



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

JAMES H. TROGDON, III  
SECRETARY

MEMORANDUM TO: Project Engineers  
Project Design Engineers

FROM: B. C. Hanks, P. E.  
State Structures Engineer

DATE: January 22, 2018

SUBJECT: B-77 GUARDRAIL ANCHOR UNIT

To be in compliance with the AASHTO Manual for Assessing Safety Hardware (MASH), the dimension from the riding surface to the centerline of a B-77 guardrail anchor unit (GRAU) has increased from 1'-11" to 2'-1".

The following Standard Drawings have been revised:

| Standard No.            | Summary of Revision(s)   |
|-------------------------|--|
| GRA2                    | <ul style="list-style-type: none"> <li>Increased dimension from the riding surface to the centerline guardrail anchor assembly from 1'-11" to 2'-1"</li> </ul>   |
| BAS4, CBR1, PCS3, PCBB8 | <ul style="list-style-type: none"> <li>Revised spacing of the "B" bars in the 42" F-Shape Concrete Barrier Rail and the 32" New Jersey Shape Concrete Barrier Rail to avoid conflict with the through-bolts of a B-77 GRAU.</li> </ul> |

The following Design Manual Figures have been revised:

| Figure           | Summary of Revision(s)   |
|------------------|--|
| 6-20, 6-22, 6-26 | <ul style="list-style-type: none"> <li>Revised spacing of the "B" bars to avoid conflict with the through-bolts of a B-77 GRAU.</li> </ul> |

The revisions are effective immediately. The revised Standard Drawings and Design Manual Figures are available online.

Project Engineers

Page 2

January 22, 2018

BCH/DCM/THC

cc: G. Muchane, P. E.  
W. K. Fischer, P. E.  
B. L. Moore, P. E.  
M. L. Sylvester, P. E.  
R. E. Davenport, P. E.  
T. M. Bruton, P. E.  
V. G. Mabry  
W. L. McAbee, P. E., FHWA  
Division Bridge Program Managers  
Regional Bridge Construction Engineers  
Area Construction Engineers