



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

September 8, 2017

U.S. Army Corps of Engineers
151 Patton Avenue, Room 208
Asheville, NC 28801-5006

ATTN: Mr. Steven Kichefski
NCDOT Coordinator

Subject: **Application for Section 404 Nationwide Permits 13 and 33** for the Proposed Replacement of Bridge 139 on SR 1609 (County Home Road) over Glade Creek in Alexander County, Division 12, TIP No. B-5391, Federal Aid Project No. BRZ-1609(2), WBS 46106.1.1.

Dear Sir:

The North Carolina Department of Transportation (NCDOT) proposes to replace bridge number 139 on SR 1609 (County Home Road) with a 55-foot, single span cored slab bridge on the existing alignment. Traffic will be maintained off-site during construction.

As a result of outlet protection from two lateral ditches, there will be 37 linear feet of stream bank stabilization. In addition, there will be <0.01 ac (37 linear feet) of temporary stream impacts from a temporary causeway needed to remove the existing bridge abutments.

Please see enclosed copies of the Pre-Construction Notification (PCN), Stormwater Management Plan, Permit Drawings, and Roadway Plan Sheets. A Programmatic Categorical Exclusion (PCE) was completed in March 2016 and distributed shortly thereafter. Additional copies are available upon request.

This project calls for a letting date of December 19, 2017 and a review date of October 31, 2017; however, the let date may advance as additional funding becomes available.

A copy of this permit application and its distribution list will be posted on the NCDOT Website at: <http://connect.ncdot.gov/resources/Environmental>. If you have any questions or need additional information, please call Erin Cheely at (919) 707-6108.

Sincerely,



for Philip S. Harris III, P.E., C.P.M.
Natural Environment Section Head

Cc:
NCDOT Permit Application Standard Distribution List



Pre-Construction Notification (PCN) Form

For Nationwide Permits and Regional General Permits

(along with corresponding Water Quality Certifications)

June 28, 2017 Ver 1.8

*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.*

Below is a link to the DRAFT online help file.

<http://edocs.deq.nc.gov/WaterResources/0/doc/549884/Page1.aspx>

A. Processing Information

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

Alexander

Is this project a public transportation project? *

Yes No

Is this a NCDOT Project? *

Yes No

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

B-5391

WBS #

46106.1.1

(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)

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

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

Nationwide Permit (NWP) Number: 13 - Bank Stabilization

Nationwide Permit (NWP) Number: 33 - Temporary Construction

NWP Number Other:

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

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

check all that apply

- 401 Water Quality Certification - Regular
 Non-404 Jurisdictional General Permit

- 401 Water Quality Certification - Express
 Riparian Buffer Authorization

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

For the record only for DWR 401 Certification: Yes No

For the record only for Corps Permit: Yes No

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

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

Yes No

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

Yes No

B. Applicant Information

1a. Who is the Primary Contact? *

NCDOT

1b. Primary Contact Email: *

ekcheely@ncdot.gov

1c. Primary Contact Phone: *

(xxx)xxx-xxxx

(919)707-6108

1d. Who is applying for the permit?

Owner Applicant (other than owner) Agent/Consultant

(Check all that apply)

2. Owner Information

2a. Name(s) on recorded deed:

2b. Deed book and page no.:

2c. Responsible party:

(for Corporations)

2d. Address

Street Address

Address Line 2

City

State / Province / Region

Postal / Zip Code

Country

2e. Telephone Number:

(xxx)xxx-xxxx

2f. Fax Number:

(xxx)xxx-xxxx

2g. Email Address: *

pharris@ncdot.gov

C. Project Information and Prior Project History

1. Project Information

1a. Name of project:*

Replacement of Bridge No. 139 over Glade Creek on SR 1609 (County Home Road)

1b. Subdivision name:

(if appropriate)

1c. Nearest municipality / town:*

Millersville

1d. Driving directions*

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

35.862385, -81.174958

2. Project Identification

2a. Property Identification Number:

(tax PIN or parcel ID)

2b. Property size:

(in acres)

2c. Project Address

Street Address

Address Line 2

City

State / Province / Region

Postal / Zip Code

Country

2d. Site coordinates in decimal degrees

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

Latitude:*

35.862385

ex: 34.208504

Longitude:*

-81.174958

-77.796371

3. Surface Waters

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

Glade Creek

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

WS-IV

[Surface Water Lookup](#)

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

Catawba

4. Project Description

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

Land use within the vicinity of this project consists of about 30% forest land, 30% cultivated land (agricultural fields and pastures), and 40% developed or disturbed lands.

4b. Attach an 8 1/2 X 11 excerpt from the most recent version of the USGS topographic map indicating the location of the project site. (for DWR)

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

File type must be pdf

4c. Attach an 8 1/2 X 11 excerpt from the most recent version of the published County NRCS Soil Survey map depicting the project site. (for DWR)

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

File type must be pdf

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

0

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

(intermittent and perennial)

824

4f. Explain the purpose of the proposed project:

The purpose of this project is to replace a functionally obsolete one-lane bridge (deck geometry rating 3 of 9, structural evaluation 4 of 9).

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

The project involves replacing a 36-foot, single-span, one-lane bridge with a 55-foot, single-span, two-lane bridge on the existing alignment. Traffic will be detoured off-site during construction. Standard road building equipment, such as trucks, dozers, and cranes will be used.

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

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

B-5391 Final Permit Drawings 170320.pdf

2.2MB

B-5391 Final Roadway Plans 170717.pdf

391.14KB

File type must be pdf

5. Jurisdictional Determinations

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

Yes

No

Unknown

Comments:

Only two perennial streams identified in the study area - Glade Creek and a UT. No JD site visit was held.

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

Preliminary

Approved

Unknown

Corps AID Number:

Example: SAW-2017-99999

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

Name (if known):

Kenan Jernigan/Erin Cheely

Agency/Consultant Company:

Axiom/NCDOT

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

Other:

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

5d1. Jurisdictional determination upload

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

File type must be PDF

6. Project History

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

Yes

No

Unknown

7. Future Project Plans

7a. Is this a phased project? *

Yes

No

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

D. Proposed Impacts Inventory

1. Impacts Summary

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

Wetlands

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.

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.

3a. Site # - Reason for impact	3b. Impact type	3c. Type of impact	3d. Stream name	3e. Stream Type	3f. Jurisdiction type	3g. Stream width	3h. Impact length
1 - Bank Stabilization Map label (e.g. Road Crossing 1)	P Permanent (P) or Temporary (T)	Stabilization	Glade Creek	Perennial Perennial (PER) or intermittent (INT)	Both	Average 30 (feet)	37 (linear feet)
1 - Temporary Causeway Map label (e.g. Road Crossing 1)	T Permanent (P) or Temporary (T)	Rip Rap Fill	Glade Creek	Perennial Perennial (PER) or intermittent (INT)	Both	Average 30 (feet)	37 (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:

37

3i. Total temporary stream impacts:

37

3i. Total stream and tributary impacts:

74

3j. Comments:

4. Open Water Impacts

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

5. Pond or Lake Construction

If pond or lake construction is proposed, then complete the chart below.

6. Buffer Impacts (for DWR)

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

E. Impact Justification and Mitigation

1. Avoidance and Minimization

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

The proposed replacement bridge will be on the same alignment as the existing bridge and it will be slightly longer than the existing bridge. No deck drains will be used. Roadway slopes and clearing methods have been minimized as much as possible to reduce impacts to dwarf-flowered heartleaf populations.

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

Traffic will be maintained via an off-site detour during construction. Best Management Practices (BMPs) will be utilized during construction to attempt to reduce stormwater impacts to receiving streams due to erosion and runoff.

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

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

Yes No

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

The NCDOT does not propose mitigation for the 37 linear feet of bank stabilization or the <0.01 ac (37 linear feet) of temporary causeway impacts. These impacts do not require permanent fill in the stream bed and, therefore, under Section 404 of the Clean Water Act, do not constitute Loss of Waters of the U.S. and are not subject to compensatory mitigation.

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

1a. Does this project require a Stormwater Management Plan?

Yes No

1b. If this project DOES require a Stormwater Management Plan, then provide a brief, narrative description of the plan:

See attached permit drawings.

1c. What is the overall percent imperviousness of this project?

%

1d. Who will be responsible for the review of the Stormwater Management Plan? *

- Certified Local Government
 DWR 401 & Buffer Permitting Branch

- DEMLR Stormwater Review
 DWR Transportation Permitting Branch

2. Diffuse Flow Plan

2a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?

- Yes No

If no, explain why:

5. DWR 401 Stormwater Review

5a. Is the Stormwater Management Plan (including BMP Supplemental Forms and Operation and Maintenance Agreements) attached?

- Yes No

Stormwater Management Plan Upload

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

file type must be pdf

G. Supplementary Information

1. Environmental Documentation

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

- Yes No

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

- Yes No

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

- Yes No

NEPA or SEPA Final Approval Letter

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

FILE TYPE MUST BE PDF

2. Violations (DWR Requirement)

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

- Yes No

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

- Yes No

2c. If you answered "yes" to one or both of the above questions, provide an explanation of the violation(s):

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.

Due to the minimal transportation impact resulting from this bridge replacement, this project will neither influence nearby land uses nor stimulate growth. Therefore, a detailed indirect or cumulative effects study will not be necessary.

4. Sewage Disposal (DWR Requirement)

4a. Describe, in detail, the treatment methods and dispositions (non-discharge or discharge) of wastewater generated from the proposed project. If the wastewater will be treated at a treatment plant, list the capacity available at that plant.

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

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

Yes No

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

Yes No

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

Asheville

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

Yes

No

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

Yes No

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

Yes No

5f(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 5f(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.

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

File must be PDF

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

Yes No

If yes, please show the location of the wind turbine(s) on the permit drawings/project plans.

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

File must be PDF

5h. 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

If yes to either, please provide details to include type of percussive activity, purpose, duration, and specific location of this activity on the property.

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

File must be PDF

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

As of April 11, 2017, the USFWS lists three protected species for Alexander County - bog turtle, northern long-eared bat, and dwarf-flowered heartleaf. No habitat is present for the bog turtle. The northern long-eared bat is in compliance with 4(d) requirements (a memo to this effect was forwarded to Andrew Henderson of USFWS on March 14, 2016). Dwarf-flowered heartleaf is present within the project area and Formal Section 7 Consultation was necessary for this species. A Biological Assessment (BA) was distributed on 9/5/17. It is anticipated that the USFWS will issue a Biological Opinion (BO) concurring with the biological conclusion of "May Affect, Likely to Adversely Affect" for this species.

6. Essential Fish Habitat (Corps Requirement)

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

Yes No

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

NMFS County Index

7. Historic or Prehistoric Cultural Resources (Corps Requirement)

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

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

Yes No

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

NEPA Documentation

7c. Historic or Prehistoric Information Upload

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

File must be PDF

8. Flood Zone Designation (Corps Requirement)

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

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

Yes No

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

NCDOT Hydraulics Unit coordination with FEMA

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

FEMA Maps

Miscellaneous attachments not previously requested.

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

B-5391 Cover Letter.pdf

29.53KB

File must be PDF

Signature

*

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

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

Full Name: *

Colin Mellor

Signature

Colin Mellor



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



(Version 2.07; Released October 2016)

WBS Element: 46106.1.1 TIP No.: B-5391 County(ies): Alexander Page 1 of 1

General Project Information

WBS Element:	46106.1.1	TIP Number:	B-5391	Project Type:	Bridge Replacement	Date:	12/19/2016
NCDOT Contact:	Paul Fisher, PE		Contractor / Designer:	NCDOT			
Address:	1020 Birchridge Drive Raleigh, NC 27610		Address:				
	Phone: 919-707-6700			Phone:			
	Email: pfisher@ncdot.gov			Email:			
City/Town:	Millersville		County(ies):	Alexander			
River Basin(s):	Catawba		CAMA County?	No			
Wetlands within Project Limits?	No						

Project Description

Project Length (lin. miles or feet):	0.158 miles	Surrounding Land Use:	Residential; Farm				
	Proposed Project		Existing Site				
Project Built-Upon Area (ac.)	0.4	ac.	0.4	ac.			
Typical Cross Section Description:	Two 10-foot travel lanes with 3-foot shoulders						
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	200	Year: 2040	Existing:	100	Year: 2013	
General Project Narrative: (Description of Minimization of Water Quality Impacts)	Replace Alexander County Bridge #139 on SR 1609 (County Home Road) over Glade Creek. Bridge #139 is a single span, 36-foot long, one lane bridge with a clear roadway width of approximately 16 feet. The replacement structure will be a single span 55-foot bridge at approximately the same grade and elevation. The new bridge width will include two 10-foot lanes and 2.5-foot shoulders to total a clear deck width of 24 feet and 10 inches.						

Waterbody Information

Surface Water Body (1):	Glade Creek		NCDWR Stream Index No.:	11-69-7-(0.7)			
NCDWR Surface Water Classification for Water Body	Primary Classification:	Water Supply IV (WS-IV)					
	Supplemental Classification:	None					
Other Stream Classification:	None						
Impairments:	None						
Aquatic T&E Species?	No Comments:						
NRTR Stream ID:	11-69-7-(0.7)						
Project Includes Bridge Spanning Water Body?	Yes	Deck Drains Discharge Over Buffer?	No	Buffer Rules in Effect:	N/A		
Deck Drains Discharge Over Water Body?	No	(If yes, provide justification in the General Project Narrative)		Dissipator Pads Provided in Buffer?			
(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)			

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

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

ALEXANDER COUNTY

**LOCATION: BRIDGE NO. 139 OVER GLADE CREEK
 ON SR 1609 (COUNTY HOME ROAD)**

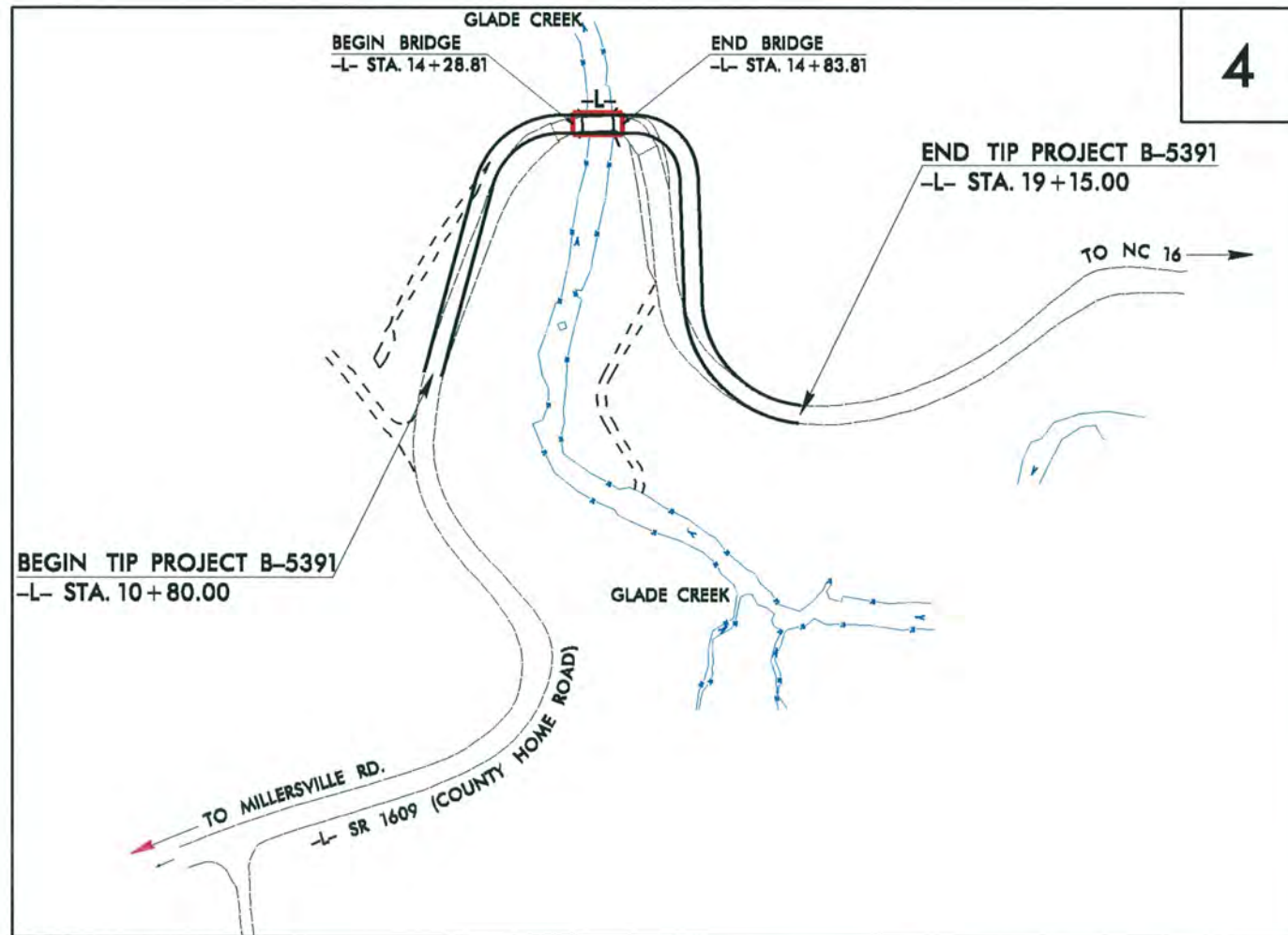
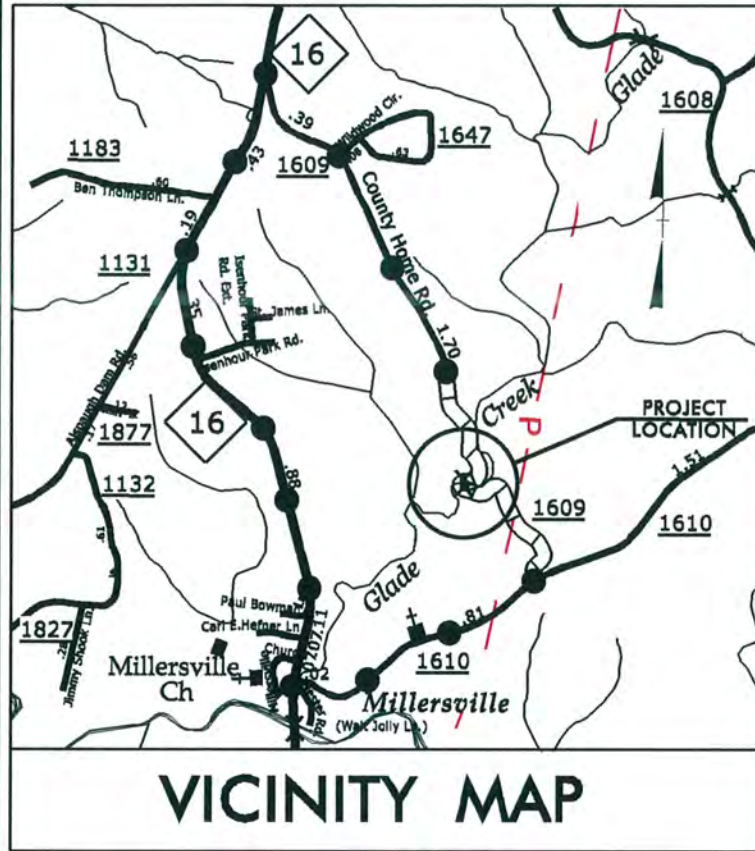
TYPE OF WORK: GRADING, DRAINAGE, PAVING, & STRUCTURE

WETLAND AND SURFACE WATER IMPACTS PERMIT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5391	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
46106.1.1	BRZ-1609(2)	PE	
46106.2.1		RW, UTIL.	



TIP PROJECT: B-5391

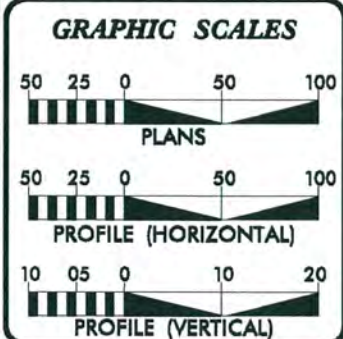


** DESIGN EXCEPTION IS REQUIRED FOR DESIGN SPEED OF 15 MPH
 THIS IS NOT A CONTROL OF ACCESS PROJECT
 THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES
 CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

**PERMIT DRAWING
 SHEET 1 OF 6**

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

CONTRACT:



DESIGN DATA

ADT 2017 =	115
ADT 2040 =	200
DHV =	19 %
D =	55 %
T =	15 % *
V =	55 MPH **
* TTST =	1% DUAL 14%
FUNC CLASS =	RURAL LOCAL
SUBREGIONAL TIER	

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-5391 =	0.148 MILES
LENGTH STRUCTURE TIP PROJECT B-5391 =	0.010 MILES
TOTAL LENGTH OF TIP PROJECT B-5391 =	0.158 MILES

Prepared in the Office of:
DIVISION OF HIGHWAYS
 1000 Birch Ridge Dr., Raleigh NC, 27610

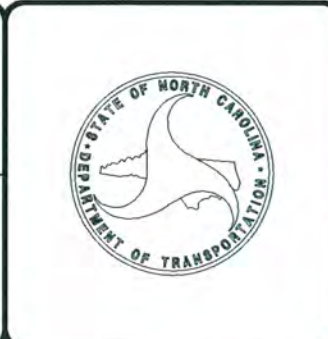
2012 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: DECEMBER 22, 2016	JAMES A. SPEER, PE PROJECT ENGINEER
LETTING DATE: DECEMBER 19, 2017	NYA K. BOAYUE, PE PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

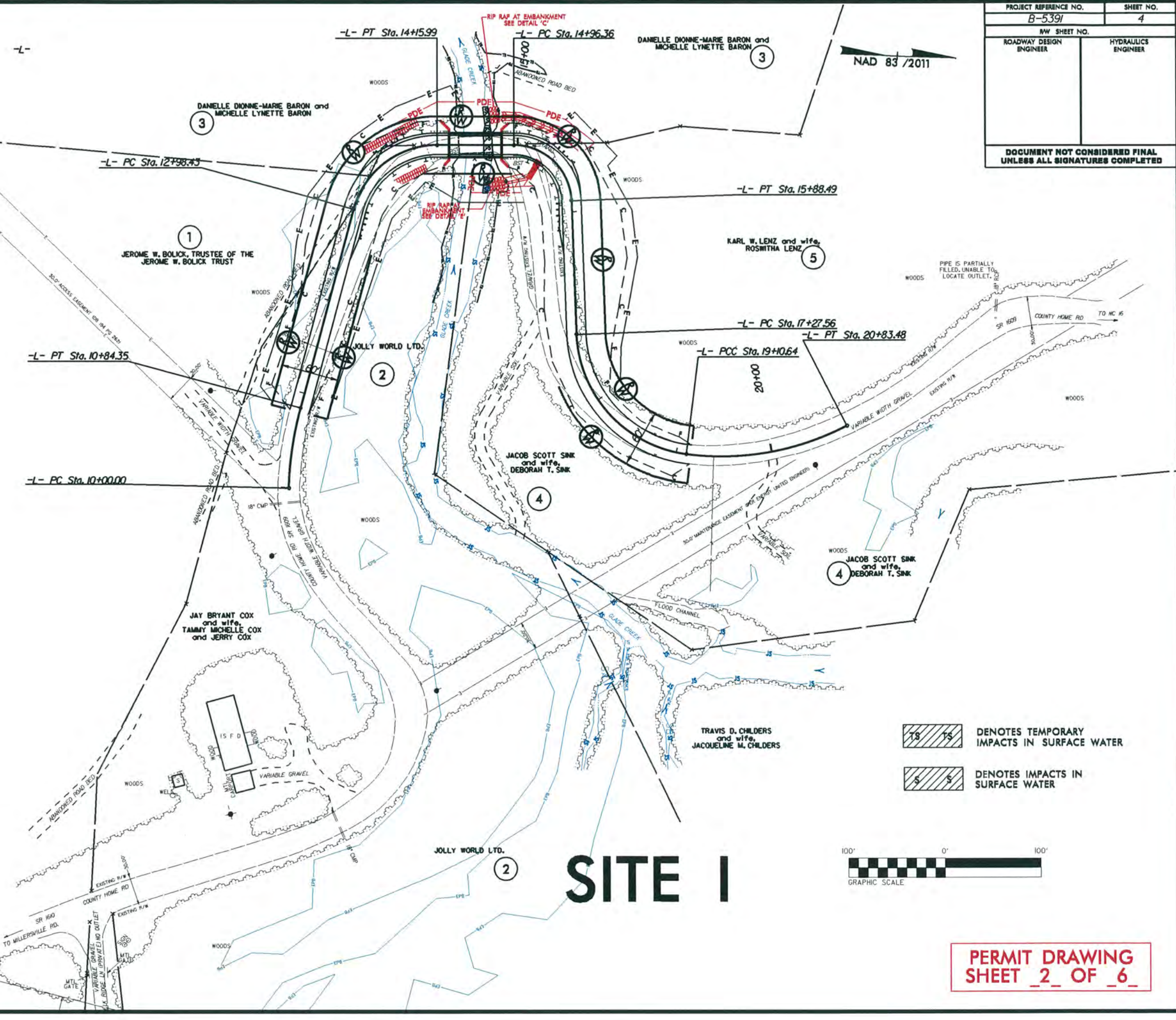
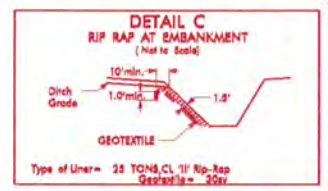
SIGNATURE: _____ P.E.



3/20/2017
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 \$\$\$DGN\$\$\$\$
 \$\$\$USERNAME\$\$\$\$

PROJECT REFERENCE NO. B-5391	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

NAD 83 /2011



DENOTES TEMPORARY IMPACTS IN SURFACE WATER

DENOTES IMPACTS IN SURFACE WATER

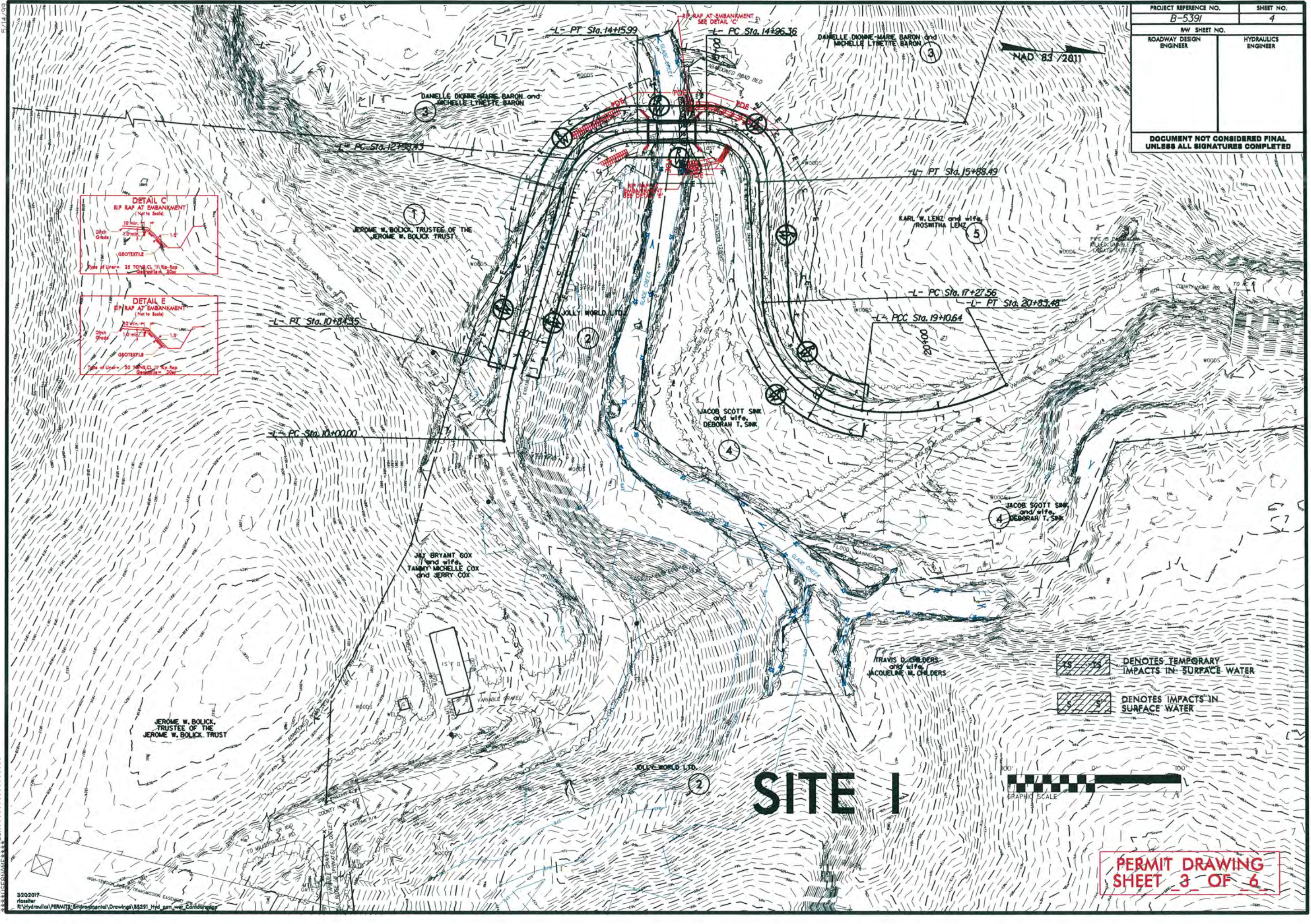
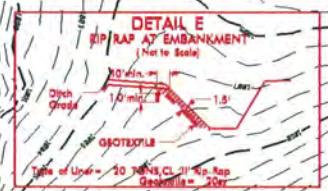
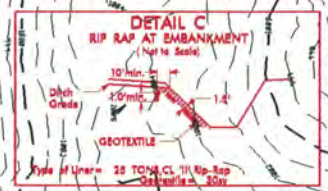


SITE I

**PERMIT DRAWING
SHEET 2 OF 6**

5/14/09
 SYSTEMS DESIGN
 3202017
 3/20/2017
 R:\Hydraulic\PERMITS_Environmental\Drawings\85391_Hyd_perm_wat.dgn

PROJECT REFERENCE NO. B-5391	SHEET NO. 4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



SITE I

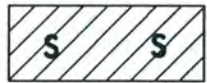
PERMIT DRAWING
SHEET 3 OF 6

3/14/2017
 3202017
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SITE I



DENOTES TEMPORARY IMPACTS IN SURFACE WATER

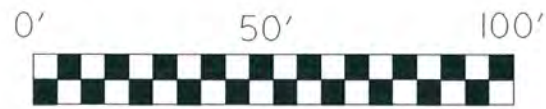


DENOTES IMPACTS IN SURFACE WATER

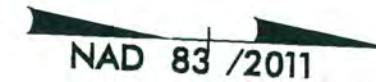
-L- PT Sta. 14+15.99

-L- PC Sta. 14+96.36

DANIELLE DIONNE-MARIE B
MICHELLE LYNETTE E

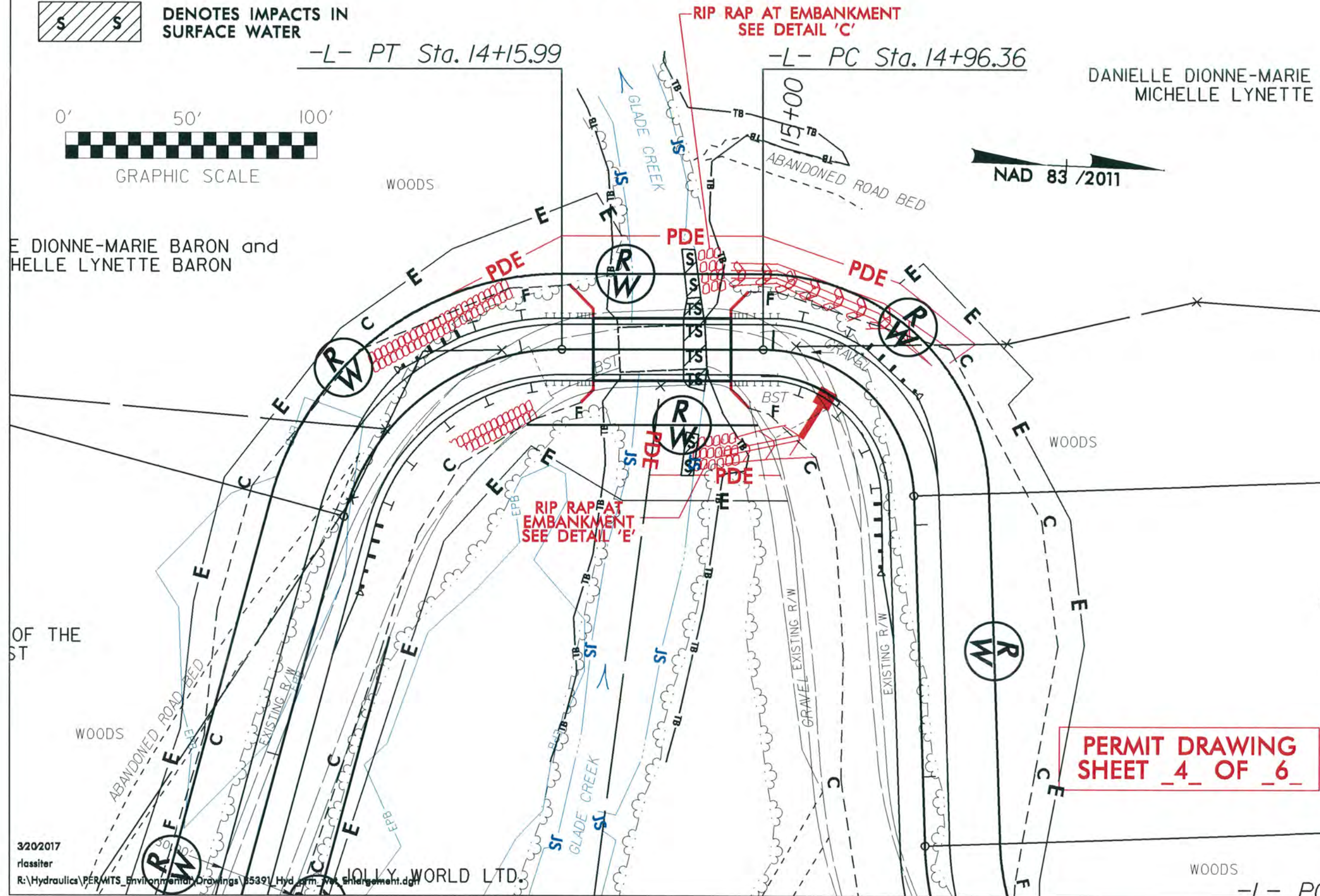


GRAPHIC SCALE



NAD 83 /2011

E DIONNE-MARIE BARON and
HELLE LYNETTE BARON



**PERMIT DRAWING
SHEET 4 OF 6**

3/20/2017

classiter

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JOLLY WORLD LTD.

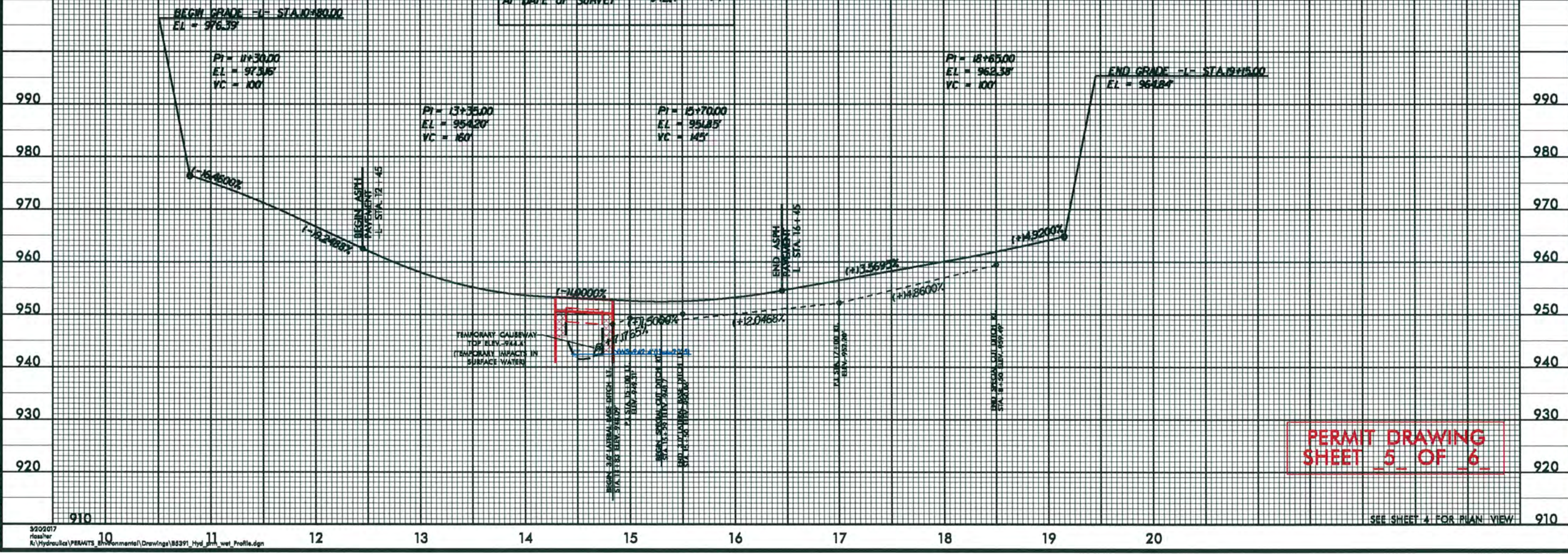
WOODS

-L- PC

WETLAND AND SURFACE WATER IMPACTS PERMIT



BRIDGE HYDRAULIC DATA		
DESIGN DISCHARGE	= 2400	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 954	FT
BASE DISCHARGE	= 3300	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 952.61	FT
OVERTOPPING DISCHARGE	= 3600	CFS
OVERTOPPING FREQUENCY	= 100+	YRS
OVERTOPPING ELEVATION	= 952.6	FT
		FT
DATE OF SURVEY	= 05/02/16	
H.S. ELEVATION AT DATE OF SURVEY	= 942.4	FT



PERMIT DRAWING SHEET 5 OF 6

SEE SHEET 4 FOR PLAN VIEW

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)
I	14+73-L- RT.& LT.	Bank Stabilization	0.00	0.00	0.00	0.00	0.00	<0.01	0.00	37	0	0
I	14+70 -L-	Causeway							<0.01		37	
TOTALS*:			0.00	0.00	0.00	0.00	0.00	<0.01	<0.01	37	37	0

*Rounded totals are sum of actual impacts

NOTES:

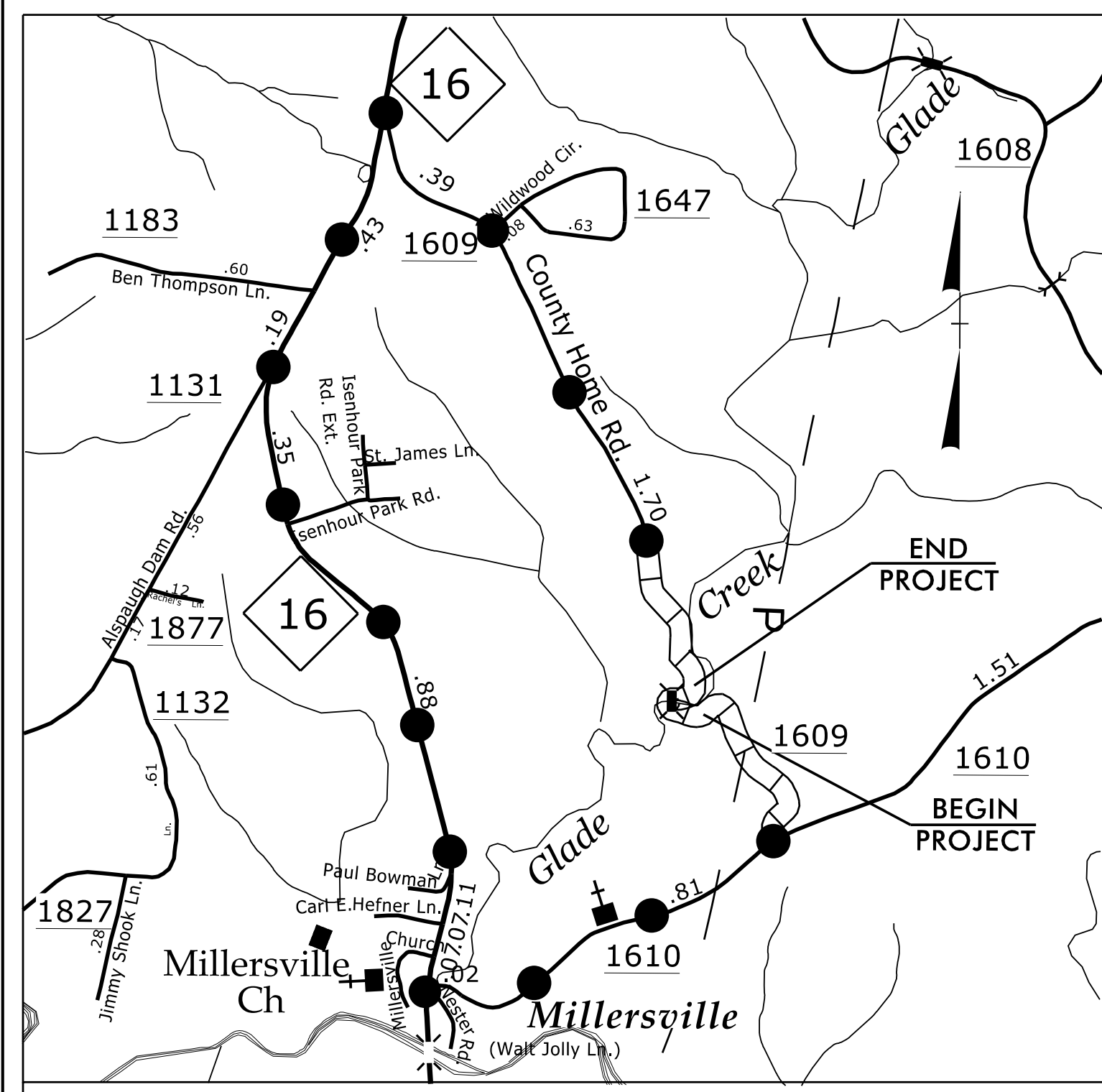
NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 3/20/2017
 ALEXANDER
 B-5391
 46106.1.1
 SHEET 6 OF 6

09/08/2019

TIP PROJECT: B-5391

CONTRACT: C203990

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



VICINITY MAP

● ● ● ● OFFSITE DETOUR

90% PLANS

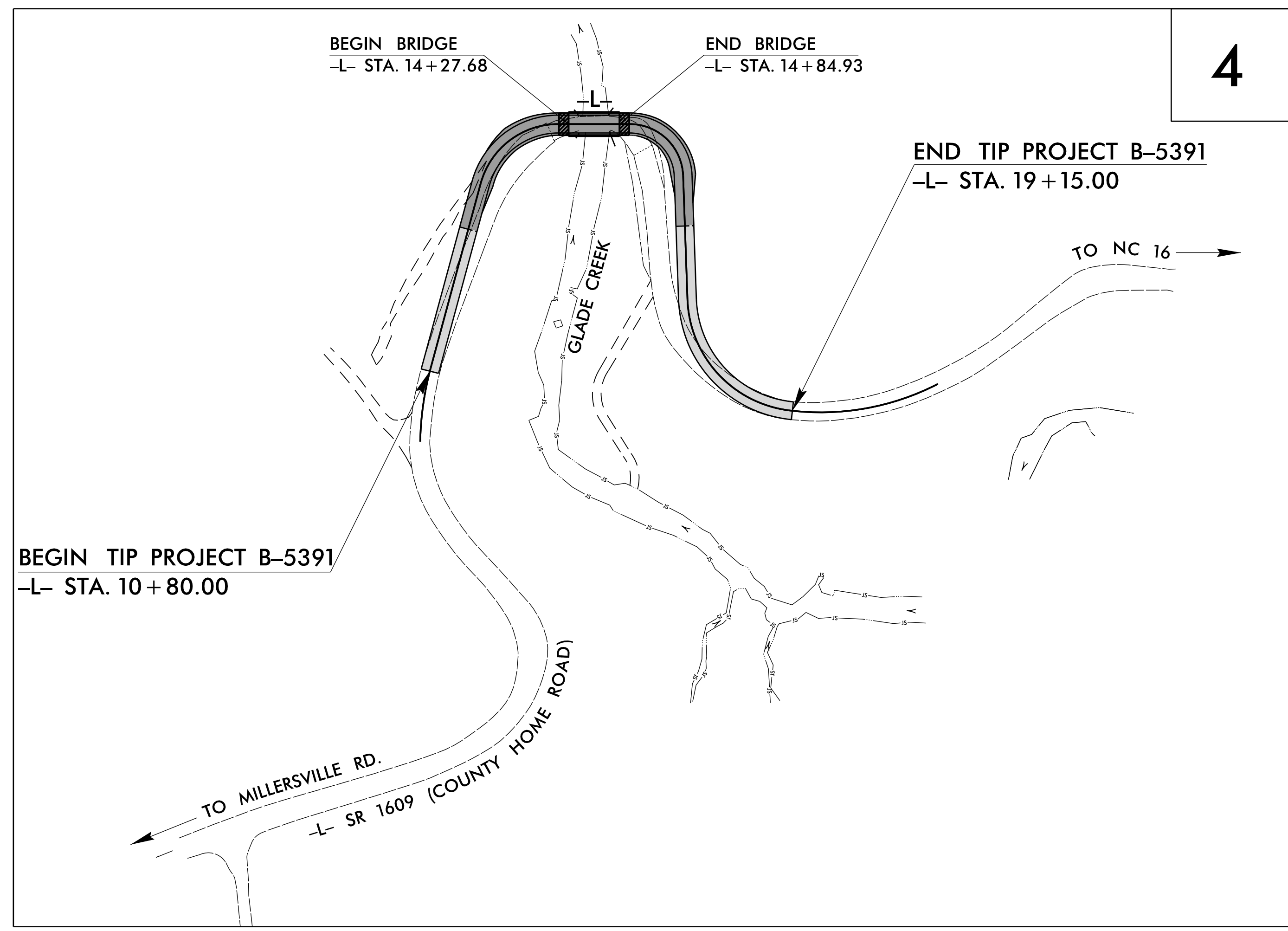
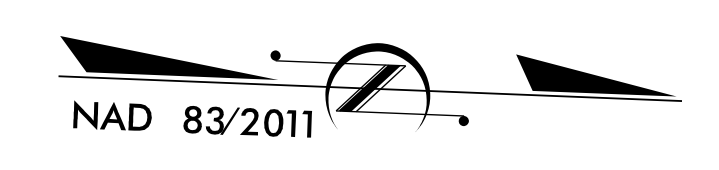
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ALEXANDER COUNTY

LOCATION: BRIDGE NO. 139 OVER GLADE CREEK
ON SR 1609 (COUNTY HOME ROAD)

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

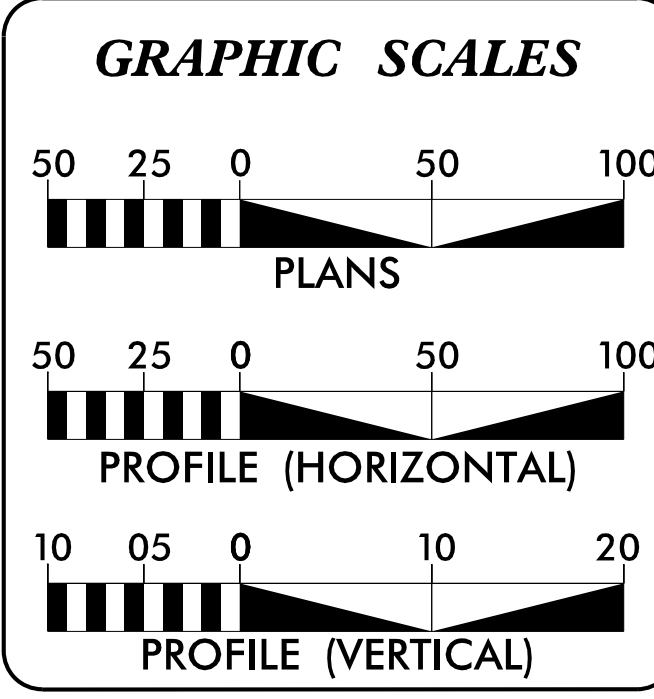
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5391	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
46106.1.1	BRZ-1609(2)	PE	
46106.2.1		RW, UTIL.	
46106.3.1		CONST.	



4

** DESIGN EXCEPTION IS REQUIRED FOR DESIGN SPEED OF 15 MPH
THIS IS NOT A CONTROL OF ACCESS PROJECT
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



DESIGN DATA

ADT 2017 =	115
ADT 2040 =	200
DHV =	19 %
D =	55 %
T =	15 % *
V =	55 MPH **
* TTST =	1% DUAL 14%
FUNC CLASS =	RURAL LOCAL
SUBREGIONAL TIER	

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-5391 =	0.147 MILES
LENGTH STRUCTURE TIP PROJECT B-5391 =	0.011 MILES
TOTAL LENGTH OF TIP PROJECT B-5391 =	0.158 MILES

Prepared in the Office of:

LOCHNER
H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919)571-7111

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
DECEMBER 22, 2016

LETTING DATE:
DECEMBER 19, 2017

BRIAN K. EASON, PE
PROJECT ENGINEER

BRIAN R. PEASE, EI
PROJECT DESIGN ENGINEER

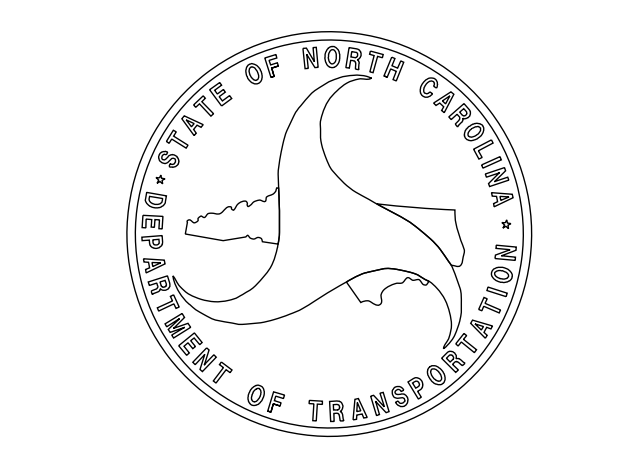
BRYAN C. KEY, PE
NCDOT CONTACT

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



17-JUL-2017 11:10
R:\Roadway\Projects\B5391\RDY_PSH_01.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$