



**SLAB LAYOUT**

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)		ℓ-ℓ 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 WITH OPEN RAIL	C.Y.	232.3	247.1	271.7	286.9	302.3	330.2	345.4	361.3	382.1
STRUCTURAL CONCRETE ABUTMENTS (w/ WOOD PILES)		C.Y.	234.8	249.8	274.7	290.1	305.8	333.7	349.1	365.3	386.3
STRUCTURAL CONCRETE ABUTMENTS (w/ STEEL H PILES)		C.Y.	36.7	36.7	36.4	36.4	36.3	-----	-----	-----	-----
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.	311.7	336.7	361.7	386.7	411.7	456.7	481.7	506.7	540.0
STRUCTURAL STEEL (w/ PILE BENT PIERS & DRAINS)		L.B.	5317	5317	5405	5405	5405	5355	5355	5355	5355
STRUCTURAL STEEL (w/ PILE BENT PIERS & NO DRAINS)		L.B.	4749	4749	4749	4749	4749	4619	4619	4619	4619
STRUCTURAL STEEL (w/ TEE PIERS & DRAINS)		L.B.	6571	6571	6659	6659	6659	6836	6836	6836	6836
STRUCTURAL STEEL (w/ TEE PIERS & NO DRAINS)		L.B.	6003	6003	6003	6003	6003	6100	6100	6100	6100
EPOXY COATED REINF. STEEL (w/ WOOD PILES & BARRIER RAIL)		L.B.	66,476	70,884	76,051	81,260	85,889	-----	-----	-----	-----
EPOXY COATED REINF. STEEL (w/ WOOD PILES & OPEN RAIL)		L.B.	67,219	71,587	76,909	82,302	86,865	-----	-----	-----	-----
EPOXY COATED REINF. (w/ STEEL H PILES & BARRIER RAIL)		L.B.	66,662	71,070	76,021	81,207	85,728	93,492	99,033	103,560	109,469
EPOXY COATED REINF. (w/ STEEL H PILES & OPEN RAIL)		L.B.	67,405	71,773	76,879	82,249	86,704	95,446	100,900	105,632	111,595
NO. OF WOOD PILES, TREATED FOR TWO ABUTMENTS		NO.	30	30	34	34	36	-----	-----	-----	-----
NO. OF STEEL H-PILES FOR TWO ABUTMENTS (HP 10 x 57)		NO.	14	14	14	16	16	20	22	22	22
PREBORED HOLES (W/ WOOD PILES)		L.F.	300	300	340	340	360	-----	-----	-----	-----
PREBORED HOLES (W/ STEEL H-PILES)		L.F.	140	140	140	160	160	200	220	220	220

CONCRETE PLACEMENT QUANT. (SUPERSTRUCTURE PLUS INTEGRAL ABUTMENTS)		ℓ-ℓ 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 WITH OPEN RAIL	C.Y.	128.8	137.4	152.0	160.8	169.6	188.0	197.0	206.4	227.2
SLAB INCLUDING HAUNCH, SECTION 2	WITH BARRIER RAIL WITH OPEN RAIL	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	WITH BARRIER RAIL WITH OPEN RAIL	C.Y.	48.0	51.9	55.7	59.6	63.3	67.4	71.2	75.2	75.2
ABUTMENT WINGS		C.Y.	49.0	51.4	57.2	59.8	62.8	67.4	69.8	72.4	72.4
ABUTMENT FOOTINGS (w/ WOOD PILES)		C.Y.	49.5	51.9	57.8	60.4	63.4	68.0	70.5	73.1	73.1
ABUTMENT FOOTINGS (w/ STEEL H PILES)		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.	36.7	36.7	36.4	36.4	36.3	-----	-----	-----	-----
ABUTMENT FOOTINGS (w/ STEEL H PILES)		C.Y.	38.4	38.4	38.4	38.4	38.4	46.4	46.4	46.4	46.4

GENERAL DATA		ℓ-ℓ ABUT. BRG.	138'-10"	151'-4"	163'-10"	176'-4"	188'-10"	201'-4"	213'-10"	226'-4"	243'-0"
VERTICAL CURVE	TOP OF SLAB TO ABUT. CONSTR. JT. AT C.L. ABUT. BRG.	"U"	3'-8 <sup>1</sup> / <sub>8</sub>	3'-7 <sup>1</sup> / <sub>8</sub>	4'-2 <sup>1</sup> / <sub>8</sub>	4'-2 <sup>1</sup> / <sub>8</sub>	4'-2 <sup>1</sup> / <sub>8</sub>	4'-8 <sup>1</sup> / <sub>8</sub>	4'-8 <sup>1</sup> / <sub>8</sub>	4'-9 <sup>1</sup> / <sub>8</sub>	4'-9 <sup>1</sup> / <sub>8</sub>
	TOP OF SLAB TO PIER TOP AT C.L. PIER*	"U"	3'-6 <sup>1</sup> / <sub>8</sub>	3'-6 <sup>1</sup> / <sub>8</sub>	4'-1 <sup>1</sup> / <sub>8</sub>	4'-1 <sup>1</sup> / <sub>8</sub>	4'-1 <sup>1</sup> / <sub>8</sub>	4'-7 <sup>1</sup> / <sub>8</sub>	4'-7 <sup>1</sup> / <sub>8</sub>	4'-7 <sup>1</sup> / <sub>8</sub>	4'-7 <sup>1</sup> / <sub>8</sub>
STRAIGHT GRADE	TOP OF SLAB TO ABUT. CONSTR. JT. AT C.L. ABUT. BRG.	"U"	3'-8 <sup>1</sup> / <sub>8</sub>	3'-7 <sup>1</sup> / <sub>8</sub>	4'-2 <sup>1</sup> / <sub>8</sub>	4'-2 <sup>1</sup> / <sub>8</sub>	4'-3 <sup>1</sup> / <sub>8</sub>	4'-8 <sup>1</sup> / <sub>8</sub>	4'-8 <sup>1</sup> / <sub>8</sub>	4'-9 <sup>1</sup> / <sub>8</sub>	4'-10
	TOP OF SLAB TO PIER TOP AT C.L. PIER*	"U"	3'-6 <sup>1</sup> / <sub>8</sub>	3'-6 <sup>1</sup> / <sub>8</sub>	4'-1 <sup>1</sup> / <sub>8</sub>	4'-1 <sup>1</sup> / <sub>8</sub>	4'-2 <sup>1</sup> / <sub>8</sub>	4'-7 <sup>1</sup> / <sub>8</sub>	4'-7 <sup>1</sup> / <sub>8</sub>	4'-8 <sup>1</sup> / <sub>8</sub>	4'-8 <sup>1</sup> / <sub>8</sub>
D.L. PIER REACTION (D.L. + F.W.S.)		KIPS	471.8	509.8	583.3	623.5	663.8	799.8	845.3	891.2	936.0
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)		"B"	169	184	199	214	229	244	259	274	294
NO. OF SPACES FOR 6a1 BARS (BOTTOM) AND 5j1 BARS (TOP)		"D"	168	183	198	213	228	243	258	273	293
OUT TO OUT OF SLAB		"S"	141'-10	154'-4	166'-10	179'-4	191'-10	204'-4	216'-10	229'-4	246'-0
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.

11-09  
 LATEST REVISION DATE

**Iowa Department of Transportation  
Highway Division**

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

APPROVED BY BRIDGE ENGINEER

**SUPERSTRUCTURE DETAILS**  
 0° SKEW

**H44-09-07**

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