

355 Vanderbilt Rd | Biltmore Forest, NC  
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www.biltmoreforest.org



George F. Goosmann, III, Mayor  
Fran G. Cogburn, Mayor-Pro Tem  
E. Glenn Kelly, Commissioner  
Doris P. Loomis, Commissioner

Jonathan B. Kanipe,  
Town Manager

## MEMORANDUM

To: Mayor and Board of Commissioners

From: Jonathan Kanipe, Town Manager

Re: Consideration of Agreement with Buckeye Bridge for Stuyvesant Road Bridge Work

Date: August 6, 2018

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The Town has two bridges within its jurisdiction that require inspections in accordance with Federal Highway Administration regulations every two years. Secondary maintenance notices were provided to the Town requiring us to install four (4) delineators on the bridges located on Southwood Road and Stuyvesant Road. This does not require significant work from the Town and I have asked the Public Works Director to perform this work.

The bridge located on Stuyvesant Road (north of the intersection with Southwood Road) was found to need repairs under a Primary Maintenance notice. As noted in the attached letter, the concrete slab underneath the bridge has advanced deterioration of the concrete and there is scour at the downstream end that is undermining the slab. As this inspection report was not received by the Town until after the FY19 budget was approved, we did not include funding for this project, but it is necessary to undertake it in a prompt manner.

The Town consulted with WithersRavenel regarding the proposed repair to the culvert. After reviewing an earlier proposal by Buckeye Bridge to perform the necessary repairs, WithersRavenel offered no additional design or engineering work and indicated that the proposal from Buckeye was in accordance with prevailing practices, and this proposed work is acceptable under a nationwide permit for maintenance. As a result, the Town does not have to receive permit approval from any state or federal regulatory agency for this work.

The work will be conducted as follows:

- (1) Flow through the culvert will be diverted to one-half of the culvert through the use of heavy duty sandbags.
- (2) Work will commence on the “closed” side of the channel with Buckeye using concrete that cures in approximately 8-10 hours. This work will be completed with normal set concrete but this concrete will achieve “initial set” in 8-10 hours. Buckeye will monitor weather forecasts to ensure that this concrete pour occurs during a time period in which a rain event is unlikely.

(3) Work will take several days or a week in order to prepare the “closed” surface in order to pour the concrete. During this prep period, it is possible that afternoon downpours could push water in the prep area before concrete is ready to be poured, thereby eliminating some of the prep work that has commenced. WithersRavenel representatives and the Town both spoke with Buckeye regarding this possibility, and they indicated their sandbags were heavy duty and would be structured to prevent this, but they did agree that an extreme rain event could result in some prep work being undone. As a result, if heavy rain falls occur during the prep time for the work, this may delay the overall job’s completion time. Buckeye has acknowledged this as well, and indicated they are accustomed to working in these conditions. The Town did reiterate to Buckeye that all care should be taken to ensure the concrete pouring happens with weather conditions in mind to ensure that the 8-10 hour curing period occurs with as little chance of rain as possible. The WithersRavenel representative did indicate that some wetness toward the end of the curing process could actually improve the process.

Buckeye has indicated they can begin this project in mid-September with the entire project lasting two (2) weeks if weather cooperates. I have asked them for a worst case scenario estimate as well, and they indicated that a four (4) week timeframe would reflect significant weather challenges during this project.

The total proposal from Buckeye for this project is \$28,000 and will be paid from the Town’s Street department funds. Town staff recommends approval of this agreement and moving forward with the bridge repair project.

# BUCKEYE BRIDGE, LLC

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June 26, 2018

Mr. Terry Crouch  
Public Works Director  
Town of Biltmore Forest  
PO Box 5352  
Biltmore Forest, NC 28813-5652

RE: Proposal for Bridge Repair on Bridge #100767 on Stuyvesant Rd.

Dear Mr. Crouch,

We are in receipt of the latest bridge inspection report for this bridge completed by Mr. Mike Mills of Michael Baker Engineering dated June 6, 2018.

Buckeye is proposing to complete the following work as requested by the bridge inspection report:

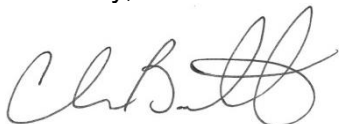
1. Repair the bottom slab – This work will involve management of the existing water during repair, to thoroughly clean the bottom slab and check for “soundness” of the slab, remove all “unsound” concrete, splice in new reinforcing steel to the existing, re-steel and place new concrete. Our lump sum price to mobilize and provide all Labor, Equipment & Materials to complete this work is \$12,500 (repair area is approx. 8'x3'x4" per report)
2. Repair scour area – This work will involve management of the existing water, excavation of a “toe wall”, placement of re-steel, chipped holes in deck for backfill of scour, placement of concrete. Our lump sum price to mobilize and provide all Labor, Equipment & Materials to complete this work is \$15,500.

Our price is based upon the following qualifications:

- Payment and Performance Bond is not included; however, we will gladly furnish this bond for an additional 1% to our contract price. No Retainage to be held for this work
- Buckeye Bridge is a licensed construction firm however we are not a design or engineering firm. Buckeye makes no representation to have engineered any of these repairs.
- Buckeye Bridge will require a minimum 4 week notice to start this work and will require approx.. 4 weeks to complete this work
- All Traffic Control, Erosion Control, Permits, Special Insurance, Special Licenses, etc. to be by others however Buckeye will provide the necessary Traffic Control and Erosion Control for this project.
- We will require a fully executed agreement for this work prior to our mobilization.
- All conflicting utilities and obstructions to be located and/or relocated by others, prior to our mobilization.
- Buckeye will require a disposal area for any chipped concrete debris.
- This quote will expire July30, 2018.

We appreciate the opportunity to assist you with these bridge repairs and look forward to a favorable response to this proposal. Please feel free to contact us should you have any questions or require additional information concerning this matter.

Sincerely,



Christopher K. Britton  
Managing Member

June 8, 2018

Terry Crouch  
Public Works Director  
Town of Biltmore Forest  
PO Box 5352  
Biltmore Forest, NC 28813-5652

Re: Priority Maintenance Notice  
Bridge Number 100767 on Stuyvesant Rd

Dear Terry,

The Federal Highway Administration, through their National Bridge Inspection Standards, requires that certain highway structures be inspected for condition every two years. As part of this inspection requirement, the above structure was inspected on 6/7/2018.

During the inspection of this structure a condition requiring prompt attention was discovered. A Priority Maintenance Notice outlining the problems that need immediate attention is attached. In this case, the bottom slab has advanced deterioration of the concrete, and there is scour at the downstream end undermining the slab.

Please contact Mr. David Snoke of the Department of Transportation – Structures Management Unit within thirty (30) calendar days of this notice with information on how and when you are going to proceed concerning this problem. When the repair is completed, Mr. Snoke will need a signed copy of the Priority Maintenance Notice form containing a description of what was done. His contact information is:

David Snoke, PE  
NCDOT – Structures Management Unit  
1581 Mail Service Center  
Raleigh, NC 27699-1581  
Phone: 919-707-6431  
Email: dsnoke@ncdot.gov

Our staff is available to meet with you to review the findings and explain the reasons for this notification. Our contact information is:

Michael Baker Engineering  
8000 Regency Parkway, Suite 600  
Cary, NC 27518  
Phone: 919-818-0458  
Email: [mike.mills@mbakerintl.com](mailto:mike.mills@mbakerintl.com)

Sincerely,

**Michael Baker Engineering**

A handwritten signature in black ink, appearing to read "Mike Mills", with a stylized flourish at the end.

Mike Mills, PE  
Bridge Inspection Manager

# PRIORITY MAINTENANCE NOTICE



Bridge: **100767**  
 County: **Buncombe**  
 City: **Biltmore Forest**  
 Route: **Stuyvesant Rd**

Team Leader : **Mike Mills**

Date : **6/8/2018**

MEMORANDUM TO: **Terry Crouch**  
 Town of Biltmore Forest

A condition inspection of the subject bridge was made **6/7/2018**. It is recommended that the conditions listed below be given prompt attention. Please send an electronic notice of the action taken as a result of these recommendations to the NCDOT Structures Management Unit. Retain one copy for your files.

PRIORITY MAINTENANCE	PHOTOGRAPH
<p>Barrel 1 Section 1: (PM) at outlet scour (2' deep x full width x 6') with undermining (4.5') of bottom slab</p> <p style="text-align: center; margin-top: 100px;">Photo 1</p>	
<p style="text-align: center; margin-top: 100px;">Photo 2</p>	
<p><b>REPAIRS COMPLETED</b></p>	<p>By Bridge Maintenance Supervisor: _____ Date : _____</p> <p><b>Action Taken:</b> _____</p>
<p><b>WILL NOT DO RECOMMENDED WORK AT THIS TIME</b></p>	<p>By Bridge Engineer: _____</p> <p>Date : _____</p>

**PRIORITY  
MAINTENANCE  
NOTICE**



Bridge: **100767**  
 County: **Buncombe**  
 City: **Biltmore Forest**  
 Route: **Stuyvesant Rd**

Team Leader : **Mike Mills**

Date : **6/8/2018**

MEMORANDUM TO: **Terry Crouch**  
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PRIORITY MAINTENANCE	PHOTOGRAPH
<p>Barrel 1 Section 1: (PM) bottom slab abrasion with loss of concrete (8" wide x full length x up to 4" deep), at north edge downstream end (7) exposed bars (8' x 3' area)</p> <p style="text-align: center;">Photo 1</p>	
<p style="text-align: center;">Photo 2</p>	
<p><b>REPAIRS COMPLETED</b></p>	<p>By Bridge Maintenance Supervisor: _____ Date : _____</p> <p><b>Action Taken:</b></p> <div style="background-color: yellow; height: 80px; width: 100%;"></div>
<p><b>WILL NOT DO RECOMMENDED WORK AT THIS TIME</b></p>	<p>By Bridge Engineer: _____</p> <p>Date : _____</p>