# STRUCTURE BULLETIN

## NCDOT Construction Unit

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## Current Issues: Capturing Barrier Rail Concrete

Excess grout and concrete from slip-forming or casting barrier and parapet walls must be contained. Catching this material is extremely important when working over water or traffic. Concrete entering waterways changes the pH of the water and causes environmental damage. Concrete falling on travel ways is a safety hazard. Catching the material can be done by several methods. In the photo above, the overhang forms remain in place until the barrier is cast. This is normal procedure for cast in place decks. In addition to providing access to the outside of the rail, it catches any excess grout.

Cored Slabs and Box Beams are more difficult situations. While there is not normally an overhang form on these bridges, it is no less important to collect the excess material. This can be done in several ways.

First, if the stream is small, the contractor may deck out with crane mats or other materials over the stream. The excess material is caught on this before it can enter the stream. Excess material falling on the stream bank should also be cleaned up and properly disposed of.

(Continued)

## Temporary Bridges:

If you are working on a project that includes a temporary bridge, there are resources available for training and assistance from submittals through installation and inspection. In addition to the Area Construction Engineers you can contact the gentlemen below.

In the East (Div. 1-6, 8):
Stephen Burke
sburke@ncdot.gov
919-524-5203

In the West (Div. 7, 9-14):
Steve Walton
Steven.walton@hdrinc.com
336-406-6502

Remember that all temporary structures carrying the public must be inspected by the Area Construction Engineer before placing the structure into service. Additionally, prefabricated truss bridges must also be inspected by a representative of the company and this form must be submitted.

Second, is the use of the optional insert detail in the exterior slabs. In the picture above, the contractor had the exterior beams fabricated with the inserts and has installed an overhang on the span over the water. This will catch the material and provide access to the exterior face of the wall. You can also see they have installed fabric on the slope under the end span to catch excess material that falls in this area.

There are many possibilities, but the contractor should never be allowed to drop excess concrete into water or traffic. If they do not have a method to catch the material in these situations, work should be suspended until the problem is addressed. This should be discussed with the Contractor before the barrier rail subcontractor shows up on the job to avoid possible delays.

## Area Construction Engineers:

| Div | Contact | Phone |
|---|---|---|
| 1&2 | Randy Hall | 252-402-9957 |
| 3&4 | David Candela | 910-524-4931 |
| 5 | Troy Brooks | 336-972-4627 |
| 6&8 | John Partin | 336-847-1226 |
| 7 | Aaron Griffith | 336-215-9170 |
| 9 | Vickie Davis | 704-202-0945 |
| 10 | Darin Waller | 980-521-5176 |
| 11&12 | Doug Eller | 336-877-7048 |
| 13&14 | Aaron Powell | 828-694-7971 |

## Inspector Training:

Training for this year is complete. Thanks to all of you that attended the Basic Structure Inspection companion class. If you did not get to attend but are still interested we plan to place videos of the class on the YouTube site. Additionally, the CON 802 Basic Structure Inspection class was revised as a companion to the class. It can be found here.

## Structure Bulletins

are now archived on the Construction Unit website under Construction Resources. Below is a QR code link to the Structure Bulletin Archive.

If you have a topic you would like to see addressed in a future edition of the Structure Bulletin please email us at either acochran@ncdot.gov or aearwood@ncdot.gov