS.					42,657			43,043			43,605			44,622
BARRIER RAIL - SEE LIST ON RAIL SHEET J30-41-06					5642			5642			5642			5642
OPEN RAIL - SEE LIST ON RAIL SHEET J30-44-06					5757			5757			5757			5757
TOTAL - LBS. WITH MONOLITHIC PIER CAP		WITH BARRIER RAIL			48,299			48,685			49,247			50,264
		WITH OPEN RAIL			48,414			48,800			49,362			50,379
TOTAL - LBS. WITH NON-MONOLITHIC PIER CAP		WITH BARRIER RAIL			46,732			47,082			47,528			48,182
SAME AS ABOVE EXCEPT ALL "h" BARS DELETED		WITH OPEN RAIL			46,847			47,197			47,643			48,297

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.	183.2	184.3	187.8	195.6	178.2	179.1	182.2	188.7
	REINFORCING STEEL EPOXY COATED	LBS.	48,299	48,685	49,247	50,264	46,732	47,082	47,528	48,182
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.	183.0	184.1	187.7	195.4	178.1	179.0	182.0	188.6
	REINFORCING STEEL EPOXY COATED	LBS.	48,414	48,800	49,362	50,379	46,847	47,197	47,643	48,297

* INCLUDES 4 WINGS @ 0.71 C.Y. EACH; EXCLUDES RAIL CONCRETE.

BENT BAR DETAILS



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

LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 30' ROADWAY, 3 SPAN BRIDGES

CONTINUOUS CONCRETE SLAB BRIDGES

NOVEMBER, 2006

SUPERSTRUCTURE DETAILS
90'-0 BRIDGE

EPOXY COATED REINFORCING

J30-07E-06