

**South Carolina Department of Transportation**  
**Engineering Directive Memorandum**

Number: 13

Primary Department: Maintenance

Referrals: South Carolina Code of Law 57-3-110

Subject: Maintenance Bridge Replacement Projects

The Department may construct, as necessary with its maintenance forces, bridges not to exceed 210 feet in length. Longer bridges may be replaced on a case-by-case basis with the approval of the deputy secretary for engineering. Only bridges that have been approved for replacement by the SCDOT Commission shall be considered for replacement by maintenance forces.

Once the decision has been made to replace a structure, elected officials shall be notified in accordance with the procedures outlined in Engineering Directive Memorandum 36.

Maintenance bridge replacement projects will be handled in accordance with the following procedures:

1. The district maintenance engineer (DME) will be the engineer of record for all maintenance bridge replacement projects and shall determine the required length and span configuration of the new bridge prior to submitting a request for a foundation review. The DME will document the basis for the span configuration and bridge width selected in a memorandum to the state bridge maintenance engineer, taking the following into account:
  - a. Existing freeboard (measured from normal flow elevation to bottom of deck).
  - b. Abutment slopes shall be no steeper than 2:1.
  - c. Spanning of the creek or stream where possible.
  - d. Bridge width may need to be reduced based on available right-of-way unless it would create an unsafe situation based on ADT and/or type of traffic.
2. The proposed detour route for the project should also be reviewed during the visit to the bridge site. The district traffic engineer shall approve the proposed detour route.
3. The district office shall forward a request for a foundation review and an asbestos survey to the Bridge Maintenance Office. A copy of the letter to elected officials announcing the project, done in accordance with Engineering Directive Memorandum 36, should be included. The Bridge Maintenance Office will forward the results and recommendations to the district office upon completion of the asbestos survey and foundation review. Requests for foundation reviews shall include the following information:

- a. Bridge ID
  - b. Route and stream crossing
  - c. New bridge length, span configuration, and width (out to out)
  - d. Type and/or weight of pile driving hammer
  - e. Location map
  - f. Form MBR-1, "Initial Field Observation for Wetland Screening" (forwarded to Environmental Management Office)
4. The resident maintenance engineer shall submit the requisition for the new bridge through the district office. The district office will forward the requisition to the bridge maintenance engineer. No requisition shall be processed until the Initial Field Observation for Wetland Screening form has been reviewed and signed off on by the Environmental Management Office.
  - a. The vendor, upon receipt of the order, will contact the resident maintenance engineer (consignee) in the county receiving the bridge to determine an estimate as to when the bridge will be needed for erection. It is important to be as accurate as possible with this date since the vendor will order materials and schedule fabrication from this information.
  - b. Plant inspection will continue as in the past. The inspector will ensure that each bridge section and barrier rail section is marked with the leading designation, manufacturer's identifying mark, and the date cast as prescribed on the plans. When inspection is completed and the item meets Department specifications, "South Carolina Department of Transportation" will be stamped on the item by the inspector.
  - c. When a bridge has been completed, stamped approved, stored, and readied for shipment, the vendor may receive a partial payment. A "Statement of Transfer of Title" will be completed, signed, and notarized by the vendor. Four copies will be sent to the director of maintenance for execution, along with four copies of invoicing for 75 percent of the purchase order amount. Upon execution, one copy will be returned to the vendor, one copy will be retained by the director of maintenance, and two copies will be forwarded to the district engineer, who will send one copy to the consignee. The consignee will, upon receipt of the form, verify with the materials laboratory that the bridge meets South Carolina Department of Transportation specifications and send in an "Acknowledgment of Partial Delivery" (Form 514-F) to the district office for 75 percent of the purchase order amount.
  - d. The remaining 25 percent of the purchase order will be paid to the vendor when the bridge has been completed.
5. The district office will prepare and forward a demolition request form along with the asbestos survey to the South Carolina Department of Health and Environmental Control

(DHEC). The cover letter to DHEC should include information naming the district as the responsible party for payment of the permit fee. A copy of the permit, when received, should be forwarded to the Bridge Maintenance Office.

6. Construction of precast bridges by maintenance bridge crews will be performed in accordance with the applicable sections of Division 700 of the 2004 SCDOT Construction Manual. In addition, approach slabs shall be constructed for all bridges built on primary routes and on secondary roads with an ADT greater than 400 vehicles per day, in accordance with Chapters 12 and 17 of the 2006 SCDOT Bridge Design Manual.
7. The district office shall notify the Bridge Maintenance Office in writing of the following:
  - a. Date work begins.
  - b. Confirmation that final notification has been sent to elected officials giving project details, in accordance with Engineering Directive Memorandum 36.
  - c. Confirmation of notification of emergency officials and schools prior to closure.
  - d. Confirmation that signs giving two weeks advance notice of closure have been placed.
  - e. Confirmation that closures were posted on the web.
  - f. Date bridge is reopened to traffic.
8. A completed SCDOT Form 53R showing foundation data and bridge cost data shall be forwarded to the bridge maintenance engineer promptly upon completion of the project.

Approved By: John V. Walsh  
John V. Walsh, Deputy Secretary for Engineering

Effective Date: March 22, 2011

**INITIAL FIELD OBSERVATION FOR WETLAND SCREENING**  
**MAINTENANCE BRIDGE REPLACEMENTS**

County \_\_\_\_\_ Crossing \_\_\_\_\_

**Project Description:** \_\_\_\_\_

I. This form is used to aid the Project Manager (PM) in initially examining a project for possible involvement within wetlands or watercourses. During the design field review, the PM will determine whether or not the project has any of the characteristics listed below. Please check any applicable boxes if the project involves the following work:

YES ☐ NO ☐ new ground disturbing activities will occur

YES ☐ NO ☐ extending the footprint of an existing roadway or roadway on new location

YES ☐ NO ☐ extension or replacement of a roadway drainage structure

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

II. If any of the above boxes are checked "YES", the PM will look for the presence of any of the three following conditions and check the appropriate boxes below:

YES ☐ NO ☐ area of new work involves surface soils having predominately smaller than sand size particles, i.e. clayish or silt size, or soil appears predominantly grayish in color

YES ☐ NO ☐ project has a bridge/culvert structure to be modified or replaced

YES ☐ NO ☐ standing or moving water exists adjacent to roadway, including streams and roadway ditches regardless of the presence or absence of aquatic plants

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

III. If a project has new ground disturbing activities as discussed in paragraph I and has any of the three conditions discussed in paragraph II, then an official permit determination will be requested. This request will be made by the Director of Maintenance office submitting a Project Planning Report (PPR) to the Environmental Management Office (EMO) for a detailed determination by a biologist. The project's construction obligation date should not be assigned until a permit determination has been conducted by the EMO and the Project Manager has been notified of their findings.

\_\_\_\_\_  
District Engineering Administrator

\_\_\_\_\_  
Date

\_\_\_\_\_  
District Maintenance Engineer

\_\_\_\_\_  
Date

\_\_\_\_\_  
Environmental Office-Engineer

\_\_\_\_\_  
Date

## **STATEMENT OF TRANSFER OF TITLE**

To: SCDOT – Transferee

From:

Transferor hereby confirms and certifies to transferee that the transferor has full and unencumbered right, title and interest in and to the property described on purchase order number listed below. Simultaneously upon the execution of this Statement of Transfer of Title by a qualified agent of the transferee, such full and unencumbered right, title and interest shall pass unconditionally to the transferee. These materials remain in the care, custody and control of the transferor who shall bear any and all liability that occurs as a result of these materials while in transferor's custody.

Receipt of this form from transferor by transferee shall indicate that these materials meet SCDOT specifications and are stored and ready for shipment on notice from transferee.

DOT Requisition No: \_\_\_\_\_ Purchase Order No: \_\_\_\_\_

Manufacturers Invoice No: \_\_\_\_\_ County: \_\_\_\_\_

Spans	Caps	Barrier
_____ each 15'	_____ each – type _____	_____ LF with drain slot
_____ each 30'	_____ each – type _____	_____ LF without drain slot
_____ each 40'	_____ each – type _____	
_____ each		

Executed this \_\_\_\_\_ day of \_\_\_\_\_, 2008.

\_\_\_\_\_  
(Bridge manufacturer)

By: \_\_\_\_\_ Attest: (As to Transferor)

Title: \_\_\_\_\_  
\_\_\_\_\_  
Witness

Notary Public: \_\_\_\_\_  
Commission Expires: \_\_\_\_\_

### **SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION**

By: \_\_\_\_\_ Attest: (As to Transferee)

Title: \_\_\_\_\_  
\_\_\_\_\_  
Witness  
\_\_\_\_\_  
Witness

Send four (4) copies of this form to the Director of Maintenance, P.O. Box 191, Columbia, SC 29202, when bridge is completed and ready for shipment.