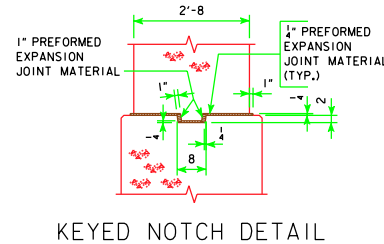
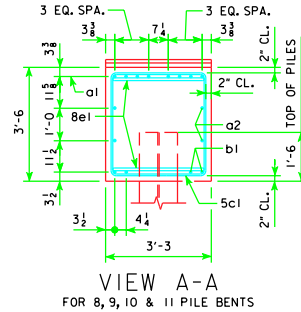


PILE BENT NOTES:

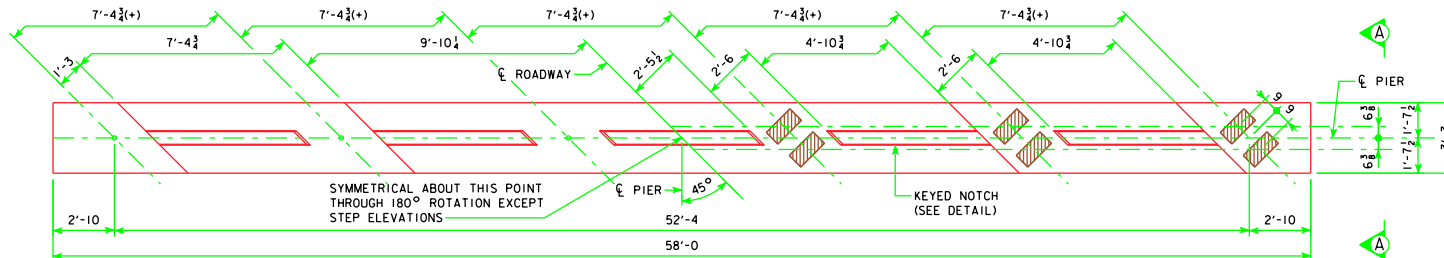
THESE PIER BENTS ARE DESIGNED FOR USE IN LOCATIONS WHERE ICE AND DRIFT CONDITIONS ARE NOT SEVERE.

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.

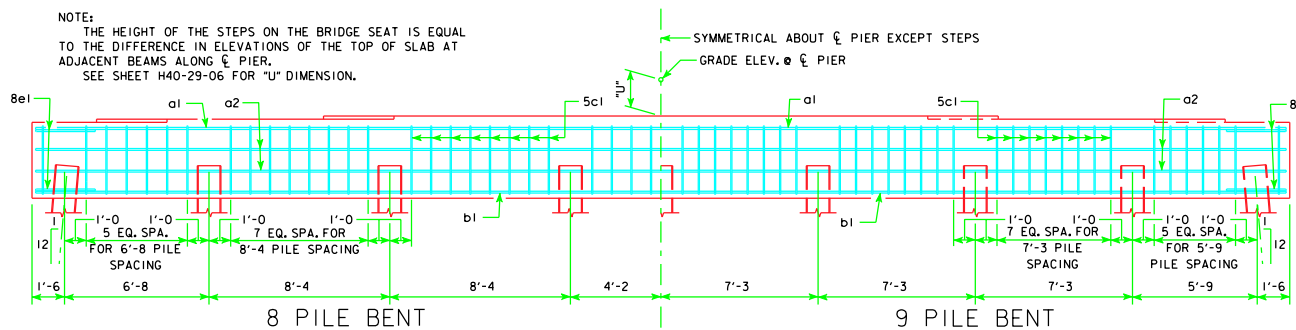


KEYED NOTCH DETAIL

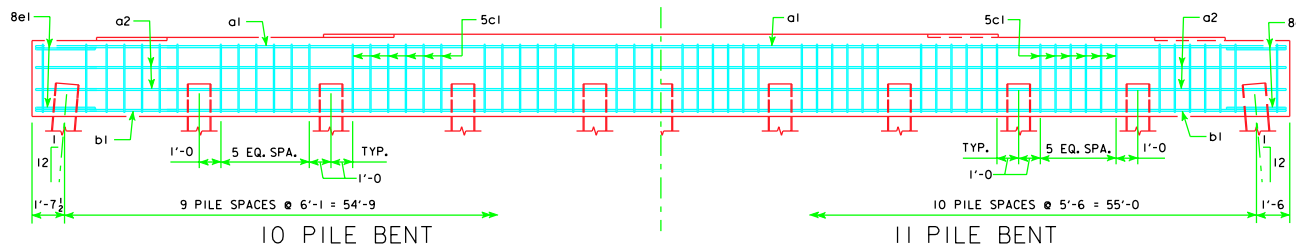


TYPICAL PLAN

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 CL. PIER.
SEE SHEET H40-29-06 FOR "U" DIMENSION.



8 PILE BENT



9 PILE BENT

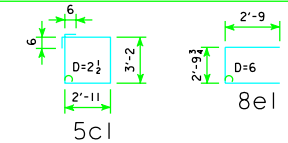
10 PILE BENT

11 PILE BENT

REINFORCING BAR LIST AND ESTIMATED QUANTITIES - PER PILE BENT

BAR	LENGTH	SHAPE	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT
a1	57'-8		8	9	1569	8	9	1569	8	9	1569	8	9	1569
a2	57'-8		4	8	616	4	8	616	4	8	616	4	8	616
b1	57'-8		4	10	993	4	10	993	4	10	993	4	10	993
5c1	13'-2		54	5	742	62	5	851	56	5	769	62	5	851
8el	8'-4		4	8	89	4	8	89	4	8	89	4	8	89
REINFORCING STEEL (LB.)				4009		4118		4036		4118				
STRUCTURAL CONCRETE (CY)				26.2		26.2		26.2		26.2				

BENT BAR DETAILS



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

FRICION OR POINT BEARING PILING

CL. ABUTMENT BEARING	PIOL TYPE 3			
	NUMBER OF TRESTLE PILES	PILE SIZE	DES. PILE BRG. (TONS)	LRFD DES. BRG. (KIPS)
138'-10	8	HP14x73	55	159
	8	HP14x89	55	159
151'-4	8	HP14x73	58	167
	8	HP14x89	58	167
163'-10	8	HP14x73	62	180
	8	HP14x89	62	180
176'-4	9	HP14x73	58	167
	8	HP14x89	65	188
188'-10	9	HP14x73	60	174
	8	HP14x89	68	196
201'-4	10	HP14x73	60	174
	8	HP14x89	75	217
213'-10	10	HP14x73	63	182
	9	HP14x89	70	202
226'-4	11	HP14x73	60	174
	9	HP14x89	73	213
243'-0	11	HP14x73	63	183
	9	HP14x89	77	223

- SEE SHEET H40-31-06 FOR STEP REINFORCING STEEL QUANTITIES AND DETAILS.
- FOR DETERMINING ACTUAL PILE LENGTHS IN FIELD.
- FOR ESTIMATING PILE LENGTHS USING AASHTO LRFD SPECIFICATIONS.

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

LATEST REVISION DATE

01-10

APPROVED BY BRIDGE ENGINEER

Norman L. McDaniel

Iowa Department of Transportation

Highway Division

STANDARD DESIGN - 40' ROADWAY, THREE SPAN BRIDGE

PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES

AUGUST, 2009

PILE BENT PIERS

HP14 PILES

45° SKEW

H40-56-06