

B310

Curved Plate Bearing Assembly (Prestressed Concrete Beams) (Fixed)

Approved, and signed, December 20, 2018. Last date revised: December 21, 2022.

Revised 12-21-2022

At SECTION X-X and SIDE ELEVATION:

- Added a callout to denote the sole plate.

At SECTION X-X:

- Added cross hatch pattern to the sole plate.

Under NOTES:

- Changed the 3rd note from "Provide Anchor Rods In Accordance with Spec. 3306. Galvanize In Accordance with Spec. 3394." to "Provide Round Bars In Accordance With Spec. 3306 For Use As Anchor Rods. Galvanize In Accordance With Spec. 3394."

At the Designer Note:

- Changed the word “plotting” to printing.

At DESIGN DATA block:

- Removed the "Design Data Block" from the lower right corner of the detail. The information that was included in the Design Data Block has been added to the MnDOT LFRD Bridge Design Manual.

Revised 12-21-2022

Under NOTES:

- Changed the 3rd note to read: Provide round bars in accordance with spec. 3306 for use as anchor rods. Galvanize in accordance with spec. 3394.

At the Designer Note:

- Changed the word “plotting” to printing.

Removed the Design Data Block from the detail.

Revised 10-22-2019

Under NOTES:

- Within the notes: Changed the term “per spec.” to “in accordance with spec.” in all instances.

At the Table:

- In the Beam Size column, added the under bars (_ _) to the beam types to designate the appropriate beam size when filling out the chart.

At the Designer Note:

- Added – “Insert table values as needed and delete unused data.”

Re-Approved 12-20-2018

In the TABLE:

- Second row, added 47” dimension to column “E” under Bearing Plate Size for the MW shape.
- Third row, added bearing pad and plate size information for MH shape beams.

At Designer Note:

- Added bearing pad size for MH shape beams.
- Added bearing plate size dimension “E” for RB, M, and MW shape beams.

At Plan (upper left corner):

- To left of dimension “B”, changed “1" CLR. (TYP.)” to “1" (TYP.)”.

Revised 11-08-2018

Under NOTES:

- Changed numbered note ③ from “Refer to bearing pad restraint sheet for additional information and details” to “Refer to bearing pad restraint B-Detail for additional information and details”.

Revised 11-02-2017

Under NOTES:

- Changed the numbered note③ to read: Refer to bearing pad restraint sheet for additional information and details.

At the SIDE ELEVATION and SECTION X-X:

- Added the restraint bars under the bearing plate.
- Changed the note pointing to both details *to*: MN shape shown (other shapes similar)
- Fixed the hatching on the curved plate and added the sole plate in Section X-X.

At SECTION Y-Y:

- Changed the note *from*: Welded Bar (Typ.)③ *to*: Restraint Bar (Typ.)③.
- Removed the weld symbol pointing to the restraint bar.

At the DESIGNER NOTE:

- Added note: For parapet and semi-integral abutment bridges on grades exceeding 3%, modify this detail to provide a tapered bearing plate per detail B309.
- Added note: Per note③ include B307 and modify as necessary.

At the bearing TABLE:

- Added the RESTRAINT PATTERN ③ column and the A-1 & A-2 designation within the column pertaining to the restraint pattern type.

Added the DESIGN DATA box:

- MAX. FACTORED SHEAR RESISTANCE:
 - 50.3 KIPS PER 1½” DIA. PINTLE
 - 36.2 KIPS PER 1½” DIA. ANCHOR ROD

Revised 01-05-2017

Under NOTES:

- At the 3rd note: Updated the anchor rod spec. number from 3385 to 3306 and updated the anchor rod galvanizing spec. number from 3392 to 3394.

Throughout the DETAIL:

- Changed the cross-hatching or removed cross-hatching on the curved plate and bearing plate.

Revised 11-03-2015

At SECTION Y-Y:

- Changed from welded “keeper” studs” to a welded “keeper” bar.
- Added the 3/16” fillet weld symbol to the welded bar on the lower left side of the detail.
- Changed the “Welded Stud (Typ.) ③” *to* “Welded Bar (Typ.) ③”

At SECTION X-X:

- Changed the shape of the beam *from* an M *to* a MN shape. Also made the change at the “Side Elevation”.
- Changed the note pointing to the beam to read: MN shape (other shapes similar).
- Removed the note “2’-2” Bottom Flange Shown” from below the Section X-X title.

Under NOTES:

- Changed all notes to “Active Voice” if needed.
- At the 3rd note, changed the spec to 3385, TYPE A.
- Changed numbered note ③ to read: 3/8" x 3/8" bar installed on bearing plate around perimeter of bearing pad. Bar length is 2" less than adjacent pad dimension, centered on pad. Centerline of bar to edge of pad dimension = 1/2".

ADDED:

- “RB” (to represent the Rectangular Beam) to the Beam Size column in the TABLE.
- Added “RB” to accompany the M, & MN shapes within the Designer Note.

Revised 11-06-2013

Under NOTES:

- In the 3rd note, Changed the galvanize spec. number from 3394 to 3392.
- Removed the “MnDOT” from the MnDOT Spec. references throughout the detail.

Re-Approved 09-22-2011

Updated the detail to include MW shape prestressed beams.

At PLAN: placed an asterisk (*) in the open dimension locations on each side of the “H” dimension for the bearing width. Also added: “* EQUAL DISTANCE” outside the bearing dimensions.

At TABLE: under the Beam Size column, added “M & MN” to the first row of dimensions.

- Added another row of dimensions for the MW shape to the table.

Under NOTES: Removed the slash from the Mn/DOT designation to read MnDOT throughout the sheet.

Changed the Designer Note to read: “Minimum size of bearing pad, 12” x 24” x ½”, is shown for M & MN shapes 16” x 36” x ½”, is shown for MW shapes”

Revised 10-28-2008

At SECTION Y-Y: changed THE PINTLE-TO-CURVED PLATE WELD DETAILS TO MATCH THE WELD SYMBOL.

Revised 08-10-2006

Under NOTES: Revised Ⓞ *from* THE MIN. RADIUS OF THE CURVED PLATE IS SHOWN. THE MAX. RADIUS IS 30". FINISH TO ... *to* THE MIN. RADIUS SHALL BE 16" UNLESS OTHERWISE SPECIFIED IN THE TABLE. THE MAX. RADIUS SHALL BE 24". FINISH TO ...

Re-Approved 10-26-2005

At PLAN: replaced 4" dimension with an “enter data field” on both sides of H dimension

At SECTION X-X: Added subtitle: 2'-2" BOTTOM FLANGE SHOWN

At TABLE: replaced 34" dimension with an “enter data field” for E dimension

Revised 12-01-2004

In the TABLE:

- Added +/- column under ANCHOR ROD OFFSET

Revised 04-20-2004

In the TABLE:

- Added CURVED PLATE column
- Changed dimension F *from* 1 3/8" *to* 1 1/2"
- Changed dimension J *from* 1 3/8" *to* 1 1/4"

Under NOTES: Revised Ⓞ *from* THE RADIUS OF THE CURVED PLATE SHALL BE 1'-4" MINIMUM AND 2'-0" MAXIMUM. FINISH TO 250 ... *to* THE MIN. RADIUS OF THE CURVED PLATE IS SHOWN. THE MAX. RADIUS IS 30". FINISH TO 250 ...

Approved 11-22-2002

Approved, and signed, November 22, 2002.