



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

February 20, 2008

MEMORANDUM TO: Mr. J. Wally Bowman , PE  
Division Five Engineer

FROM: Philip S. Harris, III, P.E., Unit Head *PHS*  
Natural Environment Unit  
Project Development and Environmental Analysis Branch

SUBJECT: Warren County, Replace Bridge No.67 on SR 1507 over  
Reedy Pond Creek; T.I.P. Number B-3707; Federal Aid  
Project No. BRZ-1507(1);

Attached is the Riparian Buffer Authorization for the above referenced project. All environmental permits have been received for the construction of this project.

PSH/gyb

Attachment

Cc:

Mr. Majed Alghandour, P. E., Programming and TIP  
Mr. Jay Bennett, P.E., Roadway Design  
Dr. David Chang, P.E., Hydraulics  
Mr. Randy Garris, P.E. State Contract Officer  
Mr. Art McMillan, P.E., Highway Design  
Mr. Greg Perfetti, P.E., Structure Design  
Mr. Mark Staley, Roadside Environmental  
Mr. John F. Sullivan, FHWA  
Ms. Beth Harmon, EEP  
Mr. Eric Midkiff, P.E., PDEA Central Region Unit Head  
Mr. Chris Murray, Division Environmental Officer

## **Project Commitments**

Warren County  
Replacement of Bridge No. 67 over Reedy Pond Creek on SR 1507 (Davis Rd.)  
WBS No. 33247.1.1  
Federal Project No. BRZ-1507(1)  
T.I.P. Project B-3707

In addition to the standard Neuse Buffer Authorization Conditions, NCDOT's Guidelines for Best Management Practices for the Protection of Surface Waters, and NCDOT's Guidelines for Best Management Practices for Bridge Demolition and Removal, the following special commitments have been agreed to by NCDOT:

### **Commitments Developed Through Project Development and Design**

#### **PDEA/Hydraulics/Roadway Design**

The Tar-Pamlico River Basin Rule applies to this project.

*No further action is required.*

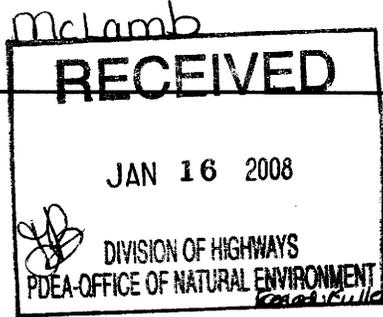
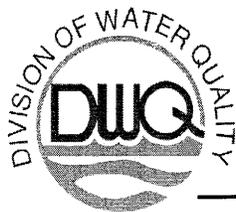
#### **Highway Design/Division 5**

The project will be coordinated with the Director of Transportation Services for the Warren County School System and the Director of Emergency Services before construction begins so appropriate changes in school bus and emergency service routes can be made. The Director of Transportation Services has requested a temporary bus turn around at a driveway located about 1 mile north of the bridge on SR 1507. The existing driveway will be suitable with the addition of gravel and possible pipe replacement. This can be included as a part of the special provisions of the construction contract. See discussion on page 3 or the CE and in the appendix.

### **Commitments Developed Through the Permit Process**

#### **Division Construction/Roadside Environmental Unit**

Streams within the project area are subject to the Neuse Buffer Regulations, therefore, NCDOT's Design Standards in Sensitive Watersheds will be implemented.



January 11, 2008  
Warren County  
DWQ Project No. 20080052  
Bridge 67 on SR 1507  
TIP No. B-3707

**APPROVAL of TAR-PAMLICO BUFFER AUTHORIZATION with ADDITIONAL CONDITIONS**

Dr. Gregory J. Thorpe, Ph.D., Environmental Management Director  
NCDOT PDEA  
1598 Mail Service Centre  
Raleigh, NC 27699-1548

Dear Dr. Thorpe:

You have our approval, in accordance with the conditions listed below, for the following impacts for the purpose of replacing Bridge 67 on SR 1507 in Warren County:

**Tar-Pamlico Riparian Buffer Impacts**

Site	Zone 1 Impact (sq ft)	minus Wetlands in Zone 1 (sq ft)	= Zone 1 Buffers (not wetlands) (sq ft)	Zone 1 Buffer Mitigation Required (using 3:1 ratio)	Zone 2 Impact (sq ft)	minus Wetlands in Zone 2 (sq ft)	= Zone 2 Buffers (not wetlands) (sq ft)	Zone 2 Buffer Mitigation Required (using 1.5:1 ratio)
1	2460	0	2460	N/A	1351	0	1351	N/A
<b>Totals</b>	<b>2460</b>	<b>0</b>	<b>2460</b>	<b>0</b>	<b>1351</b>	<b>0</b>	<b>1351</b>	<b>0</b>

\* n/a = Total for Site is less than 1/3 acre and 150 linear feet of impact, no mitigation required

**Total Buffer Impact for Project: 3811 square feet.**

The project shall be constructed in accordance with your application dated received January 9, 2008. This approval is valid for the Tar-Pamlico Riparian Buffer Rules (15A NCAC 2B .0250). In addition, you should acquire any other federal, state or local permits before you proceed with your project including (but not limited to) Sediment and Erosion Control, Non-Discharge and Water Supply Watershed regulations.

This approval is valid solely for the purpose and design described in your application (unless modified below). Should your project change, you must notify the DWQ and submit a new application. If the property is sold, the new owner must be given a copy of this Certification and approval letter, and is thereby responsible for complying with all the conditions. If total wetland fills for this project (now or in the future) exceed one acre, or of total impacts to streams (now or in the future) exceed 150 linear feet, compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). For this approval to remain valid, you must adhere to the conditions listed below.

**Conditions of Certification:**

1. Strict adherence to the most recent version of NCDOT's Best Management Practices For Bridge Demolition and Removal approved by the US Army Corps of Engineers is a condition of the 401 Water Quality Certification.



2. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Please refer to the most current version of *Stormwater Best Management Practices*.
3. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills.
4. During the construction of the project, no staging of equipment of any kind is permitted in waters of the U.S., or protected riparian buffers.
5. The dimension, pattern and profile of the stream above and below the crossing shall not be modified. Disturbed floodplains and streams shall be restored to natural geomorphic conditions.
6. The use of rip-rap above the Normal High Water Mark shall be minimized. Any rip-rap placed for stream stabilization shall be placed in stream channels in such a manner that it does not impede aquatic life passage.
7. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval.
8. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water.
9. Heavy equipment shall be operated from the banks rather than in the stream channel in order to minimize sedimentation and reduce the introduction of other pollutants into the stream.
10. All mechanized equipment operated near surface waters must be regularly inspected and maintained to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials.
11. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification.
12. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited.
13. A copy of this Water Quality Certification shall be maintained on site at the construction site at all times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager.
14. The outside buffer, wetland or water boundary located within the construction corridor approved by this authorization shall be clearly marked by highly visible fencing prior to any land disturbing activities. Impacts to areas within the fencing are prohibited unless otherwise authorized by this certification.
15. The issuance of this certification does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by other government agencies (i.e. local, state, and federal) having jurisdiction, including but not limited to applicable buffer rules, stormwater management rules, soil erosion and sedimentation control requirements, etc.
16. The Permittee shall report any violations of this certification to the Division of Water Quality within 24 hours of discovery.



17. Upon completion of the project (including any impacts at associated borrow or waste site), the NCDOT Division Engineer shall complete and return the enclosed "Certification of Completion Form" to notify DWQ when all work included in the 401 Certification has been completed.

18. Native riparian vegetation must be reestablished within the construction limits of the project by the end of the growing season following completion of construction.

19. There shall be no excavation from, or waste disposal into, jurisdictional wetlands or waters associated with this permit without appropriate modification. Should waste or borrow sites, or access roads to waste or borrow sites, be located in wetlands or streams, compensatory mitigation will be required since that is a direct impact from road construction activities.

20. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to protect surface waters standards:

- a. The erosion and sediment control measures for the project must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Sediment and Erosion Control Planning and Design Manual*.
- b. The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*. The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.
- c. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*.
- d. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.

21. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification.

If you do not accept any of the conditions of this certification, you may ask for an adjudicatory hearing. You must act within 60 days of the date that you receive this letter. To ask for a hearing, send a written petition that conforms to Chapter 150B of the North Carolina General Statutes to the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, N.C. 27699. This certification and its conditions are final and binding unless you ask for a hearing. This letter completes the review of the Division of Water Quality under Section 401 of the Clean Water Act. If you have any questions, please contact Rob Ridings at (919) 733-9817

Sincerely,

A handwritten signature in black ink, appearing to read "C. Sullins", is written over a horizontal line.

Coleen Sullins  
Director

Attachment (Certificate of Completion form)

cc: Chris Murray, Division 5 Environmental Officer  
Eric Alsmeyer, US Army Corps of Engineers, Raleigh Field Office  
Travis Wilson, NC Wildlife Resources Commission  
File Copy



DWQ Project No.: \_\_\_\_\_ County: \_\_\_\_\_

Applicant: \_\_\_\_\_

Project Name: \_\_\_\_\_

Date of Issuance of 401 Water Quality Certification: \_\_\_\_\_

**Certificate of Completion**

Upon completion of all work approved within the 401 Water Quality Certification or applicable Buffer Rules, and any subsequent modifications, the applicant is required to return this certificate to the 401 Transportation Permitting Unit, North Carolina Division of Water Quality, 1650 Mail Service Center, Raleigh, NC, 27699-1650. This form may be returned to DWQ by the applicant, the applicant's authorized agent, or the project engineer. It is not necessary to send certificates from all of these.

**Applicant's Certification**

I, \_\_\_\_\_, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Agent's Certification**

I, \_\_\_\_\_, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Engineer's Certification**

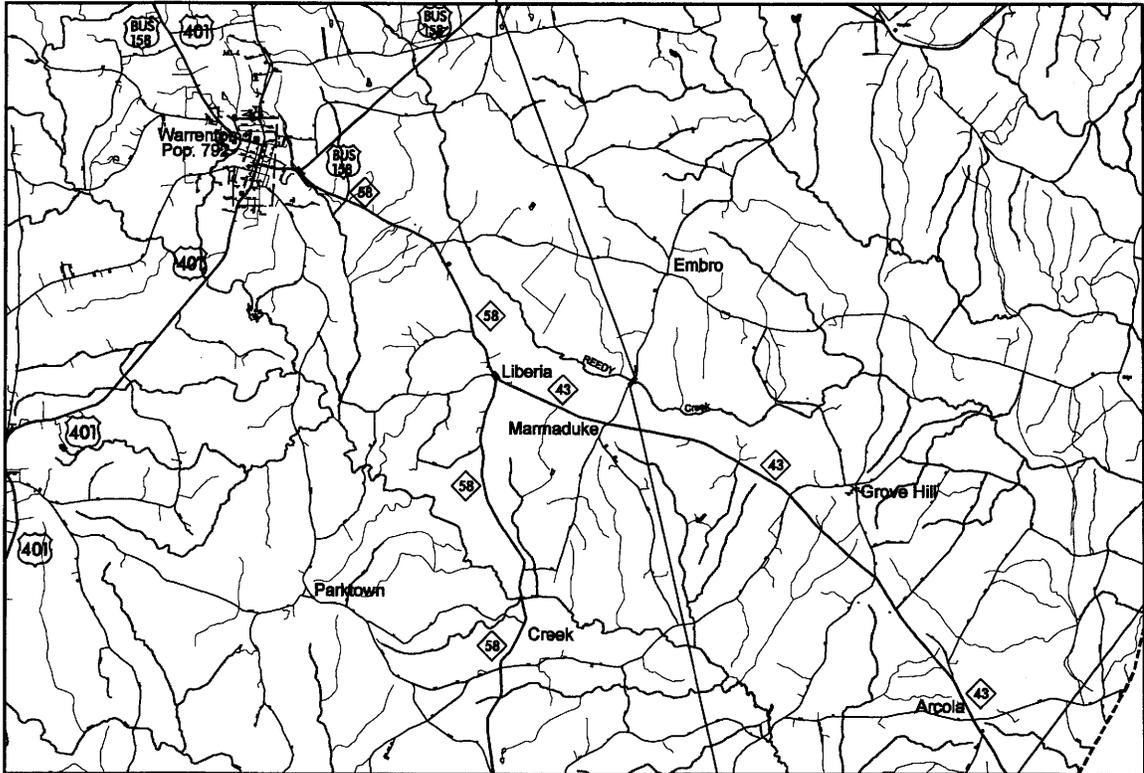
\_\_\_\_\_ Partial \_\_\_\_\_ Final

I, \_\_\_\_\_, as a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe (periodically, weekly, full time) the construction of the project, for the Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature \_\_\_\_\_ Registration No. \_\_\_\_\_

Date \_\_\_\_\_

END PROJECT



BEGIN PROJECT

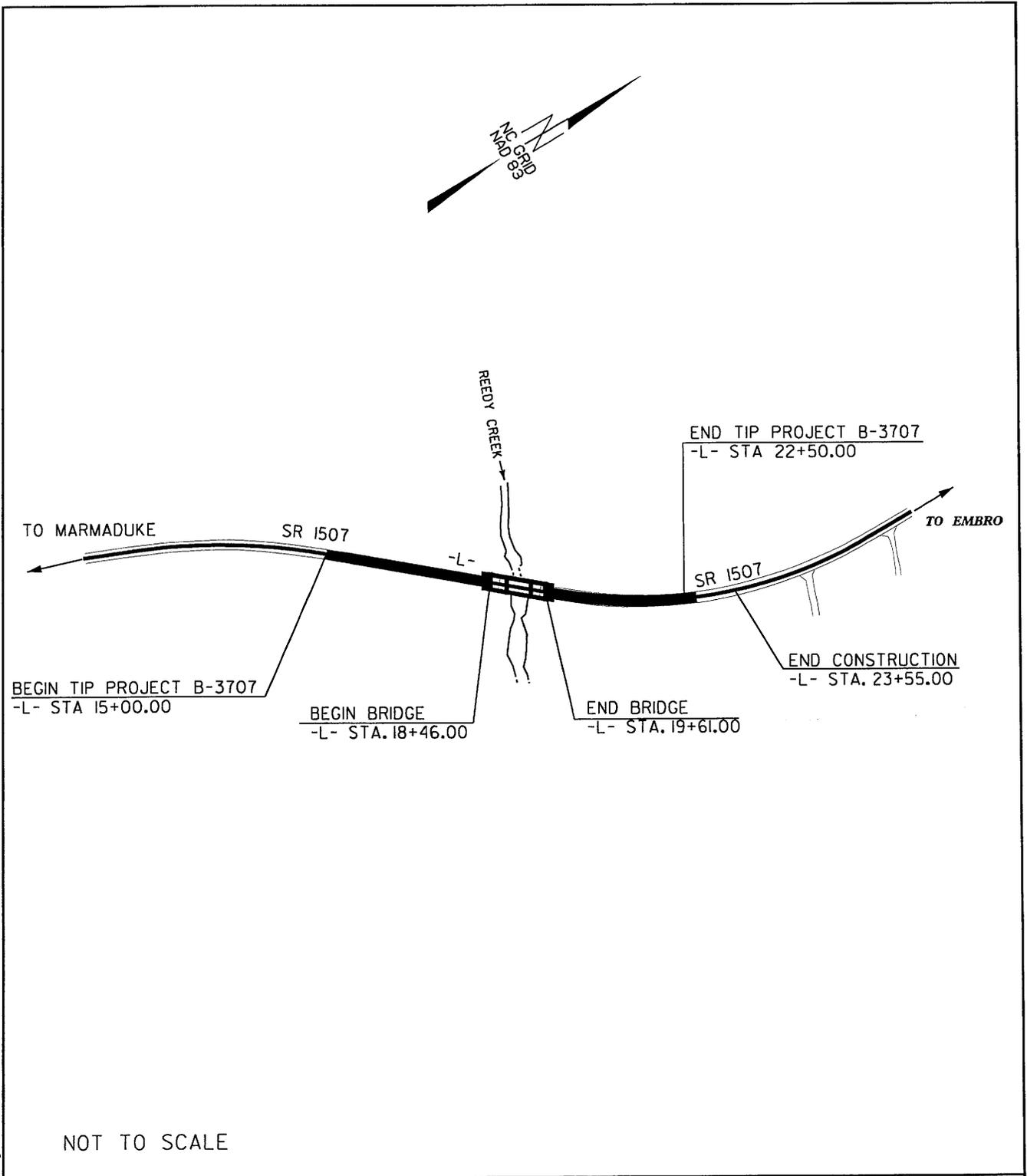
NOT TO SCALE

TAR PAMLICO RIVER BUFFER  
VICINITY  
MAPS

N. C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
WARREN COUNTY  
PROJECT: 33247.1.1 (B-3707)  
BRIDGE NO. 67  
OVER REEDY CREEK  
ON SR 1507

SHEET 1 OF 6

11/15/07



TAR PAMLICO RIVER BUFFER  
LOCATION  
MAPS

N. C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
WARREN COUNTY  
PROJECT: 33247.1.1 (B-3707)  
BRIDGE NO. 67  
OVER REEDY CREEK  
ON SR 1507

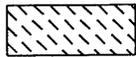
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# BUFFER LEGEND

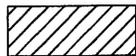
—WLB— WETLAND BOUNDARY

 WETLAND

 ALLOWABLE IMPACTS ZONE 1

 ALLOWABLE IMPACTS ZONE 2

 MITIGABLE IMPACTS ZONE 1

 MITIGABLE IMPACTS ZONE 2

—BZ— RIPARIAN BUFFER ZONE

—BZ1— RIPARIAN BUFFER ZONE 1  
30 ft (9.2m)

—BZ2— RIPARIAN BUFFER ZONE 2  
20 ft (6.1m)

→ → FLOW DIRECTION

—TB— TOP OF BANK

—WE— EDGE OF WATER

—C— PROP. LIMIT OF CUT

—F— PROP. LIMIT OF FILL

—△— PROP. RIGHT OF WAY

—NG— NATURAL GROUND

—PL— PROPERTY LINE

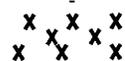
—TDE— TEMP. DRAINAGE EASEMENT

—PDE— PERMANENT DRAINAGE EASEMENT

—EAB— EXIST. ENDANGERED ANIMAL BOUNDARY

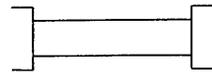
—EPB— EXIST. ENDANGERED PLANT BOUNDARY

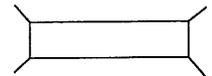
—▽— WATER SURFACE

 LIVE STAKES

 BOULDER

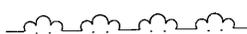
— COIR FIBER ROLLS

 PROPOSED BRIDGE

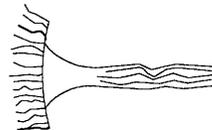
 PROPOSED BOX CULVERT

 PROPOSED PIPE CULVERT  
12"-48" PIPES  
(DASHED LINES DENOTE EXISTING STRUCTURES)  
54" PIPES & ABOVE

 SINGLE TREE

 WOODS LINE

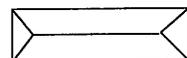
 DRAINAGE INLET

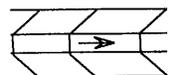
 ROOTWAD

 RIP RAP

 5  
ADJACENT PROPERTY OWNER OR PARCEL NUMBER IF AVAILABLE

 PREFORMED SCOUR HOLE (PSH)

 LEVEL SPREADER (LS)

 DITCH/  
GRASS SWALE

N. C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
WARREN COUNTY

PROJECT: 33247.1.1 (B-3707)

BRIDGE NO. 67  
OVER REEDY CREEK  
ON SR 1507

SHEET 3 OF 6

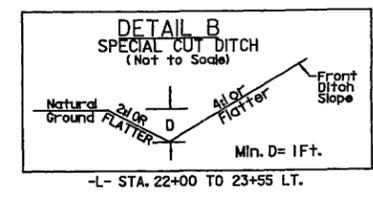
7 / 02 / 07





8/17/99

PROJECT REFERENCE NO. B-3707	SHEET NO. 4
RW SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



FISHING CREEK LAND & TIMBER CORPORATION

1

GRASS SWALE		
DA	1.06	Ac
VZ	2.0	cfs
Q10	2.22	tps
Q100	2.8	cfs
V10	2.42	tps
REQUIRED LENGTH	105.7	ft
ACTUAL LENGTH	235	ft
SLOPE	0.086	ft / ft
SIDE SLOPES	3	

30 LF CUT/FILL TRANSITION  
CLASS B RIP RAP  
EST. 15 TONS  
EST. 30 SY FF

MARGARET MOSS

3

GRASS SWALE		
DA	0.7	Ac
VZ	0.5	cfs
Q10	0.82	tps
Q100	0.1	cfs
V10	0.89	tps
REQUIRED LENGTH	17.2	ft
ACTUAL LENGTH	55	ft
SLOPE	0.003	ft / ft
SIDE SLOPES	3	

30 LF CUT/FILL TRANSITION  
CLASS B RIP RAP  
EST. 15 TONS  
EST. 30 SY FF

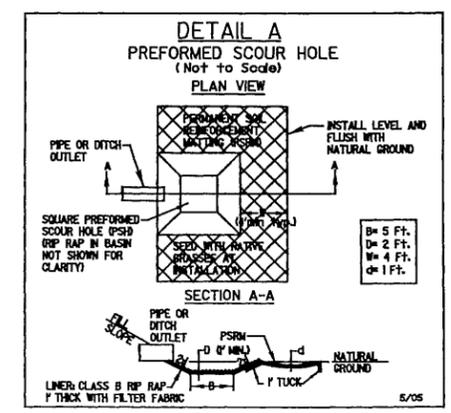
ROBERT C. KELLY & MARY E. KELLY

2

GRASS SWALE		
DA	0.39	Ac
VZ	0.7	cfs
Q10	1.74	tps
Q100	1.0	cfs
V10	1.90	tps
REQUIRED LENGTH	38.9	ft
ACTUAL LENGTH	200	ft
SLOPE	0.088	ft / ft
SIDE SLOPES	3	

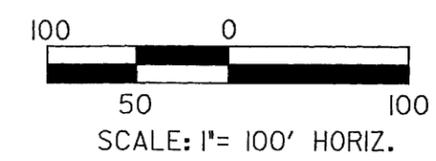
ELMER W. HARRIS

4



**LEGEND**

— BZ 1 —	RIPARIAN BUFFER - ZONE 1
— BZ 2 —	RIPARIAN BUFFER - ZONE 2
[Cross-hatched]	ALLOWABLE IMPACTS ZONE 1
[Diagonal lines]	ALLOWABLE IMPACTS ZONE 2



### BUFFER SITE 1 PLAN VIEW

Buffer Drawing  
Sheet 6 of 6

N. C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
WARREN COUNTY  
PROJECT: 33247.11 (B-3707)  
BRIDGE NO. 67  
OVER REEDY CREEK  
ON SR 1507  
SHEET 6 OF 6 7/02/07

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