



## Pre-Construction Notification (PCN) Form

For Nationwide Permits and Regional General Permits  
(along with corresponding Water Quality Certifications)

September 29, 2018 Ver 3

Please note: fields marked with a red asterisk \* below are required. You will not be able to submit the form until all mandatory questions are answered.

Also, if at any point you wish to print a copy of the E-PCN, all you need to do is right-click on the document and you can print a copy of the form.

Below is a link to the online help file.

<https://edocs.deq.nc.gov/WaterResources/0/edoc/624704/PCN%20Help%20File%202018-1-30.pdf>

### A. Processing Information

County (or Counties) where the project is located: \*

Pitt

Is this project a public transportation project? \*

Yes  No

This is any publicly funded by municipal, state or federal funds road, rail, airport transportation project.

Is this a NCDOT Project? \*

Yes  No

(NCDOT only) T.I.P. or state project number:

B-4605

WBS # \*

38430.1.3

(for NCDOT use only)

1a. Type(s) of approval sought from the Corps: \*

- Section 404 Permit (wetlands, streams and waters, Clean Water Act)  
 Section 10 Permit (navigable waters, tidal waters, Rivers and Harbors Act)

1b. What type(s) of permit(s) do you wish to seek authorization? \*

- Nationwide Permit (NWP)  
 Regional General Permit (RGP)  
 Standard (IP)

This form may be used to initiate the standard/individual permit process with the Corps. Please contact your Corps representative concerning submittals for standard permits. All required items that are not provided in the E-PCN can be added to the miscellaneous upload area located at the bottom of this form.

1c. Has the NWP or GP number been verified by the Corps? \*

Yes  No

Nationwide Permit (NWP) Number:

03 - Maintenance

NWP Numbers (for multiple NWPS):

List all NW numbers you are applying for not on the drop down list.

1d. Type(s) of approval sought from the DWR: \*

check all that apply

- 401 Water Quality Certification - Regular  
 Non-404 Jurisdictional General Permit  
 Individual Permit  
 401 Water Quality Certification - Express  
 Riparian Buffer Authorization

1e. Is this notification solely for the record because written approval is not required?

\*

For the record only for DWR 401 Certification:

Yes  No

For the record only for Corps Permit:

Yes  No

1f. Is this an after-the-fact permit application? \*

Yes  No

**1g. Is payment into a mitigation bank or in-lieu fee program proposed for mitigation of impacts?**

If so, attach the acceptance letter from mitigation bank or in-lieu fee program

Yes  No

**Acceptance Letter Attachment**

Click the upload button or drag and drop files here to attach document

FILETYPE MUST BE PDF

**1h. Is the project located in any of NC's twenty coastal counties? \***

Yes  No

**1j. Is the project located in a designated trout watershed? \***

Yes  No

Link to trout information: <http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/Trout.aspx>

**B. Applicant Information**

**1a. Who is the Primary Contact? \***

Chris Rivenbark

**1b. Primary Contact Email: \***

crivenbark@ncdot.gov

**1c. Primary Contact Phone: \***

(xxx)xxx-xxxx  
(919)707-6152

**1d. Who is applying for the permit? \***

Owner (Check all that apply)  Applicant (other than owner)

**1e. Is there an Agent/Consultant for this project? \***

Yes  No

**2. Owner Information**

**2a. Name(s) on recorded deed: \***

N/A

**2b. Deed book and page no.:**

**2c. Responsible party:**

(for Corporations)

**2d. Address \***

Street Address

1000 Birch Ridge Dr.

Address Line 2

City

Raleigh

Postal / Zip Code

27610

State / Province / Region

NC

Country

United States of America

**2e. Telephone Number: \***

(xxx)xxx-xxxx

(919)707-6123

**2f. Fax Number:**

(xxx)xxx-xxxx

**2g. Email Address: \***

pharris@ncdot.gov

**C. Project Information and Prior Project History**

**1. Project Information**

**1a. Name of project: \***

Replace Bridge No. 5 on SR 1777 over Chicod Creek (B-4605 Central)

**1b. Subdivision name:**

(if appropriate)

**1c. Nearest municipality / town: \***

Grimesland

**2. Project Identification**

**2a. Property Identification Number:**

(tax PIN or parcel ID)

**2b. Property size:**

(in acres)

**2c. Project Address**

Street Address

Address Line 2

City

State / Province / Region

Postal / Zip Code

Country

**2d. Site coordinates in decimal degrees**

Please collect site coordinates in decimal degrees. Use between 4-6 digits (unless you are using a survey-grade GPS device) after the decimal place as appropriate, based on how the location was determined. (For example, most mobile phones with GPS provide locational precision in decimal degrees to map coordinates to 5 or 6 digits after the decimal place.)

**Latitude: \***35.546312  
ex: 34.208504**Longitude: \***-77.210139  
-77.796371**3. Surface Waters****3a. Name of the nearest body of water to proposed project: \***

Chicod Creek

**3b. Water Resources Classification of nearest receiving water: \***

C;NSW

[Surface Water Lookup](#)**3c. What river basin(s) is your project located in? \***

Tar-Pamlico

**3d. Please provide the 12-digit HUC in which the project is located. \***

030201030603

[River Basin Lookup](#)**4. Project Description and History****4a. Describe the existing conditions on the site and the general land use in the vicinity of the project at the time of this application: \***

The project is an existing two-lane road and bridge. The vicinity is a rural landscape with forested and agricultural areas interspersed with residential homes.

**4b. Have Corps permits or DWR certifications been obtained for this project (including all prior phases) in the past? \*** Yes  No  Unknown**4d. Attach an 8 1/2 X 11 excerpt from the most recent version of the USGS topographic map indicating the location of the project site. (for DWR)**[Click the upload button or drag and drop files here to attach document](#)

File type must be pdf

**4e. Attach an 8 1/2 X 11 excerpt from the most recent version of the published County NRCS Soil Survey map depicting the project site. (for DWR)**[Click the upload button or drag and drop files here to attach document](#)

File type must be pdf

**4f. List the total estimated acreage of all existing wetlands on the property:**

2.0

**4g. List the total estimated linear feet of all existing streams on the property:**

(intermittent and perennial)

150

**4h. Explain the purpose of the proposed project: \***

The purpose of the project is to replace a bridge with a deteriorating timber substructure and low posted weight limit.

**4i. Describe the overall project in detail, including indirect impacts and the type of equipment to be used: \***

The project proposes to replace Bridge No. 730005 on SR 1777 (Blackjack-Grimesland Rd.) over Chicod Creek in Pitt County, NC. The proposed project would replace the existing 91' long by 33' wide two-span bridge with a 135' long by 33' wide three-span bridge. The proposed grade will be about 0.5' above the existing ground within the vicinity of the bridge and roughly matching existing ground outside of the bridge.

Equipment to be used includes cranes, excavators, dump trucks, and paving equipment.

**4j. Please upload project drawings for the proposed project.**[Click the upload button or drag and drop files here to attach document](#)

B-4605\_UTILITY Permit Drawings\_2019-09-10.pdf

2.04MB

B-4605\_Permit Drawings\_2019-09-10 final.pdf

1.45MB

B-4605\_Buffer Drawings\_2019-09-10 final.pdf

1.12MB

B-4605 Roadway.pdf

1.65MB

File type must be pdf

## 5. Jurisdictional Determinations

5a. Have the wetlands or streams been delineated on the property or proposed impact areas? \*

Yes  No  Unknown

Comments:

5b. If the Corps made a jurisdictional determination, what type of determination was made? \*

Preliminary  Approved  Not Verified  Unknown  N/A

Corps AID Number:

Example: SAW-2017-99999

5c. If 5a is yes, who delineated the jurisdictional areas?

Name (if known):

Agency/Consultant Company: Axiom Environmental

Other: Preliminary JD request submitted June 2015

5d1. Jurisdictional determination upload

Click the upload button or drag and drop files here to attach document

File type must be PDF

## 6. Future Project Plans

6a. Is this a phased project? \*

Yes  No

Are any other NWP(s), regional general permit(s), or individual permits(s) used, or intended to be used, to authorize any part of the proposed project or related activity? This includes other separate and distant crossing for linear projects that require Department of the Army authorization but don't require pre-construction notification.

## D. Proposed Impacts Inventory

### 1. Impacts Summary

1a. Where are the impacts associated with your project? (check all that apply):

Wetlands  Streams-tributaries  Buffers  
 Open Waters  Pond Construction

### 2. Wetland Impacts

If there are wetland impacts proposed on the site, then complete this question for each wetland area impacted.

"W." will be used in the table below to represent the word "wetland".

2a. Site #* (?)	2a1 Reason* (?)	2b. Impact type* (?)	2c. Type of W.*	2d. W. name*	2e. Forested*	2f. Type of Jurisdiction* (?)	2g. Impact area*
1	Bridge - Fill	P	Riverine Swamp Forest	WC	No	Corps	0.005 (acres)
1	Bridge - Fill	P	Riverine Swamp Forest	WD	Yes	Corps	0.005 (acres)
1	Bridge - Fill	P	Riverine Swamp Forest	WA	No	Corps	0.006 (acres)
1	Bridge - Excavation	P	Riverine Swamp Forest	WA	No	Corps	0.002 (acres)
1	Bridge - Fill	P	Riverine Swamp Forest	WB	Yes	Corps	0.008 (acres)
1	Utility- Excavation	P	Riverine Swamp Forest	WA	Yes	Corps	0.001 (acres)

2g. Total Temporary Wetland Impact

0.000

2g. Total Permanent Wetland Impact

0.027

2g. Total Wetland Impact

0.027

2h. Comments:

Hand clearing in wetlands for sites 1, 2, & 3 is <0.01 acre per site and 0.01 acres for site 4. Total hand clearing in wetlands = 0.03 acre. There will be <0.01 acre of temporary fill in the hand clearing areas for erosion control.

## 6. Buffer Impacts (for DWR)

If project will impact a protected riparian buffer, then complete the chart below. Individually list all buffer impacts below.

### 6a. Project is in which protect basin(s)? \*

Check all that apply.

- Neuse  
 Catawba  
 Goose Creek  
 Other
- Tar-Pamlico  
 Randleman  
 Jordan Lake

6b. Impact Type* (?)	6c. Per or Temp* (?)	6d. Stream name*	6e. Buffer mitigation required?*	6f. Zone 1 impact*	6g. Zone 2 impact*
Bridge	P	Chicod Creek	No	225 (square feet)	475 (square feet)
Bridge	P	Chicod Creek	No	980 (square feet)	55 (square feet)
Bridge	P	Chicod Creek	No	340 (square feet)	280 (square feet)
Bridge	P	Chicod Creek	No	120 (square feet)	505 (square feet)

## 6h. Total buffer impacts:

	Zone 1	Zone 2
Total Temporary impacts:	0.00	0.00

	Zone 1	Zone 2
Total Permanent impacts:	1,665.00	1,315.00

	Zone 1	Zone 2
Total combined buffer impacts:	1,665.00	1,315.00

### 6i. Comments:

Wetlands in Buffers: Zone 1: 740 sq. ft. total, Zone 2: 705 sq. ft. total (see attached permit drawings)

### Supporting Documentation - i.e. Impact Maps, Plan Sheet, etc.

Click the upload button or drag and drop files here to attach document

File must be PDF

## E. Impact Justification and Mitigation

### 1. Avoidance and Minimization

#### 1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing the project: \*

Proposed bridge is 44 ft. longer than existing; grade is roughly the same as existing ground; bridge runoff will be discharged outside the riparian buffer zone through grated inlets at either side of the bridge, and flow will be diffused with a riprap pad at the proposed pipe outlet and at the lowest velocity practicable. Design Standards in Sensitive Watersheds will be implemented.

#### 1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques: \*

Traffic will be maintained offsite during construction, thus minimizing the project footprint; construction activities inside environmentally sensitive areas have been limited to the maximum extent practicable and will be contained inside safety/silt fencing. Slopes will be 3:1 in wetlands.

### 2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State

#### 2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?

Yes
  No

#### 2b. If this project DOES NOT require Compensatory Mitigation, explain why:

Proposed mechanized clearing in the wetland will not result in the placement of dredge or fill material in the wetland. Permanent wetland impacts are less than 0.1 acre.

NC Stream Temperature Classification Maps can be found under the Mitigation Concepts tab on the Wilmington District's [RIBITS](#) website.

## F. Stormwater Management and Diffuse Flow Plan (required by DWR)

\*\*\* Recent changes to the stormwater rules have required updates to this section. \*\*\*

## 1. Diffuse Flow Plan

1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?

Yes  No

1b. All buffer impacts and high ground impacts require diffuse flow or other form of stormwater treatment. If the project is subject to a state implemented riparian buffer protection program, include a plan that fully documents how diffuse flow will be maintained.

All Stormwater Control Measures (SCM)s must be designed in accordance with the [NC Stormwater Design Manual](#). Associated supplement forms and other documentation shall be provided.

What type of SCM are you providing?

- Level Spreader  
 Vegetated Conveyance (lower SHWT)  
 Wetland Swale (higher SHWT)  
 Other SCM that removes minimum 30% nitrogen  
 Proposed project will not create concentrated stormwater flow through the buffer  
(check all that apply)

For a list of options to meet the diffuse flow requirements, click [here](#).

Diffuse Flow Documentation

Click the upload button or drag and drop files here to attach document

File type must be PDF

## 2. Stormwater Management Plan

2a. Is this a NCDOT project subject to compliance with NCDOT's Individual NPDES permit NCS000250? \*

Yes  No

Comments:

Stormwater Management Plan is included in the permit drawings

## G. Supplementary Information

### 1. Environmental Documentation

1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land? \*

Yes  No

1b. If you answered "yes" to the above, does the project require preparation of an environmental document pursuant to the requirements of the National or State (North Carolina) Environmental Policy Act (NEPA/SEPA)? \*

Yes  No

Comments: \*

An environmental document was not required.

### 2. Violations (DWR Requirement)

2a. Is the site in violation of DWR Water Quality Certification Rules (15A NCAC 2H .0500), Isolated Wetland Rules (15A NCAC 2H .1300), or DWR Surface Water or Wetland Standards or Riparian Buffer Rules (15A NCAC 2B .0200)? \*

Yes  No

### 3. Cumulative Impacts (DWR Requirement)

3a. Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality? \*

Yes  No

3b. If you answered "no," provide a short narrative description.

Per the "Cumulative Impacts and the 401 Water Quality Certification and Isolated Wetland Permit Programs (April 10, 2004, Version 2.1)" document, the proposed bridge replacement does not meet any of the "growth stimulating" or "downstream impacts" criteria.

### 4. Sewage Disposal (DWR Requirement)

4a. Is sewage disposal required by DWR for this project? \*

Yes  No  NA

### 5. Endangered Species and Designated Critical Habitat (Corps Requirement)

5a. Will this project occur in or near an area with federally protected species or habitat? \*

Yes  No

5b. Have you checked with the USFWS concerning Endangered Species Act impacts? \*

Yes  No

**5d. Is another Federal agency involved? \***

Yes  No  Unknown

**5e. Is this a DOT project located within Division's 1-8? \***

Yes  No

**5j. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? \***

1. US Fish & Wildlife Endangered Species, Threatened Species, Federal Species of Concern, and Candidate Species for Pitt County, Updated 10-05-2018
2. NOAA National Marine Fisheries Service
3. Eastern North Carolina Programmatic Biological Assessment of Potential Effects on Tar River Spiny mussel, Dwarf Wedgemussel, and Yellow Lance in Association with Bridge and Culvert Replacements
4. USFWS Informal Concurrence Letter

**Consultation Documentation Upload**

Click the upload button or drag and drop files here to attach document

20191003\_itr\_USFWS\_NCDOT\_B-4605.pdf

41.3KB

File type must be PDF

## 6. Essential Fish Habitat (Corps Requirement)

**6a. Will this project occur in or near an area designated as an Essential Fish Habitat? \***

Yes  No

**6b. What data sources did you use to determine whether your site would impact an Essential Fish Habitat? \***

NOAA Essential Fish Habitat Mapper

## 7. Historic or Prehistoric Cultural Resources (Corps Requirement)

Link to the State Historic Preservation Office Historic Properties Map (does not include archaeological data: <http://gis.ncdcr.gov/hpweb/>)

**7a. Will this project occur in or near an area that the state, federal or tribal governments have designated as having historic or cultural preservation status (e.g., National Historic Trust designation or properties significant in North Carolina history and archaeology)? \***

Yes  No

**7b. What data sources did you use to determine whether your site would impact historic or archeological resources? \***

NC State Historic Preservation Office data (<http://gis.ncdcr.gov/hpweb/>); PCE documentation  
Scoping comments from NC State Historic Preservation Office and NCDOT Archaeology

**7c. Historic or Prehistoric Information Upload**

Click the upload button or drag and drop files here to attach document

File must be PDF

## 8. Flood Zone Designation (Corps Requirement)

Link to the FEMA Floodplain Maps: <https://msc.fema.gov/portal/search>

**8a. Will this project occur in a FEMA-designated 100-year floodplain? \***

Yes  No

**8b. If yes, explain how project meets FEMA requirements:**

Approved as MOA Type 1 by NC Floodplain Mapping Program

**8c. What source(s) did you use to make the floodplain determination? \***

DFIRM Panel 5624

## Miscellaneous

**Comments**

**Miscellaneous attachments not previously requested.**

Click the upload button or drag and drop files here to attach document

File must be PDF or KMZ

## Signature

By checking the box and signing below, I certify that:

- I have given true, accurate, and complete information on this form;
- I agree that submission of this PCN form is a "transaction" subject to Chapter 66, Article 40 of the NC General Statutes (the "Uniform Electronic Transactions Act");
- I agree to conduct this transaction by electronic means pursuant to Chapter 66, Article 40 of the NC General Statutes (the "Uniform Electronic Transactions Act");
- I understand that an electronic signature has the same legal effect and can be enforced in the same way as a written signature; AND

- I intend to electronically sign and submit the PCN form.

**Full Name:\***

Mack Christopher Rivenbark III

**Signature**

*Mack C. Rivenbark, III*

**Date**

10/7/2019





## United States Department of the Interior

FISH AND WILDLIFE SERVICE

Raleigh Field Office

Post Office Box 33726

Raleigh, North Carolina 27636-3726

October 3, 2019

Philip S. Harris III  
North Carolina Department of Transportation  
Environmental Analysis Unit  
1598 Mail Service Center  
Raleigh, North Carolina 27699-1598


Dear Mr. Harris:

This letter is in response to your letter of September 26, 2019 which provided the U.S. Fish and Wildlife Service (Service) with the biological conclusion of the North Carolina Department of Transportation that the replacement of Bridge No. 5 on SR 1777 over Chicod Creek in Pitt County (STIP No. B-4605) may affect, but is not likely to adversely affect the federally proposed endangered Carolina Madtom (*Noturus furiosus*) and the federally proposed threatened Neuse River Waterdog (*Necturus lewisi*). The following response is provided in accordance with Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543).

According to information provided, an aquatic survey was conducted at the project site on November 7, 2017. The survey extended 100 meters upstream and 400 meters downstream of SR 1777. Neither of the federally proposed listed species was found, and habitat quality for the two species was not optimal. Based on the survey results and other available information, the Service concurs with your conclusion that the proposed action may affect, but is not likely to adversely affect the Carolina Madtom and Neuse River Waterdog. Although these species are currently only proposed to be listed, this concurrence will be valid if and when the species become listed. It is understood that the federally endangered Tar River Spiny mussel (*Parvaspina steinstansana*), the federally threatened Yellow Lance (*Elliptio lanceolata*), and the federally proposed threatened Atlantic Pigtoe (*Fusconaia masoni*) will be addressed by utilizing the Programmatic Biological Opinion for mussels.

We believe that the requirements of Section 7(a)(2) of the ESA have been satisfied. We remind you that obligations under Section 7 consultation must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered in this review; (2) this action is subsequently modified in a manner that was not considered in this review; or (3) a new species is listed or critical habitat determined that may be affected by this identified action. If you have any questions regarding our response, please contact Mr. Gary Jordan at (919) 856-4520 (Ext. 32).

Sincerely,

  
for Pete Benjamin  
Field Supervisor

**Electronic copy:**

**Tom Steffens, USACE, Washington, NC**  
**Travis Wilson, NCWRC, Creedmoor, NC**



North Carolina Department of Transportation

Highway Stormwater Program  
**STORMWATER MANAGEMENT PLAN**  
 FOR NCDOT PROJECTS



(Version 2.08; Released April 2018)

WBS Element: 38430.1.3      TIP No.: B-4605      County(ies): Pitt      Page 1 of 2

**General Project Information**

WBS Element:	38430.1.3	TIP Number:	B-4605	Project Type:	Bridge Replacement	Date:	6/7/2018
NCDOT Contact:	William (Galen) G. Cail, PE			Contractor / Designer:	TGS Engineers (Ben Henegar, PE)		
	Address:	1590 Mail Service Center Raleigh, NC 27699-1590			Address:	706 Hillsborough Street Suite 200 Raleigh, NC 27603	
	Phone:	919-707-6711			Phone:	919-773-8887 ext. 123	
	Email:	<a href="mailto:gcaill@ncdot.gov">gcaill@ncdot.gov</a>			Email:	<a href="mailto:bhenegar@tgsengineers.com">bhenegar@tgsengineers.com</a>	
City/Town:	Grimesland			County(ies):	Pitt		
River Basin(s):	Tar-Pamlico			CAMA County?	No		
Wetlands within Project Limits?	Yes						

**Project Description**

Project Length (lin. miles or feet):	550.00	Surrounding Land Use:	Forest, Cropland, and Rural Residential					
	<b>Proposed Project</b>			<b>Existing Site</b>				
Project Built-Upon Area (ac.)	0.4	ac.	0.3	ac.				
Typical Cross Section Description:	Two 11' paved travel lanes with 2' paved shoulders and 2' grassed shoulders (5' with guardrail).			Two 11' paved travel lanes with 3'-10' grassed shoulders.				
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	300	Year:	2016	Existing:	300	Year:	2016
General Project Narrative: (Description of Minimization of Water Quality Impacts)	<p>Replacement of Bridge No. 730005 on SR 1777 (Blackjack-Grimesland Rd.) over Chicod Creek in Pitt County, NC. The proposed 135' long by 33' wide three-span bridge would replace the existing 91' long by 33' wide two span bridge. The proposed grade will be about 0.5' above existing ground within the vicinity of the bridge and roughly matching existing ground outside of the bridge.</p> <p>Bridge No. 730005 is within the Tar-Pamlico River Drainage Basin and shall adhere to the Tar-Pamlico Buffer Rules. The proposed bridge will have no direct discharge into Chicod Creek. Stormwater runoff from the the proposed bridge is to flow to two traffic bearing grated inlets at each side of the bridge where it will be diffused with a riprap pad at the proposed pipe outlet. All proposed runoff is discharged as far away from the stream and at the lowest velocities as practicable. The proposed deck runoff will outlet outside of buffers.</p>							

**Waterbody Information**

Surface Water Body (1):	Chicod Creek		NCDWR Stream Index No.:	29-101			
NCDWR Surface Water Classification for Water Body	Primary Classification:	Class C					
	Supplemental Classification:	Nutrient Sensitive Waters (NSW)					
Other Stream Classification:							
Impairments:	None						
Aquatic T&E Species?	No	Comments:					
NRTR Stream ID:	N/A			Buffer Rules in Effect:	Tar-Pamlico		
Project Includes Bridge Spanning Water Body?	Yes	Deck Drains Discharge Over Buffer?	No	Dissipator Pads Provided in Buffer?	No		
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)							



North Carolina Department of Transportation
Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS



(Version 2.08; Released April 2018)

WBS Element:

TIP No.: B-4605

County(ies): Pitt

Page 2 of 2

Preformed Scour Holes and Energy Dissipators

Table with 11 columns: Sheet No., Station & Coordinates (Road and Non Road Projects), Surface Water Body, Energy Dissipator Type, Riprap Type, Drainage Area (ac), Conveyance Structure, Pipe/Structure Dimensions (in), Q10 (cfs), V10 (fps), BMP Associated w/ Buffer Rules?. Contains two rows of data for sheet 4.

Additional Comments

Large empty rectangular area for providing additional comments.

\* Refer to the NCDOT Best Management Practices Toolbox (2014), NCDOT Standards, the Federal Highway Administration (FHWA) Hydraulic Engineering Circular No. 14 (HEC-14), Third Edition, Hydraulic Design of Energy Dissipators for Culverts and Channels (July 2006), as applicable, for design guidance and criteria.

09/28/19

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

STATE OF NORTH CAROLINA  
 DIVISION OF HIGHWAYS

**PITT COUNTY**

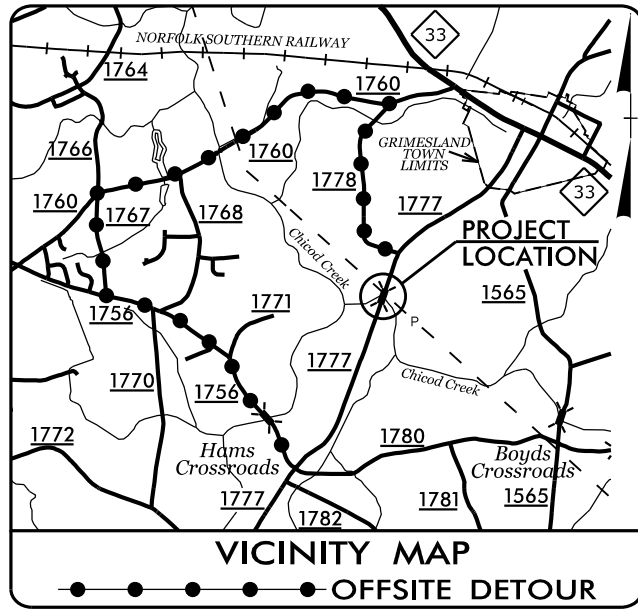
LOCATION: REPLACE BRIDGE 5 OVER CHICOD CREEK  
 ON SR 1777

TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURE

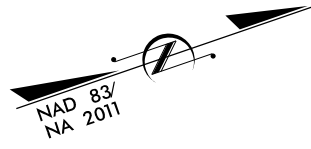
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4605	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38430.1.3	BRZ-1777(007)	PE	
38430.2.1	BRZ-1777(007)	RW & UTIL	
38430.3.1	BRZ-1777(007)	CONST.	

PERMIT DRAWING  
 SHEET 1 OF 4

TIP PROJECT: B-4605



**WETLAND AND SURFACE WATER IMPACTS**



BEGIN TIP PROJECT B-4605 -L- STA. 11 + 50.00  
 BEGIN BRIDGE -L- STA. 13 + 40.25  
 END BRIDGE -L- STA. 14 + 82.75  
 END TIP PROJECT B-4605 -L- STA. 17 + 00.00

TO HAMS CROSSROADS

TO GRIMESLAND

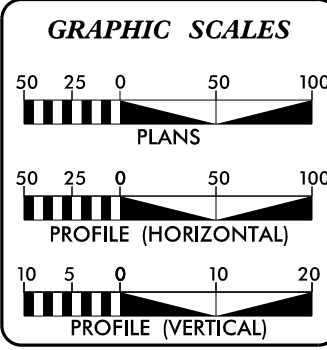
SITE 1

4

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

DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

CONTRACT:



**DESIGN DATA**

ADT 2019 =	1370
ADT 2039 =	1690
K =	12 %
D =	55 %
T =	5 % *
V =	60 MPH
* (TTST 1% + DUAL 4%)	
FUNC CLASS =	MINOR COLLECTOR SUB-REGIONAL TIER

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT B-4605	=	0.077 mile
LENGTH STRUCTURES TIP PROJECT B-4605	=	0.027 mile
TOTAL LENGTH TIP PROJECT B-4605	=	0.104 mile

Prepared For:  
**DIVISION OF HIGHWAYS**  
 1000 Birch Ridge Dr., Raleigh NC, 27610

By:  
 TGS ENGINEERS  
 706 HILLSBOROUGH ST SUITE 200  
 RALEIGH, NC 27603

PH (919) 773-8887  
 CORP. LICENSE NO.: C-0275

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: OCTOBER 26, 2018

LETTING DATE: SEPTEMBER 25, 2019

V. MARCUS LOWERY, PE  
 PROJECT ENGINEER

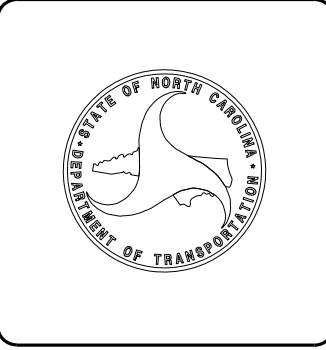
MICHAEL AMAN, P.E.  
 NCDOT DIVISION 2 CONTACT

HYDRAULICS ENGINEER




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

ROADWAY DESIGN ENGINEER

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




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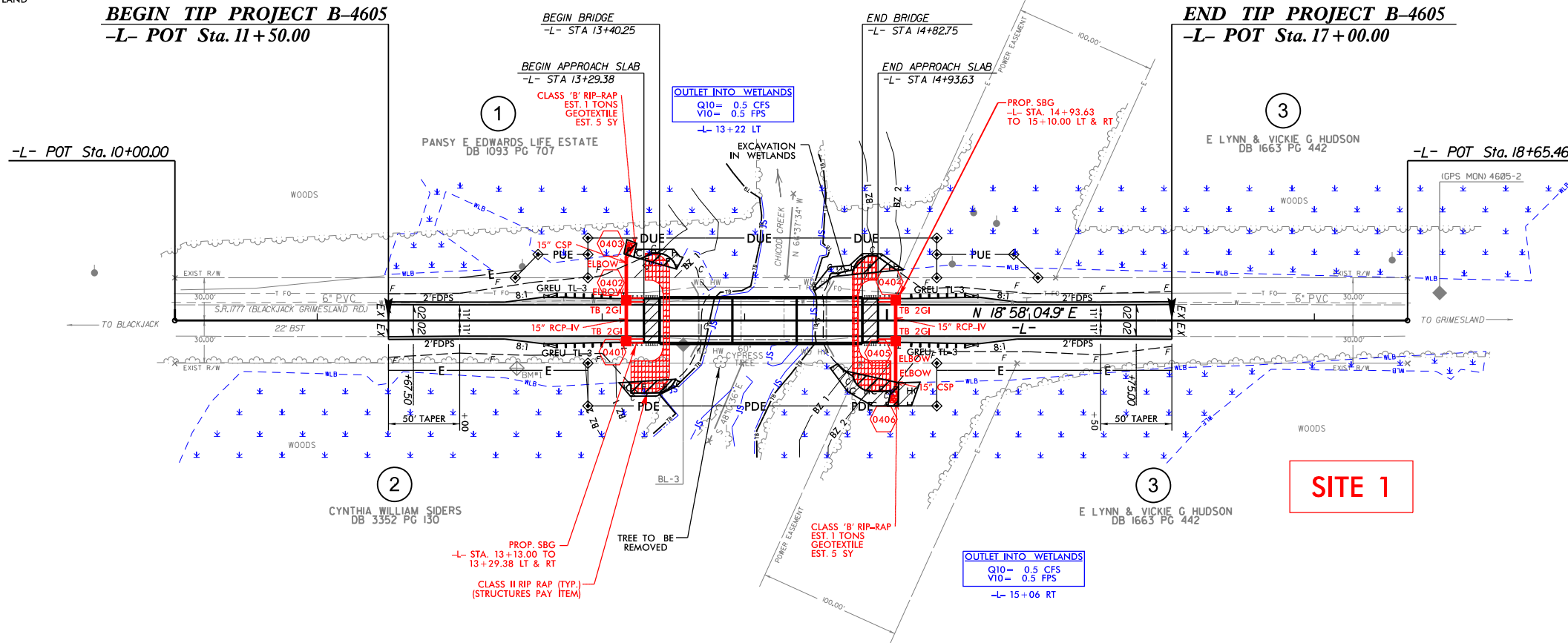
-  DENOTES FILL IN WETLAND
-  DENOTES HAND CLEARING
-  DENOTES EXCAVATION IN WETLAND

# WETLAND & STREAM IMPACTS

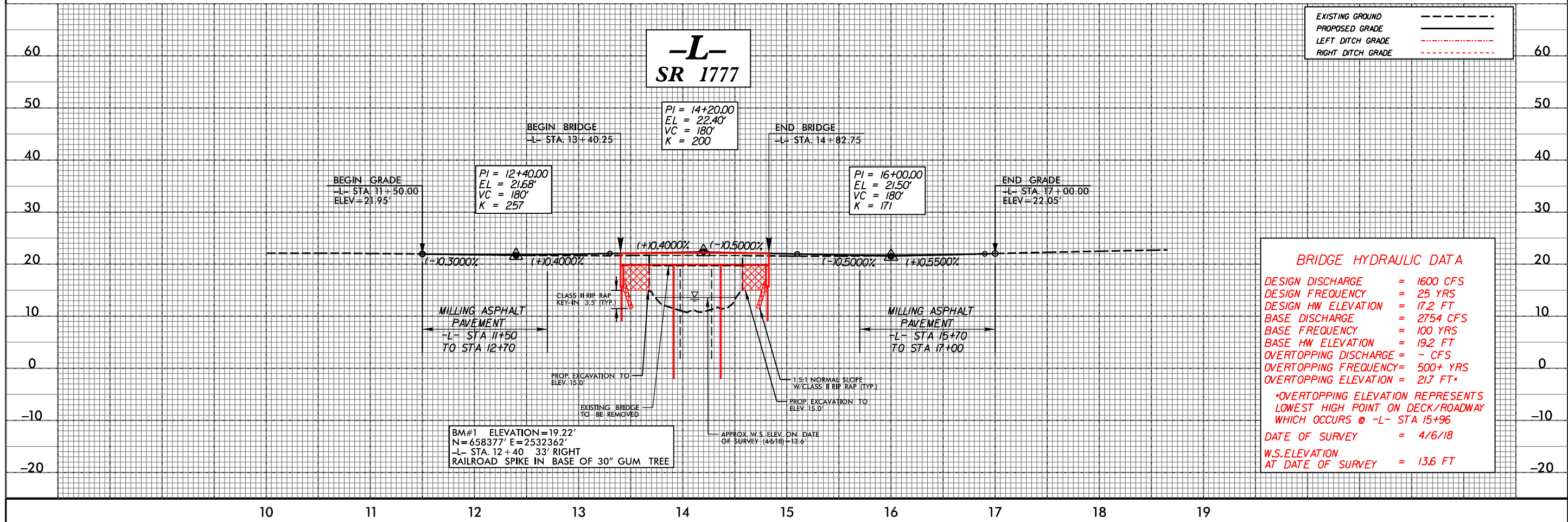


PROJECT REFERENCE NO. <b>B-4605</b>	SHEET NO. <b>04</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	
 <b>TGS ENGINEERS</b> 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

PERMIT DRAWING  
SHEET 2 OF 4



SITE 1

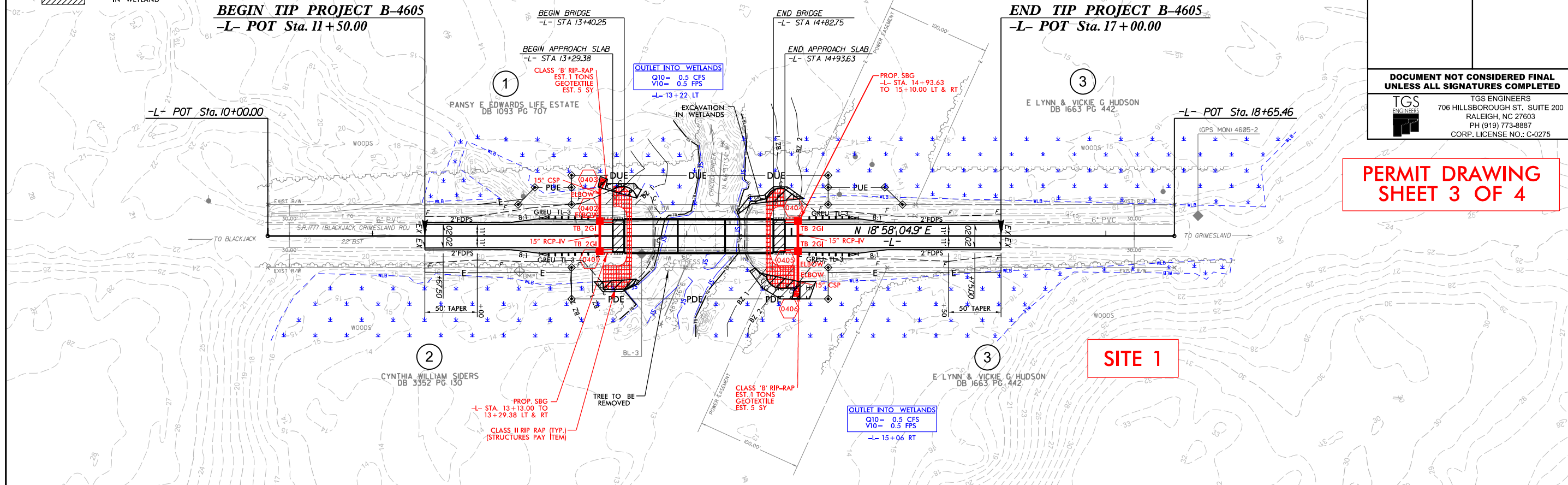


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# WETLAND & STREAM IMPACTS

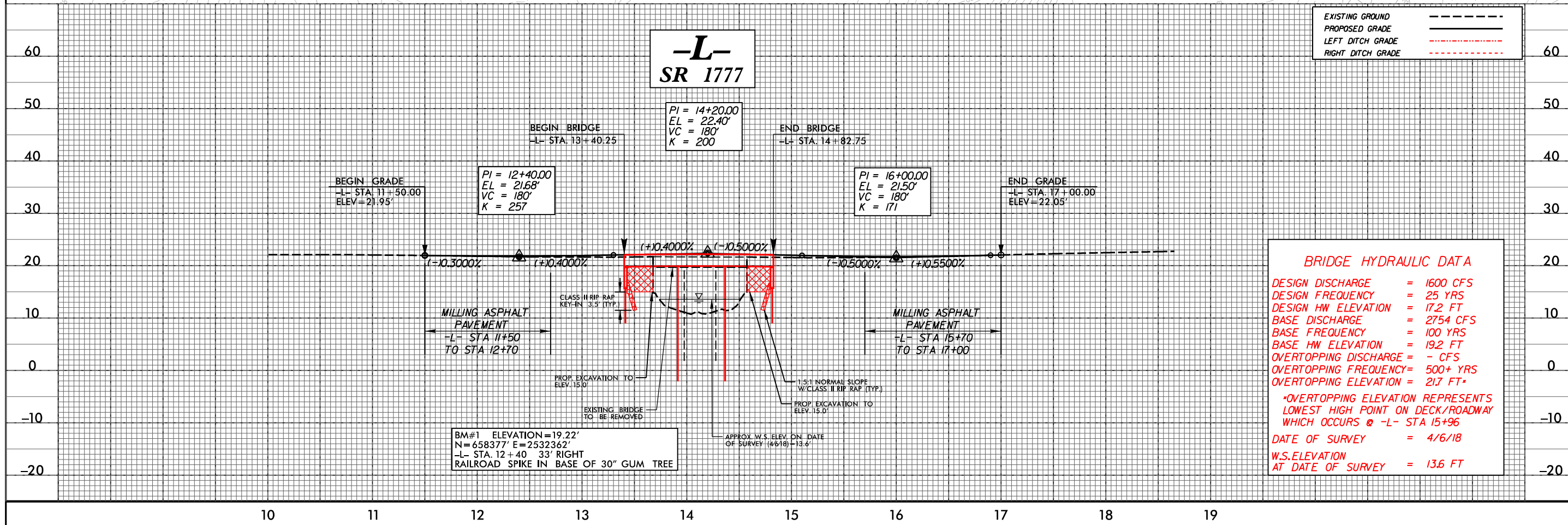


PROJECT REFERENCE NO. <b>B-4605</b>	SHEET NO. <b>04</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
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PERMIT DRAWING  
SHEET 3 OF 4

SITE 1



EXISTING GROUND	
PROPOSED GRADE	
LEFT DITCH GRADE	
RIGHT DITCH GRADE	

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 1600 CFS
DESIGN FREQUENCY	= 25 YRS
DESIGN HW ELEVATION	= 17.2 FT
BASE DISCHARGE	= 2754 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 19.2 FT
OVERTOPPING DISCHARGE	= - CFS
OVERTOPPING FREQUENCY	= 500+ YRS
OVERTOPPING ELEVATION	= 21.7 FT*

\*OVERTOPPING ELEVATION REPRESENTS LOWEST HIGH POINT ON DECK/ROADWAY WHICH OCCURS @ -L- STA 15+96

DATE OF SURVEY	= 4/6/18
W.S.ELEVATION AT DATE OF SURVEY	= 13.6 FT

-L-  
SR 1777

PI = 14+20.00  
 EL = 22.40'  
 VC = 180'  
 K = 200

PI = 12+40.00  
 EL = 21.68'  
 VC = 180'  
 K = 257

PI = 16+00.00  
 EL = 21.50'  
 VC = 180'  
 K = 171

BM#1 ELEVATION = 19.22'  
 N = 658377 E = 2532362  
 -L- STA. 12 + 40 33' RIGHT  
 RAILROAD SPIKE IN BASE OF 30" GUM TREE

APPROX. W.S. ELEV. ON DATE OF SURVEY (4/6/18) = 13.6

### WETLAND AND SURFACE WATER IMPACTS 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	-L- 13+20 to 13+55 LT	3 @ 45' CSU Bridge	< 0.01				< 0.01					
1	-L- 13+10 to 13+55 RT	3 @ 45' CSU Bridge	< 0.01				< 0.01					
1	-L- 14+50 to 15+10 LT	3 @ 45' CSU Bridge	< 0.01		< 0.01		< 0.01					
1	-L- 14+60 to 15+25 RT	3 @ 45' CSU Bridge	< 0.01				0.01					
<b>TOTALS*:</b>			0.02		< 0.01		0.03			0	0	0

\*Rounded totals are sum of actual impacts

NOTE:  
There will be <0.01 acre temporary fill in the hand clearing areas for erosion control devices.

NC DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
8/16/19  
Pitt County  
B-4605  
38430.1.3  
SHEET 4 OF 4



09/08/19

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

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**PITT COUNTY**

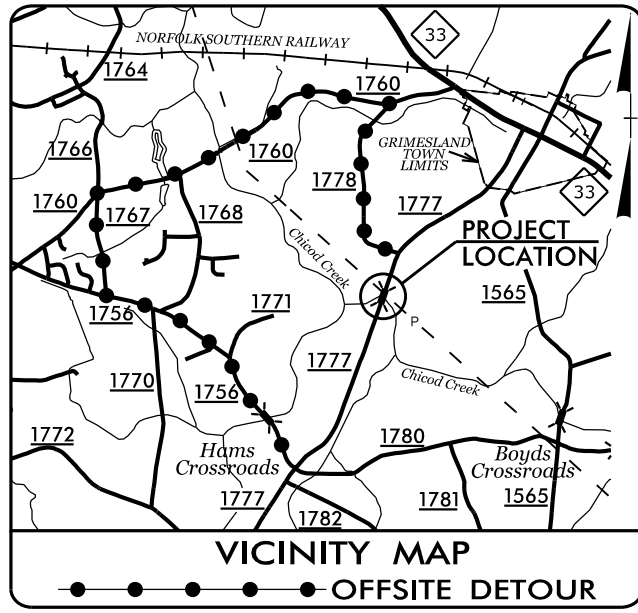
LOCATION: REPLACE BRIDGE 5 OVER CHICOD CREEK  
ON SR 1777

TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURE

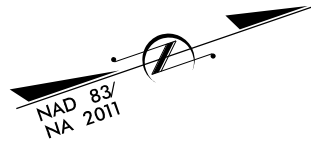
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N.C.	B-4605	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38430.1.3	BRZ-1777(007)	PE	
38430.2.1	BRZ-1777(007)	RW & UTIL	
38430.3.1	BRZ-1777(007)	CONST.	

PERMIT DRAWING  
SHEET 1 OF 5

TIP PROJECT: B-4605



**BUFFER IMPACTS**



BEGIN TIP PROJECT B-4605 -L- STA. 11 + 50.00

BEGIN BRIDGE -L- STA. 13 + 40.25

END BRIDGE -L- STA. 14 + 82.75

END TIP PROJECT B-4605 -L- STA. 17 + 00.00

TO HAMS CROSSROADS

TO GRIMESLAND

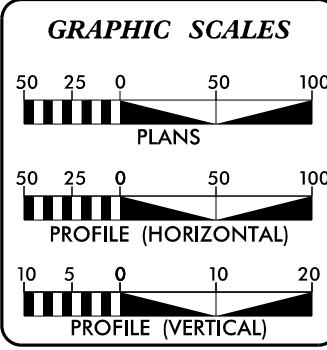
SITE 1

4

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**DESIGN DATA**

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V =	60 MPH
* (TTST 1% + DUAL 4%)	
FUNC CLASS =	MINOR COLLECTOR SUB-REGIONAL TIER

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT B-4605	=	0.077 mile
LENGTH STRUCTURES TIP PROJECT B-4605	=	0.027 mile
TOTAL LENGTH TIP PROJECT B-4605	=	0.104 mile

Prepared For:  
**DIVISION OF HIGHWAYS**  
1000 Birch Ridge Dr., Raleigh NC, 27610

By:  
TGS ENGINEERS  
706 HILLSBOROUGH ST  
SUITE 200  
RALEIGH, NC 27603

PH (919) 773-8887  
CORP. LICENSE NO.: C-0275

2018 STANDARD SPECIFICATIONS

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OCTOBER 26, 2018

LETTING DATE:  
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V. MARCUS LOWERY, PE  
PROJECT ENGINEER

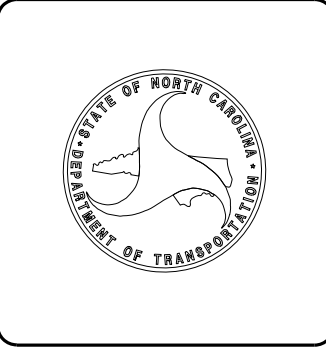
MICHAEL AMAN, P.E.  
NCDOT DIVISION 2 CONTACT

HYDRAULICS ENGINEER

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

ROADWAY DESIGN ENGINEER

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



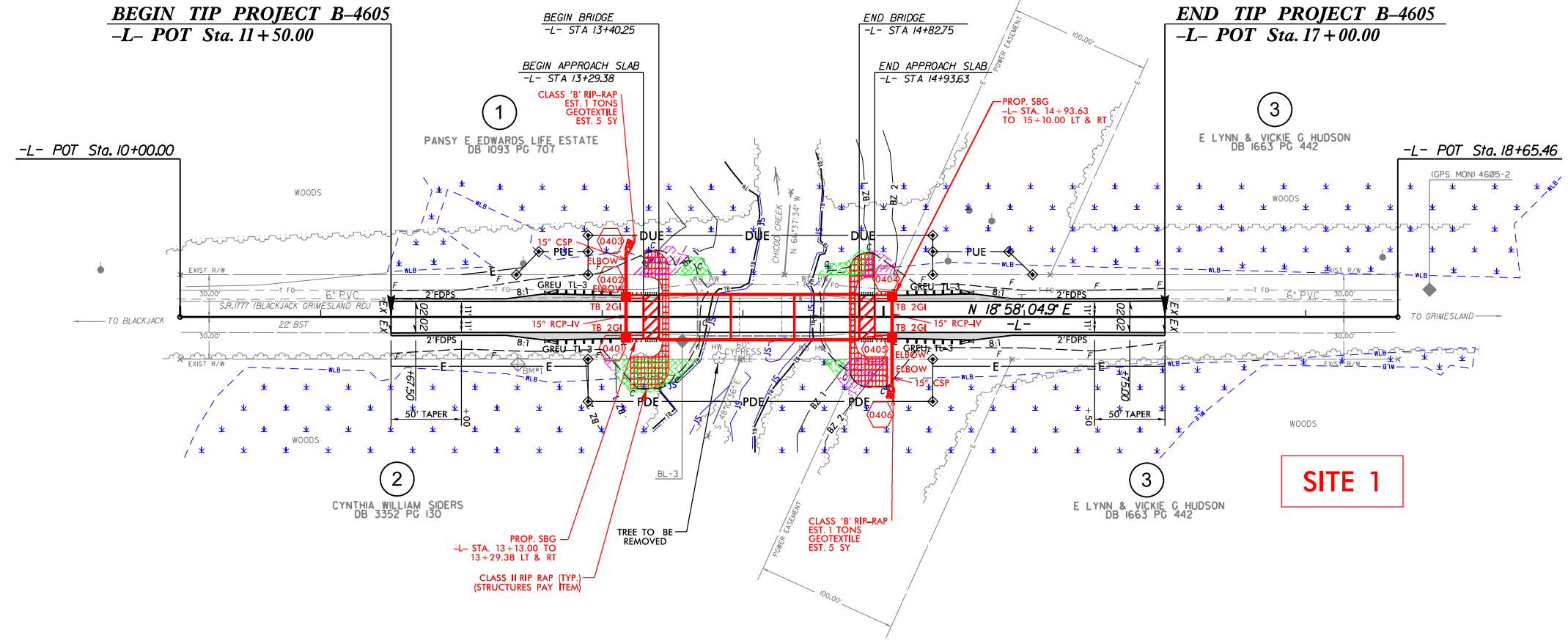
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ALLOWABLE IMPACTS ZONE 1  
 ALLOWABLE IMPACTS ZONE 2

# BUFFER IMPACTS

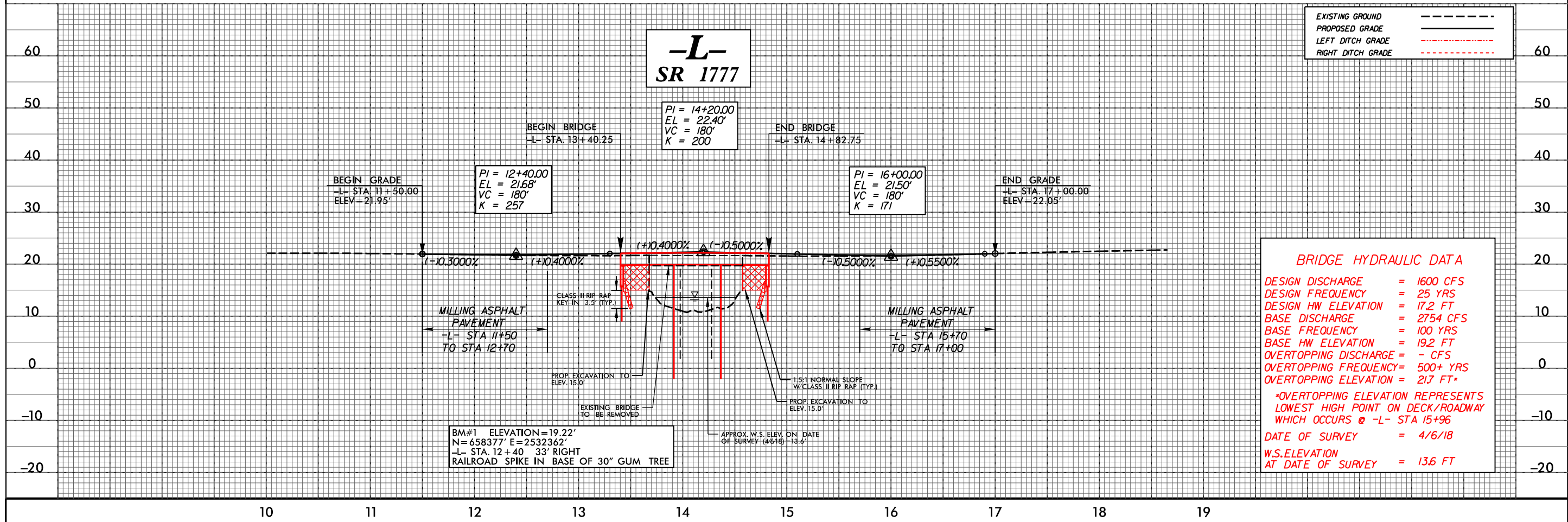
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 NA 2011

PROJECT REFERENCE NO. B-4605	SHEET NO. 04
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



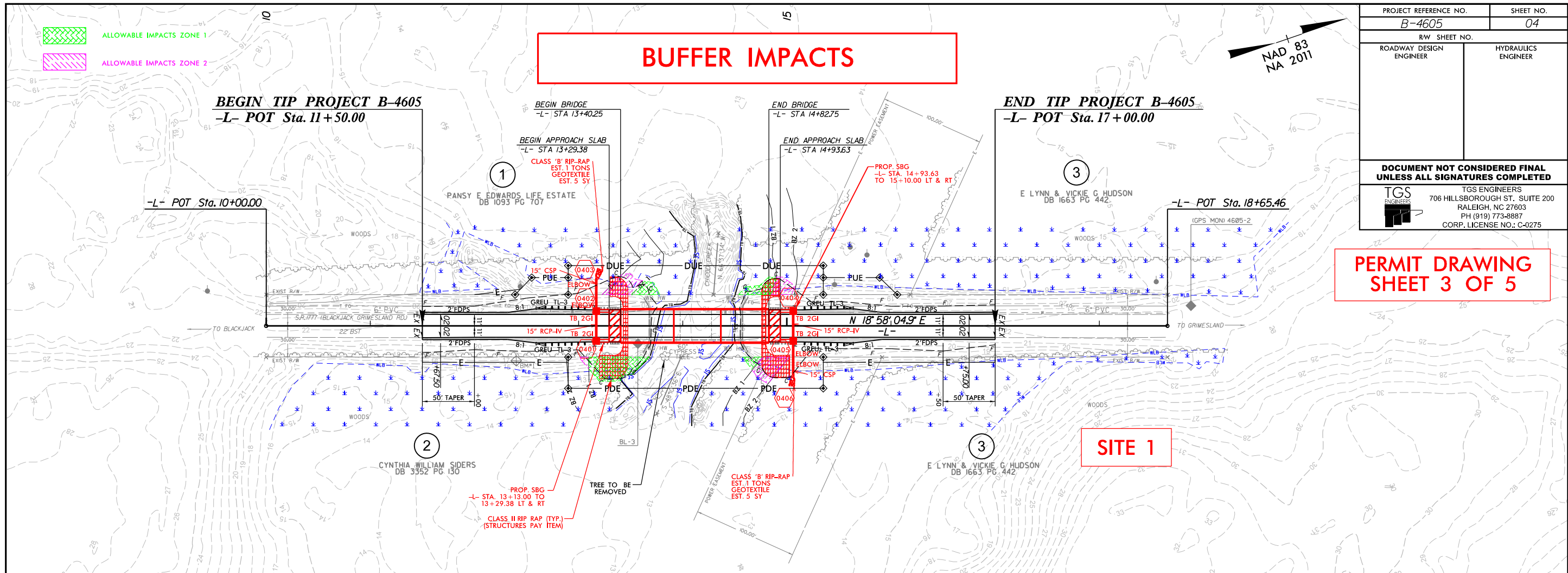
PERMIT DRAWING  
 SHEET 2 OF 5

SITE 1



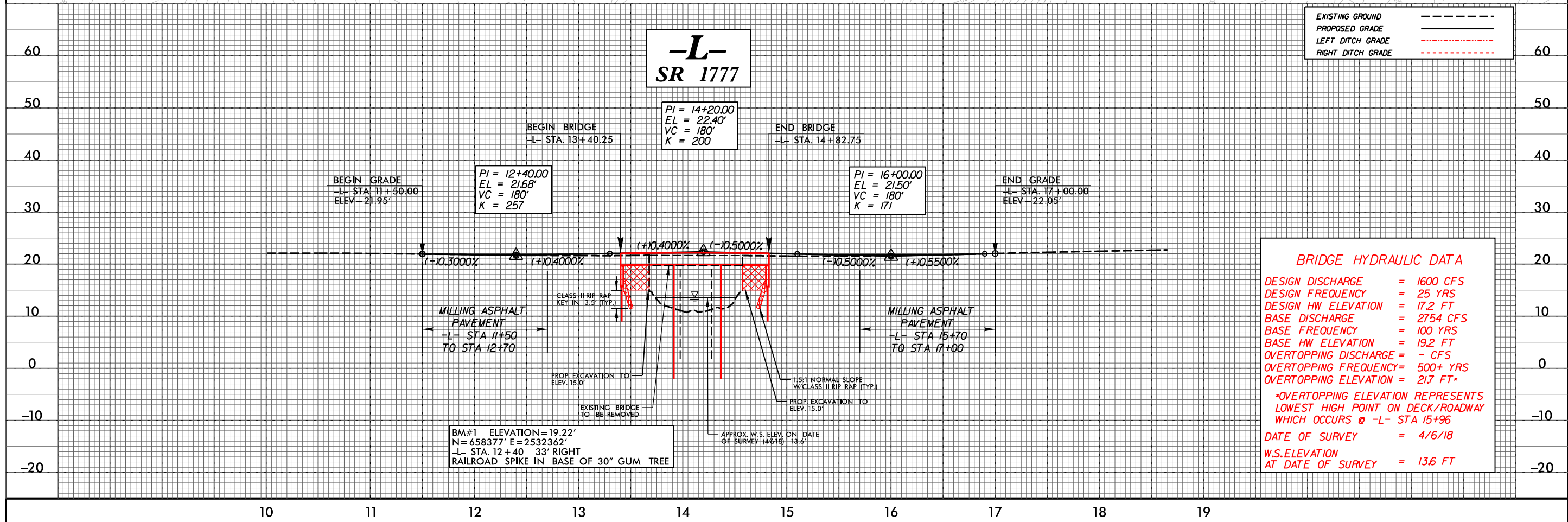
PROJECT REFERENCE NO. B-4605	SHEET NO. 04
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

# BUFFER IMPACTS



PERMIT DRAWING  
SHEET 3 OF 5

SITE 1



EXISTING GROUND	---
PROPOSED GRADE	—
LEFT DITCH GRADE	...
RIGHT DITCH GRADE	-.-.-

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 1600 CFS
DESIGN FREQUENCY	= 25 YRS
DESIGN HW ELEVATION	= 17.2 FT
BASE DISCHARGE	= 2754 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 19.2 FT
OVERTOPPING DISCHARGE	= - CFS
OVERTOPPING FREQUENCY	= 500+ YRS
OVERTOPPING ELEVATION	= 21.7 FT*

\*OVERTOPPING ELEVATION REPRESENTS LOWEST HIGH POINT ON DECK/ROADWAY WHICH OCCURS @ -L- STA 15+96

DATE OF SURVEY	= 4/6/18
W.S. ELEVATION AT DATE OF SURVEY	= 13.6 FT

-L-  
SR 1777

BM#1 ELEVATION = 19.22'  
 N = 658377 E = 2532362'  
 -L- STA. 12 + 40 33' RIGHT  
 RAILROAD SPIKE IN BASE OF 30" GUM TREE

APPROX. W.S. ELEV. ON DATE OF SURVEY (4/6/18) = 13.6'

# RIPARIAN BUFFER IMPACTS SUMMARY

			IMPACT									BUFFER REPLACEMENT	
SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	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	3 @ 45' CSU Bridge	-L- 13+20 to 13+80 LT		X		225	475	700					
1	3 @ 45' CSU Bridge	-L- 13+00 to 13+70 RT		X		980	55	1035					
1	3 @ 45' CSU Bridge	-L- 14+50 to 15+10 LT		X		340	280	620					
1	3 @ 45' CSU Bridge	-L- 14+55 to 15+00 RT		X		120	505	625					
<b>TOTAL:</b>						1665	1315	2980	0.0	0.0	0.0	0.0	0.0

NOTES:  
Total Buffer Impacts = 0.07 Ac

N.C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS

Pitt County  
PROJECT: 38430.1.3  
B-4605

12/14/2018  
SHEET **4** OF **5**

## WETLANDS IN BUFFER IMPACTS SUMMARY

SITE NO.	STATION (FROM/TO)	WETLANDS IN BUFFERS	
		ZONE 1 (ft <sup>2</sup> )	ZONE 2 (ft <sup>2</sup> )
1	-L- 13+30 to 13+55 LT	0	195
1	-L- 13+10 to 13+50 RT	335	0
1	-L- 14+50 to 15+10 LT	335	210
1	-L- 14+60 to 14+95 RT	70	300
<b>TOTAL:</b>		740	705

N.C. DEPT. OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
  
 Pitt County  
 PROJECT: 38430.1.3  
 B-4605  
  
 12/14/2018  
 SHEET **5** OF **5**

09/08/19

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

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**PITT COUNTY**

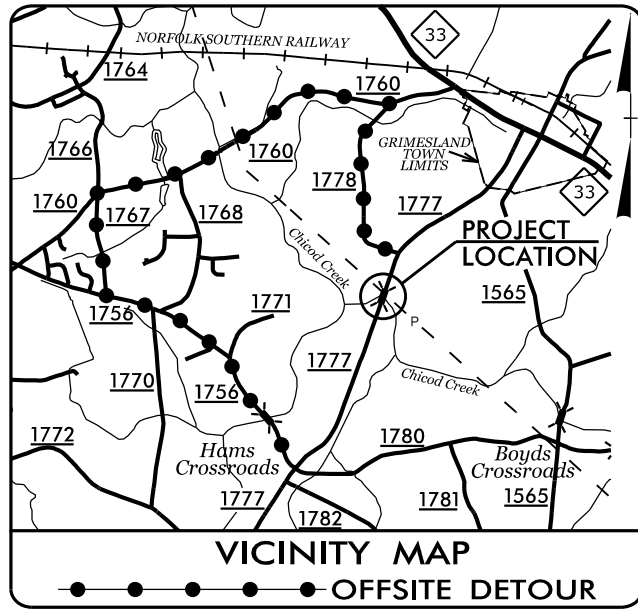
LOCATION: REPLACE BRIDGE 5 OVER CHICOD CREEK  
ON SR 1777

TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURE

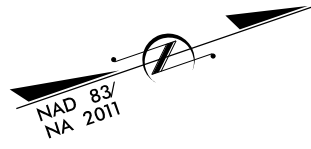
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4605	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38430.1.3	BRZ-1777(007)	PE	
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38430.3.1	BRZ-1777(007)	CONST.	

PERMIT DRAWING  
SHEET 1 OF 4

TIP PROJECT: B-4605



UTILITY WETLAND AND SURFACE WATER IMPACTS



BEGIN TIP PROJECT B-4605 -L- STA. 11 + 50.00

BEGIN BRIDGE -L- STA. 13 + 40.25

END BRIDGE -L- STA. 14 + 82.75

END TIP PROJECT B-4605 -L- STA. 17 + 00.00

TO HAMS CROSSROADS

TO GRIMESLAND

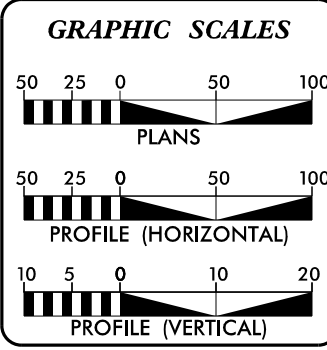
SITE 1

4

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CONTRACT:



DESIGN DATA

ADT 2019	=	1370
ADT 2039	=	1690
K	=	12 %
D	=	55 %
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V	=	60 MPH

\* (TTST 1% + DUAL 4%)

FUNC CLASS =  
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SUB-REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4605	=	0.077 mile
LENGTH STRUCTURES TIP PROJECT B-4605	=	0.027 mile
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Prepared For:  
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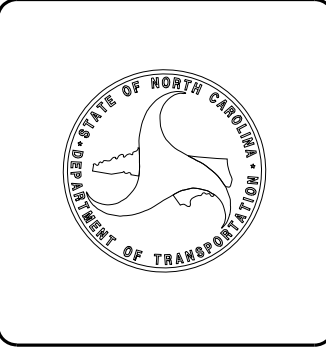
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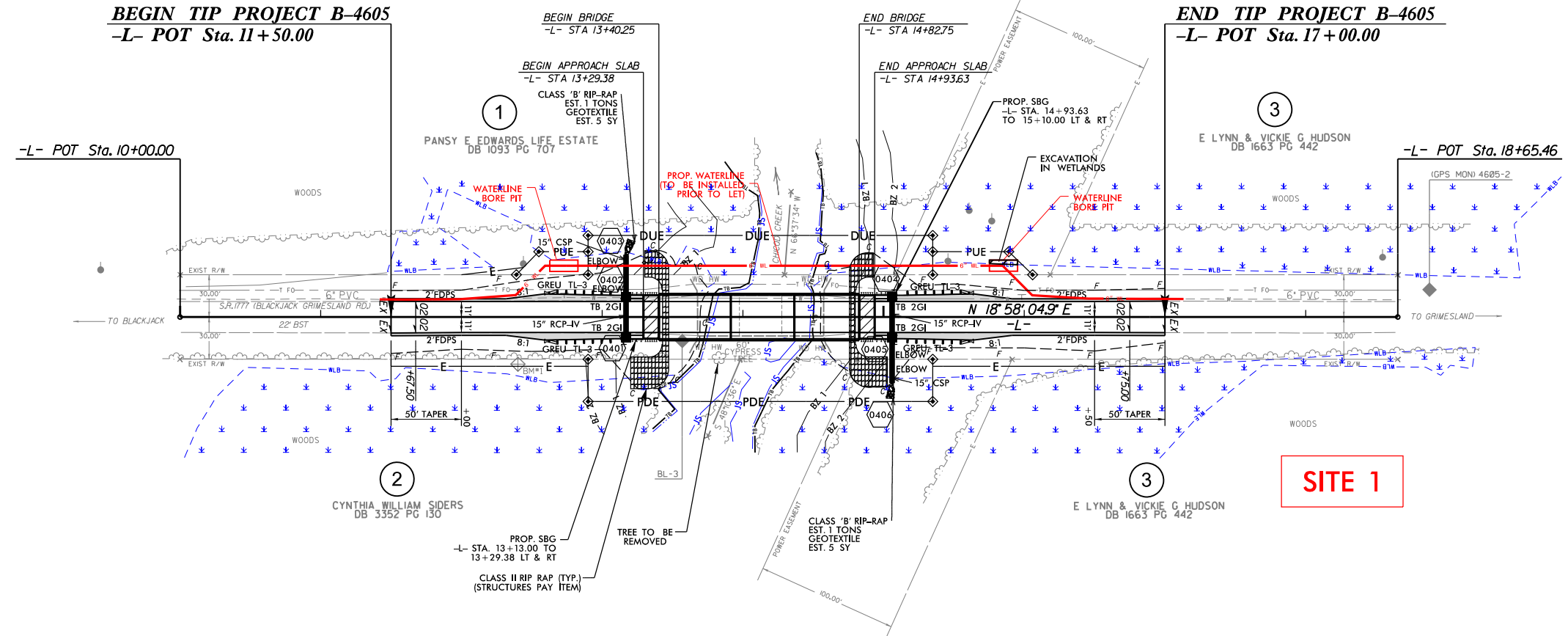
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 DENOTES EXCAVATION  
 IN WETLAND

# UTILITY WETLAND & STREAM IMPACTS

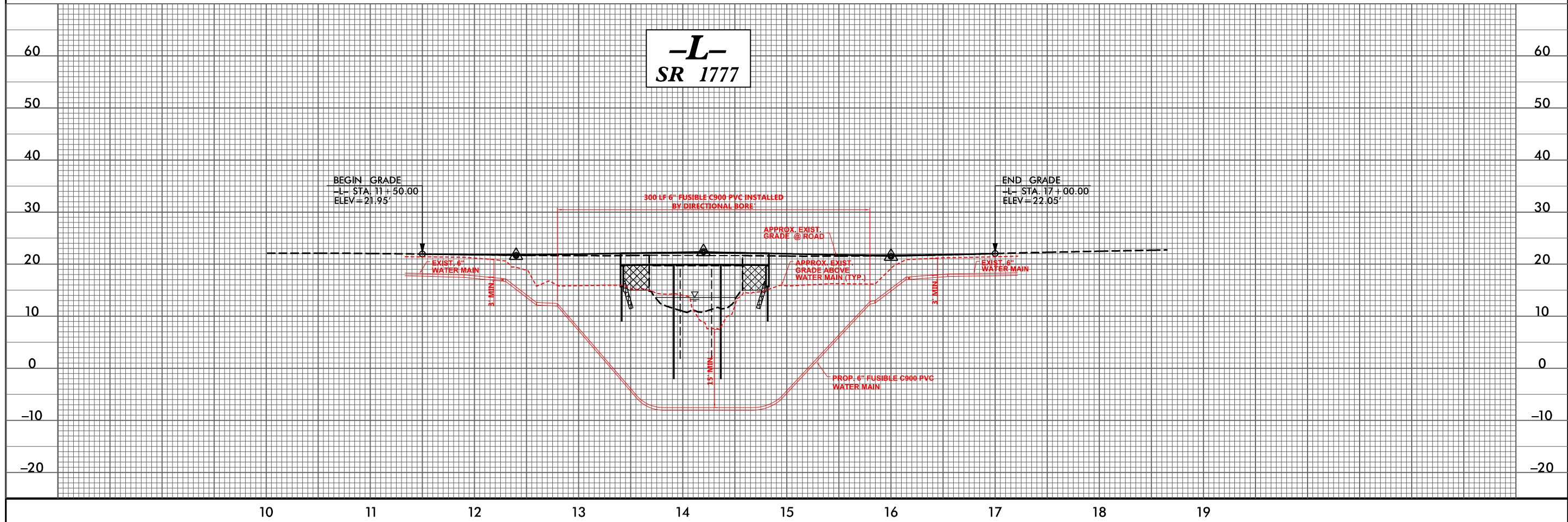
  
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PROJECT REFERENCE NO. <b>B-4605</b>	SHEET NO. <b>04</b>
RW SHEET NO.	
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 TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



**SITE 1**

-L-  
 SR 1777

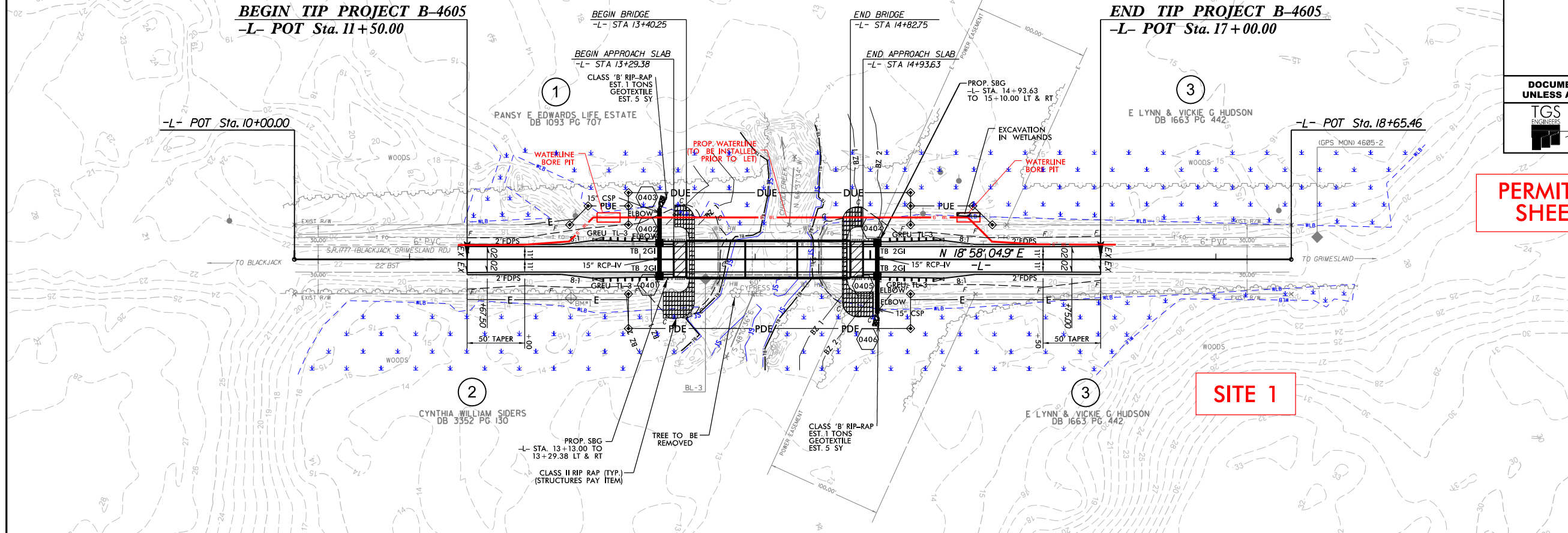


DENOTES EXCAVATION IN WETLAND

# UTILITY WETLAND & STREAM IMPACTS

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NA 2011

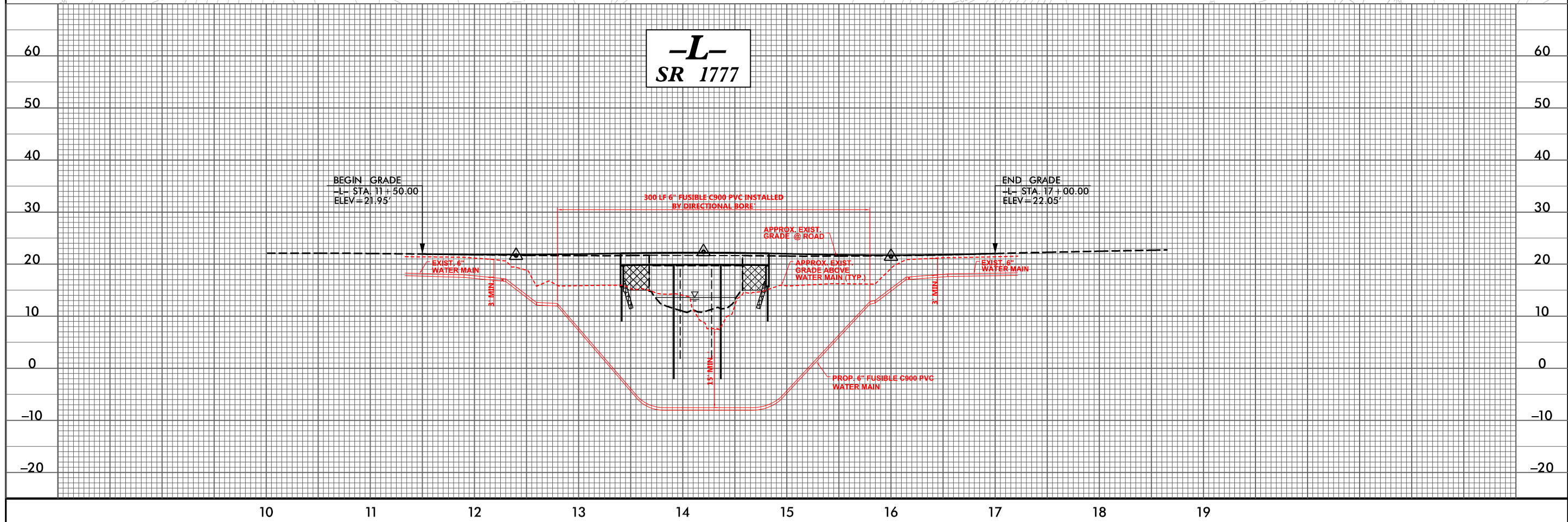
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RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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PERMIT DRAWING  
SHEET 3 OF 4

SITE 1

**-L-**  
**SR 1777**





**UTILITY WETLAND AND SURFACE WATER IMPACTS 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	-L- 15+75 to 15+95 LT	Waterline Bore Pit			< 0.01							
<b>TOTALS*:</b>					< 0.01					0	0	0

\*Rounded totals are sum of actual impacts

NOTES:  
Total Utility Permanent Wetland Impacts = < 0.01 Ac

NC DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 9/10/19  
 Pitt County  
 B-4605  
 38430.1.3  
 SHEET **4** OF **4**

09.08/19

See Sheet 1A For Index of Sheets  
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STATE OF NORTH CAROLINA  
 DIVISION OF HIGHWAYS

**PITT COUNTY**

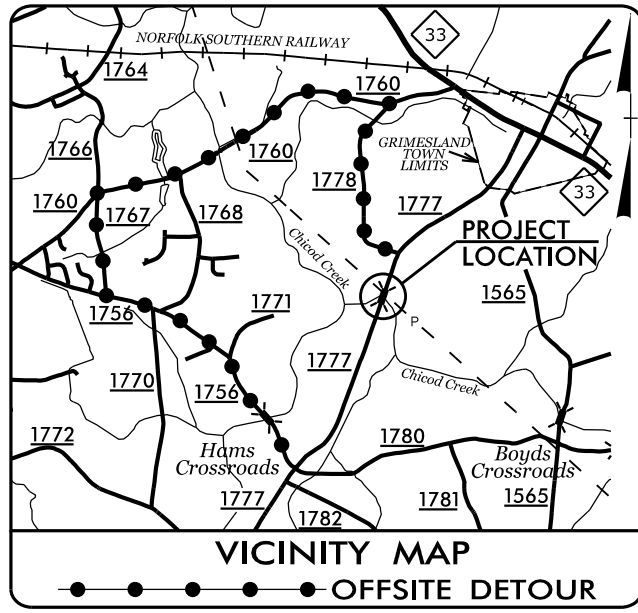
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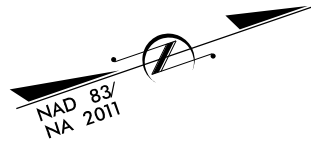
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PERMIT DRAWING  
 SHEET 1 OF 5

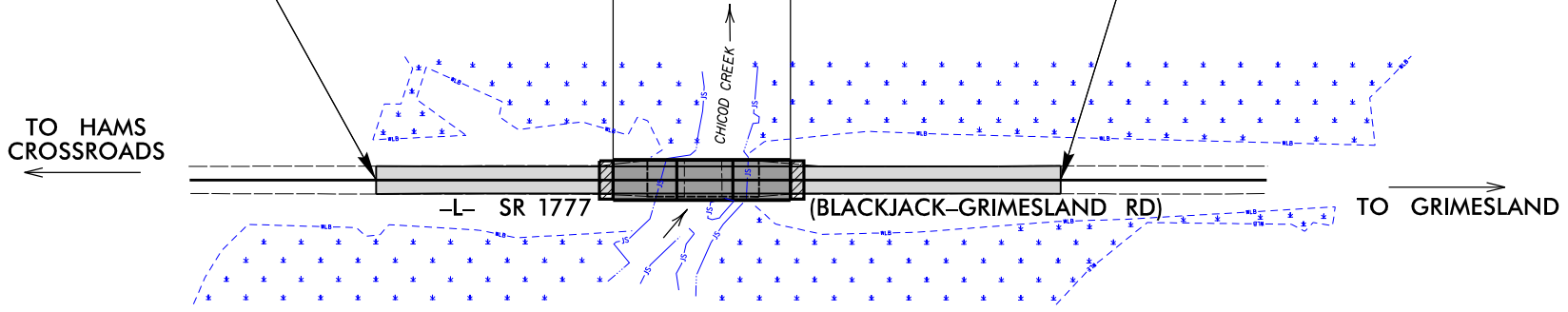
TIP PROJECT: B-4605



**UTILITY BUFFER IMPACTS**



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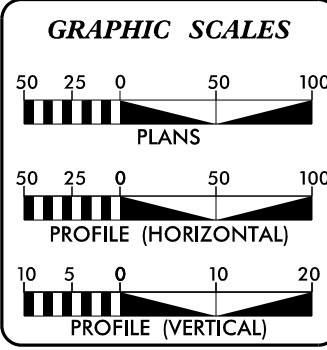
SITE 1

4

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

DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

CONTRACT:



**DESIGN DATA**

ADT 2019 =	1370
ADT 2039 =	1690
K =	12 %
D =	55 %
T =	5 % *
V =	60 MPH
* (TTST 1% + DUAL 4%)	
FUNC CLASS =	MINOR COLLECTOR SUB-REGIONAL TIER

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT B-4605	=	0.077 mile
LENGTH STRUCTURES TIP PROJECT B-4605	=	0.027 mile
TOTAL LENGTH TIP PROJECT B-4605	=	0.104 mile

Prepared For:  
**DIVISION OF HIGHWAYS**  
 1000 Birch Ridge Dr., Raleigh NC, 27610

By:  
 TGS ENGINEERS  
 706 HILLSBOROUGH ST  
 SUITE 200  
 RALEIGH, NC 27603

PH (919) 773-8887  
 CORP. LICENSE NO.: C-0275

---

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: OCTOBER 26, 2018

LETTING DATE: SEPTEMBER 25, 2019

V. MARCUS LOWERY, PE  
 PROJECT ENGINEER

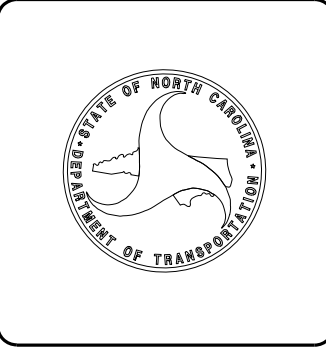
MICHAEL AMAN, P.E.  
 NCDOT DIVISION 2 CONTACT

HYDRAULICS ENGINEER

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

ROADWAY DESIGN ENGINEER

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

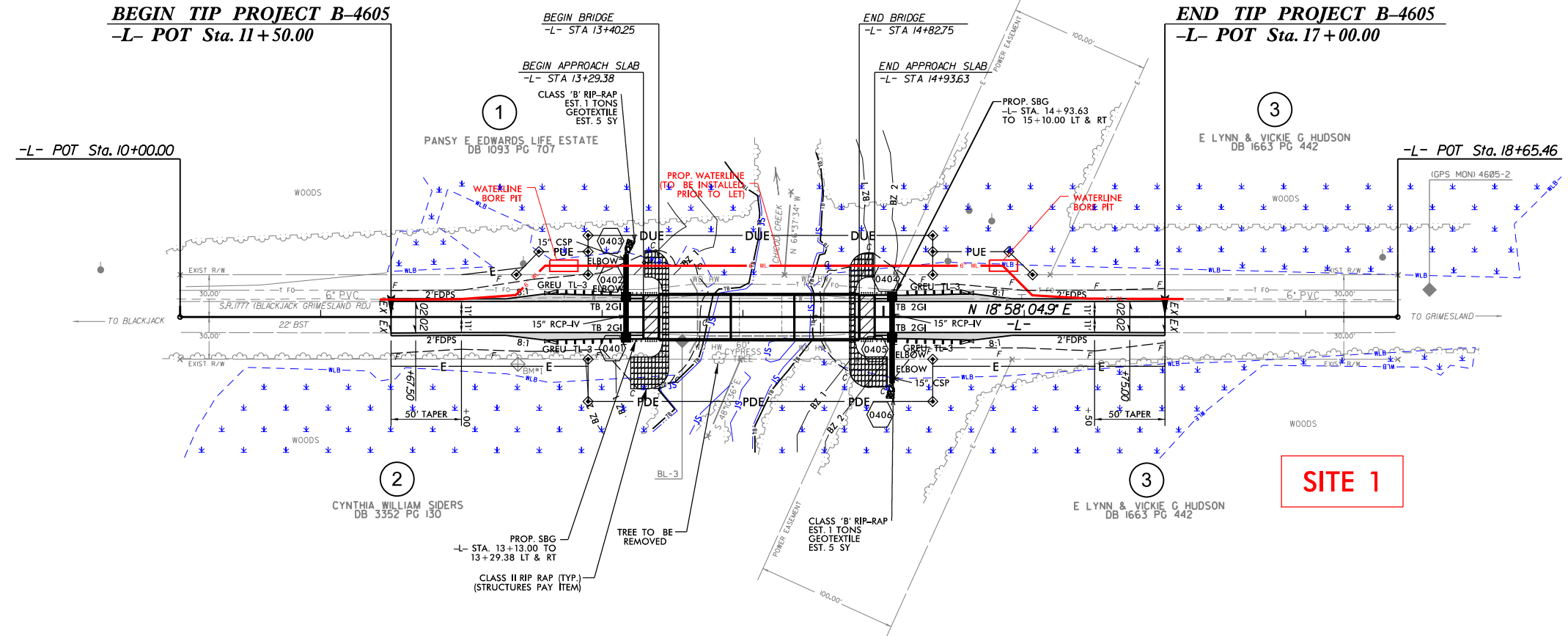


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# UTILITY BUFFER IMPACTS

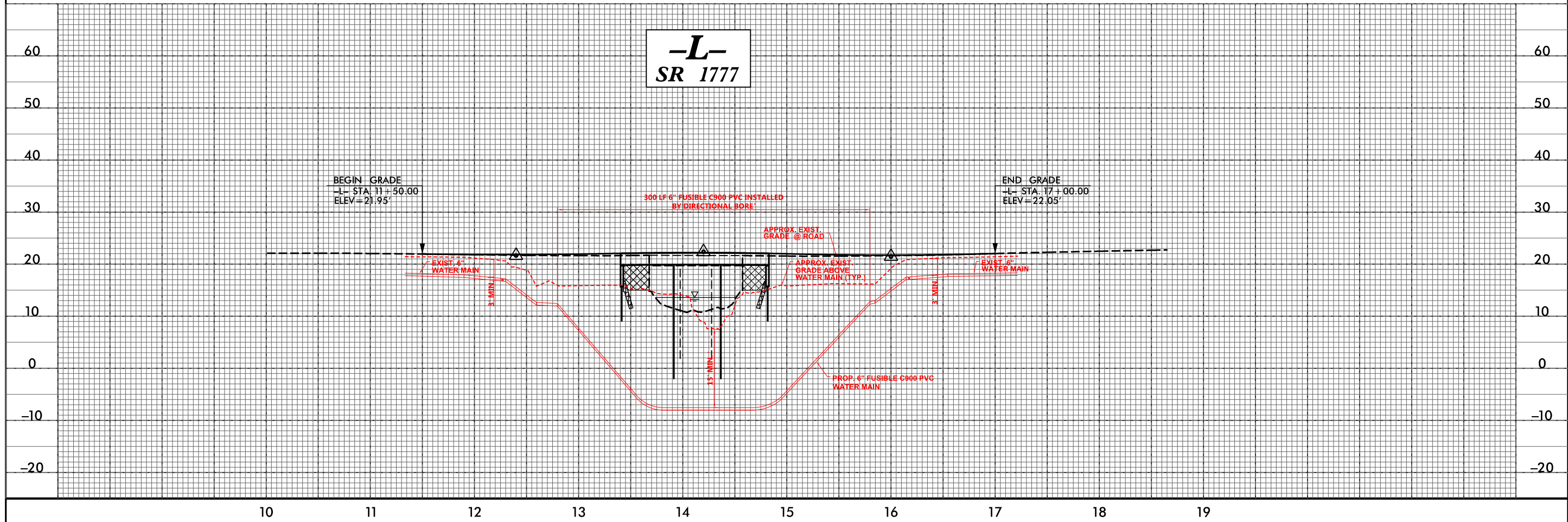


PROJECT REFERENCE NO. <b>B-4605</b>	SHEET NO. <b>04</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
<b>TGS ENGINEERS</b> 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275



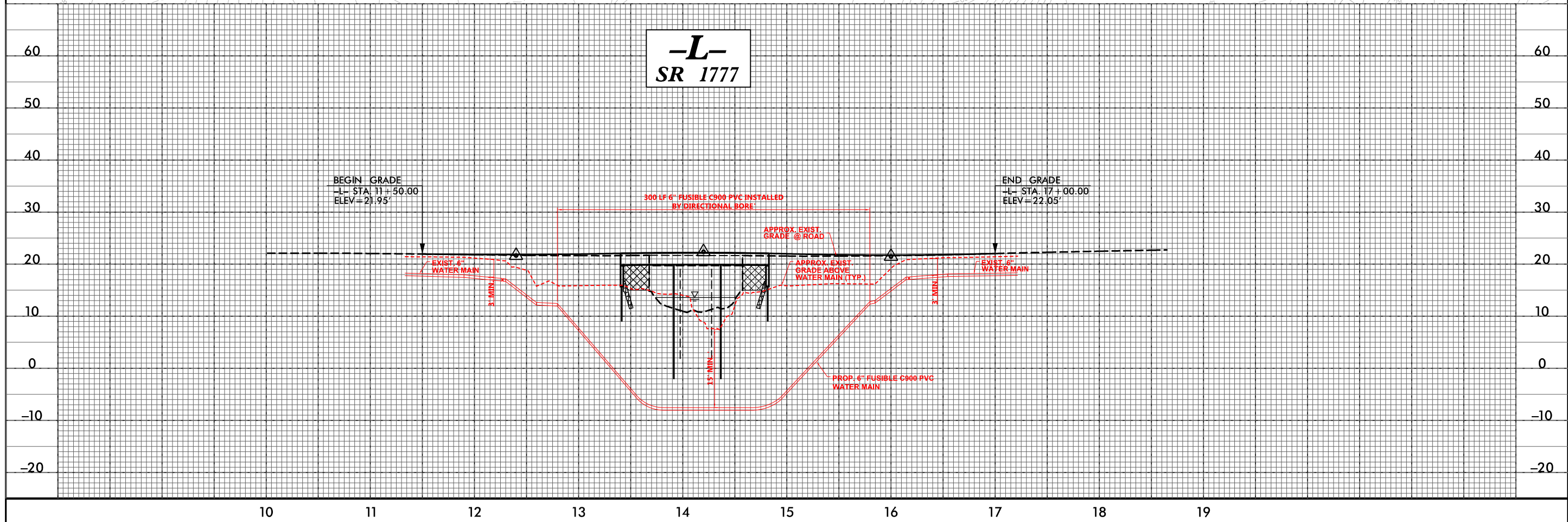
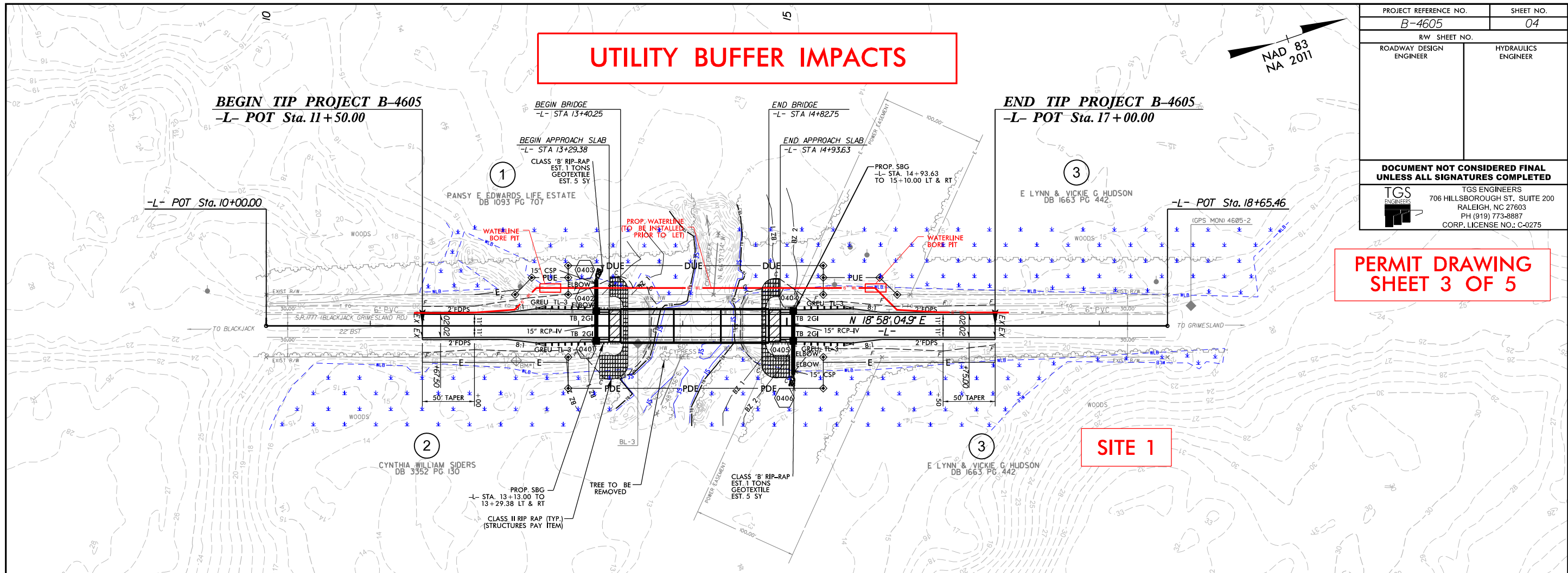
PERMIT DRAWING  
SHEET 2 OF 5

SITE 1



# UTILITY BUFFER IMPACTS

PROJECT REFERENCE NO. <b>B-4605</b>	SHEET NO. <b>04</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	
 <b>TGS ENGINEERS</b> 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



# UTILITY RIPARIAN BUFFER IMPACTS SUMMARY

			IMPACT									BUFFER REPLACEMENT	
SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	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> )		
<b>TOTAL:</b>													

NOTES:  
No Utility Buffer Impacts on Project

N.C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS

Pitt County  
PROJECT: 38430.1.3  
B-4605

9/10/2019  
SHEET **4** OF **5**

# UTILITY WETLANDS IN BUFFER IMPACTS SUMMARY

SITE NO.	STATION (FROM/TO)	WETLANDS IN BUFFERS	
		ZONE 1 (ft <sup>2</sup> )	ZONE 2 (ft <sup>2</sup> )
<b>TOTAL:</b>			

NOTES:  
No Utility Wetlands in Buffer Impacts on Project

N.C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS

Pitt County  
PROJECT: 38430.1.3  
B-4605

9/10/2019  
SHEET **5** OF **5**

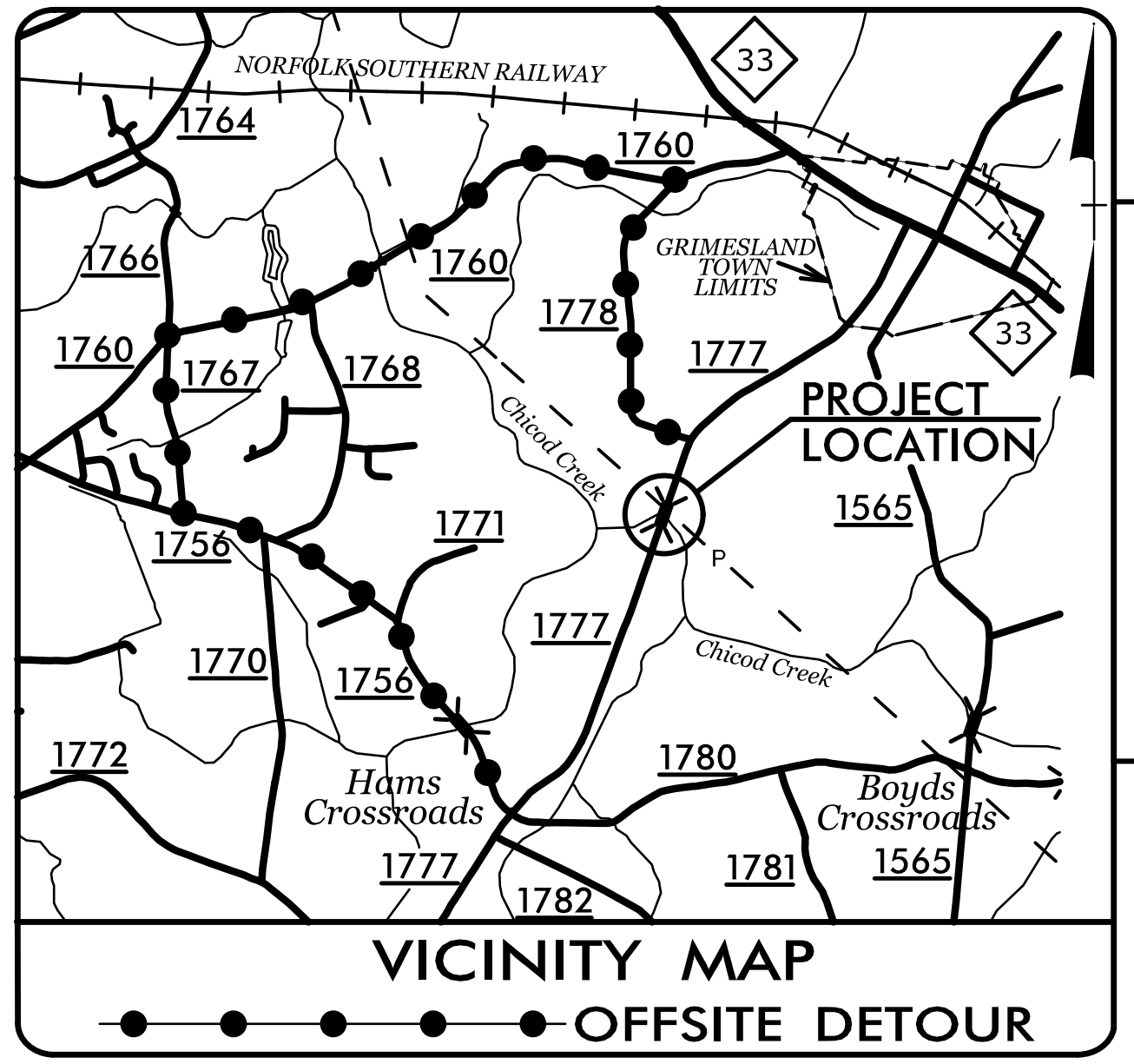
09/08/2019

See Sheet 1A For Index of Sheets  
 See Sheet 1B For Conventional Plan Sheet Symbols  
 See Sheet 1C-1 & 1C-2 For Survey Control Sheet

STATE OF NORTH CAROLINA  
 DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	<b>B-4605</b>	<b>1</b>	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38430.1.3	BRZ-1777(007)	PE	
38430.2.1	BRZ-1777(007)	RW & UTIL	
38430.3.1	BRZ-1777(007)	CONST.	

**TIP PROJECT: B-4605**

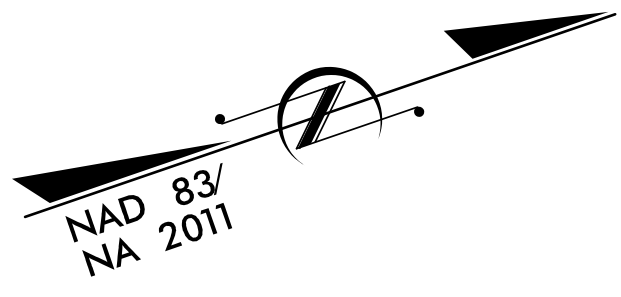


90% PLANS SUBMITTAL

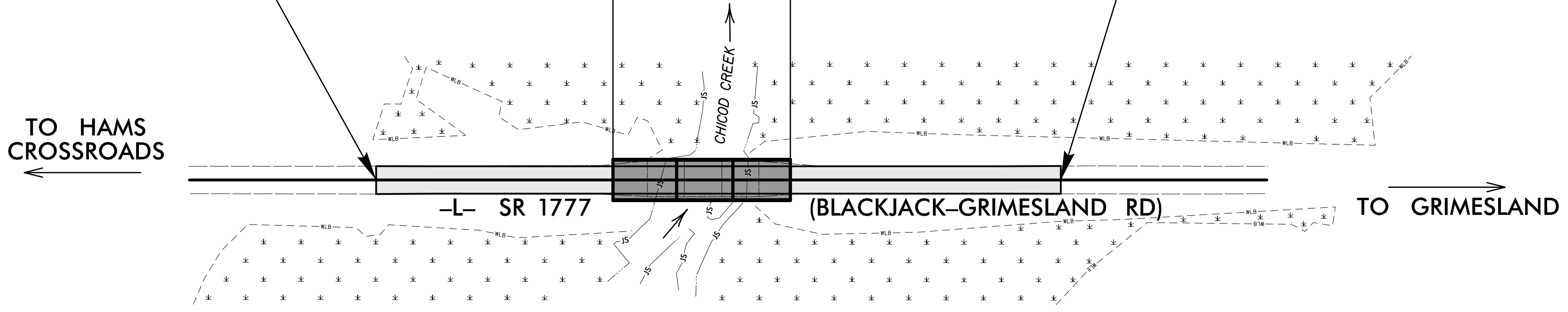
**PITT COUNTY**

**LOCATION: REPLACE BRIDGE 5 OVER CHICOD CREEK  
 ON SR 1777**

**TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURE**



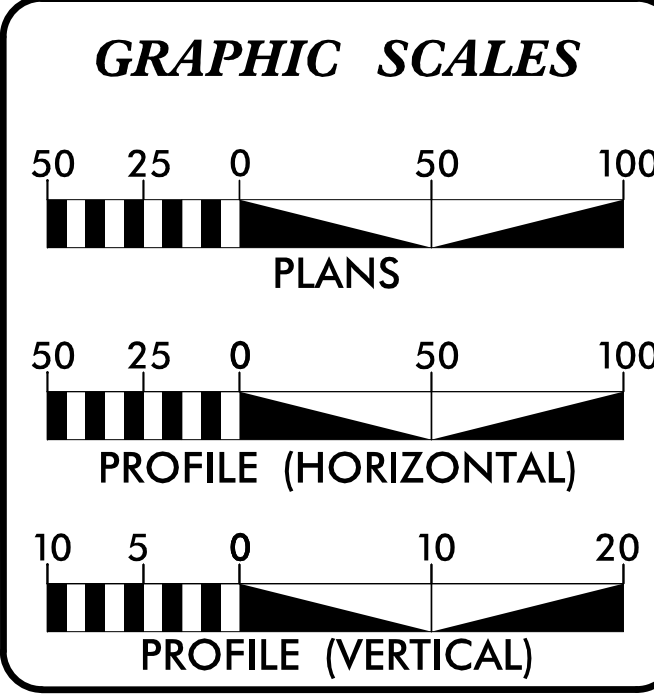
**BEGIN TIP PROJECT B-4605** -L- STA. 11 + 50.00  
**BEGIN BRIDGE** -L- STA. 13 + 40.25  
**END BRIDGE** -L- STA. 14 + 82.75  
**END TIP PROJECT B-4605** -L- STA. 17 + 00.00



**4**

DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

**CONTRACT:**



**DESIGN DATA**

ADT 2020 =	1380
ADT 2040 =	1700
K =	12 %
D =	55 %
T =	5 % *
V =	60 MPH
* (TTST 1% + DUAL 4%)	
FUNC CLASS =	MINOR COLLECTOR SUB-REGIONAL TIER

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT B-4605	=	0.077 mile
LENGTH STRUCTURES TIP PROJECT B-4605	=	0.027 mile
TOTAL LENGTH TIP PROJECT B-4605	=	0.104 mile

Prepared For:  
**DIVISION OF HIGHWAYS**  
 1000 Birch Ridge Dr., Raleigh NC, 27610

By:  
 TGS ENGINEERS  
 706 HILLSBOROUGH ST  
 SUITE 200  
 RALEIGH, NC 27603

PH (919) 773-8887  
 CORP. LICENSE NO.: C-0275

2018 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**  
 OCTOBER 26, 2018

**LETTING DATE:**  
 MARCH 17, 2020

**V. MARCUS LOWERY, PE**  
 PROJECT ENGINEER

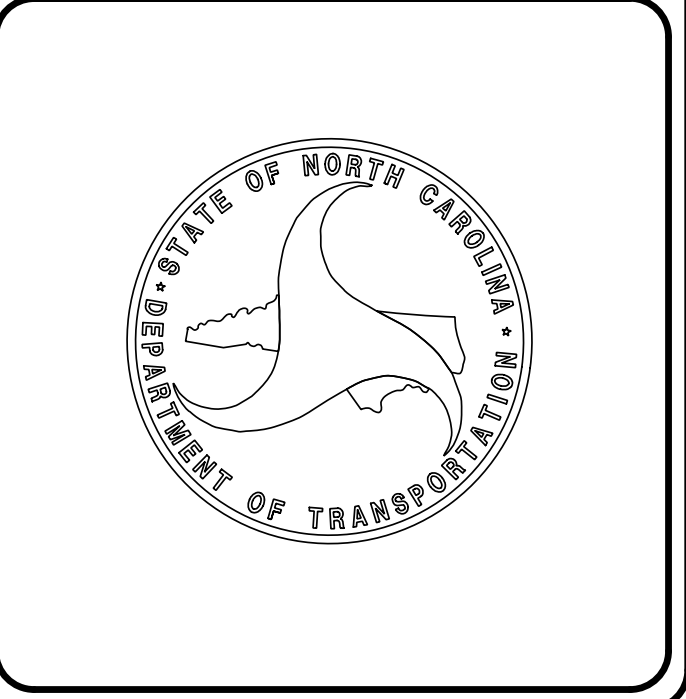
**DAVID STUTTS, P.E.**  
 NCDOT CONTACT

**HYDRAULICS ENGINEER**

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

**ROADWAY DESIGN ENGINEER**

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



5/24/2019 X:\NCDOT\B-4605\Roadway\Proj\B4605\_rdy\_fsh.dgn User:mlowery

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**TIP PROJECT: B-4605**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

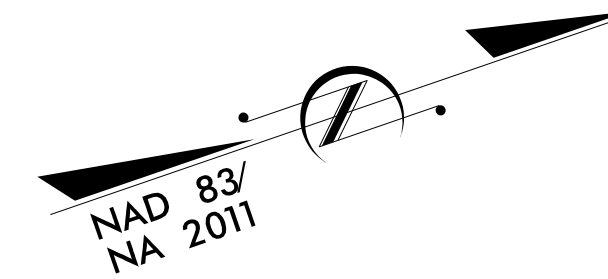
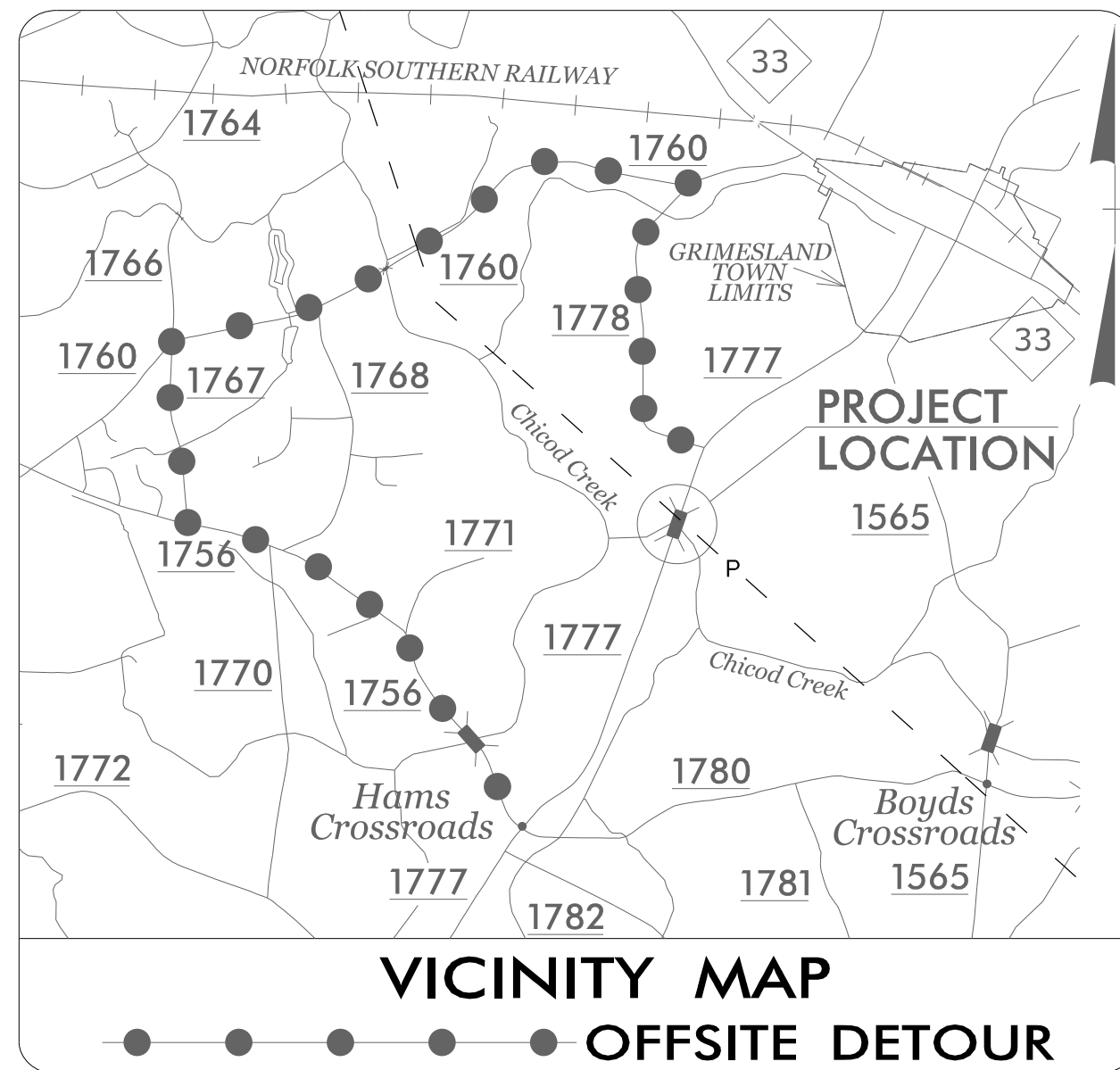
T.I.P. NO.	SHEET NO.
B-4605	UO-1

NOTE:  
ALL UTILITY WORK SHOWN ON THIS SHEET IS DONE BY OTHERS.  
NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR UTILITY WORK SHOWN ON THIS SHEET.

**UTILITIES BY OTHERS PLANS  
PITT COUNTY**

**LOCATION: REPLACE BRIDGE 5 OVER CHICOD CREEK  
ON SR 1777**

**TYPE OF WORK: POWER DISTRIBUTION & TELECOM**



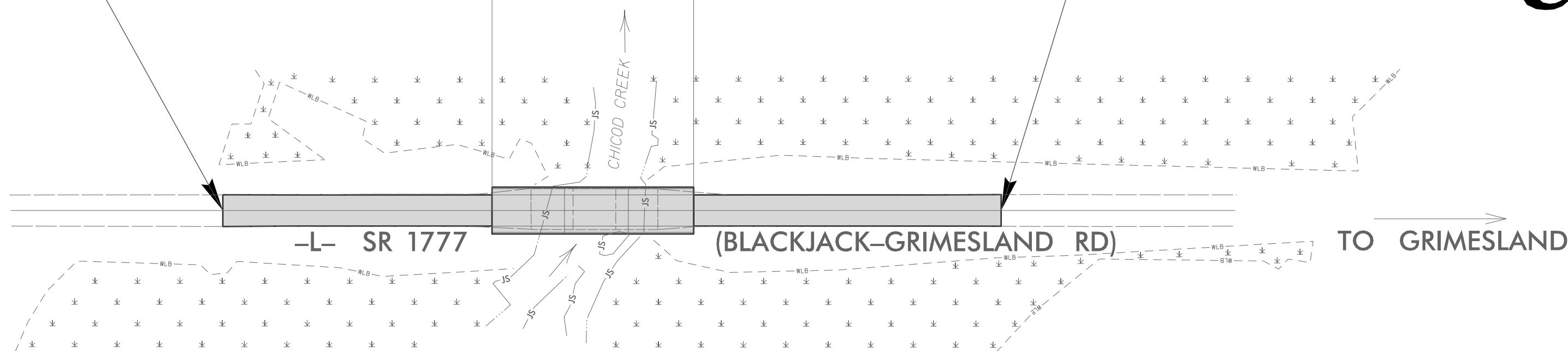
BEGIN TIP PROJECT B-4605  
-L- STA. 11 + 50.00

BEGIN BRIDGE  
-L- STA. 13 + 40.25

END BRIDGE  
-L- STA. 14 + 82.75

END TIP PROJECT B-4605  
-L- STA. 17 + 00.00

TO HAMS CROSSROADS

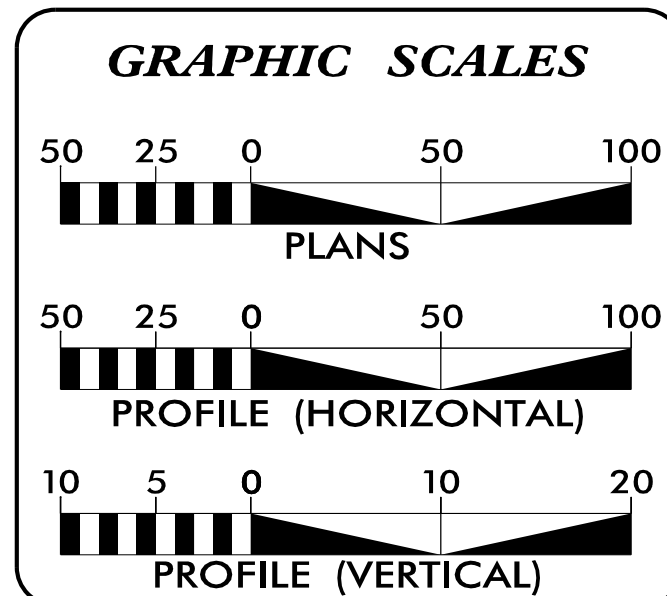


**UO-2**

**4**

INCOMPLETE PLANS  
DO NOT USE FOR R/W ACQUISITION

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



**INDEX OF SHEETS**

SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2	UBO PLAN SHEET

**UTILITY OWNERS WITH CONFLICTS**

(A) POWER DISTRIBUTION - GUC ELECTRIC  
(B) TELECOM - CENTURYLINK

PREPARED IN THE OFFICE OF:

License No. C-2639  
401 Harrison Oaks Blvd., Suite 145 Cary, NC 27513  
(919)-653-0001

Michael E. Davis	UTILITY COORDINATION PROJECT MANAGER
Harris S. Winters	PROJECT UTILITY COORDINATOR
James N. Arnold	PROJECT UTILITY DESIGNER

**DIVISION OF HIGHWAYS  
UTILITIES UNIT**  
1555 MAIL SERVICES CENTER  
RALEIGH NC 27699-1555  
PHONE (919) 707-6690  
FAX (919) 250-4151

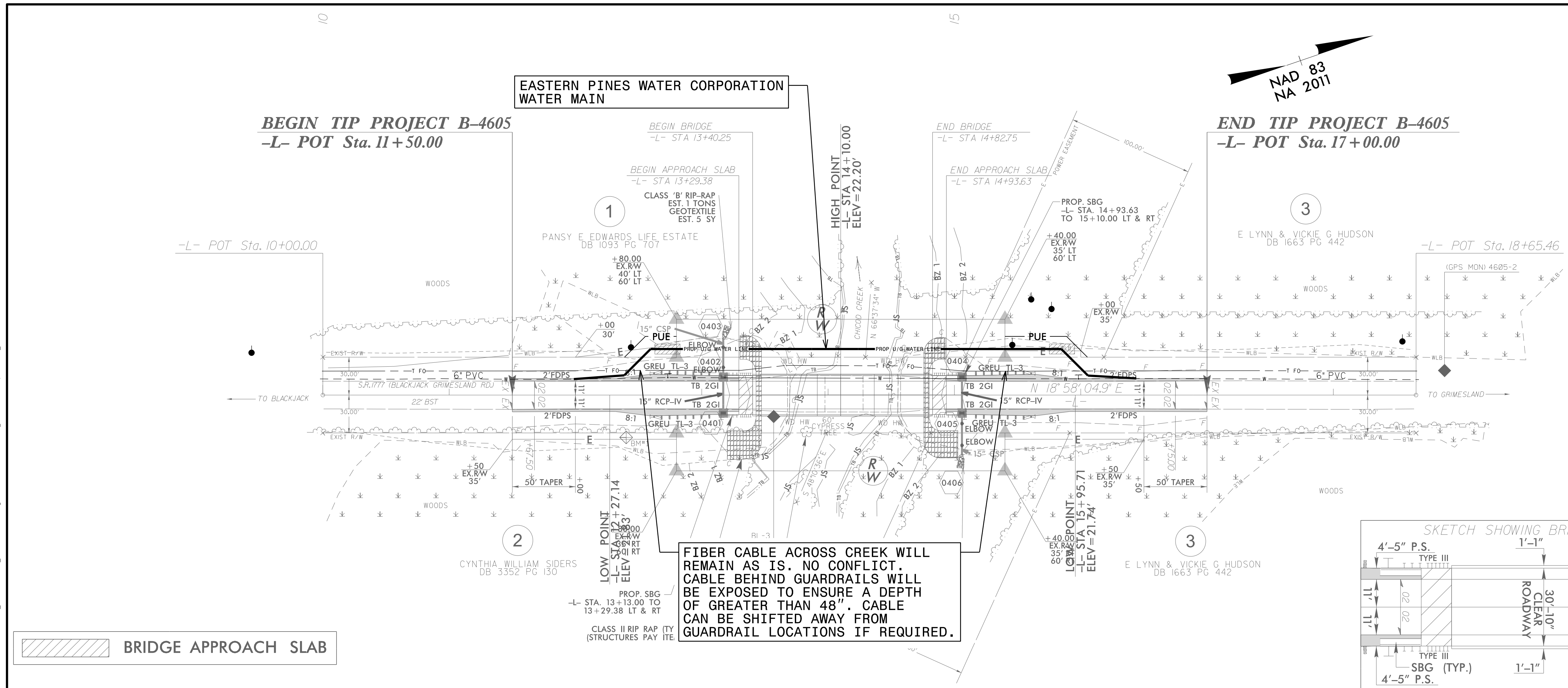
Heather Lane, P.E.	DIVISION CONTACT #1
David Kramer	DIVISION CONTACT #2
	DIVISION CONTACT #3
	DIVISION CONTACT #4



**UTILITIES BY OTHERS**

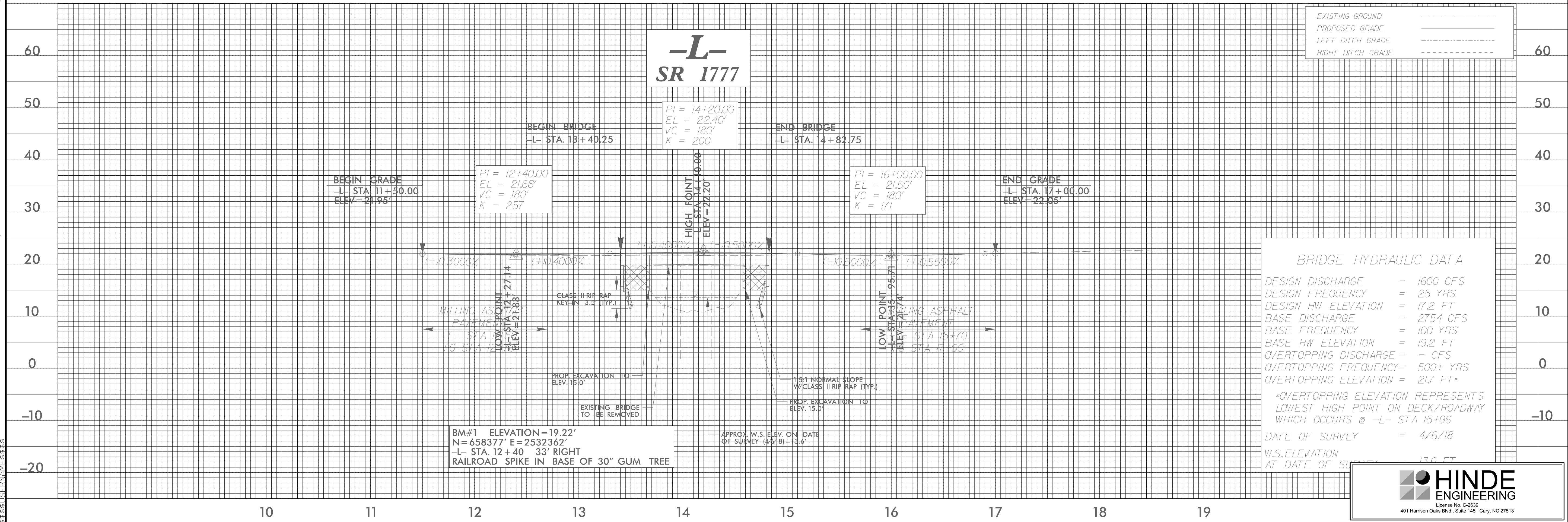
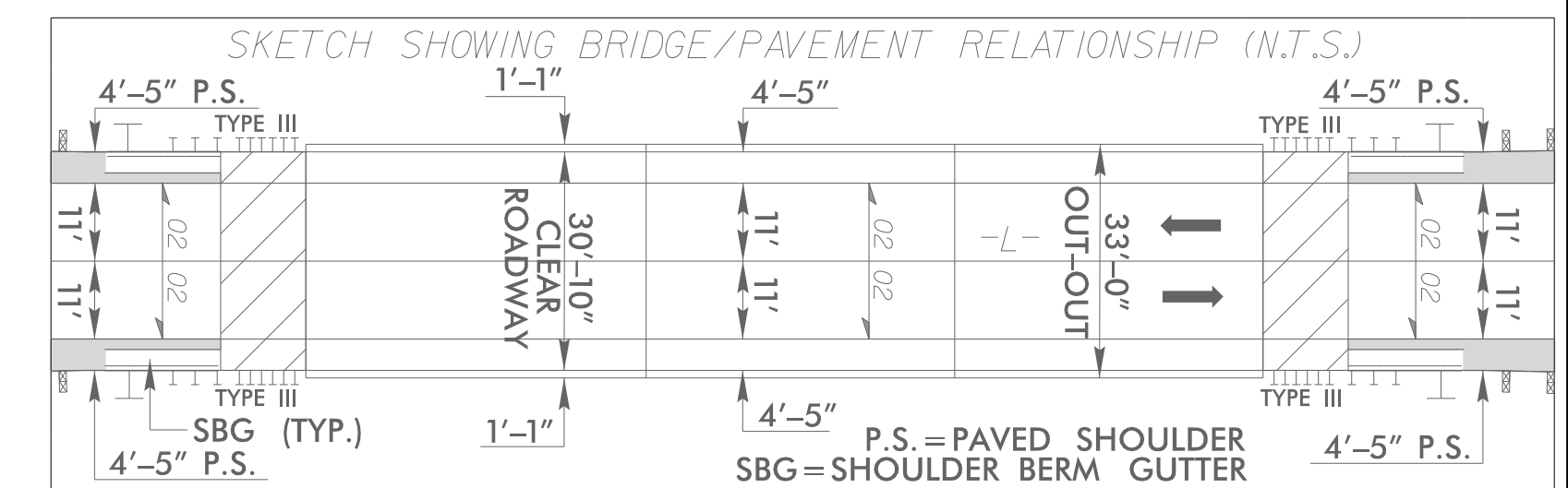
**NOTE:**  
ALL UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR UTILITY WORK SHOWN ON THIS SHEET.

NAD 83  
NA 2011



BRIDGE APPROACH SLAB

FIBER CABLE ACROSS CREEK WILL REMAIN AS IS. NO CONFLICT. CABLE BEHIND GUARDRAILS WILL BE EXPOSED TO ENSURE A DEPTH OF GREATER THAN 48". CABLE CAN BE SHIFTED AWAY FROM GUARDRAIL LOCATIONS IF REQUIRED.



EXISTING GROUND  
PROPOSED GRADE  
LEFT DITCH GRADE  
RIGHT DITCH GRADE

**BRIDGE HYDRAULIC DATA**

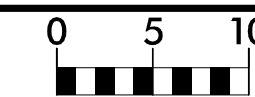
DESIGN DISCHARGE = 1600 CFS  
DESIGN FREQUENCY = 25 YRS  
DESIGN HW ELEVATION = 17.2 FT  
BASE DISCHARGE = 2754 CFS  
BASE FREQUENCY = 100 YRS  
BASE HW ELEVATION = 19.2 FT  
OVERTOPPING DISCHARGE = - CFS  
OVERTOPPING FREQUENCY = 500+ YRS  
OVERTOPPING ELEVATION = 21.7 FT\*

\*OVERTOPPING ELEVATION REPRESENTS LOWEST HIGH POINT ON DECK/ROADWAY WHICH OCCURS @ -L- STA 15+96

DATE OF SURVEY = 4/6/18  
W.S. ELEVATION AT DATE OF SURVEY = 13.6 FT

7: APR-2019 14:42 PROJECTS\A2016\A2016703\00\_TGS.Div-2.LIB.Replacement\A2016703.03.TGS.Div-2.LIB.B-4605\Design\Utilities\Engineer\ng\B0\Pro\n\_b4605.ut\_rdy4\_U002.psh.dgn

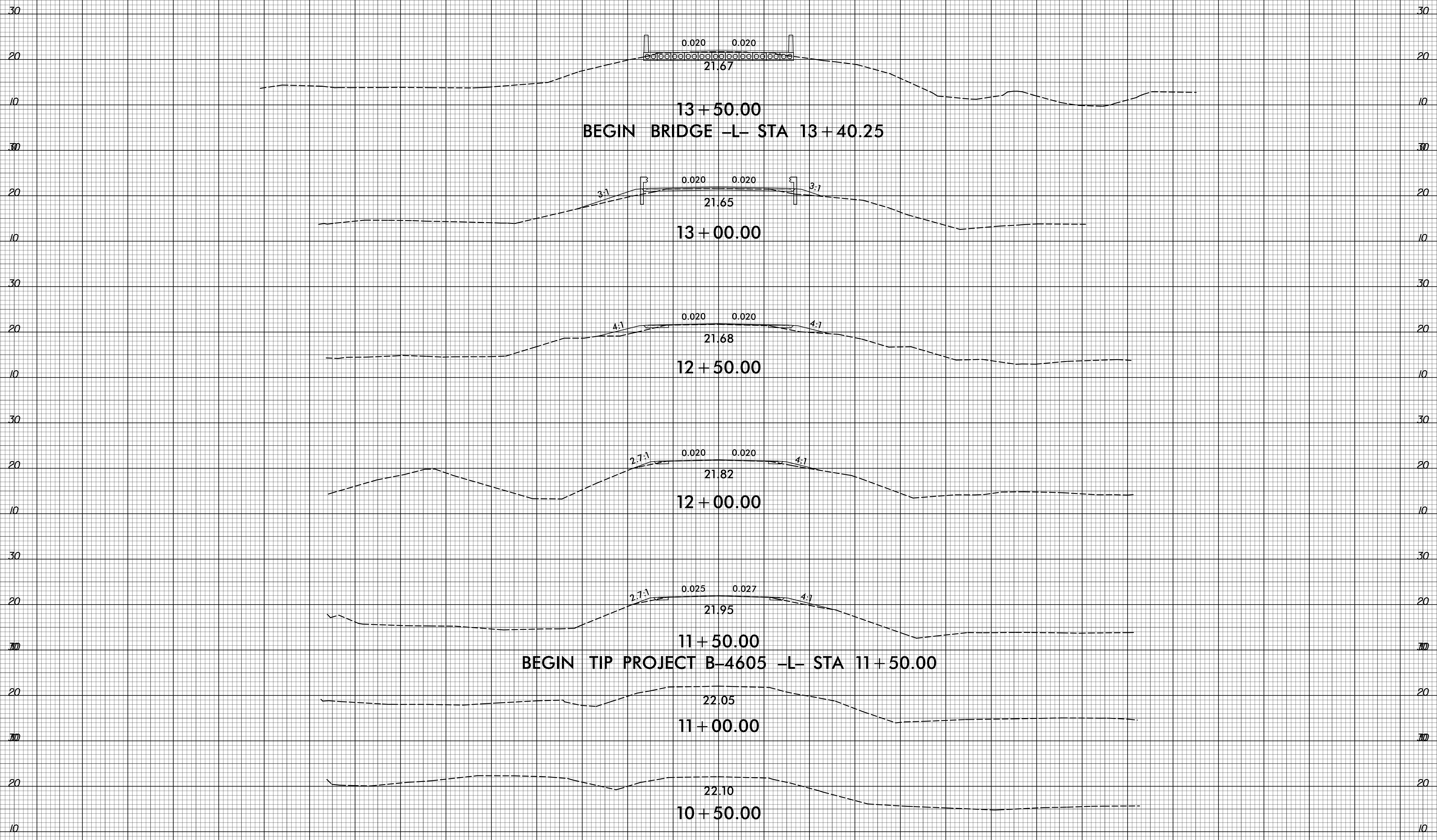
6/23/16



PROJ. REFERENCE NO.  
B-4605

SHEET NO.  
X-1

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150



13+50.00  
BEGIN BRIDGE -L- STA 13+40.25

13+00.00

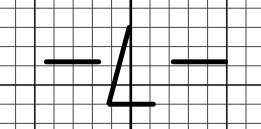
12+50.00

12+00.00

11+50.00  
BEGIN TIP PROJECT B-4605 -L- STA 11+50.00

11+00.00

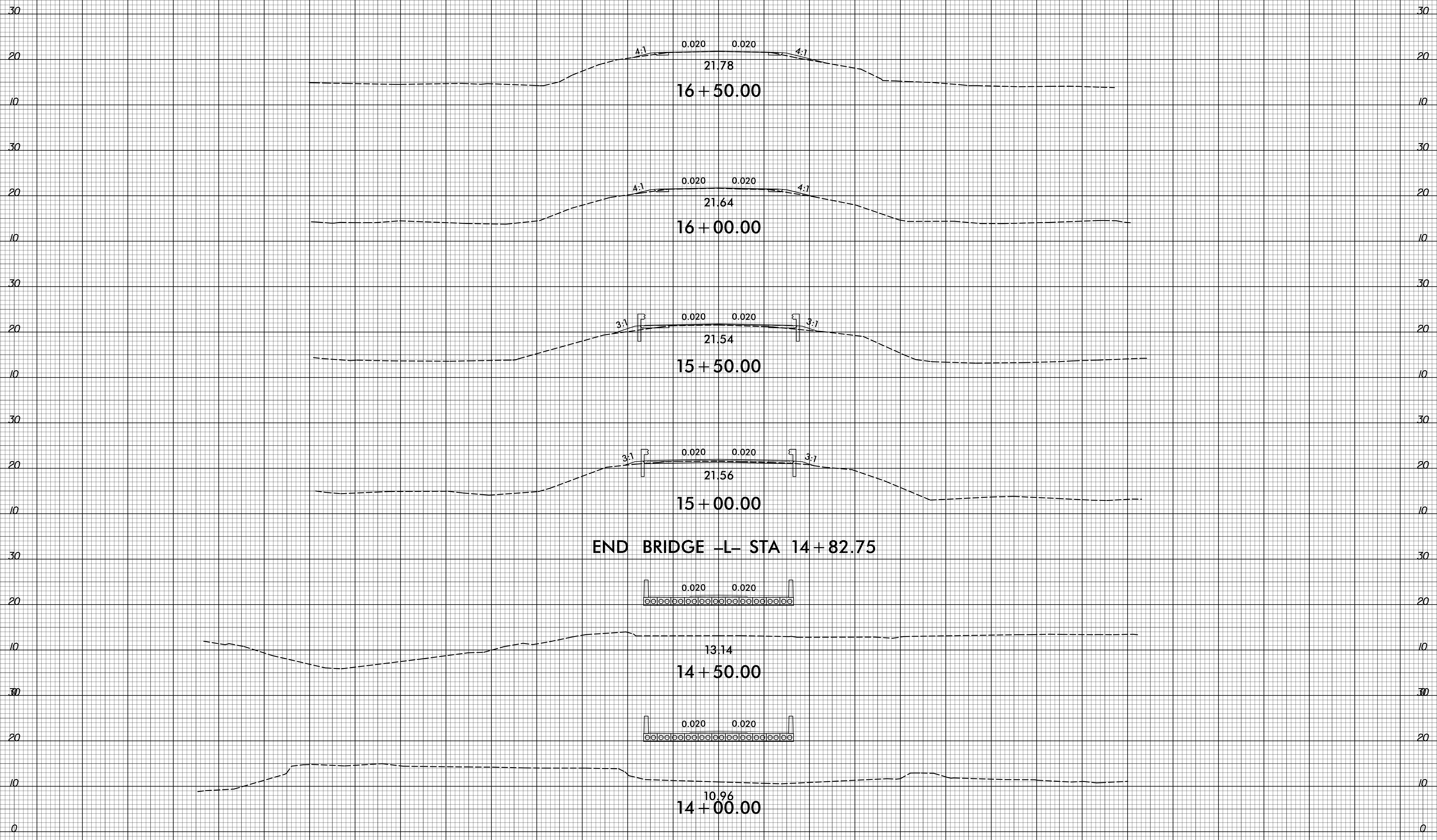
10+50.00



5/23/2019  
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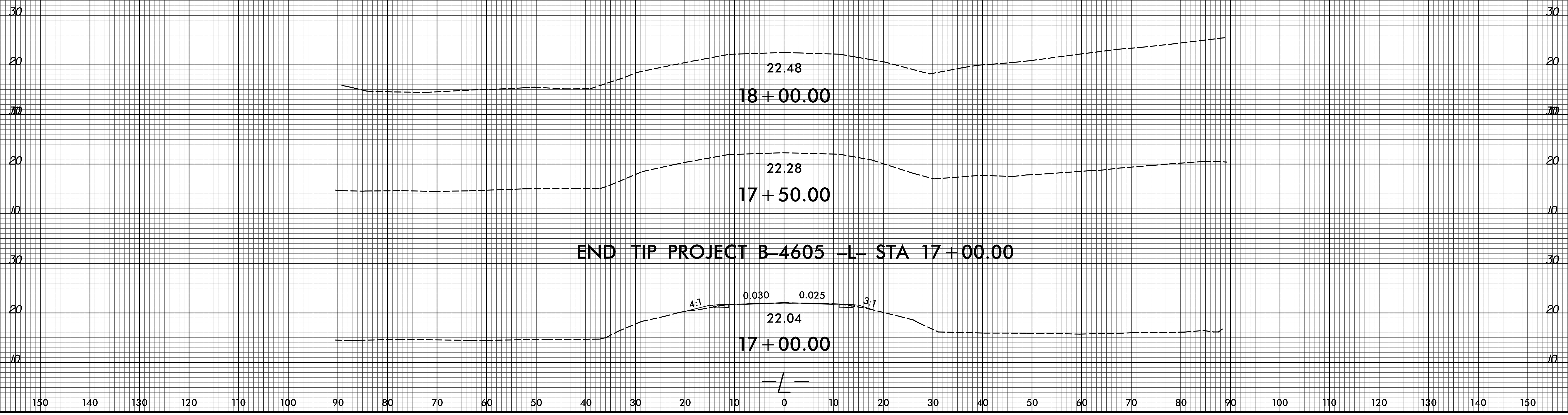
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150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150



150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150



END TIP PROJECT B-4605 -L- STA 17+00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150