



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

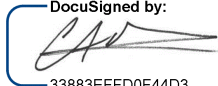
JAMES H. TROGDON, III  
SECRETARY

May 15, 2018

MEMORANDUM TO: Mr. Pat Ivey, P.E.  
Division 9 Engineer

FROM: Philip S. Harris, III, P.E., Manager  
Environmental Analysis Unit

for

DocuSigned by:  
  
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SUBJECT: Davie and Forsyth Counties ; I-40 Pavement rehabilitation and construct additional lanes from west of NC 801 to east of SR 1101 (Harper Road); State Project No. 8.1610401; WBS Element 34147.1.2 STIP No. **I-0911A**

Attached are the US Army Corps of Engineers General Permit and N.C. Division of Water Resources (NCDWR) Water Quality Certification. All environmental permits have been received for the construction of this project.

A copy of this permit package will be posted on the NCDOT website at:

<https://connect.ncdot.gov/resources/Environmental/Pages/default.aspx>

**Quick Links>Permit Documents> Issued Permits.**

cc: w/o attachment (see website for attachments)

Mr. Ron Davenport, P.E. Contracts Management  
Ms. Amy Euliss, Division 9 Environmental Officer  
Dr. Majed Al-Ghandour, P.E., Programming and TIP  
Ms. Laura Sutton, P.E., Roadway Design  
Mr. Carl Barclay, P.E., Utilities Unit  
Mr. Stephen Morgan, P.E., Hydraulics  
Mr. Brian Hanks, P.E., Structure Design  
Mr. Mark Staley, Roadside Environmental  
Mr. Lamar Sylvester, P.E., State Construction Engineer  
Ms. Cheterra Sheff, Single Audit Compliance  
Ms. Beth Harmon, Division of Mitigation Services

# PROJECT COMMITMENTS

## **I-40 PAVEMENT REHABILITATION AND CONSTRUCT ADDITIONAL LANES**

From West of NC 801 in Davie County to  
East of SR 1101 (Harper Road) in Forsyth County  
Davie and Forsyth Counties, North Carolina

Federal Aid No. NHIMF-40-3(112)180

State Project No. 8.1610401

WBS No. 34147.1.2

**TIP PROJECT NO. I-0911 A**

Current status, changes, or additions to the project commitments as shown in the environmental document for the project are printed in italics.

### **Commitments Developed through Project Development and Design**

#### **Project Development & Environmental Analysis Branch, Roadway Design Unit**

- ~~NCDOT will use a steeper slope 1.5:1 with rock plating to stabilize soil at the historic Win-Mock Farm to further minimize impact to the historic property. Additional design is needed prior to final design.~~

*NCDOT will use a retaining wall alternative with variable slopes of 2:1 to 1.5:1 at the historic Win-Mock Farm to further minimize impact to the historic property. Additional design is needed prior to completion of final design.*

*Based on the geotechnical recommendations, only 2:1 slopes are being utilized behind the retaining walls to minimize impacts to the historic property.*

#### **Project Development & Environmental Analysis Branch, Roadway Design Unit**

- The proposed preliminary design for the project currently requires a permanent construction easement at the Win-Mock Farm Property. A no adverse effect determination was rendered for this impact. A de minimis conclusion was rendered for this impact.

*The proposed retaining wall tieback system will require a permanent construction easement at the Win-Mock Farm Property. NCDOT will minimize the amount of easement required for the retaining wall tieback system, by moving the retaining wall closer to the travel lanes/shoulder for the proposed improvements, i.e. away from the Win-Mock Farm historic property.*

*This commitment will be implemented during final design of the project.*

# PROJECT COMMITMENTS

## **Project Development & Environmental Analysis Branch- Human Environmental Unit/ Traffic Noise Section, Roadway Design Unit**

- Preliminary consideration for noise abatement measures was given to all impacted receptors. Based upon the presently unavailable project design, the recommendation of this Traffic Noise Analysis is that a detailed study of potential mitigation measures for three noise sensitive areas (NSAs) that meet preliminary feasibility and reasonableness criteria shall be conducted during project Final Design.

*Based on the refined preliminary design completed after the EA was signed, NCDOT has performed a Design Noise Report for the project. The Design Noise Report proposes four (4) noise barriers. Upon completion of the final design NCDOT will review the findings of the Design Noise Report to determine if any modifications and/or revisions to the recommended noise barrier locations or lengths.*

*The Design Noise Report (DNR) will need to be revised to address conflicts encountered during final design. Due to the number of walls and benefited receptors, there will likely be a public meeting on the walls before balloting.*

*An updated DNR is currently underway. This commitment will be coordinated prior to final design of the project.*

### **Division 9 Construction**

- The I-40 bridge across the Yadkin River is approximately 4 miles above the City of Winston-Salem's primary water intake. Best Management Practices for sedimentation and erosion control (including devices such as silt fences, sediment basins, matting, etc.) will be implemented to keep sediment and other pollutants out of the Yadkin River during construction. This project involves construction activities on or adjacent to the Federal Emergency Management Agency (FEMA) regulated stream. Therefore, the Division shall submit sealed as-built construction plans to the Hydraulics Unit upon completion of project construction, certifying that the drainage structures and roadway embankment that are located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.

*This commitment will be implemented during construction of the project.*

# PROJECT COMMITMENTS

## Hydraulics

- The Hydraulics Unit will coordinate with the Floodplain Mapping Program (FMP), the delegated state agency for administering FEMA's National Flood Insurance Program, to determine the status of the project with regard to applicability of NCDOT'S Memorandum of Agreement with FMP, or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent final Letter of Map Revision (LOMR).

*This commitment will be implemented during final design prior to construction of the project.*

## Geotechnical Unit

- A soil and groundwater assessment of the three identified properties will be provided before right of way acquisition.

*The identified contaminated properties are outside of the proposed construction activities.*

## Project Development & Environmental Analysis Unit/ Roadway Design Unit/ Hydraulics

- Measures to avoid and minimize impacts of the project will include steeper side slopes (2:1) in jurisdictional areas and no impacts to the Yadkin River.

*This commitment will be implemented during final design of the project.*

## Project Development & Environmental Analysis Unit/Division 9

- *NCDOT will replace the existing structure with a standard pedestrian bridge at the same location as the existing Bert's Way Bridge. On April 22, 2014, the Town of Bermuda Run passed a resolution in support of the replacement of the Bert's Way Bridge with a pedestrian bridge and to seek funding to enhance the new bridge. Any betterment/enhancement to a standard pedestrian bridge will be the responsibility of the Town of Bermuda Run per a municipal agreement prior to construction.*

*Coordination regarding the pedestrian bridge is underway with Bermuda Run.*

## PROJECT COMMITMENTS

### **Division 9 Construction**

- *Prior to and during construction a minimum of four (4) week advance notice of construction activities, including anticipated construction phasing, in each direction of I-40 will be provided to the following entities:*
  - *Davie County Schools Transportation Department in order to re-route buses.*
  - *Winston-Salem/Forsyth County Schools Transportation Department in order to re-route buses.*
  - *Davie County Sheriff, Fire and EMS Departments;*
  - *Smith Grove Fire Department;*
  - *Forsyth County EMS Department;*
  - *Forsyth County Sheriff Department;*
  - *Clemmons Fire Department;*
  - *NCDOT-IMAP, and;*
  - *State Highway Patrol.*

*This commitment will be implemented during construction of the project.*

### **Roadway Design Unit/ Geotechnical Unit/ Division 9 Construction**

- *A project special provision will be included in the let package to instruct the contractor in the event contaminated soil or ground water is encountered.*

*This commitment will be implemented during construction of the project.*

### **Natural Environmental Section/ Division 9 Construction**

- *Construction authorization will not be requested until ESA compliance is satisfied for the northern long-eared bat (NLEB).*

*NLEB is consistent with the 4(d) rule. A memo documenting this was sent to USFWS on April 26, 2017. ESA compliance has been satisfied for this species.*

### **Natural Environmental Section/ Division 9 Construction**

- *The sumac survey has expired. An updated survey for the sumac will be performed this calendar year. Construction authorization will not be requested until ESA compliance is satisfied.*

*Updated Michaux's sumac surveys were conducted in 2017. None were identified and the biological conclusion remains No Effect.*

# PROJECT COMMITMENTS

## **Commitments Developed through Permitting**

404 Special Condition 2: Conditions within the attached “Concurrence Form For Assessment of Effects” will be adhered to for the protection of historic and cultural resources.

401 Project Specific Condition 8: Turbidity curtains shall be used to isolate all work areas from the Yadkin River during causeway construction and removal. Strict adherence to Construction and Maintenance Best Management Practices will be required.

**U.S. ARMY CORPS OF ENGINEERS  
WILMINGTON DISTRICT**

Action Id. SAW-2018-00844 County: Forsyth County U.S.G.S. Quad: Clemmons

**GENERAL PERMIT (REGIONAL AND NATIONWIDE) VERIFICATION**

Permittee: Phil Harris  
NC Department of Transportation  
Address: 1598 Mail Service Center  
Raleigh NC, 27699-1598  
Telephone Number:

Size (acres)	<u>71.1</u>	Nearest Town	<u>Clemmons</u>
Nearest Waterway	<u>Yadkin River</u>	River Basin	<u>Upper Pee Dee</u>
USGS HUC	<u>03040101</u>	Coordinates	Latitude: <u>36.0139100774487</u> Longitude: <u>-80.4288519057019</u>

Location description: The location of the project is on existing Interstate 40 from west of NC 801 to east of SR 1101 (Harper road) in Forsyth and Davie Counties, North Carolina. NCDOT has identified this project as I-0911A.

Description of projects area and activity: This project is identified as: I-0911A / I-40 Pavement Rehab and Widening / NCDOT / Div 9. This permit verification allows for impacts totaling: 0.256 permanent impacts to wetlands, 912 permanent impacts to streams, and 288 temporary impacts to streams. Of the 912 linear feet of permanent stream impacts, 19 linear feet are from bank stabilization. Impacts include 227.7 square feet to the Yadkin River for bridge piers. Compensatory mitigation is required for the permanent impacts stated above (see Special Condition below).

Applicable Law:  Section 404 (Clean Water Act, 33 USC 1344)  
 Section 10 (Rivers and Harbors Act, 33 USC 403)

Authorization: Regional General Permit Number and/or Nationwide Permit Number: GP 198200031 NCDOT Bridges, Widening Projects.... (Authorized 2015)

***SEE ATTACHED RGP or NWP GENERAL, REGIONAL AND/OR SPECIAL CONDITIONS***

Your work is authorized by the above referenced permit provided it is accomplished in strict accordance with the attached conditions and your submitted application and attached information signed on March 7, 2018. Any violation of the attached conditions or deviation from your submitted plans may subject the permittee to a stop work order, a restoration order, a Class I administrative penalty, and/or appropriate legal action.

This verification will remain valid until the expiration date identified below unless the nationwide and/or regional general permit authorization is modified, suspended or revoked. If, prior to the expiration date identified below, the nationwide and/or regional general permit authorization is reissued and/or modified, this verification will remain valid until the expiration date identified below, provided it complies with all requirements of the modified nationwide permit. If the nationwide and/or regional general permit authorization expires or is suspended, revoked, or is modified, such that the activity would no longer comply with the terms and conditions of the nationwide permit, activities which have commenced (i.e., are under construction) or are under contract to commence in reliance upon the nationwide and/or regional general permit, will remain authorized provided the activity is completed within twelve months of the date of the nationwide and/or regional general permit's expiration, modification or revocation, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend or revoke the authorization.

Activities subject to Section 404 (as indicated above) may also require an individual Section 401 Water Quality Certification. You should contact the NC Division of Water Resources (telephone 919-807-6300) to determine Section 401 requirements.

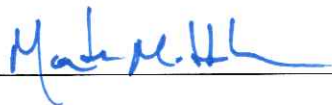
For activities occurring within the twenty coastal counties subject to regulation under the Coastal Area Management Act (CAMA), prior to beginning work you must contact the N.C. Division of Coastal Management in Morehead City, NC, at (252) 808-2808.

This Department of the Army verification does not relieve the permittee of the responsibility to obtain any other required Federal, State or local approvals/permits.

**Special Conditions: (1) In order to compensate for impacts associated with this permit, mitigation shall be provided in accordance with the provisions outlined on the most recent version of the attached Compensatory Mitigation Responsibility Transfer Form. The requirements of this form, including any special conditions listed on this form, are hereby incorporated as special conditions of this permit authorization.**

**Special Conditions (continued): (2) Conditions within the attached "Concurrence Form For Assessment of Effects" will be adhered to for the protection of historic and cultural resources.**

If there are any questions regarding this verification, any of the conditions of the Permit, or the Corps of Engineers regulatory program, please contact **Monte Matthews at 919-554-4884 x31 or monte.k.matthews@usace.army.mil.**

Corps Regulatory Official: 

Date: **May 2, 2018** Expiration Date of Verification: **April 30, 2020**



**U.S. ARMY CORPS OF ENGINEERS**  
**Wilmington District**  
**Compensatory Mitigation Responsibility Transfer Form**

Permittee: NCDOT, Attn: Phil Harris  
 Project Name: I-0911A

Action ID: SAW-2018-00844  
 County: Forsyth and Davie

**Instructions to Permittee:** The Permittee must provide a copy of this form to the Mitigation Sponsor, either an approved Mitigation Bank or the North Carolina Division of Mitigation Services (NCDMS), who will then sign the form to verify the transfer of the mitigation responsibility. Once the Sponsor has signed this form, it is the Permittee's responsibility to ensure that to the U.S. Army Corps of Engineers (USACE) Project Manager identified on page two is in receipt of a signed copy of this form before conducting authorized impacts, unless otherwise specified below. If more than one mitigation Sponsor will be used to provide the mitigation associated with the permit, or if the impacts and/or the mitigation will occur in more than one 8-digit Hydrologic Unit Code (HUC), multiple forms will be attached to the permit, and the separate forms for each Sponsor and/or HUC must be provided to the appropriate mitigation Sponsors.

**Instructions to Sponsor:** The Sponsor must verify that the mitigation requirements (credits) shown below are available at the identified site. By signing below, the Sponsor is accepting full responsibility for the identified mitigation, regardless of whether or not they have received payment from the Permittee. Once the form is signed, the Sponsor must update the bank ledger and provide a copy of the signed form and the updated bank ledger to the Permittee, the USACE Project Manager, and the Wilmington District Mitigation Office (see contact information on page 2). The Sponsor must also comply with all reporting requirements established in their authorizing instrument.

**Permitted Impacts and Compensatory Mitigation Requirements**

**Permitted Impacts Requiring Mitigation\*:** 8-digit HUC and Basin: 03040101, Yadkin River Basin

Stream Impacts (linear feet)			Wetland Impacts (acres)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
893			0.25			

\*If more than one mitigation sponsor will be used for the permit, only include impacts to be mitigated by this sponsor.

**Compensatory Mitigation Requirements:** 8-digit HUC and Basin: 03040101, Yadkin River Basin

Stream Mitigation (credits)			Wetland Mitigation (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
1,786			0.50			

Mitigation Site Debited: NCDMS

(List the name of the bank to be debited. For umbrella banks, also list the specific site. For NCDMS, list NCDMS. If the NCDMS acceptance letter identifies a specific site, also list the specific site to be debited).

**Section to be completed by the Mitigation Sponsor**

**Statement of Mitigation Liability Acceptance:** I, the undersigned, verify that I am authorized to approve mitigation transactions for the Mitigation Sponsor shown below, and I certify that the Sponsor agrees to accept full responsibility for providing the mitigation identified in this document (see the table above), associated with the USACE Permittee and Action ID number shown. I also verify that released credits (and/or advance credits for NCDMS), as approved by the USACE, are currently available at the mitigation site identified above. Further, I understand that if the Sponsor fails to provide the required compensatory mitigation, the USACE Wilmington District Engineer may pursue measures against the Sponsor to ensure compliance associated with the mitigation requirements.

Mitigation Sponsor Name: NCDER DMS

Name of Sponsor's Authorized Representative: Beth Harmon

Beth Harmon 05/11/2018  
 Signature of Sponsor's Authorized Representative Date of Signature

**USACE Wilmington District  
Compensatory Mitigation Responsibility Transfer Form, Page 2**

**Conditions for Transfer of Compensatory Mitigation Credit:**

- Once this document has been signed by the Mitigation Sponsor and the USACE is in receipt of the signed form, the Permittee is no longer responsible for providing the mitigation identified in this form, though the Permittee remains responsible for any other mitigation requirements stated in the permit conditions.
- Construction within jurisdictional areas authorized by the permit identified on page one of this form can begin only after the USACE is in receipt of a copy of this document signed by the Sponsor, confirming that the Sponsor has accepted responsibility for providing the mitigation requirements listed herein. For authorized impacts conducted by the North Carolina Department of Transportation (NCDOT), construction within jurisdictional areas may proceed upon permit issuance; however, a copy of this form signed by the Sponsor must be provided to the USACE within 30 days of permit issuance. NCDOT remains fully responsible for the mitigation until the USACE has received this form, confirming that the Sponsor has accepted responsibility for providing the mitigation requirements listed herein.
- Signed copies of this document must be retained by the Permittee, Mitigation Sponsor, and in the USACE administrative records for both the permit and the Bank/ILF Instrument. It is the Permittee's responsibility to ensure that the USACE Project Manager (address below) is provided with a signed copy of this form.
- If changes are proposed to the type, amount, or location of mitigation after this form has been signed and returned to the USACE, the Sponsor must obtain case-by-case approval from the USACE Project Manager and/or North Carolina Interagency Review Team (NCIRT). If approved, higher mitigation ratios may be applied, as per current District guidance and a new version of this form must be completed and included in the USACE administrative records for both the permit and the Bank/ILF Instrument.

**Comments/Additional Conditions:**

No additional comments or conditions.

This form is not valid unless signed below by the USACE Project Manager and by the Mitigation Sponsor on Page 1. ***Once signed, the Sponsor should provide copies of this form along with an updated bank ledger to: 1) the Permittee, 2) the USACE Project Manager at the address below, and 3) the Wilmington District Mitigation Office, Attn: Todd Tugwell, 3331 Heritage Trade Drive, Suite 105, Wake Forest, NC 27587 (email: todd.tugwell@usace.army.mil).*** Questions regarding this form or any of the permit conditions may be directed to the USACE Project Manager below.

**USACE Project Manager:** Monte Matthews  
**USACE Field Office:** Raleigh Regulatory Field Office  
US Army Corps of Engineers  
3331 Heritage Trade Drive, Suite 105  
Wake Forest, NC 27587

**Email:**

  
\_\_\_\_\_  
**USACE Project Manager Signature**

\_\_\_\_\_  
May 2, 2018  
**Date of Signature**

Current Wilmington District mitigation guidance, including information on mitigation ratios, functional assessments, and mitigation bank location and availability, and credit classifications (including stream temperature and wetland groupings) is available at <http://ribits.usace.army.mil>.

Page 2 of 2

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete the Customer Satisfaction Survey located at our website at <http://regulatory.usacesurvey.com/> to complete the survey online.

Federal Aid #: **IR-40-3(60)180** TIP#: **I-0911A** County: **Davie and Forsyth**

**CONCURRENCE FORM FOR ASSESSMENT OF EFFECTS**

Project Description: **Widen I-40 from west of NC 801 to west of SR 1101**


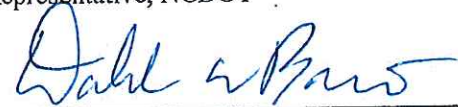
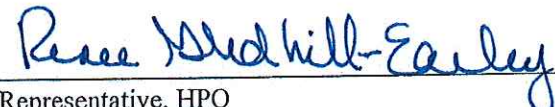
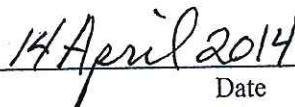
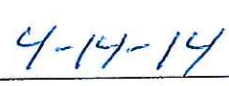
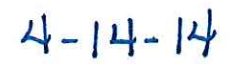
On **April 14, 2014** representatives of the

- North Carolina Department of Transportation (NCDOT)
- Federal Highway Administration (FHWA)
- North Carolina State Historic Preservation Office (HPO)
- Other

Reviewed the subject project and agreed on the effects findings listed within the table on the reverse of this signature page.

**This form incorporates the original effects finding of May 3, 2011.**

Signed:

		
_____ Representative, NCDOT	_____ FHWA, for the Division Administrator, or other Federal Agency	_____ Representative, HPO
		
Date	Date	Date
_____	_____	_____
State Historic Preservation Officer		Date

Federal Aid #: IR-40-3(60)180

TIP#: I-0911A

County: Davie and Forsyth

Property and Status	Alternative	Effect Finding	Reasons
Win-Mock Farm (NR)		No Adverse Effect	1-1/2:1 slope with rock plaiting and ditch with 25' easement - some of which within historic boundary, but not impacting contributing resources.
Win-Mock Farm (NR)	Preferred	No Adverse Effect	MSE wall on I-40 frontage, beated to minimize encroachment via easement into historic property 4-14-14

Initialled: NCDOT VEP

FHWA DB

HPO RSE

FHWA Intends to use the SHPO's concurrence as a basis for a "de minimis" finding for the following properties, pursuant to Section 4(f):  
**Win-Mock Farm.**

### A. Determination of Jurisdiction:

1.  There are waters, including wetlands, on the above described project area that may be subject to Section 404 of the Clean Water Act (CWA) (33 USC § 1344) and/or Section 10 of the Rivers and Harbors Act (RHA) (33 USC § 403). This preliminary determination is not an appealable action under the Regulatory Program Administrative Appeal Process (Reference 33 CFR Part 331). However, you may request an approved JD, which is an appealable action, by contacting the Corps district for further instruction. Please note, if work is authorized by either a general or nationwide permit, and you wish to request an appeal of an approved JD, the appeal must be received by the Corps and the appeal process concluded prior to the commencement of any work in waters of the United States and prior to any work that could alter the hydrology of waters of the United States.
2.  There are Navigable Waters of the United States within the above described project area subject to the permit requirements of Section 10 of the Rivers and Harbors Act (RHA) (33 USC § 403) and Section 404 of the Clean Water Act (CWA) (33 USC § 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.
3.  There are waters, including wetlands, within the above described project area that are subject to the permit requirements of Section 404 of the Clean Water Act (CWA) (33 USC § 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.
4.  A jurisdiction determination was not completed with this request. Therefore, this is not an appealable action. However, you may request an approved JD, which is an appealable action, by contacting the Corps for further instruction.
5.  The aquatic resources within the above described project area have been identified under a previous action. Please reference the approved jurisdictional determination issued . Action ID: SAW-

**B. Basis For Jurisdictional Determination:** See attached Approved JD form(s).

**C. Remarks:** The Yadkin River is a TNW. All wetlands were documented as meeting the Wetlands Delineation Manual and appropriate supplements. All streams contained and ordinary high water mark as needed for jurisdiction.

### D. Attention USDA Program Participants

This delineation/determination has been conducted to identify the limits of Corps' Clean Water Act jurisdiction for the particular site identified in this request. The delineation/determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA Program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

### E. Appeals Information for Approved Jurisdiction Determinations (as indicated in A2 and A3 above).

If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the following address:

US Army Corps of Engineers  
South Atlantic Division  
Attn: Jason Steele, Review Officer  
60 Forsyth Street SW, Room 10M15  
Atlanta, Georgia 30303-8801  
Phone: (404) 562-5137

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by \_\_\_\_\_.

**It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this correspondence.**

SAW-2018-00844

Corps Regulatory Official:

  
\_\_\_\_\_  
Monte Matthews

Date of JD: May 2, 2018

Expiration Date of JD:

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete our Customer Satisfaction Survey, located online at [http://corpsmapu.usace.army.mil/cm\\_apex/f?p=136:4:0](http://corpsmapu.usace.army.mil/cm_apex/f?p=136:4:0).

Copy furnished:

Action ID Number: SAW-2018-00844

County: Forsyth County

Permittee: Phil Harris  
NC Department of Transportation

Project Name: I-0911A / I-40 Pavement Rehab and Widening / NCDOT / Div 9

Date Verification Issued: May 2, 2018

Project Manager: Henry Wicker

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

US ARMY CORPS OF ENGINEERS  
WILMINGTON DISTRICT  
Attn: Monte Matthews  
3331 Heritage Trade Drive, Suite 105  
Wake Forest, North Carolina 27587

Please note that your permitted activity is subject to a compliance inspection by a U. S. Army Corps of Engineers representative. Failure to comply with any terms or conditions of this authorization may result in the Corps suspending, modifying or revoking the authorization and/or issuing a Class I administrative penalty, or initiating other appropriate legal action.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and condition of the said permit, and required mitigation was completed in accordance with the permit conditions.

\_\_\_\_\_  
Signature of Permittee

\_\_\_\_\_  
Date

DEPARTMENT OF THE ARMY  
Wilmington District, Corps of Engineers  
69 Darlington Avenue  
Wilmington, North Carolina 28403-1343  
April 30, 2015

**Regional General Permit No. 198200031**  
**Name of Permittee: North Carolina Department of Transportation**  
**Effective Date: April 30, 2015**  
**Expiration Date: April 30, 2020**

**DEPARTMENT OF THE ARMY  
REGIONAL GENERAL PERMIT**

A regional general permit (RGP) to perform work in or affecting navigable waters of the United States and waters of the United States, upon recommendation of the Chief of Engineers, pursuant to Section 10 of the Rivers and Harbors Act of March 3, 1899 (33 U.S.C. 403), and Section 404 of the Clean Water Act (33 U.S.C. 1344), is hereby modified and re-issued by authority of the Secretary of the Army by the

District Commander  
U.S. Army Engineer District, Wilmington  
Corps of Engineers  
69 Darlington Avenue  
Wilmington, North Carolina 28403-1343

**TO AUTHORIZE THE DISCHARGE OF DREDGED OR FILL MATERIAL IN WATERS OF THE UNITED STATES (U.S.), INCLUDING WETLANDS, ASSOCIATED WITH MAINTENANCE, REPAIR, AND CONSTRUCTION PROJECTS CONDUCTED BY THE VARIOUS DIVISIONS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) INCLUDING THE NCDOT DIVISION OF HIGHWAYS, RAIL, BICYCLE/PEDESTRIAN, ECT.**

Activities authorized are:

- a. Construction, maintenance, and repair of bridges, to include work on the approaches, where permanent impacts resulting in a loss of waters of the U.S. will be less than or equal to 500 linear feet (lf) of stream and/or one (1) acre of wetland/non-tidal open water for each single and complete linear project\*.
- b. Best-fit widening projects that have undergone interagency review and completed the current interagency Merger Process, which merges the requirements of the National Environmental Policy Act (NEPA) with those found within Section 404 of the Clean Water Act (CWA).



While there is no impact threshold for these widening projects, the Corps has the discretion to require an individual permit if it determines that the proposed impacts will have more than a minimal impact on the aquatic environment or on other environmental factors, or if the project would normally require an Environmental Impact Statement (EIS) under current Federal Highway Administration (FHWA) guidelines. Best-fit projects may include a small amount of new location roadway for components such as interchanges or intersections, provided the new location portion has been concurred upon by the merger team.

c. Minor widening projects, such as paving and/or widening secondary roads, or interchange improvements, when permanent impacts which result in a loss of waters of the U.S. from installation and/or extension of culverts and/or pipes will be less than or equal to 500 lf of stream and/or one (1) acre of wetland/non-tidal open water for each single and complete linear project\*.

d. Stream relocation(s) associated with projects identified in a-c above. Stream relocation lengths are to be evaluated independently and are not included within each respective maximum limit threshold for the authorized actions stated above.

**\*Single and complete linear project:** A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term “single and complete project” is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the U.S. (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of this RGP. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Generally, off-site detours are preferred to avoid and minimize impacts to the human and natural environment. However, if an off-site detour is considered impracticable, then an on-site detour may be considered as a necessary component of the actions described above. Impacts from the detour may be considered temporary and may not require compensatory mitigation if the impacted area is restored to its pre-project condition after construction is complete. If the construction of a detour (on-site or off-site) includes standard undercutting methods, removal of all material and backfilling with suitable material is required.

#### 1. Special Conditions.

a. The applicant must submit a pre-construction notification (PCN) with specified attachments to the District Engineer and receive written verification from the Corps that the proposed work complies with this RGP prior to commencing any activity authorized by this RGP.

b. If the project will not impact a designated “Area of Environmental Concern” (AEC) in the twenty (20) counties of North Carolina covered by the North Carolina Coastal Area Management Act (CAMA), then a consistency submission is not required. If the project will impact a designated AEC and meets the definition of “development”, then the applicant must

obtain the required CAMA permit. Development activities may not commence until a copy of the approved CAMA permit is furnished to the appropriate Wilmington District Regulatory Field Office (Wilmington Field Office – 69 Darlington Avenue, Wilmington, NC 28403 or Washington Field Office – 2407 West 5th Street, Washington, NC 27889).

The twenty (20) CAMA counties in North Carolina include Beaufort, Bertie, Brunswick, Camden, Carteret, Chowan, Craven, Currituck, Dare, Gates, Hertford, Hyde, New Hanover, Onslow, Pamlico, Pasquotank, Pender, Perquimans, Tyrrell, and Washington.

c. Discharges into Waters of the U.S. designated by either the North Carolina Division of Marine Fisheries (NCDMF) or the North Carolina Wildlife Resources Commission (NCWRC) as anadromous fish spawning areas are prohibited during the period between February 1 and June 30, without prior written approval from NCDMF, NCWRC, National Marine Fisheries Service (NMFS), and the Corps. Discharges into waters of the U.S. designated by NCDMF as primary nursery areas and discharges into waters of the U.S. designated by NCWRC as primary nursery areas in inland waters shall be coordinated with NCDMF (per existing agreement with NCDMF) and NCWRC prior to being authorized by this RGP. Coordination with NCDMF and NCWRC may result in a required construction moratorium during periods of significant biological productivity or critical life stages.

The applicant should contact:

**NC Division of Marine Fisheries**  
3441 Arendell Street  
Morehead City, NC 28557  
Telephone 252-726-7021  
or 800-682-2632

**North Carolina Wildlife Resources Commission**  
Habitat Conservation Program Manager  
1721 Mail Service Center  
Raleigh, NC 27699-1721  
Telephone (919) 733-7638

d. This permit does not authorize the use of culverts in areas designated as anadromous fish spawning areas by the NCDMF or the NCWRC.

e. Waters of the U.S. designated as sturgeon spawning areas are excluded during the period between February 1 and June 30, without prior written approval from NMFS.

f. If the project is located within the twenty (20) counties of North Carolina designated as coastal counties by CAMA, then all pipe and culvert inverts will be buried at least one foot below normal bed elevation when they are placed within the Public Trust AEC and/or the Estuarine Waters AEC as designated by CAMA. If the project is not located within the twenty (20) counties of North Carolina designated as coastal counties by CAMA, then culvert inverts will be buried at least one foot below the bed of the stream for culverts greater than 48 inches in diameter. Culverts 48 inches in diameter or less shall be buried or placed on the stream bed as practicable and appropriate to maintain aquatic passage, and every effort shall be made to maintain the existing channel slope. The potential for destabilization of the channel and head cutting upstream should be considered in the placement of the culvert. A waiver from the depth specifications in this condition may be requested in writing. The waiver will only be issued if it can be demonstrated that the impacts of complying with this condition would result in more adverse impacts to the aquatic environment. Culverts placed in wetlands do not have to be buried.

g. No work shall be authorized by this RGP within the twenty coastal counties, as defined by the NCDRCM, without prior consultation with NOAA Fisheries. For each activity reviewed by the Corps where it is determined that the activity may affect Essential Fish Habitat (EFH) for federally managed species, an EFH Assessment shall be prepared by the applicant and forwarded to the Corps and NOAA Fisheries for review and comment prior to authorization of work.

h. Discharges of dredged or fill material into waters of the U.S., including wetlands, must be minimized or avoided to the maximum extent practicable.

i. No activity may result in substantial permanent disruption of the movement of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area. The dimension, pattern, and profile of the stream above and below a pipe or culvert should not be modified by widening the stream channel or by reducing the depth of the stream in connection with the construction activity. It is acceptable to use rock vanes at culvert outlets to ensure, enhance, or maintain aquatic passage. Pre-formed scour holes are acceptable when designed for velocity reduction. The width, height, and gradient of a proposed opening should be such as to pass the average historical low flow and spring flow without adversely altering flow velocity. Spring flow should be determined from gauge data, if available. In the absence of such data, bankfull flow can be used as a comparable level. Where adjacent floodplain is available, flows exceeding bank-full should be accommodated by installing culverts at the floodplain elevation, if practicable. If multiple culverts are used, the construction of floodplain benches and/or sills to maintain base flow is required, if practicable.

j. Upon completion of any work authorized by this RGP, all temporary fills (to include culverts, etc.) will be completely removed from waters of the U.S. and the areas will be restored to preconstruction conditions, to include pre-project elevations and contours, restoring natural hydrology and stream corridors, and reestablishing native vegetation/riparian corridors. This work will be completed within 60 days of completion of project construction. If this timeframe occurs while a required moratorium of this permit is in effect, the temporary fill shall be removed in its entirety within 60 days of the moratorium end date. If vegetation cannot be planted due to the time of the year, all disturbed areas will be seeded with a native mix appropriate for the impacted area, and vegetation will be planted in the fall. A native seed mix may contain non-invasive small grain annuals (e.g. millet and rye grain) to ensure adequate cover while native vegetation becomes established. The PCN must include a restoration plan showing how all temporary fills and structures will be removed and how the area will be restored to pre-project conditions.

k. All activities authorized by this RGP shall, to the extent practicable, be conducted "in the dry", with barriers installed between work areas and aquatic habitat to protect that habitat from sediment, concrete, and other pollutants. Where concrete is utilized, measures will be taken to prevent live or fresh concrete, including bags of uncured concrete, from coming into contact with waters of the U.S. until the concrete has cured/hardened. All water in the work area that has been in contact with concrete shall only be returned to waters of the U.S. when it no longer poses a threat to aquatic organisms (concrete is set and cured).

l. In cases where new alignment approaches are to be constructed and the existing approach fill in waters of the U.S. is to be abandoned and no longer maintained as a roadway, the

abandoned fill shall be removed and the area will be restored to preexisting wetland/stream conditions and elevations, to include restoring natural hydrology and stream corridors, and reestablishing native vegetation/riparian corridors, to the extent practicable. This activity may qualify as compensatory mitigation credit for the project and will be assessed on a case-by-case basis in accordance with Special Conditions “q” and “r” below. A restoration plan detailing this activity will be required with the submittal of the PCN.

m. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

n. The project must be implemented and/or conducted so that all reasonable and practicable measures to ensure that equipment, structures, fill pads, and work associated with the project do not adversely affect upstream and/or downstream reaches. Adverse effects include, but are not limited to, channel instability, flooding, and/or shoreline/streambank erosion. During construction, the permittee shall routinely monitor for these effects, cease all work if/when detected, take initial corrective measures to correct actively eroding areas, and notify the Corps immediately. Permanent corrective measures may require additional authorization from the Corps.

o. All PCNs will describe sedimentation and erosion control structures and measures proposed for placement in waters of the U.S. To the extent practicable, structures and measures should be depicted on maps, surveys or drawings showing location and impacts to jurisdictional wetlands and streams. In addition, appropriate soil and erosion control measures must be established and maintained during construction. All fills, temporary and permanent, must be adequately stabilized at the earliest practicable date to prevent erosion of fill material into adjacent waters or wetlands.

p. Before discharging dredged or fill material into waters of the U.S. in the twenty-five (25) mountain counties of North Carolina, the applicant will submit a PCN to the NCWRC and the Corps concurrently. The PCN shall summarize alternatives to conducting work in mountain trout waters considered during the planning process, detail why alternatives were or were not selected, and contain a compensatory mitigation plan for all unavoidable adverse impacts to mountain trout waters. For proposals where a bridge is replaced with a culvert, the PCN must also include details of any on-site evaluations that were conducted to determine that installation of a culvert will not adversely affect passage of fish or other aquatic biota at the project site. This information must include factors such as the proposed slope of the culvert and determinations of how the slope will be expected to allow or impede passage, the necessity of baffles and/or sills to ensure passage, design considerations to ensure that expected baseflow will be maintained for passage and that post-construction velocities will not prevent passage, site conditions that will or will not allow proper burial of the culvert, existing structures (e.g., perched culverts, waterfalls, etc.) and/or stream patterns up and downstream of the culvert site that could affect passage and bank stability, and any other considerations regarding passage. The level of detail for this information should be based on site conditions (i.e., culverts on a slope over 3% will most likely

require more information than culverts on a slope that is less than 1%, etc.). Also, in order to evaluate potential impacts, describe bedforms that will be impacted by the proposed culvert – e.g., pools, glides, riffles, etc. The NCWRC will respond both to the proponent and directly to the Corps.

The twenty-five (25) designated trout counties of North Carolina include Alleghany, Caldwell, Watauga, Ashe, Mitchell, Wilkes, Avery, Burke, Stokes, Surry, Buncombe, Henderson, Polk, Cherokee, Jackson, Rutherford, Clay, Macon, Swain, Graham, Madison, Transylvania, Haywood, McDowell, and Yancey.

The applicant may contact NCWRC at:

North Carolina Wildlife Resources  
Commission  
Ms. Marla Chambers  
Western NCDOT Permit Coordinator  
206 Charter Street  
Albemarle, NC 28001  
Office: 704-982-9181

q. Compensatory mitigation will be required for permanent impacts resulting in a loss of waters of the U.S., including wetlands, from culverts/pipes and associated fill. Mitigation will also be required for stream relocation projects. The applicant will attach a proposed mitigation plan to the PCN. Mitigation proposals will be in accordance with currently approved Wilmington District and/or Corps-wide mitigation regulations and guidance. The Corps Project Manager will make the final determination concerning the appropriate amount and type of mitigation.

r. Stream relocation(s) associated with projects may be authorized under this RGP. As stated above, mitigation will be required for all relocation projects. If the stream relocation is conducted in accordance with the requirements stated below in 1-5, the relocated segment of stream may\* be considered toward reducing the amount of compensatory mitigation required. A relocation plan must be submitted with the PCN that addresses all factors required within the current Wilmington District, Corps of Engineers Stream Mitigation Guidelines, which can include, but may not be limited to:

(1) The relocated stream has pattern, profile, and dimension based on natural channel design. If natural channel design construction is not possible due to site constraints, the relocated stream must have pattern, profile, and dimension similar to, or better than, the existing stream. Note that site constraints do not include those situations where NCDOT chooses not to acquire additional adjacent property that is available for purchase.

(2) The new stream meets the current buffer requirements as stated in current District stream mitigation guidance. If the required buffer widths cannot be obtained, a project-by-project decision will be completed to determine if additional compensatory mitigation is required.

(3) The new location allows the relocated stream to remain stable (e.g., in a

valley vs. on a slope, no bends that will impact stability, etc.).

(4) There is no loss of channel for any reason (e.g., old channel is 200' and new channel is 150' = 50' channel loss; part of the new channel is put in a culvert; the new channel (sides and bottom) is hardened with concrete, rip rap, etc.).

(5) The Corps will determine if monitoring and reporting will be required for a specific project and the parameters of any required monitoring and reporting. If monitoring is required, a monitoring plan must be included with the PCN and meet current requirements.

All relocation plans must clearly depict both the existing channel and the proposed (relocated) channel.

\* Conducting stream relocation(s) in accordance with 1-5 above may not fully compensate for the impact and may require additional compensatory mitigation. The Corps Project Manager will determine if the proposed amount of mitigation is adequate on a project-by-project basis.

If stream relocation cannot be conducted in accordance with 1-5 above, mitigation at a 2:1 ratio will typically be required unless: (1) the applicant provides a Stream Quality Assessment Worksheet or NCSAM documentation (when available) that supports a different mitigation ratio; (2) the Corps Project Manager determines that the relocated stream, while not in full compliance with 1-5 above, warrants partial mitigation, or; (3) the Corps determines that the existing stream is an excellent quality stream, in which case a 3:1 mitigation ratio may be required. The Corps Project Manager will make the final determination concerning the appropriate amount and type of mitigation.

If the Corps determines that the proposed stream relocation is of such a magnitude that it cannot be authorized by this RGP, an Individual Permit will be required.

s. The applicant shall sign and return the compliance certificate that is attached to the RGP verification letter.

t. In the event that any Federal agency maintains an objection or any required State authorization is outstanding, no notice to proceed will be given until objections are resolved and State authorizations are issued.

u. The Corps may place additional special conditions, limitations, or restrictions on any verification of the use of RGP 31 on a project-by-project basis.

## 2. General Conditions.

a. Except as authorized by this RGP or any Corps approved modification to this RGP, no excavation, fill or mechanized land-clearing activities shall take place within waters or wetlands, at any time in the construction or maintenance of this project. This permit does not authorize temporary placement or double handling of excavated or fill material within waters or wetlands outside the permitted area. This prohibition applies to all borrow and fill activities connected with this project.

b. Authorization under this RGP does not obviate the need to obtain other federal, state, or local authorizations.

c. All work authorized by this RGP must comply with the terms and conditions of the applicable CWA Section 401 Water Quality Certification for this RGP issued by the NCDWR.

d. The permittee shall employ all sedimentation and erosion control measures necessary to prevent an increase in sedimentation or turbidity within waters and wetlands outside the permit area. This shall include, but is not limited to, the immediate installation of silt fencing or similar appropriate devices around all areas subject to soil disturbance or the movement of earthen fill, and the immediate stabilization of all disturbed areas. Additionally, the project must remain in full compliance with all aspects of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statutes Chapter 113A Article 4).

e. The activities authorized by this RGP must not interfere with the public's right to free navigation on all navigable waters of the U.S. No attempt will be made by the permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the authorized work for a reason other than safety.

f. The permittee understands and agrees that, if future operations by the U.S. require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the U.S. No claim shall be made against the U.S. on account of any such removal or alteration.

g. The permittee, upon receipt of a notice of revocation of this permit or upon its expiration before completion of the work will, without expense to the U.S. and in such time and manner as the Secretary of the Army or his authorized representative may direct, restore the affected water of the U.S. to its former conditions.

h. The permittee will allow the Wilmington District Engineer or his representative to inspect the authorized activity at any time deemed necessary to assure that the activity is being performed or maintained in strict accordance with the Special and General Conditions of this permit.

i. This RGP does not grant any property rights or exclusive privileges.

j. This permit does not authorize any injury to the property or rights of others.

k. This RGP does not authorize the interference with any existing or proposed federal project.

l. In issuing this permit, the Federal Government does not assume any liability for the following:

(1) Damages to the permitted project or uses thereof as a result of other permitted

or unpermitted activities or from natural causes.

(2) Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the U.S. in the public interest.

(3) Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

(4) Design or construction deficiencies associated with the permitted work.

(5) Damage claims associated with any future modification, suspension, or revocation of this permit.

m. Authorization provided by this RGP may be modified, suspended or revoked in whole or in part if the Wilmington District Engineer, acting for the Secretary of the Army, determines that such action is in the best public interest. The term of this RGP shall be five (5) years unless subject to modification, suspension or revocation. Any modification, suspension or revocation of this authorization will not be the basis for any claim for damages against the U.S. Government.

n. This RGP does not authorize any activity, which the District Engineer determines, after any necessary investigations, will adversely affect:

(1) Rivers named in Section 3 of the Wild and Scenic Rivers Act (15 U.S.C. 1273), those proposed for inclusion as provided by Sections 4 and 5 of the Act, and wild, scenic and recreational rivers established by state and local entities.

(2) Sites included in or determined eligible for listing in the National Registry of Natural Landmarks.

(3) NOAA designated marine sanctuaries, National Estuarine Research Reserves, and coral reefs.

(4) Submerged Aquatic Vegetation (SAV) as defined by the N.C. Division of Marine Fisheries at 15A NCAC 03I .0101(4)(i)).

o. Endangered Species.

(1) No activity is authorized under this RGP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under this RGP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

(2) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees (and when FHWA is the lead federal agency) must provide the district engineer with the appropriate documentation to demonstrate compliance with



those requirements. The district engineer will review the documentation and determine whether it is sufficient to address ESA compliance for the RGP activity, or whether additional ESA consultation is necessary.

(3) Non-federal permittees must submit a PCN to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect federally-listed endangered or threatened species or designated critical habitat, the PCN must include the name(s) of the endangered or threatened species that might be affected by the proposed work or that utilize the designated critical habitat that might be affected by the proposed work. The district engineer will determine whether the proposed activity “may affect” or will have “no effect” to listed species and designated critical habitat and will notify the non-federal applicant of the Corps’ determination within 45 days of receipt of a complete PCN notification. In cases where the non-federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activities will have “no effect” on listed species or critical habitat, or until Section 7 consultation has been completed. If the non-federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(4) As a result of formal or informal consultation with the U.S. Fish and Wildlife Service (USFWS) or NMFS, the district engineer may add species-specific endangered species conditions to the RGP.

(5) Authorization of an activity by a RGP does not authorize the “take” of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with “incidental take” provisions, etc.) from the USFWS or the NMFS, the ESA prohibits any person subject to the jurisdiction of the U.S. to take a listed species, where “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word “harm” in the definition of “take” means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(6) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the USFWS and NMFS or their world wide web pages at <http://www.fws.gov/> or <http://www.fws.gov/ipac> and <http://www.noaa.gov/fisheries.html> respectively.

p. The permittee is responsible for obtaining any “take” permits required under the USFWS’s regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The permittee should contact the appropriate local office of the USFWS to determine if such “take” permits are required for a particular activity.

q. For proposed activities the sixteen counties listed below, applicants must provide a

copy of the PCN to the USFWS, 160 Zillicoa Street, Asheville, North Carolina 28801. This PCN must be sent concurrently to the USFWS and the Corps Project Manager for that specific county.

Counties with tributaries that drain to designated critical habitat that require notification to the Asheville USFWS: Avery, Cherokee, Forsyth, Graham, Haywood, Henderson, Jackson, Macon Mecklenburg, Mitchell, Stokes, Surry, Swain, Transylvania, Union and Yancey.

Applicants may contact the appropriate USFWS office listed below or the US Army Corps of Engineers:

US Fish and Wildlife Service  
Asheville Field Office  
160 Zillicoa Street  
Asheville, NC 28801  
Telephone: (828) 258-3939

Asheville USFWS Office counties: All counties west of and including Anson, Stanly, Davidson, Forsyth and Stokes Counties.

US Fish and Wildlife Service  
Raleigh Field Office  
Post Office Box 33726  
Raleigh, NC 27636-3726  
Telephone: (919) 856-4520

Raleigh USFWS Office counties: all counties east of and including Richmond, Montgomery, Randolph, Guilford, and Rockingham Counties.

r. Permittees are advised that development activities in or near a floodway may be subject to the National Flood Insurance Program that prohibits any development, including fill, within a floodway that results in any increase in base flood elevations. This RGP does not authorize any activity prohibited by the National Flood Insurance Program.

s. The permittee must make every reasonable effort to perform the work authorized herein in a manner so as to minimize any adverse impact on fish, wildlife and natural environmental values.

t. All activities authorized by this RGP that involve the use of riprap material for bank stabilization, the following measures shall be applied:

(1) Filter cloth must be placed underneath the riprap as an additional requirement of its use in North Carolina waters.

(2) The placement of riprap shall be limited to the areas depicted on submitted work plan drawings and not be placed in a manner that prevents or impedes fish passage.

(3) The riprap material shall be clean and free from loose dirt or any pollutant

except in trace quantities that will not have an adverse environmental effect.

(4) It shall be of a size sufficient to prevent its movement from the authorized alignment by natural forces under normal conditions.

(5) The riprap material shall consist of clean rock or masonry material such as, but not limited to, granite, marl, or broken concrete.

(6) A waiver from the specifications in this general condition may be requested in writing. The waiver will only be issued if it can be demonstrated that the impacts of complying with this condition will result in greater adverse impacts to the aquatic environment.

u. The permittee must install and maintain, at his expense, any signal lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, on authorized facilities. For further information, the permittee should contact the U.S. Coast Guard Marine Safety Office at (910) 772-2191.

v. The permittee must maintain any structure or work authorized by this permit in good condition and in conformance with the terms and conditions of this permit. The Permittee is not relieved of this requirement if the Permittee abandons the structure or work. Transfer in fee simple of the work authorized by this permit will automatically transfer this permit to the property's new owner, with all of the rights and responsibilities enumerated herein. The permittee must inform any subsequent owner of all activities undertaken under the authority of this permit and provide the subsequent owner with a copy of the terms and conditions of this permit.

w. At his sole discretion, any time during the processing cycle, the Wilmington District Engineer may determine that this RGP will not be applicable to a specific proposal. In such case, the procedures for processing an individual permit in accordance with 33 CFR 325 will be available.

x. The activity must comply with applicable FEMA approved state or local floodplain management requirements.

y. All fill material placed in waters or wetlands shall be generated from an upland source and will be clean and free of any pollutants except in trace quantities. Metal products, organic materials (including debris from land clearing activities), or unsightly debris will not be used.

z. All excavated material will be disposed of in approved upland disposal areas.

aa. Historic Properties.

(1) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places (NRHP), the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(2) Federal permittees (or when FHWA is the lead federal agency) should follow their own procedures for complying with the requirements of Section 106 of the NHPA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address Section 106 compliance for this RGP activity, or whether additional Section 106 consultation is necessary.

(3) Non-federal permittees must submit a PCN to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the NRHP, including previously unidentified properties. For such activities, the PCN must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO), as appropriate, and the NRHP (see 33 CFR 330.4(g)). When reviewing PCNs, district engineers will comply with the current procedures for addressing the requirements of Section 106 of the NHPA. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-federal applicant has identified historic properties on which the activity may have the potential to cause effects and so notified the Corps, the non-federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(4) The district engineer will notify the prospective permittee within 45 days of receipt of a complete PCN whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA Section 106 consultation is required and will occur, the district engineer will notify the non-federal applicant that he or she cannot begin work until Section 106 consultation is completed. If the non-federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(5) Prospective permittees should be aware that Section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit will relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the

undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

bb. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the NRHP.

cc. There will be no unreasonable interference with navigation or the right of the public to riparian access by the existence or use of activities authorized by this RGP.

dd. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

ee. This RGP will not be applicable to proposed construction when the Wilmington District Engineer determines that the proposed activity will significantly affect the quality of the human environment and determines that an EIS must be prepared.

ff. Activities which have commenced (i.e. are under construction) or are under contract to commence in reliance upon this general permit will remain authorized provided the activity is completed within twelve months of the date of the general permit's expiration, modification, or revocation. Activities completed under the authorization of this general permit which were in effect at the time the activity was completed continue to be authorized by the general permit.

BY AUTHORITY OF THE SECRETARY OF THE ARMY:



Kevin P. Landers Sr.  
Colonel, U. S. Army  
District Commander



ROY COOPER  
Governor

MICHAEL S. REGAN  
Secretary

LINDA CULPEPPER  
Interim Director

April 17, 2018 *revision*  
Davie and Forsyth Counties  
NCDWR Project No. 20180327  
I-40 Widening  
TIP Project No. I-0911A  
Federal Aid NHIMF-40-3(112)180  
WBS Element 34147.3.4

**APPROVAL of 401 WATER QUALITY CERTIFICATION, with ADDITIONAL CONDITIONS**

Mr. Philip S. Harris, III, P.E., C.P.M  
NCDOT, Environmental Analysis Unit Head  
1598 MSC  
Raleigh, NC 27699-1598

Dear Mr. Harris:

*This revision removes Project Specific Condition 10 from the Certification dated April 3, 2018 related to erosion control measures. No other revisions were made.*

You have our approval, in accordance with the conditions listed below and revised herewith, for the following impacts related to I-40 widening (pavement rehabilitation and construction of additional lanes from west of NC 801 in Davie County to east of SR 1101 (Harper Road) in Forsyth County.

**Stream Impacts in the Yadkin Pee Dee River Basin**

Site	Permanent Fill in Perennial Stream (linear ft)		Temporary Fill in Perennial Stream (linear ft)	Permanent Fill in Intermittent Stream (linear ft)	Temporary Fill in Intermittent Stream (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
	Bank Stabilization	Fill	Dewatering	Fill	Dewatering	
1	-	-	-	41	-	-
2	-	324	14	-	-	324
2	-	-	-	50	16	-
3	-	-	-	84	-	-
4	-	-	-	57	-	-
5	-	-	-	19	-	-
6	-	-	-	57	-	-
7A	9	-	21	-	-	-
7B	6	-	21	-	-	-
7C	4	-	20	-	-	-
8	-	-	144	-	-	-
9	-	244	31	-	-	-
10	-	17	21	-	-	-
<b>Totals</b>	<b>19</b>	<b>585</b>	<b>272</b>	<b>308</b>	<b>16</b>	<b>324</b>

**Total Stream Impact for Project: 1,200 linear feet.**

**Wetland Impact in the Yadkin Pee Dee River Basin (Riparian)**

<b>Site</b>	<b>Fill (ac)</b>	<b>Mechanical Hand Clearing (ac)</b>	<b>Impacts Requiring Mitigation (ac)</b>
5	0.01	-	-
7A	0.23	-	-
9	-	<0.01	-
10	<0.01	<0.01	-
<b>Totals</b>	<b>0.24</b>	<b>0.01</b>	-

**Total Wetland Impact for Project: 0.256 acres.**

The project shall be constructed in accordance with your application dated March 7, 2018. After reviewing your application, we have decided that these impacts are covered by General Water Quality Certification Number 4135. This certification corresponds to General Permit 198200031 issued by the Corps of Engineers. In addition, you should acquire any other federal, state or local permits before you proceed with your project including (but not limited to) Sediment and Erosion Control, Non-Discharge and Water Supply Watershed regulations. This approval will expire with the accompanying 404 permit.

This approval is valid solely for the purpose and design described in your application (unless modified below). Should your project change, you must notify the NCDWR and submit a new application. If the property is sold, the new owner must be given a copy of this Certification and approval letter, and is thereby responsible for complying with all the conditions. If total wetland fills for this project (now or in the future) exceed one acre, or of total impacts to streams (now or in the future) exceed 300 linear feet, compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). For this approval to remain valid, you must adhere to the conditions listed in the attached certification and any additional conditions listed below.

**Condition(s) of Certification:**

**Project Specific Conditions**

1. Burial of culverts in streambeds for this project as described in the permit application, will not be required. However, design and placement of culverts and other structures shall be installed in such a manner that the original stream profiles are not altered to the extent practicable (i.e., the depth of the channel must not be reduced by a widening of the streambed). When practicable, existing stream dimensions (including pattern and profile) are to be maintained above and below locations of each culvert. The structures shall be designed and installed to prevent headcutting of the stream. The applicant may be required to provide evidence that the equilibrium has been maintained if requested in writing by the NCDWR. [15A NCAC 02H.0506(b)(2)]
2. For the segment of streams being impacted due to site dewatering activities, the site shall be graded to its preconstruction contours and revegetated with appropriate native species. [15A NCAC 02H.0506(b)(2)]
3. All bridge construction shall be performed from the existing bridge, temporary work bridges or temporary causeways. [15A NCAC 02H .0506(b)(3)]
4. The post-construction removal of any temporary bridge structures must return the project site to its preconstruction contours and elevations. The impacted areas shall be revegetated with appropriate native species. [15A NCAC 02H .0506(b)(2)]
5. As a condition of this 401 Water Quality Certification, bridge demolition and construction must be accomplished in strict compliance with the most recent version of NCDOT's Best Management Practices for Construction and Maintenance Activities. [15A NCAC 02H .0507(d)(2) and 15A NCAC 02H .0506(b)(5)]

6. Bridge deck drains can be discharged directly into the Yadkin River on a temporary basis during traffic phasing; however, once permanent bridge and traffic conditions are established, deck drains shall not discharge directly into the Yadkin River or any other tributary to the Yadkin River. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. [15A NCAC 02H .0507(d)(2) and 15A NCAC 02H .0506(b)(5)]
7. No drill slurry or water that has been in contact with uncured concrete shall be allowed to enter surface waters. This water shall be captured, treated, and disposed of properly. [15A NCAC 02H .0506(b)(3)]
8. Turbidity curtains shall be used to isolate all work areas from the Yadkin River during causeway construction and removal. Strict adherence to the Construction and Maintenance Best Management Practices will be required.

#### *Off-Site Stream Mitigation*

9. Compensatory mitigation for 324 linear feet of impact to streams is required. We understand that you have chosen to perform compensatory mitigation for impacts to streams through the North Carolina Division of Mitigation Service (DMS) (formerly NCEEP), and that the DMS has agreed to implement the mitigation for the project. The DMS has indicated in a letter dated March 1, 2018 that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with the DMS Mitigation Banking Instrument signed July 28, 2010.

#### **General Conditions**

1. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills. [15A NCAC 02B.0200]
2. During the construction of the project, no staging of equipment of any kind is permitted in waters of the U.S., or protected riparian buffers. [15A NCAC 02H.0506(b)(2)]
3. The dimension, pattern and profile of the stream above and below the crossing shall not be modified. Disturbed floodplains and streams shall be restored to natural geomorphic conditions. [15A NCAC 02H.0506(b)(2)]
4. The use of rip-rap above the Normal High Water Mark shall be minimized. Any rip-rap placed for stream stabilization shall be placed in stream channels in such a manner that it does not impede aquatic life passage. [15A NCAC 02H.0506(b)(2)]
5. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]
6. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water. [15A NCAC 02H.0506(b)(3) and (c)(3)]
7. Heavy equipment shall be operated from the banks rather than in the stream channel in order to minimize sedimentation and reduce the introduction of other pollutants into the stream. [15A NCAC 02H.0506(b)(3)]
8. All mechanized equipment operated near surface waters must be regularly inspected and maintained to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials. [15A NCAC 02H.0506(b)(3)]
9. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification. [15A NCAC 02H.0506(b)(3)]
10. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited. [15A NCAC 02H.0506(b)(3)]



11. The permittee and its authorized agents shall conduct its activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act) and any other appropriate requirements of State and Federal law. If the NCDWR determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use) or that State or federal law is being violated, or that further conditions are necessary to assure compliance, the NCDWR may reevaluate and modify this certification. [15A NCAC 02B.0200]
12. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification. [15A NCAC 02H.0506(b)(2)]
13. A copy of this Water Quality Certification shall be maintained on the construction site at all times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]
14. The outside buffer, wetland or water boundary located within the construction corridor approved by this authorization shall be clearly marked by highly visible fencing prior to any land disturbing activities. Impacts to areas within the fencing are prohibited unless otherwise authorized by this certification. [15A NCAC 02H.0501 and .0502]
15. The issuance of this certification does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by other government agencies (i.e. local, state, and federal) having jurisdiction, including but not limited to applicable buffer rules, stormwater management rules, soil erosion and sedimentation control requirements, etc.
16. The Permittee shall report any violations of this certification to the Division of Water Resources within 24 hours of discovery. [15A NCAC 02B.0506(b)(2)]
17. Upon completion of the project (including any impacts at associated borrow or waste sites), the NCDOT Division Engineer (or appointee) shall complete and return the enclosed "Certification of Completion Form" to notify the NCDWR when all work included in the 401 Certification has been completed. [15A NCAC 02H.0502(f)]
18. Native riparian vegetation must be reestablished in the riparian areas within the construction limits of the project by the end of the growing season following completion of construction. [15A NCAC 02B.0506(b)(2)]
19. There shall be no excavation from, or waste disposal into, jurisdictional wetlands or waters associated with this permit without appropriate modification. Should waste or borrow sites, or access roads to waste or borrow sites, be located in wetlands or streams, compensatory mitigation will be required since that is a direct impact from road construction activities. [15A NCAC 02H.0506(b)(3) and (c)(3)]
20. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to protect surface waters standards [15A NCAC 02H.0506(b)(3) and (c)(3)]:
  - a. The erosion and sediment control measures for the project must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Sediment and Erosion Control Planning and Design Manual*.
  - b. The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*. The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.
  - c. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*.
  - d. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.
21. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification. [15A NCAC 02H.0506(b)(3) and (c)(3)]

If you wish to contest any statement in the attached Certification you must file a petition for an administrative hearing. You may obtain the petition form from the office of Administrative hearings. You must file the petition

with the office of Administrative Hearings within sixty (60) days of receipt of this notice. A petition is considered filed when it is received in the office of Administrative Hearings during normal office hours. The Office of Administrative Hearings accepts filings Monday through Friday between the hours of 8:00am and 5:00pm, except for official state holidays. The original and one (1) copy of the petition must be filed with the Office of Administrative Hearings.

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

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

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

Mr. Bill F. Lane, General Counsel  
Department of Environmental Quality  
1601 Mail Service Center

This letter completes the review of the Division of Water Resources under Section 401 of the Clean Water Act. If you have any questions, please contact Dave Wanucha at (336)473-9703 or [Dave.Wanucha@ncdenr.gov](mailto:Dave.Wanucha@ncdenr.gov).

Sincerely,



Linda Culpepper, Interim Director  
Division of Water Resources

Electronic copy only distribution:

James Lastinger, US Army Corps of Engineers, Raleigh Field Office  
Amy Euliss, Division 7 Environmental Officer  
Carla Dagnino, NC Department of Transportation  
Chris Militscher, US Environmental Protection Agency  
Marella Buncick, US Fish and Wildlife Service  
Marla Chambers, NC Wildlife Resources Commission  
Beth Harmon, Division of Mitigation Services  
File Copy



ROY COOPER  
Governor

MICHAEL S. REGAN  
Secretary

LINDA CULPEPPER  
Interim Director

NCDWR Project No.: \_\_\_\_\_ County: \_\_\_\_\_

Applicant: \_\_\_\_\_

Project Name: \_\_\_\_\_

Date of Issuance of 401 Water Quality Certification: \_\_\_\_\_

**Certificate of Completion**

Upon completion of all work approved within the 401 Water Quality Certification or applicable Buffer Rules, and any subsequent modifications, the applicant is required to return this certificate to the 401 Transportation Permitting Unit, North Carolina Division of Water Resources, 1617 Mail Service Center, Raleigh, NC, 27699-1617. This form may be returned to NCDWR by the applicant, the applicant's authorized agent, or the project engineer. It is not necessary to send certificates from all of these.

**Applicant's Certification**

I, \_\_\_\_\_, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Agent's Certification**

I, \_\_\_\_\_, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Engineer's Certification**

\_\_\_\_\_ Partial \_\_\_\_\_ Final

I, \_\_\_\_\_, as a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe (periodically, weekly, full time) the construction of the project for the Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature \_\_\_\_\_ Registration No. \_\_\_\_\_

Date \_\_\_\_\_

**STATE OF NORTH CAROLINA  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
DIVISION OF WATER RESOURCES**

**WATER QUALITY GENERAL CERTIFICATION NO. 4135**

**GENERAL CERTIFICATION FOR PROJECTS ELIGIBLE FOR US ARMY CORPS OF ENGINEERS**

- **NATIONWIDE PERMIT NUMBER 14 (LINEAR TRANSPORTATION PROJECTS), AND**
- **REGIONAL GENERAL PERMIT 198200031 (NCDOT BRIDGES, WIDENING PROJECTS, INTERCHANGE IMPROVEMENTS)**

Water Quality Certification Number 4135 is issued in conformity with the requirements of Section 401, Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Regulations in 15A NCAC 02H .0500 and 15A NCAC 02B .0200 for the discharge of fill material to surface waters and wetland areas as described in 33 CFR 330 Appendix A (B) (14) of the US Army Corps of Engineers regulations and Regional General Permit 198200031.

The State of North Carolina certifies that the specified category of activity will not violate applicable portions of Sections 301, 302, 303, 306 and 307 of the Public Laws 92-500 and 95-217 if conducted in accordance with the conditions hereinafter set forth.

Effective date: December 1, 2017

Signed this day: December 1, 2017

By

A handwritten signature in black ink, appearing to read 'Linda Culpepper', is written over a solid horizontal line.

*for* Linda Culpepper  
Interim Director

## GC4135

**Activities meeting any one (1) of the following thresholds or circumstances require written approval for a 401 Water Quality Certification from the Division of Water Resources (DWR):**

- a) If any of the conditions of this Certification (listed below) cannot be met; or
- b) Any temporary or permanent impacts to wetlands, open waters and/or streams, except for construction of a driveway to a single family residential lot that is determined to not be part of a larger common plan of development, as long as the driveway involves a travel lane of less than 25 feet and total stream impacts of less than 60 feet, including any topographic/slope stabilization or in-stream stabilization needed for the crossing; or
- c) Any stream relocation or stream restoration; or
- d) Any high-density project, as defined in 15A NCAC 02H .1003(2)(a) and by the density thresholds specified in 15A NCAC 02H .1017, which:
  - i. Disturbs one acre or more of land (including a project that disturbs less than one acre of land that is part of a larger common plan of development or sale); and
  - ii. Has permanent wetland, stream or open water impacts; and
  - iii. Is proposing new built-upon area; and
  - iv. Does not have a stormwater management plan reviewed and approved under a state stormwater program<sup>1</sup> or a state-approved local government stormwater program<sup>2</sup>.

Projects that have vested rights, exemptions, or grandfathering from state or locally-implemented stormwater programs and projects that satisfy state or locally-implemented stormwater programs through use of community in-lieu programs **require written approval**; or

- e) Any permanent impacts to waters, or to wetlands adjacent to waters, designated as: ORW (including SAV), HQW (including PNA), SA, WS-I, WS-II, or North Carolina or National Wild and Scenic River.
- f) Any permanent impacts to waters, or to wetlands adjacent to waters, designated as Trout except for driveway projects that are below threshold (b) above provided that:
  - i. The impacts are not adjacent to any existing structures
  - ii. All conditions of this General Certification can be met, including adherence to any moratoriums as stated in Condition #10; and
  - iii. A *Notification of Work in Trout Watersheds Form* is submitted to the Division at least 60 days prior to commencement of work; or
- g) Any permanent impacts to coastal wetlands [15A NCAC 07H .0205], or Unique Wetlands (UWL); or
- h) Any impact associated with a Notice of Violation or an enforcement action for violation(s) of NC Wetland Rules (15A NCAC 02H .0500), NC Isolated Wetland Rules (15A NCAC 02H .1300), NC Surface Water or Wetland Standards (15A NCAC 02B .0200), or State Regulated Riparian Buffer Rules (15A NCAC 02B .0200); or

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<sup>1</sup> e.g. Coastal Counties, HQW, ORW, or state-implemented Phase II NPDES

<sup>2</sup> e.g. Delegated Phase II NPDES, Water Supply Watershed, Nutrient-Sensitive Waters, or Universal Stormwater Management Program

## GC4135

- i) Any impacts to subject water bodies and/or state regulated riparian buffers along subject water bodies in the Neuse, Tar-Pamlico, or Catawba River Basins or in the Randleman Lake, Jordan Lake or Goose Creek Watersheds (or any other basin or watershed with State Regulated Riparian Area Protection Rules [Buffer Rules] in effect at the time of application) *unless*:
  - i. The activities are listed as “EXEMPT” from these rules; or
  - ii. A Buffer Authorization Certificate is issued by the NC Division of Coastal Management (DCM); or
  - iii. A Buffer Authorization Certificate or a Minor Variance is issued by a delegated or designated local government implementing a state riparian buffer program pursuant to 143-215.23

**Activities included in this General Certification that do not meet one of the thresholds listed above do not require written approval.**

### **I. ACTIVITY SPECIFIC CONDITIONS:**

1. If this Water Quality Certification is used to access residential, commercial or industrial building sites, then all parcels owned by the applicant that are part of the single and complete project authorized by this Certification must be buildable without additional impacts to streams or wetlands. If required in writing by DWR, the applicant shall provide evidence that the parcels are buildable without requiring additional impacts to wetlands, waters, or state regulated riparian buffers. [15A NCAC 02H .0506(b)(4) and (c)(4)]
2. For road and driveway construction purposes, this Certification shall only be utilized from natural high ground to natural high ground. [15A NCAC 02H .0506(b)(2) and (c)(2)]
3. Deed notifications or similar mechanisms shall be placed on all lots with retained jurisdictional wetlands, waters, and state regulated riparian buffers within the project boundaries in order to assure compliance with NC Wetland Rules (15A NCAC 02H .0500), NC Isolated Wetland Rules (15A NCAC 02H .1300), and/or State Regulated Riparian Buffer Rules (15A NCAC 02B .0200). These mechanisms shall be put in place at the time of recording of the property or individual parcels, whichever is appropriate. [15A NCAC 02H .0506(b)(4) and (c)(4)]
4. For the North Carolina Department of Transportation, compliance with the NCDOT’s individual NPDES permit NCS000250 shall serve to satisfy this condition. All other high-density projects that trigger threshold item (d) above shall comply with one of the following requirements: [15A NCAC 02H .0506(b)(5) and (c)(5)]

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- a. Provide a completed Stormwater Management Plan (SMP) for review and approval, including all appropriate stormwater control measure (SCM) supplemental forms and associated items, that complies with the high-density development requirements of 15A NCAC 02H .1003. Stormwater management shall be provided throughout the entire project area in accordance with 15A NCAC 02H .1003. For the purposes of 15A NCAC 02H .1003(2)(a), density thresholds shall be determined in accordance with 15A NCAC 02H .1017.
- b. Provide documentation (including calculations, photos, etc.) that the project will not cause degradation of downstream surface waters. Documentation shall include a detailed analysis of the hydrological impacts from stormwater runoff when considering the volume and velocity of stormwater runoff from the project built upon area and the size and existing condition of the receiving stream(s).

Exceptions to this condition require application to and written approval from DWR.

### **II. GENERAL CONDITIONS:**

1. When written authorization is required, the plans and specifications for the project are incorporated into the authorization by reference and are an enforceable part of the Certification. Any modifications to the project require notification to DWR and may require an application submittal to DWR with the appropriate fee. [15A NCAC 02H .0501 and .0502]
2. No waste, spoil, solids, or fill of any kind shall occur in wetlands or waters beyond the footprint of the impacts (including temporary impacts) as authorized in the written approval from DWR; or beyond the thresholds established for use of this Certification without written authorization. [15A NCAC 02H .0501 and .0502]

No removal of vegetation or other impacts of any kind shall occur to state regulated riparian buffers beyond the footprint of impacts approved in a Buffer Authorization or Variance or as listed as an exempt activity in the applicable riparian buffer rules. [15A NCAC 02B .0200]

3. In accordance with 15A NCAC 02H .0506(h) and Session Law 2017-10, compensatory mitigation may be required for losses of greater than 300 linear feet of perennial streams and/or greater than one (1) acre of wetlands. Impacts associated with the removal of a dam shall not require mitigation when the removal complies with the requirements of Part 3 of Article 21 in Chapter 143 of the North Carolina General Statutes. Impacts to isolated and other non-404 jurisdictional wetlands shall not be combined with 404 jurisdictional wetlands for the purpose of determining when impact thresholds trigger a mitigation requirement. For linear publicly owned and maintained transportation projects that are not determined to be part of a larger common plan of development by the US Army Corps of Engineers, compensatory mitigation may be required for losses of greater than 300 linear feet per perennial stream.

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Compensatory stream and/or wetland mitigation shall be proposed and completed in compliance with G.S. 143-214.11. For applicants proposing to conduct mitigation within a project site, a complete mitigation proposal developed in accordance with the most recent guidance issued by the US Army Corps of Engineers Wilmington District shall be submitted for review and approval with the application for impacts.

4. All activities shall be in compliance with any applicable State Regulated Riparian Buffer Rules in Chapter 2 of Title 15A.
5. When applicable, all construction activities shall be performed and maintained in full compliance with G.S. Chapter 113A Article 4 (Sediment and Pollution Control Act of 1973). Regardless of applicability of the Sediment and Pollution Control Act, all projects shall incorporate appropriate Best Management Practices for the control of sediment and erosion so that no violations of state water quality standards, statutes, or rules occur. [15A NCAC 02H .0506(b)(3) and (c)(3) and 15A NCAC 02B .0200]

Design, installation, operation, and maintenance of all sediment and erosion control measures shall be equal to or exceed the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*, or for linear transportation projects, the *NCDOT Sediment and Erosion Control Manual*.

All devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) sites, including contractor-owned or leased borrow pits associated with the project. Sufficient materials required for stabilization and/or repair of erosion control measures and stormwater routing and treatment shall be on site at all times.

For borrow pit sites, the erosion and sediment control measures shall be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*. Reclamation measures and implementation shall comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act and the Mining Act of 1971.

If the project occurs in waters or watersheds classified as Primary Nursery Areas (PNAs), SA, WS-I, WS-II, High Quality Waters (HQW), or Outstanding Resource Waters (ORW), then the sedimentation and erosion control designs shall comply with the requirements set forth in 15A NCAC 04B .0124, *Design Standards in Sensitive Watersheds*.

6. Sediment and erosion control measures shall not be placed in wetlands or waters except within the footprint of temporary or permanent impacts authorized under this Certification. Exceptions to this condition require application to and written approval from DWR. [15A NCAC 02H .0501 and .0502]
7. Erosion control matting that incorporates plastic mesh and/or plastic twine shall not be used along streambanks or within wetlands. Exceptions to this condition require application to and written approval from DWR. [15A NCAC 02B .0201]



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8. An NPDES Construction Stormwater Permit (NCG010000) is required for construction projects that disturb one (1) or more acres of land. The NCG010000 Permit allows stormwater to be discharged during land disturbing construction activities as stipulated in the conditions of the permit. If the project is covered by this permit, full compliance with permit conditions including the erosion & sedimentation control plan, inspections and maintenance, self-monitoring, record keeping and reporting requirements is required. [15A NCAC 02H .0506(b)(5) and (c)(5)]

The North Carolina Department of Transportation (NCDOT) shall be required to be in full compliance with the conditions related to construction activities within the most recent version of their individual NPDES (NCS000250) stormwater permit. [15A NCAC 02H .0506(b)(5) and (c)(5)]

9. All work in or adjacent to streams shall be conducted so that the flowing stream does not come in contact with the disturbed area. Approved best management practices from the most current version of the *NC Sediment and Erosion Control Manual*, or the *NC DOT Construction and Maintenance Activities Manual*, such as sandbags, rock berms, cofferdams, and other diversion structures shall be used to minimize excavation in flowing water. Exceptions to this condition require application to and written approval from DWR. [15A NCAC 02H .0506(b)(3) and (c)(3)]
10. If activities must occur during periods of high biological activity (e.g. sea turtle nesting, fish spawning, or bird nesting), then biological monitoring may be required at the request of other state or federal agencies and coordinated with these activities. [15A NCAC 02H .0506 (b)(2) and 15A NCAC 04B .0125]

All moratoriums on construction activities established by the NC Wildlife Resources Commission (WRC), US Fish and Wildlife Service (USFWS), NC Division of Marine Fisheries (DMF), or National Marine Fisheries Service (NMFS) shall be implemented. Exceptions to this condition require written approval by the resource agency responsible for the given moratorium. A copy of the approval from the resource agency shall be forwarded to DWR.

Work within a designated trout watershed of North Carolina (as identified by the Wilmington District of the US Army Corps of Engineers), or identified state or federal endangered or threatened species habitat, shall be coordinated with the appropriate WRC, USFWS, NMFS, and/or DMF personnel.

11. Culverts shall be designed and installed in such a manner that the original stream profiles are not altered and allow for aquatic life movement during low flows. The dimension, pattern, and profile of the stream above and below a pipe or culvert shall not be modified by widening the stream channel or by reducing the depth of the stream in connection with the construction activity. The width, height, and gradient of a proposed culvert shall be such as to pass the average historical low flow and spring flow without adversely altering flow velocity. [15A NCAC 02H .0506(b)(2) and (c)(2)]

## GC4135

Placement of culverts and other structures in streams shall be below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20% of the culvert diameter for culverts having a diameter less than or equal to 48 inches, to allow low flow passage of water and aquatic life.

If multiple pipes or barrels are required, they shall be designed to mimic the existing stream cross section as closely as possible including pipes or barrels at flood plain elevation and/or sills where appropriate. Widening the stream channel shall be avoided.

When topographic constraints indicate culvert slopes of greater than 5%, culvert burial is not required, provided that all alternative options for flattening the slope have been investigated and aquatic life movement/connectivity has been provided when possible (e.g. rock ladders, cross vanes, etc.). Notification, including supporting documentation to include a location map of the culvert, culvert profile drawings, and slope calculations, shall be provided to DWR 60 calendar days prior to the installation of the culvert.

When bedrock is present in culvert locations, culvert burial is not required provided that there is sufficient documentation of the presence of bedrock. Notification, including supporting documentation such as, a location map of the culvert, geotechnical reports, photographs, etc. shall be provided to DWR a minimum of 60 calendar days prior to the installation of the culvert. If bedrock is discovered during construction, then DWR shall be notified by phone or email within 24 hours of discovery.

If other site-specific topographic constraints preclude the ability to bury the culverts as described above and/or it can be demonstrated that burying the culvert would result in destabilization of the channel, then exceptions to this condition require application to and written approval from DWR.

Installation of culverts in wetlands shall ensure continuity of water movement and be designed to adequately accommodate high water or flood conditions. When roadways, causeways, or other fill projects are constructed across FEMA-designated floodways or wetlands, openings such as culverts or bridges shall be provided to maintain the natural hydrology of the system as well as prevent constriction of the floodway that may result in destabilization of streams or wetlands.

The establishment of native woody vegetation and other soft stream bank stabilization techniques shall be used where practicable instead of rip-rap or other bank hardening methods.

12. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means to the maximum extent practicable (e.g. grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Exceptions to this condition require application to and written approval from DWR. [15A NCAC 02H .0506(b)(5)]

## GC4135

13. Application of fertilizer to establish planted/seeded vegetation within disturbed riparian areas and/or wetlands shall be conducted at agronomic rates and shall comply with all other Federal, State and Local regulations. Fertilizer application shall be accomplished in a manner that minimizes the risk of contact between the fertilizer and surface waters. [15A NCAC 02B .0200 and 15A NCAC 02B .0231]
14. If concrete is used during construction, then all necessary measures shall be taken to prevent direct contact between uncured or curing concrete and waters of the state. Water that inadvertently contacts uncured concrete shall not be discharged to waters of the state. [15A NCAC 02B .0200]
15. All proposed and approved temporary fill and culverts shall be removed and the impacted area shall be returned to natural conditions within 60 calendar days after the temporary impact is no longer necessary. The impacted areas shall be restored to original grade, including each stream's original cross sectional dimensions, planform pattern, and longitudinal bed profile. For projects that receive written approval, no temporary impacts are allowed beyond those included in the application and authorization. All temporarily impacted sites shall be restored and stabilized with native vegetation. [15A NCAC 02H .0506(b)(2) and (c)(2)]
16. All proposed and approved temporary pipes/culverts/rip-rap pads etc. in streams shall be installed as outlined in the most recent edition of the *North Carolina Sediment and Erosion Control Planning and Design Manual* or the *North Carolina Surface Mining Manual* or the *North Carolina Department of Transportation Best Management Practices for Construction and Maintenance Activities* so as not to restrict stream flow or cause dis-equilibrium during use of this Certification. [15A NCAC 02H .0506(b)(2) and (c)(2)]
17. Any rip-rap required for proper culvert placement, stream stabilization, or restoration of temporarily disturbed areas shall be restricted to the area directly impacted by the approved construction activity. All rip-rap shall be placed such that the original stream elevation and streambank contours are restored and maintained. Placement of rip-rap or other approved materials shall not result in de-stabilization of the stream bed or banks upstream or downstream of the area or in a manner that precludes aquatic life passage. [15A NCAC 02H .0506(b)(2)]
18. Any rip-rap used for stream or shoreline stabilization shall be of a size and density to prevent movement by wave, current action, or stream flows and shall consist of clean rock or masonry material free of debris or toxic pollutants. Rip-rap shall not be installed in the streambed except in specific areas required for velocity control and to ensure structural integrity of bank stabilization measures. [15A NCAC 02H .0506(b)(2)]
19. Applications for rip-rap groins proposed in accordance with 15A NCAC 07H .1401 (NC Division of Coastal Management General Permit for construction of Wooden and Rip-rap Groins in Estuarine and Public Trust Waters) shall meet all the specific conditions for design and construction specified in 15A NCAC 07H .1405.

## GC4135

20. All mechanized equipment operated near surface waters shall be inspected and maintained regularly to prevent contamination of surface waters from fuels, lubricants, hydraulic fluids, or other toxic materials. Construction shall be staged in order to minimize the exposure of equipment to surface waters to the maximum extent practicable. Fueling, lubrication and general equipment maintenance shall be performed in a manner to prevent, to the maximum extent practicable, contamination of surface waters by fuels and oils. [15A NCAC 02H .0506(b)(3) and (c)(3) and 15A NCAC 02B .0211 (12)]
21. Heavy equipment working in wetlands shall be placed on mats or other measures shall be taken to minimize soil disturbance. [15A NCAC 02H .0506(b)(3) and (c)(3)]
22. In accordance with 143-215.85(b), the applicant shall report any petroleum spill of 25 gallons or more; any spill regardless of amount that causes a sheen on surface waters; any petroleum spill regardless of amount occurring within 100 feet of surface waters; and any petroleum spill less than 25 gallons that cannot be cleaned up within 24 hours.
23. If an environmental document is required under the State Environmental Policy Act (SEPA), then this General Certification is not valid until a Finding of No Significant Impact (FONSI) or Record of Decision (ROD) is issued by the State Clearinghouse. If an environmental document is required under the National Environmental Policy Act (NEPA), then this General Certification is not valid until a Categorical Exclusion, the Final Environmental Assessment, or Final Environmental Impact Statement is published by the lead agency. [15A NCAC 01C .0107(a)]
24. This General Certification does not relieve the applicant of the responsibility to obtain all other required Federal, State, or Local approvals before proceeding with the project, including those required by, but not limited to, Sediment and Erosion Control, Non-Discharge, Water Supply Watershed, and Trout Buffer regulations.
25. The applicant and their authorized agents shall conduct all activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act), and any other appropriate requirements of State and Federal Law. If DWR determines that such standards or laws are not being met, including failure to sustain a designated or achieved use, or that State or Federal law is being violated, or that further conditions are necessary to assure compliance, then DWR may revoke or modify a written authorization associated with this General Water Quality Certification. [15A NCAC 02H .0507(d)]
26. The permittee shall require its contractors and/or agents to comply with the terms and conditions of this permit in the construction and maintenance of this project, and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this Certification. A copy of this Certification, including all conditions shall be available at the project site during the construction and maintenance of this project. [15A NCAC 02H .0507 (c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]

## GC4135

27. When written authorization is required for use of this Certification, upon completion of all permitted impacts included within the approval and any subsequent modifications, the applicant shall be required to return a certificate of completion (available on the DWR website <https://edocs.deq.nc.gov/Forms/Certificate-of-Completion>). [15A NCAC 02H .0502(f)]
28. Additional site-specific conditions, including monitoring and/or modeling requirements, may be added to the written approval letter for projects proposed under this Water Quality Certification in order to ensure compliance with all applicable water quality and effluent standards. [15A NCAC 02H .0507(c)]
29. If the property or project is sold or transferred, the new permittee shall be given a copy of this Certification (and written authorization if applicable) and is responsible for complying with all conditions. [15A NCAC 02H .0501 and .0502]

### III. GENERAL CERTIFICATION ADMINISTRATION:

1. In accordance with North Carolina General Statute 143-215.3D(e), written approval for a 401 Water Quality General Certification must include the appropriate fee. An applicant for a CAMA permit under Article 7 of Chapter 113A of the General Statutes for which a Water Quality Certification is required shall only make one payment to satisfy both agencies; the fee shall be as established by the Secretary in accordance with 143-215.3D(e)(7).
2. This Certification neither grants nor affirms any property right, license, or privilege in any waters, or any right of use in any waters. This Certification does not authorize any person to interfere with the riparian rights, littoral rights, or water use rights of any other person and this Certification does not create any prescriptive right or any right of priority regarding any usage of water. This Certification shall not be interposed as a defense in any action respecting the determination of riparian or littoral rights or other rights to water use. No consumptive user is deemed by virtue of this Certification to possess any prescriptive or other right of priority with respect to any other consumptive user regardless of the quantity of the withdrawal or the date on which the withdrawal was initiated or expanded.
3. This Certification grants permission to the Director, an authorized representative of the Director, or DWR staff, upon the presentation of proper credentials, to enter the property during normal business hours. [15A NCAC 02H .0502(e)]
4. This General Certification shall expire on the same day as the expiration date of the corresponding Nationwide Permit and/or Regional General Permit. The conditions in effect on the date of issuance of Certification for a specific project shall remain in effect for the life of the project, regardless of the expiration date of this Certification. This General Certification is rescinded when the US Army Corps of Engineers reauthorizes any of the corresponding Nationwide Permits and/or Regional General Permits or when deemed appropriate by the Director of the Division of Water Resources.

## GC4135

5. Non-compliance with or violation of the conditions herein set forth by a specific project may result in revocation of this General Certification for the project and may also result in criminal and/or civil penalties.
6. The Director of the North Carolina Division of Water Resources may require submission of a formal application for Individual Certification for any project in this category of activity if it is deemed in the public's best interest or determined that the project is likely to have a significant adverse effect upon water quality, including state or federally listed endangered or threatened aquatic species, or degrade the waters so that existing uses of the water or downstream waters are precluded.

*History Note: Water Quality Certification (WQC) Number 4135 issued December 1, 2017 replaces WQC Number 4088 issued March 3, 2017; WQC 3886 issued March 12, 2012; WQC Number 3820 issued April 6, 2010; WQC Number 3627 issued March 2007; WQC Number 3404 issued March 2003; WQC Number 3375 issued March 18, 2002; WQC Number 3289 issued June 1, 2000; WQC Number 3103 issued February 11, 1997; WQC Number 2732 issued May 1, 1992; WQC Number 2666 issued January 21, 1992; WQC Number 2177 issued November 5, 1987.*



North Carolina Department of Transportation

Highway Stormwater Program  
STORMWATER MANAGEMENT PLAN  
FOR NCDOT PROJECTS



(Version 2.07; Released October 2016)

WBS Element: 34147.3.4      TIP No.: I-0911A      County(ies): Davie Forsyth      Page 1 of 4

General Project Information

WBS Element:	34147.3.4	TIP Number:	I-0911A	Project Type:	Roadway Widening	Date:	1/4/2018
NCDOT Contact:	Craig Lee, PE		Contractor / Designer:	RK&K: Matt Cook, PE			
Address:	NC Department of Transportation 1020 Birch Ridge Dr Raleigh, NC 27610		Address:	900 Ridgefield Drive Suite 350 Raleigh, NC 27609			
	Phone:	919-707-6708		Phone:	919-878-9560		
	Email:	<a href="mailto:cilee@ncdot.gov">cilee@ncdot.gov</a>		Email:	<a href="mailto:mcook@rkk.com">mcook@rkk.com</a>		
City/Town:	Bermuda Run		County(ies):	Davie	Forsyth		
River Basin(s):	Yadkin-Pee Dee		CAMA County?	No	No		
Wetlands within Project Limits?	Yes						

Project Description

Project Length (lin. miles or feet):	3.78	Surrounding Land Use:	Residential and Commercial				
		Proposed Project			Existing Site		
Project Built-Upon Area (ac.)	67.0	ac.	58.0		ac.		
Typical Cross Section Description:	6 lane divided highway with a 26' median that contains median barrier: 11.5' paved median shoulders, (3) 12' travel lanes, 14' outside shoulders. 122' wide bridge that spans the Yadkin River.			4 lane divided highway with a grass median: 10' outside shoulders, (2) 12' travel lanes, 4' median shoulder. Dual bridges that spans the Yadkin River.			

Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	74,800	Year:	2037	Existing:	58,600	Year:	2017
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**General Project Narrative:**  
**(Description of Minimization of Water Quality Impacts)**

This project is the widening of I-40 from 4 lanes to 6 lanes including pavement rehabilitation, safety improvements and the rehabilitation of the dual bridges over the Yadkin River. The project extends west of NC 801 in Davie County to east of SR 1101(Harper Rd) in Forsyth County. During the construction of the proposed bridge over the Yadkin River, temporary causeways will be put in place to get construction equipment out of the water. Drainage from bridge will discharge through deck drains into the Yadkin River only during the temporary condition for traffic phasing but will not discharge into the river in the permanent condition. Concrete will be precasted offsite when possible to eliminate spilling concrete into the Yadkin River. The overall bridge length is 1104' with 8 spans as follows: 1 span @ 155', 3 spans @ 150', 1 span @ 135', 1 span @ 155' and 2 spans @ 104.5' F.I.B. prestressed girders; sloped abutments with 3' x4.25' wide caps. Swales and Preformed Scour Holes are used as Best Management Practices on the project. There are four sites where there are proposed swales to provide some filtration and dissipation before water enters jurisdictional streams. There are three sites where there are proposed preformed scour holes to provide energy dissipation and infiltration before the water enters the jurisdictional streams.

Waterbody Information

Surface Water Body (1):	Yadkin River		NCDWR Stream Index No.:	12-(86.7)			
NCDWR Surface Water Classification for Water Body	Primary Classification:		Water Supply IV (WS-IV)				
	Supplemental Classification:						
Other Stream Classification:	None						
Impairments:	None						
Aquatic T&E Species?	No	Comments:					
NRTR Stream ID:	Yadkin 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						



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



(Version 2.07; Released October 2016)

**WBS Element:** 34147.3.4     
 **TIP No.:** I-0911A     
 **County(ies):** Davie Forsyth     
 **Page** 2 **of** 4

**Additional Waterbody Information**

<b>Surface Water Body (2):</b>	Smith Creek		<b>NCDWR Stream Index No.:</b>	12-93-1	
<b>NCDWR Surface Water Classification for Water Body</b>	<b>Primary Classification:</b>		Class C		
	<b>Supplemental Classification:</b>		None		
<b>Other Stream Classification:</b>	None				
<b>Impairments:</b>	None				
<b>Aquatic T&amp;E Species?</b>	No	<b>Comments:</b>			
<b>NRTR Stream ID:</b>	Smith Creek		<b>Buffer Rules in Effect:</b>		N/A
<b>Project Includes Bridge Spanning Water Body?</b>	No	<b>Deck Drains Discharge Over Buffer?</b>	N/A	<b>Dissipator Pads Provided in Buffer?</b> N/A	
<b>Deck Drains Discharge Over Water Body?</b>	No				
<hr/>					
<b>Surface Water Body (3):</b>	Johnson Creek		<b>NCDWR Stream Index No.:</b>	12-91	
<b>NCDWR Surface Water Classification for Water Body</b>	<b>Primary Classification:</b>		Water Supply IV (WS-IV)		
	<b>Supplemental Classification:</b>		None		
<b>Other Stream Classification:</b>	None				
<b>Impairments:</b>	None				
<b>Aquatic T&amp;E Species?</b>	No	<b>Comments:</b>			
<b>NRTR Stream ID:</b>	UT to Johnson Creek (not in NRTR)		<b>Buffer Rules in Effect:</b>		N/A
<b>Project Includes Bridge Spanning Water Body?</b>	No	<b>Deck Drains Discharge Over Buffer?</b>	N/A	<b>Dissipator Pads Provided in Buffer?</b> N/A	
<b>Deck Drains Discharge Over Water Body?</b>	No	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)	
	(If yes, provide justification in the General Project Narrative)				







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



(Version 2.07; Released October 2016)

Preformed Scour Holes and Energy Dissipators

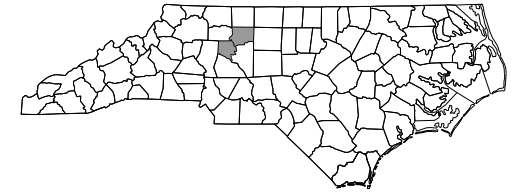
Sheet No.	Station & Coordinates (Road and Non Road Projects)	Surface Water Body	Energy Dissipator Type	Riprap Type	Drainage Area (ac)	Conveyance Structure	Pipe/Structure Dimensions (in)	Q10 (cfs)	V10 (fps)	BMP Associated w/ Buffer Rules?
4	-L- STA. 49+17 LT		PSH	Class 'B'	0.4	Pipe	15	2.2	0.5	No
11	-L- STA. 121+50 RT		PSH	Class 'B'	2.8	Pipe	18	9.5	1.0	No
12	-L- STA. 139+49 RT		PSH	Class 'B'	1.7	Pipe	18	8.2	0.9	No

Additional Comments

Large empty yellow box for additional comments.

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-0911A	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34147.3.4	NHIMF-40-3(112)180	PE	



**PERMIT DRAWING  
SHEET 1 OF 33**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

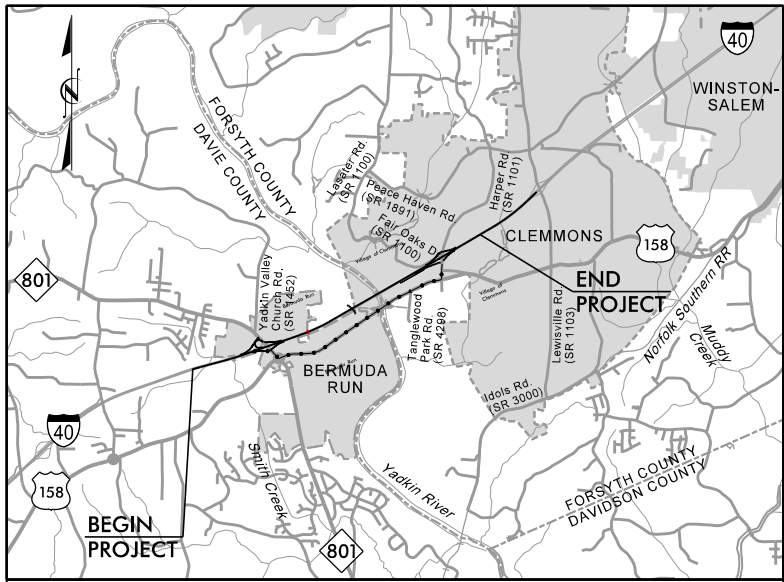
**DAVIE & FORSYTH COUNTIES**

**LOCATION: I-40 FROM WEST OF NC 801  
IN DAVIE COUNTY TO EAST OF I-40/SR 1101  
(HARPER RD.) IN FORSYTH COUNTY**

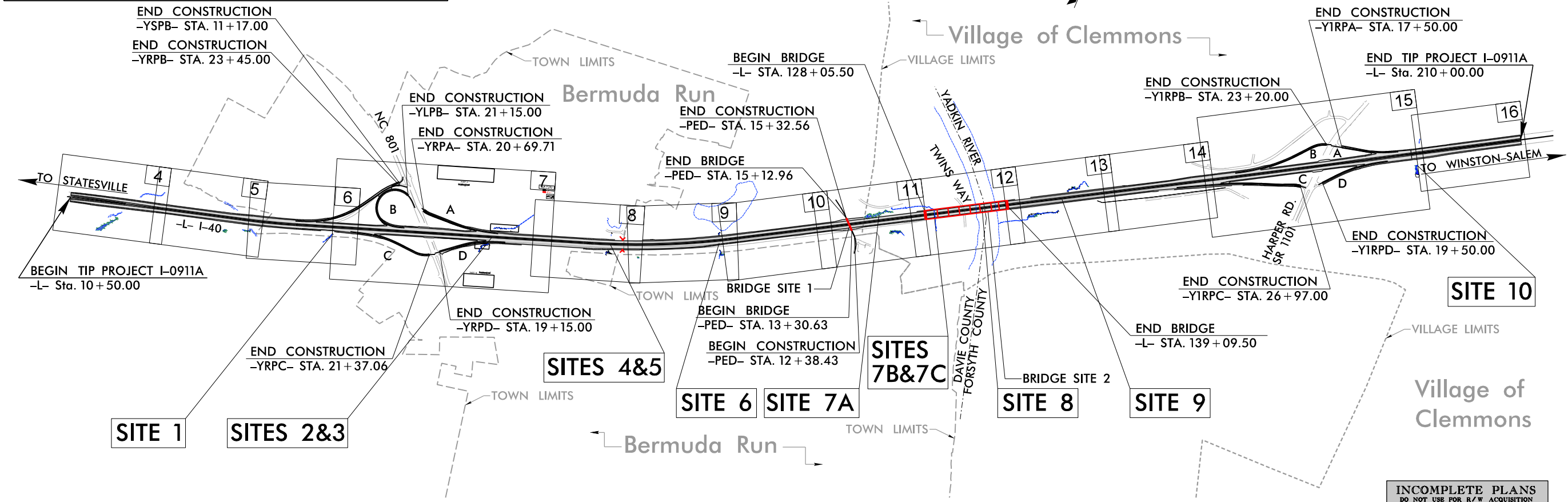
**TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNING, STRUCTURES,  
ITS, LIGHTING & UTILITIES**

**WETLAND AND  
STREAM IMPACTS**

See Sheet 1-B For Symbology

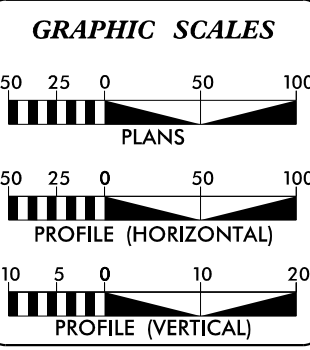


**VICINITY MAP (NTS)**



THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.

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



**DESIGN DATA**

ADT 2017	=	58,600
ADT 2037	=	74,800
DHV	=	60%
D	=	9%
T	=	8% *
V	=	70 MPH
FUNC CLASS	=	INTERSTATE
* (TTST 5% + DUAL 3%)		

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT I-0911A	.....	3.569 miles
LENGTH STRUCTURE TIP PROJECT I-0911A	.....	0.209 miles
TOTAL LENGTH OF PROJECT I-0911A	.....	3.778 miles

**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

**FOR NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION**

2012 STANDARD SPECIFICATIONS

**LETTING DATE:**  
JULY 18, 2017

**Brandon J. McInnis, P.E.**  
PROJECT ENGINEER

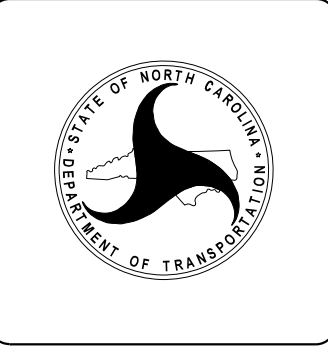
**Mary E. Yahl, P.E.**  
PROJECT DESIGN ENGINEER

**HYDRAULICS ENGINEER**

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

**ROADWAY DESIGN ENGINEER**

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



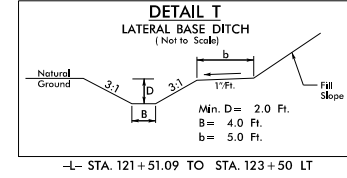
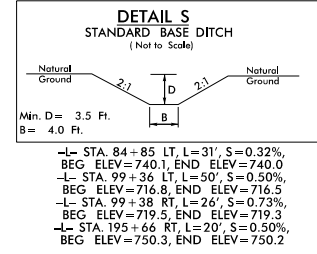
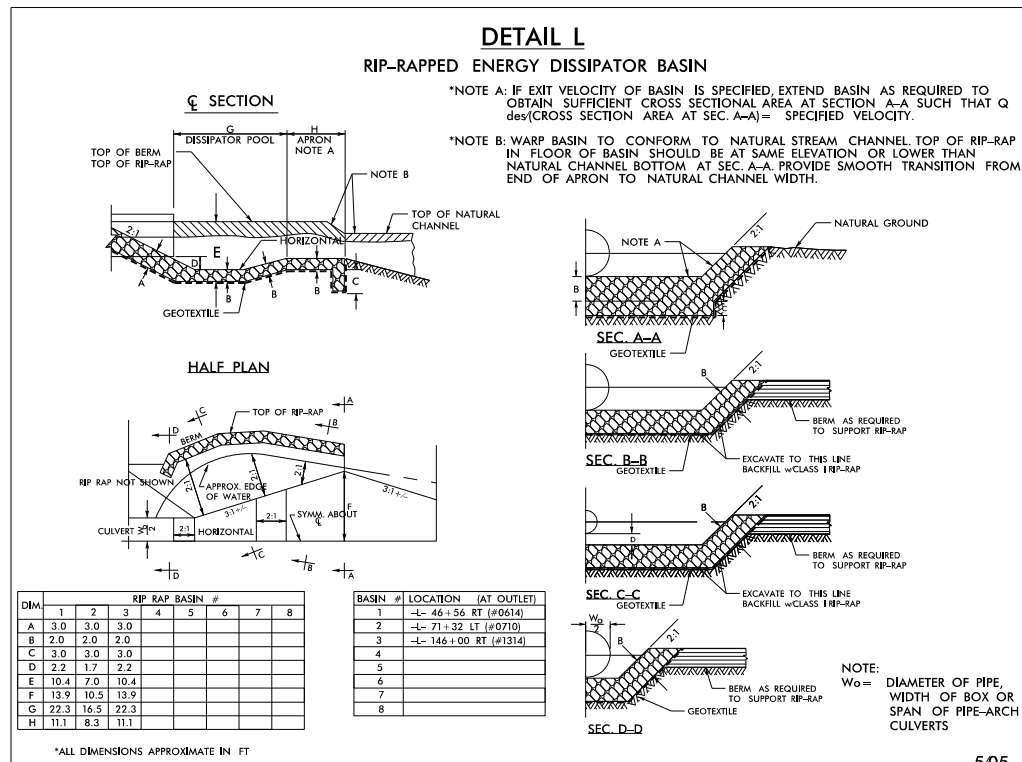
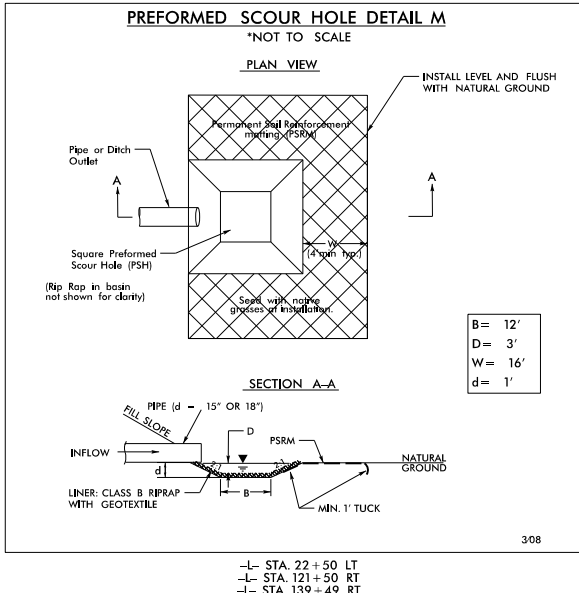
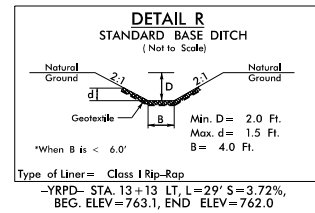
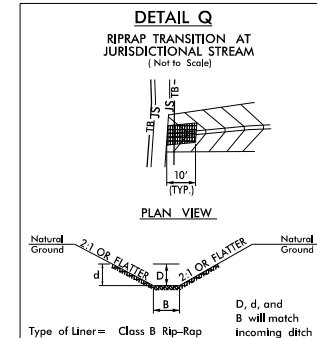
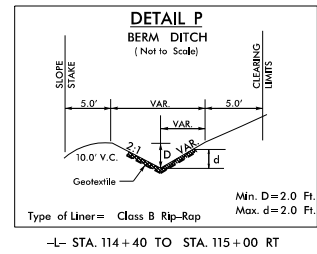
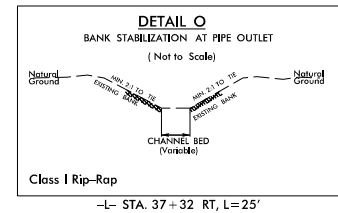
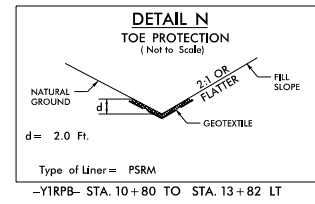
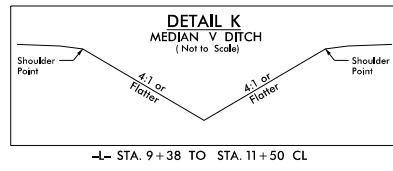
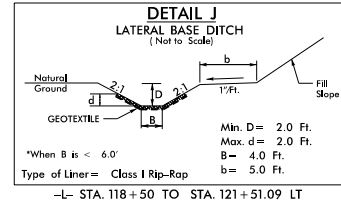
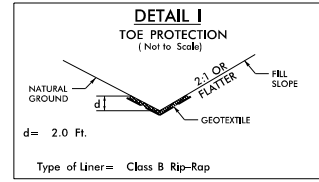
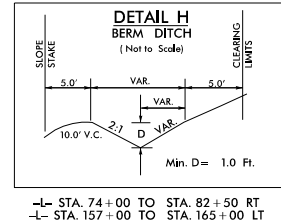
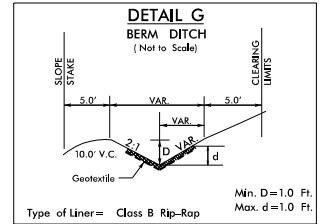
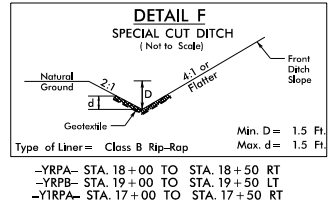
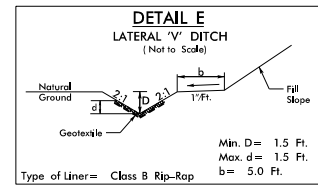
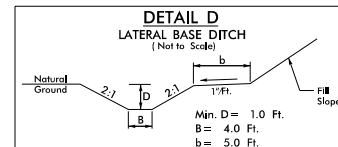
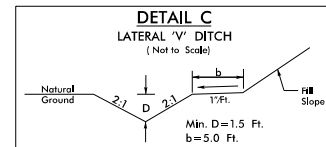
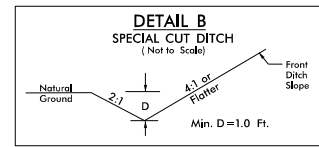
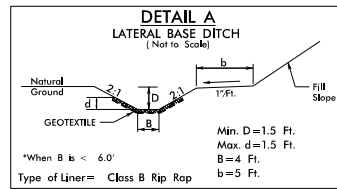
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**CONTRACT: C203965**

2/21/2018 R:\Hydraulics\PERMITS-Environmental\Drawings\I0911A-Hyd-prm.-tsh.dgn fkeys

PROJECT REFERENCE NO. 1-0911A	SHEET NO. 20-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	

**PERMIT DRAWING**  
**SHEET 2 OF 33**



PLANS PREPARED BY:

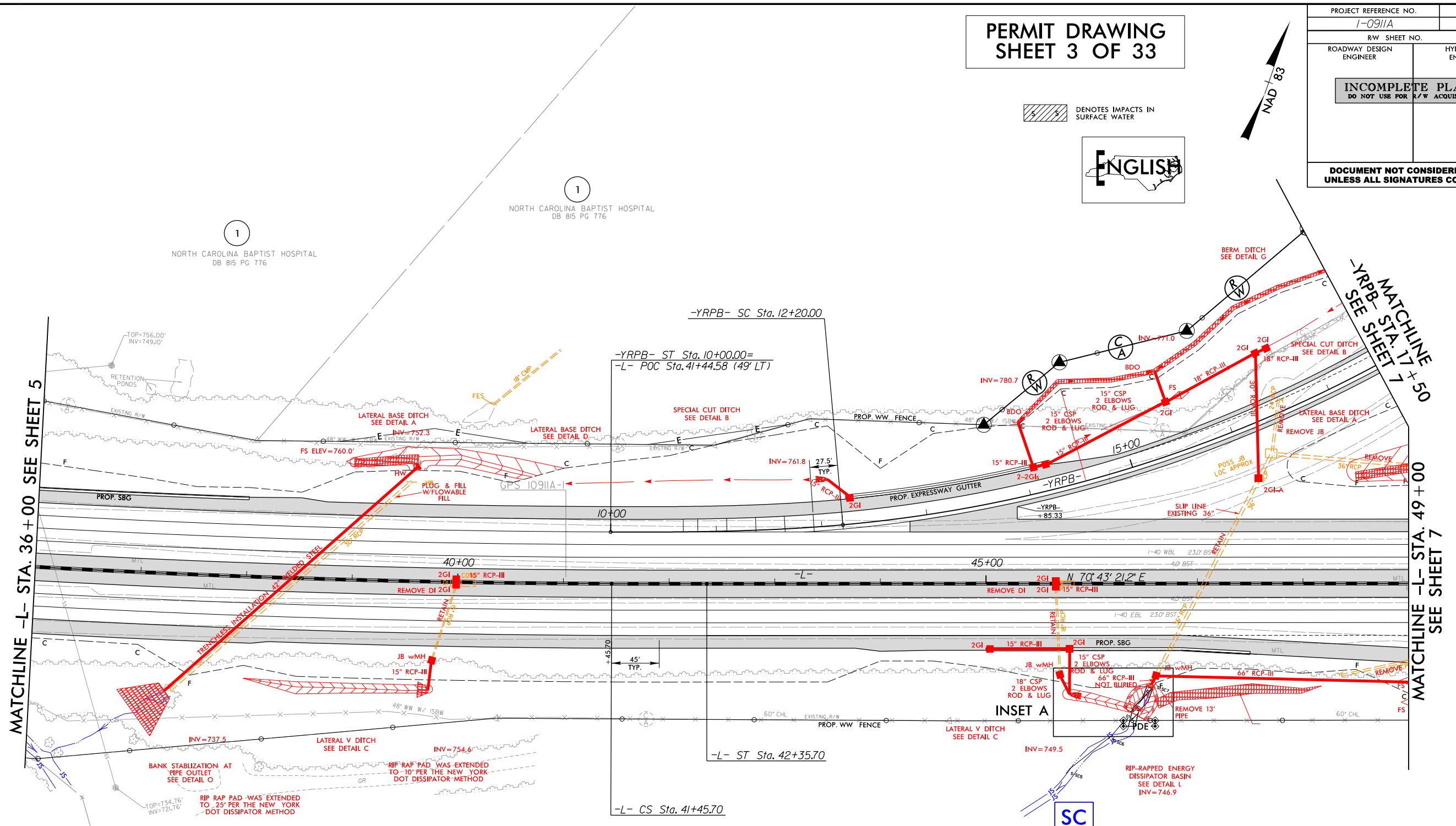
**RK&K**

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

# PERMIT DRAWING SHEET 3 OF 33

PROJECT REFERENCE NO. 1-0911A	SHEET NO. 6
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	
<b>INCOMPLETE PLANS</b> DO NOT USE FOR A/W ACQUISITION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	

5 5 DENOTES IMPACTS IN SURFACE WATER

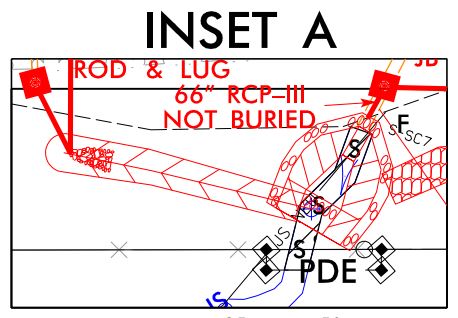


MATCHLINE -L- STA. 36+00 SEE SHEET 5

MATCHLINE -YRPB- STA. 17+50 SEE SHEET 7

MATCHLINE -L- STA. 49+00 SEE SHEET 7

**SC**  
**SITE 1**



FOR -L- PROFILE SEE SHTS. 18-19  
FOR -YRPB- PROFILE SEE SHT. 28  
FOR -YRPC- PROFILE SEE SHT. 29

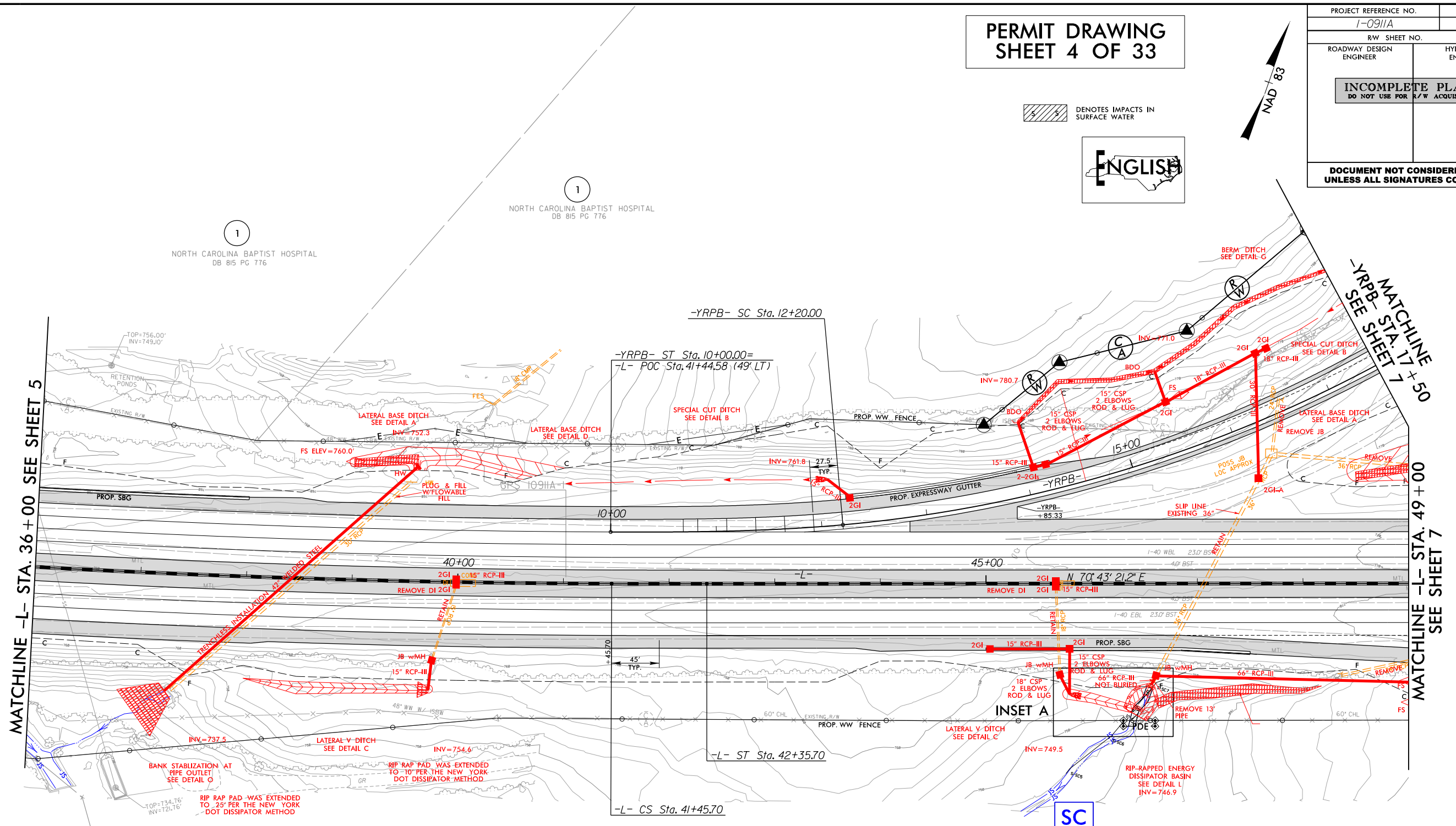
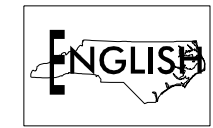
PLANS PREPARED BY :  
**RK&K**  
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2/21/2018  
R:\Hydro\Drawings\Environmental\Drawings\10911A\_Hyd.prm\_wet\_psh06.dgn

# PERMIT DRAWING SHEET 4 OF 33

PROJECT REFERENCE NO. 1-0911A	SHEET NO. 6
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	
<b>INCOMPLETE PLANS</b> DO NOT USE FOR A/W ACQUISITION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	

5 5 DENOTES IMPACTS IN SURFACE WATER

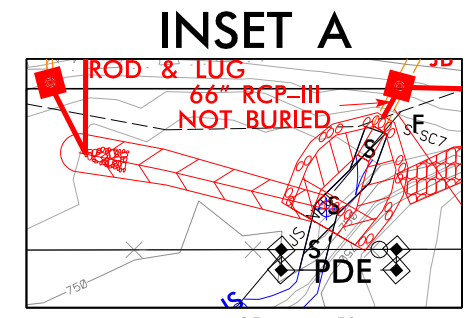


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MATCHLINE -YRPB- STA. 17+50 SEE SHEET 7

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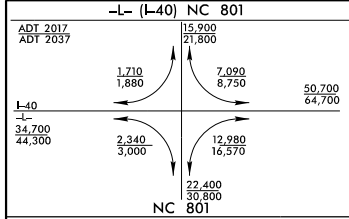
**SC**  
**SITE 1**



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

FOR -L- PROFILE SEE SHTS. 18-19  
FOR -YRPB- PROFILE SEE SHT. 28  
FOR -YRPC- PROFILE SEE SHT. 29

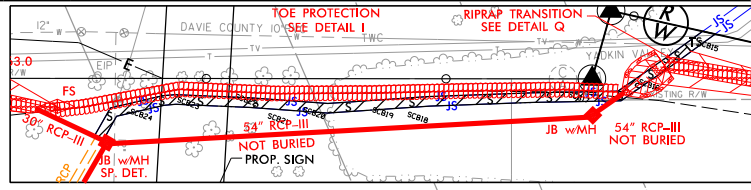
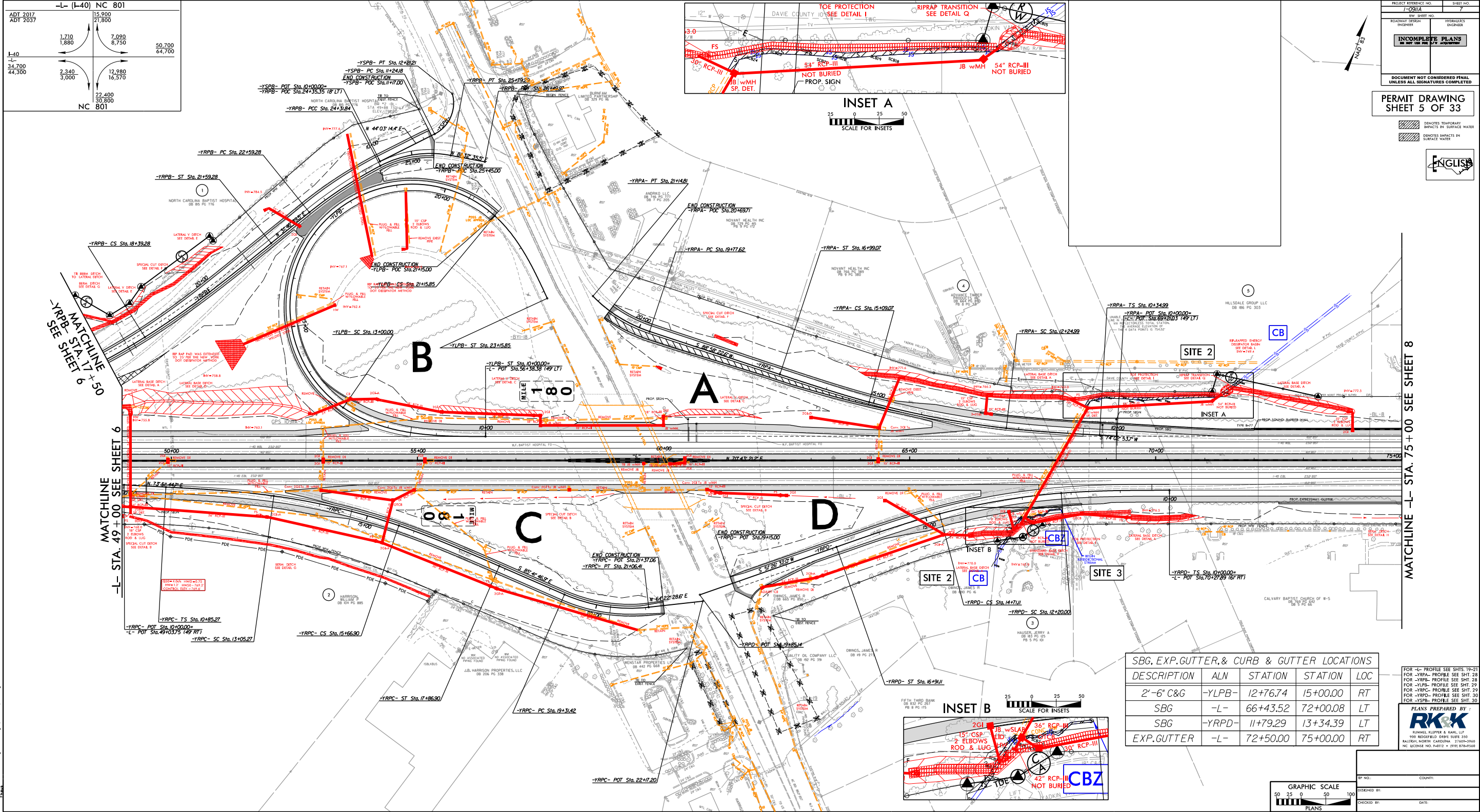
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2/21/2018  
R:\Hydro\Publics\PERMITS\Environmental\Drawings\10911A\_Hyd.prm\_wet\_psh06.com.dgn



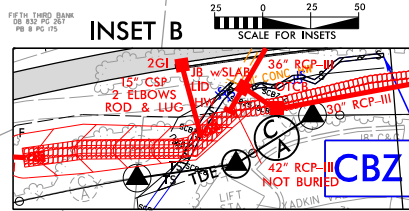
PROJECT REFERENCE NO. 7  
 SHEET NO. 7  
 INCOMPLETE PLANS  
 DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING  
 SHEET 5 OF 33

INDICATES TEMPORARY IMPACTS BY SURFACE WATER  
 INDICATES IMPACTS BY SURFACE WATER



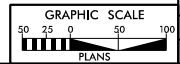
INSET A  
 SCALE FOR INSETS



INSET B  
 SCALE FOR INSETS

SBG, EXP, GUTTER, & CURB & GUTTER LOCATIONS				
DESCRIPTION	ALN	STATION	STATION	LOC
2'-6\"/>				

FOR -L- PROFILE SEE SHIT. 19-21  
 FOR -YRPA- PROFILE SEE SHIT. 28  
 FOR -YRBP- PROFILE SEE SHIT. 28  
 FOR -YRPP- PROFILE SEE SHIT. 29  
 FOR -YRPP- PROFILE SEE SHIT. 29  
 FOR -YRSP- PROFILE SEE SHIT. 30  
 FOR -YRSP- PROFILE SEE SHIT. 30



GRAPHIC SCALE  
 0 25 50 100  
 FEET  
 PLANS

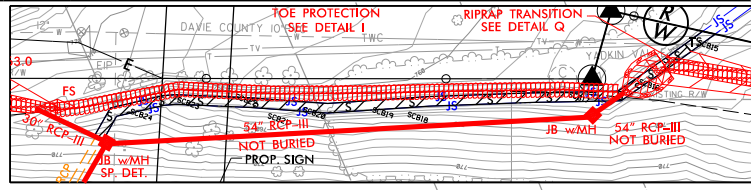
DESIGNED BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

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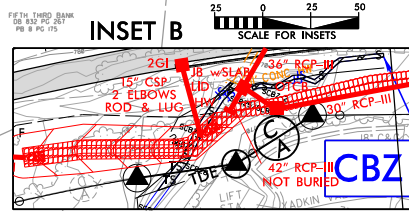
ADT 2017  
ADT 2037

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NC 801



INSET A  
SCALE FOR INSETS



INSET B  
SCALE FOR INSETS

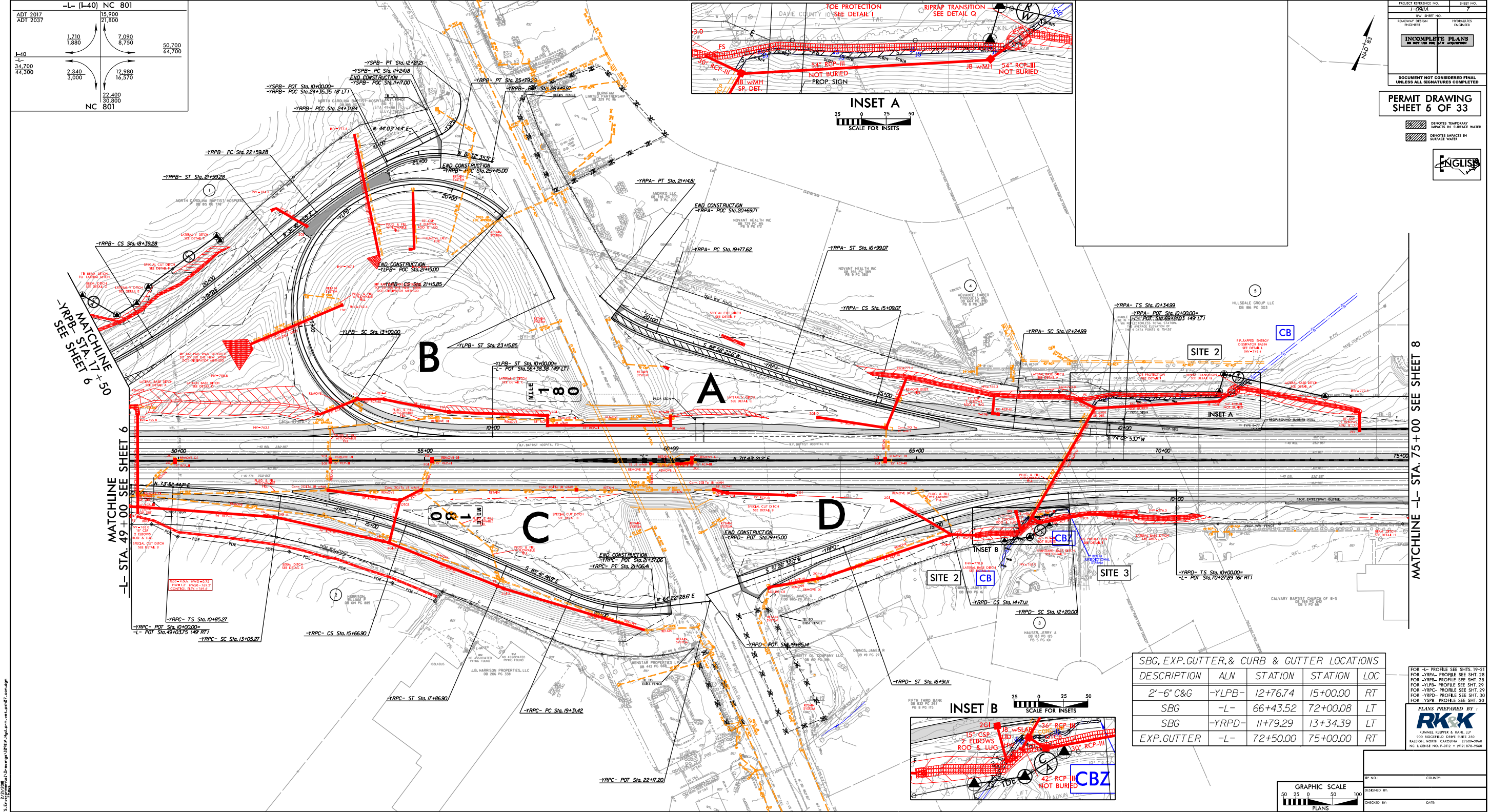
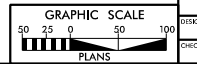
SBG, EXP. GUTTER, & CURB & GUTTER LOCATIONS

DESCRIPTION	ALN	STATION	STATION	LOC
2'-6\"/>				

FOR -L- PROFILE SEE SHIS. 19-21  
FOR -YRPA- PROFILE SEE SHT. 28  
FOR -YRBP- PROFILE SEE SHT. 28  
FOR -YRPP- PROFILE SEE SHT. 29  
FOR -YRPS- PROFILE SEE SHT. 29  
FOR -YRPT- PROFILE SEE SHT. 30  
FOR -YRPU- PROFILE SEE SHT. 30

**RK&K**  
SHIMMER LUTHER & KANE, L.P.  
100 REDFORD DRIVE SUITE 350  
RALEIGH, NORTH CAROLINA 27604-2942  
NC LICENSE NO. K-0117 • (919) 878-6568

DESIGNED BY:	CHECKED BY:
DATE:	DATE:



PROJECT REFERENCE NO. 7-051A SHEET NO. 7

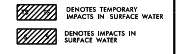
ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

**INCOMPLETE PLANS**  
DO NOT USE FOR THE PROJECT

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING SHEET 6 OF 33



MATCHLINE -L- STA. 75+00 SEE SHEET 8

MATCHLINE -L- STA. 49+00 SEE SHEET 6

MATCHLINE -L- STA. 17+50 SEE SHEET 6

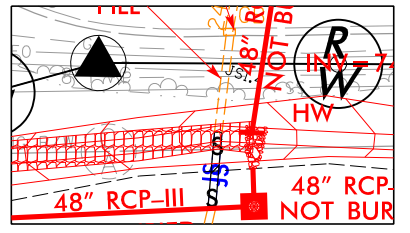
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8/17/99  
2/21/2016  
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# PERMIT DRAWING SHEET 7 OF 33

PROJECT REFERENCE NO. 1-0911A	SHEET NO. 8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR A/W ACQUISITION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	



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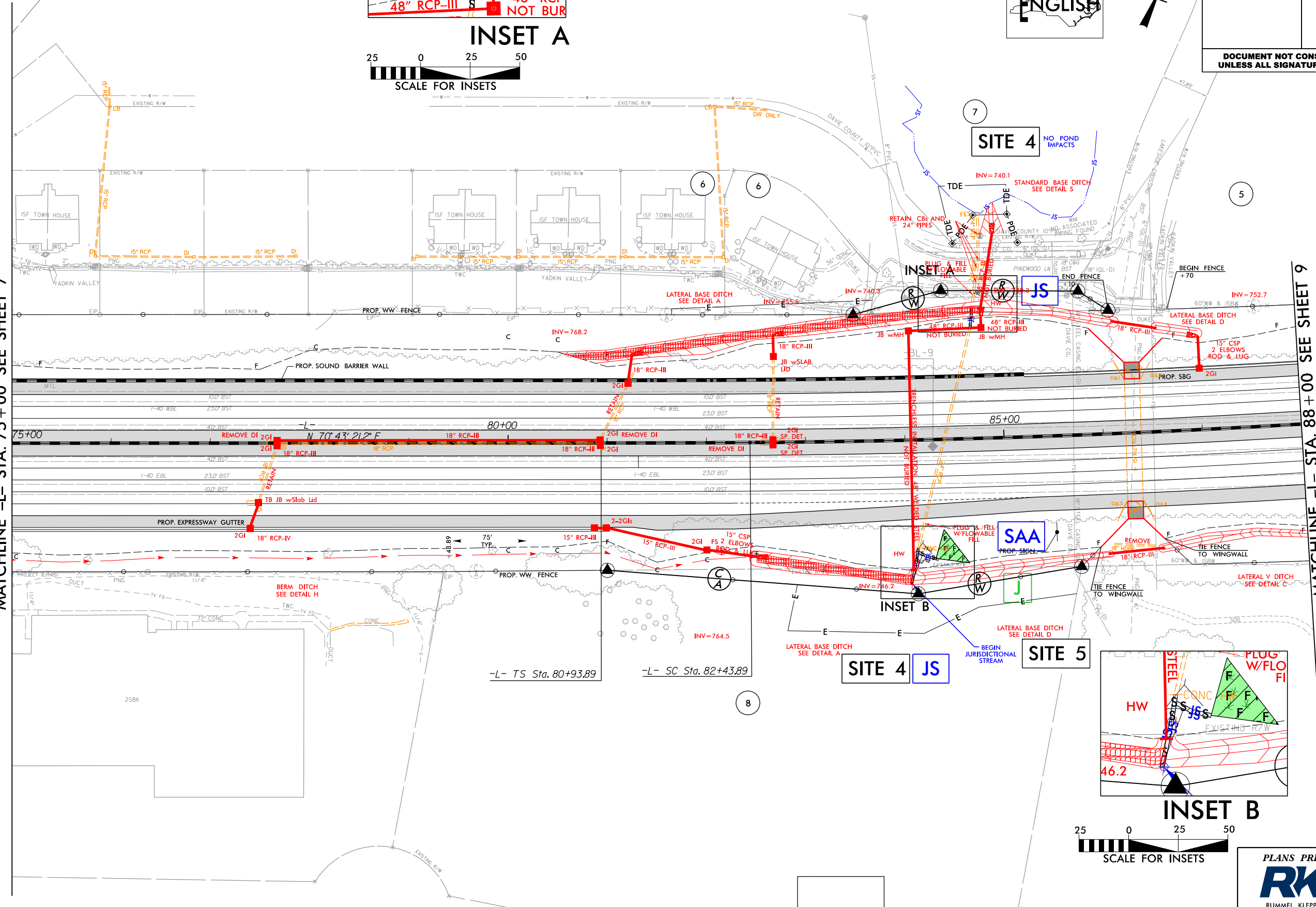


- DENOTES IMPACTS IN SURFACE WATER
- DENOTES FILL IN WETLAND

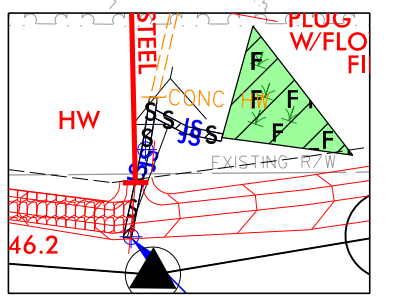


MATCHLINE -L- STA. 75+00 SEE SHEET 7

MATCHLINE -L- STA. 88+00 SEE SHEET 9



### INSET B



### INSET B

PLANS PREPARED BY:  
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RALEIGH, NORTH CAROLINA 27609-3960  
NC LICENSE NO. F-0112 • (919) 878-9560

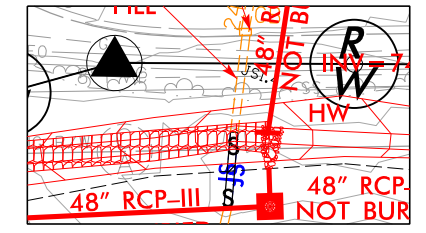
FOR -L- PROFILE SEE SHTS. 21-22

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ELEV.=803.77'

8/17/99  
2/21/2018  
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# PERMIT DRAWING SHEET 8 OF 33

PROJECT REFERENCE NO. 1-0911A	SHEET NO. 8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR A/W ACQUISITION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	



### INSET A

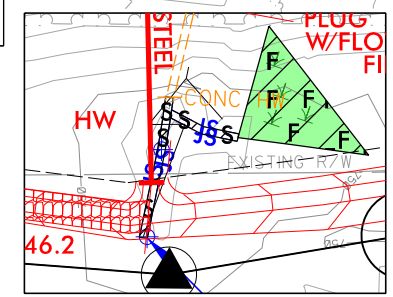
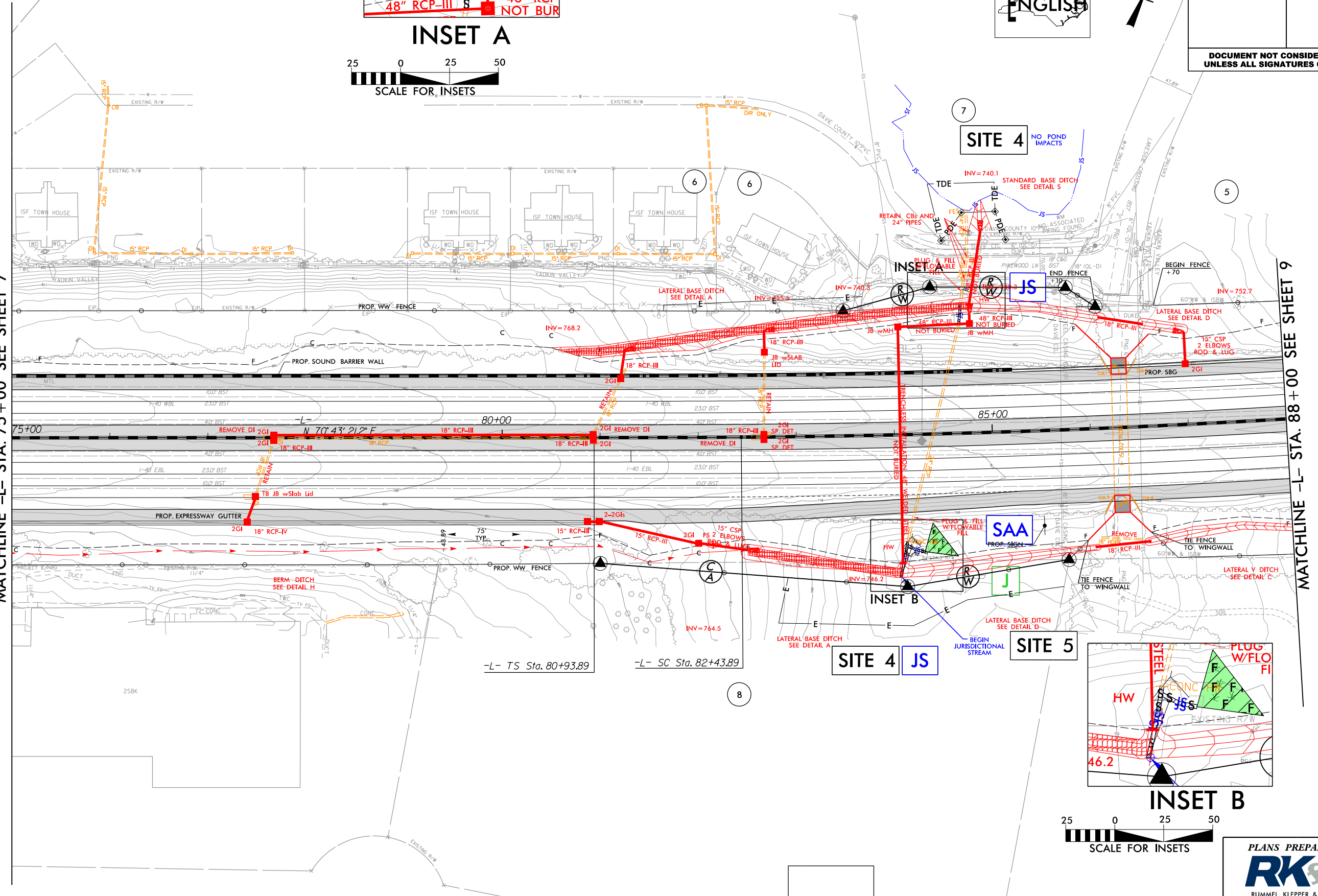
SCALE FOR INSETS  
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- DENOTES IMPACTS IN SURFACE WATER
- DENOTES FILL IN WETLAND



MATCHLINE -L- STA. 75+00 SEE SHEET 7

MATCHLINE -L- STA. 88+00 SEE SHEET 9



### INSET B

SCALE FOR INSETS  
0 25 50

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

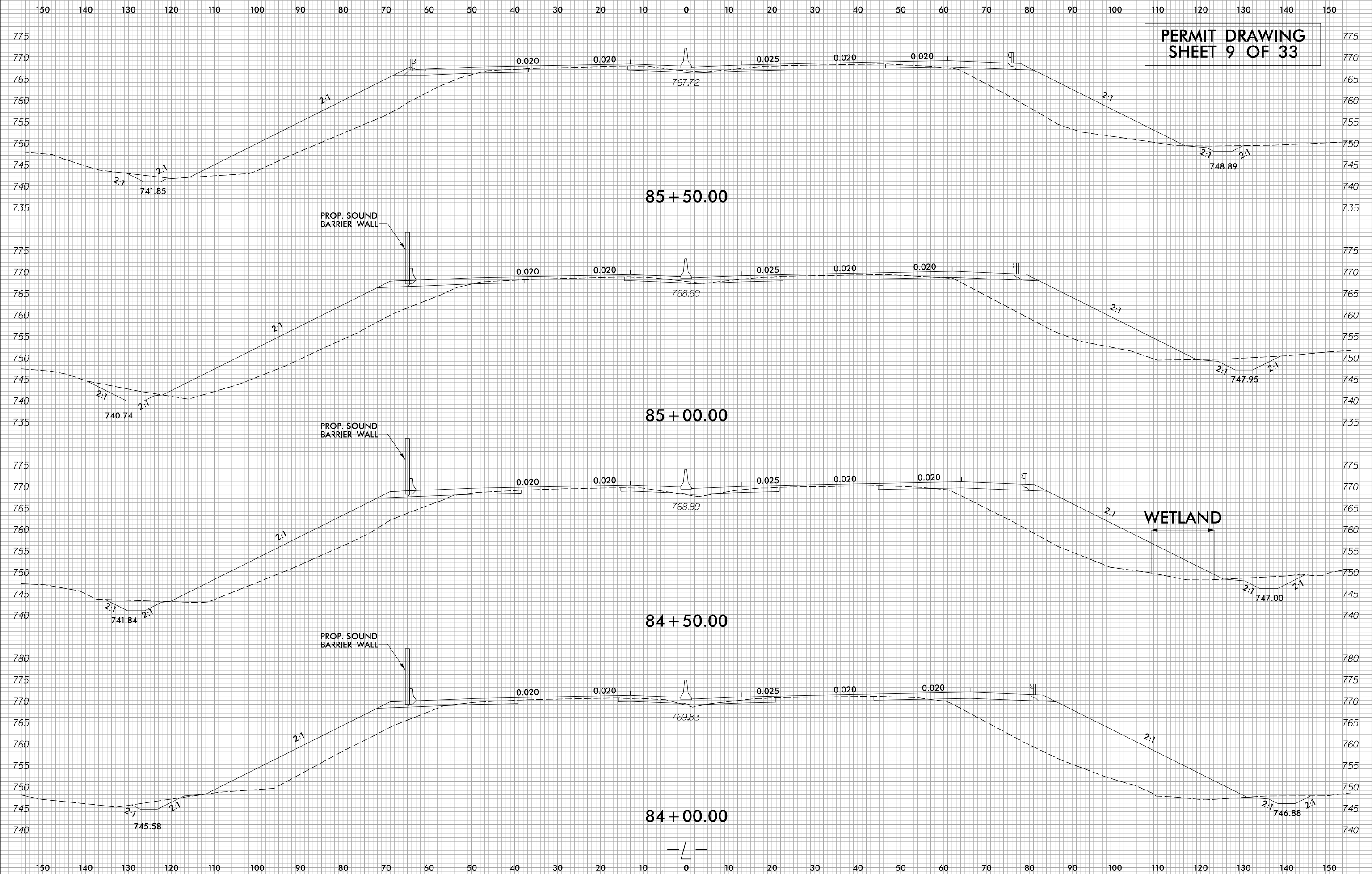
FOR -L- PROFILE SEE SHTS. 21-22

6/23/16



PROJ. REFERENCE NO.	SHEET NO.
I-0911A	X-43

**PERMIT DRAWING  
SHEET 9 OF 33**

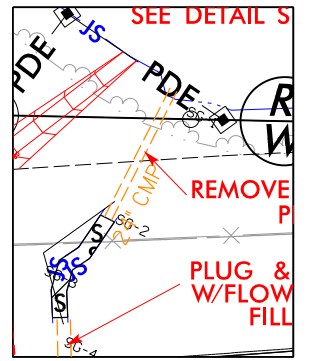


2/21/2018  
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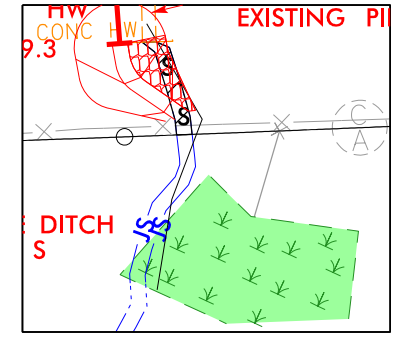
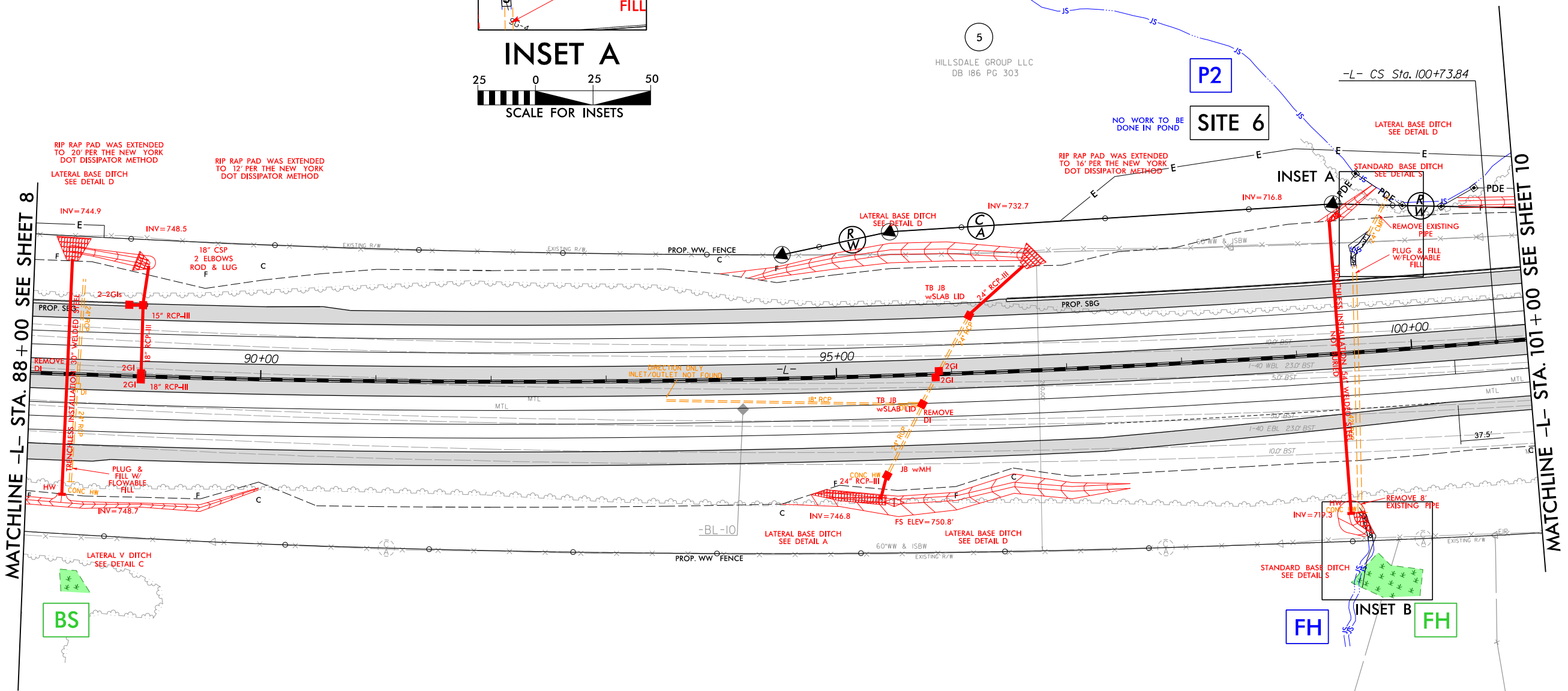
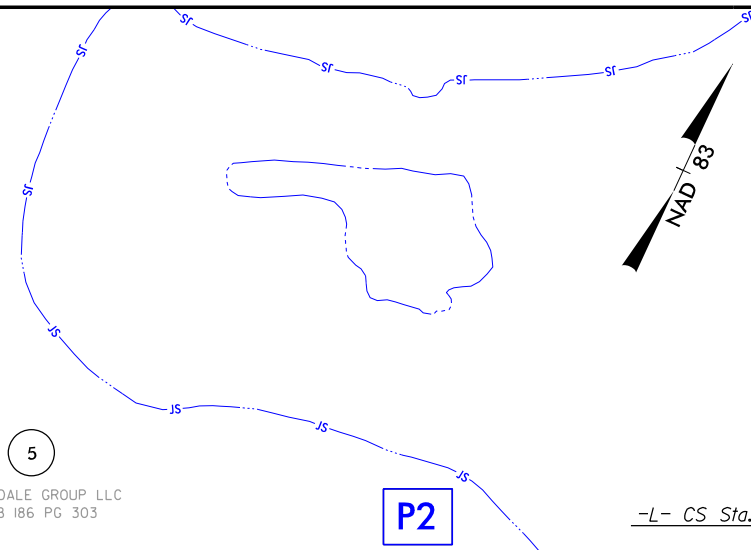
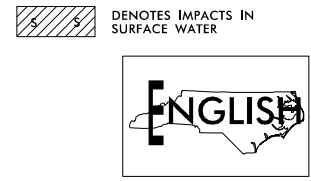
8/17/99

PROJECT REFERENCE NO. 1-0911A	SHEET NO. 9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR A/W ACQUISITION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	

**PERMIT DRAWING SHEET 10 OF 33**



**INSET A**  
SCALE FOR INSETS



**INSET B**  
SCALE FOR INSETS

HILLSDALE GROUP LLC  
DB 186 PG 303  
PB 10 PG 230

HILLSDALE GROUP LLC  
DB 186 PG 303  
PB 7 PG 66

**PLANS PREPARED BY :**  
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FOR -L- PROFILE SEE SHTS. 22-23

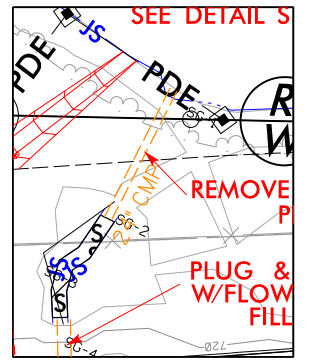
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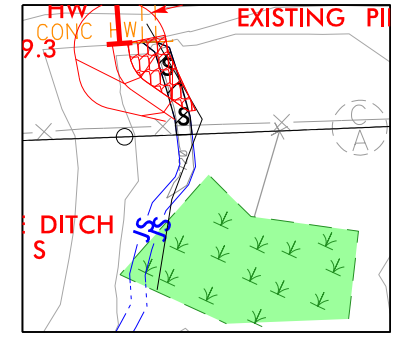
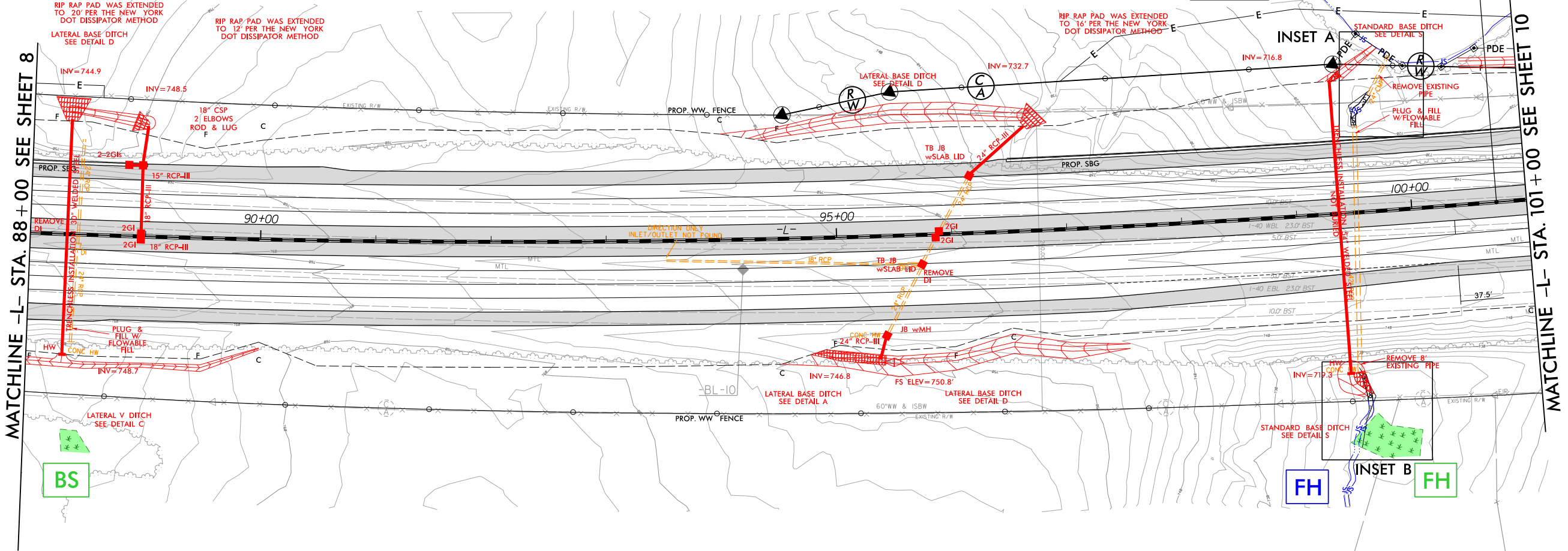
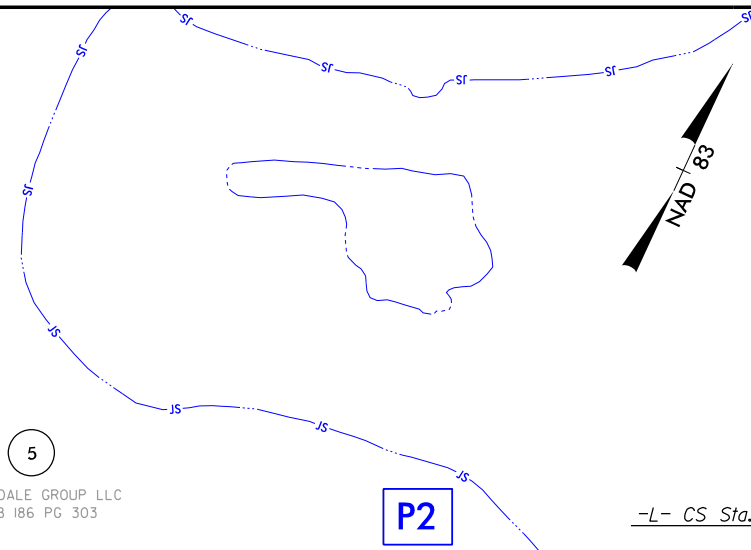
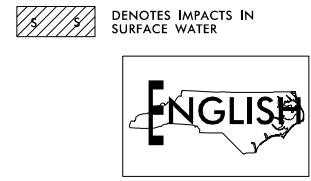
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# PERMIT DRAWING SHEET 11 OF 33

PROJECT REFERENCE NO. 1-0911A	SHEET NO. 9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR A/W ACQUISITION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	



**INSET A**  
SCALE FOR INSETS



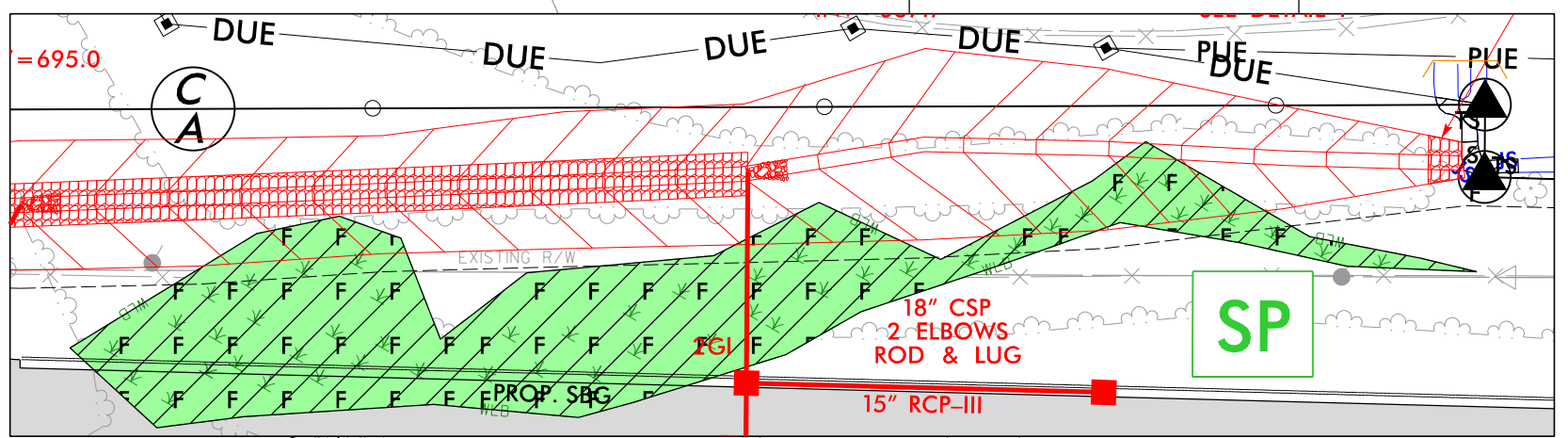
**INSET B**  
SCALE FOR INSETS

PLANS PREPARED BY :  
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 900 RIDGEFIELD DRIVE SUITE 350  
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 NC LICENSE NO. F-0112 • (919) 878-9560

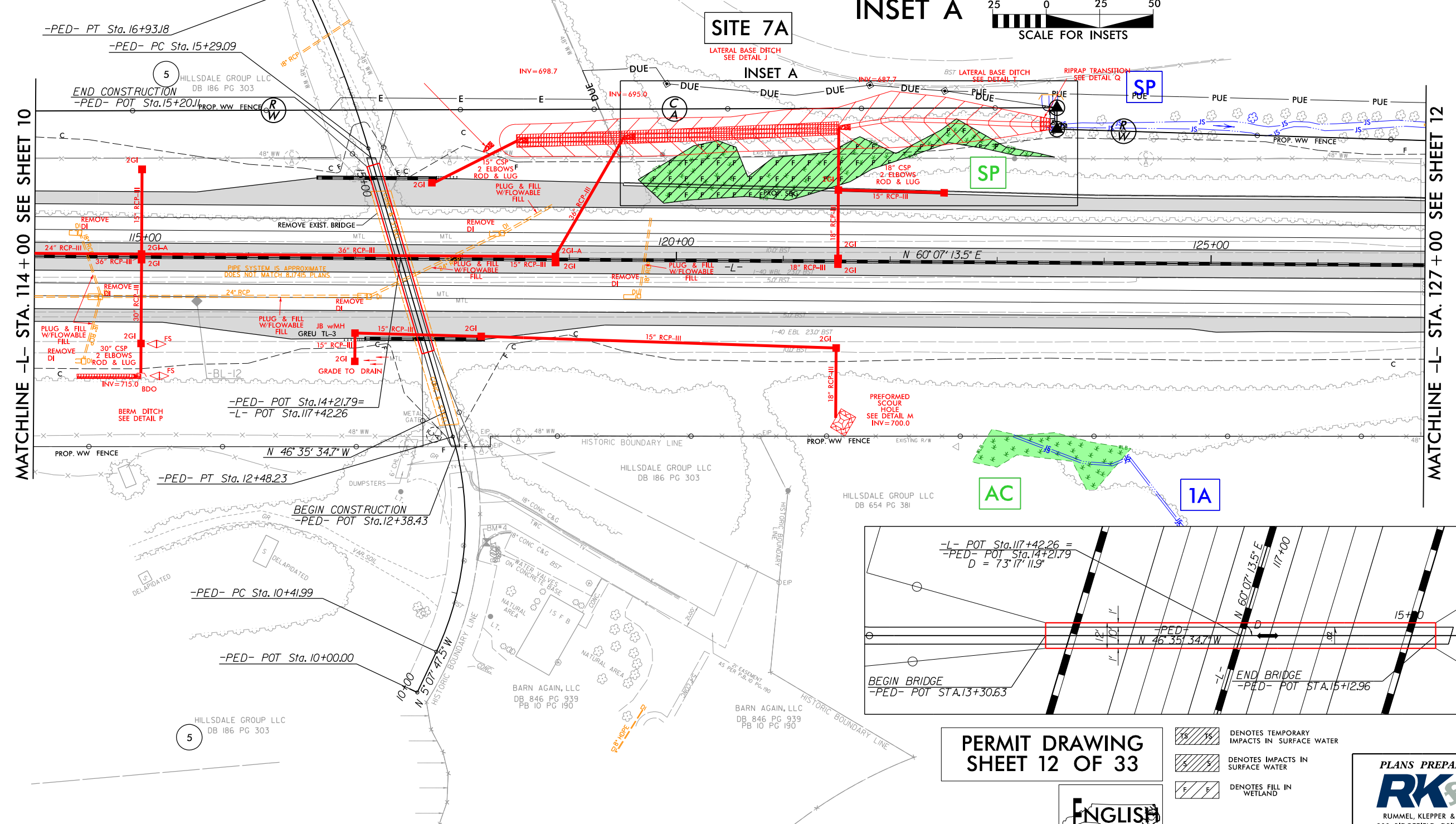
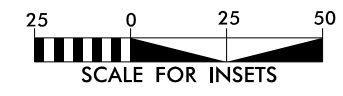
FOR -L- PROFILE SEE SHTS. 22-23

8/17/99  
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 2/21/2016

PROJECT REFERENCE NO. 1-0911A	SHEET NO. 11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR A/W ACQUISITION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	



DESCRIPTION	ALN	STATION	STATION	LOC
SBG	-L-	119+50.00	127+00.00	LT



MATCHLINE -L- STA. 114 + 00 SEE SHEET 10

MATCHLINE -L- STA. 127 + 00 SEE SHEET 12

**PERMIT DRAWING**  
**SHEET 12 OF 33**

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

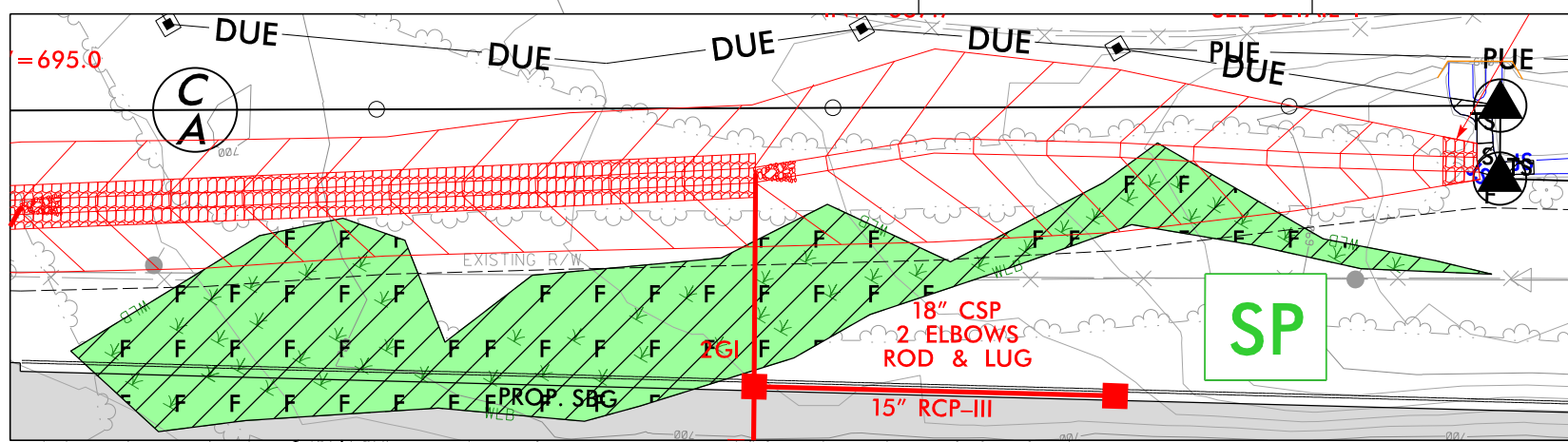
**ENGLISH**

**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

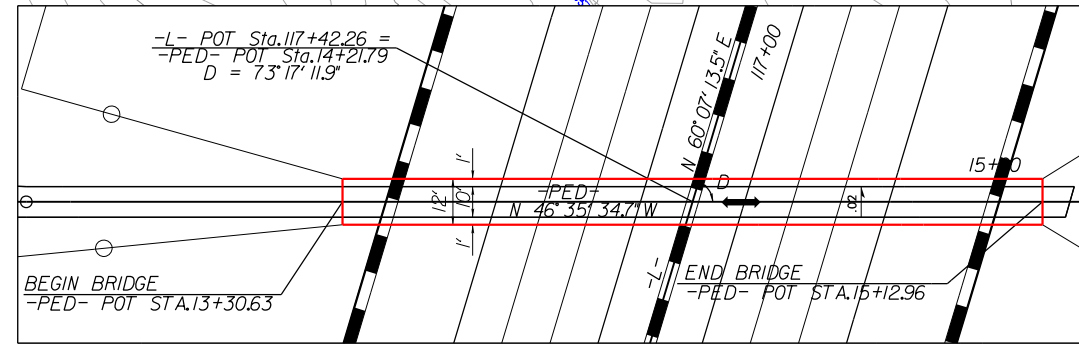
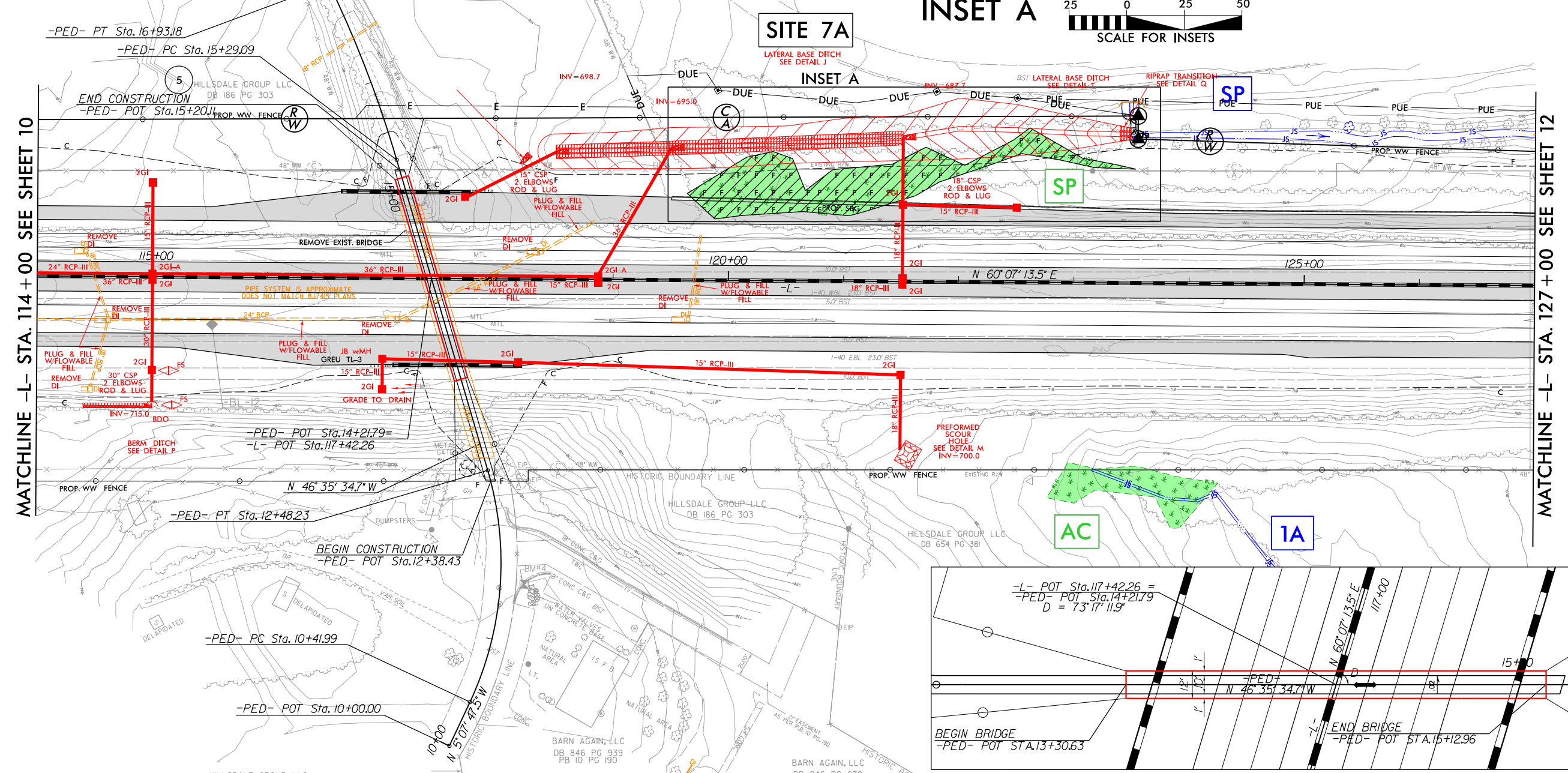
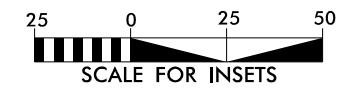
FOR -L- PROFILE SEE SHT. 24  
 FOR -PED- PROFILE SEE SHT. 32

8.17/99

PROJECT REFERENCE NO. 1-0911A	SHEET NO. 11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR A/W ACQUISITION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	



DESCRIPTION	ALN	STATION	STATION	LOC
SBG	-L-	119+50.00	127+00.00	LT



**PERMIT DRAWING**  
**SHEET 13 OF 33**

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



**PLANS PREPARED BY :**  
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900 RIDGEFIELD DRIVE SUITE 350  
RALEIGH, NORTH CAROLINA 27609-3960  
NC LICENSE NO. F-0112 • (919) 878-9560

FOR -L- PROFILE SEE SHT. 24  
FOR -PED- PROFILE SEE SHT. 32

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6/23/16

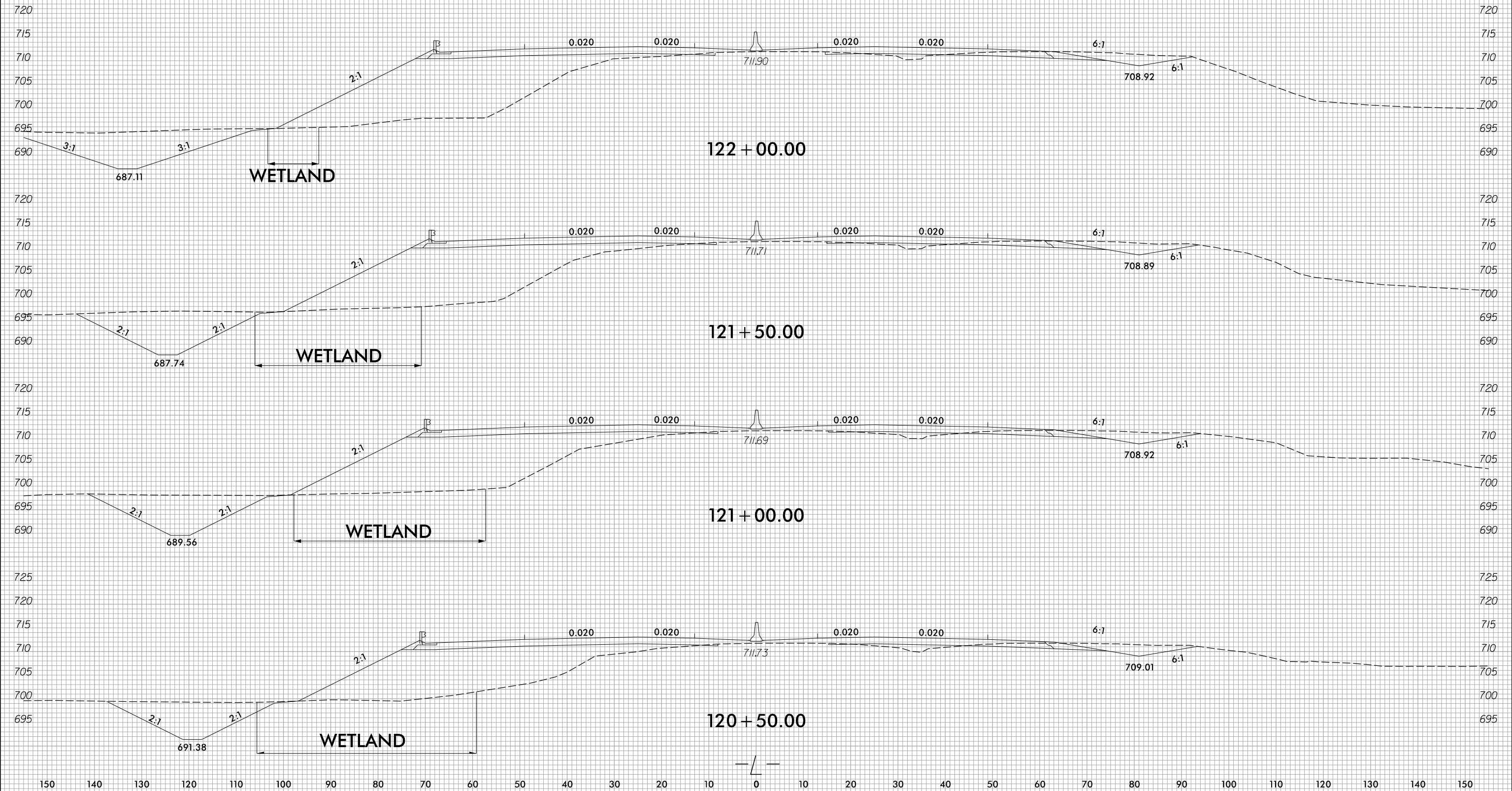


PROJ. REFERENCE NO.  
I-0911A

SHEET NO.  
X-61

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**PERMIT DRAWING  
SHEET 14 OF 33**

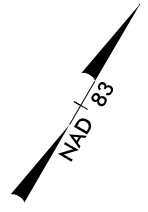


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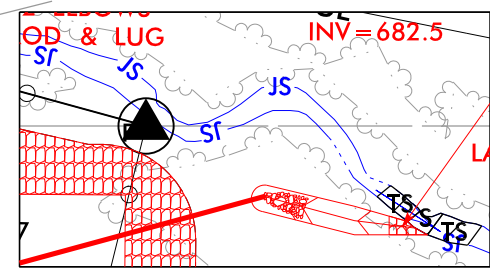


**PERMIT DRAWING  
SHEET 15 OF 33**

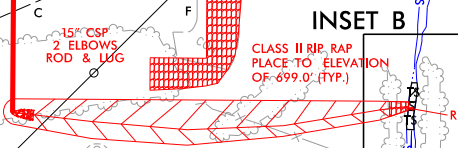
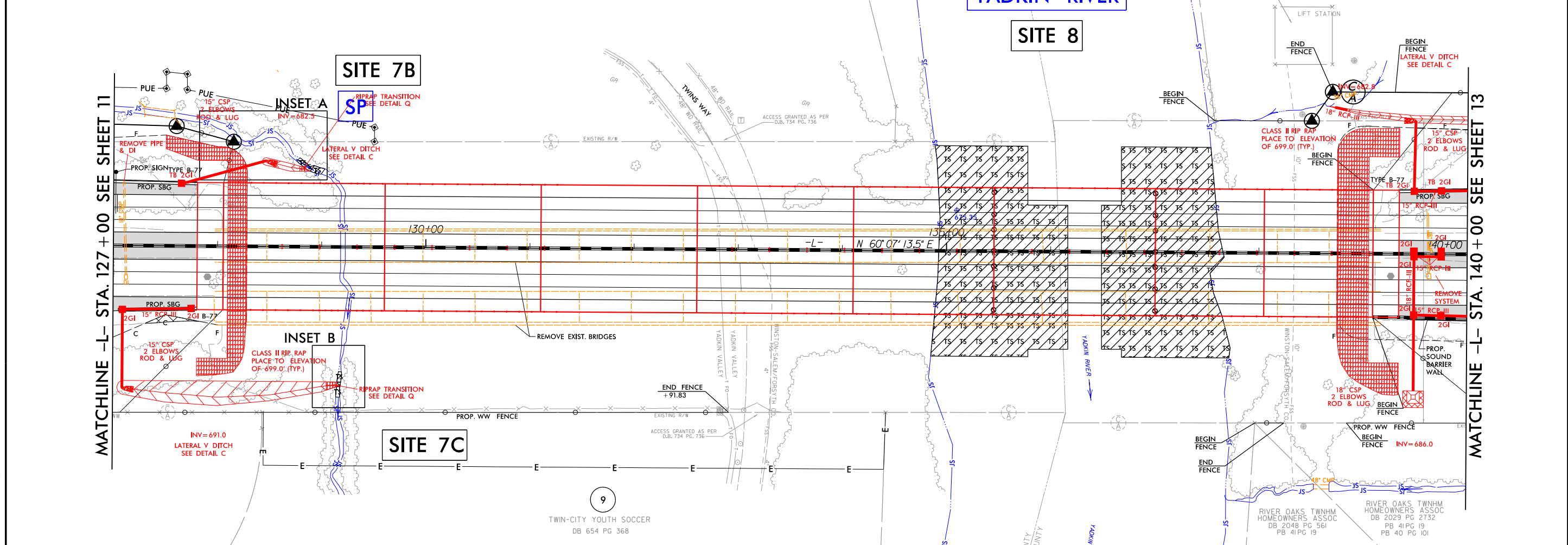
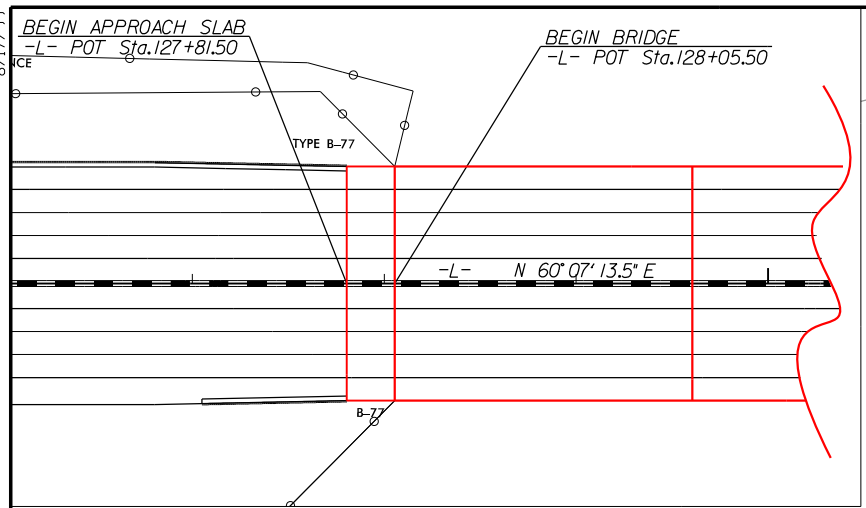
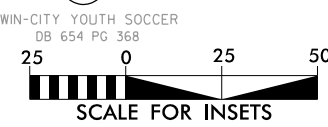
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<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	



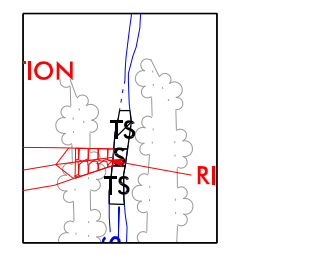
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 DENOTES IMPACTS IN SURFACE WATER



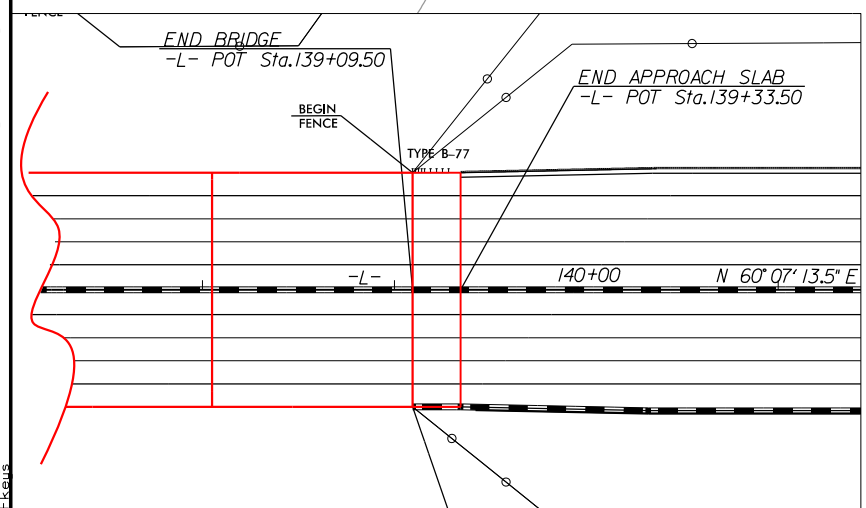
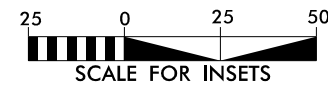
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**INSET B**



**INSET C**



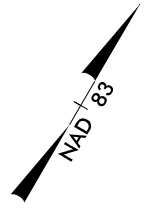
**PLANS PREPARED BY :**  
  
 RUMMEL, KLEPPER & KAHL, LLP  
 900 RIDGEFIELD DRIVE SUITE 350  
 RALEIGH, NORTH CAROLINA 27609-3960  
 NC LICENSE NO. F-0112 • (919) 878-9560

FOR -L- PROFILE SEE SHTS. 24-25

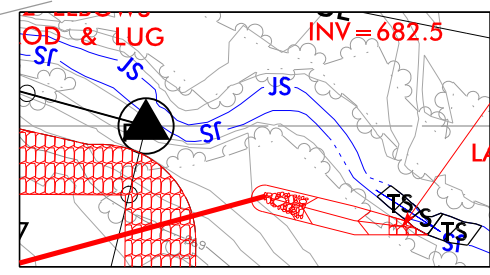
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 8/21/2018

**PERMIT DRAWING  
SHEET 16 OF 33**

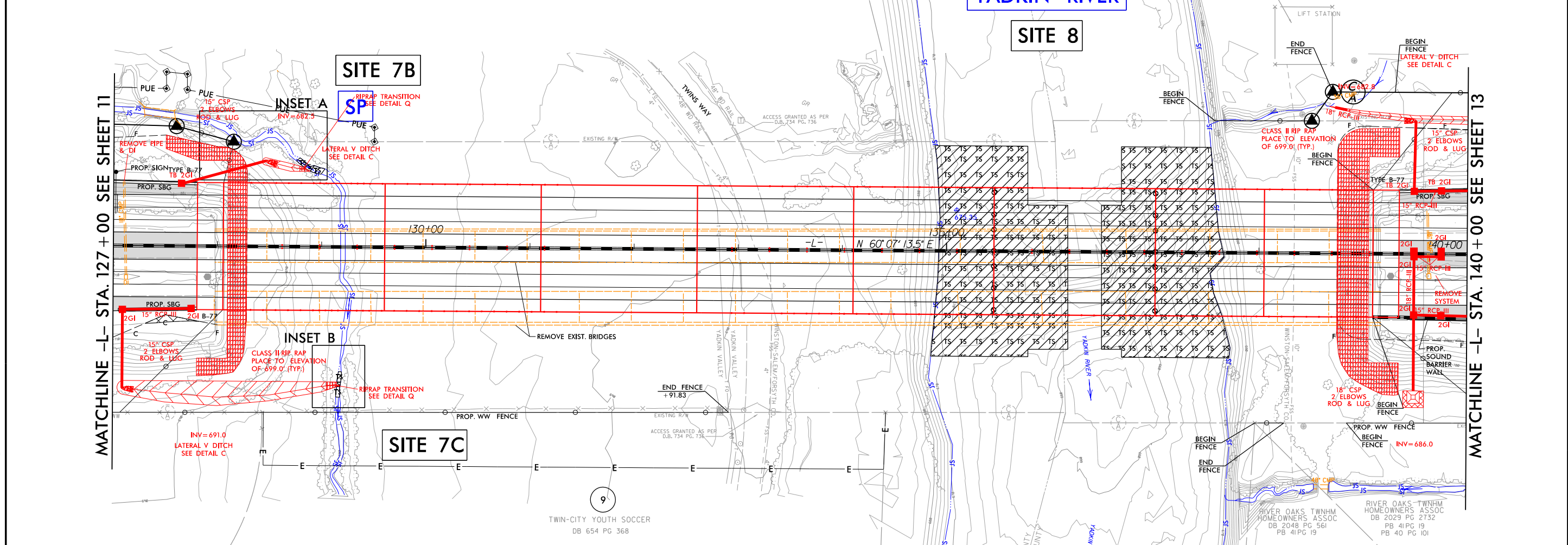
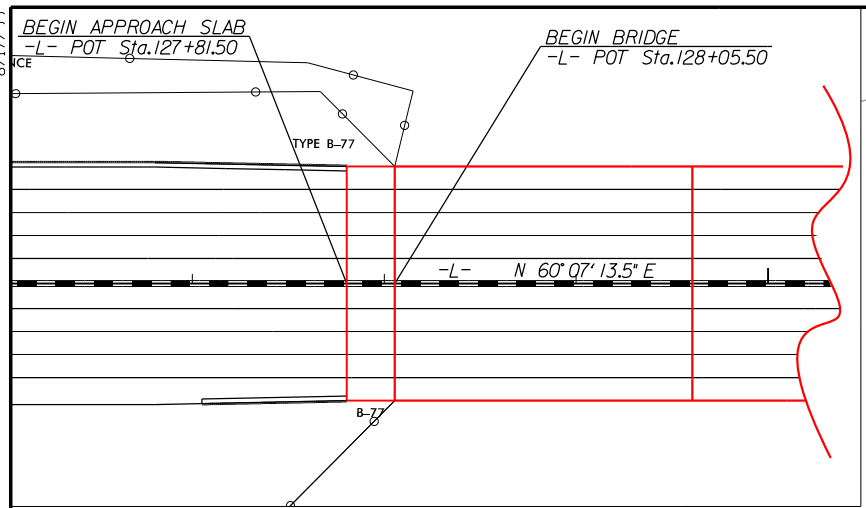
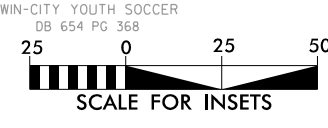
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RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR A/W ACQUISITION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	



DENOTES TEMPORARY IMPACTS IN SURFACE WATER  
 DENOTES IMPACTS IN SURFACE WATER

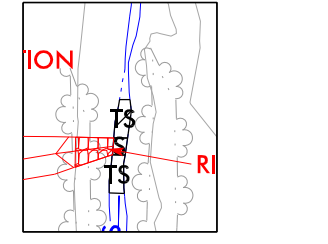
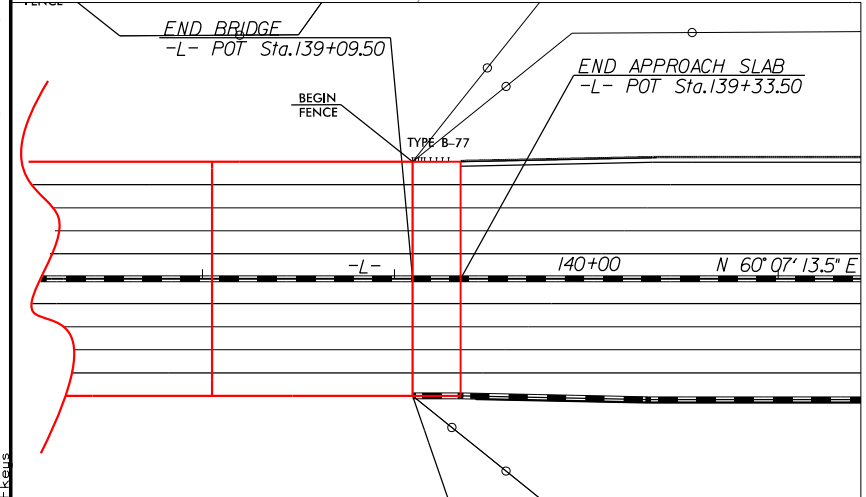


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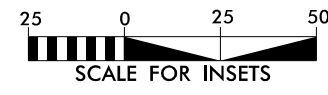


MATCHLINE -L- STA. 127+00 SEE SHEET 11

MATCHLINE -L- STA. 140+00 SEE SHEET 13



**INSET B**



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

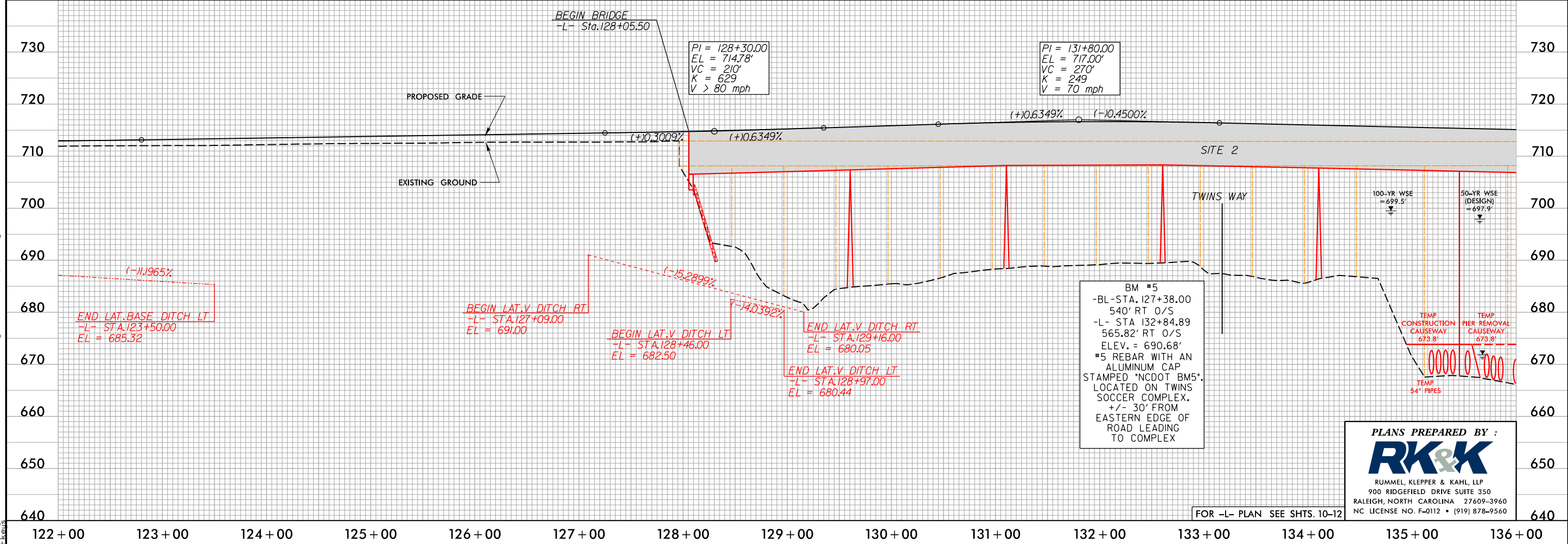
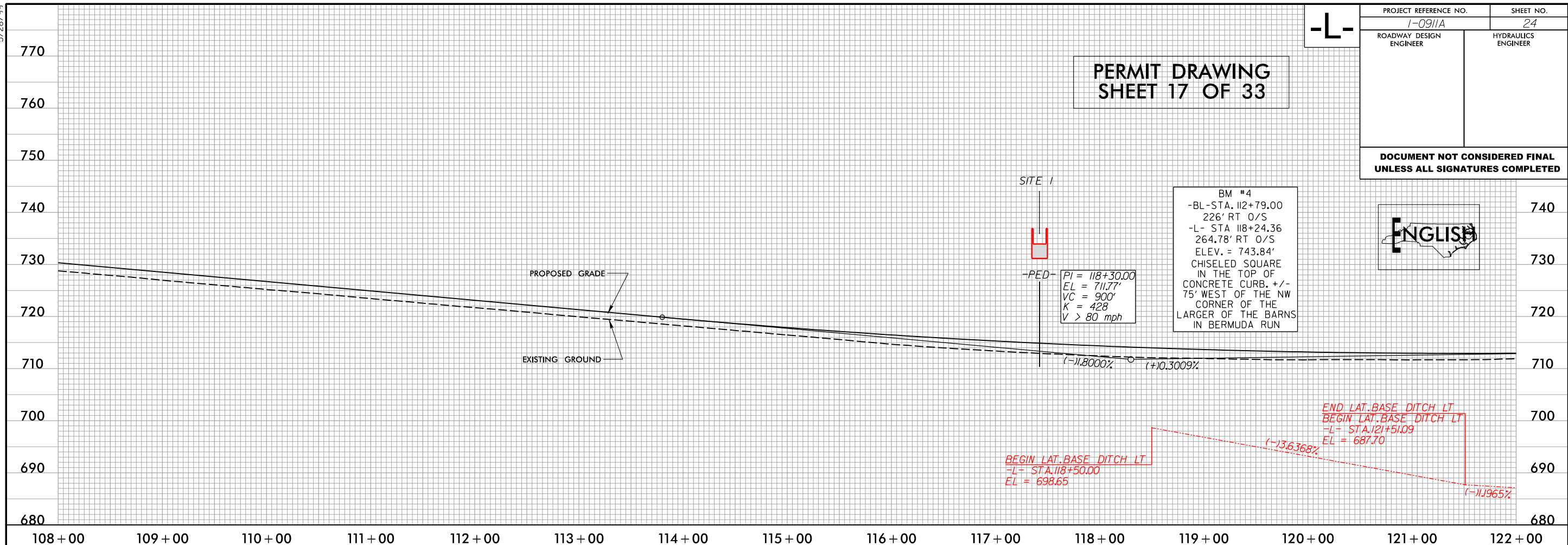
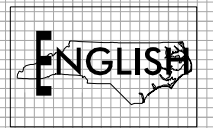
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5/28/99

PROJECT REFERENCE NO. 1-0911A		SHEET NO. 24
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

**PERMIT DRAWING  
SHEET 17 OF 33**



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

FOR -L- PLAN SEE SHTS. 10-12

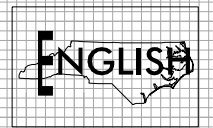
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5/28/99

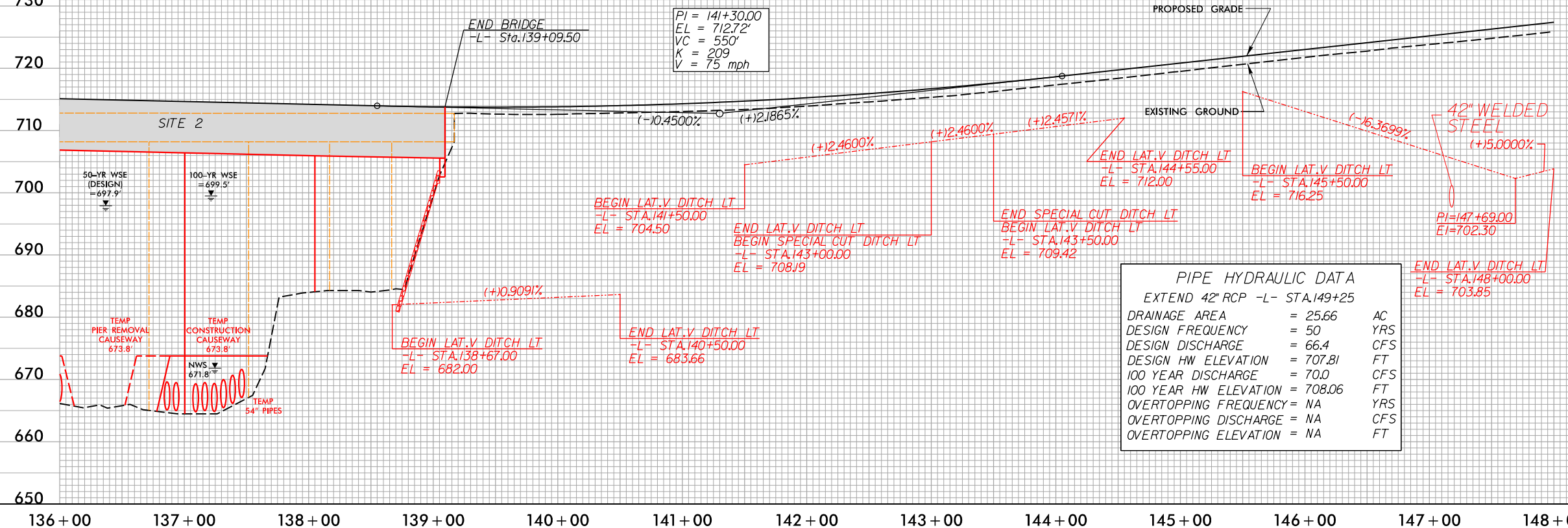
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# PERMIT DRAWING SHEET 18 OF 33

PROJECT REFERENCE NO. 1-0911A	SHEET NO. 25
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<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	

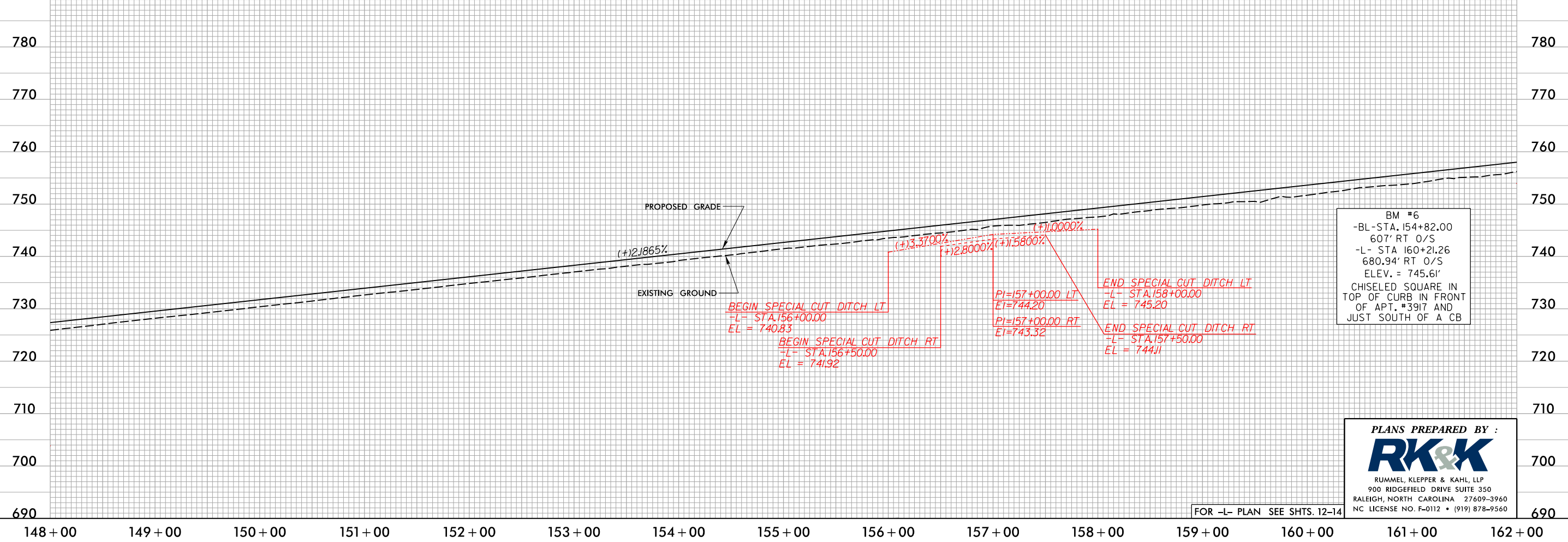


710  
700  
690  
680  
670  
660  
650



136+00 137+00 138+00 139+00 140+00 141+00 142+00 143+00 144+00 145+00 146+00 147+00 148+00

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148+00 149+00 150+00 151+00 152+00 153+00 154+00 155+00 156+00 157+00 158+00 159+00 160+00 161+00 162+00

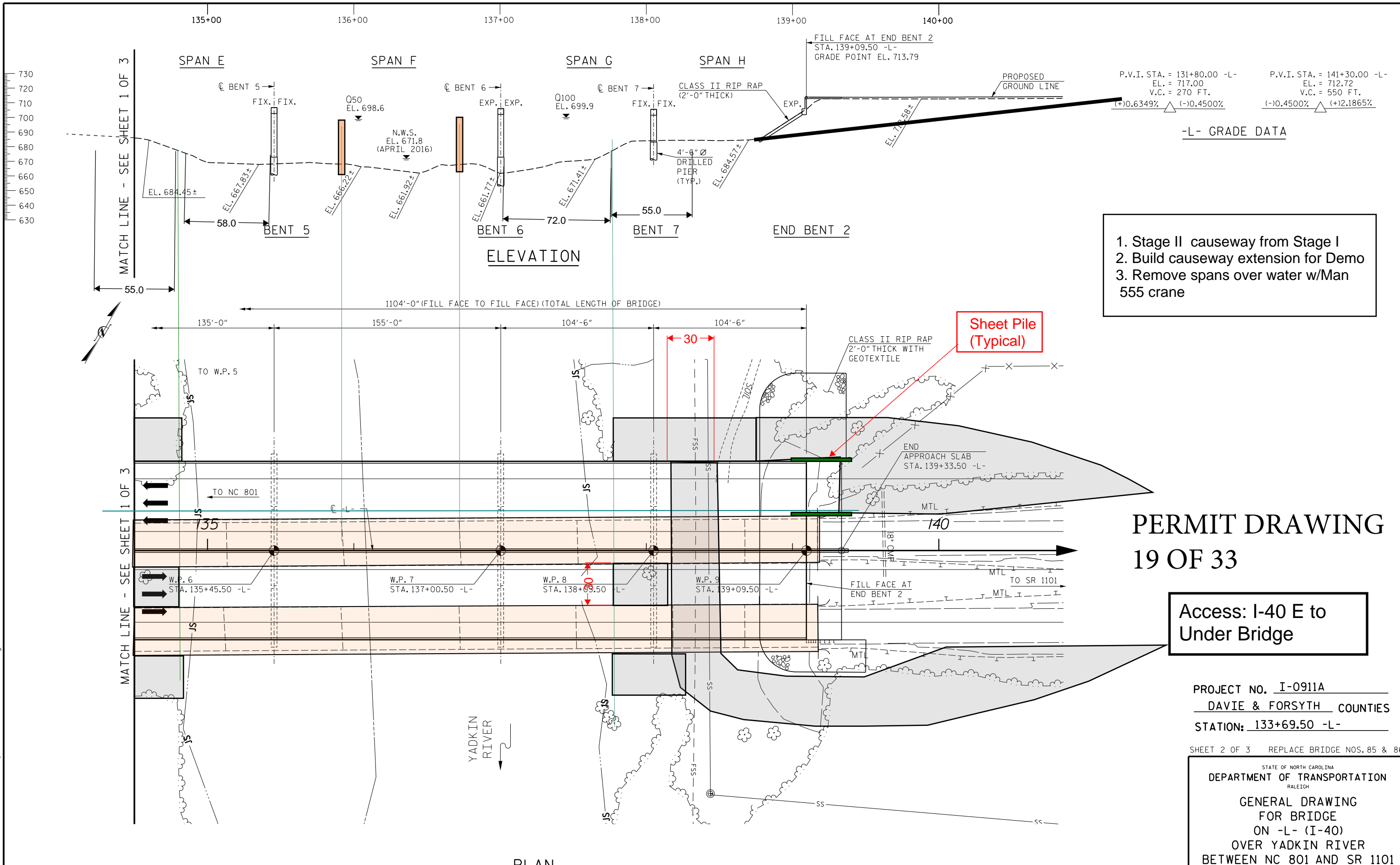
BM #6  
 -BL-STA. 154+82.00  
 607' RT 0/S  
 -L- STA 160+21.26  
 680.94' RT 0/S  
 ELEV. = 745.61'  
 CHISELED SQUARE IN  
 TOP OF CURB IN FRONT  
 OF APT. #3917 AND  
 JUST SOUTH OF A CB

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

FOR -L- PLAN SEE SHTS. 12-14

710  
700  
690  
680  
670  
660  
650  
780  
770  
760  
750  
740  
730  
720  
710  
700  
690



1. Stage II causeway from Stage I
2. Build causeway extension for Demo
3. Remove spans over water w/Man 555 crane

**PERMIT DRAWING  
19 OF 33**

**Access: I-40 E to Under Bridge**

PROJECT NO. I-0911A  
DAVIE & FORSYTH COUNTIES  
 STATION: 133+69.50 -L-

SHEET 2 OF 3 REPLACE BRIDGE NOS. 85 & 86

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**GENERAL DRAWING  
 FOR BRIDGE  
 ON -L- (I-40)  
 OVER YADKIN RIVER  
 BETWEEN NC 801 AND SR 1101**

**PLAN**  
(PILES NOT SHOWN FOR CLARITY)

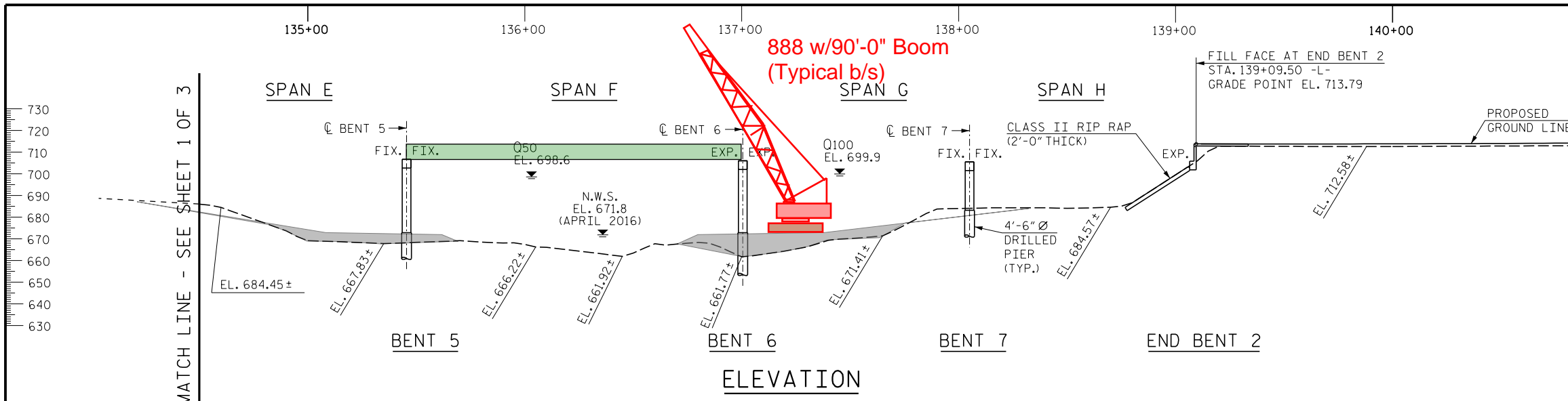
6/1/2017  
 DRAWN BY : B. A. HAAG      DATE : JUN 2017  
 CHECKED BY : K. M. WING      DATE : JUN 2017  
 DESIGN ENGINEER OF RECORD : K. M. WING      DATE : JUN 2017

**REVIEW PLANS**  
 DO NOT USE FOR CONSTRUCTION



REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
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2			4		

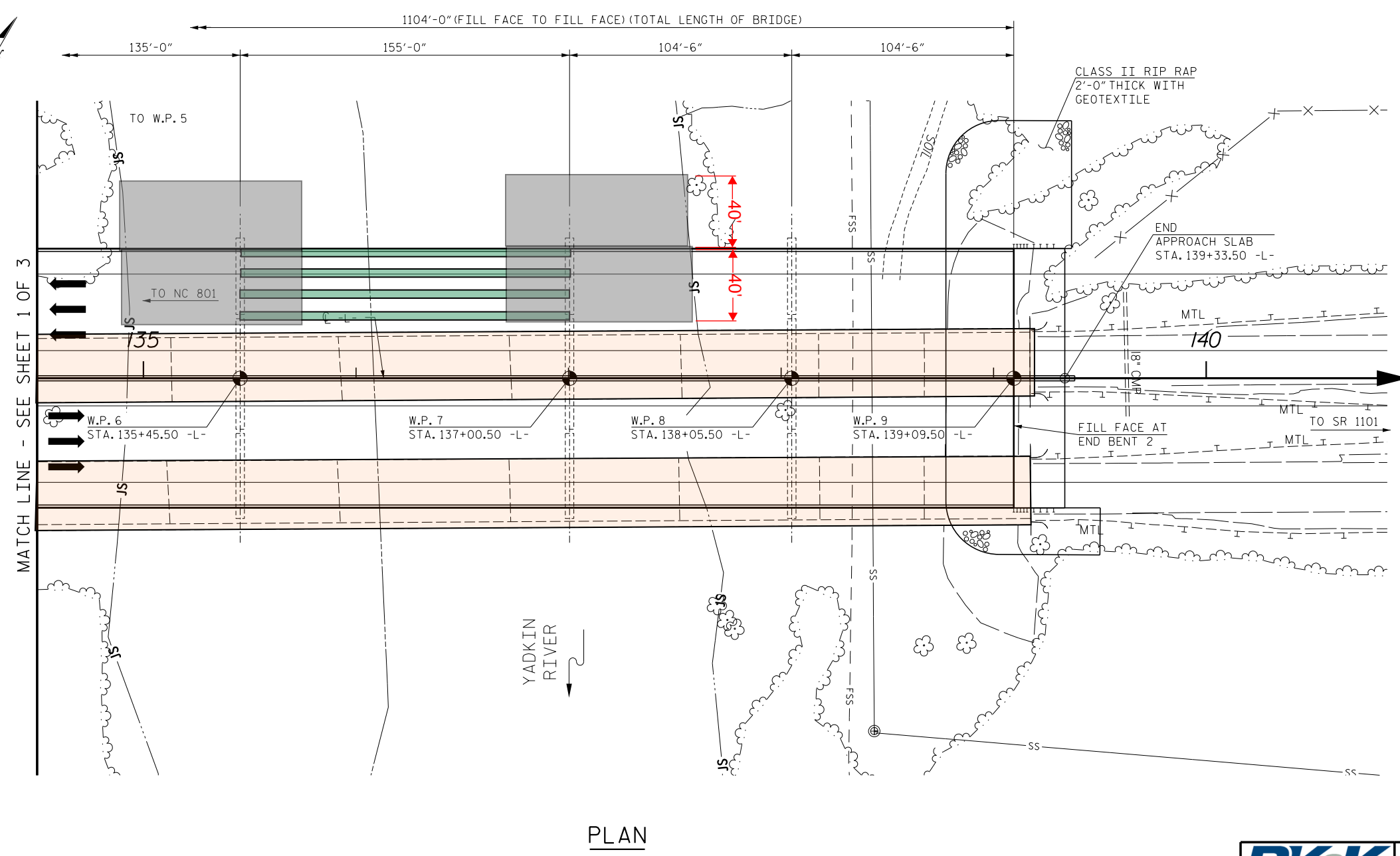
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**S-2**  
TOTAL SHEETS  
**3**



P.V.I. STA. = 131+80.00 -L-  
EL. = 717.00  
V.C. = 270 FT.  
(+).0.6349% (-).0.4500%

P.V.I. STA. = 141+30.00 -L-  
EL. = 712.72  
V.C. = 550 FT.  
(-).0.4500% (+).1865%

-L- GRADE DATA



# PERMIT DRAWING 20 OF 33

**Stage I  
Construction**

PROJECT NO. I-0911A  
DAVIE & FORSYTH COUNTIES  
STATION: 133+69.50 -L-

SHEET 2 OF 3 REPLACE BRIDGE NOS. 85 & 86

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

GENERAL DRAWING  
FOR BRIDGE  
ON -L- (I-40)  
OVER YADKIN RIVER  
BETWEEN NC 801 AND SR 1101

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-2
1			3			TOTAL SHEETS
2			4			3

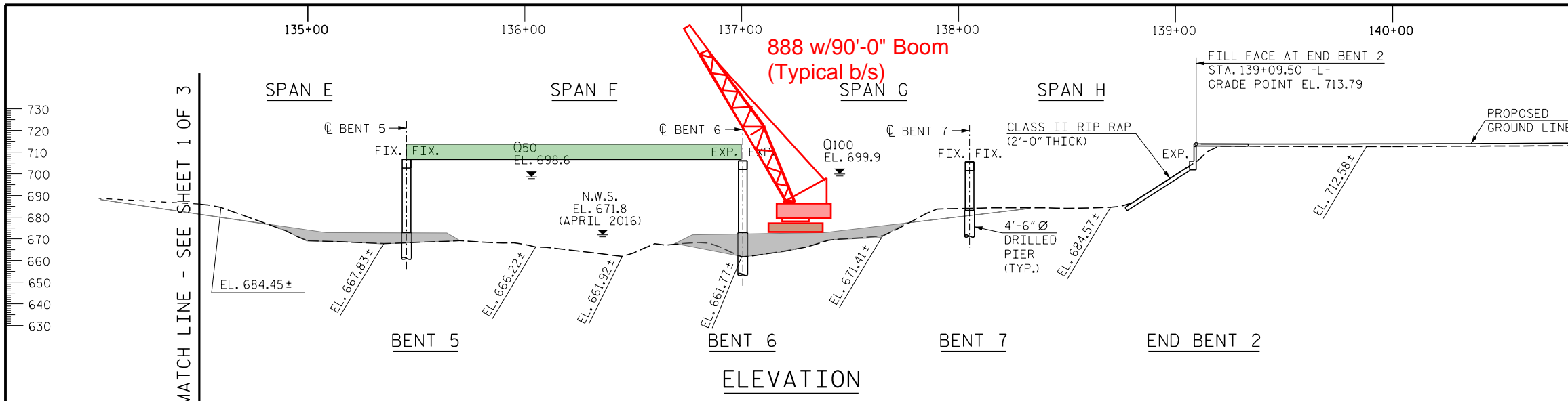
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DRAWN BY : B. A. HAAG  
CHECKED BY : K. M. WING  
DESIGN ENGINEER OF RECORD : K. M. WING

DATE : JUN 2017  
DATE : JUN 2017  
DATE : JUN 2017

**REVIEW PLANS**  
DO NOT USE FOR CONSTRUCTION

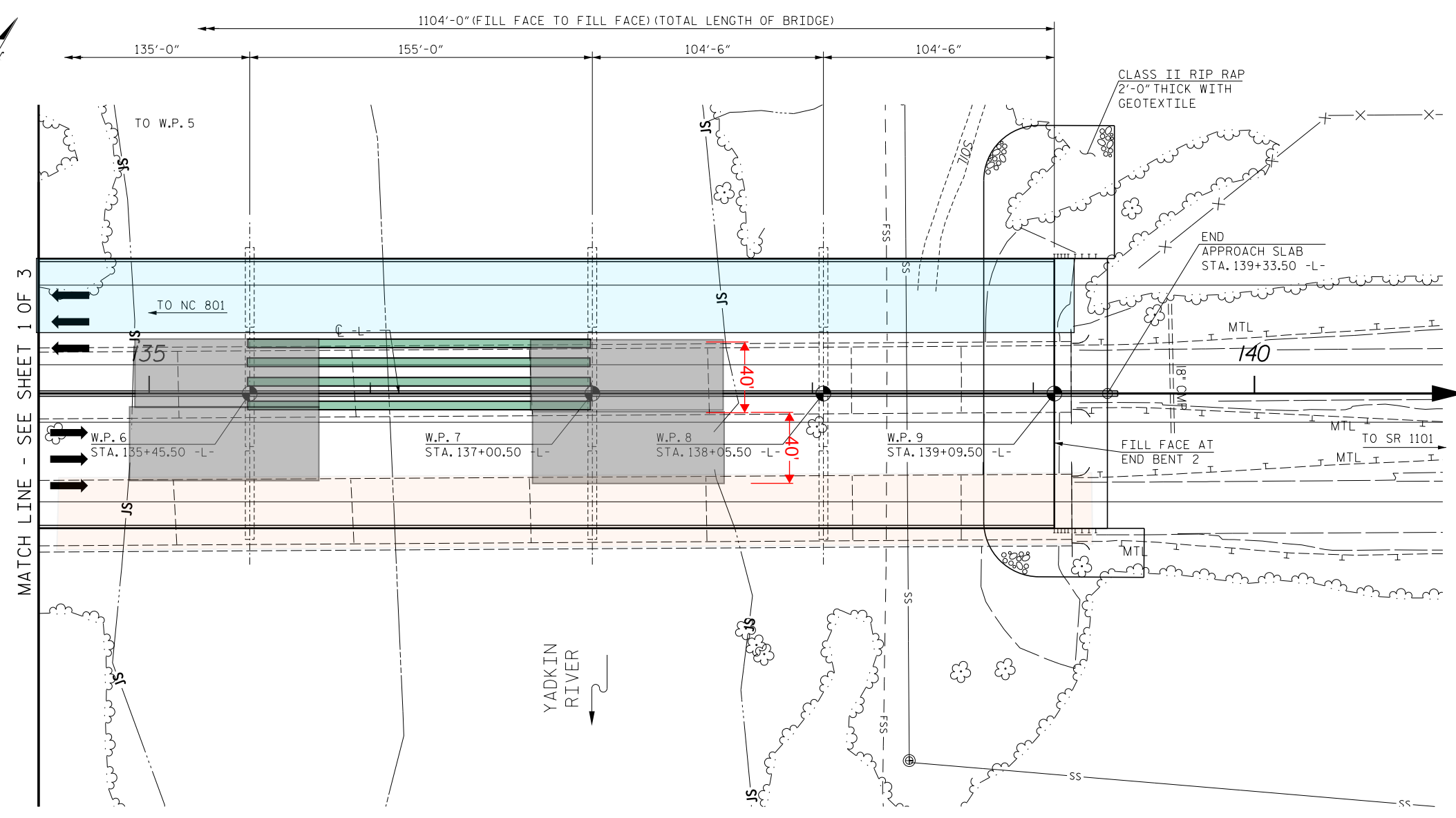




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P.V.I. STA. = 141+30.00 -L- EL. = 712.72 V.C. = 550 FT. (-)0.4500% (+)2.1865%

-L- GRADE DATA



**PLAN**  
(PILES NOT SHOWN FOR CLARITY)

**PERMIT DRAWING  
21 OF 33**

**Stage II  
Construction**

PROJECT NO. I-0911A  
DAVIE & FORSYTH COUNTIES  
STATION: 133+69.50 -L-

SHEET 2 OF 3 REPLACE BRIDGE NOS. 85 & 86

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
GENERAL DRAWING  
FOR BRIDGE  
ON -L- (I-40)  
OVER YADKIN RIVER  
BETWEEN NC 801 AND SR 1101

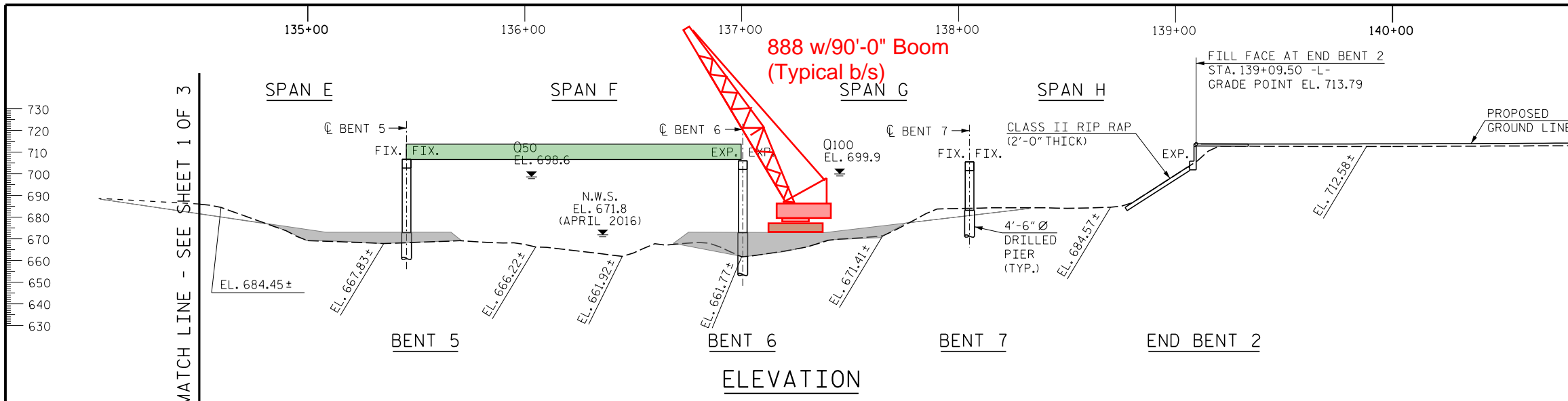
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1			3			TOTAL SHEETS
2			4			3

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6/1/2017  
DRAWN BY : B. A. HAAG DATE : JUN 2017  
CHECKED BY : K. M. WING DATE : JUN 2017  
DESIGN ENGINEER OF RECORD : K. M. WING DATE : JUN 2017

**REVIEW PLANS**  
DO NOT USE FOR CONSTRUCTION

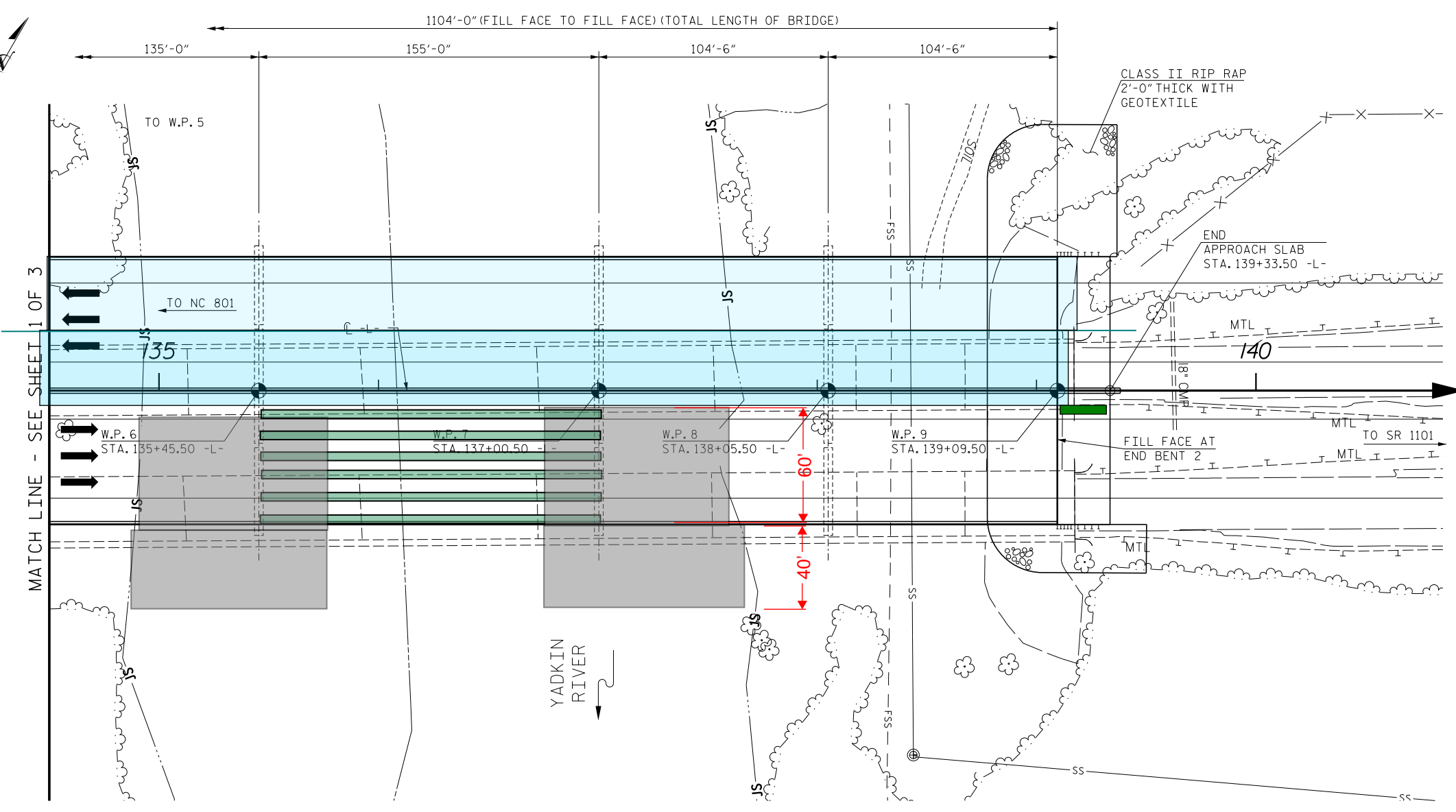




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P.V.I. STA. = 141+30.00 -L- EL. = 712.72 V.C. = 550 FT. (-)0.4500% (+)2.1865%

-L- GRADE DATA



PERMIT DRAWING  
22 OF 33

**Stage III  
Construction**

PROJECT NO. I-0911A  
DAVIE & FORSYTH COUNTIES  
STATION: 133+69.50 -L-

SHEET 2 OF 3 REPLACE BRIDGE NOS. 85 & 86

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

GENERAL DRAWING  
FOR BRIDGE  
ON -L- (I-40)  
OVER YADKIN RIVER  
BETWEEN NC 801 AND SR 1101

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-2
1			3			TOTAL SHEETS
2			4			3

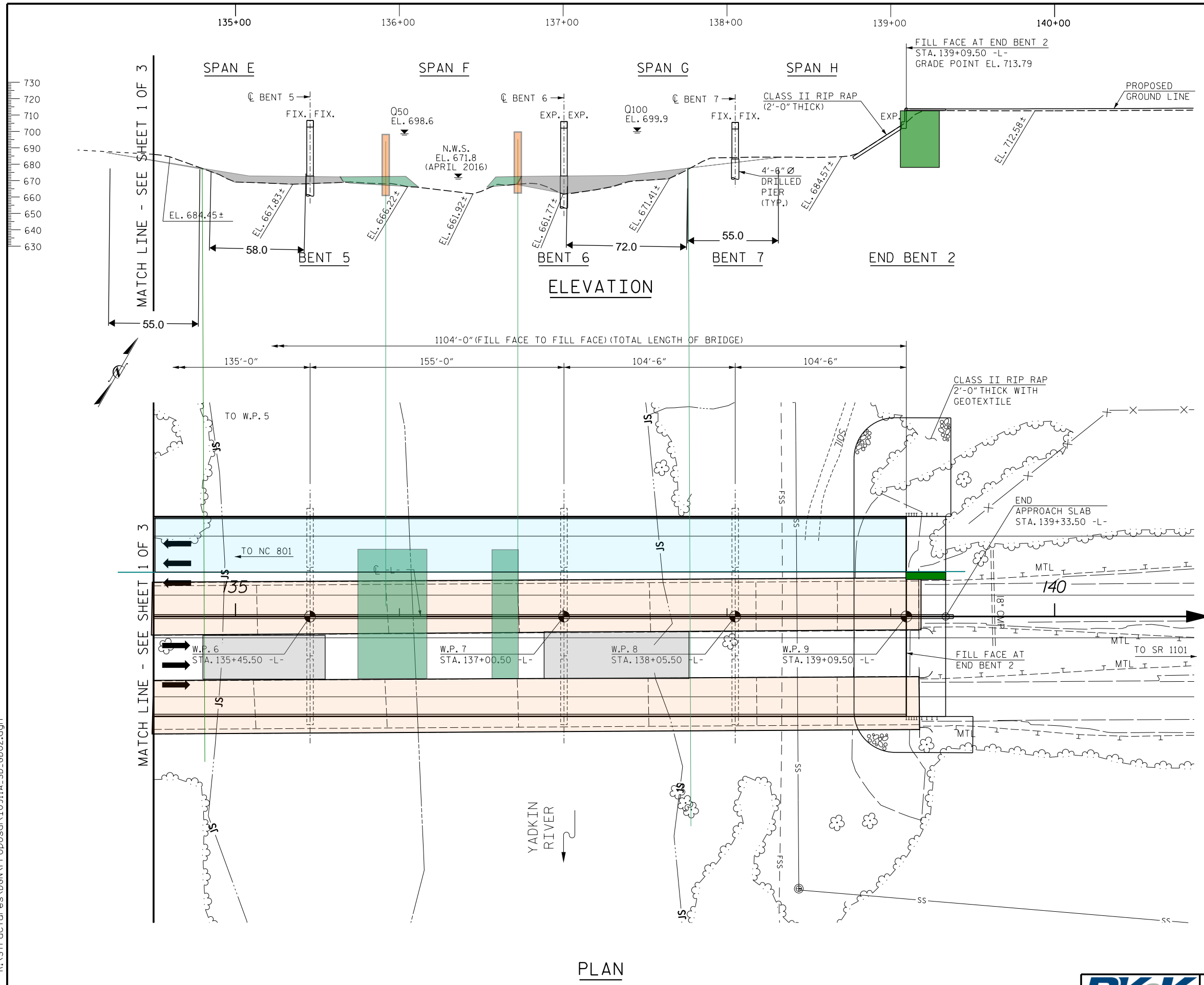
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DRAWN BY : B. A. HAAG DATE : JUN 2017  
CHECKED BY : K. M. WING DATE : JUN 2017  
DESIGN ENGINEER OF RECORD : K. M. WING DATE : JUN 2017

REVIEW PLANS  
DO NOT USE FOR CONSTRUCTION







P.V.I. STA. = 131+80.00 -L- EL. = 717.00 V.C. = 270 FT. (+)0.6349% (-)0.4500%

P.V.I. STA. = 141+30.00 -L- EL. = 712.72 V.C. = 550 FT. (-)0.4500% (+)2.1865%

-L- GRADE DATA

1. Build Stage II causeway
2. Build causeway extension for Demo
3. Remove spans over water w/Man 555 crane

# PERMIT DRAWING 23 OF 33

**Stage I Demo**

PROJECT NO. I-0911A  
DAVIE & FORSYTH COUNTIES  
 STATION: 133+69.50 -L-

SHEET 2 OF 3 REPLACE BRIDGE NOS. 85 & 86

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

GENERAL DRAWING  
 FOR BRIDGE  
 ON -L- (I-40)  
 OVER YADKIN RIVER  
 BETWEEN NC 801 AND SR 1101

**PLAN**  
 (PILES NOT SHOWN FOR CLARITY)

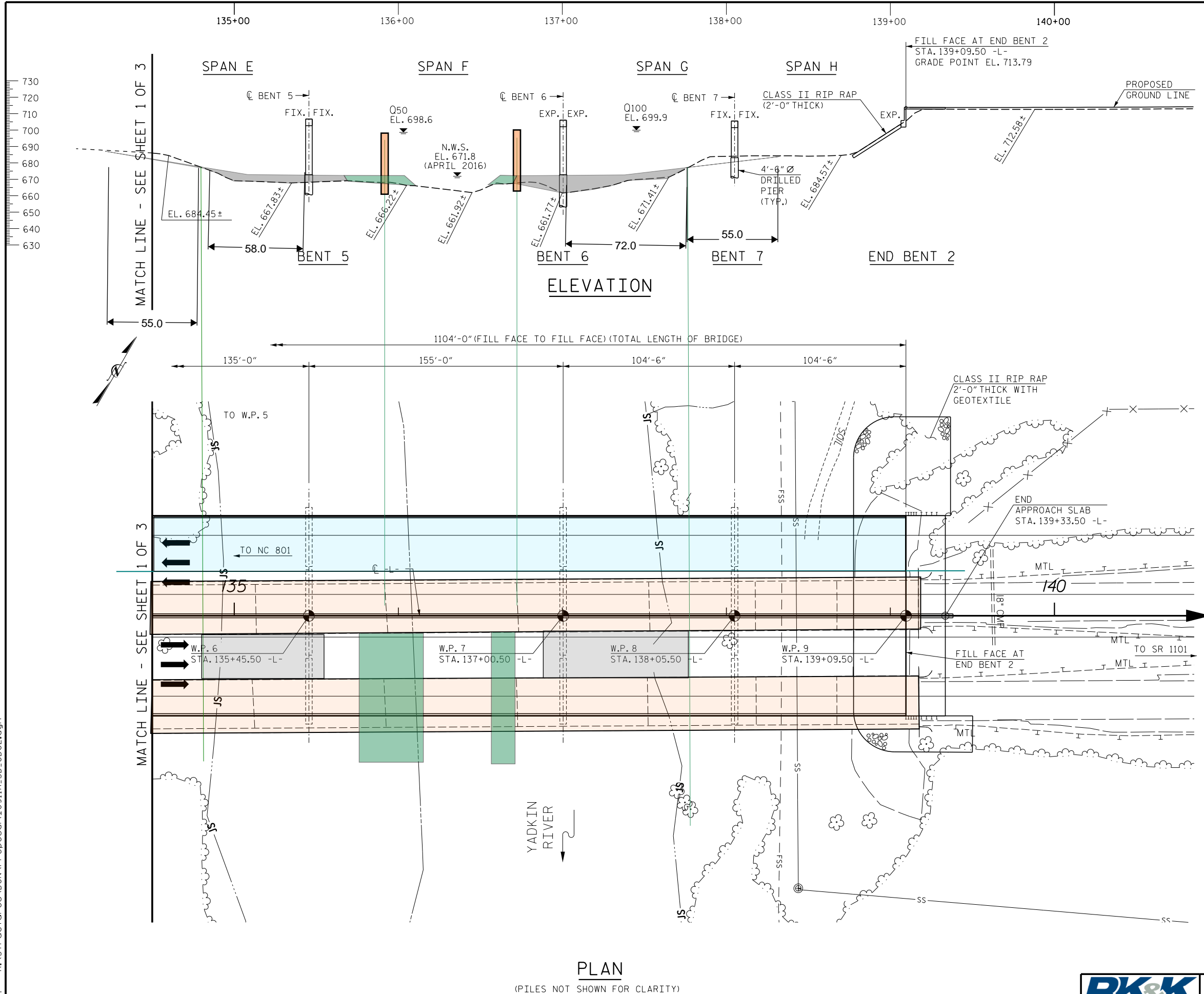
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 DRAWN BY : B. A. HAAG DATE : JUN 2017  
 CHECKED BY : K. M. WING DATE : JUN 2017  
 DESIGN ENGINEER OF RECORD : K. M. WING DATE : JUN 2017

**REVIEW PLANS**  
 DO NOT USE FOR CONSTRUCTION



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-2
1			3			TOTAL SHEETS
2			4			3

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P.V.I. STA. = 131+80.00 -L- EL. = 717.00 V.C. = 270 FT. (+)0.6349% (-)0.4500%

P.V.I. STA. = 141+30.00 -L- EL. = 712.72 V.C. = 550 FT. (-)0.4500% (+)2.1865%

-L- GRADE DATA

1. Stage II causeway from Stage I
2. Build causeway extension for Demo
3. Remove spans over water w/Man 555 crane

# PERMIT DRAWING 24 OF 33

**Stage II Demo**

PROJECT NO. I-0911A  
DAVIE & FORSYTH COUNTIES  
 STATION: 133+69.50 -L-

SHEET 2 OF 3 REPLACE BRIDGE NOS. 85 & 86

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

GENERAL DRAWING  
 FOR BRIDGE  
 ON -L- (I-40)  
 OVER YADKIN RIVER  
 BETWEEN NC 801 AND SR 1101

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-2
1			3			TOTAL SHEETS
2			4			3

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6/1/2017  
 DRAWN BY : B. A. HAAG DATE : JUN 2017  
 CHECKED BY : K. M. WING DATE : JUN 2017  
 DESIGN ENGINEER OF RECORD : K. M. WING DATE : JUN 2017

**PLAN**  
 (PILES NOT SHOWN FOR CLARITY)

**REVIEW PLANS**  
 DO NOT USE FOR CONSTRUCTION

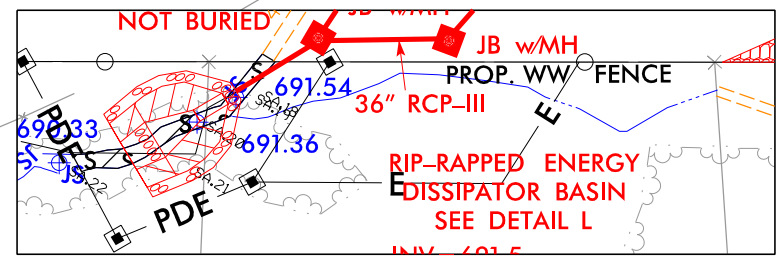
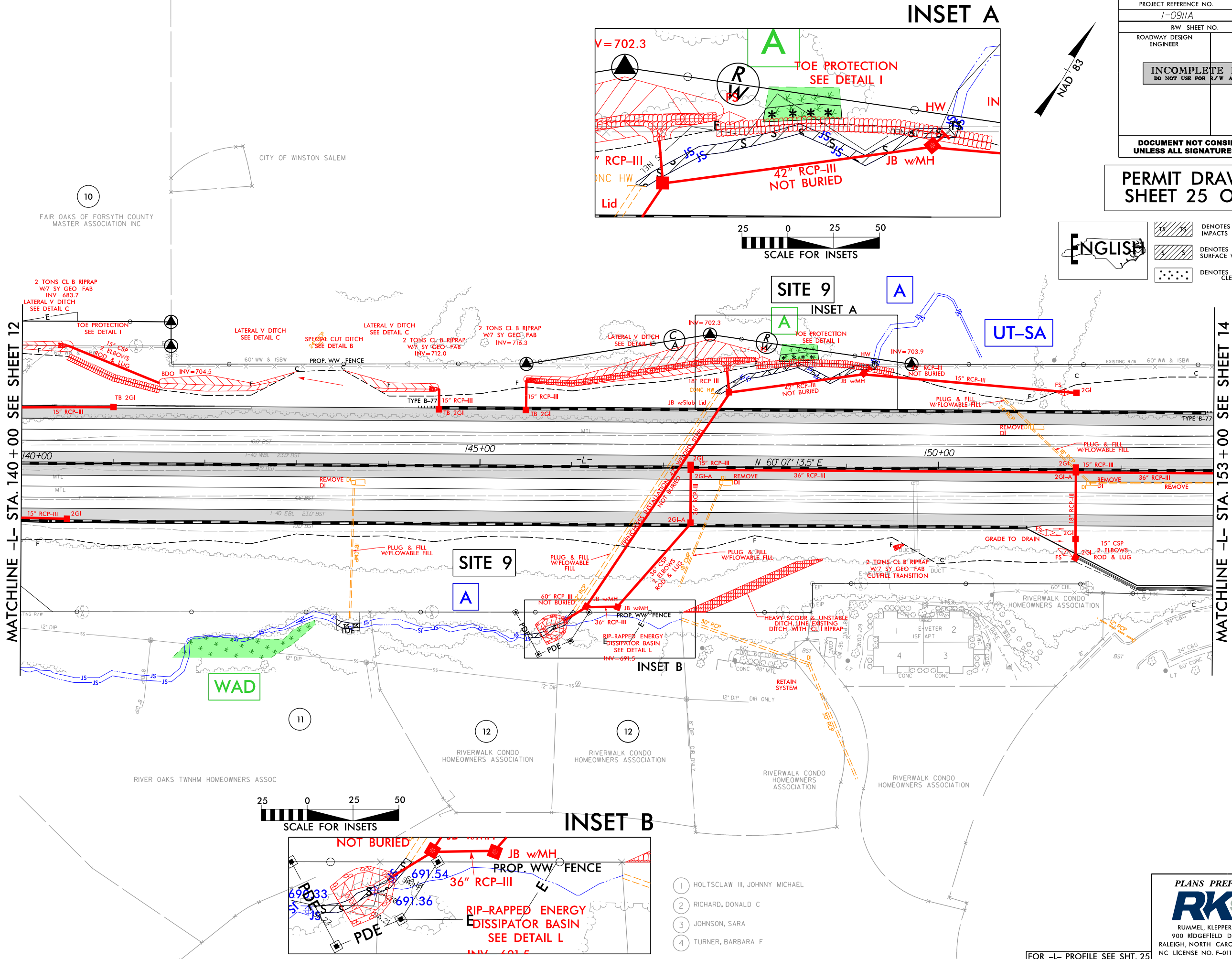
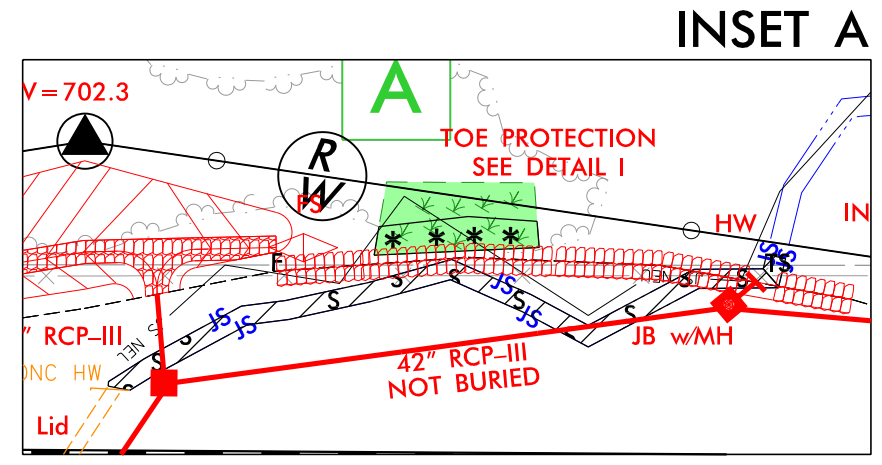


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 2/21/2018

PROJECT REFERENCE NO. 1-0911A	SHEET NO. 13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR A/W ACQUISITION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	

**PERMIT DRAWING**  
**SHEET 25 OF 33**

	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES IMPACTS IN SURFACE WATER
	DENOTES MECHANIZED CLEARING



- 1 HOLTSCLAU III, JOHNNY MICHAEL
- 2 RICHARD, DONALD C
- 3 JOHNSON, SARA
- 4 TURNER, BARBARA F

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

FOR -L- PROFILE SEE SHT. 25

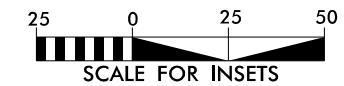
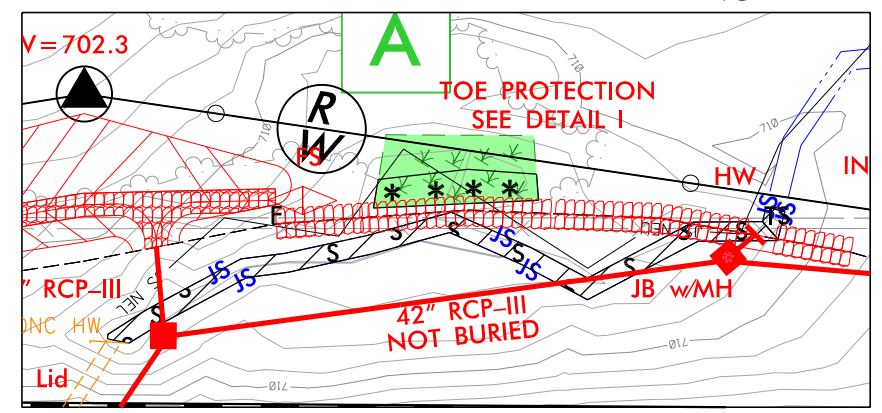
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PROJECT REFERENCE NO. 1-0911A	SHEET NO. 13
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	

**PERMIT DRAWING**  
**SHEET 26 OF 33**

**INSET A**

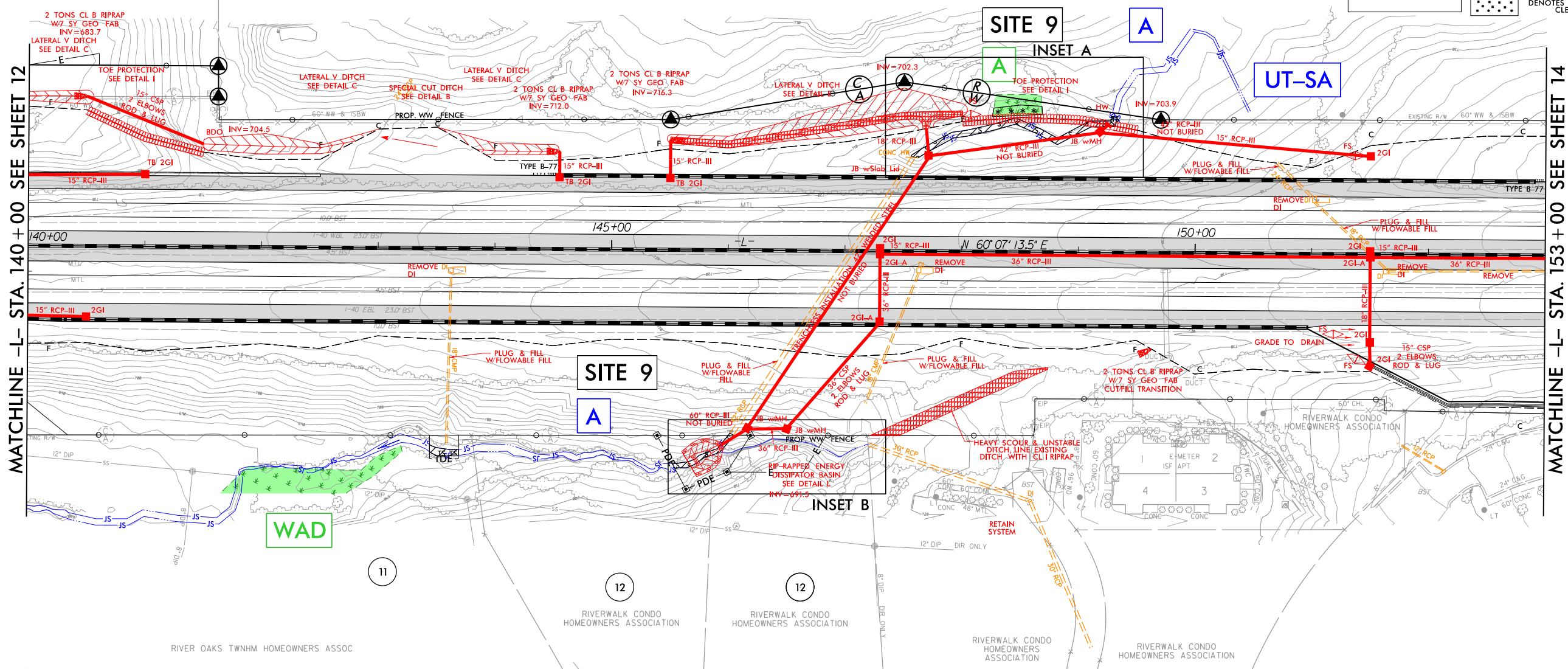


	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES IMPACTS IN SURFACE WATER
	DENOTES MECHANIZED CLEARING

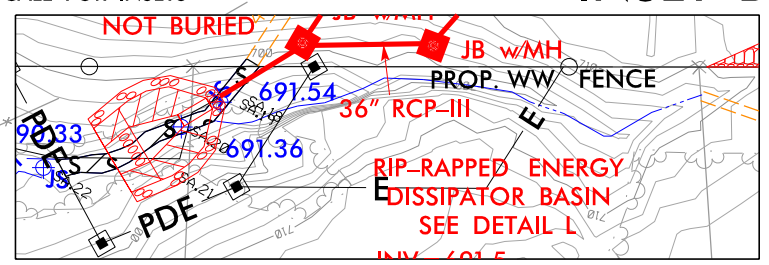


MATCHLINE -L- STA. 140+00 SEE SHEET 12

MATCHLINE -L- STA. 153+00 SEE SHEET 14



**INSET B**



- 1 HOLTSLAW III, JOHNNY MICHAEL
- 2 RICHARD, DONALD C
- 3 JOHNSON, SARA
- 4 TURNER, BARBARA F

PLANS PREPARED BY :

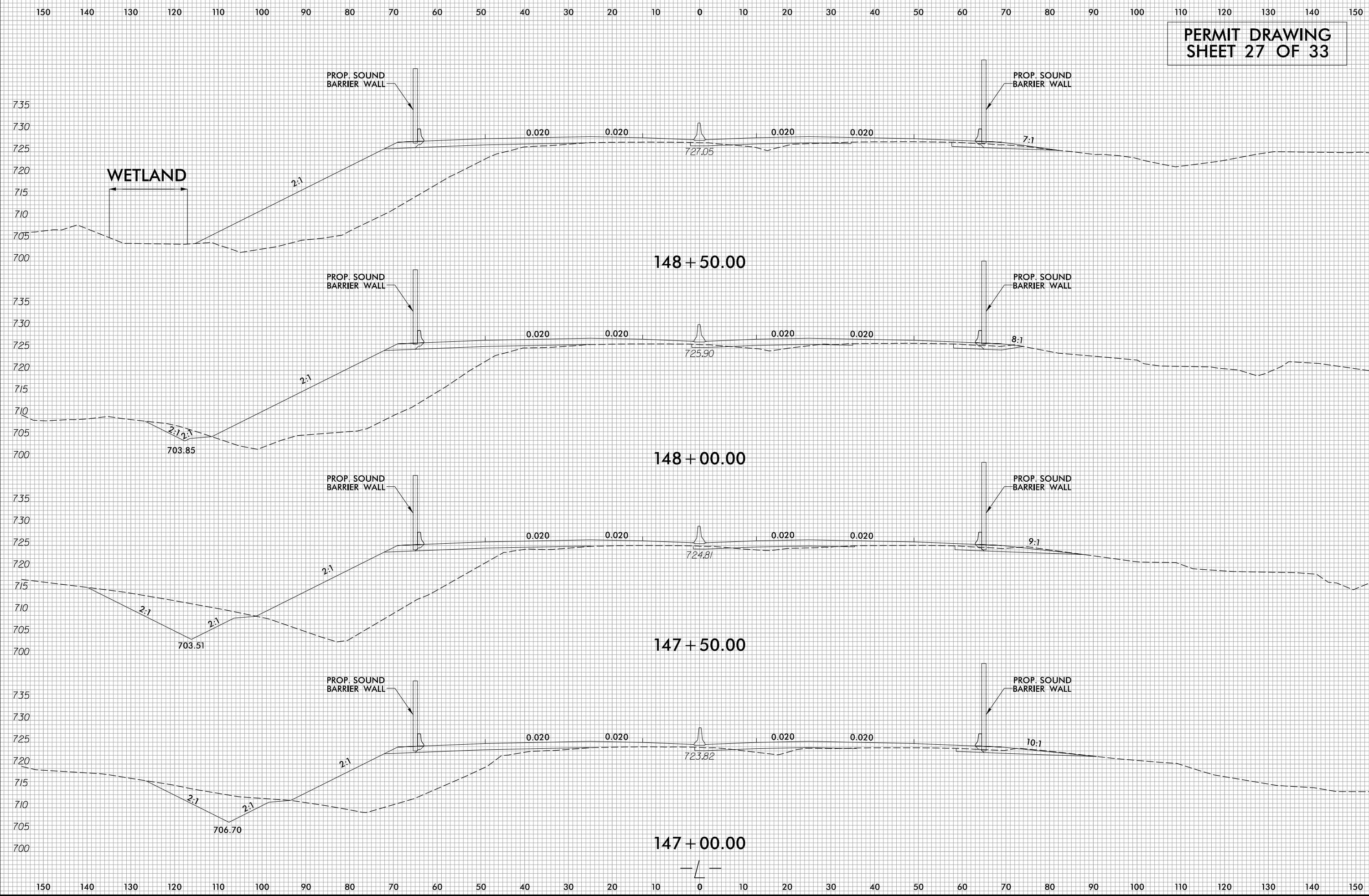
**RK&K**

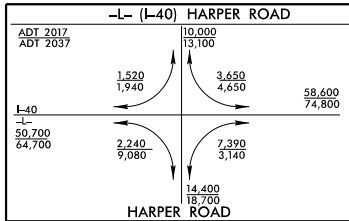
RUMMEL, KLEPPER & KAHL, LLP  
900 RIDGEFIELD DRIVE SUITE 350  
RALEIGH, NORTH CAROLINA 27609-3960  
NC LICENSE NO. F-0112 • (919) 878-9560

FOR -L- PROFILE SEE SHT. 25



PERMIT DRAWING SHEET 27 OF 33

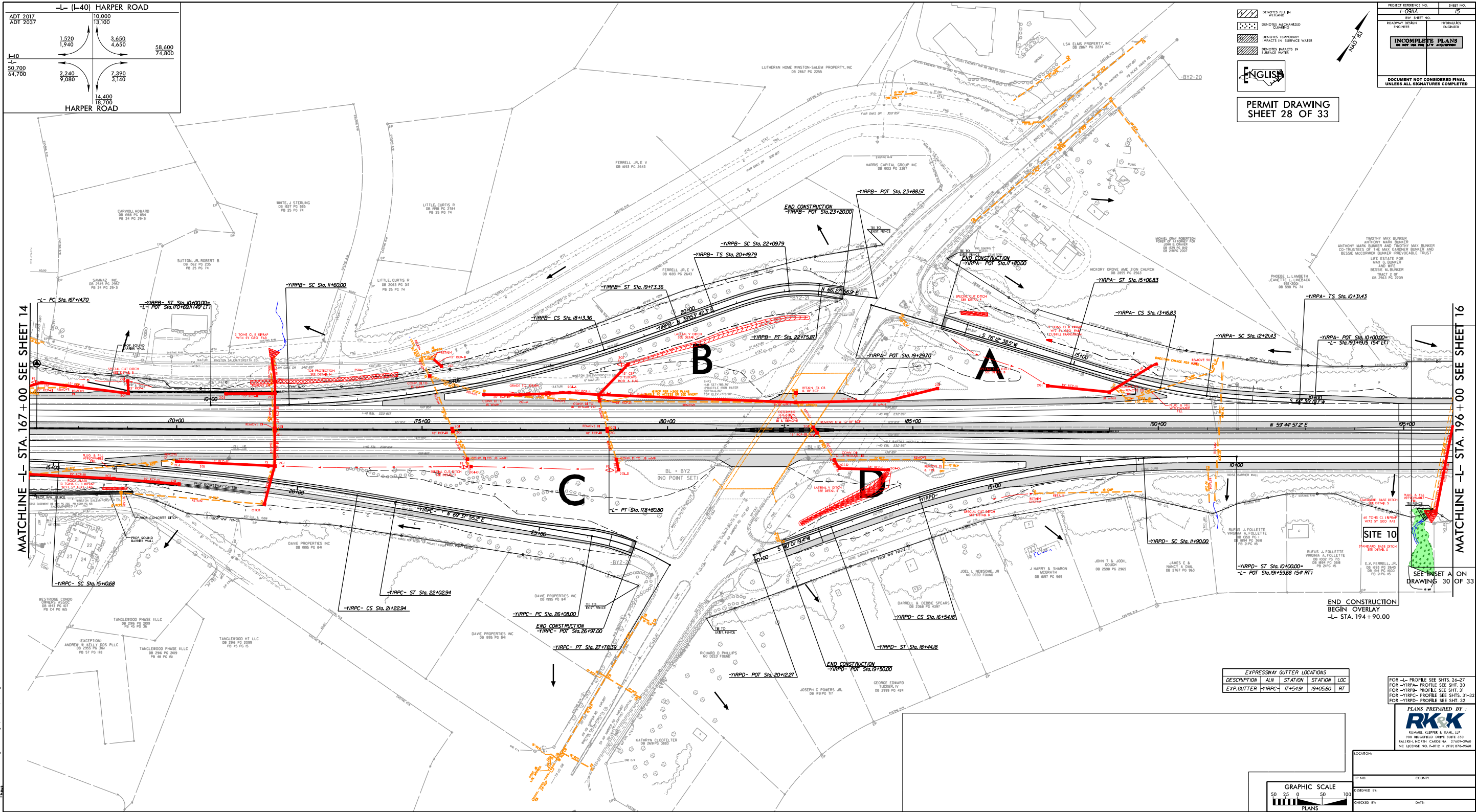




PROJECT REFERENCE NO. 17-051A  
 SHEET NO. 28  
 ROADWAY DESIGN ENGINEER  
 REVISIONS ENGINEER  
**INCOMPLETE PLANS**  
 NO NEW WORK SHALL BE PERMITTED  
 DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

ENGLISH

PERMIT DRAWING  
 SHEET 28 OF 33

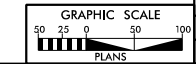


MATCHLINE -L- STA. 167+00 SEE SHEET 14

MATCHLINE -L- STA. 196+00 SEE SHEET 16

EXPRESSWAY GUTTER LOCATIONS				
DESCRIPTION	ALIGN.	STATION	STATION	LOC.
EXP. GUTTER - YIRPC		17+54.91	19+05.60	RT

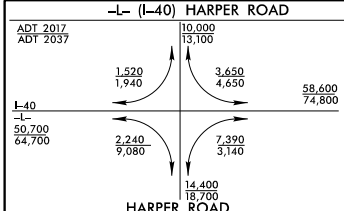
FOR -L- PROFILE SEE SHTS. 26-27  
 FOR -YIRPA- PROFILE SEE SHT. 30  
 FOR -YIRPB- PROFILE SEE SHT. 31  
 FOR -YIRPC- PROFILE SEE SHTS. 31-32  
 FOR -YIRPD- PROFILE SEE SHT. 32



PLANS PREPARED BY:  
**RK&K**  
 ENGINEERS & ARCHITECTS  
 100 REDFORD DRIVE SUITE 350  
 RALEIGH, NORTH CAROLINA 27609-2943  
 NC LICENSE NO. 6-017 • (919) 878-6568

LOCATION: \_\_\_\_\_  
 TR. NO.: \_\_\_\_\_ COUNTY: \_\_\_\_\_  
 DESIGNED BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

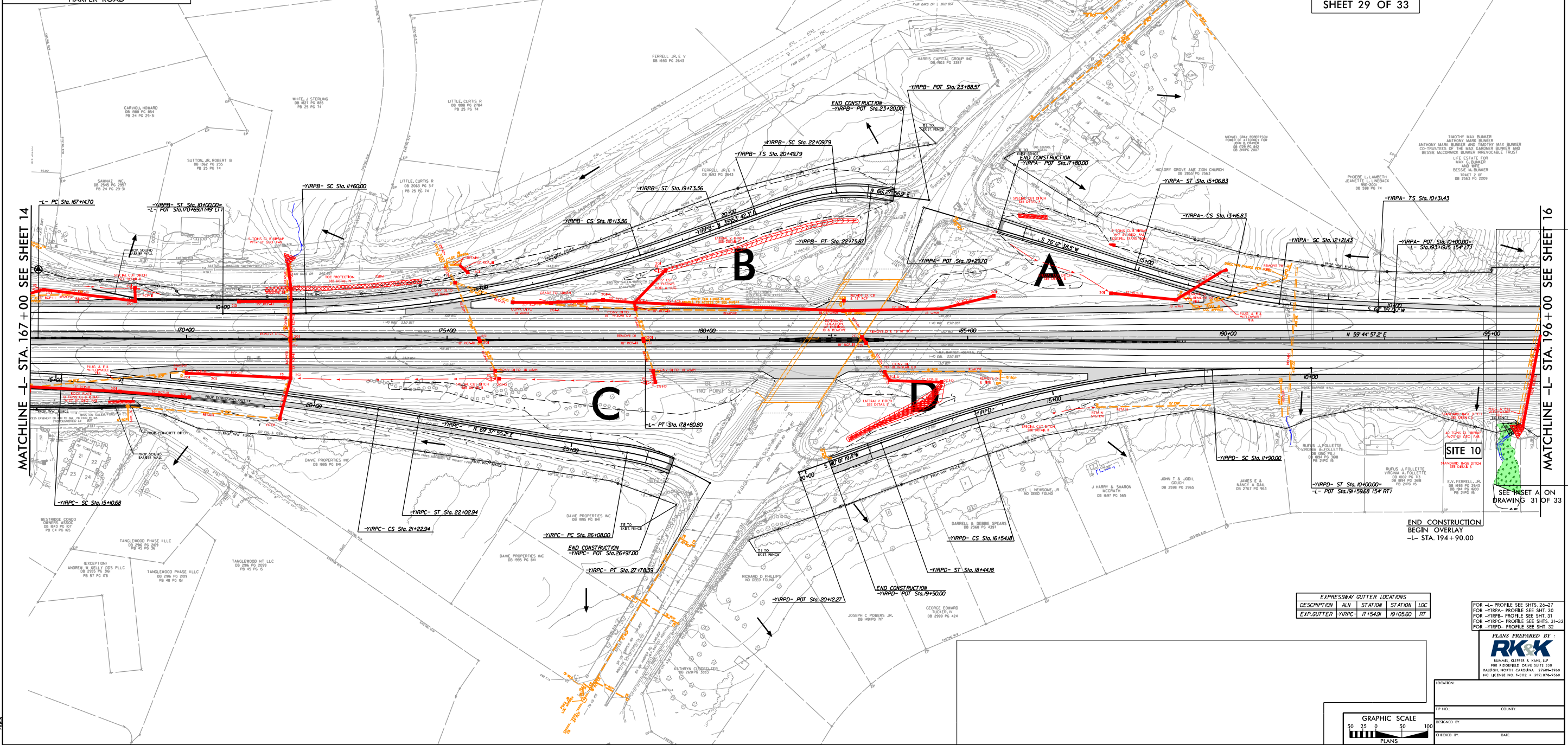
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PROJECT REFERENCE NO.	75
REV. SHEET NO.	15
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b>	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

**ENGLISH**

**PERMIT DRAWING SHEET 29 OF 33**



MATCHLINE -L- STA. 167+00 SEE SHEET 14

MATCHLINE -L- STA. 196+00 SEE SHEET 16

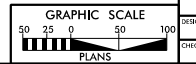
END CONSTRUCTION BEGIN OVERLAY  
-L- STA. 194+90.00

EXPRESSWAY GUTTER LOCATIONS

DESCRIPTION	ALN	STATION	STATION	LOC
EXP. GUTTER	YIRPC-	17+54.91	19+05.60	RT

FOR -L- PROFILE SEE SHS. 26-27  
FOR -YIRPA- PROFILE SEE SHS. 30  
FOR -YIRPB- PROFILE SEE SHS. 31  
FOR -YIRPC- PROFILE SEE SHS. 31-32  
FOR -YIRPD- PROFILE SEE SHS. 32

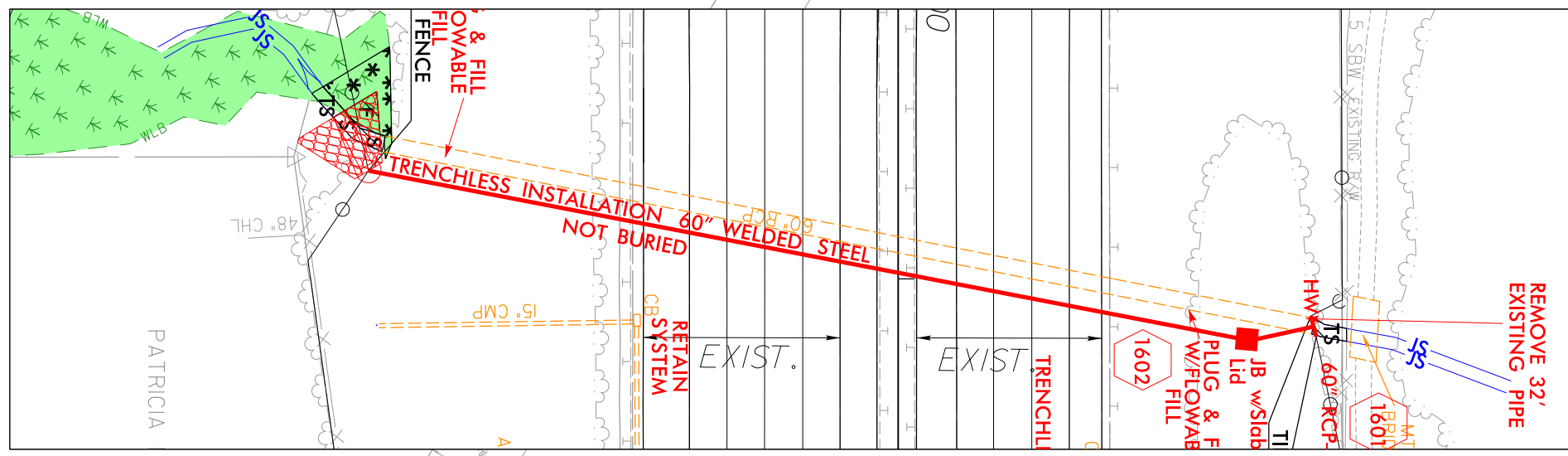
**PLANS PREPARED BY:**  
**RK&K**  
ENGINEERS, ARCHITECTS & PLANNERS  
900 ROSELAND DRIVE, SUITE 310  
RAVENS CREEK, NORTH CAROLINA 27093-3440  
NC LICENSE NO. E-0012 • (919) 878-9560



LOCATION:	TP NO.:	COUNTY:
DESIGNED BY:	CHECKED BY:	DATE:

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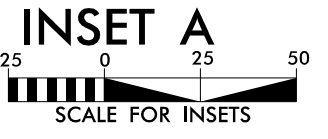
8/17/99  
R:\Hydro\builcs\PERMITS\_Environmental\Drawings\0911A\_Hyd.prm\_wet\_psh16.dgn  
8/21/2016



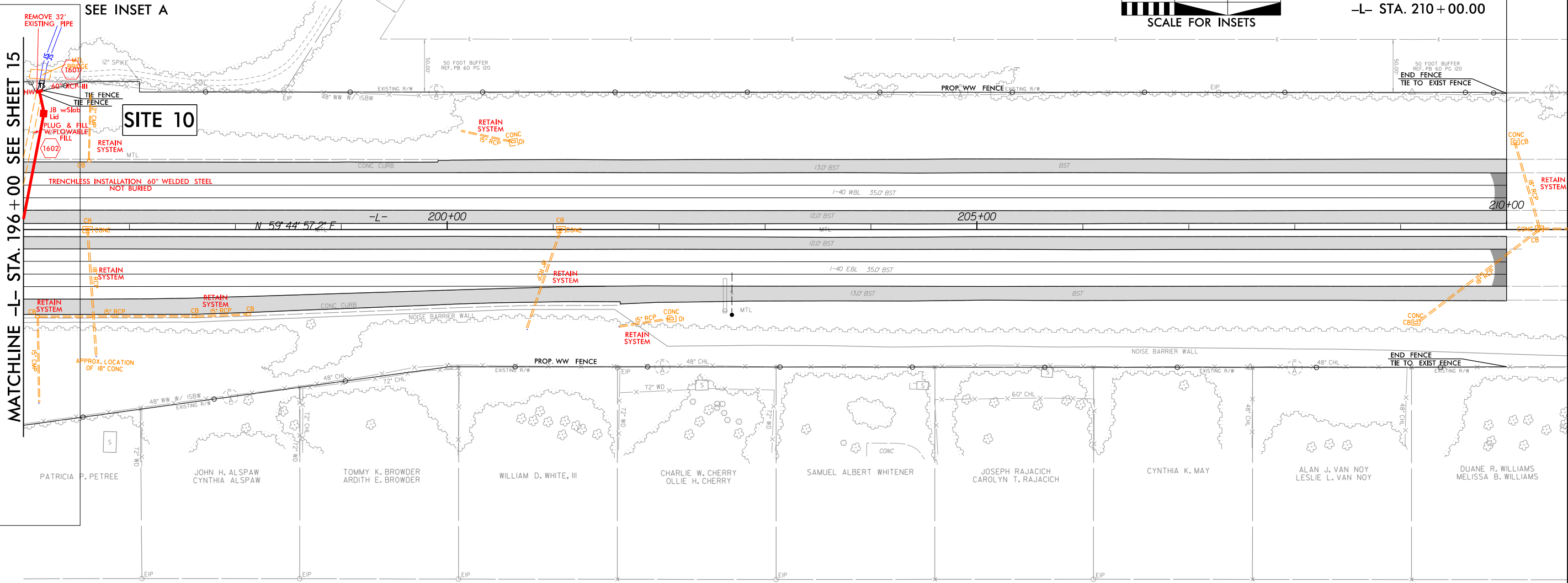
- Denotes Fill in Wetland
- Denotes Mechanized Clearing
- Denotes Temporary Impacts in Surface Water
- Denotes Impacts in Surface Water

PROJECT REFERENCE NO. I-0911A	SHEET NO. 16
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	

### PERMIT DRAWING SHEET 30 OF 33



END OVERLAY  
END PROJECT I-0911A  
-L- STA. 210+00.00



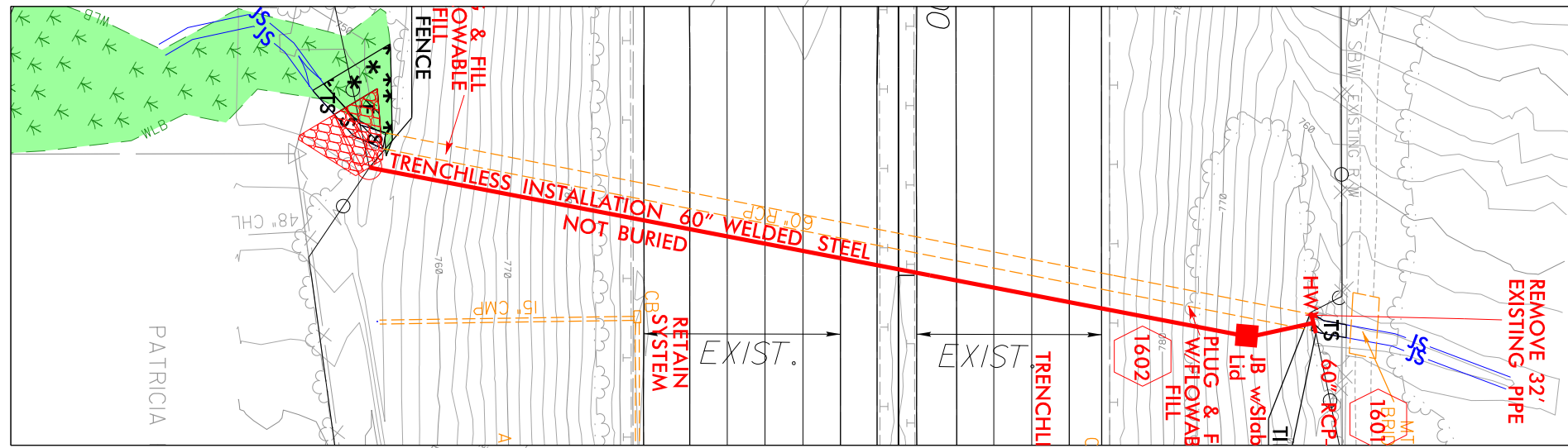
PLANS PREPARED BY :  
**RK&K**  
RUMMEL, KLEPPER & KAHL, LLP  
900 RIDGEFIELD DRIVE SUITE 350  
RALEIGH, NORTH CAROLINA 27609-3960  
NC LICENSE NO. F-0112 • (919) 878-9560

FOR -L- PROFILE SEE SHT. 27

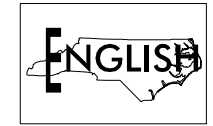
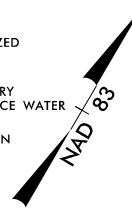


8/17/99

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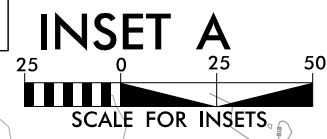


- DENOTES FILL IN WETLAND
- DENOTES MECHANIZED CLEARING
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- DENOTES IMPACTS IN SURFACE WATER

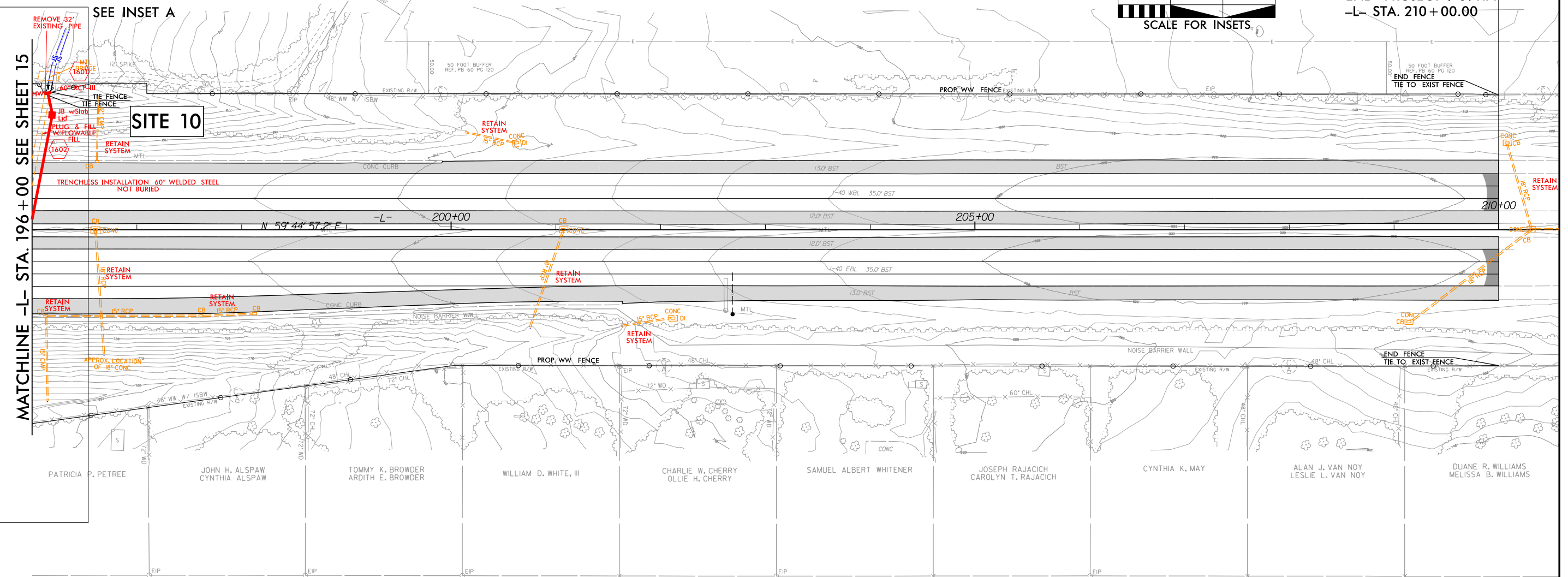


**PERMIT DRAWING SHEET 31 OF 33**

PROJECT REFERENCE NO. 1-0911A	SHEET NO. 16
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	
<b>INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION</b>	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	



END OVERLAY  
END PROJECT I-0911A  
-L- STA. 210+00.00



MATCHLINE -L- STA. 196+00 SEE SHEET 15

SEE INSET A

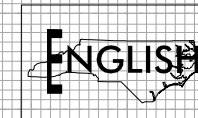
**SITE 10**

FOR -L- PROFILE SEE SHT. 27

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

PROJECT REFERENCE NO.	SHEET NO.
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

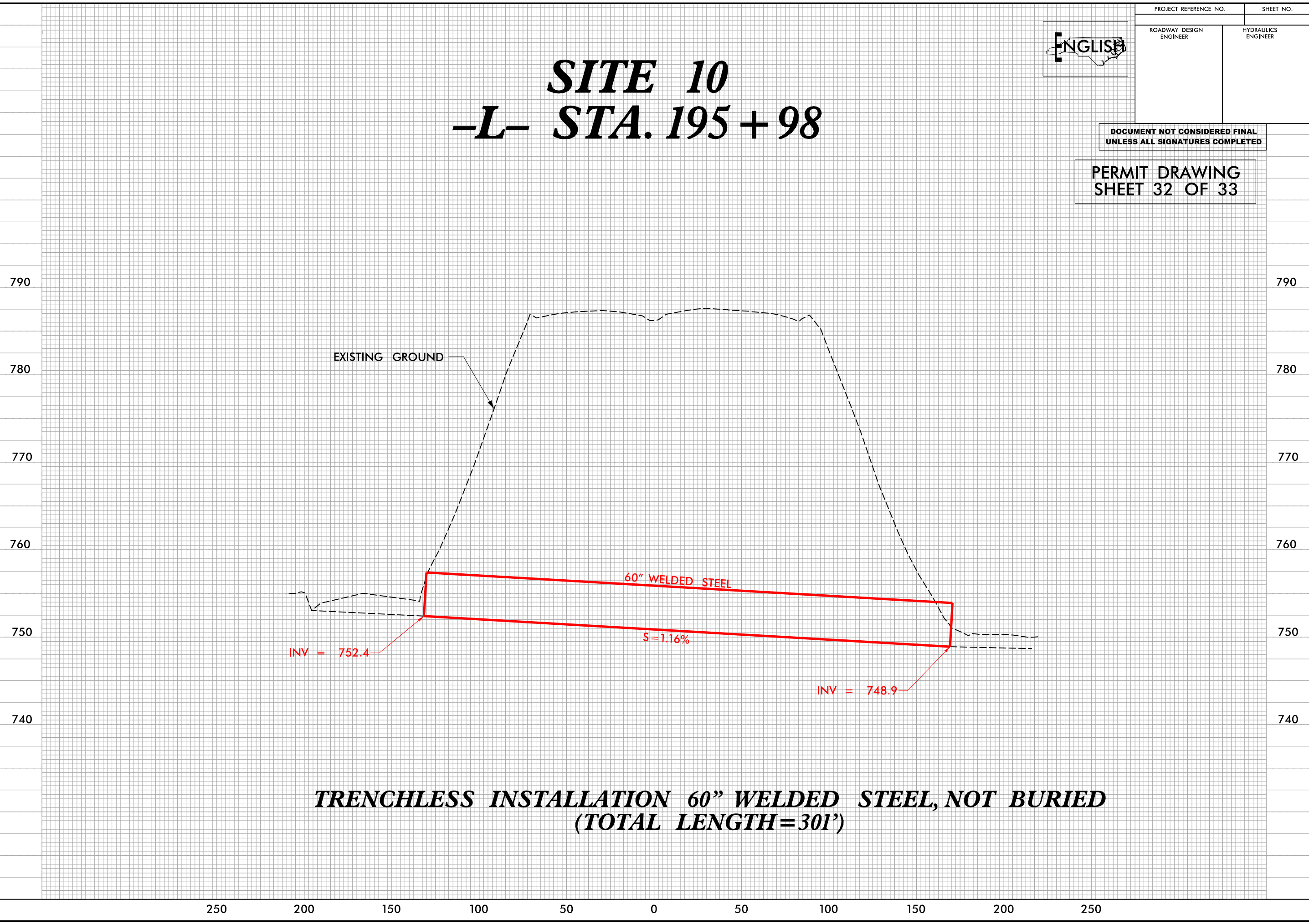


DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING  
SHEET 32 OF 33

# SITE 10

## -L- STA. 195+98



**TRENCHLESS INSTALLATION 60" WELDED STEEL, NOT BURIED  
(TOTAL LENGTH=301')**

**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- 46+35 TO 46+58 RT	ROADWAY FILL						< 0.01		41		
2	-L- 66+89 TO 71+75 LT & RT	ROADWAY FILL						0.04	< 0.01	374	30	
3	-L- 67+30 TO 68+07 RT	ROADWAY FILL						< 0.01		84		
4	-L- 84+03 TO 84+72 LT & RT	ROADWAY FILL						< 0.01		57		
5	-L- 84+11 TO 84+62 RT	ROADWAY FILL	0.01					< 0.01		19		
6	-L- 99+44 TO 99+71 LT & RT	ROADWAY FILL & DITCH						< 0.01		57		
7A	-L- 119+64 TO 123+66 LT	BANK STABILIZATION	0.23					< 0.01	< 0.01	9	21	
7B	-L- 128+75 TO 129+03 LT	BANK STABILIZATION						< 0.01	< 0.01	6	21	
7C	-L- 129+14 TO 129+20 RT	BANK STABILIZATION						< 0.01	< 0.01	4	20	
8	-L- 134+87 TO 137+72	BRIDGE							1.01		144	
9	-L- 145+53 TO 149+33 LT & RT	ROADWAY FILL				< 0.01		0.03	< 0.01	244	31	
10	-L- 195+27 TO 196+20 LT & RT	60" WS	< 0.01			< 0.01		< 0.01	< 0.01	17	21	
TOTALS*:			0.24			0.01		0.09	1.03	912	288	0

\*Rounded totals are sum of actual impacts

NOTES:  
 Site 8 has 14 proposed bridge piers with a diameter of 4.5' for a total area of 222.7 sf  
 Yadkin River to never be blocked more that 50% at any time during construction.

NC DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 February 2018  
 DAVIE & FORSYTH  
 I-0911A

SHEET 33 OF 33