



Pre-Construction Notification (PCN) Form

For Nationwide Permits and Regional General Permits

(along with corresponding Water Quality Certifications)

January 31, 2018 Ver 2.3

*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: *

Perquimans

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:

R-4467 (Central)

WBS #

35748.3.2

(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 Corps to initiate the standard/individual permit process. Please contact your Corps representative for submittal of standard permits.

All required items that are not provided in the E-PCN and be added to the miscellaneous upload located at the bottom of this form.

Nationwide Permit (NWP) Number:

14 - Linear transportation

NWP Number Other:

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

1c. 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

1d. 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

1e. 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

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

Yes No

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

Yes No Unknown

1h. 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: *

jdilday@ncdot.gov

1c. Primary Contact Phone: *

(xxx)xxx-xxxx

(919)707-6111

1d. Who is applying for the permit?

Owner Applicant (other than owner) Agent/Consultant

(Check all that apply)

2. Owner Information

2a. Name(s) on recorded deed:

2b. Deed book and page no.:

2c. Responsible party:

(for Corporations)

2d. Address

Street Address

Address Line 2

City

State / Province / Region

Postal / Zip Code

Country

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: *

US 17 Business/NC 37 (North Church Street) From South of the Perquimans River Bridge to NC 37 Including Replacement of Bridge No. 8. R-4467

1b. Subdivision name:

(if appropriate)

1c. Nearest municipality / town: *

Hertford

1d. Driving directions *

If it is a new project and can not easily be found in a GPS mapping system. Please provide directions.

<https://www.google.com/maps/place/36%C2%B011'38.4%22N+76%C2%B027'58.6%22W/@36.1940126,-76.4681265,17z/data=!3m1!4b1!4m1!1m7!3m6!1s0x89a55e43156a0db9:0x29017303fc357cffi!2sHertford,+NC+27944!3b1!8m2!3d36.1901579!4d-76.4660519!3m5!1s0x0:0x0!7e2!8m2!3d36.1940092!4d-76.4662858>

2. Project Identification

2a. Property Identification Number:

(tax PIN or parcel ID)

2b. Property size:

(in acres)

66

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: *

36.194987

ex: 34.208504

Longitude: *

-76.467046

-77.796371

3. Surface Waters

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

Perquimans River

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

SC

[Surface Water Lookup](#)

3c. What river basin(s) is your project located in?*

Pasquotank

[River Basin Lookup](#)

4. Project Description

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:*

US 17 Business/NC 37 (North Church Street) currently crosses the Perquimans River Bridge between the Towns of Hertford and Winfall. The existing bridge is a swinging bridge. The Town of Hertford is a National Register-listed Historic District. The north side of the project study area is comprised of maintained road causeway and natural areas with wetlands or open water on either side of the causeway for a significant portion. The south side of the project study area is within the Town of Hertford and is comprised of commercial and residential areas and maintained roadway.

4b. 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

4c. 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

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

41.8

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

(intermittent and perennial)

700

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

The purpose of the project is to provide a direct, reliable route between the Towns of Hertford and Winfall. The current bridge and causeway is experiencing substantial deterioration and ongoing maintenance problems, jeopardizing its ability to provide direct, reliable connectivity from Hertford to Winfall. A detailed description of the project need is provided in the Environmental Assessment (EA 2013).

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

The proposed project will replace the US 17 Business/NC 37 bridge and causeway over Perquimans River with an approximately 0.5-mile bridge with 29 spans parallel to the existing roadway/causeway. There will also be roadway improvements on the east side of the bridge. The existing swing span will be replaced with a new swing span bridge just south of the existing structure. The existing roadway will remain open during construction. In shallow waters, a crawler crane on a trestle will be used to construct the bridge. A temporary causeway will be built near the north side of the bridge. Once the new roadway is complete, the existing bridge and causeway will be removed. An existing tender house will be removed and replaced with a new one.

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

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

R-4467_PRM_4C_071118.pdf

8.52MB

R-4467_HYD_SMPv2.07_(20180531) (Oct 2016).pdf

175.66KB

R-4467_Rdy_Full.pdf

6.53MB

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 Unknown N/A

Corps AID Number:

Example: SAW-2017-99999

SAW-2005-11122

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

Name (if known):

Laura Thornbrough

Agency/Consultant Company:

Kimley-Horn and Associates, Inc.

Other:

5d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation.

Initial package provided to on February 18, 2010 (Corps & NCDWQ), January 26, 2010 (NCDCM). Updated package provided to Corps in February 2018

5d1. Jurisdictional determination upload

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

R-4467_JD_Determination_SAW-2005-11122.pdf

45.61KB

File type must be PDF

6. Project History

6a. Have permits or certifications been requested or obtained for this project (including all prior phases) in the past? *

Yes No Unknown

6b. If yes, please give the DWR Certification number or the Corps Action ID (exp. SAW-0000-00000).

SAW-2018-00615

Project History Upload

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

SAW-2018-00615 NCDOT R4467 US17 Bus_NC 37 Geotech Survey.pdf

143.46KB

File type must be PDF

7. Future Project Plans

7a. 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
- Open Waters

- Streams-tributaries
- Pond Construction

- Buffers

2. Wetland Impacts

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

2a. Site # - Reason for impact *	2b. Impact type *	2c. Type of wetland *	2d. Wetland name *	2e. Forested *	2f. Type of Jurisdiction *	2g. Impact area *
2A - Bridge Map label (e.g. Rbad Crossing 1 - Culvert, dewatering, etc)	P Permanent (P) or Temporary (T)	Riverine Swamp Forest	WC	Yes	Both (404, 10) or DWR (401, other)	0.002 (acres)
2A - Hand Clearing Map label (e.g. Rbad Crossing 1 - Culvert, dewatering, etc)	T Permanent (P) or Temporary (T)	Riverine Swamp Forest	WC	Yes	Both (404, 10) or DWR (401, other)	0.490 (acres)
2B - Jacking/Receiving Pit (Utility) Map label (e.g. Rbad Crossing 1 - Culvert, dewatering, etc)	T Permanent (P) or Temporary (T)	Riverine Swamp Forest	WC	Yes	Both (404, 10) or DWR (401, other)	0.001 (acres)
2C - Jacking/Receiving Pit (Utility) Map label (e.g. Rbad Crossing 1 - Culvert, dewatering, etc)	T Permanent (P) or Temporary (T)	Riverine Swamp Forest	WC	Yes	Both (404, 10) or DWR (401, other)	0.001 (acres)
3 - Bridge Map label (e.g. Rbad Crossing 1 - Culvert, dewatering, etc)	P Permanent (P) or Temporary (T)	Riverine Swamp Forest	WB	Yes	Both (404, 10) or DWR (401, other)	0.001 (acres)
3 - Hand Clearing Map label (e.g. Rbad Crossing 1 - Culvert, dewatering, etc)	T Permanent (P) or Temporary (T)	Riverine Swamp Forest	WB	Yes	Both (404, 10) or DWR (401, other)	0.210 (acres)
4 - Bridge Map label (e.g. Rbad Crossing 1 - Culvert, dewatering, etc)	P Permanent (P) or Temporary (T)	Riverine Swamp Forest	WA	Yes	Both (404, 10) or DWR (401, other)	0.001 (acres)
4 - Hand Clearing Map label (e.g. Rbad Crossing 1 - Culvert, dewatering, etc)	T Permanent (P) or Temporary (T)	Riverine Swamp Forest	WA	Yes	Both (404, 10) or DWR (401, other)	0.930 (acres)
4 - Temporary Causeway Map label (e.g. Rbad Crossing 1 - Culvert, dewatering, etc)	T Permanent (P) or Temporary (T)	Riverine Swamp Forest	WA	Yes	Both (404, 10) or DWR (401, other)	0.280 (acres)
5A - Temporary Causeway Map label (e.g. Rbad Crossing 1 - Culvert, dewatering, etc)	T Permanent (P) or Temporary (T)	Riverine Swamp Forest	WF	Yes	Both (404, 10) or DWR (401, other)	0.120 (acres)
5A - Hand Clearing Map label (e.g. Rbad Crossing 1 - Culvert, dewatering, etc)	T Permanent (P) or Temporary (T)	Riverine Swamp Forest	WF	Yes	Both (404, 10) or DWR (401, other)	0.080 (acres)
5A - Jacking/Receiving Pit (Utility) Map label (e.g. Rbad Crossing 1 - Culvert, dewatering, etc)	T Permanent (P) or Temporary (T)	Riverine Swamp Forest	WF	Yes	Both (404, 10) or DWR (401, other)	0.001 (acres)
5A - Guy Wire (Utility) Map label (e.g. Rbad Crossing 1 - Culvert, dewatering, etc)	T Permanent (P) or Temporary (T)	Riverine Swamp Forest	WF	Yes	Both (404, 10) or DWR (401, other)	0.001 (acres)
5B - 15" Pipe Outlet Map label (e.g. Rbad Crossing 1 - Culvert, dewatering, etc)	P Permanent (P) or Temporary (T)	Riverine Swamp Forest	WF	Yes	Both (404, 10) or DWR (401, other)	0.001 (acres)
5B - Hand Clearing Map label (e.g. Rbad Crossing 1 - Culvert, dewatering, etc)	T Permanent (P) or Temporary (T)	Riverine Swamp Forest	WF	Yes	Both (404, 10) or DWR (401, other)	0.001 (acres)

5C- Jacking/Receiving Pit (Utility) Map label (e.g. Road Crossing 1 - Culvert, dewatering, etc)	T Permanent (P) or Temporary (T)	Riverine Swamp Forest	WF	Yes	Both (404, 10) or DWR (401, other)	0.001 (acres)
5D - Jacking/Receiving Pit (Utility) Map label (e.g. Road Crossing 1 - Culvert, dewatering, etc)	T Permanent (P) or Temporary (T)	Riverine Swamp Forest	WF	Yes	Both (404, 10) or DWR (401, other)	0.001 (acres)
5A - 18" Pipe Outlet Map label (e.g. Road Crossing 1 - Culvert, dewatering, etc)	P Permanent (P) or Temporary (T)	Riverine Swamp Forest	WF	Yes	Both (404, 10) or DWR (401, other)	0.050 (acres)

2g. Total Temporary Wetland Impact

2.117

2g. Total Permanent Wetland Impact

0.055

2g. Total Wetland Impact

2.172

2h. Comments:

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 # - Reason for impact *	4b. Impact type *	4c. Name of waterbody *	4d. Activity type *	4e. Waterbody type *	4f. Impact area *
1 - Cofferdam Map label (e.g. Road Crossing 1)	T Permanent (P) or Temporary (T)	Perquimans River (if applicable)	Dewatering	Other	0.06 (acres)
1 - Bulk Head Map label (e.g. Road Crossing 1)	P Permanent (P) or Temporary (T)	Perquimans River (if applicable)	Bulkheads	Other	0.01 (acres)
1 - Bridge Spans Map label (e.g. Road Crossing 1)	P Permanent (P) or Temporary (T)	Perquimans River (if applicable)	Bridge	Other	0.02 (acres)
1 - Bulk Head Map label (e.g. Road Crossing 1)	T Permanent (P) or Temporary (T)	Perquimans River (if applicable)	Bulkheads	Other	0.06 (acres)
1 - Bridge Spans Map label (e.g. Road Crossing 1)	T Permanent (P) or Temporary (T)	Perquimans River (if applicable)	Bridge	Other	0.01 (acres)

4g. Total temporary open water Impacts:

0.13

4g. Total permanent open water impacts:

0.03

4g. Total open water impacts:

0.16

4h. Comments:

On impact summary table, impacts are rounded totals of actual impacts, therefore totals do not match the totals calculated here.

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: *

The proposed project is the replacement of Bridge No. 8 over Perquimans River in the Town of Hertford. Since the bridge is located in a historic district, the bridge has been designed to reflect the aesthetic of the existing bridge including: a truss swing span, Oregon rails, decorative pedestrian lights which match the streetlights throughout the town, safety standard vertical lift gates, two observational bump-outs on the bridge, sidewalks on the east side of the bridge, reuse of the current bridge plaque on the new bridge and an added second bridge plaque for the new bridge, retaining walls of stamped concrete within the historic district, signs on NCDOT property stating authorized vehicles and personnel only, flag pole with US and NC flags lit dusk to dawn, and fenders composed of artificial timber that include lights and signs.

Additionally, the realignment of the new bridge will allow traffic to use the existing bridge during construction, thus reducing impacts. Also, the swing span lines up with original navigation, so there will be no change to the horizontal opening or the navigation path of the new swing bridge. The new bridge will have an increased vertical clearance. The old road causeway, totaling approximately 1.2 acres, will be removed and returned to a natural state. The new alignment will avoid impacts to the locally significant turtle log.

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

Erosion and sedimentation BMPs will be installed prior to construction. As in-stream work moratorium from February 15 to June 30 will be strictly followed. Impacts will be reduced through the use of a work barge and a minimally sized temporary causeway. During construction, one of the two navigation channels will remain open at all times to ensure navigation is available. Impacts will be minimized by strict enforcement of BMPs for the protection of surface waters, restrictions against the staging of equipment in or adjacent to water of the US and coordination (including pre-construction meeting) with the Division Environmental staff.

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:

Due to the minimal amount of permanent wetland impacts, per agency confirmation compensatory mitigation is not proposed.

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

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

If no, explain why:

The proposed project is not located in a watershed with riparian buffer protection rules and is the replacement of existing bridge and causeway, which will not change overall impervious surfaces.

2. Stormwater Management Plan

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

Yes No

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

FILETYPE 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

2b. Is this an after-the-fact permit application? *

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.

Cumulative impact analysis was completed for this project in the Final Environmental Assessment (2013, attached).

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

What Federal Agency is involved?

NMFS

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, NOAA, and NCNHP websites, and field surveys. Additional information pertaining to federally listed species is provided in the 2013 Environmental Assessment (EA) and the 2018 Finding of No Significant Impact (FONSI).

6. Essential Fish Habitat (Corps Requirement)

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

Yes No

Are there submerged aquatic vegetation (SAV) around the project vicinity? *

Yes No Unknown

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

NOAA Essential Fish Mapper and Natural Resource Technical Report (May 2010)

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? *

The historical and cultural resources were discussed in the 2013 EA and 2018 FONSI. A copy of the Memorandum of Agreement is attached.

7c. Historic or Prehistoric Information Upload

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

R4467 MOA.pdf

288.92KB

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:

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

North Carolina Floodplain Mapping Program

Miscellaneous

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

8/3/2018



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

August 3, 2018

N.C. Dept. of Environmental Quality
Division of Coastal Management
401 South Griffin Street, Suite 300
Elizabeth City, NC 27909

ATTN: Mr. Greg Daisey
NCDOT Coordinator

Subject: **Application for a CAMA Major Development Permit** for the Proposed Improvements to US 17 Business/NC 37 (North Church Street) from South of the Perquimans River Bridge to NC 37 including the replacement of Bridge No. 8 in Perquimans County, North Carolina; TIP No. R-4467; Federal Aid Project No. BRNHS-0017(85); Debit \$475 from WBS No. 35748.3.2

Dear Sir,

The North Carolina Department of Transportation (NCDOT) proposes improvements of US 17 Business/NC 37 from south of Bridge No. 8 over the Perquimans River Bridge to north of NC 37.

Please see enclosed copies of the Division of Coastal Management Major Permit Forms 1, 2 and 5, permit drawings, stormwater management plan, utility drawings, and roadway plans for the above referenced project. An Environmental Assessment was completed in February 2013 and Finding of No Significant Impact was completed February 2018, and distributed shortly after. Additional copies are available at the NCDOT website: <http://207.4.62.65/PDEA/EnvironmentalDocs/>

NCDOT requests that the proposed work be authorized under a Coastal Area Management Act Major Permit. Adjacent riparian landowner certified mail return receipts will be provided once they are received. Authorization to debit the \$475 Permit Application Fee from WBS Element 35748.3.2 is hereby given.

A copy of this permit application will be posted on the NCDOT Website at <https://connect.ncdot.gov/resources/Environmental/Pages/default.aspx>, under *Quick Links > Permit Applications*. Should you have any questions regarding this information, please contact Jason Dilday at (919) 707-6111 or jldilday@ncdot.gov.

Sincerely,

for Philip S. Harris III, P.E., C.P.M., Unit Head
Environmental Analysis Unit

cc: Cathy Brittingham, NCDCM Raleigh

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL ANALYSIS UNIT
1598 MAIL SERVICE CENTER
RALEIGH NC 27699-1598

Telephone: (919) 707-6000
Fax: (919) 212-5785
Customer Service: 1-877-368-4968
Website: www.ncdot.gov

Location:
1020 BIRCH RIDGE DRIVE
RALEIGH NC 27610

APPLICATION for Major Development Permit

(last revised 12/27/06)



North Carolina DIVISION OF COASTAL MANAGEMENT

1. Primary Applicant/ Landowner Information			
Business Name North Carolina Department Of Transportation		Project Name (if applicable) R-4467	
Applicant 1: First Name Philip	MI S	Last Name Harris	
Applicant 2: First Name	MI	Last Name	
<i>If additional applicants, please attach an additional page(s) with names listed.</i>			
Mailing Address Environmental Analysis Unit 1598 Mail Service Center		PO Box	City Raleigh
			State NC
ZIP 27699-1598	Country USA	Phone No. 919 - 707 - 6111 ext.	FAX No. - -
Street Address (if different from above) 1020 Birch Ridge Drive		City Raleigh	State NC
			ZIP 27610-
Email jldilday@ncdot.gov			

2. Agent/Contractor Information			
Business Name			
Agent/ Contractor 1: First Name	MI	Last Name	
Agent/ Contractor 2: First Name	MI	Last Name	
Mailing Address		PO Box	City
			State
ZIP		Phone No. 1 - - ext.	Phone No. 2 - - ext.
FAX No.	Contractor #		
Street Address (if different from above)		City	State
			ZIP -
Email			

<Form continues on back>

3. Project Location			
County (can be multiple) Perquimans	Street Address	State Rd. # NC 37/US 17 Bus	
Subdivision Name N/A	City Hertford	State NC	Zip 27944 -
Phone No. - - ext.		Lot No.(s) (if many, attach additional page with list) See attached list, , , ,	
a. In which NC river basin is the project located? Pasquotank		b. Name of body of water nearest to proposed project Perquimans River	
c. Is the water body identified in (b) above, natural or manmade? <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Manmade <input type="checkbox"/> Unknown		d. Name the closest major water body to the proposed project site. Perquimans River	
e. Is proposed work within city limits or planning jurisdiction? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		f. If applicable, list the planning jurisdiction or city limit the proposed work falls within. Hertford	

4. Site Description	
a. Total length of shoreline on the tract (ft.) 5,100	b. Size of entire tract (sq.ft.) 67.5 acres
c. Size of individual lot(s) See attached, , , (If many lot sizes, please attach additional page with a list)	d. Approximate elevation of tract above NHW (normal high water) or NWL (normal water level) -0.1' <input type="checkbox"/> NHW or <input checked="" type="checkbox"/> NWL
e. Vegetation on tract Maintained/Disturbed: poison ivy, Japanese honeysuckle, fescue, wild onion, Bermuda grass. River Swamp Forest: Bald cypress, blackgum, water tupelo, swamp tupelo, loblolly bay, red bay, red maple, wax myrtle, baccharis, multiflora rose, swamp rose, rush. Bottomland Hardwood Forest: water oak, willow oak, loblolly pine, black willow, tulip tree, sycamore, sweetgum, American holly, giant cane, and various vine species.	
f. Man-made features and uses now on tract Features are: US 17 Business/NC 12, swing-span bridge, electric and water utility lines, residential and commercial buildings. Uses are: transportation, residential, commercial, recreational, and historic.	
g. Identify and describe the existing land uses <u>adjacent</u> to the proposed project site. Residential, commercial, recreational, historic, transportation, open space, open water	
h. How does local government zone the tract? Hertford ETJ, Winfall Town Limits	i. Is the proposed project consistent with the applicable zoning? (Attach zoning compliance certificate, if applicable) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
j. Is the proposed activity part of an urban waterfront redevelopment proposal? <input type="checkbox"/>Yes <input checked="" type="checkbox"/>No	
k. Has a professional archaeological assessment been done for the tract? If yes, attach a copy. <input checked="" type="checkbox"/>Yes <input type="checkbox"/>No <input type="checkbox"/>NA If yes, by whom? NCDOT	
l. Is the proposed project located in a National Registered Historic District or does it involve a National Register listed or eligible property? <input checked="" type="checkbox"/>Yes <input type="checkbox"/>No <input type="checkbox"/>NA	

<Form continues on next page>

m. (i) Are there wetlands on the site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
(ii) Are there coastal wetlands on the site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
(iii) If yes to either (i) or (ii) above, has a delineation been conducted? <i>(Attach documentation, if available)</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
n. Describe existing wastewater treatment facilities. Town of Hertford wastewater treatment	
o. Describe existing drinking water supply source. Town of Hertford water supply	
p. Describe existing storm water management or treatment systems. None	

5. Activities and Impacts	
a. Will the project be for commercial, public, or private use?	<input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Public/Government <input type="checkbox"/> Private/Community
b. Give a brief description of purpose, use, and daily operations of the project when complete. The purpose of the project is to provide a direct, reliable route between the Towns of Hertford and Winfall. The current bridge and causeway is experiencing substantial deterioration and ongoing maintenance problems, jeopardizing its ability to provide direct, reliable connectivity from Hertford to Winfall. A detailed description of the project need is provided in the Environmental Assessment (EA, 2013). The proposed bridge and roadway will serve automobile and pedestrian traffic carrying residents, tourists, workers, and goods on the roadway daily.	
c. Describe the proposed construction methodology, types of construction equipment to be used during construction, the number of each type of equipment and where it is to be stored. In shallow waters, a crawler crane on a trestle will be used to construct the bridge. A temporary causeway will be built near the north side of the bridge. Once the new roadway is complete, the existing bridge and causeway will be removed. The existing tender house will be removed and a new one built on the new bridge. Typical bridge construction equipment will include cranes, pile hammers, vibratory hammers, jetting pumps, forklifts, generators, etc. Typical roadway construction will include but is not limited to the following equipment; bulldozers, dump trucks and motor graders. A power cable to the pivot and resting piers will be installed via hand jetting performed by divers outside of the February 15 - June 30 moratorium	
d. List all development activities you propose. Construction of a 29 span bridge, including a swing bridge, realignment of existing US 17 Business/NC 37 running parallel to the existing roadway, and removal of a portion of the existing US 17 Business/NC 37. Traffic will remain on the existing roadway during construction. Once construction is complete, the realigned portion will tie back to the roadway at both ends of the project. A new tender house will be constructed as part of this project and the existing tender house removed.	
e. Are the proposed activities maintenance of an existing project, new work, or both?	Both
f. What is the approximate total disturbed land area resulting from the proposed project?	11.85 <input type="checkbox"/> Sq.Ft or <input checked="" type="checkbox"/> Acres
g. Will the proposed project encroach on any public easement, public accessway or other area that the public has established use of?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
h. Describe location and type of existing and proposed discharges to waters of the state. Throughout the entire length of the bridge, proposed discharge will occur through deck drains of varied spacing (between 4' to 12')	
i. Will wastewater or stormwater be discharged into a wetland?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
If yes, will this discharged water be of the same salinity as the receiving water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
j. Is there any mitigation proposed?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
If yes, attach a mitigation proposal.	

<Form continues on back>

6. Additional Information	
<i>In addition to this completed application form, (MP-1) the following items below, if applicable, must be submitted in order for the application package to be complete. Items (a) – (f) are always applicable to any major development application. Please consult the application instruction booklet on how to properly prepare the required items below.</i>	
a. A project narrative.	
b. An accurate, dated work plat (including plan view and cross-sectional drawings) drawn to scale. Please give the present status of the proposed project. Is any portion already complete? If previously authorized work, clearly indicate on maps, plats, drawings to distinguish between work completed and proposed.	
c. A site or location map that is sufficiently detailed to guide agency personnel unfamiliar with the area to the site.	
d. A copy of the deed (with state application only) or other instrument under which the applicant claims title to the affected properties.	
e. The appropriate application fee. Check or money order made payable to DENR.	
f. A list of the names and complete addresses of the adjacent waterfront (riparian) landowners and signed return receipts as proof that such owners have received a copy of the application and plats by certified mail. Such landowners must be advised that they have 30 days in which to submit comments on the proposed project to the Division of Coastal Management.	
Name	See attached letters
Address	
Name	
Address	
Name	
Address	
g. A list of previous state or federal permits issued for work on the project tract. Include permit numbers, permittee, and issuing dates. USACOE - NWP 6. SAW-2018-00615	
h. Signed consultant or agent authorization form, if applicable.	
i. Wetland delineation, if necessary.	
j. A signed AEC hazard notice for projects in oceanfront and inlet areas. (Must be signed by property owner)	
k. A statement of compliance with the N.C. Environmental Policy Act (N.C.G.S. 113A 1-10), if necessary. If the project involves expenditure of public funds or use of public lands, attach a statement documenting compliance with the North Carolina Environmental Policy Act.	

7. Certification and Permission to Enter on Land

I understand that any permit issued in response to this application will allow only the development described in the application. The project will be subject to the conditions and restrictions contained in the permit.

I certify that I am authorized to grant, and do in fact grant permission to representatives of state and federal review agencies to enter on the aforementioned lands in connection with evaluating information related to this permit application and follow-up monitoring of the project.

I further certify that the information provided in this application is truthful to the best of my knowledge.

Date 8/3/18 Print Name Philip S. Harris, III, P.E.

Signature for Mark CRM III

- Please indicate application attachments pertaining to your proposed project.
- DCM MP-2 Excavation and Fill Information
 - DCM MP-5 Bridges and Culverts
 - DCM MP-3 Upland Development
 - DCM MP-4 Structures Information

EXCAVATION and FILL

(Except for bridges and culverts)

Attach this form to Joint Application for CAMA Major Permit, Form DCM MP-1. Be sure to complete all other sections of the Joint Application that relate to this proposed project. Please include all supplemental information.

Describe below the purpose of proposed excavation and/or fill activities. **All values should be given in feet.**

	Access Channel (NLW or NWL)	Canal	Boat Basin	Boat Ramp	Rock Groin	Rock Breakwater	Other (excluding shoreline stabilization)
Length							
Width							
Avg. Existing Depth					NA	NA	
Final Project Depth					NA	NA	

1. EXCAVATION This section not applicable

- a. Amount of material to be excavated from below NHW or NWL in cubic yards. _____
- b. Type of material to be excavated. _____
- c. (i) Does the area to be excavated include coastal wetlands/marsh (CW), submerged aquatic vegetation (SAV), shell bottom (SB), or other wetlands (WL)? If any boxes are checked, provide the number of square feet affected.
 CW _____ SAV _____ SB _____
 WL _____ None _____
 (ii) Describe the purpose of the excavation in these areas:

- d. High-ground excavation in cubic yards. _____

2. DISPOSAL OF EXCAVATED MATERIAL This section not applicable

- a. Location of disposal area. _____
- b. Dimensions of disposal area. _____
- c. (i) Do you claim title to disposal area?
 Yes No NA
 (ii) If no, attach a letter granting permission from the owner. _____
- d. (i) Will a disposal area be available for future maintenance?
 Yes No NA
 (ii) If yes, where? _____
- e. (i) Does the disposal area include any coastal wetlands/marsh (CW), submerged aquatic vegetation (SAV), shell bottom (SB), or other wetlands (WL)? If any boxes are checked, provide the number of square feet affected.
 CW _____ SAV _____ SB _____
 WL _____ None _____
 (ii) Describe the purpose of disposal in these areas:

- f. (i) Does the disposal include any area in the water?
 Yes No NA
 (ii) If yes, how much water area is affected? _____

3. SHORELINE STABILIZATION

This section not applicable

(If development is a wood groin, use MP-4 – Structures)

- a. Type of shoreline stabilization:
 Bulkhead Riprap Breakwater/Sill Other: _____
- b. Length: 228'
 Width: 1'
- c. Average distance waterward of NHW or NWL: 2' waterward of existing bulkhead
- d. Maximum distance waterward of NHW or NWL: 2' waterward of existing bulkhead
- e. Type of stabilization material:
 Metal sheet piles with concrete cap
- f. (i) Has there been shoreline erosion during preceding 12 months?
 Yes No NA
 (ii) If yes, state amount of erosion and source of erosion amount information.
- g. Number of square feet of fill to be placed below water level.
 Bulkhead backfill 456 Riprap _____
 Breakwater/Sill _____ Other _____
- h. Type of fill material.
 Earth fill
- i. Source of fill material.
 NCDOT approved borrow source

4. OTHER FILL ACTIVITIES

This section not applicable

(Excluding Shoreline Stabilization)

- a. (i) Will fill material be brought to the site? Yes No NA
 If yes,
 (ii) Amount of material to be placed in the water _____
 (iii) Dimensions of fill area _____
 (iv) Purpose of fill _____
- b. (i) Will fill material be placed in coastal wetlands/marsh (CW), submerged aquatic vegetation (SAV), shell bottom (SB), or other wetlands (WL)? If any boxes are checked, provide the number of square feet affected.
 CW _____ SAV _____ SB _____
 WL _____ None _____
 (ii) Describe the purpose of the fill in these areas:

5. GENERAL

- a. How will excavated or fill material be kept on site and erosion controlled?
 Will follow NCDOT BMPs for Construction and Maintenance Activities
- b. What type of construction equipment will be used (e.g., dragline, backhoe, or hydraulic dredge)?
 cranes, barges, crane trestles, pile hammers, dozers, trucks
- c. (i) Will navigational aids be required as a result of the project?
 Yes No NA
 (ii) If yes, explain what type and how they will be implemented.
 Navigational aids will supplement the existing navigational aids as directed by the US Coast Guard.
- d. (i) Will wetlands be crossed in transporting equipment to project site? Yes No NA
 (ii) If yes, explain steps that will be taken to avoid or minimize environmental impacts.
 There will be a temporary access causeway within wetlands. The roads will consist of geotextile fabric laid over the wetlands, topped with stone to create the causeway.



Date

8/3/18

Project Name

R-4467

Applicant Name

Philip S. Harris, III, PE

Applicant Signature

PHILIP S. HARRIS III

BRIDGES and CULVERTS

Attach this form to Joint Application for CAMA Major Permit, Form DCM MP-1. Be sure to complete all other sections of the Joint Application that relate to this proposed project. Please include all supplemental information.

1. BRIDGES This section not applicable

a. Is the proposed bridge:
 Commercial Public/Government Private/Community

b. Water body to be crossed by bridge:
Perquimans River

c. Type of bridge (construction material):
Fixed bridge consists of reinforced concrete deck on prestressed concrete girders. Substructure consists of reinforced concrete caps on prestressed concrete piles. Swing span consists of structural steel truss with reinforced concrete deck and substructure consisting of reinforced concrete caps on prestressed concrete piles.

d. Water depth at the proposed crossing at NLW or NWL:
0'-31.5' from NWL

e. (i) Will proposed bridge replace an existing bridge? Yes No
If yes,
(ii) Length of existing bridge: 640'
(iii) Width of existing bridge: 23' 2"
(iv) Navigation clearance underneath existing bridge:
unlimited - open swing span
(v) Will all, or a part of, the existing bridge be removed?
(Explain) Yes, the existing bridge will be removed and replaced with a new bridge on new alignment, immediately downstream of the existing bridge.

f. (i) Will proposed bridge replace an existing culvert? Yes No
If yes,
(ii) Length of existing culvert: _____
(iii) Width of existing culvert: _____
(iv) Height of the top of the existing culvert above the NHW or NWL: _____
(v) Will all, or a part of, the existing culvert be removed?
(Explain)

g. Length of proposed bridge: 2,691'

h. Width of proposed bridge: 41'

i. Will the proposed bridge affect existing water flow? Yes No
If yes, explain:

j. Will the proposed bridge affect navigation by reducing or increasing the existing navigable opening? Yes No
If yes, explain:

k. Navigation clearance underneath proposed bridge: Unlimited navigation clearance when swing span is open. When swing span closed 12' navigation clearance.

l. Have you contacted the U.S. Coast Guard concerning their approval? Yes No
If yes, explain: A USCG permit is being prepared and will be submitted to the USCG. USCG has provided preliminary approval of the single 55' navigation channel.

m. Will the proposed bridge cross wetlands containing no navigable waters? Yes No
If yes, explain: There are wetlands under the east end of the bridge. They are not navigable, but are adjacent to navigable waters.

n. Height of proposed bridge above wetlands: 4.0' to 12.4'

2. CULVERTS

This section not applicable

- a. Number of culverts proposed: _____
- b. Water body in which the culvert is to be placed:

< Form continues on back >

- c. Type of culvert (construction material):

- d. (i) Will proposed culvert replace an existing bridge? Yes No
- If yes,
 (ii) Length of existing bridge: _____
 (iii) Width of existing bridge: _____
 (iv) Navigation clearance underneath existing bridge: _____
 (v) Will all, or a part of, the existing bridge be removed? (Explain)

- e. (i) Will proposed culvert replace an existing culvert? Yes No
- If yes,
 (ii) Length of existing culvert(s): _____
 (iii) Width of existing culvert(s): _____
 (iv) Height of the top of the existing culvert above the NHW or NWL: _____
 (v) Will all, or a part of, the existing culvert be removed? (Explain)

- f. Length of proposed culvert: _____
- g. Width of proposed culvert: _____
- h. Height of the top of the proposed culvert above the NHW or NWL.

- i. Depth of culvert to be buried below existing bottom contour.

- j. Will the proposed culvert affect navigation by reducing or increasing the existing navigable opening? Yes No
- If yes, explain:

- k. Will the proposed culvert affect existing water flow? Yes No
- If yes, explain:

3. EXCAVATION and FILL

This section not applicable

- a. (i) Will the placement of the proposed bridge or culvert require any excavation below the NHW or NWL? Yes No
- If yes,
 (ii) Avg. length of area to be excavated: 240'
 (iii) Avg. width of area to be excavated: 70'
 (iv) Avg. depth of area to be excavated: 20'
 (v) Amount of material to be excavated in cubic yards: 2,500
CY above water level and 10,000 CY below water
(12,500 CY total)
Note: The excavation below water level does not occur in
the channel or wetlands
- b. (i) Will the placement of the proposed bridge or culvert require any excavation within coastal wetlands/marsh (CW), submerged aquatic vegetation (SAV), shell bottom (SB), or other wetlands (WL)? If any boxes are checked, provide the number of square feet affected.
- CW _____ SAV _____ SB _____
 WL _____ None
- (ii) Describe the purpose of the excavation in these areas:

c. (i) Will the placement of the proposed bridge or culvert require any high-ground excavation? Yes No

If yes,

(ii) Avg. length of area to be excavated: 800'

(iii) Avg. width of area to be excavated: 62'

(iv) Avg. depth of area to be excavated: 3'

(v) Amount of material to be excavated in cubic yards: 5,500

d. If the placement of the bridge or culvert involves any excavation, please complete the following:

(i) Location of the spoil disposal area: Spoil will either be incorporated into new roadway embankment or disposed of at an approved NCDOT facility

(ii) Dimensions of the spoil disposal area: undetermined

(iii) Do you claim title to the disposal area? Yes No (If no, attach a letter granting permission from the owner.)

(iv) Will the disposal area be available for future maintenance? Yes No

(v) Does the disposal area include any coastal wetlands/marsh (CW), submerged aquatic vegetation (SAVs), other wetlands (WL), or shell bottom (SB)?

CW SAV WL SB None

If any boxes are checked, give dimensions if different from (ii) above.

(vi) Does the disposal area include any area below the NHW or NWL? ? Yes No

If yes, give dimensions if different from (ii) above.

e. (i) Will the placement of the proposed bridge or culvert result in any fill (other than excavated material described in Item d above) to be placed below NHW or NWL? Yes No

If yes,

(ii) Avg. length of area to be filled: 30"

(iii) Avg. width of area to be filled: 30"

(iv) Purpose of fill: bridge bents

f. (i) Will the placement of the proposed bridge or culvert result in any fill (other than excavated material described in Item d above) to be placed within coastal wetlands/marsh (CW), submerged aquatic vegetation (SAV), shell bottom (SB), or other wetlands (WL)? If any boxes are checked, provide the number of square feet affected.

CW 16 SAV SB

WL 2,600 None

(ii) Describe the purpose of the excavation in these areas:

Placement of bridge piles, fill slope, and outlet pipes

g. (i) Will the placement of the proposed bridge or culvert result in any fill (other than excavated material described in Item d above) to be placed on high-ground? Yes No

If yes,

(ii) Avg. length of area to be filled: 800'

(iii) Avg. width of area to be filled: 40.5'

(iv) Purpose of fill: roadway construction

4. GENERAL

a. Will the proposed project require the relocation of any existing utility lines? Yes No

If yes, explain: Power cable to the pivot and resting piers will be installed via hand jetting performed by divers outside of the February 15 - June 30 moratorium

b. Will the proposed project require the construction of any temporary detour structures? Yes No

If yes, explain:

If this portion of the proposed project has already received approval from local authorities, please attach a copy of the approval or certification.

< Form continues on back >

c. Will the proposed project require any work channels? Yes No

If yes, complete Form DCM-MP-2.

d. How will excavated or fill material be kept on site and erosion controlled?

Will follow NCDOT BMPs for Construction and Maintenance Activities

e. What type of construction equipment will be used (for example, dragline, backhoe, or hydraulic dredge)?
cranes, barges, crane trestles, pile hammers, dozers, trucks

f. Will wetlands be crossed in transporting equipment to project site? Yes No

If yes, explain steps that will be taken to avoid or minimize environmental impacts.

There will be a temporary access causeway within wetlands. The roads will consist of geotextile fabric laid over the wetlands, topped with stone to create the causeway.

g. Will the placement of the proposed bridge or culvert require any shoreline stabilization? Yes No

If yes, complete form MP-2, Section 3 for Shoreline Stabilization only.

8/3/18
Date

R-4467

Project Name

Philip S. Harris, III, PE

for Applicant Name

Philip S. Harris, III

Applicant Signature



North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN

FOR NCDOT PROJECTS



(Version 2.07; Released October 2016)

WBS Element: 35748.3.2 TIP No.: R-4467 County(ies): Perquimans Page 1 of 1

General Project Information

WBS Element:	35748.3.2	TIP Number:	R-4467	Project Type:	Roadway Relocation	Date:	6/21/2018
NCDOT Contact:	Paul Atkinson, PE			Contractor / Designer:	RK&K: Jeff Meador, PE		
Address:	NC Department of Transportation 1020 Birch Ridge Dr Raleigh, NC 27610			Address:	900 Ridgefield Drive Suite 350 Raleigh, NC 27609		
	Phone:	919-707-6707			Phone:	919-878-9560	
	Email:	patkinson@ncdot.gov			Email:	jmeador@rkk.com	
City/Town:	Hertford			County(ies):	Perquimans		
River Basin(s):	Pasquotank			CAMA County?	Yes		
Wetlands within Project Limits?	Yes						

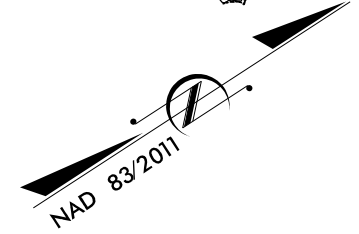
Project Description

Project Length (lin. miles or feet):	0.804 miles	Surrounding Land Use:	Historic Hertford & Perquimans River Access					
	Proposed Project			Existing Site				
Project Built-Up Area (ac.)	7.8	ac.		7.6	ac.			
Typical Cross Section Description:	South of Business 17 Bridge; Two lane highway with 14' lanes with curb and gutter. Bridge typical will be 12' lanes and 4' paved shoulders and 5.5' sidewalk on the east side. North of Business 17 Bridge; Two lane highway with 12' lanes, 8' paved shoulders.			The existing typical cross section for Business 17 South of the existing bridge is a two lane highway with 15' lanes with curb and gutter. Existing Bridge typical was 13' lanes and a sidewalk on the east side. Business 17 North of the existing bridge is a two lane highway with 11' lanes and variable shoulders.				
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	16,500	Year:	2037	Existing:	10,100	Year:	2017
General Project Narrative: (Description of Minimization of Water Quality Impacts)	The project is the realignment of the existing swing span bridge over the Perquimans River with minor ties along US 17 Business (near historic downtown Hertford) and NC 37 towards the town of Winfall. Barges and floating cranes will be utilized during the construction of the proposed bridge over the Perquimans River and the existing bridge will be removed and backfilled once the proposed bridge is fully constructed. Drainage from the bridge will discharge through 4" diameter deck drains into the Perquimans River to minimize spread and release accumulated drainage. Systems on the South end of the project will outlet to the proposed bulk head, systems on the North end outlet to the wetlands with non-erosive velocities. 2,057' of proposed ditches along the project meet swale criteria. These locations are vegetated channels that can treat the runoff by having flatter than 3:1 slopes and less than 2 ft/s velocities in the 10 year storm. The overall bridge length is 2691' with 29 spans as follows: 1 span @ 67', 2 spans @ 98' (swing span), 2 spans @ 88', 4 spans @ 88', 4 spans @ 88', 2 spans @ 88', 2 spans @ 98', 4 spans @ 98', 4 spans @ 98', 4 spans @ 98', 4 spans @ 98' F.I.B. prestressed girders.							

Waterbody Information

Surface Water Body (1):	Perquimans River		NCDWR Stream Index No.:	30-6-(3)			
NCDWR Surface Water Classification for Water Body	Primary Classification:		Class SC				
	Supplemental Classification:		None				
Other Stream Classification:	None						
Impairments:	None						
Aquatic T&E Species?	No	Comments:					
NRTR Stream ID:	Perquimans River		Buffer Rules in Effect:		N/A		
Project Includes Bridge Spanning Water Body?	Yes	Deck Drains Discharge Over Buffer?	N/A		Dissipator Pads Provided in Buffer?		N/A
Deck Drains Discharge Over Water Body?	Yes	(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)							

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-4467	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
35748.3.2	N/A		



PERMIT DRAWING
SHEET 1 OF 17



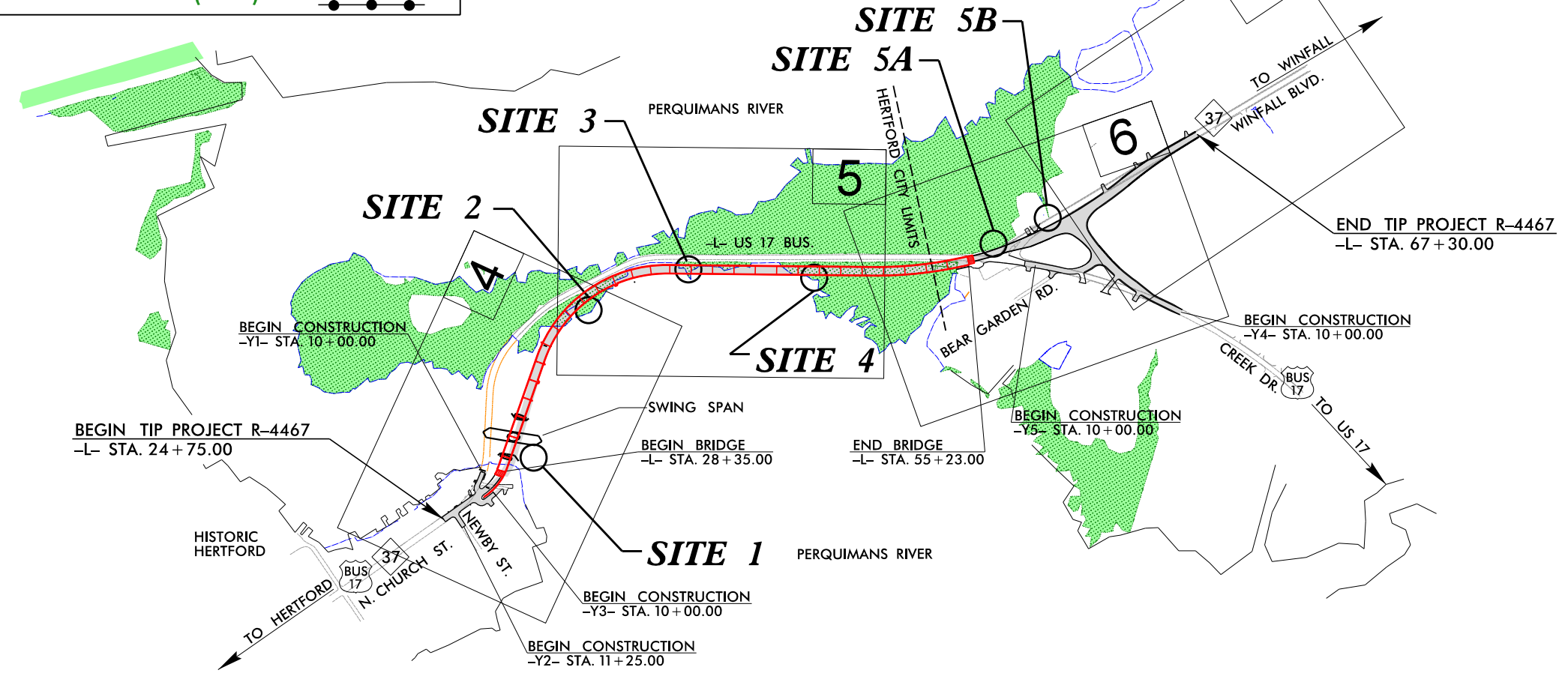
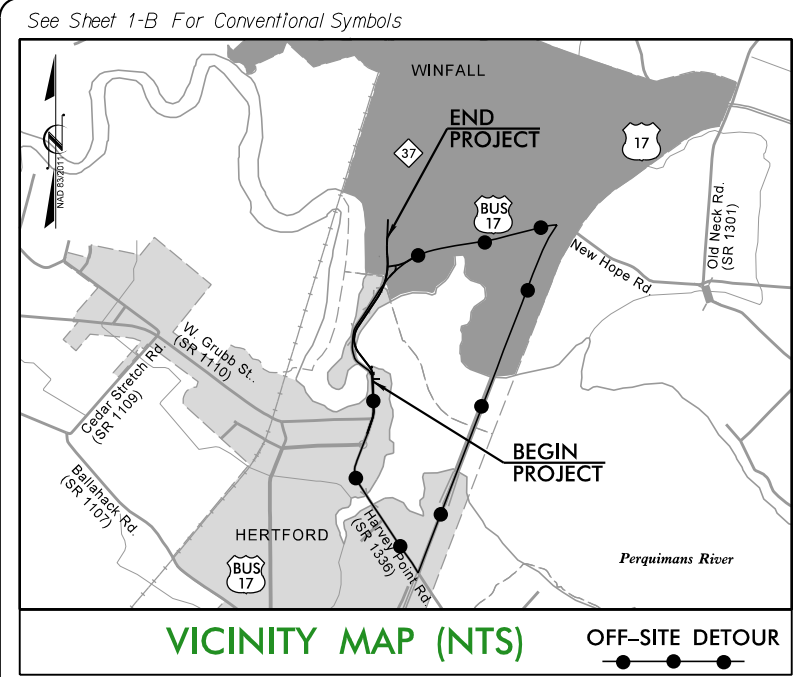
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
PERQUIMANS COUNTY

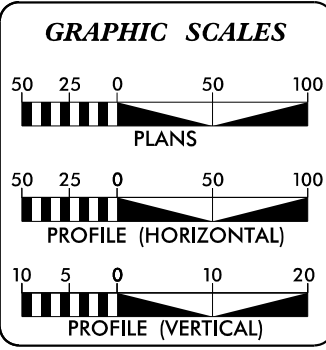
LOCATION: US 17 BUSINESS / NC 37 (NORTH CHURCH STREET)
FROM SOUTH OF THE PERQUIMANS RIVER BRIDGE TO
NORTH OF NC 37 (WINFALL BOULEVARD)

TYPE OF WORK: GRADING, DRAINAGE, PAVING, LIGHTING
SIGNALS, SIGNING, ITS & STRUCTURES

WETLAND AND STREAM IMPACTS



- NOTES:
1. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.
2. THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF THE TOWN OF HERTFORD AND THE TOWN OF WINFALL.
3. DESIGN EXCEPTION REQUIRED FOR HORIZONTAL STOPPING SIGHT DISTANCE AND SUPERELEVATION AT -L- PI STATION 28+26.83.



DESIGN DATA

ADT 2017 = 10,100
ADT 2037 = 16,500
SOUTH APPROACH & BRIDGE
V = 30 MPH
FUNC. CLASS. = URBAN COLLECTOR
NORTH OF BRIDGE
V = 50 MPH
FUNC. CLASS. = RURAL COLLECTOR

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-4467.....0.296 mi
LENGTH STRUCTURE TIP PROJECT R-4467.....0.509 mi
TOTAL LENGTH TIP PROJECT R-4467.....0.805 mi

NCDOT CONTACT

K. Zak Hamidi, P.E.
PROJECT ENGINEER - DESIGN-BUILD GROUP

PLANS PREPARED BY:

RK&K RUMMEL, KLEPPER & KAHL, LLP
900 RIDGEFIELD DRIVE, SUITE 350
RALEIGH, NORTH CAROLINA 27609
NC LICENSE NO. F-0112

FOR NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

2012 STANDARD SPECIFICATIONS

LETTING DATE:
JANUARY 2, 2018

McLean
CONTRACTING COMPANY

Michael T. Merritt, P.E.
PROJECT ENGINEER

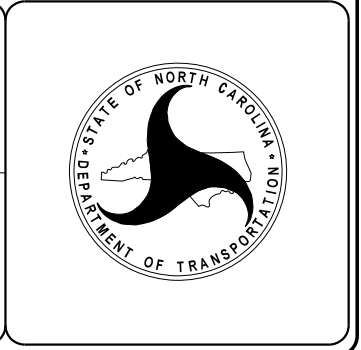
Anthony A. Houser, P.E.
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.

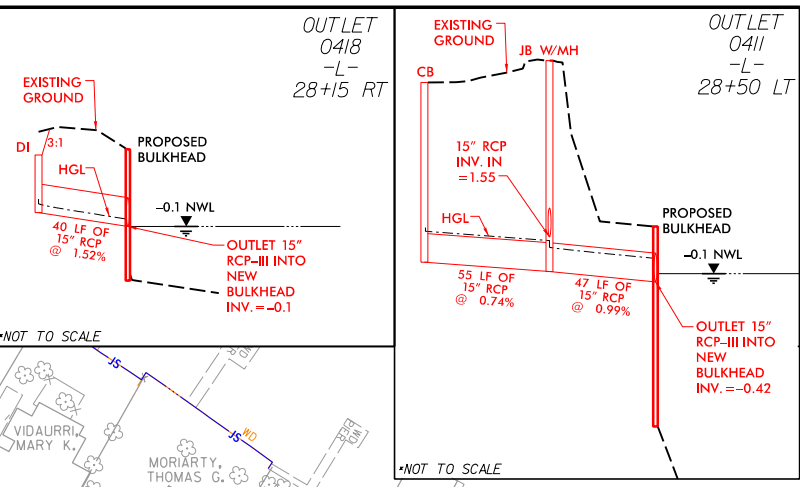


TIP PROJECT: R-4467

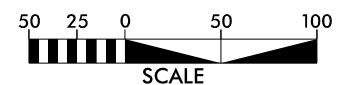
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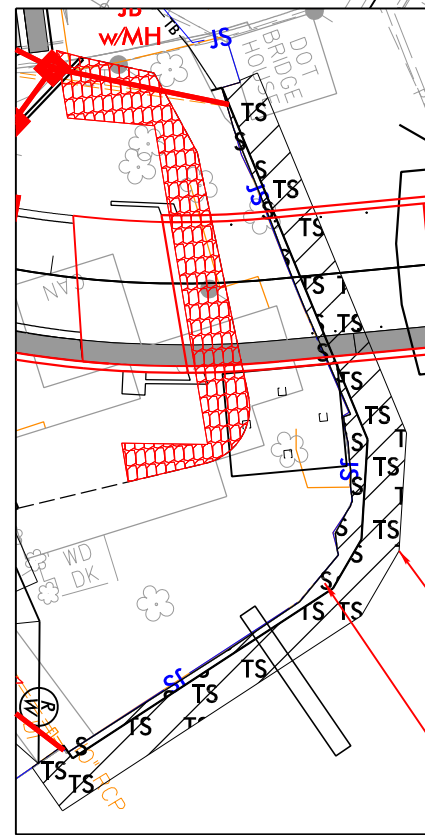
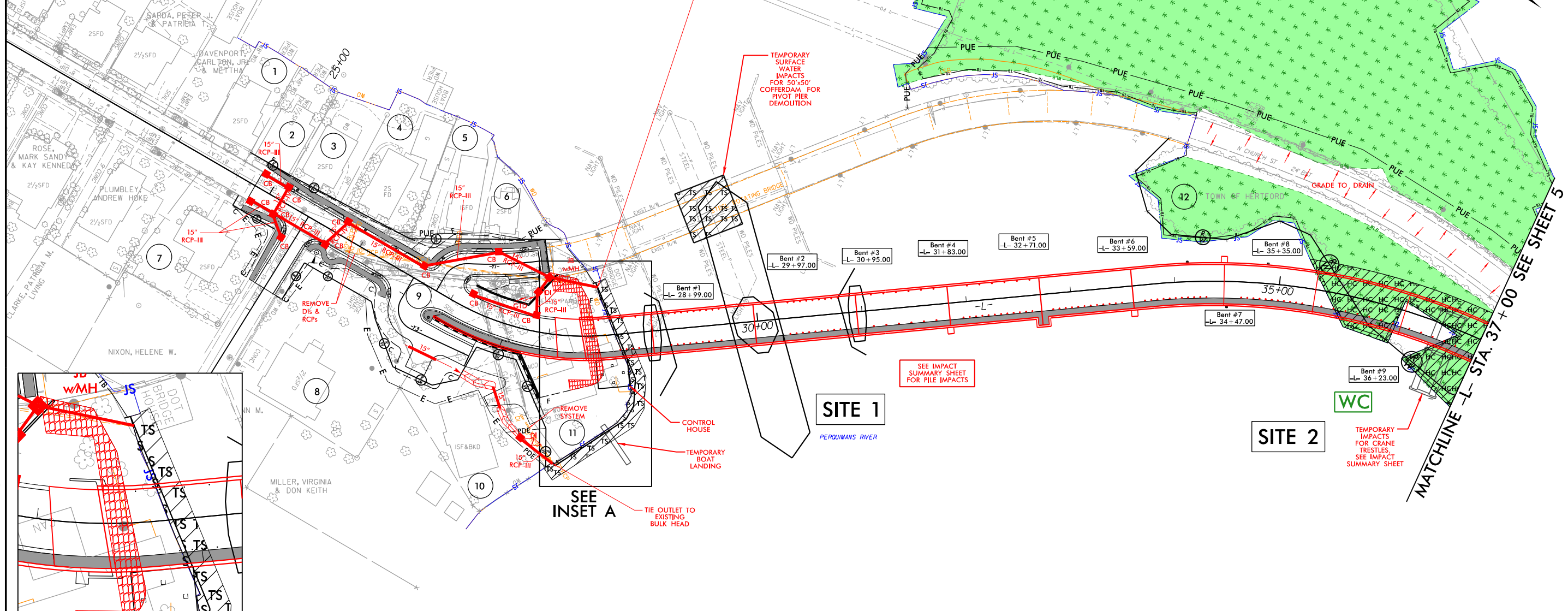
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PERMIT DRAWING SHEET 2 OF 17



PROJECT REFERENCE NO. <i>R-4467</i>		SHEET NO. 4
RW SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		



INSET A

PARCEL NUMBERS AND PROPERTY OWNERS

- | | |
|--|--|
| <ul style="list-style-type: none"> 1 HOLLOWELL, BRENDA
DB 312, PG 717 2 KENNEDY, CHARLES R.
DB 120, PG 594 3 W.V.M., LLC
DB 204, PG 251 4 JAKLIC, FRANK A. & CONSTANCE L.
DB 204 PG 251 5 MADRE, EDWARD LEE & ANN F.
DB 166 PG 201 6 VAYDA, MARGARET M.
DB 97 PG 507 | <ul style="list-style-type: none"> 7 SMITH, RICHARD W. & JEAN P.
DB 164 PG 545 8 MALOTT, BRETT DARRYL & MARY M.
DB 165 PG 746 9 JAKLIC, FRANK A. & CONSTANCE L.
DB 204 PG 251 10 WINSLOW, SARA E. & ANNE W.
DB 120 PG 585 11 WADDELL, RUSSELL LEE & NANCY LYNNE THEODORE
DB 153 PG 50 |
|--|--|

SEE ROADWAY PLANS FOR DECK DRAIN SPACING

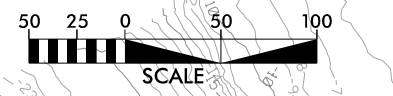
PLANS PREPARED BY :

RK&K

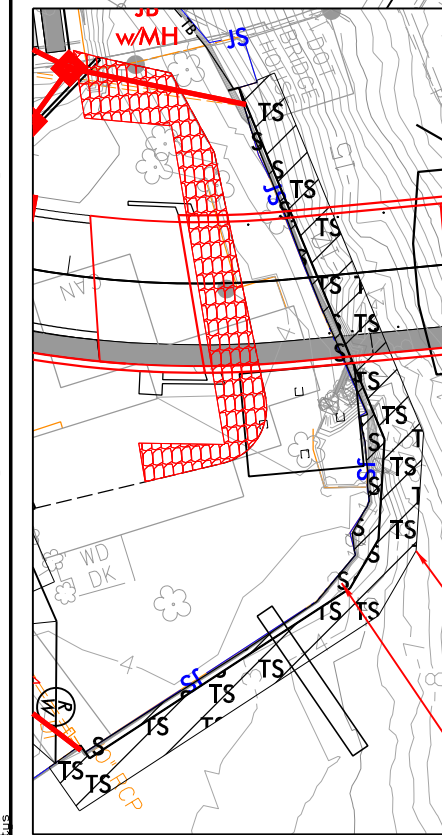
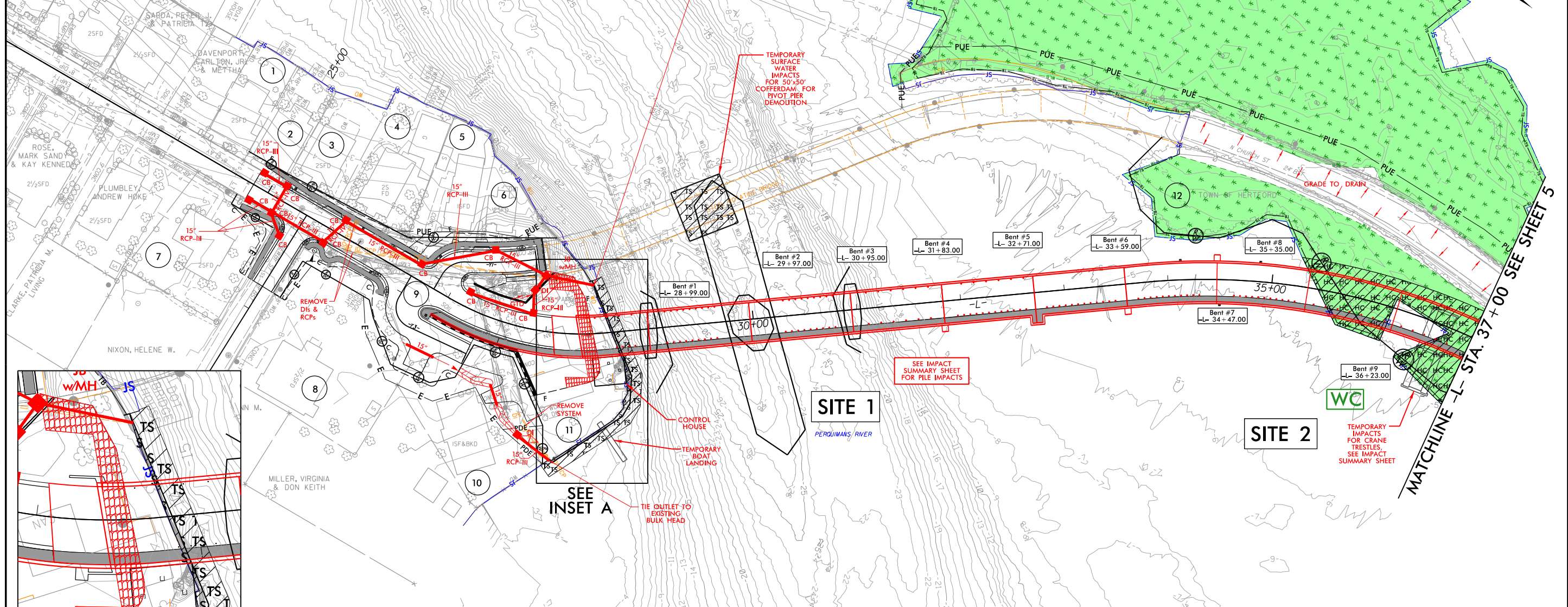
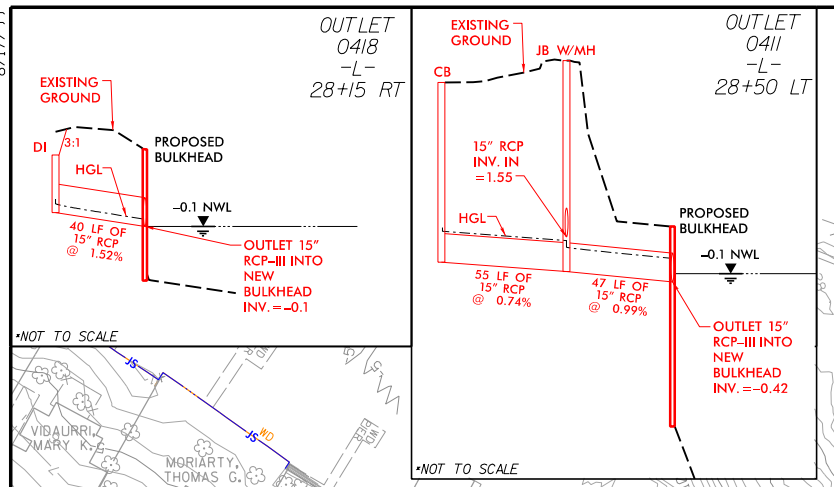
RUMMEL, KLEPPER & KAHL, LLP
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PROJECT REFERENCE NO. R-4467	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PERMIT DRAWING SHEET 3 OF 17



- DENOTES HAND CLEARING
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER



PARCEL NUMBERS AND PROPERTY OWNERS

1 HOLLOWELL, BRENDA DB 312, PG 717	7 SMITH, RICHARD W. & JEAN P. DB 164 PG 545
2 KENNEDY, CHARLES R. DB 120, PG 334	8 MALOTT, BRETT DARRYL & MARY M. DB 165 PG 746
3 W.V.M., LLC DB 204, PG 251	9 JAKLIC, FRANK A. & CONSTANCE L. DB 204 PG 251
4 JAKLIC, FRANK JA. & CONSTANCE L. DB 204 PG 251	10 WINSLOW, SARA E. & ANNE W. DB 120 PG 585
5 MADRE, EDWARD LEE & ANN F. DB 166 PG 201	11 WADDELL, RUSSELL LEE & NANCY LYNN THEODORE DB 153 PG 50
6 VAYDA, MARGARET M. DB 97 PG 507	

SEE ROADWAY PLANS
FOR DECK DRAIN SPACING

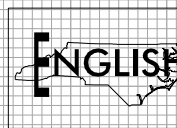
PLANS PREPARED BY :

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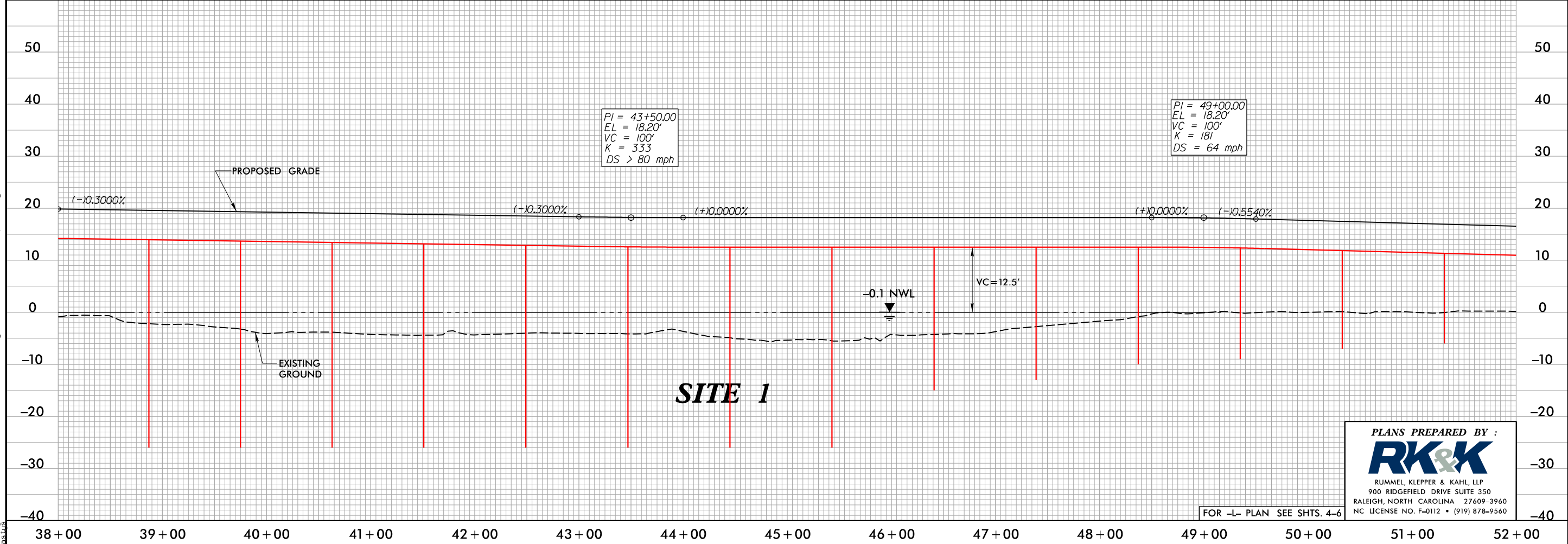
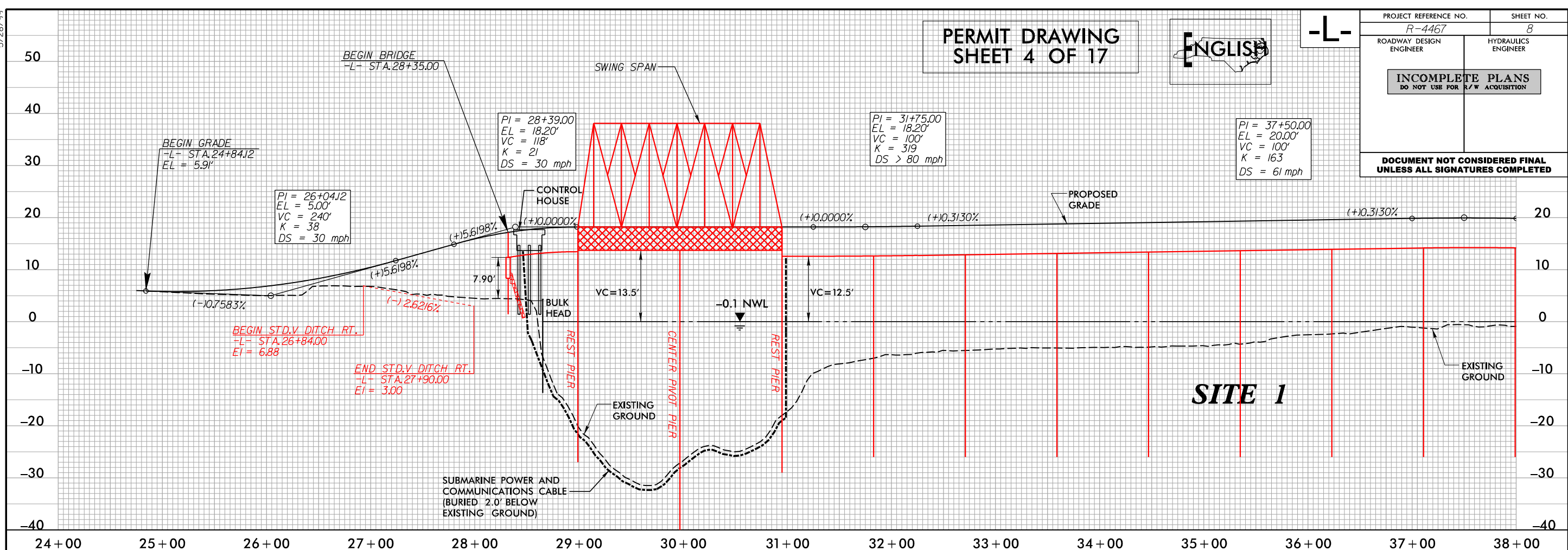
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ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



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FOR -L- PLAN SEE SHTS. 4-6

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PERMIT DRAWING SHEET 5 OF 17

ENGLISH

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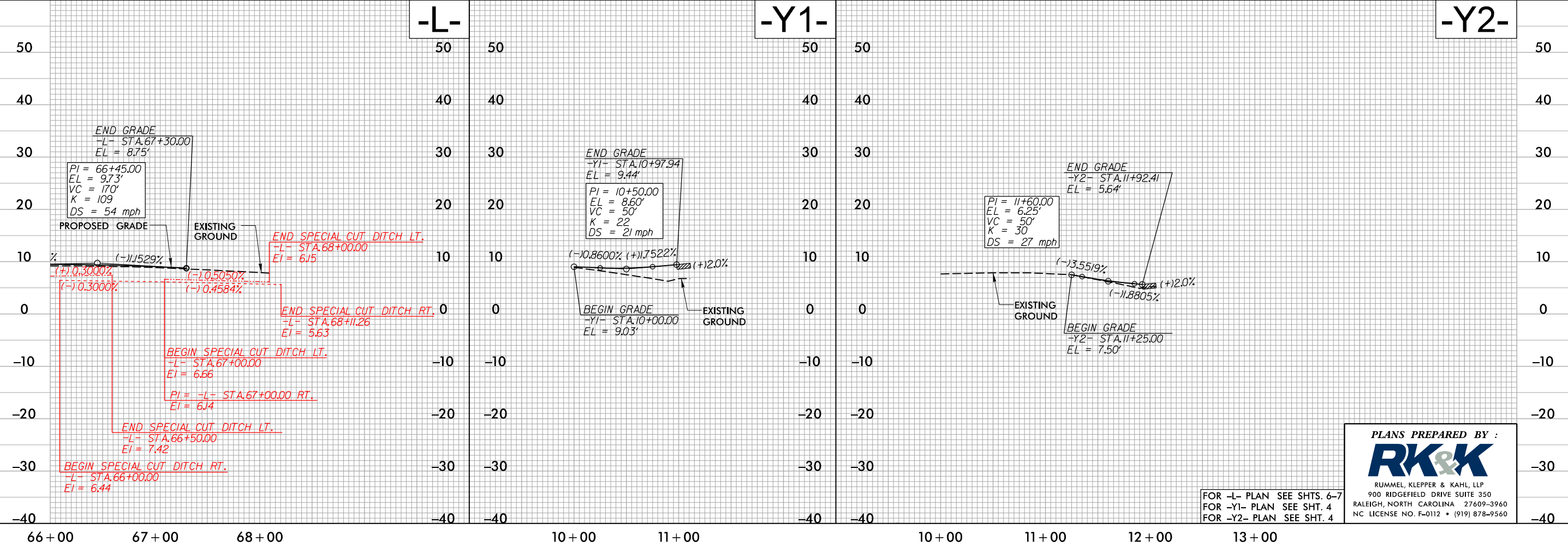
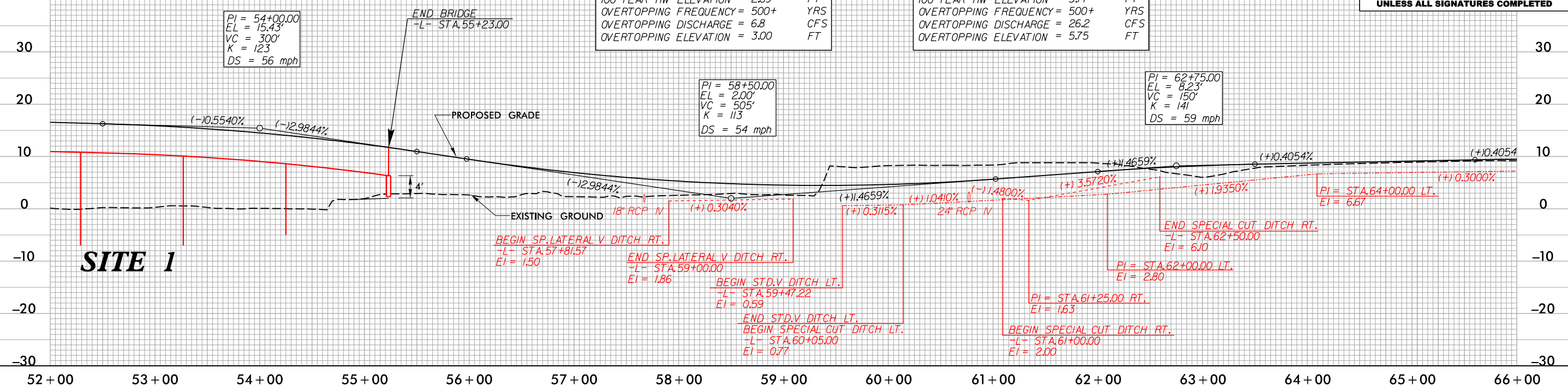
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ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
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DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PIPE HYDRAULIC DATA
18" RCP-IV -L- STA.57+58

DRAINAGE AREA	= 0.90	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 4.3	CFS
DESIGN HW ELEVATION	= 2.61	FT
100 YEAR DISCHARGE	= 4.6	CFS
100 YEAR HW ELEVATION	= 2.69	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 6.8	CFS
OVERTOPPING ELEVATION	= 3.00	FT

PIPE HYDRAULIC DATA
24" RCP-IV -L- STA.60+68

DRAINAGE AREA	= 4.61	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 13.9	CFS
DESIGN HW ELEVATION	= 3.67	FT
100 YEAR DISCHARGE	= 15.2	CFS
100 YEAR HW ELEVATION	= 3.77	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 26.2	CFS
OVERTOPPING ELEVATION	= 5.75	FT



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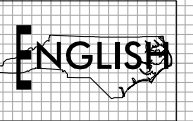
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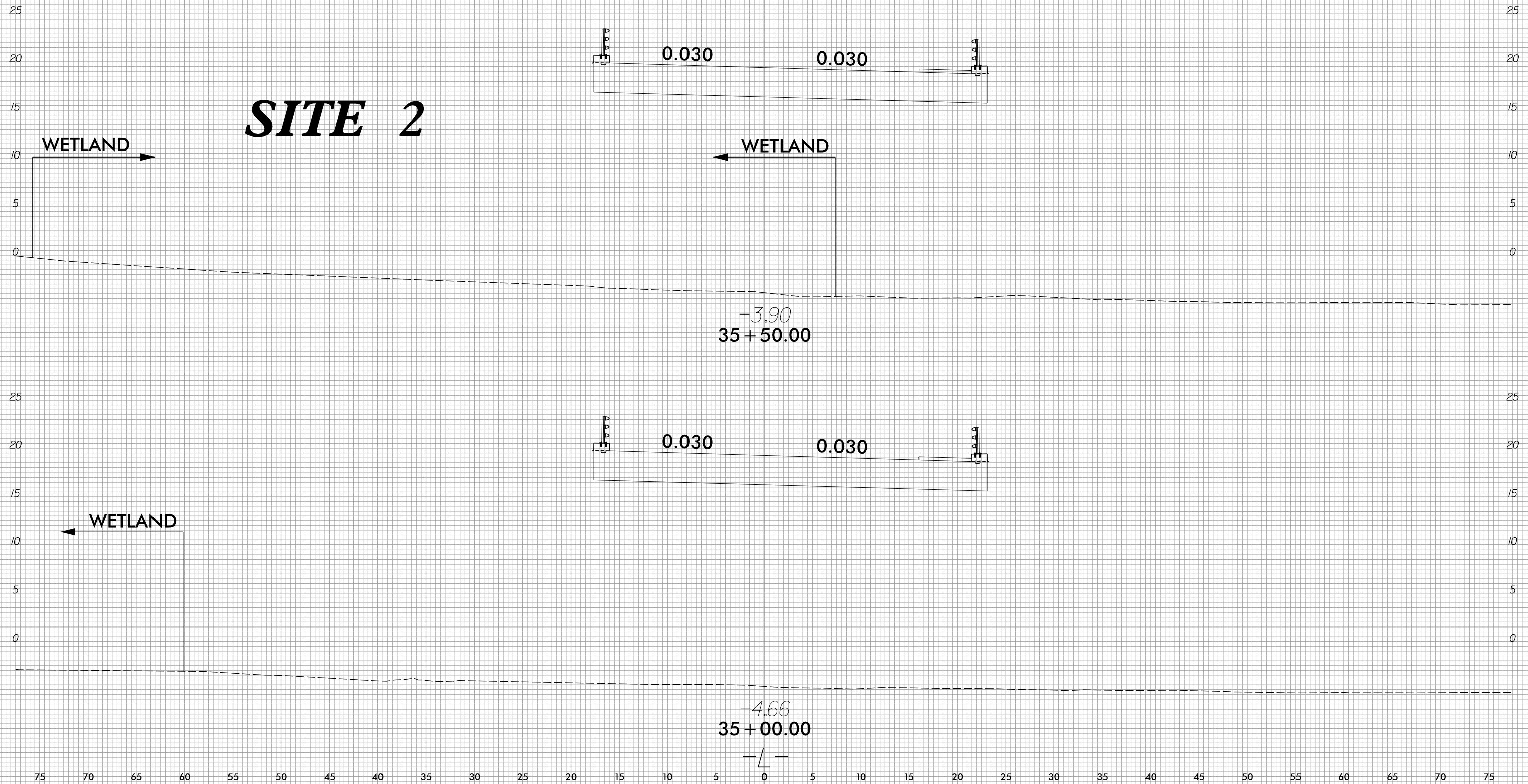
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 FOR -Y1- PLAN SEE SHT. 4
 FOR -Y2- PLAN SEE SHT. 4

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PERMIT DRAWING
SHEET 6 OF 17

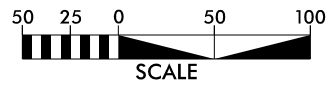
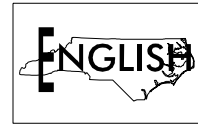


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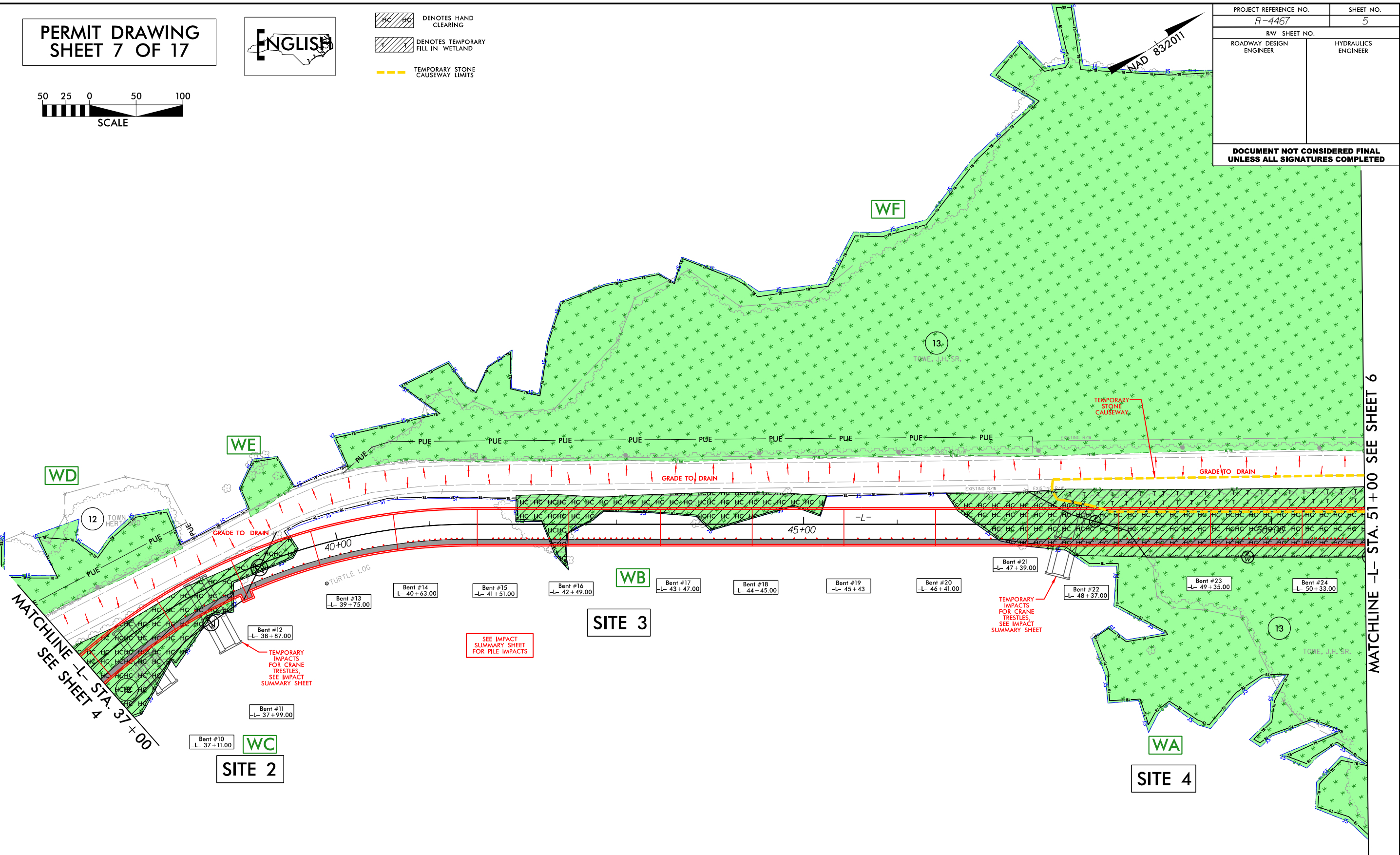
PERMIT DRAWING SHEET 7 OF 17



- DENOTES HAND CLEARING
- DENOTES TEMPORARY FILL IN WETLAND
- TEMPORARY STONE CAUSEWAY LIMITS

PROJECT REFERENCE NO. R-4467	SHEET NO. 5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



MATCHLINE -L- STA. 37+00
SEE SHEET 4

MATCHLINE -L- STA. 51+00 SEE SHEET 6

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WC
Bent #10
-L- 37+11.00

SITE 3
WB

SITE 4
WA

SEE IMPACT SUMMARY SHEET FOR PILE IMPACTS

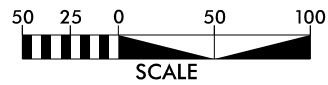
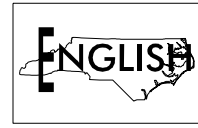
TEMPORARY IMPACTS FOR CRANE TRESTLES SEE IMPACT SUMMARY SHEET

SEE ROADWAY PLANS FOR DECK DRAIN SPACING

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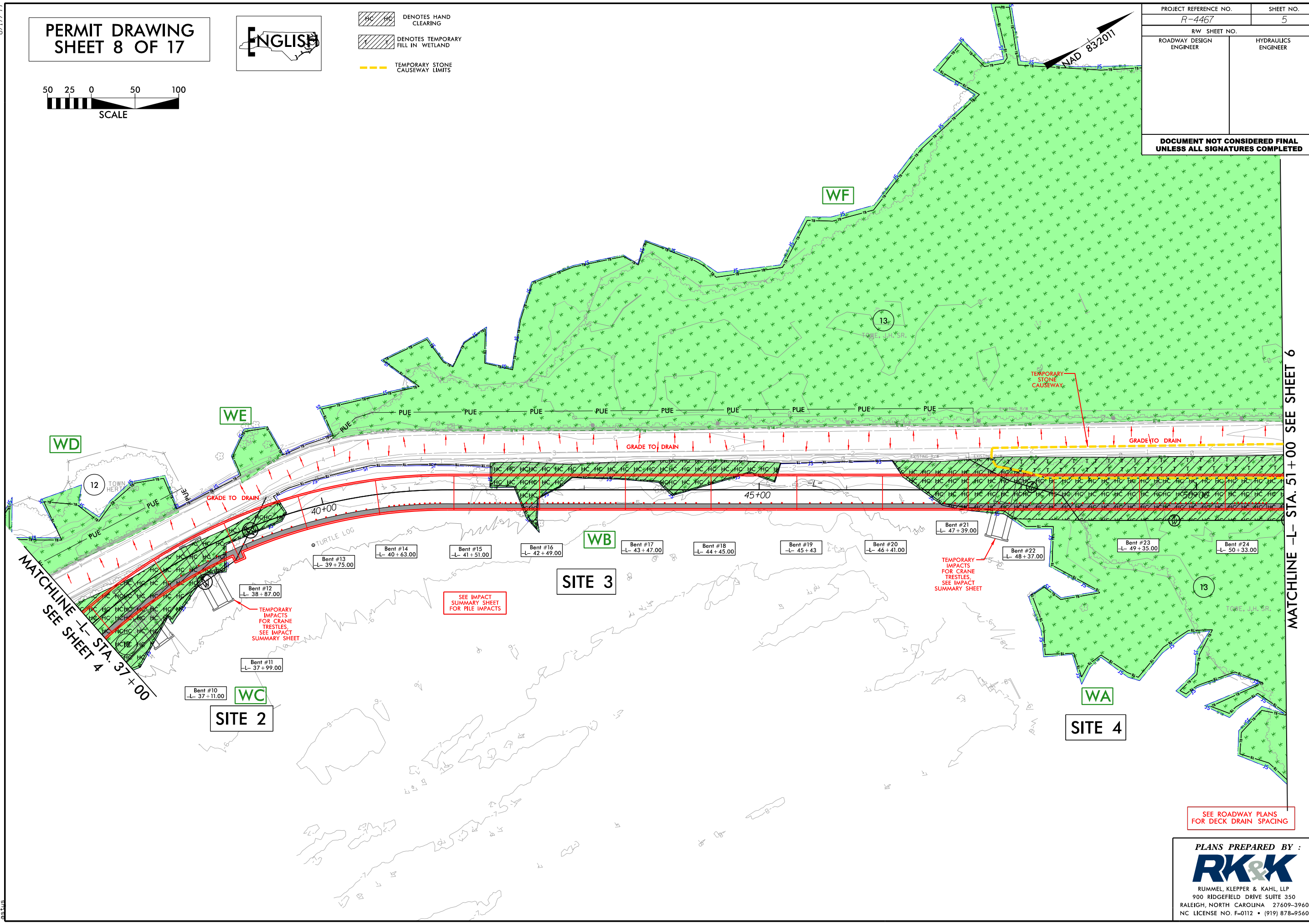
PERMIT DRAWING SHEET 8 OF 17



- DENOTES HAND CLEARING
- DENOTES TEMPORARY FILL IN WETLAND
- TEMPORARY STONE CAUSEWAY LIMITS

PROJECT REFERENCE NO. R-4467	SHEET NO. 5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**



MATCHLINE -L- STA. 37+00
SEE SHEET 4

MATCHLINE -L- STA. 51+00 SEE SHEET 6

SITE 2

SITE 3

SITE 4

TEMPORARY IMPACTS FOR CRANE TRESTLES
SEE IMPACT SUMMARY SHEET

SEE IMPACT SUMMARY SHEET FOR PILE IMPACTS

TEMPORARY IMPACTS FOR CRANE TRESTLES
SEE IMPACT SUMMARY SHEET

SEE ROADWAY PLANS FOR DECK DRAIN SPACING

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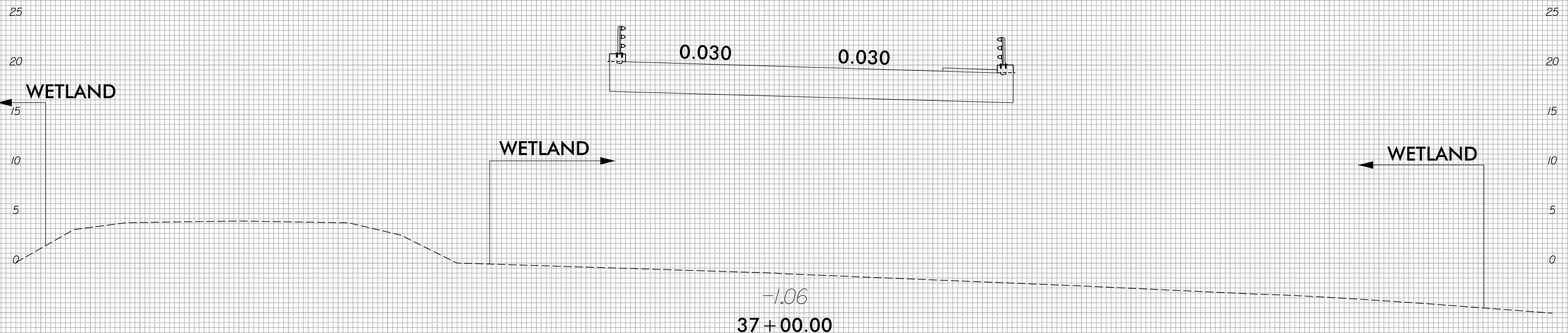
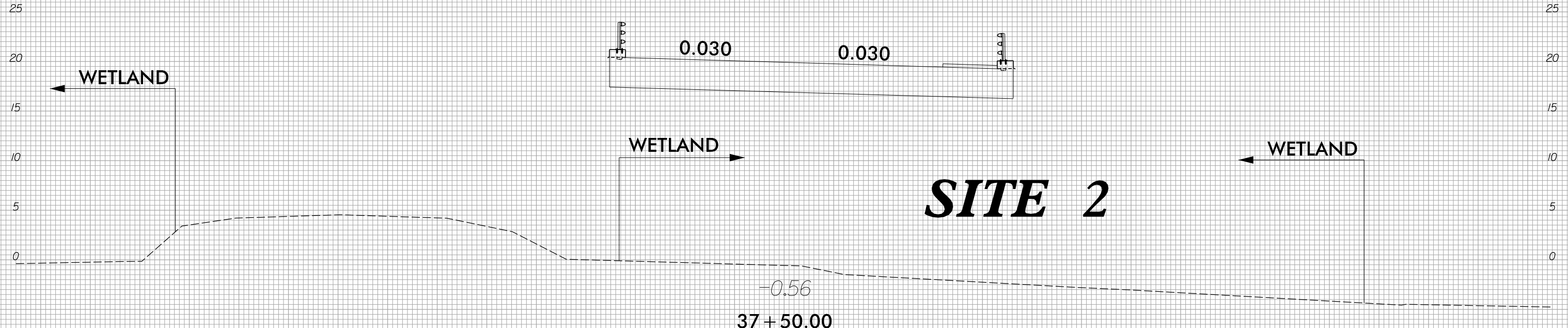


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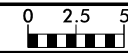
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SHEET 9 OF 17



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6/25/2018
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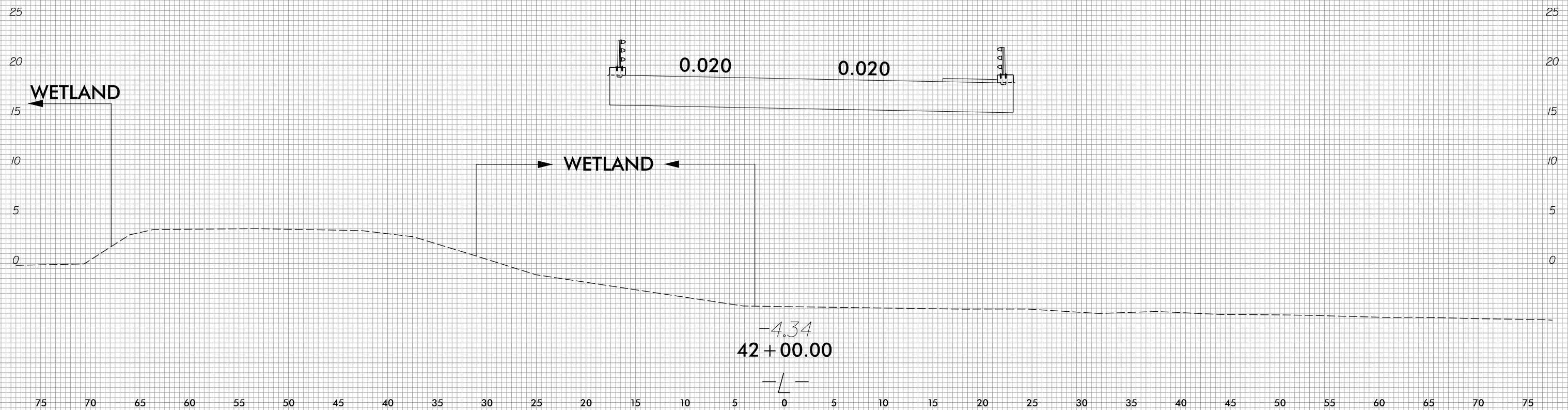
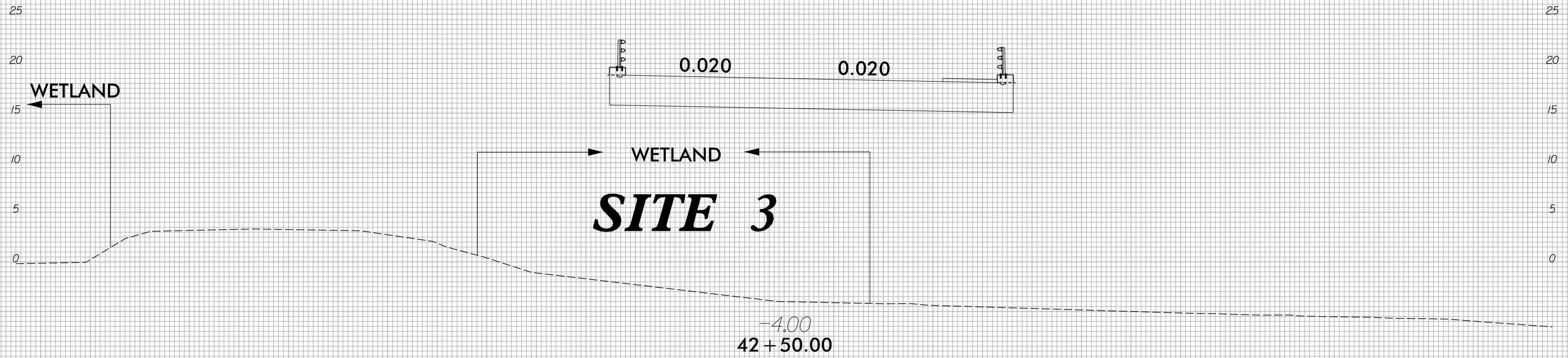


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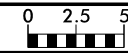
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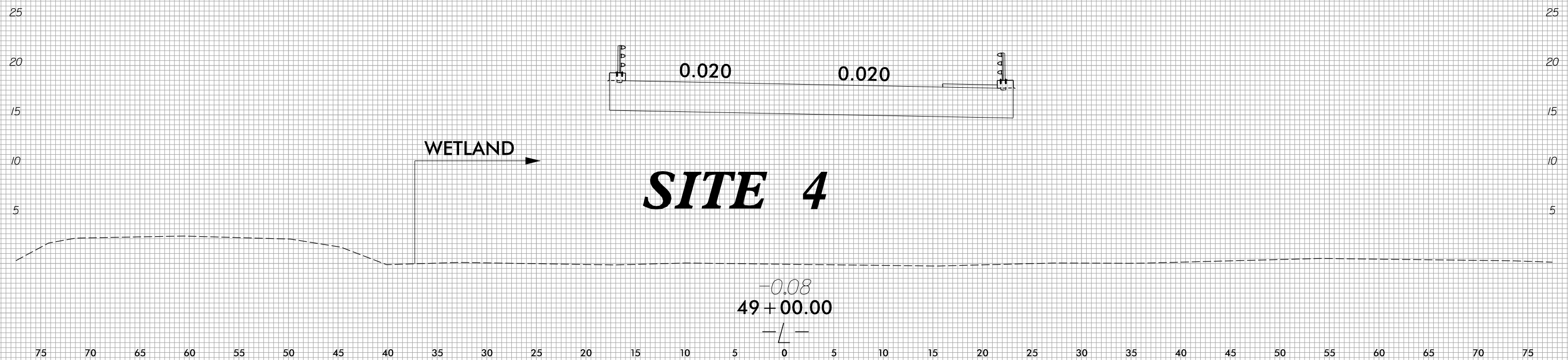
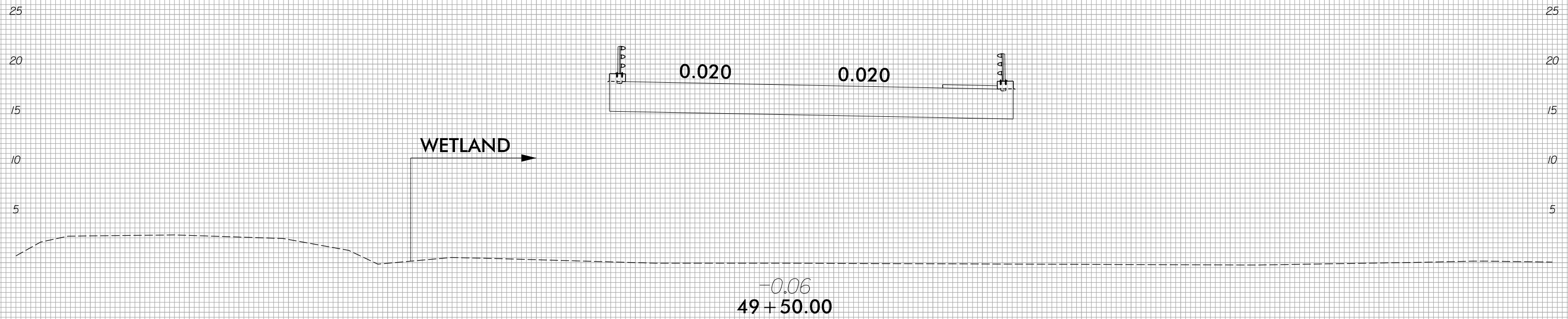


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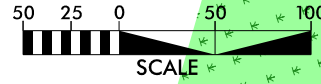
PERMIT DRAWING
SHEET 11 OF 17



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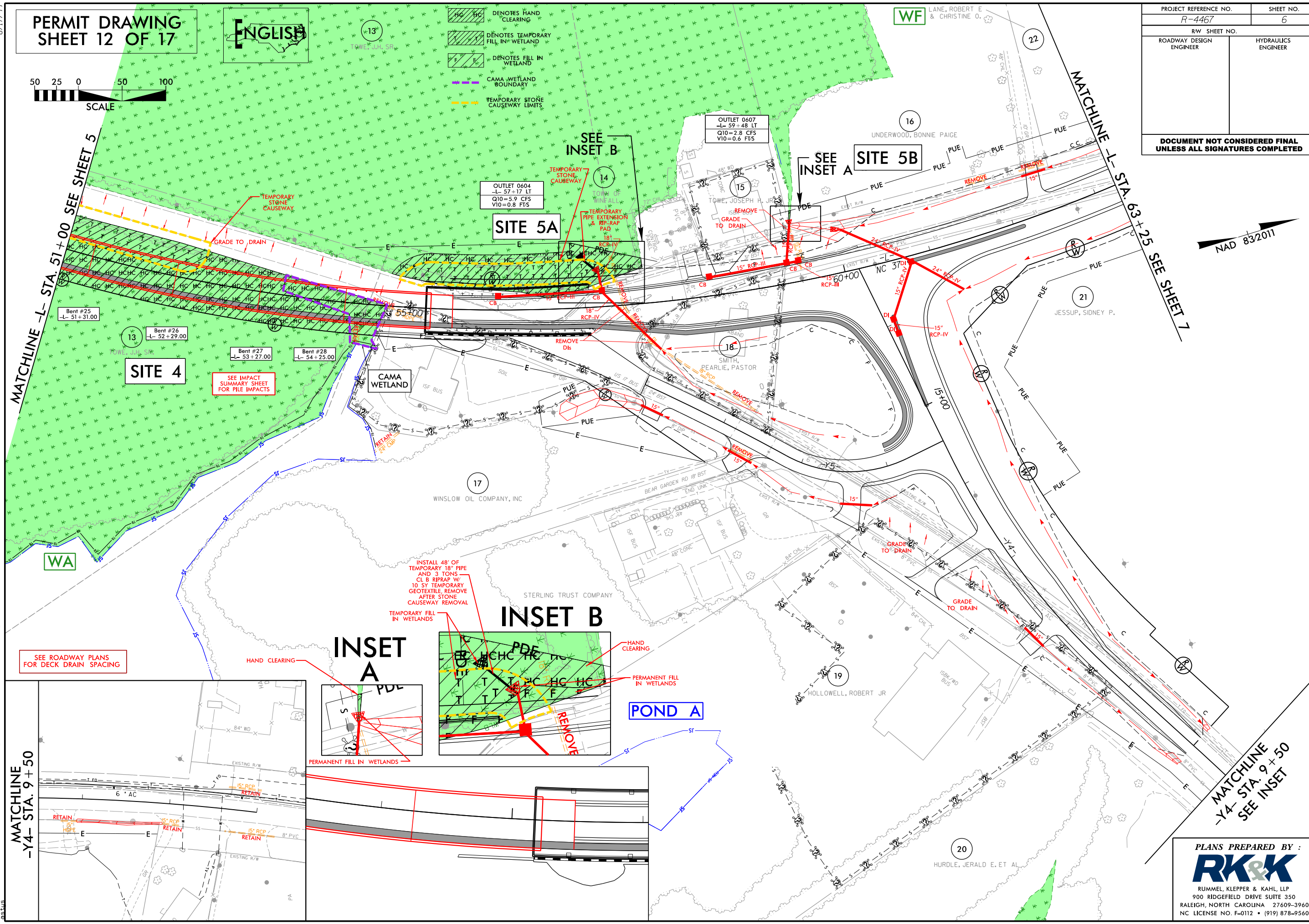
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PERMIT DRAWING
SHEET 12 OF 17



- HC HC DENOTES HAND CLEARING
- HC HC HC DENOTES TEMPORARY FILL INF WETLAND
- F HC HC DENOTES FILL IN WETLAND
- CAMA WETLAND BOUNDARY
- TEMPORARY STONE CAUSEWAY LIMITS

PROJECT REFERENCE NO. R-4467	SHEET NO. 6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



MATCHLINE -L- STA. 51+00 SEE SHEET 5

MATCHLINE -L- STA. 63+25 SEE SHEET 7

MATCHLINE -Y4- STA. 9+50

MATCHLINE -Y4- STA. 9+50
SEE INSET

SEE ROADWAY PLANS FOR DECK DRAIN SPACING

SEE IMPACT SUMMARY SHEET FOR PILE IMPACTS

INSTALL 48' OF TEMPORARY 18" PIPE AND 3 TONS CL B RIPRAP W/ 10 SY TEMPORARY GEOTEXTILE. REMOVE AFTER STONE CAUSEWAY REMOVAL

INSET A

INSET B

POND A

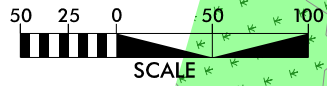


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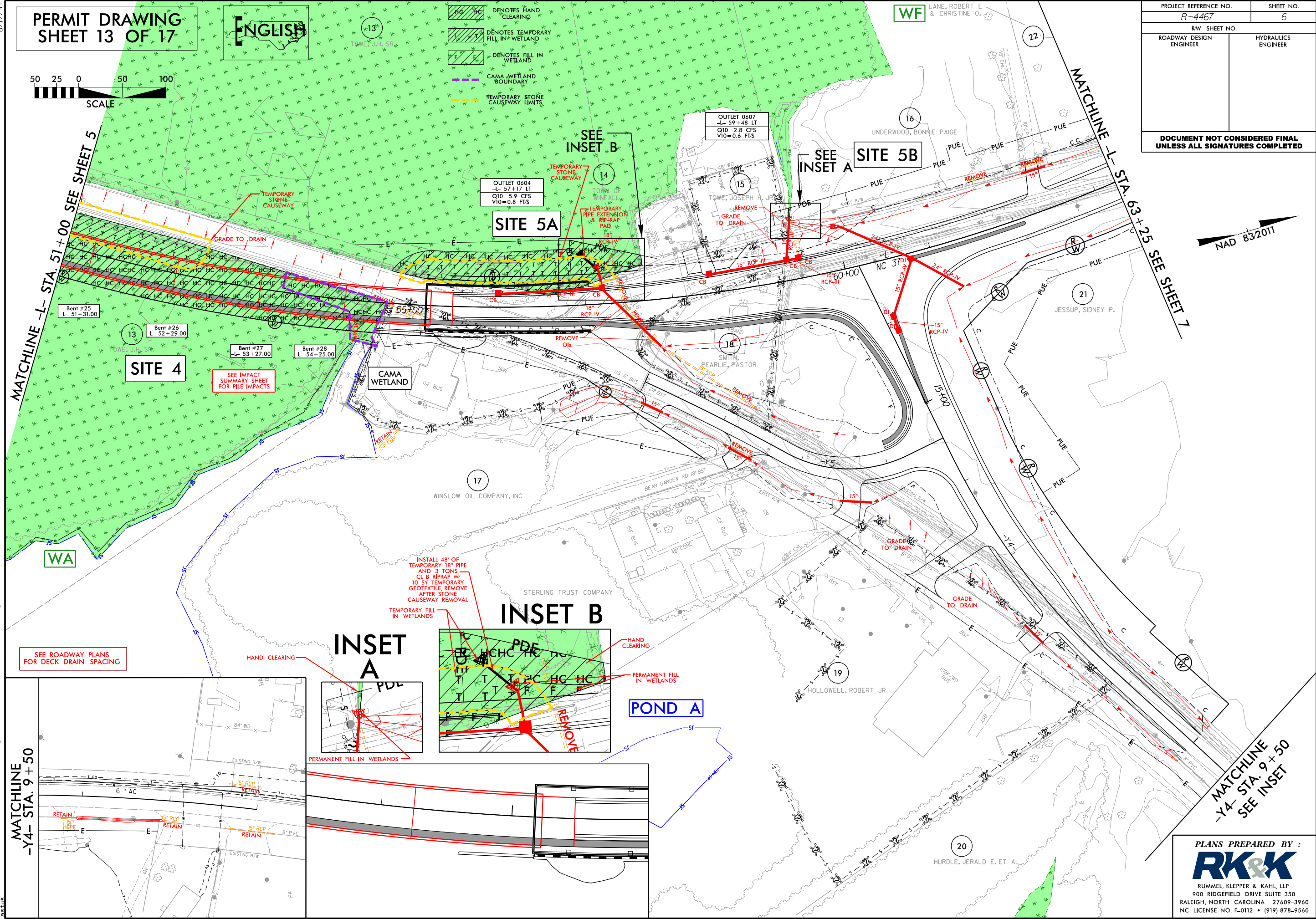
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**PERMIT DRAWING
SHEET 13 OF 17**



- DENOTES HAND CLEARING
- DENOTES TEMPORARY FILL IN WETLAND
- DENOTES FILL IN WETLAND
- CAMA WETLAND BOUNDARY
- TEMPORARY STONE CAUSEWAY LIMITS

PROJECT REFERENCE NO. R-4467	SHEET NO. 6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



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MATCHLINE -L- STA. 9+25 SEE SHEET 7

MATCHLINE -Y4- STA. 9+50

MATCHLINE -Y4- STA. 9+50
SEE INSET

SEE ROADWAY PLANS FOR DECK DRAIN SPACING

SEE IMPACT SUMMARY SHEET FOR FILE IMPACTS

INSTALL 48' OF TEMPORARY 18" PIPE AND 3 TONS CL B RIPRAP W/ 10 SY TEMPORARY GEOTEXTILE. REMOVE AFTER STONE CAUSEWAY REMOVAL

INSET A

INSET B

POND A

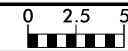
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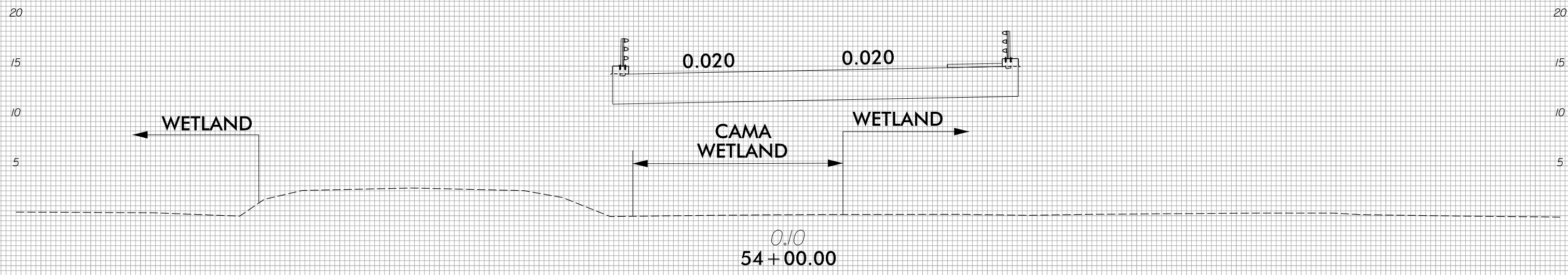
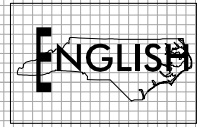


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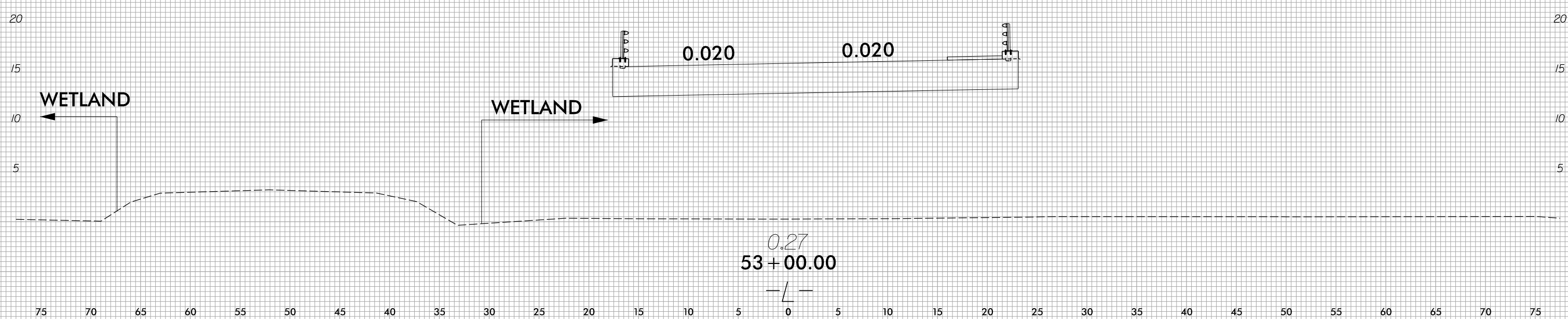
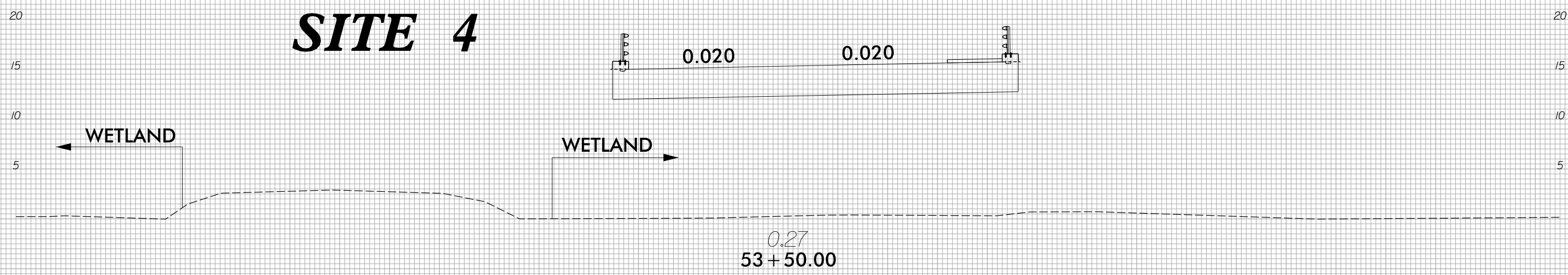
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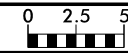
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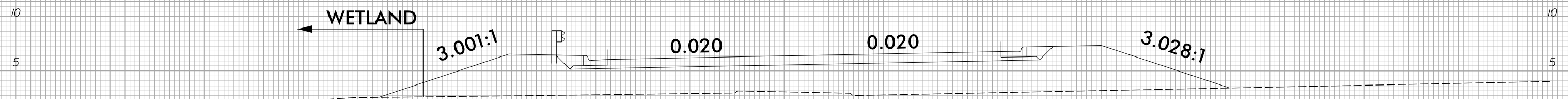
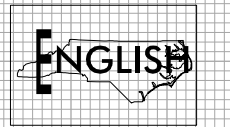


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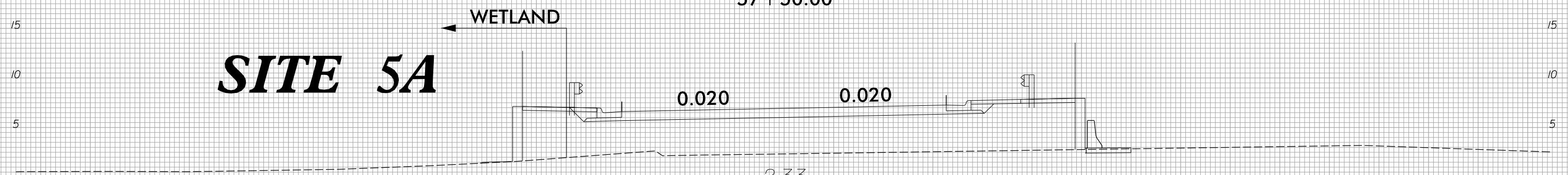
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PERMIT DRAWING
SHEET 15 OF 17

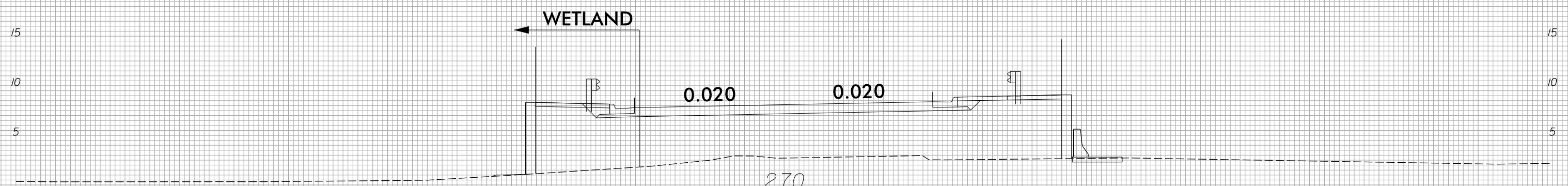


2.38
57+50.00

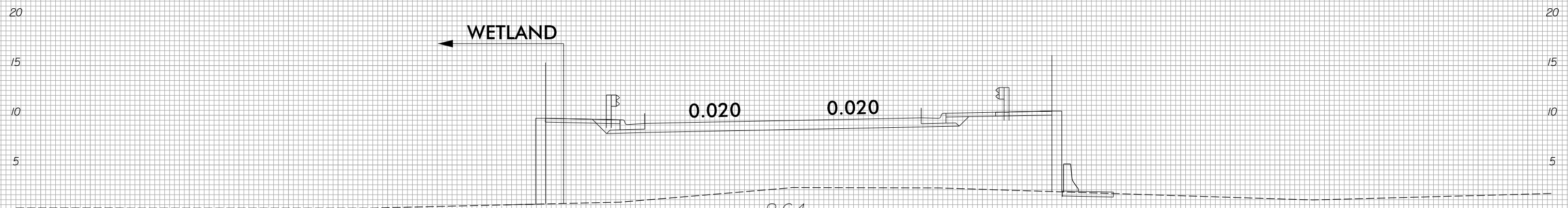
SITE 5A



2.33
57+00.00



2.70
56+50.00

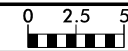


2.64
56+00.00

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6/25/2018
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6/23/16



PROJ. REFERENCE NO.
R-4467

SHEET NO.
X-42

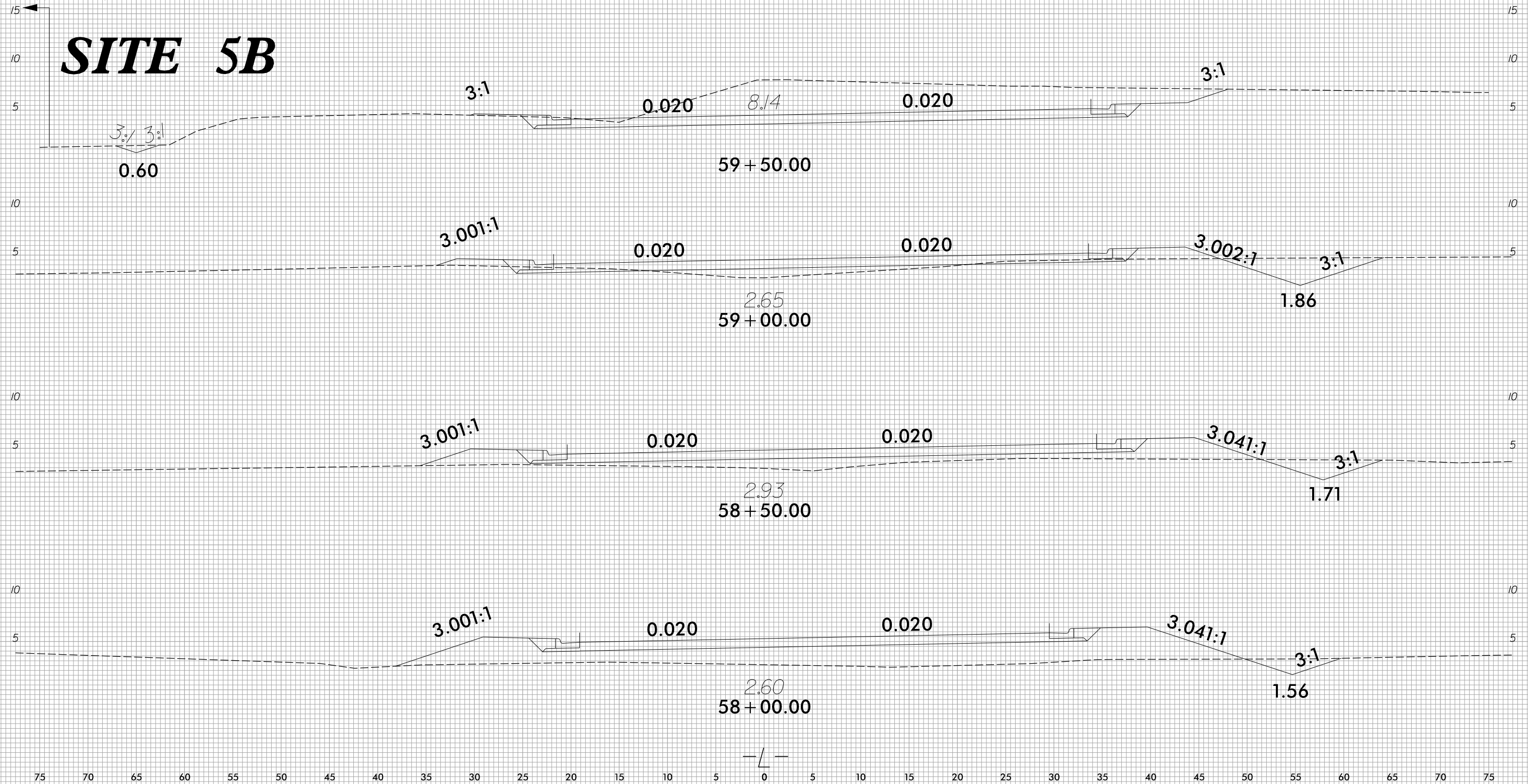
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PERMIT DRAWING
SHEET 16 OF 17



WETLAND

SITE 5B



6/25/2018
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esj

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- 28+08 to 28+89	BULK HEAD AT PERQUIMANS RIVER						0.01	0.06			
	-L-28+32 to 55+23	BRIDGE - 29 SPANS: 1@67' (45" FLORIDA I-BEAM); 2@98' (SWING SPAN TRUSS); 12@88', 14@98' (54" FLORIDA I-BEAM); WITH 4' CAPS AND SLOPED ABUTMENTS ¹						0.02	0.01			
	-L- 29+32 to 29+95 LT	50'x50' COFFERDAM FOR PIVOT PIER DEMOLITION							0.06			
2	-L- 35+28 to 39+58	BRIDGE CONSTRUCTION BETWEEN BENTS #8 & 13 ²	< 0.01	< 0.01								
3	-L- 41+93 to 45+23	BRIDGE CONSTRUCTION BETWEEN BENTS #15 & 19 ³	< 0.01	< 0.01								
4	-L- 46+59 to 54+65	BRIDGE CONSTRUCTION BETWEEN BENTS #20 & END BENT ⁴	< 0.01	< 0.01								
		TEMPORARY STONE CAUSEWAY ⁵		0.28								
5A	-L- 54+68 to 57+64 LT	TEMPORARY STONE CAUSEWAY		0.12								
		FILL SLOPE & 18" PIPE OUTLET	0.05									
5B	-L- 59+45 LT	15" PIPE OUTLET	< 0.01									
TOTALS*:			0.06	0.40			1.71	0.04	0.13	0	0	0

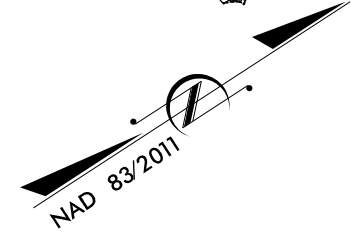
*Rounded totals are sum of actual impacts

NOTES:

1. Permanent Surface Water Impacts for Piles: 1041 sf
Temporary Surface Water Impacts for Piles: 527.2 sf
Temporary Surface Water Impacts for Moorings : 56.5 sf
Temporary Surface Water Impacts for Boat Landing : 1.8 sf
2. Permanent Fill in Wetland Impacts for Piles : 92 sf
Temporary Fill in Wetland Impact for Piles: 31 sf
3. Permanent Fill in Wetland Impacts for Piles : 34 sf
Temporary Fill in Wetland Impact for Piles: 22 sf
4. Permanent Fill in Wetland Impacts for Piles : 281 sf
Temporary Fill in Wetland Impact for Piles : 88 sf
Permanent Fill in CAMA Wetlands for Piles : 16 sf
5. Hand Clearing in CAMA Wetlands (Site 4) : 3014 sf

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
JUNE 2018
PERQUIMANS
R-4467
35748.3.2

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-4467	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
35748.3.2	N/A		



UTILITY PERMIT DRAWING SHEET 1 OF 8



INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

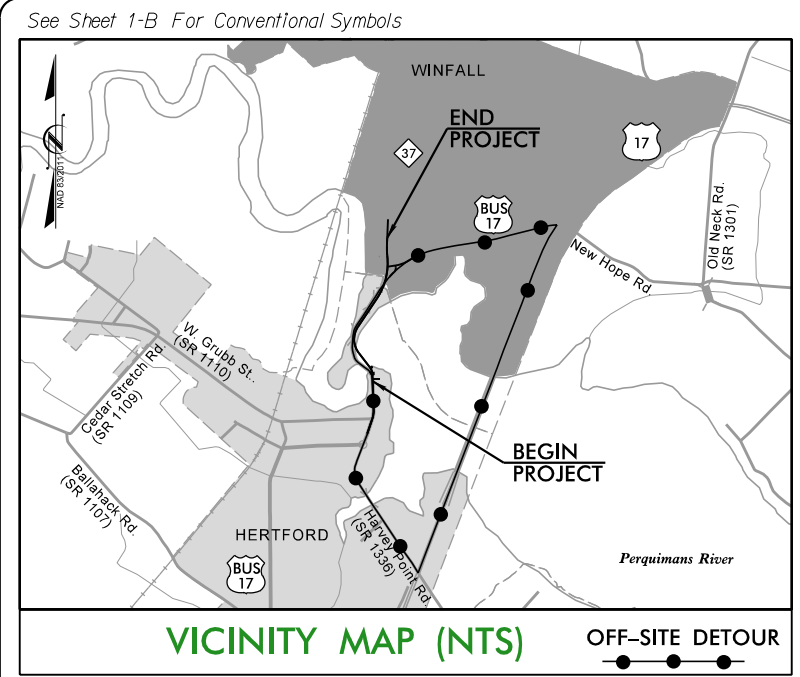
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PERQUIMANS COUNTY

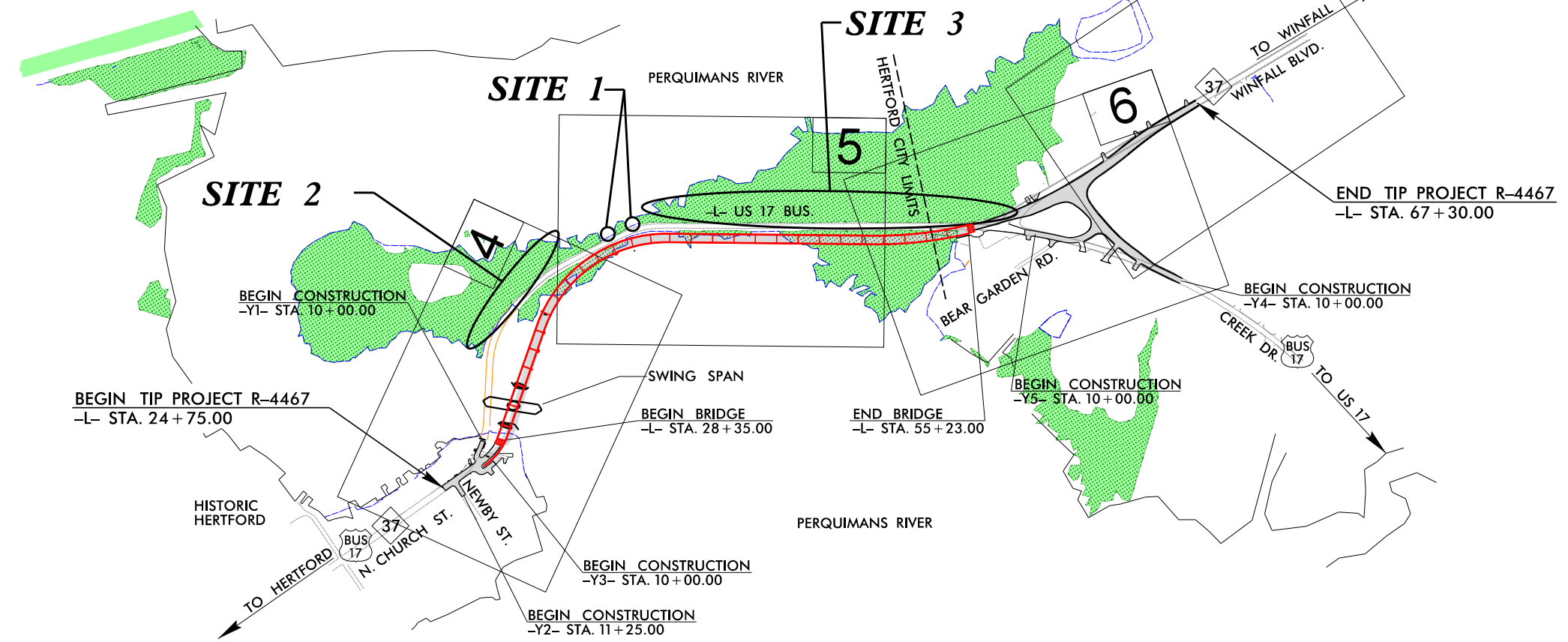
LOCATION: US 17 BUSINESS / NC 37 (NORTH CHURCH STREET)
FROM SOUTH OF THE PERQUIMANS RIVER BRIDGE TO
NORTH OF NC 37 (WINFALL BOULEVARD)

TYPE OF WORK: GRADING, DRAINAGE, PAVING, LIGHTING
SIGNALS, SIGNING, ITS & STRUCTURES

**JURISDICTIONAL IMPACTS
FOR UTILITIES**



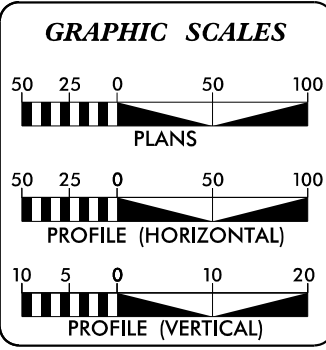
VICINITY MAP (NTS) OFF-SITE DETOUR



- NOTES:
1. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.
2. THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF THE TOWN OF HERTFORD AND THE TOWN OF WINFALL.
3. DESIGN EXCEPTION REQUIRED FOR HORIZONTAL STOPPING SIGHT DISTANCE AND SUPERELEVATION AT -L- PI STATION 28+26.83.

TIP PROJECT: R-4467

CONTRACT: C204003



DESIGN DATA

ADT 2017 = 10,100
ADT 2037 = 16,500
SOUTH APPROACH & BRIDGE V = 30 MPH FUNC. CLASS. = URBAN COLLECTOR
NORTH OF BRIDGE V = 50 MPH FUNC. CLASS. = RURAL COLLECTOR

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-4467.....0.296 mi
LENGTH STRUCTURE TIP PROJECT R-4467.....0.509 mi
TOTAL LENGTH TIP PROJECT R-4467.....0.805 mi

NCDOT CONTACT

K. Zak Hamidi, P.E.
PROJECT ENGINEER - DESIGN-BUILD GROUP

PLANS PREPARED BY:

RK&K RUMMEL, KLEPPER & KAHL, LLP
900 RIDGEFIELD DRIVE, SUITE 350
RALEIGH, NORTH CAROLINA 27609
NC LICENSE NO. F-0112

**FOR NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

2012 STANDARD SPECIFICATIONS

LETTING DATE:
JANUARY 2, 2018

McLean
CONTRACTING COMPANY

Michael T. Merritt, P.E.
PROJECT ENGINEER

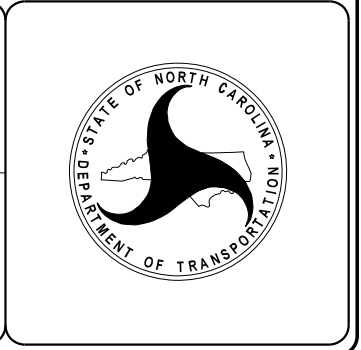
Anthony A. Houser, P.E.
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.

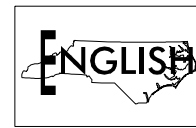
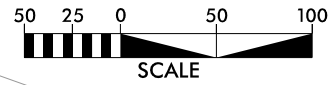


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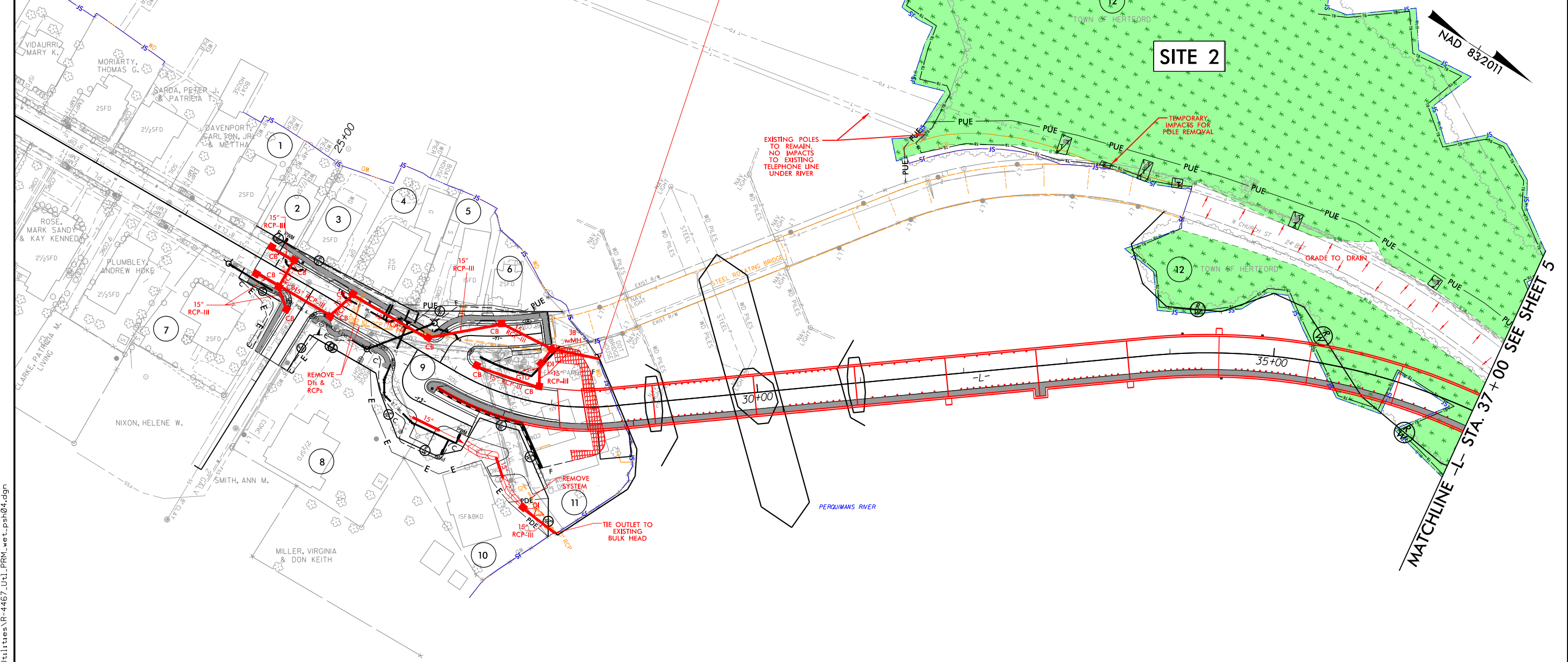
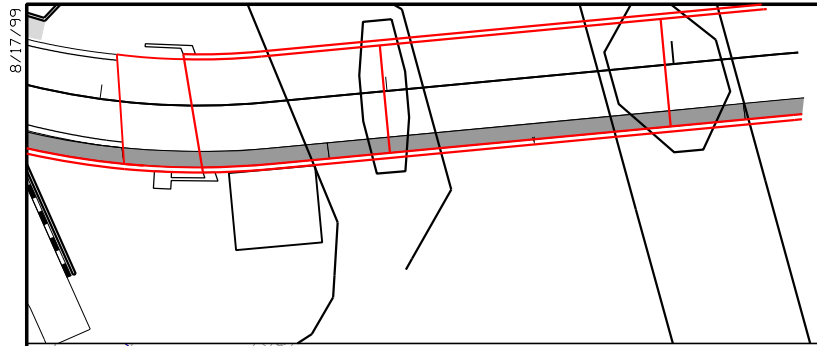
PROJECT REFERENCE NO. R-4467	SHEET NO. 4
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

UTILITY PERMIT DRAWING SHEET 2 OF 8



PERQUIMANS RIVER
 DENOTES TEMPORARY FILL IN WETLAND



8/17/99
 R:\14\Utilities\Environmental\Drawings\4C\Utilities\4467_Ut1_PPM_wet_psh04.dgn
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PARCEL NUMBERS AND PROPERTY OWNERS

- | | |
|--|--|
| 1 HOLLOWELL, BRENDA
DB 312, PG 717 | 7 SMITH, RICHARD W. & JEAN P.
DB 164 PG 545 |
| 2 KENNEDY, CHARLES R.
DB 120, PG 594 | 8 MALOTT, BRETT DARRYL & MARY M.
DB 165 PG 746 |
| 3 W.V.M., LLC
DB 204, PG 251 | 9 JAKLIC, FRANK A. & CONSTANCE L.
DB 204 PG 251 |
| 4 JAKLIC, FRANK A. & CONSTANCE L.
DB 204 PG 251 | 10 WINSLOW, SARA E. & ANNE W.
DB 120 PG 585 |
| 5 MADRE, EDWARD LEE & ANN F.
DB 166 PG 201 | 11 WADDELL, RUSSELL LEE & NANCY LYNNE THEODORE
DB 153 PG 50 |
| 6 VAYDA, MARGARET M.
DB 97 PG 507 | |

SEE ROADWAY PLANS FOR DECK DRAIN SPACING

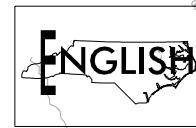
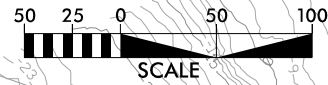
PLANS PREPARED BY :

 RUMMEL, KLEPPER & KAHL, LLP
 900 RIDGEFIELD DRIVE SUITE 350
 RALEIGH, NORTH CAROLINA 27609-3960
 NC LICENSE NO. F-0112 • (919) 878-9560

MATCHLINE -L- STA. 37+00 SEE SHEET 5

PROJECT REFERENCE NO. R-4467	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

UTILITY PERMIT DRAWING SHEET 3 OF 8



PERQUIMANS RIVER
 DENOTES TEMPORARY FILL IN WETLAND

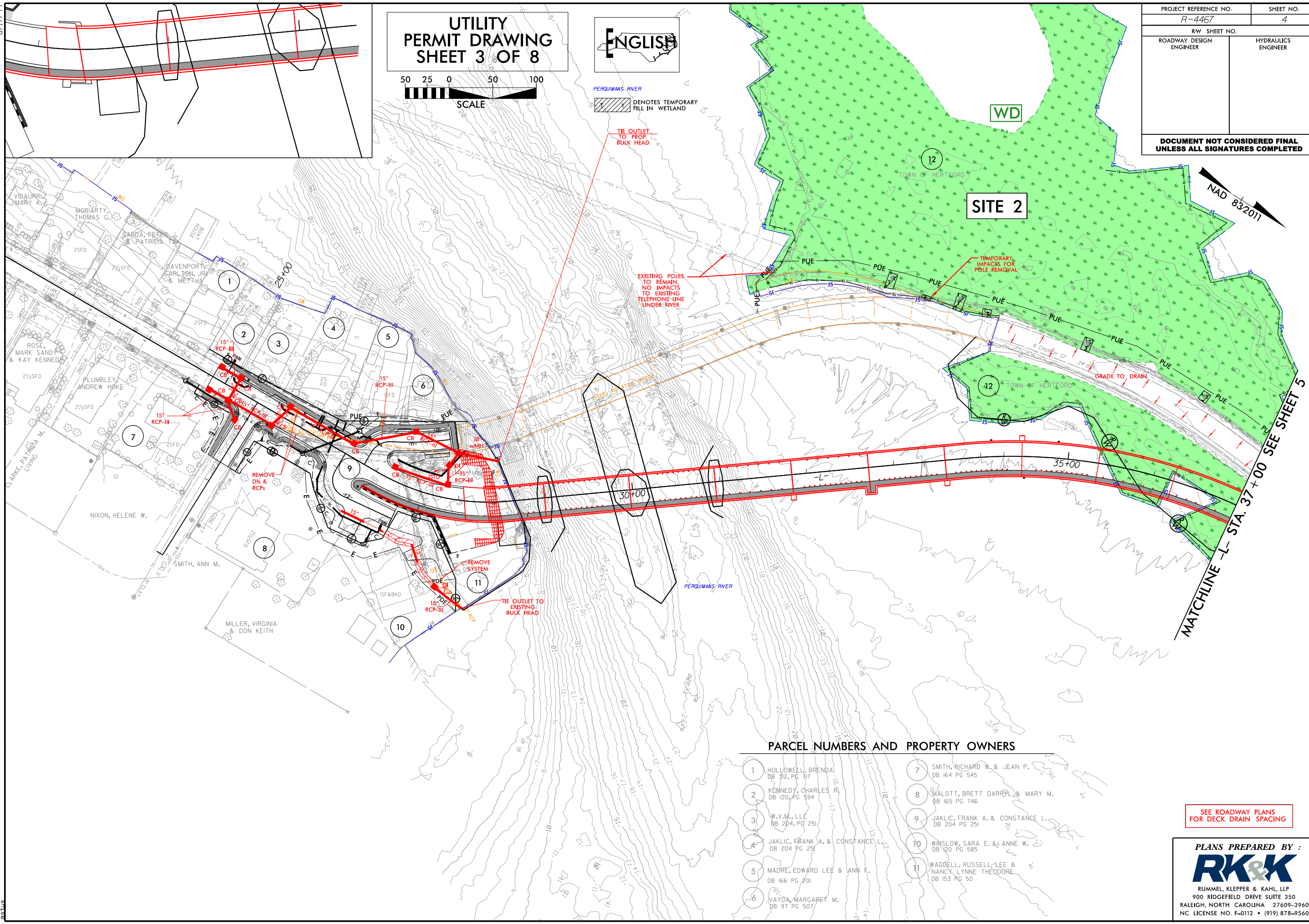
TIE OUTLET TO PROP BULK HEAD

EXISTING POLES TO REMAIN, NO IMPACTS TO EXISTING TELEPHONE LINE UNDER RIVER

SITE 2

TEMPORARY IMPACTS FOR POLE REMOVAL

MATCHLINE -L- STA. 37+00 SEE SHEET 5



PARCEL NUMBERS AND PROPERTY OWNERS

- | | |
|--|---|
| 1 HOLLOWELL, BRENDA
DB 312, PG 717 | 7 SMITH, RICHARD W. & JEAN P.
DB 164 PG 545 |
| 2 KENNEDY, CHARLES R.
DB 120, PG 334 | 8 MALOTT, BRETT DARRYL & MARY M.
DB 165 PG 746 |
| 3 W.V.M., LLC
DB 204, PG 251 | 9 JAKLIC, FRANK A. & CONSTANCE L.
DB 204 PG 251 |
| 4 JAKLIC, FRANK A. & CONSTANCE L.
DB 204 PG 251 | 10 WINSLOW, SARA E. & ANNE W.
DB 120 PG 585 |
| 5 MADRE, EDWARD LEE & ANN F.
DB 166 PG 201 | 11 WADDELL, RUSSELL LEE & NANCY LYNN THEODORE
DB 153 PG 50 |
| 6 VAYDA, MARGARET M.
DB 97 PG 507 | |

SEE ROADWAY PLANS FOR DECK DRAIN SPACING

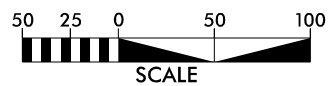
PLANS PREPARED BY :

 RUMMEL, KLEPPER & KAHL, LLP
 900 RIDGEFIELD DRIVE SUITE 350
 RALEIGH, NORTH CAROLINA 27609-3960
 NC LICENSE NO. F-0112 • (919) 878-9560

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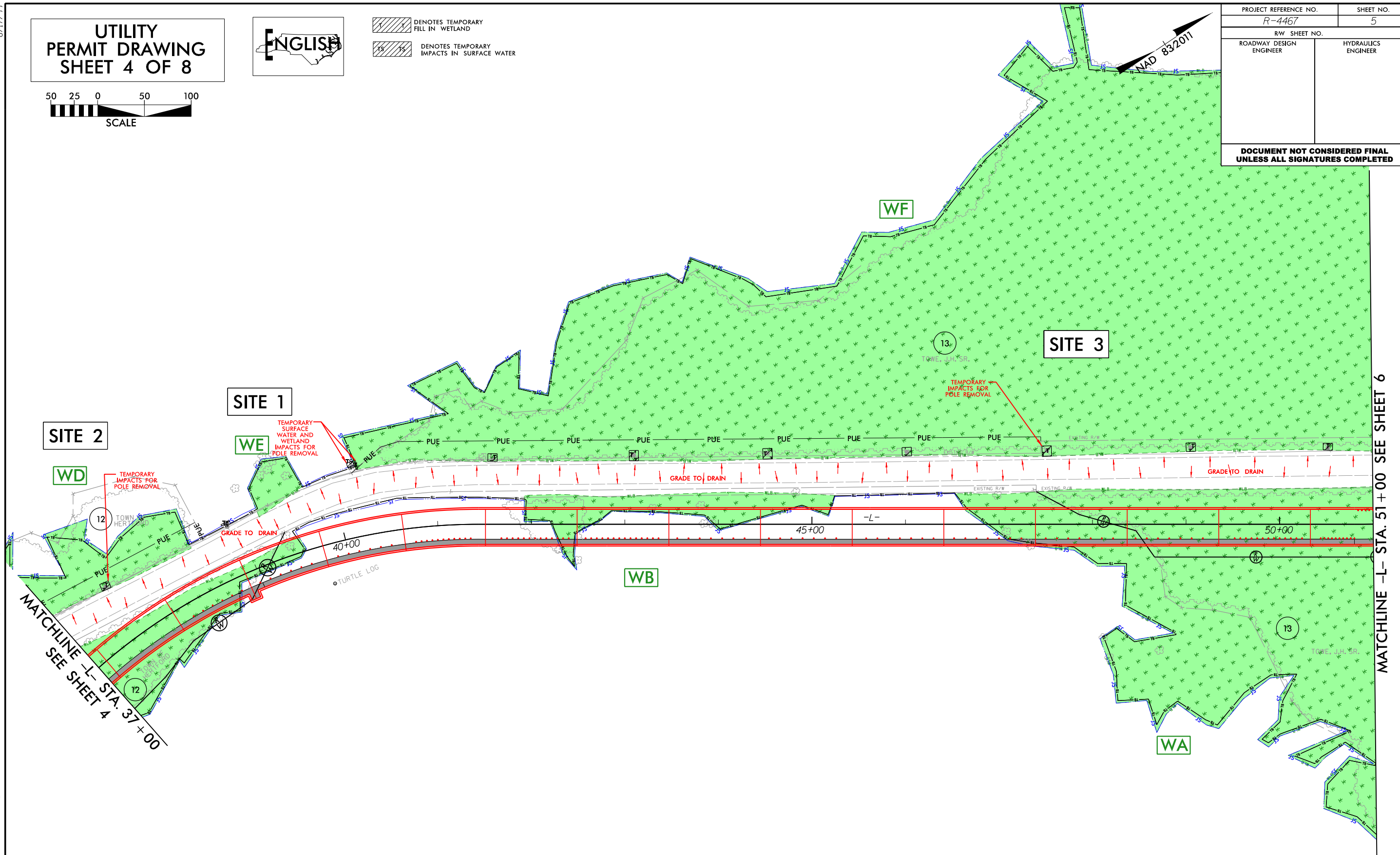
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UTILITY PERMIT DRAWING SHEET 4 OF 8



- DENOTES TEMPORARY FILL IN WETLAND
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

PROJECT REFERENCE NO. R-4467	SHEET NO. 5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



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MATCHLINE -L- STA. 37+00
SEE SHEET 4

MATCHLINE -L- STA. 51+00 SEE SHEET 6

SEE ROADWAY PLANS FOR DECK DRAIN SPACING

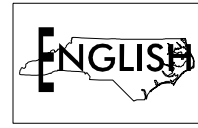
PLANS PREPARED BY :



RK&K

RUMMEL, KLEPPER & KAHL, LLP
 900 RIDGEFIELD DRIVE SUITE 350
 RALEIGH, NORTH CAROLINA 27609-3960
 NC LICENSE NO. F-0112 • (919) 878-9560

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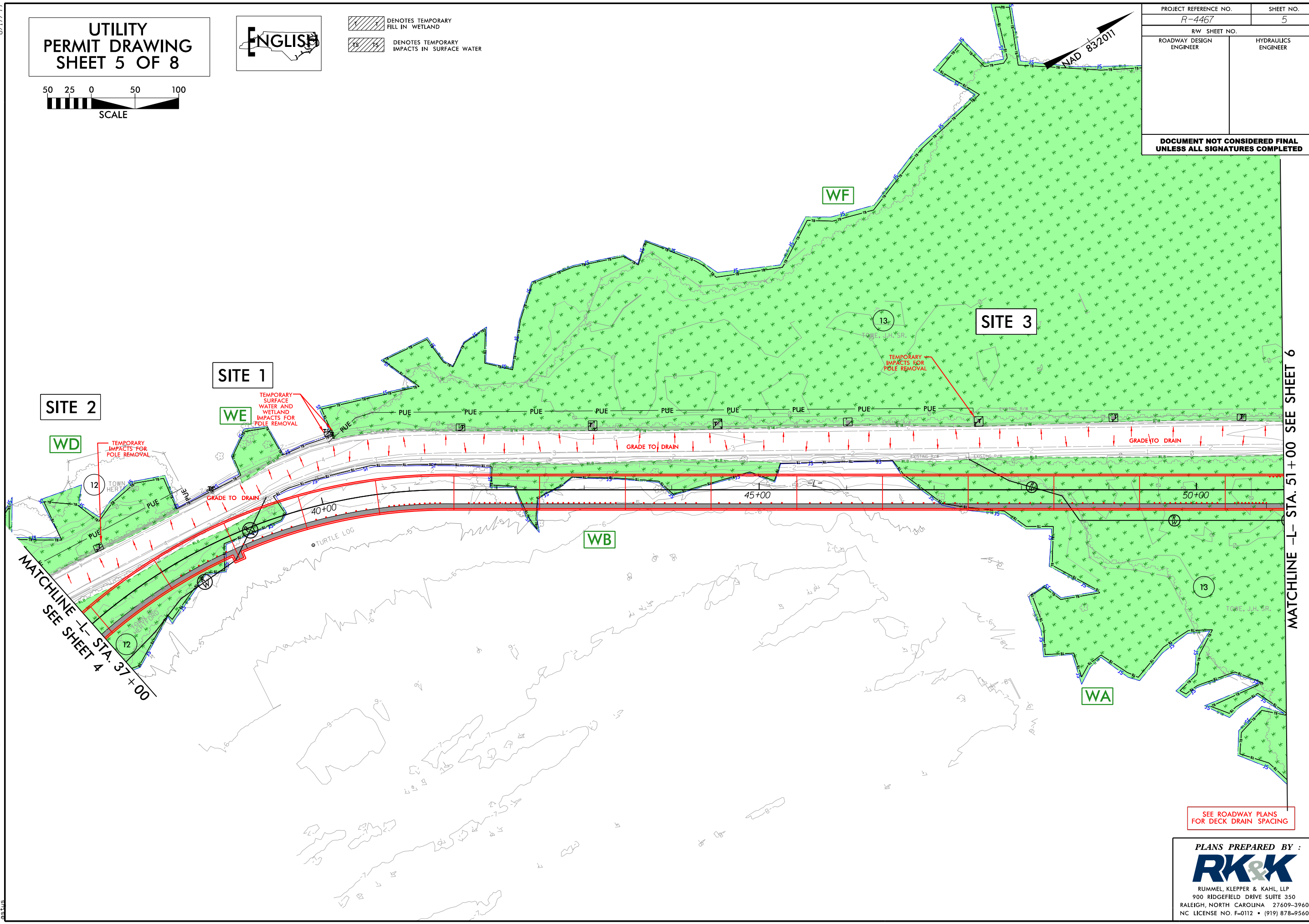
UTILITY PERMIT DRAWING SHEET 5 OF 8



 DENOTES TEMPORARY FILL IN WETLAND
 DENOTES TEMPORARY IMPACTS IN SURFACE WATER

PROJECT REFERENCE NO. R-4467	SHEET NO. 5
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

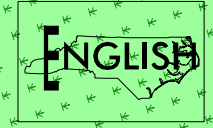
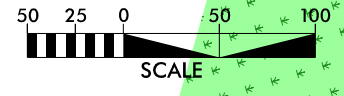


SEE ROADWAY PLANS FOR DECK DRAIN SPACING

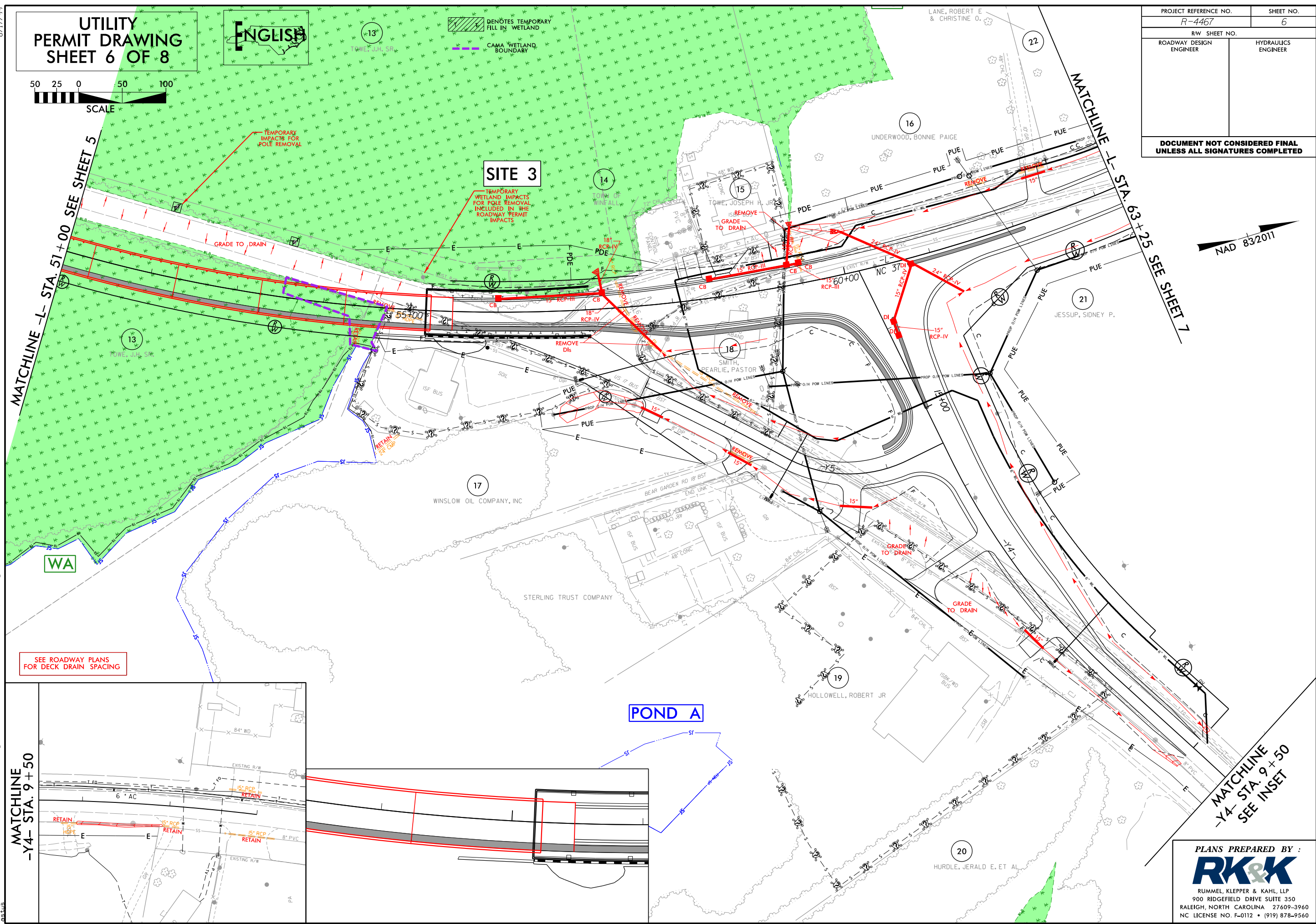
PLANS PREPARED BY :
RK&K
RUMMEL, KLEPPER & KAHL, LLP
900 RIDGEFIELD DRIVE SUITE 350
RALEIGH, NORTH CAROLINA 27609-3960
NC LICENSE NO. F-0112 • (919) 878-9560

PROJECT REFERENCE NO. R-4467	SHEET NO. 6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

UTILITY PERMIT DRAWING SHEET 6 OF 8



DENOTES TEMPORARY FILL IN WETLAND
 CAMA WETLAND BOUNDARY



MATCHLINE -L- STA. 51+00 SEE SHEET 5

MATCHLINE -L- STA. 9+25 SEE SHEET 7

SEE ROADWAY PLANS FOR DECK DRAIN SPACING

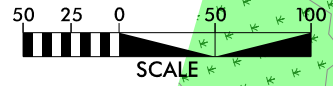


MATCHLINE -Y4- STA. 9+50 SEE INSET

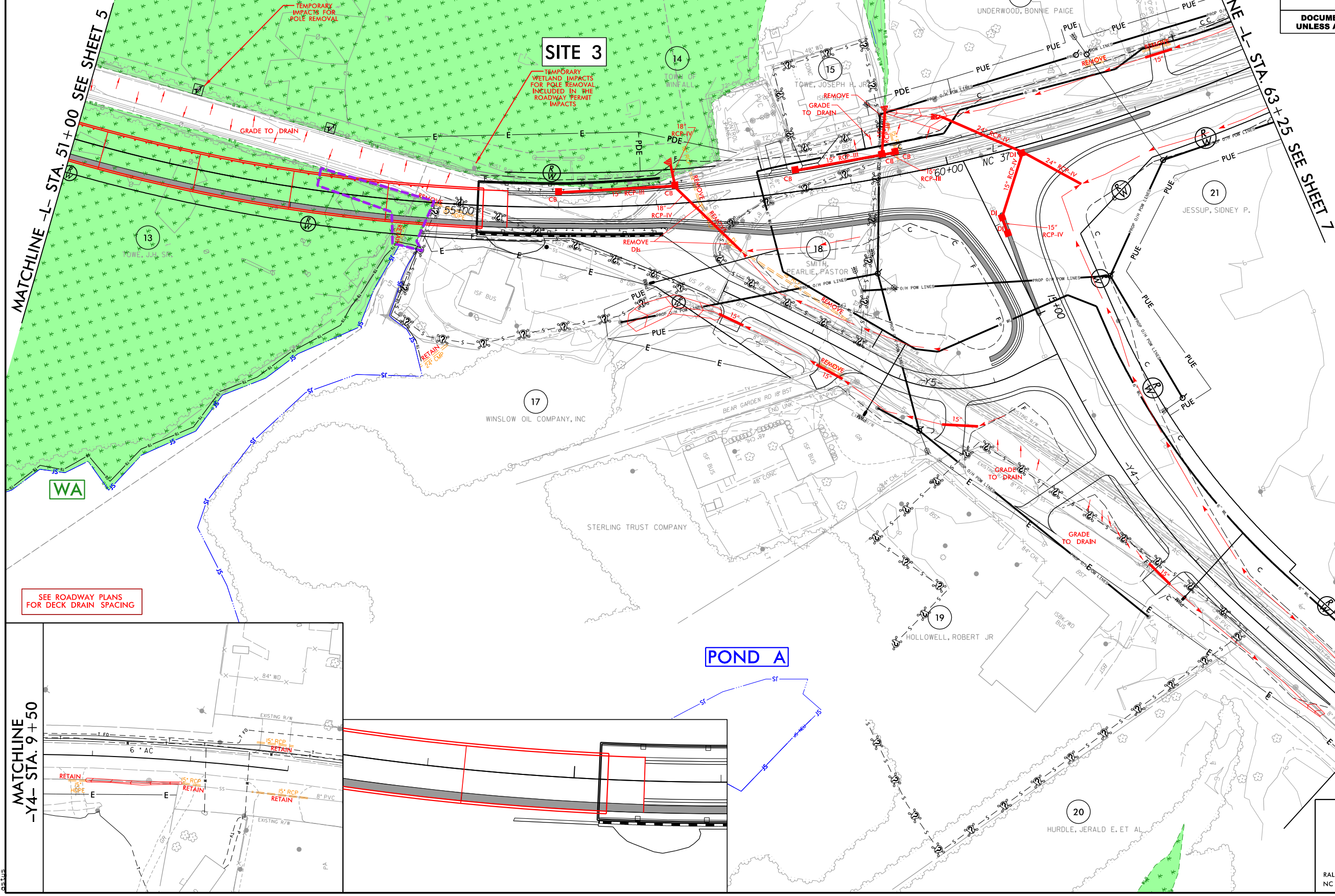
PLANS PREPARED BY :
RK&K
 RUMMEL, KLEPPER & KAHL, LLP
 900 RIDGEFIELD DRIVE SUITE 350
 RALEIGH, NORTH CAROLINA 27609-3960
 NC LICENSE NO. F-0112 • (919) 878-9560

8/17/99
 8/26/2018
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UTILITY PERMIT DRAWING SHEET 7 OF 8



PROJECT REFERENCE NO. R-4467	SHEET NO. 6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



SEE ROADWAY PLANS FOR DECK DRAIN SPACING



8/17/99
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6/26/2018
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PLANS PREPARED BY :
RK&K
RUMMEL, KLEPPER & KAHL, LLP
900 RIDGEFIELD DRIVE SUITE 350
RALEIGH, NORTH CAROLINA 27609-3960
NC LICENSE NO. F-0112 • (919) 878-9560

WETLAND AND SURFACE WATER IMPACTS SUMMARY FROM UTILITIES

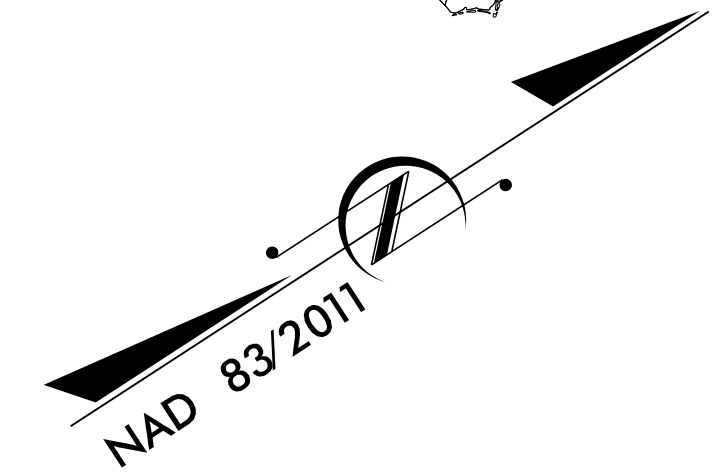
Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	-L- 38+84 to 40+24 LT	POLE REMOVAL						< 0.01				
2	-L- 33+08 to 37+61 LT	POLE REMOVAL		0.02								
3	-L- 40+23 to 50+64 LT	POLE REMOVAL		0.02								
TOTALS*:				0.04				< 0.01	0	0	0	

*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 JUNE 2018
 PERQUIMANS
 R-4467
 35748.3.2
 SHEET 8 OF 8

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-4467	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
35748.3.2	N/A		



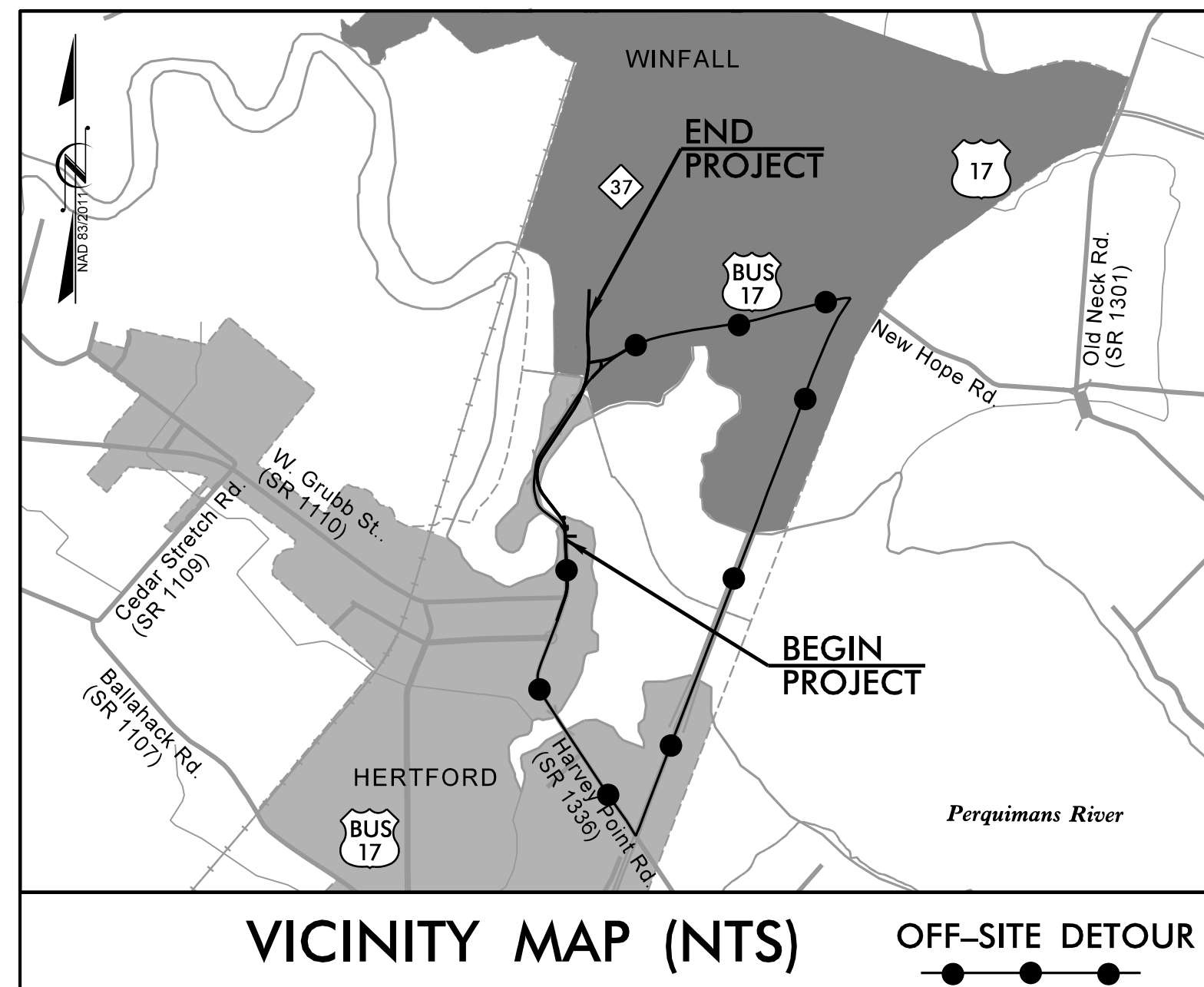
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PERQUIMANS COUNTY

**LOCATION: US 17 BUSINESS /NC 37 (NORTH CHURCH STREET)
FROM SOUTH OF THE PERQUIMANS RIVER BRIDGE TO
NORTH OF NC 37 (WINFALL BOULEVARD)**

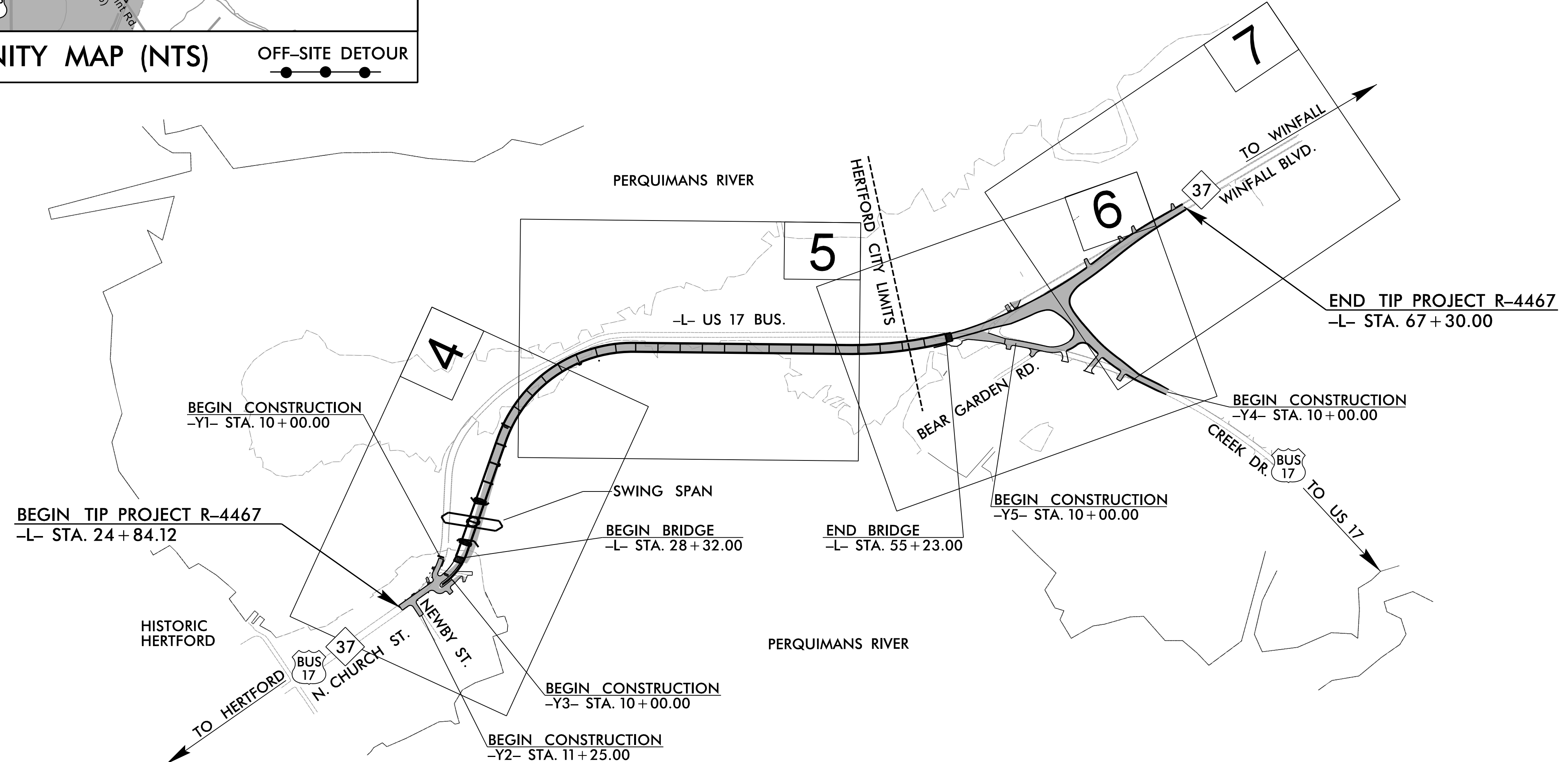
**TYPE OF WORK: GRADING, DRAINAGE, PAVING, LIGHTING
SIGNALS, SIGNING, ITS & STRUCTURES**

See Sheet 1-B For Conventional Symbols



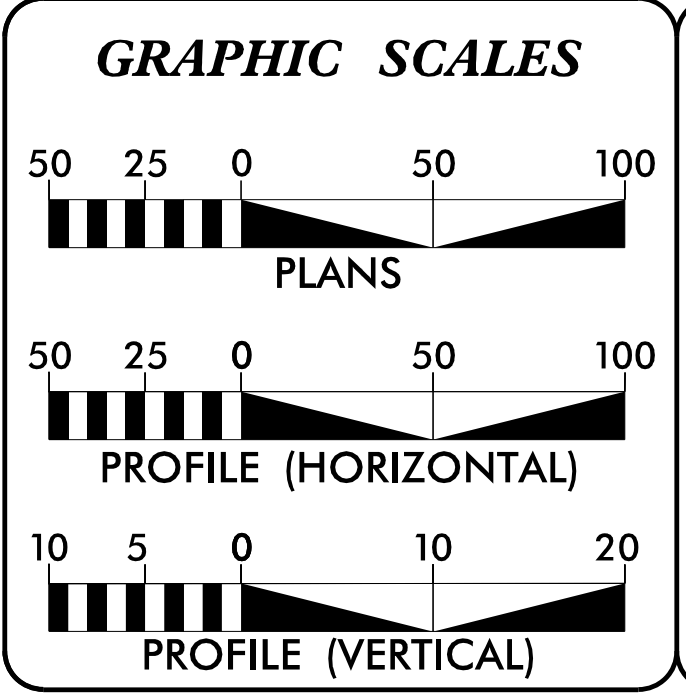
TIP PROJECT: R-4467

CONTRACT: C204003



- NOTES:**
- CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.
 - THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF THE TOWN OF HERTFORD AND THE TOWN OF WINFALL.
 - DESIGN EXCEPTION REQUIRED FOR HORIZONTAL STOPPING SIGHT DISTANCE AND SUPERELEVATION AT -L- PI STATION 27 + 82.88.

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



DESIGN DATA

ADT 2017 = 10,100

ADT 2037 = 16,500

SOUTH APPROACH & BRIDGE

V = 30 MPH
FUNC. CLASS. = URBAN COLLECTOR

NORTH OF BRIDGE

V = 50 MPH
FUNC. CLASS. = RURAL COLLECTOR

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-4467.....0.294 mi

LENGTH STRUCTURE TIP PROJECT R-4467.....0.510 mi

TOTAL LENGTH TIP PROJECT R-4467.....0.804 mi

NCDOT CONTACT

K. Zak Hamidi, P.E.
PROJECT ENGINEER - DESIGN-BUILD UNIT

PLANS PREPARED BY:

RK&K RUMMEL, KLEPPER & KAHL, LLP
900 RIDGEFIELD DRIVE, SUITE 350
RALEIGH, NORTH CAROLINA 27609
NC LICENSE NO. F-0112

McLean
CONTRACTING COMPANY

**FOR NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

2012 STANDARD SPECIFICATIONS

LETTING DATE:
JANUARY 2, 2018

Michael T. Merritt, P.E.
PROJECT ENGINEER

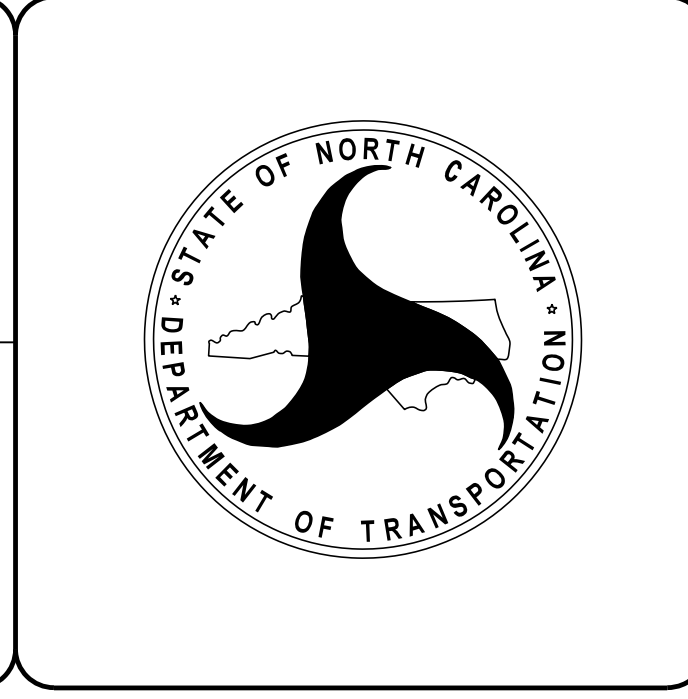
Anthony A. Houser, P.E.
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



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	-x-x-x-
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	▬
False Sump	▽

RAILROADS:

Standard Gauge	-----
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	-----
Proposed Right of Way Line with Iron Pin and Cap Marker	○ R/W
Proposed Right of Way Line with Concrete or Granite RW Marker	△ R/W
Proposed Control of Access Line with Concrete CA Marker	○ C/A
Existing Control of Access	○ C/A
Proposed Control of Access	○ C/A
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	▭
Telephone Cell Tower	▭
U/G Telephone Cable Hand Hole	○ TH
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.*)	-----TF-----
U/G Fiber Optics Cable LOS C (S.U.E.*)	-----TF-----
U/G Fiber Optics Cable LOS D (S.U.E.*)	-----TF-----

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	□
TV Tower	⊗
U/G TV Cable Hand Hole	○ TH
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	▭
Utility Unknown U/G Line LOS B (S.U.E.*)	-----2UTL-----
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.

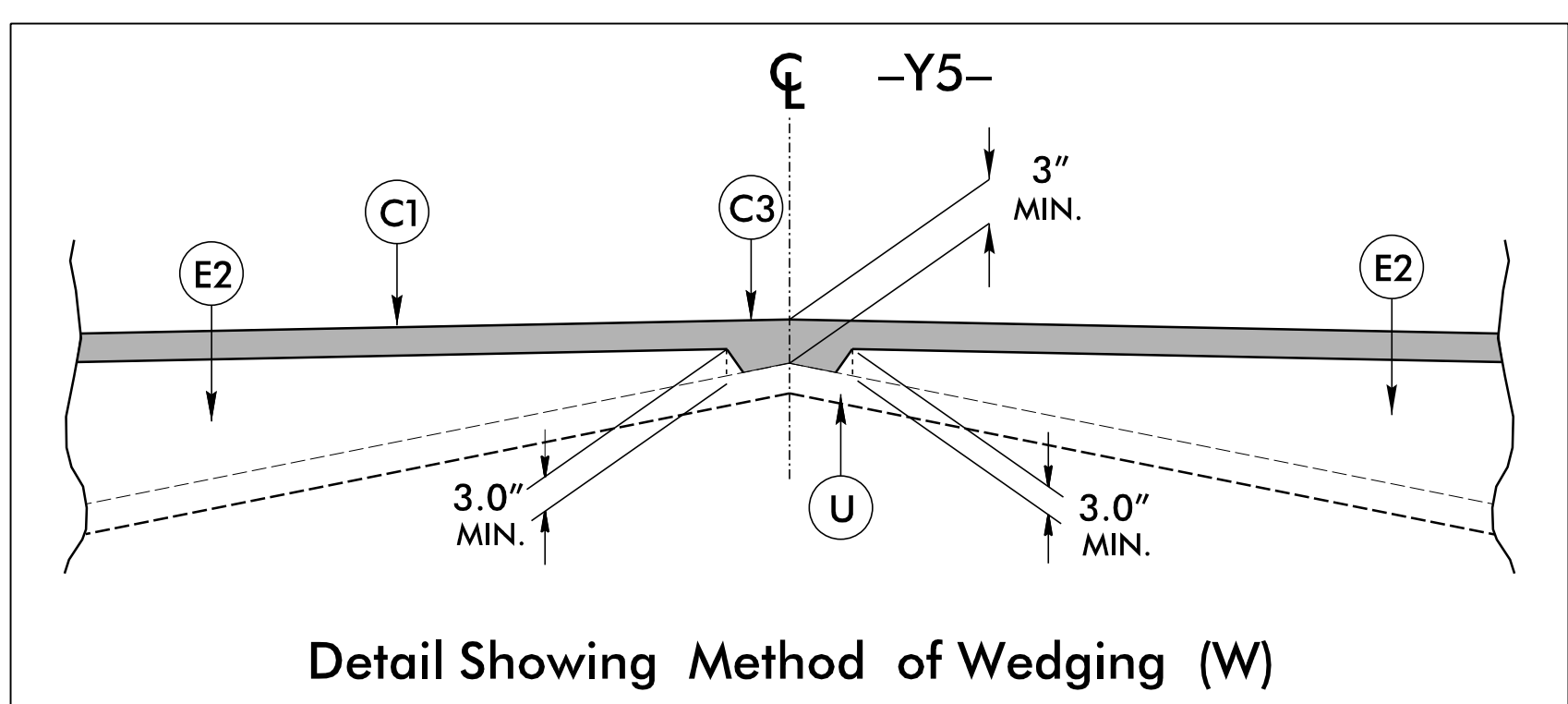
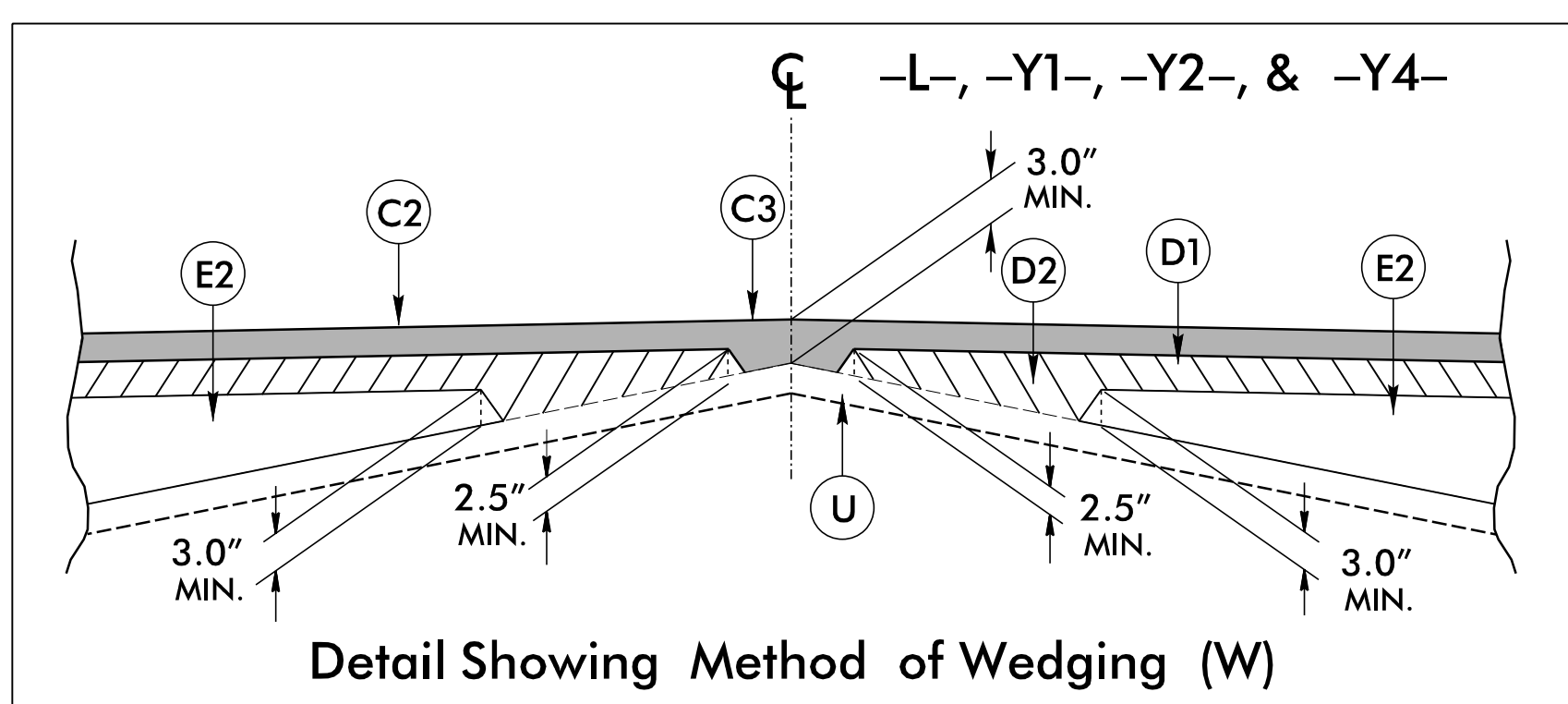
04/06/15 \$DATE\$ \$FILE\$ \$STATUS\$

PAVEMENT SCHEDULE

PROJECT REFERENCE NO. <i>R-4467</i>	SHEET NO. <i>2A-1</i>
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	J1	8" AGGREGATE BASE COURSE
C2	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.	P	PRIME COAT
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.	R	2'-6" CONCRETE CURB AND GUTTER.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	S	4" CONCRETE SIDEWALK.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 4" IN DEPTH.	T	EARTH MATERIAL.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AVERAGE RATE OF 456 LBS. PER SQ. YD.	U	EXISTING PAVEMENT.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 5.5" IN DEPTH.	W	WEDGING
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE. SEE PLANS FOR LOCATION OF CONCRETE ISLANDS, TURN LANES, AND TAPERS.		Y	4" CONCRETE PAVEMENT

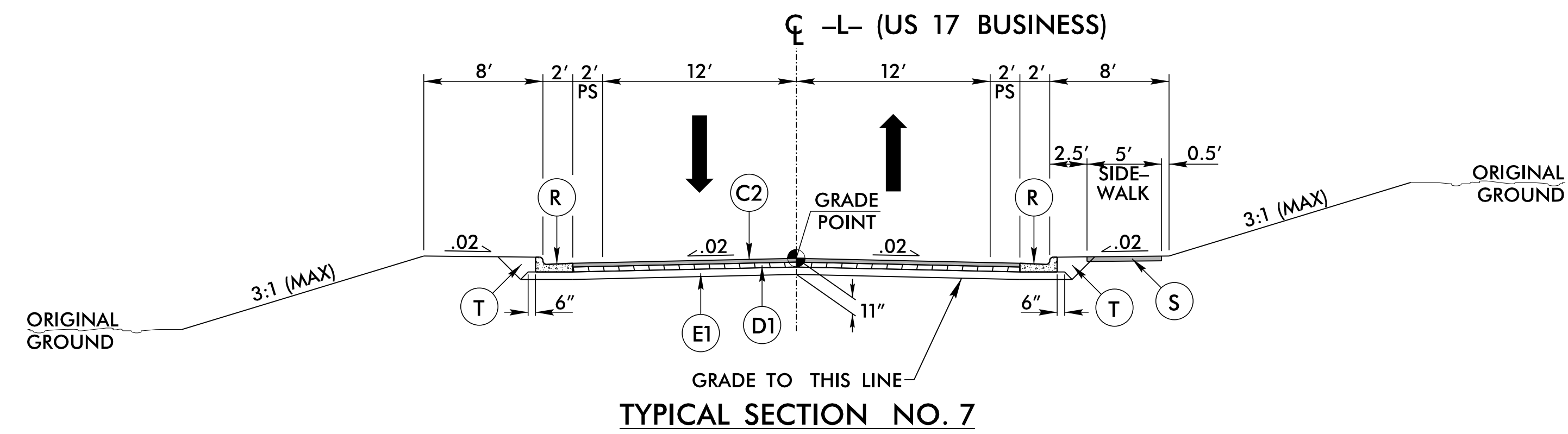
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PAVEMENT SCHEDULE	
C1	1.5" S9.5B
C2	3" S9.5B
C3	VAR. S9.5B
D1	4" I19.0B
D2	VAR. I19.0B
E1	4" B25.0B
E2	VAR. B25.0B
J1	8" ABC
P	PRIME COAT
R	2'-6" C&G
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W	WEDGING
Y	4" CONCRETE

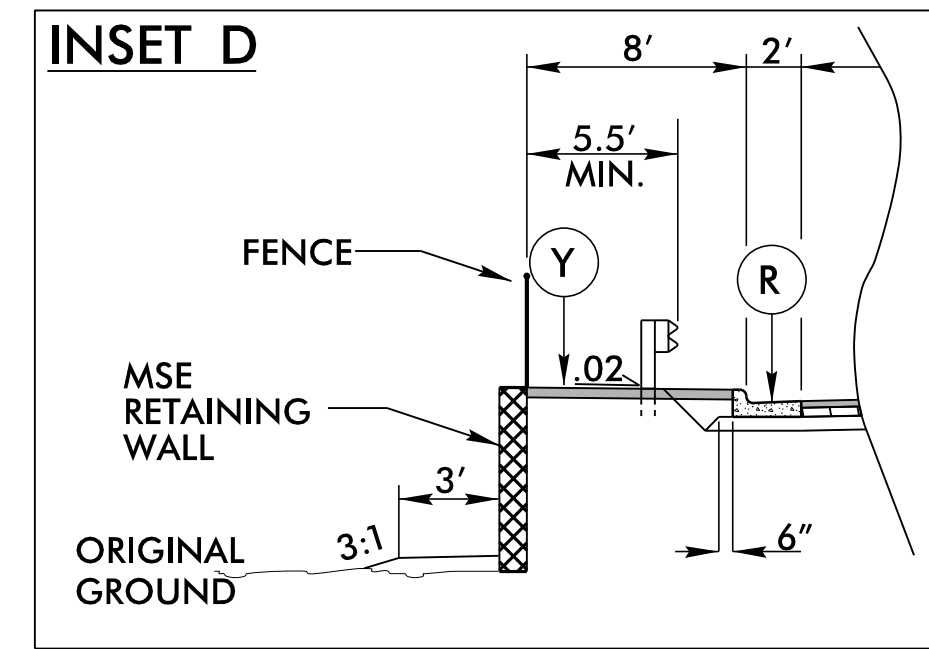
PROJECT REFERENCE NO.	SHEET NO.
R-4467	2A-4
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



TYPICAL SECTION NO. 7

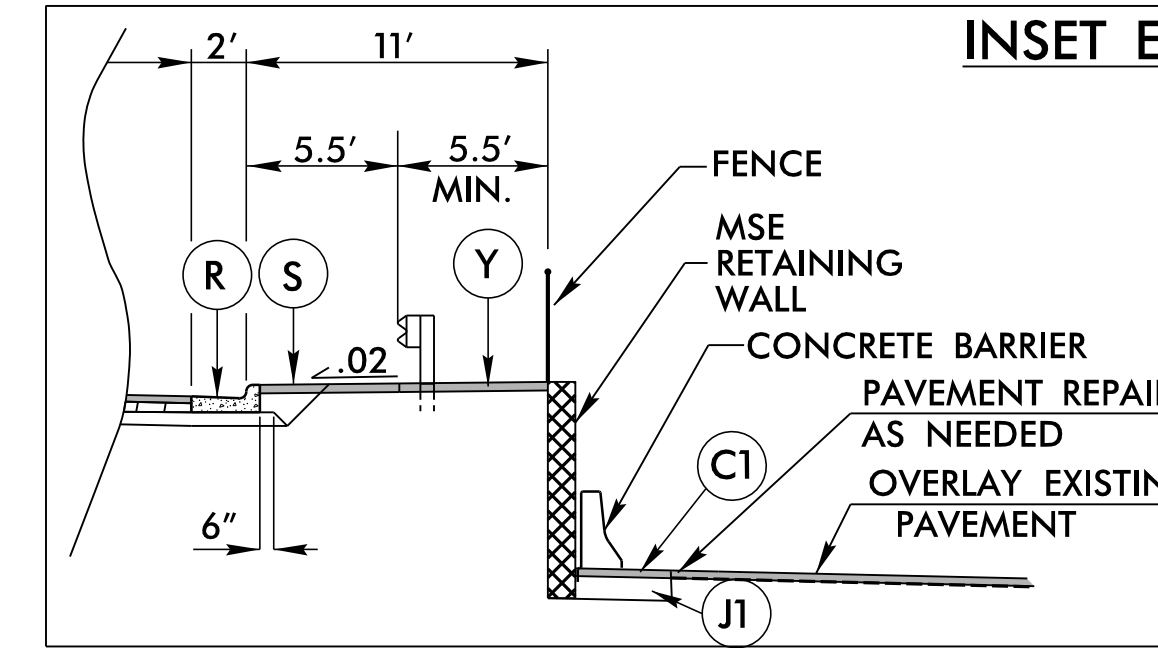
-L- STA. 55+23.00 (END BRIDGE) TO STA. 60+16.16

NOTE: BERM WIDENING NOT REQUIRED FOR GUARDRAIL LOCATIONS WHERE FACE OF GUARDRAIL IS ADJACENT TO FACE OF CURB.



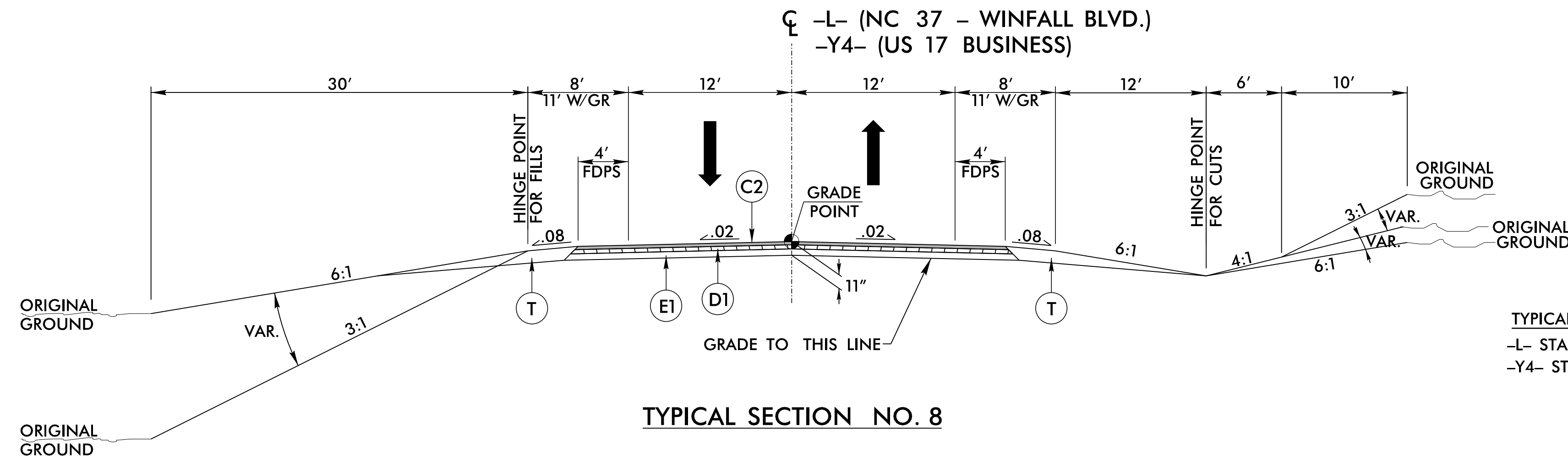
INSET D

-L- STA. 55+23.00 (END BRIDGE) TO STA. 57+05.00 (LT)



INSET E

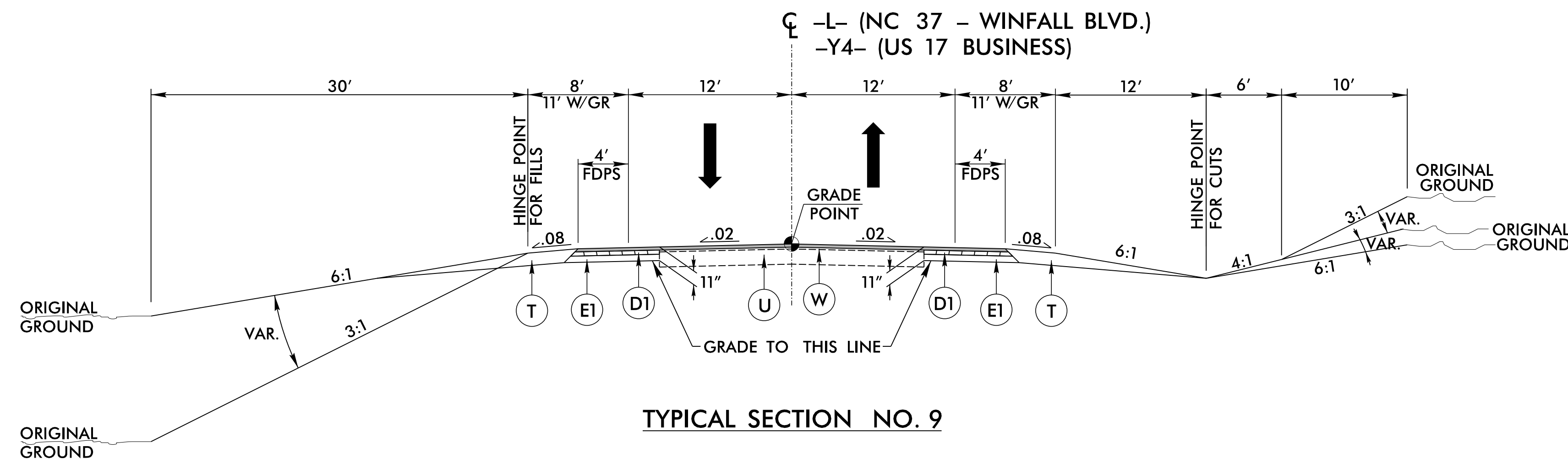
-L- STA. 55+23.00 (END BRIDGE) TO STA. 57+05.00 (RT)



TYPICAL SECTION NO. 8

TYPICAL SECTION NO. 8

-L- STA. 60+16.16 TO STA. 63+25.00
-Y4- STA. 12+56.55 TO STA. 16+53.74



TYPICAL SECTION NO. 9

TYPICAL SECTION NO. 9

-L- STA. 63+25.00 TO STA. 67+30.00
-Y4- STA. 10+00.00 TO STA. 12+56.55

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NOTE: SEE PLANS FOR LOCATIONS OF TURN LANES, TAPERS, AND CONCRETE ISLANDS.

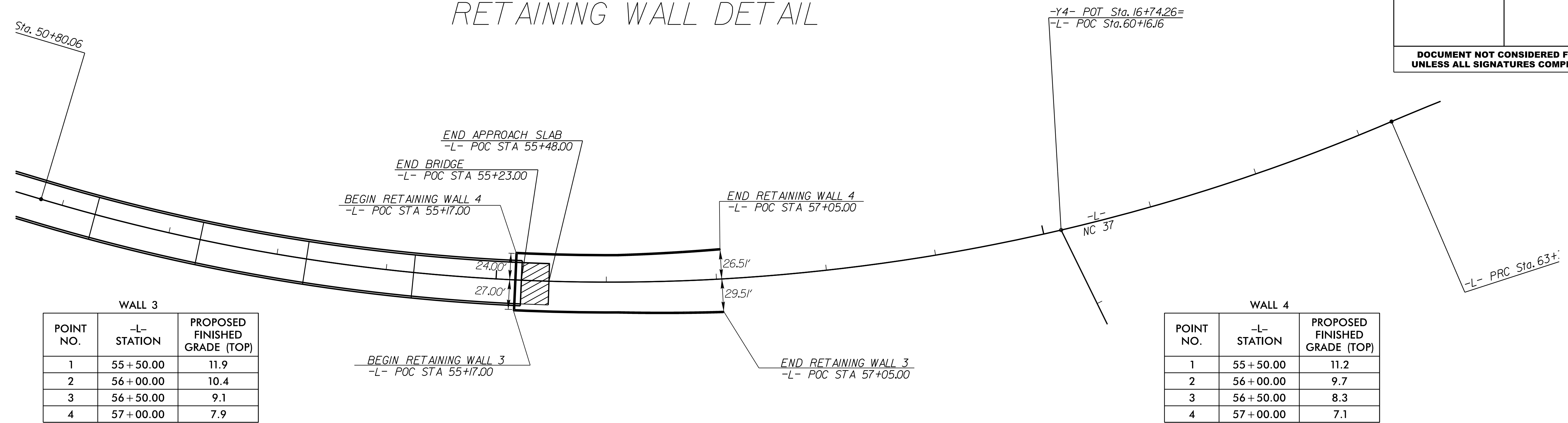
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PROJECT REFERENCE NO. R-4467	SHEET NO. 2B-4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

RETAINING WALL DETAIL



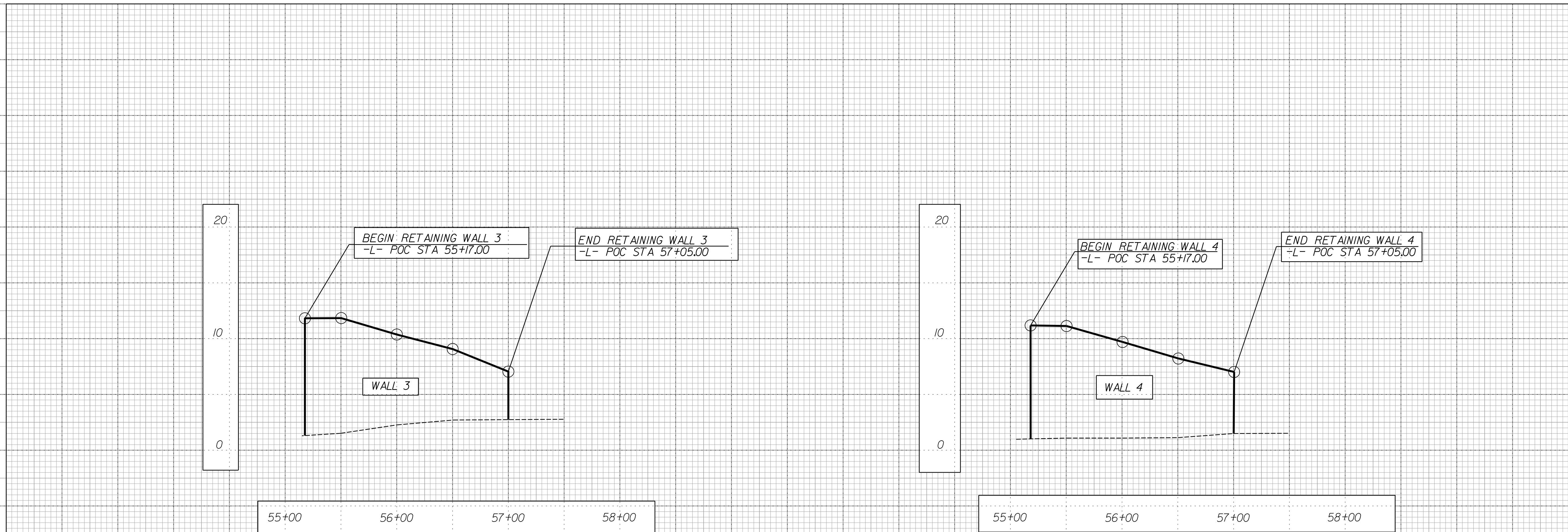
WALL 3

POINT NO.	-L- STATION	PROPOSED FINISHED GRADE (TOP)
1	55+50.00	11.9
2	56+00.00	10.4
3	56+50.00	9.1
4	57+00.00	7.9

WALL 4

POINT NO.	-L- STATION	PROPOSED FINISHED GRADE (TOP)
1	55+50.00	11.2
2	56+00.00	9.7
3	56+50.00	8.3
4	57+00.00	7.1

REVISIONS



8/17/99

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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ROW AREA DATA SHEET

PARCEL NO.	PROPERTY OWNERS NAME	TOTAL AREA	AREA TAKEN	AREA REMAINING RIGHT	AREA REMAINING LEFT	CONSTR. EASEMENT	TEMPORARY DRAINAGE EASEMENT	PERMANENT DRAINAGE EASEMENT	DRAINAGE UTILITY EASEMENT	PERMANENT UTILITY EASEMENT
1	Brenda Hollowell	---	---	---	---	---	---	---	---	---
2	Charles R. Kennedy	---	444.95 SF	---	---	---	---	---	---	---
3	W.V. M., LLC	---	591.60 SF	---	---	---	---	---	---	---
4	Frank A. & Constance L. Jaklic	---	521.40 SF	---	---	39.83 SF	---	---	---	---
5	Edward Lee & Ann F. Madre	---	337.47 SF	---	---	390.21 SF	---	---	---	---
6	Margaret M. Vayda	3627.14 SF	507.80 SF	---	---	422.52 SF	---	---	---	---
7	Richard W. & Jean P. Smith	11,223.34 SF	528.23 SF	---	---	524.28 SF	---	---	---	---
8	Brett Darryl & Mary M. Malott	21,417.91 SF	2829.61 SF	---	---	2072.02 SF	---	---	---	---
9	Frank A. & Constance L. Jaklic	6867.82 SF	6867.82 SF	---	---	---	---	---	---	---
10	Sara E. & Anne W. Winslow	11,465.90 SF	1077.60 SF	---	---	2845.28 SF	---	271.41 SF	---	---
11	Russell Lee & Nancy Lynne Theodore Waddell	15,519.33 SF	15,519.33 SF	---	---	---	---	---	---	---
12	Town of Hertford	---	40,144.84 SF	---	---	---	---	---	---	---
13	J.H. Towe, Sr.	---	43,824.47 SF	---	---	7471.69 SF	---	2260.37 SF	---	---
14	Town of Winfall	4534.39 SF	---	---	---	---	---	214.28 SF	---	---
15	Joseph H. Towe, Jr.	7495.37 SF	---	---	---	---	---	243.31 SF	---	---
16	Bonnie Paige Underwood	---	---	---	---	---	---	---	1085.21 SF	5083.42 SF
17	Winslow Oil Company, INC	---	4763.99 SF	---	---	6141.83 SF	---	---	---	3319.47 SF
18	Pearl Smith, Pastor	18,929.35 SF	18929.35 SF	---	---	---	---	---	---	---
19	Robert Hollowell, Jr.	---	---	---	---	10,419.36 SF	---	---	---	---
20	Jerald E. Hurdle, ET AL	---	---	---	---	4946.15 SF	---	---	---	---
21	Sidney P. Jessup	---	2.358 AC	---	---	---	---	---	---	28,415.73 SF
22	Robert E. Christine O. Lane	---	822.66 SF	---	---	---	---	---	---	3300.93 SF
23	Andrew P. & Lesley R. Ohmann	---	843.98 SF	---	---	---	---	---	---	782.10 SF
24	Nancy M. Towe	---	3468.67 SF	---	---	---	---	---	---	2145.52 SF
25	Clifford P. & Crystal Towe	---	3764.90 SF	---	---	---	---	---	---	1960.99 SF
26	Stanley P. & Crystal Towe	---	727.91 SF	---	---	---	---	---	---	4786.32 SF
27	Regional Medical Services	1.009 AC	---	---	---	---	---	---	---	5610.28 SF

5/28/99

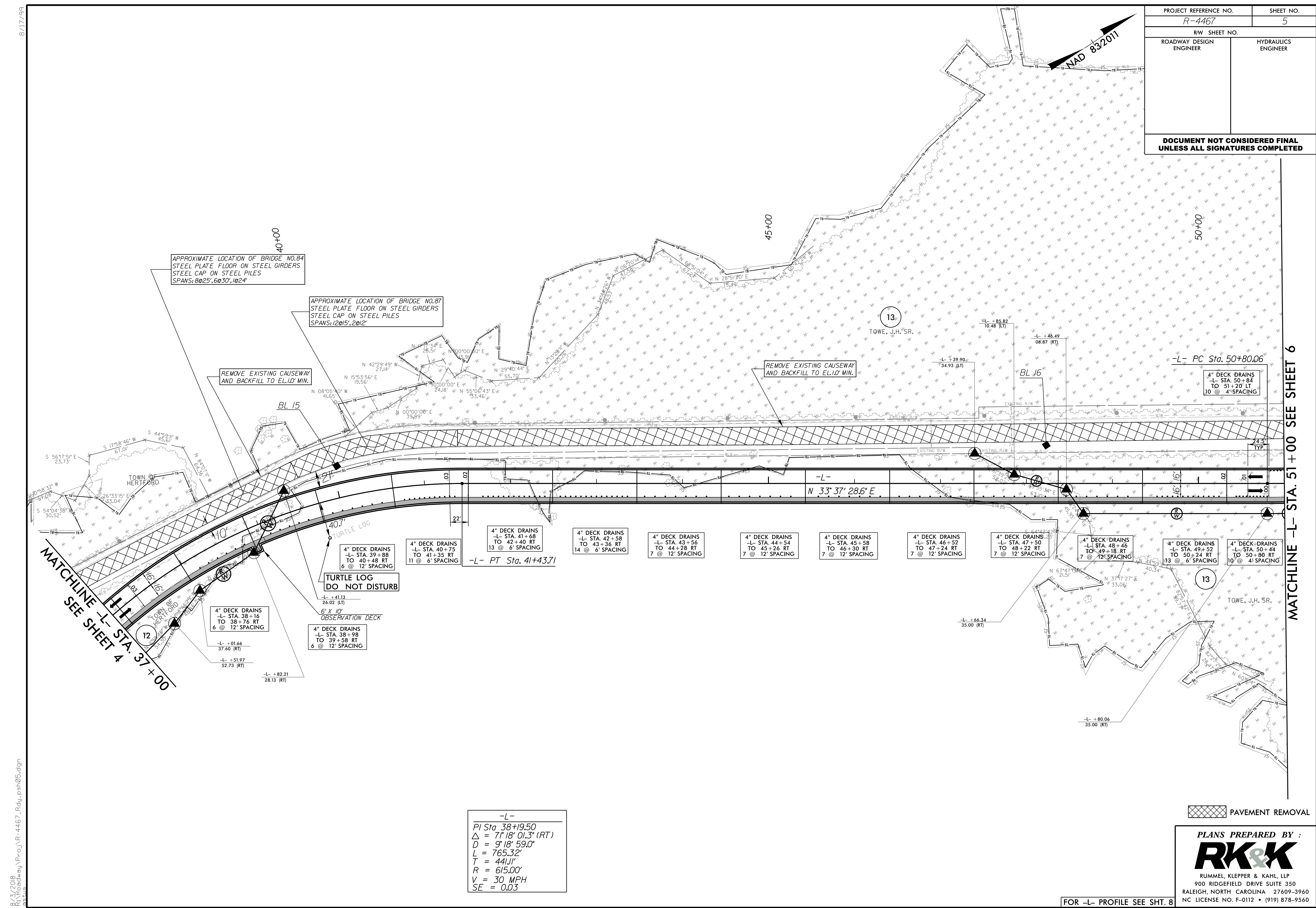
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PROJECT REFERENCE NO. R-4467		SHEET NO. 5	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



8/17/99

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MATCHLINE -L- STA. 51+00 SEE SHEET 6

MATCHLINE -L- STA. 37+00 SEE SHEET 4

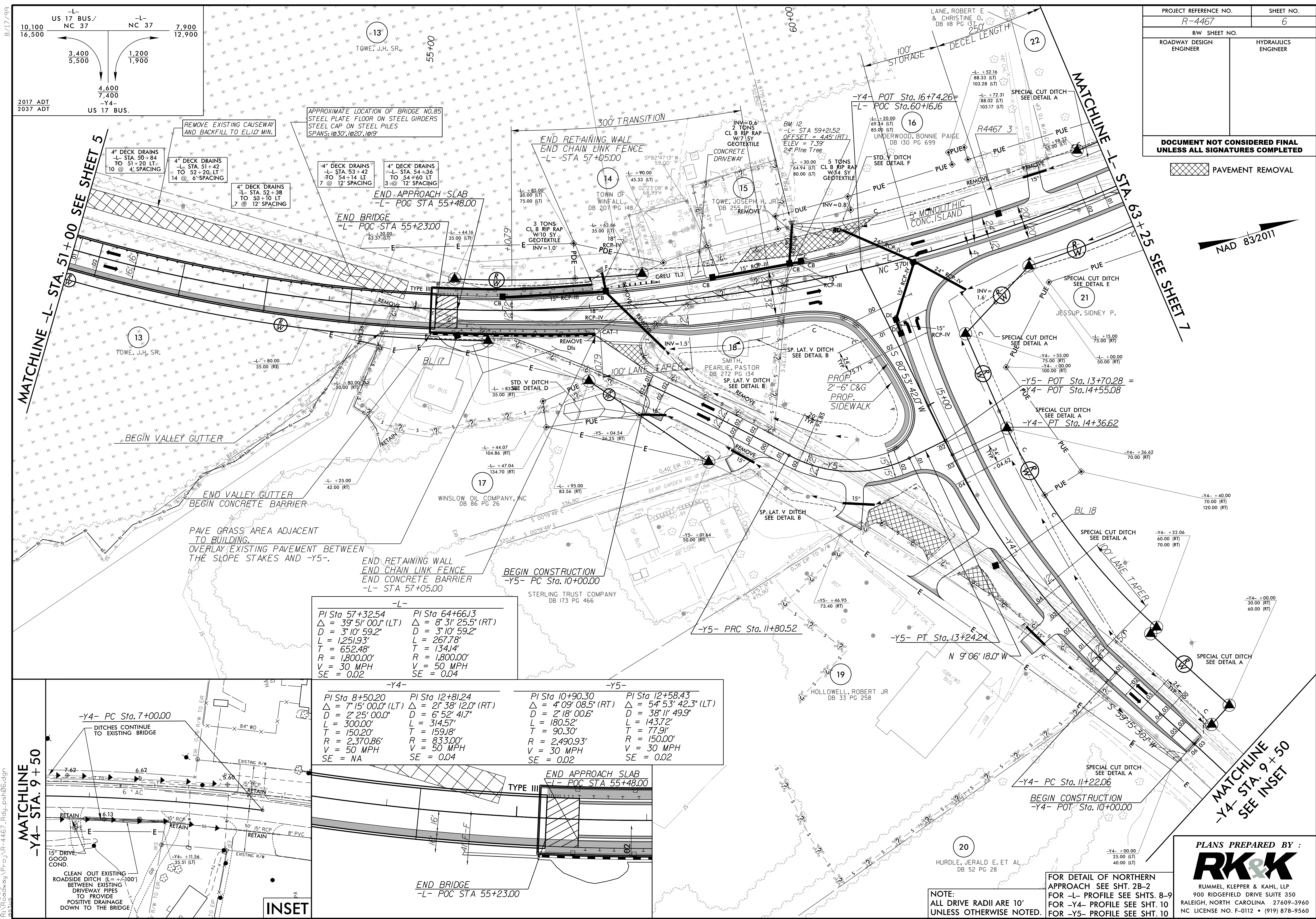
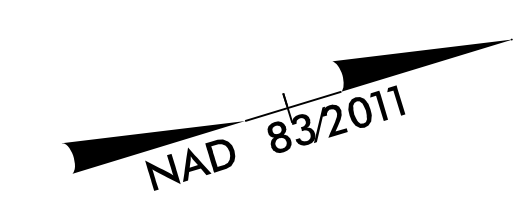
-L-
 PI Sta 38+19.50
 $\Delta = 7' 18' 01.3''$ (RT)
 $D = 9' 18' 59.0''$
 $L = 765.32'$
 $T = 441.11'$
 $R = 615.00'$
 $V = 30$ MPH
 $SE = 0.03$

PAVEMENT REMOVAL

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FOR -L- PROFILE SEE SHT. 8

PAVEMENT REMOVAL

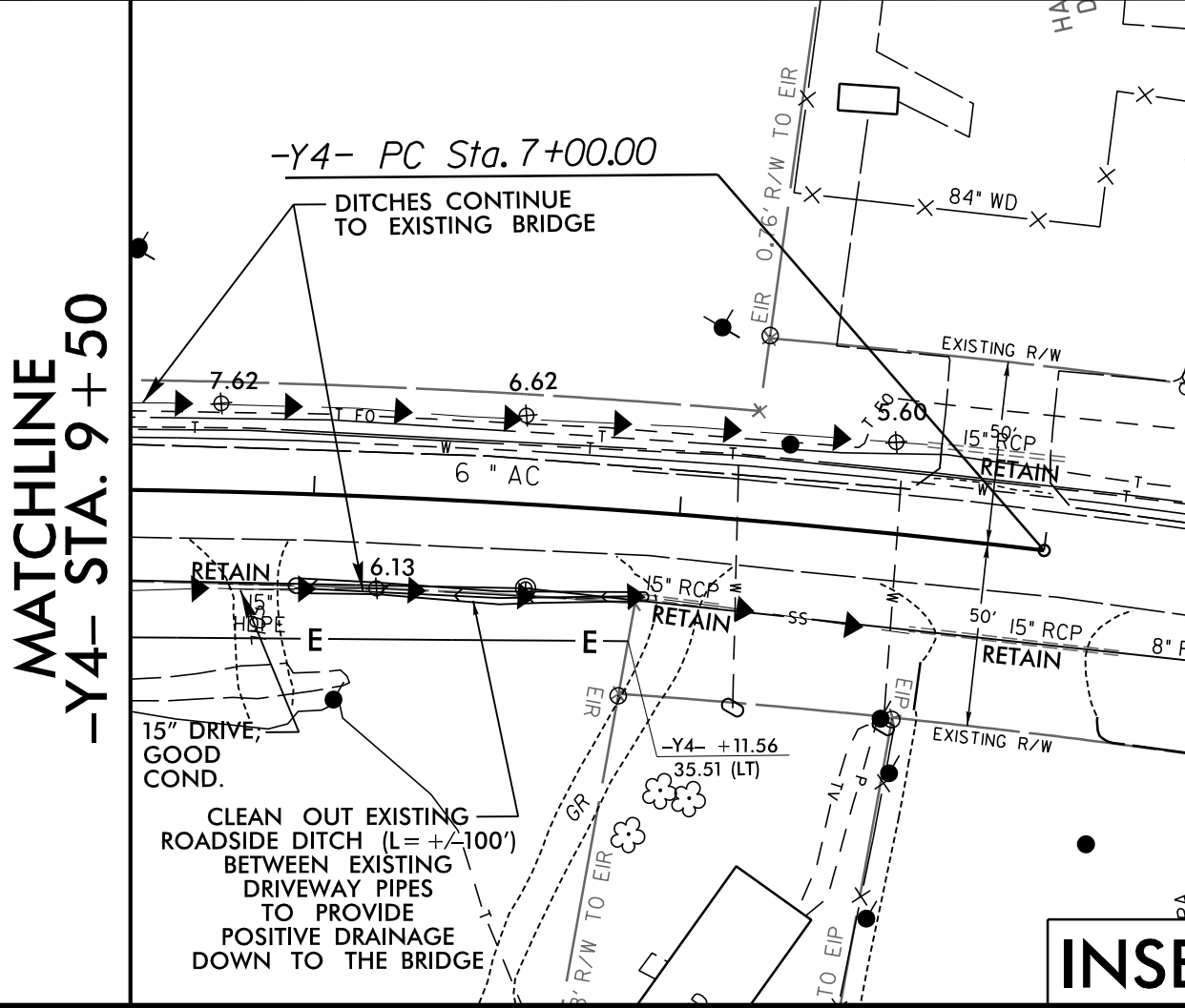


MATCHLINE -L- STA. 51+00 SEE SHEET 5

MATCHLINE -L- STA. 9+50 SEE SHEET 7

MATCHLINE -Y4- STA. 9+50

MATCHLINE -Y4- STA. 9+50 SEE INSET



-L-	
PI Sta 57+32.54 Δ = 39° 51' 00.0" (LT) D = 3' 10' 59.2" L = 1,251.93' T = 652.48' R = 1,800.00' V = 30 MPH SE = 0.02	PI Sta 64+66.13 Δ = 8° 31' 25.5" (RT) D = 3' 10' 59.2" L = 267.78' T = 134.14' R = 1,800.00' V = 50 MPH SE = 0.04

-Y4-		-Y5-	
PI Sta 8+50.20 Δ = 7° 15' 00.0" (LT) D = 2' 25' 00.0" L = 300.00' T = 150.20' R = 2,370.86' V = 50 MPH SE = NA	PI Sta 12+81.24 Δ = 2° 38' 12.0" (RT) D = 6' 52' 41.7" L = 314.57' T = 159.18' R = 833.00' V = 50 MPH SE = 0.04	PI Sta 10+90.30 Δ = 4° 09' 08.5" (RT) D = 2' 18' 00.6" L = 180.52' T = 90.30' R = 2,490.93' V = 30 MPH SE = 0.02	PI Sta 12+58.43 Δ = 54° 53' 42.3" (LT) D = 38' 11' 49.9" L = 143.72' T = 77.91' R = 150.00' V = 30 MPH SE = 0.02

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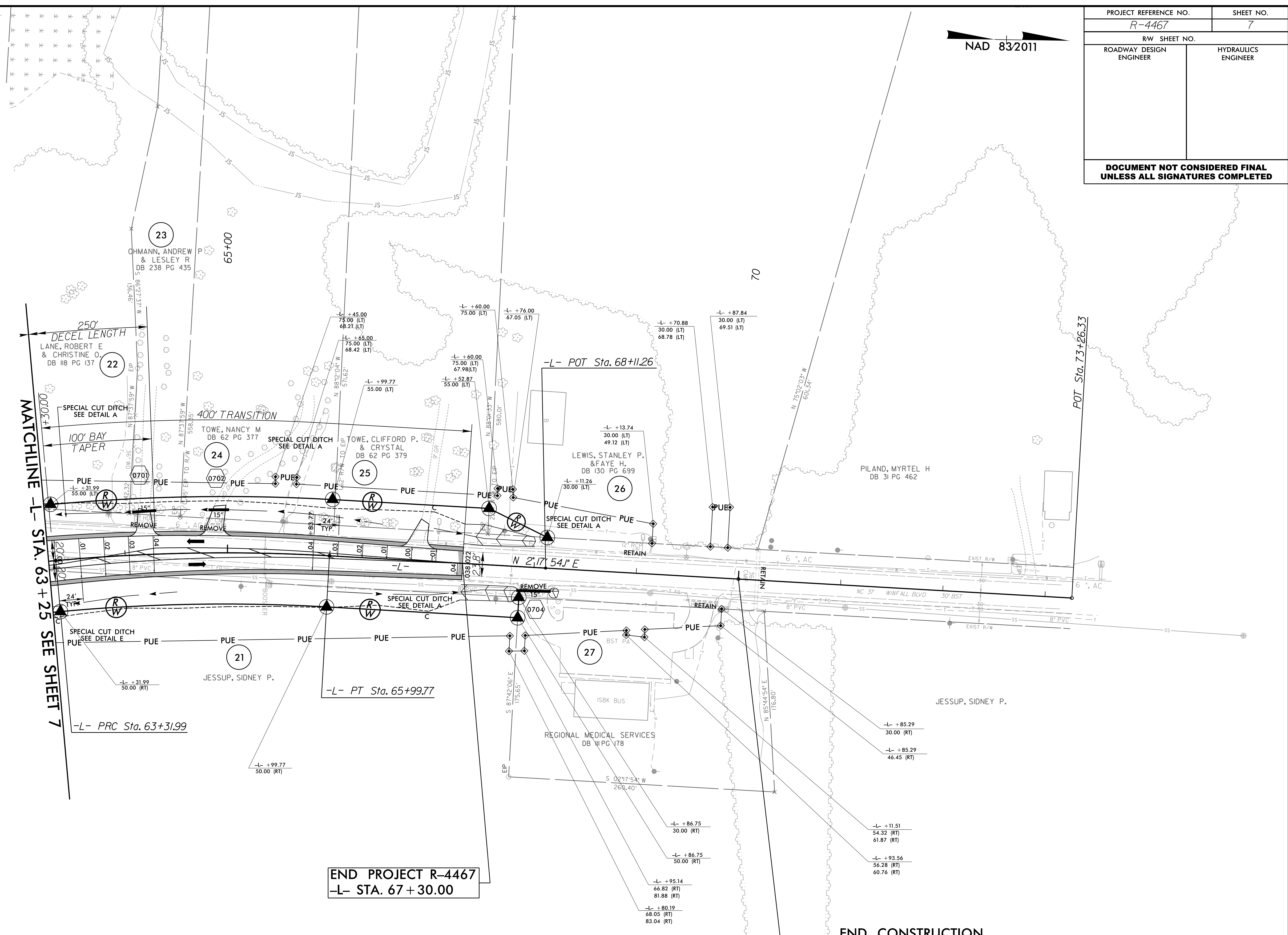
NOTE:
ALL DRIVE RADII ARE 10'
UNLESS OTHERWISE NOTED.

FOR DETAIL OF NORTHERN
APPROACH SEE SHT. 2B-2
FOR -L- PROFILE SEE SHTS. 8-9
FOR -Y4- PROFILE SEE SHT. 10
FOR -Y5- PROFILE SEE SHT. 10

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PROJECT REFERENCE NO. R-4467	SHEET NO. 7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

NAD 83/2011



END PROJECT R-4467
-L- STA. 67+30.00

END CONSTRUCTION
-L- STA. 70+00.00

-L-
PI Sta 64+66.13
Δ = 8° 31' 25.5" (RT)
D = 3° 10' 59.2"
L = 267.78'
T = 134.14'
R = 1,800.00'
V = 50 MPH
SE = 0.04

8/17/99

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NOTE:
ALL DRIVE RADII ARE 10' UNLESS OTHERWISE NOTED.

FOR -L- PROFILE SEE SHT. 9

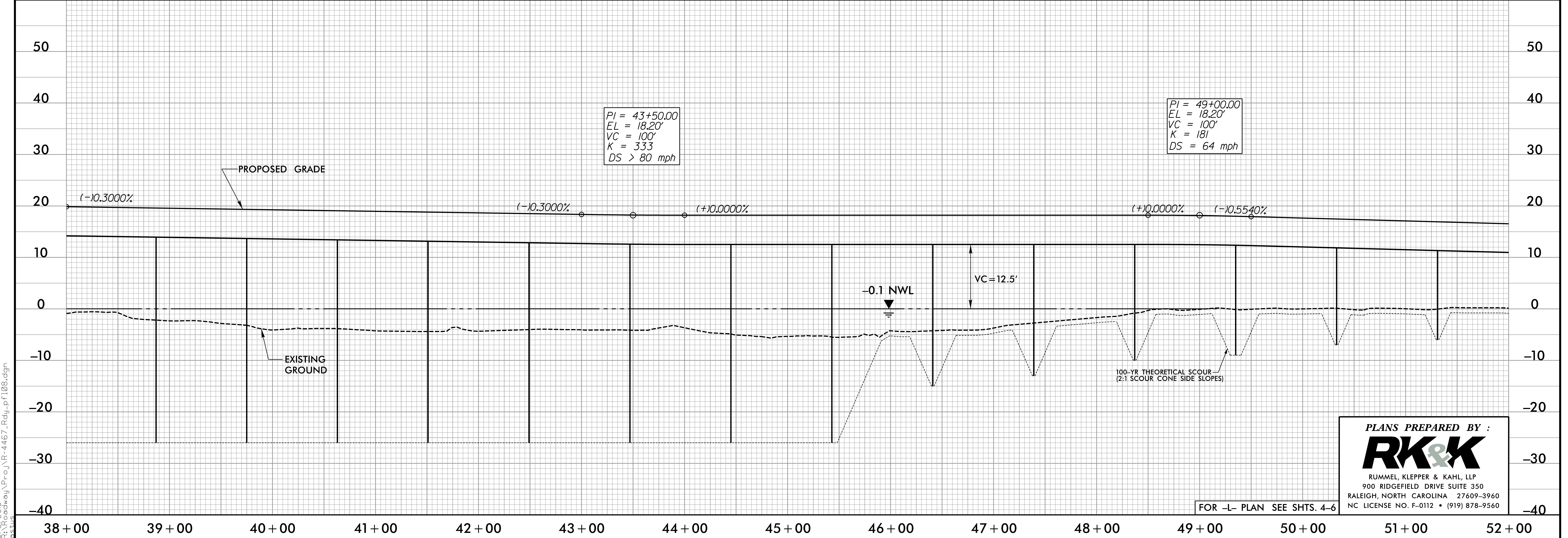
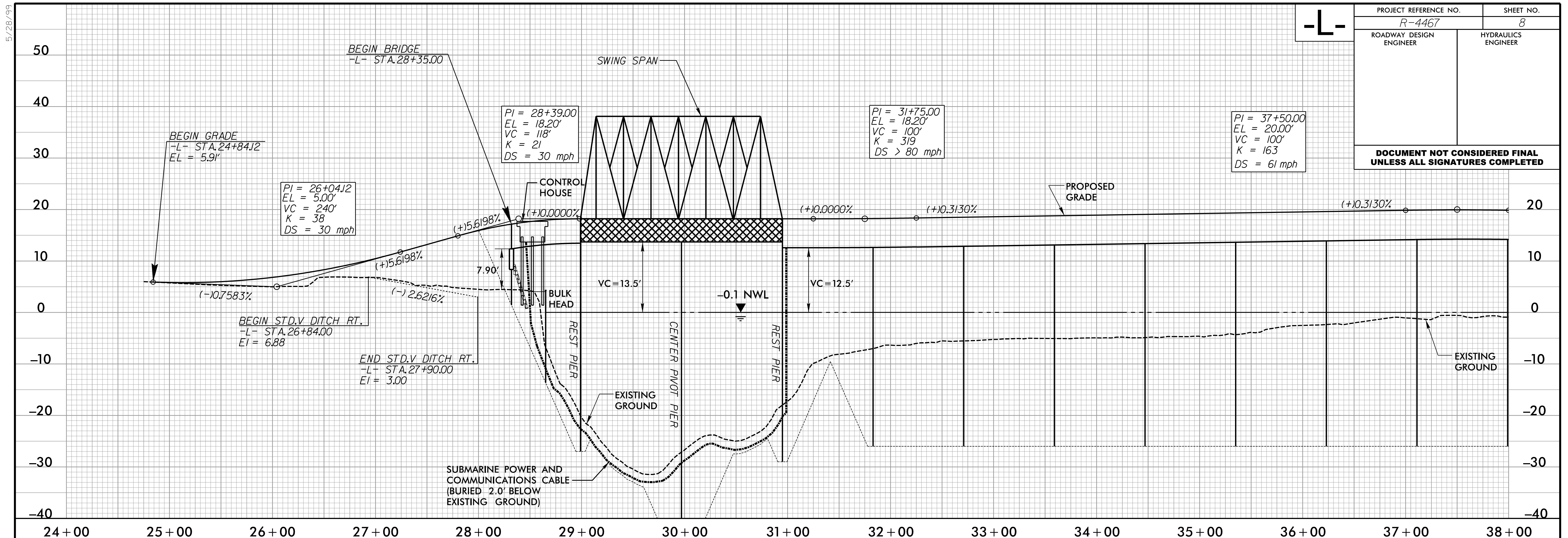
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-L-

PROJECT REFERENCE NO. R-4467	SHEET NO. 8
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



5/28/99

8/7/2018 R:\Projects\Roadway\ProJ\R-4467_Rdy.pl108.dgn

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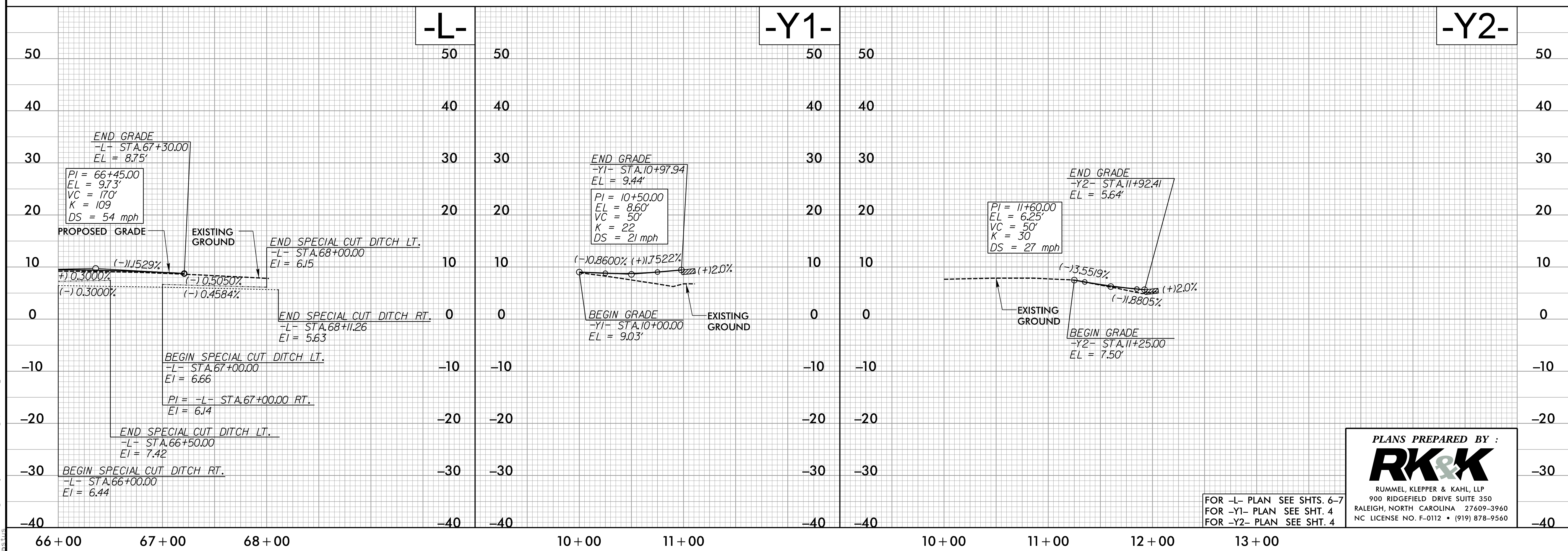
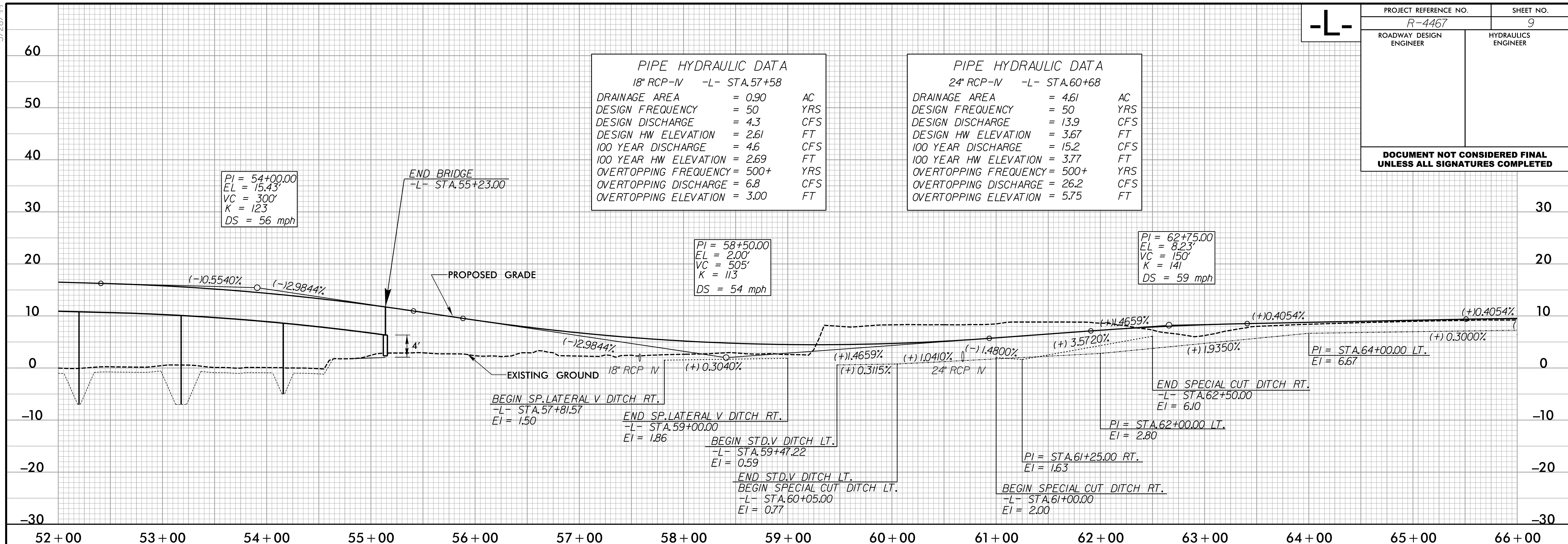
FOR -L- PLAN SEE SHTS. 4-6

PIPE HYDRAULIC DATA
18" RCP-IV -L- STA.57+58

DRAINAGE AREA	= 0.90	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 4.3	CFS
DESIGN HW ELEVATION	= 2.61	FT
100 YEAR DISCHARGE	= 4.6	CFS
100 YEAR HW ELEVATION	= 2.69	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 6.8	CFS
OVERTOPPING ELEVATION	= 3.00	FT

PIPE HYDRAULIC DATA
24" RCP-IV -L- STA.60+68

DRAINAGE AREA	= 4.61	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 13.9	CFS
DESIGN HW ELEVATION	= 3.67	FT
100 YEAR DISCHARGE	= 15.2	CFS
100 YEAR HW ELEVATION	= 3.77	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 26.2	CFS
OVERTOPPING ELEVATION	= 5.75	FT



PLANS PREPARED BY :

 RUMMEL, KLEPPER & KAHL, LLP
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FOR -L- PLAN SEE SHTS. 6-7
 FOR -Y1- PLAN SEE SHT. 4
 FOR -Y2- PLAN SEE SHT. 4

5/28/99
 8/7/2018
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