



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)		℄-℄ ABUT. BRG.	138'-10	151'-4	163'-10	176'-4	188'-10	201'-4	213'-10	226'-4	243'-0
STRUCTURAL CONCRETE SUPERSTRUCTURE (INCLUDES ABUTMENT WINGS)	WITH BARRIER RAIL	C.Y.	227.5	241.4	266.3	280.4	294.5	321.9	335.8	350.3	369.5
	WITH OPEN RAIL	C.Y.	230.0	244.1	269.3	283.6	297.9	325.4	339.5	354.2	373.7
STRUCTURAL CONCRETE ABUTMENTS (w/ WOOD PILES) ***		C.Y.	39.1	39.1	38.9	38.8	38.8	-----	-----	-----	-----
STRUCTURAL CONCRETE ABUTMENTS (w/ STEEL H PILES) ***		C.Y.	40.8	40.8	40.8	40.8	40.8	48.4	48.4	48.4	48.4
PRETENSIONED PRESTRESSED CONCRETE BEAM, CENTER SPAN		NO.	6-A50	6-A55	6-B59	6-B63	6-B67	6-C71	6-C75	6-C80	6-C80
PRETENSIONED PRESTRESSED CONCRETE BEAM, END SPAN		NO.	12-A42	12-A46	12-B50	12-B55	12-B59	12-C63	12-C67	12-C71	12-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.	5143	5143	5231	5231	5231	5215	5215	5215	5215
STRUCTURAL STEEL (w/ PILE BENT PIERS & NO DRAINS)		L.B.	4463	4463	4463	4463	4463	4367	4367	4367	4367
STRUCTURAL STEEL (w/ TEE PIERS & DRAINS)		L.B.	6218	6218	6306	6306	6306	6485	6485	6485	6485
STRUCTURAL STEEL (w/ TEE PIERS & NO DRAINS)		L.B.	5538	5538	5538	5538	5538	5637	5637	5637	5637
EPOXY COATED REINF. STEEL (w/ WOOD PILES & BARRIER RAIL)		L.B.	62,821	67,187	71,726	76,737	80,997	-----	-----	-----	-----
EPOXY COATED REINF. STEEL (w/ WOOD PILES & OPEN RAIL)		L.B.	63,486	67,808	72,494	77,681	81,871	-----	-----	-----	-----
EPOXY COATED REINF. STEEL (w/ STEEL H PILES & BARRIER RAIL)		L.B.	63,006	67,372	71,804	76,706	80,943	88,402	93,685	97,879	103,446
EPOXY COATED REINF. STEEL (w/ STEEL H PILES & OPEN RAIL)		L.B.	63,671	67,993	72,572	77,650	81,817	90,246	95,438	99,829	105,442
NO. OF WOOD PILES, TREATED FOR TWO ABUTMENTS		NO.	30	30	32	34	34	-----	-----	-----	-----
NO. OF STEEL H-PILES FOR TWO ABUTMENTS (HP 10 x 57)		NO.	14	14	14	14	16	20	20	22	22
PREBORED HOLES (w/ WOOD PILES)		L.F.	300	300	320	340	340	-----	-----	-----	-----
PREBORED HOLES (w/ STEEL H-PILES)		L.F.	140	140	140	140	160	200	200	220	220

CONCRETE PLACEMENT QUANT.		℄-℄ ABUT. BRG.	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	WITH BARRIER RAIL	C.Y.	124.0	132.0	146.2	154.4	162.4	180.2	188.4	197.0	216.2
	WITH OPEN RAIL	C.Y.	125.3	133.4	147.8	156.1	164.2	182.1	190.4	199.1	218.6
SLAB INCLUDING HAUNCH, SECTION 2	WITH BARRIER RAIL	C.Y.	43.5	47.0	50.5	54.0	57.3	61.1	64.6	68.1	68.1
	WITH OPEN RAIL	C.Y.	44.2	47.8	51.3	54.9	58.3	62.1	65.6	69.2	69.2
SLAB INCLUDING HAUNCH & PIER DIAPHRAGM, SECTIONS 4 & 5	WITH BARRIER RAIL	C.Y.	52.8	55.2	62.0	64.4	67.2	72.2	74.4	76.8	76.8
	WITH OPEN RAIL	C.Y.	53.3	55.7	62.6	65.0	67.8	72.8	75.1	77.5	77.5
ABUTMENT WINGS		C.Y.	7.2	7.2	7.6	7.6	7.6	8.4	8.4	8.4	8.4
ABUTMENT FOOTINGS (w/ WOOD PILES) ***		C.Y.	39.1	39.1	38.9	38.8	38.8	-----	-----	-----	-----
ABUTMENT FOOTINGS (w/ STEEL H PILES) ***		C.Y.	40.8	40.8	40.8	40.8	40.8	48.4	48.4	48.4	48.4

GENERAL DATA		℄-℄ 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	3'-7 ¹¹ / ₁₆	4'-2 ¹ / ₁₆	4'-2 ¹ / ₁₆	4'-2 ¹ / ₁₆	4'-8 ¹ / ₁₆	4'-8 ¹ / ₁₆	4'-9 ¹ / ₁₆	4'-9 ¹ / ₁₆
CURVE	TOP OF SLAB TO PIER TOP AT C.L. PIER*	"U"	3'-6 ³ / ₈	3'-6 ³ / ₈	4'-1 ¹ / ₁₆	4'-1 ¹ / ₁₆	4'-1 ¹ / ₁₆	4'-7 ¹ / ₁₆	4'-7 ¹ / ₁₆	4'-7 ¹ / ₁₆	4'-7 ¹ / ₁₆
STRAIGHT	TOP OF SLAB TO ABUT. CONSTR. JT. AT C.L. ABUT. BRG.	"U"	3'-8 ¹ / ₁₆	3'-7 ¹ / ₁₆	4'-2 ¹ / ₁₆	4'-2 ¹ / ₁₆	4'-3	4'-8 ¹ / ₁₆	4'-8 ¹ / ₁₆	4'-9 ¹ / ₁₆	4'-9 ¹ / ₁₆
GRADE	TOP OF SLAB TO PIER TOP AT C.L. PIER*	"U"	3'-6 ³ / ₈	3'-6 ³ / ₈	4'-1 ¹ / ₁₆	4'-1 ¹ / ₁₆	4'-2 ¹ / ₁₆	4'-7 ¹ / ₁₆	4'-7 ¹ / ₁₆	4'-8	4'-8
D.L. PIER REACTION (D.L. + F.W.S.) SERVICE LOADS		KIPS	446.0	480.7	549.2	585.8	622.7	743.2	784.2	825.8	866.1
L.L. PIER REACTION (HL93) NO IMPACT SERVICE LOADS		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"	141	156	171	186	201	216	231	246	266
NO. OF SPACES FOR 6a1 BARS (BOTTOM)		"H"	142	157	172	187	202	217	232	247	267
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

* 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 3/8 INCHES TO "U" VALUES SHOWN.
 ** WINGWALLS APPLY ONLY TO BRIDGES USING "C" BEAMS.
 *** SEE SHEET H40-24-06 FOR ADDITIONAL CONCRETE REQUIRED IN ABUTMENT FOOTINGS.

05-13
 LATEST REVISION DATE
 Approved by: *Thomas E. Mc Donald*
 APPROVED BY BRIDGE ENGINEER

Iowa Department of Transportation
 Highway Division
 STANDARD DESIGN - 40' ROADWAY, THREE SPAN BRIDGE
PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES
 AUGUST, 2009

SUPERSTRUCTURE DETAILS
 30° SKEW

H40-22-06

REVISED 05-13 - REVISION FOR LRFD PILE DESIGN.