

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

PAT L. MCCRORY  
GOVERNOR

ANTHONY J. TATA  
SECRETARY

August 27, 2013

MEMORANDUM TO: Mr. John Rouse, P.E.  
Division 2 Engineer

FROM: Philip S. Harris, III, P.E., Manager  
Natural Environment Section  
Project Development and Environmental Analysis Unit

SUBJECT: Greene County; Replacement of Bridge No. 65 over Appletree  
Swamp on SR 1215; Federal Aid Project Number BRZ-1215 (2).  
WBS 38527.1.1; **TIP No. B-4755.**

*C. P. Fuchs*

Attached are the N.C. Division of Water Resources Buffer Authorization Certificate/ Minor Variance and Modification for the above referenced project. All environmental permits have been received for the construction of this project.

A copy of this permit package will be posted on the NCDOT website at:  
<https://connect.ncdot.gov/resources/Environmental>

cc: w/o attachment (see website for attachments):

Mr. Randy Garris, P.E. State Contract Officer  
Mr. Jay Johnson, Division Environmental Officer  
Mr. Majed Alghandour, P. E., Program. and TIP  
Mr. Jay Bennett, P.E., Roadway Design  
Mr. Dewayne Sykes, P.E. Utilities Unit  
Mr. Art McMillan, P.E., Hydraulics  
Mr. Tom Koch, P.E., Structure Design  
Mr. Mark Staley, Roadside Environmental  
Mr. Ron Hancock, P.E., State Roadway Construction Engineer  
Mr. Mike Robinson, P.E., State Bridge Construction Engineer  
Mr. Bill Goodwin, P.E., PDEA Bridge Section

# PROJECT COMMITMENTS

T.I.P. Project B-4755  
Bridge No. 65 on SR 1215  
Over Appletree Swamp  
Greene County  
Federal Aid Project No. BRZ-1215 (2)  
W.B.S. No. 38527.1.1

## COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

### Hydraulics Unit

The Hydraulics Unit will coordinate with the NC Floodplain Mapping Program (FMP), to determine status of project with regard to applicability of NCDOT'S Memorandum of Agreement, or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent final Letter of Map Revision (LOMR).

### Division 2 Construction

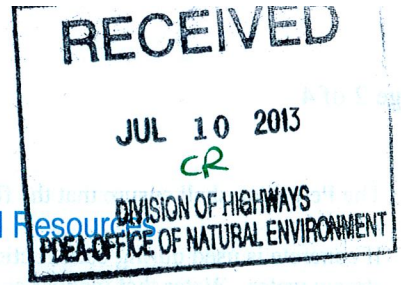
This project involves construction activities on or adjacent to FEMA-regulated stream(s). Therefore, the Division shall submit sealed as-built construction plans to the Hydraulics Unit upon completion of project construction, certifying that the drainage structure(s) and roadway embankment that are located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.

## COMMITMENTS FROM PERMITTING

No additional special conditions were developed during the permitting process.



North Carolina Department of Environment and Natural Resources  
Division of Water Quality



Pat McCrory  
Governor

Thomas A. Reeder  
Acting Director

John E. Skvarla, III  
Secretary

July 3, 2013  
Greene County  
DWQ Project No. 2013038  
TIP B-4755  
Bridge 65

**APPROVAL of NEUSE RIVER BUFFER RULES (15A NCAC 2B .0233) AUTHORIZATION CERTIFICATE and NEUSE RIVER BUFFER PROTECTION RULES MINOR VARIANCE [15A NCAC 2B .0233 (9)(b)]**

Dr. Greg Thorpe, PhD., Manager  
Project Development and Environmental Analysis  
North Carolina Department of Transportation  
1598 Mail Service Center  
Raleigh, North Carolina, 27699-1598

Dear Dr Thorpe:

You have our approval, in accordance with the conditions listed below, for the following impacts for the purpose of replacing Bridge Number 65 over Appletree Swamp on SR 1215 in Greene County:

**Buffer Impacts in the Neuse Basin**

Site	Buffer Zone 1 (sq ft)	Buffer Zone 2 (sq ft)
Bridge 65	492	910
Net Total Impacts	1,402	

The project shall be constructed in accordance with your application dated received March 6, 2013 and additional information dated received June 17, 2013 and July 3, 2013. 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 authorization 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 authorization letter, and is thereby responsible for complying with all the conditions. For this authorization to remain valid, you must adhere to the following conditions.

1. The issuance of this authorization 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.

2. The Permittee shall ensure that the final design drawings adhere to the authorization and to the drawings submitted for approval.
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. 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.
5. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized.
6. 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.
7. 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.
8. 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.
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. 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.
12. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this authorization.
13. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this authorization.
14. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited.
15. Native riparian vegetation (ex. list trees and shrubs native to your geographic region) must be reestablished within the construction limits of the project by the end of the growing season following completion of construction.
16. There shall be no excavation from, or waste disposal into, jurisdictional wetlands or waters associated with this authorization 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.
17. 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 Buffer Authorization.



18. Bridge piles and bents shall be constructed using driven piles (hammer or vibratory) or drilled shaft construction methods. More specifically, jetting or other methods of pile driving are prohibited without prior written approval from NCDWQ.
19. A turbidity curtain will be installed in the stream if driving or drilling activities occur within the stream channel, on the stream bank, or within 5 feet of the top of bank. This condition can be waived with prior approval from DWQ.
20. 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*.
21. All stormwater runoff shall be directed as sheetflow through stream buffers at nonerosive velocities, unless otherwise approved by this authorization.
22. Pursuant to 15A NCAC 2B .0233(6), sediment and erosion control devices shall not be placed in Zone 1 of any Neuse Buffer without prior approval by NCDWQ. At this time, NCDWQ has approved no sediment and erosion control devices in Zone 1, outside of the approved project impacts, anywhere on this project. Moreover, sediment and erosion control devices shall be allowed in Zone 2 of the buffers provided that Zone 1 is not compromised and that discharge is released as diffuse flow.
23. New roadside ditches must be in compliance with the nitrogen control and diffuse flow requirements outlined in 15A NCAC 2B .0233.
24. All riparian buffers impacted by the placement of temporary fill or clearing activities shall be restored to the preconstruction contours and revegetated. Maintained buffers shall be permanently revegetated with non-woody species by the end of the growing season following completion of construction. For the purpose of this condition, maintained buffer areas are defined as areas within the transportation corridor that will be subject to regular NCDOT maintenance activities including mowing. The area with non-maintained buffers shall be permanently revegetated with native woody species before the next growing season following completion of construction.
25. The permittee and its authorized agents shall conduct its activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act) and any other appropriate requirements of State and Federal law. If DWQ determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use) or that State or federal law is being violated, or that further conditions are necessary to assure compliance, DWQ may reevaluate and modify this authorization.
26. The Permittee shall report any violations of this authorization to the Division of Water Quality within 24 hours of discovery.
27. 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 authorization has been completed.
28. A copy of this Buffer Authorization shall be maintained on site at the construction site at all times.

This letter completes the review of the "No Practical Alternatives" determination under 15A NCAC 2B .0233. This letter does not authorize any impacts to either Waters of the United States or Waters of the State. Please contact the US Army Corps of Engineers (USACE) or NC Division of Water Quality (DWQ) if any impacts are proposed to either of these waters. If you have any questions, please telephone Garcy Ward of the Washington Regional Office at 252-946-6481.

Sincerely,



for Thomas A. Reeder

Attachments (General Certification and Certificate of Completion form)

cc: Tom Steffens, US Army Corps of Engineers, Washington Field Office  
Sonia Carrillo, DWQ, Transportation Permitting Unit  
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 \_\_\_\_\_





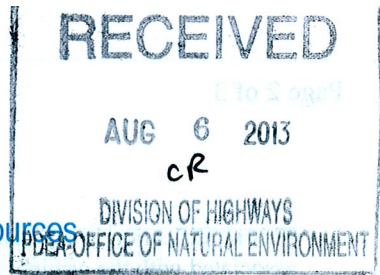
North Carolina Department of Environment and Natural Resources

Division of Water Resources  
Water Quality Programs

Pat McCrory  
Governor

Thomas A. Reeder  
Director

John E. Skvarla, III  
Secretary



August 2, 2013  
Greene County  
DWQ Project No. 20130386 v.2  
TIP B-4755  
Bridge 65

**MODIFICATION of APPROVAL of NEUSE RIVER BUFFER RULES (15A NCAC 2B .0233) AUTHORIZATION CERTIFICATE and NEUSE RIVER BUFFER PROTECTION RULES MINOR VARIANCE [15A NCAC 2B .0233 (9)(b)]**

Dr. Greg Thorpe, PhD., Manager  
Project Development and Environmental Analysis  
North Carolina Department of Transportation  
1598 Mail Service Center  
Raleigh, North Carolina, 27699-1598

Dear Dr Thorpe:

You have our approval, in accordance with the conditions listed below, for the following impacts for the purpose of replacing Bridge Number 65 over Appletree Swamp on SR 1215 in Greene County:

**Buffer Impacts in the Neuse Basin**

<b>Bridge 65</b>	<b>Buffer Zone 1 (sq ft)</b>	<b>Buffer Zone 2 (sq ft)</b>
Original impacts authorized	492	910
Impacts authorized with this modification	1445	975
difference	+ 953	+ 65
Net Total Impacts	<b>2,420</b>	

This approval is only valid for the purpose and design that you submitted in your modified application dated received July 31, 2013. All the authorized activities and conditions associated with the original Buffer Authorization dated July 3, 2013 still apply except where superceded by this certification. 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 authorization 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 authorization letter, and is thereby responsible for complying with all the conditions. For this authorization to remain valid, you must adhere to the following conditions.



1. This modification is applicable only to the additional proposed activities. All of the authorized activities and conditions associated with the original Buffer Authorization dated July 3, 2013 and subsequent modifications still apply except where superseded by this authorization.
2. A copy of this modification shall be maintained on site at the construction site at all times. In addition, the original authorization and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager.

This letter completes the review of the "No Practical Alternatives" determination under 15A NCAC 2B .0233. This letter does not authorize any impacts to either Waters of the United States or Waters of the State. Please contact the US Army Corps of Engineers (USACE) or NC Division of Water Quality (DWQ) if any impacts are proposed to either of these waters. If you have any questions, please telephone Garcy Ward of the Washington Regional Office at 252-946-6481.

Sincerely,

for Thomas A. Reeder

cc: Tom Steffens, US Army Corps of Engineers, Washington Field Office  
Jay Johnson, NC DOT, Division 2  
Sonia Carrillo, DWQ, Transportation Permitting Unit  
File Copy



09/08/99

See Sheet 1-A For Index of Sheets  
See Sheet 1-B for Symbology Sheet  
See Sheet 1-C for Control Sheet

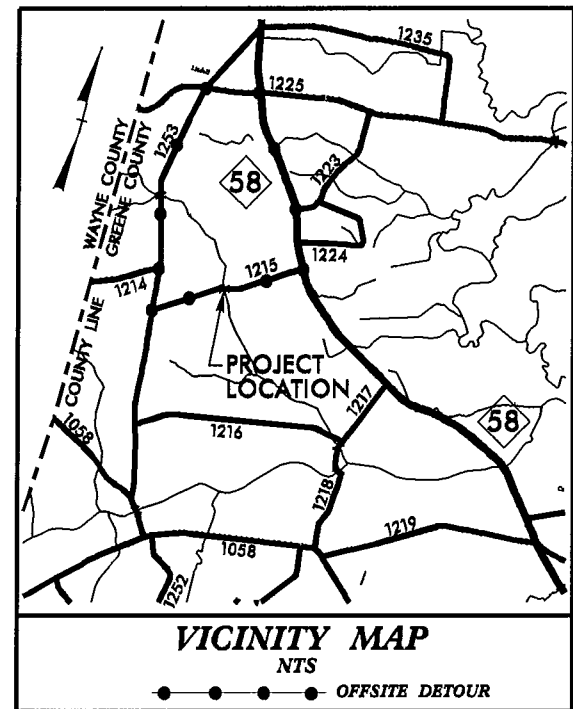
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**GREENE COUNTY**

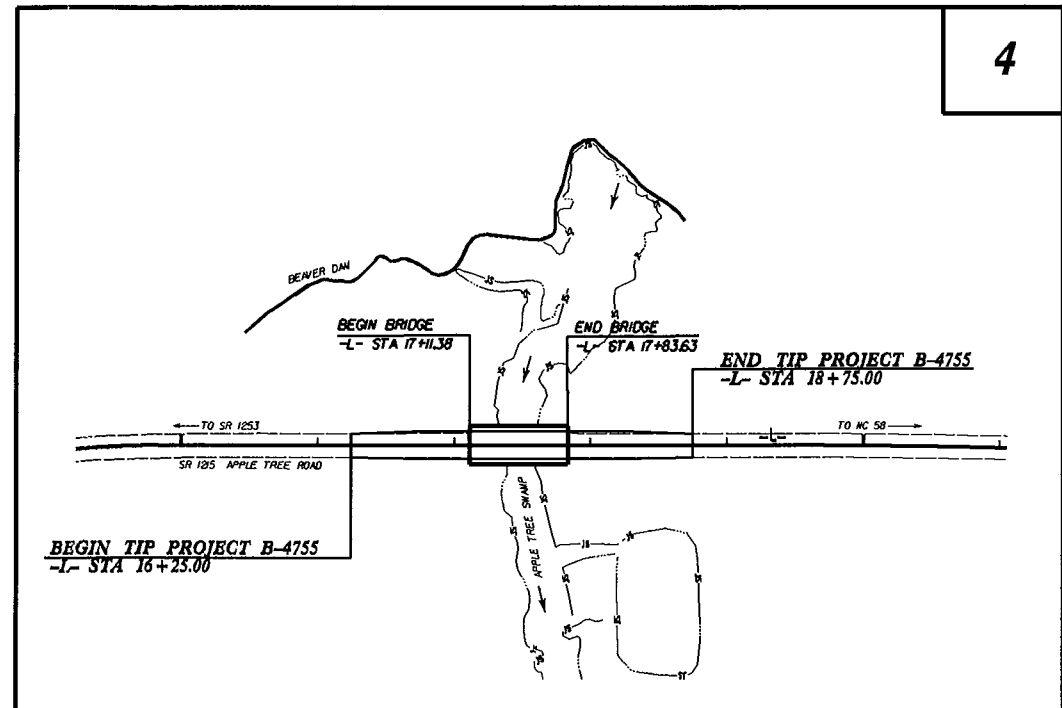
LOCATION: BRIDGE NO. 65 OVER APPLETREE CREEK ON SR 1215  
TYPE OF WORK: GRADING, DRAINAGE, STRUCTURE AND PAVING

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4755	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38527.1.1	BRZ-1215(2)	PE	
38527.2.1	BRZ-1215(2)	RAW & UTIL.	

**TIP PROJECT: B-4755**



**BUFFER IMPACTS PERMIT**



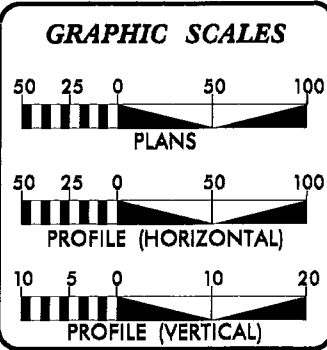
Buffer Drawing  
Sheet 1 of 5

NOTE:

- CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.
- THIS PROJECT IS NOT LOCATED WITHIN ANY MUNICIPAL BOUNDARIES.

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

**CONTRACT:**



**DESIGN DATA**

ADT 2017 =	427
ADT 2037 =	620
DHV =	10 %
D =	60 %
T =	5 % *
V =	60 MPH
* TTST =	2% DUAL 3%
FUNC CLASS =	RURAL LOCAL
	SUB-REGIONAL TIER

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT B-4755	=	0.033 MILES
LENGTH STRUCTURE TIP PROJECT B-4755	=	0.014 MILES
TOTAL LENGTH OF TIP PROJECT B-4755	=	0.047 MILES

Prepared In the Office of:  
**DIVISION OF HIGHWAYS**  
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:  
JULY 23, 2012

LETTING DATE:  
OCTOBER 15, 2013

GARY LOVERING, PE  
PROJECT ENGINEER

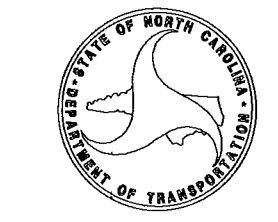
ANTHONY WEST  
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: \_\_\_\_\_ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: \_\_\_\_\_ P.E.

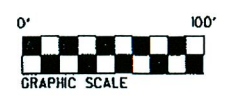
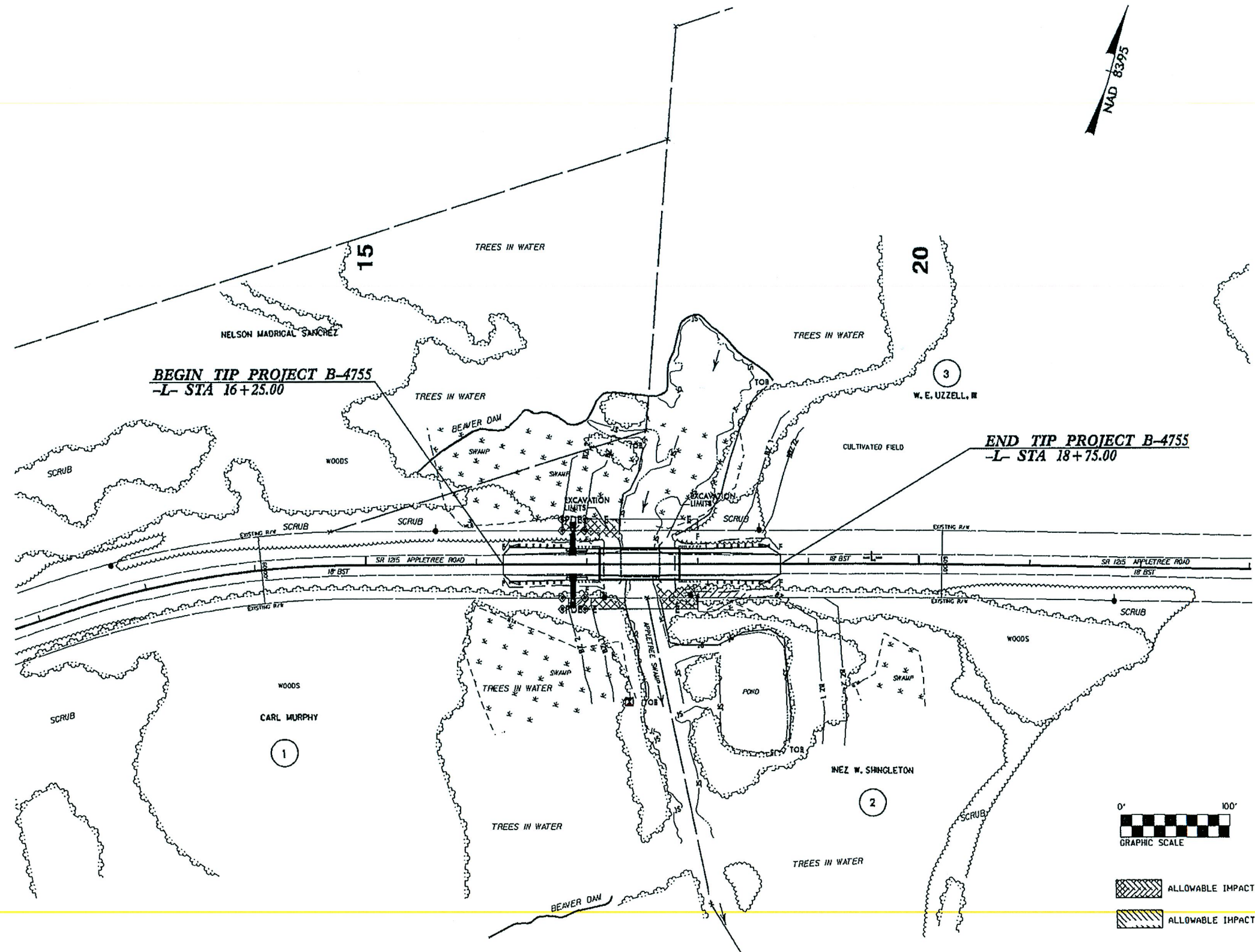


\$\$\$ SYSTEMS \$\$\$  
\$\$\$ USER NAME \$\$\$

5/14/99

PROJECT REFERENCE NO. B-4755		SHEET NO. 4	
NW SHEET NO.			
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER		
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION			

5/14/99



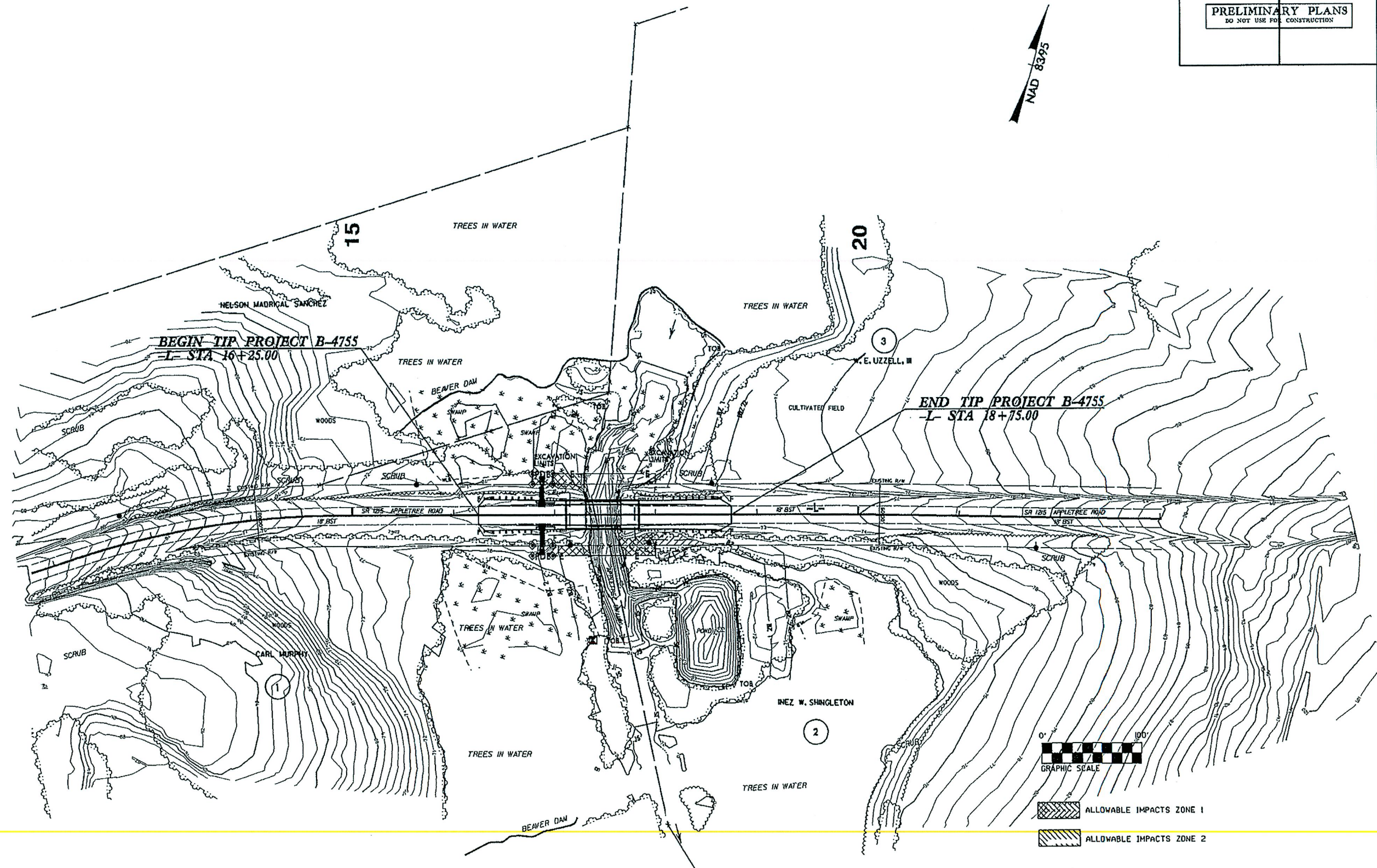
- ALLOWABLE IMPACTS ZONE 1
- ALLOWABLE IMPACTS ZONE 2

revised 7/31/13  
Buffer Drawing  
Sheet 2 of 5



5/14/99

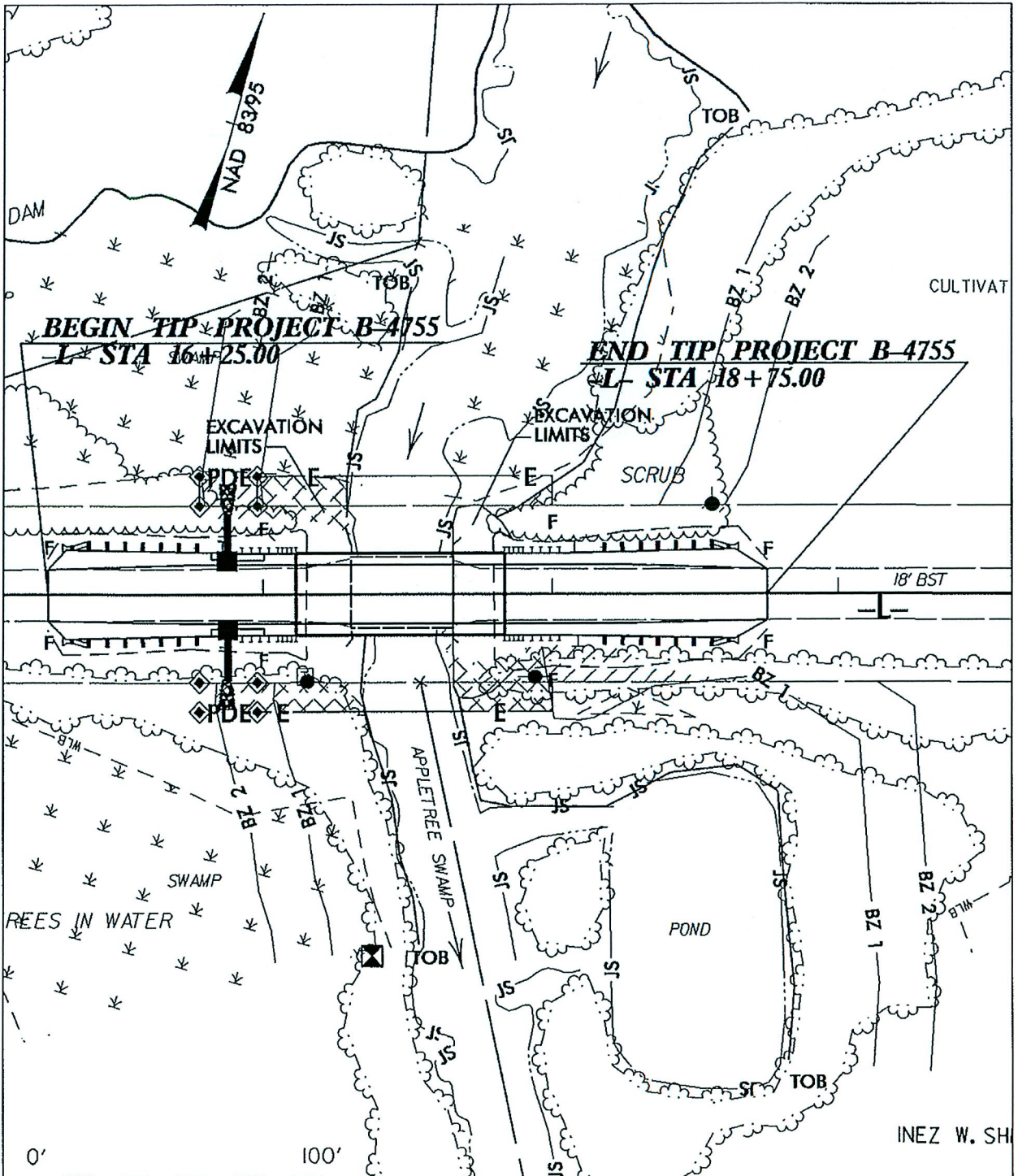
PROJECT REFERENCE NO. B-4755	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	





revised 7/31/13  
 Buffer Drawing  
 Sheet 3 of 5

5/14/99





**SITE**

-  ALLOWABLE IMPACTS ZONE 1
-  ALLOWABLE IMPACTS ZONE 2

**NCDOT**  
 DIVISION OF HIGHWAYS  
 GREENE COUNTY  
 PROJECT: 38527.1.1 (B-4755)

**REPLACE BRG #65 OVER APPLETREE CREEK ON SR 1215**

SHEET OF REVISED 07/17/13

revised 7/31/13  
 Buffer Drawing  
 Sheet 4 of 5

### BUFFER IMPACTS SUMMARY

SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	IMPACT									BUFFER REPLACEMENT	
			TYPE			ALLOWABLE			MITIGABLE			ZONE 1 (ft <sup>2</sup> )	ZONE 2 (ft <sup>2</sup> )
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft <sup>2</sup> )	ZONE 2 (ft <sup>2</sup> )	TOTAL (ft <sup>2</sup> )	ZONE 1 (ft <sup>2</sup> )	ZONE 2 (ft <sup>2</sup> )	TOTAL (ft <sup>2</sup> )		
	1@ 70'; 24" CORED SLAB	16+50-L- to 18+75-L-		X		1445.0	975.0	2420.0	0.0	0.0	0.0	0.0	0.0
<b>TOTALS:</b>						1445.0	975.0	2420.0					

*revised 7/31/13*  
 Buffer Drawing  
 Sheet 5 of 5

N.C. DEPT. OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
  
 GREENE COUNTY  
 PROJECT: 38527.1.1 (B-4755)  
  
 11/7/2012  
 SHEET OF