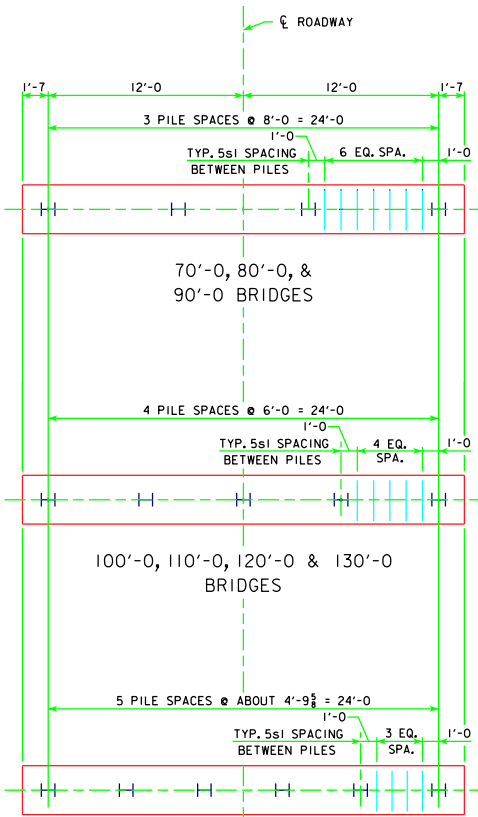
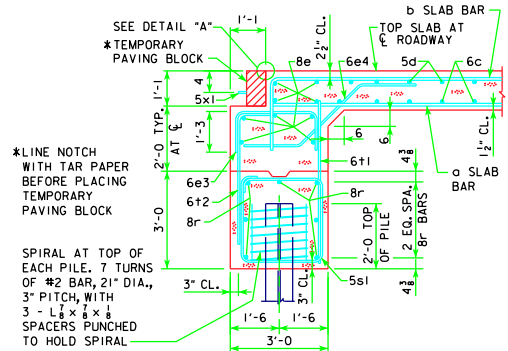


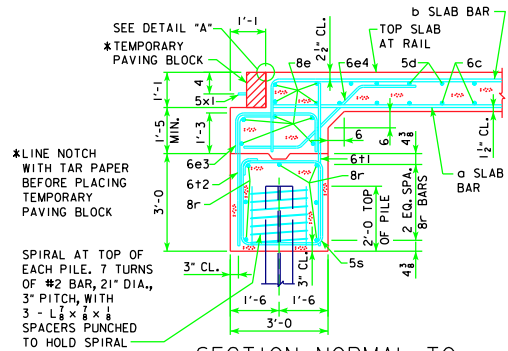
REVISED 12-08 - REVISED SHEET FOR NEW PAVING NOTCH AND WING. DESIGN FOR HL-93 LOADING.



PILE PLAN - 0° SKEW STEEL PILING



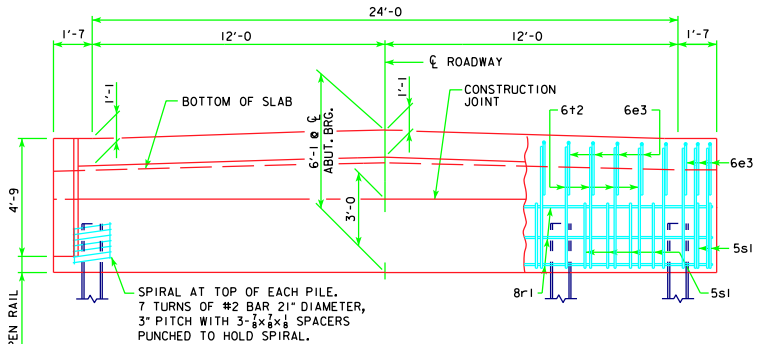
SECTION NORMAL TO ABUTMENT AT CL



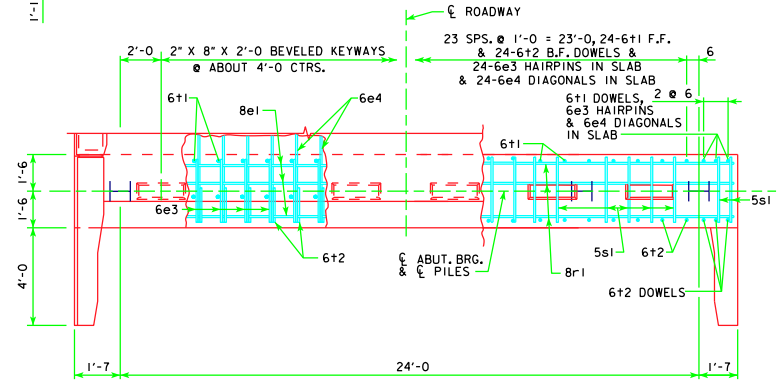
SECTION NORMAL TO ABUTMENT AT GUTTERLINE

**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 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 HL-93 LOADING WITH AN ALLOWANCE FOR 20 LBS. PER SQ. FT. FUTURE WEARING SURFACE.



REAR ELEVATION



PLAN VIEW

NOTE: WING REINFORCING AND RAIL NOT SHOWN.  
6e3, 6e4, AND 8e 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	252	266	280	298	315	334	354	Δ 409	Δ 431
BEARING - TONS	32	34	35	30	32	34	36	35	36
PILING - NUMBER	4	4	4	5	5	5	5	6	6
STRENGTH   REACTION - KIPS	345	366	387	414	439	468	496	Δ 587	Δ 619

Δ INCLUDES IMPACT



DETAIL "A"

LATEST REVISION DATE 12-08	APPROVED BY BRIDGE ENGINEER <i>Thomas C. McQuinn</i>	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