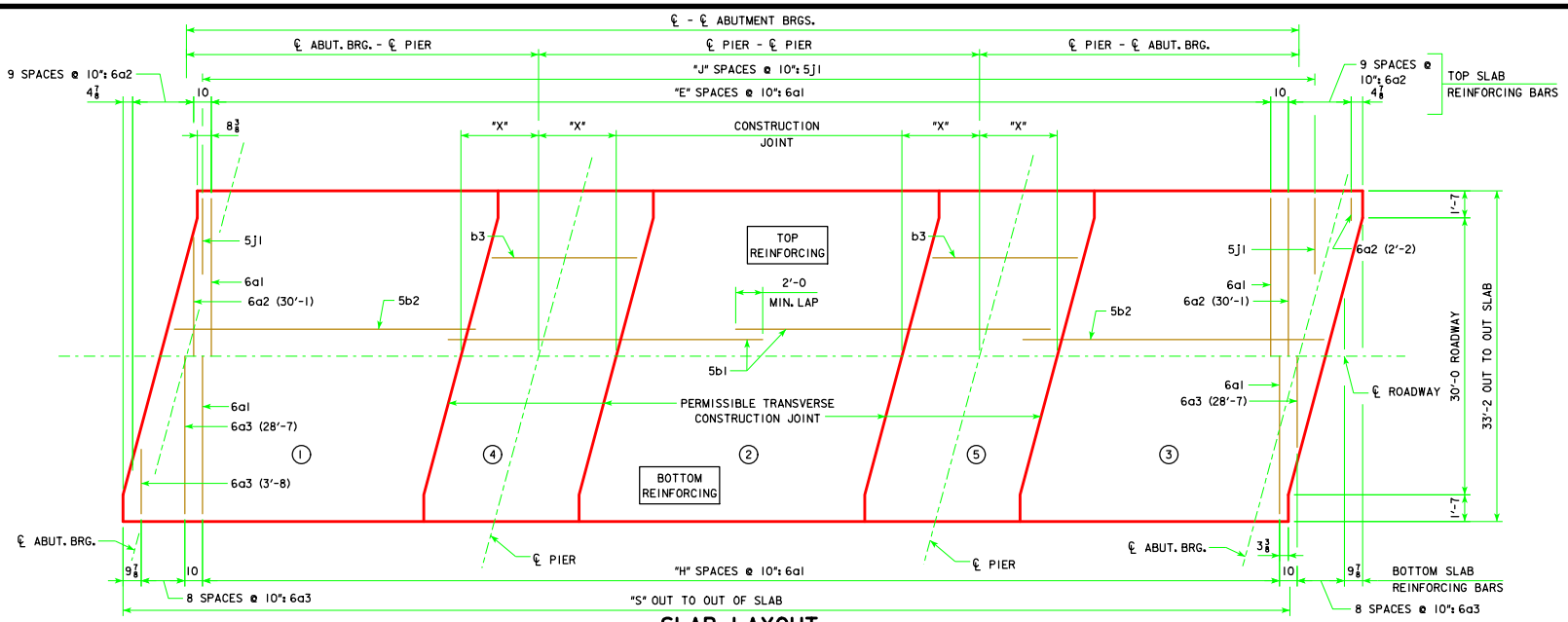

SLAB LAYOUT

(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)

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	WITH BARRIER RAIL	C.Y.	172.3	183.0	200.9	211.8	222.7	244.4	255.1	266.4	281.2
(INCLUDES ABUTMENT WINGS, PAV. BLOCKS)	WITH OPEN RAIL	C.Y.	174.8	185.7	203.9	215.0	226.2	247.9	258.8	270.4	285.4
STRUCTURAL CONCRETE ABUTMENTS (w/ WOOD PILES) ***		C.Y.	26.3	26.2	26.1	26.1	26.1	-----	-----	-----	-----
STRUCTURAL CONCRETE ABUTMENTS (w/ STEEL H PILES) ***		C.Y.	27.6	27.6	27.6	27.6	27.6	35.4	35.4	35.4	35.4
PRETENSIONED PRESTRESSED CONCRETE BEAM, CENTER SPAN		NO.	5-A50	5-A55	5-B59	5-B63	5-B67	5-C71	5-C75	5-C80	5-C80
PRETENSIONED PRESTRESSED CONCRETE BEAM, END SPAN		NO.	10-A42	10-A46	10-B50	10-B55	10-B59	10-C63	10-C67	10-C71	10-C80
CONCRETE RAIL (BARRIER OR OPEN)		L.F.	311.9	336.9	361.9	386.9	411.9	456.7	481.7	506.7	540.0
STRUCTURAL STEEL (w/ PILE BENT PIERS & DRAINS)		LB.	3985	3985	4073	4073	4073	4077	4077	4077	4077
STRUCTURAL STEEL (w/ PILE BENT PIERS & NO DRAINS)		LB.	3305	3305	3305	3305	3305	3229	3229	3229	3229
STRUCTURAL STEEL (w/ TEE PIERS & DRAINS)		LB.	4881	4881	4969	4969	4969	5135	5135	5135	5135
STRUCTURAL STEEL (w/ TEE PIERS & NO DRAINS)		LB.	4201	4201	4201	4201	4201	4287	4287	4287	4287
REINFORCING STEEL (w/ WOOD PILES & BARRIER RAIL)		LB.	50,260	53,865	57,543	61,408	64,830	-----	-----	-----	-----
REINFORCING STEEL (w/ WOOD PILES & OPEN RAIL)		LB.	50,925	54,486	58,311	62,352	65,704	-----	-----	-----	-----
REINFORCING STEEL (w/ STEEL H PILES & BARRIER RAIL)		LB.	50,312	53,809	57,443	61,308	64,730	71,176	75,336	78,755	83,229
REINFORCING STEEL (w/ STEEL H PILES & OPEN RAIL)		LB.	50,977	54,430	58,211	62,252	65,604	72,807	76,876	80,492	85,012
NO. OF WOOD PILES, TREATED FOR TWO ABUTMENTS		NO.	22	24	26	26	26	-----	-----	-----	-----
NO. OF STEEL H-PILES FOR TWO ABUTMENTS (HP 10 x 57)		NO.	10	10	12	12	12	16	18	18	18
PREBORED HOLES (w/ WOOD PILES)		L.F.	220	240	260	260	260	-----	-----	-----	-----
PREBORED HOLES (w/ STEEL H-PILES)		L.F.	100	100	120	120	120	160	180	180	180

CONCRETE PLACEMENT QUANT.
(SUPERSTRUCTURE PLUS INTEGRAL ABUTMENTS)

CONCRETE PLACEMENT QUANT. (SUPERSTRUCTURE PLUS INTEGRAL ABUTMENTS)	℄-℄ 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,	WITH BARRIER RAIL	C.Y.	91.8	98.0	108.2	114.6	120.8	135.4	141.8	148.4	163.2
& WINGWALLS** , SECTIONS 1 & 3	WITH OPEN RAIL	C.Y.	93.1	99.4	109.8	116.3	122.7	137.3	143.8	150.6	165.6
SLAB INCLUDING	WITH BARRIER RAIL	C.Y.	33.5	36.2	38.9	41.6	44.1	47.0	49.7	52.4	52.4
HAUNCH, SECTION 2	WITH OPEN RAIL	C.Y.	34.2	37.0	39.7	42.5	45.1	48.0	50.7	53.5	53.5
SLAB INCLUDING HAUNCH &	WITH BARRIER RAIL	C.Y.	37.4	39.2	43.8	45.6	47.8	51.2	52.8	54.8	54.8
PIER DIAPHRAGM, SECTIONS 4 & 5	WITH OPEN RAIL	C.Y.	37.9	39.7	44.4	46.2	48.4	51.8	53.5	55.5	55.5
PAVING BLOCKS		C.Y.	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
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.	26.3	26.2	26.1	26.1	26.1	-----	-----	-----	-----
ABUTMENT FOOTINGS (w/ STEEL H PILES) ***		C.Y.	27.6	27.6	27.6	27.6	27.6	35.4	35.4	35.4	35.4

GENERAL DATA

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'-7 15/16	3'-7 3/4	4'-2 13/16	4'-2 13/16	4'-3	4'-8 1/2	4'-8 11/16	4'-9	4'-9 7/16
CURVE	TOP OF SLAB TO PIER TOP AT C.L. PIER*	"U"	3'-6 7/8	3'-6 5/8	4'-1 3/8	4'-1 5/8	4'-1 15/16	4'-7 5/16	4'-7 5/16	4'-7 3/16	4'-7 1/16
STRAIGHT	TOP OF SLAB TO ABUT. CONSTR. JT. AT C.L. ABUT. BRG.	"U"	3'-8 1/16	3'-7 7/8	4'-2 1/16	4'-2 1/16	4'-3 1/16	4'-8 11/16	4'-8 5/16	4'-9 3/8	4'-10
GRADE	TOP OF SLAB TO PIER TOP AT C.L. PIER*	"U"	3'-6 3/8	3'-6 7/8	4'-1 11/16	4'-1 15/16	4'-2 5/16	4'-7 15/16	4'-7 15/16	4'-7 3/4	4'-8 1/16
D.L. PIER REACTION (D.L. + F.W.S.)		KIPS	352.1	380.1	434.5	464.0	493.8	592.3	625.5	659.1	691.9
L.L. PIER REACTION (HL93) NO IMPACT		KIPS	207.6	215.3	222.7	229.9	237.0	244.0	253.2	268.2	284.4
NO. OF SPACES FOR 6a1 BARS (TOP)		"E"	159	174	189	204	219	234	249	264	284
NO. OF SPACES FOR 6a1 BARS (BOTTOM)		"H"	160	175	190	205	220	235	250	265	285
NO. OF SPACES FOR 5j1 BARS (TOP)		"J"	167	182	197	212	227	242	257	272	292
OUT TO OUT OF SLAB		"S"	141'-11 1/4	154'-5 1/4	166'-11 1/4	179'-5 1/4	191'-11 1/4	204'-5 1/4	216'-11 1/4	229'-5 1/4	246'-1 1/4
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 3/16 INCHES TO "U" VALUES SHOWN.

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

*** SEE SHEET H30-17-06 FOR ADDITIONAL CONCRETE REQUIRED IN ABUTMENT FOOTINGS.

10-11
LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 30' ROADWAY, THREE SPAN BRIDGES

PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES

DECEMBER, 2006

SUPERSTRUCTURE DETAILS
15° SKEW

H30-15-06

REVISED 10-11 - THE ESTIMATED QUANTITIES FOR THE STRUCTURAL STEEL WITH DRAINS WAS CHANGED.