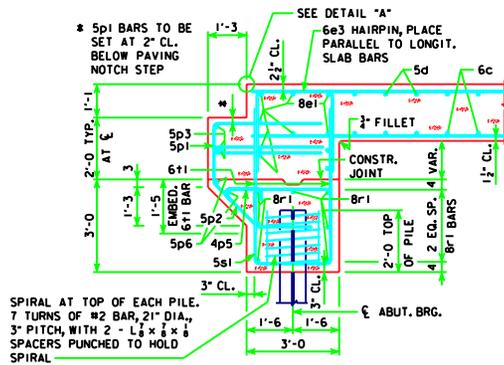
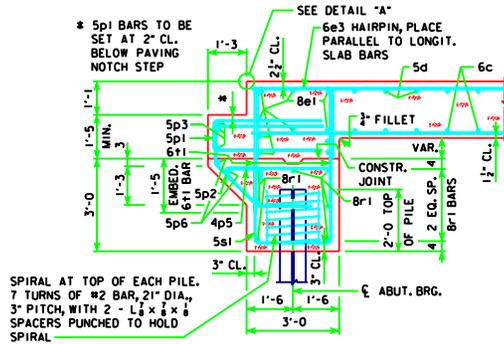


PILE PLAN - 0° SKEW STEEL PILING



SECTION NORMAL TO ABUTMENT AT ROADWAY



SECTION NORMAL TO ABUTMENT AT RAIL

ABUTMENT NOTES:

ALL PILING HP10X42.

THE CONCRETE AND REINFORCING STEEL FOR THE WINGS IS INCLUDED WITH THE SUPERSTRUCTURE.

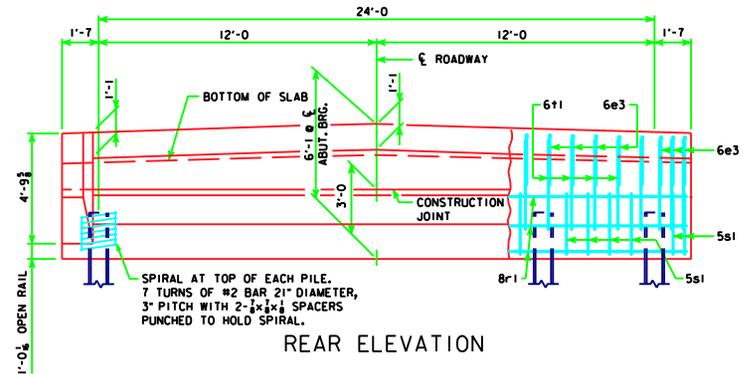
DETAILS ON THIS SHEET ARE TO BE USED ONLY WHEN ABUTMENTS ARE PLACED ON STEEL PILES. IF ROCK IS ENCOUNTERED CLOSER THAN 12' BELOW ABUTMENT FOOTING, SPECIAL ANALYSIS MAY BE REQUIRED.

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

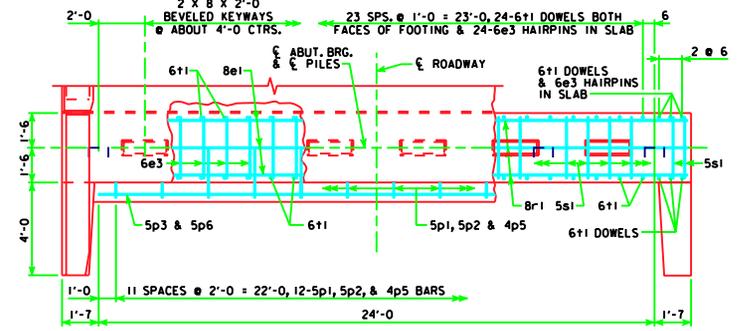
STEEL PILING USED AS FRICTION PILE SHALL BE DRIVEN TO FULL PENETRATION IF PRACTICABLE BUT IN NO CASE TO A BEARING VALUE LESS THAN THE PILE BEARING REQUIRED FOR EACH BRIDGE LENGTH AS SHOWN ON THIS SHEET.

ALL REINFORCING STEEL IS TO BE GRADE 60.

ABUTMENT PILING WAS DESIGNED FOR HS25 LOADING WITH AN ALLOWANCE FOR 20 LBS. PER SQ. FT. FUTURE WEARING SURFACE.



REAR ELEVATION



PLAN VIEW

NOTE: WING REINFORCING AND RAIL NOT SHOWN.
5p1, 5p3, 6e3 AND 8e1 ARE INCLUDED WITH SUPERSTRUCTURE QUANTITIES.

REACTION, PILE NUMBER & BEARING									
BRIDGE LENGTH	70'-0	80'-0	90'-0	100'-0	110'-0	120'-0	130'-0	140'-0	150'-0
REACTION - KIPS	237	256	272	289	306	324	342	Δ 401	Δ 422
BEARING - TONS	30	32	34	37	31	33	35	34	36
PILING - NUMBER	4	4	4	4	5	5	5	6	6

Δ INCLUDES IMPACT



LATEST REVISION DATE	 IOWA DEPARTMENT OF TRANSPORTATION Highway Division	STANDARD DESIGN - 24' ROADWAY, 3 SPAN BRIDGES	
		CONTINUOUS CONCRETE SLAB BRIDGES NOVEMBER, 2006	
		ABUTMENT DETAILS 0° SKEW - STEEL PILING	J24-34-06