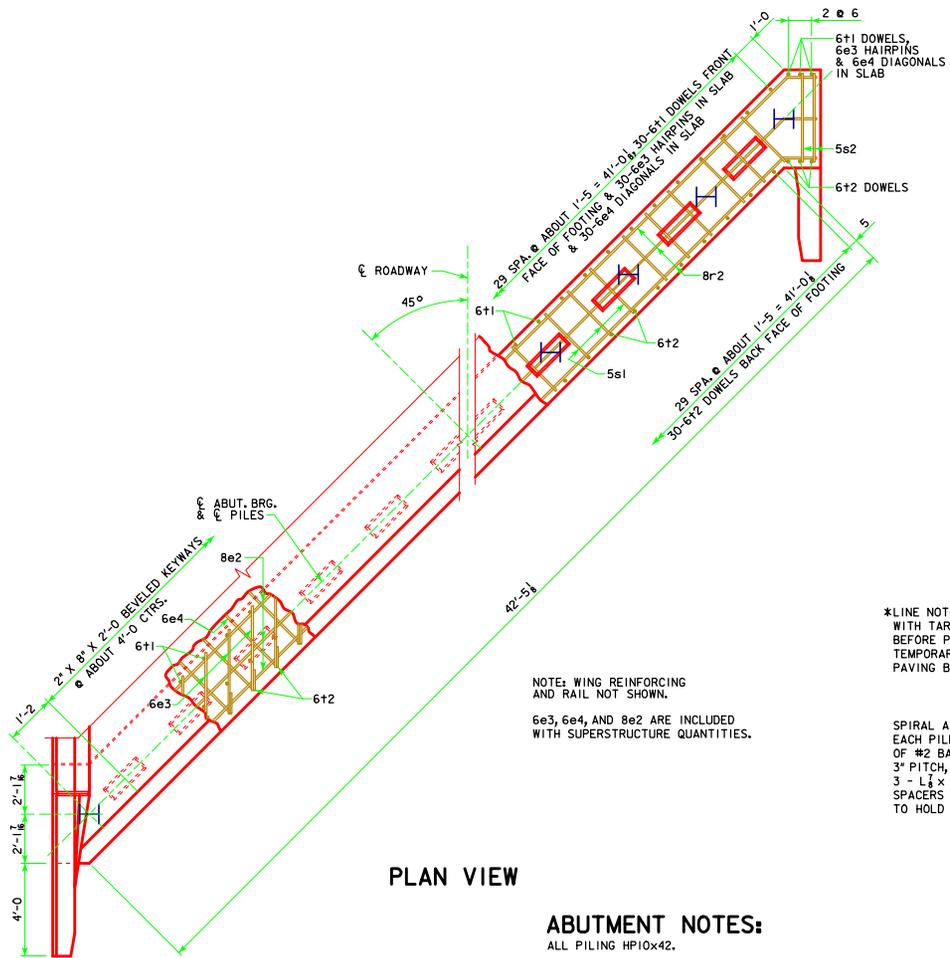


REVISED 06-13 - REVISION FOR LRFD PILING DESIGN.

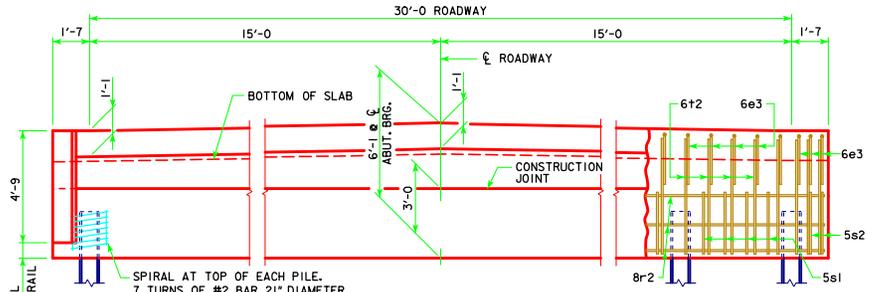


**PLAN VIEW**

NOTE: WING REINFORCING AND RAIL NOT SHOWN.  
6e3, 6e4, AND 8e2 ARE INCLUDED WITH SUPERSTRUCTURE QUANTITIES.

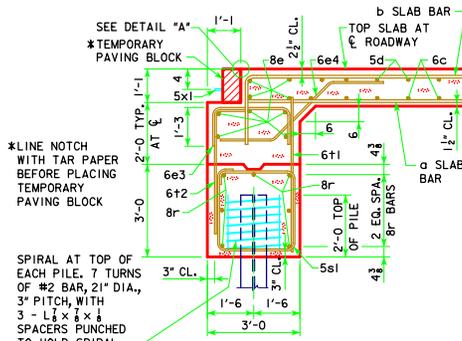
**ABUTMENT NOTES:**

- 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.

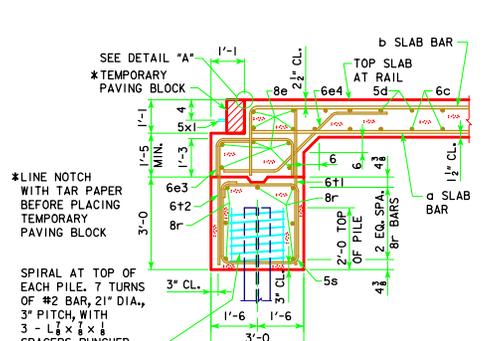


**REAR ELEVATION**

NOTE: THE BOTTOM OF FOOTING IS TO BE SLOPED TO COMPENSATE FOR GRADE ON THIS SKEWED ABUTMENT. THEREFORE BOTTOM OF FOOTING ELEVATIONS WILL BE REQUIRED AT EACH EXTERIOR PILE.



**SECTION NORMAL TO ABUTMENT AT CL**



**SECTION NORMAL TO ABUTMENT AT GUTTERLINE**



**DETAIL "A"**

<p>LATEST REVISION DATE 06-13</p> <p>APPROVED BY BRIDGE ENGINEER <i>Thomas E. M. Donnell</i></p>	<p><b>Iowa Department of Transportation</b> Highway Division</p> <p>STANDARD DESIGN - 30' ROADWAY, 3 SPAN BRIDGES</p> <p><b>CONTINUOUS CONCRETE SLAB BRIDGES</b></p> <p>NOVEMBER, 2006</p>	
<p><b>ABUTMENT DETAILS</b> 45° SKEW - STEEL PILING</p>		<p><b>J30-37-06</b></p>