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:*

Beaufort

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-5302

WBS #*

46016.1.1

(for NCDOT use only)

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

- [x] 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?*

- [x] 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: 23 - Categorical Exclusions

Nationwide Permit (NWP) Number: 12 - Utility Lines

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

- [x] 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

B-5302 Revised - RW - TP 04.pdf 65.56KB

FILE TYPE MUST BE PDF

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

◉ Yes ○ No

1i. Is the project located within a NC DCM Area of Environmental Concern (AEC)? *

○ Yes ◉ No ○ Unknown

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? *

NCDOT

1b. Primary Contact Email: *

gcashin@ncdot.gov

1c. Primary Contact Phone: *

(xxx)xxx-xxxx

(919)707-6107

1d. Who is applying for the permit? *

☑ Owner ☐ Applicant (other than owner)

(Check all that apply)

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

○ Yes ◉ No

2. Owner Information

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

Multiple properties

2b. Deed book and page no.:

2c. Responsible party:

(for Corporations)

2d. Address *

Street Address

1000 Birch Ridge Dr.

Address Line 2

City

Raleigh

State / Province / Region

NC

Postal / Zip Code

27610

Country

USA

2e. Telephone Number: *

(xxx)xxx-xxxx

(919)707-6107

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: *

B-5302 Bridge No. 3 over Norfolk Southern RR on US 17 Bus (Central)

1b. Subdivision name:

(if appropriate)

1c. Nearest municipality / town: *

Washington

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: *

35.530422

ex: 34.208504

Longitude: *

-77073292

-77.796371

3. Surface Waters

3a. Name of the nearest body of water to proposed project: *

Taylor Creek

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

SC; 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. *

030201040103

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: *

Land use in the vicinity consists of bottomland swamp, rural residences and some small businesses along the roadway.

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:

1.5

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

(intermittent and perennial)

N/A

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

Replace the existing US 17 bridge over the railroad, which will also require relocating existing water sewer and power utilities.

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

The existing 5-span 173 foot structure will be replaced on the existing alignment. The new 3-span bridge will be 246 feet long, with a deck width of 70 feet. Standard roadbuilding equipment will be used. Water and sewer mains for the City of Washington need to be relocated, as well as a sewer main for the Town of Chocowinity. These will be installed using directional bore to reduce impacts, but will still require excavation and fill in wetlands. Power, telephone, and CATV lines will be relocated without causing impacts.

4j. Please upload project drawings for the proposed project.

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

B-5302_Permit Drawings_20181020.pdf 4.36MB
B5302 Utilities combined.pdf 5.74MB
B-5302_Roadway.pdf 2.86MB

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:

A PJD request was sent November 1, 2016. Wetland lines have since been extended due to utility easements.

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): Brian Dustin and Mark Mickley

Agency/Consultant Company: Mulkey, Inc.

Other: Gordon Cashin & Hal Bain made a follow-up visit in 2018.

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 Jurisdicition * (?)	2g. Impact area *
1 - Roadway/Bridge	Roadway fill	P	Bottomland Hardwood Forest	WA	Yes	Both	0.560 (acres)
1- Utilities	Water/sewer fill	P	Bottomland Hardwood Forest	WA	Yes	Both	0.060 (acres)
1 - Utilities	Water/sewer excavation	P	Bottomland Hardwood Forest	WA	Yes	Both	0.010 (acres)
2 - Utilities	Water/sewer fill	P	Bottomland Hardwood Forest	WA	Yes	Both	0.220 (acres)
2 - Utilities	Water/sewer excavation	P	Bottomland Hardwood Forest	WA	Yes	Both	0.020 (acres)
3 - Utilities	Water/sewer fill	P	Bottomland Hardwood Forest	WA	Yes	Both	0.120 (acres)
3 - Utilities	Water/sewer excavation	P	Bottomland Hardwood Forest	WA	Yes	Both	0.010 (acres)

4 - Utilities	Water/sewer fill	P	Bottomland Hardwood Forest	WA	Yes	Both	0.050 (acres)
4 - Utilities	Water/sewer excavation	P	Bottomland Hardwood Forest	WA	Yes	Both	0.010 (acres)
5 - Utilities	Water/sewer fill	P	Bottomland Hardwood Forest	WA	Yes	Both	0.010 (acres)
Roadway/Bridge	Handclearing	T	Bottomland Hardwood Forest	WA	Yes	Both	0.391 (acres)

2g. Total Temporary Wetland Impact

0.391

2g. Total Permanent Wetland Impact

1.070

2g. Total Wetland Impact

1.461

2h. Comments:

There will be 0.09 acre of temporary fill in wetlands in the hand clearing areas for the instalation of erosion control meaures, including Temporary Silt Fences and/or Special Sediment Control Fence.

4. Open Water Impacts

If there are proposed impacts to lakes, ponds, estuaries, tributaries, sounds, the Atlantic Ocean, or any other open water of the U.S. then individually list all open water impacts below.

4a. Site # * (?)	4a1. Impact Reason	4b. Impact type * (?)	4c. Name of waterbody (?)	4d. Activity type *	4e. Waterbody type *	4f. Impact area *
1 - Roadway Bridge		P	N/A	Bridge	Pond	0.01 (acres)
1 - Roadway Bridge		T	N/A	Bridge	Pond	0.01 (acres)

4g. Total temporary open water Impacts:

0.01

4g. Total permanent open water impacts:

0.01

4g. Total open water impacts:

0.02

4h. Comments:

Surface Water impacts are to an excavated pond; permanent impacts are 0.002 acre, temporary impacts are 0.007 acre.

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: *

Bridge No. 3 will be replaced on the existing alignment, use of directional bore methods all helped to minimize impacts, and traffic will be detoured offsite.

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

Slopes in wetlands will be 3:1 and use of directional bore methods all helped to minimize impacts. BMP's for Construction and Maintenance Activities will be implemented.

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

2c. If yes, mitigation is required by (check all that apply):

☑ DWR ☑ Corps

2d. If yes, which mitigation option(s) will be used for this project?

☐ Mitigation bank ☑ Payment to in-lieu fee program ☐ Permittee Responsible Mitigation

4. Complete if Making a Payment to In-lieu Fee Program

4a. Approval letter from in-lieu fee program is attached.

◉ Yes ○ No

4b. Stream mitigation requested:

(linear feet)

4c. If using stream mitigation, what is the stream temperature:

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

4d. Buffer mitigation requested (DWR only):

(square feet)

4e. Riparian wetland mitigation requested:

(acres)

1.04

4f. Non-riparian wetland mitigation requested:

(acres)

4g. Coastal (tidal) wetland mitigation requested:

(acres)

4h. Comments

6. Buffer mitigation (State Regulated Riparian Buffer Rules) - required by DWR

6a. Will the project result in an impact within a protected riparian buffer that requires buffer mitigation? If yes, you must fill out this entire form - please contact DWR for more information.

○ Yes ◉ No

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

For a list of options to meet the diffuse flow requirements, click here.

If no, explain why:

No stream present.

2. Stormwater Management Plan

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

◉ Yes ○ No

Comments:

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

1c. If you answered "yes" to the above, has the document review been finalized by the State Clearing House? (If so, attach a copy of the NEPA or SEPA final approval letter.) *

◉ Yes ○ No

NEPA or SEPA Final Approval Letter

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

FILE TYPE MUST BE PDF

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.

The bridge replaces an existing bridge over a railroad. Local conditions will remain the same as before.

4. Sewage Disposal (DWR Requirement)

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

○ Yes ◉ No ○ N/A

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

5c. If yes, indicate the USFWS Field Office you have contacted.

Raleigh

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? *

USFWS County lists, field surveys, NCNHP data, coordination with USFWS Raleigh office.

Consultation Documentation Upload

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

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? *

NMFS Essential Fish Habitat website, no streams are present.

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/hpoweb/

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? *

Programmatic CE documentation

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

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

Hydraulics Unit. Railroad crossing does not involve a FEMA stream, so no coordination required.

Miscellaneous

Comments

Miscellaneous attachments not previously requested.

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

B-5302 UO NEU narrative_180920.pdf 208.06KB

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

11/13/2018

Environmental Quality

ROY COOPER
Governor

November 7, 2018

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

Dear Mr. Harris:

Subject: Mitigation Acceptance Letter:

B-5302, Replace Bridge 3 over the Norfolk Southern Railroad on US 17, Beaufort County

The purpose of this letter is to notify you that the Division of Mitigation Services (DMS) will provide the compensatory wetland mitigation for the subject project. Based on the information supplied by you on November 7, 2018, the impacts are located in CU 03020104 of the Tar-Pamlico River basin in the Northern Outer Coastal Plain (NOCP) Eco-Region, and are as follows:

Tar-Pamlico 03020104 NOCP	Stream			Wetlands			Buffer (Sq. Ft.)	
	Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh	Zone 1	Zone 2
Impacts (feet/acres)	0	0	0	1.04	0	0	0	0

*Some of the stream and/or wetland impacts may be proposed to be mitigated at a 1:1 mitigation ratio. See permit application for details.

The impacts and associated mitigation needs were under projected by the NCDOT in the 2018 impact data. DMS will commit to implement sufficient compensatory wetland mitigation credits to offset the impacts associated with this project as determined by the regulatory agencies using the delivery timeline listed in Section F.3.c.iii of the In-Lieu Fee Instrument dated July 28, 2010. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from DMS.

If you have any questions or need additional information, please contact Beth Harmon at 919-707-8420.

Sincerely,

James B. Stanfill
DMS Asset Management Supervisor

cc: Mr. Tom Steffens, USACE – Washington Regulatory Field Office
Mr. Garcy Ward, NCDWR
File: B-5302 Revised

North Carolina Department of Transportation

Highway Stormwater Program

STORMWATER MANAGEMENT PLAN

FOR NCDOT PROJECTS

(Version 2.08; Released April 2018)

General Project Information

WBS Element:	46016.1.1	**TIP Number:**	B-5302	**Project Type:** Bridge Replacement	**Date:** 6/15/2018
NCDOT Contact:	Jacquelyn Bowles, PE	**Contractor / Designer:**	David Petty, PE (TGS Engineers)		
Address:	1020 Birch Ridge Drive Raleigh, NC 27610	**Address:**	706 Hillsborough Street - Suite 200 Raleigh, NC 27606		
Phone:	919-707-6559	**Phone:**	919-773-8887 ext 104		
Email:	jkbowles@ncdot.gov	**Email:**	dpetty@tgsengineers.com		
City/Town:	Washington, NC	**County(ies):**	Beaufort		
River Basin(s):	Tar-Pamlico	**CAMA County?**	Yes		
Wetlands within Project Limits?	Yes				

Project Description

Project Length (lin. miles or feet):	2070 ft.	**Surrounding Land Use:**	Woods, Farmland and Rural Residential
	Proposed Project		**Existing Site**
Project Built-Upon Area (ac.)	3.4 ac.		3.2 ac.
Typical Cross Section Description:	Four to five 12' paved travel lanes with 10" paved shoulders and Modified Shoulder Berm Gutter.		Four 12' paved travel lanes with 5' to 9' paved shoulders and 2'-6" Curb & Gutter.
Annual Avg Daily Traffic (veh/hr/day):	Design/Future: 20273 Year: 2039		Existing: 14909 Year: 2019
General Project Narrative: (Description of Minimization of Water Quality Impacts)	Replacement of Bridge No. 060003 on US 17 Bus. over Norfolk Southern Railroad in Beaufort County southwest of Washington, NC. Proposed 246' long by 70' wide three-span bridge to replace existing 173' long by 57' wide five-span bridge. Stormwater runoff from the proposed bridge and roadway flows to traffic bearing grated inlets where it will be diffused with riprap pads at the proposed pipe outlets and discharged at non-erosive velocities. All proposed stormwater runoff is discharged at the lowest practicable velocities. The jurisdictional pond in the east quadrant is artificially excavated and has no diret connection observed in study area per NRTR; therefore, buffer rules do not apply.		

Waterbody Information

Surface Water Body (1):	Pamlico River	**NCDWR Stream Index No.:**	29-(1)		
NCDWR Surface Water Classification for Water Body		**Primary Classification:**	Class SC		
		Supplemental Classification:	Nutrient Sensitive Waters (NSW)		
Other Stream Classification:	None				
Impairments:					
Aquatic T&E Species?	Yes	Comments: Red Wolf: may affect, not likely adversely, coord with USFWS re biological conclusion prior to construction authorization.			
NRTR Stream ID:				**Buffer Rules in Effect:**	Tar-Pamlico
Project Includes Bridge Spanning Water Body?	No	**Deck Drains Discharge Over Buffer?**	N/A	**Dissipator Pads Provided in Buffer?**	N/A
Deck Drains Discharge Over Water Body?	N/A	(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:	46016.1.1	**TIP No.:**	B-5302	**County(ies):**	Beaufort	**Page**	2	**of**	2

Additional Waterbody Information

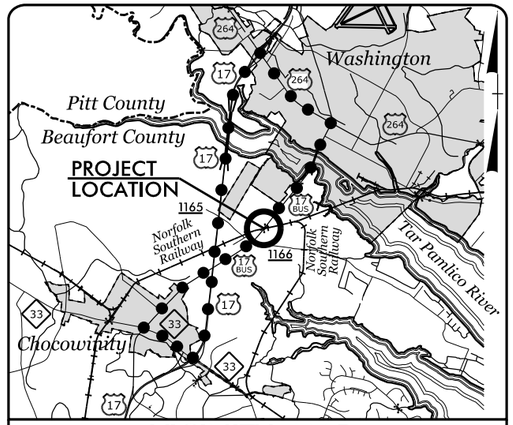
Surface Water Body (2):	Taylor Creek		**NCDWR Stream Index No.:**	29-6-3		
NCDWR Surface Water Classification for Water Body		**Primary Classification:**	Class SC			
		Supplemental Classification:	Nutrient Sensitive Waters (NSW)			
Other Stream Classification:	None					
Impairments:						
Aquatic T&E Species?	Yes	Comments:	Red Wolf: may affect, not likely adversely, coord with USFWS re biological conclusion prior to construction authorization.			
NRTR Stream ID:				**Buffer Rules in Effect:**	Tar-Pamlico	
Project Includes Bridge Spanning Water Body?	No	**Deck Drains Discharge Over Buffer?**	N/A	**Dissipator Pads Provided in Buffer?**	N/A	
Deck Drains Discharge Over Water Body?	N/A	(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)						

09/08/99

TIP PROJECT: B-5302

CONTRACT: C204219

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



VICINITY MAP
OFFSITE DETOUR

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BEAUFORT COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5302	1	

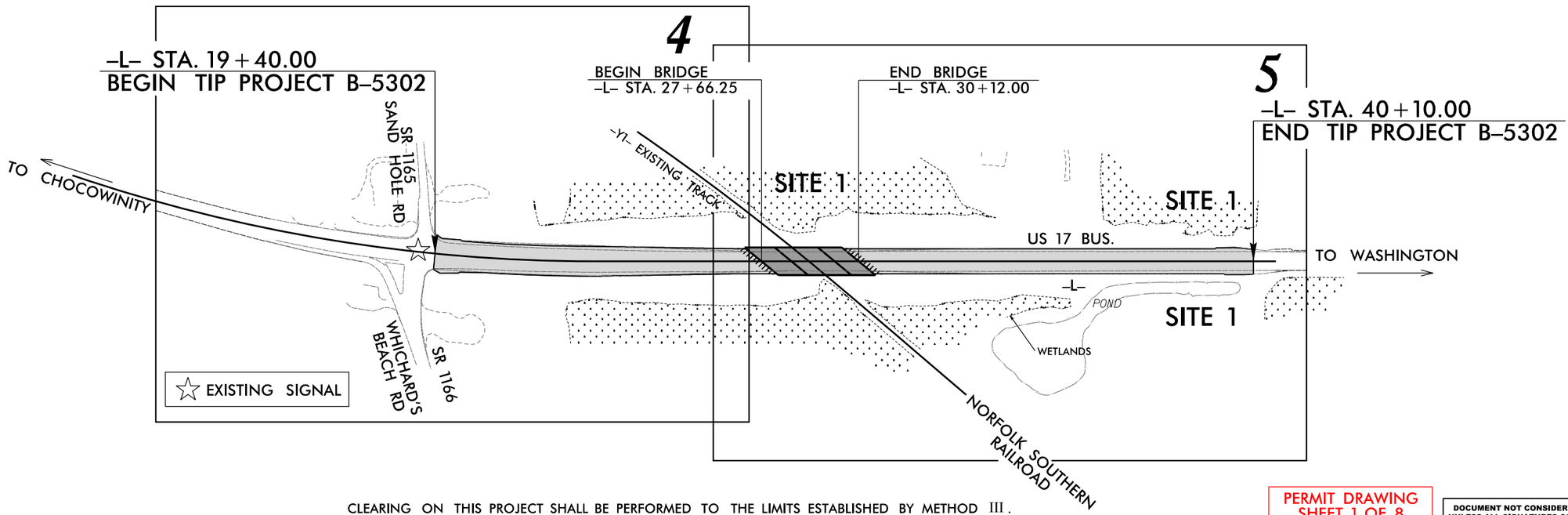
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
46016.1.1	BRNHPP-0017(127)	PE
46016.2.1		R/W & UTIL

LOCATION: REPLACE BRIDGE NO. 3 OVER NORFOLK SOUTHERN RAILROAD ON US 17 BUS.

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

PERMIT DRAWINGS
STREAM AND WETLAND IMPACTS

NAD 83/NA 2011



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

PERMIT DRAWING SHEET 1 OF 8

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES

PLANS: 50 25 0 50 100
PROFILE (HORIZONTAL): 50 25 0 50 100
PROFILE (VERTICAL): 10 5 0 10 20

DESIGN DATA

ADT 2019 = 14,909
ADT 2039 = 20,273
K = 9 %
D = 60 %
T = 8 % *
V = 60 MPH
* TTST = 4% DUAL = 4%
FUNC CLASS =
RURAL MINOR ARTERIAL
REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-5302	=	*0.345 mile*
LENGTH STRUCTURES TIP PROJECT B-5302	=	*0.047 mile*
TOTAL LENGTH TIP PROJECT B-5302	=	*0.392 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

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MAY 22, 2017

LETTING DATE:
MAY 21, 2019

V. MARCUS LOWERY, PE
PROJECT ENGINEER

TRAVIS COOK, EI
PROJECT DESIGN ENGINEER

GARY LOVERING, PE
PROJECT ENGINEER
NCDOT ROADWAY DESIGN

HYDRAULICS ENGINEER

SIGNATURE: *P.E.*

ROADWAY DESIGN ENGINEER

SIGNATURE: *P.E.*

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

10/20/2008
X:\NCDOT\B-5302\Hydraulics\PERMITS_Environmental\Drawings\dgn\B-5302_Hyd_prm_tsh.dgn
User:dpetty

5/14/99

ROW REV. - OCTOBER 9, 2018 - ADDED PUE TO PARCELS 1,2,3 AND 4; REMOVED TCE STA. 22+84 ON PARCEL 1; CHANGED PDE TO DUE AT STA 21+49 ON PARCEL 4 (VML)
ROW REV. - OCTOBER 9, 2018 - REMOVED TCE STA. 20+83 ON PARCEL 1; REMOVED TDE AT STA 21+80 ON PARCEL 1; CHANGED PDE TO DUE AT STA 23+04 ON PARCEL 2; CHANGED PDE TO DUE AT STA 23+27 ON PARCEL 1; REMOVED TDE AT STA 21+80 ON PARCEL 1; CHANGED PDE TO DUE AT STA 23+04 ON PARCEL 4 (VML)

WETLAND IMPACTS	
Permanent Fill in Wetlands	Hand Clearing in Wetlands
F F F F F F F F	HC HC HC HC HC HC HC HC

EXISTING BRIDGE DIMENSIONS 173'X57' (FIVE-SPAN), 39 DEG. SKEW
PROPOSED BRIDGE DIMENSIONS 246'X70' (THREE-SPAN), 39 DEG. SKEW
TOTAL PROJECT LENGTH – 2070'

PERMIT DRAWINGS FOR B-5302 BEAUFORT COUNTY BRIDGE #060003

PROJECT REFERENCE NO.	SHEET NO.
B-5302	4
R/W 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

STREAM AND WETLAND IMPACTS

NAD 83 /NA2011

SCALE: 1" = 50'

TRIPLE D'S, LLC

MASON S. PARAMORE, JR., et al

MTL BARN

ISF BUS

HTR ABAND

GR

SIZE UNKNOWN

GR PARKING

BLOCK WALL

SOUTH BOUND US 17 BUS VARIABLE BST

NORTH BOUND US 17 BUS VARIABLE BST

CONC ISLAND

PIRATE MEDIA GROUPE, LLC

SR 1165 WHICHARDS BEACH RD VAR BST

SR 1165 SAND HILL RD VARIABLE BST

MATCHLINE -L- STA. 13+00.00 SEE INSET 'A'

MATCHLINE -L- STA. 27+00.00 SEE SHEET 5

INSET 'A'

-L- PC Sta. 10+00.00

-L- LINE TIE TO EXISTING R/W 50' 50'

NAD 83 (2011)

BMI -BL- 5+00.00 154' RT ELEV=4.82'

RETAIN

REMOVE

DUE

PDE

ELBOW

CSP

WLB

CLASS B RIP RAP

PUE

REMOVE DI

TB FL GR 2GI

15" HDPE

12" PVC

8" PVC

72" CHL W/35RW

ANN WHICHARD FAMILY TRUST

DEBORAH W. MUTHERSPAW

MELVIN RAY SUGG FAMILY TRUST

WILLIAM C. CONGLETON, et ux

NORFOLK-SOUTHERN RAILROAD

R/R SPIKE

WOODED

EXISTING R/W

Q10=3.1 CFS
V10=1.2 FPS

HAND CLEARING IN WETLANDS

FILL IN WETLANDS

SITE 1

SITE 1

FILL IN WETLANDS

HAND CLEARING IN WETLANDS

PERMIT DRAWING SHEET 2 OF 8

☆ EXISTING SIGNAL

FOR -L- PROFILE SEE SHEET 6

NOTES:

1. PROJECT IS IN THE TAR-PAMLICO RIVER BASIN.
2. CLEARING SHALL BE PERFORMED PER NCDOT METHOD III.

GRAPHIC SCALE
50 0 50 100

10/29/2018
R:\Projects\Environmental\Drawings\dgn\B-5302_Hyd_prm_pgh_4.dgn
hendrickt

5/14/99

ROW REV. - OCTOBER 9, 2018 - ADDED PUE TO PARCELS 1,2,3 AND 4; REMOVED TCE STA. 22+84 ON PARCEL 1; CHANGED PDE TO DUE AT STA 21+49 ON PARCEL 4 (VM)
ROW REV. - OCTOBER 9, 2018 - REMOVED TCE STA. 20+83 ON PARCEL 1; REMOVED TDE AT STA 21+80 ON PARCEL 1; CHANGED PDE TO DUE AT STA 23+04 ON PARCEL 1; CHANGED PDE TO DUE AT STA 23+27 ON PARCEL 4 (VM)

10/29/2018
R:\Projects\PERMITS\Environmental\Drawings\dgn\B-5302 Hyd prm bsh 4.dgn
bsheridan

WETLAND IMPACTS	
Permanent Fill in Wetlands	Hand Clearing in Wetlands
F F F F F F F F F F	HC HC HC HC HC HC HC HC HC HC

EXISTING BRIDGE DIMENSIONS 173'X57' (FIVE-SPAN), 39 DEG. SKEW
PROPOSED BRIDGE DIMENSIONS 246'X70' (THREE-SPAN), 39 DEG. SKEW
TOTAL PROJECT LENGTH – 2070'

PERMIT DRAWINGS FOR B-5302 BEAUFORT COUNTY BRIDGE #060003

PROJECT REFERENCE NO.	SHEET NO.
B-5302	4
R/W 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

STREAM AND WETLAND IMPACTS

NAD 83 /NA2011

SCALE: 1" = 50'

MATCHLINE -L- STA. 13+00.00 SEE INSET 'A'

MATCHLINE -L- STA. 27+00.00 SEE SHEET 5

TRIPLE D'S, LLC

MASON S. PARAMORE, JR., et al

MTL BARN

ISF BUS

ISF BNS

SIZE UNKNOWN

GR PARKING

PIRATE MEDIA GROUPE, LLC

ANN WHICHARD FAMILY TRUST

WILLIAM C. CONGLETON, et ux

DEBORAH W. MUTHERSPAW

MELVIN RAY SUGG FAMILY TRUST

SR 1955 WHICHARDS BEACH RD VAR BST

SR 1955 SAND HILL FARM RD VAR BST

SITE 1 (4)

FILL IN WETLANDS

HAND CLEARING IN WETLANDS

CLASS B RIP RAP

REMOVE

RETAIN

DUE

PDE

PUE

ELBOW

15" CSP

TB FL GR 2GI

REMOVE DI

SBG

WLB

Q10=3.1 CFS
V10=1.2 FT/S

INSET 'A'

-L- PC Sta. 10+00.00

-L- LINE TIE TO EXISTING R/W

50'

EXISTING R/W

BOUND

NAD 83 (2011)

PERMIT DRAWING SHEET 3 OF 8

☆ EXISTING SIGNAL

FOR -L- PROFILE SEE SHEET 6

NOTES:

1. PROJECT IS IN THE TAR-PAMLICO RIVER BASIN.
2. CLEARING SHALL BE PERFORMED PER NCDOT METHOD III.

GRAPHIC SCALE

50 0 50 100

PERMIT DRAWINGS FOR B-5302 BEAUFORT COUNTY BRIDGE #060003

PROJECT REFERENCE NO.	SHEET NO.
B-5302	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

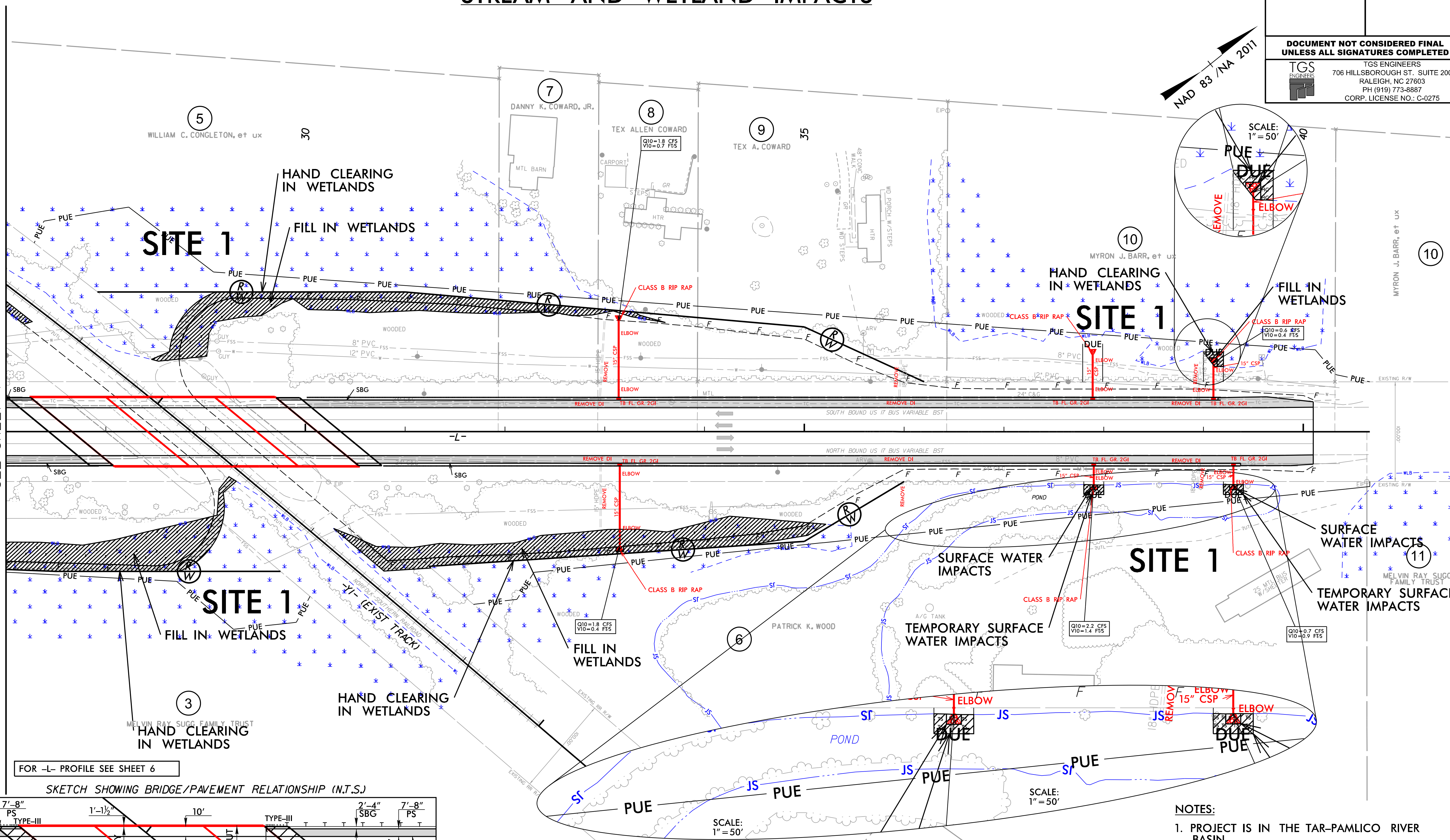
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

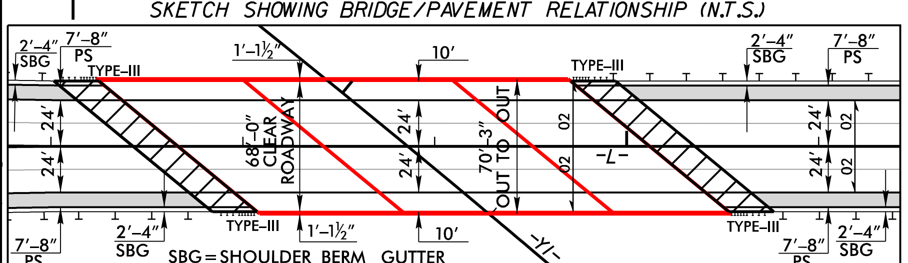
WETLAND IMPACTS		STREAM IMPACTS	
Permanent Fill in Wetlands	Hand Clearing in Wetlands	Impacts in Surface Water	Temporary Impacts in Surface Water

EXISTING BRIDGE DIMENSIONS 173'X57' (FIVE-SPAN), 39 DEG. SKEW
PROPOSED BRIDGE DIMENSIONS 246'X70' (THREE-SPAN), 39 DEG. SKEW
TOTAL PROJECT LENGTH - 2070'

STREAM AND WETLAND IMPACTS



SKETCH SHOWING BRIDGE/PAVEMENT RELATIONSHIP (N.T.S.)



PERMIT DRAWING SHEET 4 OF 8

NOTES:

1. PROJECT IS IN THE TAR-PAMLICO RIVER BASIN.
2. CLEARING SHALL BE PERFORMED PER NCDOT METHOD III.

GRAPHIC SCALE 50 0 50 100

ROW REV. - OCTOBER 9,2018 - ADDED PUE TO PARCELS 3,5,6,7,8,9, AND 10; ADDED PARCEL 11 FOR PUE; REMOVED TDE STA 33+04 ON PARCEL 8; REMOVED TCE STA 35+86 ON PARCEL 9; CHANGED PDE TO DUE STA 37+79 ON PARCEL 10; CHANGED PDE TO DUE STA 39+00 ON PARCEL 10; REMOVED TCE STA 38+85 ON PARCEL 10; REMOVED TDE STA 33+05 ON PARCEL 6; REMOVED TCE STA 35+83 ON PARCEL 6; CHANGED PDE TO DUE STA 37+80 ON PARCEL 6; CHANGED PDE TO DUE STA 39+20 ON PARCEL 6 (VML)

5/14/99

ROW REV. - OCTOBER 9,2018 - ADDED PUE TO PARCELS 3,5,6,7,8,9, AND 10; ADDED PARCEL 11 FOR PUE; REMOVED TDE STA 33+04 ON PARCEL 8; REMOVED TCE STA 35+86 ON PARCEL 9; CHANGED PDE TO DUE STA 37+79 ON PARCEL 10; CHANGED PDE TO DUE STA 39+00 ON PARCEL 10; REMOVED TCE STA 38+85 ON PARCEL 10; REMOVED TDE STA 33+05 ON PARCEL 6; REMOVED TCE STA 35+83 ON PARCEL 6; CHANGED PDE TO DUE STA 37+80 ON PARCEL 6; CHANGED PDE TO DUE STA 39+20 ON PARCEL 6 (VML)

WETLAND IMPACTS		STREAM IMPACTS	
Permanent Fill in Wetlands	Hand Clearing in Wetlands	Impacts in Surface Water	Temporary Impacts in Surface Water
F	HC	S	TS

EXISTING BRIDGE DIMENSIONS 173'X57' (FIVE-SPAN), 39 DEG. SKEW
PROPOSED BRIDGE DIMENSIONS 246'X70' (THREE-SPAN), 39 DEG. SKEW
TOTAL PROJECT LENGTH – 2070'

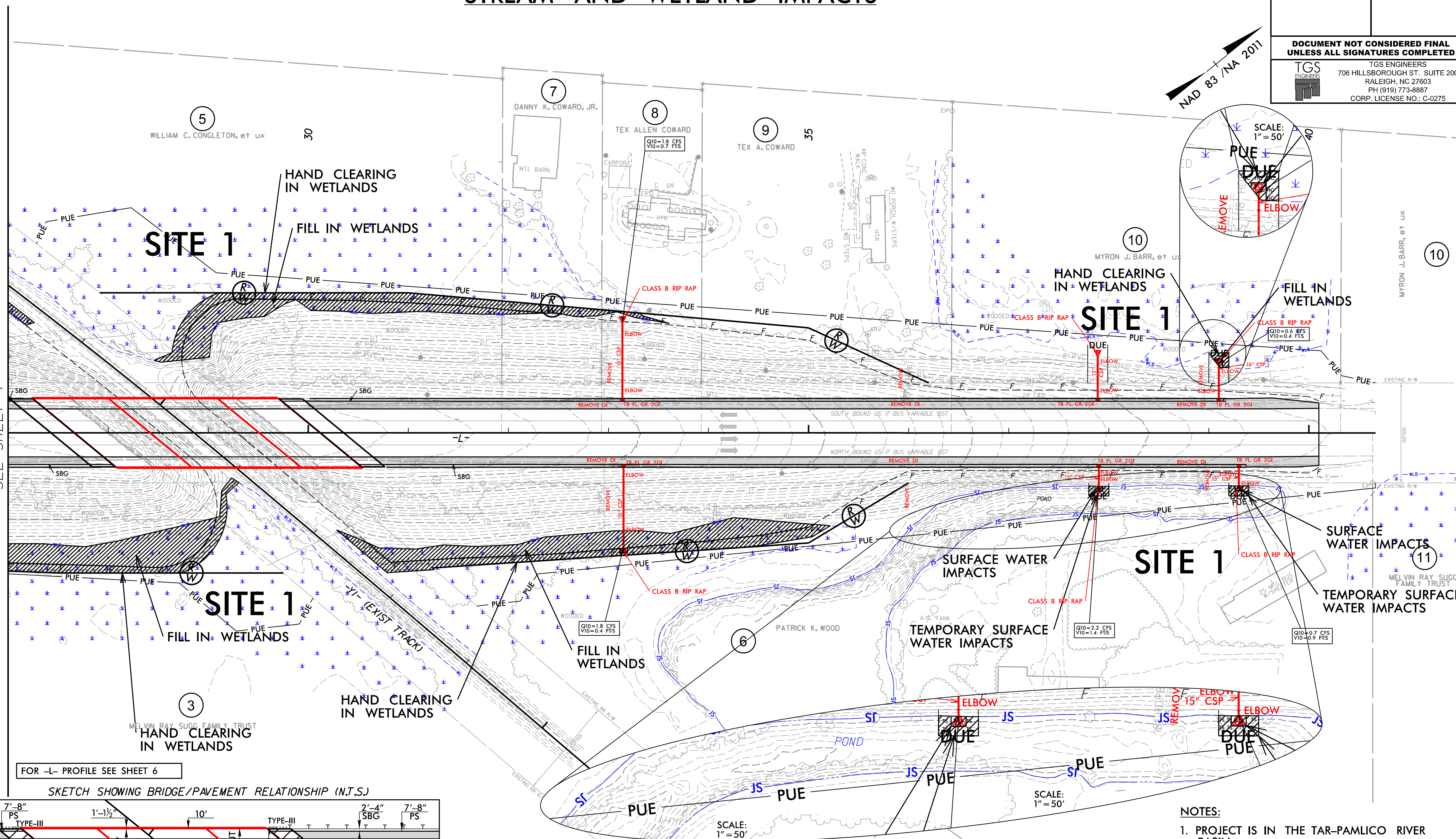
STREAM AND WETLAND IMPACTS

PERMIT DRAWINGS FOR B-5302 BEAUFORT COUNTY BRIDGE #060003

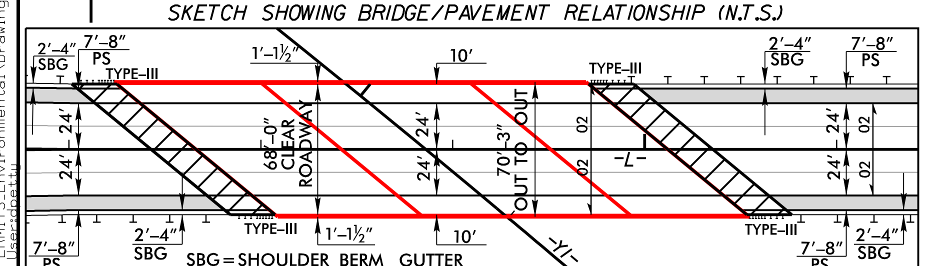
PROJECT REFERENCE NO.	SHEET NO.
B-5302	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



SKETCH SHOWING BRIDGE/PAVEMENT RELATIONSHIP (N.T.S.)



PERMIT DRAWING SHEET 5 OF 8

NOTES:

1. PROJECT IS IN THE TAR-PAMLICO RIVER BASIN.
2. CLEARING SHALL BE PERFORMED PER NCDOT METHOD III.

GRAPHIC SCALE

50 0 50 100

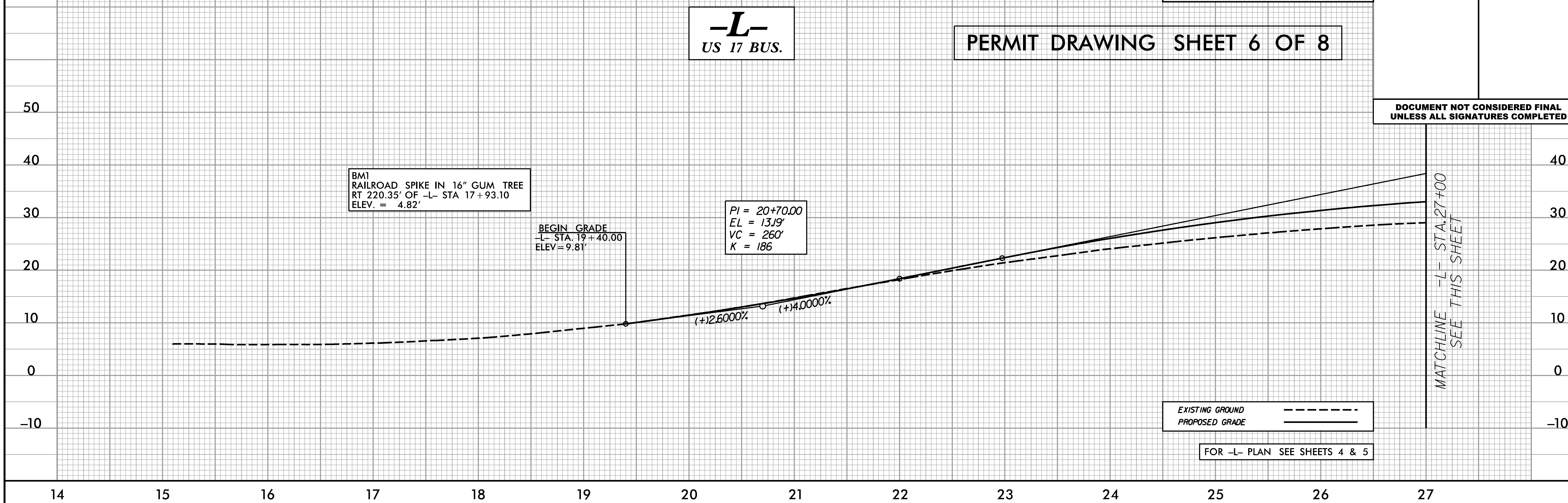
10/20/2018

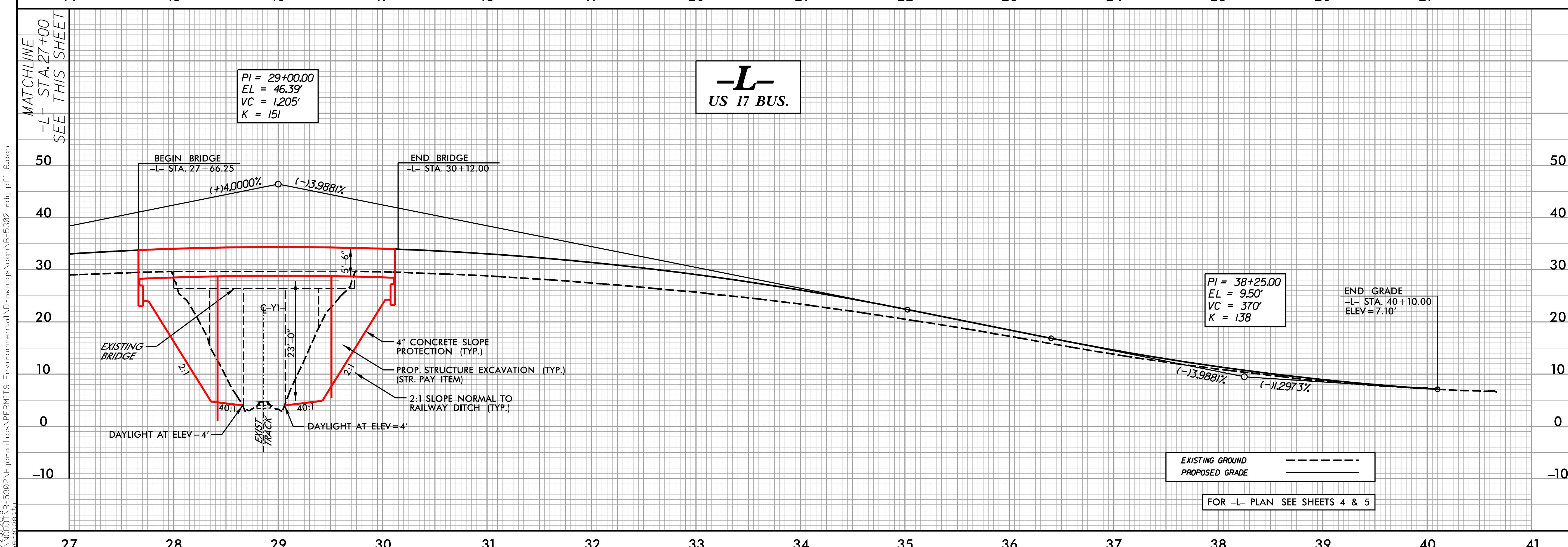
TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

PROJECT REFERENCE NO.	SHEET NO.
B-5302	6
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING SHEET 6 OF 8





MATCHLINE -L- STA. 27+00
SEE THIS SHEET
-L-
US 17 BUS.
PI = 29+00.00
EL = 46.39'
VC = 1,205'
K = 151
BEGIN BRIDGE
-L- STA. 27+66.25
END BRIDGE
-L- STA. 30+12.00
(+)4.0000%
(-)13.9881%
5'-6"
23'-0"
EXISTING BRIDGE
4" CONCRETE SLOPE PROTECTION (TYP.)
PROP. STRUCTURE EXCAVATION (TYP.)
(STR. PAY ITEM)
2:1 SLOPE NORMAL TO RAILWAY DITCH (TYP.)
DAYLIGHT AT ELEV=4'
DAYLIGHT AT ELEV=4'
EXIST TRACK
40:1
40:1
2:1
2:1
PI = 38+25.00
EL = 9.50'
VC = 370'
K = 138
END GRADE
-L- STA. 40+10.00
ELEV=7.10'
(-)13.9881%
(-)1.2973%
EXISTING GROUND
PROPOSED GRADE
FOR -L- PLAN SEE SHEETS 4 & 5

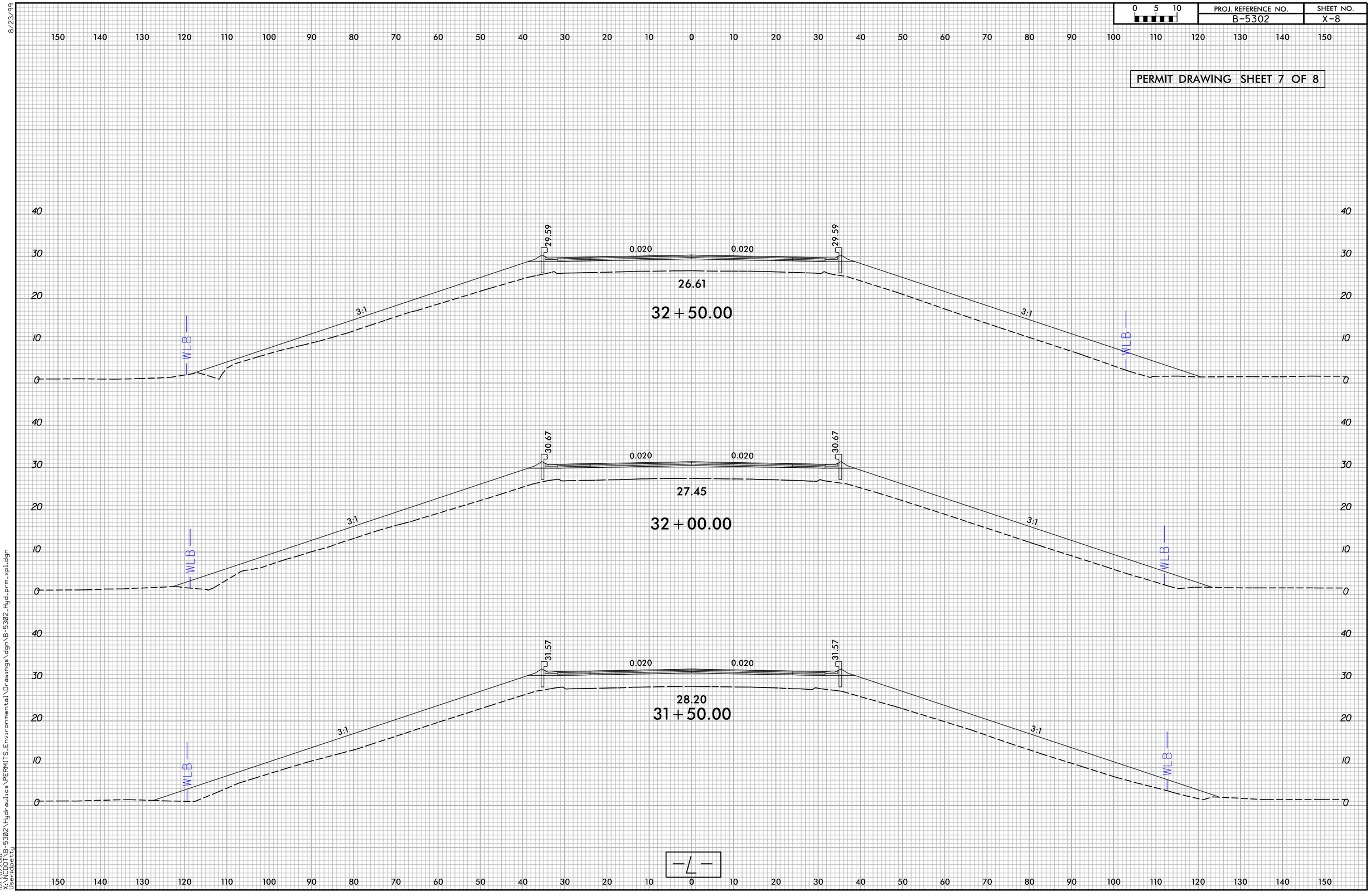
5/28/99

10/20/2018
X:\NCDOT\B-5302\Hydraulics\PERMITS_Environmental\Drawings\dgn\B-5302_rdy_pfl_6.dgn

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	B-5302	X-8

PERMIT DRAWING SHEET 7 OF 8



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User:dpettu

WETLAND AND SURACE WATER IMPACTS SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	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 22+80 to 39+40	Roadway/Bridge	0.56				0.39	< 0.01	< 0.01			
TOTALS*:			0.56				0.39	< 0.01	< 0.01	0	0	0

*Rounded totals are sum of actual impacts

NOTES:

0.09 acre of Temporary Fill in Wetlands in the Hand Clearing areas for erosion control measures.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
10/20/2018
BEAUFORT COUNTY
B-5302
46016.1.1
SHEET 8 OF 8

WETHERILL ENGINEERING
WE Design Your Tomorrow . . .

Raleigh
Transportation
Planning
Bridge/Structural
Civil/Site
Construction Observation
Surveying

Wilmington
Surveying

Date: 20 September 2018
TIP Number: B-5302
County: Beaufort
Description: Bridge #3 over Norfolk Southern Railroad on US 17 Business

B-5302 NEU Environmental Permit Narrative

This roadway project is located in the Tar-Pamlico River Basin. The adjacent area contains some delineated wetland areas.

City of Washington (Water)

The existing underground water main along the west side of US 17 Business is in conflict with the proposed new bridge and must be relocated. The City of Washington will install a new water main along the west side of US 17 business. To reduce wetland impact, the water main will be installed by directional drill. Bore pits will be required at the beginning, the end of the project, and on each side of the railroad right of way where the new water main crosses. These bore pits will require excavation, and permanent fill in the wetlands. Excavation and fill has been reduced as much as possible and will be confined to the bore pits. The City of Washington has investigated all available options for their water relocation and have chosen the alignment that minimizes environmental impacts.

City of Washington (Sewer)

The existing underground FSS sewer main along the west side of US 17 Business is in conflict with the proposed new bridge and must be relocated. The City of Washington will install a new FSS sewer main along the west side of US 17 business. To reduce wetland impact, the sewer main will be installed by directional drill. Bore pits will be required at the beginning, the end of the project, and on each side of the railroad right of way where the new water main crosses. These bore pits will require excavation, and permanent fill in the wetlands. Excavation and fill has been reduced as much as possible and will be confined to the bore pits. The City of Washington has investigated all available options for their water relocation and have chosen the alignment that minimizes environmental impacts.

Town of Chocowinity (Sewer)

The existing underground FSS sewer main along the east side of US 17 Business is in conflict with the proposed new bridge and must be relocated. The Town of Chocowinity will install a new FSS sewer main along the east side of US 17 business. To reduce wetland impact, the sewer main will be installed by directional drill. Bore pits will be required at the beginning, the end of the project, and on each side of the railroad right of way where the new water main crosses. These bore pits will require excavation, and permanent fill in the wetlands. Excavation and fill has been reduced as much as possible and will be confined to the bore pits. The Town of Chocowinity has investigated all available options for their water relocation and have chosen the alignment that minimizes environmental impacts.

Duke Energy (Power)

The existing Duke Energy power poles will be replaced with taller poles in their current location. There will be no environmental impacts from the power relocation work.

1223 Jones Franklin Road
Raleigh, NC 27606

Phone: 919.851.8077
Fax: 919.851.8107
www@wetherilleng.com

CenturyLink (Telephone)

The existing underground telephone cables along the west side of US 17 Business are in conflict with the proposed new bridge and must be relocated. CenturyLink will install new telephone cables along the west side of US 17 Business approximately 5' outside the existing right-of-way. The new telephone cables will be bored under the railroad and tied back into the existing telephone manholes in the west shoulder US 17 Business. There will be no environmental impacts from the telephone relocation work.

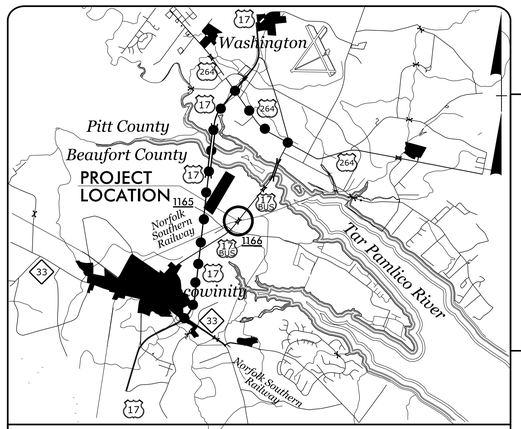
Suddenlink (CATV)

The existing overhead CATV lines are attached to the Duke Energy poles. The overhead CATV will move to the new Duke Energy poles. There will be no environmental impacts from CATV.

09/08/99

TIP PROJECT: B-5302

See Sheet 1-A For Index of Sheets



VICINITY MAP

OFFSITE DETOUR

25% PLANS SUBMITTAL

T.I.P. NO.	SHEET NO.
B-5302	UC-1

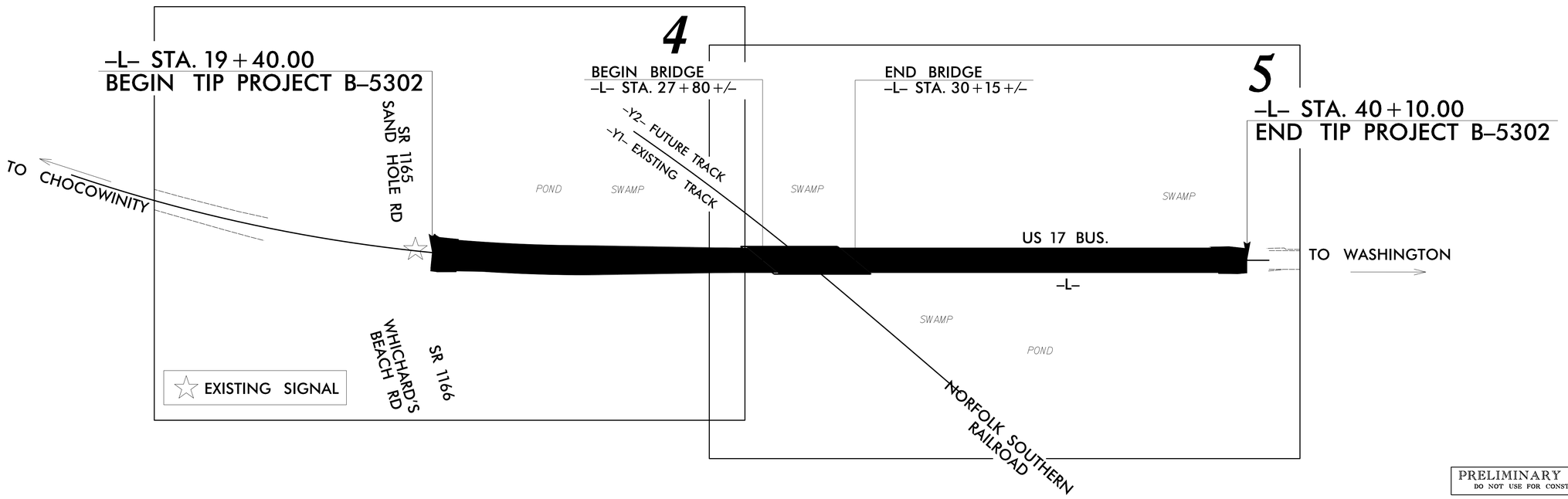
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITY CONSTRUCTION PLANS
BEAUFORT COUNTY

LOCATION: REPLACE BRIDGE 3 OVER NORFOLK AND SOUTHERN RAILROAD ON US 17

TYPE OF WORK: RELOCATE WATER MAIN

NAD 83/
NA 2011



PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL UNTIL ALL SIGNATURES ARE COMPLETED

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

INDEX OF SHEETS

SHEET NO.:	*DESCRIPTION:*
UE-1	*TITLE SHEET*
UE-2 TO UE-3	*UTILITY PLAN SHEETS*
UE-3A TO UE-3D	*UTILITY DETAIL SHEETS*
UE-4 THRU UE-17	*PROFILE SHEETS*

WATER AND SEWER OWNERS ON PROJECT

(A) CITY OF WASHINGTON WATER
(B) TOWN OF CHOCOWINITY

PREPARED IN THE OFFICE OF

CONSULTANT INFO

CONSULTANT ADDRESS AND PHONE NUMBERS

FRED STOWE *CONSULTANT CONTACT #1*

SEAL

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

BO HEMPHILL, P.E.	*UTILITIES REGIONAL ENGINEER*
KELVIN MARTIN	*UTILITIES ENGINEER*
KYLE PLEASANT	*UTILITIES AREA COORDINATOR*
LARRY JAMES JR.	*UTILITIES COORDINATOR*

25-SEP-2018 07:52
R:\Utilities\Engineering\NEU\Permit Plans and Narrative\B5302_Ut_Itsh_UEI_psh.dgn
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
B-5302	UE-2
DESIGNED BY: KSM	
DRAWN BY: KSM	
CHECKED BY:	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DENOTES EXCAVATION IN WETLAND

DENOTES FILL IN WETLAND

NAD 83 (2011)

SITE 1
FILL IN WETLANDS = 0.063 ACRES
EXCAVATION IN WETLANDS = 0.003 ACRES

PROPOSED PERMANENT FILL

SITE 1

EX. R/W 135' LT

8" FSS

MILE POST 128

R/R SPIKE

MATCHLINE -L- STA. 13+00.00

MATCHLINE -L- STA. 27+00.00 SEE SHEET 5

BEGIN TIP PROJECT B-5302
-L- POC Sta. 19+40.00

TRIPLE D'S, LLC
DB 1490 PG 006

MASON S. PARAMORE, JR., et al
DB 1785 PG 359

MTL BARN

MASON S. PARAMORE, JR., et al
DB 1708 PG 93

ANN WHICHARD HAMILTON FAMILY TRUST
DB 1189 PG 535

WILLIAM C. CONGLETON, et ux
DB 925 PG 394

DEBORAH W. MUTHERSPAW
DB 1471 PG 501

MELVIN RAY SUGG FAMILY TRUST
DB 1747 PG 129

PIRATE MEDIA GROUPE, LLC
DB 1473 PG 503

PROPOSED PERMANENT UTILITY EASEMENT

PROPOSED PERMANENT FILL
-L- PT Sta. 23+39.93

BEGIN HDD

END HDD

BEGIN OPEN CUT

BEGIN OPEN CUT

BEGIN OPEN CUT

BORE AN

BORE AN

10' X 10' EXIT

10' X 10' EXIT

300' STORAGE

200' TAPER LT TURN LANE

360' TRANSITION (NB & SB)

50' INC.

SOUTH BOUND US 17 BUS VARIABLE BST

NORTH BOUND US 17 BUS VARIABLE BST

SR 1166 WHICHARDS BEACH RD VAR BST

NORFOLK SOUTHERN RAILWAY

BMI
-BL- 5+00.00
15.4' RT
ELEV=4.82'

SHEET # 2 OF # 17

5/14/99

SITE 2

FILL IN WETLANDS = 0.218 ACRES
EXCAVATION IN WETLANDS = 0.0241 ACRES

SITE 3

FILL IN WETLANDS = 0.116 ACRES
EXCAVATION IN WETLANDS = 0.012 ACRES

E E DENOTES EXCAVATION IN WETLAND

F F DENOTES FILL IN WETLAND

SITE 4

FILL IN WETLANDS = 0.047 ACRES
EXCAVATION IN WETLANDS = 0.002 ACRES

SITE 5

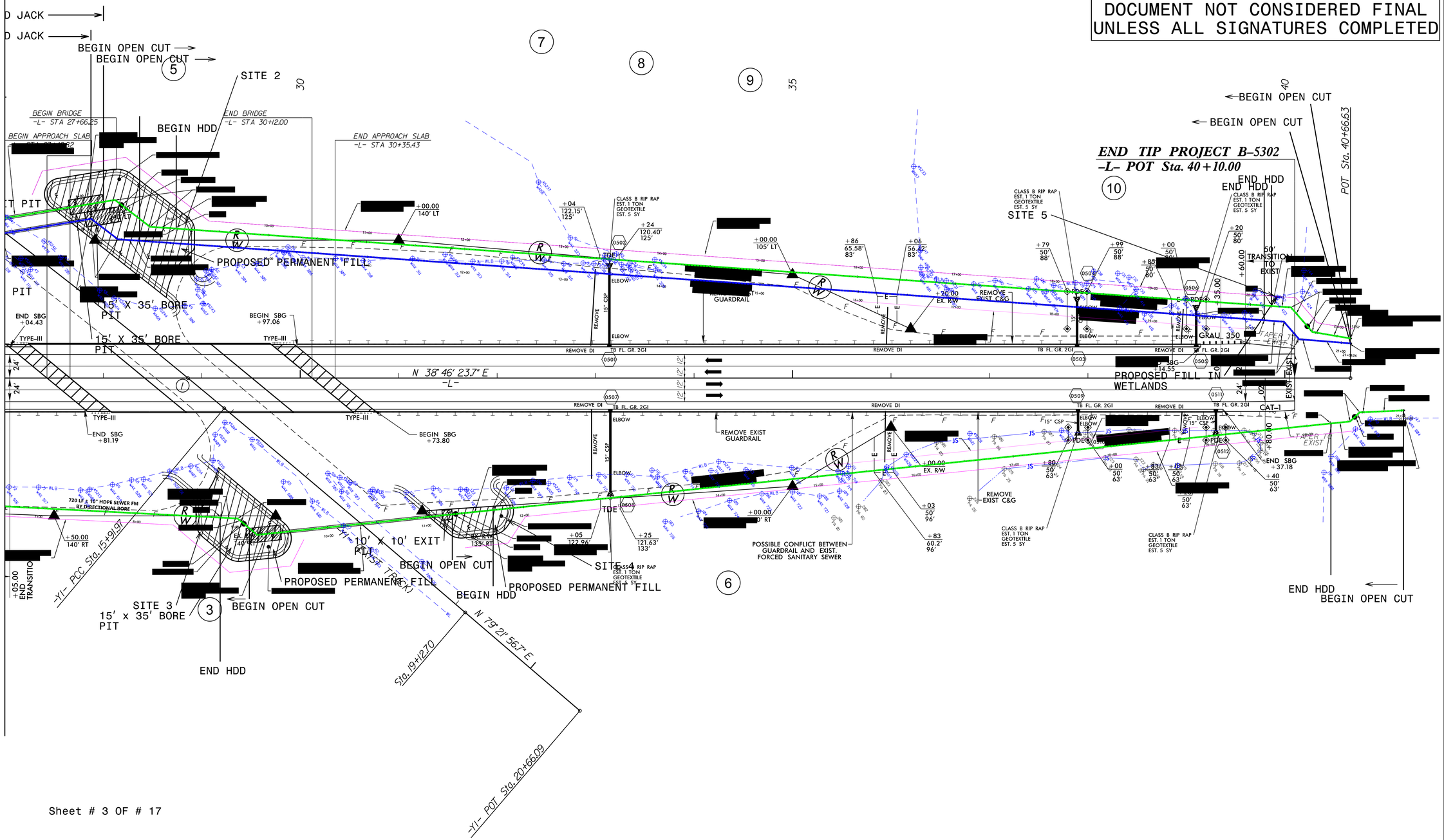
FILL IN WETLANDS = 0.001 ACRES

NAD 83 (2011)

PROJECT REFERENCE NO.	SHEET NO.
B-5302	UE-3
DESIGNED BY: KSM	
DRAWN BY: KSM	
CHECKED BY:	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



Sheet # 3 OF # 17

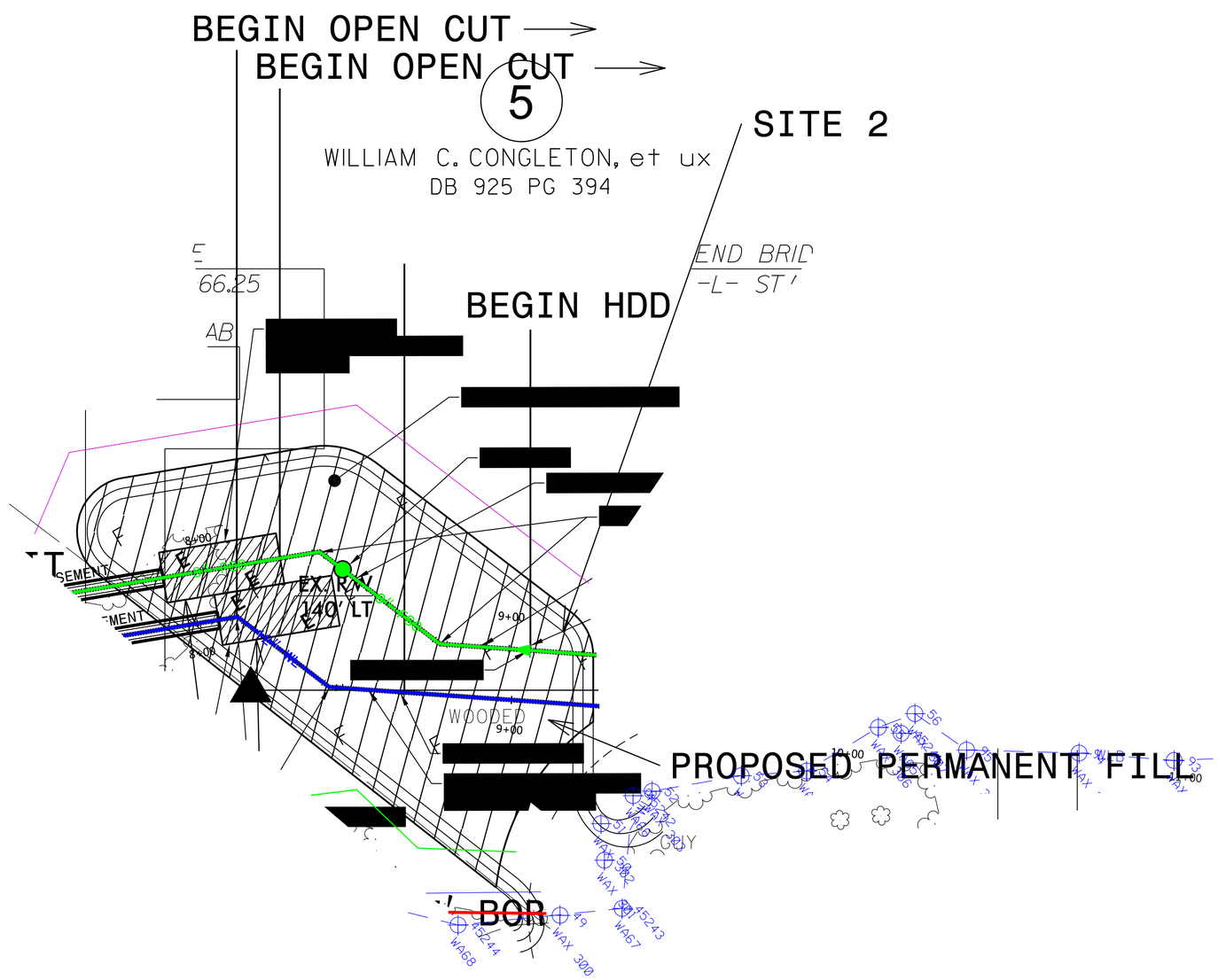
SHEET # 4 OF #1

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-5302	UE-3A
DESIGNED BY: KSM	
DRAWN BY: KSM	
CHECKED BY:	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



SHEET # 4 OF # 17

PROJECT REFERENCE NO.	SHEET NO.
B-5302	UE-3B
DESIGNED BY: KSM	
DRAWN BY: KSM	
CHECKED BY:	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

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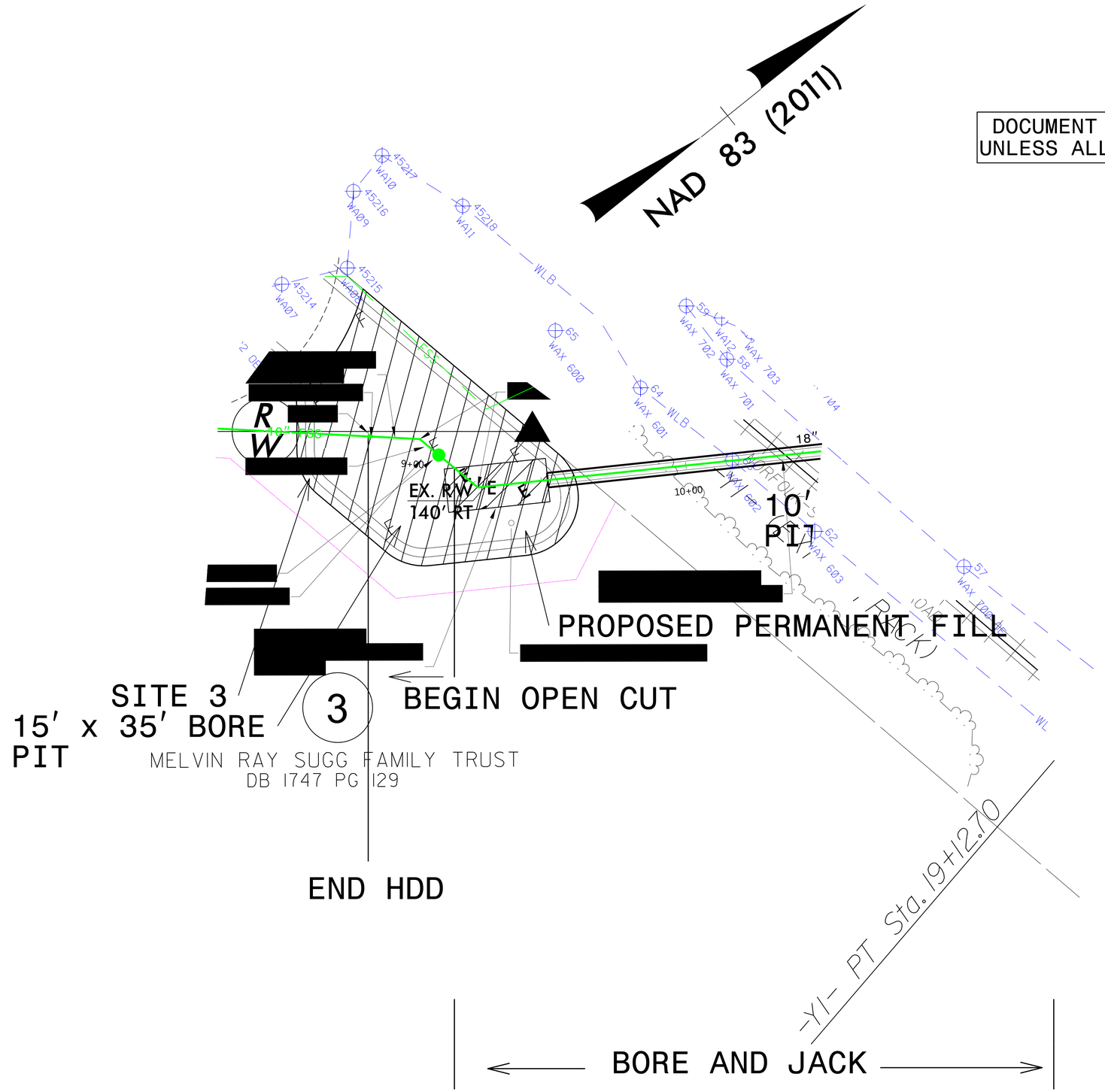

SHEET # 5 OF #17

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-5302	UE-3C
DESIGNED BY: KSM	
DRAWN BY: KSM	
CHECKED BY:	
APPROVED BY:	
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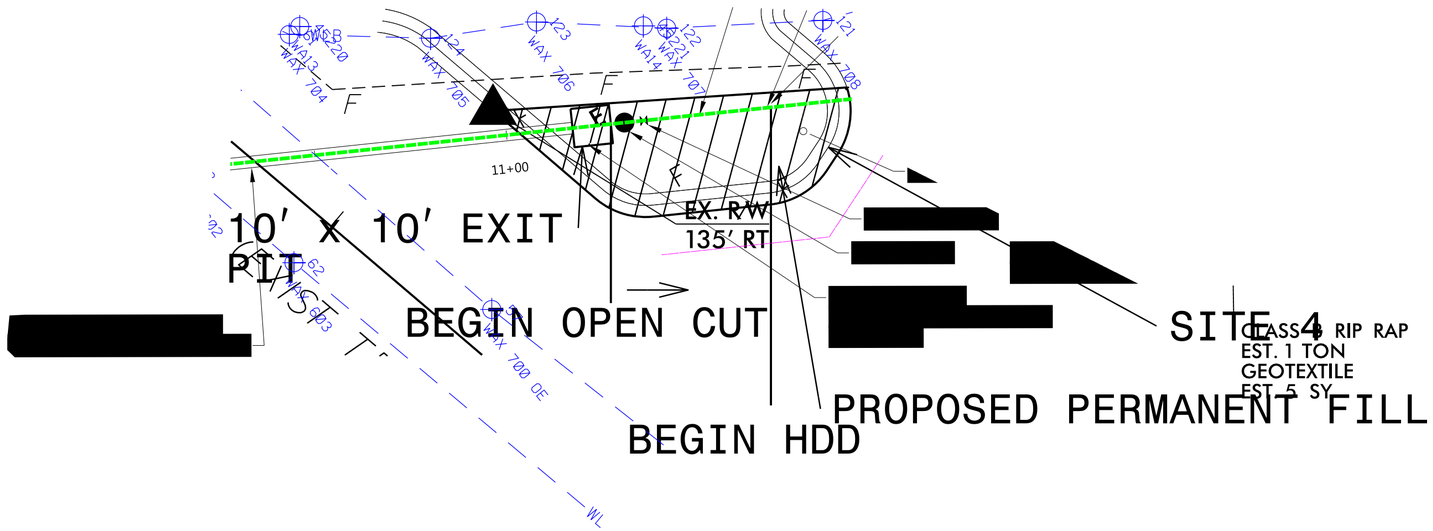
NAD 83 (2011)



Sheet # 6 OF # 17

PROJECT REFERENCE NO.	SHEET NO.
B-5302	UE-3D

DESIGNED BY: KSM
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APPROVED BY:
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

UTILITIES ENGINEERING SEC.
PHONE:(919)707-6690
FAX:(919)250-4151

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UTILITY CONSTRUCTION

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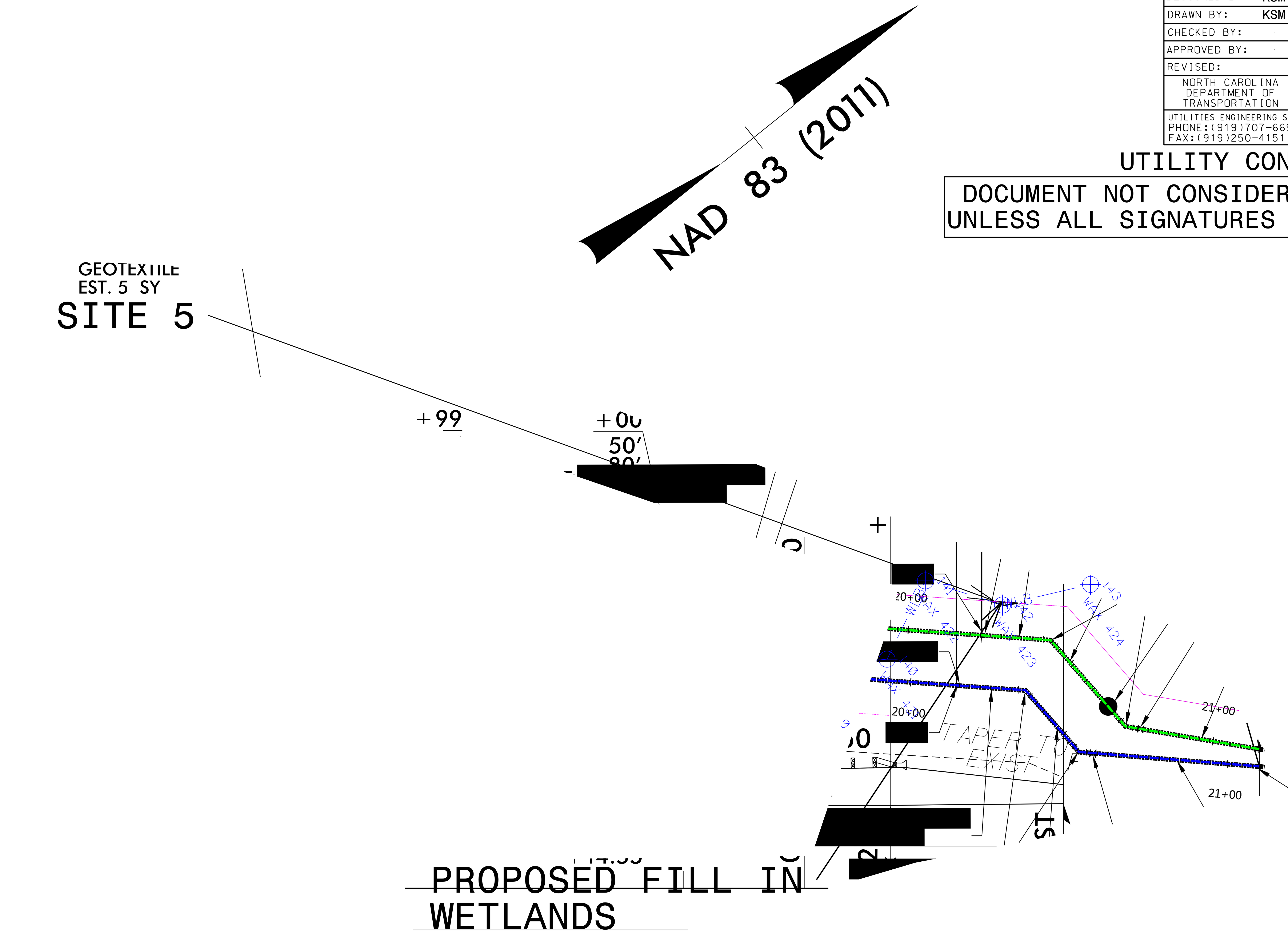
UNLESS ALL SIGNATURES COMPLETED



Sheet # 7 OF # 17

5/14/99

10-OCT-2018 09:42
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$$$$USERNAME$$$$

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-5302	UE-4
DESIGNED BY: KSM	
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UTILITY CONSTRUCTION

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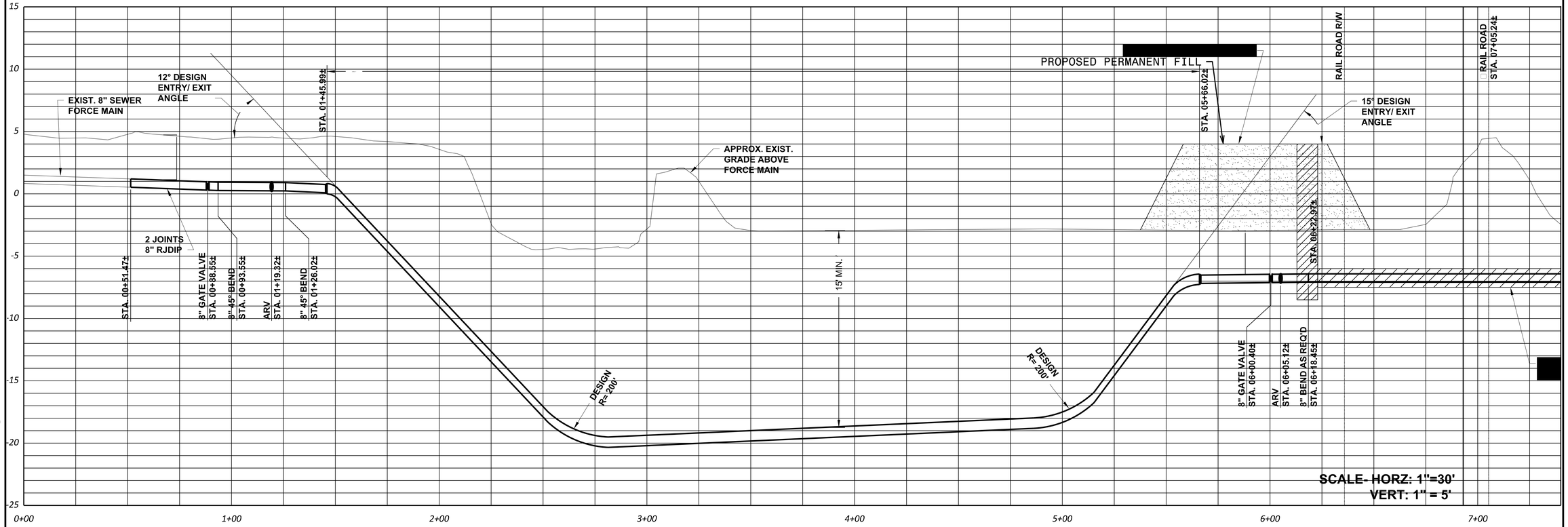
WASHINGTON SEWER FM



SHEET # 8 OF # 17

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-5302	UE-5
DESIGNED BY: KSM	
DRAWN BY: KSM	
CHECKED BY:	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

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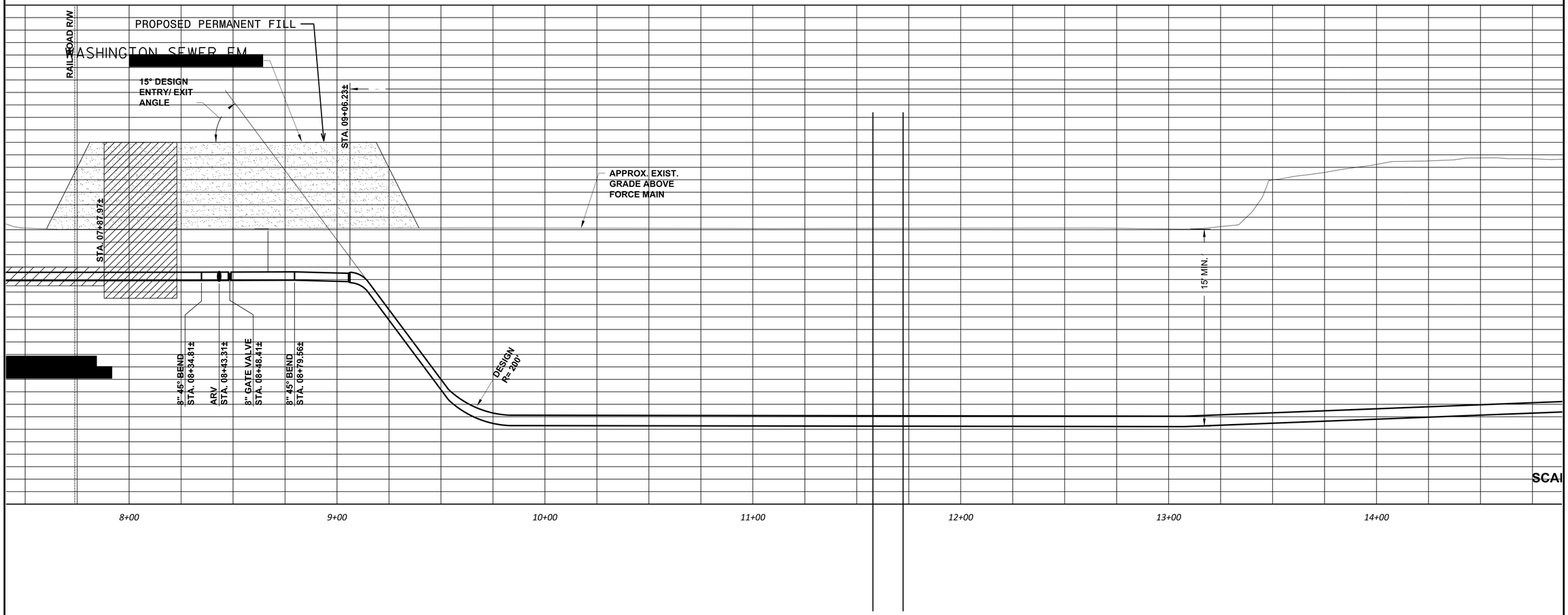
WASHINGTON SEWER FM



SHEET # 9 OF # 17

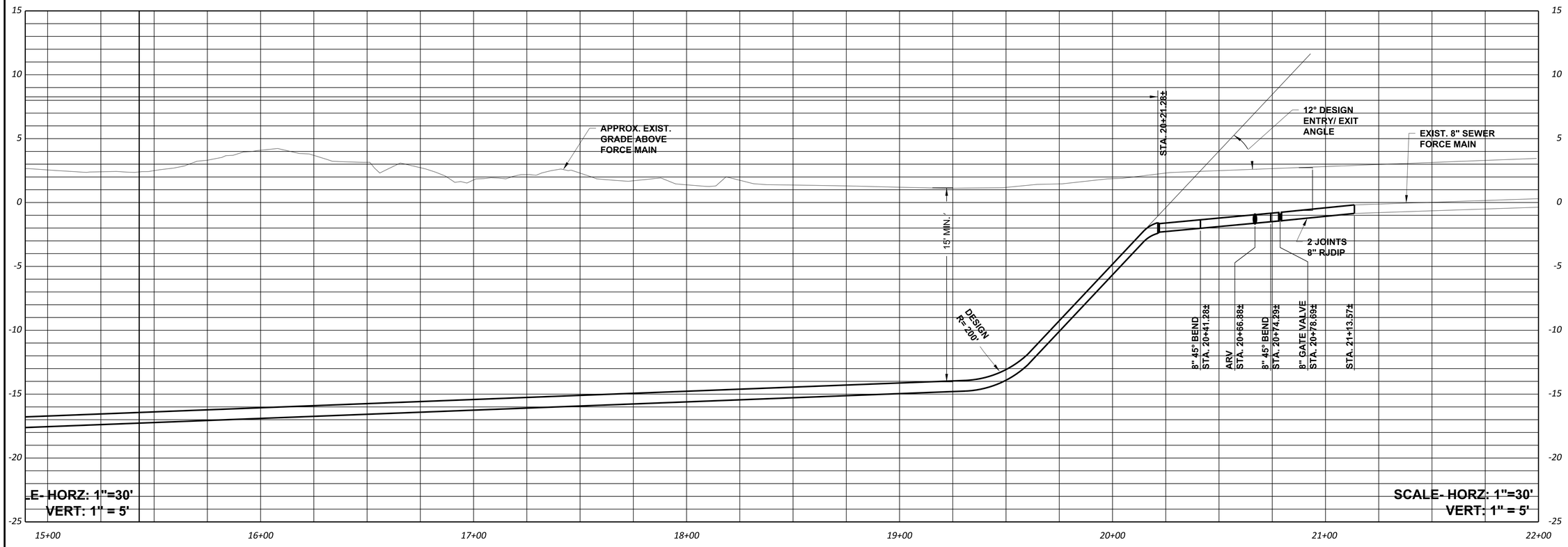
5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-5302	UE-6
DESIGNED BY: KSM	
DRAWN BY: KSM	
CHECKED BY:	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

WASHINGTON SEWER FM



SCALE- HORZ: 1"=30'
VERT: 1" = 5'

SCALE- HORZ: 1"=30'
VERT: 1" = 5'

SHEET # 10 OF # 17

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5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-5302	UE-7
DESIGNED BY: KSM	
DRAWN BY: KSM	
CHECKED BY:	
APPROVED BY:	
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UTILITY CONSTRUCTION

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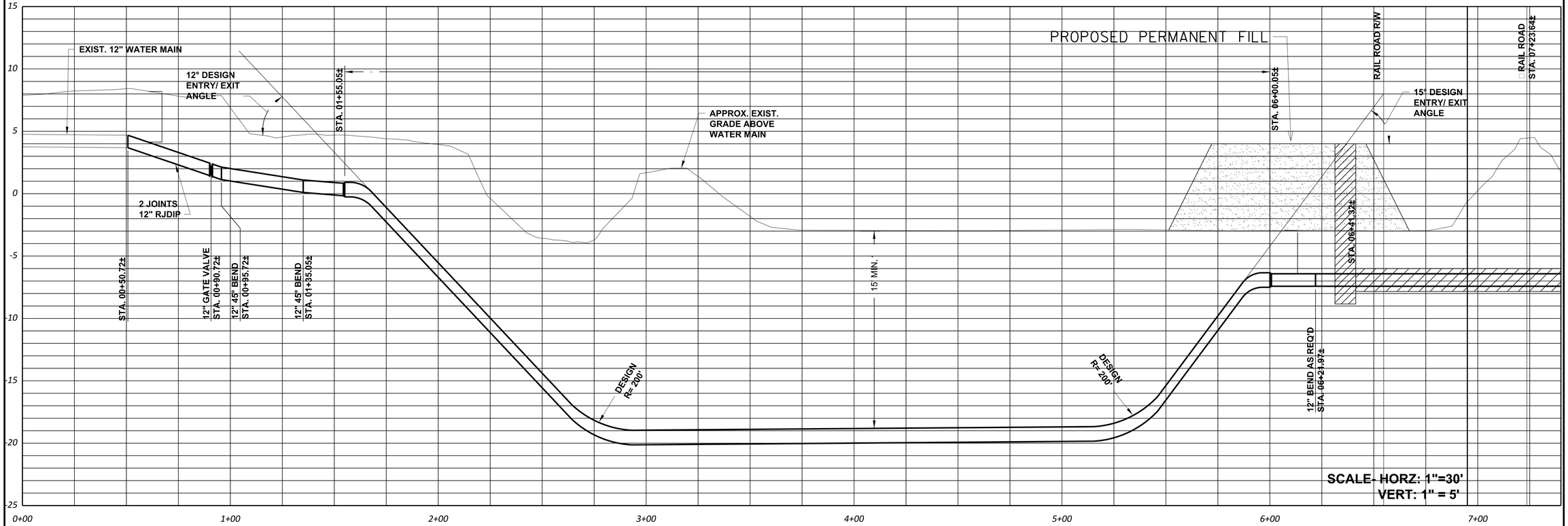
WASHINGTON WM



SHEET # 11 OF # 17

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-5302	UE-8
DESIGNED BY: KSM	
DRAWN BY: KSM	
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APPROVED BY:	
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
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WASHINGTON WM

SHEET # 12 OF # 17

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PROJECT REFERENCE NO.	SHEET NO.
B-5302	UE-9
DESIGNED BY: KSM	
DRAWN BY: KSM	
CHECKED BY:	
APPROVED BY:	
REVISED:	

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

UTILITIES ENGINEERING SECT.
PHONE: (919) 707-6690
FAX: (919) 250-4151

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UTILITY CONSTRUCTION

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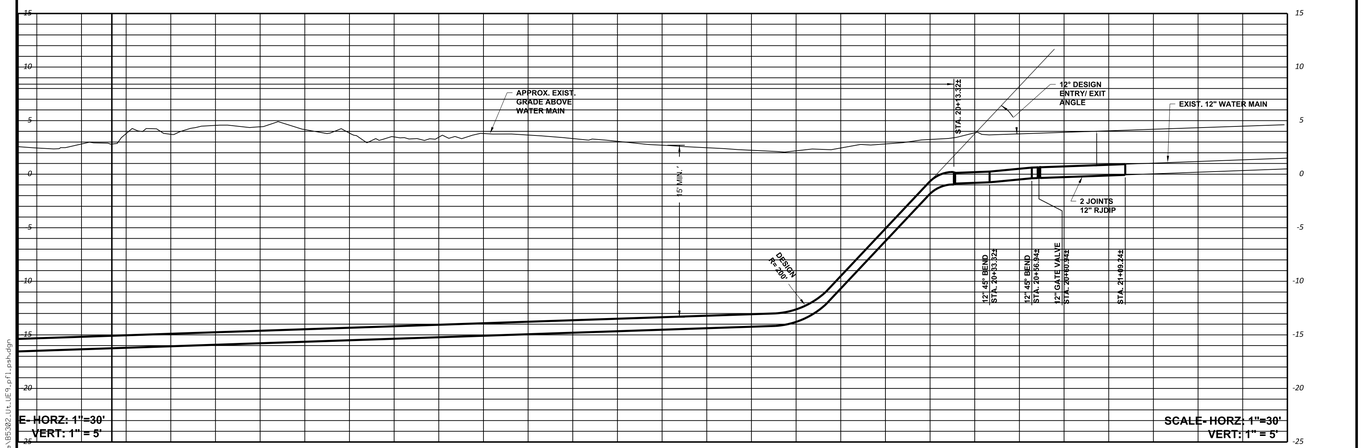
WASHINGTON WM



SHEET # 13 OF # 17

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-5302	UE-10
DESIGNED BY: KSM	
DRAWN BY: KSM	
CHECKED BY:	
APPROVED BY:	
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

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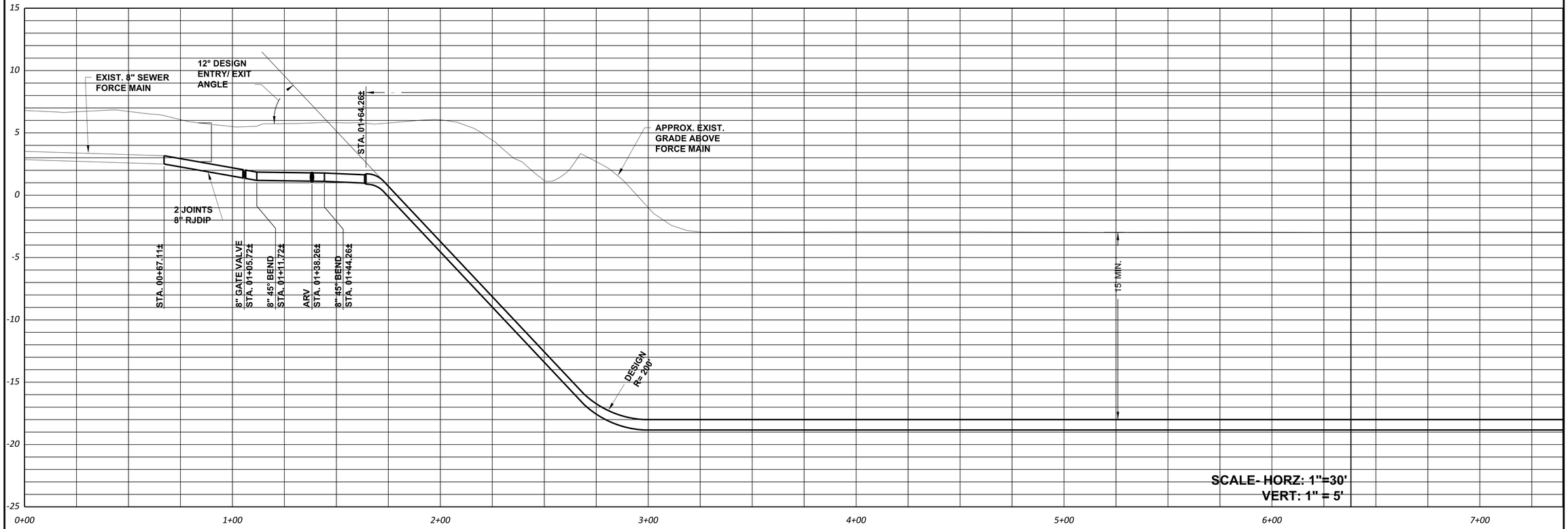
CHOCOWINITY SEWER FM



SHEET # 14 OF # 17

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-5302	UE-11
DESIGNED BY: KSM	
DRAWN BY: KSM	
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

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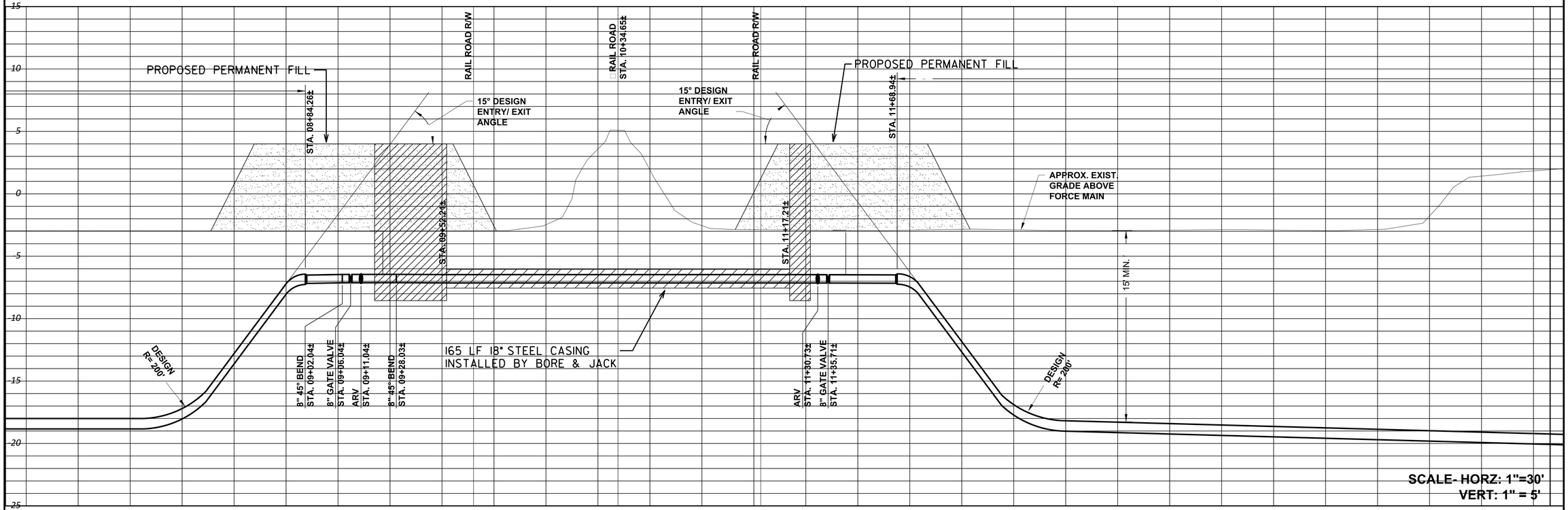
CHOCOWINTY SEWER FM



SCALE- HORZ: 1"=30'
VERT: 1" = 5'

SHEET # 15 OF # 17

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-5302	UE-12
DESIGNED BY: KSM	
DRAWN BY: KSM	
CHECKED BY:	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

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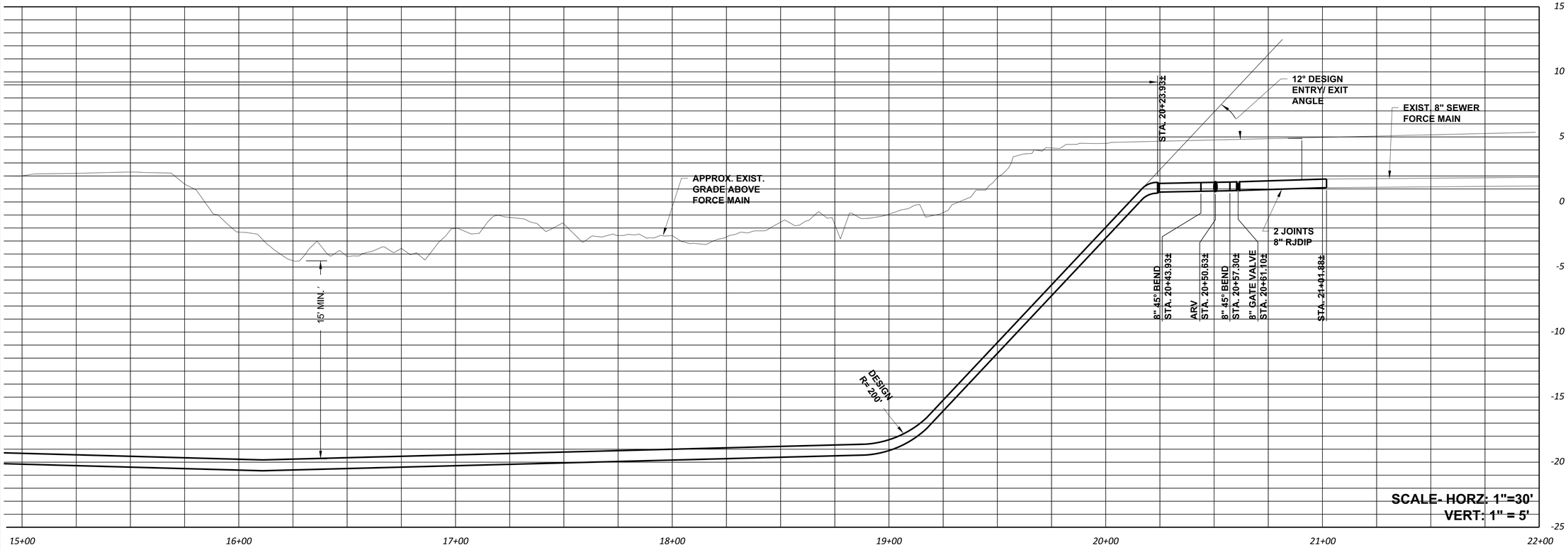
CHOCOWINITY WM



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$$$$USER_NAME$$$$

5/28/99

TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

PROJECT REFERENCE NO.	SHEET NO.
B-5302	6

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

–L–
US 17 BUS.

BM1
RAILROAD SPIKE IN 16" GUM TREE
RT 220.35' OF –L– STA 17+93.10
ELEV. = 4.82'

BEGIN GRADE
–L– STA. 19+40.00
ELEV=9.81'

PI = 20+70.00
EL = 13.19'
VC = 260'
K = 186

(+)2.6000%

(+)4.0000%

EXISTING MH. RAISE FRAME & COVER, ADD 48" COLLAR

MATCHLINE –L– STA. 27+00 SEE THIS SHEET

EXISTING GROUND
PROPOSED GRADE

FOR –L– PLAN SEE SHEETS 4 & 5

MATCHLINE –L– STA. 27+00 SEE THIS SHEET

PI = 29+00.00
EL = 46.39'
VC = 1,205'
K = 151

BEGIN BRIDGE
–L– STA. 27+80 +/–

(+)4.0000%

(–)3.9881%

HIGH POINT
–L– STA. 29+00.90
ELEV=34.36'

END BRIDGE
–L– STA. 30+15 +/–

MAKE DIRECTIONAL BORE 6-4" HDPE SDR 11. BORE MINIMUM OF 15' BELOW BASE OF TRACK.

EXISITNG MH. RAISE FRAME & COVER, ADD 48" COLLAR.

EXISTING BRIDGE

23'-0"

EXIST TRACK

FUTURE TRACK

APPROX. PROPOSED GRADING LINE
(BASED ON NORFOLK SOUTHERN TYPICAL SECTION AND 1.5:1 UNDER BRIDGE SLOPES)

CONTROLLING POINT ELEV=4.81'(SEE DTM RAIL SHOTS) +0.05'(11' RAILCAR FOOTPRINT IN SUPER)=4.86'

NORFOLK SOUTHERN TYPICAL SECTION SUPERIMPOSED TO DETERMINE BRIDGE SLOPE LOCATIONS
(ACTUAL GRADING LINE DEVIATES FROM TYPICAL DUE TO DRAINAGE CONSTRAINTS)

PI = 38+25.00
EL = 9.50'
VC = 370'
K = 138

(–)3.9881%

(–)1.2973%

END GRADE
–L– STA. 40+10.00
ELEV=7.10'

EXISTING GROUND
PROPOSED GRADE

FOR –L– PLAN SEE SHEETS 4 & 5

2/4/2017
K:\NCDOT\B-5302\Roadway\Proj\b5302_rdy_pf1_6.dgn
User:jlowery

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	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-25+32 to L-26+33	Water/Sewer	0.06		<0.01							
2	L-27+40 to L-28+91	Water/Sewer	0.22		0.02							
3	L-28+94 to L-29+91	Water/Sewer	0.12		0.01							
4	L-31+24 to L-32+17	Water/Sewer	0.05		<0.01							
5	L-39+79 toL-40+34	Water/Sewer	<0.01									
TOTALS:			0.45		0.03							

Note:

Revised 9/26/18

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

BEAUFORT COUNTY
WBS - 46016.1.1 (B-5302)

SHEET 1 OF 1 9/26/2018

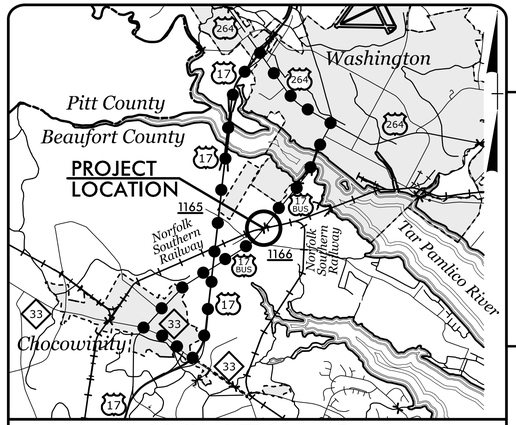
ATN Revised 3/31/05

09/08/99

TIP PROJECT: B-5302

CONTRACT: C204219

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



VICINITY MAP

OFFSITE DETOUR

RIGHT-OF-WAY PLANS

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BEAUFORT COUNTY

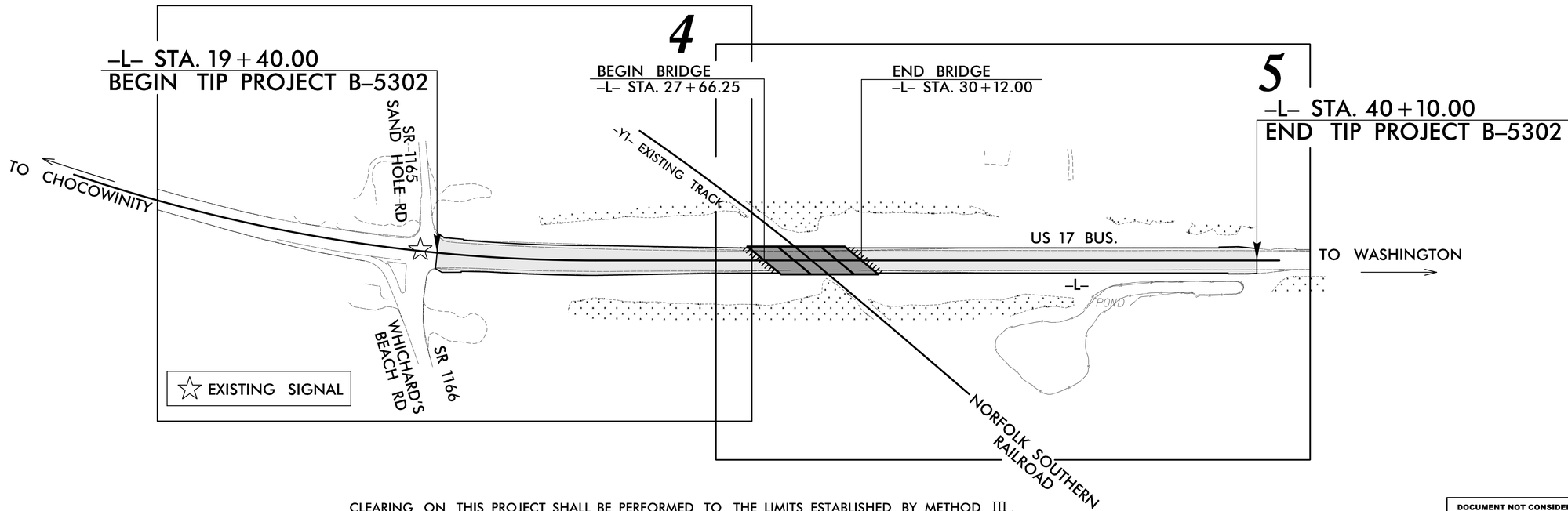
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5302	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
46016.1.1	BRNHPP-0017(127)	PE
46016.2.1		R/W & UTIL

LOCATION: REPLACE BRIDGE NO. 3 OVER NORFOLK SOUTHERN RAILROAD ON US 17 BUS.

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

NAD 83/NA 2011



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

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GRAPHIC SCALES

PLANS: 50 25 0 50 100

PROFILE (HORIZONTAL): 50 25 0 50 100

PROFILE (VERTICAL): 10 5 0 10 20

DESIGN DATA

ADT 2019 = 14,909
ADT 2039 = 20,273
K = 9 %
D = 60 %
T = 8 % *
V = 60 MPH
* TTST = 4% DUAL = 4%
FUNC CLASS = RURAL MINOR ARTERIAL REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-5302	=	*0.345 mile*
LENGTH STRUCTURES TIP PROJECT B-5302	=	*0.047 mile*
TOTAL LENGTH TIP PROJECT B-5302	=	*0.392 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

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MAY 22, 2017

LETTING DATE:
MAY 21, 2019

V. MARCUS LOWERY, PE
PROJECT ENGINEER

TRAVIS COOK, EI
PROJECT DESIGN ENGINEER

GARY LOVERING, PE
PROJECT ENGINEER
NCDOT ROADWAY DESIGN

HYDRAULICS ENGINEER

SIGNATURE: *P.E.*

ROADWAY DESIGN ENGINEER

SIGNATURE: *P.E.*

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

10/9/2018
X:\NCDOT_B-5302\Roadway\Proj\b5302_rdy_tsh_ldgn
User:mlowery

04/06/15

PROJECT REFERENCE NO.	SHEET NO.
B-5302	1B

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale **S.U.E. = Subsurface Utility Engineering*

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — EIP
- Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary — WLB
- Proposed Wetland Boundary — WLB
- Existing Endangered Animal Boundary — EAB
- Existing Endangered Plant Boundary — EPB
- Existing Historic Property Boundary — HPB
- Known Contamination Area: Soil
- Potential Contamination Area: Soil
- Known Contamination Area: Water
- Potential Contamination Area: Water
- Contaminated Site: Known or Potential

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign — S
- Well — W
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream — JS
- Buffer Zone 1 — BZ 1
- Buffer Zone 2 — BZ 2
- Flow Arrow
- Disappearing Stream
- Spring
- Wetland
- Proposed Lateral, Tail, Head Ditch — FLOW
- False Sump

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY:

- Baseline Control Point
- Existing Right of Way Marker
- Existing Right of Way Line
- Proposed Right of Way Line — RW
- Proposed Right of Way Line with Iron Pin and Cap Marker — RW
- Proposed Right of Way Line with Concrete or Granite R/W Marker — RW
- Proposed Control of Access Line with Concrete C/A Marker — CA
- Existing Control of Access — CA
- Proposed Control of Access — CA
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Proposed Temporary Drainage Easement — TDE
- Proposed Permanent Drainage Easement — PDE
- Proposed Permanent Drainage / Utility Easement — DUE
- Proposed Permanent Utility Easement — PUE
- Proposed Temporary Utility Easement — TUE
- Proposed Aerial Utility Easement — AUE
- Proposed Permanent Easement with Iron Pin and Cap Marker

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Curb Ramp — CR
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard — VINEYARD

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole — P
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole
- H-Frame Pole
- U/G Power Line LOS B (S.U.E.*) — P
- U/G Power Line LOS C (S.U.E.*) — P
- U/G Power Line LOS D (S.U.E.*) — P

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole — T
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — HH
- U/G Telephone Cable LOS B (S.U.E.*) — T
- U/G Telephone Cable LOS C (S.U.E.*) — T
- U/G Telephone Cable LOS D (S.U.E.*) — T
- U/G Telephone Conduit LOS B (S.U.E.*) — TC
- U/G Telephone Conduit LOS C (S.U.E.*) — TC
- U/G Telephone Conduit LOS D (S.U.E.*) — TC
- U/G Fiber Optics Cable LOS B (S.U.E.*) — T FO
- U/G Fiber Optics Cable LOS C (S.U.E.*) — T FO
- U/G Fiber Optics Cable LOS D (S.U.E.*) — T FO

WATER:

- Water Manhole — W
- Water Meter
- Water Valve
- Water Hydrant
- U/G Water Line LOS B (S.U.E.*) — W
- U/G Water Line LOS C (S.U.E.*) — W
- U/G Water Line LOS D (S.U.E.*) — W
- Above Ground Water Line — A/G Water

TV:

- TV Pedestal — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- U/G TV Cable LOS B (S.U.E.*) — TV
- U/G TV Cable LOS C (S.U.E.*) — TV
- U/G TV Cable LOS D (S.U.E.*) — TV
- U/G Fiber Optic Cable LOS B (S.U.E.*) — TV FO
- U/G Fiber Optic Cable LOS C (S.U.E.*) — TV FO
- U/G Fiber Optic Cable LOS D (S.U.E.*) — TV FO

GAS:

- Gas Valve
- Gas Meter
- U/G Gas Line LOS B (S.U.E.*) — G
- U/G Gas Line LOS C (S.U.E.*) — G
- U/G Gas Line LOS D (S.U.E.*) — G
- Above Ground Gas Line — A/G Gas

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- SS Forced Main Line LOS B (S.U.E.*) — FSS
- SS Forced Main Line LOS C (S.U.E.*) — FSS
- SS Forced Main Line LOS D (S.U.E.*) — FSS

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line LOS B (S.U.E.*) — ?UTL
- U/G Tank; Water, Gas, Oil
- Underground Storage Tank, Approx. Loc. — UST
- A/G Tank; Water, Gas, Oil
- Geoenvironmental Boring
- U/G Test Hole LOS A (S.U.E.*)
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-5302	2A-1
R/W 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

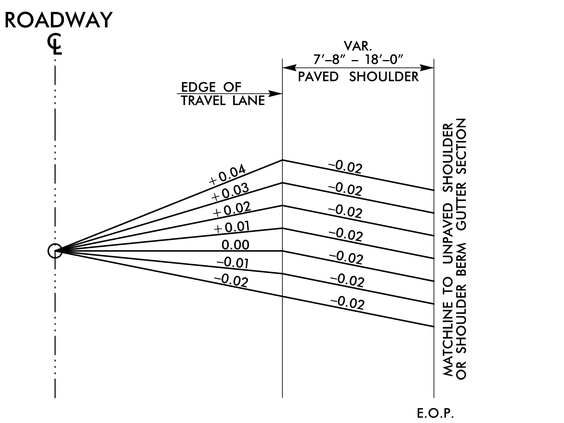
PAVEMENT SCHEDULE

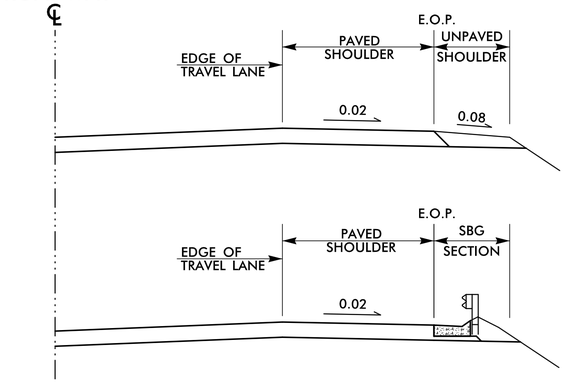
FINAL PAVEMENT DESIGN: DECEMBER 31, 2015

C1	PROP. APPROX. 3″ ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
D1	PROP. APPROX. 4″ ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E1	PROP. APPROX. 4″ ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
R	MODIFIED SHOULDER BERM GUTTER (SEE DETAIL ON SHEET 2C-1)
T	EARTH MATERIAL

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

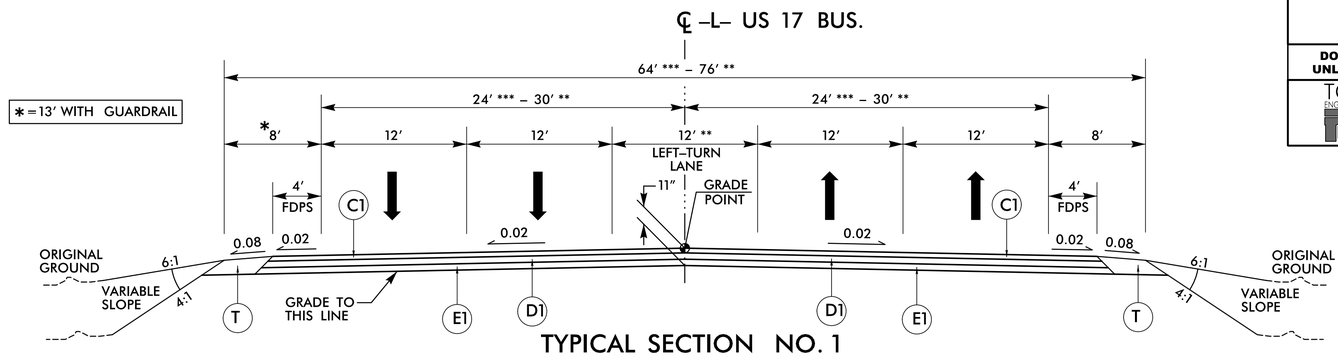
DETAIL SHOWING METHOD OF SHOULDER CONSTRUCTION
(HIGH SIDE OF SUPERELEVATED CURVE)





USE THIS DETAIL AS FOLLOWS:

FROM –L– STA 19+40.00 (RT.) TO STA 25+73.26 (RT.)



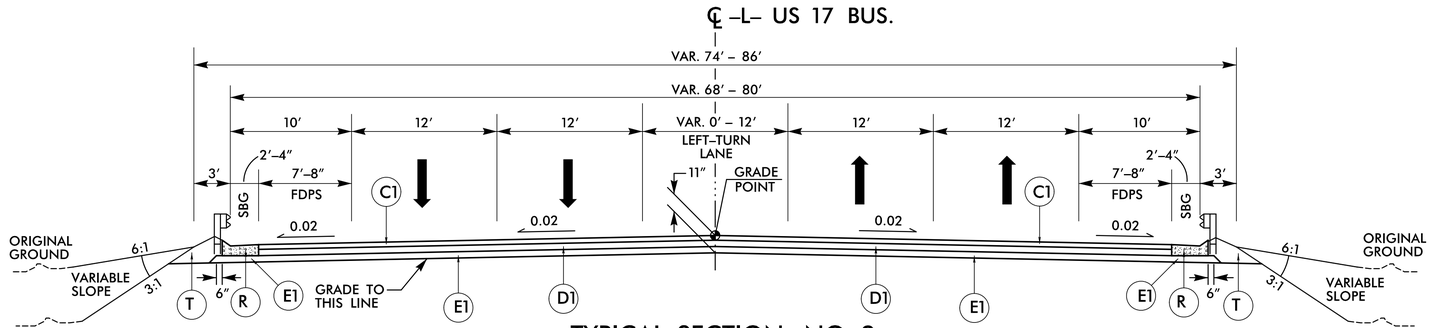
*=13′ WITH GUARDRAIL

TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1 AS FOLLOWS:

** FROM –L– STA 19+40.00 TO STA 20+04.04 (LT.) & STA 20+04.51 (RT.)
*** FROM –L– STA 39+14.55 (LT.) & STA 39+37.18 (RT.) TO STA 40+10.00

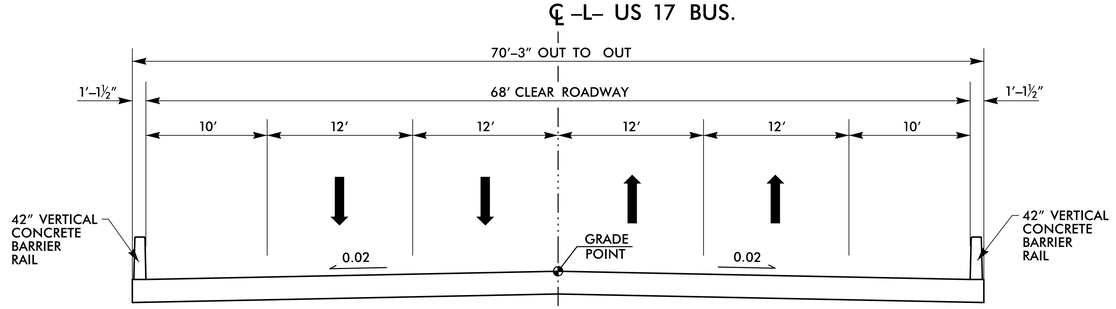
SBG=SHOULDER BERM GUTTER
FDPS=FULL DEPTH PAVED SHOULDER



TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2 AS FOLLOWS:

FROM –L– STA 20+04.04 (LT.) & STA 20+04.51 (RT.) TO STA 27+66.25 (BEGIN BRIDGE)
FROM –L– STA 30+12.00 (END BRIDGE) TO STA 39+14.55 (LT.) & 39+37.18 (RT.)
NOTE: TURN LANE TRANSITION –L– STA 23+45.00 TO STA 27+05.00



TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3 AS FOLLOWS:

FROM –L– STA 27+66.25 (BEGIN BRIDGE) TO STA 30+12.00 (END BRIDGE)

PROJECT REFERENCE NO.	SHEET NO.
B–5302	2C–1

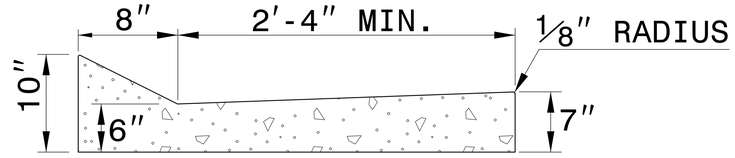
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR

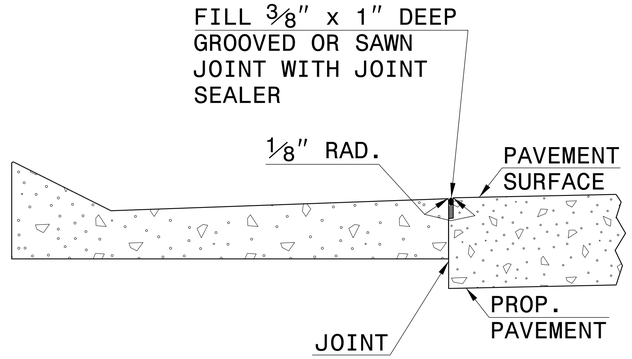
MODIFIED SHOULDER BERM GUTTER

SHEET OF

846D01

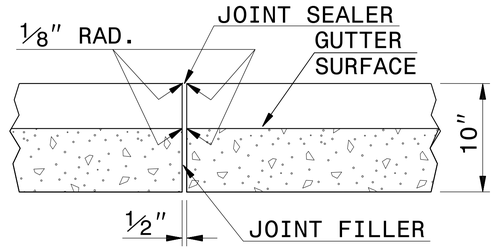


MODIFIED SHOULDER BERM GUTTER



LONGITUDINAL JOINT

GENERAL NOTES:
- -PLACE CONTRACTION JOINTS AT 10′ INTERVALS, EXCEPT THAT A 15′ SPACING MAY BE USED WHEN A MACHINE IS USED OR WHEN SATISFACTORY SUPPORT FOR THE FACE FORM CAN BE OBTAINED WITHOUT THE USE OF TEMPLATES AT 10′ INTERVALS.
- -JOINT SPACING MAY BE ALTERED IF REQUIRED BY THE ENGINEER.
- -CONTRACTION JOINTS MAY BE INSTALLED WITH THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS. CONSTRUCT NON-TEMPLATE FORMED JOINTS A MIN. OF 1½″ DEEP.
- -FILL ALL CONSTRUCTION JOINTS WITH JOINT FILLER AND SEALER.
- -SPACE EXPANSION JOINTS AT 90′ INTERVALS AND ADJACENT TO ALL RIGID OBJECTS.



TRANSVERSE EXPANSION JOINT IN CURB AND GUTTER

SECTION VIEW OF JOINTS

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR

MODIFIED SHOULDER BERM GUTTER

SHEET OF

846D01

NORTH CAROLINA PROFESSIONAL SEAL 022966 ENGINEER JOHN S. HOWERTON

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

ORIGINAL BY: kkempf DATE: 11/13/08
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: special details/kkempf/english/117x79 tbdi.dgn

$$$$$$SYSTIME$$$$$$
$$$$$$USERNAME$$$$$$

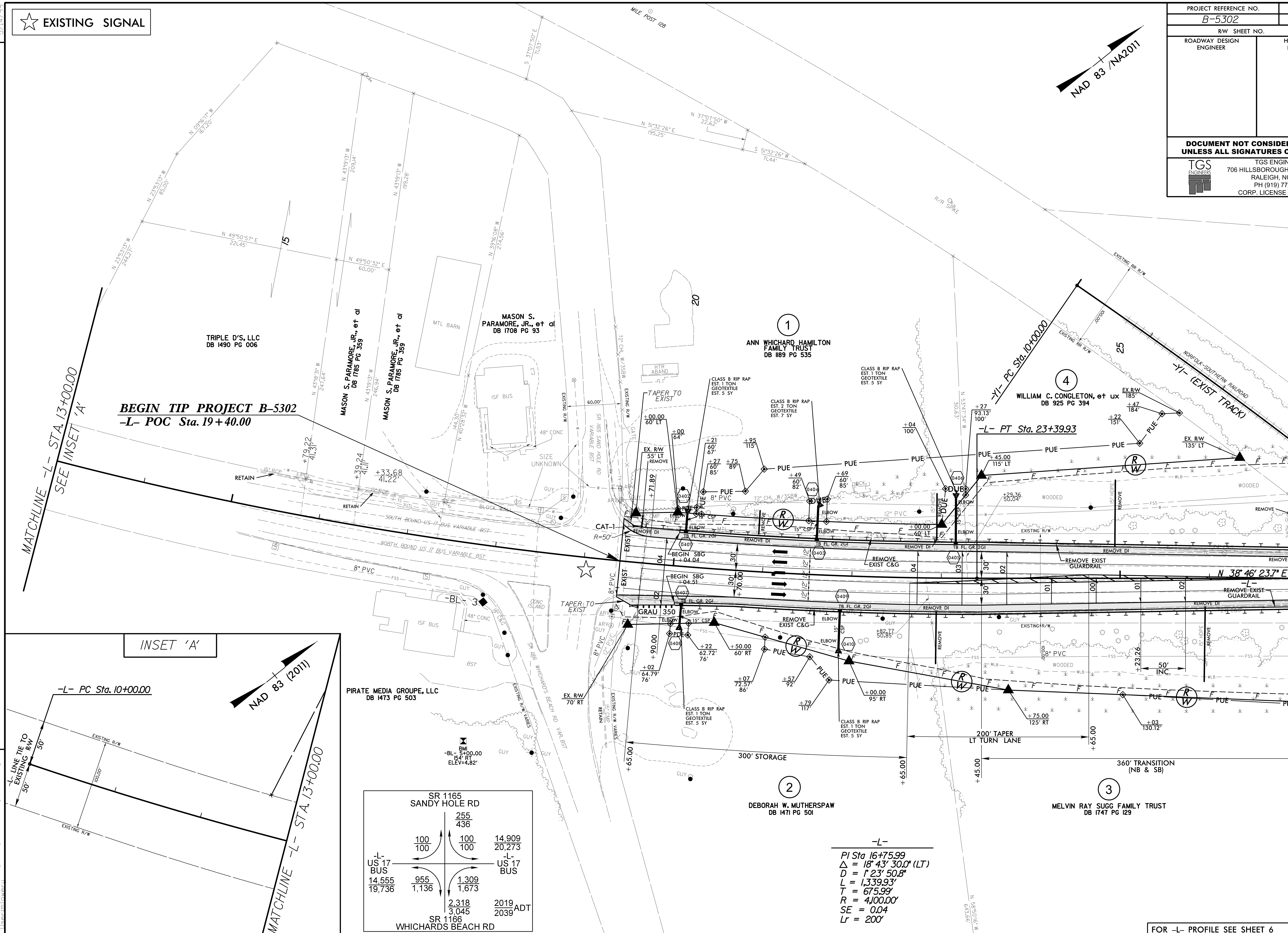
PROJECT REFERENCE NO.	SHEET NO.
B-5302	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

REVISIONS

ROW REV.- OCTOBER 9,2018 - ADDED PUE TO PARCELS 1,2,3,AND 4; REMOVED TCE STA 20+83 ON PARCEL 1; REMOVED TCE STA 22+84 ON PARCEL 1; CHANGED PDE TO DUE AT STA 21+49 ON PARCEL 1; CHANGED PDE TO DUE AT STA 23+04 ON PARCEL 1; REMOVED TDE AT STA 21+80 ON PARCEL 2; CHANGED PDE TO DUE AT STA 23+27 ON PARCEL 4 (VML)



	SR 1165 SANDY HOLE RD 255/436		
-L- US 17 BUS 14,555/19,736	100/100 ; 955/1,136	100/100 ; 1,309/1,673	14,909/20,273 -L- US 17 BUS
	2,318/3,045 SR 1166 WHICHARDS BEACH RD		2019/2039 ADT

-L-
PI Sta 16+75.99
Δ = 18° 43' 30.0" (LT)
D = 1° 23' 50.8"
L = 1,339.93'
T = 675.99'
R = 4,100.00'
SE = 0.04
Lr = 200'

FOR -L- PROFILE SEE SHEET 6

PROJECT REFERENCE NO.	SHEET NO.
B-5302	5

R/W 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

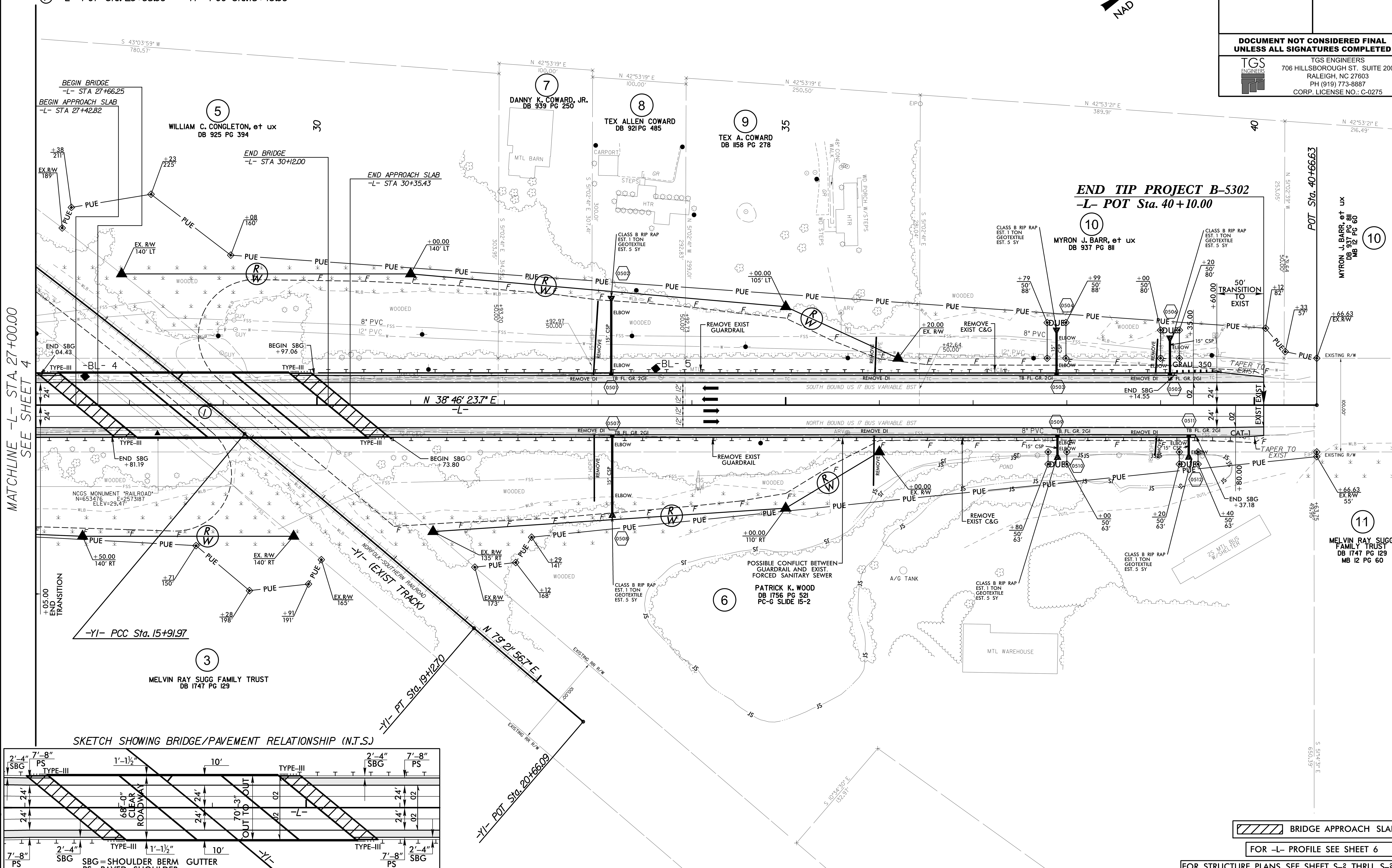
-YI- (EXIST TRACK)

PI Sta 12+96.20	PI Sta 17+52.33
Δ = 5° 24' 34.5" (RT)	Δ = 0° 37' 28.5" (RT)
D = 0° 54' 49.8"	D = 0° 11' 41.0"
L = 591.97'	L = 320.73'
T = 296.20'	T = 160.37'
R = 6,269.81'	R = 29,422.30'

(1) -L- POT Sta. 28+85.96 = -YI- POC Sta.15+43.96

REVISIONS

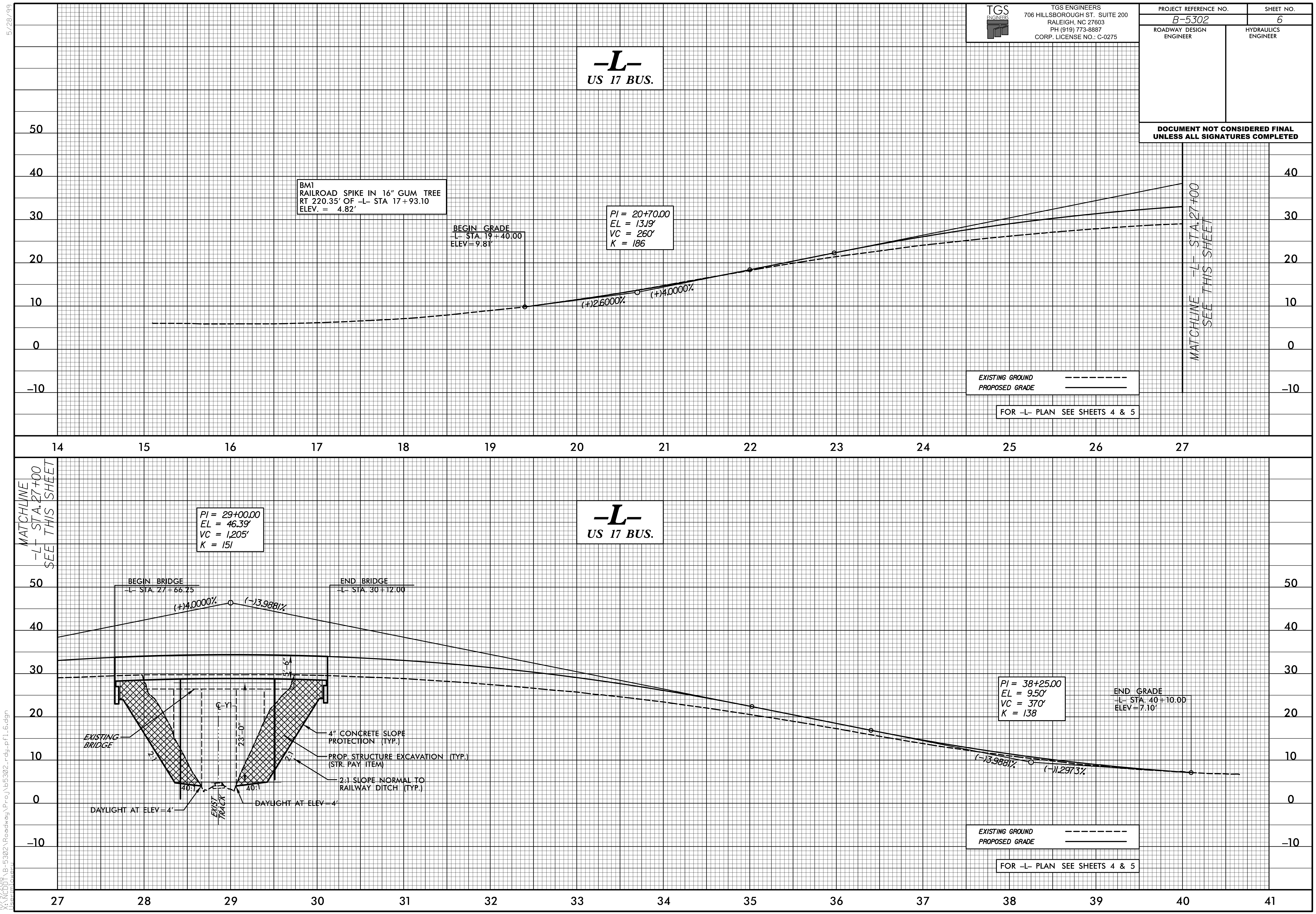
ROW REV.- OCTOBER 9,2018 - ADDED PUE TO PARCELS 3,5,6,7,8,9, AND 10; ADDED PARCEL 11 FOR PUE; REMOVED TCE STA 33+04 ON PARCEL 8; REMOVED TCE STA 35+86 ON PARCEL 9; CHANGED PDE TO DUE STA 37+79 ON PARCEL 10; CHANGED PDE TO DUE STA 39+00 ON PARCEL 10; REMOVED TCE STA 38+85 ON PARCEL 10; REMOVED TDE STA 33+05 ON PARCEL 6; REMOVED TCE STA 35+83 ON PARCEL 6; CHANGED PDE TO DUE STA 37+80 ON PARCEL 6; CHANGED PDE TO DUE STA 39+20 ON PARCEL 6 (VML)



BRIDGE APPROACH SLAB

FOR -L- PROFILE SEE SHEET 6

FOR STRUCTURE PLANS, SEE SHEET S-? THRU S-??


TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275
PROJECT REFERENCE NO.
B-5302
SHEET NO.
6
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
-L-
US 17 BUS.
BM1
RAILROAD SPIKE IN 16" GUM TREE
RT 220.35' OF -L- STA 17+93.10
ELEV. = 4.82'
BEGIN GRADE
-L- STA. 19+40.00
ELEV=9.81'
PI = 20+70.00
EL = 13.19'
VC = 260'
K = 186
(+)2.6000%
(+)4.0000%
MATCHLINE -L- STA. 27+00
SEE THIS SHEET
EXISTING GROUND
PROPOSED GRADE
FOR -L- PLAN SEE SHEETS 4 & 5
-L-
US 17 BUS.
PI = 29+00.00
EL = 46.39'
VC = 1,205'
K = 151
BEGIN BRIDGE
-L- STA. 27+66.25
END BRIDGE
-L- STA. 30+12.00
(+)4.0000%
(-)3.9881%
5'-6"
23'-0"
EXISTING BRIDGE
4" CONCRETE SLOPE PROTECTION (TYP.)
PROP. STRUCTURE EXCAVATION (TYP.)
(STR. PAY ITEM)
2:1 SLOPE NORMAL TO RAILWAY DITCH (TYP.)
40:1
DAYLIGHT AT ELEV=4'
EXIST TRACK
PI = 38+25.00
EL = 9.50'
VC = 370'
K = 138
END GRADE
-L- STA. 40+10.00
ELEV=7.10'
(-)3.9881%
(-)1.2973%
EXISTING GROUND
PROPOSED GRADE
FOR -L- PLAN SEE SHEETS 4 & 5