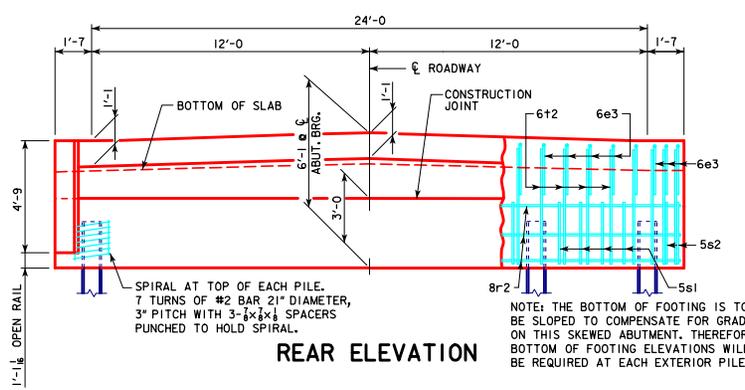
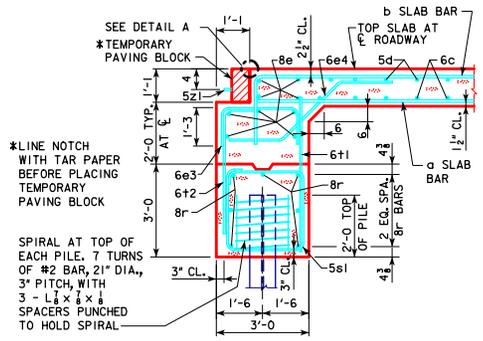


REVISED 06-13 - REVISION FOR LRED PILE DESIGN. REVISED 08-2022 BY UPDATED BRIDGE ENGINEER SIGNATURE. CHANGED PAVING BLOCK LIFTING HOOP BAR MARK (WAS 5x1).



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.



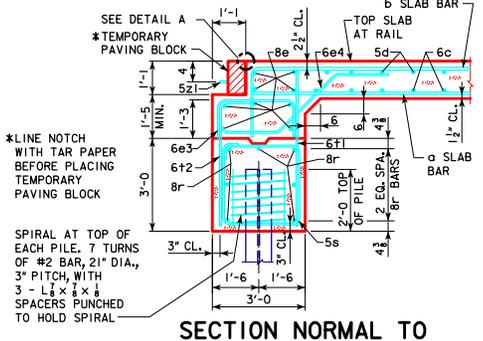
SECTION NORMAL TO ABUTMENT AT ROADWAY

*LINE NOTCH WITH TAR PAPER BEFORE PLACING TEMPORARY PAVING BLOCK

SEE DETAIL A

*TEMPORARY PAVING BLOCK

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



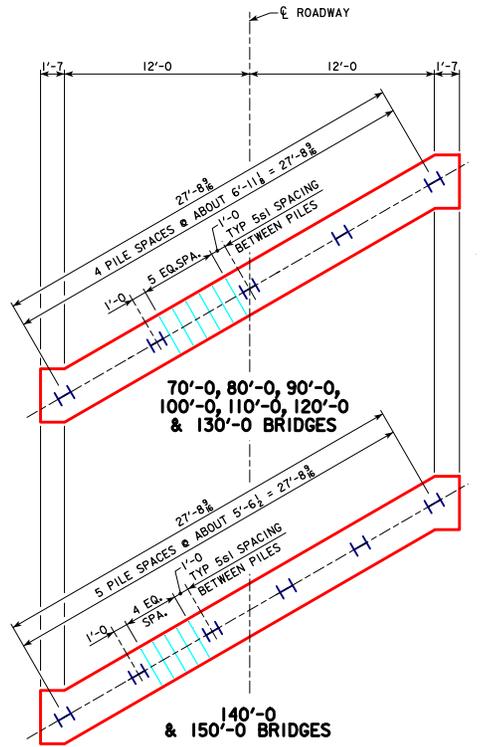
SECTION NORMAL TO ABUTMENT AT GUTTERLINE

*LINE NOTCH WITH TAR PAPER BEFORE PLACING TEMPORARY PAVING BLOCK

SEE DETAIL A

*TEMPORARY PAVING BLOCK

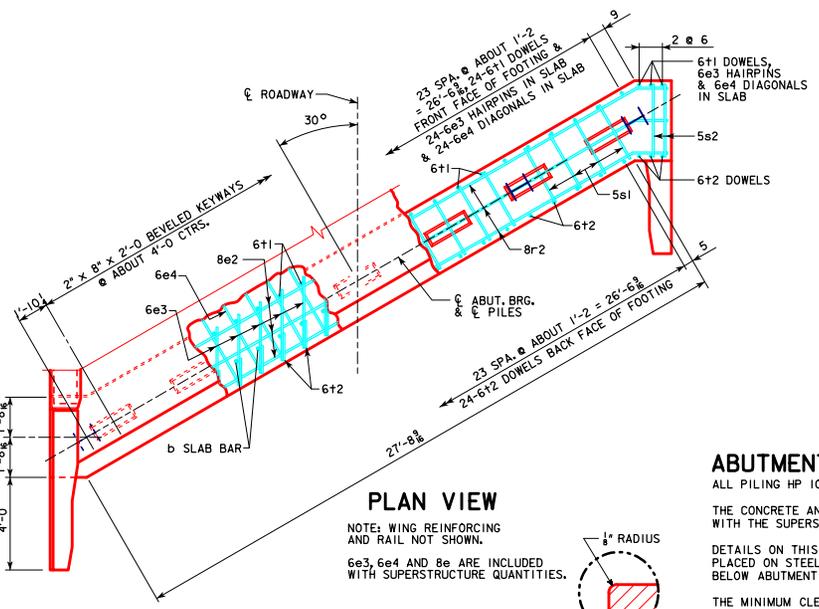
SPIRAL AT TOP OF EACH PILE. 7 TURNS OF #2 BAR, 21" DIA., 3" PITCH, WITH 3 - 1/2 x 1/2 x 1/2 SPACERS PUNCHED TO HOLD SPIRAL



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	5	5	5	5	5	5	5	6	6
PU, STRENGTH I DESIGN LOAD - KIPS	358	379	400	427	452	481	510	Δ 601	Δ 632

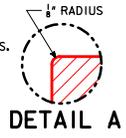
Δ INCLUDES DYNAMIC LOAD ALLOWANCE
 NOTE: PU, STRENGTH I DESIGN LOAD (KIPS) IS NOT THE VALUE USED IN THE FIELD FOR DRIVING PILES.



PLAN VIEW

NOTE: WING REINFORCING AND RAIL NOT SHOWN.

6e3, 6e4 AND 8e ARE INCLUDED WITH SUPERSTRUCTURE QUANTITIES.



DETAIL A

ABUTMENT NOTES:

- ALL PILING HP 10x42.
- 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.

08-2022
 LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

IOWA DOT

STANDARD DESIGN - 24'-0" ROADWAY, 3 SPAN BRIDGES

CONTINUOUS CONCRETE SLAB BRIDGES

NOVEMBER, 2006

ABUTMENT DETAILS
30° SKEW - STEEL PILING

J24-36-06