

North Carolina Department of Environmental Quality

Pat McCrory
Governor

Donald R. van der Vaart
Secretary

November 24, 2015
Granville County
NCDWR Project No. 20151173
Bridge 93 on SR 1156
State Project No. 17BP.5.R.52

APPROVAL of 401 TAR-PAMLICO BUFFER AUTHORIZATION with ADDITIONAL CONDITIONS

Mr. J. Hopkins, P.E., Division Engineer
NCDOT, Division 5
2612 North Duke Street
Durham, NC 27704

Dear Mr. Hopkins,

You have our approval, in accordance with the conditions listed below, for the following impacts for the purpose of replacing Bridge 93 in Granville County:

Tar-Pamlico Riparian Buffer Impacts

Site	Zone 1 Impact (sq ft)	Zone 1 Buffer Mitigation Required (using 3:1 ratio)	Zone 2 Impact (sq ft)	Zone 2 Buffer Mitigation Required (using 1.5:1 ratio)
Totals	5605	N/A	1856	N/A

* 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: 7461 square feet.

The project shall be constructed in accordance with your application dated November 9, 2015. This approval is valid for the Tar-Pamlico Riparian Buffer Rules (15A NCAC 02B.0259). 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 NCDWR 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 as described in 15A NCAC 2B.0267. For this approval to remain valid, you must adhere to the conditions below.

Conditions of Certification:

1. The post-construction removal of any temporary bridge structures must return the project site to its preconstruction contours and elevations. The impacted areas shall be revegetated with appropriate native species. [15A NCAC 02H .0506(b)(2)]

1617 Mail Service Center, Raleigh, North Carolina 27699-1617
Phone: 919-807-6300 \ Internet: www.ncdenr.gov

2. As a condition of this 401 Water Quality Certification, the bridge demolition and construction must be accomplished in strict compliance with the most recent version of NCDOT's Best Management Practices for Construction and Maintenance Activities. [15A NCAC 02H .0507(d)(2) and 15A NCAC 02H .0506(b)(5)]
3. 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*. [15A NCAC 02H .0507(d)(2) and 15A NCAC 02H .0506(b)(5)]
4. All stormwater runoff shall be directed as sheetflow through stream buffers at non-erosive velocities, unless otherwise approved by this certification. [15A NCAC 2B.0259(6)]
5. 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. [15A NCAC 2B.0259(6)]
6. Pursuant to 15A NCAC 2B.0259(6), sediment and erosion control devices shall not be placed in Zone 1 of any Tar-Pamlico Buffer without prior approval by the NCDWR. At this time, the NCDWR 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.
7. 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. [15A NCAC 02B.0200]
8. 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. [15A NCAC 02H.0506(b)(2)]
9. 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. [15A NCAC 02H.0506(b)(2)]
10. 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. [15A NCAC 02H.0506(b)(2)]
11. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval. [15A NCAC 02H .0507 (c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]
12. 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. [15A NCAC 02H.0506(b)(3) and (c)(3)]
13. 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. [15A NCAC 02H.0506(b)(3)]
14. 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. [15A NCAC 02H.0506(b)(3)]
15. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification. [15A NCAC 02H.0506(b)(3)]
16. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited. [15A NCAC 02H.0506(b)(3)]

17. 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 the NCDWR 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, the NCDWR may reevaluate and modify this certification. [15A NCAC 02B.0200]

18. 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. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]

19. 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. [15A NCAC 02H.0501 and .0502]

20. 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.

21. The Permittee shall report any violations of this certification to the Division of Water Resources within 24 hours of discovery. [15A NCAC 02B.0506(b)(2)]

22. Upon completion of the project (including any impacts at associated borrow or waste sites), the NCDOT Division Engineer shall complete and return the enclosed "Certification of Completion Form" to notify the NCDWR when all work included in the 401 Certification has been completed. [15A NCAC 02H.0502(f)]

23. Native riparian vegetation (i.e., trees and shrubs native to your geographic region) must be reestablished in the riparian areas within the construction limits of the project by the end of the growing season following completion of construction. [15A NCAC 2B.0259(6)]

24. 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.[15A NCAC 02H.0506(b)(3) and (c)(3)]

25. 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 [15A NCAC 02H.0506(b)(3) and (c)(3)]:

- 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.

26. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification. [15A NCAC 02H.0506(b)(3) and (c)(3)]

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 DEQ as follows:

Mr. Sam M. Hayes, General Counsel
Department of Environmental Quality
1601 Mail Service Center

This letter completes the review of the Division of Water Resources under Section 401 of the Clean Water Act. If you have any questions, please contact Rob Ridings at 919-707-8786.

Sincerely,

A handwritten signature in black ink, appearing to read "S. Jay Zimmerman Esq.", written in a cursive style.

S. Jay Zimmerman, Director
Division of Water Resources

Electronic copy only distribution:

Eric Aismeyer, US Army Corps of Engineers, Raleigh Field Office
Chris Murray, Division 5 Environmental Officer
File Copy



North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
 FOR NCDOT PROJECTS



(Version 2.01: Released December 2014)

WBS Element: 17BP.5.R.52 TIP No.: 17BP.5.R.52 County(ies): Granville Page 1 of 2

General Project Information

WBS Element:	17BP.5.R.52	TIP Number:	17BP.5.R.52	Project Type:	Bridge Replacement	Date:	4/9/2015
NCDOT Contact:	Lisa Gilchrist, EI		Contractor / Designer:	HDR ICA Engineering / Trent Cormier			
Address:	4809 Beryl Road Raleigh, NC 27606		Address:	5121 Kingdom Way, Suite 100 Raleigh, NC 27607			
	Phone:	919-733-4699		Phone:	919-900-1608		
	Email:	lgilchrist@ncdot.gov		Email:	tcormier@icaeng.com		
City/Town:	Providence		County(ies):	Granville			
River Basin(s):	Tar-Pamlico		CAMA County?	No			
Wetlands within Project Limits?	No						

Project Description

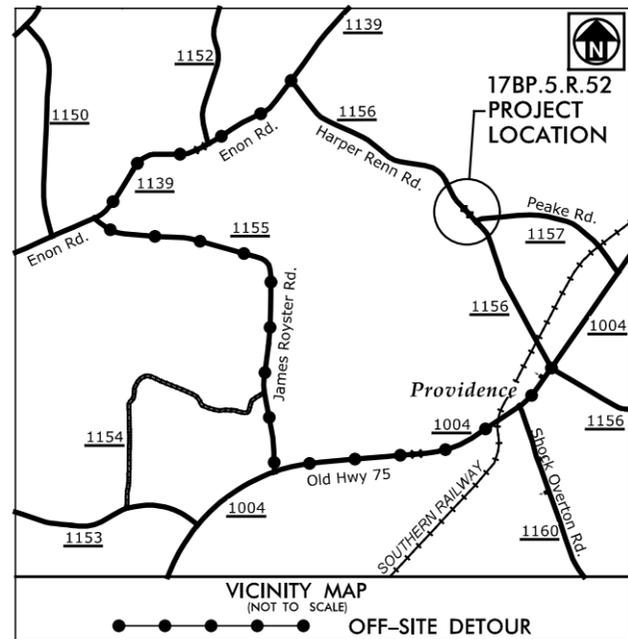
Project Length (lin. miles or feet):	0.07	Surrounding Land Use:	Forest and residential				
	Proposed Project		Existing Site				
Project Built-Upon Area (ac.)	0.4	ac.	0.3	ac.			
Typical Cross Section Description:	2 lane @ 10' with 4' shoulder		2 lane @ 10' with 2' shoulder				
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	Year: NA	Existing:	420	Year:	2011	
General Project Narrative: (Description of Minimization of Water Quality Impacts)	NCDOT proposes to replace the existing Bridge No. 93 over Owen Creek on SR 1156 (Harper Renn Road). The total project length is 0.123 miles. To minimize water quality impacts, roadway drainage will be dissipated outside of the stream's buffer zone as diffuse flow and no wetlands will be impacted.						

Waterbody Information

Surface Water Body (1):	Owen Creek		NCDWR Stream Index No.:	28-6				
NCDWR Surface Water Classification for Water Body	Primary Classification:		Class C					
	Supplemental Classification:		Nutrient Sensitive Waters (NSW)					
Other Stream Classification:	None							
Impairments:	None							
Threatened/Endangered Species?	No	Comments: Long eared bat survey to be completed to comply with October 20, 2014 ruling.						
NRTR Stream ID:						Buffer Rules in Effect:	Tar-Pamlico	
Project Includes Bridge Spanning Water Body?	Yes	Deck Drains Discharge Over Buffer?	No	Dissipator Pads Provided in Buffer?				N/A
Deck Drains Discharge Over Water Body?	No	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)				
(If yes, provide justification in the General Project Narrative)								

TIP PROJECT: 17BP.5.R.52

CONTRACT:



STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS
GRANVILLE COUNTY

LOCATION: BRIDGE NO. 93 OVER OWEN CREEK ON SR 1156 (HARPER RENN ROAD)

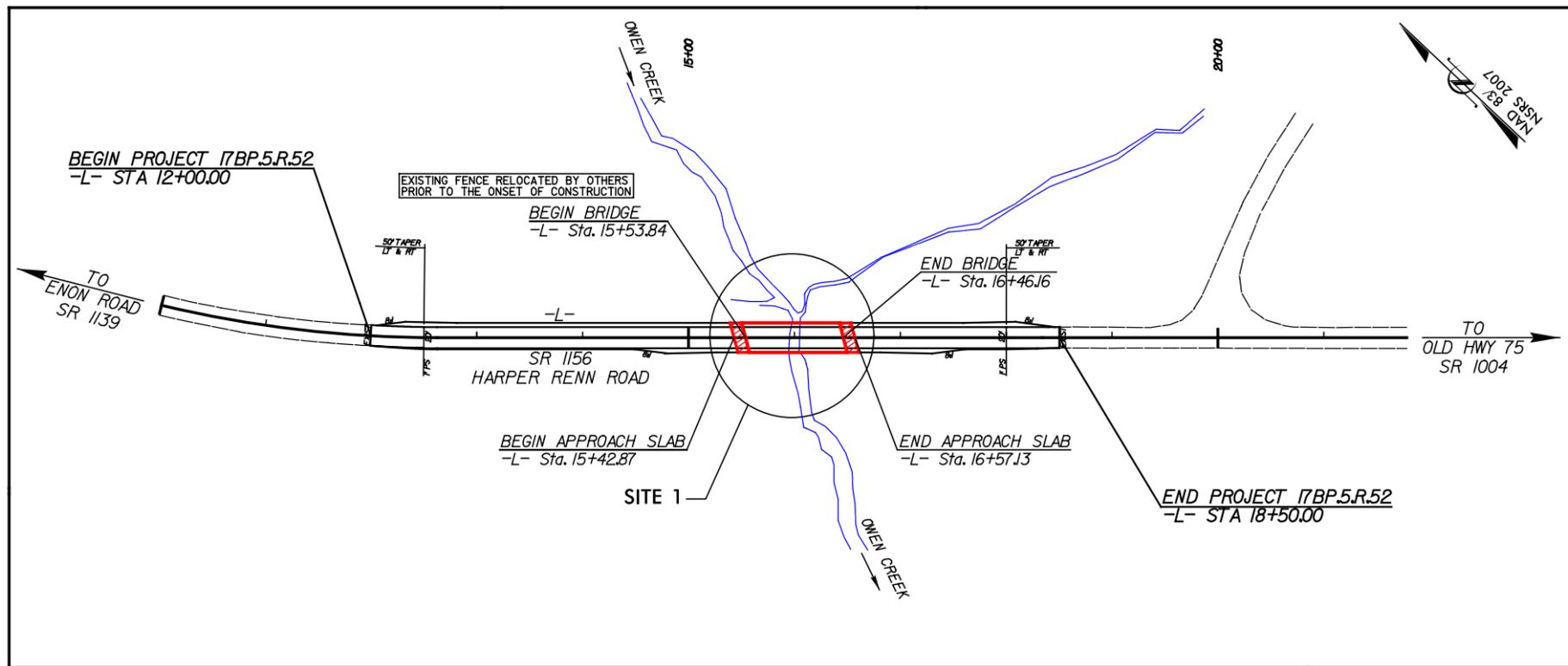
TYPE OF WORK: GRADING, PAVING, DRAINAGE AND STRUCTURE

WETLAND AND SURFACE WATER IMPACTS PERMIT

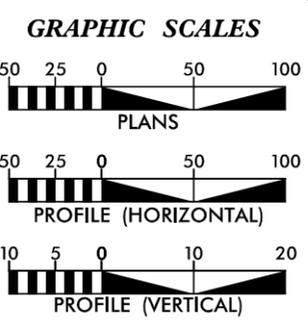
NO IMPACTS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.5.R.52	1	
STATE PROJECT NO.	F.A. PROJ. NO.	DESCRIPTION	

PRELIMINARY PLANS
 DO NOT USE FOR CONSTRUCTION
INCOMPLETE PLANS
 DO NOT USE FOR R/W ACQUISITION



*DESIGN EXCEPTION:
 SUPERELEVATION



DESIGN DATA

ADT (2011) =	420
ADT (2035) =	?
V =	55 MPH
RURAL LOCAL SUB REGIONAL TIER	

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT	=	0.106 MILES
LENGTH STRUCTURE TIP PROJECT	=	0.017 MILES
TOTAL LENGTH TIP PROJECT	=	0.123 MILES

Prepared In the Office of Hatch Mott MacDonald for
DIVISION 5
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2012 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE:	TIM JORDAN, PE PROJECT ENGINEER
LETTING DATE:	TRENT CORMIER, PE HYDRAULICS ENGINEER
NCDOT CONTACT:	LISA GILCHRIST, EI

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

PLANS PREPARED BY:

Hatch Mott MacDonald

P.O. Box 700
 Fuquay-Varina, NC 27526
 (919) 552-2253
 (919) 552-2254 (Fax)
 www.hatchmott.com
 LICENSE NO. F-0669

ICA Engineering

5121 Kingdom Way,
 Suite 100
 Raleigh, NC 27607
 NC License No. F-0258

PERMIT DRAWING
 SHEET OF

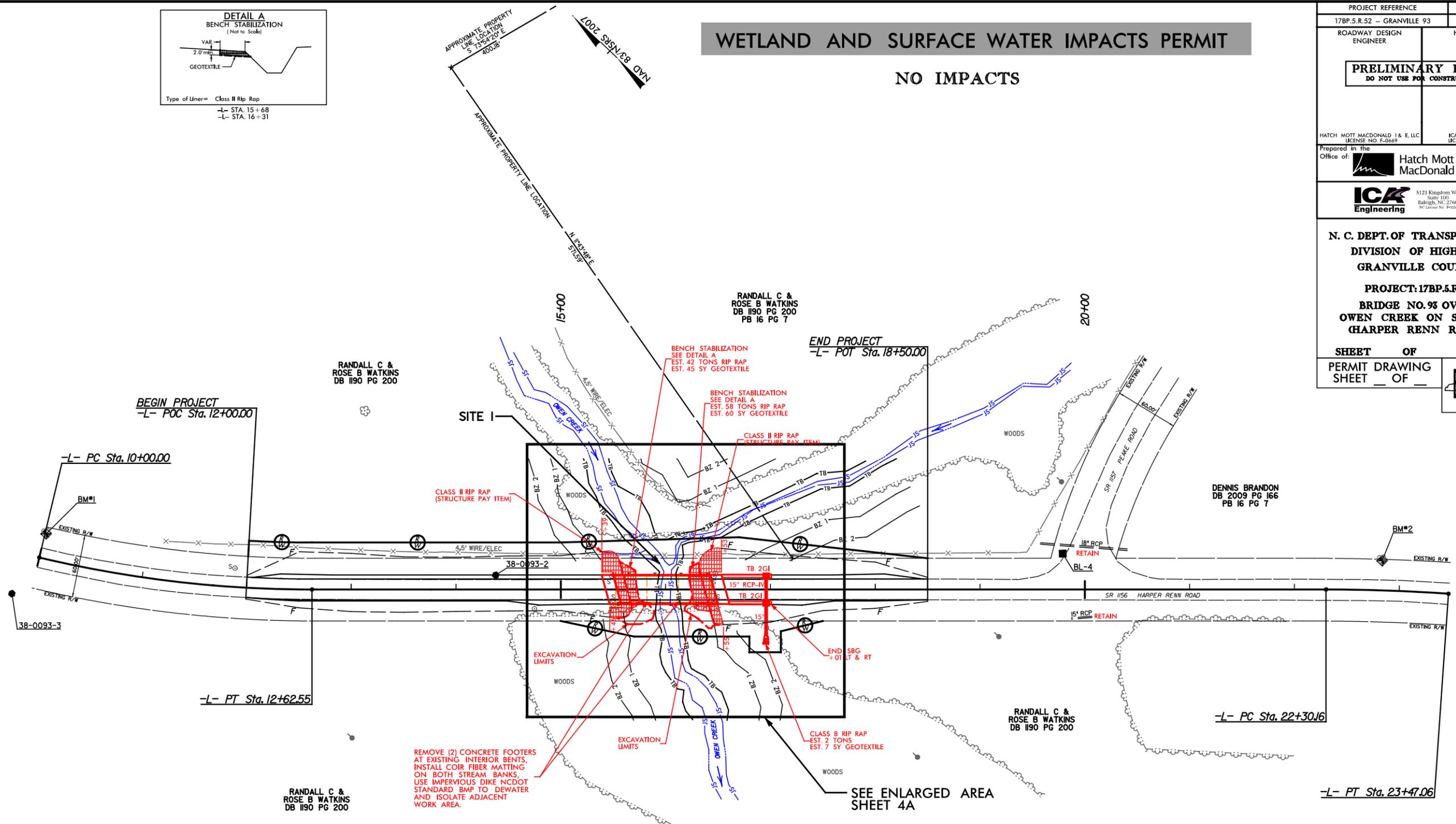
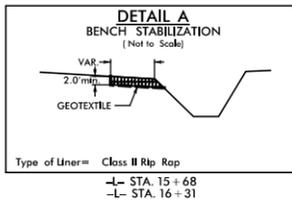
N. C. DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 GRANVILLE COUNTY

PROJECT: 17BP.5.R.52
 BRIDGE NO. 93 OVER
 OWEN CREEK ON SR 1156
 (HARPER RENN ROAD)

SHEET OF

WETLAND AND SURFACE WATER IMPACTS PERMIT

NO IMPACTS



QUANTITY FOR EXCAVATION LIMITS IS INCLUDED IN UNCLASSIFIED STRUCTURE EXCAVATION

IMPERVIOUS DIKE SHALL BE CONSIDERED INCIDENTAL TO THE REMOVAL OF THE EXISTING STRUCTURE

PLAN VIEW



PROJECT REFERENCE 17BP.5.R.52 - GRANVILLE 93	SHEET NO. 4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
HATCH MOTT MACDONALD I & E, LLC LICENSE NO. F-0669	ICA ENGINEERING LICENSE NO. F-0258
Prepared in the Office of: Hatch Mott MacDonald PO Box 700 Fayetteville, NC 27526 www.hatchmott.com	
ICA Engineering 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No. F-0258	
N. C. DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS GRANVILLE COUNTY PROJECT: 17BP.5.R.52 BRIDGE NO. 93 OVER OWEN CREEK ON SR 1156 (HARPER RENN ROAD)	
SHEET OF PERMIT DRAWING SHEET OF	



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WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	NO IMPACTS	33" BOX BEAM										
TOTALS*:										0	0	0

*Rounded totals are sum of actual impacts

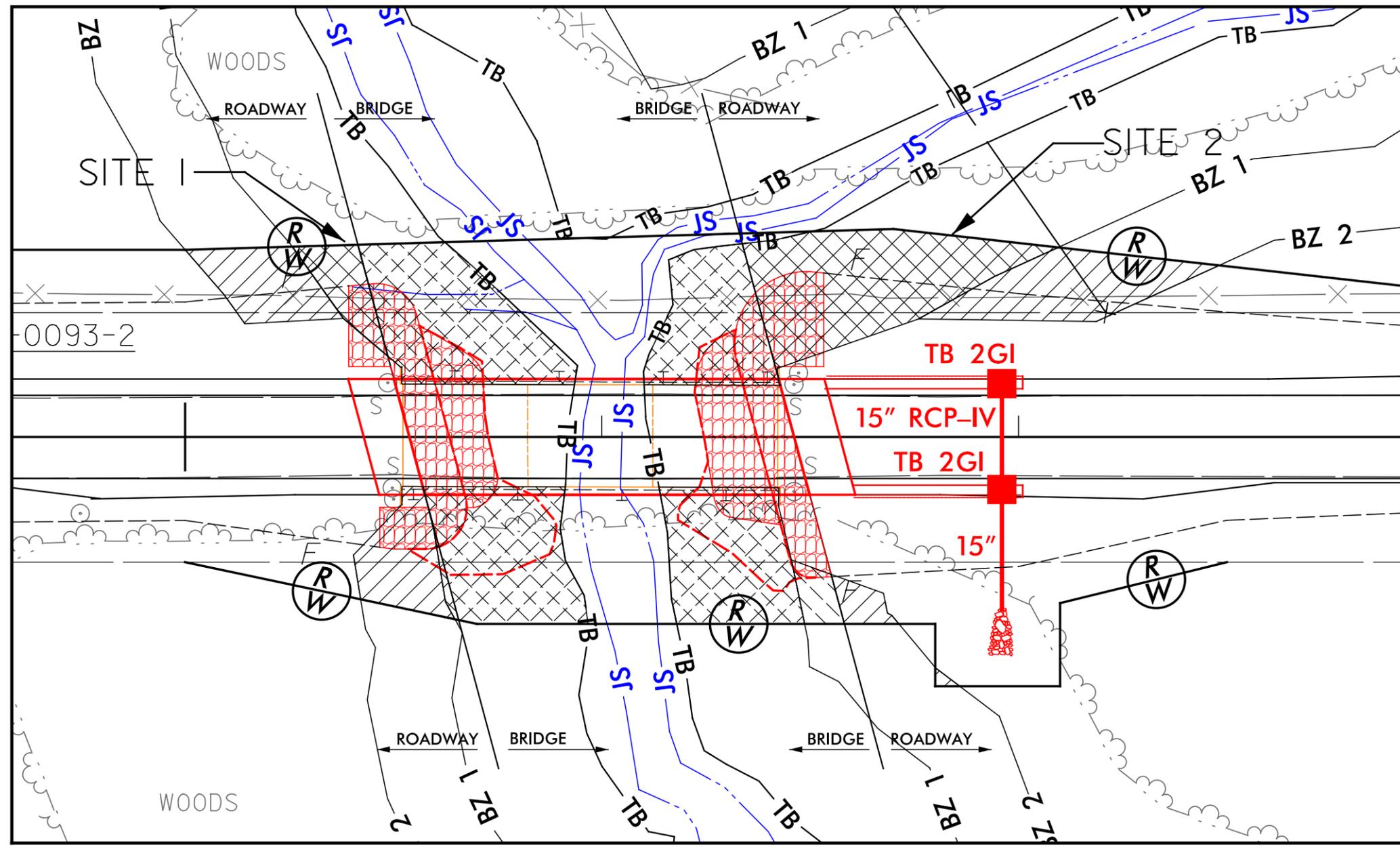
NOTES:

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 9/24/15
 GRANVILLE COUNTY
 BRIDGE 93
 17BP.5.R.52
 SHEET OF

BUFFER IMPACTS PERMIT

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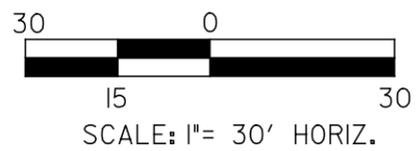
PROJECT REFERENCE 17BP.5.R.52 - GRANVILLE 93	SHEET NO. 4A
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
HATCH MOTT MACDONALD I & E, LLC LICENSE NO. F-06649	ICA ENGINEERING LICENSE NO. F-02258
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ICA Engineering 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No. P-0208	
N. C. DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS GRANVILLE COUNTY PROJECT: 17BP.5.R.52 BRIDGE NO. 93 OVER OWEN CREEK ON SR 1156 (HARPER RENN ROAD)	
SHEET OF BUFFER DRAWING SHEET _ OF _	



**SITE 1 & 2
ENLARGED
PLAN VIEW**

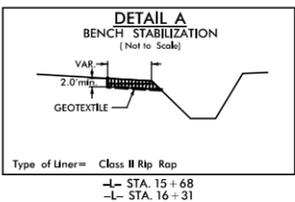
LEGEND

- BZ 1 — RIPARIAN BUFFER ZONE 1 (30')
- BZ 2 — RIPARIAN BUFFER ZONE 2 (20')
- [Cross-hatched box] ALLOWABLE IMPACTS ZONE 1 (BRIDGE)
- [Diagonal hatched box] ALLOWABLE IMPACTS ZONE 1 (ROAD CROSSING)
- [Diagonal hatched box] ALLOWABLE IMPACT ZONE 2 (BRIDGE)
- [Diagonal hatched box] ALLOWABLE IMPACTS ZONE 2 (ROAD CROSSING)



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BUFFER IMPACTS PERMIT



PROJECT REFERENCE 17BP.5.R.52 - GRANVILLE 93	SHEET NO. 4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
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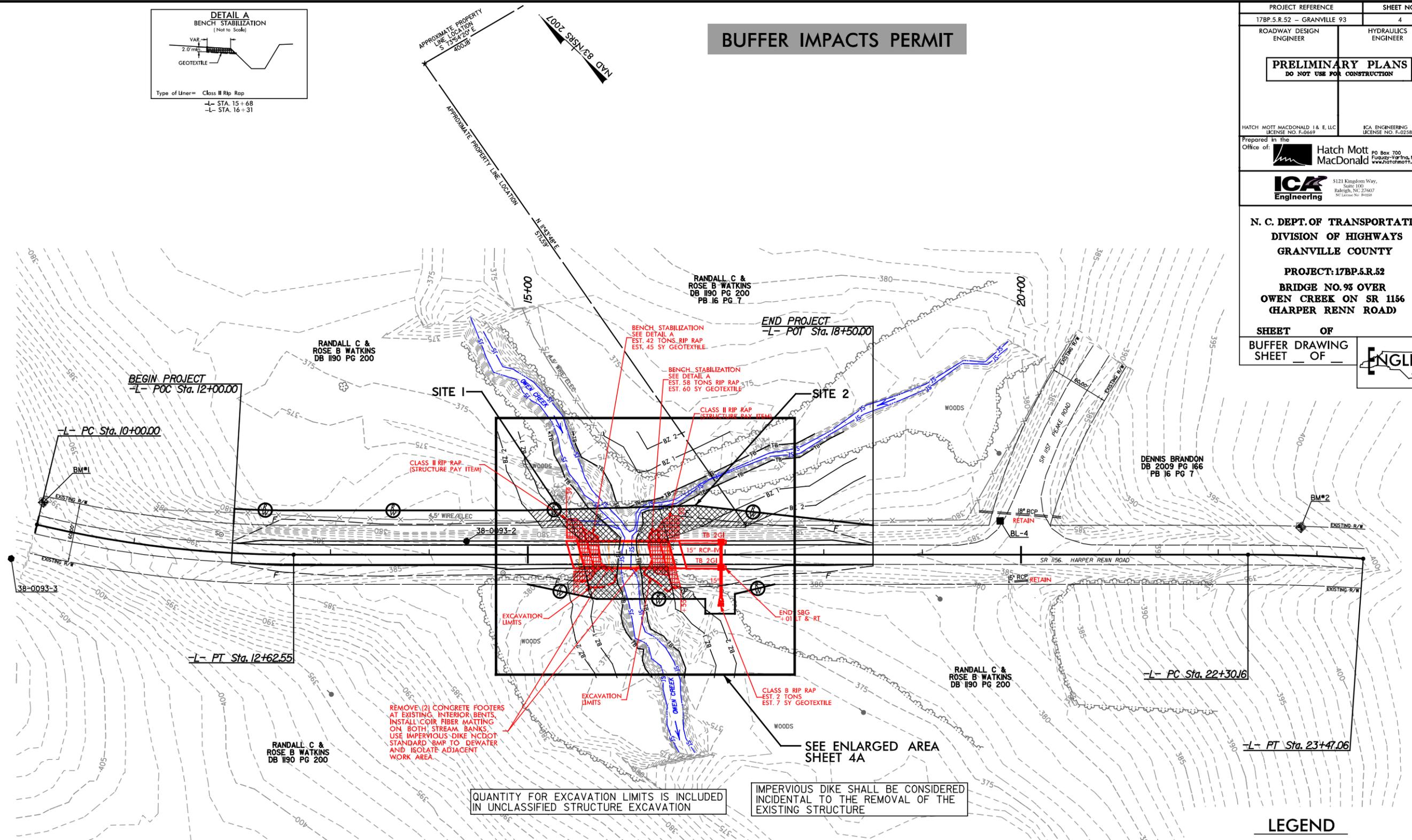
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 Raleigh, NC 27602
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 Suite 100
 Raleigh, NC 27607
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N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
GRANVILLE COUNTY

PROJECT: 17BP.5.R.52
BRIDGE NO. 93 OVER
OWEN CREEK ON SR 1156
(HARPER RENN ROAD)

SHEET OF
BUFFER DRAWING
SHEET OF



SITE 1 & 2
PLAN VIEW

LEGEND

- BZ 1 — RIPARIAN BUFFER ZONE 1 (30')
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- ALLOWABLE IMPACTS ZONE 1 (BRIDGE)
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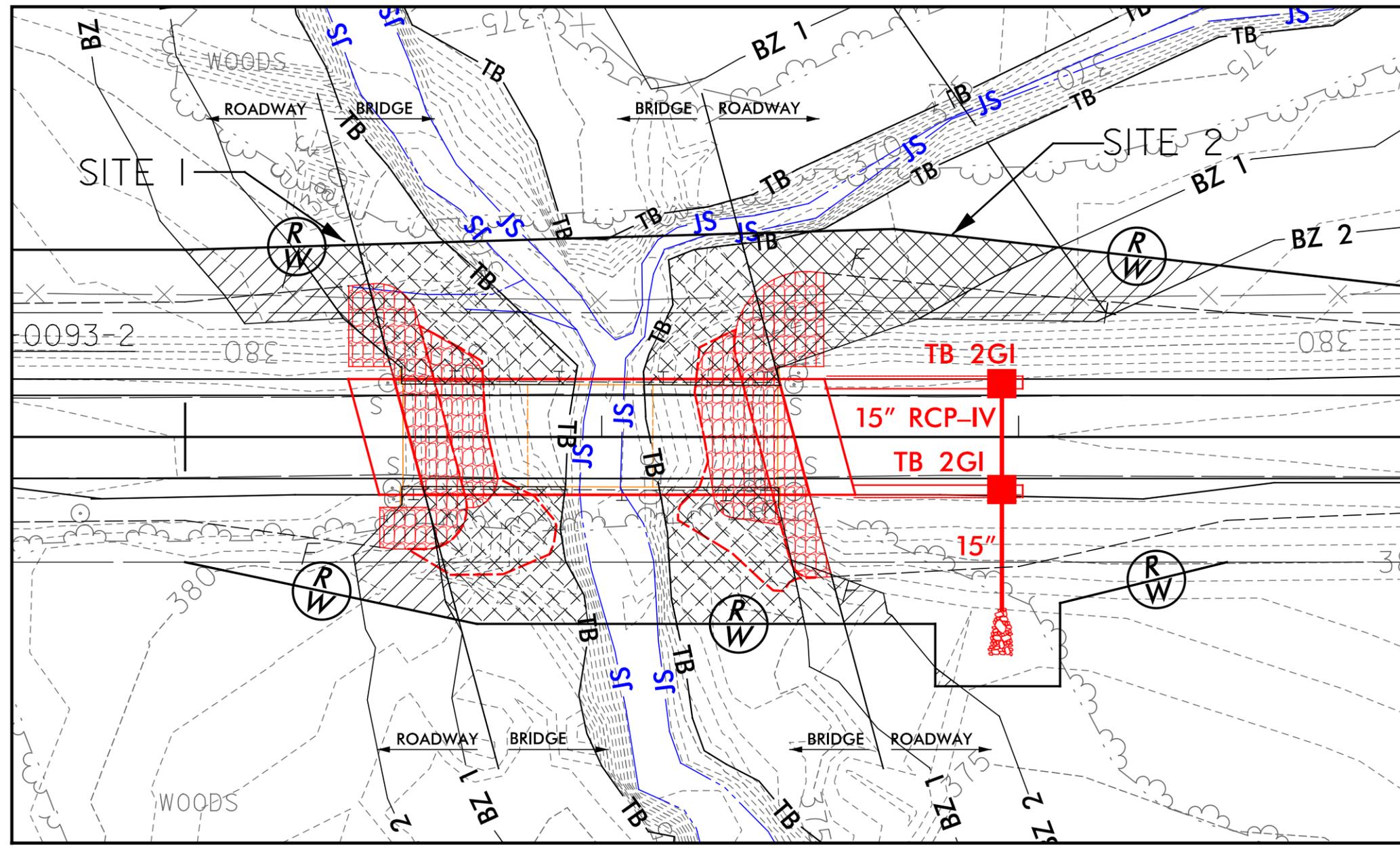


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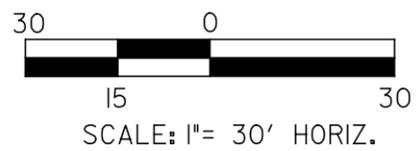
BUFFER IMPACTS PERMIT



PROJECT REFERENCE 17BP.5.R.52 - GRANVILLE 93	SHEET NO. 4A
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SHEET OF BUFFER DRAWING SHEET _ OF _	
ENGLISH	



**SITE 1 & 2
ENLARGED
PLAN VIEW**



LEGEND

- BZ 1 — RIPARIAN BUFFER ZONE 1 (30')
- BZ 2 — RIPARIAN BUFFER ZONE 2 (20')
- ALLOWABLE IMPACTS ZONE 1 (BRIDGE)
- ALLOWABLE IMPACTS ZONE 1 (ROAD CROSSING)
- ALLOWABLE IMPACT ZONE 2 (BRIDGE)
- ALLOWABLE IMPACTS ZONE 2 (ROAD CROSSING)

9/24/2015
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BUFFER IMPACTS SUMMARY

SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	IMPACT									BUFFER REPLACEMENT	
			TYPE			ALLOWABLE			MITIGABLE			ZONE 1 (ft ²)	ZONE 2 (ft ²)
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)		
1	33" BOX BEAM	-L-15+54 TO 16+46	X			275	1014	1289					
				X		3943	125	4068					
2	ROADWAY EMB.	-L-16+34 TO 17+92	X			1386	717	2103					
TOTAL:						5605	1856	7460	0	0	0		

N.C. DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS

 GRANVILLE COUNTY
 PROJECT: 17BP.5.R.52 (BRIDGE 93)

 9/24/2015
 SHEET OF