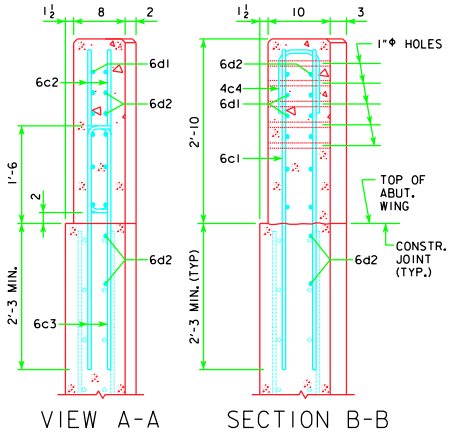
TABLE OF OPEN RAIL DIMENSIONS AND NUMBERS

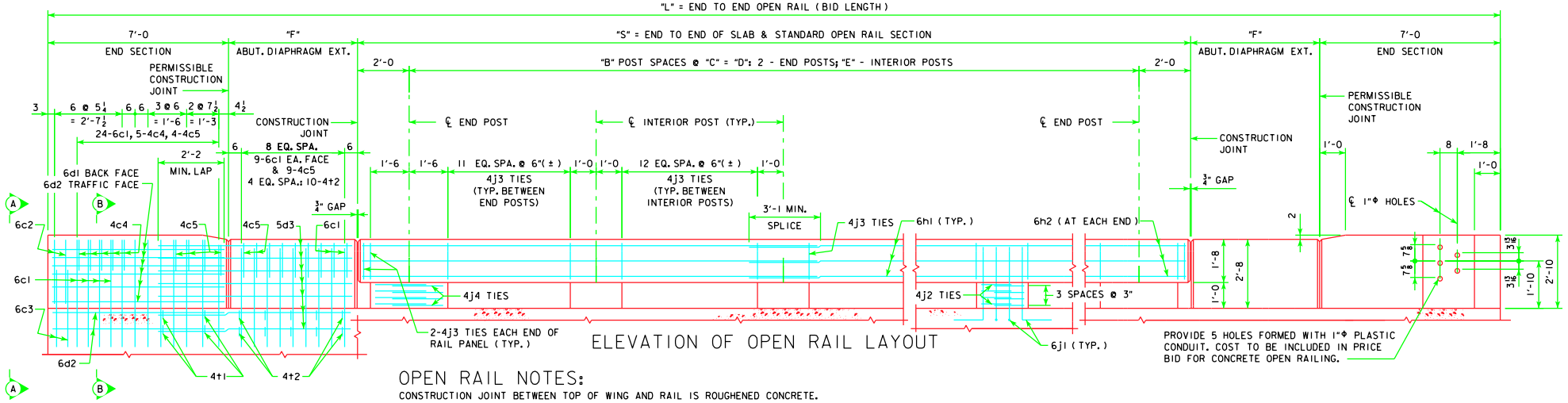
℄-℄ ABUT. BRG		138'-10				151'-4				163'-10				176'-4				188'-10				℄-℄ ABUT. BRG
SKEW		0°	15°	30°	45°	0°	15°	30°	45°	0°	15°	30°	45°	0°	15°	30°	45°	0°	15°	30°	45°	SKEW
DIMENSION OR NUMBER	L (FT.-IN.)	155'-10	155'-11 1/4	156'-3 5/8	157'-0 7/8	168'-4	168'-5 1/4	168'-9 5/8	169'-6 7/8	180'-10	180'-11 1/4	181'-3 5/8	182'-0 7/8	193'-4	193'-5 1/4	193'-9 5/8	194'-6 7/8	205'-10	205'-11 1/4	206'-3 5/8	207'-0 7/8	L (FT.-IN.)
	S (FT.-IN.)	141'-10	141'-11 1/4	142'-3 5/8	143'-0 7/8	154'-4	154'-5 1/4	154'-9 5/8	155'-6 7/8	166'-10	166'-11 1/4	167'-3 5/8	168'-0 7/8	179'-4	179'-5 1/4	179'-9 5/8	180'-6 7/8	191'-10	191'-11 1/4	192'-3 5/8	193'-0 7/8	S (FT.-IN.)
	B	18	18	18	18	19	19	19	19	21	21	21	21	23	23	23	23	24	24	24	24	B
	C (FT.-IN.)	7'-7 7/8	7'-8	7'-8 1/4	7'-8 3/8	7'-11	7'-11	7'-11 1/4	7'-11 3/8	7'-9	7'-9 1/8	7'-9 3/8	7'-9 3/4	7'-7 1/2	7'-7 1/2	7'-7 3/4	7'-8 1/8	7'-9 1/8	7'-10	7'-10 1/8	7'-10 1/2	C (FT.-IN.)
	D (FT.-IN.)	137'-10	137'-11 1/4	138'-3 5/8	139'-0 7/8	150'-4	150'-5 1/4	150'-9 5/8	151'-6 7/8	162'-10	162'-11 1/4	163'-3 5/8	164'-0 7/8	175'-4	175'-5 1/4	175'-9 5/8	176'-6 7/8	187'-10	187'-11 1/4	188'-3 5/8	189'-0 7/8	D (FT.-IN.)
	E	17	17	17	17	18	18	18	18	20	20	20	20	22	22	22	22	23	23	23	23	E
	F (FT.-IN.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	F (FT.-IN.)

TABLE OF OPEN RAIL DIMENSIONS AND NUMBERS

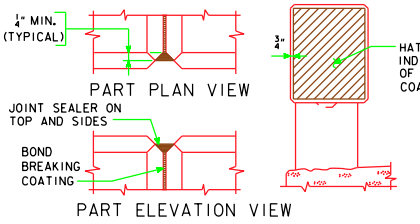
℄-℄ ABUT. BRG		201'-4				213'-10				226'-4				243'-0				℄-℄ ABUT. BRG
SKEW		0°	15°	30°	45°	0°	15°	30°	45°	0°	15°	30°	45°	0°	15°	30°	45°	SKEW
DIMENSION OR NUMBER	L (FT.-IN.)	228'-4	228'-4	228'-4	228'-4	240'-10	240'-10	240'-10	240'-10	253'-4	253'-4	253'-4	253'-4	270'-0	270'-0	270'-0	270'-0	L (FT.-IN.)
	S (FT.-IN.)	204'-4	204'-5 1/4	204'-9 5/8	205'-6 7/8	216'-10	216'-11 1/4	217'-3 5/8	218'-0 7/8	229'-4	229'-5 1/4	229'-9 5/8	230'-6 7/8	246'-0	246'-1 1/4	246'-5 5/8	247'-2 7/8	S (FT.-IN.)
	B	26	26	26	26	27	27	27	27	29	29	29	29	31	31	31	31	B
	C (FT.-IN.)	7'-8 1/2	7'-8 1/2	7'-8 5/8	7'-9	7'-10 5/8	7'-10 5/8	7'-10 3/4	7'-11 1/8	7'-9 1/4	7'-9 1/4	7'-9 3/8	7'-9 3/4	7'-9 5/8	7'-9 3/4	7'-9 7/8	7'-10 1/8	C (FT.-IN.)
	D (FT.-IN.)	200'-4	200'-5 1/4	200'-9 5/8	201'-6 7/8	212'-10	212'-11 1/4	213'-3 5/8	214'-0 7/8	225'-4	225'-5 1/4	225'-9 5/8	226'-6 7/8	242'-0	242'-1 1/4	242'-5 5/8	243'-2 7/8	D (FT.-IN.)
	E	25	25	25	25	26	26	26	26	28	28	28	28	30	30	30	30	E
	F (FT.-IN.)	5'-0	4'-11 3/8	4'-9 1/4	4'-4 1/2	5'-0	4'-11 3/8	4'-9 1/4	4'-4 1/2	5'-0	4'-11 3/8	4'-9 1/4	4'-4 1/2	5'-0	4'-11 3/8	4'-9 1/4	4'-4 1/2	F (FT.-IN.)



VIEW A-A SECTION B-B



ELEVATION OF OPEN RAIL LAYOUT



OPEN RAIL JOINT DETAILS

OPEN RAIL NOTES:

CONSTRUCTION JOINT BETWEEN TOP OF WING AND RAIL IS ROUGHENED CONCRETE.

MINIMUM CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR REINFORCING BAR IS TO BE 2" UNLESS OTHERWISE NOTED OR SHOWN.

COST OF THE JOINT SEALER AND BOND BREAKER SHALL BE CONSIDERED INCIDENTAL TO OTHER CONSTRUCTION.

THE CONCRETE OPEN RAIL IS TO BE BID ON A LINEAL FOOT BASIS MEASURED FROM END TO END OF RAIL. THE NUMBER OF LINEAL FEET OF OPEN RAIL INSTALLED WILL BE PAID FOR AT THE CONTRACT PRICE PER LINEAL FOOT. PRICE BID FOR "CONCRETE OPEN RAILING, TL-4" SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIAL, EXCLUDING REINFORCING STEEL, AND ALL OF THE EQUIPMENT AND LABOR REQUIRED TO CONSTRUCT THE RAIL IN ACCORDANCE WITH THESE PLANS AND CURRENT SPECIFICATIONS.

ALL OPEN RAIL REINFORCING STEEL IS TO BE INCLUDED WITH THE SUPERSTRUCTURE REINFORCING STEEL.

THE CAST-IN-PLACE OPEN RAIL SHALL USE CLASS C MIX. CLASS D CONCRETE IS NOT PERMITTED.

TOP OF THE OPEN RAIL IS TO BE PARALLEL TO THEORETICAL ℄ GRADE.

IF CONDUIT IS REQUIRED IN THIS PLAN THE RIGID STEEL CONDUIT, JUNCTION BOXES AND FITTINGS INCLUDING LABOR AND ANY ADDITIONAL WORK TO DO THE INSTALLATION IS CONSIDERED INCIDENTAL TO THE COST OF THE RAILING.

07-10
LATEST REVISION DATE

Herman R. McDonald
APPROVED BY BRIDGE ENGINEER

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 24' ROADWAY, THREE SPAN BRIDGE

PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES

DECEMBER, 2006

OPEN RAIL, TL-4 DETAILS

SHEET 1 OF 2

H24-39-06

REVISED 07-10 - PROVIDED A ¾" GAP BETWEEN RAIL AND ABUT. DIAPH. EXT.