Delete "(L/10'-0")" for the \( \delta \) (delta) equation under the Design Information.

Please direct any questions to:

Tony McCloskey, P.E.
PENNDOT Bureau of Design
Bridge Quality Assurance Division
Phone: 717-705-1495
Fax: 717-787-2882
e-mail: amccloskey@state.pa.us

For more information, please visit the PENNDOT BQAD Publications support web site at www.dot.state.pa.us/bridge/standards
See the following two sheets for revised details from Sheets 2 & 3 which have the special confinement reinforcement around the dowel bars removed per Seismic Strike-off Letter 431-02-05, dated May 23, 2002.

Direct any questions concerning the above issue to:

Gary P. Gordon, P.E.
Phone: (717) 783-7551
Fax: (717) 787-2882
gagordon@state.pa.us

Archived copies of all previously distributed e-Notifications can be obtained from the PENNDOT Bridge Standards website at http://www.dot.state.pa.us/Bridge/Standards and clicking on “Subscribe to E-mail Notification System” and then “Previous E-Mail Notifications”. 
PIPELINE UTILITY - FULL DEPTH DIAPHRAGM
(SLAB REINFORCEMENT NOT SHOWN FOR CLARITY)
NOTE:
REINFORCEMENT CONFIGURATIONS SHOWN ARE MINIMUMS. ACTUAL BAR SIZES AND SPACING MUST BE DESIGNED. CLEARANCES SHOWN ARE MINIMUMS.

PIER DIAPHRAGM OPENING FOR TELEPHONE AND/OR CABLE TV UTILITY
(SLAB REINFORCEMENT NOT SHOWN FOR CLARITY)

SECTION Y-Y
Please make the following minor correction to this standard:

Under Note 10, replace “BD-625M” with “BC-751M”.

Please direct any questions to:

Tony McCloskey, P.E.
PENNDOT Bureau of Design
Bridge Quality Assurance Division
Phone: 717-705-1495
Fax: 717-787-2882
email: amccloskey@state.pa.us

For more information, please visit the PENNDOT BQAD Publications support web site at www.dot.state.pa.us/bridge/standards
Revise the stirrup spacing from 525 (21") to 530 (21") as indicated on the attached Adobe Acrobat PDF File.

Please direct any questions to:

Tony McCloskey, P.E.
PENNDOT Bureau of Design
Bridge Quality Assurance Division
Phone: 717-705-1495
Fax: 717-787-2882
email: amccloskey@state.pa.us

For more information, please visit the PENNDOT BQAD Publications support web site at www.dot.state.pa.us/bridge/standards
For General Note 21, add the following sentence:

“For General Note 21, add the following sentence to Note 21: “THE BEAM SEAT MUST BE PARALLEL TO THE ROADWAY GRADE.”

Please direct any questions to:

Tony McCloskey, P.E.
PENNDOT Bureau of Design
Bridge Quality Assurance Division
Phone: 717-705-1495
Fax: 717-787-2882
email: amccloskey@state.pa.us

For more information, please visit the PENNDOT BQAD Publications support web site at www.dot.state.pa.us/bridge/standards
Please make the following minor correction to this standard:

Under Elastomeric Bearing Pad Note 2, replace Section 1107.02(N) with Section 1113.02.

Please direct any questions to:

Tony McCloskey, P.E.
PENNDOT Bureau of Design
Bridge Quality Assurance Division
Phone: 717-705-1495
Fax: 717-787-2882
email: amccloskey@state.pa.us

For more information, please visit the PENNDOT BQAD Publications support web site at www.dot.state.pa.us/bridge/standards
Attached is an Adobe Acrobat PDF File which shows the correction of a typographical error in the Section Modulus Table on this sheet.

Please direct any questions to:

William P. Longstreet
PENNDOT Bureau of Design
Bridge Quality Assurance Division
Phone: 717-783-7476
Fax: 717-787-2882
email: wlongstree@state.pa.us

For more information, please visit the PENNDOT BQAD Publications support web site at www.dot.state.pa.us/bridge/standards
Correction to the typographical error in Required Section Modulus Value for a 9.5” slab thickness and Design Span of 6’-11” listed in table on page 4. Please manually mark the .3674 instead of .4674 onto your Standard. Thank you.

Direct any questions concerning the above issue to:

William P. Longstreet  
Phone: (717) 783-7476  
Fax: (717) 787-2882  
wlongstree@state.pa.us

Archived copies of all previously distributed e-Notifications can be obtained from the PENNDOT Bridge Standards website at http://www.dot.state.pa.us/Bridge/Standards and clicking on “Subscribe to E-mail Notification System” and then “Previous E-Mail Notifications”.
### REQUIRED SECTION MODULUS AND MOMENT OF INERTIA OF FORMS TABLE

<table>
<thead>
<tr>
<th>T, SLAB THICKNESS, INCHES</th>
<th>I, MOMENT OF INERTIA in 4/ft 3</th>
<th>S, SECTION MODULUS in 3/ft 2</th>
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<td>0.594</td>
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**Note:** Computations are required for spans in excess of ten feet along with shop drawings.
PENNDOT e-Notification No. 8
Bureau of Design
Bridge Quality Assurance Division

Feb. 23, 2004

| Interim Revision to Bridge Standard Drawing(s) | BC-707M, Sht. 1 - PA HT Post Radius correction |

ELEVATION – POST DETAIL has the following revisions and clarifications:

A. REVISE THE EXISTING OUTER EDGE POST RADIUS OF 250 (10") R TO INDICATE 240 (9 1/2") R. CENTER POINT TO BE LOCATED AT 75 (3") FROM INSIDE EDGE OF POST PLATE AND 190 (7 5/8") FROM BOTTOM EDGE OF POST PLATE.

B. REVISE THE POST PLATE DIMENSION IN THE TOP RIGHT BLOW-UP VIEW FROM 6 (1/4") TO 10 (3/8").

C. CLARIFY THE CENTER POINT OF THE 4 1/2 INCH INSIDE RADIUS OF POST PLATE.

THIS DETAIL IS INCLUDED ON THE NEXT SHEET AND THE REVISIONS ARE CLOUDED.

Please note implementation of these revisions is immediate. For projects already in construction, please contact BQAD’s Bryan Spangler, at (717) 783-5347, if fabrication has already commenced.

Direct any questions concerning the above issue to:

William P. Longstreet
Phone: (717) 783-7476
Fax: (717) 787-2882
wlongstree@state.pa.us

Archived copies of all previously distributed e-Notifications can be obtained from the PENNDOT Bridge Standards website at http://www.dot.state.pa.us/Bridge/Standards and clicking on “Subscribe to E-mail Notification System” and then “Previous E-Mail Notifications”.

This e-Notification deleted by Pub. 218M, Change # 2, issued on July 29, 2005
This e-Notification deleted by Pub. 218M, Change # 2, issued on July 29, 2005
**PENNDOT e-Notification**

Bureau of Design  
Bridge Quality Assurance Division

*May 19, 2004*

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Interim Revision to Bridge Standard Drawing(s) – No. 9  
BD-632M, Sht. 5 - Revised Joint Detail

**JOINT DETAIL** has the following revisions and clarifications:

A. Added PVC Duct for Post Tensioning Strand detail to drawing.
B. Changed 40 min. / 50 max. dimension to 35 min. / 50 max.
C. Removed SEE NOTE 24 SHEET 4 references and added note (*) beneath Details title. Increased thickness break point used to determine perpendicular surface width of joint from 300 (1'-0") to 350 (1'-2").

Please note implementation of these revisions is immediate. For projects already in construction, please contact BQAD's Bryan Spangler, at (717) 783-5347, if fabrication has already commenced.

Direct any questions concerning the above issue to:

William P. Longstreet  
Phone: (717) 783-7476  
Fax: (717) 787-2882  
wlongstree@state.pa.us

Archived copies of all previously distributed e-Notifications can be obtained from the PENNDOT Bridge Standards website at [http://www.dot.state.pa.us/Bridge/Standards](http://www.dot.state.pa.us/Bridge/Standards) and clicking on “Subscribe to E-mail Notification System” and then “Previous E-Mail Notifications”.

This e-Notification deleted by Pub. 218M, Change # 2, issued on July 29, 2005
PVC DUCT FOR POST TENSIONING STRAND.

JOINT SEALING MATERIAL
SEC. 705.4(e)

300 (1'-0'"
(MIN)

MEMBRANE WATERPROOFING

PROTECTIVE BOARD

40 (1 1/2"

OUTSIDE FACE

INSIDE FACE

50x25 (2"x1") CLOSED CELL NEOPRENE SPONGE GASKET
(ALL AROUND) SEC. 1107.02(n)1.

JOINT DETAIL
SEAL AROUND EACH DUCT JOINT WITH A NEOPRENE SPONGE DONUT.

≥ 125 (5") WHEN WALL OR SLAB ≥ 350 (1'-2"
≥ 75 (3") WHEN WALL OR SLAB < 350 (1'-2"

This e-Notification deleted by Pub. 218M, Change # 2, issued on July 29, 2005
PENNDOT e-Notification No. 11

Bureau of Design
Bridge Quality Assurance Division

<table>
<thead>
<tr>
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<th>July 29, 2005 Revised Standards issued and all e-notifications discontinued on Aug. 18, 2005</th>
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</thead>
</table>

All previous e-Notifications are discontinued with the release of Pub. 218M, Change 2 & Pub. 219M, Change 3 which were issued by Strike-off Letter 431-05-03, dated August 18, 2005.
**PENNDOT e-Notification No. 12**

**Bureau of Design**  
**Bridge Quality Assurance Division**

*Dec. 29, 2005*

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**Interim Revision to Bridge Standard Drawing(s)**  
**BD-613M, dated Jan. 21, 2003, Shts. 1, 3, 4, 7 & 9 - Metric Unit Tables’ corrections and 3 Note corrections**

Corrections are provided for the Vertical Loads and their corresponding Horizontal Loads listed in the Metric Tables located on Shts. 3, 4, 7 and 9 of this standard. The last four Vertical loads in the English units Tables were not correctly converted over to Metric units.

In addition, three (3) minor corrections are included to Notes contained on Sht. 1.

Please note implementation of these revisions is immediate.

Direct any questions concerning the above issue to:

Patricia L. Kiehl, P. E.  
PENNDOT Bureau of Design  
Bridge Quality Assurance Division  
Phone: (717) 772-0568  
Fax: (717) 787-2882  
pkiehl@state.pa.us

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Archived copies of all previously distributed e-Notifications can be obtained from the PENNDOT Bridge Standards website at [http://www.dot.state.pa.us/Bridge/Standards](http://www.dot.state.pa.us/Bridge/Standards) and clicking on “Subscribe to E-mail Notification System” and then “Previous E-Mail Notifications”.

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Page 1 of 3
INSTRUCTIONS FOR USING DESIGN TABLES:
  • Note 3 - revise the metric load in the 3rd sentence from 5293kN to 6672kN.
  • Note 9, line 5 – add “TO” after “EQUAL”.

DESIGN METHODOLOGY – SOLE PLATE DESIGN:
  • Note 1 – revise “THOUGH” to read “THROUGH”.

Sheets 3 & 7:
Metric Tables contains four (4) incorrect Vertical Loads and their corresponding “10% Horizontal Loads” as shown below in shaded portion of table:

| 4003 | 400 | 0.03 |
| 4226 | 423 | 0.03 |
| 4448 | 445 | 0.03 |
| 4893 | 489 | 0.03 |
| 4993 | 499 | 0.03 |
| 5093 | 509 | 0.03 |
| 5193 | 519 | 0.03 |
| 5293 | 529 | 0.03 |

Corrected Loads are shown below in shaded portion of table:

| 4003 | 400 | 0.03 |
| 4226 | 423 | 0.03 |
| 4448 | 445 | 0.03 |
| 4893 | 489 | 0.03 |
| 5338 | 534 | 0.03 |
| 5782 | 578 | 0.03 |
| 6227 | 623 | 0.03 |
| 6672 | 667 | 0.03 |
Sheets 4 & 9:

Metric Tables contains four (4) incorrect Vertical Loads and their corresponding “30% Horizontal Loads” as shown below in shaded portion of table:

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<tbody>
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<tr>
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<td>0.03</td>
</tr>
<tr>
<td>4893</td>
<td>1468</td>
<td>0.03</td>
</tr>
<tr>
<td>4993</td>
<td>1498</td>
<td>0.03</td>
</tr>
<tr>
<td>5093</td>
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</tr>
<tr>
<td>5293</td>
<td>1588</td>
<td>0.03</td>
</tr>
</tbody>
</table>

Corrected Loads are shown below in shaded portion of table:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
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<td>4003</td>
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<tr>
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<tr>
<td>4893</td>
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</tr>
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<td>5338</td>
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<tr>
<td>5782</td>
<td>1735</td>
<td>0.03</td>
</tr>
<tr>
<td>6227</td>
<td>1868</td>
<td>0.03</td>
</tr>
<tr>
<td>6672</td>
<td>2002</td>
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</tr>
</tbody>
</table>
e-Notification No. 17 (this number was not included in distributed message):

On BD-662M, sheet 2, on "TYPICAL CLIPPED FLANGE REINFORCEMENT DETAILS", the Beam End View has a typo. The word "VEIW" should be "VIEW".
PENNDOT e-Notification No. 18

Bureau of Design
Bridge Quality Assurance Division

Nov. 20, 2007

Interim Revision to
Bridge Standard
Drawing(s)  BD-664M, dated July 20, 2007, Sheet 4 – Addition of 200 (8”) Maximum Difference of Depth for Adjacent Span PA Bulb-Tee prestressed concrete beams.

In OPTIONAL POSITIVE MOMENT CONNECTION DETAIL AT PIER: Added maximum height difference of 200 (8”) for adjacent span PA Bulb-Tee prestressed concrete beams. This correction is shown in the attached 8.5”x11” page.

Please note that implementation of this revision is immediate.

Direct any questions concerning the above issue to:

Gary P. Gordon, P.E.
PENNDOT Bureau of Design
Bridge Quality Assurance Division
Phone: (717) 783-7551
Fax: (717) 787-2882
gagordon@state.pa.us

Archived copies of all previously distributed e-Notifications can be obtained from the PENNDOT Bridge Standards website at http://www.dot.state.pa.us/Bridge/Standards and clicking on “Subscribe to E-mail Notification System” and then “Previous E-Mail Notifications.”
OPTIONAL POSITIVE MOMENT CONNECTION DETAIL AT PIER

(DIFFERENT BEAM DEPTH-FIXED)

150 (6") MAXIMUM DIFFERENCE FOR I-BEAM AND PA BULB-TEE

STyrofoam (THICKNESS = 5 (1/4") THICKER THAN BEARING PAD)

25 (1") THICK STYROFOAM

PIER

END OF BEAMS TO BE VERTICAL

2-#16 (#5), X1

PEDESTAL

50 (2") CL. (TYP.)

POSITIVE MOMENT CONNECTION REINF., AS REQ'D. BY DESIGN (TYP.)**

SEE NOTE 3

SEE NOTE 4.

BEARING PAD (TYP.)

STYROFOAM (THICKNESS = 5 (1/4") THICKER THAN BEARING PAD)

W (SEE NOTE 11 ON SH. 1)

W/2

C PIER

150 (6") MAXIMUM DIFFERENCE FOR I-BEAM AND PA BULB-TEE

150 (6") MAXIMUM DIFFERENCE FOR I-BEAM AND 200 (8") FOR PA BULB-TEE

e-Notification No. 18

BD-664M, SHT. 4 OF 4
(JULY 20, 2007)

MAXIMUM BEAM DEPTH DIFFERENCE FOR PA BULB-TEE
PENNDOT e-Notification No. 19

Bureau of Design
Bridge Quality Assurance Division

Nov. 27, 2007

Interim Revision to Bridge Standard Drawing(s)


In Section A-A of BD-632M, Sheet 7:

- Revise size of anchor bolt bar embedded in the slab from #22 (#7) to #19 (#6).
- Add “x 3/16” to thickness of top railing tube.
- Add the following call-out for longitudinal reinforcement in barrier’s concrete parapet:
  
  REQUIRED ADDITIONAL REINFORCEMENT IF CURB HEIGHT IS GREATER THAN 200 (8”)

These revisions are shown in the attached 8.5”x11” page.

Please note that implementation of this revision is immediate.

Direct any questions concerning the above issue to:

William P. Longstreet
PENNDOT Bureau of Design
Bridge Quality Assurance Division
Phone: (717) 783-7476
Fax: (717) 787-2882
wlongstree@state.pa.us

Archived copies of all previously distributed e-Notifications can be obtained from the PENNDOT Bridge Standards website at http://www.dot.state.pa.us/Bridge/Standards and clicking on “Subscribe to E-mail Notification System” and then “Previous E-Mail Notifications.”
REQUIRED ADDITIONAL REINFORCEMENT IF CURB HEIGHT IS GREATER THAN 200 (8"

25 ODx52 LONG
(1 1/2" OD x 2½" LONG)
SLEEVE

150x150x565
(6"x6"x22/4")
WOOD BLOCK

22 (2¼"
A325 ANCHOR BOLTS
W/ LEVELING NUTS

2.77 12 GA.
W-BEAM RAIL ELEMENT

16 (2/8"
DIA.
HEXHEAD BOLT WITH
HEX NUTS

TS 4"x3"
(100x75)

C6x8.2
RUBRAIL

SECTION A-A
(SLAB BRIDGES & LIKE STRUCTURES)
● CURB REINFORCEMENT SHOWN FOR CLARITY, SEE BD-60SM.
● SEE RC-52M FOR TYPE 2 STRONG POST GUIDE RAIL DETAILS
● S7 REINFORCEMENT REQUIRED AT POST LOCATIONS ONLY.
SEE SHEET 7 FOR S7 REINFORCEMENT DETAIL.

NOTE:
PRIOR TO CONSTRUCTING CURB AND DECK, ANCHOR BOLTS SHALL BE INSTALLED WITH EITHER A TEMPLATE OR ACTUAL POST #/BASEPLATE INSTALLED TO ENSURE PROPER ANCHOR BOLT ALIGNMENT & PLACEMENT

#13 (#4)
SEE REINF.
BAR DETAILS

1.25 (2"
CLR.)(TYP.)

125 (5"
(TYP.)

200

125

450 (18"
(TYP.)

#19 (#6)

#22 (#7)
SEE ANCHOR BOLT BAR DETAIL

#13 (#4)
SEE REINF.
BAR DETAILS

5 (5"
(TYP.)

S7

330 (13"

791 (31"

791 (31"

Wearing Course

203 (8"

330 (13"

791 (31"

h

T

TOP SLAB
BOX CULVERT

NOTE:
SEE NOTE 1

SE-Notification No. 19
BD-632M, SHT. 7 OF 11
(JULY 20, 2007)

REVISION OF ANCHOR BOLT BAR SIZE
**PENNDOT e-Notification No. 20**

Bureau of Design  
Bridge Quality Assurance Division

*Dec. 7, 2007*

| Interim Revision to Bridge Standard Drawing(s) | BD-667M, dated July 20, 2007, Sheet 6 – APPROACH SLAB CONNECTION DETAILS: Replacing “BOND BREAKER” with “circled Note 12 - COAT WITH EPOXY BONDING COMPOUND...”.

---

In the two (2) Approach Slab Connection details of BD-667M, Sheet 6:

- Replace “BOND BREAKER” with circled Note 12 which is explained below.

Add circled Note 12 to LEGEND and make it read as follows:

**COAT WITH AN APPROVED EPOXY BONDING COMPOUND PRIOR TO PLACING APPROACH SLAB CONCRETE.**

These revisions are shown in the attached 8.5”x11” page.

Please note that implementation of this revision is immediate.

Direct any questions concerning the above issue to:

Gary P. Gordon, P.E.  
PENNDOT Bureau of Design  
Bridge Quality Assurance Division  
Phone: (717) 783-7551  
Fax: (717) 787-2882  
gagordon@state.pa.us

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Archived copies of all previously distributed e-Notifications can be obtained from the PENNDOT Bridge Standards website at Bureau of Design, BQAD and clicking on “Subscribe to E-mail Notification System” and then “Previous E-Mail Notifications.”
Approach Slab Connection Detail

Girder Depth < 600 (2' - 0"")

** 350 (1' - 2") within the width of box beams
500 (1' - 8") at other locations

Approach Slab Connection Detail

Girder Depth ≥ 600 (2' - 0"")

Legend:

8. For steel and concrete girders, adjust spacing to clear girders.
9. For 180° hook dimensions, refer to BC-736M.
10. For dimensions and reinforcement of approach slab, see standard drawing BD-628M.
11. Pour bridge deck before pouring the end diaphragm except the portion of the deck within 1200 mm (4' - 0") from the front face of the abutment which will be poured 2 hours after placing the end diaphragm.
12. Coat with an approved epoxy bonding compound prior to placing approach slab concrete.

This e-Notification rescinded by e-Notification No. 22

E-Notification No. 20

BD-667M, SHT. 5 OF 6
(JULY 20, 2007)

Adding epoxy bonding compound between approach slab and abutment
In BEAM NOTCH NOTES No. 5 for Table B: Correct beam depth to be 990 (39") instead of 1065 (42").

This correction makes Note 5 agree with the statement contained with DETAIL 20 on Sheet 29 of the Bridge Approach Slab standard, BD-628M. It lists the minimum beam depth required to use Type 3 & 4 Approach Slabs for Prestressed Concrete Spread Box Beam Bridges that have abutment with backwalls.

Please note that implementation of this revision is immediate.

Direct any questions concerning the above issue to:

Gary P. Gordon, P.E.
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Bridge Quality Assurance Division
Phone: (717) 783-7551
Fax: (717) 787-2882
email: gagordon@state.pa.us

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PennDOT BQAD Publications e-Notification
Bureau of Design
Bridge Quality Assurance Division

Publication No. 218M
Standard: BD-667M
RE: Sheet 6
No. 22
Date: 3-11-08

E-Notification No. 20 is hereby rescinded by this e-Notification, No. 22. The bridge approach slab connection to the integral abutment is to be permitted to have rotation; hence a bond breaker is the correct coating to be applied to the mating concrete surfaces. Therefore, BD-667M, Note 12 will be removed. Also, e-Notification No. 23 will correct a similar note on a corresponding detail on Sht. 35 of the Bridge Approach Slab, BD-628M.

Please note that implementation of this revision is immediate.
Direct any questions concerning the above issue to:

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PENNDOT e-Notification No. 23
Bureau of Design
Bridge Quality Assurance Division

March 11, 2008

Interim Revision to Bridge Standard Drawing(s) BD-628M, dated July 20, 2007, Sheet 35 – BRIDGE APPROACH SLAB CONNECTION DETAILS: Replacing “AN APPROVED EPOXY BONDING COMPOUND” with “BOND BREAKER”

The intent is to permit rotation of the end of the Bridge Approach Slab Type 5 for integral abutments. To assure that this is possible, the following revision is needed to be made to SECTION X-X on BD-628M, Sheet 35:

- In ** Note, replace “AN APPROVED EPOXY BONDING COMPOUND” with “BOND BREAKER”.

This revision is shown in mark-up on the attached 8.5”x11” page.

Please note that implementation of this revision is immediate.

Direct any questions concerning the above issue to:

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e-Notification No. 23

For integral abutment details, see BD-667M.

$40$
$(2'-9'')$
(TYP.)

$16 \odot 300$
$(\# 5 \odot 12'')$
(both ends)

$50\ (2'')$

$16 \odot 300$
$(\# 5 \odot 12'')$

$33 \odot 150$
$(\# 10 \odot 6'')$

Provide 2 layers of 0.1 mm (4 mil) polyethylene sheeting underneath approach slab.

Pay limits for bridge approach slab quantity.

Refer to BD-667M for additional details.

** Coat with an approved epoxy bonding compound prior to placing approach slab concrete.

Bond Breaker

Section X-X

BD-628M, Sht. 35 - e-Notification No. 23, Mar. 11, 2008
Sheet 1 –

NOTES:

#2.) Remove “1998”

#3.) Move the (c) text from the D in “AND” to the right of “f” in “f = 24 MPa.”

#5.) – Under the 2nd bullet point, change “DETAIL A” to “ALTERNATE CONTINUITY REINFORCEMENT DETAIL” and change “SHEET 7” to read “SHEET 8”

- Under DECK THICKNESS, move the “>” symbol from on top of (1/2) to in front of (8”)

#11.) Change “SHEET 7” to read “SHEET 8”

#18.) Remove “1998” and “LRFD”

#28.) Under DECK DESIGN PROCEDURE, change “SHEETS 8 and 9” to read “SHEETS 9 and 10”

Sheet 4 –

RAISED SIDEWALK DETAIL: add “2% slope with arrow” to surface of sidewalk. Arrow points towards bridge barrier.

Please note that implementation of this revision is immediate.

Direct any questions concerning the above issue to:

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PennDOT e-Notification No. 25

July 10, 2008

Interim Revision to Bridge Standard Drawing(s)


In RAISED SIDEWALK DETAIL of BD-601M, Sheet 4:

- The direction of the raised sidewalk’s slope given in e-Notification No. 24 requires further clarification:

  “2% slope with arrow” needs to be linked to the existing two call-outs located in the upper portion of this detail as shown on the attached 8.5”x11” page.

- Remove the Note 7 reference from the top call-out for sidewalk slope.

Please note that implementation of this revision is immediate.

Direct any questions concerning the above issue to:

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Sheet 1 –

NOTE 22: add “BD-660M AND” before “BD-661M”

Sheet 11 –

Lighting Pole Anchorage Dimensions Table: swap table values listed for dimension “A” with those listed for dimension “B”.

Please note that implementation of this revision is immediate and that these corrections are in addition to those of e-Notification Nos. 24 & 25 which were also for this same standard.

Direct any questions concerning the above issue to:

Gary P. Gordon, P.E.  
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PennDOT e-Notification No. 27

July 6, 2009

| Interim Revision to Bridge Standard Drawing(s) | BD-655M, “TYPICAL SUPERSTRUCTURE SECTIONS”, Sheet 1, dated December 29, 2008
| INTERMEDIATE DIAPHRAGM - Elimination of Threaded Inserts from Prestressed Concrete I-Beam’s bottom flange |

For the INTERMEDIATE DIAPHRAGM detail with vertical clearance less than 4880 (16'-0") : removed lower inserts in beam flange, added rebar at bottom of diaphragm with 180° hooks, and added #5 rebar with insert at 6” spacing.

Please note that implementation of this revision is immediate.

Direct any questions concerning the above issue to:

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PennDOT e-Notification No. 28

August 2, 2010

Interim Revision to Bridge Standard Drawing(s) BD-632M, "R.C. Box Culvert", sheets 1, 3, 5, 9 and 10, dated 12/29/2008. Deeper Inlet Apron Cutoff Walls, Impervious Wingwall Backfill and Multiple Opposing Apron Baffles.

Three (3) issues are addressed by these revisions:

1. Inlet apron cutoff walls must be extended to the bottom of the wing wall footing or the bottom of the rock lining whichever is deeper (3'-6" min.). Note 18 is revised to require waterstop to be used at bottom slab in addition to top slab and walls. The purpose of this is to ensure that the stream flow does not pass beneath the culvert, thereby, reducing structural stability and reducing aquatic organism passage.

2. Flowable backfill must be placed on the outside of the wing walls to 2'-0" minimum elevation above the normal stream elevation. Also, flowable backfill must be placed along the entire length of the culvert and wing walls for the same purpose as mentioned above.

3. If an apron is greater than 8 feet long, a second set of opposing baffles is required to be ½ the distance from the end baffles to the face of the box. For longer aprons, baffles are not to exceed 8-foot spacing. The purpose of this is to improved aquatic organism passage by reducing sheet flow and promoting sediment buildup to the baffle height on the aprons.

Attached drawing sheets indicate revisions with yellowing highlighting within red clouding:

- Sheet 1 - Section along Centerline Culvert, Apron Section, and Note 18 revised
- Sheet 3 - Typical Headwall Section revised
- Sheet 5 - Precast End Section and Cast-In-Place Wingwalls revised
- Sheet 9 - Plan Views and Notes 2 & 7 revised
- Sheet 10 - Plan Views and Notes 2 & 7 revised

Please note that implementation of this revision is effective for all projects currently advertised and all future projects.

Direct any questions concerning the above issue to:

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**NOTES:**

- **TENSIONING IS REQUIRED**

**4. FOR T 11", USE SHIP LAP DETAIL.**

**DISCONTINUOUS IF POST EACH FACE.**

**2. EITHER SHIP LAP OR KEYWAY JOINTS CAN BE USED.**

**1. NO BOLT THROUGH CONNECTIONS CAN BE USED.**

**3. ONE (1) ROW OF JOINT SEALING FLEXIBLE FOAM MATERIAL KEYED JOINT.**

**PARTIAL PLAN**

**CULVERT WITH PRECAST END SECTION**

**NOTE:**

- **T** = TENSIONING IS REQUIRED

- **#5 @ 9"**

- **#16 @ 225 (#5 @ 9")**

**COLLAR**

- **450 (1'-6")**

- **#13 (#4)**

**SLAB**

- **100 (4") CLR.**

**BEDDING MINIMUM**

- **300 (1'-0")**

**MIN.**

- **R-6 ROCK LINING (SEC. 850)**

**PROFILE**

- **MIN. 150 (6") MIN. FROM OUT OF CURB.**

- **MIN. 1500 mm  (5'-0") INLET AND OUTLET.**

**STRAWS**

- **#10 (#3)**

- **#19 (#6)**

- **#19 (#6) AS SHOWN**

- **LOCATIONS (TYP.)**

**COMMONWEALTH OF PENNSYLVANIA**

**DEPARTMENT OF TRANSPORTATION**

**RECOMMENDED JULY 2, 2010**

**R.C. BOX CULVERT PRECAST**

**P-Notification No. 25**

Aug. 2, 2010

**NOTE:** EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS, METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.
**ALTERNATE BAFFLE DETAIL**

**TYPICAL BAFFLE**

- **Precast Box Culvert**
  - **Bottom Slab of Box Culvert**
    - 200 (8")
  - **Primary Cell**
    - 300 (1'-0")
  - **Secondary Cell**
    - 300 (1'-0")
  - **NATURAL STREAM SLOPE.**
  - **DEPRESSIONS**
  - **CAST-IN-PLACE BAFFLE/WEIR REINFORCEMENT**
  - **#16 (#5) 90° HOOKS, ROTATE ALTERNATING HOOKS 180°**
  - **DESIGN BAFFLE WIDTH**
  - **ADDITIONAL TWIN CELL DETAILS ARE SHOWN ON SHEET 11.**

**BUREAU OF DESIGN**

- **COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION**

**RECOMMENDED SHEET 9 OF 11**

**COMMENTS:**

- **BLUEPRINTS SHOULD NOT BE MIXED.**
- **CAST-IN-PLACE BAFFLE/WEIR REINFORCEMENT MUST BE BASED ON THE STRUCTURE OR SHOW SIGNS OF DEGRADATION.**
- **ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.**

**NOTE:**

- **Either all metric or all English values must be used on plans. Metric and English values shown may not be mixed.**

**COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION**

**R.C. BOX CULVERT**

**MISCELLANEOUS DETAILS**

**STREAM GRADES ≥ 4%**

**RECOMMENDED:**

- **July 1, 2010**
- **July 2, 2010**

**NOTE:**

- The slope of the new structure should match the natural stream slope.
- Additional twin cell details are shown on sheet 11.
PennDOT e-Notification No. 29

Sept. 20, 2010

Interim Revision to Bridge Standard Drawing(s)


Background:
Problems have been observed that the stream flow is initially piping through granular fill and bedding around some box culverts. As a result, the inlet end cut-off wall depth was set deeper to in-situ material (e-Notification No. 28) and an imperious type of backfill is to be used at the inlet end of the box culvert. Details were added to BD-632M to address this issue and the revisions were included in the Bridge Standards Feb. 5, 2010 Clearance Transmittal. Afterwards, the revisions were sent out as e-Notification No. 28. This current e-Notification provides clarification to the revisions of e-Notification No. 28.

The following four (4) changes are being included:

1. Compacted No. 2 Coarse Aggregate or Flowable Backfill must be placed behind inlet end wing walls and for a minimum length of 10'-0" along the sides of the box culvert instead of the entire length as indicated in Section P-P of e-Notification No. 28. This backfill is to be placed a minimum of 2'-0" above the normal stream elevation. The placement limits of this backfill material has been added to the box culvert Elevation on Sheet 1 along with new Note 21.

2. Note 12 is revised to include a statement on use of preformed drain at weep holes that are within this backfill. PREFORMED DRAIN detail added to show proper placement of preformed drain at weep hole locations that are within the compacted No. 2 Coarse Aggregate or Flowable Backfill (See Sheet 5).

3. Rock Lining placement modified to not indicate it extending behind the wing walls on plan views.

4. New Note 28 was added to Sheet 4 to reference Notes 12 and 21 on Sheet 1.

Attached drawing sheets 1, 4, 5, 9 and 10 indicate revisions with yellow highlighting within red clouding or boxes.

Please note that implementation of this revision is effective for all projects currently advertised for bids and all future projects.

Direct any questions concerning the above issue to:

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