



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

September 17, 2021

Andy Williams
US Army Corps of Engineers
3331 Heritage Trade Drive, Suite 105
Wake Forest, NC 27587

Dave Wanucha
NC Division of Water Resources
Winston Salem Regional Office
450 West Hanes Mill Road Suite 300
Winston Salem, NC 2105

SUBJECT: Application for Section 404 Regional General Permit and Section 401 Water Quality Certification for Julian Road Widening Project in Rowan County; TIP No. U-5738, WBS: 50136.1.1

Dear Mr. Williams and Mr. Wanucha,

The North Carolina Department of Transportation (NCDOT), in accordance with the Federal Highway Administration (FHWA), proposes to widen Julian Road (SR 2528) in Rowan County, North Carolina.

The purpose of this letter is to request approval for a Section 404 Regional General Permit and Section 401 Water Quality Certification. In addition to this cover letter, the following has been included to assist your review:

- Appendix A – Wetland and Stream Impact Maps
- Appendix B – Final Natural Resources Technical Report
- Appendix C – Preliminary Jurisdictional Determination Package
- Appendix D – Cultural Resource Documentation
- Appendix E – Final Minimum Criteria Determination Checklist
- Appendix F – FEMA Documentation

PROJECT DESCRIPTION

The project will widen SR 2528 (Julian Road, an existing local arterial/minor thoroughfare) between SR 2578 (Klumac Road) / I-85 and U.S. 601 (Jake Alexander Boulevard) from a two-lane ditch section (with approximate ROW width of 60 feet) to a four-lane, divided facility (on 110-ft ROW) with a 23-foot-raised median, curb and gutter, 5-foot striped bike lanes and sidewalks on both sides of the roadway. Existing design speed of 50 mph will be retained with the proposed improvement of the facility to a major collector. A full movement traffic signal is proposed at Julian Rd. / Corporate Circle (South) / W. Ritchie Rd. and a directional median crossover is proposed at Corporate Circle (North) that allows northbound U-turns and southbound lefts onto Corporate Circle. A proposed triangular raised island will also create a yield condition for eastbound Jake Alexander Blvd. to southbound Julian Road right turns, improving safety for traffic exiting Old Julian Road. Also, new, extended or restriped turn lanes at all intersections are proposed to expand storage.

PURPOSE AND NEED

The purpose of the proposed project is to improve capacity and facilitate safe and efficient multi-modal operations by widening the roadway, controlling left turn movements with a median and directional crossovers, and installing striped bike lanes and sidewalks.

PROJECT SCHEDULE

Currently, U-5738 is scheduled to LET in 2022.

INDEPENDENT UTILITY

This project exhibits the following characteristics of independent utility of a project:

- 1) The project connects logical termini and is of sufficient length to address environmental matters on a broad scope.
- 2) The project is usable and a reasonable expenditure, even if no additional transportation improvements are made in the area.
- 3) The project does not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

NEPA DOCUMENT STATUS

The proposed project qualifies as a Non-Major Action under the Minimum Criteria rules and a Minimum Criteria Determination Checklist was completed to satisfy the State Environmental Policy Act (SEPA) documentation requirements.

RESOURCE STATUS

Water Quality Classification

The U-5738 project is located entirely in the Yadkin-Pee Dee River basin [U.S. Geological Survey (USGS) Hydrologic Unit 03040103].

There are no designated Outstanding Resource Waters (ORW), High Quality Waters (HQW), or water supply watersheds (WS-I or WS-II) within 1.0 mile downstream of the study area. There are no designated anadromous fish waters or Primary Nursery Areas (PNA) present in the study area. Town Creek appears on the North Carolina 2020 Final 303(d) list of impaired waters for turbidity. The sediment and erosion control plan has been designed to NCDOT Design Standards in Sensitive Watersheds.

Jurisdictional Determination

Waters of the U.S. identified within the project study area include 975-linear feet of jurisdictional stream and 0.15 acres of jurisdictional wetlands.

Wetland and stream delineations have been completed for the project. The delineation was field verified by both the USACE and DWR. USACE issued a Preliminary Jurisdictional Determination on April 3, 2017, and the DWR issued a determination on March 20, 2017.

SUMMARY OF IMPACTS

The NCDOT is committed to incorporating all reasonable and practicable design features to avoid and minimize jurisdictional impacts and to provide full compensatory mitigation of all remaining, unavoidable jurisdictional impacts. Avoidance measures were taken throughout the planning and design stages, and minimization measures were incorporated as part of the project design.

Proposed permanent impacts to jurisdictional areas total approximately 0.050 acres of wetland impacts and approximately 1,030 linear feet of stream impacts (424 linear feet of temporary and 606 linear feet of permanent). Tables 1 and 2 summarize the wetland and stream impacts resulting from the proposed project as well as the compensatory mitigation requirements.

NCDOT has obtained compensatory mitigation for 257 linear feet of stream impacts from the N.C. Division of Mitigation Services (DMS) to compensate for unavoidable impacts to jurisdictional Waters of the U.S. resulting from the proposed project.

IMPACTS TO JURISDICTIONAL RESOURCES

The proposed project was designed to avoid and minimize impacts to Waters of the U.S. in project area to the greatest extent practicable. However, unavoidable impacts will occur from the proposed project. Tables 1 and 2 summarize impacts to jurisdictional wetlands and streams, respectively. Site numbers correspond with the permit (hydraulic) drawings included with this application and the Preliminary Jurisdictional Determination, dated April 3, 2017.

The culvert extension at Julian Branch (SB-Site 1A) was designed to match existing conditions and as such, the culvert will not be buried in this location. Based on findings from the field, there are no sills cast into the existing culvert which is being extended. One barrel (the left barrel, facing downstream) is buried approximately 1-foot with sediment. The channel dimensions at the culvert inlet/outlet do approximate the dimensions of a single barrel, and a floodplain bench is clearly present, particularly on the outlet end. This detail is intended to match existing conditions.

Impacts at sites 2B include temporary dewatering of UT 2 to Town Creek (SA). Due to the close proximity of the stream to the road fill work, this channel will be dewatered during construction. The stream bed will not be disturbed within the temporary impacts as noted on the plans. At site 2C, there will be a temporary impact associated with the utility line crossing. We are planning to bore and jack this crossing; however, we are permitting it as a temporary impact in the event that an open cut is required.

Impacts at other sites are straight forward and have not been individually discussed.

All impacts are located in the Yadkin Pee-Dee River Basin. Stream classification and statuses are listed in Table 2.

Table 1. U-5738 Impacted Jurisdictional Wetlands Impacts							
Site #	Reason	Impact Type	Type of Wetland	Wetland Name	Forested (Y/N)	Type of Jurisdiction	Impacted Area (AC)
2B	Roadway Fill/Rip Rap	Permanent	Headwater Forest	WB	Y	404/401	0.01
2D	Mechanized Clearing	Permanent	Headwater Forest	WB	Y	404/401	0.01
3	Roadway Fill/Rip Rap	Permanent	Headwater Forest	WD	Y	404/401	0.02
4	E&SC Mechanized Clearing	Permanent	Floodplain Pool	WA	Y	404/401	0.01

Table 2. U-5738 Impacted Jurisdictional Impacts								
Site #	NRTR Stream ID	Reason	Impact Type	Type of Impact	Stream Type	Type of Jurisdiction	Stream Width (LF)	Impact Length (LF)
1A	SB	Culvert Extension	Permanent	Culvert	Perennial	404/401	9	80
1B	SB	Rip Rap	Permanent	Bank Stabilization	Perennial	404/401	9	67
1B	SB	Rip Rap	Temporary	Bank Stabilization	Perennial	404/401	9	75
2A	SA	Bank Stabilization	Permanent	Bank Stabilization	Perennial	404/401	3	10
2B	SA	Dewatering	Temporary	Dewatering	Perennial	404/401	3	318
2C	SA	Utility Relocation	Temporary	Other	Perennial	404/401	3	36
2D	SA	Roadway Fill	Permanent	Fill	Perennial	404/401	3	177
5A	Town Creek	Bank Stabilization	Permanent	Bank Stabilization	Perennial	404/401	18	90
5A	Town Creek	Bank Stabilization	Temporary	Bank Stabilization	Perennial	404/401	18	78
5B	Town Creek	Bridge Replacement	Temporary	Other	Perennial	404/401	18	99

COMPENSATORY MITIGATION

Compensatory mitigation for impacts to 257 linear feet of streams is being provided by NC Division of Mitigation Services. Impacts have been requested at a 2:1 ratio. A letter Mitigation Acceptance Letter dated September 15, 2021 is linked in the ePCN.

FEDERALLY PROTECTED SPECIES

The U.S. Fish and Wildlife Service (USFWS) lists two federally protected species for Rowan County: The Schweinitz's sunflower (*Helianthus schweinitzii*) and the Northern long-eared bat (*Myotis septentrionalis*). Suitable habitat for Schweinitz's sunflower is present in the study area. Therefore, surveys were conducted by SEPI biologists on September 15, 2016, August 12, 2019 and most recently, September 7, 2021. No individuals of Schweinitz's sunflower were observed during any of the surveys. A review of Natural Heritage Program (NHP) records was performed for the project by NHP staff on September 9, 2021. No known occurrences are present within 1.0 mile of the study area. A biological conclusion of No Effect was determined for this species.

In western North Carolina, the Northern long-eared bat (NLEB) spend winter hibernating in caves and mines. Surveys of the existing bridge over Town Creek and the culvert conveying the UT to Town Creek (SB) under Julian Road were performed by NCDOT Division 9 Environmental Officer, Amy Euliss, on September 10, 2021. Surveys followed the SOP outlined in the NCDOT Preliminary Bat Habitat Assessment (Structures Caves & Mines) June 2021. No bats or evidence of bats was identified in the structures.

According to the NHP Biotics Database, most recently updated July 2021, the nearest NLEB hibernacula record is 65 miles west (Burke County) and no known NLEB roost trees occur within 150 feet of the project area.

NCDOT has also reviewed the USFWS Asheville Field office website (http://www.fws.gov/asheville/htmls/project_review/NLEB_in_WNC.html) for consistency with NHP records. This project is located entirely outside of the red highlighted areas (12-digit HUC) that the USFWS Asheville Field Office has determined to be representative of an area that may require consultation.

We believe that Situation 1 of the SLOPES (Standard Local Operating Procedures for Endangered Species Act Compliance for the Northern Long-Eared Bat in North Carolina) agreement applies to this project.

MORATORIUMS

Construction moratoria are not anticipated for this project. There are no designated anadromous fish spawning areas within Rowan County.

ESSENTIAL FISH HABITAT (EFH)

The project will not impact any Essential Fish Habitat (EFH) identified by the National Marine Fisheries Service (NMFS), and NMFS has not requested further consultation regarding EFH.

ARCHAEOLOGICAL RESOURCES

A review of the project was conducted by the Office of State Archaeology (OSA) on June 30, 2016. According to OSA findings, there is low probability for prehistoric and /or historic archaeological materials to be present within the Study Area. No archaeological survey is required for this project. Documentation of the archaeological review is included with this application.

HISTORIC ARCHITECTURAL RESOURCES

A review of State Historic Preservation (HPO) quad maps, relevant background reports, historic designations roster, and indexes was undertaken on July 12, 2016. Based on this review there are no NR, DE, LL or SL in the Area of Potential Effects (APE). One structure is present in the APE, greater than 50 years of age. The structure is typical of a ranch style house from that time period and is not eligible for the National Register of Historic Places. No survey is required. Documentation of the historic architectural review is included with this application.

SECTION 4(f) RESOURCES

The project did not require a determination under Section 4(f)

FEMA COMPLIANCE

The project study area is located in a FEMA-designated 100-year floodplain (Panel 5659). As such the project has received a Conditional Letter of Map Revision (CLOMR) and a final Memorandum of Agreement (MOA). Copies of the CLOMR and MOA are included with this application.

AVOIDANCE AND MINIMIZATION

Avoidance and minimization of impacts to protected and valued resources were incorporated throughout the design process. A detailed delineation of wetland and streams was initially performed to ensure the limitations of impacts to natural resources. As a result, proposed disturbance limits were shifted to avoid impacts, where possible.

The initial design proposed an aerial sewer crossing at Town Creek. Ultimately, the Town Creek impacts were minimized by utilizing the existing crossing of Town Creek in the proposed sewer design. Furthermore, in areas around and under Town Creek, all utilities will be installed via directional bore. Wetland impacts have been further minimized by steepening fill slopes and elongating erosion control basins where appropriate.

In addition, implementation of NCDOT's Best Management Practices for the Protection of Surface Waters (BMPs) will minimize impacts to water resources during the preconstruction, construction, maintenance, and repair situations. The existing 3-span bridge over Town Creek will be replaced with a wider 2 span structure to minimize stream impacts. The water line across the main stem of Town Creek is proposed to be constructed using horizontal directional drilling eliminating stream impacts at this location resulting from the utility crossing. As noted previously, the crossing of the SA (UT to Town Creek) is permitted as a temporary impact in the event that a directional bore is not possible. Furthermore, the plans specify that there will be no disturbance to the existing

streambed outside of the utility location areas in SA (UT to Town Creek) that runs parallel the project.

INDIRECT AND CUMULATIVE IMPACTS

Existing rules for the Water Quality Certification Program (15A NCAC 2H .0506(b)(4) require that DWR determine that a project “does not result in cumulative impacts based on past or reasonably anticipated future impacts that cause or will cause a violation of downstream impacts, that cause or will cause a violation of downstream water quality standards”.

The purpose of the proposed project is to improve capacity and facilitate safe and efficient multi-modal operations by widening the roadway. No additional development is anticipated as a result of this project.

The project is not expected to have a notable indirect effect to land use or development patterns in the area. In addition, because few indirect impacts are anticipated, the cumulative effect of this project, when considered in context with other past, present and future actions and the resulting impact on notable human and natural features, should also be minimal.

The project will address increases in impervious surfaces and associated stormwater runoff in the individual project design through the use of stormwater management control devices (SCMs).

If you have any questions or need additional information, please contact Amy Euliss at aeuliss@ncdot.gov or (336)747-7800.

Sincerely,



Amy Euliss
Division 9 PDEA Engineer

ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
TIM BAUMGARTNER
Director



September 15, 2021

Ms. Amy Euliss
NCDOT Division 9 PDEA Engineer
North Carolina Department of Transportation
375 Silas Creek Parkway
Winston-Salem, North Carolina 27127

Dear Ms. Euliss:

Subject: Mitigation Acceptance Letter:

Division 9 Project TIP U-5738, Widening SR 2528 (Julian Road), Rowan County; WBS Element 50163.1.1

The purpose of this letter is to notify you that the North Carolina Department of Environmental Quality – Division of Mitigation Services (NCDEQ-DMS) will provide the compensatory stream mitigation for the subject project. Based on the information received from you on September 15, 2021, the impacts are located in CU 03040103 of the Yadkin River basin in the Central Piedmont (CP) Eco-Region, and are as follows:

Yadkin 03040103 CP	Stream			Wetlands			Buffer (Sq. Ft.)	
	Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh	Zone 1	Zone 2
Impacts (feet/acres)	0	0	257.0	0	0	0	0	0

DMS commits to implementing sufficient compensatory stream mitigation credits to offset the impacts associated with this project as determined by the regulatory agencies in accordance with the In-Lieu Fee Instrument dated July 28, 2010. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from NCDEQ-DMS.

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

Sincerely,

James B. Stanfill
DMS Asset Management Supervisor

cc: Mr. Andrew Williams, USACE – Raleigh Regional Office
Ms. Amy Chapman, NCDWR – Raleigh
Ms. Linda Fitzpatrick, NCDOT – EAU
File: U-5738 – Division 9





Pre-Construction Notification (PCN) Form

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

June 1, 2021 Ver 4.1

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

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

Below is a link to the online help file.

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

A. Processing Information

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

Rowan

Is this a NCDMS Project? *

Yes No

Click Yes, only if NCDMS is the applicant or co-applicant.

Is this project a public transportation project? *

Yes No

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

Is this a NCDOT Project? *

Yes No

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

TIP U-5738

WBS # *

50163.3.1

(for NCDOT use only)

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

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

Has this PCN previously been submitted? *

Yes
 No

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

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

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

Yes No

Regional General Permit (RGP) Number:

201902350 - Work associated with bridge construction, widening, replacement, and interchanges

RGP Numbers (for multiple RGPs):

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

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

check all that apply

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

Pre-Filing Meeting Information

Before submitting this form please ensure you have submitted the Pre-Filing Meeting Request Form as we will not be able to accept your application without this important first step. The Pre-Filing Meeting Request Form is used in accordance with 40 C.F.R. Section 121.4(a) "At least 30 days prior to submitting a certification request, the project proponent shall request a pre-filing meeting with the

certifying agency" and in accordance with 40 C.F.R. Section 121.5(b)(7), and (c)(5) all certification requests shall include documentation that a pre-filing meeting request was submitted to the certifying authority at least 30 days prior to submitting the certification request. Click [here](#) to read more information on when this form is needed prior to application submission or [here](#) to view the form.

Is this a courtesy copy notification? *

Yes No

ID#

Version

Pre-filing Meeting or Request Date *

11/25/2020

Attach documentation of Pre-Filing Meeting Request here: *

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

DWR Pre-Filing Meeting Request Form.pdf

50.32KB

File type must be PDF

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

*

For the record only for DWR 401 Certification:

Yes No

For the record only for Corps Permit:

Yes No

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

Yes No

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

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

Yes No

Acceptance Letter Attachment

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

Accept_U-5738_Div 9.pdf

396.84KB

FILE TYPE MUST BE PDF

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

Yes No

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

Yes No

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

B. Applicant Information



1a. Who is the Primary Contact? *

Amy Euliss

1c. Primary Contact Phone: *

(xxx)xxx-xxxx
(336)747-7800

1b. Primary Contact Email: *

aeuliss@ncdot.gov

1d. Who is applying for the permit? *

Owner

(Check all that apply)

Applicant (other than owner)

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

Yes No

2. Owner Information

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

NCDOT

2b. Deed book and page no.:

2c. Contact Person:

(for Corporations)

2d. Address *

Street Address

375 Silas Creek Parkway

Address Line 2

City

Winston Salem

Postal / Zip Code

27127

State / Province / Region

NC

Country

USA

2e. Telephone Number: *

(xxx)xxx-xxxx

(336)747-7800

2f. Fax Number:

(xxx)xxx-xxxx

2g. Email Address: *

aeuliss@ncdot.gov

4. Agent/Consultant (if applicable)

4a. Name: *

Bob Lepsic

4b. Business Name:

(if applicable)

SEPI, Inc.

4c. Address *

Street Address

One Glenwood Avenue

Address Line 2

Suite 600

City

Raleigh

Postal / Zip Code

27603

State / Province / Region

NC

Country

USA

4d. Telephone Number: *

(919)747-5857

(xxx)xxx-xxxx

4e. Fax Number:

(xxx)xxx-xxxx

4f. Email Address: *

blepsic@sepiinc.com

C. Project Information and Prior Project History

1. Project Information

1a. Name of project: *

U-5738

1b. Subdivision name:

(if appropriate)

1c. Nearest municipality / town: *

Salisbury

2. Project Identification

2a. Property Identification Number:

(tax PIN or parcel ID)

2b. Property size:

(in acres)

34.9

2c. Project Address

Street Address

Julian Road

Address Line 2

City

Salisbury

Postal / Zip Code

State / Province / Region

NC

Country

2d. Site coordinates in decimal degrees

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

Latitude: *

35.6421
ex: 34.208504

Longitude: *

-80.4938
-77.796371

3. Surface Waters

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

Town Creek

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

C

[Surface Water Lookup](#)

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

Yadkin-PeeDee

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

030401030301

[River Basin Lookup](#)

4. Project Description and History

4a. Describe the existing conditions on the site and the general land use in the vicinity of the project at the time of this application. *

Land use at the site includes Julian Road and the maintained right-of-way areas. Land use in the project vicinity consists primarily of commercial development along roadways, forestland along stream corridors, interspersed with vacant land.

4b. Have Corps permits or DWR certifications been obtained for this project (including all prior phases) in the past? *

Yes No Unknown

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

0.15

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

(intermittent and perennial)

975

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

The purpose of the proposed project is to improve capacity and facilitate safe and efficient multimodal operations by widening the roadway, controlling left turn movements with a median and directional crossovers, and installing striped bike lanes and sidewalks.

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

The project will widen SR 2528 (Julian Road, an existing local arterial/minor thoroughfare) between SR 2578 (Klumac Road) / I-85 and U.S. 601 (Jake Alexander Boulevard) from a two-lane ditch section (with approximate ROW width of 60-feet) to a four-lane, divided facility (on 110-ft ROW) with a 23-foot raised median, curb and gutter, 5-foot striped bike lanes and sidewalks on both sides of the roadway. Existing design speed of 50 mph will be retained with the proposed improvement of the facility to a major collector. A full movement traffic signal is proposed at Julian Rd / Corporate Circle (South) / W. Ritchie Rd. and a directional median crossover is proposed at Corporate Circle (North) that allows northbound Uturns and southbound lefts onto Corporate Circle. A proposed triangular raised island will also create a yield condition for eastbound Jake Alexander Blvd. to southbound Julian Road right turns, improving safety for traffic exiting Old Julian Road. Also, new, extended or restriped turn lanes at all intersections are proposed to expand storage.

In addition, the project includes addition of a sidewalk on the west side of Julian Road between Klumac Road/I-85 and SR 2667 (Summit Park Drive). The portion of the project corridor proposed to be widened (with median, sidewalks and bike lanes) extends from U.S. 601 (Jake Alexander Boulevard) to SR 2578 (Klumac Rd & I-85) and is approximately 4,700 feet in length. The portion of the project corridor proposed for sidewalk improvements only, extends from SR 2578 (Klumac Rd & I-85) to SR 2667 (Summit Park Drive), and is approximately 2,000 feet in length.

We do not anticipate indirect impacts since the project is widening of a new road, and no new access will be granted as a result of the widening project. Standard road building equipment will be used.

5. Jurisdictional Determinations

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

Yes No Unknown

Comments:

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

Preliminary Approved Not Verified Unknown N/A

Corps AID Number:

Example: SAW-2017-99999

SAW-2016-01370

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

Name (if known): Eric Black, PWS

Agency/Consultant Company: SEPI Inc

Other:

5d. List the dates of the Corp jurisdiction determination or State determination if a determination was made by the Corps or DWR.

SAW-2016-01370 April 3, 2017
DWR March 20, 2017

6. Future Project Plans

6a. Is this a phased project? *

Yes No

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

D. Proposed Impacts Inventory

1. Impacts Summary

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

Wetlands Streams-tributaries Buffers
 Open Waters Pond Construction

2. Wetland Impacts

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

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

2a. Site # * (?)	2a1 Reason * (?)	2b. Impact type * (?)	2c. Type of W. *	2d. W. name *	2e. Forested *	2f. Type of Jurisdiction * (?)	2g. Impact area *
2B	Dewatering Operation	P	Headwater Forest	WB	Yes	Both	0.010 (acres)
2D	Roadway Fill	P	Headwater Forest	WB	Yes	Both	0.010 (acres)
3	Roadway Fill	P	Headwater Forest	WD	Yes	Both	0.020 (acres)
4	E&SC Measures	P	Floodplain Pool	WA	Yes	Both	0.010 (acres)

2g. Total Temporary Wetland Impact

0.000

2g. Total Permanent Wetland Impact

0.050

2g. Total Wetland Impact

0.050

2i. Comments:

Impact amounts differ from amount shown on permit plans due to rounding.

3. Stream Impacts

If there are perennial or intermittent stream impacts (including temporary impacts) proposed on the site, then complete this question for all stream sites impacted.

"S." will be used in the table below to represent the word "stream".

	3a. Reason for impact * (?)	3b. Impact type *	3c. Type of impact *	3d. S. name *	3e. Stream Type * (?)	3f. Type of Jurisdiction *	3g. S. width *	3h. Impact length *
S1	(Site 1A) Culvert Extension	Permanent	Culvert	Julian Branch (SB)	Perennial	Both	9 Average (feet)	80 (linear feet)
S2	(Site 1B) Rip rap	Permanent	Bank Stabilization	Julian Branch (SB)	Perennial	Both	9 Average (feet)	67 (linear feet)
S3	(Site 1B) Rip rap	Temporary	Bank Stabilization	Julian Branch (SB)	Perennial	Both	9 Average (feet)	75 (linear feet)
S4	(Site 2A) Bank Stabilization	Permanent	Bank Stabilization	UT to Town Creek (SA)	Perennial	Both	3 Average (feet)	10 (linear feet)
S5	(Site 2B) Dewatering Operation	Temporary	Dewatering	UT to Town Creek (SA)	Perennial	Both	3 Average (feet)	318 (linear feet)
S6	(Site 2C) Utility Relocation	Temporary	Other	UT to Town Creek (SA)	Perennial	Both	3 Average (feet)	36 (linear feet)

S7	(Site 2D) Roadway Fill	Permanent	Fill	UT to Town Creek (SA)	Perennial	Both	3 Average (feet)	177 (linear feet)
S8	(Site 5A) Bank Stabilization	Permanent	Bank Stabilization	Town Creek	Perennial	Both	18 Average (feet)	90 (linear feet)
S9	(Site 5A) Bank Stabilization	Temporary	Bank Stabilization	Town Creek	Perennial	Both	18 Average (feet)	78 (linear feet)
S10	(Site 5B) Bridge Replacement	Temporary	Other	Town Creek	Perennial	Both	18 Average (feet)	99 (linear feet)

** All Perennial or Intermittent streams must be verified by DWR or delegated local government.

3i. Total jurisdictional ditch impact in square feet:

0

3i. Total permanent stream impacts:

424

3i. Total temporary stream impacts:

606

3i. Total stream and ditch impacts:

1030

3j. Comments:

Impact amounts differ from amount shown on permit plans due to rounding.

E. Impact Justification and Mitigation

1. Avoidance and Minimization

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

Avoidance and minimization of impacts to protected and valued resources were incorporated throughout the design process. A detailed delineation of wetland and streams was initially performed to ensure the limitations of impacts to natural resources. As a result, proposed disturbance limits were shifted to avoid impacts, where possible.

The initial design proposed an aerial sewer crossing at Town Creek. Ultimately, the Town Creek impacts were minimized by utilizing the existing crossing of Town Creek in the proposed sewer design. Furthermore, in areas around and under Town Creek, all utilities will be installed via directional bore. Wetland impacts have been further minimized by steepening fill slopes and elongating erosion control basins where appropriate. The project erosion control plan has also been designed in accordance with Design Standards in Sensitive Watersheds.

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

In addition, implementation of NCDOT's Best Management Practices for the Protection of Surface Waters (BMPs) will minimize impacts to water resources during the preconstruction, construction, maintenance, and repair situations. The existing 3-span bridge over Town Creek will be replaced with a wider 2 span structure to minimize stream impacts. The water line across the main stem of Town Creek is proposed to be constructed using horizontal directional drilling eliminating stream impacts at this location resulting from the utility crossing. As noted previously, the crossing of the SA (UT to Town Creek) is permitted as a temporary impact in the event that a directional bore is not possible. Furthermore, the plans specify that there will be no disturbance to the existing streambed outside of the utility location areas in SA (UT to Town Creek) that runs parallel the project.

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

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

Yes No

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

DWR Corps

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

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

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

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

Yes No

4b. Stream mitigation requested:

(linear feet)

514 (257' at a 2:1 ratio)

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

warm

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

4d. Buffer mitigation requested (DWR only):

(square feet)

4e. Riparian wetland mitigation requested:

(acres)

4f. Non-riparian wetland mitigation requested:

(acres)

4g. Coastal (tidal) wetland mitigation requested:

(acres)

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

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

1. Diffuse Flow Plan

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

Yes No

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

If no, explain why:

Project does not occur in a NC buffered basin.

2. Stormwater Management Plan

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

Yes No

Comments:

See attached permit drawings and stormwater management plan.

Roadway runoff will be conveyed by curb & gutter and discharged into vegetated or riprap lined ditches prior to entering Julian Branch or Town Creek. The portion of the project from -L- STA 13+05 to STA 52+04 drains to Julian Branch and the portion from -L- STA 52+04 to 79+23 drains to Town Creek.

G. Supplementary Information

1. Environmental Documentation

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

Yes No

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

Yes No

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

Yes No

2. Violations (DWR Requirement)

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

Yes No

3. Cumulative Impacts (DWR Requirement)

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

Yes No

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

The purpose of the proposed project is to improve capacity and facilitate safe and efficient multimodal operations by widening the roadway. No additional development is anticipated as a result of this project.

4. Sewage Disposal (DWR Requirement)

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

Yes No N/A

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

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

Yes No

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

Yes No

5d. Is another Federal agency involved? *

Yes No Unknown

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

Yes No

5f. Will you cut any trees in order to conduct the work in waters of the U.S.? *

Yes No

5g. Does this project involve bridge maintenance or removal? *

Yes No

5g(1). If yes, have you inspected the bridge for signs of bat use such as staining, guano, bats, etc.? Representative photos of signs of bat use can be found in the NLEB SLOPES, Appendix F, pages 3-7.

Yes No

Link to the NLEB SLOPES document: http://saw-reg.usace.army.mil/NLEB/1-30-17-signed_NLEB-SLOPES&apps.pdf

If you answered "Yes" to 5g(1), did you discover any signs of bat use? *

Yes No Unknown

*** If yes, please show the location of the bridge on the permit drawings/project plans.

5h. Does this project involve the construction/installation of a wind turbine(s)? *

Yes No

5i. Does this project involve (1) blasting, and/or (2) other percussive activities that will be conducted by machines, such as jackhammers, mechanized pile drivers, etc.? *

Yes No

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

U.S. Fish and Wildlife Information Planning and Consultation tool, Natural Heritage Program database, on-site habitat and species surveys.

6. Essential Fish Habitat (Corps Requirement)

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

Yes No

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

<https://www.fisheries.noaa.gov/resource/map/essential-fish-habitat-mapper>

7. Historic or Prehistoric Cultural Resources (Corps Requirement)

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

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

Yes No

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

The project was reviewed by NCDOT Cultural Resource staff. No survey required forms for both Archeology and Historic Architecture are attached to the ePCN. Additionally, the Catawba Indian Nation was consulted for impact to tribal resources. In a letter dated, May 18, 2020, they stated that they had no immediate concerns with the project. The tribal coordination are attached to the ePCN.

8. Flood Zone Designation (Corps Requirement)

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

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

Yes No

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

The project has received a Conditional Letter of Map Revision (CLOMR) and a final Memorandum of Agreement (MOA). Copies of the CLOMR and MOA are attached.

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

Federal Emergency Management Agency (FEMA) Floodmaps Panel 5659 (<https://flood.nc.gov/ncflood/mappingprogram.html>)

Miscellaneous



Comments

Please use the space below to attach all required documentation or any additional information you feel is helpful for application review. Documents should be combined into one file when possible, with a Cover Letter, Table of Contents, and a Cover Sheet for each Section preferred.

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

Cultural Resource documentation for ePCN.pdf	7.48MB
FINAL U-5738 Julian Rd Widening NRTR_202109.pdf	17.31MB
U5738 DWR JS.pdf	1.28MB
U5738 signed PJD.pdf	908.03KB
U-5738 Cover Lettter_FINAL COMBINED_R.pdf	13.78MB
U-5738_PermitPlans.pdf	8.14MB

File must be PDF or KMZ

Signature



*

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

- The project proponent hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief; and
- The project proponent hereby requests that the certifying authority review and take action on this CWA 401 certification request within the applicable reasonable period of time.
- I have given true, accurate, and complete information on this form;
- I agree that submission of this PCN form is a "transaction" subject to Chapter 66, Article 40 of the NC General Statutes (the "Uniform Electronic Transactions Act");
- I agree to conduct this transaction by electronic means pursuant to Chapter 66, Article 40 of the NC General Statutes (the "Uniform Electronic Transactions Act");
- I understand that an electronic signature has the same legal effect and can be enforced in the same way as a written signature; AND
- I intend to electronically sign and submit the PCN form.

Full Name: *

Amy Euliss

Signature *



Date

9/20/2021



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



(Version 2.07; Released October 2016)

WBS Element: 50163.1.1 **TIP No.:** U-5738 **County(ies):** Rowan **Page** 1 **of** 2

General Project Information

WBS Element:	50163.1.1	TIP Number:	U-5738	Project Type:	Roadway Widening	Date:	Sept 2021
NCDOT Contact:	Matt W Jones, PE		Contractor / Designer:		Greg Brickham, PE		
	Address:	Highway Division 9 375 Silas Creek Parkway Winston Salem, NC 27127			Address:	KCI Associates of NC 4505 Falls of Neuse Rd, Suite 400 Raleigh, NC 27609	
	Phone:	(336) 747-7800			Phone:	(919) 278-2509	
	Email:	mwjones2@ncdot.gov			Email:	gregory.brickham@kci.com	
City/Town:	Salisbury		County(ies):	Rowan			
River Basin(s):	Yadkin-Pee Dee		CAMA County?	No			
Wetlands within Project Limits?	Yes						

Project Description

Project Length (lin. miles or feet):	1.258 Miles	Surrounding Land Use:	Urban
Project Built-Upon Area (ac.)		Proposed Project	Existing Site
		15.8 ac.	11.7 ac.
Typical Cross Section Description:	(4) - 12' travel lanes with 23' median, 5' bike lanes & sidewalk at culvert. (4) - 12' travel lanes with 5.5' median, 5' bike lanes & sidewalk at bridge.		(2) - 12' travel lanes with 5' paved shoulders at culvert. (2) - 11' travel lanes with 3' paved shoulders at bridge.

Annual Avg Daily Traffic (veh/hr/day):	Design/Future: 26800	Year: 2040	Existing: 24000	Year: 2020
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General Project Narrative:
(Description of Minimization of Water Quality Impacts)

The proposed project will widen a portion of Julian Road (SR 2528) from 1 to 2 lanes (median divided) in both directions, adding curb & gutter and sidewalk throughout. The widening begins at the intersection of Julian Road and Klumac Road (SR 2541) and will end at the intersection with Jake Alexander Blvd. (SR 1007). The project will cross over 2 waterbodies, Julian Branch and Town Creek. Town Creek is listed on the 303(D) impaired waters list. An existing 7'x8' double box culvert at STA 41+19 over Julian Branch will be extended due to road widening and proposed fill slopes. The existing 3-span bridge at STA 69+96.5 over Town Creek will be replaced with a wider, 2-span structure to minimize stream impacts. There are no proposed bents in the water and no deck drains over water.

There are wetlands within the proposed project limits. Fill activities will result in 0.03 AC. of permanent fill in wetlands. Erosion control activities and roadway fill will result in a total of 0.02 AC. of mechanized clearing in wetlands. Wetland impacts have been minimized by steepening fill slopes and elongating erosion control basins where appropriate. There will be 187 LF of permanent impacts and 354 LF of temporary impacts to a parallel jurisdictional stream (to Town Creek) starting at STA 65+54 RT. The proposed culvert extension along Julian Branch will result in 147 LF of permanent channel impacts and 75 LF of temporary channel impacts. Bank stabilization and the bridge replacement and along the Town Creek main stem will result in 90 LF of permanent and 177 LF of temporary channel impacts. The water line across the Town Creek main stem starting at STA 71+32 RT is proposed to be designed using horizontal directional drilling, therefore there will be no stream impacts at this location due to utility construction. The total project impacts will result in 0.03 AC. permanent fill in wetlands, 0.02 AC. mechanized clearing in wetlands, 0.09 AC. of permanent surface water impacts, 0.14 AC. of temporary surface water impacts, 424 LF of permanent channel impacts and 606 LF of temporary channel impacts. Riparian buffer rules do not apply for the Yadkin Pee-Dee River basin.

Stormwater controls: Roadway runoff will be conveyed by curb & gutter and discharged into vegetated or riprap lined ditches prior to entering Julian Branch or Town Creek. The portion of the project from -L- STA 13+05 to STA 52+04 drains to Julian Branch and the portion from -L- STA 52+04 to 79+23 drains to Town Creek. Town Creek is on the 2020 303(d) list for turbidity, therefore Environmentally Sensitive Areas have been added to be within 50 ft from the top of bank for all jurisdictional streams and all erosion control basins have been designed to the 25-yr storm event to accommodate this designation.

Waterbody Information

Surface Water Body (1):	Town Creek		NCDWR Stream Index No.:	12-115-3	
NCDWR Surface Water Classification for Water Body	Primary Classification:	Class C			
	Supplemental Classification:	None			
Other Stream Classification:	None				
Impairments:	biological impairment	turbidity			
Aquatic T&E Species?	No Comments:				
NRTR Stream ID:	Town Creek		Buffer Rules in Effect:	No	
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?	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



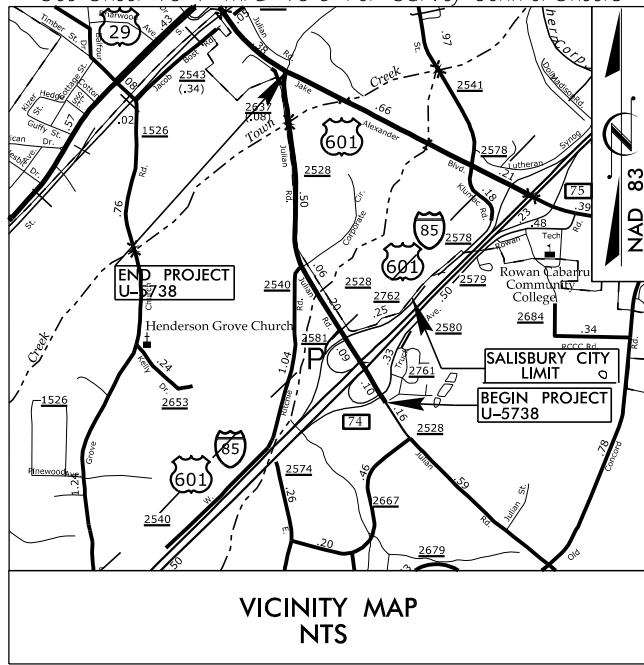
(Version 2.07; Released October 2016)

WBS Element: 50163.1.1 **TIP No.:** U-5738 **County(ies):** Rowan **Page** 2 **of** 2

Additional Waterbody Information

Surface Water Body (2):	UT1 to Town Creek (parallel to Julian Rd starting at STA 65+54 RT)		NCDWR Stream Index No.:	12-115-3	
NCDWR Surface Water Classification for Water Body	Primary Classification:		Class C		
	Supplemental Classification:		None		
Other Stream Classification:	None				
Impairments:	biological impairment		turbidity		
Aquatic T&E Species?	No		Comments:		
NRTR Stream ID:	SA		Buffer Rules in Effect:		No
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?	
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)	
	(If yes, provide justification in the General Project Narrative)				
Surface Water Body (3):	UT2 to Town Creek (Julian Branch)		NCDWR Stream Index No.:	12-115-3	
NCDWR Surface Water Classification for Water Body	Primary Classification:		Class C		
	Supplemental Classification:		None		
Other Stream Classification:	None				
Impairments:	biological impairment		turbidity		
Aquatic T&E Species?	No		Comments:		
NRTR Stream ID:	SB		Buffer Rules in Effect:		No
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?	
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)	
	(If yes, provide justification in the General Project Narrative)				
Surface Water Body (4):			NCDWR Stream Index No.:		
NCDWR Surface Water Classification for Water Body	Primary Classification:				
	Supplemental Classification:				
Other Stream Classification:					
Impairments:					
Aquatic T&E Species?			Comments:		
NRTR Stream ID:			Buffer Rules in Effect:		
Project Includes Bridge Spanning Water Body?		Deck Drains Discharge Over Buffer?		Dissipator Pads Provided in Buffer?	
Deck Drains Discharge Over Water Body?		(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)				
Surface Water Body (5):			NCDWR Stream Index No.:		
NCDWR Surface Water Classification for Water Body	Primary Classification:				
	Supplemental Classification:				
Other Stream Classification:					
Impairments:					
Aquatic T&E Species?			Comments:		
NRTR Stream ID:			Buffer Rules in Effect:		
Project Includes Bridge Spanning Water Body?		Deck Drains Discharge Over Buffer?		Dissipator Pads Provided in Buffer?	
Deck Drains Discharge Over Water Body?		(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)				

See Sheet 1A For Index of Sheets
 See Sheet 1B For Conventional Symbols
 See Sheet 1C-1 thru 1C-9 For Survey Control Sheets



VICINITY MAP
NTS

90% PLANS

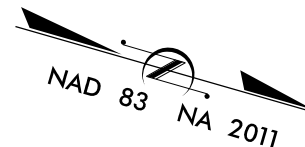
STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

ROWAN COUNTY

**LOCATION: SR 2528 (JULIAN ROAD) FROM
 SR 2667 (SUMMIT PARK DRIVE) TO
 US 601 (JAKE ALEXANDER BOULEVARD)
 IN SALISBURY**

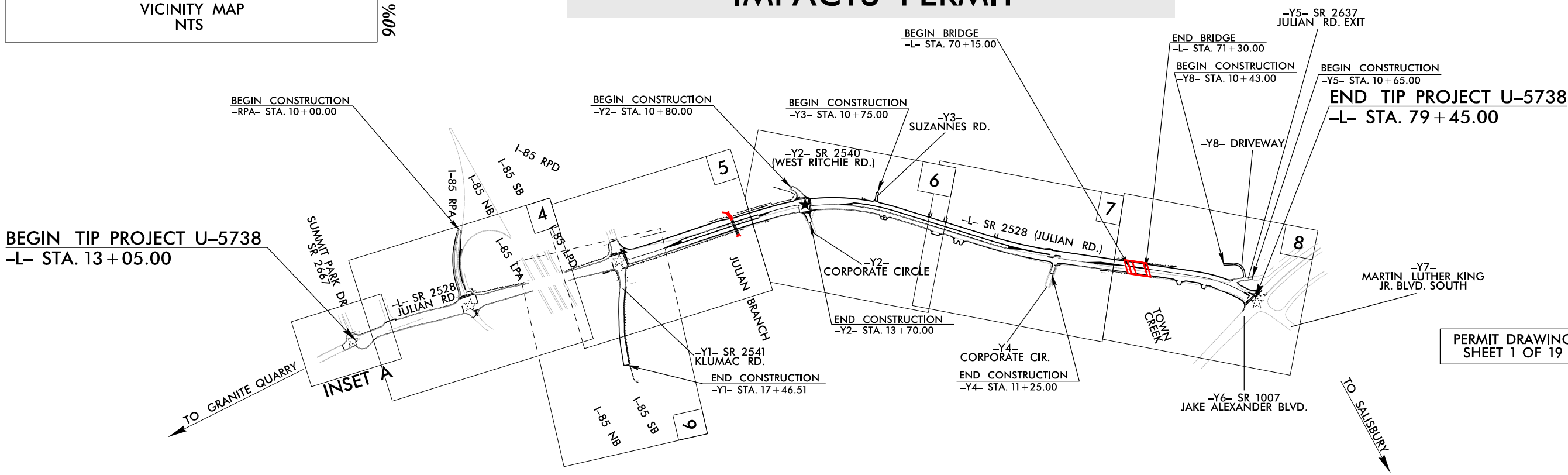
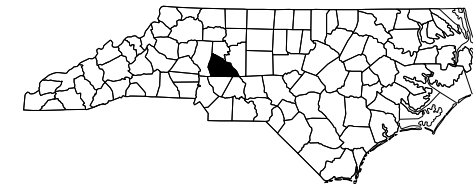
**TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND
 STRUCTURES**

**WETLAND AND SURFACE WATER
 IMPACTS PERMIT**



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5738	1	19
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
50163.1.1	N/A	P.E.	
50163.2.1	N/A	RW & UTILITIES	
50163.3.1	N/A	CONST.	

- ☆ EXISTING TRAFFIC SIGNAL
- ★ PROPOSED TRAFFIC SIGNAL

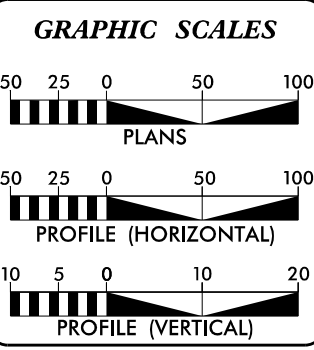


PERMIT DRAWING
SHEET 1 OF 19

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

THIS PROJECT IS PARTIALLY WITHIN THE MUNICIPAL BOUNDARIES OF THE CITY OF SALISBURY, NC

CONTRACT:



DESIGN DATA

ADT 2020 =	24,000
ADT 2040 =	26,800
K =	9 %
D =	60 %
T =	8 % *
V =	50 MPH
*(TTST=2% DUAL=6%)	
FUNC CLASS =	LOCAL STATEWIDE TIER

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT U-5738 =	1.236 Miles
LENGTH OF STRUCTURES TIP PROJECT U-5738 =	0.022 Miles
TOTAL LENGTH TIP PROJECT U-5738 =	1.258 Miles

PREPARED FOR
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 DIVISION NINE

SEPI
 ENGINEERING & CONSTRUCTION
 1 Glenwood Avenue
 Raleigh, NC 27603
 Tel: 919.789.9977
 Fax: 919.789.9591
 License: C-2197

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
 FEBRUARY 16, 2018

LETTING DATE:
 2022

BEN CRAWFORD, PE
 PROJECT ENGINEER

DANIEL W. GARDNER, JR., PE
 PROJECT DESIGN ENGINEER

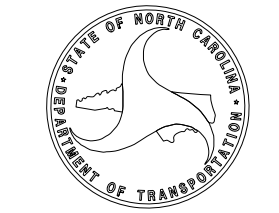
MATT JONES, PE
 NCDOT DIVISION CONTACT

HYDRAULICS ENGINEER

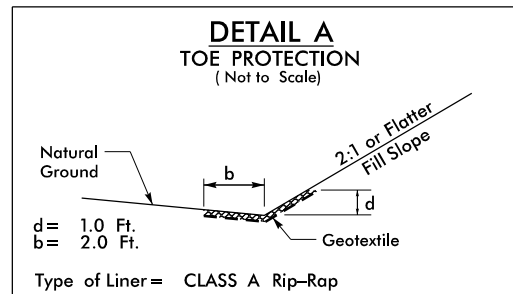
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ROADWAY DESIGN ENGINEER

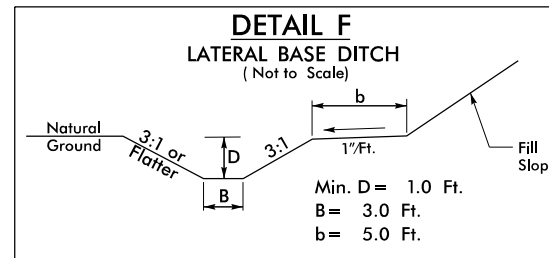
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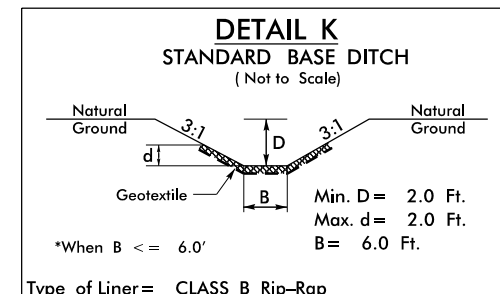
9/14/2021
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 Sawyer, Walter



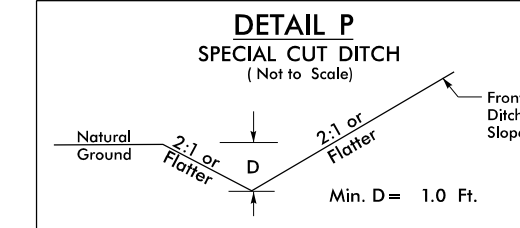
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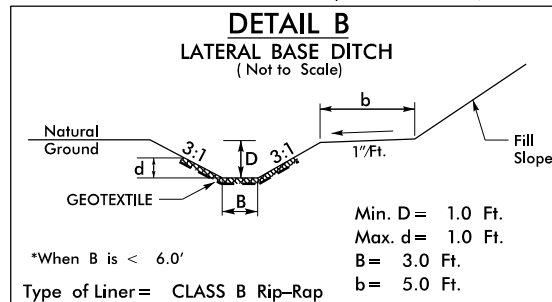
FROM -L- STA. 46+75 TO STA. 49+00 LT
FROM -L- STA. 71+50 TO STA. 73+50 RT



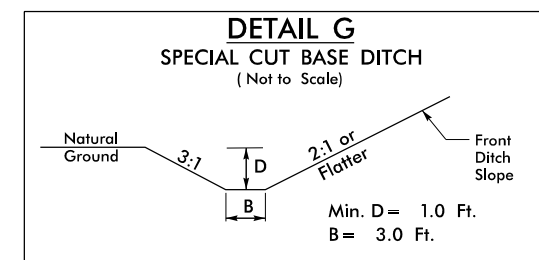
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(EST 165 TONS, EST 360 SY GT)



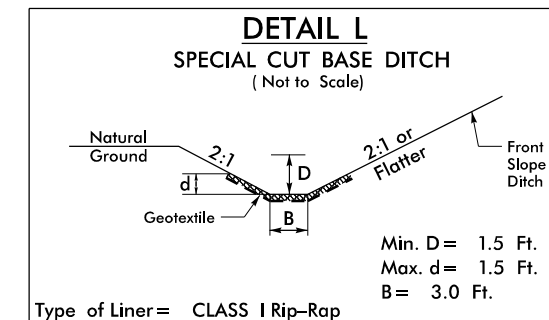
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FROM -Y8- STA. 10+75 TO STA. 11+00 RT



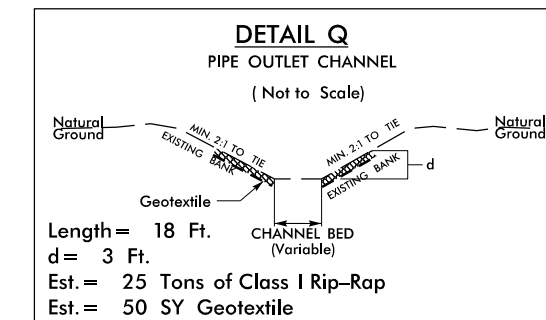
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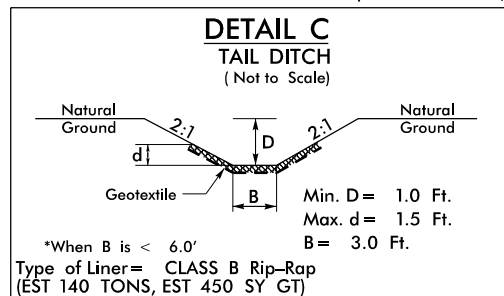
FROM -L- STA. 49+00 TO STA. 49+50 LT
FROM -L- STA. 52+00 TO STA. 55+14.8 LT
FROM -L- STA. 55+62.1 TO STA. 56+22.5 LT



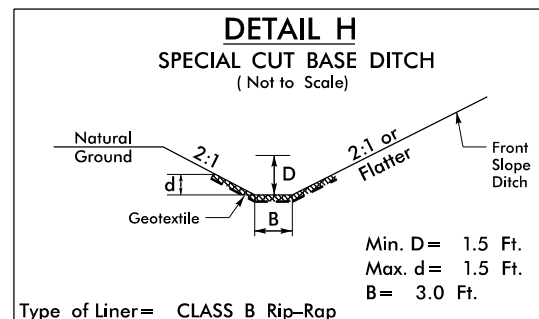
FROM -L- STA. 67+50 TO STA. 68+25 LT
(EST 45 TONS, EST 95 SY GT)



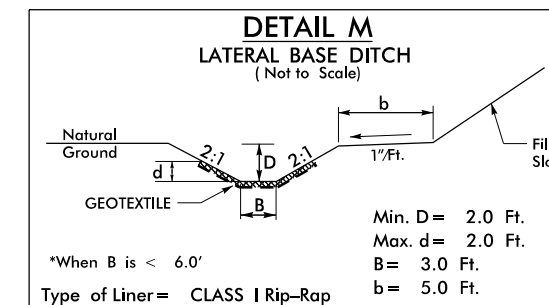
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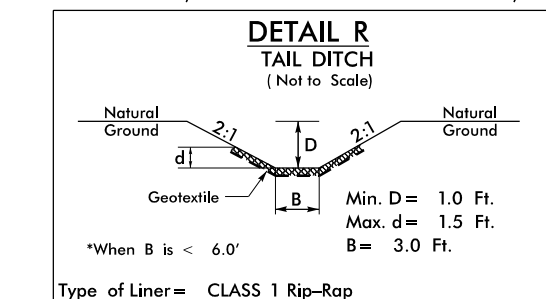
FROM -L- STA. 22+68.1, OFF -99.8' TO STA. 25+29.6, OFF -237.0' LT



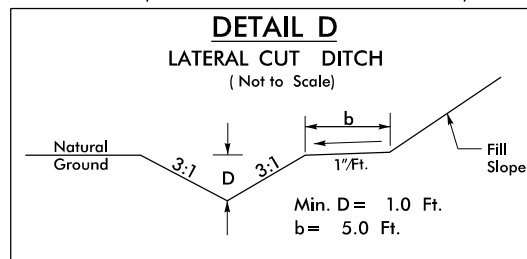
FROM -L- STA. 56+90.2 TO STA. 60+09.1 LT (EST 175 TONS, EST 385 SY GT)
FROM -L- STA. 60+59.9 TO STA. 67+50 LT (EST 370 TONS, EST 820 SY GT)



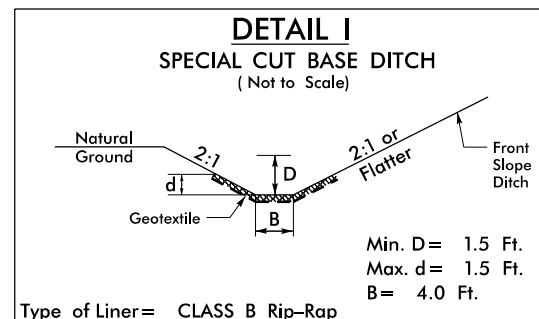
FROM -L- STA. 68+25 TO STA. 70+00 LT
(EST 100 TONS, EST 215 SY GT)



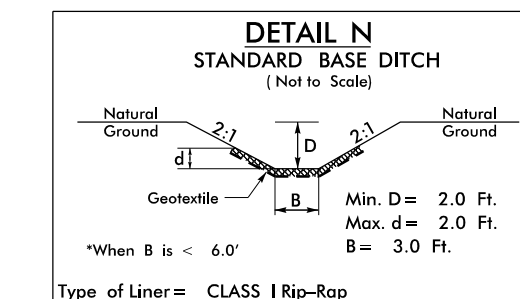
FROM -L- STA. 41+50.1, OFF +104.3' TO STA. 41+80.1, OFF +96.0' RT
(EST 15 TONS, EST 40 SY GT)



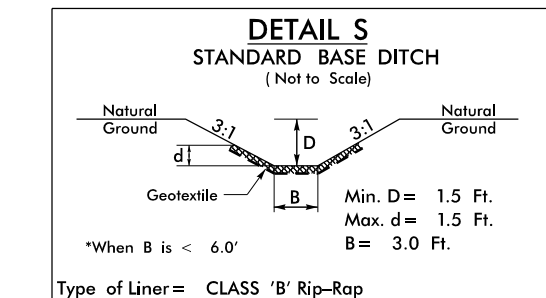
FROM -L- STA. 34+50 TO STA. 38+90 LT
FROM -L- STA. 39+85 TO STA. 40+73.7 LT



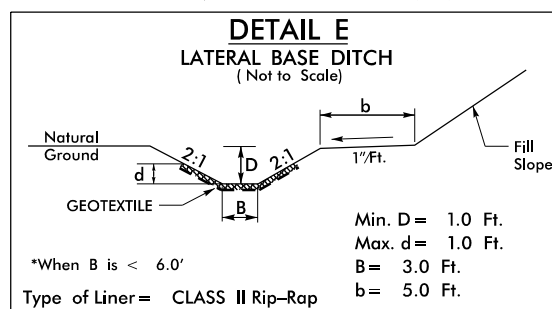
FROM -L- STA. 59+28 TO STA. 61+50 RT
(EST 155 TONS, EST 345 SY GT)



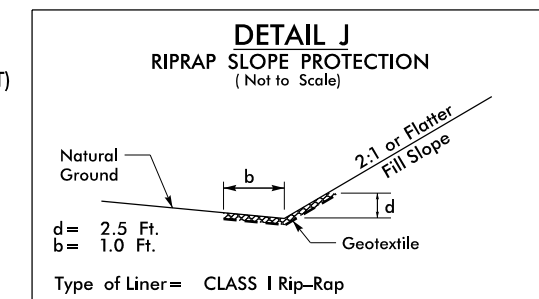
FROM STA. 70+00 TO STA. 70+45 LT
(EST 30 TONS, EST 60 SY GT)



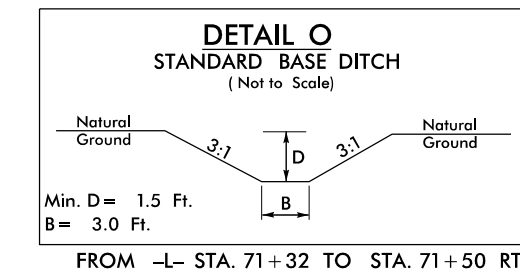
FROM -L- STA. 70+65 TO STA. 71+50 LT (EST 50 TONS, EST 105 SY GT)



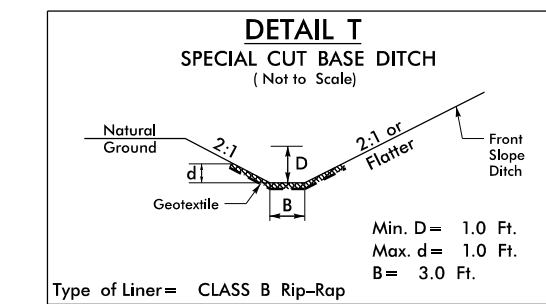
FROM -L- STA. 40+94.2 TO STA. 43+00 LT (EST 95 TONS, EST 200 SY GT)



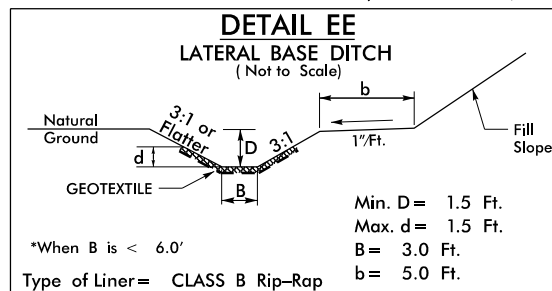
FROM STA. 65+50 TO STA. 68+50 RT
(EST 115 TONS, EST 240 SY GT)



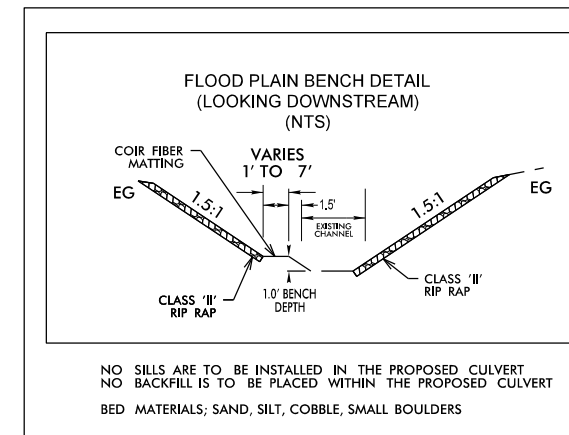
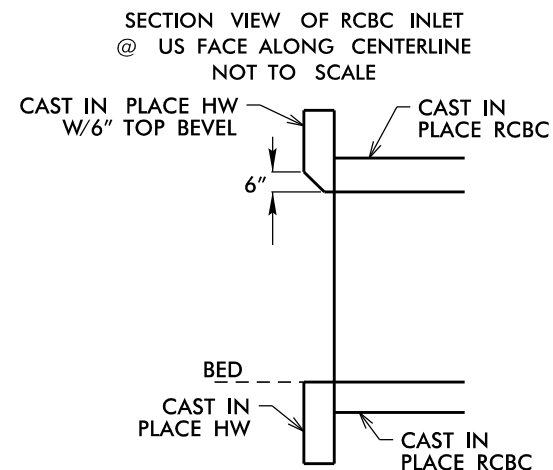
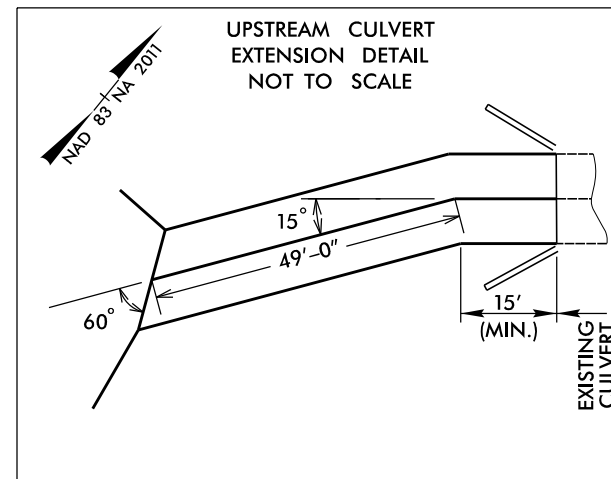
FROM -L- STA. 71+32 TO STA. 71+50 RT



FROM -L- STA. 73+00 TO STA. 75+00 LT
(EST 80 TONS, EST 170 SY GT)



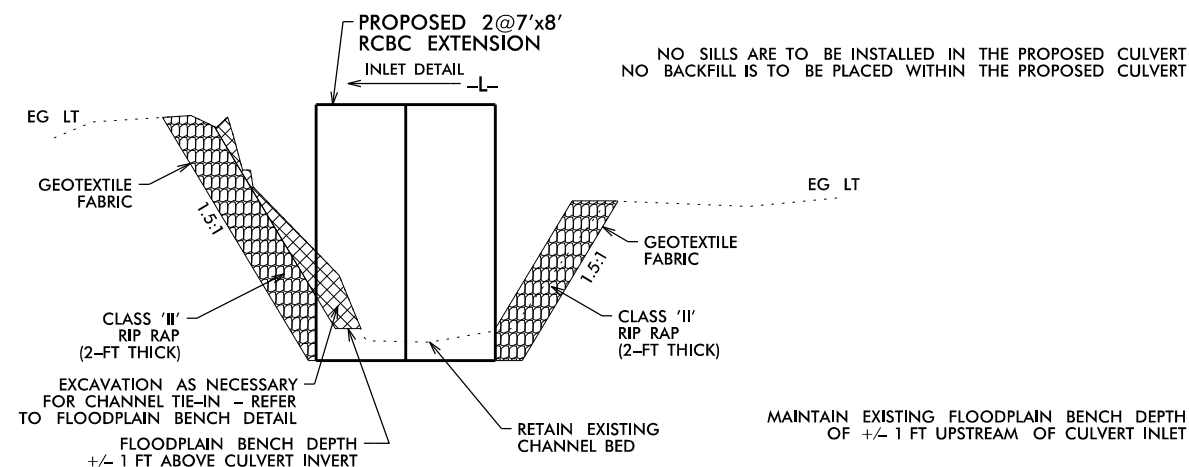
FROM -L- STA. 43+00 TO STA. 45+75 LT (EST 190 TONS, EST 415 SY GT)



NO SILLS ARE TO BE INSTALLED IN THE PROPOSED CULVERT
NO BACKFILL IS TO BE PLACED WITHIN THE PROPOSED CULVERT
BED MATERIALS; SAND, SILT, COBBLE, SMALL BOULDERS

STREAM CROSS SECTION
LT TO RT FACING DOWNSTREAM
(NOT TO SCALE)

TOTAL EST. EXCAVATION AT INLET = 10 C.Y.
TOTAL EST. CL 'II' RIP RAP AT INLET = 75 TONS
TOTAL EST. GEOTEXTILE AT INLET = 85 S.Y.
TOTAL EST. C.F. MATTING AT INLET = 40 S.Y.



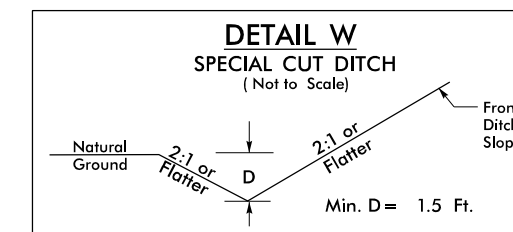
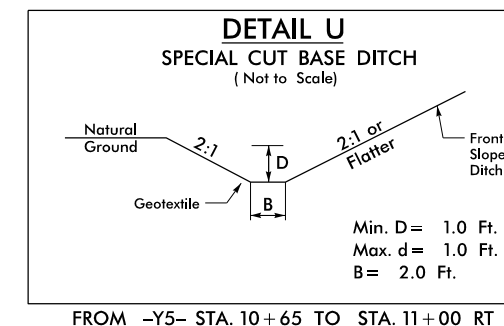
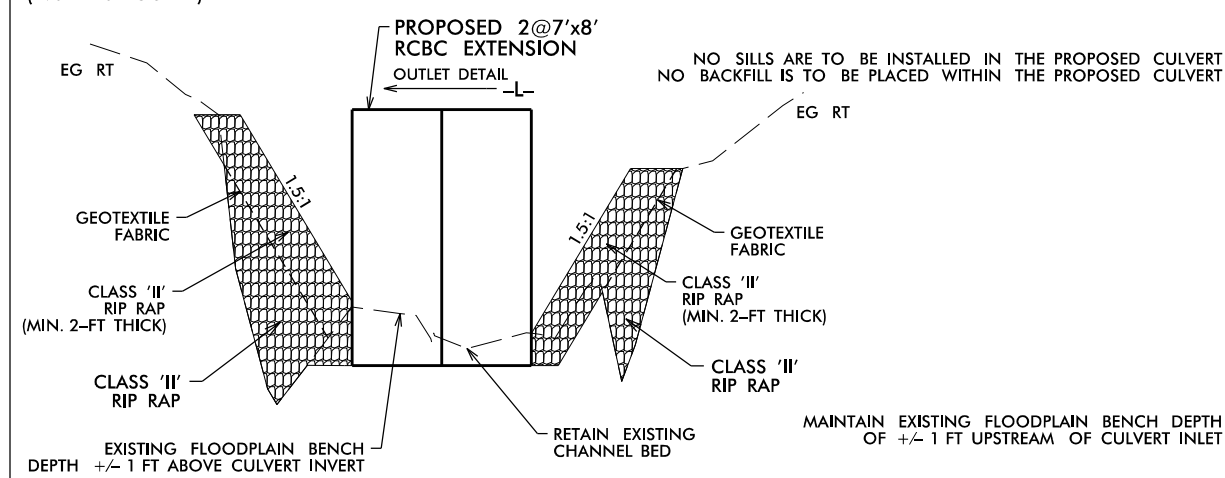
NO SILLS EXIST WITHIN THE EXISTING CULVERT BARRELS. THE INCLUSION OF SILLS IN THE EXTENDED CULVERT BARRELS WOULD REDUCE THE EFFECTIVE OPENING OF THE CROSSING. IN ORDER TO COMPLY WITH THE FEMA REQUIREMENT TO CAUSE NO INCREASE IN BASE FLOOD ELEVATIONS ON EXISTING INSURABLE STRUCTURES WITHIN THE FLOODPLAIN, THE EXISTING EFFECTIVE CULVERT OPEN AREA MUST BE MAINTAINED.

FOR THE PURPOSE OF DETERMINING BASE FLOOD ELEVATIONS ALONG THE IMPACTED REACH, EXISTING CONDITIONS WERE MODELED CONSISTENT WITH THE INTENT OF THE DESIGN OF THE EXISTING CULVERT. HISTORICAL CULVERT PLANS INDICATE TWO CLEAR 7-FT WIDE BY 8-FT DEEP CONCRETE BARRELS. OVER TIME, SEDIMENT HAS ACCUMULATED IN ONE BARREL, CREATING A FLOODPLAIN BENCH. HOWEVER, IT IS ASSUMED THAT DURING HIGH FLOW EVENTS SUCH AS A 100-YR DISCHARGE, THE BARRELS ARE FLUSHED OUT AND PROVIDE THE FULL OPEN AREA.

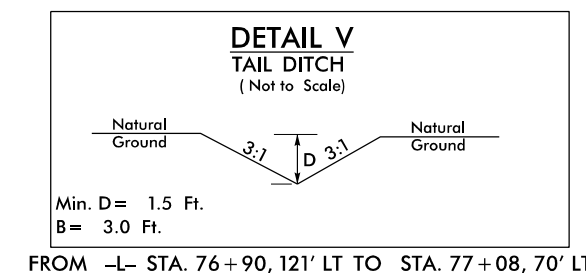
THE CULVERT EXTENSIONS HAVE BEEN DESIGNED CONSISTENT WITH THE ORIGINAL CULVERT DESIGN. NO BACKFILL HAS BEEN CALLED FOR. HOWEVER, IT IS ASSUMED THAT SEDIMENT WILL ACCUMULATE AND FLOODPLAIN BENCHES WILL DEVELOP CONSISTENT WITH WHAT HAS BEEN OBSERVED AT THE SITE.

STREAM CROSS SECTION
LT TO RT FACING DOWNSTREAM
(NOT TO SCALE)

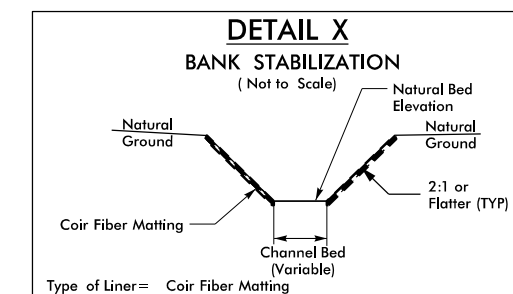
TOTAL EST. CL 'II' RIP RAP AT OUTLET = 100 TONS
TOTAL EST. GEOTEXTILE AT OUTLET = 85 S.Y.
TOTAL EST. C.F. MATTING AT INLET = 40 C.Y.



FROM -L- STA. 75+00 TO STA. 77+14.7 LT
FROM -Y5- STA. 11+50 TO STA. 11+94. RT



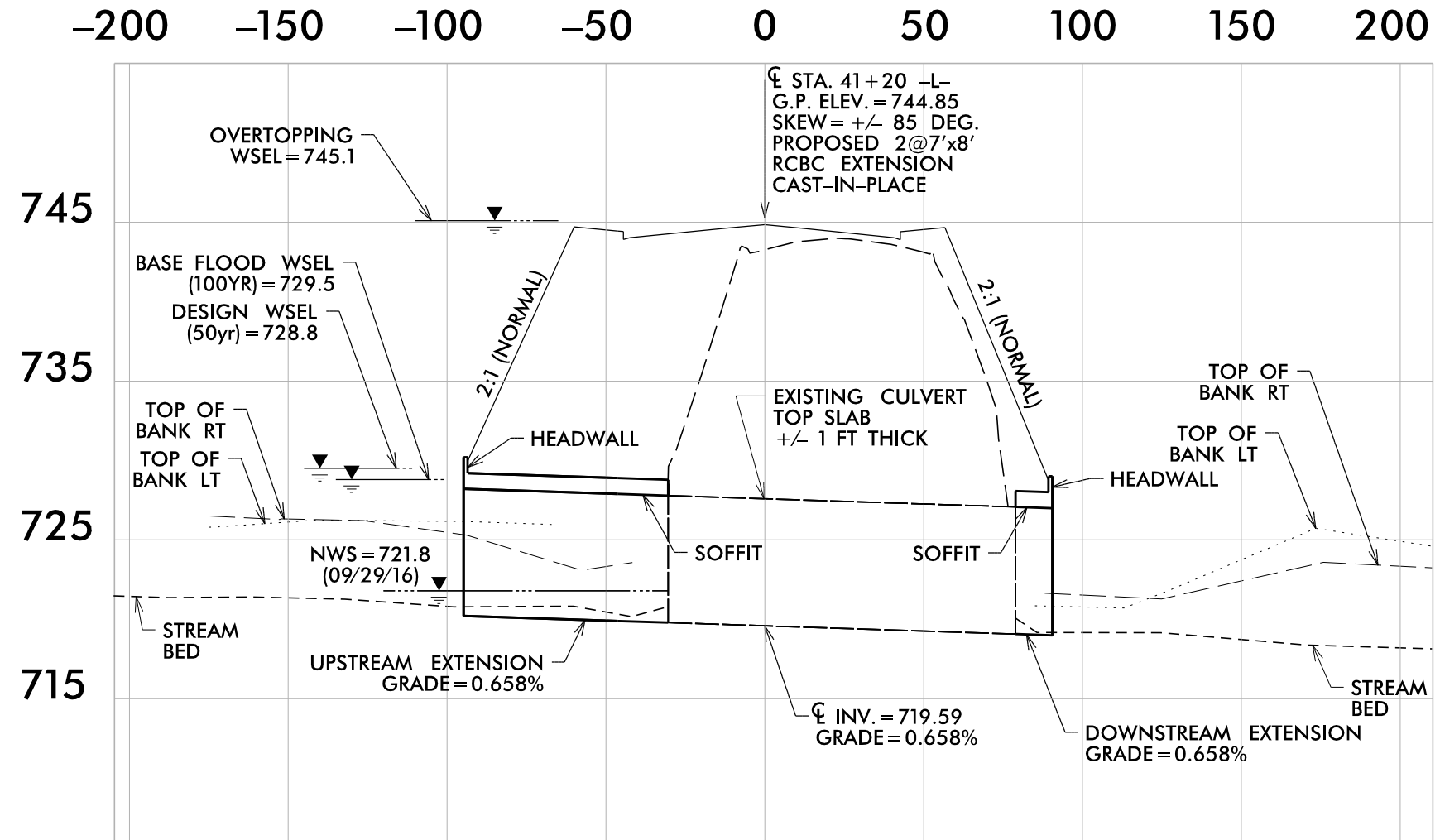
FROM -L- STA. 76+90, 121' LT TO STA. 77+08, 70' LT



FROM -L- STA. 66+73 RT TO STA. 67+09 RT
FROM -L- STA. 70+52 LT TO STA. 70+92 LT
FROM -L- STA. 70+65 RT TO STA. 71+12 RT

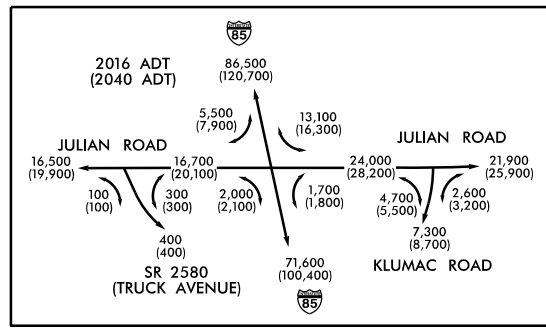
SCALE:
 1" = 50' H
 1" = 10' V

PERMIT DRAWING
 SHEET 4 OF 19



PROFILE VIEW ALONG CULVERT

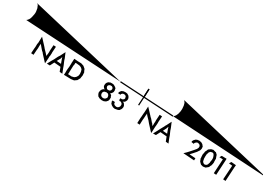
8/17/99



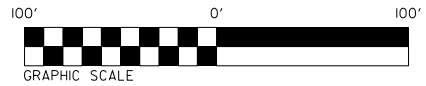
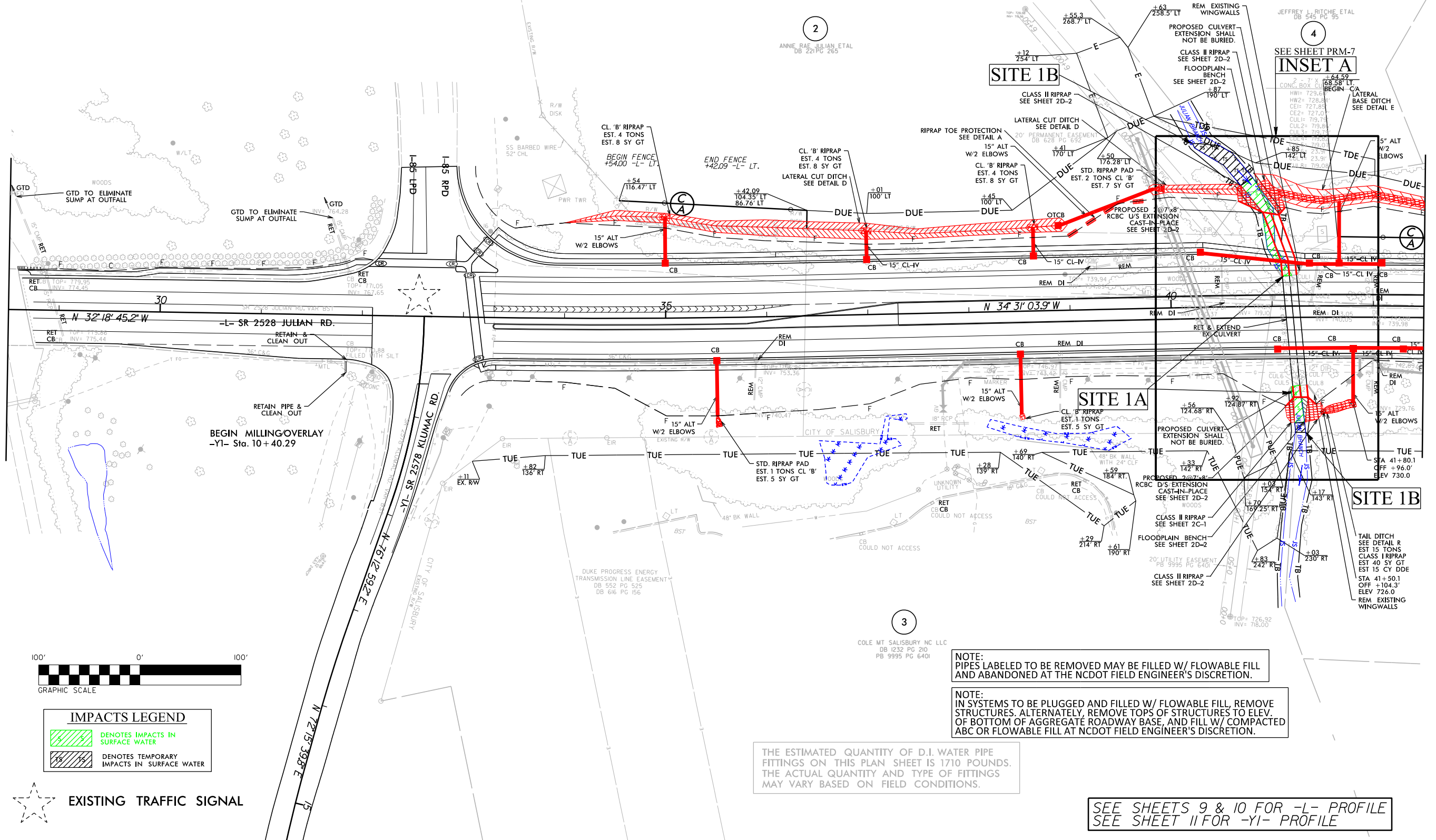
SEPI
Engineering & Construction, Inc.
1 Glenwood Avenue
Raleigh, NC 27603
Tel: 919.789.9977
Fax: 919.789.9591
License: C-2197

PERMIT DRAWING SHEET 5 OF 19

PROJECT REFERENCE NO. U-5738	SHEET NO. PRM-5
RW SHEET NO. 5	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



REVISIONS



IMPACTS LEGEND

	DENOTES IMPACTS IN SURFACE WATER
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER



NOTE:
PIPES LABELED TO BE REMOVED MAY BE FILLED W/ FLOWABLE FILL AND ABANDONED AT THE NCDOT FIELD ENGINEER'S DISCRETION.

NOTE:
IN SYSTEMS TO BE PLUGGED AND FILLED W/ FLOWABLE FILL, REMOVE STRUCTURES. ALTERNATELY, REMOVE TOPS OF STRUCTURES TO ELEV. OF BOTTOM OF AGGREGATE ROADWAY BASE, AND FILL W/ COMPACTED ABC OR FLOWABLE FILL AT NCDOT FIELD ENGINEER'S DISCRETION.

THE ESTIMATED QUANTITY OF D.I. WATER PIPE FITTINGS ON THIS PLAN SHEET IS 1710 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS MAY VARY BASED ON FIELD CONDITIONS.

SEE SHEETS 9 & 10 FOR -L- PROFILE
SEE SHEET 11 FOR -YI- PROFILE

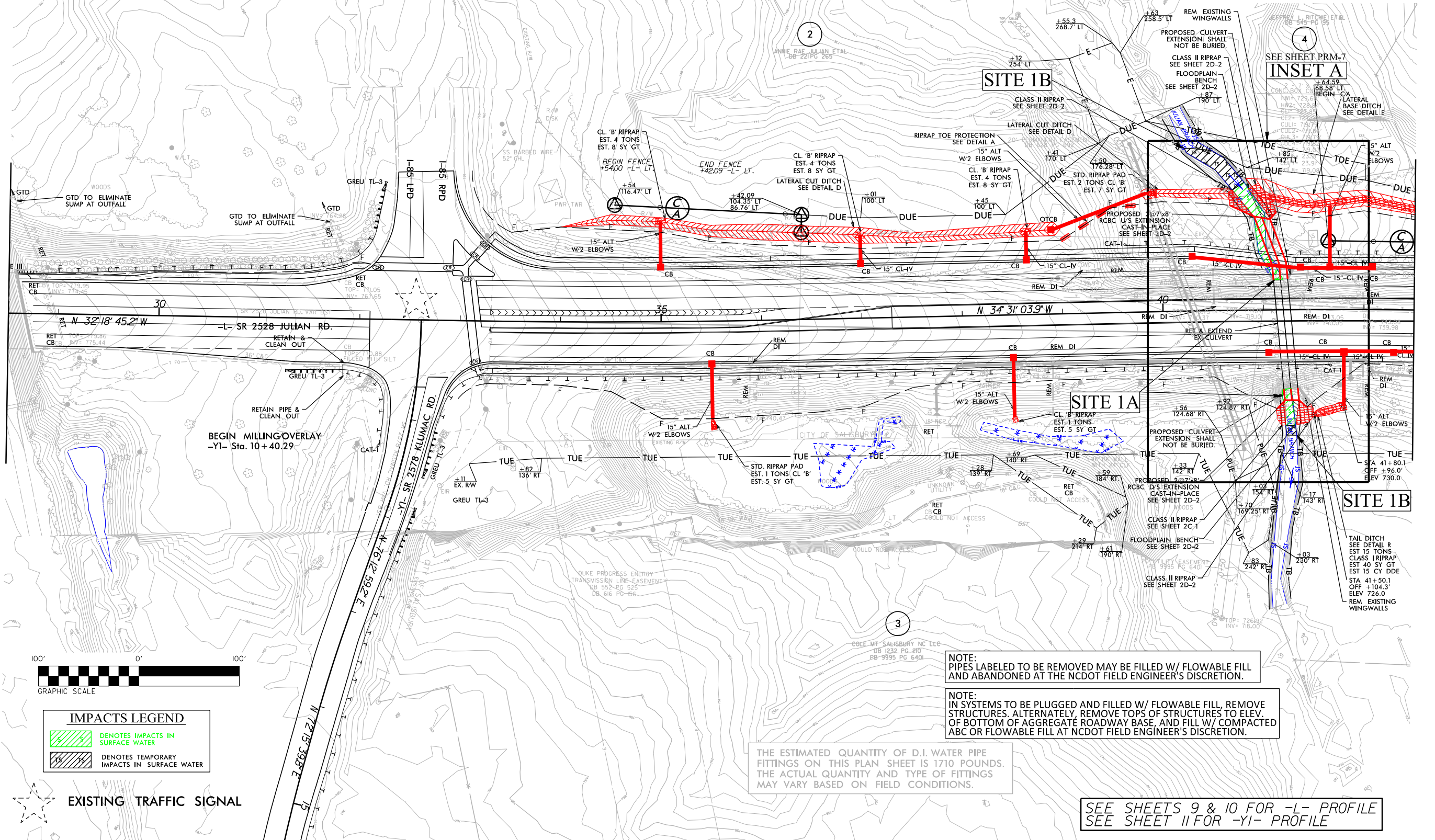
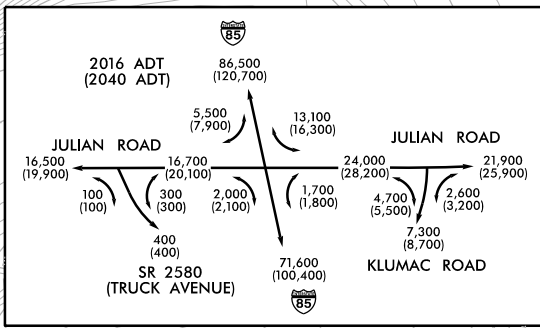
9/14/2021 17102620 U5738 Hydraulics PERMITS - Environmental Drawings U5738 - Rdy - prm - 04.dgn
 Sawyer, Walters



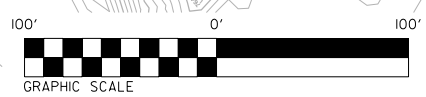
1 Glenwood Avenue
Raleigh, NC 27603
Tel: 919.789.9977
Fax: 919.789.9591
License: C-2197

PERMIT DRAWING
SHEET 6 OF 19

PROJECT REFERENCE NO. U-5738	SHEET NO. PRM-6
RW SHEET NO. 5	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



REVISIONS



IMPACTS LEGEND

	DENOTES IMPACTS IN SURFACE WATER
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER



NOTE:
PIPES LABELED TO BE REMOVED MAY BE FILLED W/ FLOWABLE FILL AND ABANDONED AT THE NCDOT FIELD ENGINEER'S DISCRETION.

NOTE:
IN SYSTEMS TO BE PLUGGED AND FILLED W/ FLOWABLE FILL, REMOVE STRUCTURES. ALTERNATELY, REMOVE TOPS OF STRUCTURES TO ELEV. OF BOTTOM OF AGGREGATE ROADWAY BASE, AND FILL W/ COMPACTED ABC OR FLOWABLE FILL AT NCDOT FIELD ENGINEER'S DISCRETION.

THE ESTIMATED QUANTITY OF D.I. WATER PIPE FITTINGS ON THIS PLAN SHEET IS 1710 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS MAY VARY BASED ON FIELD CONDITIONS.

SEE SHEETS 9 & 10 FOR -L- PROFILE
SEE SHEET 11 FOR -YI- PROFILE

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9/14/2021 17102620 U5738 Hydraulics PERMITS_Environmental\Drawings\U5738_Rdy_prm_05.dgn
Sawyer, Walters

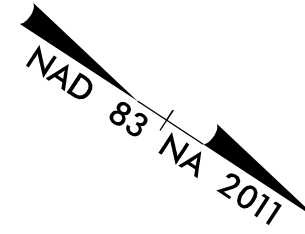
INSET A



1 Glenwood Avenue
Raleigh, NC 27603
Tel: 919.789.9977
Fax: 919.789.9591
License: C-2197

PROJECT REFERENCE NO. U-5738	SHEET NO. PRM-7
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PERMIT DRAWING
SHEET 7 OF 19

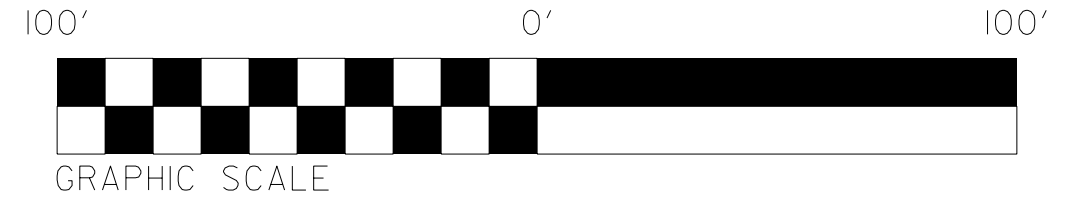


SITE 1B

SITE 1A

SITE 1A

PROPOSED CULVERT
EXTENSIONS SHALL
NOT BE BURIED.



IMPACTS LEGEND

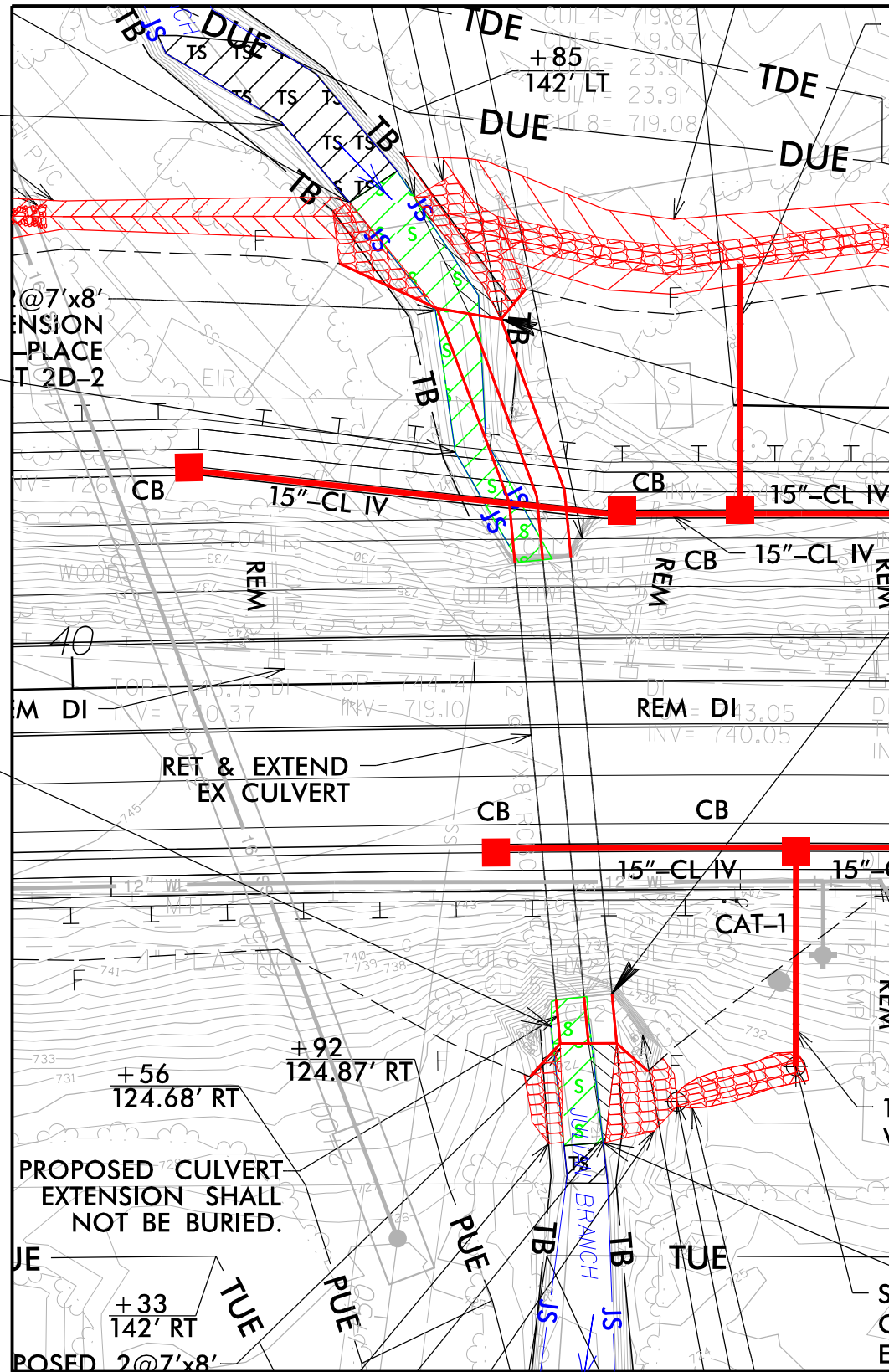


DENOTES IMPACTS IN
SURFACE WATER



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

SITE 1B



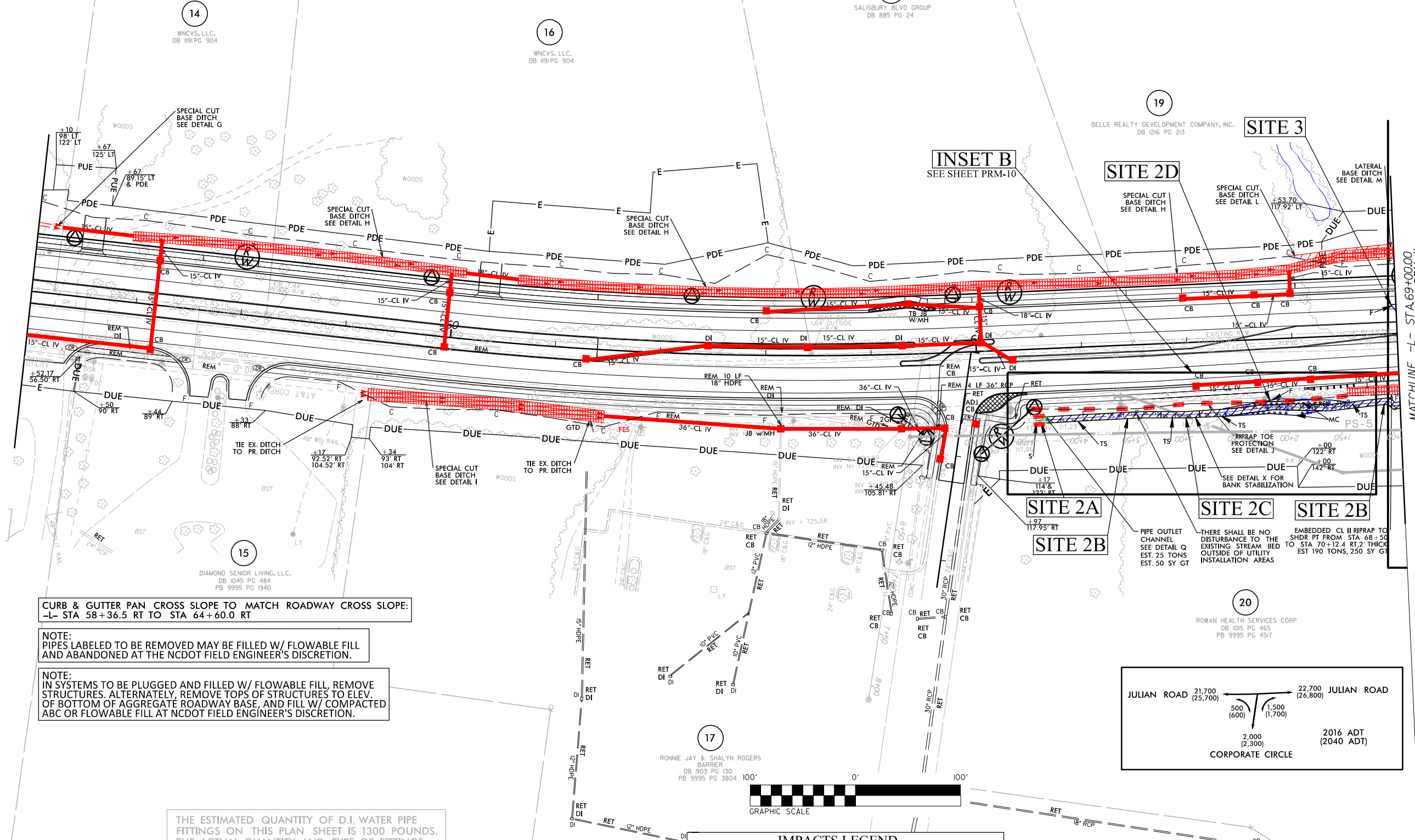
PROPOSED CULVERT
EXTENSION SHALL
NOT BE BURIED.

PROPOSED 2@7'x8'

NAD 83 NA 2011

PERMIT DRAWING
SHEET 8 OF 19

8/17/19



INSET B
SEE SHEET PRM-10

SITE 2D
SPECIAL CUT BASE DITCH SEE DETAIL H

SITE 3
SPECIAL CUT BASE DITCH SEE DETAIL L

SITE 2A
SITE 2B

SITE 2C

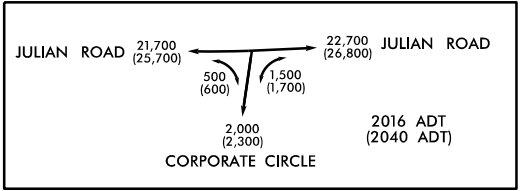
SITE 2B

CURB & GUTTER PAN CROSS SLOPE TO MATCH ROADWAY CROSS SLOPE:
-L- STA 58+36.5 RT TO STA 64+60.0 RT

NOTE:
PIPES LABELED TO BE REMOVED MAY BE FILLED W/ FLOWABLE FILL AND ABANDONED AT THE NCDOT FIELD ENGINEER'S DISCRETION.

NOTE:
IN SYSTEMS TO BE PLUGGED AND FILLED W/ FLOWABLE FILL, REMOVE STRUCTURES. ALTERNATELY, REMOVE TOPS OF STRUCTURES TO ELEV. OF BOTTOM OF AGGREGATE ROADWAY BASE, AND FILL W/ COMPACTED ABC OR FLOWABLE FILL AT NCDOT FIELD ENGINEER'S DISCRETION.

THE ESTIMATED QUANTITY OF D.I. WATER PIPE FITTINGS ON THIS PLAN SHEET IS 1300 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS MAY VARY BASED ON FIELD CONDITIONS.



IMPACTS LEGEND

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

SEE SHEET 10 & 11 FOR -L- PROFILE
SEE SHEET 13 FOR -Y4- PROFILE

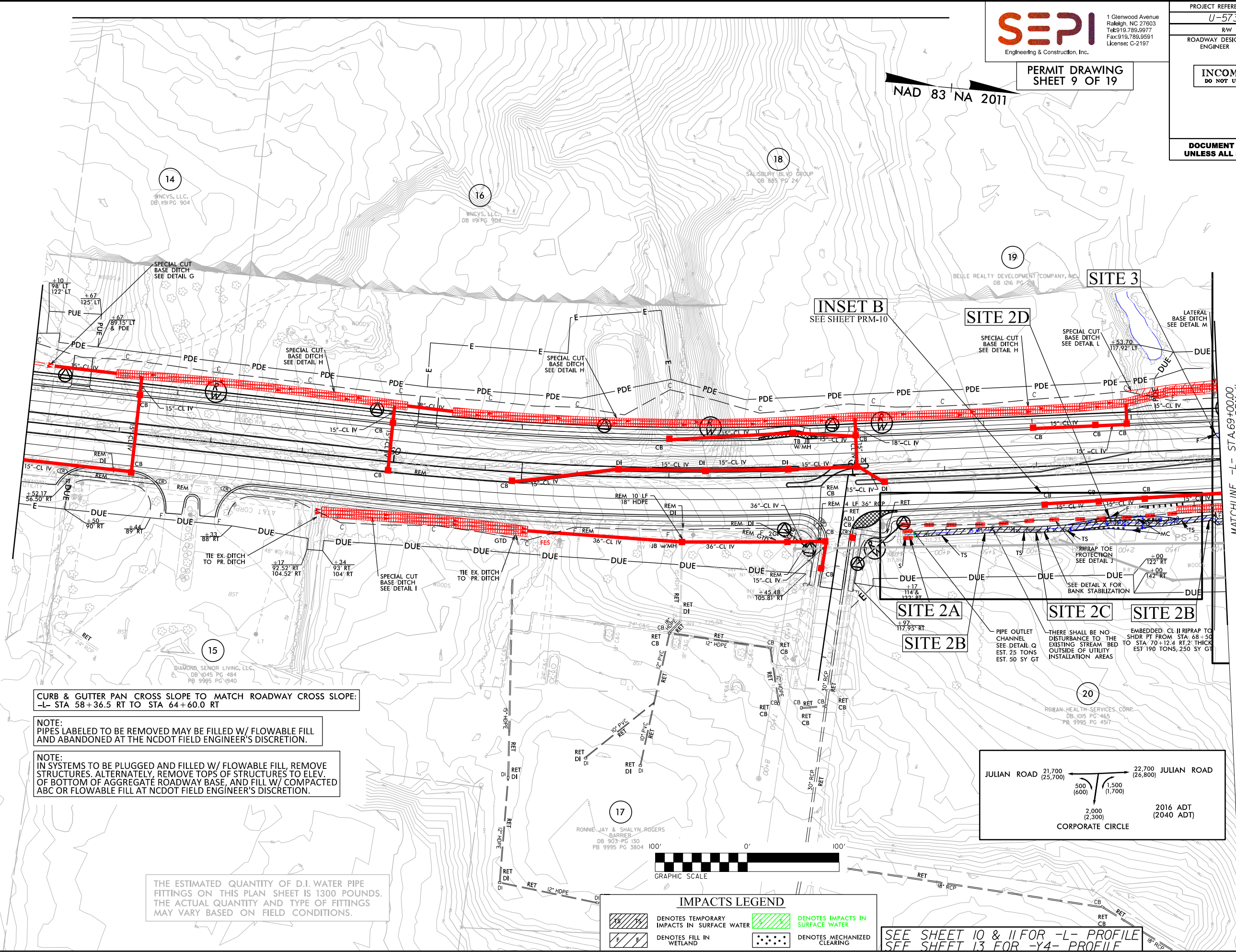
REVISIONS

9/14/2021 171702620 U5738 Hydraulics PERMITS-Environmental Drawings U5738-Rdy-prm-07.dgn
 Sawyer, Walters

PROJECT REFERENCE NO. U-5738	SHEET NO. PRM-9
RW SHEET NO. 7	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PERMIT DRAWING
SHEET 9 OF 19

NAD 83 NA 2011



REVISIONS

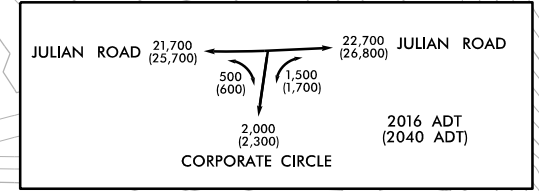
MATCHLINE -L- STA 69+00.00
SEE SHEET PRM-10 / PRM-11

CURB & GUTTER PAN CROSS SLOPE TO MATCH ROADWAY CROSS SLOPE:
-L- STA 58+36.5 RT TO STA 64+60.0 RT

NOTE:
PIPES LABELED TO BE REMOVED MAY BE FILLED W/ FLOWABLE FILL AND ABANDONED AT THE NCDOT FIELD ENGINEER'S DISCRETION.

NOTE:
IN SYSTEMS TO BE PLUGGED AND FILLED W/ FLOWABLE FILL, REMOVE STRUCTURES. ALTERNATELY, REMOVE TOPS OF STRUCTURES TO ELEV. OF BOTTOM OF AGGREGATE ROADWAY BASE, AND FILL W/ COMPACTED ABC OR FLOWABLE FILL AT NCDOT FIELD ENGINEER'S DISCRETION.

THE ESTIMATED QUANTITY OF D.I. WATER PIPE FITTINGS ON THIS PLAN SHEET IS 1300 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS MAY VARY BASED ON FIELD CONDITIONS.



IMPACTS LEGEND

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

SEE SHEET 10 & 11 FOR -L- PROFILE
SEE SHEET 13 FOR -Y4- PROFILE

8/17/99

9/14/2021 171702620 U5738 Hydraulics PERMITS - Environmental Drawings U5738 - Rdy - prm - 08.dgn

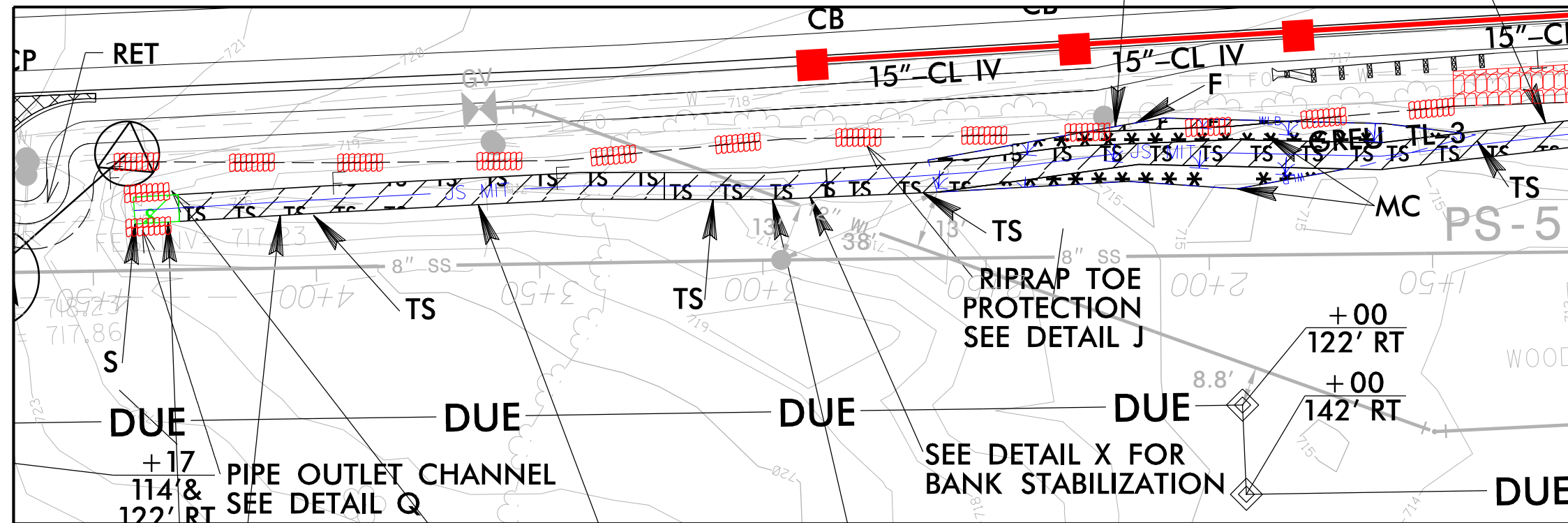
PERMIT DRAWING
SHEET 10 OF 19



INSET B

SITE 2D

SITE 2B



SITE 2A

SITE 2B

SITE 2C

THERE SHALL BE NO
DISTURBANCE TO THE
EXISTING STREAM BED
OUTSIDE OF UTILITY
INSTALLATION AREAS

IMPACTS LEGEND



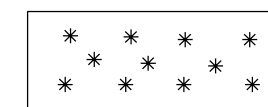
DENOTES TEMPORARY
IMPACTS IN SURFACE WATER



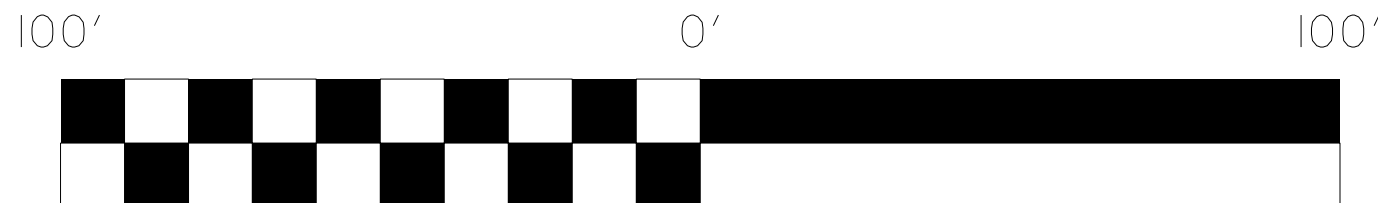
DENOTES IMPACTS IN
SURFACE WATER



DENOTES FILL IN
WETLAND



DENOTES MECHANIZED
CLEARING



GRAPHIC SCALE

REVISIONS

8/17/99

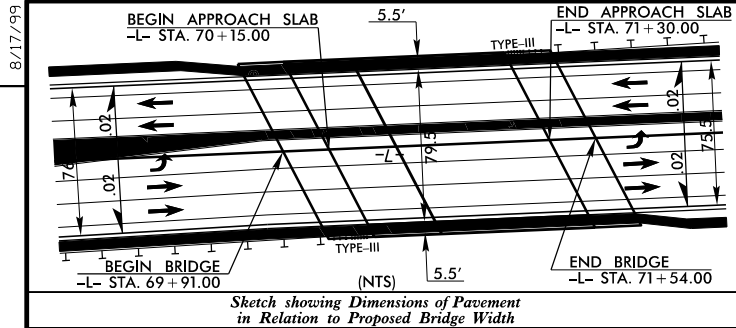
9/14/2021 171702620 U5738 Hydraulics PERMITS Environmental Drawings U5738_Rdy_prm_09.dgn



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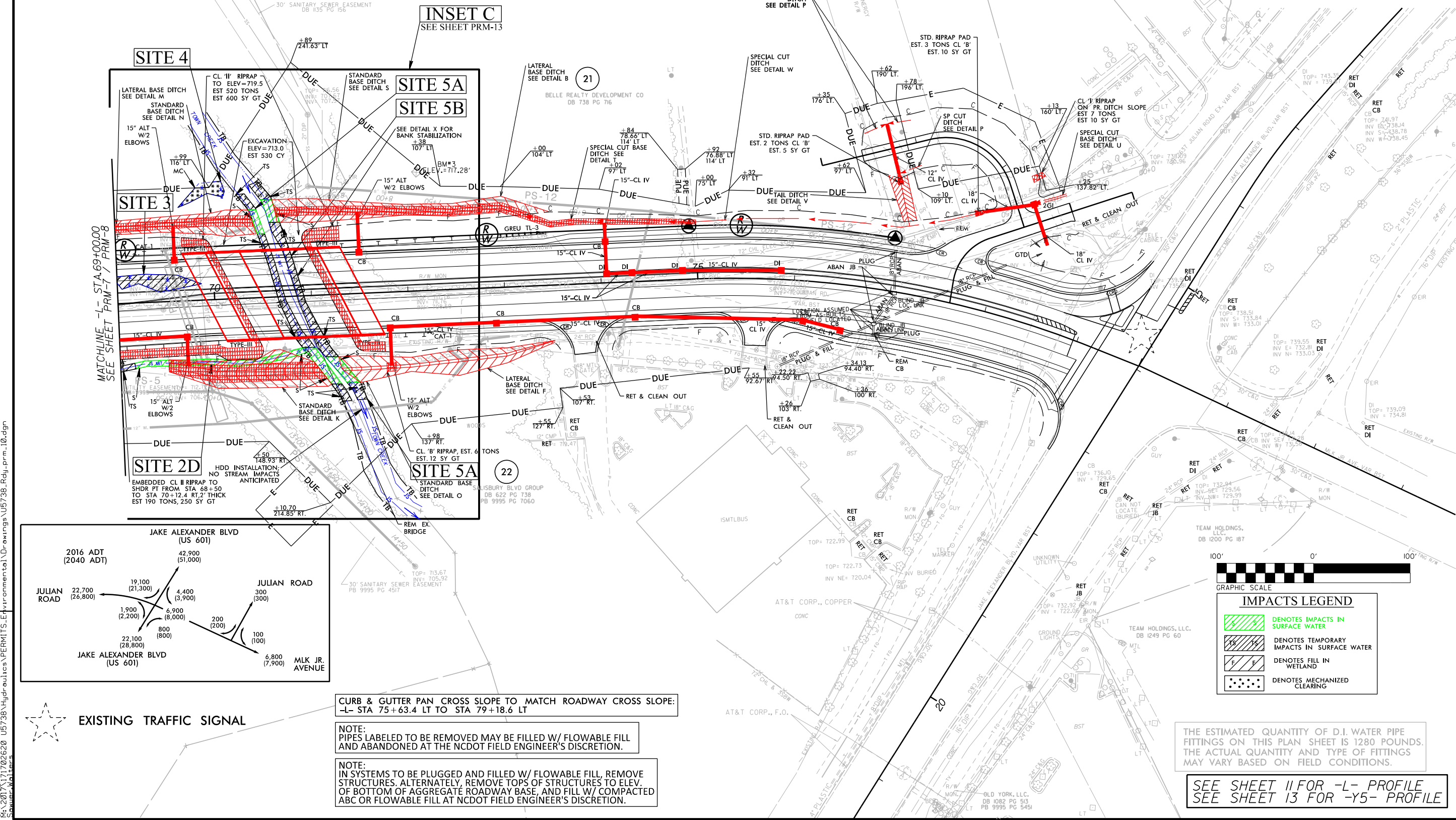
PERMIT DRAWING
SHEET 11 OF 19

PROJECT REFERENCE NO. U-5738	SHEET NO. PRM-11
RW SHEET NO. 8	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



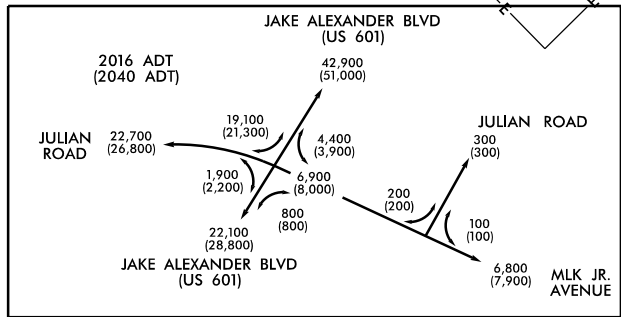
Sketch showing Dimensions of Pavement in Relation to Proposed Bridge Width

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REVISIONS

8/17/19
9/14/2021
171702620 U5738 Hydraulics PERMITS Drawings U5738_Rdy_prm_10.dgn
Sawyer-Walters

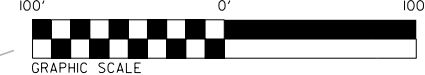


EXISTING TRAFFIC SIGNAL

CURB & GUTTER PAN CROSS SLOPE TO MATCH ROADWAY CROSS SLOPE:
-L- STA 75+63.4 LT TO STA 79+18.6 LT

NOTE:
PIPES LABELED TO BE REMOVED MAY BE FILLED W/ FLOWABLE FILL AND ABANDONED AT THE NCDOT FIELD ENGINEER'S DISCRETION.

NOTE:
IN SYSTEMS TO BE PLUGGED AND FILLED W/ FLOWABLE FILL, REMOVE STRUCTURES. ALTERNATELY, REMOVE TOPS OF STRUCTURES TO ELEV. OF BOTTOM OF AGGREGATE ROADWAY BASE, AND FILL W/ COMPACTED ABC OR FLOWABLE FILL AT NCDOT FIELD ENGINEER'S DISCRETION.



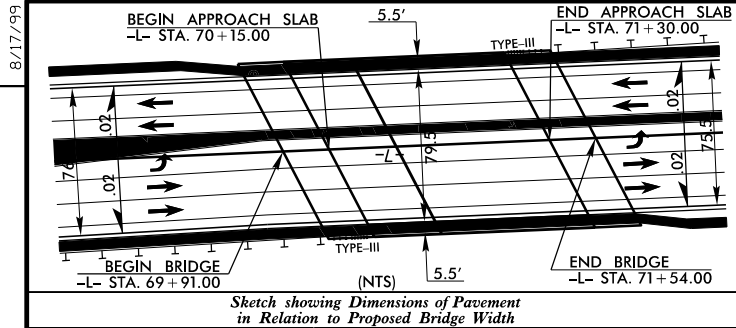
IMPACTS LEGEND

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

THE ESTIMATED QUANTITY OF D.I. WATER PIPE FITTINGS ON THIS PLAN SHEET IS 1280 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS MAY VARY BASED ON FIELD CONDITIONS.

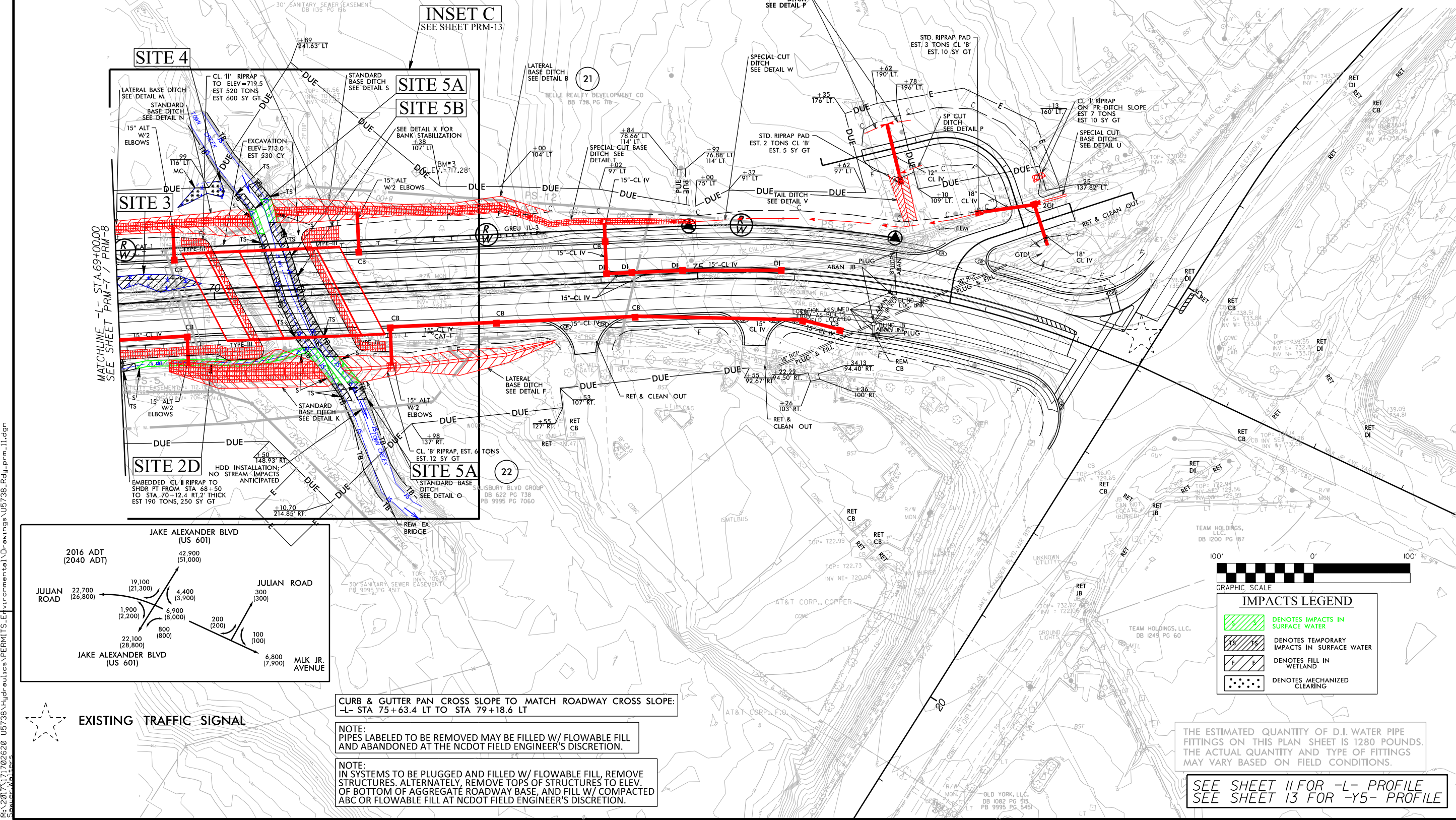
SEE SHEET 11 FOR -L- PROFILE
SEE SHEET 13 FOR -Y5- PROFILE

PROJECT REFERENCE NO. U-5738	SHEET NO. PRM-12
R/W SHEET NO. 8	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



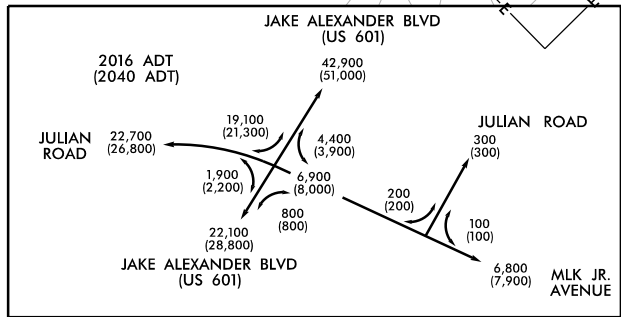
Sketch showing Dimensions of Pavement in Relation to Proposed Bridge Width

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REVISIONS

8/17/19
9/14/2021
U5738-Hydraulics-Permits-Drawings\U5738-Rdy-prm-11.dgn
Sawyer-Walters



EXISTING TRAFFIC SIGNAL

CURB & GUTTER PAN CROSS SLOPE TO MATCH ROADWAY CROSS SLOPE:
-L- STA 75+63.4 LT TO STA 79+18.6 LT

NOTE:
PIPES LABELED TO BE REMOVED MAY BE FILLED W/ FLOWABLE FILL AND ABANDONED AT THE NCDOT FIELD ENGINEER'S DISCRETION.

NOTE:
IN SYSTEMS TO BE PLUGGED AND FILLED W/ FLOWABLE FILL, REMOVE STRUCTURES. ALTERNATELY, REMOVE TOPS OF STRUCTURES TO ELEV. OF BOTTOM OF AGGREGATE ROADWAY BASE, AND FILL W/ COMPACTED ABC OR FLOWABLE FILL AT NCDOT FIELD ENGINEER'S DISCRETION.



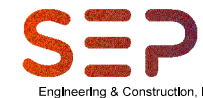
IMPACTS LEGEND

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

THE ESTIMATED QUANTITY OF D.I. WATER PIPE FITTINGS ON THIS PLAN SHEET IS 1280 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS MAY VARY BASED ON FIELD CONDITIONS.

**SEE SHEET 11 FOR -L- PROFILE
SEE SHEET 13 FOR -Y5- PROFILE**

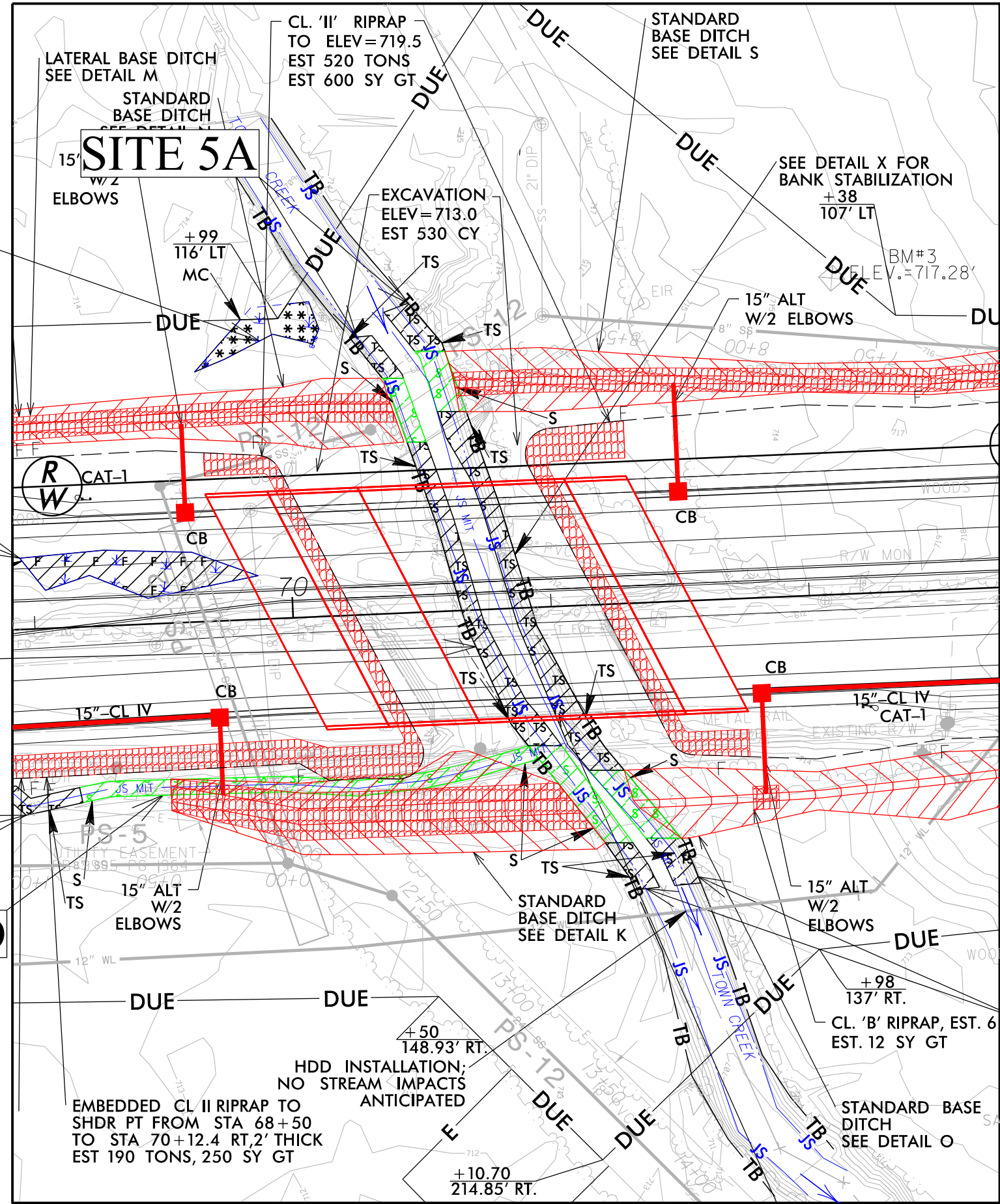
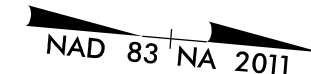
INSET C



1 Glenwood Avenue
Raleigh, NC 27603
Tel: 919.789.9977
Fax: 919.789.9991
License: C-2197

PROJECT REFERENCE NO. U-5738	SHEET NO. PRM-13
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PERMIT DRAWING
SHEET 13 OF 19



SITE 4

SITE 3

SITE 5B

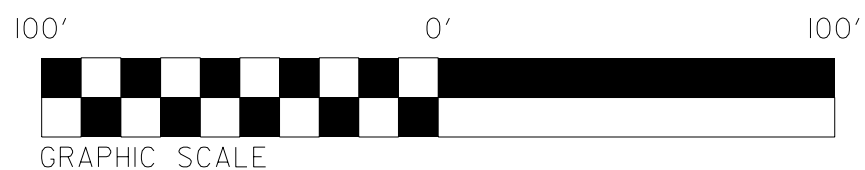
SITE 2B

SITE 2D

SITE 5A

IMPACTS LEGEND

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



REVISIONS

8/17/99
9/15/2021
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Sawyer-Walters

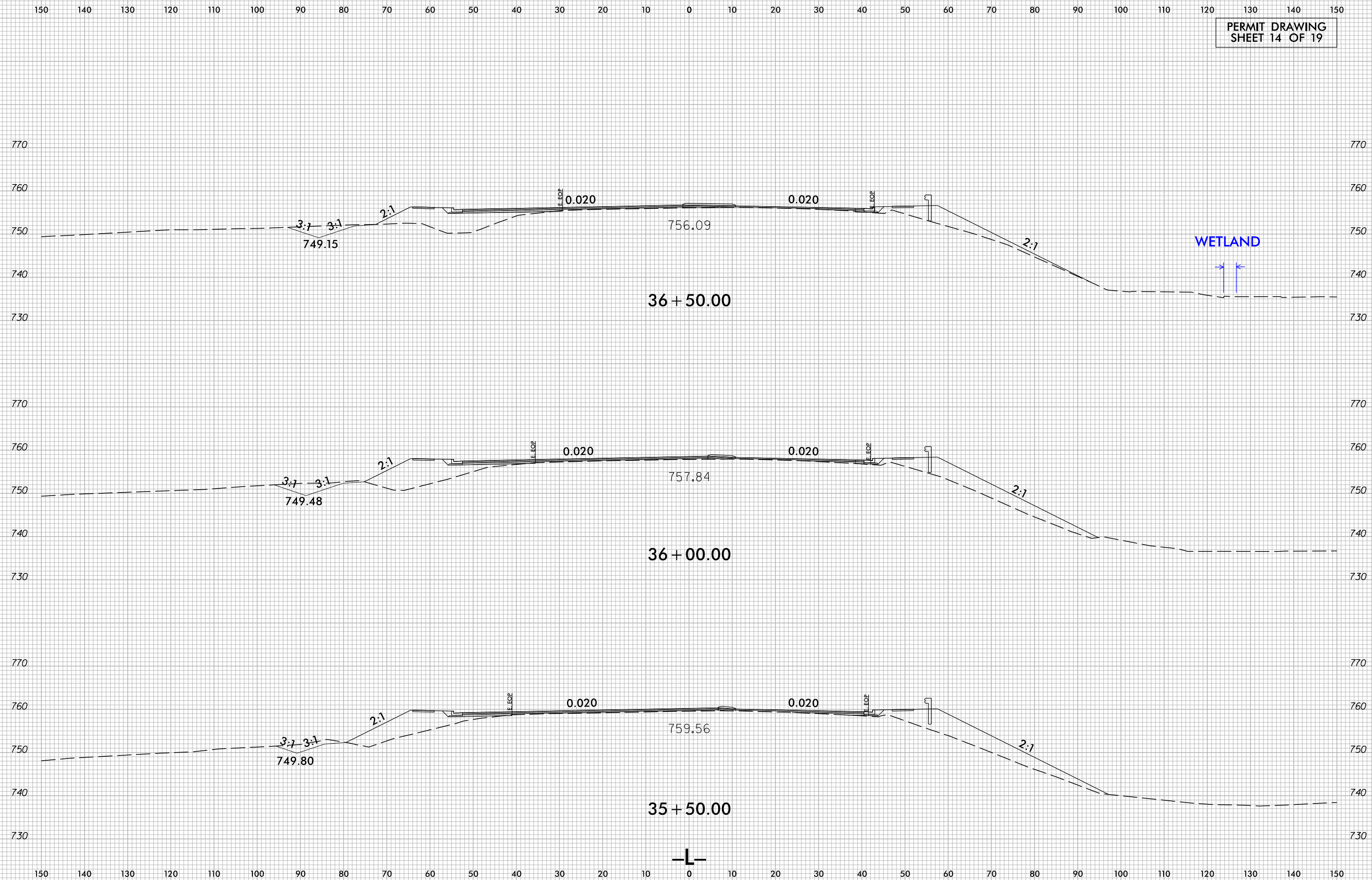
6/23/16



PROJ. REFERENCE NO.
U-5738

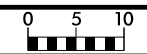
SHEET NO.
X-12

PERMIT DRAWING
SHEET 14 OF 19



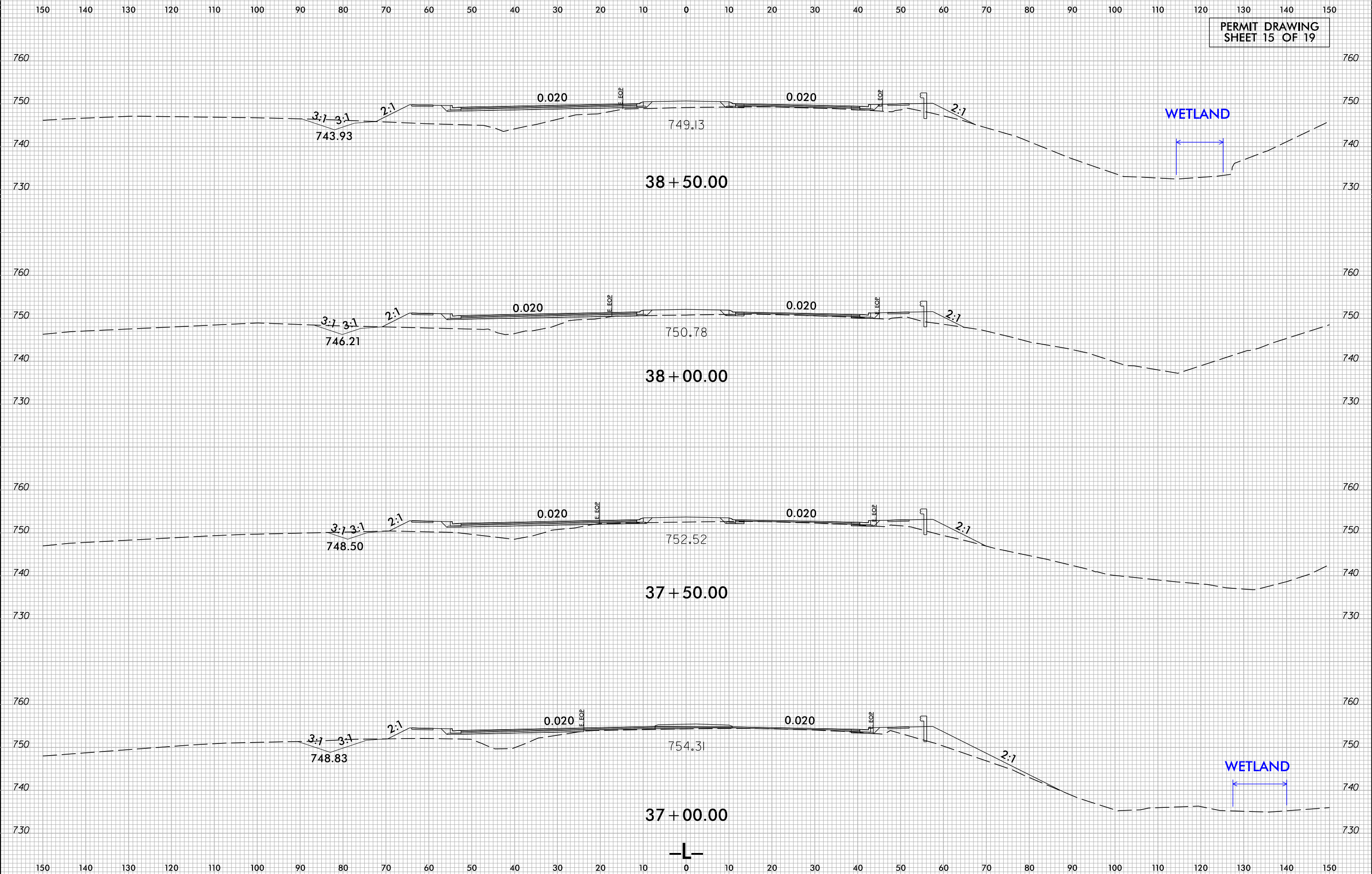
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6/23/16
9/14/2021
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Sawyer.Waters

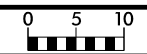


PROJ. REFERENCE NO.	SHEET NO.
U-5738	X-13

PERMIT DRAWING
SHEET 15 OF 19

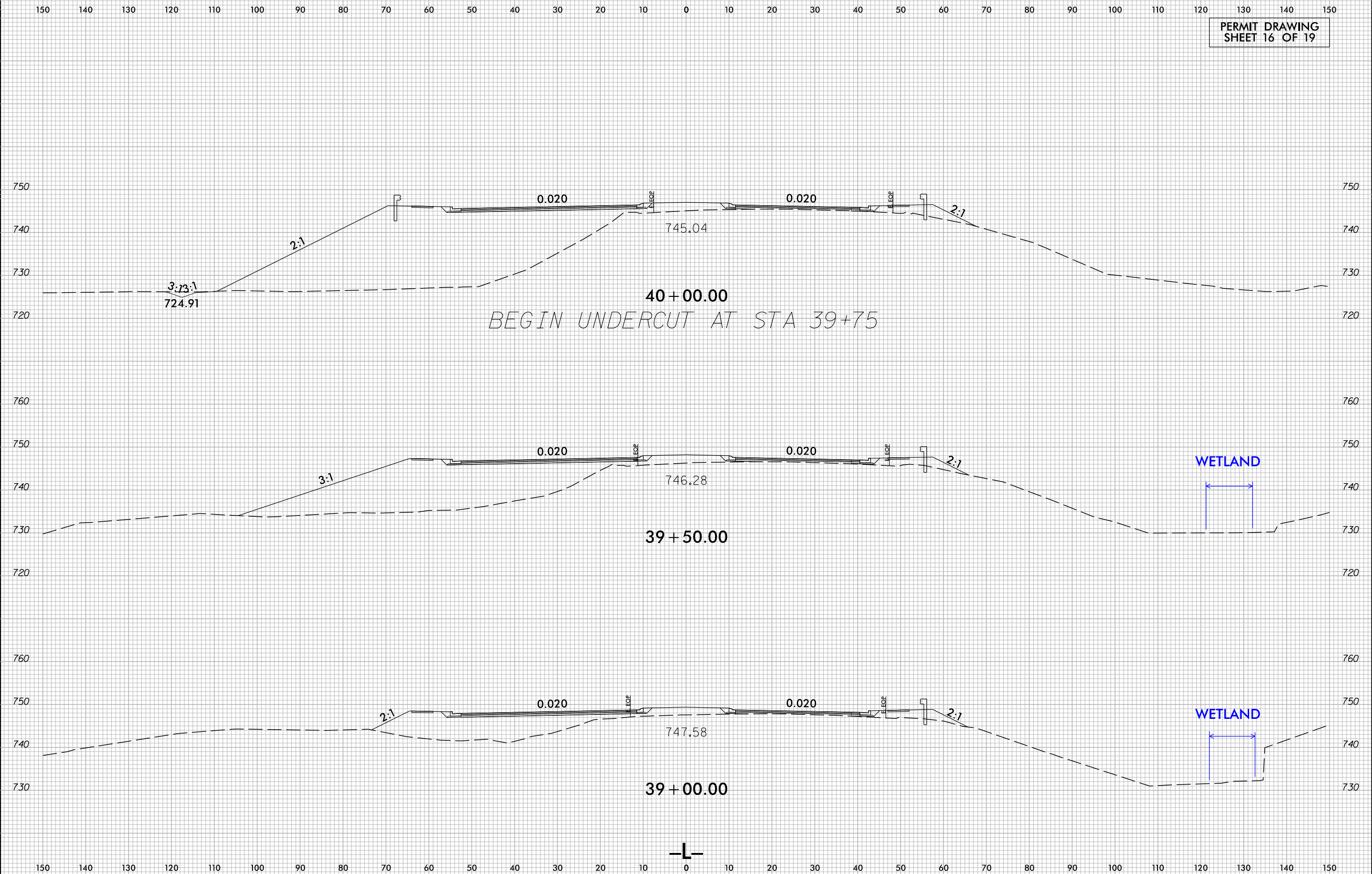


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Sawyer.WG1:ERS



PROJ. REFERENCE NO. U-5738	SHEET NO. X-14
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PERMIT DRAWING
SHEET 16 OF 19



6/23/16

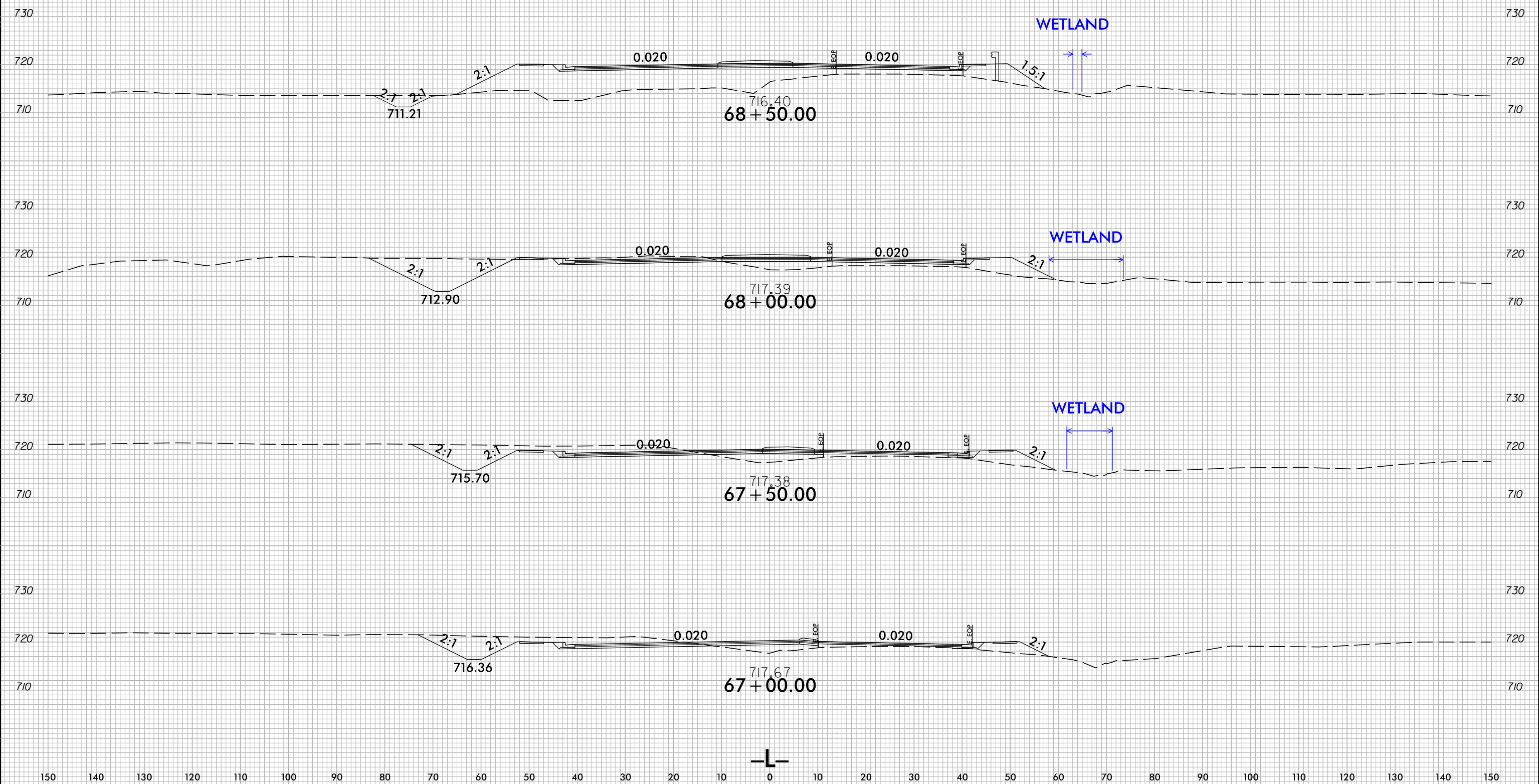


PROJ. REFERENCE NO.
U-5738

SHEET NO.
X-29

PERMIT DRAWING
SHEET 17 OF 19

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Sawyer, WJ

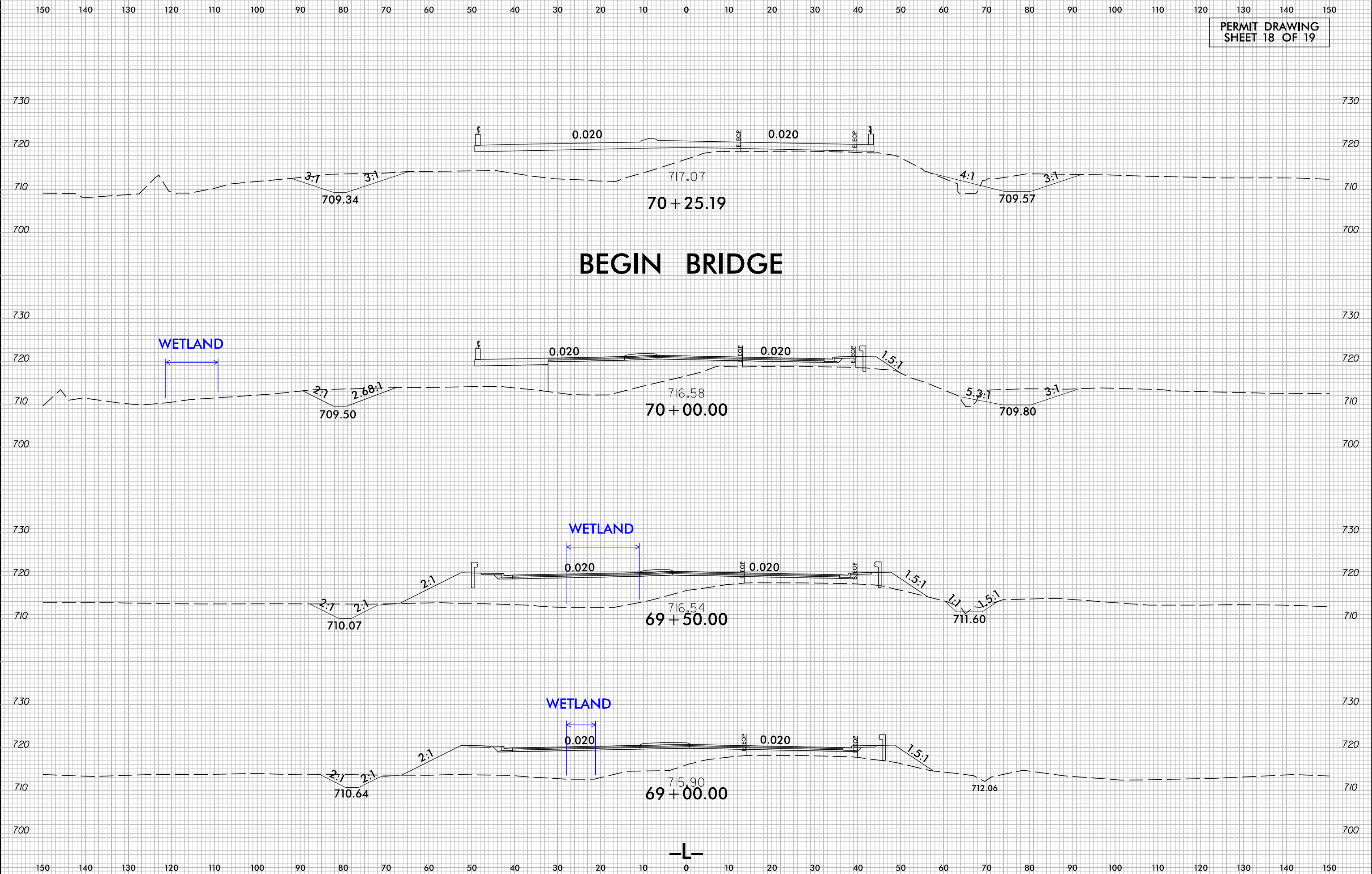


6/23/16



PROJ. REFERENCE NO.	SHEET NO.
U-5738	X-30

PERMIT DRAWING
SHEET 18 OF 19



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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)
1A	40+24 LT TO 41+32 RT	Structure - 2 @ 7'x8' RCBC Extension						0.02		80		
1B	40+24 LT TO 41+32 RT	Bank Stabilization						0.02	0.02	67	75	
2A	65+54 RT TO 65+64 RT	Bank Stabilization						< 0.01		10		
2B	65+64 RT TO 66+73 RT 67+09 RT TO 69+15 RT	Dewatering Operation				0.01			0.04		318	
2C	66+73 RT TO 67+09 RT	Utility Relocation							< 0.01		36	
2D	67+67 RT TO 68+13 RT 69+15 RT TO 70+91 RT	Roadway Fill/Impacts	< 0.01					0.02		177		
3	68+95 LT TO 69+87 LT	Roadway Fill	0.02									
4	69+66 LT TO 69+92 LT	E&SC Measures				< 0.01						
5A	70+27 LT TO 71+70 RT	Bank Stabilization						0.03	0.04	90	78	
5B	70+52 LT TO 71+12 RT	Bridge Replacement							0.03		99	
TOTALS*:			0.03			0.02		0.09	0.14	424	606	0

*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 Sept 2021
 ROWAN COUNTY
 PROJECT: U-5738
 WBS-50163.1.1
 SHEET 19 OF 19