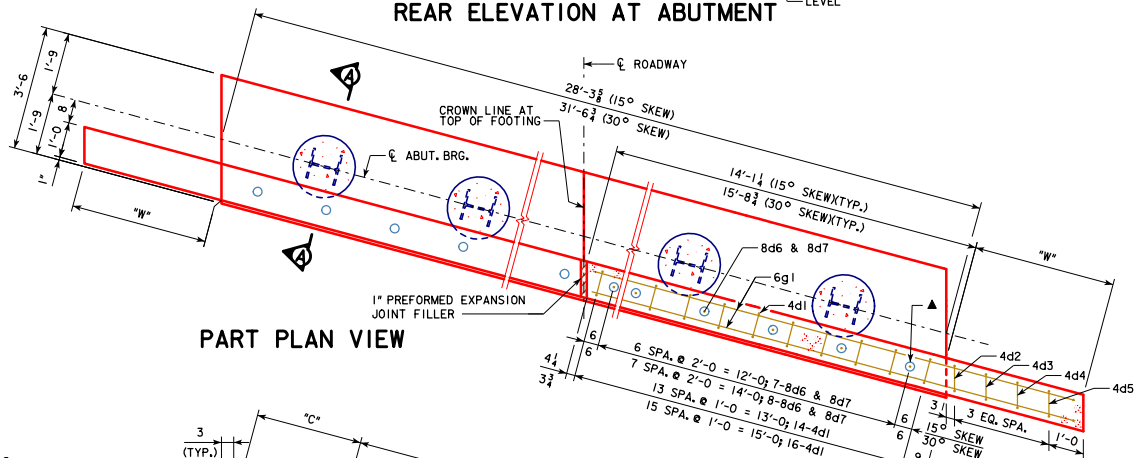
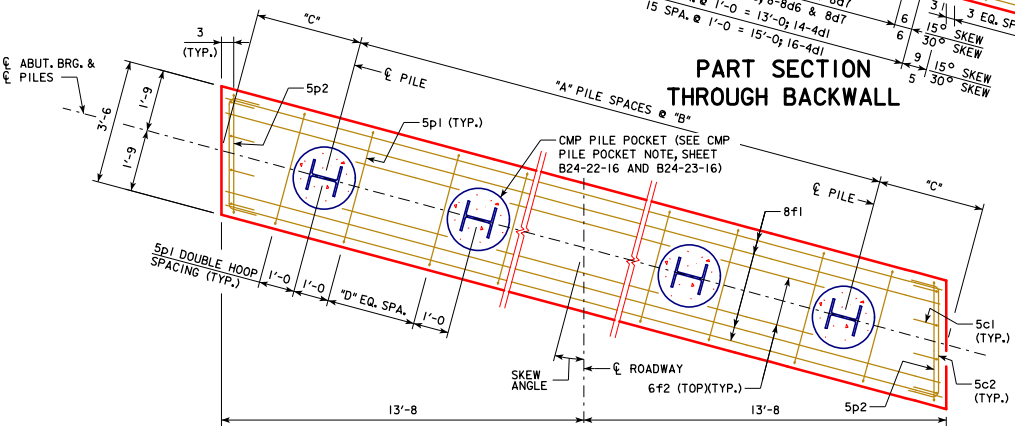


REAR ELEVATION AT ABUTMENT



PART PLAN VIEW

PART SECTION THROUGH BACKWALL

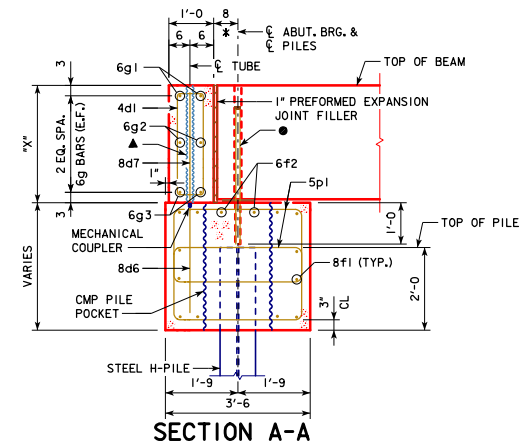


ABUTMENT PILE PLAN

		ABUTMENT DATA (15° SKEW)							
		REINFORCED CONCRETE BOX BEAMS			PRETENSIONED PRESTRESSED CONCRETE BOX BEAMS				
SPAN		30'-0"	40'-0"	50'-0"	30'-0"	40'-0"	50'-0"	60'-0"	70'-0"
"W" (FT. - IN.)		4'-0"	4'-0"	4'-0"	3'-0"	3'-0"	4'-0"	4'-0"	4'-0"
"X" (FT. - IN.)		2'-4 1/2"	2'-4 1/2"	2'-10 1/2"	1'-10 1/2"	1'-10 1/2"	2'-4 1/2"	2'-4 1/2"	2'-10 1/2"
"Y" (FT. - IN.)		2'-0"	2'-0"	2'-0"	1'-6"	1'-6"	2'-0"	2'-0"	2'-0"
"Z" (FT. - IN.)		2'-4"	2'-4"	2'-10"	2'-4"	2'-4"	2'-4"	2'-4"	2'-10"
"A" PILE SPACES		4	4	4	4	4	4	4	5
"B" (FT. - IN.)		6'-0"	6'-0"	6'-0"	6'-0"	6'-0"	6'-0"	6'-0"	4'-10"
"C" (FT. - IN.)		2'-1 1/8"	2'-1 1/8"	2'-1 1/8"	2'-1 1/8"	2'-1 1/8"	2'-1 1/8"	2'-1 1/8"	2'-0 1/8"
"D" EQUAL SPACES		4	4	4	4	4	4	4	3
NO. OF PILES PER ABUT.		5	5	5	5	5	5	5	6
P _u STRENGTH I DESIGN LOAD (KIPS)		97	113	133	93	109	127	141	135

		ABUTMENT DATA (30° SKEW)							
		REINFORCED CONCRETE BOX BEAMS			PRETENSIONED PRESTRESSED CONCRETE BOX BEAMS				
SPAN		30'-0"	40'-0"	50'-0"	30'-0"	40'-0"	50'-0"	60'-0"	70'-0"
"W" (FT. - IN.)		4'-0"	4'-0"	4'-0"	3'-0"	3'-0"	4'-0"	4'-0"	4'-0"
"X" (FT. - IN.)		2'-4 1/2"	2'-4 1/2"	2'-10 1/2"	1'-10 1/2"	1'-10 1/2"	2'-4 1/2"	2'-4 1/2"	2'-10 1/2"
"Y" (FT. - IN.)		2'-0"	2'-0"	2'-0"	1'-6"	1'-6"	2'-0"	2'-0"	2'-0"
"Z" (FT. - IN.)		2'-4"	2'-4"	2'-10"	2'-4"	2'-4"	2'-4"	2'-4"	2'-10"
"A" PILE SPACES		4	4	4	4	4	4	4	5
"B" (FT. - IN.)		6'-9"	6'-9"	6'-9"	6'-9"	6'-9"	6'-9"	6'-9"	5'-5"
"C" (FT. - IN.)		2'-3 3/8"	2'-3 3/8"	2'-3 3/8"	2'-3 3/8"	2'-3 3/8"	2'-3 3/8"	2'-3 3/8"	2'-2 3/8"
"D" EQUAL SPACES		5	5	5	5	5	5	5	4
NO. OF PILES PER ABUT.		5	5	5	5	5	5	5	6
P _u STRENGTH I DESIGN LOAD (KIPS)		99	115	135	95	110	129	143	137

NOTE:
P_u STRENGTH I DESIGN LOAD (KIPS) IS NOT THE VALUE USED IN THE FIELD FOR DRIVING PILES.



SECTION A-A

NOTES:
 ● 1 1/2" Ø SMOOTH DOWELS (A36). DRILL A 1 1/2" Ø HOLE 12" DEEP INTO ABUTMENT AFTER BEAMS ARE IN PLACE. USE LOW IMPACT ROTARY DRILL. PRIOR TO SETTING DOWEL, FILL HOLE TO A DEPTH OF 4" WITH A POLYMER GROUT SYSTEM IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. PLACE 2" Ø x 1" THICK POLYSTYRENE PLUG ON TOP OF DOWEL. FILL REMAINDER OF HOLE ABOVE PLUG WITH NON-SHRINK GROUT.
 * THIS DIMENSION MAY VARY. TILTING OF THE BACKWALL DURING CONSTRUCTION MAY BE NECESSARY TO ACCOMMODATE BEAM CAMBER AND LONGITUDINAL GRADE.
 ▲ 3" DIAMETER PLASTIC CORRUGATED TUBE. COVER TOP OF DOWELS WITH 2" OF GROUT.

LATEST REVISION DATE	<i>Thomas E. M. Donnell</i>	IOWA DOT Highway Division	STANDARD DESIGN - 24'-0" ROADWAY, SINGLE SPAN CONCRETE BOX BEAM BRIDGES	DECEMBER, 2016
	APPROVED BY BRIDGE ENGINEER			
	ABUTMENT DETAILS (PRECAST) CONCRETE WINGS 15° AND 30° SKEW			
			B24-21-16	