

(NOTE: THESE REINFORCING BARS TO BE USED ON ALL SKEWS)

Figure 10 illustrates various dimensioning rules for holes in plates, showing different hole sizes, offsets, and dimensions.

1. Hole diameter: $D=2$. Dimensions: 8 , 7 , $4c1$, $4c2$, $1'-2$.

2. Hole diameter: $D=2\frac{1}{2}$. Dimensions: $9\frac{1}{2}$, 2 , 10 , $5'-10$.

3. Hole diameter: $D=4\frac{1}{2}$. Dimensions: $3'-2$, $1'-0$.

4. Hole diameter: $D=2$. Dimensions: $4\frac{1}{2}$, $1'-3$, $1'-4$, $2'-2$.

5. Hole diameter: $D=2$. Dimensions: 9 , $4j2$, $1'-0$, 9 .

6. Hole diameter: $D=3\frac{1}{2}$. Dimensions: $4t1$, $4t2$, $11\frac{1}{8}$, $3\frac{1}{2}$, $4t1 \& 4t2$.

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

3'-0 2'

0 10000 20000 30000 40000 50000 60000 70000 80000 90000 100000

Figure 10: Reinforcement details for the deck slab. The diagram shows a cross-section of a deck slab with various reinforcement bars and dimensions. Key dimensions include 6, 12 SPA, 26-5C3, 12-4C1, 6, 6, 8 EQUAL SPACES, 5C3 & 4C1, 6, 2'-2", MIN. LAP, 4C2, 4C1, 5d2, 5d1, 5C3, 4C1, 5d4, 5C3, 4C1, and 5. A detail view on the right shows a cross-section of a bar with a 5-inch dimension.

Figure 1

Technical drawing of a roughened joint. The drawing shows a cross-section of a joint with dimensions: 2, 1'-0 1/2, 4 1/2, 2'-8, 3, 4 EQ. SPAC., 10-5/64, 3. Components are labeled: 4c1, 5d4, ROUGHENED JOINT, 5d3, 4t2, 5c3.

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BRIDGE LENGTH		138'-10	151'-4	163'-10	176'-4	188'-10	201'-4	213'-10	226'-4	243'-0
OPEN RAIL SECTION	2 @ 0.073 CU. YDS. PER FT.	20.9	22.7	24.5	26.4	28.2	30.0	31.8	33.7	36.1
OPEN RAIL-END SECTION	4 @ 0.755 CU. YDS.	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
OPEN RAIL-ABUT. DIAPH. SECTION	4 @ 0.103 CU. YDS. PER FT.	-----	-----	-----	-----	-----	1.8	1.8	1.8	1.8
OPEN RAIL-END POSTS	4 @ 0.12 CU. YDS.	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
OPEN RAIL-INTERIOR POSTS	2 x "E" @ 0.08 CU. YDS.	2.7	2.9	3.2	3.5	3.7	4.0	4.2	4.5	4.8
TOTAL (C.Y.)		27.1	29.1	31.2	33.4	35.4	39.3	41.3	43.5	46.2

BRIDGE LENGTH	138'-10	151'-4	163'-10	176'-4	188'-10	201'-4	213'-10	226'-4	243'-0
OPEN CONCRETE RAILING, TL-4 0° SKEW	311.7	336.7	361.7	386.7	411.7	456.7	481.7	506.7	540.0
OPEN CONCRETE RAILING, TL-4 15° SKEW	311.9	336.9	361.9	386.9	411.9	456.7	481.7	506.7	540.0
OPEN CONCRETE RAILING, TL-4 30° SKEW	312.6	337.6	362.6	387.6	412.6	456.7	481.7	506.7	540.0
OPEN CONCRETE RAILING, TL-4 45° SKEW	314.2	339.2	364.2	389.2	414.2	456.7	481.7	506.7	540.0

APPROVED BY BRIDGE ENGINEER



HL93 SU
OPEN



Iowa Department of Transportation

Highway Division

STANDARD DESIGN - 40' ROADWAY, THREE SPAN BRIDGE

PRETENSIONED PRESTRESSED

CONCRETE BEAM BRIDGES

HL93 SUPERSTRUCTURE

DECEMBER, 2006

HS25 SUBSTRUCTURE

OPEN RAIL, TL-4 DETAILS
SHEET 2 OF 2

H40-43-06