



SLAB LAYOUT

(LEFT AHEAD SKEW SHOWN, RIGHT AHEAD SKEW SIMILAR)

NOTE: CONCRETE DECK SLAB SHALL BE PLACED IN SECTIONS AND SEQUENCES INDICATED. ALTERNATE PROCEDURES FOR PLACING SLAB CONCRETE MAY BE SUBMITTED FOR APPROVAL TOGETHER WITH A STATEMENT OF THE PROPOSED METHOD AND EVIDENCE THAT THE CONTRACTOR POSSESSES THE NECESSARY EQUIPMENT AND FACILITIES TO ACCOMPLISH THE REQUIRED RESULTS.

ESTIMATED QUANTITIES
(SUPERSTRUCTURE PLUS INTEGRAL ABUTMENTS)

	WITH BARRIER RAIL	WITH OPEN RAIL	C.Y.	138'-10"	151'-4"	163'-10"	176'-4"	188'-10"	201'-4"	213'-10"	226'-4"	243'-0"
STRUCTURAL CONCRETE SUPERSTRUCTURE (INCLUDES ABUTMENT WINGS)			C.Y.	247.1	262.3	289.3	304.5	320.1	349.0	364.4	380.3	401.3
STRUCTURAL CONCRETE ABUTMENTS (w/ WOOD PILES) ***			C.Y.	43.1	42.9	42.8	42.7	42.7	42.7	42.7	42.7	42.7
PRETENSIONED PRESTRESSED CONCRETE BEAM, CENTER SPAN			NO.	7-A50	7-A55	7-B59	7-B63	7-B67	7-C71	7-C75	7-C80	7-C80
PRETENSIONED PRESTRESSED CONCRETE BEAM, END SPAN			NO.	14-A42	14-A46	14-B50	14-B55	14-B59	14-C63	14-C67	14-C71	14-C80
CONCRETE RAIL (BARRIER OR OPEN)			L.F.	312.6	337.6	362.6	387.6	412.6	456.7	481.7	506.7	540.0
STRUCTURAL STEEL (w/ PILE BENT PIERS & DRAINS)			L.B.	5777	5777	5665	5665	5665	5630	5630	5630	5630
STRUCTURAL STEEL (w/ PILE BENT PIERS & NO DRAINS)			L.B.	5009	5009	5009	5009	5009	4894	4894	4894	4894
STRUCTURAL STEEL (w/ TEE PIERS & DRAINS)			L.B.	6831	6831	6919	6919	6919	7111	7111	7111	7111
STRUCTURAL STEEL (w/ TEE PIERS & NO DRAINS)			L.B.	6263	6263	6263	6263	6263	6375	6375	6375	6375
EPOXY COATED REINF. STEEL (w/ WOOD PILES & BARRIER RAIL)			L.B.	67,844	71,967	76,807	82,123	86,642	94,534	100,147	104,673	110,469
EPOXY COATED REINF. STEEL (w/ WOOD PILES & OPEN RAIL)			L.B.	68,587	72,020	77,665	83,165	87,618	94,534	100,147	104,673	110,469
EPOXY COATED REINF. (w/ STEEL H PILES & BARRIER RAIL)			L.B.	67,393	72,022	76,753	81,962	86,481	94,534	100,147	104,673	110,469
EPOXY COATED REINF. (w/ STEEL H PILES & OPEN RAIL)			L.B.	68,136	72,725	77,611	83,004	87,457	96,488	102,014	106,745	112,595
NO. OF WOOD PILES, TREATED FOR TWO ABUTMENTS			NO.	30	32	34	36	36	36	36	36	36
NO. OF STEEL H-PILES FOR TWO ABUTMENTS (HP 10 x 57)			NO.	16	16	16	16	16	22	22	22	24
PREBORED HOLES (W/WOOD PILES)			L.F.	300	320	340	360	360	360	360	360	360
PREBORED HOLES (W/STEEL H-PILES)			L.F.	160	160	160	160	160	220	220	220	240

GENERAL DATA

		CL-CL ABUT. BRG.	138'-10"	151'-4"	163'-10"	176'-4"	188'-10"	201'-4"	213'-10"	226'-4"	243'-0"
VERTICAL	TOP OF SLAB TO ABUT. CONSTR. JT. AT C.L. ABUT. BRG.	"U"	3'-8 1/2"	3'-7 1/2"	4'-2 1/2"	4'-2 1/2"	4'-8 3/8"	4'-8 3/8"	4'-9 3/8"	4'-9 3/8"	4'-9 3/8"
CURVE	TOP OF SLAB TO PIER TOP AT C.L. PIER*	"U"	3'-6 3/8"	3'-6 3/8"	4'-1 1/2"	4'-1 1/2"	4'-7 3/8"	4'-7 3/8"	4'-7 3/8"	4'-7 3/8"	4'-7 3/8"
STRAIGHT	TOP OF SLAB TO ABUT. CONSTR. JT. AT C.L. ABUT. BRG.	"U"	3'-8 1/2"	3'-7 1/2"	4'-2 1/2"	4'-2 1/2"	4'-3 1/8"	4'-8 3/8"	4'-8 3/8"	4'-9 3/8"	4'-10"
GRADE	TOP OF SLAB TO PIER TOP AT C.L. PIER*	"U"	3'-6 3/8"	3'-6 3/8"	4'-1 1/2"	4'-1 1/2"	4'-2 3/8"	4'-7 3/8"	4'-7 3/8"	4'-8 3/8"	4'-8 3/8"
D.L. PIER REACTION (D.L. + F.W.S.)		KIPS	489.3	527.5	604.3	644.6	685.2	822.9	868.4	914.4	959.2
L.L. PIER REACTION (HL93) NO IMPACT		KIPS	264.7	274.5	283.9	293.1	302.2	311.0	322.9	341.9	362.6
NO. OF SPACES FOR 6a1 BARS (TOP)		"E"	138	153	168	183	198	213	228	243	263
NO. OF SPACES FOR 6a1 BARS (BOTTOM)		"H"	139	154	169	184	199	214	229	244	264
NO. OF SPACES FOR 5j1 BARS (TOP)		"J"	165	180	195	210	225	240	255	270	290
OUT TO OUT OF SLAB		"S"	142'-3 3/8"	154'-9 3/8"	167'-3 3/8"	179'-9 3/8"	192'-3 3/8"	204'-9 3/8"	217'-3 3/8"	229'-9 3/8"	246'-5 3/8"
SLAB TRANSVERSE CONSTR. JT. DISTANCE FROM C.L. PIER		"X"	6'-7"	7'-1"	7'-7"	8'-1"	8'-8"	9'-2"	9'-8"	10'-2"	10'-2"

CONCRETE PLACEMENT QUANT.
(SUPERSTRUCTURE PLUS INTEGRAL ABUTMENTS)

	WITH BARRIER RAIL	WITH OPEN RAIL	C.Y.	138'-10"	151'-4"	163'-10"	176'-4"	188'-10"	201'-4"	213'-10"	226'-4"	243'-0"
SLAB INCLUDING HAUNCH, ABUT. DIAPHRAGM, & WINGWALLS**, SECTIONS 1 & 3			C.Y.	135.0	143.8	159.2	168.0	176.8	195.6	204.6	214.0	235.0
SLAB INCLUDING HAUNCH, SECTION 2			C.Y.	47.3	51.1	54.9	58.7	62.3	66.4	70.2	74.1	74.1
SLAB INCLUDING HAUNCH & PIER DIAPHRAGM, SECTIONS 4 & 5			C.Y.	58.1	60.7	62.6	70.2	73.4	78.6	81.2	83.8	83.8
ABUTMENT WINGS			C.Y.	58.1	60.7	62.6	70.2	73.4	78.6	81.2	83.8	83.8
ABUTMENT FOOTINGS (w/ WOOD PILES) ***			C.Y.	43.1	42.9	42.8	42.7	42.7	42.7	42.7	42.7	42.7
ABUTMENT FOOTINGS (w/ STEEL H PILES) ***			C.Y.	44.8	44.8	44.8	44.8	44.8	52.6	52.6	52.6	52.6

* VALUES SHOWN ARE FOR FIXED PIERS ONLY AND ALLOW FOR 1/8 INCH DEFLECTION OF THE 1 INCH NEOPRENE BEARING PAD. AT EXPANSION PIER LOCATIONS ADD 3/16 INCHES TO "U" VALUES SHOWN.

** WINGWALLS APPLY ONLY TO BRIDGES USING "C" BEAMS.

*** SEE SHEET H44-24-07 FOR ADDITIONAL CONCRETE REQUIRED IN ABUTMENT FOOTINGS.

11-09
LATEST REVISION DATE

Thomas C. Mc Donnell
APPROVED BY BRIDGE ENGINEER

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 44' ROADWAY, THREE SPAN BRIDGE
PRETENSIONED PRESTRESSED
CONCRETE BEAM BRIDGES
MARCH, 2007

SUPERSTRUCTURE DETAILS
30° SKEW

H44-22-07

REVISED 11-09 - THE ESTIMATED QUANTITIES & CONC. PLACEMENT QUANTITIES WERE CHANGED.