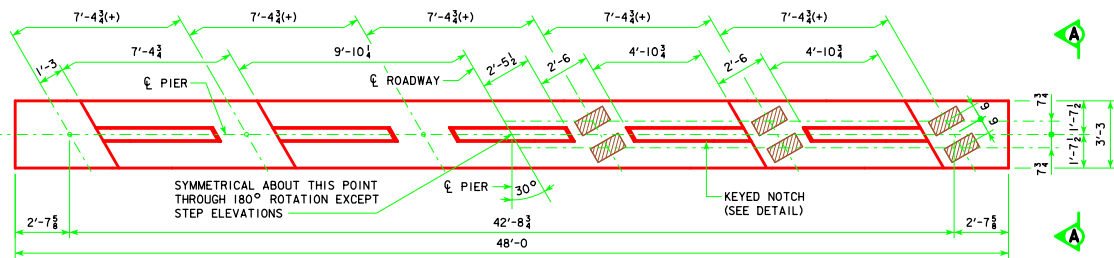
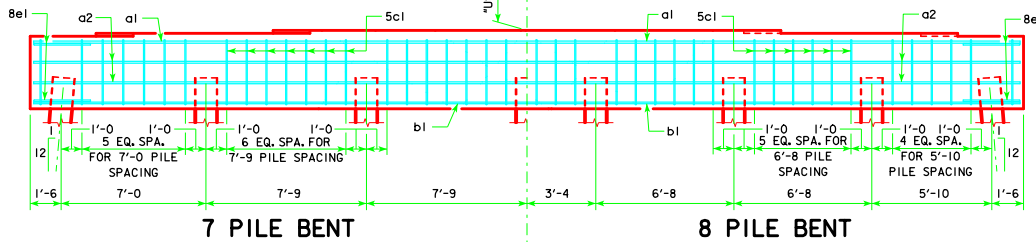


REVISED 05-13 - REVISION FOR LRFD PILE DESIGN.



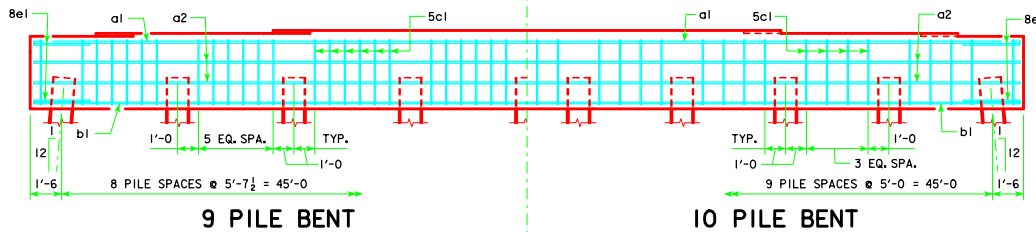
TYPICAL PLAN

NOTE:
THE HEIGHT OF THE STEPS ON THE BRIDGE SEAT IS EQUAL TO THE DIFFERENCE IN ELEVATIONS OF THE TOP OF SLAB AT ADJACENT BEAMS ALONG ϕ PIER. SEE SHEET H40-22-06 FOR "U" DIMENSION.



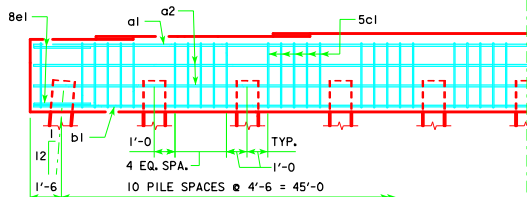
7 PILE BENT

8 PILE BENT

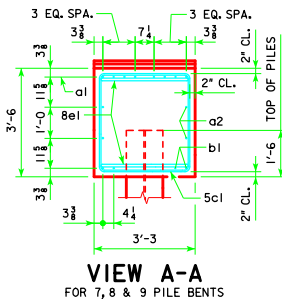


9 PILE BENT

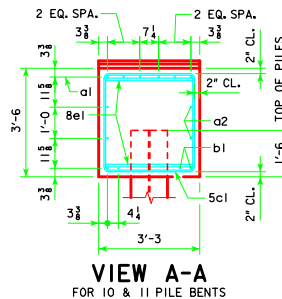
10 PILE BENT



11 PILE BENT



VIEW A-A
FOR 7, 8 & 9 PILE BENTS



VIEW A-A
FOR 10 & 11 PILE BENTS

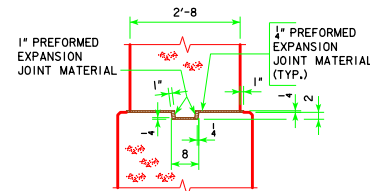
PILE BENT NOTES:

THESE PIER BENTS ARE DESIGNED FOR USE IN LOCATIONS WHERE ICE AND DRIFT CONDITIONS ARE NOT SEVERE.

FOR DETAILS OF TRESTLE PILES, SEE STANDARD PIOL.

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

PIER PILES SHALL BE DRIVEN TO VALUES SHOWN IN DESIGN PLANS.

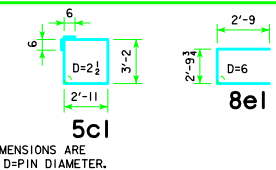


KEYED NOTCH DETAIL

REINFORCING BAR LIST AND ESTIMATED QUANTITIES - PER PILE BENT

BAR	LENGTH	SHAPE	7 PILE BENT			8 PILE BENT			9 PILE BENT			10 PILE BENT			11 PILE BENT		
			NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT
a1	47'-8		8	9	1297	8	9	1297	8	9	1297	8	9	972	6	9	972
a2	47'-8		4	8	509	4	8	509	4	8	509	4	8	509	4	8	509
b1	47'-8		4	10	820	4	10	820	4	9	648	4	9	648	4	9	648
5c1	13'-2		42	5	577	42	5	577	50	5	687	38	5	522	52	5	714
8e1	8'-4		4	8	89	4	8	89	4	8	89	4	8	89	4	8	89
REINFORCING STEEL (LB.)			3292			3292			3230			2740			2932		
STRUCTURAL CONCRETE (CY)			3			3			3			3			3		

BENT BAR DETAILS



NOTE: ALL DIMENSIONS ARE OUT TO OUT. D=PIN DIAMETER.

FRICTION OR POINT BEARING PILING

ϕ - ϕ ABUTMENT BEARING	PILOT TYPE 3		
	NUMBER OF TRESTLE PILES	PILE SIZE	LRFD PU, STRENGTH I DES. LOAD (KIPS)
138'-10	7	HP14x73	177
	7	HP14x89	177
151'-4	8	HP14x73	162
	7	HP14x89	186
163'-10	8	HP14x73	175
	7	HP14x89	200
176'-4	8	HP14x73	183
	7	HP14x89	209
188'-10	9	HP14x73	170
	7	HP14x89	218
201'-4	10	HP14x73	170
	8	HP14x89	212
213'-10	10	HP14x73	178
	8	HP14x89	222
226'-4	11	HP14x73	170
	9	HP14x89	208
243'-0	11	HP14x73	179
	9	HP14x89	219

- ① SEE SHEET H40-24-06 FOR STEP REINFORCING STEEL QUANTITIES AND DETAILS.
- ② FOR DETERMINING ACTUAL PILE LENGTHS IN FIELD.
- ③ NOTE: PU, STRENGTH I DESIGN LOAD (KIPS) IS NOT THE VALUE USED IN THE FIELD FOR DRIVING PILES.

NOTE: FRICTION BEARING INCLUDES SIDE FRICTION AND END BEARING IN SOIL. POINT BEARING INCLUDES SIDE FRICTION AND POINT BEARING IN ROCK.

LATEST REVISION DATE
05-13

APPROVED BY BRIDGE ENGINEER
Thomas E. Mc Donnell

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 40' ROADWAY, THREE SPAN BRIDGE
PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES
AUGUST, 2009

PILE BENT PIERS
HPI4 PILES
30° SKEW

H40-53-06