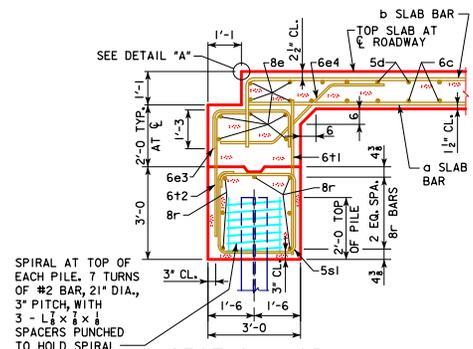
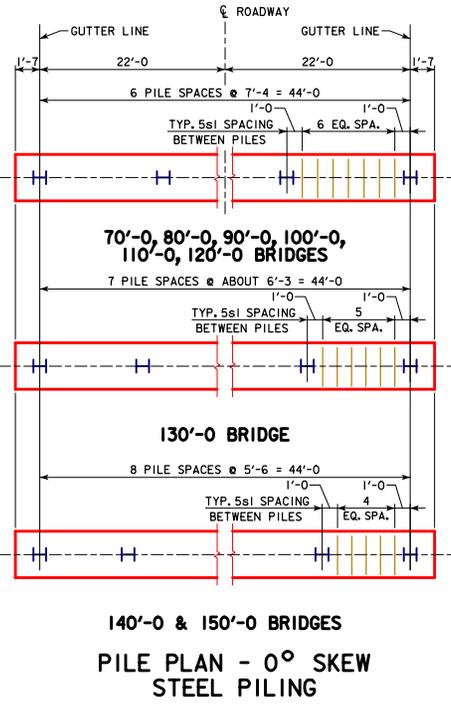
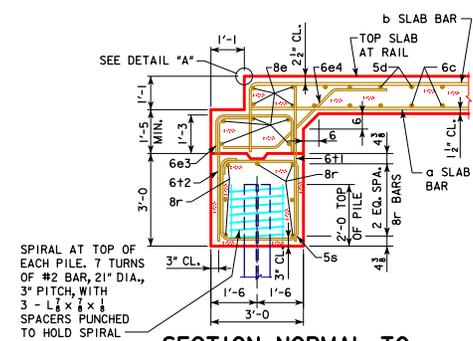


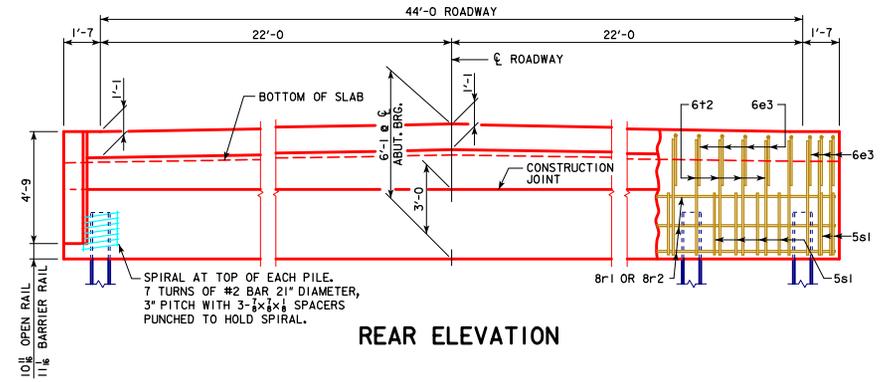
REVISED 06-13 - REVISION FOR LRFD PILE DESIGN. REVISED 10-2016 - ADDED 4" DIMENSION THAT WAS MISSING IN "SECTION NORMAL TO ABUTMENT AT CENTERLINE".



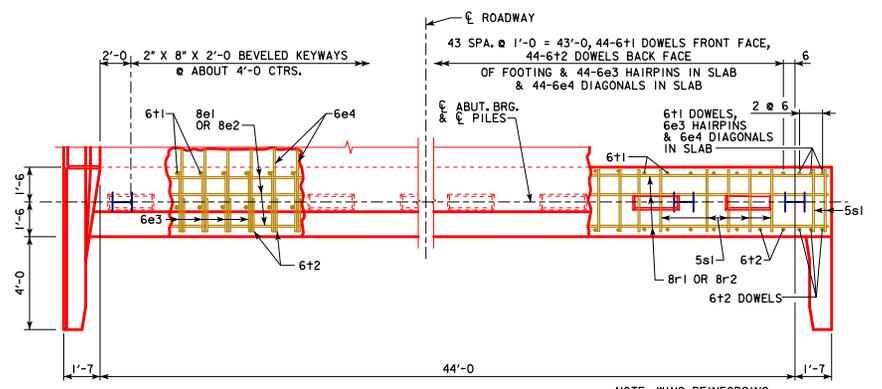
**SECTION NORMAL TO ABUTMENT AT CL**



**SECTION NORMAL TO ABUTMENT AT GUTTERLINE**

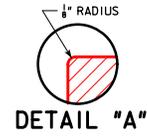


**REAR ELEVATION**



**PLAN VIEW**

NOTE: WING REINFORCING AND RAIL NOT SHOWN.  
6e3, 6e4 AND 8e ARE INCLUDED WITH SUPERSTRUCTURE QUANTITIES.



**ABUTMENT NOTES:**

- ALL PILING HP10x42.
- THE CONCRETE AND REINFORCING STEEL FOR THE WINGS IS INCLUDED WITH THE SUPERSTRUCTURE.
- DETAILS ON THIS SHEET ARE TO BE USED ONLY WHEN ABUTMENTS ARE PLACED ON STEEL PILES. IF ROCK IS ENCOUNTERED CLOSER THAN 12' BELOW ABUTMENT FOOTING, SPECIAL ANALYSIS MAY BE REQUIRED.
- THE MINIMUM CLEAR DISTANCE FROM THE FACE OF THE CONCRETE TO NEAR REINFORCING BAR IS TO BE 2 INCHES UNLESS OTHERWISE NOTED OR SHOWN.
- STEEL ABUTMENT PILES SHALL BE DRIVEN TO FULL PENETRATION IF PRACTICABLE BUT IN NO CASE TO A BEARING VALUE LESS THAN SHOWN IN DESIGN PLANS.
- ALL REINFORCING STEEL IS TO BE GRADE 60.
- ABUTMENT PILING WAS DESIGNED FOR HL-93 LOADING WITH AN ALLOWANCE FOR 20 LBS. PER SQ. FT. FUTURE WEARING SURFACE.

NUMBER OF PILES AND ABUTMENT DESIGN LOADS									
BRIDGE LENGTH	70'-0	80'-0	90'-0	100'-0	110'-0	120'-0	130'-0	140'-0	150'-0
PILING - NUMBER	7	7	7	7	7	7	8	9	9
PU, STRENGTH I DESIGN LOAD - KIPS	504	539	571	613	653	699	744	Δ 869	Δ 922

Δ INCLUDES DYNAMIC LOAD ALLOWANCE  
NOTE: PU, STRENGTH I DESIGN LOAD (KIPS) IS NOT THE VALUE USED IN THE FIELD FOR DRIVING PILES.

**Iowa Department of Transportation**  
Highway Division

STANDARD DESIGN - 44' ROADWAY, 3 SPAN BRIDGES

**CONTINUOUS CONCRETE**  
**SLAB BRIDGES**

NOVEMBER, 2006

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APPROVED BY BRIDGE ENGINEER  
*Thomas E. M. Donnell*
**0° ABUTMENT DETAILS**  
**SKEW - STEEL PILING**
**J44-39-06**