



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

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MEMORANDUM TO: Project Engineers  
Project Design Engineers

FROM: G. R. Perfetti, P. E.  
State Structures Engineer

DATE: June 27, 2013

SUBJECT: Revisions to Standard Drawings

Several Standard Drawings have been revised. A summary list of the revisions is attached. The revised standard drawings, and corresponding metric standard drawings, are available on both the network drive and via the Structures Management web site.

The revisions are effective immediately. The cored slab and box beam standard design plans have been updated to reflect these revisions.

GRP/BH/gdt

Attachment

Cc: T. K. Koch, P. E.  
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**LOCATION:**  
CENTURY CENTER COMPLEX  
BUILDING A  
1000 BIRCH RIDGE DRIVE  
RALEIGH NC 27610

## Structure Standards Revisions and Additions

| Standard No.                           | Explanation of Revisions   | Why Revisions were Required   |
|--|--|---|
| BAS1, BAS2,<br>BAS3 BAS5<br>&<br>BAS 6 | <ul style="list-style-type: none"> <li>○ Revised type of Drainage Pipe from perforated corrugated PVC to perforated Schedule 40 PVC pipe.</li> </ul>   | <ul style="list-style-type: none"> <li>□ To match Roadway Standard drawings.</li> </ul>   |
| BAS4                                   | <ul style="list-style-type: none"> <li>○ Added 42" F-shape Concrete Barrier Rail to the models.</li> </ul>   | <ul style="list-style-type: none"> <li>□ Implementation of a taller barrier rail.</li> </ul>                                      |
| BMR1                                   | <ul style="list-style-type: none"> <li>○ Revised geometry of the End Post for the One Bar Metal Rail due to increase in height of guardrail.</li> </ul>  | <ul style="list-style-type: none"> <li>□ Complete implementation of the increased height of guardrail.</li> </ul>                 |
| BMR3                                   | <ul style="list-style-type: none"> <li>○ Added note to allow the Contractor the option of using an alternate to the 2 bar metal rail from the Department's Approved Products List (APL).</li> </ul>  | <ul style="list-style-type: none"> <li>□ Broaden the number of suppliers of the 2BMR.</li> </ul>                                  |
| CBR1                                   | <ul style="list-style-type: none"> <li>○ Replaced 32" New Jersey Barrier Rail with 42" F-shape Concrete Barrier Rail.</li> </ul>   | <ul style="list-style-type: none"> <li>□ Implementation of a taller barrier rail.</li> </ul>                                      |
| CBR2                                   | <ul style="list-style-type: none"> <li>○ Added sloped end of barrier rail details for the 42" Vertical Concrete Barrier Rail.</li> </ul>   | <ul style="list-style-type: none"> <li>□ Implementation of a taller barrier rail.</li> </ul>                                      |
| EB1 & EB2                              | <ul style="list-style-type: none"> <li>○ Updated maximum allowable service loads for LRFD — Method B design.</li> <li>○ Added details for steel girders using Type II &amp; III bearings (i.e. for spans over 120 ft. span) on the models.</li> <li>○ Added notes for resetting bearings on long span steel bridges.</li> <li>○ Added note referencing special provision for Steel Reinforced Elastomeric Bearings.</li> </ul> | <ul style="list-style-type: none"> <li>□ Ref: Policy Memo dated October 24, 2012 - LRFD Steel Reinforced Bearing Pads.</li> </ul> |

## Structure Standards Revisions and Additions

| Standard No. | Explanation of Revisions   | Why Revisions were Required   |
|--------------|--|---|
| EB3 & EB4    | <ul style="list-style-type: none"> <li>○ Updated maximum allowable service loads for LRFD — Method B design.</li> <li>○ Added note referencing special provision for Steel Reinforced Elastomeric Bearings.</li> </ul>   | <ul style="list-style-type: none"> <li>□ Ref: Policy Memo dated October 24,2012 - LRFD Steel Reinforced Bearing Pads.</li> </ul>                                      |
| EJS2         | <ul style="list-style-type: none"> <li>○ Added 42" F-shape concrete barrier rail.</li> </ul>   | <ul style="list-style-type: none"> <li>□ Implementation of a taller barrier rail.</li> </ul>  |
| GRA2         | <ul style="list-style-type: none"> <li>○ Replaced 32" New Jersey Barrier Rail with 42" F-shape Concrete Barrier Rail.</li> </ul>   | <ul style="list-style-type: none"> <li>□ Implementation of a taller barrier rail.</li> </ul>  |
| GRA3         | <ul style="list-style-type: none"> <li>○ Added details to the models for sloped end of barrier rail for 42" Vertical Concrete Barrier Rail.</li> <li>○ Increased dimension from riding surface to centerline guardrail anchor unit from 1'-9" to 1'-11" for the 42" Vertical Concrete Barrier Rail.</li> </ul> | <ul style="list-style-type: none"> <li>□ Implementation of a taller barrier rail.</li> <li>□ Complete implementation of the increased height of guardrail.</li> </ul> |
| MEJS1        | <ul style="list-style-type: none"> <li>○ Added 42" F-shape concrete barrier rail.</li> </ul>   | <ul style="list-style-type: none"> <li>□ Implementation of a taller barrier rail.</li> </ul>  |
| OF123        | <ul style="list-style-type: none"> <li>○ Deleted Standard. Standard Overhang falsework hanger and bracket spacing was incorporated into the special provision for Falsework and Formwork.</li> </ul>   | <ul style="list-style-type: none"> <li>□ Ref: Memo dated April 5, 2012 - Revisions to Project Special Provision (Falsework and Formwork).</li> </ul>                  |
| PCBB1        | <ul style="list-style-type: none"> <li>○ Added notes regarding the size of deck drains and epoxy coating the exterior units when deck drains are necessary.</li> </ul>   | <ul style="list-style-type: none"> <li>□ Consistency in plan preparation.</li> </ul>  |

## Structure Standards Revisions and Additions

| Standard No. | Explanation of Revisions  | Why Revisions were Required  |
|--------------|---|--|
| PCBB8        | <ul style="list-style-type: none"> <li>○ Added 42" F-shape concrete barrier rail.</li> <li>○ Added details to the models for sloped end of barrier rail for 42" Vertical Concrete Barrier Rail.</li> <li>○ Revised geometry of the End Post for the One Bar Metal Rail due to increase in height of guardrail.</li> <li>○ Added Section T-T Grout Dam at Open Joint.</li> </ul>   | <ul style="list-style-type: none"> <li>□ Implementation of a taller barrier rail.</li> <li>□ Complete implementation of the increased height of guardrail.</li> <li>□ Proper drainage of the structure</li> </ul>  |
| PCG7 & PCG8  | <ul style="list-style-type: none"> <li>○ Modify #5 S11 Bending Dimensions</li> </ul>  | <ul style="list-style-type: none"> <li>□ Improve constructability.</li> </ul>  |
| PCS3         | <ul style="list-style-type: none"> <li>○ Added 42" F-shape concrete barrier rail.</li> <li>○ Added details to the models for sloped end of barrier rail for 42" Vertical Concrete Barrier Rail.</li> <li>○ Revised geometry of the End Post for the One Bar Metal Rail due to increase in height of guardrail.</li> <li>○ Added Section T-T Grout Dam at Open Joint.</li> <li>○ Added notes regarding the size of deck drains and epoxy coating the exterior units when deck drains are necessary.</li> </ul> | <ul style="list-style-type: none"> <li>□ Implementation of a taller barrier rail.</li> <li>□ Complete implementation of the increased height of guardrail.</li> <li>□ Proper drainage of the structure.</li> <li>□ Consistency in plan preparation.</li> </ul> |
| SSJ2         | <ul style="list-style-type: none"> <li>○ Added 42" F-shape concrete barrier rail.</li> </ul>  | <ul style="list-style-type: none"> <li>□ Implementation of a taller barrier rail.</li> </ul>   |