



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

PAT L. MCCRORY  
GOVERNOR

ANTHONY J. TATA  
SECRETARY

August 7, 2013

MEMORANDUM TO: Mr. Mike Mills, PE  
Division 7 Engineer

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

SUBJECT: Guilford County, Replace Bridge No. 159 over North  
Buffalo Creek on SR 2824, Federal Aid No. BRZ-  
2824(5); WBS No. 38530.1.1, **TIP B-4758**.

*E. L. Fush*

Attached is the NC DWQ Buffer Authorization 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:  
<http://www.ncdot.gov/doh/preconstruct/pe/neu/permit.html>

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<http://www.ncdot.gov/doh/preconstruct/pe/neu/permit.html>.

Cc:

Mr. Randy Garris, P.E. State Contract Officer  
Mr. Jerry Parker, Division Environ. Officer  
Mr. Majed Alghandour, P. E., Programming and TIP  
Mr. Jay Bennett, P.E., Roadway Design  
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. Bill Goodwin, P.E., PDEA Bridge Unit  
Ms. Beth Harmon, EEP  
Mr. Phillip Ayscue, Office of Inspector General

**MAILING ADDRESS:**  
NC DEPARTMENT OF TRANSPORTATION  
PROJECT DEVELOPMENT & ENVIRONMENTAL ANALYSIS UNIT  
1598 MAIL SERVICE CENTER  
RALEIGH NC 27699-1548

TELEPHONE: 919-707-6000  
FAX: 919-212-5785  
WEBSITE: [NCDOT.GOV](http://www.ncdot.gov)

**LOCATION:**  
CENTURY CENTER, BUILDING B  
1020 BIRCH RIDGE DRIVE  
RALEIGH NC 27610

# PROJECT COMMITMENTS

T.I.P. Project No B-4758  
Replacement of Bridge No. 159 over North Buffalo Creek  
On SR 2824 (Creekview Road)  
Guilford County  
Federal Aid Project No. BRZ-2824(5)  
W.B.S. No. 38530.1.1

## COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

### Division 7 Construction

In order to allow Emergency Management Services (EMS) time to prepare for road closure, the NCDOT Resident Engineer will notify the Director of Guilford County EMS at (336) 641-2278 of the bridge removal 30 days prior to road closure.

In order to allow Guilford County Schools to prepare for the road closure, the NCDOT Resident Engineer will notify the Transportation Director at (336) 370-8920 of the bridge removal 30 days prior to road closure.

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.

### Hydraulics Unit – FEMA Coordination

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).

## COMMITMENTS FROM PERMITTING

No special conditions developed during permitting.



North Carolina Department of Environment and Natural Resources

Division of Water Quality
Thomas A. Reeder
Acting Director

Pat McCrory
Governor



July 17, 2013
Guilford County
NCDWQ Project No. 20130690
(Bridge 159) SR 2824
TIP B-4758

APPROVAL of JORDAN BUFFER AUTHORIZATION with ADDITIONAL CONDITIONS

Mr. Greg Thorpe, PhD
NCDOT, PDEA
1598 Mail Service Center
Raleigh, NC 27699-1598

Dear Mr. Thorpe:

You have our approval, in accordance with the conditions listed below, for the following impacts for the purpose of replacing Bridge No. 159 over North Buffalo Creek on SR 2824 (Creekview Road) in Guilford County:

Jordan Riparian Buffer Impacts

Table with 9 columns: 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 (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 (1.5:1 ratio). Rows include Bridge, Road Crossing, parallel, and TOTAL.

\* 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: 6320 square feet.

The project shall be constructed in accordance with your application dated received July 3, 2013 with additional information dated received July 15, 2013. This approval is valid for the Jordan Lake Riparian Buffer Rules (15A NCAC 2B .0267). 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 will expire five years from the date issued.

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 NCDWQ 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). Additional buffer impacts may require compensatory mitigation

Transportation and Permitting Unit
1650 Mail Service Center, Raleigh, North Carolina 27699-1650
Location: 512 N. Salisbury St. Raleigh, North Carolina 27604
Phone: 919-807-6300 \ FAX: 919-807-6492
Internet: www.ncwaterquality.org



as described in 15A NCAC .0268. For this approval to remain valid, you must adhere to the conditions listed below.

**Condition(s) of Certification:**

**Project Specific Conditions**

1. All stormwater runoff shall be directed as sheetflow through stream buffers at nonerosive velocities, unless otherwise approved by this certification.
2. Pursuant to 15A NCAC 2B .0267, sediment and erosion control devices shall not be placed in Zone 1 of any Jordan Lake 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.
3. Compensatory mitigation for impacts to 2132 square feet of protected riparian buffers in Zone 1 and 468 square feet of protected riparian buffers in Zone 2 shall be required. We understand that you have chosen to perform compensatory mitigation for impacts to protected buffers through use of the North Carolina Ecosystem Enhancement Program (EEP). Mitigation for unavoidable impacts to Jordan Lake Riparian Buffers shall be provided in the Cape Fear River Basin and done in accordance with 15A NCAC 2B .0268. EEP has indicated in a letter dated June 18, 2013 that they will assume responsibility for satisfying the compensatory mitigation requirements for the above-referenced project, in accordance with EEP's Mitigation Banking Instrument signed July 28, 2010.

**General Conditions**

1. 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.
2. 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.
3. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval.
4. 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.
5. 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.
6. 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.
7. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification.
8. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited.
9. A copy of this Water Quality Certification shall be maintained on 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.
10. 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.

11. 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.
12. The Permittee shall report any violations of this certification to the Division of Water Quality within 24 hours of discovery.
13. Upon completion of the project (including any impacts at associated borrow or waste sites), the NCDOT shall complete and return the enclosed "Certification of Completion Form" to notify NCDWQ when all work included in the 401 Certification has been completed.
14. 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.
15. 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.
16. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification.

If you wish to contest any statement in the attached Certification you must file a petition for an administrative hearing. You may obtain the petition form from the office of Administrative hearings. You must file the petition with the office of Administrative Hearings within sixty (60) days of receipt of this notice. A petition is considered filed when it is received in the office of Administrative Hearings during normal office hours. The Office of Administrative Hearings accepts filings Monday through Friday between the hours of 8:00am and 5:00pm, except for official state holidays. The original and one (1) copy of the petition must be filed with the Office of Administrative Hearings.

The petition may be faxed-provided the original and one copy of the document is received by the Office of Administrative Hearings within five (5) business days following the faxed transmission. The mailing address for the Office of Administrative Hearings is:

Office of Administrative Hearings  
6714 Mail Service Center  
Raleigh, NC 27699-6714  
Telephone: (919)-431-3000, Facsimile: (919)-431-3100


A copy of the petition must also be served on DENR as follows:

Mr. Lacy Presnell, General Counsel  
Department of Environment and Natural Resources  
1601 Mail Service Center

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 Amy Euliss at (336) 771-4959 or amy.euliss@ncdenr.gov.

Sincerely,



 Thomas A. Reeder

cc: Jerry Parker, Division 7 Environmental Officer  
Andy Williams, US Army Corps of Engineers, Raleigh Field Office (electronic copy only)  
Beth Harmon, Ecosystem Enhancement Program (electronic copy only)  
DWQ Transportation Permitting Unit (electronic copy only)  
File Copy



North Carolina Department of Environment and Natural Resources

Division of Water Quality
Thomas A. Reeder
Acting Director

Pat McCrory
Governor

John E. Skvarla, III
Secretary

NCDWQ 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 NCDWQ 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 \_\_\_\_\_

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An Equal Opportunity \ Affirmative Action Employer



09/28/99

See Sheet 1-A For Index of Sheets  
See Sheet 1-B For Conventional Plan Sheet Symbols  
See Sheet 1-C For Survey Control Sheets

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**BUFFER IMPACTS PERMIT**

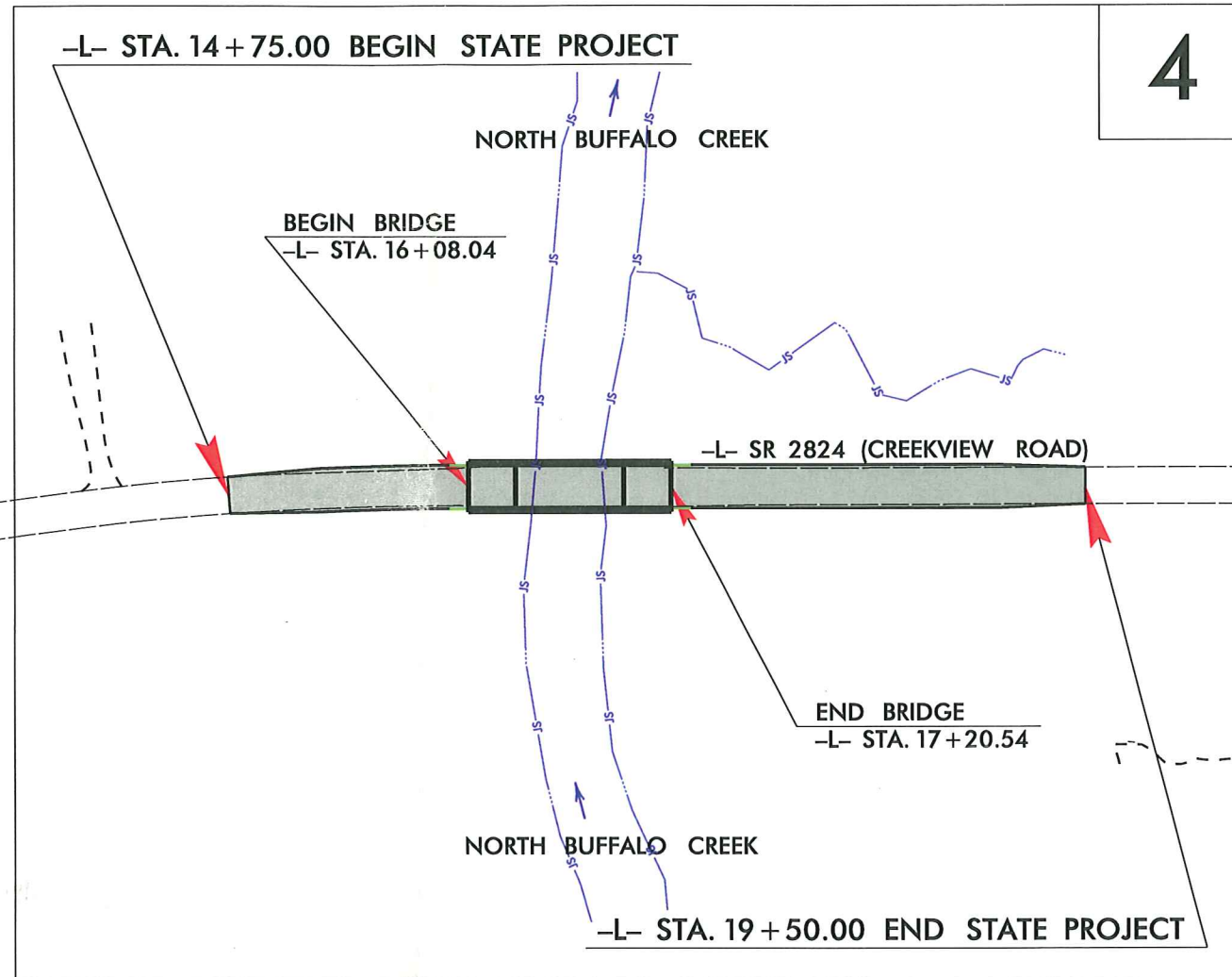
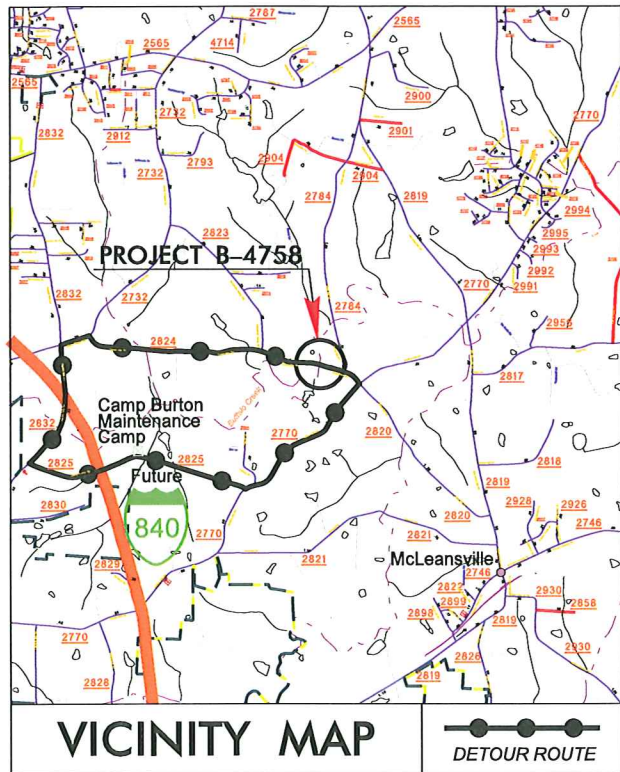
**GUILFORD COUNTY**

**BUFFER IMPACTS**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4758	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38530.1.1	BRZ-2824(5)	PE	
38530.2.1	BRZ-2824(5)	RW & UTILITIES	

**BUFFER DRAWING SHEET 1 OF 5**

**TIP PROJECT: B-4758**

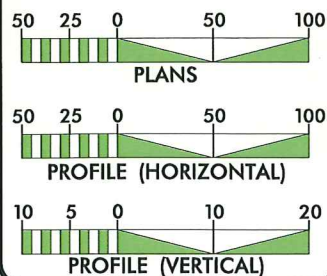


**CONTRACT: C203363**

THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.  
DESIGN EXCEPTION FOR SAG VERTICAL CURVE AND ASSOCIATED NIGHTTIME STOPPING SIGHT DISTANCE.  
CLEARING ON THIS PROJECT SHALL BE PREPARED TO THE LIMITS ESTABLISHED BY METHOD II.

**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION

**GRAPHIC SCALES**



**DESIGN DATA**

ADT 2014 = 3375  
 ADT 2030 = 7200  
 DHV = 11 %  
 D = 55 %  
 T = 16 % \*  
 V = 50 MPH  
 \* TTST 3% DUAL 13%  
 FUNC. CLASS. = RURAL LOCAL  
 "SUB-REGIONAL TIER"

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT B-4758 = 0.069 MILES  
 LENGTH STRUCTURE TIP PROJECT B-4758 = 0.021 MILES  
 TOTAL LENGTH OF TIP PROJECT B-4758 = 0.090 MILES

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

2012 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**  
 MARCH 1, 2013

**LETTING DATE:**  
 MARCH 18, 2014

**JAMES A. SPEER, PE**  
 PROJECT ENGINEER

**DANIEL W. GARDNER JR., PE**  
 PROJECT DESIGN ENGINEER

**HYDRAULICS ENGINEER**

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

**ROADWAY DESIGN ENGINEER**

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



SYSTEMS USER MANUAL



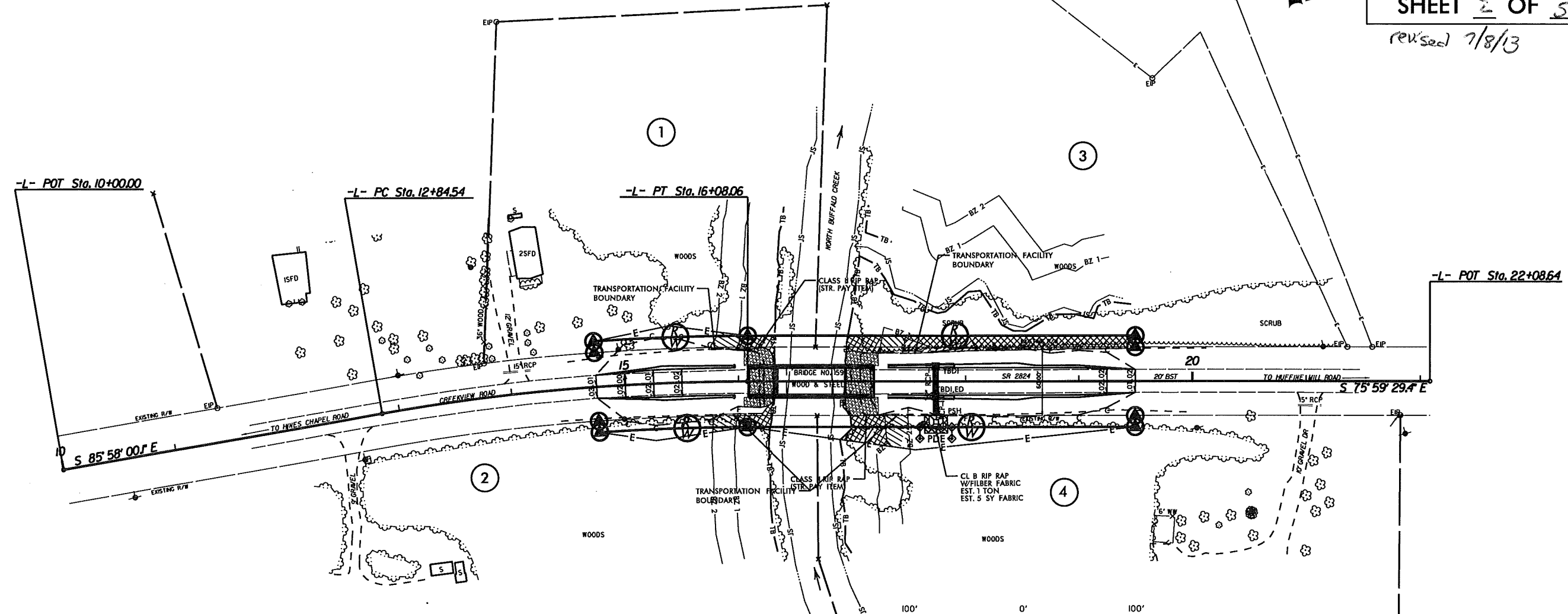
# BUFFER IMPACTS PERMIT

PROJECT REFERENCE NO. <b>B-4758</b>	SHEET NO. <b>4</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> <small>DO NOT USE FOR CONSTRUCTION</small>	

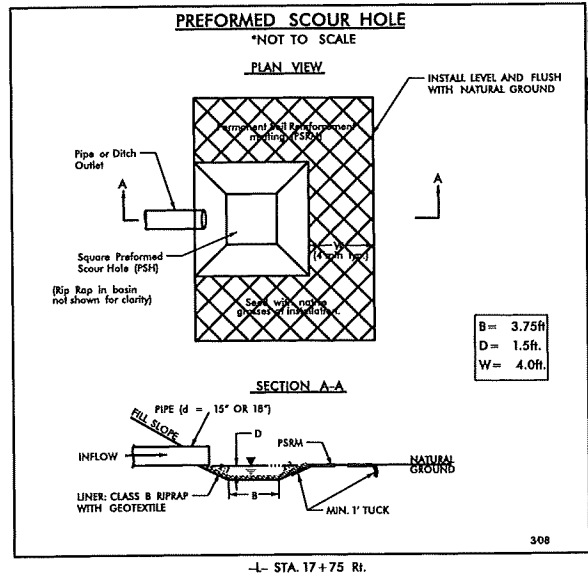
**PERMIT DRAWING SHEET 2 OF 5**

*revised 7/8/13*

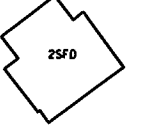
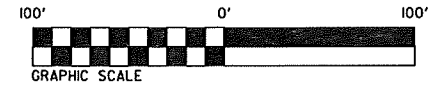
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REVISIONS



- ALLOWABLE IMPACTS ZONE 1
- ALLOWABLE IMPACTS ZONE 2
- MITIGABLE IMPACTS ZONE 1
- MITIGABLE IMPACTS ZONE 2



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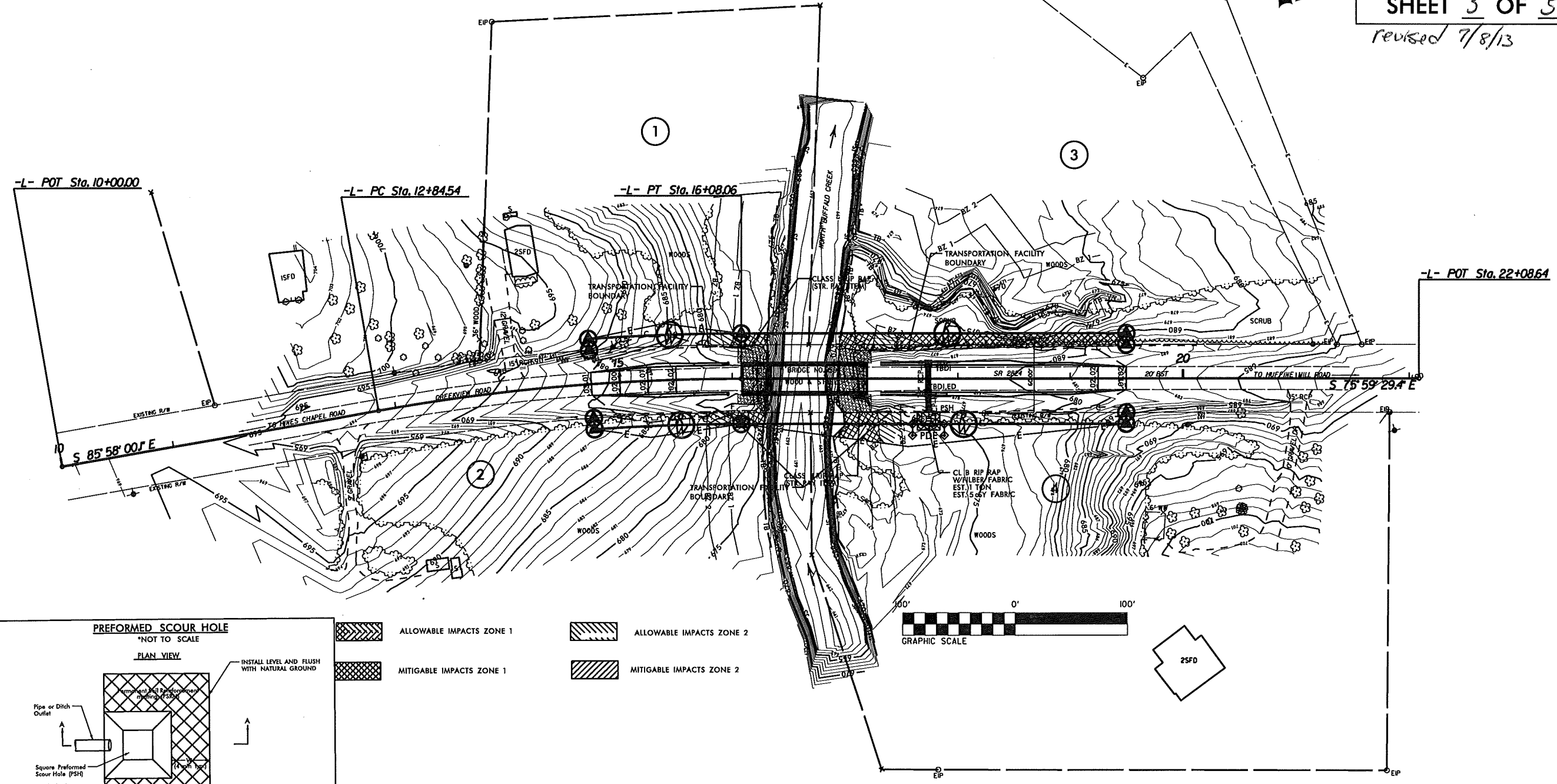
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# BUFFER IMPACTS PERMIT

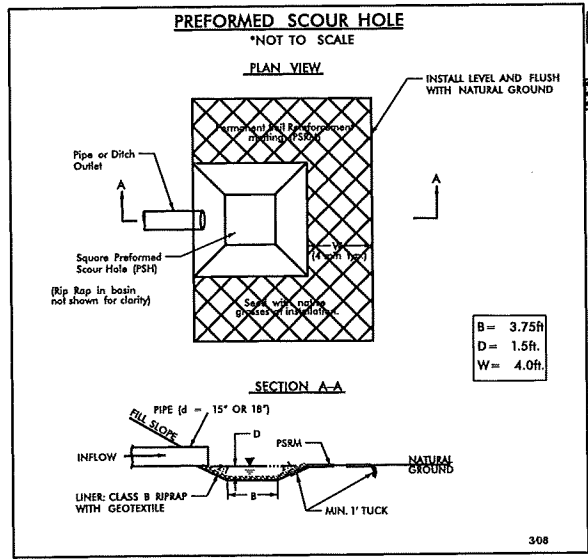
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RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

**PERMIT DRAWING SHEET 3 OF 5**  
revised 7/8/13

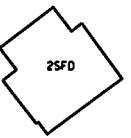
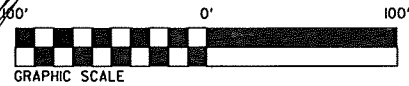
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REVISIONS



- ALLOWABLE IMPACTS ZONE 1
- ALLOWABLE IMPACTS ZONE 2
- MITIGABLE IMPACTS ZONE 1
- MITIGABLE IMPACTS ZONE 2

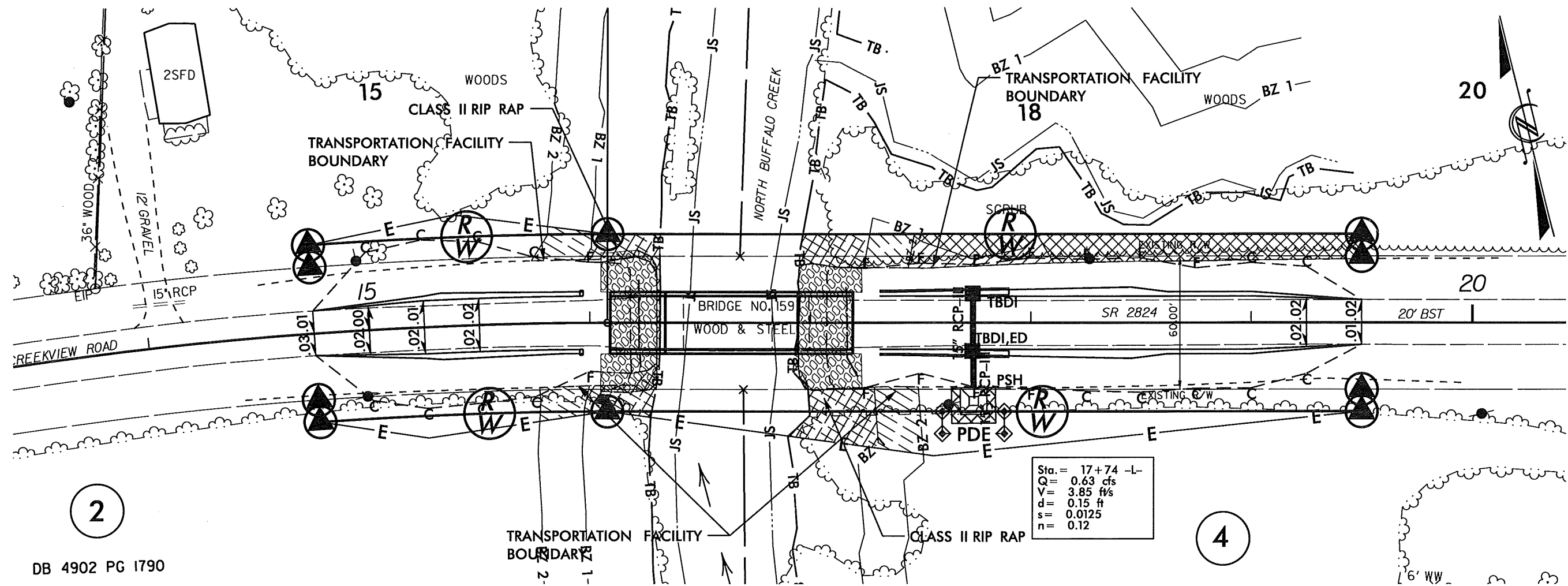


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# ENLARGEMENT - BUFFER IMPACTS

PERMIT DRAWING  
SHEET 4 OF 5




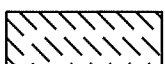
revised 7/8/13



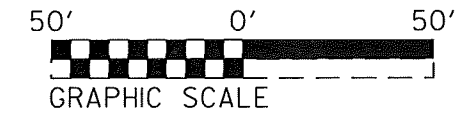
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DB 4902 PG 1790

-  MITIGABLE IMPACTS ZONE 1
-  MITIGABLE IMPACTS ZONE 2
-  ALLOWABLE IMPACTS ZONE 1
-  ALLOWABLE IMPACTS ZONE 2

N. C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
GUILFORD COUNTY  
WBS NO.: 38530.1.1 (B-4758)  
REPLACEMENT OF BRIDGE NO. 159  
ON SR2824 (CREEKVIEW RD.)  
OVER NORTH BUFFALO CREEK



### 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	110' CSU 3-span Bridge	16+09 to 17+19 -L-		X		1599		1599					
	110' CSU 3-span Bridge	16+09 to 17+19 -L-	X			623	1498	2121					
2	Roadway Fill	17+45 to 19+50 Lt. -L-	X						2132	468	2600.1		
<b>TOTALS:</b>						2222	1498	3720	2132	468	2600		

N.C. DEPT. OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
  
 GUILFORD COUNTY  
 PROJECT: 38530.1.1 (B-4758)  
  
 6/10/2013  
 SHEET 5 OF 5