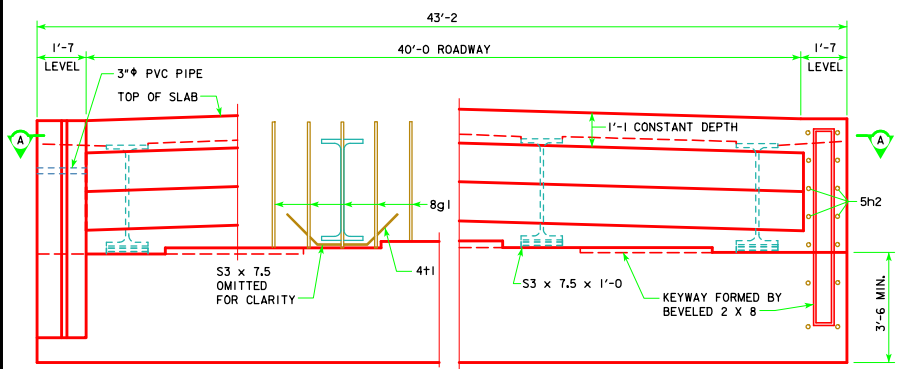
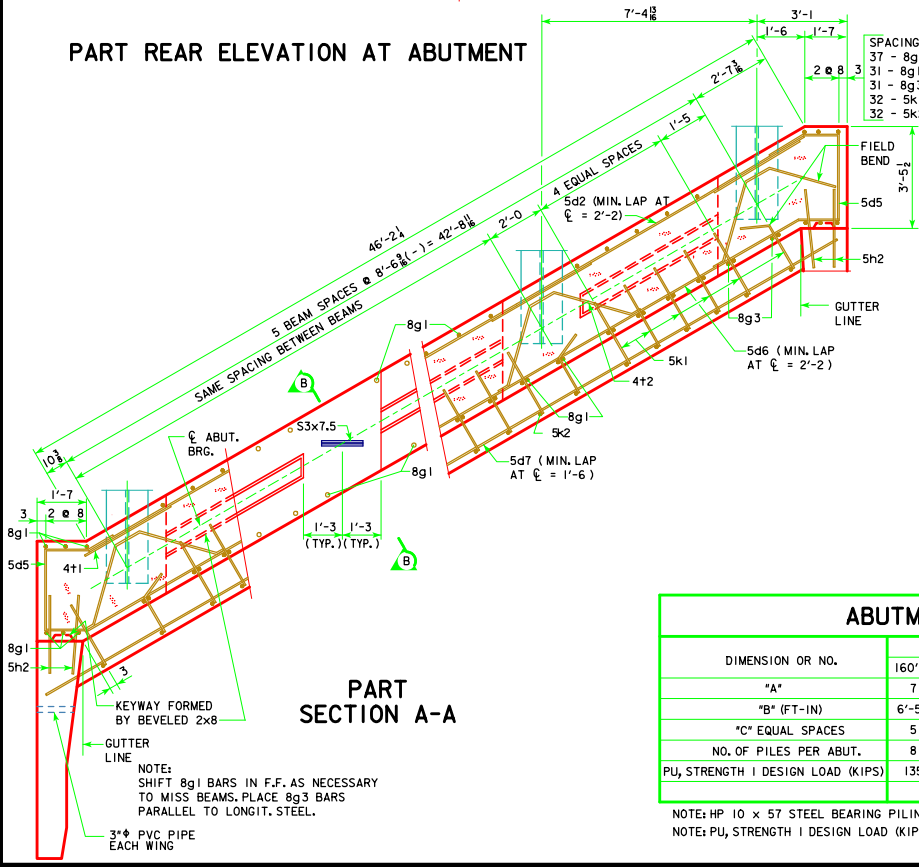


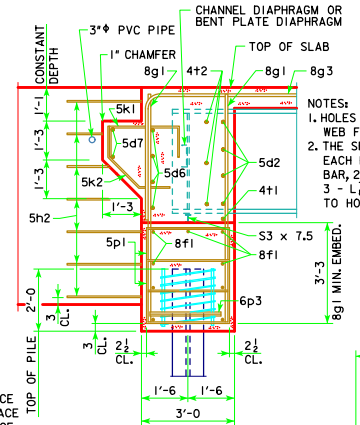
REVISED 05-13 - REVISION FOR LREQ PILE DESIGN.



PART REAR ELEVATION AT ABUTMENT

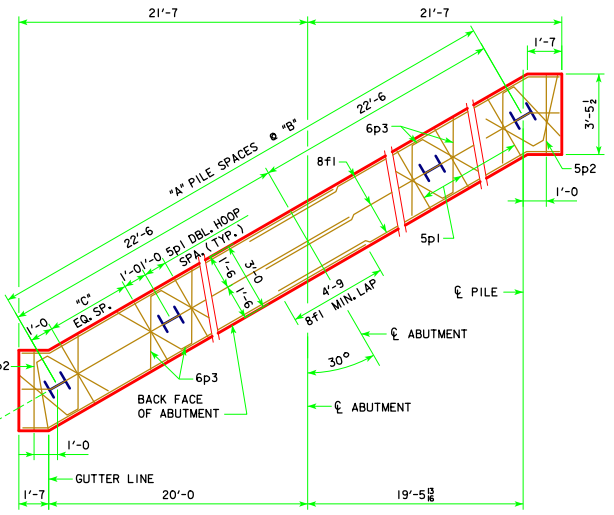


PART SECTION A-A



PART SECTION B-B

- NOTES:**
- Holes drilled through beam web for 5k2 and 4+2 bars.
 - The spiral at the top of each pile to be 7 turns of No. 2 bar, 2" diameter, 3" pitch with 3 - 1 1/2" x 1/2" x 1/4" spacers punched to hold spiral.



ABUTMENT PILE PLAN

NOTE:
 ABUTMENT STEP DIAGRAM PROVIDED BY DESIGNER, SEE "ESTIMATED BRIDGE QUANTITIES" SHEET.

ABUTMENT PILE SPACING

DIMENSION OR NO.	℄ TO ℄ ABUTMENT BEARING								
	160'-0"	180'-0"	200'-0"	220'-0"	240'-0"	260'-0"	280'-0"	300'-0"	320'-0"
"A"	7	7	8	8	8	9	9	9	9
"B" (FT-IN)	6'-5 1/2"	6'-5 1/2"	5'-7 1/2"	5'-7 1/2"	5'-7 1/2"	5'-0"	5'-0"	5'-0"	5'-0"
"C" EQUAL SPACES	5	5	4	4	4	3	3	3	3
NO. OF PILES PER ABUT.	8	8	9	9	9	10	10	10	10
PU, STRENGTH I DESIGN LOAD (KIPS)	135	141	129	135	140	130	134	139	141

NOTE: HP 10 x 57 STEEL BEARING PILING REQUIRED.
 NOTE: PU, STRENGTH I DESIGN LOAD (KIPS) IS NOT THE VALUE USED IN THE FIELD FOR DRIVING PILES.

ABUTMENT NOTES:

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

IF NECESSARY TO PREVENT DAMAGE TO THE END OF THE BRIDGE DECK OR BACKWALL FROM CONSTRUCTION EQUIPMENT, AN APPROPRIATE METHOD OF PROTECTION APPROVED BY THE ENGINEER SHALL BE PROVIDED BY THE BRIDGE CONTRACTOR AT NO EXTRA COST TO THE COUNTY OR STATE.


ABUTMENT PILES SHALL BE DRIVEN TO VALUES SHOWN IN DESIGN PLANS.

PLACE 5h2 BAR AT 1:6 SLOPE TO MATCH TRAFFIC SIDE OF ABUTMENT WING FACE. (BOTH SIDES TYPICAL)

BARRIER RAIL NOT SHOWN IN DETAILS.

IF ROCK IS CLOSER THAN 15' BELOW ABUTMENT FOOTING, SPECIAL ANALYSIS MAY BE REQUIRED.

05-13
 LATEST REVISION DATE
 Approved by Bridge Engineer
 [Signature]



Iowa Department of Transportation
 Highway Division

STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES

ROLLED STEEL BEAM BRIDGES

JUNE, 2010

ABUTMENT DETAILS
 30° SKEW

RS40-013-10