

Ah REINFORCEMENT		
HEIGHT h (FT.)	Ah (IN <sup>2</sup> /FT.)	
	15° & 30° SKEW	45° SKEW
7 OR LESS	0.192	0.192
8	0.20	0.24
9	0.29	0.36
10	0.42	0.53
11	0.60	0.75
12	0.78	0.98
13	1.03	1.36
14	1.38	1.85

Ab† REINFORCEMENT	
SPAN (FT.)	Ab† (IN <sup>2</sup> /FT.)
6-10	0.20
12	0.30
14	0.39
16	0.39

LINTEL BEAM REINFORCEMENT		
SPAN (FT.)	BOTTOM REINFORCEMENT	
	A1	A2
6	NO. 4 @ 1'-0"	NO. 4 @ 9"
8	NO. 4 @ 1'-1"	NO. 4 @ 6"
10	NO. 4 @ 9"	NO. 5 @ 6"
12	NO. 5 @ 9"	NO. 6 @ 6"
14	NO. 6 @ 9"	NO. 8 @ 6"
16	NO. 6 @ 9"	NO. 8 @ 6"

LENGTH N			
SPAN (FT.)	15° SKEW	30° SKEW	45° SKEW
6	4'-3 <sup>3</sup> / <sub>8</sub> "	6'-4 <sup>1</sup> / <sub>4</sub> "	9'-2"
8	4'-9 <sup>7</sup> / <sub>8</sub> "	7'-6"	11'-2"
10	5'-4 <sup>1</sup> / <sub>4</sub> "	8'-7 <sup>7</sup> / <sub>8</sub> "	13'-2"
12	5'-10 <sup>3</sup> / <sub>4</sub> "	9'-9 <sup>3</sup> / <sub>4</sub> "	15'-2"
14	6'-5 <sup>1</sup> / <sub>8</sub> "	10'-11 <sup>5</sup> / <sub>8</sub> "	17'-2"
16	6'-11 <sup>5</sup> / <sub>8</sub> "	12'-1 <sup>1</sup> / <sub>2</sub> "	NA (7)

LINTEL BEAM THICKNESS			
SPAN (FT.)	15° SKEW	30° SKEW	45° SKEW
≤ 12	9"	9"	9"
14	10" (8)	10" (8)	10" (8)
16	10" (8)	10" (8)	NA (7)

### CONSTRUCTION NOTES

SEE STANDARD FIG. 5-395.101(A) AND FIG. 5-395.101(B) FOR ADDITIONAL DIMENSIONS AND CONSTRUCTION NOTES.

ALL END SECTIONS REQUIRE CURB ON LINTEL BEAM.

GROUT CONSISTS OF 1 PART CEMENT AND 2 PARTS SAND. USE TYPE 1A AIR ENTRAINED PORTLAND CEMENT. GROUT MIX MAXIMUM SLUMP IS 4".

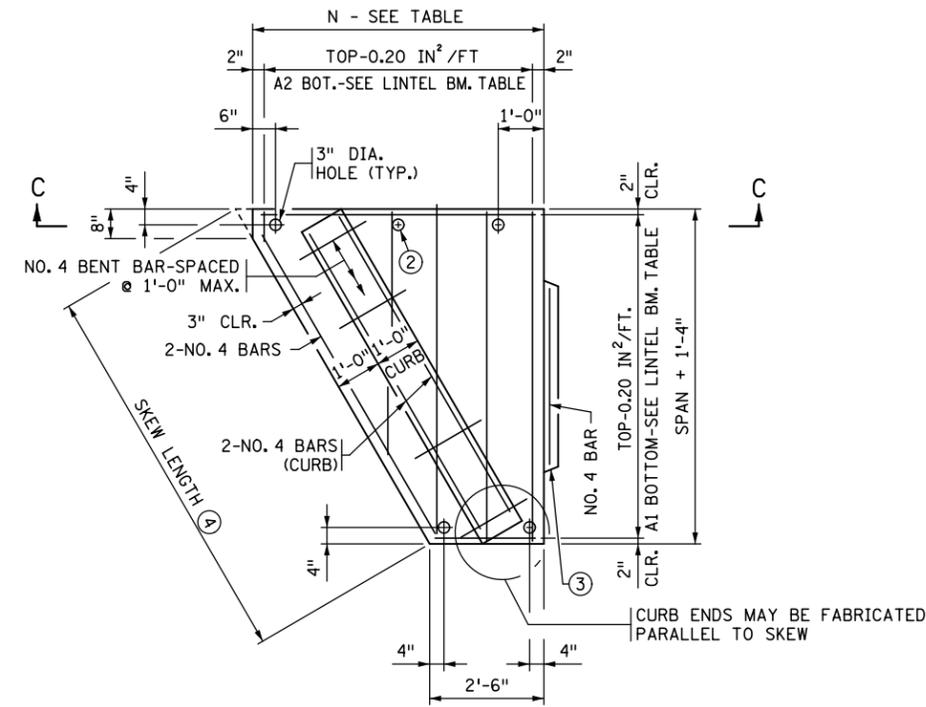
STRUCTURAL STEEL PER SPEC. 3306.

WELDING PER SPEC. 2471.

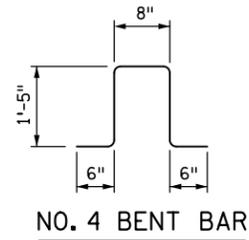
GALVANIZE STRUCTURAL STEEL PER SPEC. 3394.

GALVANIZE BOLTS, NUTS AND WASHERS PER SPEC. 3392.

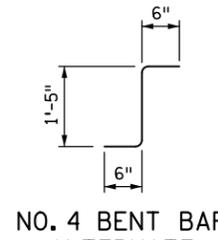
- ① NO. 8 DOWEL, 1'-0" LONG, 2" DIA. HOLE IN THE TOP OF THE WALL SECTION AND 3" DIA. HOLE IN THE LINTEL. FILL HOLE WITH GROUT.
- ② PROVIDE ADDITIONAL 3" HOLES AT 4'-0" MAXIMUM SPACING WHEN SIDE OF LINTEL BEAM IS OVER 6 FT.
- ③ CHECK THE LOCATION TO DETERMINE WHETHER A TONGUE OR A GROOVE IS USED. TONGUE AND GROOVE TO TERMINATE AT CULVERT RADIUS.
- ④ FOR SKEW LENGTH UNDER 10' USE NO. 8 BARS. FOR SKEW LENGTH OF 10' TO 14' USE NO. 9 BARS. FOR SKEW LENGTH OVER 14' TO 18' USE NO. 10 BARS. FOR SKEW LENGTH OVER 18' TO 22' USE NO. 11 BARS OR EQUAL. SKEW LENGTH IS DISTANCE BETWEEN OUTSIDE FACES OF END SECTION ALONG LINTEL BEAM.
- ⑤ SEE LINTEL BEAM THICKNESS TABLE ON THIS SHEET. USE LINTEL BEAMS WITH 5000 PSI 3W82 CONCRETE UNLESS OTHERWISE SPECIFIED.
- ⑥ ALTERNATE BAR BEND MAY BE USED FOR NO. 4 BENT BARS.
- ⑦ FOR CULVERTS WITH SPANS OF 16' THE MAXIMUM SKEW IS 30°.
- ⑧ ALTERNATIVELY A 9" THICKNESS MAY BE USED WITH 6500 PSI 3W82 CONCRETE.



PLAN VIEW  
LINTEL BEAM WITH INTEGRAL CURB

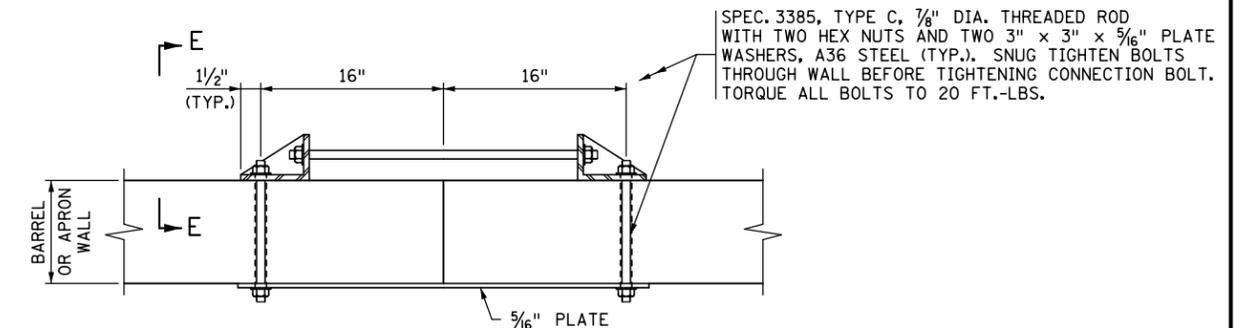


NO. 4 BENT BAR

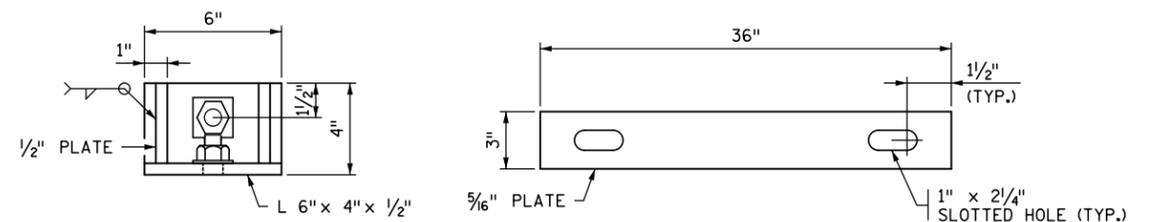


NO. 4 BENT BAR ALTERNATE

⑥  
2 REQUIRED



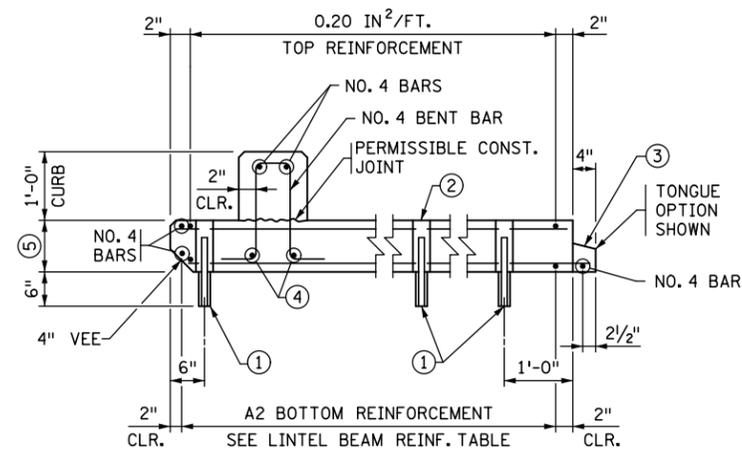
PLAN VIEW



SECTION E-E

PLATE DETAIL

EXTRA STRONG CONNECTION DETAILS



SECTION C-C

LINTEL BEAM WITH INTEGRAL CURB

REVISION: 10-09-2015

APPROVED: MARCH 24, 2011

*Nancy Subenberger*  
STATE BRIDGE ENGINEER

STATE PROJ. NO

(T.H.) STA. +

FIG. 5-395.110(B)

CERTIFIED BY \_\_\_\_\_  
LICENSED PROFESSIONAL ENGINEER DATE \_\_\_\_\_  
NAME: \_\_\_\_\_ LIC. NO. \_\_\_\_\_

TITLE: PRECAST CONCRETE END SECTION  
TYPE III - SINGLE OR DOUBLE BARREL  
FOR SKEWS 7<sup>1</sup>/<sub>2</sub>' TO 45'

DES: \_\_\_\_\_ DR: \_\_\_\_\_ APPROVED: \_\_\_\_\_  
CHK: \_\_\_\_\_ CHK: \_\_\_\_\_ SHEET NO. OF SHEETS

BRIDGE NO.