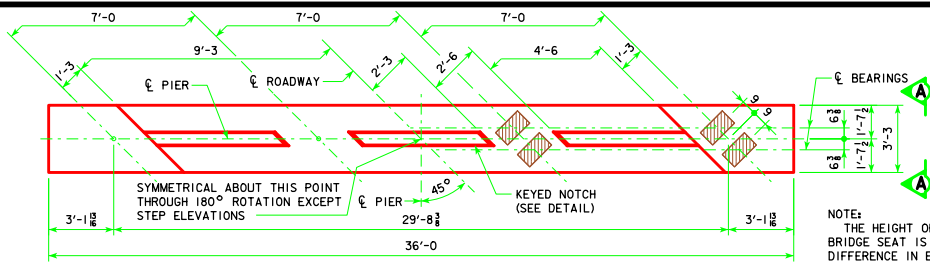


REVISED 05-13 - REVISION FOR LRFD PILE DESIGN.



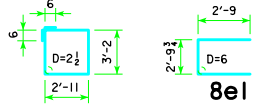
TYPICAL PLAN

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 H24-29-06 FOR "U" DIMENSION.

REINFORCING BAR LIST AND ESTIMATED QUANTITIES - PER PILE BENT

BAR	LENGTH	SHAPE	5 PILE BENT			6 PILE BENT			7 PILE BENT			8 PILE BENT		
			NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT
a1	35'-8"		8	9	970	8	9	970	8	9	970	6	9	728
a2	35'-8"		4	8	381	4	8	381	4	8	381	4	8	381
b1	35'-8"		4	8	381	4	10	614	4	9	485	4	8	381
5c1	13'-2"		34	5	467	35	5	481	38	5	522	37	5	508
8e1	8'-4"		4	8	89	4	8	89	4	8	89	4	8	89
REINFORCING STEEL (L.B.)			2288			2535			2447			2087		
STRUCTURAL CONCRETE (CY)			3			15.8			15.8			15.8		

BENT BAR DETAILS



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

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 PI0L.

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

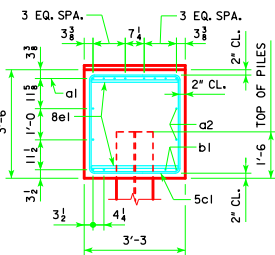
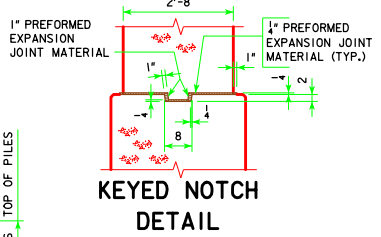
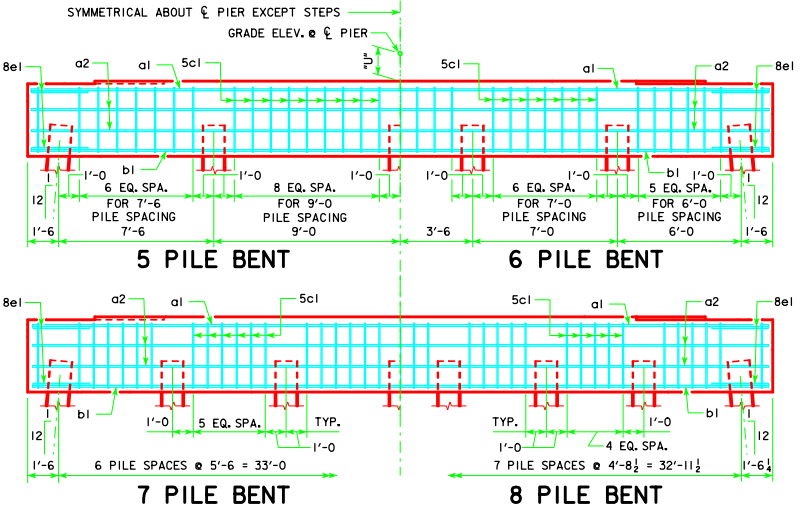
PIER PILES SHALL BE DRIVEN TO VALUES SHOWN IN DESIGN PLANS.

FRICTION OR POINT BEARING PILING

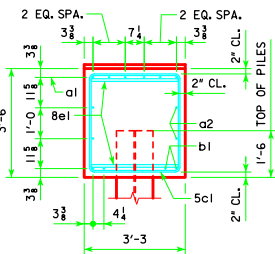
ϕ - ϕ ABUTMENT BEARING	PI0L TYPE 3		
	NUMBER OF TRESTLE PILES	PILE SIZE	LRFD P_u , STRENGTH I, DES. LOAD (KIPS)
138'-10"	5	HP14x73	180
	5	HP14x89	180
151'-4"	6	HP14x73	157
	5	HP14x89	189
163'-10"	6	HP14x73	169
	5	HP14x89	203
176'-4"	6	HP14x73	177
	5	HP14x89	212
188'-10"	6	HP14x73	184
	5	HP14x89	221
201'-4"	7	HP14x73	174
	6	HP14x89	203
213'-10"	7	HP14x73	182
	6	HP14x89	213
226'-4"	8	HP14x73	168
	6	HP14x89	224
243'-0"	8	HP14x73	176
	7	HP14x89	202

- ① SEE SHEET H24-31-06 FOR STEP REINFORCING STEEL QUANTITIES AND DETAILS.
- ② **NOTE:** P_u , 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.



VIEW A-A
FOR 5, 6 & 7 PILE BENTS



VIEW A-A
FOR 8 PILE BENT

LATEST REVISION DATE
05-13
APPROVED BY BRIDGE ENGINEER
Thomas E. McQuill

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 24' ROADWAY, THREE SPAN BRIDGE
PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES
DECEMBER, 2006

PILE BENT PIERS
HPI4 PILES
45° SKEW

H24-49-06