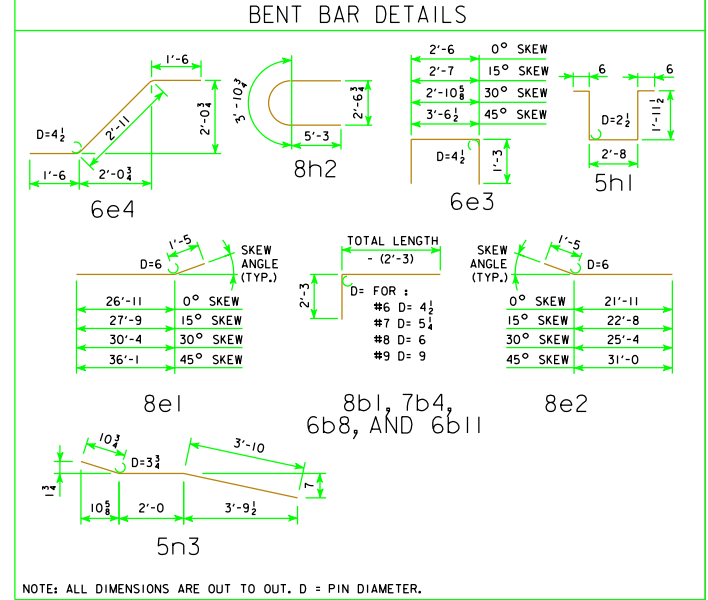


BILL OF REINFORCING STEEL FOR SUPERSTRUCTURE - 110' BRIDGE

LOCATION	SKEW	SHAPE	0°		15°		30°		45°						
			BAR NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	
SLAB LONGITUDINAL BOTTOM			8a1	58	24'-3	3756	58	24'-3	3756	58	24'-3	3756	58	24'-3	3756
SLAB LONGITUDINAL BOTTOM			9a2	58	38'-3	7543	58	38'-3	7543	58	38'-3	7543	58	38'-3	7543
SLAB LONGITUDINAL BOTTOM			8a3	58	34'-3	5304	58	34'-3	5304	58	34'-3	5304	58	34'-3	5304
SLAB LONGITUDINAL BOTTOM			9a4	58	31'-9	6262	58	31'-9	6262	58	31'-9	6262	58	31'-9	6262
SLAB LONGITUDINAL BOTTOM			8a5	29	41'-0	3175	29	41'-0	3175	29	41'-0	3175	29	41'-0	3175
SLAB LONGITUDINAL BOTTOM, AT RAIL			9a6	8	39'-3	1068	8	39'-3	1068	8	39'-3	1068	8	39'-3	1068
SLAB LONGITUDINAL BOTTOM, AT RAIL			9a7	4	42'-8	581	4	42'-8	581	4	42'-8	581	4	42'-8	581
SLAB LONGITUDINAL BOTTOM, AT RAIL			8a8	8	23'-9	508	8	23'-9	508	8	23'-9	508	8	23'-9	508
SLAB LONGITUDINAL BOTTOM, AT RAIL			8a9	4	24'-0	257	4	24'-0	257	4	24'-0	257	4	24'-0	257
SLAB LONGITUDINAL TOP			8b1	58	13'-0	2014	58	13'-0	2014	58	13'-0	2014	58	13'-0	2014
SLAB LONGITUDINAL TOP			10b2	58	28'-4	7072	58	28'-4	7072	58	28'-4	7072	58	28'-4	7072
SLAB LONGITUDINAL TOP			10b3	58	25'-7	6385	58	25'-7	6385	58	25'-7	6385	58	25'-7	6385
SLAB LONGITUDINAL TOP			7b4	58	21'-5	2539	58	21'-5	2539	58	21'-5	2539	58	21'-5	2539
SLAB LONGITUDINAL TOP			10b5	58	26'-6	6614	58	26'-6	6614	58	26'-6	6614	58	26'-6	6614
SLAB LONGITUDINAL TOP			6b6	29	27'-4	1191	29	27'-4	1191	29	27'-4	1191	29	27'-4	1191
SLAB LONGITUDINAL TOP, AT RAIL			6b8	8	26'-9	322	8	26'-9	322	8	26'-9	322	8	26'-9	322
SLAB LONGITUDINAL TOP, AT RAIL			10b9	8	27'-3	939	8	27'-3	939	8	27'-3	939	8	27'-3	939
SLAB LONGITUDINAL TOP, AT RAIL			6b10	4	21'-0	127	4	21'-0	127	4	21'-0	127	4	21'-0	127
SLAB LONGITUDINAL TOP, AT RAIL			6b11	8	30'-3	364	8	30'-3	364	8	30'-3	364	8	30'-3	364
SLAB LONGITUDINAL TOP, AT RAIL			10b12	8	19'-6	672	8	19'-6	672	8	19'-6	672	8	19'-6	672
SLAB TRANSVERSE BOTTOM			6c1	107	25'-5	4085	107	26'-4	4233	96	25'-5	3665	86	25'-5	3284
SLAB TRANSVERSE BOTTOM			6c2	107	23'-3	3737	107	24'-1	3871	98	23'-3	3423	89	23'-3	3109
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	107	25'-9	2874	107	26'-8	2977	96	25'-9	2579	86	25'-9	2310
SLAB TRANSVERSE TOP			5d2	107	23'-3	2595	107	24'-1	2688	98	23'-3	2377	89	23'-3	2159
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	72	7'-7	570	72	7'-7	570	96	7'-7	760	96	7'-7	760
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	212	8'-6	1880	212	8'-6	1880	206	8'-6	1827	204	8'-6	1809
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.						78,840			79,463			80,027			81,014
BARRIER RAIL - SEE LIST ON RAIL SHEET J44-46-06						6962			6962			6962			6962
OPEN RAIL - SEE LIST ON RAIL SHEET J44-49-06						7261			7261			7261			7261
TOTAL - LBS.						85,802			86,425			86,989			87,976
		WITH MONOLITHIC PIER CAP	WITH BARRIER RAIL			86,101			86,724			87,288			88,275
TOTAL - LBS.						83,471			84,038			84,244			84,866
		WITH BARRIER RAIL													
SAME AS ABOVE EXCEPT ALL "h" BARS DELETED			WITH OPEN RAIL			83,770			84,337			84,543			85,165



- 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.

ESTIMATED QUANTITIES FOR SUPERSTRUCTURE - 110' BRIDGE

ITEM	SKEW	WITH MONOLITHIC PIER CAP				WITH NON-MONOLITHIC PIER CAP			
		0°	15°	30°	45°	0°	15°	30°	45°
		C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.
WITH STRUCTURAL CONCRETE (BRIDGE)		330.2	331.3	335.0	342.9	323.8	324.7	327.6	334.0
BARRIER RAIL REINFORCING STEEL EPOXY COATED		85,802	86,425	86,989	87,976	83,471	84,038	84,244	84,866
CONCRETE BARRIER OR OPEN RAIL		LIN. FT.	242.0	242.2	242.9	244.5	242.0	242.2	242.9
WITH STRUCTURAL CONCRETE (BRIDGE)		C.Y.	330.0	331.1	334.7	342.7	323.6	324.5	327.4
OPEN RAIL REINFORCING STEEL EPOXY COATED		LBS.	86,101	86,724	87,288	84,275	83,770	84,337	84,543

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

07-09 LATEST REVISION DATE	 APPROVED BY BRIDGE ENGINEER		<p style="text-align: center;">Iowa Department of Transportation Highway Division</p> <p style="text-align: center;">STANDARD DESIGN - 44' ROADWAY, 3 SPAN BRIDGES</p> <p style="text-align: center;">CONTINUOUS CONCRETE SLAB BRIDGES</p> <p style="text-align: center;">NOVEMBER, 2006</p>
		SUPERSTRUCTURE DETAILS 110'-0 BRIDGE	J44-11-06