STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

November 15, 2019

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

ATTN: Ms. Crystal Amschler
NCDOT Coordinator

Subject: **Application for Section 404 Nationwide Permit 14 and 401 Water Quality Certification** for the proposed replacement of Bridge No. 190002 on NC 141 over Slow Creek in Cherokee County, Division 14, TIP No. BR-0011.
Debit $240 from WBS 67011.1.1.

Dear Madam:

NCDOT proposes to replace the structurally deficient Bridge No. 190002 on NC 141 over Slow Creek in Cherokee County. The new bridge will be constructed in its existing location. Traffic will utilize an onsite detour via a temporary bridge to be constructed just east of the existing bridge, during the construction period.

The construction of the new bridge will require an existing 48-inch CMP to be slip-lined with a 42-inch steel casing, which will extend out to the -L- fill line. Initially however, the existing 48-inch CMP will be extended with a temporary 42-inch out to the -L-DET fill slope to allow for the construction of the temporary detour bridge and associated approach. After construction of the new bridge and removal of the temporary detour bridge and its approaches, the fill will be pulled back to the -L- line fill slope, the temporary 42-inch RCP will be removed, and the existing 48-inch CMP will be slip-lined with the 42-inch steel casing, as mentioned previously.

The fill to Wetland WA for the construction of the temporary detour bridge and its associated approach will be temporary. However, NCDOT has determined that even though the elevation can be restored to the wetland, the compaction of the soils is likely to disturb the function of the wetland. Therefore, all wetland fill impacts have been listed as “permanent” in the PCN, and mitigation is provided for these impacts.

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

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

Location:
1000 BIRCH RIDGE DRIVE
RALEIGH NC 27610

Total impacts for this project are 78 lf of permanent stream impacts (70 lf of fill, 8 lf of bank stabilization), 10 lf of temporary steam impacts associated with the bank stabilization, 0.04 acre of permanent wetland fill, and <0.01 acre of wetland hand-clearing.

There will be no utility impacts for this project.

Mitigation
NCDOT proposes mitigation for the 70 feet of permanent stream impacts (excludes mitigation for the 8 lf of bank stabilization impact) and 0.04 acre of permanent wetland impacts (excludes mitigation for the 0.003 acre of hand-clearing impact) for this project. Mitigation has been received from DMS.

Please see enclosed copies of the Pre-Construction Notification (PCN), DMS Acceptance Letter, stormwater management plan, permit drawings and design plans for the above-referenced project.

A Minimum Criteria Determination Checklist was completed in May 2019 and distributed shortly thereafter. Additional copies are available upon request.

This project calls for a letting date of April 21, 2020 and a review date of March 3, 2020.

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 contact Bill Barrett at wabarrett@ncdot.gov or (919) 707-6103.

Sincerely,

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

Pre-Construction Notification (PCN) Form

For Nationwide Permits and Regional General Permits

(along with corresponding Water Quality Certifications)

September 29, 2018 Ver 3

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

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

Below is a link to the online help file.

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

A. Processing Information

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

Cherokee

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:

BR-0011

WBS #*

67011.1.1

(for NCDOT use only)

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

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

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

- [x] Nationwide Permit (NWP)
- [ ] Regional General Permit (RGP)
- [ ] Standard (IP)

This form may be used to initiate the standard/individual permit process with the Corps. Please contact your Corps representative concerning submittals for standard permits. All required items that are not provided in the E-PCN can be added to the miscellaneous upload area located at the bottom of this form.

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

( ) Yes (•) No

Nationwide Permit (NWP) Number: 14 - Linear transportation

NWP Numbers (for multiple NWPS):

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

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

check all that apply

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

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

*

For the record only for DWR 401 Certification: ( ) Yes (•) No

For the record only for Corps Permit: ( ) Yes (•) No

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

( ) Yes (•) No

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

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

(•) Yes ( ) No

Acceptance Letter Attachment

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

BR-0011 - STR - RW - HI 02.pdf 62.45KB

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

You must submit a copy of the appropriate Wildlife Resource Commission Office.

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

B. Applicant Information

1a. Who is the Primary Contact?*

NCDOT

1b. Primary Contact Email:*

wabarrett@ncdot.gov

1c. Primary Contact Phone:*

(xxx)xxx-xxxx

(919)707-6103

1d. Who is applying for the permit?*

[x] Owner

[ ] Applicant (other than owner)

(Check all that apply)

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

( ) Yes (•) No

2. Owner Information

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

NC Department of Transportation

2b. Deed book and page no.:

2c. Responsible party:

(for Corporations)

2d. Address*

Street Address

1598 Mail Service Center

Address Line 2

City

Raleigh

State / Province / Region

NC

Postal / Zip Code

27699

Country

United States of America

2e. Telephone Number:*

(xxx)xxx-xxxx

(919)707-6000

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 190002 on NC 141 over Slow Creek

1b. Subdivision name:

(if appropriate)

1c. Nearest municipality / town:*

Murphy

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: *
35.096772
ex: 34.208504

Longitude: *
-83.945641
-77.796371

3. Surface Waters

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

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

Surface Water Lookup

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

3d. Please provide the 12-digit HUC in which the project is located. *
60200020303

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: *
The surrounding land use is a mix of light industrial, residential, and pastureland

4b. Have Corps permits or DWR certifications been obtained for this project (including all prior phases) in the past? *
○ Yes ◉ No ○ Unknown

4d. Attach an 8 1/2 X 11 excerpt from the most recent version of the USGS topographic map indicating the location of the project site. (for DWR)
Click the upload button or drag and drop files here to attach document
File type must be pdf

4e. Attach an 8 1/2 X 11 excerpt from the most recent version of the published County NRCS Soil Survey map depicting the project site. (for DWR)
Click the upload button or drag and drop files here to attach document
File type must be pdf

4f. List the total estimated acreage of all existing wetlands on the property:
0.38

4g. List the total estimated linear feet of all existing streams on the property:
(intermittent and perennial)
1,612

4h. Explain the purpose of the proposed project: *
The purpose of the project is to replace an existing bridge (originally constructed in 1954) due to strucutal deficiencies (Structural Rating of 7.79).

4i. Describe the overall project in detail, including indirect impacts and the type of equipment to be used: *
The replacement of NCDOT Bridge No. 190002 on NC 141 over Slow Creek, in Cherokee County, at its existing location, utilizing an on-site detour. The existing bridge consists of a 1 @ 40'-6" steel plank floor on I-beams with timber caps and piles. The proposed bridge will consist of 1 @ 70'-24" cored slab with 4'-0" end caps with sloping spill-through abutments. A 1 @ 60' Detour bridge will be constructed to maintain traffic during construction on the proposed bridge. Standard road building equipment, such as trucks, dozers, and cranes will be used.

4j. Please upload project drawings for the proposed project.
Click the upload button or drag and drop files here to attach document
BR-0011_PermitDrawings_20191107.pdf 3.45MB
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:

VHB Engineering conducted delineation in May 2018. The PJD Package was submitted to USACE (attn: Crystal Amschler) on November 19, 2018, from VHB (Sean Murray).

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

○ Preliminary ○ Approved ◉ Not Verified ○ Unknown ○ N/A

Corps AID Number:

Example: SAW-2017-99999

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

Name (if known): D. Robertson, WPIT; and P. Bailey WPIT

Agency/Consultant Company: VHB Engineering conducted delineation in May 2018

Other:

5d1. Jurisdictional determination upload

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

File type must be PDF

6. Future Project Plans

6a. Is this a phased project?*

○ Yes ◉ No

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

No.

D. Proposed Impacts Inventory

1. Impacts Summary

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

☑ Wetlands ☑ Streams-tributaries ☐ Buffers

☐ Open Waters ☐ Pond Construction

2. Wetland Impacts

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

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

2a. Site #* (?)	2a1 Reason* (?)	2b. Impact type* (?)	2c. Type of W.*	2d. W. name*	2e. Forested*	2f. Type of Jurisdicition* (?)	2g. Impact area*
1	42-inch cross-pipe (for Detour)	P	Bottomland Hardwood Forest	WA	Yes	Corps	0.020 (acres)
1	42-inch cross-pipe (for bridge replacement and approach)	P	Bottomland Hardwood Forest	WA	No	Corps	0.020 (acres)
1	hand-clearing	P	Bottomland Hardwood Forest	WA	Yes	Corps	0.003 (acres)

2g. Total Temporary Wetland Impact

0.000

2g. Total Permanent Wetland Impact

0.043

2g. Total Wetland Impact

0.043

2h. Comments:

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	42-inch RCP cross-pipe (for Detour)	Permanent	Fill	SA	Perennial	Both	2 Average (feet)	45 (linear feet)
S2	42-inch RCP cross-pipe (for bridge replacement)	Permanent	Fill	SA	Perennial	Both	2 Average (feet)	25 (linear feet)
S3	bank stabilization	Permanent	Bank Stabilization	Slow Creek	Perennial	Both	2 Average (feet)	8 (linear feet)
S4	bank stabilization	Temporary	Bank Stabilization	Slow Creek	Perennial	Both	2 Average (feet)	10 (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:

78

3i. Total temporary stream impacts:

10

3i. Total stream and ditch impacts:

88

3j. Comments:

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 bridge will be approximately 30 feet longer than the existing bridge.
The proposed bridge will completely span Slow Creek, with no pilings in the stream.
The proposed Detour bridge will span Slow Creek, with no pilings in the stream.
Side slopes for the -L- line in the area of the wetland are at a 2:1 grade.
Due to the impacts to the wetland for the on-site detour, it is likely that the compaction of soils will alter the function of the wetland; as such, NCDOT has obtained mitigation for the wetland impacts associated with the detour even though the temporary fill will be removed.

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

Riprap pads will be utilized to dissipate energy and to reduce velocity at all proposed outfalls. Runoff from the roads will be directed to vegetated roadside ditches.
Best Management Practices for Surface Waters will be used during all phases of construction.

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 [x] Corps

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

[ ] Mitigation bank [x] 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)

70

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

cold

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)

0.04

4f. Non-riparian wetland mitigation requested:

(acres)

4g. Coastal (tidal) wetland mitigation requested:

(acres)

4h. Comments

The fill to Wetland WA for the construction of the temporary detour bridge and its associated approach will be temporary. However, NCDOT has determined that even though the elevation can be restored to the wetland, the compaction of the soils is likely to disturb the function of the wetland. Therefore, all wetland fill impacts have been listed as “permanent” in the PCN, and mitigation is provided for these impacts.

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:

2. Stormwater Management Plan

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

◉ Yes ○ No

Comments:

Runoff from roads will be directed to vegetated roadside ditches.

G. Supplementary Information

1. Environmental Documentation

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

◉ Yes ○ No

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

◉ Yes ○ No

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

◉ Yes ○ No

NEPA or SEPA Final Approval Letter

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

FILE TYPE MUST BE PDF

2. Violations (DWR Requirement)

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

○ Yes ◉ No

3. Cumulative Impacts (DWR Requirement)

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

○ Yes ◉ No

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

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. 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

If yes, 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

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

USFWS website for protected species for Cherokee County, last updated October 17, 2018; N.C. Natural Heritage Program database; mussel surveys (Freshwater Mussel Survey Report, dated January 24, 2019); bat surveys (Bat Survey Memo, dated November 30, 2018); pedestrian surveys for plant species habitat.
As of October 17, 2018, the USFWS lists nine protected species for Cherokee County: bog turtle, gray bat (MYGR), Indiana bat (MYS0), northern long-eared bat (NLEB), Cumberland bean, littlewing pearlymussel, tan riffleshell, small whorled pogonia, and white fringeless orchid.
Assessment of the bridge project footprint for NLEB, MYSO and MYGR habitat was conducted (Bat survey memo dated November 30, 2018-attached). The assessment determined there was no evidence of bats. Habitat for NLEB and MYSO (river birch and cherry trees) was noted within the study area. No MYGR habitat (caves and/or mines) was observed.
A Mussel Survey Report, dated January 24, 2019 (attached), documents that no mussels were found in the study area. A Biological Conclusion of No Effect was determined for the three mussel species. No habitat for small whorled pagonia or white fringeless orchid is present within the project area (note that white fringeless orchid is an "historic" record and does not require surveys).

Consultation Documentation Upload

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

File type must be PDF

6. Essential Fish Habitat (Corps Requirement)

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

○ Yes ◉ No

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

NMFS 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? *

N/SEPA 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. [Panel 3700552200J]

Miscellaneous

Comments

Please find attached below:
- Cover Letter
- Bat Memo
- Mussel Survey Report

Miscellaneous attachments not previously requested.

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

BR-0011 Bat memo Cherokee slopes.pdf	241.81KB
BR-0011_Mussel Survey Report.pdf	2.39MB
BR-0011 Application Cover Letter.pdf	240.31KB

File must be PDF or KMZ

Signature

*

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

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

Full Name: *

Michael Turchy

Signature

Date

11/15/2019

ROY COOPER
Governor
MICHAEL S. REGAN
Secretary
TIM BAUMGARTNER
Director

NORTH CAROLINA
Environmental Quality

November 12, 2019

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

Dear Mr. Harris:

Subject: Mitigation Acceptance Letter:

TIP Number BR-0011 – Replace Bridge 190002 on NC 141 over Slow Creek, Cherokee County

The purpose of this letter is to notify you that the Division of Mitigation Services (DMS) will provide the compensatory stream and wetland mitigation for the subject project. Based on the information received on November 12, 2019, the impacts are located in CU 06020002 of the Hiwassee River basin in the Southern Mountains (SM) Eco-Region, and are as follows:

Hiwassee 06020002 SM	Stream			Wetlands			Buffer (Sq. Ft.)	
	Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh	Zone 1	Zone 2
Impacts (feet/acres)	70.0	0	0	0.04	0	0	0	0

DMS commits to implementing sufficient compensatory stream and wetland 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 DMS.

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

Sincerely,

Beth Harmon

for James B. Stanfill
DMS Asset Management Supervisor

cc: Mr. Monte Matthews, USACE – Raleigh Regulatory Field Office
Ms. Amy Chapman, NCDWR
File: BR-0011

North Carolina Department of Transportation

Highway Stormwater Program

STORMWATER MANAGEMENT PLAN

FOR NCDOT PROJECTS

(Version 2.08; Released April 2018)

WBS Element: 67011.1.1 **TIP No.:** BR-0011 **County(ies):** Cherokee

General Project Information

WBS Element:	67011.1.1	**TIP Number:**	BR-0011	**Project Type:** Bridge Replacement	**Date:** 10/14/2019
NCDOT Contact:	Dan Duffield	**Contractor / Designer:**	Reid B. Robol - VHB		
Address:	1020 Birch Ridge Drive Room #16 Raleigh, NC 27610	**Address:**	940 Main Campus Drive Suite 500 Raleigh, NC 27606		
Phone:	919-707-6611	**Phone:**	919-754-5005		
Email:	dcduffield@ncdot.gov	**Email:**	rrobol@vhb.com		
City/Town:	Murphy	**County(ies):**	Cherokee		
River Basin(s):	Hiwassee	**CAMA County?**	No		
Wetlands within Project Limits?	Yes				

Project Description

Project Length (lin. miles or feet):	0.152 Miles	**Surrounding Land Use:** Forest, rural residential
	Proposed Project	**Existing Site**
Project Built-Upon Area (ac.)	0.6 ac.	0.5 ac.
Typical Cross Section Description:	2 @ 12' lanes with 7'-11" paved shoulders (bridge) and 2 @ 12' lanes with 2' paved shoulders and 6' grass shoulders (road).	2 @ 11' lanes with 1' paved shoulders.
Annual Avg Daily Traffic (veh/hr/day):	Design/Future: 4800 Year: 2040	Existing: 4200 Year: 2018
General Project Narrative: (Description of Minimization of Water Quality Impacts)	TIP project BR-0011 involves the replacement of the existing NCDOT Bridge #190002 on NC 141 over Slow Creek in Cherokee County. Bridge #190002 consists of 1 @ 40'-6" steel plank floor on I-beams with timber caps and piles. The proposed bridge consists of 1 @ 70'-24" cored slab with 4'-0" end caps with sloping spill through abutments. A 1@60' Detour bridge will be constructed to maintain traffic during construction on the proposed bridge. Rip-rap pads will be utilized to dissipate energy and to reduce velocity at all proposed outfalls. Runoff from the roads will be directed to vegetated roadside ditches. No deck drains are required for the proposed bridge.	

Waterbody Information

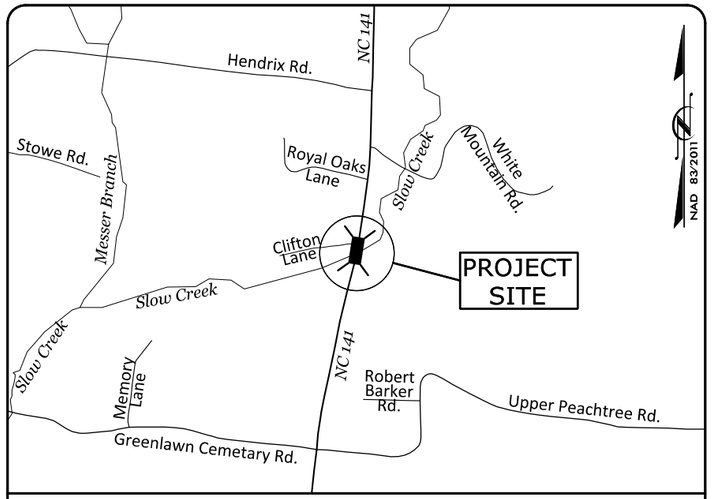
Surface Water Body (1):	Slow Creek	**NCDWR Stream Index No.:**	1-44-9		
NCDWR Surface Water Classification for Water Body		**Primary Classification:**	Class C		
		Supplemental Classification:			
Other Stream Classification:	None				
Impairments:	None				
Aquatic T&E Species?	No	Comments:			
NRTR Stream ID:				**Buffer Rules in Effect:**	N/A
Project Includes Bridge Spanning Water Body?	Yes	**Deck Drains Discharge Over Buffer?**	N/A	**Dissipator Pads Provided in Buffer?**	N/A
Deck Drains Discharge Over Water Body?	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)					

09/08/99

TIP PROJECT: BR-0011

CONTRACT: C204387

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



VICINITY MAP
NOT TO SCALE

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CHEROKEE COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BR-0011	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
WBS 67011.1.1		PE
WBS 67011.2.1		ROW, UTL.

LOCATION: BRIDGE 190002 ON NC141 OVER SLOW CREEK

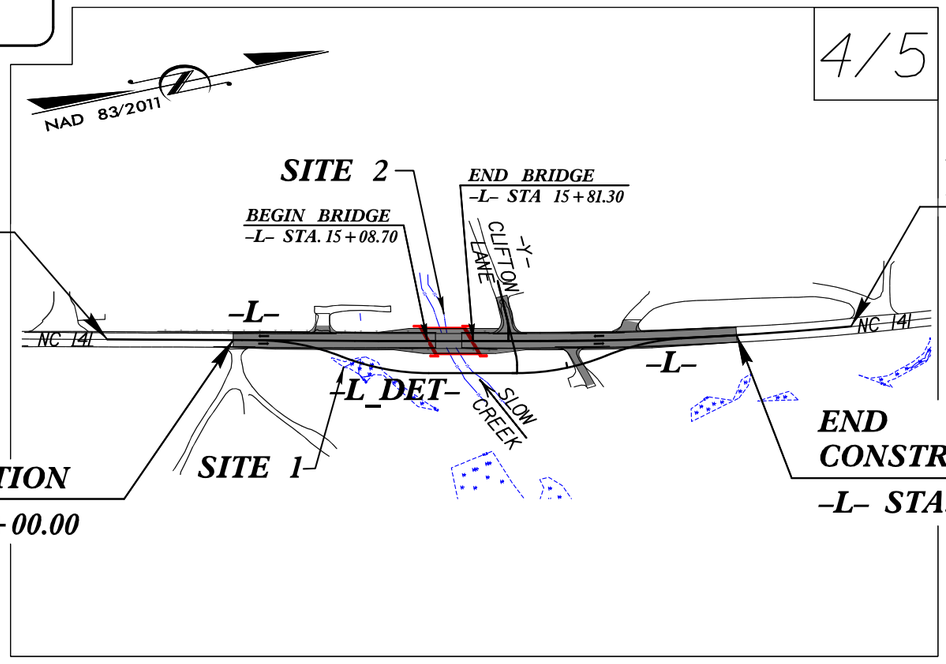
TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURE

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 1 OF 7

ROW PLANS

4/5



BEGIN TIP PROJECT BR-0011
-L- STA. 10+00.00

END TIP PROJECT BR-0011
-L- STA. 21+82.40

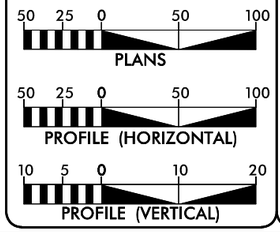
BEGIN CONSTRUCTION
-L- STA. 12+00.00

END CONSTRUCTION
-L- STA. 20+00.00

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

GRAPHIC SCALES



DESIGN DATA

ADT 2018 = 4200
ADT 2040 = 4800
K = 9 %
D = 55 %
T = 6 % *
V = 50 MPH
* TTST =1% DUAL 5%
FUNC CLASS =
MAJOR COLLECTOR
REGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT BR-0011	=	0.211 MI.
LENGTH OF STRUCTURE TIP PROJECT BR-0011	=	0.013 MI.
TOTAL LENGTH OF TIP PROJECT BR-0011	=	0.224 MI.

Prepared for the North Carolina Department of Transportation In the Office of:

vhb
940 Main Campus Drive, Suite 500
Raleigh, NC 27606
NC License No: C-3705

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
OCTOBER 29, 2019

LETTING DATE:
APRIL 21, 2020

MARK COLGAN, PE
PROJECT ENGINEER

ELIZABETH LAWES, PE
PROJECT DESIGN ENGINEER

NCDOT CONTACT DAVID S. STUTTS, PE
PROJECT ENGINEER-ROADWAY DESIGN

HYDRAULICS ENGINEER

SIGNATURE: *P.E.*

ROADWAY DESIGN ENGINEER

SIGNATURE: *P.E.*

STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION ·

11:37:30 AM
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rrobol

PROJECT REFERENCE NO.	SHEET NO.
BR-0011	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

vhb
VHB Engineering NC, P.C. (C-3705)
940 Main Campus Drive, Suite 500
Raleigh, NC 27606

NAD 83/2011

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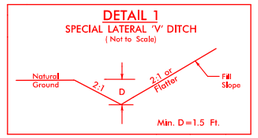
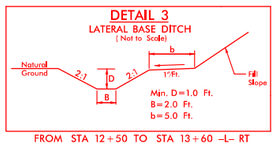
PERMIT DRAWING SHEET 2 OF 7

DETAIL 1
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



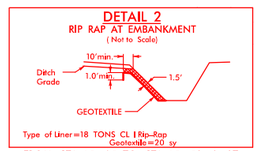
FROM STA 15+50 TO STA 19+50 –L– LT

DETAIL 3
LATERAL BASE DITCH
(Not to Scale)

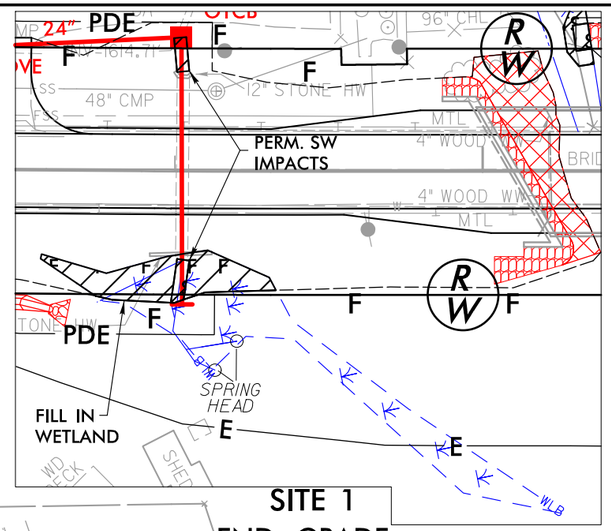


FROM STA 12+50 TO STA 13+60 –L– RT

DETAIL 2
RIP RAP AT EMBANKMENT
(Not to Scale)



FROM STA 15+35 TO STA 15+50 –L– LT

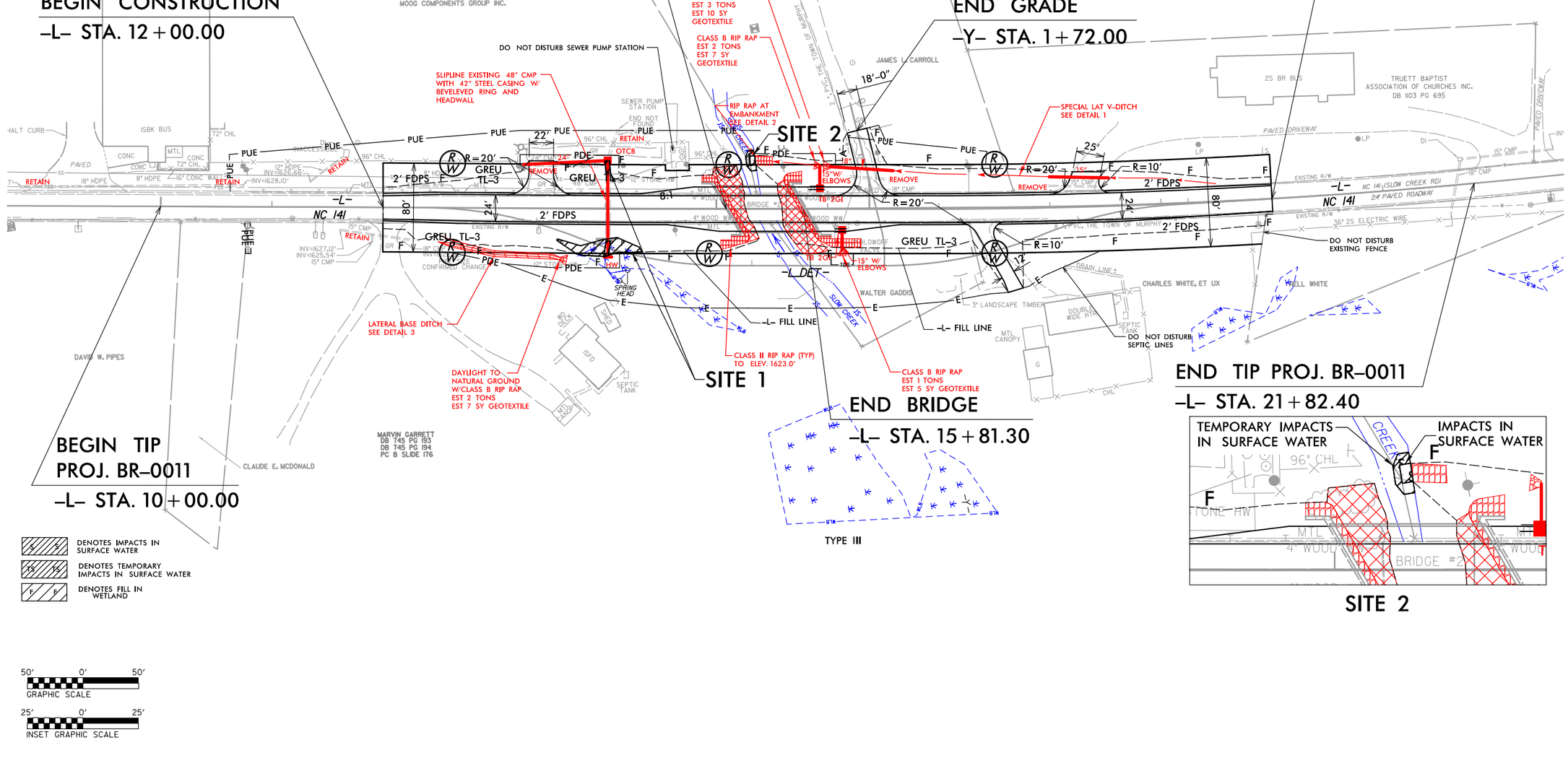


BEGIN CONSTRUCTION
–L– STA. 12+00.00

BEGIN BRIDGE
–L– STA. 15+08.70

SITE 1
END GRADE
–Y– STA. 1+72.00

END CONSTRUCTION
–L– STA. 20+00.00



END TIP PROJ. BR–0011
–L– STA. 21+82.40

BEGIN TIP PROJ. BR–0011
–L– STA. 10+00.00

S S DENOTES IMPACTS IN SURFACE WATER

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

F F DENOTES FILL IN WETLAND

SITE 2

50' 0' 50'
GRAPHIC SCALE

25' 0' 25'
INSET GRAPHIC SCALE

REVISIONS
11/7/2019

PROJECT REFERENCE NO.	SHEET NO.
BR-0011	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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940 Main Campus Drive, Suite 500
Raleigh, NC 27606

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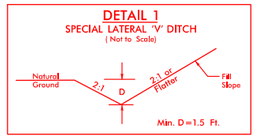
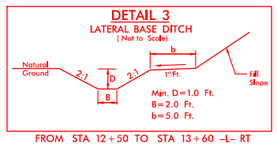
PERMIT DRAWING SHEET 3 OF 7

DETAIL 1
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



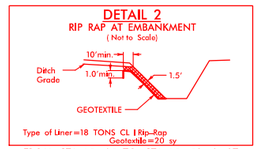
FROM STA 15+50 TO STA 19+50 –L– LT

DETAIL 3
LATERAL BASE DITCH
(Not to Scale)

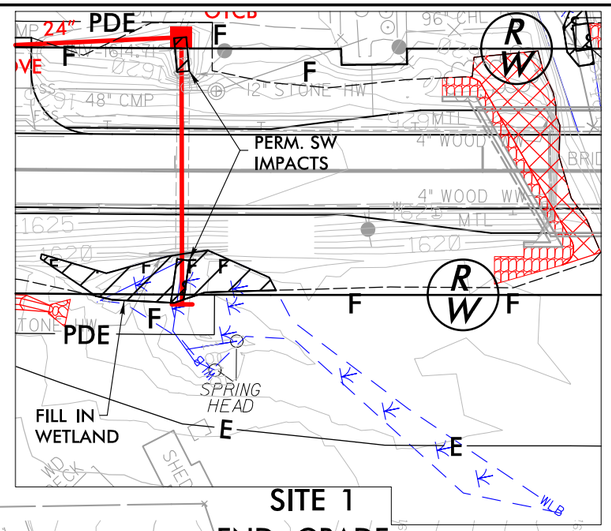


FROM STA 12+50 TO STA 13+60 –L– RT

DETAIL 2
RIP RAP AT EMBANKMENT
(Not to Scale)



FROM STA 15+35 TO STA 15+50 –L– LT

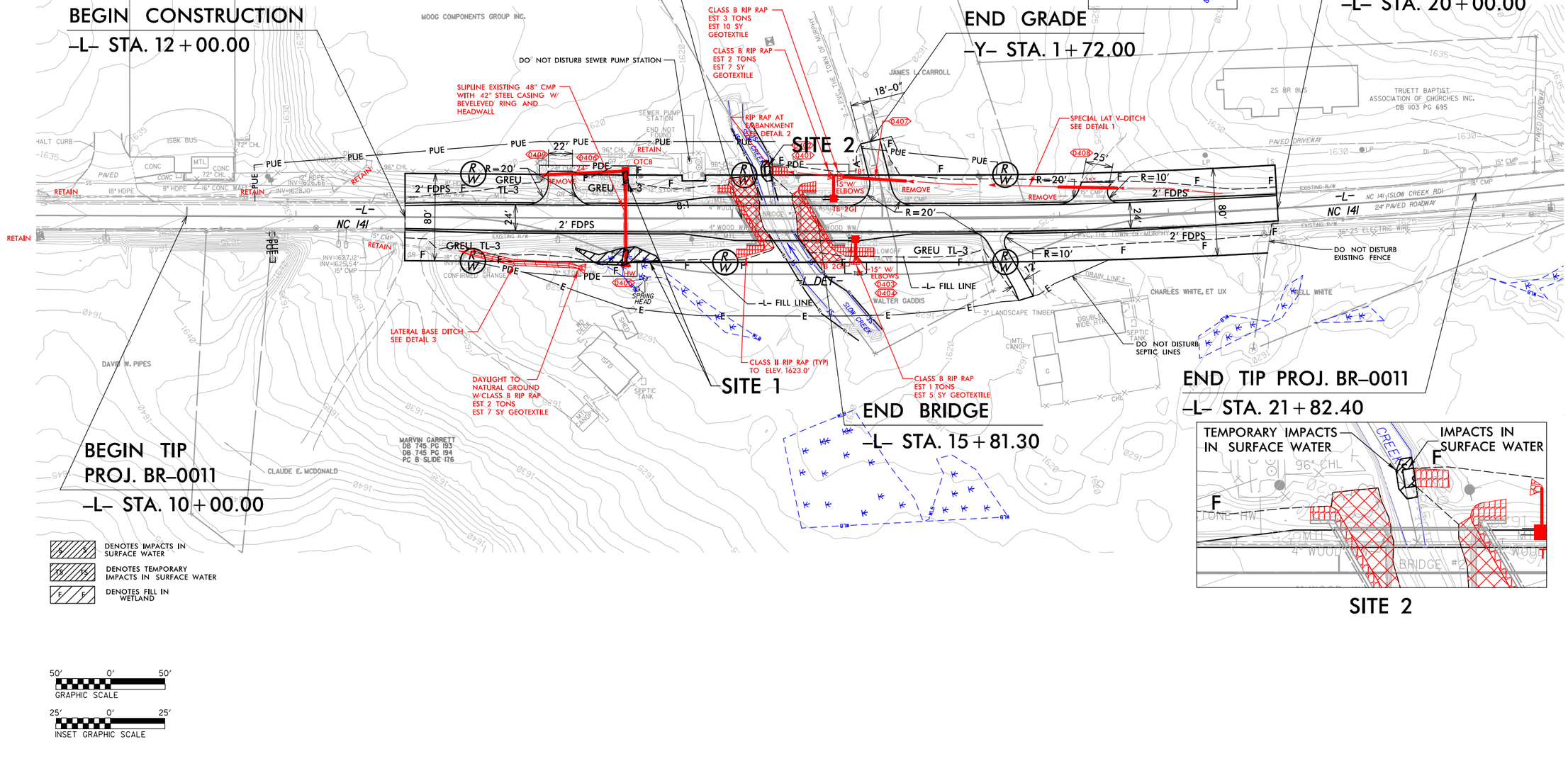


SITE 1
END GRADE
–Y– STA. 1+72.00

BEGIN CONSTRUCTION
–L– STA. 12+00.00

BEGIN BRIDGE
–L– STA. 15+08.70

END CONSTRUCTION
–L– STA. 20+00.00



SITE 2

DENOTES IMPACTS IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

DENOTES FILL IN WETLAND

50' 0' 50'
GRAPHIC SCALE

25' 0' 25'
INSET GRAPHIC SCALE

REVISIONS
11/7/2019

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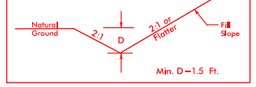
REVISIONS

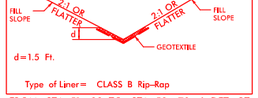
DETOUR

DETAIL 1
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



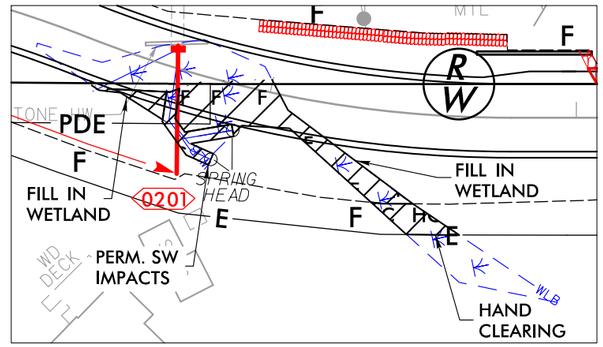
FROM STA 50+50 TO STA 51+78 -L_DET- RT =
STA 12+84 - STA 14+02 -L- RT

DETAIL 4
TOE PROTECTION
(Not to Scale)

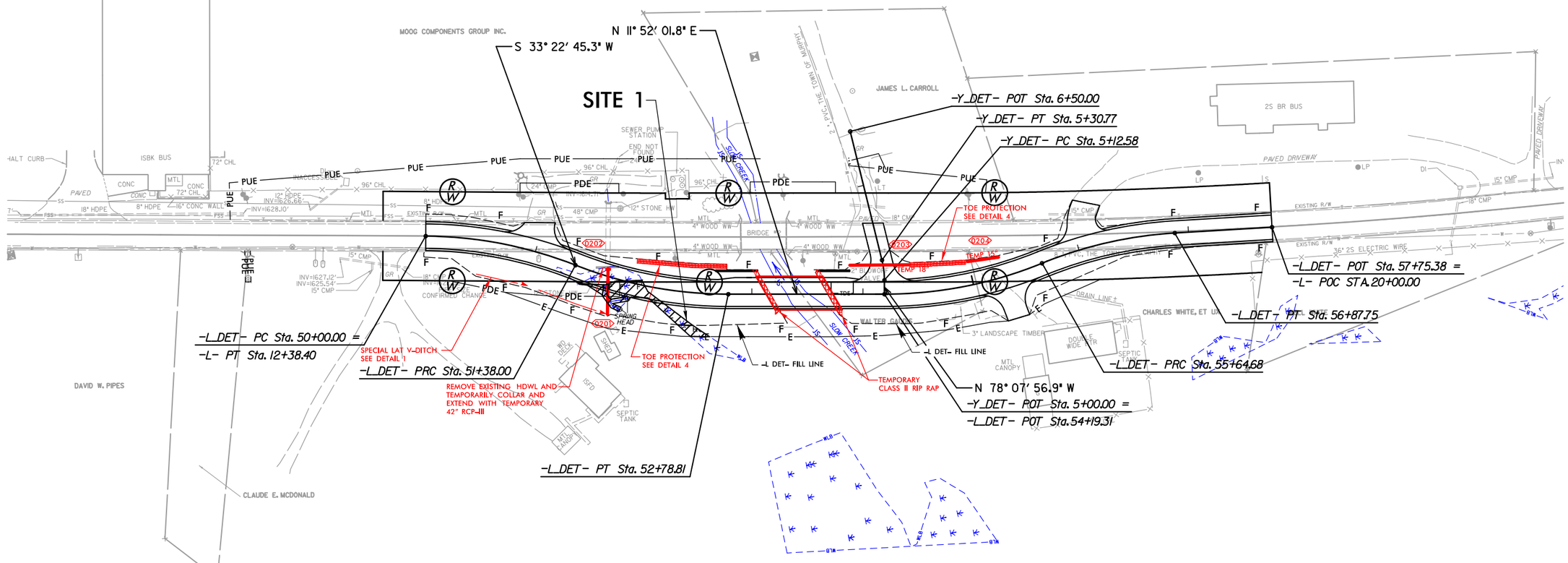


Type of Liner= CLASS B Rip-Rap

FROM STA 51+90 TO STA 52+78 -L_DET- RT
FROM STA 54+40 TO STA 55+00 -L_DET- RT



SITE 1



DENOTES IMPACTS IN SURFACE WATER

DENOTES HAND CLEARING

DENOTES FILL IN WETLAND

50' 0' 50'
GRAPHIC SCALE

25' 0' 25'
INSET GRAPHIC SCALE

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NAD 83/2011

PROJECT REFERENCE NO.	SHEET NO.
BR-0011	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING SHEET 4 OF 7

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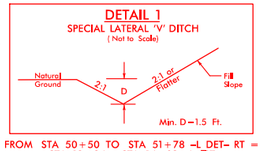
11/7/2019

REVISIONS

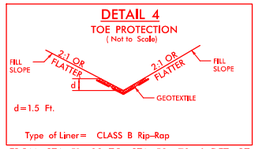
DETOUR

DETAIL 1
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



FROM STA 50+50 TO STA 51+78 –L_DET– RT =
STA 12+84 – STA 14+02 –L– RT

DETAIL 4
TOE PROTECTION
(Not to Scale)



Type of Liner= CLASS B Rip-Rap

FROM STA 51+90 TO STA 52+78 –L_DET– RT
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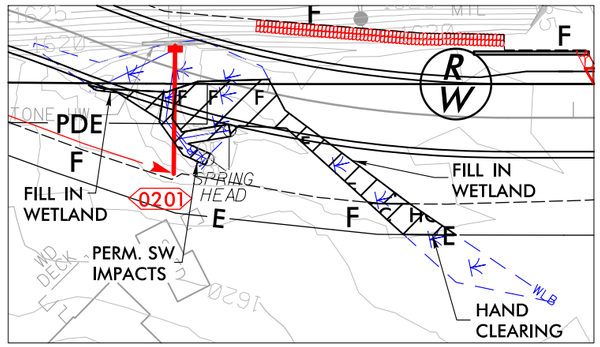

SITE 1

vhb
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940 Main Campus Drive, Suite 500
Raleigh, NC 27606

NAD 83/2011

PROJECT REFERENCE NO.	SHEET NO.
BR-0011	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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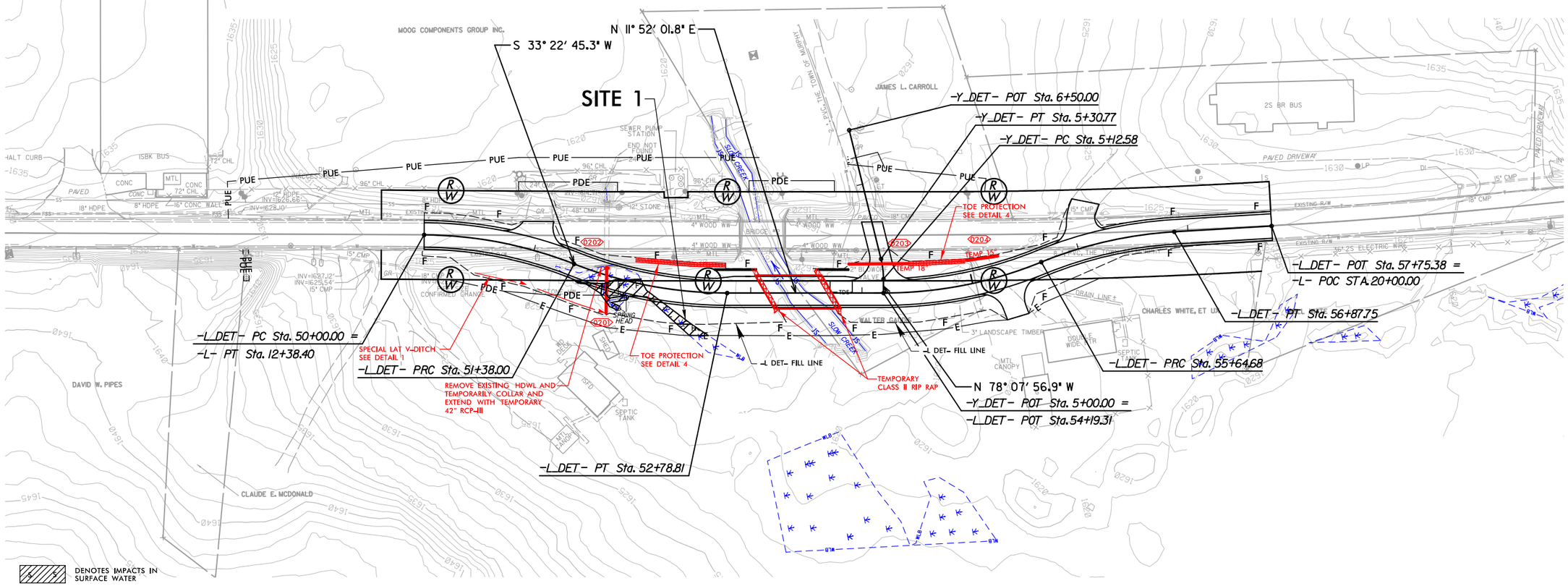
PERMIT DRAWING SHEET 5 OF 7



DENOTES IMPACTS IN SURFACE WATER

DENOTES HAND CLEARING

DENOTES FILL IN WETLAND

50' 0' 50'
GRAPHIC SCALE

25' 0' 25'
INSET GRAPHIC SCALE

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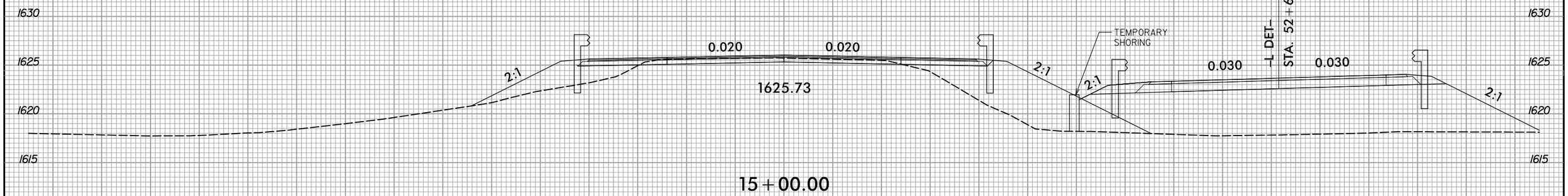
6/23/16

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	BR-0011	X-2

PERMIT DRAWING
SHEET 6 OF 7



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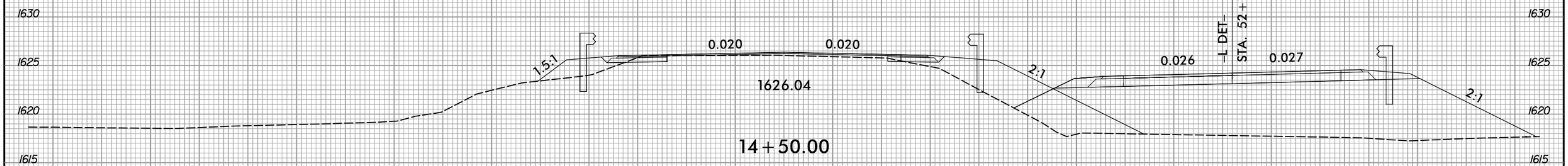

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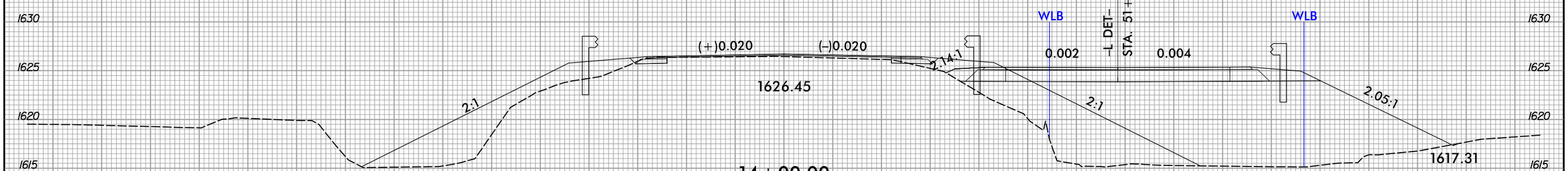
SITE 1



14+00.00

WETLAND AND SURACE WATER IMPACTS SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	51+55 to 52+63 -L_DET- RT	42" RCP cross-pipe & Detour	0.02				< 0.01*	< 0.01*****		45		
1	13+57 to 14+33 -L- RT	42" RCP cross-pipe	0.02					< 0.01****		25		
2	15+29 to 15+35 -L- LT	Bank Stabilization						< 0.01**	< 0.01***	8	10	
TOTALS*:			0.04				< 0.01	< 0.01	< 0.01	78	10	0

*Rounded totals are sum of actual impacts

NOTES:

*42" RCP cross-pipe & Detour = 152.2 sf
**Bank Stabilization = 41.9 sf
***Bank Stabilization = 90.0 sf
****42" RCP cross-pipe = 99.1 sf
******42" RCP cross-pipe & Detour = 173.2 sf

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
11/07/2019
CHEROKEE
BR-0011
67011.1.1

Revised 2018 Feb

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

November 30, 2018

TO: Bill Barrett, Environmental Senior Specialist
Environmental Coordination & Permitting Group, EAU

FROM: Melissa Miller, Environmental Program Consultant
Biological Surveys Group, EAU

SUBJECT: Section 7 survey results for the northern long-eared bat *(Myotis septentrionalis),* Indiana Bat *(Myotis sodalis)* and gray bat *(Myotis grisescens)* associated with the replacement of Bridge No. 02 over Slow Creek on NC 141 in Cherokee County, **TIP No. BR-0011**.

The North Carolina Department of Transportation (NCDOT, Division 14) proposes to replace Bridge No. 02 over Slow Creek on NC 141 in Cherokee County, TIP No. BR-0011. The existing bridge is a single span structure with metal beams, deck, guard rails and timber end walls. The overall length of the structure is 41 feet.

Northern long-eared bat

The project to replace Bridge No. 02 has been reviewed for effects on the northern long-eared bat (NLEB). As of May 4, 2015, NLEB is listed by the U.S. Fish and Wildlife Service (USFWS) as "Threatened" under the Endangered Species Act of 1973. As of November 30, 2018, NLEB is listed by USFWS (http://www.fws.gov/raleigh/species/cntylist/nc_counties.html) as "current" in Cherokee County.

According to the North Carolina Natural Heritage Program (NHP) Biotics Database, most recently updated October 2018, **the nearest NLEB hibernacula record is 10.6 miles northwest of the project (EO ID 34127) and no known NLEB roost trees occur within 150 feet of the project area**. EO 34127 represents Radford Cave sites with multiple observations from 2008 to 2014.

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

TELEPHONE: 919-707-6000
FAX: 919-212-5785

WEBSITE:NCDOT.GOV

Location:
CENTURY CENTER, BUILDING B
1020 BIRCH RIDGE DRIVE
RALEIGH NC 27610

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. The closest 12 digit (0602000020701) red HUC is approximately 6 miles away (Hanging Dog Creek).

On June 20, 2018, NCDOT biologists assessed the bridge project footprint for potential NLEB habitat. No evidence of bats was observed. River birch and Cherry were noted within the project footprint. These trees receive approximately 7+ hours of sunlight daily.

Indiana Bat

The project to replace Bridge No. 02 has also been reviewed for effects on the Indiana bat (MYSO). As of March 11, 1967, the Indiana bat was listed by the U.S. Fish and Wildlife Service (USFWS) as "Endangered" under the Endangered Species Act of 1973. As of November 30, 2018 the Indiana bat is listed by USFWS as "current" in Cherokee County (http://www.fws.gov/raleigh/species/cntylist/nc_counties.html).

According to the North Carolina Natural Heritage Program (NHP) Biotics Database, most recently updated in October 2018, MYSO have been documented in Cherokee County. USFWS, North Carolina Wildlife Resources Commission (WRC) and NHP data indicate **that the closest known occurrence of MYSO is approximately 8 miles northwest of the project site (EO ID 32450).** EO ID 32450 represents Hanging Dog Creek site with mist net and observation records of two adult females in 2007.

On June 20, 2018, NCDOT biologists assessed the bridge project footprint for potential MYSO habitat. No evidence of bats was observed. River birch and Cherry were noted within the project footprint. These trees receive approximately 7+ hours of sunlight daily.

Gray Bat

The project to replace Bridge No. 02 has also been reviewed for effects on the gray bat (MYGR). As of April 28, 1976, the gray bat was listed by the U.S. Fish and Wildlife Service (USFWS) as "Endangered" under the Endangered Species Act of 1973. According to the USFWS Cherokee County webpage (accessed November 30, 2018), (http://www.fws.gov/raleigh/species/cntylist/nc_counties.html), the gray bat is listed by USFWS as "current" in Cherokee County.

According to the North Carolina Natural Heritage Program (NHP) Biotics Database, most recently updated in October 2018, MYGR have not been documented in Cherokee County. NHP data indicate that **the closest known occurrence of MYGR is approximately 30 miles northeast of the project site (EO ID 38506).** EO 38506 represents an observation near Fontana Lake. On July 3, 2018, a MYGR was observed roosting in a bridge approximately 3.5 miles south of BR-0011.
This information is based on personal communication and although it has been verified, has not yet been updated and assigned an EO number in NHP as of this writing.

On June 20, 2018, NCDOT biologists assessed the bridge project footprint for potential MYGR habitat. No evidence of bats was observed. No caves or mines are located within the project footprint.

Final design, tree clearing, and percussive activities information will be provided in the permit application.
ACOE will make all determinations for all listed species in county (per Lori Beckwith 7/17/18).

If you need any additional information, please contact Melissa Miller at 919-707-6127.

Freshwater Mussel Survey Report

Replacement of Bridge No. 2 on NC 141
Over Slow Creek
Cherokee County, North Carolina
TIP# BR-0011
WBS Element # 67011.1.1

Prepared For:

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1.0 Introduction

The North Carolina Department of Transportation (NCDOT) proposes the replacement Bridge No. 2 on NC 141 over Slow Creek in Cherokee County (Appendix A, Figure 1). This project on Slow Creek (BR-0011) is located in the Hiwassee River Basin. The Cumberland Bean (*Villosa tribalis*), Little-wing Pearlymussel (*Pegias fabula*), and Tan Riffleshell (*Epioblasma florentina walkeri*) are listed as protected species under the Endangered Species Act (ESA) for Cherokee County by the U.S. Fish and Wildlife Service (USFWS).

A review of NC Natural Heritage Program (NCNHP) records, last accessed August 7, 2018, indicated there is a known occurrence for one of the target species within a 5-mile buffer around the project (Figure 2). The nearest element occurrence (EO) for the Little-wing Pearlymussel (EO ID 8346) is located on the Valley River, approximately eight stream miles from the project location. The only observation date for this historical occurrence is listed as 1882-Pre. The closest occurrence for the Cumberland Bean (EO ID 11479) is on the Hiwassee River, approximately 35 stream miles downstream from the project. The observation dates listed for this EO were 1990s and February 21, 2003. Records for the Tan Riffleshell in Cherokee County are considered historical and obscure. The species is considered to be extirpated from North Carolina and there are no NCNHP occurrences in the state.

As part of the federal permitting process that requires an evaluation of potential project related effects to federally protected species, Rummel, Klepper, and Kahl Engineering (RK&K) was contracted by NCDOT to conduct the freshwater mussel survey for the target species given above.

2.0 Waters Affected

Slow Creek is located in the Hiwassee River Basin (HUC# 06020002). From the survey location, Slow Creek flows approximately three stream miles to the Hiwassee River.

2.1 NPDES Dischargers

The are no NPDES permitted dischargers within the 5-mile project buffer (Figure 3).

2.2 303(d) Classification

Slow Creek is on the North Carolina Department of Environmental Quality (NCDEQ) - Division of Water Resources 2016 303(d) list of impaired streams and the 2018 draft list for exceeding fecal coliform criteria (Figure 3).

3.0 Target Species Descriptions

3.1 Cumberland Bean (*Villosa trabalis*)

3.1.1 Characteristics

This species was described by Conrad in 1834. The Cumberland Bean is a small to medium sized freshwater mussel with relatively thick, elongated, oval shells. The shells of the females are somewhat more rounded and slightly larger (maximum about 55 millimeters or 2.2 inches long). The periostracum (outer shell surface) is smooth (no ridges or bumps) and somewhat shinny; and can be olive green, yellowish brown, or blackish with fine wavy dark green or blackish rays. However, these rays are often difficult to see unless the shell surface is cleaned. The nacre (inside shell surface) is bluish white or white with a bluish iridescence towards posterior end of the shell.

3.1.2 Distribution and Habitat Requirements

Historically, the Cumberland Bean was restricted to tributary streams of the Tennessee and Cumberland rivers and was most abundant in the Cumberland system. Historic records for the species exist for the Tennessee River, South Chickamauga Creek, Paint Rock River, Flint River, Hiwassee River, Clinch River, Cumberland River, Buck Creek, Obey River, Rockcastle River, Laurel Fork of the Rockcastle River, and Beaver Creek. Populations of the species still exist in Cumberland River tributaries in Kentucky and Tennessee, and the Hiwassee River downstream of Apalachia Dam in Tennessee. This species is thought to be extirpated from North Carolina.

The Cumberland Bean inhabits small rivers and streams in fast riffles with gravel or sand and gravel substrate. Individuals have been found in riffle and run habitat areas with shallow water depths (less than one meter) and clean, stable substrate. Individuals can often be found in transitional zones between sand and gravel substrates.

3.2 Little-wing Pearlymussel (*Pegias fabula*)

3.2.1 Characteristics

This species was described by Isaac Lea in 1838. The Little-wing Pearlymussel is small, rarely exceeding 1.5 inches (38 mm) in length and 0.5 inches in width. The shell's outer surface (periostracum) is usually eroded, giving the shell a chalky appearance. When the periostracum is present, the shell is light green or dark yellowish with dark rays. The shells exhibit sexual dimorphism; with females having an inflated posterior ridge and a more truncated posterior end.

3.2.2 Distribution and Habitat Requirements

This once wide-ranging species once inhabited numerous smaller tributaries of the upper Cumberland and Tennessee River Basins in Alabama, North Carolina (Little Tennessee River, Swain County and Valley River, Cherokee County), Kentucky, Tennessee and Virginia. Currently, three populations may still survive in the Cumberland River system and three in the

Tennessee River system, including a very small population in the Little Tennessee River, North Carolina.

The Little-wing Pearlymussel inhabits cool, clear, and relatively high gradient streams (of small to medium size) where it is sometimes found lying on a rocky stream bed in shallow water. However, it is more often hidden under large rocks.

3.3 Tan Riffleshell (*Epioblasma florentina walkeri*)

3.3.1 Characteristics

The Tan Riffleshell, is a medium-sized freshwater mussel (2.8 in; 7 cm) characterized by a dull brownish green or yellowish green shell surface with numerous, evenly distributed, faint green rays. The subinflated valves are of unequal length and are marked with uneven growth rings. The inner shell surface is bluish white. The thin, posterior swelling of the female has one or more constrictions which give the shell a lobed appearance.

3.3.2 Distribution and Habitat Requirements

The Tan Riffleshell inhabits headwaters, riffles, and shoals in sand and gravel substrates. Historic occurrences of the Tan Riffleshell are known from the French Broad and Hiawassee Rivers in North Carolina. Currently, the only known viable population of this species is located in Tazwell County, Virginia.

4.0 Survey Efforts

A mussel survey was conducted in association with this project by RK&K personnel Neil Medlin (Permit # 18-ES00030) and Gordon March on August 8, 2018.

4.1 Stream Conditions at Time of Assessment: Slow Creek

Slow Creek had a variable width, ranging from one to three meters wide within the survey reach. The banks were 0.5 meters high with some areas of erosion. The substrate was a mix of cobble, gravel, sand, and silt. Sand was the dominant type of substrate with cobble subdominant. Sand and gravel bars were common throughout the survey reach. The stream had a narrow, forested buffer along the survey reach. The watershed for Slow Creek above the survey location contained residential areas along with many pastures where livestock have direct access to the stream. Heavy bank erosion was visible in many of the pastures.

4.2 Methodology

A mussel survey was conducted on Slow Creek from approximately 400 meters below the NC 141 road crossing to approximately 100 meters above the road crossing for a total distance of approximately 500 meters. Within the survey reach, areas of appropriate habitat were searched, concentrating on any stable habitats preferred by the target species. Visual surveys were conducted using glass bottom view buckets (bathyscopes) along with tactile methods that were

employed where appropriate. All freshwater bivalves were recorded and returned to the substrate. Timed survey efforts provided Catch Per Unit Effort (CPUE) data for each species.

5.0 Results

No target mussel species was observed during the survey of Slow Creek. For the survey, a total of 1.5 person-hours of survey time was spent in the reach, with one species of freshwater mussel observed along with one freshwater snail.

Table 1. CPUE for Freshwater Mussels in Slow Creek, August 8, 2018.

Scientific Name	**Common Name**	**# live**	**#shells**	**Abundance/ CPUE**
Freshwater Mussels				CPUE
Villosa iris	Rainbow	9	~	6.0/hr
Freshwater Snails				Relative Abundance
Elimia sp.	~	~		Rare

6.0 Discussion/Conclusions

The results indicate that the project area on Slow Creek supports a limited native freshwater mussel fauna. Based on the distance to known and/or current records for the target species, the degraded habitat in the stream, and the survey results, completion of this project will not affect the any of the target mussel species.

Biological Conclusion for Cumberland Bean: No Effect

Biological Conclusion for Little-wing Pearlymussel: No Effect

Biological Conclusion for Tan Riffleshell: No Effect

7.0 References

LeGrand, Jr., H.E., J.T. Finnegan, S.E. McRae, S.P. Hall. 2010. Natural Heritage Program List of the Rare Animal Species of North Carolina. N.C. Natural Heritage Program, Raleigh, NC.

North Carolina Department of Environmental Quality - Division of Water Resources. 2018. 2016 North Carolina 303(d) List. https://files.nc.gov/ncdeq/Water%Quality/Planning/TMDL/303d/2016/2016_NC_Category_5_303d_list.pdf (Accessed 08/14/18).

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North Carolina Natural Heritage Program (NCNHP). 2018. nheo-2018-04. Natural Heritage Element Occurrence polygon shapefile. April, 2018.

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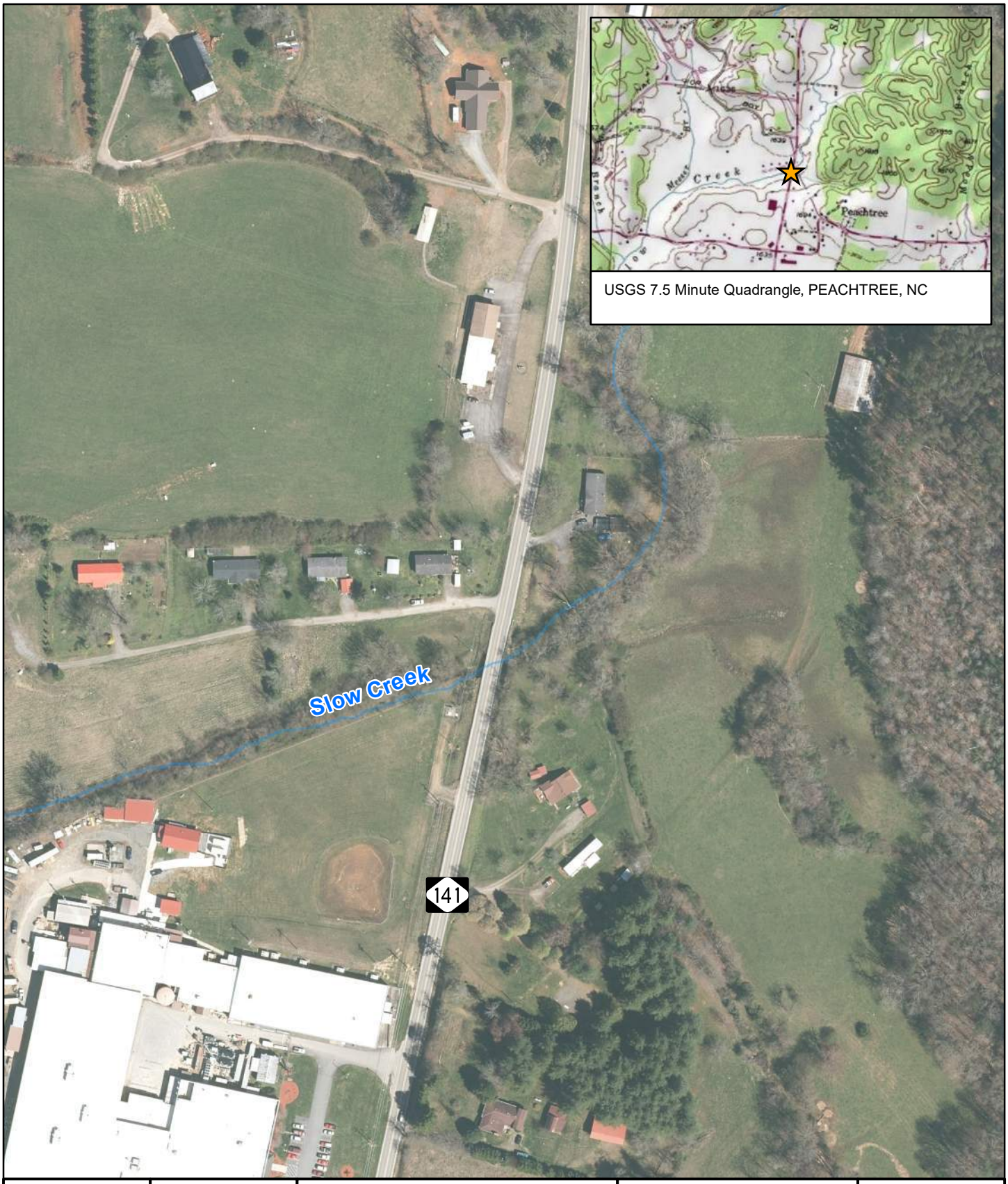
U.S. Fish and Wildlife Service (USFWS). 2011. Littlewing Pearlymussel (*Pegias fabula*) Species Profile. Raleigh Ecological Field Office web site. https://www.fws.gov/raleigh/species/es_littlewing_pearlymussel.htm. (Accessed 12/12/16).

U. S. Fish and Wildlife Service (USFWS). 1984. Recovery Plan [for the] Tan [Riffleshell] Mussel *Epioblasma (=Dysnomia) walker*. 59pp.

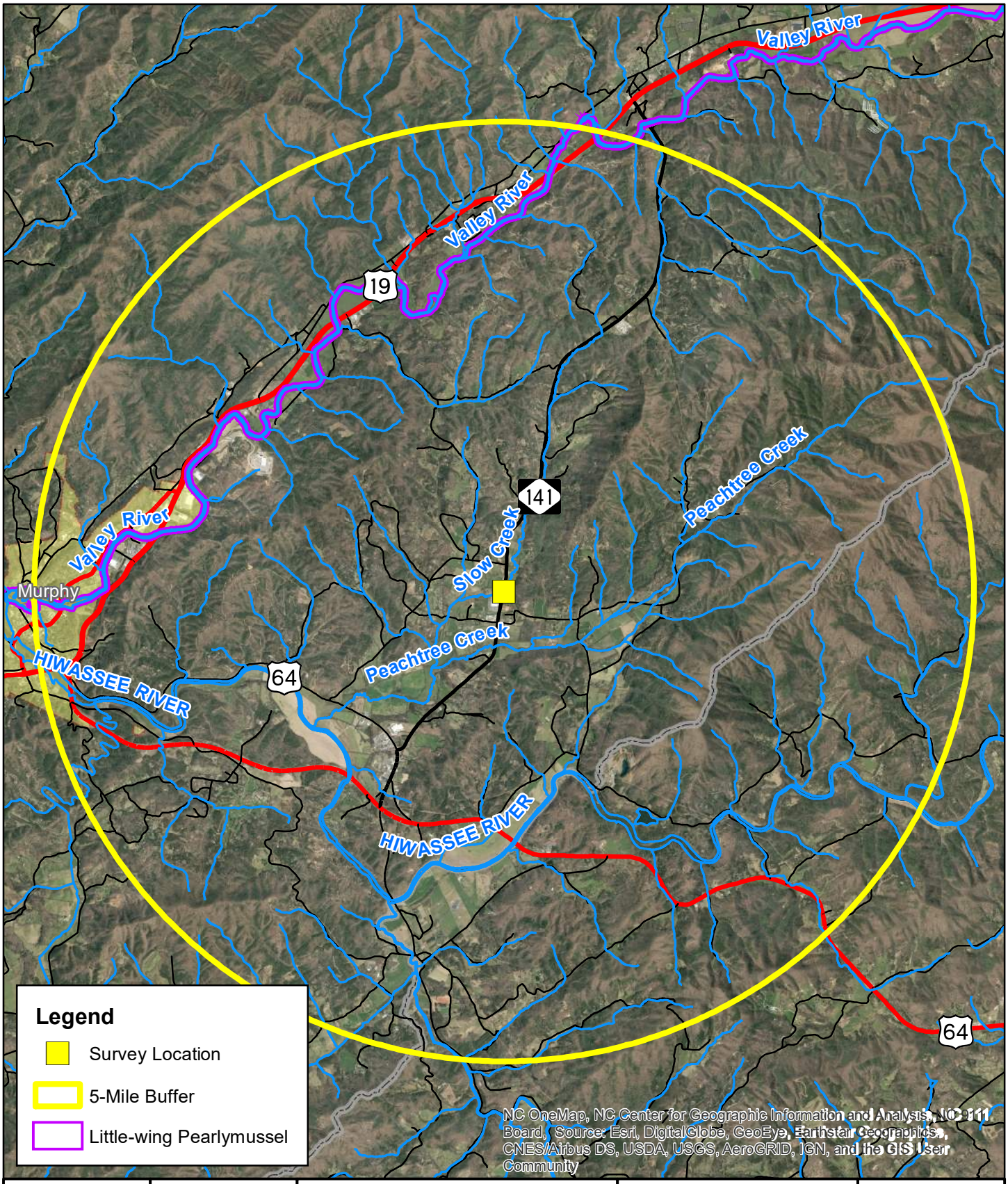
Appendix A

Figures

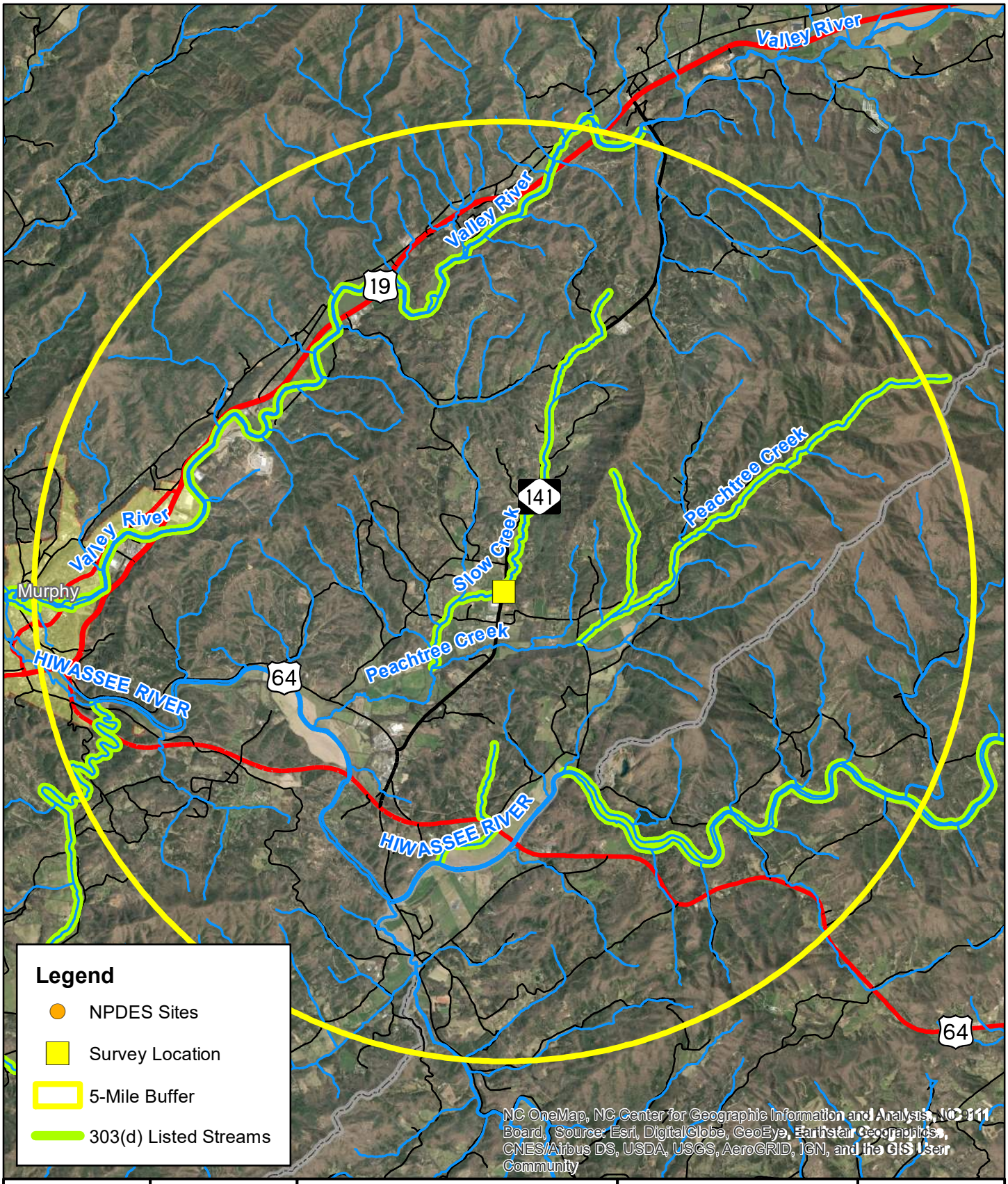


USGS 7.5 Minute Quadrangle, PEACHTREE, NC

Prepared By: RK&K	Prepared For: State of North Carolina Department of Transportation	**Freshwater Mussel Survey** BRIDGE # 2 ON NC141 OVER SLOW CREEK BR-0011 CHEROKEE COUNTY	Date: January 2019 Scale 0 200 Feet Job No. BR-0011 Drawn by: GSM Checked by: KNM	**Figure 1**



Prepared By: RK&K	Prepared For: State of North Carolina Department of Transportation	**NC NHP Element Occurrence** BRIDGE # 2 ON NC141 OVER SLOW CREEK BR-0011 CHEROKEE COUNTY	Date: January 2019 Scale 0 1 Miles Job No. BR-0011 Drawn by: GSM Checked by: KNM	**Figure 2**



Prepared By: RK&K	Prepared For: State of North Carolina Department of Transportation	**NPDES Dischargers and 303(d) Listed Streams** BRIDGE # 2 ON NC141 OVER SLOW CREEK BR-0011 CHEROKEE COUNTY	Date: January 2019 Scale 0 1 Miles Job No. BR-0011 Drawn by: GSM Checked by: KNM	**Figure 3**

Project Tracking No. (Internal Use)

17-12-0038

HISTORIC ARCHITECTURE AND LANDSCAPES NO SURVEY REQUIRED FORM

This form only pertains to Historic Architecture and Landscapes for this project. It is not valid for Archaeological Resources. You must consult separately with the Archaeology Group.

PROJECT INFORMATION

Project No:	BR-0011	***County***:	Cherokee
WBS No.:	67011.3.1	***Document Type***:	MCC
Fed. Aid No:	N/A	***Funding***:	☒ State ☐ Federal
Federal Permit(s):	☒ Yes ☐ No	***Permit Type(s)***:	USACE
Project Description: Replace Bridge No. 190002 on NC 141 over Slow Creek.			

SUMMARY OF HISTORIC ARCHICTECTURE AND LANDSCAPES REVIEW

Description of review activities, results, and conclusions:
Review of HPO quad maps, HPO GIS information, historic designations roster, and indexes was undertaken on January 4, 2018. Based on this review, there are no existing NR, SL, LD, DE, or SS properties in the Area of Potential Effects, which is 500'from the each end of the existing bridge and 75' from the centerline each way. A visual survey through aerial imagery and Google street view. There is one large industrial building south of the bridge and all other properties are one-story early to mid-20th century homes ranging from brick ranches to unremarkable frame structures and manufactured homes. All are not eligible for NR listing. Bridge No. 2 is not eligible for NR listing based on the NCDOT Historic Bridge Inventory. There are no National Register listed or eligible properties and no survey is required. If design plans change, additional review will be required.

Why the available information provides a reliable basis for reasonably predicting that there are no unidentified significant historic architectural or landscape resources in the project area:
HPO quad maps and GIS information recording NR, SL, LD, DE, and SS properties for the Cherokee County survey, Cherokee County GIS/Tax information, and Google Maps are considered valid for the purposes of determining the likelihood of historic resources being present. There are no National Register listed or eligible properties within the APE and no survey is required.

SUPPORT DOCUMENTATION

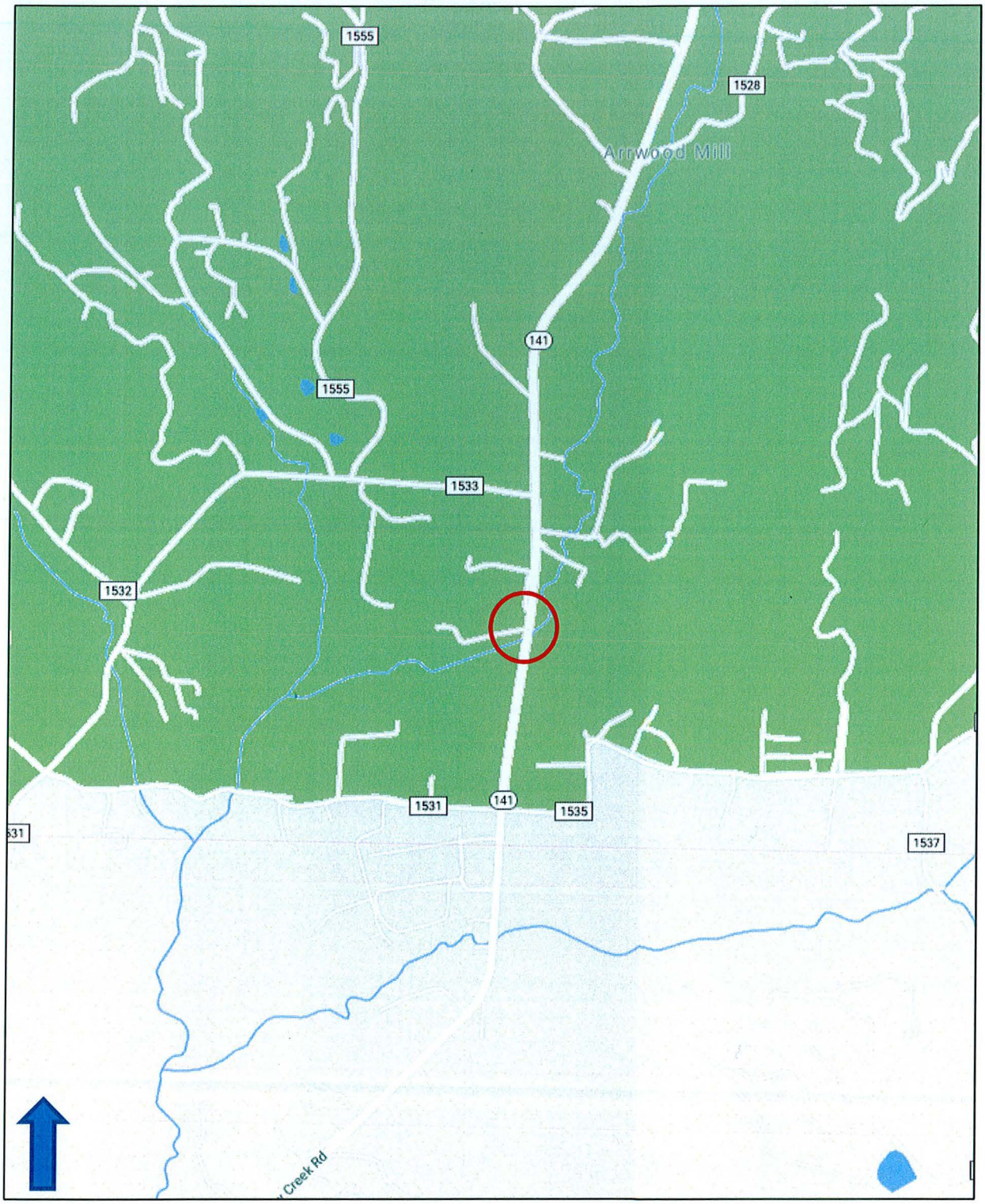
☑ Map(s) ☐ Previous Survey Info. ☐ Photos ☐ Correspondence ☐ Design Plans

FINDING BY NCDOT ARCHITECTURAL HISTORIAN

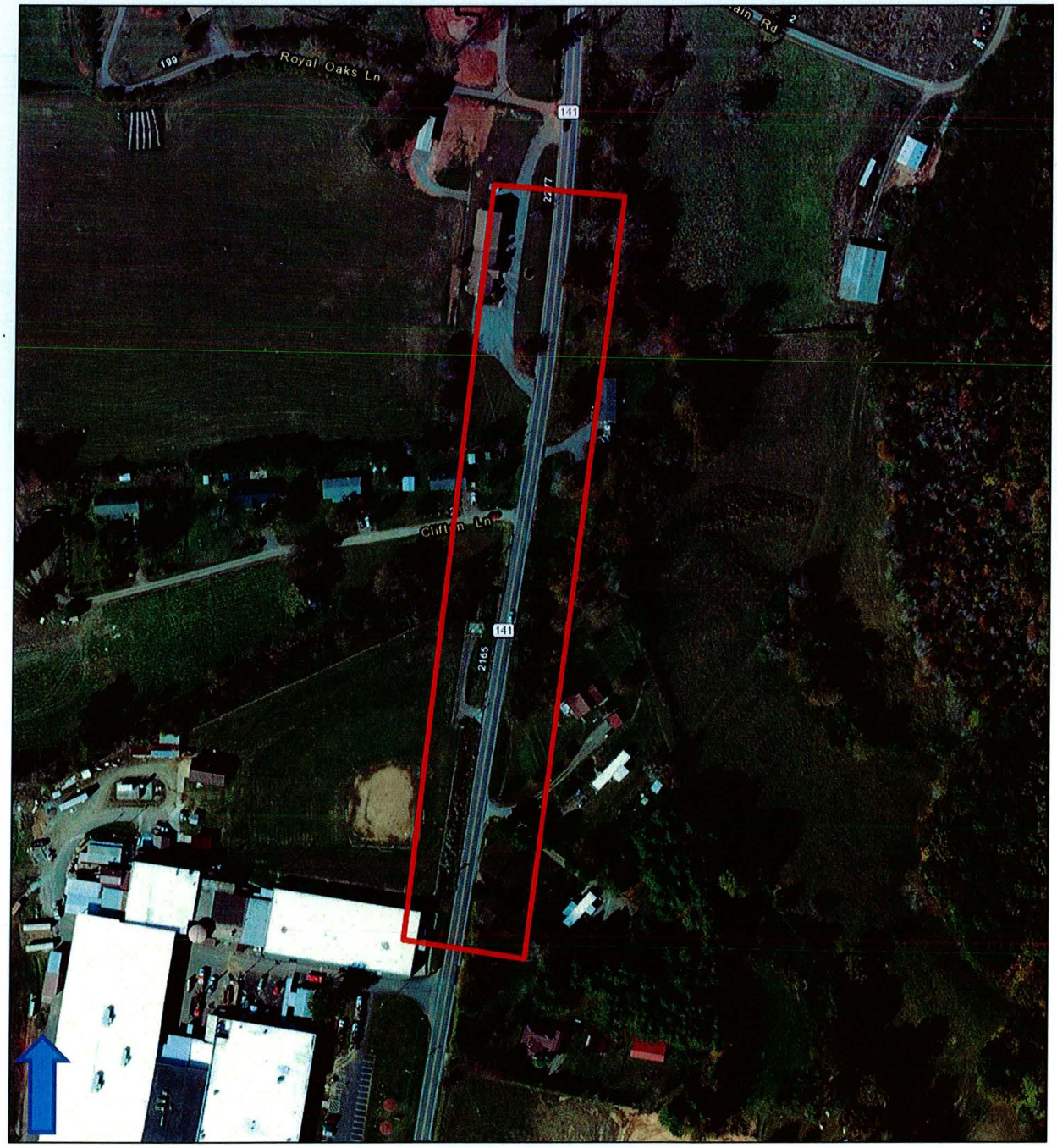
Historic Architecture and Landscapes -- NO SURVEY REQUIRED

Kate Husband 1/4/2018

NCDOT Architectural Historian Date



Project Location.



State Historic Preservation Office GIS.

View from north end of Bridge No. 2 looking north.
All properties are not eligible for NR listing.

View from the south end of Bridge No. 2 looking south.
All properties are not eligible for NR lisitng.

Project Tracking No.:

17-12-0038

NO NATIONAL REGISTER OF HISTORIC PLACES ELIGIBLE OR LISTED ARCHAEOLOGICAL SITES PRESENT FORM

This form only pertains to ARCHAEOLOGICAL RESOURCES for this project. It is not valid for Historic Architecture and Landscapes. You must consult separately with the Historic Architecture and Landscapes Group.

PROJECT INFORMATION

Project No:	**Bridge 2**	*County:*	**Cherokee**
WBS No:	**67001.1.1**	*Document:*	**Minimum Criteria**
F.A. No:	**n/a**	*Funding:*	☒ State ☐ Federal

Federal Permit Required? ☒ Yes ☐ No *Permit Type:* **NWP# 3 or 14**

Project Description:
The project calls for the replacement of Bridge No. 2 on NC 141 over Slow Creek in Cherokee County (Figure 1). The archaeological Area of Potential Effects (APE) for the project is defined as a 4,000-foot (1,219.20 m) long corridor running 2,000 feet (609.60 m) north and south along NC 141 from the center of Bridge No. 2. The corridor is approximately 500 feet (152.40 m) wide, extending 250 feet (76.20 m) on either side of the road from its present centerline.

SUMMARY OF ARCHAEOLOGICAL FINDINGS

The North Carolina Department of Transportation (NCDOT) Archaeology Group reviewed the subject project and determined:

☒ **There are no National Register listed ARCHAEOLOGICAL SITES within the project's area of potential effects. (Attach any notes or documents as needed)**
☐ No subsurface archaeological investigations were required for this project.
☐ Subsurface investigations did not reveal the presence of any archaeological resources.
☒ **Subsurface investigations did not reveal the presence of any archaeological resources considered eligible for the National Register.**
☒ **All identified archaeological sites located within the APE have been considered and all compliance for archaeological resources with Section 106 of the National Historic Preservation Act and GS 121-12(a) has been completed for this project.**

RECOMMENDATION

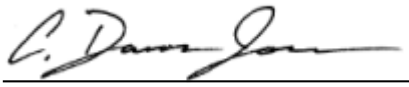
New South Associates, Inc. conducted an intensive archaeological survey and evaluation for proposed replacement of Bridge No. 2 in Cherokee County on April 30 through May 2, 2018, under the direction of James Stewart and the supervision of Shawn Patch (see Figures 1 and 2). During the course of the survey, one previously identified archaeological site (31CE96) was re-identified and evaluated, and five additional sites (31CE853–857) were newly recorded and evaluated. All sites are recommended not eligible for the National Register of Historic Places (NRHP) under all four NRHP criteria. However, site 31CE854 extends outside the APE. This portion of the site was not thoroughly investigated or evaluated. Those sections of site 31CE854 outside the APE are unassessed. Finally, previously undocumented bridge abutments associated with an earlier bridge over the Slow Creek were identified, but determined not to merit recordation as a cultural resource. Based on these results, no further archaeological investigations are recommended for this project as currently defined. I concur with this recommendation as the proposed project will not impact significant archaeological resources. In the event that the APE changes, however, additional survey and/or site evaluation may be necessary. This includes the uninvestigated portions of site 31CE854.

SUPPORT DOCUMENTATION

See attached: ☒ Map(s) ☐ Previous Survey Info ☒ Photos ☐ Correspondence

Other: **Cultural Review**

Signed:



6/22/18

C. Damon Jones **Date**

NCDOT ARCHAEOLOGIST

Brief description of review activities, results of review, and conclusions:

Bridge No. 2 is located east of Murphy and southwest of Andrews in Cherokee County, North Carolina. The project area is plotted in the northern half of the Peachtree USGS 7.5' topographic quadrangle (Figure 1). Bridge No. 2 and NC 141 run mostly north to south, while Slow Creek drains to the west and south into Peachtree Creek. These waterways are part of the Hiwassee drainage basin.

A site file search was conducted at the Office of State Archaeology (OSA) on January 11, 2018. One previously recorded site (31CE96) is recorded within the APE (see Figure 1; Figure 2), and eight sites (31CE32, 31CE56, 31CE57, 31CE58, 31CE2/59, 31CE97, 31CE116 and 31CE800) are within one mile of the APE. North Carolina Department of Transportation (NCDOT) archaeologists also examined topographic maps, USDA soil survey maps, aerial photographs (NC One Map), and historic maps (North Carolina maps website) for information on environmental and cultural variables that may have contributed to prehistoric or historic settlement within the project limits and to assess the level of ground disturbance. The Peachtree community, with a modern road layout, was illustrated on the 1906 USGS Nantahala map. The map also depicts a crossing at or near the current bridge. The 1921 soil map shows growth in structures and a railroad (Jurney et al 1921). Remnants of the railroad may be present in the southern end of the APE. The 1921 map also plots a structure to the southwest of the bridge. According to the North Carolina State Historic Preservation Office online database (HPOWEB 2018), the surveyed-only W.K. Johnson House is just outside of the southwest corner of the archaeological APE.

The preliminary background investigation determined that subsurface testing was needed within the APE for the proposed replacement of Bridge No. 2. The stream terraces and floodplain, the presence of well-drained soils, the proximity to Peachtree Creek and its tributaries, and the nearby early twentieth-century road/trail made this a highly probable area for precontact and historic settlement activity. Minimal ground disturbance on some properties also increases the likelihood for the presence of intact deposits. Previously recorded Site 31CE96 is within the APE and needed a National Register of Historic Places (NRHP) eligibility assessment. Given these considerations, NCDOT required additional work to locate, record, and evaluate archaeological sites that might be impacted by the proposed replacement.

New South Associates, Inc. (New South) conducted an intensive archaeological survey of the Bridge No. 2 APE between April 30 and May 2, 2018. The APE incorporates portions of the Slow Creek floodplain and a ridge rising along the northwestern side of the APE. The APE landscape is mostly open, consisting of a mix of residential, agricultural, pasture, and commercial/industrial development (Figure 3a–d). Commercial/industrial properties are concentrated in the southwest quadrant and consist of paved surfaces and existing structures (see Figure 2). Fieldwork efforts focused on visual inspection of the entire APE and the excavation of 15-meter interval shovel tests in areas with moderate to high potential for the presence of archaeological remains. Before fieldwork, LiDAR-based slope data, NRCS soil data, and aerial photography were used to identify these areas, and a grid of 593 potential shovel test locations was established. All test locations were visually inspected during the survey, and 441 survey tests were excavated. All shovel tests measured 30 centimeters in diameter and were excavated into sterile subsoil, water table, or impenetrable substrate. Excavated soils were screened through 0.25-inch hardware cloth. Of the excavated survey tests locations, 27 yielded artifacts,

and negative results were recorded for 414 survey tests. The 152 remaining tests were not excavated due to the presence of disturbances (e.g., ditches, buried utilities, graded side slopes, or pavement) or water.

Six archaeological sites (31CE96, 31CE853, 31CE854, 31CE855, 31CE856, and 31CE857) were identified and evaluated for National Register of Historic Places (NRHP) eligibility during fieldwork (see Figure 2). These sites are discussed below. The APE also contains elements of an earlier road alignment. This includes concrete bridge footings and several areas of raised roadbeds and roadcuts located on the eastern side of NC 141. An overlay of these features with LiDAR-derived hillshade data and the 1921 Cherokee County Soil Survey Map indicate that these roads were used in the early twentieth century.

31CE96

The previously recorded boundaries of Site 31CE96 encompass the NC 141 crossing of Slow Creek (see Figures 1 and 2). No artifact collection was made during the original site visit, but the site was thought to represent a camp or village occupation. Due to a lack of information, OSA considered the site unevaluated for the NRHP. New South's survey initially resulted in 15 positive shovel tests in the northwestern portion of the previously plotted site boundaries. Survey tests in the area to the northeast of the bridge did not locate any artifacts. The area located to the southwest of Bridge No. 2 was heavily disturbed by the construction of a baseball field, industrial plant, and pump station. No tests were excavated in this area. A separate historical site, 31CE853, was identified on the southeast corner of the bridge.

The site 31CE96 scatter was identified on a hay- and grass-covered ridge and narrow floodplain (Figure 4). Two pole barns are located on the ridge within the site boundary, and the Truett Baptist Association office building and parking lot form most of the eastern site boundary. Three houses located along Clifton Road also fall within the southern half of site 31CE96.

Fifty-eight 15-meter and 7.5-meter interval shovel tests were excavated during the survey and site evaluation (Figure 5). These tests encountered a 10- to 30-centimeter layer of reddish brown (10YR 4/4) silty clay plow zone overlying five to 20 centimeters of reddish yellow (7.5YR 6/6) clay subsoil (Figure 6). The observed profiles are indicative of erosion and agricultural disturbances. Twenty tests, including five delineation tests and the 15 survey tests, yielded artifacts between zero to 40 centimeters below ground surface. The positive test locations indicate the artifact deposit measures 91x167 meters.

Fifty-nine precontact and historic artifacts along with seven non-cultural stones were collected from Site 31CE96 (Table 1). Precontact lithics (n=43) were the most common artifact class recovered from this site. Most are temporally non-diagnostic quartz flake/flake fragments and Ridge and Valley chert flake/flake fragments. Thermally altered rock and one non-diagnostic biface were also collected. The site also produced four sand-tempered precontact ceramics. Three sherds were residual or eroded. Although the fourth sherd had a plain surface treatment and could not be identified to a precontact ceramic series, it does attest to a post-Archaic period precontact occupation at site 31CE96. Technicians collected 12 historic artifacts from the southeastern portion of the site as well, including eight twentieth-century clear container glass fragments, plastic, and a piece of unidentified metal. These artifacts likely resulted from modern disposal activity, given the proximity of the Truett Baptist Association parking lot and NC 9.

Table 1. Artifacts Collected from Site 31CE96 During the Current Survey

Shovel Test / Coordinates	Artifact Description	Count
44 (N380 E470)	Ridge and Valley Chert Flake-Fragment	2
48 (N440 E470)	Fine Sand Tempered Plain Body Sherd	1
50 (N470 E470)	Fine Sand Tempered Plain Body Sherd	1
	Quartz Flake-General	2
51 (N485 E470)	Sand Tempered Residual Sherd	1
	Quartz Flake-Fragment	3
	Quartz Flake-General	2
	Ridge and Valley Chert Flake-General	1
	Unmodified Stone	2
126 (N410 E485)	Quartz Angular Debris	2
127 (N425 E485)	Quartz Angular Debris	2
	Ridge and Valley Chert Flake-General	1
	Unmodified Stone	1
131 (N485 E485)	Quartz Angular Debris	1
	Quartz Biface	1
	Quartzite Flake-General	1
132 (N500 E485)	Quartz Angular Debris	1
	Quartz Flake-General	1
	Quartzite Flake-General	1
	Unmodified Stone	1
202 (N350 E500)	Quartz Flake-General	2
209 (N455 E500)	Fine Sand Tempered Eroded Decorated Body Sherd	1
	Quartz Flake-Fragment	1
	Quartz Flake-General	1
	Unmodified Stone	1
211 (N485 E500)	Quartz Flake-General	1
212 (N500 E500)	Quartz Flake-General	1
285 (N395 E515)	Plastic, Indeterminate	3
	Container Glass, Clear	6
286 (N410 E515)	Container Glass, Clear	2
	Iron/ Steel, Unidentified/ Corroded	1
	Ridge and Valley Chert Flake-Fragment	1
	Ridge and Valley Chert Flake-General	1
366 (N410 E530)	Quartz Flake-General	1
N410 E537	Ridge and Valley Chert Flake-General	1
N440 E455	Thermally Altered Rock	1
	Crystal Quartz Flake-General	1
	Quartz Flake-General	3
	Unmodified Stone	1
N440 E462	Quartz Flake-General	1
N507 E500	Quartz Flake-General	2
N522 E500	Quartz Flake-General	3
	Quartzite Flake-General	1
	Unmodified Stone	1
	Total	**66**

Site 31CE96 contains a post-Archaic period precontact and twentieth-century artifact scatter. Although the site may extend further west of the excavated test grid, local topography suggests that most of the deposit is located within the delineated site boundaries. Shovel testing results indicate artifact density is low throughout the site. Although thermally altered rock was identified during the survey, no concentrations were observed. Given the presence of a plow zone similar in color and texture to the underlying subsoil, the site is likely eroded, disturbed by agricultural activity, and has a low potential for the presence of intact subsurface features. The site cannot be associated with any broad historical patterns or notable people, and none of the collected artifacts are representative of masterful works or high design ideals. Thus, the site does not meet NRHP Criterion A, B, or C. Site 31CE96 lacks integrity and cannot provide any significant research contributions. The site is recommended not eligible under NRHP Criterion D. No further work is recommended for site 31CE96.

31CE853

Site 31CE853, a historic artifact scatter, was identified at the southeastern corner of Bridge No. 2 (see Figure 2). The artifact scatter is located 10 meters north of an occupied, twentieth-century house that rests on an area of floodplain approximately 1.5 meters below the current NC 141 road grade. During the survey, the residence was surrounded by a grassy lawn with minimal ground surface visibility. A spring flows along the eastern road edge. The presence of a fieldstone springhouse/wellhouse and a fieldstone pile indicate a pre-modern occupation of the site (Figure 7). The 1921 Cherokee County Soil Map also identifies a house at this approximate location, and later topographic maps indicate this location was occupied throughout the twentieth century. A barbed-wire fence and scrub vegetation separate the current residence from Slow Creek to the north and a cattle pasture to the east. The early twentieth-century road alignment abuts the eastern side of the fence.

Ten 15-meter-interval shovel tests were excavated during the survey and Site 31CE853 evaluation (Figure 8). These tests uncovered 30 centimeters of dark brown (10YR 3/3) silty clay overlying dark yellowish brown (10YR 4/4) clay subsoil (Figure 9). The lower depths of several tests nearest the spring and creek encountered the water table. Four tests yielded artifacts from depths of zero to 40 centimeters below ground surface and indicated the site measures 25x53 meters.

The artifact collection included ceramic tableware, cut nails, wire nails, clear container glass, and a metal fragment (Table 2). The nails and sponge-stamped whiteware indicate a mid-nineteenth- to twentieth-century date range (Miller 1996; Nelson 1968). Given the age of these artifacts and their recovery depth, the deposit likely resulted from household refuse disposal activity.

Table 2. Artifacts Collected from 31CN853 Shovel Tests.

Shovel Test / Coordinate	Artifact Description	Count
520 (N515 E485)	Container Glass, Amber	1
	Nail, Wire Common, Unmeasured	1
600 (N500 E500)	Container Glass, Clear	1
	Nail, Cut fragment	1
	Whiteware, Cut Sponge Stamped	1
601 (N515 E500)	Container Glass Burned	1
681 (N500 E515)	Brick, Unidentified	2

	Container Glass, Clear	4
	Iron/ Steel Unidentified/ Corroded	1
	Whiteware, Plain	1
	Total	**14**

Site 31CE853 contains several standing structures and a small, twentieth-century refuse scatter. The small number of artifacts collected from the site indicates that it does not contain a significant artifact deposit. As further archaeological investigation will not generate any unique research contributions, the site is recommended not eligible for the NRHP under Criterion D. Background research did not identify any broad historical patterns or locally significant people associated with the site. Site 31CE853 is recommended not eligible under Criterion A, B, or C, and no further work is recommended.

31CE854

Shovel testing located this precontact and historic artifact scatter in the southwestern corner of the APE (see Figure 2). This site occupies a 1.5-meter-high natural rise overlooking a grassy yard, hay field, and the NC 141 and Greenlawn Cemetery Road intersection (Figure 10). The two-story W.K. Johnson house stands just outside of the APE on the crest of the landform.

Eleven 15-meter and 7.5-meter shovel tests were excavated at site 31CE854 (Figure 11). These tests revealed 15-35 centimeters of dark brown (7.5YR 3/3) clayey loam overlying five to 10 centimeters of reddish yellow (5YR 6/6) clay (Figure 12). All artifacts were collected from the upper strata (0-35 cmbs). Although no tests were excavated to the west of the APE boundary, the house, topography, and shovel test locations indicate site 31CE854 measures approximately 65 meters in diameter.

There were 40 artifacts and five unmodified stones collected from six shovel tests at Site 31CE85 (Table 3). This assemblage includes one mostly complete quartzite triangular projectile point (Figure 13), which resembles the Middle Woodland period Garden Creek Triangular variety described by Keel (1987). There were also 39 historic artifacts collected from the site. Temporally diagnostic artifacts include cut nails, wire nails, amethyst glass, glass canning seals, whiteware, and plastic. The date ranges for these artifact types indicate a mid-nineteenth- to twentieth-century occupation date range (Miller et al. 2000; Nelson 1968). The 1921 Soil Survey Map of Cherokee County shows an occupied residence in the approximate location of the house. The current landowner, Mr. Douglas Sneed, also stated that his ancestor built the house in the early twentieth century. As the W.K. Johnson house stands close by, the historic artifact deposit likely resulted from household refuse disposal activity.

Table 3. Artifacts Collected from 31CE854 Shovel Tests

Shovel Test / Coordinate	Artifact Description	Count
1 (N500 E500)	Nail, Wire Common, Unmeasured	2
	Nail, Cut fragment	1
	Quartz Projectile Point/Knife	1
	Unmodified Stone	4
2 (N515 E500)	Plastic, Indeterminate	2
	Glass, Burned	1
	Glass, Unmeasured Flat	4

Shovel Test / Coordinate	Artifact Description	Count
	Unmodified Stone	1
81 (N500 E515)	Container Glass, Amethyst Color	1
N485 E500	Container Glass, Clear	2
	Whiteware, Plain	3
	Nail, Cut Common, Unmeasured	1
	Container Glass, Aqua	1
	Stoneware, Domestic, Albany Slipped	1
	Bolt and/or Bracket	2
N492 E500	Nail, Wire Common, Unmeasured	1
	Glass, Unmeasured Flat	3
	Container Glass, Clear	3
	Container Glass, Aqua	2
	Coal	1
	Stoneware, Domestic, Albany Slipped	1
	Container Glass, Light Green	1
	Container Glass, Cobalt Blue	1
	Nail, Wire Roofing 2 Penny, 0.0 to 1.0 in.	1
	Bolts	1
N500 E507	Nail, Cut Common, Unmeasured	1
	Canning Seal, Glass	1
	Container Glass, Aqua	1
	Total	**45**

The APE encompassed a relatively small portion of a Middle Woodland period and mid-nineteenth- to twentieth-century historic artifact scatter. Field survey guidelines prevented a complete delineation of Site 31CE854. The local landscape suggests the precontact artifact scatter may continue farther south and/or west along the landform. The setting and the house's location indicate the historic artifact scatter also extends outside of the APE. As the site was not fully delineated, the entire site cannot be evaluated for the NRHP. However, that portion of the site within the APE is unlikely to contribute to the site's NRHP eligibility, and is recommended not eligible under Criterion A, B, C, or D. New South recommends no further work on this portion of Site 31CE854. Those areas of the site outside the APE will remain unassessed and will required additional work if the APE is expanded.

31CE855

Shovel tests 790, 791, and 873 encountered Site 31CE855 on the east side of NC141, approximately 60 meters southeast of the Hendrix Road intersection (see Figure 2). This precontact artifact scatter was identified on a bluff overlooking the Slow Creek floodplain to the east. During the survey, this area was covered by a fallow agricultural field and the yard of an occupied residence (Figure 14).

Twenty-two 15-meter- and 7.5-meter-interval shovel tests were excavated during the site delineation (Figure 15). These tests uncovered 15-34 centimeters of brown (10YR 5/3) silty loam overlying pale brown (10YR 6/3) or yellowish brown (10YR 5/4) clay subsoil (Figure 16). Seven tests, including the three survey tests, yielded artifacts between 0-25 centimeters below ground surface and indicated the site measures 58 meters in diameter.

Table 4 presents an artifact summary for site 31CE855. There were seven tests that produced 12 precontact artifacts, including Ridge and Valley chert flakes (n=3), quartz flakes/flake fragments (n=3), and quartzite flake/flake fragments (n=2). Additionally, four unmodified stones were collected during the site evaluation. None of the artifacts in the collection are temporally diagnostic.

Table 4. Artifacts Collected from 31CE855

Shovel Test / Coordinate	Artifact Description	Count
790 (N485 E500)	Ridge and Valley Chert Flake-General	1
791 (N500 E500)	Ridge and Valley Chert Flake-General	1
	Unmodified Stone	3
873 (N515 E515)	Quartz Flake-Fragment	1
N477 E500	Quartzite Flake-Fragment	1
N485 E507.5	Quartz Flake-General	1
	Unmodified Stone	1
N507.5 E515	Quartzite Flake-General	1
N507 E530	Quartz Flake-General	1
	Ridge and Valley Chert Flake-General	1
	Total	**12**

Site 31CE855 contains a precontact artifact scatter of uncertain age. Soil profiles indicate local soils are deflated and affected by agricultural and construction activity. Shovel testing results indicate the artifact scatter is light-density and limited to the plow zone (0-34 cmbs). The soils and collected artifacts indicate the site has little integrity and is unlikely to contain intact features. The precontact artifact scatter also does not convey any associations with broad historical patterns or notable individuals, and site 31CE855 is recommended not eligible for the NRHP under Criterion A, B, C, or D. New South recommends no further work for the site.

31CE856

Site 31CE856 represents a single whiteware sherd collected from Shovel Test 618 (see Figure 2). This mid-nineteenth- to twentieth-century artifact was found in a floodplain cattle pasture located between NC 141 and Slow Creek (Miller 1991). This location is approximately 40 meters northeast of the NC 141 intersection with an unnamed private road (Figure 17).

A cruciform of four 7.5-meter interval shovel tests was excavated around the positive shovel test (Figure 18). These tests revealed 15-25 centimeters of dark yellowish brown (10YR 4/6) silty loam overlying light yellowish brown (10YR 6/4) sandy clay subsoil (Figure 19). Because none of the delineation tests produced artifacts, a 15-meter site boundary was established for the site.

Site 31CE856 contains a very light density nineteenth- or twentieth-century artifact scatter. Close-interval delineation did not locate additional artifacts. Their absence indicates the artifact deposit was ephemeral, has limited information potential, and lacks significance. Observed soil profiles documented agricultural disturbances in this area. Given the effects of agricultural activity and on-going cattle grazing, the artifact deposit has no integrity. Site 31CE856 is unlikely to provide any significant contributions to research and cannot be associated with any

significant events or notable people. New South recommends the site as not eligible for the NRHP under Criteria A, B, C, or D. No further work is recommended for this site.

31CE857

Surface inspection of a fallow agricultural field identified an Albany/Bristol slipped stoneware fragment at Shovel Test 640 near the northeastern end of the survey area (see Figure 2; Figure 20). Like 31CE856, this sherd was collected from a bluff overlooking the Slow Creek floodplain to the east. The excavation of Shovel Test 640 did not produce any additional artifacts.

Four negative 7.5-meter interval shovel tests were dug in a cruciform pattern around Shovel Test 640 (Figure 21). These testing results indicate the site measures 11 meters in diameter. Shovel tests uncovered 15 centimeters of dark reddish brown (5YR 3/4) silty clayey loam overlying reddish yellow (7.5YR 6/6) clay subsoil (Figure 22). Soil profiles appeared to be deflated and disturbed by agricultural activity.

The late nineteenth- to early twentieth-century surface find lacks context (Greer 1999). The absence of any subsurface artifact deposit and the observed soil conditions indicate site 31CE857 is disturbed with no potential to yield important information. The artifact cannot be associated with any broad historical patterns or notable people. New South recommends this site not eligible under NRHP Criteria A, B, C and D. No further work is recommended.

Summary of Findings

New South excavated 467 survey and delineation shovel tests in the Bridge 2 APE. One previously recorded site, 31CE96, and five new archaeological sites, 31CE853-31CE857, were identified and evaluated for NRHP eligibility. Five sites (31CE96, 31CE854, 31CE855, 31CE856, and 31CE857) are recommended not eligible for the NRHP. The NRHP eligibility of site 31CE853 is also not eligible within the APE; but, the portion of the site which was not intensively investigation outside the APE will remain unevaluated. No further archaeological work is recommended for the non-eligible sites or the portion of 31CE853 located within the APE.

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James Stewart
Archaeologist

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1906 Nantahala, North Carolina-Tennessee, 30-minute quadrangle map. Reprinted 1924.

1976 Peachtree, North Carolina, 7.5-minute quadrangle map.

Figure List

Figure 1. Bridge 2 APE in Cherokee County

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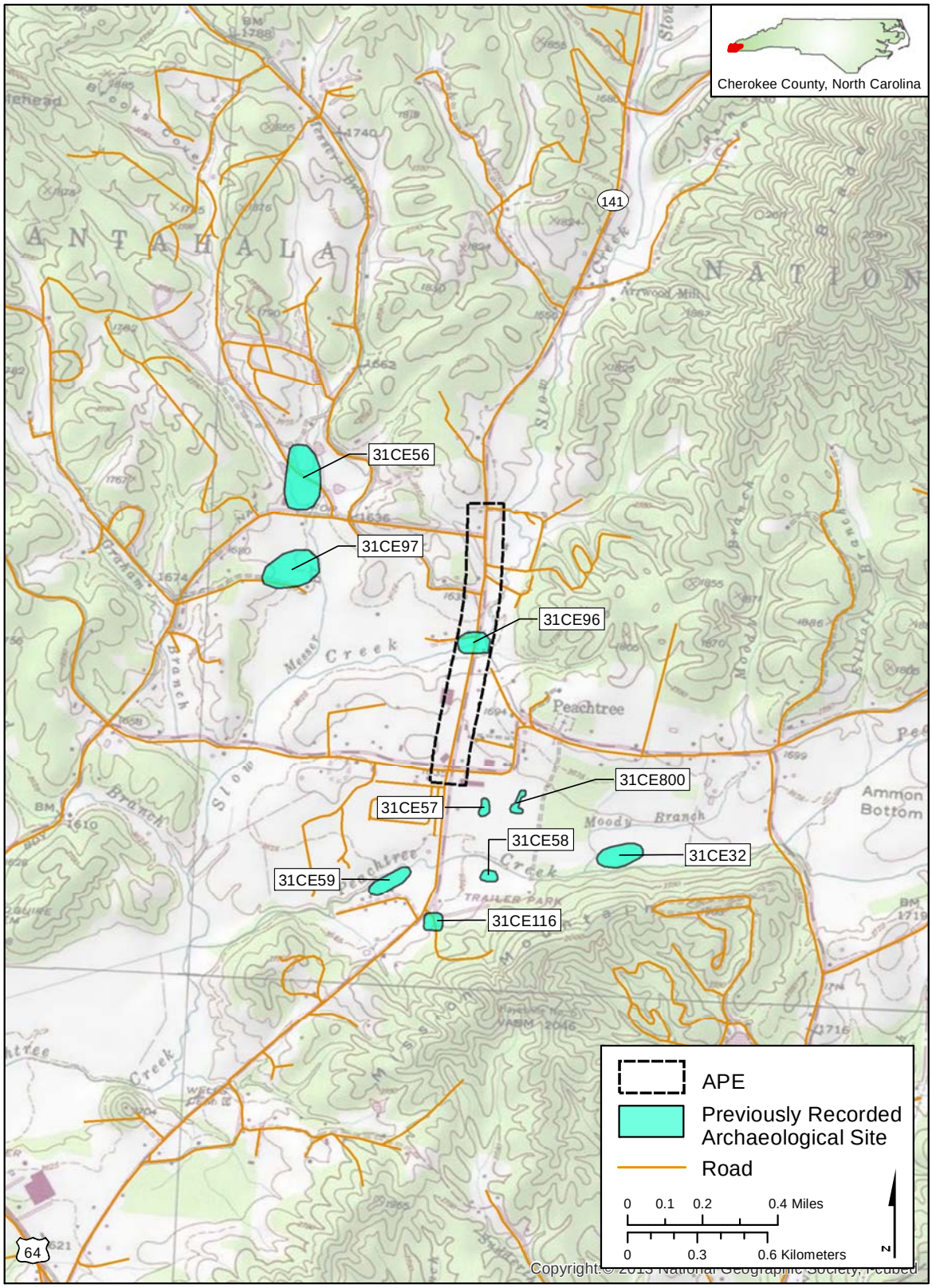
Figure 19. Site 31CE856 Shovel Test Profile

Figure 20. Site 31CE857 Setting

Figure 21. Map of Site 31CE857

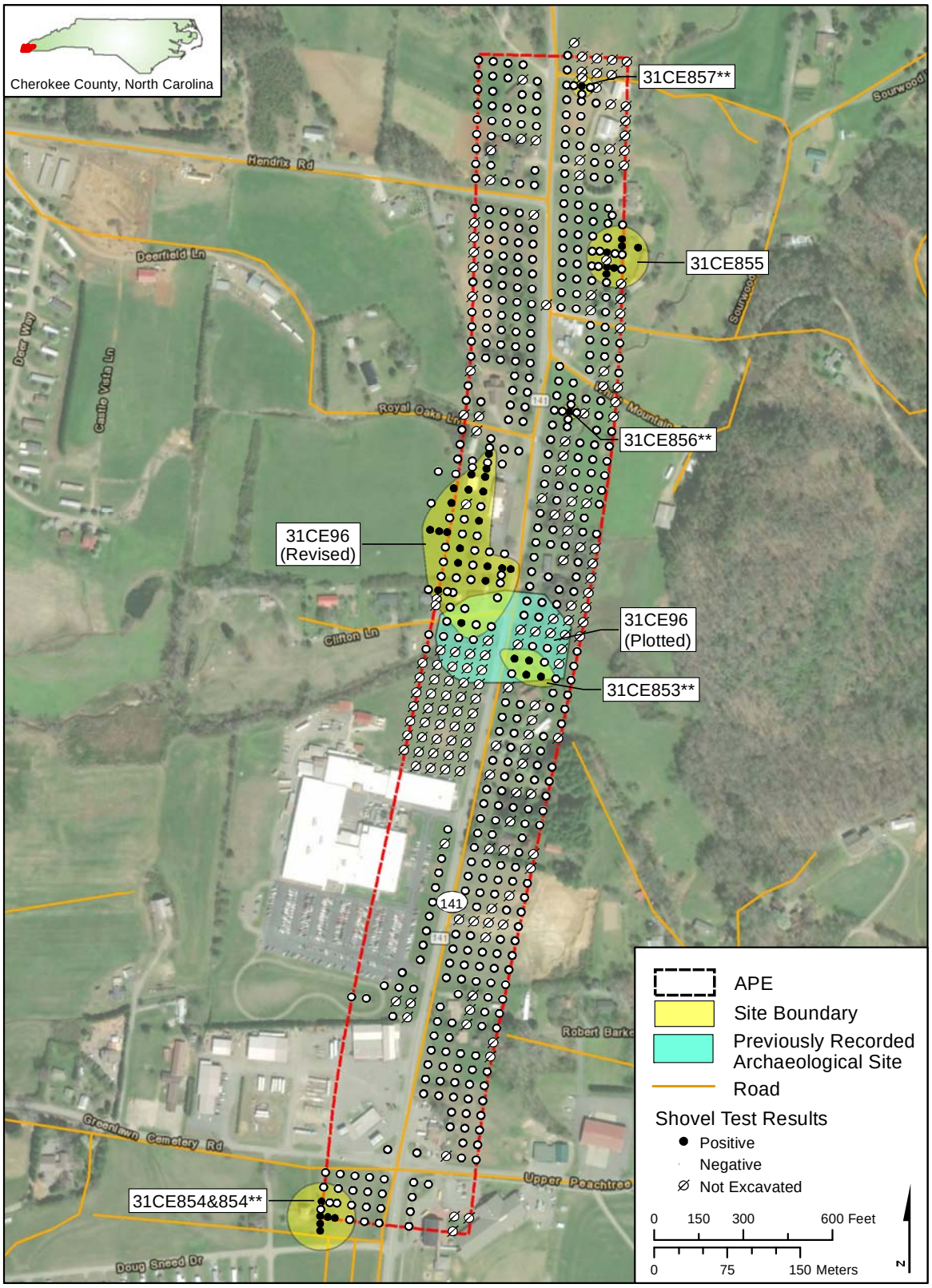
Figure 22. Site 31CE857 Shovel Test Profile

Figure 1. Bridge 2 APE in Cherokee County



Source: USGS Topographic Quadrangle Map, Peachtree, NC (1976)

Figure 2. Pre-Plotted Shovel Test Locations



Source: ESRI World Imagery

Figure 3. Current Conditions in the Bridge 2 APE

A) Cattle Pasture, Facing Southeast

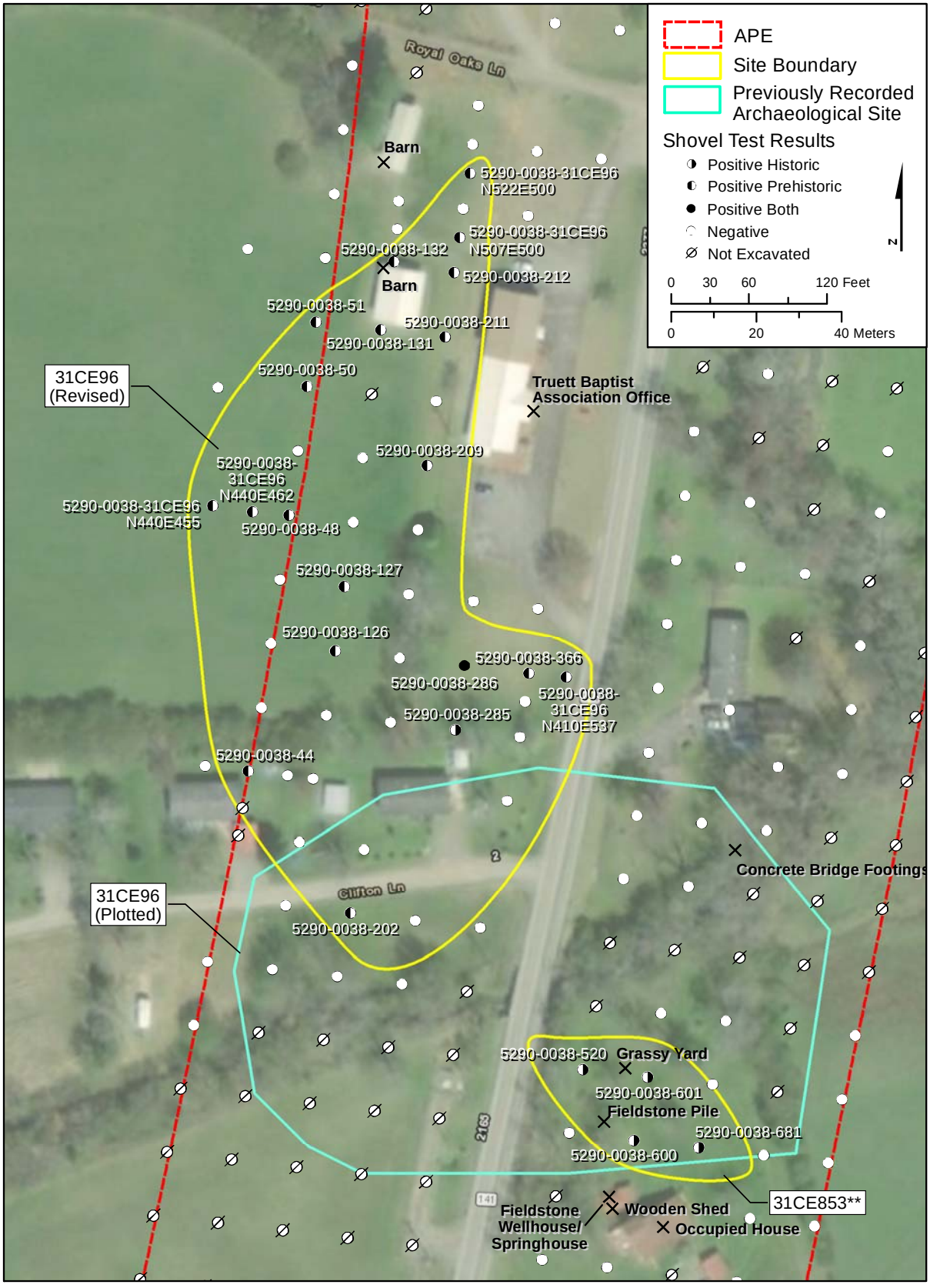
B) Truett Baptist Association Office, Facing West

C) Borrow Pit, Facing East

D) NC 141 and Greenlawn Cemetery Road Intersection, the W.K. Johnson House in the Background

Figure 4. Site 31CE96 Setting

Figure 5. Map of Site 31CE96



Source: ESRI World Imagery (2018)

Figure 6. Site 31CE96 Shovel Test Profile

Figure 7. Site 31CE853 Setting

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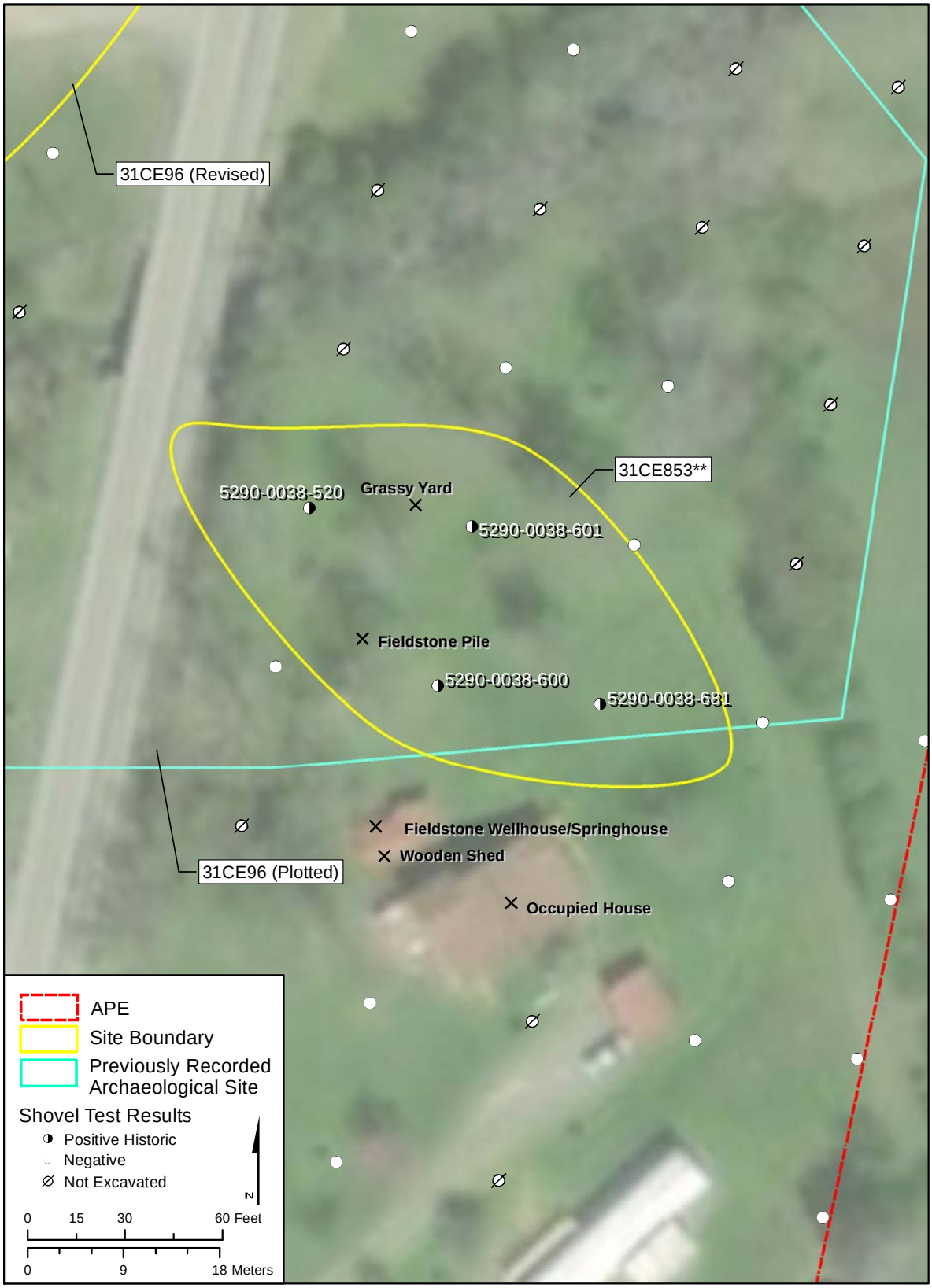

Source: ESRI World Imagery (2018)

Figure 9. Site 31CE853 Shovel Test Profile

Figure 10. Site 31CE854 Setting

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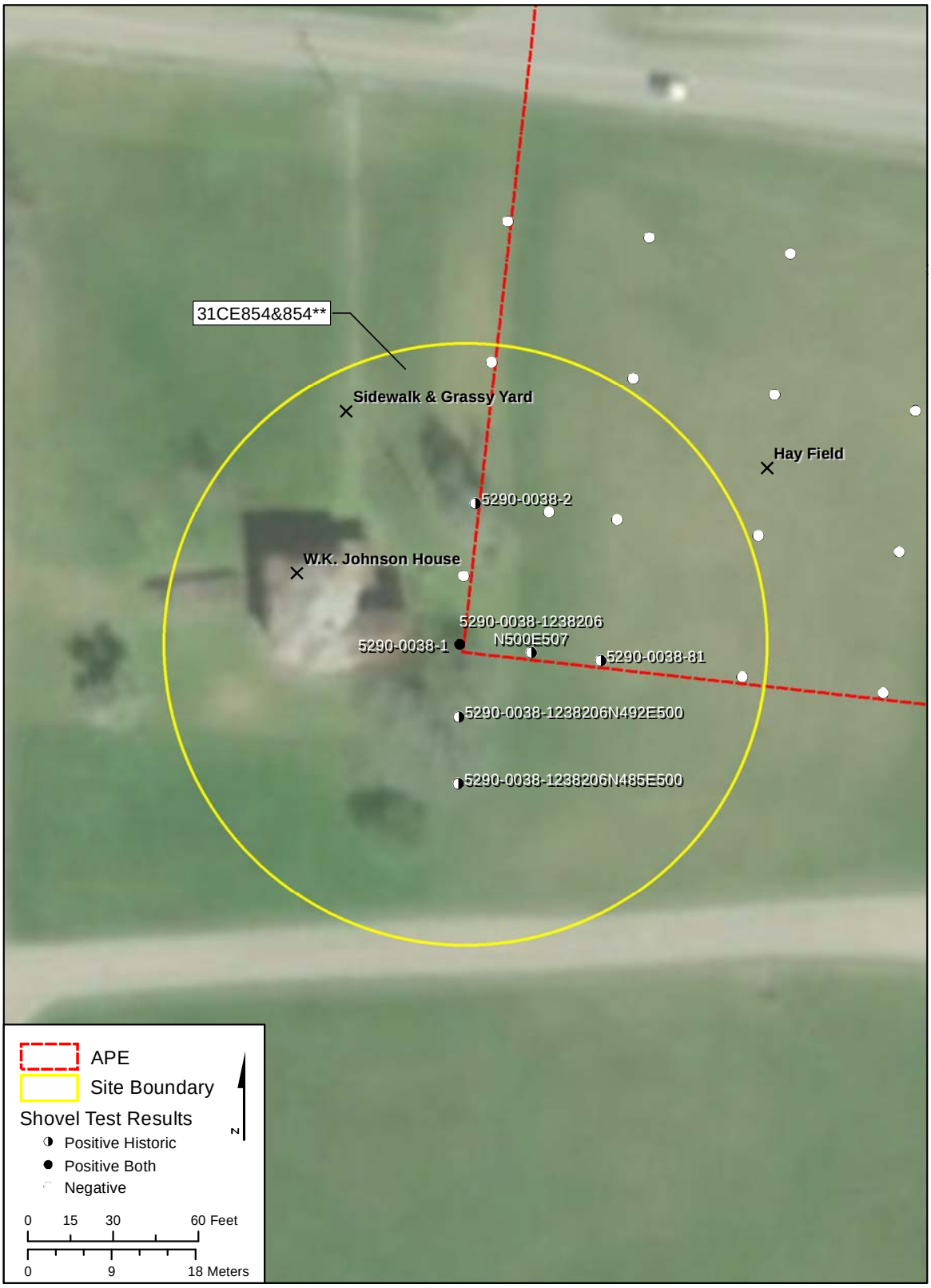

Source: ESRI World Imagery (2018)

Figure 12. Site 31CE854 Shovel Test Profile

Figure 13. Garden Creek Triangular Projectile Point Fragment

Figure 14. Site 31CE855 Setting

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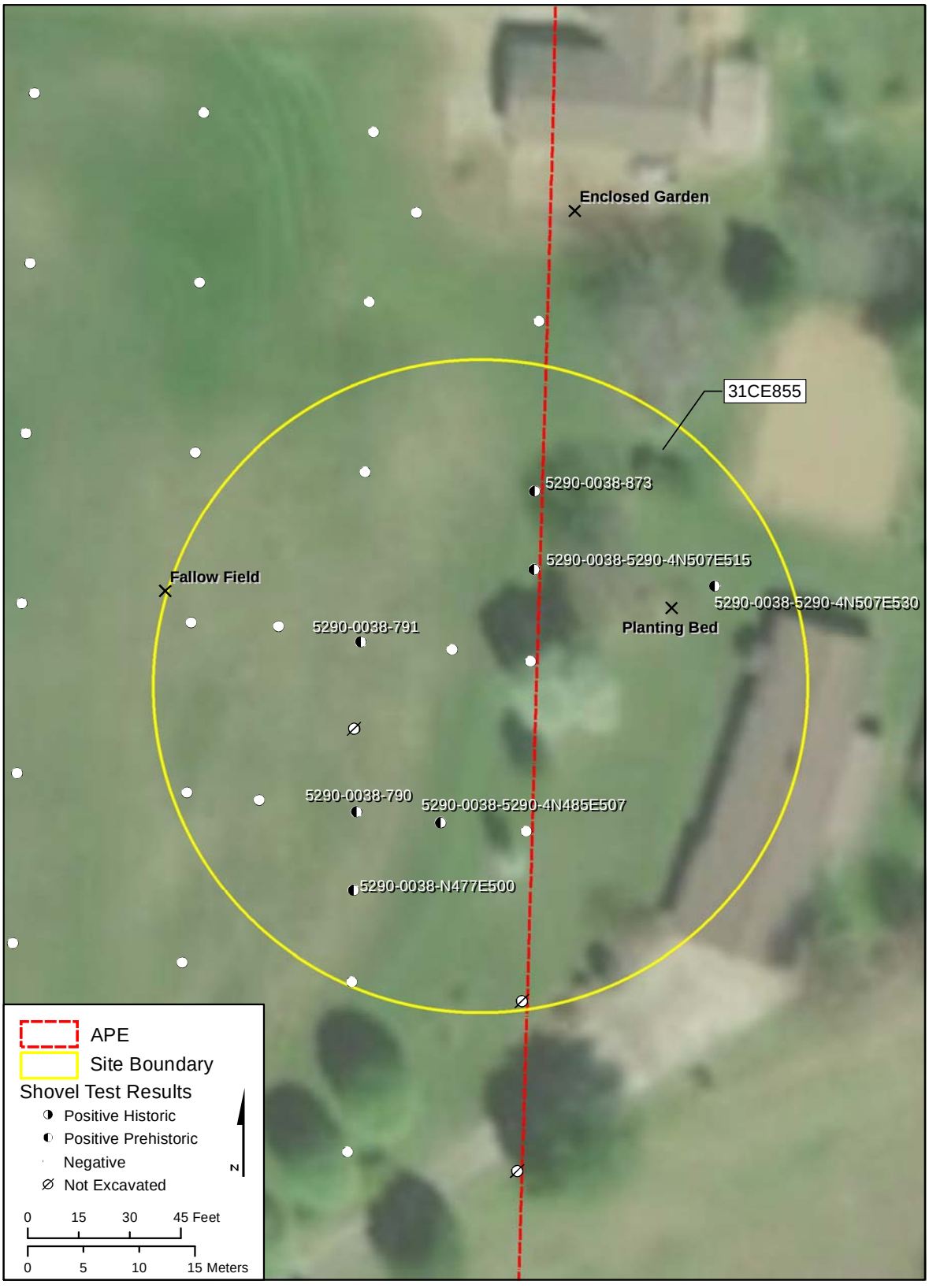


Source: ESRI World Imagery (2018)

Figure 16. Site 31CE855 Shovel Test Profile

Figure 17. Site 31CE856 Setting

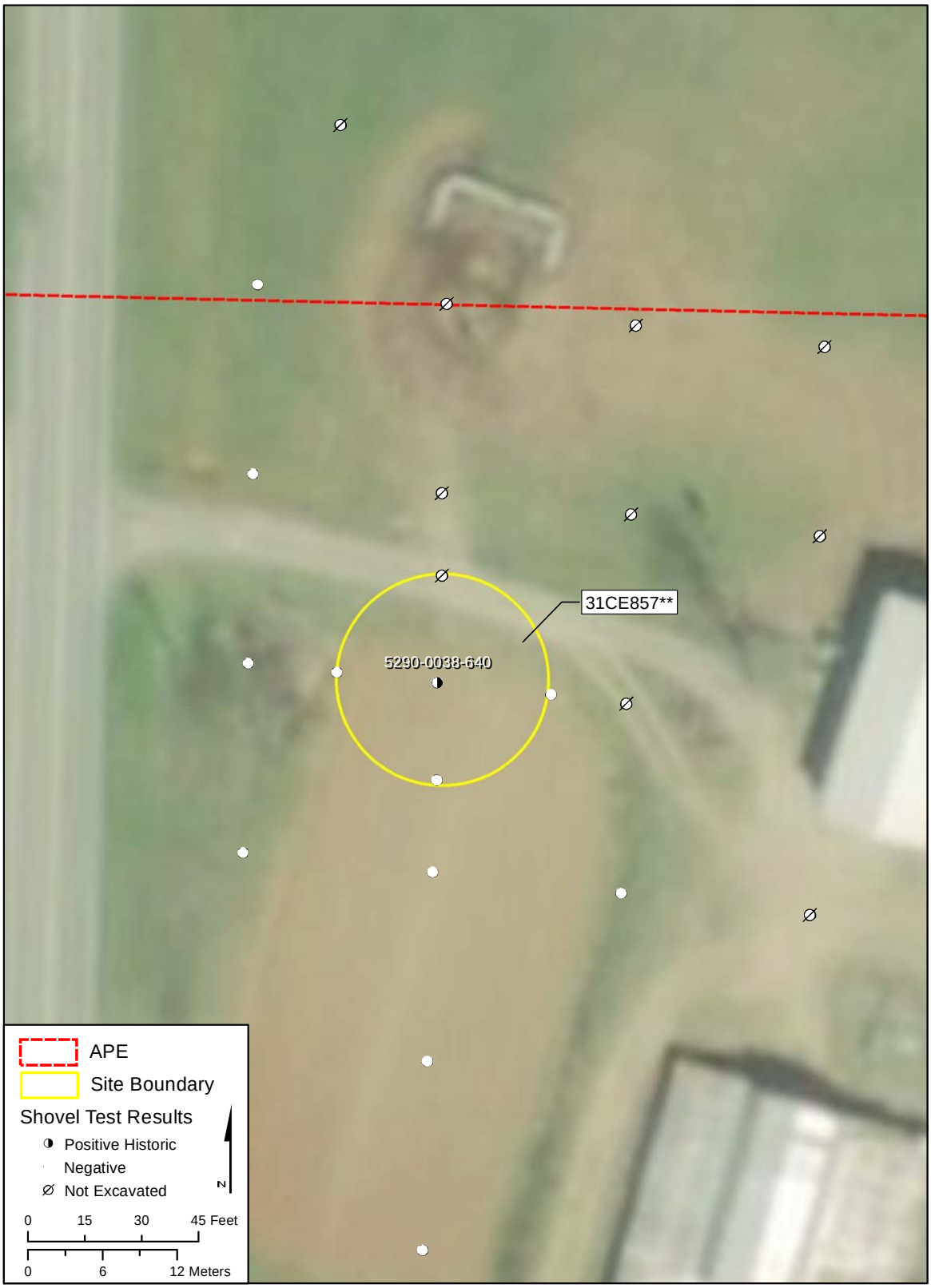
Figure 18. Map of Site 31CE856

Source: ESRI World Imagery (2018)

Figure 19. Site 31CE856 Shovel Test Profile

Figure 20. Site 31CE857 Setting

Figure 21. Map of Site 31CE857



Source: ESRI World Imagery (2018)

Figure 22. Site 31CE857 Shovel Test Profile

Appendix A: Shovel Test Log

STP ID	Results	Strat	Description
1	Positive Both	I	0-20 7.5YR4/2 Brown Silty Clay Loam
		II	20-30 5YR4/3 Reddish Brown Clay
2	Positive Historic	I	0-25 7.5YR5/8 Strong Brown Clay Loam
		II	25-30 5YR5/4 Reddish Brown Clay
3	Negative	I	0-29 10YR3/3 Dark Brown Silty Loam
		II	29-38 7.5YR5/8 Strong Brown Clay Silt
4	Negative	I	0-35 10YR3/3 Dark Brown Silt
		II	35-40 7.5YR5/8 Strong Brown Clay Silt
16	Negative	I	0-3 10R5/8 Red Clay Loam
		II	3-12 10R5/8 Red Clay
33	Not Excavated	-	Disturbed Graded Baseball Field.
34	Not Excavated	-	Disturbed Graded Baseball Field.
35	Not Excavated	-	Disturbed Graded Baseball Field.
36	Not Excavated	-	Disturbed Graded Baseball Field.
37	Not Excavated	-	Disturbed Graded Baseball Field.
38	Not Excavated	-	Disturbed Graded Baseball Field.
39	Not Excavated	-	Disturbed Graded Baseball Field.
40	Negative	I	0-60 7.5YR4/2 Brown Silty Clay
		II	60-70 10YR5/4 Yellowish Brown Silty Clay
41	Negative	I	0-40 7.5YR4/2 Brown Silty Clay
		II	40-60 10YR4/3 Brown Silty Clay
44	Positive Prehistoric	I	0-40 10YR3/2 Very Dark Grayish Brown Silty Clay
		II	40-45 5YR6/6 Reddish Yellow Clay
45	Negative	I	0-30 5YR5/8 Yellowish Red Silty Clay
		II	30-40 5YR6/6 Reddish Yellow Clay
46	Negative	I	0-25 10YR5/2 Grayish Brown Clay Loam
		II	25-35 10YR5/6 Yellowish Brown Clay
47	Negative	I	0-30 7.5YR4/2 Brown Silty Clay
		II	30-40 5YR4/3 Reddish Brown Clay
48	Positive Prehistoric	I	0-35 5YR5/4 Reddish Brown Silty Clay
		II	35-40 5YR6/3 Light Reddish Brown Silty Clay
49	Negative	I	0-25 10YR5/2 Grayish Brown Clay Loam
		II	25-40 7.5YR4/3 Brown Clay
50	Positive Prehistoric	I	0-34 7.5YR6/6 Reddish Yellow Silty Clay Loam
		II	34-42 7.5YR6/6 Reddish Yellow Clay
51	Positive Prehistoric	I	0-30 5YR3/2 Dark Reddish Brown Silty Clay
		II	30-40 5YR4/3 Reddish Brown Clay
52	Negative	I	0-15 7.5YR4/2 Brown Clay Loam
		II	15-30 2.5YR4/3 Reddish Brown Clay
53	Negative	I	0-10 5YR6/4 Light Reddish Brown Clay
54	Negative	I	0-2 10YR5/2 Grayish Brown Clay Loam
		II	2-15 5YR5/3 Reddish Brown Clay
55	Negative	I	0-5 2.5YR6/3 Light Reddish Brown Clay
56	Not Excavated	-	Paved
57	Negative	I	0-10 2.5YR2.5/3 Dark Reddish Brown Clay Loam
		II	10-20 2.5YR4/6 Red Clay
58	Negative	I	0-5 2.5YR2.5/3 Dark Reddish Brown Clay Loam
		II	5-15 2.5YR4/6 Red Clay
59	Not Excavated	-	Heavily Disturbed, By Conex Hole
60	Negative	I	0-12 10R5/8 Red Clay Loam

STP ID	Results	Strat	Description
		II	12-17 10R5/8 Red Clay
61	Negative	I	0-15 2.5YR6/4 Light Reddish Brown Clay
62	Negative	I	0-15 2.5YR5/4 Reddish Brown Clay
63	Negative	I	0-15 5YR3/2 Dark Reddish Brown Silty Clay
64	Not Excavated	-	>15 degree slope
65	Negative	I	0-5 5YR4/3 Reddish Brown Silty Clay
66	Not Excavated	-	>15 degree slope
67	Not Excavated	-	>15 degree slope
68	Not Excavated	-	>15 degree slope
69	Not Excavated	-	>15 degree slope
70	Negative	I	0-10 2.5YR5/6 Red Clay
72	Negative	I	0-10 10R5/8 Red Clay
73	Negative	I	0-3 7.5YR3/3 Dark Brown Silty Clay Loam
		II	3-10 10R5/8 Red Clay
74	Negative	I	0-7 10R5/8 Red Clay
75	Negative	I	0-8 10R5/8 Red Clay
76	Negative	I	0-15 10R5/8 Red Silty Clay Loam
		II	15-21 10R5/8 Red Clay
77	Negative	I	0-5 10R5/8 Red Silty Clay Loam
		II	5-13 10R5/8 Red Clay
78	Negative	I	0-10 10R5/8 Red Clay
79	Negative	I	0-12 10R5/8 Red Clay
80	Negative	I	0-27 10R5/8 Red Clay Loam
		II	27-34 10R5/8 Red Clay
81	Positive Historic	I	0-19 7.5YR3/3 Dark Brown Clay Loam
		II	19-28 7.5YR6/6 Reddish Yellow Clay
82	Negative	I	0-30 5YR3/4 Dark Reddish Brown Silty Clay
83	Negative	I	0-30 2.5Y5/3 Light Olive Brown Silty Clay Loam
		II	30-40 2.5Y6/4 Light Yellowish Brown Clay
84	Negative	I	0-31 2.5Y5/3 Light Olive Brown Silty Clay Loam
		II	31-39 2.5Y6/4 Light Yellowish Brown Clay
96	Negative	I	0-15 7.5YR6/6 Reddish Yellow Clay Loam
		II	15-21 10R5/8 Red Clay
112	Not Excavated	-	Slope. Disturbed Graded Baseball Field.
113	Not Excavated	-	Slope. Disturbed Graded Baseball Field.
114	Not Excavated	-	Disturbed Graded Baseball Field.
115	Not Excavated	-	Disturbed Graded Baseball Field.
116	Not Excavated	-	Disturbed Graded Baseball Field.
117	Not Excavated	-	Disturbed Graded Baseball Field.
118	Not Excavated	-	Disturbed Graded Baseball Field.
119	Not Excavated	-	Disturbed Graded Baseball Field.
120	Not Excavated	-	(blank)
121	Negative	I	0-40 10YR4/2 Dark Grayish Brown Silty Clay
		II	40-60 10YR6/1 Gray Silty Clay
122	Negative	I	0-35 5YR5/4 Reddish Brown Silty Clay
		II	35-45 10YR6/4 Light Yellowish Brown Clay
123	Negative	I	0-35 5YR4/4 Reddish Brown Silty Clay
		II	35-45 5YR6/6 Reddish Yellow Silty Clay
124	Negative	I	0-40 5YR4/4 Reddish Brown Silty Clay
		II	40-45 5YR6/6 Reddish Yellow Silty Clay
125	Negative	I	0-10 10YR5/2 Grayish Brown Clay Loam
		II	10-30 7.5YR4/2 Brown Clay
		III	30-50 7.5YR5/2 Brown Silty Clay

STP ID	Results	Strat	Description
126	Positive Prehistoric	I	0-35 5YR5/3 Reddish Brown Silty Clay
		II	35-45 5YR6/6 Reddish Yellow Clay
127	Positive Prehistoric	I	0-10 10YR5/2 Grayish Brown
		II	10-30 10YR5/4 Yellowish Brown Clay
128	Negative	I	0-15 10YR5/2 Grayish Brown Clay Loam
		II	15-25 10YR5/4 Yellowish Brown Clay
129	Negative	I	0-15 10YR5/2 Grayish Brown Clay Loam
		II	15-30 7.5YR4/2 Brown Clay
130	Not Excavated	-	(blank)
131	Positive Prehistoric	I	0-20 7.5YR4/2 Brown Clay Loam
		II	20-30 10YR5/4 Yellowish Brown Clay
132	Positive Prehistoric	I	0-15 7.5YR4/2 Brown Clay Loam
		II	15-30 5YR5/3 Reddish Brown Clay
133	Negative	I	0-5 5Y7/2 Light Gray Sand
135	Not Excavated	-	Paved
136	Not Excavated	-	>15 degree slope
137	Negative	I	0-5 2.5YR5/3 Reddish Brown Clay Loam
		II	5-15 2.5YR4/6 Red Clay
140	Negative	I	0-15 2.5YR4/3 Reddish Brown Clay
141	Negative	I	0-5 5YR5/3 Reddish Brown Clay Loam
		II	5-15 2.5YR4/6 Red Clay
142	Negative	I	0-10 5YR4/3 Reddish Brown Clay Loam
		II	10-25 5YR4/3 Reddish Brown Clay
143	Negative	I	0-10 2.5YR2.5/3 Dark Reddish Brown Clay
144	Negative	I	0-10 2.5YR4/4 Reddish Brown Clay
145	Negative	I	0-15 5YR4/3 Reddish Brown Clay Loam
		II	15-25 7.5YR4/2 Brown Clay
146	Negative	I	0-15 5YR5/3 Reddish Brown Clay Loam
		II	15-25 7.5YR4/2 Brown Clay
147	Negative	I	0-5 5YR4/3 Reddish Brown
		II	5-20 2.5YR5/6 Red Clay
148	Negative	I	0-20 5YR4/3 Reddish Brown Clay Loam
		II	20-30 2.5YR5/6 Red Clay
149	Negative	I	0-10 5YR4/3 Reddish Brown
		II	10-20 7.5YR4/2 Brown
150	Negative	I	0-15 5YR5/4 Reddish Brown Clay Loam
		II	15-30 7.5YR5/6 Strong Brown Clay
152	Not Excavated	-	Sub On Surface. In Ditch Adjacent To Road
153	Negative	I	0-8 10R5/8 Red Clay
154	Not Excavated	-	Graded Disturbed Area
155	Negative	I	0-10 10R5/8 Red Clay
156	Negative	I	0-15 5YR5/4 Reddish Brown Silty Clay Loam
		II	15-24 2.5YR3/6 Dark Red Clay
157	Negative	I	0-10 10R5/8 Red Clay
158	Negative	I	0-10 2.5YR3/6 Dark Red Clay
159	Negative	I	0-13 10R5/8 Red Clay Loam
		II	13-18 10R5/8 Red Clay
160	Negative	I	0-12 5YR3/4 Dark Reddish Brown Silty Clay Loam
		II	12-20 2.5YR3/6 Dark Red Clay
161	Negative	I	0-20 10YR3/3 Dark Brown Silty Loam
		II	20-28 10YR6/8 Brownish Yellow Clay Silt
162	Negative	I	0-20 5YR3/4 Dark Reddish Brown Silty Clay
		II	20-35 2.5YR5/3 Reddish Brown Clay

STP ID	Results	Strat	Description
163	Negative	I	0-30 7.5YR4/2 Brown Silty Clay Loam
		II	30-40 10YR5/4 Yellowish Brown Silty Clay
164	Negative	I	0-30 7.5YR4/2 Brown Silty Clay Loam
		II	30-40 10YR5/4 Yellowish Brown Clay
177	Negative	I	0-4 7.5YR6/6 Reddish Yellow Clay Loam
		II	4-13 10R5/8 Red Clay
192	Not Excavated	-	Disturbed Slope Graded Baseball Field.
193	Not Excavated	-	Disturbed Graded Baseball Field.
194	Not Excavated	-	Disturbed Graded Baseball Field.
195	Not Excavated	-	Disturbed Graded Baseball Field.
196	Not Excavated	-	Disturbed Graded Baseball Field.
197	Not Excavated	-	Disturbed Graded Baseball Field.
198	Not Excavated	-	Disturbed Graded Baseball Field.
199	Not Excavated	-	Disturbed Graded Baseball Field.
200	Not Excavated	-	Disturbed Graded Baseball Field.
201	Negative	I	0-40 7.5YR4/2 Brown Silty Clay
		II	40-50 7.5YR4/2 Brown Silty Clay
202	Positive Prehistoric	I	0-30 7.5YR4/2 Brown Silty Clay
		II	30-50 10YR5/4 Yellowish Brown Silty Clay
203	Negative	I	0-30 5YR5/4 Reddish Brown Silty Clay
		II	30-45 7.5YR6/6 Reddish Yellow Clay
205	Negative	I	0-50 5YR5/4 Reddish Brown Silty Loam
		II	50-60 10YR3/6 Dark Yellowish Brown Silty Clay
		III	60-70 10YR6/4 Light Yellowish Brown Clay
206	Negative	I	0-27 7.5YR3/4 Dark Brown Silty Loam
		II	27-35 7.5YR6/8 Reddish Yellow Clay
207	Negative	I	0-10 5YR4/3 Reddish Brown Silty Clay
		II	10-20 5YR6/4 Light Reddish Brown Clay
208	Negative	I	0-30 5YR4/4 Reddish Brown Clay
209	Positive Prehistoric	I	0-27 7.5YR3/3 Dark Brown Silty Clay Loam
		II	27-38 7.5YR6/8 Reddish Yellow Clay
210	Negative	I	0-20 5YR2.5/2 Dark Reddish Brown Silty Clay
		II	20-30 5YR6/4 Light Reddish Brown Clay
211	Positive Prehistoric	I	0-20 2.5YR5/3 Reddish Brown Silty Clay
		II	20-30 5YR3/4 Dark Reddish Brown Clay
212	Positive Prehistoric	I	0-20 7.5YR3/3 Dark Brown Silty Clay Loam
		II	20-30 7.5YR5/8 Strong Brown Clay
213	Negative	I	0-24 5YR4/4 Reddish Brown Silty Clay Loam
		II	24-29 5YR4/6 Yellowish Red Clay
214	Negative	I	0-19 5YR5/4 Reddish Brown Silty Clay Loam
		II	19-27 2.5YR3/6 Dark Red Clay
220	Negative	I	0-10 2.5YR3/6 Dark Red Clay
221	Negative	I	0-12 2.5YR3/6 Dark Red Clay
222	Negative	I	0-10 2.5YR3/6 Dark Red Clay
223	Negative	I	0-10 2.5YR3/6 Dark Red Clay
224	Negative	I	0-13 2.5YR3/6 Dark Red Clay
225	Negative	I	0-10 2.5YR3/6 Dark Red Clay
226	Negative	I	0-13 2.5YR3/6 Dark Red Clay
227	Negative	I	0-12 5YR4/4 Reddish Brown Silty Clay Loam
		II	12-20 2.5YR3/6 Dark Red Clay
228	Negative	I	0-16 5YR5/4 Reddish Brown Silty Clay Loam
		II	16-25 2.5YR3/6 Dark Red Clay
229	Negative	I	0-10 2.5YR3/6 Dark Red Clay

STP ID	Results	Strat	Description
230	Negative	I	0-10 5YR5/4 Reddish Brown Clay
232	Negative	I	0-10 2.5YR3/6 Dark Red Clay
235	Negative	I	0-10 2.5YR3/6 Dark Red Clay
236	Negative	I	0-10 2.5YR3/6 Dark Red Clay
237	Negative	I	0-10 2.5YR3/6 Dark Red Clay
239	Negative	I	0-10 2.5YR3/6 Dark Red Clay
240	Negative	I	0-10 2.5YR3/6 Dark Red Clay
241	Negative	I	0-25 10YR3/3 Dark Brown Silty Loam
		II	25-32 10YR6/8 Brownish Yellow Silt
242	Negative	I	0-18 10YR3/3 Dark Brown Silty Loam
		II	18-26 10YR6/8 Brownish Yellow Clay Silt
243	Negative	I	0-20 10YR3/4 Dark Yellowish Brown Silty Loam
		II	20-26 10YR6/8 Brownish Yellow Clay Silt
244	Negative	I	0-10 10YR3/4 Dark Yellowish Brown Silty Loam
255	Negative	I	0-12 10R5/8 Red Clay
256	Not Excavated	-	Buried Utilities
257	Negative	I	0-4 7.5YR3/3 Dark Brown Clay Loam
		II	4-12 10R5/8 Red Clay
258	Negative	I	0-2 7.5YR3/3 Dark Brown Clay Loam
		II	2-12 10R5/8 Red Clay
272	Not Excavated	-	Disturbed Graded Baseball Field. Slope.
273	Not Excavated	-	Disturbed Graded Baseball Field.
274	Not Excavated	-	Disturbed Graded Baseball Field.
275	Not Excavated	-	Disturbed Graded Baseball Field.
276	Not Excavated	-	Disturbed Graded Baseball Field.
277	Not Excavated	-	Disturbed Graded Baseball Field.
278	Not Excavated	-	Disturbed Graded Baseball Field.
279	Not Excavated	-	Disturbed Graded Baseball Field.
280	Not Excavated	-	Disturbed Graded Baseball Field.
281	Negative	I	0-50 7.5YR4/2 Brown Silty Clay
		II	50-65 7.5YR4/2 Brown Silty Clay
282	Negative	I	0-40 7.5YR4/2 Brown Silty Clay
285	Positive Historic	I	0-35 10YR4/3 Brown Silty Clay Loam
		II	35-45 10YR4/3 Brown Silty Clay
286	Positive Both	I	0-40 10YR4/3 Brown Silty Clay
		II	40-50 10YR5/4 Yellowish Brown Clay
287	Negative	I	0-5 7.5YR4/2 Brown Silty Loam
		II	5-30 5YR5/6 Yellowish Red Silty Clay
293	Negative	I	0-5 7.5YR4/2 Brown Silty Loam
		II	5-10 5YR6/6 Reddish Yellow Silty Clay
		III	10-20 5YR5/6 Yellowish Red Clay
294	Negative	I	0-20 5YR5/6 Yellowish Red Silty Clay Loam
		II	20-30 5YR6/6 Reddish Yellow Silty Clay
296	Negative	I	0-10 5YR4/3 Reddish Brown Silty Clay
297	Negative	I	0-10 5YR4/3 Reddish Brown Clay
298	Negative	I	0-10 5YR3/2 Dark Reddish Brown Clay
299	Negative	I	0-15 5YR4/3 Reddish Brown Clay
300	Negative	I	0-10 5YR3/2 Dark Reddish Brown Clay
		II	10-20 5YR4/3 Reddish Brown Clay
301	Negative	I	0-10 5YR4/3 Reddish Brown Clay
302	Negative	I	0-10 5YR4/3 Reddish Brown Clay
303	Negative	I	0-5 5YR4/3 Reddish Brown Clay Loam
		II	5-15 5YR4/3 Reddish Brown Clay

STP ID	Results	Strat	Description
304	Negative	I	0-4 10R5/8 Red Silty Clay
		II	4-10 10R5/8 Red Clay
305	Negative	I	0-10 5YR4/4 Reddish Brown Clay
306	Negative	I	0-5 5YR4/3 Reddish Brown Silty Clay Loam
		II	5-15 5YR5/3 Reddish Brown Clay
307	Negative	I	0-15 5YR4/3 Reddish Brown Silty Clay
308	Negative	I	0-15 5YR4/3 Reddish Brown Clay
309	Negative	I	0-15 5YR4/3 Reddish Brown Clay
310	Negative	I	0-10 5YR4/3 Reddish Brown Clay
312	Negative	I	0-10 2.5YR3/6 Dark Red Clay
315	Not Excavated	-	Sub On Surface. Dense Gravel From Driveway
316	Negative	I	0-10 2.5YR3/6 Dark Red Clay
317	Negative	I	0-10 2.5YR3/6 Dark Red Clay
318	Negative	I	0-10 2.5YR3/6 Dark Red Clay
319	Not Excavated	-	Gravel Driveway
320	Negative	I	0-12 2.5YR3/6 Dark Red Clay
321	Negative	I	0-10 10YR5/2 Grayish Brown Clay Loam
		II	10-24 7.5YR7/8 Reddish Yellow Clay
		III	24-40 10YR5/1 Gray Clay
322	Negative	I	0-10 10YR5/2 Grayish Brown Clay Loam
		II	10-20 7.5YR7/8 Reddish Yellow Clay
		III	20-30 10YR6/1 Gray Clay
323	Negative	I	0-5 10YR5/2 Grayish Brown Clay Loam
324	Negative	I	0-20 10YR4/3 Brown Clay Loam
		II	20-30 10YR5/4 Yellowish Brown Clay
326	Negative	I	0-5 10YR5/2 Grayish Brown Clay Loam
		II	5-15 2.5YR4/6 Red Clay
		III	15-25 2.5Y6/6 Olive Yellow Clay
335	Not Excavated	-	Buried Utilities
336	Not Excavated	-	Buried Utilities
337	Negative	I	0-10 10R5/8 Red Clay
339	Negative	I	0-5 5YR6/6 Reddish Yellow Clay Loam
		II	5-13 10R5/8 Red Clay
340	Negative	I	0-15 7.5YR3/3 Dark Brown Clay Loam
		II	15-21 10R5/8 Red Clay
341	Negative	I	0-7 7.5YR3/3 Dark Brown Loamy Clay
		II	7-15 10R5/8 Red Clay
342	Negative	I	0-8 7.5YR3/3 Dark Brown Clay Loam
		II	8-13 10R5/8 Red Clay
343	Negative	I	0-13 7.5YR3/3 Dark Brown Clay Loam
		II	13-20 10R5/8 Red Clay
344	Negative	I	0-13 7.5YR3/3 Dark Brown Clay Loam
		II	13-19 10R5/8 Red Clay
345	Negative	I	0-3 7.5YR3/3 Dark Brown Clay Loam
		II	3-14 7.5YR6/6 Reddish Yellow Clay
346	Negative	I	0-5 7.5YR3/3 Dark Brown Clay Loam
		II	5-12 7.5YR6/6 Reddish Yellow Clay
347	Not Excavated	-	Buried Utilities
348	Negative	I	0-18 7.5YR3/3 Dark Brown Clay Loam
		II	18-25 7.5YR6/6 Reddish Yellow Clay
352	Not Excavated	-	Buried Utilities, Roadside Disturbance, Graded Baseball Field
353	Not Excavated	-	Buried Utilities, Roadside Disturbance, Graded

STP ID	Results	Strat	Description
			Baseball Field
354	Not Excavated	-	Buried Utilities, Roadside Disturbance, Graded Baseball Field
355	Not Excavated	-	Buried Utilities, Roadside Disturbance, Graded Baseball Field
356	Not Excavated	-	Buried Utilities, Roadside Disturbance, Graded Baseball Field
357	Not Excavated	-	Paved
358	Not Excavated	-	Paved
359	Not Excavated	-	Paved
360	Not Excavated	-	Buried Utilities
361	Not Excavated	-	Surface Water
362	Negative	I	0-40 7.5YR3/3 Dark Brown Silty Clay Loam
		II	40-49 2.5Y4/1 Dark Gray Clay
364	Negative	I	0-25 7.5YR3/3 Dark Brown Silty Clay Loam
		II	25-30 7.5YR6/6 Reddish Yellow Clay
365	Negative	I	0-18 7.5YR3/3 Dark Brown Silty Clay Loam
		II	18-24 7.5YR6/6 Reddish Yellow Clay
366	Positive Prehistoric	I	0-17 7.5YR3/3 Dark Brown Silty Clay Loam
		II	17-28 7.5YR6/6 Reddish Yellow Clay
367	Negative	I	0-6 7.5YR3/3 Dark Brown Silty Clay Loam
		II	6-14 7.5YR6/6 Reddish Yellow Clay
374	Negative	I	0-3 10R5/8 Red Clay
376	Negative	I	0-11 10R5/8 Red Clay
377	Negative	I	0-14 10R5/8 Red Clay
378	Negative	I	0-3 10R5/8 Red Clay Loam
		II	3-11 10R5/8 Red Clay
379	Negative	I	0-13 10R5/8 Red Clay
380	Negative	I	0-12 10R5/8 Red Clay
381	Negative	I	0-4 10R5/8 Red Silty Clay
		II	4-10 10R5/8 Red Clay
382	Negative	I	0-5 10R5/8 Red Silty Clay
		II	5-13 10R5/8 Red Clay
383	Negative	I	0-3 10R5/8 Red Silty Clay
		II	3-12 10R5/8 Red Clay
384	Negative	I	0-10 10R5/8 Red Clay
385	Negative	I	0-12 10R5/8 Red Clay
386	Negative	I	0-10 10R5/8 Red Clay
387	Negative	I	0-11 10R5/8 Red Clay
388	Negative	I	0-11 10R5/8 Red Clay
389	Negative	I	0-10 10R5/8 Red Clay
390	Not Excavated	-	Buried Utilities
392	Negative	I	0-10 5YR4/4 Reddish Brown Sandy Clay
393	Negative	I	0-10 5YR5/4 Reddish Brown Sandy Clay
395	Not Excavated	-	Gravel Fill/Sub On Surface
396	Negative	I	0-8 2.5YR3/6 Dark Red Clay
397	Negative	I	0-10 2.5YR3/6 Dark Red Clay
398	Negative	I	0-10 2.5YR3/6 Dark Red Clay
399	Negative	I	0-10 2.5YR3/6 Dark Red Clay
464	Not Excavated	-	(blank)
481	Negative	I	0-15 10YR4/3 Brown Clay Loam
		II	15-20 10YR5/8 Yellowish Brown Clay
		III	15-20 10YR5/8 Yellowish Brown Clay

STP ID	Results	Strat	Description
482	Negative	I	0-15 10YR3/3 Dark Brown Silty Clay
483	Negative	I	0-10 7.5YR4/2 Brown Silty Clay Loam
484	Negative	I	0-12 10YR5/8 Yellowish Brown Clay
486	Negative	I	0-10 10YR2/1 Black Silty Loam
490	Negative	I	0-5 5YR3/4 Dark Reddish Brown Silty Clay
		II	5-15 5YR5/3 Reddish Brown Clay
491	Negative	I	0-32 2.5Y5/3 Light Olive Brown Silty Clay Loam
		II	32-40 2.5Y6/4 Light Yellowish Brown Clay
492	Negative	I	0-12 2.5Y5/3 Light Olive Brown Silty Clay Loam
		II	12-18 5Y6/4 Pale Olive Clay
493	Negative	I	0-29 2.5Y5/3 Light Olive Brown Silty Clay Loam
		II	29-39 2.5Y6/4 Light Yellowish Brown Clay
494	Negative	I	0-18 2.5Y5/3 Light Olive Brown Silty Clay Loam
		II	18-26 2.5Y6/4 Light Yellowish Brown Clay
495	Negative	I	0-13 2.5Y5/3 Light Olive Brown Silty Clay Loam
		II	13-20 2.5Y6/4 Light Yellowish Brown Clay
496	Negative	I	0-13 2.5Y5/3 Light Olive Brown Silty Clay Loam
		II	13-20 5Y6/4 Pale Olive Clay
498	Negative	I	0-31 2.5Y5/3 Light Olive Brown Silty Clay Loam
		II	31-39 2.5Y6/4 Light Yellowish Brown Clay
499	Negative	I	0-27 2.5Y5/3 Light Olive Brown Silty Clay Loam
		II	27-32 2.5Y6/4 Light Yellowish Brown Clay
500	Negative	I	0-16 10YR4/3 Brown Silty Clay Loam
		II	16-22 10R5/8 Red
501	Negative	I	0-8 2.5Y4/3 Olive Brown Silty Clay Loam
		II	8-11 10R5/8 Red Clay
502	Not Excavated	-	Paved
503	Negative	I	0-13 10R4/3 Weak Red Silty Clay Loam
		II	13-18 10R5/8 Red Clay
504	Negative	I	0-5 10R4/3 Weak Red Silty Clay Loam
		II	5-10 10R5/8 Red Clay
505	Negative	I	0-9 10R4/3 Weak Red Silty Clay Loam
		II	9-13 10R5/8 Red Clay
506	Negative	I	0-5 10R4/3 Weak Red Clay Loam
		II	5-9 10R5/8 Red Clay
507	Negative	I	0-12 10R4/3 Weak Red Silty Clay Loam
		II	12-16 10R5/8 Red Clay
508	Negative	I	0-29 7.5YR3/3 Dark Brown Silty Clay Loam
		II	29-35 7.5YR6/6 Reddish Yellow Clay
509	Negative	I	0-37 7.5YR3/3 Dark Brown Silty Loam
		II	37-43 2.5Y6/4 Light Yellowish Brown Clay
510	Negative	I	0-8 10R4/3 Weak Red Silty Clay Loam
		II	8-14 10R5/8 Red Clay
511	Negative	I	0-8 10R4/3 Weak Red Clay Loam
		II	8-12 10R5/8 Red Clay
512	Not Excavated	-	>15 degree slope
513	Negative	I	0-11 7.5YR6/6 Reddish Yellow Clay
514	Not Excavated	-	Paved
515	Negative	I	0-4 10R4/3 Weak Red Silty Clay Loam
		II	4-9 10R5/8 Red Clay
516	Negative	I	0-10 10R5/8 Red Clay
517	Negative	I	0-3 7.5YR3/3 Dark Brown Silty Clay Loam
		II	3-10 10R5/8 Red Clay

STP ID	Results	Strat	Description
518	Not Excavated	-	Surface Water
519	Negative	I	0-35 7.5YR3/3 Dark Brown Silty Clay
		II	35-41 2.5Y6/4 Light Yellowish Brown Clay
520	Positive Historic	I	0-40 7.5YR3/3 Dark Brown Silty Clay Loam
		II	40-46 7.5YR3/3 Dark Brown Clay
521	Not Excavated	-	(blank)
522	Not Excavated	-	Surface Water
523	Negative	I	0-20 10YR3/3 Dark Brown Silty Clay
		II	20-30 10YR3/4 Dark Yellowish Brown Silty Clay
524	Negative	I	0-15 10YR4/3 Brown Silty Clay
		II	15-30 10YR4/4 Dark Yellowish Brown Clay
525	Negative	I	0-8 10YR4/3 Brown Silty Loam
526	Negative	I	0-10 10YR4/3 Brown Silty Clay
527	Negative	I	0-10 7.5YR4/2 Brown Silty Clay
		II	10-20 10YR5/4 Yellowish Brown Silty Clay
528	Negative	I	0-30 7.5YR4/2 Brown Silty Loam
		II	30-50 10YR5/4 Yellowish Brown Silty Clay
529	Negative	I	0-20 7.5YR4/2 Brown Silty Loam
		II	20-30 10YR5/4 Yellowish Brown Clay
530	Negative	I	0-10 5YR4/3 Reddish Brown Silty Clay
		II	10-20 5YR3/2 Dark Reddish Brown Silty Clay
531	Not Excavated	-	Pile Of Stones , Push Pile. Disturbed.
532	Negative	I	0-25 10YR4/2 Dark Grayish Brown Silty Clay
		II	25-35 10YR5/2 Grayish Brown Silty Clay
533	Negative	I	0-20 10YR4/3 Brown Silty Clay
		II	20-30 10YR5/2 Grayish Brown Clay
534	Negative	I	0-20 2.5YR7/4 Light Reddish Brown Silty Loam
		II	20-30 5YR4/3 Reddish Brown Clay
535	Negative	I	0-20 10YR5/2 Grayish Brown Silty Loam
		II	20-30 10YR5/2 Grayish Brown Clay
536	Negative	I	0-30 10YR5/2 Grayish Brown Clay
537	Negative	I	0-15 10YR5/2 Grayish Brown Clay
		II	15-25 7.5YR4/6 Strong Brown Clay
538	Negative	I	0-15 10YR4/3 Brown Silty Clay
		II	15-30 5YR4/3 Reddish Brown Clay
539	Negative	I	0-20 5YR4/3 Reddish Brown Silty Loam
		II	20-30 5YR3/2 Dark Reddish Brown Clay
540	Negative	I	0-20 5YR4/3 Reddish Brown Silty Loam
		II	20-30 5YR3/2 Dark Reddish Brown Silty Clay
544	Negative	I	0-5 5YR4/3 Reddish Brown Silty Loam
		II	5-15 5YR3/2 Dark Reddish Brown Silty Clay
545	Negative	I	0-20 5YR5/3 Reddish Brown Silty Clay
		II	20-30 5YR3/2 Dark Reddish Brown Clay
546	Negative	I	0-20 5YR4/3 Reddish Brown Silty Clay Loam
		II	20-30 5YR3/2 Dark Reddish Brown Silty Clay
547	Negative	I	0-15 5YR4/3 Reddish Brown Silty Clay
		II	15-25 5YR3/2 Dark Reddish Brown Clay
548	Negative	I	0-15 5YR4/3 Reddish Brown Silty Clay Loam
		II	15-25 5YR3/2 Dark Reddish Brown Clay
549	Negative	I	0-20 5YR4/3 Reddish Brown Silty Loam
		II	20-30 5YR3/2 Dark Reddish Brown Clay
550	Negative	I	0-15 5YR4/3 Reddish Brown Silty Loam
		II	15-25 5YR3/2 Dark Reddish Brown Silty Clay

STP ID	Results	Strat	Description
551	Negative	I	0-15 5YR4/3 Reddish Brown Silty Loam
		II	15-25 5YR3/2 Dark Reddish Brown Silty Clay
552	Negative	I	0-10 5YR4/3 Reddish Brown Silty Clay Loam
		II	10-20 5YR3/2 Dark Reddish Brown Silty Clay
553	Negative	I	0-10 5YR3/2 Dark Reddish Brown Silty Clay
554	Negative	I	0-10 5YR3/2 Dark Reddish Brown Silty Clay
555	Negative	I	0-10 5YR3/2 Dark Reddish Brown Silty Clay
556	Negative	I	0-5 5YR4/3 Reddish Brown Silty Loam
		II	5-10 5YR3/2 Dark Reddish Brown Silty Clay
557	Negative	I	0-5 5YR4/3 Reddish Brown Silty Loam
		II	5-10 5YR3/2 Dark Reddish Brown Silty Clay
558	Negative	I	0-10 5YR4/3 Reddish Brown Silty Loam
		II	10-20 5YR3/2 Dark Reddish Brown Silty Clay
559	Negative	I	0-10 5YR4/3 Reddish Brown Silty Clay
		II	10-20 5YR3/2 Dark Reddish Brown Clay
560	Negative	I	0-10 5YR4/3 Reddish Brown Silty Clay
561	Negative	I	0-5 5YR4/3 Reddish Brown Silty Loam
		II	5-10 5YR3/2 Dark Reddish Brown Silty Clay
565	Negative	I	0-10 10YR5/2 Grayish Brown Clay Loam
		II	10-20 2.5YR5/6 Red Clay
571	Negative	I	0-9 10R5/8 Red Clay
572	Negative	I	0-30 7.5YR4/2 Brown Silty Clay
		II	30-40 10YR5/4 Yellowish Brown Clay
573	Negative	I	0-30 7.5YR4/2 Brown Silty Clay
		II	30-40 10YR5/4 Yellowish Brown Clay
574	Negative	I	0-20 7.5YR4/2 Brown Silty Clay
		II	20-30 10YR5/4 Yellowish Brown Clay
575	Negative	I	0-5 7.5YR4/2 Brown Silty Clay
		II	5-20 10YR5/4 Yellowish Brown Clay
576	Negative	I	0-5 7.5YR4/2 Brown Silty Clay
		II	5-15 10YR5/4 Yellowish Brown Clay
578	Negative	I	0-10 7.5YR4/2 Brown Silty Clay
579	Negative	I	0-20 7.5YR4/2 Brown Silty Clay
		II	20-30 10YR5/4 Yellowish Brown Clay
580	Negative	I	0-20 7.5YR4/2 Brown Silty Clay
		II	20-30 10YR5/4 Yellowish Brown Clay
581	Negative	I	0-20 7.5YR4/2 Brown Silty Clay
		II	20-30 10YR5/4 Yellowish Brown Clay
582	Negative	I	0-10 10YR5/4 Yellowish Brown Clay
583	Not Excavated	-	Paved
584	Negative	I	0-15 7.5YR4/2 Brown Silty Clay Loam
585	Negative	I	0-5 10YR4/3 Brown Silty Clay Loam
		II	5-15 7.5YR6/6 Reddish Yellow Silty Clay Loam
586	Negative	I	0-20 10YR5/4 Yellowish Brown Silty Clay Loam
		II	20-30 10YR3/3 Dark Brown Silty Clay
587	Negative	I	0-10 7.5YR4/2 Brown Silty Clay Loam
		II	10-20 10YR5/4 Yellowish Brown Clay
588	Not Excavated	-	Paved
589	Negative	I	0-25 7.5YR4/2 Brown Silty Loam
		II	25-35 10YR5/4 Yellowish Brown Clay

STP ID	Results	Strat	Description
590	Negative	I	0-15 7.5YR4/2 Brown Silty Loam
		II	15-25 10YR5/4 Yellowish Brown Silty Clay
591	Negative	I	0-15 7.5YR4/2 Brown Silty Clay
		II	15-25 10YR5/4 Yellowish Brown Clay
592	Negative	I	0-15 7.5YR4/6 Strong Brown Silty Clay
593	Negative	I	0-10 7.5YR4/6 Strong Brown Clay
594	Negative	I	0-5 7.5YR4/2 Brown Silty Clay Loam
		II	5-15 7.5YR4/6 Strong Brown Clay
595	Negative	I	0-10 7.5YR4/6 Strong Brown Clay
596	Negative	I	0-15 7.5YR4/6 Strong Brown Silty Clay
597	Negative	I	0-15 10YR3/3 Dark Brown Silty Clay
		II	15-25 7.5YR4/6 Strong Brown Clay
598	Negative	I	0-15 10YR3/3 Dark Brown Silty Clay
		II	15-25 7.5YR4/6 Strong Brown Clay
600	Positive Historic	I	0-20 7.5YR4/2 Brown Silty Clay Loam
		II	20-30 10YR5/4 Yellowish Brown Clay
601	Positive Historic	I	0-30 10YR3/3 Dark Brown Silty Clay
		II	30-40 10YR5/4 Yellowish Brown Clay
602	Negative	I	0-30 10YR3/3 Dark Brown Silty Clay
		II	30-50 10YR4/4 Dark Yellowish Brown Clay
603	Not Excavated	-	(blank)
604	Negative	I	0-10 2.5YR4/3 Reddish Brown Clay
605	Negative	I	0-10 10YR5/2 Grayish Brown Clay Loam
		II	10-30 10YR5/4 Yellowish Brown Clay
606	Negative	I	0-5 10YR5/2 Grayish Brown Clay Loam
		II	5-25 10YR7/3 Very Pale Brown Silty Clay
		III	25-35 2.5Y5/2 Grayish Brown Silty Clay
609	Negative	I	0-30 10YR5/2 Grayish Brown Clay Loam
		II	30-40 10YR5/4 Yellowish Brown Clay
610	Negative	I	0-25 10YR5/2 Grayish Brown Clay Loam
		II	25-35 10YR5/4 Yellowish Brown Silty Clay
		III	35-45 10YR5/2 Grayish Brown Silty Clay
611	Not Excavated	-	Surface Water
612	Negative	I	0-34 10YR4/3 Brown Silty Clay Loam
		II	34-40 2.5Y6/4 Light Yellowish Brown Clay
613	Negative	I	0-29 7.5YR3/3 Dark Brown Silty Clay Loam
		II	29-37 7.5YR6/6 Reddish Yellow Clay
614	Not Excavated	-	Surface Water
615	Not Excavated	-	Surface Water
616	Not Excavated	-	Surface Water
617	Negative	I	0-14 10YR4/3 Brown Silty Clay Loam
		II	14-22 2.5Y6/4 Light Yellowish Brown Clay

STP ID	Results	Strat	Description
618	Positive Historic	I	0-23 7.5YR6/6 Reddish Yellow Silty Clay Loam
		II	23-32 10R5/8 Red Clay
		III	23-42 10R4/1 Dark Reddish Gray
619	Negative	I	0-6 10R5/8 Red Clay Loam
		II	6-11 10R5/8 Red Clay
620	Negative	I	0-3 10R5/8 Red Clay Loam
		II	3-12 10R5/8 Red Clay
625	Negative	I	0-4 10R5/8 Red Clay Loam
		II	4-12 5YR5/8 Yellowish Red Clay
626	Negative	I	0-34 10R5/8 Red Clay Loam
		II	34-40 10R5/8 Red Clay
627	Negative	I	0-20 10R5/8 Red Clay Loam
		II	20-29 10R5/8 Red Clay
628	Negative	I	0-5 10R5/8 Red Clay Loam
		II	5-15 10R5/8 Red Clay
629	Negative	I	0-8 10R5/8 Red Clay Loam
		II	8-19 10R5/8 Red Clay
630	Negative	I	0-13 10R5/8 Red Clay
631	Negative	I	0-12 10R5/8 Red Clay
632	Negative	I	0-13 10R5/8 Red Clay
633	Negative	I	0-36 10R5/8 Red Clay Loam
		II	36-40 10R5/8 Red Clay
634	Not Excavated	-	Graded Gravel Road And Slope.
635	Not Excavated	-	Graded Gravel Road
636	Negative	I	0-12 7.5YR6/6 Reddish Yellow Clay Loam
		II	12-20 10R5/8 Red Clay
637	Negative	I	0-22 7.5YR3/3 Dark Brown Silty Clay Loam
		II	22-29 7.5YR6/6 Reddish Yellow Clay
638	Negative	I	0-19 7.5YR3/3 Dark Brown Silty Clay Loam
		II	19-27 7.5YR6/6 Reddish Yellow Clay
639	Negative	I	0-22 7.5YR3/3 Dark Brown Silty Clay Loam
		II	22-30 7.5YR6/6 Reddish Yellow Clay
640	Positive Historic	I	0-10 7.5YR6/6 Reddish Yellow Clay
641	Not Excavated	-	Graded Gravel Driveway.
642	Not Excavated	-	Building
648	Not Excavated	-	(blank)
650	Negative	I	0-5 7.5YR6/3 Light Brown Silty Clay
		II	5-15 10YR5/4 Yellowish Brown Clay
651	Negative	I	0-3 7.5YR6/3 Light Brown Clay
		II	3-15 10YR5/4 Yellowish Brown Clay
652	Negative	I	0-10 5YR5/3 Reddish Brown Silty Loam
		II	10-15 5YR6/6 Reddish Yellow Silty Clay
653	Negative	I	0-18 10YR3/4 Dark Yellowish Brown Silty Loam
		II	18-31 10YR5/8 Yellowish Brown Silty Clay
654	Negative	I	0-17 10YR3/4 Dark Yellowish Brown Silty Loam
		II	17-29 10YR5/8 Yellowish Brown Silty Clay
655	Negative	I	0-15 10YR3/4 Dark Yellowish Brown Silty Loam

STP ID	Results	Strat	Description
		II	15-25 10YR5/8 Yellowish Brown Silty Clay
657	Not Excavated	-	Built Up From House Construction
658	Not Excavated	-	Built Up From House Construction
659	Not Excavated	-	(blank)
660	Negative	I	0-16 10YR3/4 Dark Yellowish Brown Silty Loam
		II	16-25 10YR5/8 Yellowish Brown Silty Clay Loam
661	Negative	I	0-10 10YR5/8 Yellowish Brown Silty Clay Loam
662	Negative	I	0-20 10YR3/4 Dark Yellowish Brown Silty Loam
		II	20-28 10YR5/8 Yellowish Brown Silty Clay Loam
663	Not Excavated	-	Sub On Surface
664	Not Excavated	-	Road
665	Negative	I	0-5 10YR5/8 Yellowish Brown Silty Clay Loam
666	Negative	I	0-8 10YR3/4 Dark Yellowish Brown Silty Loam
		II	8-12 7.5YR5/8 Strong Brown Silty Clay Loam
		III	12-18 10YR6/8 Brownish Yellow Silty Clay Loam
667	Negative	I	0-5 10YR5/8 Yellowish Brown Silty Clay Loam
668	Negative	I	0-10 7.5YR5/8 Strong Brown Silty Clay
669	Not Excavated	-	Driveway
671	Not Excavated	-	Disturbed From House Construction
672	Negative	I	0-9 7.5YR5/8 Strong Brown Silty Clay
673	Not Excavated	-	Buried Utilities
674	Negative	I	0-20 7.5YR5/8 Strong Brown Silty Clay
675	Not Excavated	-	Built Up
676	Not Excavated	-	Disturbed
677	Not Excavated	-	Disturbed
678	Not Excavated	-	(blank)
679	Not Excavated	-	Disturbed And Buried Utilities
681	Positive Historic	I	0-28 10YR3/4 Dark Yellowish Brown Silty Loam
		II	28-35 10YR7/3 Very Pale Brown Silty Clay
682	Negative	I	0-25 2.5YR2.5/4 Dark Reddish Brown Silty Clay
		II	25-50 10YR3/2 Very Dark Grayish Brown Clay Silt
683	Negative	I	0-28 10YR3/2 Very Dark Grayish Brown Silty Loam
		II	28-37 10YR4/1 Dark Gray Silty Loam
684	Not Excavated	-	(blank)
685	Not Excavated	-	(blank)
686	Negative	I	0-30 7.5YR4/2 Brown Silty Clay
		II	30-50 10YR5/2 Grayish Brown Silty Clay
687	Negative	I	0-20 10YR5/2 Grayish Brown Clay Loam
		II	20-40 10YR5/2 Grayish Brown Silty Clay
689	Not Excavated	-	Fenced Yard
690	Negative	I	0-15 10YR5/2 Grayish Brown Clay Loam
		II	15-25 10YR5/2 Grayish Brown Silty Clay
691	Not Excavated	-	(blank)
692	Not Excavated	-	St In Creek
693	Not Excavated	-	St In Stream
694	Negative	I	0-36 10YR4/3 Brown Silty Loam
		II	36-52 10YR2/1 Black Silt
695	Negative	I	0-23 10YR4/4 Dark Yellowish Brown Silty Loam
		II	23-30 10YR6/4 Light Yellowish Brown Sand
696	Negative	I	0-16 10YR4/4 Dark Yellowish Brown Loamy Sand
697	Negative	I	0-27 10YR4/4 Dark Yellowish Brown Silty Loam
		II	27-35 10YR6/6 Brownish Yellow Sand
699	Not Excavated	-	In Creek

STP ID	Results	Strat	Description
700	Negative	I	0-15 10YR5/4 Yellowish Brown Silty Loam
		II	15-24 10YR6/4 Light Yellowish Brown Sand
702	Negative	I	0-5 10YR4/3 Brown Silty Loam
703	Negative	I	0-10 10YR4/3 Brown Silty Clay Loam
		II	10-16 7.5YR5/8 Strong Brown Silty Clay
704	Negative	I	0-10 2.5YR3/6 Dark Red Clay
705	Negative	I	0-10 2.5YR3/6 Dark Red Clay
706	Not Excavated	-	Paved
707	Not Excavated	-	Paved
708	Negative	I	0-13 2.5YR3/6 Dark Red Clay
709	Negative	I	0-8 5YR3/4 Dark Reddish Brown Silty Clay Loam
		II	8-15 2.5YR3/6 Dark Red Clay
710	Negative	I	0-27 5YR3/3 Dark Reddish Brown Silt
		II	27-35 2.5YR5/4 Reddish Brown Silty Clay
711	Negative	I	0-30 5YR4/3 Reddish Brown Clay Silt
		II	30-38 2.5YR3/6 Dark Red Clay
712	Negative	I	0-40 5YR3/4 Dark Reddish Brown Silty Loam
		II	40-51 2.5YR3/6 Dark Red Clay
713	Negative	I	0-10 2.5YR3/6 Dark Red Clay
715	Negative	I	0-10 5YR5/4 Reddish Brown Clay Silt
716	Negative	I	0-10 5YR5/4 Reddish Brown Clay Silt
717	Negative	I	0-10 5YR5/4 Reddish Brown Silty Clay Loam
720	Negative	I	0-27 7.5YR4/3 Brown Silty Loam
		II	27-35 7.5YR6/8 Reddish Yellow Clay Silt
721	Not Excavated	-	Road
722	Not Excavated	-	Disturbed
723	Not Excavated	-	100% Visibility
724	Not Excavated	-	Disturbed Area. Near School Building
725	Not Excavated	-	Disturbed. Near School Building.
729	Negative	I	0-10 10R5/8 Red Clay
730	Negative	I	0-8 10R5/8 Red Clay
731	Negative	I	0-10 10R5/8 Red Clay
732	Negative	I	0-6 10R5/8 Red Clay
733	Negative	I	0-7 10R5/8 Red Clay
734	Negative	I	0-36 2.5Y5/3 Light Olive Brown Silty Clay Loam
		II	36-41 2.5Y6/4 Light Yellowish Brown Clay
735	Negative	I	0-40 10YR5/2 Grayish Brown Clay Loam
		II	40-50 10YR5/4 Yellowish Brown Clay
736	Negative	I	0-20 10YR5/2 Grayish Brown Clay Loam
		II	20-30 10YR5/4 Yellowish Brown
738	Negative	I	0-30 10YR5/2 Grayish Brown Clay Loam
		II	30-40 10YR5/4 Yellowish Brown Clay
739	Negative	I	0-30 10YR5/2 Grayish Brown Clay Loam
		II	30-40 10YR5/4 Yellowish Brown Clay
740	Negative	I	0-30 10YR5/2 Grayish Brown Clay Loam
		II	30-40 10YR5/4 Yellowish Brown Clay
741	Negative	I	0-30 10YR5/2 Grayish Brown Clay Loam
		II	30-40 10YR5/4 Yellowish Brown Clay
742	Negative	I	0-20 10YR4/6 Dark Yellowish Brown Silty Clay
		II	20-30 10YR4/2 Dark Grayish Brown Clay
743	Negative	I	0-15 10YR5/2 Grayish Brown Clay Loam
		II	15-30 10YR5/4 Yellowish Brown Clay
744	Negative	I	0-5 7.5YR5/6 Strong Brown Silty Clay

STP ID	Results	Strat	Description
745	Not Excavated	-	(blank)
746	Negative	I	0-10 10YR5/4 Yellowish Brown Clay
		II	10-30 7.5YR8/6 Reddish Yellow Clay
747	Not Excavated	-	Graded
748	Negative	I	0-10 7.5YR8/2 Pinkish White Clay
749	Negative	I	0-10 2.5YR5/4 Reddish Brown Silty Clay
		II	10-20 2.5YR6/3 Light Reddish Brown Clay
750	Negative	I	0-10 10YR5/2 Grayish Brown Clay Loam
		II	10-30 10YR3/6 Dark Yellowish Brown Clay
751	Negative	I	0-15 2.5YR5/3 Reddish Brown Silty Clay
		II	15-20 2.5YR6/4 Light Reddish Brown Clay
752	Negative	I	0-20 5YR4/3 Reddish Brown Clay
753	Negative	I	0-20 2.5YR6/4 Light Reddish Brown Clay
754	Not Excavated	-	Paved
755	Negative	I	0-5 10YR5/2 Grayish Brown Clay Loam
		II	5-30 10YR4/3 Brown Clay
756	Negative	I	0-10 10YR5/2 Grayish Brown Clay Loam
		II	10-30 7.5YR4/3 Brown Clay
757	Negative	I	0-20 10YR5/2 Grayish Brown Clay
758	Negative	I	0-15 10YR5/2 Grayish Brown Clay Loam
		II	15-30 10YR5/4 Yellowish Brown Clay
760	Negative	I	0-20 10YR5/2 Grayish Brown Clay Loam
		II	20-30 5YR5/3 Reddish Brown Clay
761	Negative	I	0-10 10YR5/2 Grayish Brown Clay Loam
		II	10-20 5YR4/3 Reddish Brown Clay
762	Negative	I	0-5 10YR5/2 Grayish Brown Clay Loam
763	Not Excavated	-	(blank)
764	Not Excavated	-	(blank)
765	Not Excavated	-	(blank)
766	Not Excavated	-	(blank)
767	Not Excavated	-	Surface Water
768	Negative	I	0-20 5YR4/3 Reddish Brown Sandy Loam
		II	20-30 2.5YR6/3 Light Reddish Brown Sandy Clay
769	Negative	I	0-20 5YR3/2 Dark Reddish Brown Silty Loam
		II	20-30 10YR4/2 Dark Grayish Brown Silty Clay
770	Negative	I	0-30 7.5YR4/2 Brown Silty Loam
		II	30-40 5YR4/3 Reddish Brown Silty Clay
771	Not Excavated	-	Surface Water
772	Negative	I	0-30 5YR4/4 Reddish Brown Silty Clay
		II	30-35 10YR5/2 Grayish Brown Clay
773	Negative	I	0-30 5YR4/4 Reddish Brown Silty Clay
		II	30-35 10YR5/2 Grayish Brown Clay
774	Negative	I	0-30 5YR4/4 Reddish Brown Silty Clay
		II	30-35 10YR5/2 Grayish Brown Clay
775	Negative	I	0-26 10YR5/4 Yellowish Brown Silty Loam
		II	26-32 10YR6/4 Light Yellowish Brown Silty Clay
776	Negative	I	0-30 5YR4/4 Reddish Brown Silty Clay
		II	30-35 10YR5/2 Grayish Brown Clay
777	Negative	I	0-30 10YR5/2 Grayish Brown Clay Loam
		II	30-40 10YR5/2 Grayish Brown Silty Clay
778	Negative	I	0-10 10YR5/2 Grayish Brown Clay Loam
		II	10-30 10YR5/4 Yellowish Brown Clay
779	Negative	I	0-10 10YR5/2 Grayish Brown Clay Loam

STP ID	Results	Strat	Description
		II	10-20 10YR5/4 Yellowish Brown Clay
780	Negative	I	0-15 10YR5/2 Grayish Brown Clay Loam
		II	15-25 10YR5/4 Yellowish Brown Clay
781	Negative	I	0-10 10YR5/2 Grayish Brown Silty Clay Loam
		II	10-20 10YR5/3 Brown Clay
782	Not Excavated	-	Paved
783	Not Excavated	-	Surface Water
784	Negative	I	0-5 10YR5/2 Grayish Brown Clay Loam
		II	5-20 7.5YR4/2 Brown Clay Loam
		III	20-30 10YR5/2 Grayish Brown Silty Clay Loam
785	Negative	I	0-10 10YR5/2 Grayish Brown Clay Loam
		II	10-20 10YR5/4 Yellowish Brown Clay
786	Negative	I	0-15 10YR5/2 Grayish Brown Clay Loam
		II	15-25 10YR5/4 Yellowish Brown Clay
787	Negative	I	0-10 7.5YR4/2 Brown Clay
788	Negative	I	0-10 10YR5/2 Grayish Brown Clay Loam
		II	10-20 10YR5/4 Yellowish Brown Clay
789	Negative	I	0-25 10YR5/2 Grayish Brown Clay Loam
		II	25-35 10YR6/3 Pale Brown Clay
790	Positive Prehistoric	I	0-25 10YR5/2 Grayish Brown Clay Loam
		II	25-35 10YR6/3 Pale Brown
791	Positive Prehistoric	I	0-25 10YR5/2 Grayish Brown Clay Loam
		II	25-35 10YR6/3 Pale Brown Clay
792	Negative	I	0-25 10YR5/2 Grayish Brown Clay Loam
		II	25-35 10YR6/3 Pale Brown Clay
793	Negative	I	0-15 10YR5/2 Grayish Brown Clay Loam
		II	15-30 7.5YR4/2 Brown Clay
794	Negative	I	0-5 10YR5/2 Grayish Brown Sandy Loam
		II	5-15 10YR5/4 Yellowish Brown Clay
796	Negative	I	0-10 10YR5/2 Grayish Brown Clay Loam
		II	10-20 5YR5/3 Reddish Brown Clay
797	Negative	I	0-5 10YR5/2 Grayish Brown Clay Loam
		II	5-15 2.5YR5/4 Reddish Brown Clay
798	Not Excavated	-	Exposed Surface, Horse Pasture
801	Not Excavated	-	Paved
803	Not Excavated	-	Exposed Surface
804	Not Excavated	-	Exposed Surface
806	Not Excavated	-	Disturbed Area. Near School Building.
810	Negative	I	0-15 2.5YR4/6 Red Clay
811	Negative	I	0-10 10YR5/2 Grayish Brown Clay Loam
		II	10-15 10YR5/4 Yellowish Brown Clay
		III	15-25 7.5YR5/1 Gray Clay
812	Negative	I	0-15 10YR4/2 Dark Grayish Brown Silty Clay
		II	15-35 10YR6/4 Light Yellowish Brown Clay
813	Negative	I	0-25 10YR4/2 Dark Grayish Brown Silty Clay
		II	25-35 10YR6/4 Light Yellowish Brown Silty Clay
814	Negative	I	0-5 10YR5/2 Grayish Brown Clay Loam
		II	5-10 10YR5/4 Yellowish Brown Clay
		III	10-20 7.5YR5/1 Gray Clay
815	Negative	I	0-20 10YR5/2 Grayish Brown Clay Loam
		II	20-30 7.5YR4/2 Brown Clay
816	Negative	I	0-12 10YR3/3 Dark Brown Silty Loam
		II	12-25 7.5YR5/8 Strong Brown Clay Silt

STP ID	Results	Strat	Description
817	Not Excavated	-	Built Up
818	Not Excavated	-	Built Up And Collapsed Building
819	Negative	I	0-20 10YR3/3 Dark Brown Silty Loam
820	Negative	I	0-10 10YR3/3 Dark Brown Silty Loam
821	Negative	I	0-17 10YR3/3 Dark Brown Silty Loam
		II	17-25 7.5YR5/8 Strong Brown Clay Silt
822	Negative	I	0-15 2.5YR2.5/3 Dark Reddish Brown Silty Clay
823	Negative	I	0-10 7.5YR5/8 Strong Brown Clay Silt
824	Negative	I	0-5 2.5YR6/3 Light Reddish Brown Sandy Clay
825	Negative	I	0-10 10YR5/4 Yellowish Brown Clay
826	Negative	I	0-25 5YR5/4 Reddish Brown Sand
827	Negative	I	0-20 5YR5/8 Yellowish Red Silty Clay
828	Negative	I	0-10 7.5YR5/8 Strong Brown Sand
829	Negative	I	0-10 10R7/4 Pale Red Silty Clay
830	Not Excavated	-	Building
831	Not Excavated	-	(blank)
833	Negative	I	0-13 10R5/8 Red Clay
834	Negative	I	0-3 7.5YR4/2 Brown Clay
		II	3-10 5YR5/3 Reddish Brown Clay
835	Negative	I	0-10 5YR4/4 Reddish Brown Clay Loam
836	Negative	I	0-5 10YR5/2 Grayish Brown Clay Loam
		II	5-15 5YR5/3 Reddish Brown Clay
837	Negative	I	0-25 5YR5/4 Reddish Brown Silty Clay
		II	25-35 5YR6/3 Light Reddish Brown Clay
839	Not Excavated	-	Building
840	Negative	I	0-14 7.5YR3/3 Dark Brown Clay Loam
		II	14-22 7.5YR6/6 Reddish Yellow Clay
841	Negative	I	0-20 10YR6/4 Light Yellowish Brown Clay
842	Negative	I	0-20 10YR6/4 Light Yellowish Brown Clay
843	Negative	I	0-20 10YR6/4 Light Yellowish Brown Clay
844	Negative	I	0-20 10YR6/4 Light Yellowish Brown Clay
845	Negative	I	0-15 5Y6/1 Gray Clay
846	Not Excavated	-	Surface Water
847	Not Excavated	-	Surface Water
848	Not Excavated	-	Surface Water
849	Not Excavated	-	Surface Water
850	Not Excavated	-	Surface Water
851	Not Excavated	-	Surface Water
852	Not Excavated	-	Surface Water
853	Negative	I	0-30 5YR6/3 Light Reddish Brown Silty Clay
		II	30-40 10YR5/2 Grayish Brown Clay
855	Negative	I	0-30 5YR6/3 Light Reddish Brown Silty Clay
		II	30-40 10YR5/2 Grayish Brown Clay
856	Negative	I	0-30 5YR6/3 Light Reddish Brown Silty Clay
		II	30-40 10YR5/2 Grayish Brown Clay
857	Negative	I	0-30 5YR6/3 Light Reddish Brown Silty Clay
		II	30-40 10YR5/2 Grayish Brown Clay
858	Negative	I	0-30 5YR6/3 Light Reddish Brown Silty Clay
		II	30-40 10YR5/2 Grayish Brown Clay
859	Negative	I	0-30 5YR6/3 Light Reddish Brown Silty Clay
		II	30-40 10YR5/2 Grayish Brown Clay
860	Negative	I	0-30 5YR6/4 Light Reddish Brown Silty Clay
		II	30-35 10YR5/2 Grayish Brown Clay

STP ID	Results	Strat	Description
861	Negative	I	0-20 10YR2/2 Very Dark Brown Silty Clay
		II	20-40 5YR4/4 Reddish Brown Silty Clay
		III	40-45 2.5YR6/4 Light Reddish Brown Silty Clay
862	Not Excavated	-	Ditch Along Elevated Road
863	Not Excavated	-	Ditch Along Elevated Road
864	Negative	I	0-40 5YR4/4 Reddish Brown Silty Clay
		II	40-45 5YR5/2 Reddish Gray Silty Clay
865	Negative	I	0-40 5YR3/4 Dark Reddish Brown Silty Clay
		II	40-45 5YR5/2 Reddish Gray Silty Clay
866	Negative	I	0-40 5YR3/4 Dark Reddish Brown Silty Clay
		II	40-45 5YR5/2 Reddish Gray Silty Clay
867	Not Excavated	-	Paved
868	Not Excavated	-	>15 degree slope
869	Not Excavated	-	Paved
870	Not Excavated	-	Paved
871	Negative	I	0-25 5YR5/3 Reddish Brown Silty Clay
		II	25-30 5YR5/6 Yellowish Red Silty Clay
872	Negative	I	0-30 5YR5/4 Reddish Brown Silty Clay
		II	30-40 5YR6/3 Light Reddish Brown Silty Clay
873	Positive Prehistoric	I	0-30 5YR5/4 Reddish Brown Silty Clay
		II	30-35 5YR6/6 Reddish Yellow Silty Clay
874	Negative	I	0-30 5YR3/3 Dark Reddish Brown Silty Clay
		II	30-35 5YR6/6 Reddish Yellow Silty Clay
878	Not Excavated	-	>15 degree slope
879	Not Excavated	-	>15 degree slope
880	Not Excavated	-	>15 degree slope
881	Not Excavated	-	>15 degree slope
882	Not Excavated	-	>15 degree slope
885	Not Excavated	-	(blank)
31CE854&854 **-N485E500	Positive Historic	I	0-36 7.5YR3/3 Dark Brown Clay Loam
		II	36-41 7.5YR6/6 Reddish Yellow Clay
31CE854&854 **-N492E500	Positive Historic	I	0-32 7.5YR3/3 Dark Brown Clay Loam
		II	32-36 7.5YR6/6 Reddish Yellow Clay
31CE854&854 **-N500E507	Positive Historic	I	0-20 7.5YR4/2 Brown Silty Clay
		II	20-30 5YR4/3 Reddish Brown Clay
31CE854&854 **-N507E500	Negative	I	0-15 10YR4/4 Dark Yellowish Brown Silty Loam
31CE854&854 **-N515E507	Negative	I	0-20 7.5YR5/6 Strong Brown Clay Loam
		II	20-25 5YR4/3 Reddish Brown Clay
31CE855-N477E500	Positive Prehistoric	I	0-20 10YR4/3 Brown Sandy Clay Loam
		II	20-28 10YR6/3 Pale Brown Clay
31CE855-N485E492	Negative	I	0-25 10YR5/2 Grayish Brown Clay Loam
		II	25-35 10YR5/4 Yellowish Brown Clay
31CE855-N485E507	Positive Prehistoric	I	0-20 10YR5/2 Grayish Brown Clay Loam
		II	20-30 10YR5/4 Yellowish Brown Clay
31CE855-N492E500	Negative	I	0-20 10YR4/3 Brown Silty Loam
		II	20-29 10YR6/3 Pale Brown Silty Clay

STP ID	Results	Strat	Description
31CE855-N500E492	Negative	I	0-12 7.5YR3/3 Dark Brown Silty Clay Loam
		II	12-25 2.5Y6/4 Light Yellowish Brown Clay
31CE855-N500E507	Negative	I	0-16 10YR5/3 Brown Silty Loam
		II	16-21 10YR6/3 Pale Brown Silty Clay
31CE855-N507E515	Positive Prehistoric	I	0-14 10YR4/3 Brown Silty Loam
		II	14-19 10YR6/3 Pale Brown Silty Clay
31CE855-N507E522	Not Excavated	-	Raised Landscaped Mound Area
31CE855-N507E530	Positive Prehistoric	I	0-25 7.5YR4/2 Brown Silty Loam
		II	25-35
31CE855-N522E515	Negative	I	0-17 7.5YR4/4 Brown Silty Clay Loam
		II	17-26 2.5Y6/4 Light Yellowish Brown Clay
31CE856**-N492E500	Negative	I	0-14 10YR4/6 Dark Yellowish Brown Silty Loam
		II	14-23 10YR6/4 Light Yellowish Brown Sandy Clay
31CE856**-N500E507	Negative	I	0-22 10YR3/4 Dark Yellowish Brown Silty Loam
		II	22-31 10YR6/4 Light Yellowish Brown Sandy Clay
31CE856**-N507E500	Negative	I	0-4 10YR4/3 Brown Silty Clay Loam
		II	4-14 10R5/8 Red Clay
31CE857**-N492E500	Negative	I	0-34 7.5YR3/3 Dark Brown Silty Clay Loam
		II	34-40 7.5YR6/6 Reddish Yellow
31CE857**-N500E492	Negative	I	0-13 5YR3/4 Dark Reddish Brown Silty Clay Loam
31CE857**-N500E507	Negative	I	0-22 10YR4/4 Dark Yellowish Brown Silty Loam
		II	22-31 2.5YR3/6 Dark Red Clay
31CE857**-N507E500	Not Excavated	-	Gravel Driveway
31CE96-N372E470	Not Excavated	-	Building
31CE96-N380E462	Negative	I	0-30 10YR5/2 Grayish Brown Clay Loam
		II	30-40 7.5YR5/2 Brown Clay
31CE96-N380E477	Negative	I	0-30 2.5Y5/2 Grayish Brown Clay Loam
		II	30-40 10YR5/3 Brown Clay
31CE96-N387E470	Not Excavated	-	Buried Utilities
31CE96-N440E455	Positive Prehistoric	I	0-30 7.5YR4/2 Brown Silty Loam
		II	30-40 5YR4/3 Reddish Brown Silty Clay
31CE96-N440E462	Positive Prehistoric	I	0-30 7.5YR4/2 Brown Silty Clay Loam
		II	30-40 5YR4/3 Reddish Brown Silty Clay
31CE96-N470E455	Negative	I	0-20 7.5YR4/2 Brown Silty Loam
		II	20-30 5YR4/3 Reddish Brown Silty Clay

STP ID	Results	Strat	Description
31CE96-N500E445	Negative	I	0-15 7.5YR4/2 Brown Clay Loam
		II	15-20 2.5YR4/3 Reddish Brown Clay
		III	20-30 10YR6/6 Brownish Yellow Clay