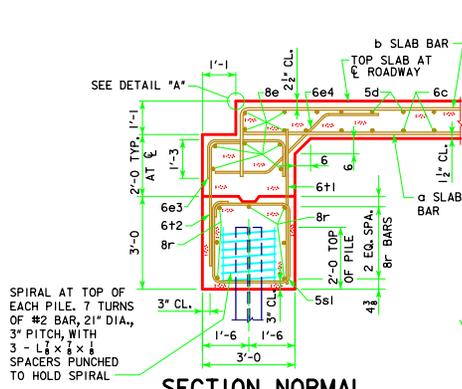


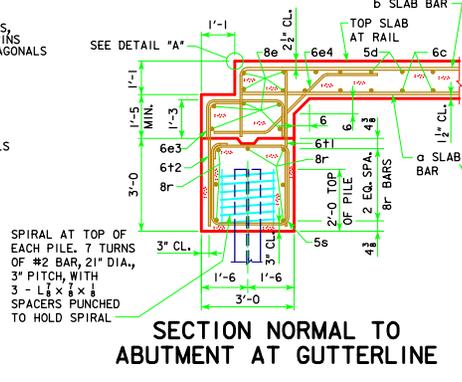
**REAR ELEVATION**

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 ROADWAY**

SPIRAL AT TOP OF EACH PILE. 7 TURNS OF #2 BAR, 21" DIA., 3" PITCH, WITH 3 - L 1/2 x 1/2 x 1/2 SPACERS PUNCHED TO HOLD SPIRAL

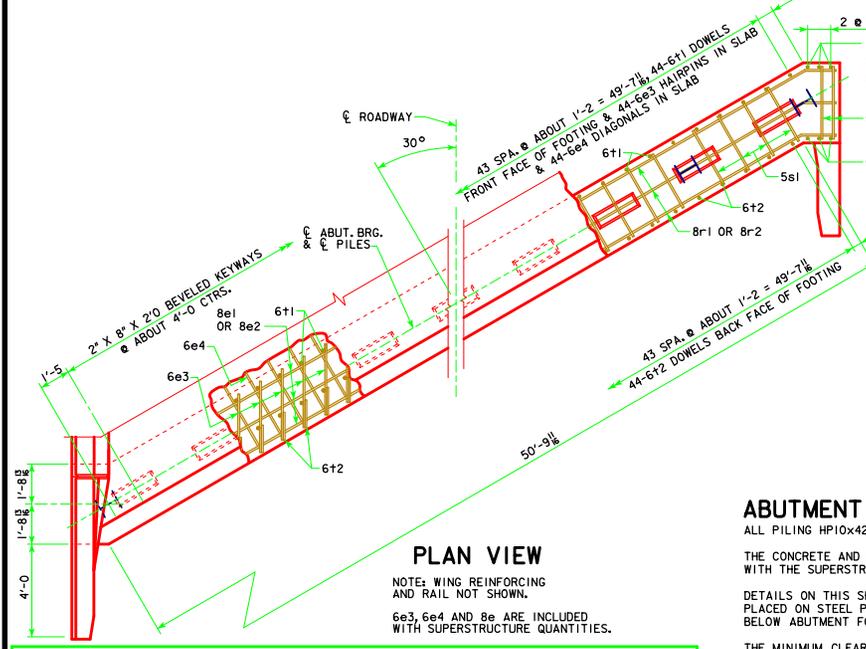


**SECTION NORMAL TO ABUTMENT AT GUTTERLINE**

SPIRAL AT TOP OF EACH PILE. 7 TURNS OF #2 BAR, 21" DIA., 3" PITCH, WITH 3 - L 1/2 x 1/2 x 1/2 SPACERS PUNCHED TO HOLD SPIRAL



**DETAIL "A"**

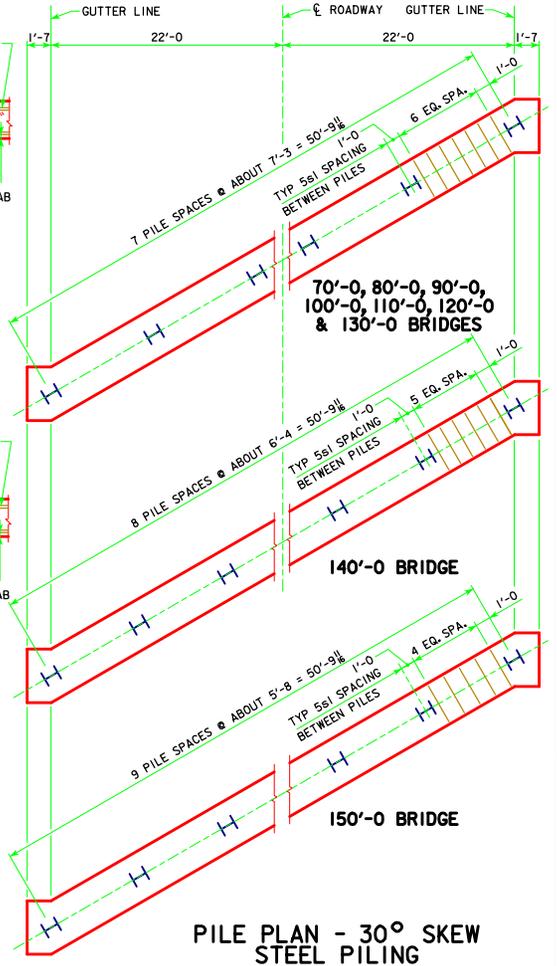


**PLAN VIEW**

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

**ABUTMENT NOTES:**

- ALL PILING HPI0x42.
- 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.



**PILE PLAN - 30° SKEW STEEL PILING**

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	8	8	8	8	8	8	8	9	10	
PU, STRENGTH I DESIGN LOAD - KIPS	527	562	594	636	676	723	768	Δ 893	Δ 946	

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

LATEST REVISION DATE  APPROVED BY BRIDGE ENGINEER <i>Thomas E. M. Small</i>	
	STANDARD DESIGN - 44' ROADWAY, 3 SPAN BRIDGES <b>CONTINUOUS CONCRETE SLAB BRIDGES</b> JULY, 2014
	<b>30° ABUTMENT DETAILS</b> <b>STEEL PILING</b>
<b>J44-41-14</b>	