



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

April 18, 2023

U. S. Army Corps of Engineers
Regulatory Field Office
151 Patton Avenue, Room 208
Asheville, NC 28805

NC Division of Water Resources
Transportation Permitting Branch
1617 Mail Service Center
Raleigh NC 27699-1617

ATTN: Ms. Lori Beckwith
NCDOT Coordinator

Mr. Kevin Mitchell
NCDOT Coordinator

Subject: **Application for Section 404 Permit and Section 401 Water Quality Certification** for the proposed new interchange on I-26 (future exit 35) and roadway extension, Buncombe County, Division 13.
Debit \$570 from WBS No. 49472.1.2, **TIP: HE-0001**

Dear Madam & Sir:

The North Carolina Department of Transportation (NCDOT) proposes to construct a new interchange on I-26 (future exit 35). The proposed project is located approximately 6 miles south of Asheville along I-26, north of the Blue Ridge Parkway and south of the French Broad River bridge. The proposed interchange would be constructed primarily within the existing right-of-way of I-26, which currently is under construction to be widened from 2 lanes in each direction to 4 lanes in each direction as part of TIP project I-4700. The proposed roadway extension will connect to East Frederick Law Olmsted Way (East FLOW), a 2-lane facility constructed by a private developer (Biltmore Farms, LLC). East FLOW is currently open to traffic and is a State-maintained facility. Upon completion of HE-0001, East FLOW will connect I-26 to NC 191 via a 2-lane roadway with auxiliary/turn lanes at intersection approaches as needed.

Purpose and Need:

Need: The proposed project is needed to address the lack of network connectivity between NC 191 and I-26 in southern Buncombe County to accommodate current and planned growth.

Purpose: The purpose of the project is to provide access to I-26 and improve east-west connectivity within the project vicinity to accommodate current and planned growth.

Other desirable outcomes of the proposed project include:

- improved traffic safety due to greater separation of local traffic from interstate traffic;
- improved emergency response times to the area including Pratt & Whitney Manufacturing Center, Biltmore Park West property, and sections of NC 191 and I-26;
- consistency with local and regional economic development initiatives in the project vicinity;
- improved access to current and anticipated regional employment opportunities and improved access to tourist destinations.

NEPA DOCUMENT STATUS

A Type III Categorical Exclusion Action Classification Form was completed in August 2022 and is included in this application package.

MERGER SUMMARY

Concurrence Point	Meeting Date
1 Purpose and Need	07/15/2021
2 Alternatives to be Studied in Detail	07/15/2021
2A Bridging Decisions and Alignment Review	09/16/2021
3 Least Environmentally Damaging Practicable Alternative	02/09/2022
4A Avoidance and Minimization Measures	06/15/2022
4B Hydraulic Review	08/17/2022
4C Hydraulic/Permit Plan Review	01/25/2023

IMPACTS TO WATERS OF THE U.S. and AVOIDANCE, MINIMIZATION, AND MITIGATION

The following tables display avoidance and minimization measures in preliminary design, actual project impacts to jurisdictional wetlands and streams, and then specific avoidance and minimization measures at each impact site.

Avoidance and Minimization Measures Implemented in Preliminary Design

Location	Measure
Concept/ Project Development	Eliminated concepts from consideration during the scoping phase of the project for a variety of factors and feasibility concerns, including avoiding and minimizing potential impacts to the French Broad River (FBR) floodplain/wetland complex, residential and commercial developments north of the FBR, and the Biltmore Estate National Historic Landmark (NHL) property.
Project Study Area	Reduced Project Study Area to avoid and minimize potential impacts to the FBR floodplain and known potential jurisdictional resources.
Detailed Study Alternatives	• Did not consider alternatives with the potential to have direct effects to the Blue Ridge Parkway. • Considered and eliminated alternatives with the potential to have direct effects to the Biltmore Estate NHL.
Two-lane -Y-Line Typical Section	Two-lane roadway with curb and gutter typical section (opposed to 4-lane divided with grassed shoulder typical section) to accommodate future traffic volumes, noting auxiliary lanes will likely be required at intersection approaches. This results in less ROW requirements and will minimize impacts at proposed stream crossings and reduce tree clearing requirements.
-Y-Line Alignment	Shift the roadway alignment to the southeast to minimize potential impacts to Stream SA. Following CP 3, per NCDWR request, NCDOT shifted -y-line alignment to: • improve Stream SA crossing skew, reducing potential impacts by approx. 100 ft, • avoid 0.03 ac impact to Wetland WD, and • avoid 0.01 ac impact to Wetland WH.
Ramp -C- Retaining Walls	Following CP 3, retaining walls were refined in conjunction with the DDI design and Ramp-C- Alignment shift (described below) in the same general locations.
Ramp -C- Alignment	Following CP 3, shift ramp alignment between <1 ft to about 18 ft to the east (closer to I-26 westbound travel lanes) to: • improve constructability of the proposed retaining walls, • avoid approx. 120 ft of impacts to Stream SDY and Stream SDZ, • avoid approx. <0.1 ac impacts to Wetland WCR, • minimize impact to Stream SDX by approx. 175 ft, and • minimize impacts to Wetland IDs WCS and WCN by approx. <0.1 ac.
Channel Change (Stream SDX)	Following CP 4B, NCDOT determined that the Ramp-D- Retaining Wall (described below) was not feasible. A stream channel relocation was designed for Stream SDX. Though this does not avoid required compensatory mitigable impacts to a jurisdictional aquatic resource, daylighting a stream channel is preferable to enclosing in a pipe or structure. In total, approx. 225 feet of Stream SDX will be daylighted.
Ramp -A- Headwall	A headwall is included on the upstream side of the 54-inch pipe that will convey Stream SA under Ramp -A-. The inclusion of the headwall minimizes stream channel impacts and avoids impacts to the adjacent Wetland WQ.
Ramp -B- Retaining Wall	An approx. 225-ft retaining wall is used along Ramp -B- to avoid fill impacts to the perpendicular Stream SH.
Culvert Extension	Following CP 4C, the proposed culvert extension was shortened by approx. 60 feet due to revisions to the Ramp -D- design slope stakes. As a result: • Approx. 60 feet more of stream SDX is daylighted (this is included in the approx. 225 feet of Stream SDX that will be daylighted with the channel change described above), • A stormwater control device was removed from the culvert extension and will now receive treatment before entering Stream SDX

Avoidance Measures Investigated but not implemented	
Ramp -C- Alignment	NCDOT reviewed a revised Ramp -C- alignment because of challenges associated with bridging Stream SDX (discussed at CP 2A). An approx. 325-ft bridge was reviewed in the I-26 bifurcated section to avoid and minimize potential impacts to Stream SDX and Wetland WCN. The bridge clearance was 6 feet and would not provide the environmental benefit for the wetland feature.
Ramp -D- Retaining Wall	NCDOT included approx. 1,400 feet of retaining walls to avoid and minimize approx. 1,100 feet of potential impacts to Stream SDX and approx. <0.1 ac of wetlands in the I-26 bifurcated section through preliminary design and shown at CP 3, CP 4A and CP 4B. During detailed design NCDOT determined the retaining walls were not feasible and were removed from the project design.

Site numbers in the tables below correspond with the permit (hydraulic) drawings included in this application and with the PJD package, dated September 2021. NCDOT received the PJD authorization from the USACE, dated September 8, 2022.

Wetland Impacts HUC 06010105 (French Broad)

Permit Site / Wetland ID	NC WAM Classification	Wetland Size (ac)	Perm. Fill in Wetlands (ac)	Excavation (ac)	Mechanized Clearing (ac)	Impact Description/ Avoidance and Minimization
1 / WCN	Headwater Forest	0.13	<0.01	0	0.01	Fill in Wetland due to construction of Ramp-C. Mechanized Clearing for construction access. Construction of MSE retaining wall /reinforced slope along Ramp-C to reduce permanent impacts.
2 / WCS	Headwater Forest	0.05	0.016	0	0.03	Fill in Wetland due to construction of Ramp-C. Mechanized Clearing for construction access. Will try not to utilize this impact if possible. Construction of MSE retaining wall/reinforced slope along Ramp-C to reduce permanent impacts.
3 / WCQ	Headwater Forest	<0.01	<0.01	0	0	Fill in Wetland due to construction of Ramp-C and interchange.
4 / WQ	Bottomland Hardwood Forest	0.135	0	0	0.02	Mechanized Clearing due to construction of Ramp-A and installation of proposed 54" RCP. No permanent impacts. Construction of MSE retaining wall/reinforced slope along Ramp-A to avoid permanent impacts.
5 /	Headwater Forest	0	0	0	0	<i>No Wetland impacts at this site.</i>
6 / WH	Headwater Forest	0.007	0	0.007	0	Excavation in Wetland due to outlet of proposed 24" RCP.
Totals by Impact Type:			0.036	0.007	0.060	
Total Permanent Wetland Impacts:			0.103			
Total Required Mitigation:			0.103 (@2:1=0.206)			

Stream Impacts in French Broad River Basin 06010105

Permit Site / Stream ID	Stream Name	Status/Class	Impact Type	Length	Temporary Impact (length)	ACOE Mitigation Required	DWR Mitigation Required	Impact Description/ Avoidance and Minimization
1 / SDX	UT FBR	Perennial	Perm. Fill (loss)	--	--	--	--	No stream channel impacts this site.
			Bank Stabilization	--	--	--	--	
		C	Embedded rip-rap	--	--	--	--	No stream channel impacts this site.
			Temporary Fill	--	--	--	--	
2 / SDX	UT FBR	Perennial	Perm. Fill (loss)	--	--	--	--	No stream channel impacts this site.
			Bank Stabilization	--	--	--	--	
		C	Embedded rip-rap	--	--	--	--	No stream channel impacts this site.
			Temporary Fill	--	--	--	--	
3 / SDX	UT FRB	Perennial	Perm. Fill (loss)	512	--	512 (1:1)	512	Construction of interchange, installation of 66" RCP and extension of proposed 9'x7' RCBC.
			Bank Stabilization	--	--	--	--	
		C	Embedded rip-rap	--	--	--	--	Channel change and day light 175' between proposed 9'x7' RCBC and 66" RCP.
			Temporary Fill	--	73	--	--	
4 / SA-A	UT to FBR	Perennial	Perm. Fill (loss)	50	--	50 (2:1)	--	Construction of Ramp-A and installation of proposed 54" RCP.
			Bank Stabilization	--	--	--	--	
		C	Embedded rip-rap	--	--	--	--	Utilized MSE retaining wall/reinforced slope to reduce permanent impacts.
			Temporary Fill	--	16	--	--	
5 / SG	UT to FBR	Perennial	Perm. Fill (loss)	160	--	160 (2:1)	--	Construction of new roadway and installation of 30" RCP.
			Bank Stabilization		--	--	--	
		C	Embedded rip-rap		--	--	--	
			Temporary Fill		40	--	--	
6 / SE	UT to FBR	Perennial	Perm. Fill (loss)	114	--	114 (2:1)	--	Construction of new roadway and installation of 24" RCP.
			Bank Stabilization	--	--	--	--	
		C	Embedded rip-rap	--	--	--	--	
			Temporary Fill	--	45	--	--	
7 / SA	UT to FBR	Perennial	Perm. Fill (loss)	145	--	145 (2:1)	--	Construction of new roadway and installation of 36" RCP.
			Bank Stabilization	--	--	--	--	
		C	Embedded rip-rap	--	--	--	--	
			Temporary Fill	--	16	--	--	
Total Stream Impacts:				981	190	469 (2:1) = 938 512 (1:1) = 512	512	
Total Required Mitigation:						1,450		

MITIGATION SUMMARY

Mitigation for the unavoidable impacts for this project will be handled by mitigation banks and the NC Division of Mitigation Services (DMS).

Wetlands:

DMS has accepted mitigation for the 0.1 acre of unavoidable impacts associated with HE-0001. Please see attached DMS acceptance letter.

Streams:

The Dead Oak Mitigation Site is part of the RES French Broad 05 Umbrella mitigation bank. The 41.58-acre project is located approximately one mile northwest of Alexander in Buncombe County, North Carolina.

NCDOT has acquired stream credits from the Dead Oak mitigation site sponsored by EBX in order to offset impacts associated with future TIP's within HUC 06010105. EBX will be debiting the Dead Oak mitigation site for 1,450 linear feet, to offset unavoidable impacts associated with HE-0001. This debit is listed below with the appropriate ratios applied.

Debits			
PO Number	TIP	Debit Amount	Notes
7700002202	HE-0001	1,450	469 lf @ 2:1 512lf @1:1 (impacts)

FEDERALLY PROTECTED SPECIES

Plants and animals with Federal classification of Endangered (E) or Threatened (T) are protected under provisions of Section 7 and Section 9 of the Endangered Species Act of 1973, as amended.

As of the date of this letter, the USFWS Information for Planning and Consultation (IPaC) lists the following federally protected species in the project area:

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Myotis grisescens</i>	Gray bat	Endangered	Yes	MANLAA*
<i>Myotis septentrionalis</i>	Northern long-eared bat	Threatened	Yes	MANLAA
<i>Perimyotis subflavus</i>	Tricolored bat	Proposed Endangered	Yes	MANLAA
<i>Glyptemys muhlenbergii</i>	Bog turtle	T(S/A)	No	Not Required
<i>Alasmidonta raveneliana</i>	Appalachian elktoe	Endangered	No	MANLAA*
<i>Sarracenia rubra ssp. jonesii</i>	Mountain sweet pitcher plant	Endangered	No	No Effect
<i>Gymnoderma lineare</i>	Rock gnome lichen	Endangered	No	No Effect
T(S/A) - Threatened due to similarity of appearance; MANLAA - May Affect–Not Likely to Adversely Affect; * Biological Conclusion includes NCDOT commitment implementation of Conservation Measures outlined in the Informal Consultation USFWS letter dated July 22, 2022				

INDIRECT CUMULATIVE IMPACT ANALYSIS

The proposed project may impact travel patterns, reduce travel time, and may affect access to properties in the area, or open areas for development or redevelopment. Due to the potential transportation impact-causing activities, this project may influence nearby land uses or stimulate growth. For these reasons, an Indirect and Cumulative Effects (ICE) and Land Use Scenario Assessment (LUSA) was completed according to NCDOT procedure.

The LUSA Matrix concluded that the rankings for the various development categories are similar for the future (2045) No-Build and Build scenarios. This does not imply that additional development is not anticipated to occur within the Probable Development Areas (PDAs), but that effects of additional development are not quantifiably different between the future No-Build and Build scenarios (i.e., with or without HE-0001). Based on the results from the LUSA Matrix a Cumulative Effects Assessment is not required.

CULTURAL RESOURCES

In order to comply with Section 106 of the National Historic Preservation Act (1966) (NHPA), as amended, FHWA and NCDOT must evaluate the project's impact upon any extant architectural and archaeological resources and determine if additional measure(s) will be necessary to mitigate any adverse effects of the project upon any significant properties and sites.

In accordance with Section 106 of the NHPA, NCDOT and FHWA consulted with appropriate parties in the determination of effects to the four above-ground historic architectural properties and one archaeological property at a series of meetings:

October 7, 2021 - NCDOT and FHWA hosted a Pre-effects Meeting with the NC HPO and the National Park Service (NPS)-Blue Ridge Parkway. The Blue Ridge Parkway was the topic of discussion.

February 4, 2022 - NCDOT and FHWA hosted an Effects Meeting with NC HPO, NC Office of State Archaeology (OSA), NPS-Blue Ridge Parkway, and Biltmore Estate. All historic properties were reviewed for effects. Concurrence was reached on all historic properties except the Blue Ridge Parkway.

March 18, 2022 - NCDOT and FHWA hosted a follow-up Effects Meeting for the Blue Ridge Parkway with NC HPO, the NPS-Blue Ridge Parkway, Buncombe County, and Biltmore Farms, LLC (landowner). The Blue Ridge Parkway was the topic of discussion.

May 11, 2022 - NCDOT and FHWA hosted a second follow-up Effects Meeting for the Blue Ridge Parkway with NC HPO, the NPS-Blue Ridge Parkway, Buncombe County, and Biltmore Farms, LLC. The Blue Ridge Parkway was the topic of discussion.

June 29, 2022 - NCDOT and FHWA hosted a final Effects Meeting to reach concurrence on a No Adverse Effect, with conditions determination for the Blue Ridge Parkway.

The following effects determinations were made for the Preferred Alternative through consultation:

Historic Property (State ID)	Status	Effect
Biltmore Estate (BN1835)	NHL	No Effect
Blue Ridge Parkway (NC0001)	NR eligible; NHL pending	No Adverse Effect, with conditions
French Broad River Gaging Station (BN6468)	NR eligible	No Effect
Bent Creek Campus (BN0898)	NR eligible	No Effect
(32BN1119)	NR eligible	No Effect

FEMA COMPLIANCE

The project has been coordinated with appropriate state and local officials and the Federal Emergency Management Agency (FEMA) to assure compliance with FEMA, state, and local floodway regulations.

REGULATORY APPROVALS

Please find enclosed Eng. Form 4345, Mitigation Acceptance Letter(s), Stormwater Management Plan (SMP), US Fish and Wildlife Service Informal Consultation Correspondence, Permit drawings, Section 106 Correspondence, including Historic Archaeology and Properties forms, Tribal Coordination, Concurrence Meeting Minutes, and NEPA document.

Application is hereby made for the following regulatory approvals for the above-described activities:

Section 404: USACE Individual Permit.

Section 401: Water Quality Certification from the N.C. Division of Water Resources. In compliance with Section 143 215.3D(e) of the NCAC, we will provide \$570.00 to act as payment for processing the Section 401 permit application previously noted in this application (see Subject line).

Thank you for your assistance with this project. If you have any questions or need additional information, please contact Michael Turchy at maturchy@ncdot.gov. A copy of this application and distribution list will also be posted on the NCDOT website at: <http://connect.ncdot.gov/resources/Environmental/Pages>.

Sincerely,



Michael Turchy
Environmental Coordination and Permitting Group Leader
Environmental Analysis Unit

ec: NCDOT Permit Application Standard Distribution List.

ENG 4345

Form

**U.S. ARMY CORPS OF ENGINEERS
APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT**

33 CFR 325. The proponent agency is CECW-CO-R.

OMB APPROVAL NO. 0710-0003
EXPIRES: 28 FEBRUARY 2013

Public reporting for this collection of information is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of the collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters, Executive Services and Communications Directorate, Information Management Division and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE
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(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME First - Michael Middle - A Last - Turchy Company - North Carolina Department of Transportation E-mail Address - maturchy@ncdot.com		8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required) First - Middle - Last - Company - E-mail Address -	
6. APPLICANT'S ADDRESS: Address- 1598 Mail Service Center City - Raleigh State - NC Zip - 27699 Country - USA		9. AGENT'S ADDRESS: Address- City - State - Zip - Country -	
7. APPLICANT'S PHONE NOS. w/AREA CODE a. Residence b. Business c. Fax 919 707-6000		10. AGENTS PHONE NOS. w/AREA CODE a. Residence b. Business c. Fax	

STATEMENT OF AUTHORIZATION

11. I hereby authorize, _____ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

SIGNATURE OF APPLICANT

DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions) Proposed new interchange on I-26 (future exit 35) and roadway extension, Buncombe County, TIP HE-0001			
13. NAME OF WATERBODY, IF KNOWN (if applicable) UTs of French Broad River		14. PROJECT STREET ADDRESS (if applicable) Address I-26, mile marker 35	
15. LOCATION OF PROJECT Latitude: °N 35.50378 Longitude: °W -82.57796		City - Asheville State- NC Zip-	
16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions) State Tax Parcel ID Municipality Section - Township - Range -			

17. DIRECTIONS TO THE SITE

The North Carolina Department of Transportation (NCDOT) proposes to construct a new interchange on I-26 / future exit 35. The proposed project is located approximately 6 miles south of Asheville along I-26, north of the Blue Ridge Parkway and south of the French Broad River bridge.

18. Nature of Activity (Description of project, include all features)

Linear Transportation with logical termini: The proposed interchange would be constructed primarily within the existing right-of-way of I-26, which currently is under construction to be widened from 2 lanes in each direction to 4 lanes in each direction as part of TIP project I-4700. The proposed roadway extension will connect to East Frederick Law Olmsted Way (East FLOW), a 2-lane facility constructed by a private developer (Biltmore Farms, LLC). East FLOW is currently open to traffic and is a State maintained facility. Upon completion of HE-0001, East FLOW will connect I-26 to NC 191 via a 2-lane roadway with auxiliary/turn lanes at intersection approaches as needed.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

Need: The proposed project is needed to address the lack of network connectivity between NC 191 and I-26 in southern Buncombe County to accommodate current and planned growth.

Purpose: The purpose of the project is to provide access to I-26 and improve east-west connectivity within the project vicinity to accommodate current and planned growth.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

Linear Transportation with logical termini: HE-0001 would include unavoidable fill discharges into UTs of the French Broad River associated with the practicable construction of the proposed I-26 interchange (future exit 35), including access ramps, and interchange roadway approach connection to the existing East FLOW. This proposed fill in jurisdictional waters is for roadway shoulder slope construction and culvert crossings of UTs of the French Broad River that are included in the proposed project construction.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type	Type	Type
Amount in Cubic Yards	Amount in Cubic Yards	Amount in Cubic Yards

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres 0.103 acre of JD Wetland fill
or

Linear Feet 981 linear feet of permanent JD stream channel fill & 190 linear feet of temporary stream channel impact for dewatering.

23. Description of Avoidance, Minimization, and Compensation (see instructions)

See attached page for description of project development avoidance and minimization.

Applicant agrees to supply appropriate compensatory mitigation for unavoidable impacts to JD Wetlands and Stream Channels associated with the construction of the referenced transportation project.

24. Is Any Portion of the Work Already Complete? ☐ Yes ☒ No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

a. Address- Raytheon Technologies, P.O. Box 7000

City - Greenville

State - TX

Zip - 75403

b. Address- Biltmore Farms LLC, P.O. Box 5355

City - Asheville

State - NC

Zip - 28813

c. Address- Biltmore Company, 1 N Pack SQ Suite 400

City - Asheville

State - NC

Zip - 28801

d. Address- National Park Service Blue Ridge Parkway, 199 Hemphill Knob Road

City - Asheville

State - NC

Zip - 28803

e. Address-

City -

State -

Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

 13-April-2023
SIGNATURE OF APPLICANT DATE

SIGNATURE OF AGENT DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

Project Submittal Interim Form

Updated September 4, 2020



*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.*

Project Type: *

- ☐ For the Record Only (Courtesy Copy)
- ☒ New Project
- ☐ Modification/New Project with Existing ID
- ☐ More Information Response
- ☐ Other Agency Comments
- ☐ Pre-Application Submittal
- ☐ Re-Issuance/Renewal Request
- ☐ Stream or Buffer Appeal

Submittal Type: *

Individual

Pre-Filing Meeting Date Request was submitted on:

1/25/2023

Project Contact Information

Name:

Michael Turchy

Who is submitting the information?

Email Address: *

maturchy@ncdot.gov

Project Information

Project Name: *

HE-0001

Is this a public transportation project? *

- ☒ Yes
- ☐ No

Is this a DOT project? *

- ☒ Yes
- ☐ No

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

- ☐ Yes ☒ No ☐ Unknown

Is this project connected with ARPA funding? *

- ☐ Yes ☒ No

TIP#:

HE-0001

WBS#:

49742.1.2

(Applies to DOT projects only)

County (ies) *

Buncombe

Please upload all files that need to be submitted.

[Click the upload button or drag and drop files here to attach document](#)

HE-0001 Buncombe April 2023.pdf

37.44MB

[Only pdf or kmz files are accepted.](#)

Describe the attachments or add comments:

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

- I, the project proponent, hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief.
- I, the project proponent, hereby requests that the certifying authority review and take action on this CWA 401 certification request within the applicable reasonable period of time.
- I agree that submission of this online 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 online form.

Signature: *

A rectangular box containing a handwritten signature in black ink that reads "Michael Turchy".

Submittal Date:

Mitigation

ROY COOPER

Governor

ELIZABETH S. BISER

Secretary

MARC RECKTENWALD

Director



NORTH CAROLINA
Environmental Quality

April 13, 2023

Mr. Jamie Lancaster, P.E.
Environmental Analysis Unit
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Dear Mr. Lancaster:

Subject: Mitigation Acceptance Letter:

HE-0001, Construction of New Interchange – I-26 and Frederick L. Olmstead Way, Buncombe County

The purpose of this letter is to notify you that the North Carolina Department of Environmental Quality – Division of Mitigation Services (NCDEQ-DMS) will provide the mitigation for the subject project. Based on the information received from you on March 28, 2023, the impacts are located in CU 06010105 of the French Broad River basin in the Southern Mountains (SM) Eco-Region, and are as follows:

French Broad 06010105	Stream			Wetlands			Buffer (Sq. Ft.)	
	Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh	Zone 1	Zone 2
Impacts (feet/acres)	0	0	0	0.100	0	0	0	0

The impacts and associated mitigation needs were not projected by the NCDOT in the 2023 impact data. NCDEQ – DMS commits to implementing sufficient compensatory mitigation credits to offset the impacts associated with this project as determined by the regulatory agencies using the delivery timeline listed in Section F.3.c.iii of the In-Lieu Fee Instrument dated July 28, 2010. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from NCDEQ-DMS.

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

Sincerely,

Elizabeth Harmon

for James B. Stanfill
DMS Deputy Director

cc: Mr. Monte Matthews, USACE – Raleigh
Ms. Amy Chapman, NCDWR
File: HE-0001



North Carolina Department of Environmental Quality | Division of Mitigation Services
217 West Jones Street | 1652 Mail Service Center | Raleigh, North Carolina 27699-1652
919.707.8976

Pre and Post Stormwater Analysis

and

SELDM Design Information

Project: HE-0001
Designer: NW
Date: 2/13/2023

Pre/Post Stormwater Analysis

Replaced by 5/2/2023
Version

10yr

PRE

Interchange								
Identification	Runoff C	Drainage Area	Time of Conc.	Time Used	Intensity	Discharge	Velocity	Shear
9'x7' RCBC	COMPUTED USING HEC RAS					180.00	13.75	
55" RCP	0.20	116.00	10.00	10.00	5.30	122.96	2.00	3.50

-Y-								
Identification	Runoff C	Drainage Area	Time of Conc.	Time Used	Intensity	Discharge	Velocity	Shear
SG	0.20	10.92	10.00	10.00	5.30	11.58	5.58	2.44
SE	0.20	12.69	10.00	10.00	5.30	13.45	6.40	3.31
SA	0.20	25.23	10.00	10.00	5.30	26.74	3.59	0.91

POST

Identification	Runoff C	Drainage Area	Time of Conc.	Time Used	Intensity	Discharge	Velocity	Shear
9'x7' RCBC	COMPUTED USING HEC RAS					180.00	8.87	
55" RCP	0.22	116.00	10.00	10.00	5.30	135.26	2.10	3.70

△ Pre vs Post	% Difference
Discharge	
0.00	0.0%
12.30	9.1%

Identification	Runoff C	Drainage Area	Time of Conc.	Time Used	Intensity	Discharge	Velocity	Shear
SG	0.26	14.40	10.00	10.00	5.30	19.84	6.55	3.10
SE	0.22	12.51	10.00	10.00	5.30	14.59	6.54	3.43
SA	0.21	26.35	10.00	10.00	5.30	29.33	3.70	0.95

△ Pre vs Post	% Difference
Discharge	
8.27	41.7%
1.14	7.8%
2.58	8.8%

5yr

PRE

Interchange								
Identification	Runoff C	Drainage Area	Time of Conc.	Time Used	Intensity	Discharge	Velocity	Shear
9'x7' RCBC	COMPUTED USING HEC RAS					130.00	12.99	
55" RCP	0.20	116.00	10.00	10.00	4.70	109.04		

-Y-								
Identification	Runoff C	Drainage Area	Time of Conc.	Time Used	Intensity	Discharge	Velocity	Shear
SG	0.20	10.92	10.00	10.00	4.70	10.26	5.38	2.31
SE	0.20	12.69	10.00	10.00	4.70	11.93	6.20	3.16
SA	0.20	25.23	10.00	10.00	4.70	23.72	3.46	0.86

POST

Identification	Runoff C	Drainage Area	Time of Conc.	Time Used	Intensity	Discharge	Velocity	Shear
9'x7' RCBC	COMPUTED USING HEC RAS					130.00	7.75	
55" RCP	0.22	116.00	10.00	10.00	4.70	119.94		

△ Pre vs Post	% Difference
Discharge	
0.00	0.0%
10.90	9.1%

Identification	Runoff C	Drainage Area	Time of Conc.	Time Used	Intensity	Discharge	Velocity	Shear
SG	0.26	14.40	10.00	10.00	4.70	17.60	6.33	2.94
SE	0.22	12.51	10.00	10.00	4.70	12.94	6.33	3.26
SA	0.21	26.35	10.00	10.00	4.70	26.01	3.56	0.90

△ Pre vs Post	% Difference
Discharge	
7.33	41.7%
1.01	7.8%
2.29	8.8%

2yr

PRE

Interchange								
Identification	Runoff C	Drainage Area	Time of Conc.	Time Used	Intensity	Discharge	Velocity	Shear
9'x7' RCBC	COMPUTED USING HEC RAS					66.00	10.52	
55" RCP	0.20	116.00	10.00	10.00	3.37	78.18	1.90	3.00

-Y-								
Identification	Runoff C	Drainage Area	Time of Conc.	Time Used	Intensity	Discharge	Velocity	Shear
SG	0.20	10.92	10.00	10.00	3.90	8.52	5.08	2.12
SE	0.20	12.69	10.00	10.00	3.90	9.90	5.89	2.92
SA	0.20	25.23	10.00	10.00	3.90	19.68	3.26	0.79

POST

Identification	Runoff C	Drainage Area	Time of Conc.	Time Used	Intensity	Discharge	Velocity	Shear
9'x7' RCBC	COMPUTED USING HEC RAS					66.00	5.48	
55" RCP	0.22	116.00	10.00	10.00	3.37	86.00	2.00	3.20

△ Pre vs Post	% Difference
Discharge	
0.00	0.0%
7.82	9.1%

Identification	Runoff C	Drainage Area	Time of Conc.	Time Used	Intensity	Discharge	Velocity	Shear
SG	0.26	14.40	10.00	10.00	3.90	14.60	6.00	2.71
SE	0.22	12.51	10.00	10.00	3.90	10.73	6.02	3.02
SA	0.21	26.35	10.00	10.00	3.90	21.58	3.34	0.82

△ Pre vs Post	% Difference
Discharge	
6.08	41.7%
0.84	7.8%
1.90	8.8%

Project: HE-0001
Designer: adg
Date: 5/2/2023

Revised
5/2/2023

Pre/Post Stormwater Analysis

10yr

PRE

Interchange									
Identification	Location	Runoff C	Drainage Area	Time of Conc.	Time Used	Intensity	Discharge	Velocity	Shear
9'x7' RCBC	50' DS of outlet	COMPUTED USING HEC RAS					180.00	13.75	
54" RCP	20' DS of outlet	0.20	116.00	10.00	10.00	5.17	119.94	2.00	3.50

-Y-									
Identification	Location	Runoff C	Drainage Area	Time of Conc.	Time Used	Intensity	Discharge	Velocity	Shear
SG	100' DS of outlet	0.20	10.92	10.00	10.00	5.17	11.29	5.58	2.44
SE	100' DS of outlet	0.20	12.69	10.00	10.00	5.17	13.12	6.40	3.31
SA	100' DS of outlet	0.20	25.23	10.00	10.00	5.17	26.09	5.10	2.89

5yr

PRE

Interchange									
Identification	Location	Runoff C	Drainage Area	Time of Conc.	Time Used	Intensity	Discharge	Velocity	Shear
9'x7' RCBC	50' DS of outlet	COMPUTED USING HEC RAS					130.00	12.99	
54" RCP	20' DS of outlet	0.20	116.00	10.00	10.00	4.60	106.72		

-Y-									
Identification	Location	Runoff C	Drainage Area	Time of Conc.	Time Used	Intensity	Discharge	Velocity	Shear
SG	100' DS of outlet	0.20	10.92	10.00	10.00	4.60	10.05	5.38	2.31
SE	100' DS of outlet	0.20	12.69	10.00	10.00	4.60	11.67	6.20	3.16
SA	100' DS of outlet	0.20	25.23	10.00	10.00	4.60	23.21	4.90	2.70

2yr

PRE

Interchange									
Identification	Location	Runoff C	Drainage Area	Time of Conc.	Time Used	Intensity	Discharge	Velocity	Shear
9'x7' RCBC	50' DS of outlet	COMPUTED USING HEC RAS					66.00	10.52	
54" RCP	20' DS of outlet	0.20	116.00	10.00	10.00	3.37	78.18	1.90	3.00

-Y-									
Identification	Location	Runoff C	Drainage Area	Time of Conc.	Time Used	Intensity	Discharge	Velocity	Shear
SG	100' DS of outlet	0.20	10.92	10.00	10.00	3.82	8.34	5.08	2.12
SE	100' DS of outlet	0.20	12.69	10.00	10.00	3.82	9.70	5.89	2.92
SA	100' DS of outlet	0.20	25.23	10.00	10.00	3.82	19.28	4.70	2.31

POST

Identification	Location	Runoff C	Drainage Area	Time of Conc.	Time Used	Intensity	Discharge	Velocity	Shear
9'x7' RCBC	50' DS of outlet	COMPUTED USING HEC RAS					180.00	8.87	
54" RCP	20' DS of outlet	0.22	116.00	10.00	10.00	5.17	131.94	2.10	3.70

Identification	Location	Runoff C	Drainage Area	Time of Conc.	Time Used	Intensity	Discharge	Velocity	Shear
SG	100' DS of outlet	0.26	14.40	10.00	10.00	5.17	19.36	6.55	3.10
SE	100' DS of outlet	0.22	12.51	10.00	10.00	5.17	14.23	6.54	3.43
SA*	100' DS of outlet	0.21	22.74	10.00	10.00	5.17	25.04	5.00	2.89

△ Pre vs Post % Difference
Discharge
0.00 0.0%
11.99 9.1%

POST

Identification	Location	Runoff C	Drainage Area	Time of Conc.	Time Used	Intensity	Discharge	Velocity	Shear
9'x7' RCBC	50' DS of outlet	COMPUTED USING HEC RAS					130.00	7.75	
54" RCP	20' DS of outlet	0.22	116.00	10.00	10.00	4.70	119.94		

Identification	Location	Runoff C	Drainage Area	Time of Conc.	Time Used	Intensity	Discharge	Velocity	Shear
SG	100' DS of outlet	0.26	14.40	10.00	10.00	4.60	17.22	6.33	2.94
SE	100' DS of outlet	0.22	12.51	10.00	10.00	4.60	12.66	6.33	3.26
SA*	100' DS of outlet	0.21	22.74	10.00	10.00	4.60	22.28	4.90	2.70

△ Pre vs Post % Difference
Discharge
0.00 0.0%
13.22 11.0%

POST

Identification	Location	Runoff C	Drainage Area	Time of Conc.	Time Used	Intensity	Discharge	Velocity	Shear
9'x7' RCBC	50' DS of outlet	COMPUTED USING HEC RAS					66.00	5.48	
54" RCP	20' DS of outlet	0.22	116.00	10.00	10.00	3.37	86.00	2.00	3.20

Identification	Location	Runoff C	Drainage Area	Time of Conc.	Time Used	Intensity	Discharge	Velocity	Shear
SG	100' DS of outlet	0.26	14.40	10.00	10.00	3.82	14.30	6.00	2.71
SE	100' DS of outlet	0.22	12.51	10.00	10.00	3.82	10.51	6.02	3.02
SA*	100' DS of outlet	0.21	22.74	10.00	10.00	3.82	18.24	4.60	2.31

△ Pre vs Post % Difference
Discharge
0.00 0.0%
7.82 9.1%

△ Pre vs Post % Difference
Discharge
5.96 41.7%
0.82 7.8%
-1.03 -5.7%

*Adjusted to incorporate the energy dissipator

COMPARISON OF SELDM VS. DESIGN STORMWATER CONTROL DEVICES

May 4, 2023



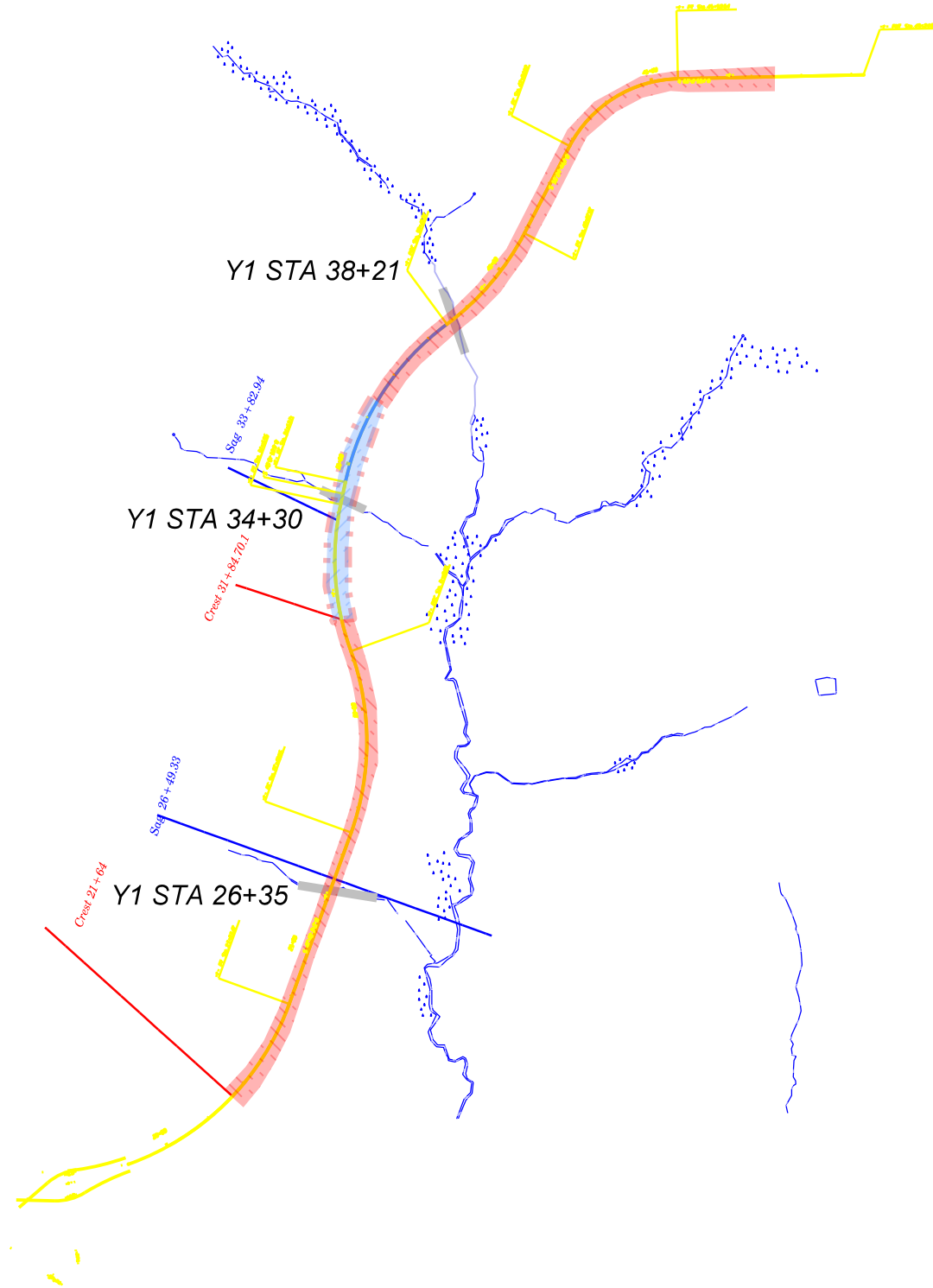
Stormwater design includes many variables including topography, current and future land use, regional regulations, and costs including resolutions to impacts associated with adjacent properties. These variables are not speculative during this phase of project development. During preliminary feasibility analysis, the goal is to anticipate potential conflicts and costs. The SELDM Catalog is a very useful tool in determining the location for likely Stormwater Control Devices (SCD). The catalog assumes all Newly Built Upon Areas (NBUA) between crests outlet at one location. Using methods determined by USGS and NCDOT, areas that show a probability of stream degradation are located and correlated to an appropriate SCD from the catalog.

The SCD used along a project are design using the NCDOT Post Construction Stormwater Program (PCSP) and BMP Toolbox Manual. More information is available, and the stormwater calculations are more refined. The outfalls in design may increase resulting in smaller NBUA's at each outlet. The roadway super elevations are provided and can split the impervious areas to opposite sides of the roadway. Therefore, the SCD required may change.

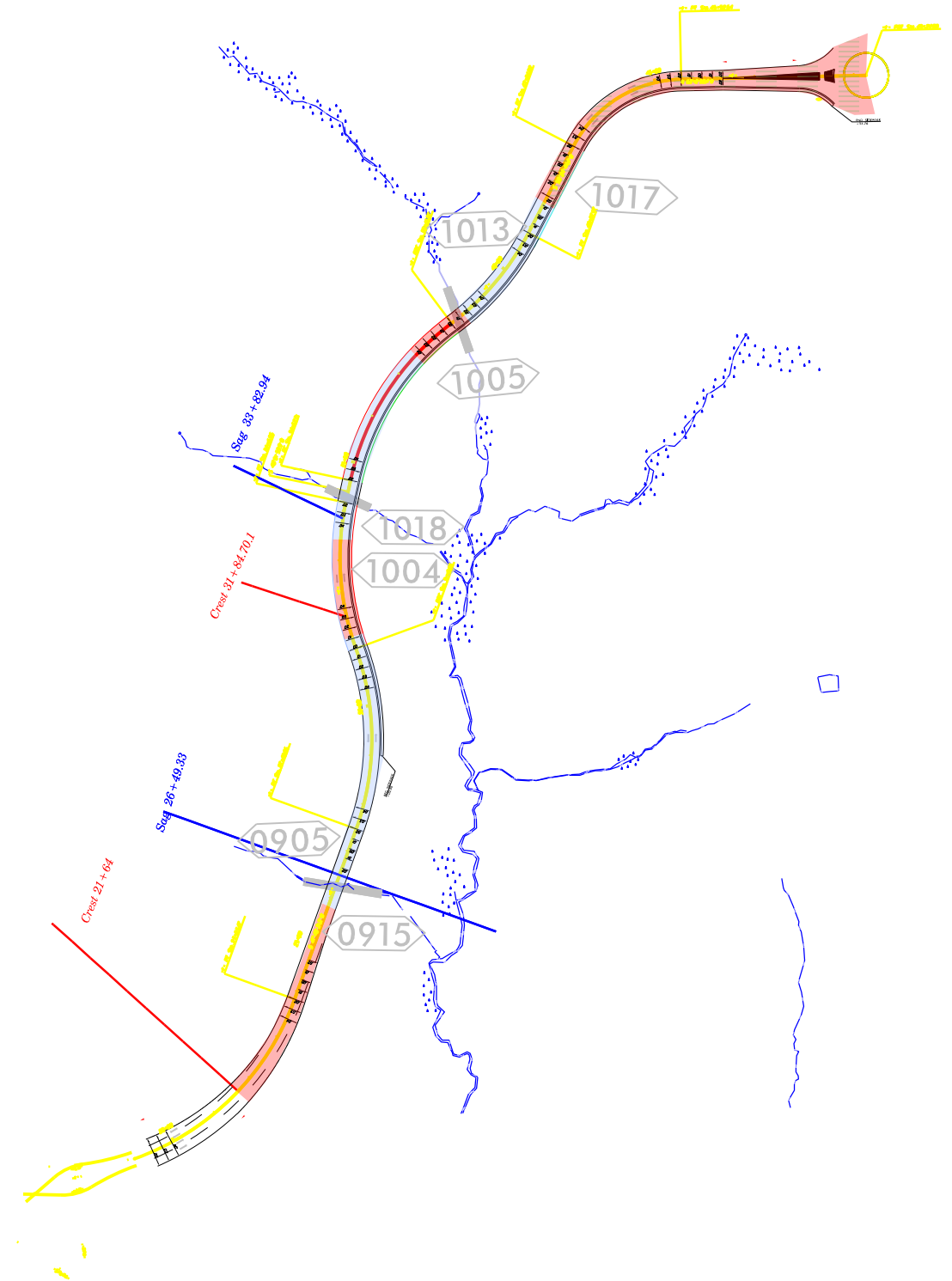
Site	Stream	SELDM		Outlet	Design	
		HWY DA (ac)	SCD Required		HWY DA (ac)	SCD Designed
1	SDX Trib	3.45	Minimum measures can be used	0506	1.12	Pre-formed Scour Hole
2	SDX	0.10	Direct discharge allowed			Included in next outlet
3	SDX	Analysis at culvert was not included in PSMP				
4	SA	1.13	Minimum measures can be used	0709	0.27	Pre-formed scour hole
				0720	0.14	Pre-formed scour hole
5	SG	0.55	Minimum measures can be used	0905	0.45	RR Energy Dissipator
				0915	0.42	RR Energy Dissipator
6	SE	0.29	Minimum measures can be used	1018	0.34	RR Pad and Base Ditch
7	SA	0.87	BMP Tool Box Device	1005	0.11	Pre-formed Scour Hole
				1017	0.69	RR Energy Dissipator
				1013	0.28	RR Pad

Attached is an example of the differences between the SELDM preliminary analysis and the design criteria. Please note the differences in drainage areas and discharges.

NEWLY BUILT UPON AREAS



SELDM NBUA



DESIGN NBUA

PRELIMINARY STORMWATER TREATMENT GOAL: SUMMARY REPORT

Preliminary stormwater treatment goal: Summary report

Project Name:	69172
Site Description:	Y1 Sta. 26+35 - SG
Conducted by:	HA
Date:	5/12/22 4:09 PM

Project Information

Upstream basin characteristics

Dominant Region:	Blue Ridge
Drainage Area:	0.0683 square miles
Basin Slope:	439.64 feet per mile
Imperviousness:	0.4 percent

Highway drainage area characteristics

Impervious area:	0.55 acres
Average Slope:	4.41 percent
Longest Drainage Length:	680 feet

Recommendation

Minimum measures can be used to treat stormwater runoff at this stream crossing.

Explanation

Based on this stream crossing's upstream basin attributes and preliminary highway design characteristics, NC SELDM simulation results suggest that highway runoff may impact downstream water quality conditions; however, those impacts could be adequately mitigated using minimum measures to treat stormwater runoff.

This report was generated from the NC SELDM Catalog, developed as part of a cooperative agreement between the North Carolina Department of Transportation (NCDOT) Hydraulics Unit and the U.S. Geological Survey (USGS) South Atlantic Water Science Center. NC SELDM documentation can be found at <https://pubs.er.usgs.gov/publication/sir20195031> and <https://doi.org/10.5066/P9LCXHLN>. For questions concerning this workbook, please contact the the NCDOT NPDES Permit Program Supervisor or the USGS South Atlantic Water Science Center Associate Director of Studies.

Preliminary stormwater treatment goal: Summary report

Project Name:	69172
Site Description:	Y1 Sta. 34+30 - WH/SE/WG
Conducted by:	HA
Date:	5/12/22 4:25 PM

Project Information

Upstream basin characteristics

Dominant Region:	Blue Ridge
Drainage Area:	0.0339 square miles
Basin Slope:	586.61 feet per mile
Imperviousness:	0.7 percent

Highway drainage area characteristics

Impervious area:	0.29 acres
Average Slope:	5.58 percent
Longest Drainage Length:	359 feet

Recommendation

Minimum measures can be used to treat stormwater runoff at this stream crossing.

Explanation

Based on this stream crossing's upstream basin attributes and preliminary highway design characteristics, NC SELDM simulation results suggest that highway runoff may impact downstream water quality conditions; however, those impacts could be adequately mitigated using minimum measures to treat stormwater runoff.

This report was generated from the NC SELDM Catalog, developed as part of a cooperative agreement between the North Carolina Department of Transportation (NCDOT) Hydraulics Unit and the U.S. Geological Survey (USGS) South Atlantic Water Science Center. NC SELDM documentation can be found at <https://pubs.er.usgs.gov/publication/sir20195031> and <https://doi.org/10.5066/P9LCXHLN>. For questions concerning this workbook, please contact the the NCDOT NPDES Permit Program Supervisor or the USGS South Atlantic Water Science Center Associate Director of Studies.

Preliminary stormwater treatment goal: Summary report

Project Name:	69172
Site Description:	Y1 Sta. 38+20.9 - SA
Conducted by:	HA
Date:	5/13/22 8:18 AM

Project Information

Upstream basin characteristics

Dominant Region:	Blue Ridge
Drainage Area:	0.036 square miles
Basin Slope:	547 feet per mile
Imperviousness:	4 percent

Highway drainage area characteristics

Impervious area:	0.87 acres
Average Slope:	0.06 percent
Longest Drainage Length:	1025 feet

Recommendation

A BMP from the BMP Toolbox should be used to treat stormwater runoff at this stream crossing.

Explanation

Based on this stream crossing's upstream basin attributes and preliminary highway design characteristics, NC SELDM simulation results suggest that highway runoff may impact downstream water quality conditions; however, those impacts could be adequately mitigated using a BMP from the BMP Toolbox to treat stormwater runoff.

This report was generated from the NC SELDM Catalog, developed as part of a cooperative agreement between the North Carolina Department of Transportation (NCDOT) Hydraulics Unit and the U.S. Geological Survey (USGS) South Atlantic Water Science Center. NC SELDM documentation can be found at <https://pubs.er.usgs.gov/publication/sir20195031> and <https://doi.org/10.5066/P9LCXHLN>. For questions concerning this workbook, please contact the the NCDOT NPDES Permit Program Supervisor or the USGS South Atlantic Water Science Center Associate Director of Studies.

DESIGN ANALYSIS

Spreader #1	
Location	-Y1- 39+00 RT
Drainage Areas Total (AC)	0.66 C
Composite C (C_c) =	0.67
Intensity (I_{10}) =	5.87 inches per hour
(Q_{10}) = $C_c * I_{10} * A$=	2.6 cubic feet per second
$Q_{ff} = C * 1 \frac{in}{hr} * A$=	0.44 cubic feet per second
Q < 10 CFS; USE PRE FORMED SCOUR	

Spreader #1	
Location	-Y1- 26+98 LT
Drainage Areas Total (AC)	3.27 C
Composite C (C_c) =	0.36
Intensity (I_{10}) =	5.87 inches per hour
(Q_{10}) = $C_c * I_{10} * A$=	6.9 cubic feet per second
$Q_{ff} = C * 1 \frac{in}{hr} * A$=	1.18 cubic feet per second
Q < 10 CFS; USE PRE FORMED SCOUR	

Spreader #1	
Location	-Y1- 33+44 LT
Drainage Areas Total (AC)	0.92 C
Composite C (C_c) =	0.70
Intensity (I_{10}) =	5.87 inches per hour
(Q_{10}) = $C_c * I_{10} * A$=	3.8 cubic feet per second
$Q_{ff} = C * 1 \frac{in}{hr} * A$=	0.64 cubic feet per second
Q < 10 CFS; USE PRE FORMED SCOUR	

Spreader #1	
Location	-Y1- 37+50 RT
Drainage Areas Total (AC)	0.16 C
Composite C (C_c) =	0.50
Intensity (I_{10}) =	5.87 inches per hour
(Q_{10}) = $C_c * I_{10} * A$=	0.5 cubic feet per second
$Q_{ff} = C * 1 \frac{in}{hr} * A$=	0.08 cubic feet per second
Q < 10 CFS; USE PRE FORMED SCOUR	

Spreader #1	
Location	-Y1- 39+10 RT
Drainage Areas Total (AC)	0.06 C
Composite C (C_c) =	0.67
Intensity (I_{10}) =	5.87 inches per hour
(Q_{10}) = $C_c * I_{10} * A$=	0.2 cubic feet per second
$Q_{ff} = C * 1 \frac{in}{hr} * A$=	0.04 cubic feet per second
Q < 10 CFS; USE PRE FORMED SCOUR	

Spreader #1	
Location	-Y1- 38+50 RT
Drainage Areas Total (AC)	0.88 C
Composite C (C_c) =	0.35
Intensity (I_{10}) =	5.87 inches per hour
(Q_{10}) = $C_c * I_{10} * A$=	1.8 cubic feet per second
$Q_{ff} = C * 1 \frac{in}{hr} * A$=	0.31 cubic feet per second
Q < 10 CFS; USE PRE FORMED SCOUR	

Permit Drawings

Replaced by
5/4/2023 submittal

4-18-2023

		North Carolina Department of Transportation Highway Stormwater Program STORMWATER MANAGEMENT PLAN FOR NCDOT PROJECTS					
(Version 3.00; Released August 2021)							
WBS Element: 49742.3		TIP/Proj No: HE-0001		County(ies): Buncombe		Page 1 of 5	
General Project Information							
WBS Element: 49742.3		TIP Number: HE-0001		Project Type: Other		Date: 4/6/2023	
NCDOT Contact:		Brendan Merithew, PE		Contractor / Designer:		Rick Tipton, PE	
Address:		NCDOT Division 13 55 Orange Street Asheville, NC 28801		Address:		Gannett Fleming One Glenwood Avenue, Suite 900 Raleigh, NC 27603	
Phone:				Phone:			
Email:				Email:			
City/Town:		Biltmore Park, NC		County(ies):		Buncombe	
River Basin(s):		French Broad		CAMA County?		No	
Wetlands within Project Limits?		Yes					
Project Description							
Project Length (lin. miles or feet):		1.016 mi		Surrounding Land Use: Wooded, Commercial/Residential			
Proposed Project							
Project Built-Up Area (ac.):		9.0 ac.		Existing Site			
Typical Cross Section Description:		Widening: 8-lane, divided with concrete median barrier. Widen paved shoulder on LT side with roadside ditches. New Location: Ramps - 1 lane w/ paved shoulder. Y line - 2 lane, divided with concrete median barrier. Paved shoulders and roadside ditches.		8-lane, divided with concrete median barrier. Paved shoulders with roadside ditches.			
Annual Avg Daily Traffic (veh/hr/day):		Design/Future: 113700		Year: 2045		Existing: 89900	
Year: 2023							
General Project Narrative: (Description of Minimization of Water Quality Impacts)		The purpose of this project is to construct a new Diverging Diamond Interchange at Exit 35 on I-26 with a new location Y-line from the interchange to a roundabout on East Frederick Law Olmsted Way. The project will be broken into two sections for construction. The first section will consist of the proposed Y-line from the interchange to the roundabout on East Frederick Law Olmsted Way. This portion of the project is new location and can be constructed in one continuous phase. The interchange will be constructed inside the currently active TIP Project I-4700. During Phase IA of construction for I-4700, the Eastbound lanes along I-26 are shifted to the inside so that the outer two lanes and shoulder can be reconstructed. Ideally, Ramps A and B as well as end bent two would be constructed first to minimize impacts to traffic. End bent one would be better suited for construction during Phase IB of I-4700 as the traffic will be shifted into the outer two lanes. During Phase II of construction for I-4700, the Westbound lanes of I-26 are shifted adjacent to EB traffic. Ramps C and D can be constructed during this period. Jurisdictional features including wetlands, and streams are all present within the project limits. The proposed drainage system for this project will primarily tie to the existing network proposed by the I-4700 project. Retaining walls are currently under design to reduce impacts along the corridor of this project.					

Revised
5/4/2023

		North Carolina Department of Transportation Highway Stormwater Program STORMWATER MANAGEMENT PLAN FOR NCDOT PROJECTS					
(Version 3.00; Released August 2021)							
WBS Element: 49742.3		TIP/Proj No: HE-0001		County(ies): Buncombe		Page 1 of 5	
General Project Information							
WBS Element: 49742.3		TIP Number: HE-0001		Project Type: Other		Date: 4/6/2023	
NCDOT Contact:		Brendan Merithew, PE		Contractor / Designer:		Rick Tipton, PE	
Address:		NCDOT Division 13 55 Orange Street Asheville, NC 28801		Address:		Gannett Fleming One Glenwood Avenue, Suite 900 Raleigh, NC 27603	
Phone:				Phone:			
Email:				Email:			
City/Town:		Biltmore Park, NC		County(ies):		Buncombe	
River Basin(s):		French Broad		CAMA County?		No	
Wetlands within Project Limits?		Yes					
Project Description							
Project Length (lin. miles or feet):		1.016 mi		Surrounding Land Use:		Wooded, Commercial/Residential	
		Proposed Project		Existing Site			
Project Built-Upon Area (ac.):		9.0 ac.		3.6 ac.			
Typical Cross Section Description:		Widening: 8-lane, divided with concrete median barrier. Widen paved shoulder on LT side with roadside ditches. New Location: Ramps - 1 lane w/ paved shoulder. Y line - 2 lane, divided with concrete median barrier. Paved shoulders and roadside ditches.		8-lane, divided with concrete median barrier. Paved shoulders with roadside ditches.			
Annual Avg Daily Traffic (veh/hr/day):		Design/Future: 113700		Year: 2045		Existing: 89900	
						Year: 2023	
General Project Narrative: (Description of Minimization of Water Quality Impacts)		The purpose of this project is to construct a new Diverging Diamond Interchange at Exit 35 on I-26 with a new location Y-line from the interchange to a roundabout on East Frederick Law Olmsted Way. The project will be broken into two sections for construction. The first section will consist of the proposed Y-line from the interchange to the roundabout on East Frederick Law Olmsted Way. This portion of the project is new location and can be constructed in one continuous phase. The interchange will be constructed inside the currently active TIP Project I-4700. During Phase IA of construction for I-4700, the Eastbound lanes along I-26 are shifted to the inside so that the outer two lanes and shoulder can be reconstructed. Ideally, Ramps A and B as well as end bent two would be constructed first to minimize impacts to traffic. End bent one would be better suited for construction during Phase IB of I-4700 as the traffic will be shifted into the outer two lanes. During Phase II of construction for I-4700, the Westbound lanes of I-26 are shifted adjacent to EB traffic. Ramps C and D can be constructed during this period. Jurisdictional features including wetlands, and streams are all present within the project limits. The proposed drainage system for this project will primarily tie to the existing network proposed by the I-4700 project. Retaining walls are currently under design to reduce impacts along the corridor of this project. Preliminary analysis using NCDOT SELDM catalog determined most outlets required minimum measures. Where the SELDM catalog suggested using the BMP Toolbox, the areas were reevaluated in the design phase for requirements at the outlets. Attached is a SELDOM vs Design document explaining in further detail.					

Replaced by
5/4/2023 submittal

4-18-2023

North Carolina Department of Transportation			
Highway Stormwater Program STORMWATER MANAGEMENT PLAN FOR NCDOT PROJECTS			
Version 3.00; Released August 2021		Page 2 of 5	
WBS Element: 49742.3	TIP/Proj No.: HE-0001	County(ies): Buncombe	
General Project Information			
Waterbody Information			
Surface Water Body (1):	FBR	NCDWR Stream Index No.:	6-(54.75)
NCDWR Surface Water Classification for Water Body	Primary Classification:	Class B	
	Supplemental Classification:	None	
Other Stream Classification:	None		
Impairments:	None		
Aquatic T&E Species?	Yes	Comments:	FBR is occupied by the endangered Appalachian elktoe habitat.
NRTR Stream ID:	FBR	Buffer Rules in Effect:	N/A
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A
Deck Drains Discharge Over Water Body?	N/A	Dissipator Pads Provided in Buffer?	
(If yes, provide justification in the General Project Narrative)			
Surface Water Body (2):			
Surface Water Body (2):	UT to FBR (SA)	NCDWR Stream Index No.:	N/A
NCDWR Surface Water Classification for Water Body	Primary Classification:	Class B	
	Supplemental Classification:	None	
Other Stream Classification:	None		
Impairments:	None		
Aquatic T&E Species?	No	Comments:	No listed species in waterbody; however, receiving body, FBR, is occupied app. elktoe habitat.
NRTR Stream ID:	SA(O)	Buffer Rules in Effect:	
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A
Deck Drains Discharge Over Water Body?	N/A	Dissipator Pads Provided in Buffer?	N/A
(If yes, provide justification in the General Project Narrative)			
Surface Water Body (3):			
Surface Water Body (3):	UT to FBR (SD)	NCDWR Stream Index No.:	N/A
NCDWR Surface Water Classification for Water Body	Primary Classification:	Class B	
	Supplemental Classification:	None	
Other Stream Classification:	None		
Impairments:	None		
Aquatic T&E Species?	No	Comments:	No listed species in waterbody; however, receiving body, FBR, is occupied app. elktoe habitat.
NRTR Stream ID:	SD(X-Z)	Buffer Rules in Effect:	
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A
Deck Drains Discharge Over Water Body?	N/A	Dissipator Pads Provided in Buffer?	N/A
(If yes, provide justification in the General Project Narrative)			
WBS Element: 49742.3	TIP No.: HE-0001	County(ies): Buncombe	Page 3 of 5
Additional Waterbody Information			
Surface Water Body (4):			
Surface Water Body (4):	UT to FBR SE	NCDWR Stream Index No.:	N/A
NCDWR Surface Water Classification for Water Body	Primary Classification:	Class B	
	Supplemental Classification:	None	
Other Stream Classification:	None		
Impairments:	None		
Aquatic T&E Species?	No	Comments:	No listed species in waterbody; however, receiving body, FBR, is occupied app. elktoe habitat.
NRTR Stream ID:	SE(Q-W)	Buffer Rules in Effect:	
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A
Deck Drains Discharge Over Water Body?	N/A	Dissipator Pads Provided in Buffer?	N/A
(If yes, provide justification in the General Project Narrative)			
Surface Water Body (5):			
Surface Water Body (5):	UT to FBR (SDX)	NCDWR Stream Index No.:	N/A
NCDWR Surface Water Classification for Water Body	Primary Classification:	Class B	
	Supplemental Classification:	None	
Other Stream Classification:	None		
Impairments:	None		
Aquatic T&E Species?	Yes	Comments:	No listed species in waterbody; however, receiving body, FBR, is occupied app. elktoe habitat.
NRTR Stream ID:	SDX	Buffer Rules in Effect:	
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A
Deck Drains Discharge Over Water Body?	N/A	Dissipator Pads Provided in Buffer?	N/A
(If yes, provide justification in the General Project Narrative)			

Revised
5/4/2023

		North Carolina Department of Transportation Highway Stormwater Program STORMWATER MANAGEMENT PLAN FOR NCDOT PROJECTS			
Version 3.00; Released August 2021					
WBS Element: 49742.3		TIP/Proj No.: HE-0001		County(ies): Buncombe Page 2 of 5	
General Project Information					
Waterbody Information					
Surface Water Body (1):	FBR	NCDWR Stream Index No.:	6-(54.75)		
NCDWR Surface Water Classification for Water Body	Primary Classification:	Class B			
	Supplemental Classification:	None			
Other Stream Classification:	None				
Impairments:	None				
Aquatic T&E Species?	Yes	Comments: FBR is occupied by the endangered Appalachian elktoe habitat.			
NRTR Stream ID:	FBR	Buffer Rules in Effect:	N/A		
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?	
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)	
(If yes, provide justification in the General Project Narrative)					
Surface Water Body (2):	UT to FBR (SA)	NCDWR Stream Index No.:	N/A		
NCDWR Surface Water Classification for Water Body	Primary Classification:	Class B			
	Supplemental Classification:	None			
Other Stream Classification:	None				
Impairments:	None				
Aquatic T&E Species?	No	Comments: No listed species in waterbody; however, receiving body, FBR, is occupied app. elktoe habitat.			
NRTR Stream ID:	S(A-O)	Buffer Rules in Effect:			
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?	
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)	
(If yes, provide justification in the General Project Narrative)					
Surface Water Body (3):	UT to FBR (SD)	NCDWR Stream Index No.:	N/A		
NCDWR Surface Water Classification for Water Body	Primary Classification:	Class B			
	Supplemental Classification:	None			
Other Stream Classification:	None				
Impairments:	None				
Aquatic T&E Species?	No	Comments: No listed species in waterbody; however, receiving body, FBR, is occupied app. elktoe habitat.			
NRTR Stream ID:	SD(X-Z)	Buffer Rules in Effect:			
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?	
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)	
(If yes, provide justification in the General Project Narrative)					
WBS Element: 49742.3		TIP No.: HE-0001		County(ies): Buncombe Page 3 of 5	
Additional Waterbody Information					
Surface Water Body (4):	UT to FBR SE	NCDWR Stream Index No.:	N/A		
NCDWR Surface Water Classification for Water Body	Primary Classification:	Class B			
	Supplemental Classification:	None			
Other Stream Classification:	None				
Impairments:	None				
Aquatic T&E Species?	No	Comments: No listed species in waterbody; however, receiving body, FBR, is occupied app. elktoe habitat.			
NRTR Stream ID:	SE(Q-W)	Buffer Rules in Effect:			
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?	
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)	
(If yes, provide justification in the General Project Narrative)					
Surface Water Body (5):	UT to FBR (SDX)	NCDWR Stream Index No.:	N/A		
NCDWR Surface Water Classification for Water Body	Primary Classification:	Class B			
	Supplemental Classification:	None			
Other Stream Classification:	None				
Impairments:	None				
Aquatic T&E Species?	Yes	Comments: No listed species in waterbody; however, receiving body, FBR, is occupied app. elktoe habitat.			
NRTR Stream ID:	SDX	Buffer Rules in Effect:			
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?	
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)	
(If yes, provide justification in the General Project Narrative)					

Replaced by
5/4/2023 submittal



~~4-18-2023~~

North Carolina Department of Transportation

Highway Stormwater Program STORMWATER MANAGEMENT PLAN FOR NCDOT PROJECTS



Highway Stormwater PROGRAM

(Version 3.00; Released August 2021)

WBS Element: 49742.3

TIP/Proj No.: HE-0001

County(ies): Buncombe

Page 4 of 5

Swale

[illegible]

Additional Comments

Note: Rp D swale (slopes average 3:1)

Revised
5/4/2023



**Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS**

STORMWATER MANAGEMENT PLAN

FOR NCDOT PROJECTS

FOR NCDOT PROJECTS

(Version 3.00; Released August 2021)

WBS Element: 49742.3

TIP/Proj No.: HE-0001

County(ies): Buncombe

Page 4 of 5

Swale

[illegible]

Additional Comments

Note: Rp D swale (slopes average 3:1)

Lateral Grassed Swales from Sta 26+50 to Sta 27+00 -Y- Lt and from Sta 38+50 to Sta 39+00 -Y- Rt. met the criteria except for the V2. They were still incorporated into the design to provide treatment to the maximum extend practicable.

Revised
5/4/2023



North Carolina Department of Transportation

**Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS**

(Version 3.00; Released August 2021)

WBS Element:

TIP/Proj No.: HE-0001

County(ies): Buncombe

Page 5 of 5

Preformed Scour Holes and Energy Dissipators

[illegible]

Additional Comments

ALL SCD'S MEET THE DESIGN CRITERIA FOR THE BMP TOOLBOX.

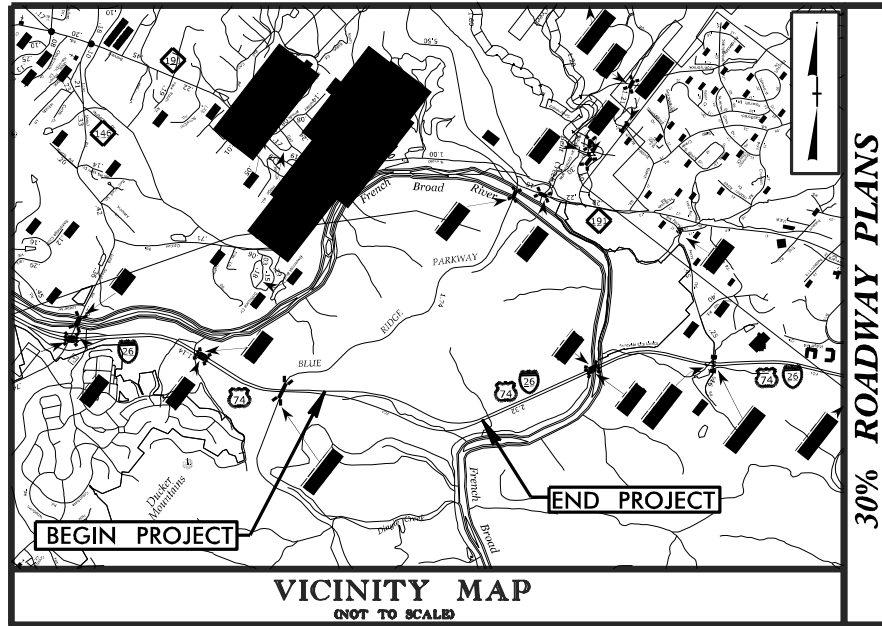
* Refer to the NCDOT Best Management Practices Toolbox (2014), NCDOT Standards, the Federal Highway Administration (FHWA) Hydraulic Engineering Circular No. 14 (HEC-14), Third Edition, Hydraulic Design of Energy Dissipators for Culverts and Channels (July 2006), as applicable, for design guidance and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

03-APR-2023 12:07
nwoods AT PC77611
pw/ghe-pw-bentley.com:gfnet-pw-01\Documents\Projects\691725-Working\Task 003 - HE-0001 I-26 Bldmore\Permit Drawings\HE-0001_cdy_ish.dgn

TIP PROJECT: HE-0001

CONTRACT:

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

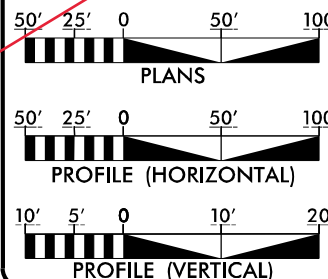


BEGIN TIP PROJECT HE-0001
-WBL- STA. 1086 + 17.11

END TIP PROJECT HE-0001
-L- STA. 1138 + 79.12

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

GRAPHIC SCALES



DESIGN DATA

ADT 2021 = 9,100
ADT 2046 = 18,600
K = 10 %
D = 55 %
V = 75 MPH
* TTST = 1% DUAL 4%
FUNC CLASS = INTERSTATE

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT HE-0001 = 2.033 Miles
LENGTH STRUCTURES = 0.019 Miles
TOTAL LENGTH TIP PROJECT HE-0001 = 2.052 Miles

NCDOT CONTACT: **MCCRAY COATES, PE**
DIVISION 13 PROJECT MANAGER

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

2018 STANDARD SPECIFICATIONS
RIGHT OF WAY DATE:
2022

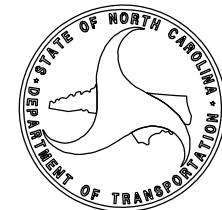
LETTING DATE:

RICK TIPTON, PE
PROJECT ENGINEER
ANGEL B. PRIDGEN, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.
ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BUNCOMBE COUNTY

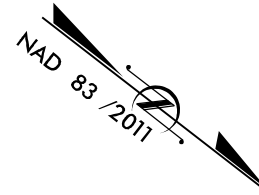
LOCATION: NEW I-26 DIVERGING DIAMOND INTERCHANGE (EXIT 35)
AND ACCESS ROAD CONNECTING TO NC 191 (BREVARD RD)

TYPE OF WORK: GRADING, PAVING, DRAINAGE, STRUCTURE, SIGNALS, AND
RETAINING WALLS

Replaced by
Revised Drawing

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	HE-0001	1	11
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
XXXXXXXX	XXXXXX	PE	

4-18-2023



DRAINAGE IN RED IS PART OF HE-0001
ALL OTHER DRAINAGE IS EXISTING OR
BEING BUILT UNDER I-4700

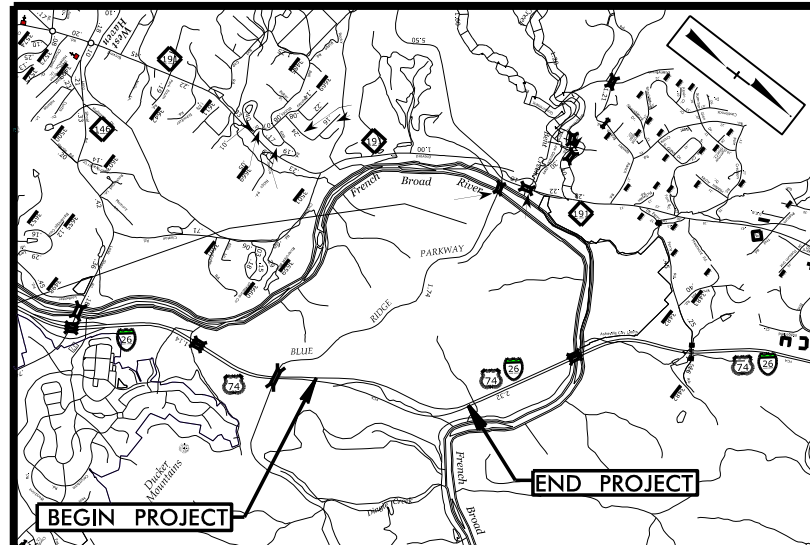
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PLANS PREPARED BY: Gannett Fleming
One General Avenue
Suite 900
Raleigh, NC 27601
(919) 420-7600
FAC. L.L. No. P-0270

TIP PROJECT: HE-0001

CONTRACT:

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



VICINITY MAP
(NOT TO SCALE)

30% ROADWAY PLANS

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

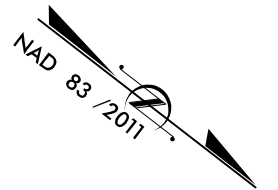
BUNCOMBE COUNTY

LOCATION: NEW I-26 DIVERGING DIAMOND INTERCHANGE (EXIT 35)
AND ACCESS ROAD CONNECTING TO NC 191 (BREVARD RD)

TYPE OF WORK: GRADING, PAVING, DRAINAGE, STRUCTURE, SIGNALS, AND
RETAINING WALLS

Revised
May 2, 2023

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	HE-0001	1	15
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
XXXXXXXX	XXXXXX	PE	



BEGIN TIP PROJECT HE-0001
-WBL- STA. 1086 + 17.11

END TIP PROJECT HE-0001
-L- STA. 1138 + 79.12

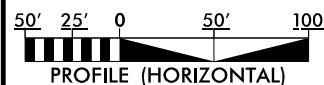
DRAINAGE IN RED IS PART OF HE-0001
DRAINAGE IN GREEN BEING BUILT UNDER I-4700
ALL OTHER DRAINAGE IS EXISTING

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

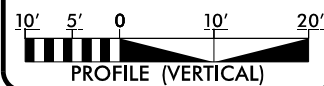
GRAPHIC SCALES



PLANS



PROFILE (HORIZONTAL)



PROFILE (VERTICAL)

DESIGN DATA

ADT 2021 = 9,100
ADT 2046 = 18,600
K = 10 %
D = 55 %
V = 75 MPH
* TTST = 1% DUAL 4%

FUNC CLASS = INTERSTATE

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT HE-0001 = 2.033 Miles
LENGTH STRUCTURES = 0.019 Miles
TOTAL LENGTH TIP PROJECT HE-0001 = 2.052 Miles

NCDOT CONTACT: MCCRAY COATES, PE
DIVISION 13 PROJECT MANAGER

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

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
2022

LETTING DATE:

RICK TIPTON, PE
PROJECT ENGINEER

ANGEL B. PRIDGEN, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

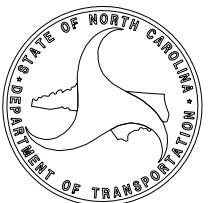
SIGNATURE: P.E.

ROADWAY DESIGN
ENGINEER

SIGNATURE: P.E.

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PLANS PREPARED BY:
Gannett Fleming
One Glenwood Avenue
Suite 300
Fayetteville, NC 27513
(919) 420-7440
Excellence Delivered As Promised NC C.E. No. P-6070



PROJECT REFERENCE NO.	SHEET NO.
HE-0001A	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

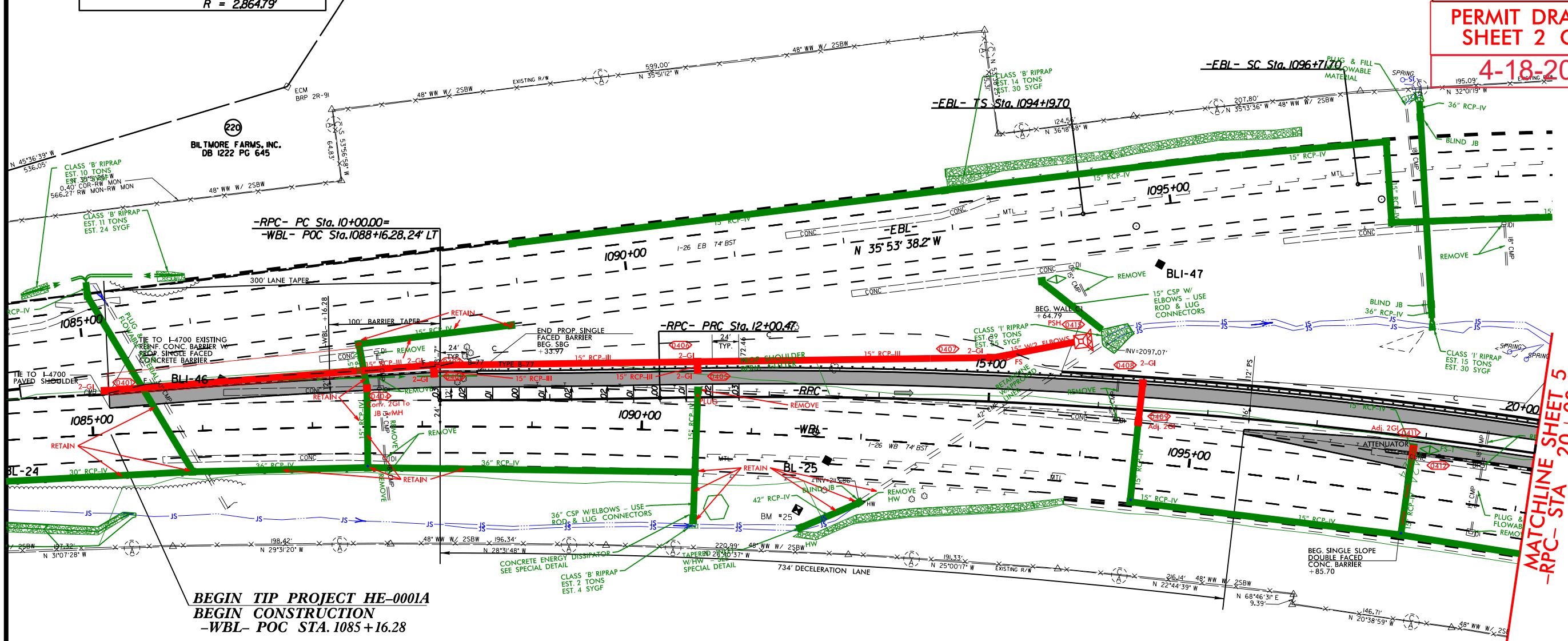
PERMIT DRAWING
SHEET 2 OF 19
4-18-2023

NO STREAM IMPACTS



-WBL- (EXISTING I-4700 ALIGNMENT)	-RPC-
PI Sta 1093+37.38 Δ = 22° 08' 01.8" (RT) D = 0° 55' 00.2" L = 2414.43' T = 1222.45' R = 6250.00'	PI Sta 11+00.24 Δ = 1° 08' 55.1" (LT) D = 0° 34' 22.6" L = 200.47' T = 100.24' R = 10,000.00' SE = 02 RO = 24' DS = 65 MPH
-EBL- (EXISTING I-4700 ALIGNMENT)	PI Sta 19+38.58 Δ = 17° 25' 49.5" (RT) D = 1° 11' 23.8" L = 1464.81' T = 738.11' R = 4815.00' SE = 03 RO = 24' DS = 55 MPH

BILTMORE FARMS, INC.
DB 1222 PG 645



BEGIN TIP PROJECT HE-0001A
BEGIN CONSTRUCTION
-WBL- POC STA. 1085+16.28

BILTMORE FARMS, INC.
DB 1222 PG 645

BILTMORE FARMS, INC.
DB 1222 PG 645

MATCHLINE SHEET 5
-RPC- STA 20+00.00

PROJECT REFERENCE NO.	SHEET NO.
HE-0001A	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

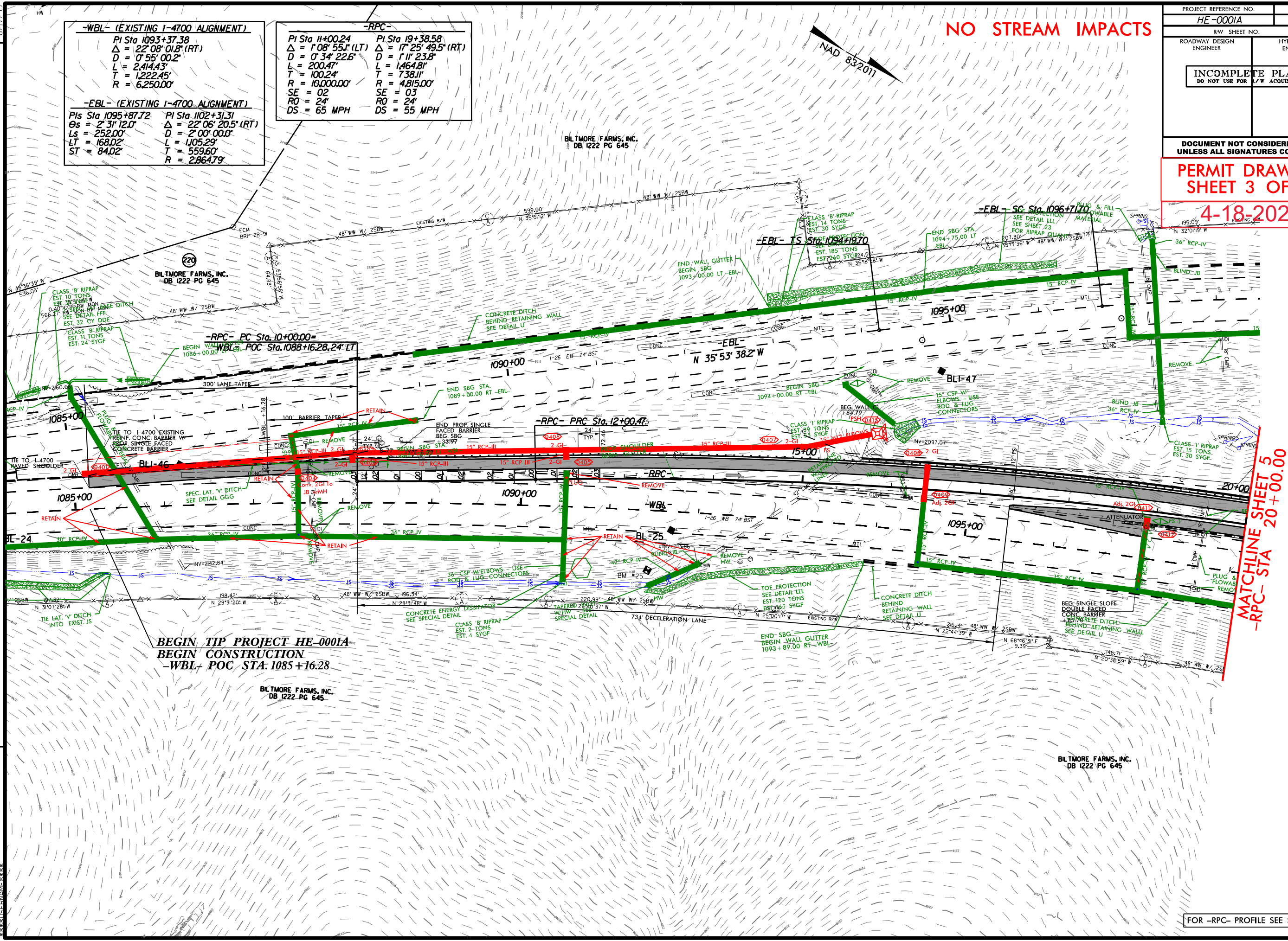
PERMIT DRAWING
SHEET 3 OF 19
4-18-2023

NO STREAM IMPACTS



-WBL- (EXISTING I-4700 ALIGNMENT) PI Sta 1093+37.38 $\Delta = 22^{\circ}08'01.8"$ (RT) $D = 0^{\circ}56'00.2"$ $L = 2414.43'$ $T = 1222.45'$ $R = 6250.00'$	-RPC- PI Sta 11+00.24 $\Delta = 1^{\circ}08'55.1"$ (LT) $D = 0^{\circ}34'22.6"$ $L = 200.47'$ $T = 100.24'$ $R = 10000.00'$ SE = 02 RO = 24' DS = 65 MPH	PI Sta 19+38.58 $\Delta = 17^{\circ}25'49.5"$ (RT) $D = 1^{\circ}11'23.8"$ $L = 1464.81'$ $T = 738.11'$ $R = 4815.00'$ SE = 03 RO = 24' DS = 55 MPH
--	--	---

-EBL- (EXISTING I-4700 ALIGNMENT) PIs Sta 1095+87.72 $\Theta_s = 2^{\circ}31'12.0"$ $L_s = 252.00'$ $LT = 168.02'$ $ST = 84.02'$	PI Sta 1102+31.31 $\Delta = 22^{\circ}06'20.5"$ (RT) $D = 2^{\circ}00'00.0"$ $L = 1105.29'$ $T = 559.60'$ $R = 2864.79'$
--	---



MATCHLINE SHEET 5
-RPC- STA 20+00.00

BEGIN TIP PROJECT HE-0001A
BEGIN CONSTRUCTION
-WBL- POC STA. 1085+16.28

BILTMORE FARMS, INC.
DB 1222 PG 645

BILTMORE FARMS, INC.
DB 1222 PG 645

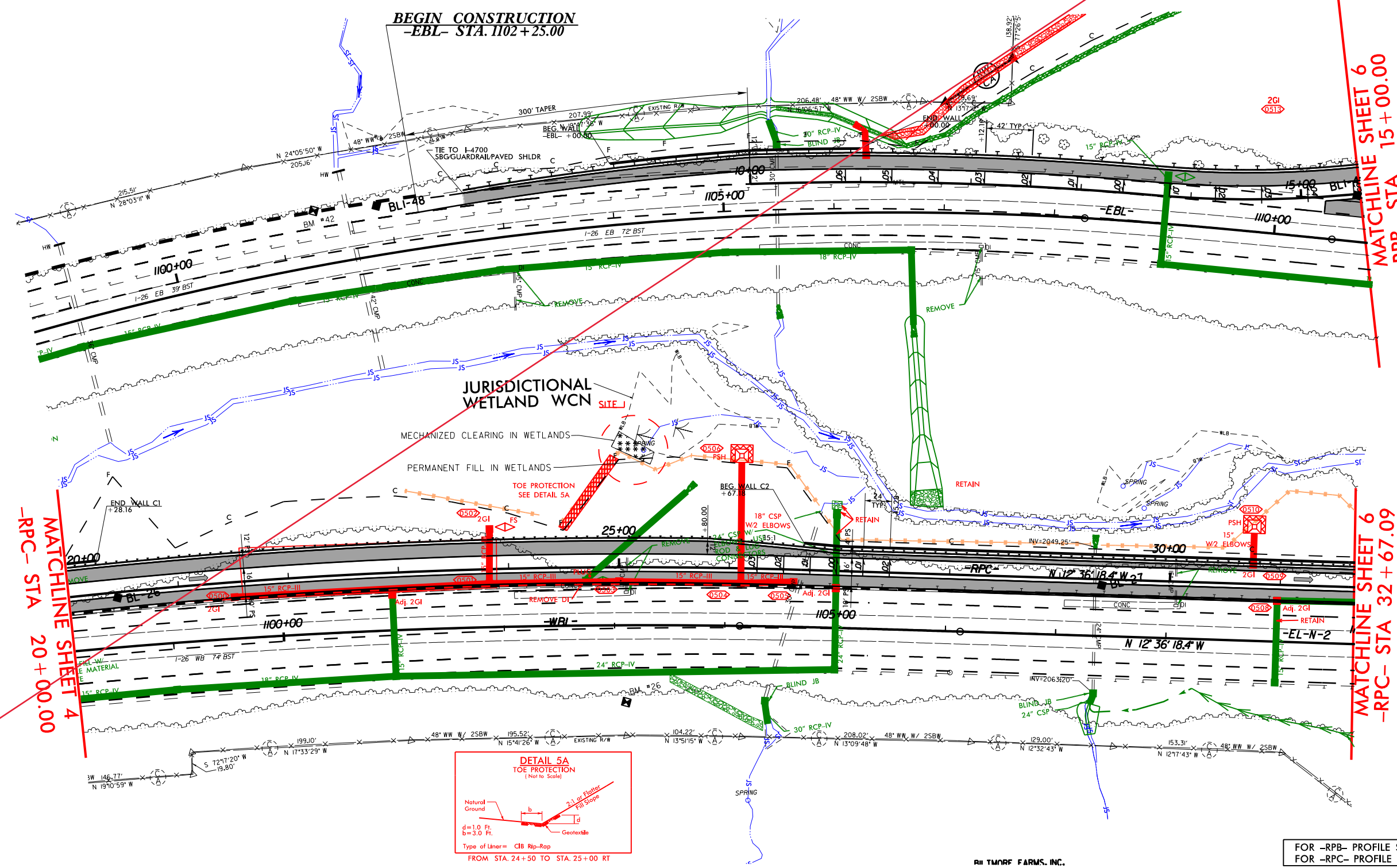
FOR -RPC- PROFILE SEE SHEET 10

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
HE-0001A	5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
4-18-2023	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PERMIT DRAWING
SHEET 4 OF 19
Replaced by
Revised Drawing

- LEGEND
- TEMPORARY FILL IN WETLAND
 - MECHANIZED CLEARING (GRUBBING)
 - SAFETY FENCE



MATCHLINE SHEET 6
-RPC- STA 15+00.00

MATCHLINE SHEET 6
-RPC- STA 32+67.09

FOR -RPB- PROFILE SEE RDY SHEET 12
FOR -RPC- PROFILE SEE RDY SHEET 13

8/17/99

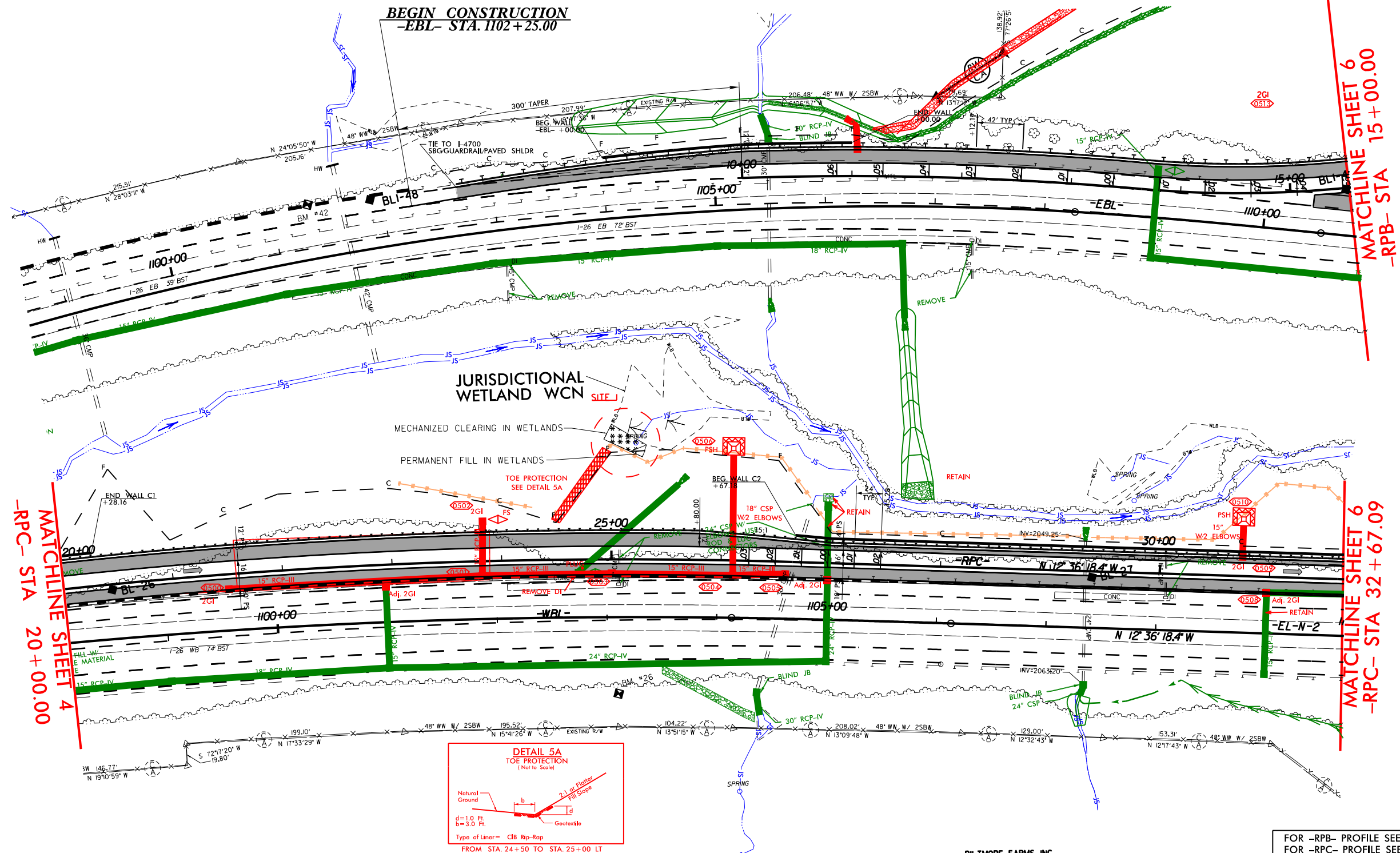
WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
HE-0001A	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PERMIT DRAWING
SHEET 4 OF 19

Revised
May 02, 2023

LEGEND	
	TEMPORARY FILL IN WETLAND
	MECHANIZED CLEARING (GRUBBING)
	SAFETY FENCE



FOR -RPB- PROFILE SEE R/W SHEET 12
FOR -RPC- PROFILE SEE R/W SHEET 13

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
HE-0001A	5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 5 OF 19

4-18-2023

- LEGEND
- TEMPORARY FILL IN WETLAND
 - MECHANIZED CLEARING (GRUBBING)
 - SAFETY FENCE

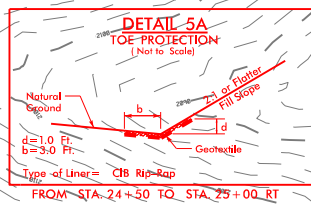
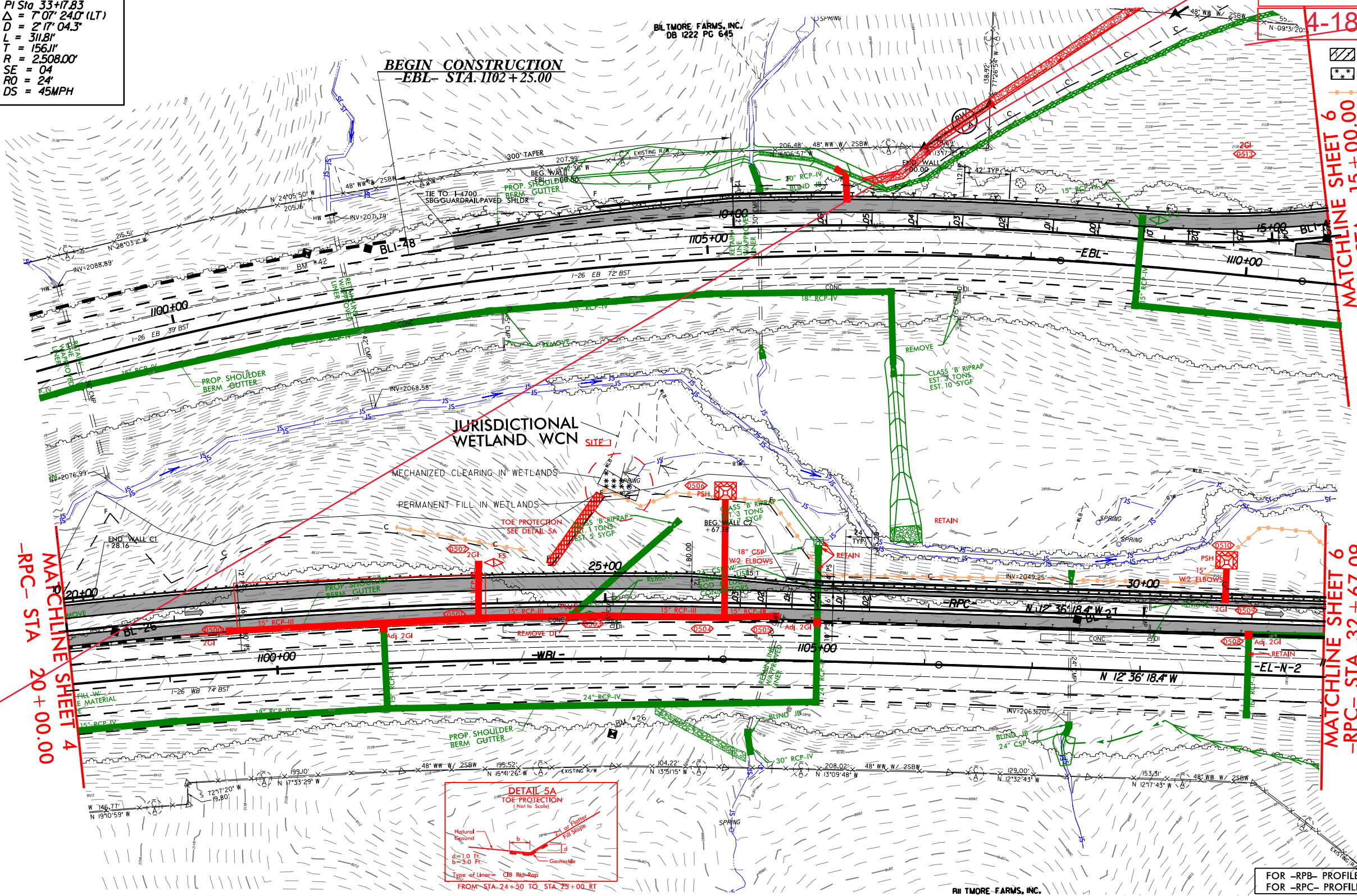
-EBL- (EXISTING I-4700 ALIGNMENT)		-RPB-	
PI Sta 1102+31.31	PIs Sta 1108+61.00	PI Sta 11+82.29	PI Sta 18+11.83
$\Delta = 22^{\circ}06'20.5"$ (RT)	$\Theta_s = 2^{\circ}31'11.3"$	$\Delta = 6^{\circ}57'16.5"$ (RT)	$\Delta = 48^{\circ}14'06.0"$ (RT)
$D = 2^{\circ}00'00.0"$	$L_s = 251.98'$	$D = 1^{\circ}54'35.5"$	$D = 5^{\circ}43'46.5"$
$L = 1,105.29'$	$LT = 168.00'$	$L = 364.14'$	$L = 841.86'$
$T = 559.60'$	$ST = 84.0'$	$T = 182.29'$	$T = 447.69'$
$R = 2,864.79'$		$R = 3,000.00'$	$R = 1,000.00'$
		$SE = 06'$	$SE = 04'$
		$RO = 168'$	$RO = 48'$
		$DS = 55MPH$	$DS = 55MPH$

-WBL2- (EXISTING I-4700 ALIGNMENT)	
PI Sta 1093+37.38	PIs Sta 1105+71.35
$\Delta = 22^{\circ}08'01.8"$ (RT)	$\Theta_s = 0^{\circ}34'39.0"$
$D = 0^{\circ}55'00.2"$	$L_s = 125.99'$
$L = 2,414.43'$	$LT = 83.99'$
$T = 1,222.45'$	$ST = 42.00'$
$R = 6,250.00'$	

-RPC-	
PI Sta 19+38.58	PI Sta 33+17.83
$\Delta = 17^{\circ}25'49.5"$ (RT)	$\Delta = 7^{\circ}07'24.0"$ (LT)
$D = 1^{\circ}11'23.8"$	$D = 2^{\circ}17'04.3"$
$L = 1,464.81'$	$L = 311.81'$
$T = 738.11'$	$T = 156.11'$
$R = 4,815.00'$	$R = 2,508.00'$
$SE = 03'$	$SE = 04'$
$RO = 24'$	$RO = 24'$
$DS = 55MPH$	$DS = 45MPH$



Replaced by
Revised Drawing



FOR -RPB- PROFILE SEE R/W SHEET 12
FOR -RPC- PROFILE SEE R/W SHEET 13

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
HE-0001A	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

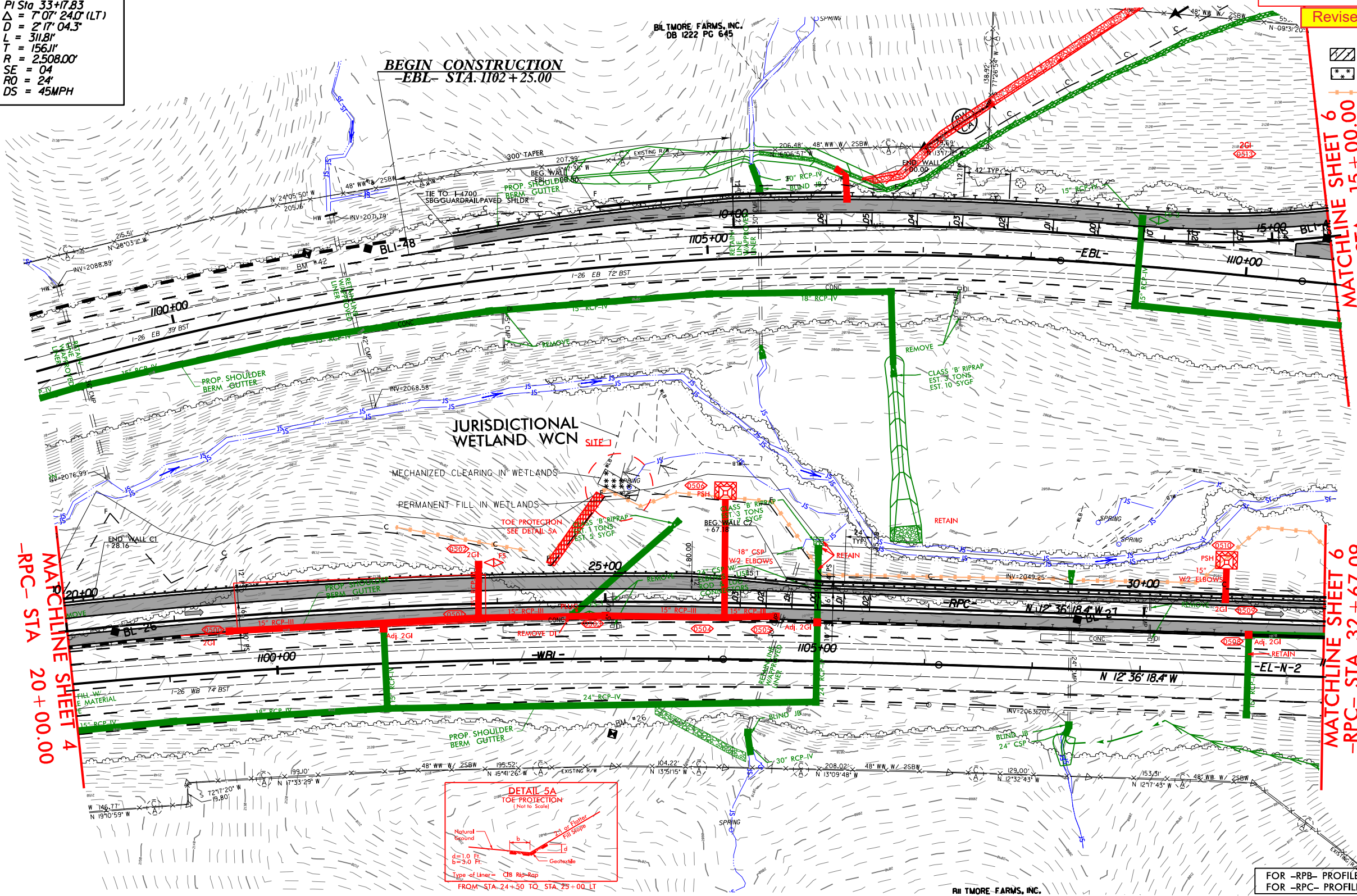
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 5 OF 19

Revised May 02, 2023

LEGEND	
	TEMPORARY FILL IN WETLAND
	MECHANIZED CLEARING (GRUBBING)
	SAFETY FENCE

-EBL- (EXISTING I-4700 ALIGNMENT)	
PI Sta 1102+31.31 $\Delta = 22^{\circ} 06' 20.5"$ (RT) $D = 2^{\circ} 00' 00.0"$ $L = 1,055.29'$ $T = 559.60'$ $R = 2,864.79'$	PIs Sta 1108+61.00 $\Theta_s = 2^{\circ} 31' 11.3"$ $L_s = 251.98'$ $LT = 168.00'$ $ST = 84.01'$
-WBL2- (EXISTING I-4700 ALIGNMENT)	
PI Sta 1093+37.38 $\Delta = 22^{\circ} 08' 01.8"$ (RT) $D = 0^{\circ} 55' 00.2"$ $L = 2,414.43'$ $T = 1,222.45'$ $R = 6,250.00'$	PIs Sta 1105+71.35 $\Theta_s = 0^{\circ} 34' 39.0"$ $L_s = 125.99'$ $LT = 83.99'$ $ST = 42.00'$
-RPB-	
PI Sta 11+82.29 $\Delta = 6^{\circ} 57' 16.5"$ (RT) $D = 1^{\circ} 54' 35.5"$ $L = 364.14'$ $T = 182.29'$ $R = 3,000.00'$ $SE = 06'$ $RO = 168'$ $DS = 55MPH$	PI Sta 18+11.83 $\Delta = 48^{\circ} 14' 06.0"$ (RT) $D = 5^{\circ} 43' 46.5"$ $L = 841.86'$ $T = 447.69'$ $R = 1,000.00'$ $SE = 04'$ $RO = 48'$ $DS = 55MPH$
-RPC-	
PI Sta 19+38.58 $\Delta = 17^{\circ} 25' 49.5"$ (RT) $D = 1^{\circ} 11' 23.8"$ $L = 1,464.81'$ $T = 738.11'$ $R = 4,815.00'$ $SE = 03'$ $RO = 24'$ $DS = 55MPH$	PI Sta 33+17.83 $\Delta = 7^{\circ} 07' 24.0"$ (LT) $D = 2^{\circ} 17' 04.3"$ $L = 311.81'$ $T = 156.11'$ $R = 2,508.00'$ $SE = 04'$ $RO = 24'$ $DS = 45MPH$



MATCHLINE SHEET 4
-RPC- STA 20+00.00

MATCHLINE SHEET 6
-RPC- STA 15+00.00

MATCHLINE SHEET 6
-RPC- STA 32+67.09

FOR -RPB- PROFILE SEE R/W SHEET 12
FOR -RPC- PROFILE SEE R/W SHEET 13

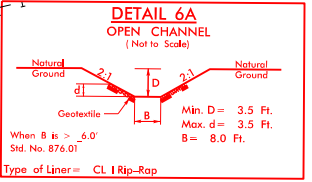
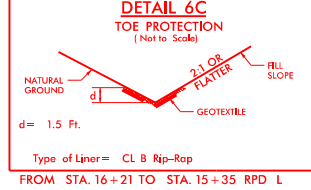
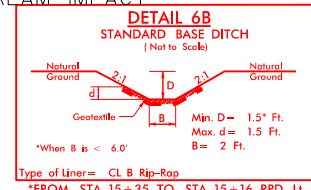
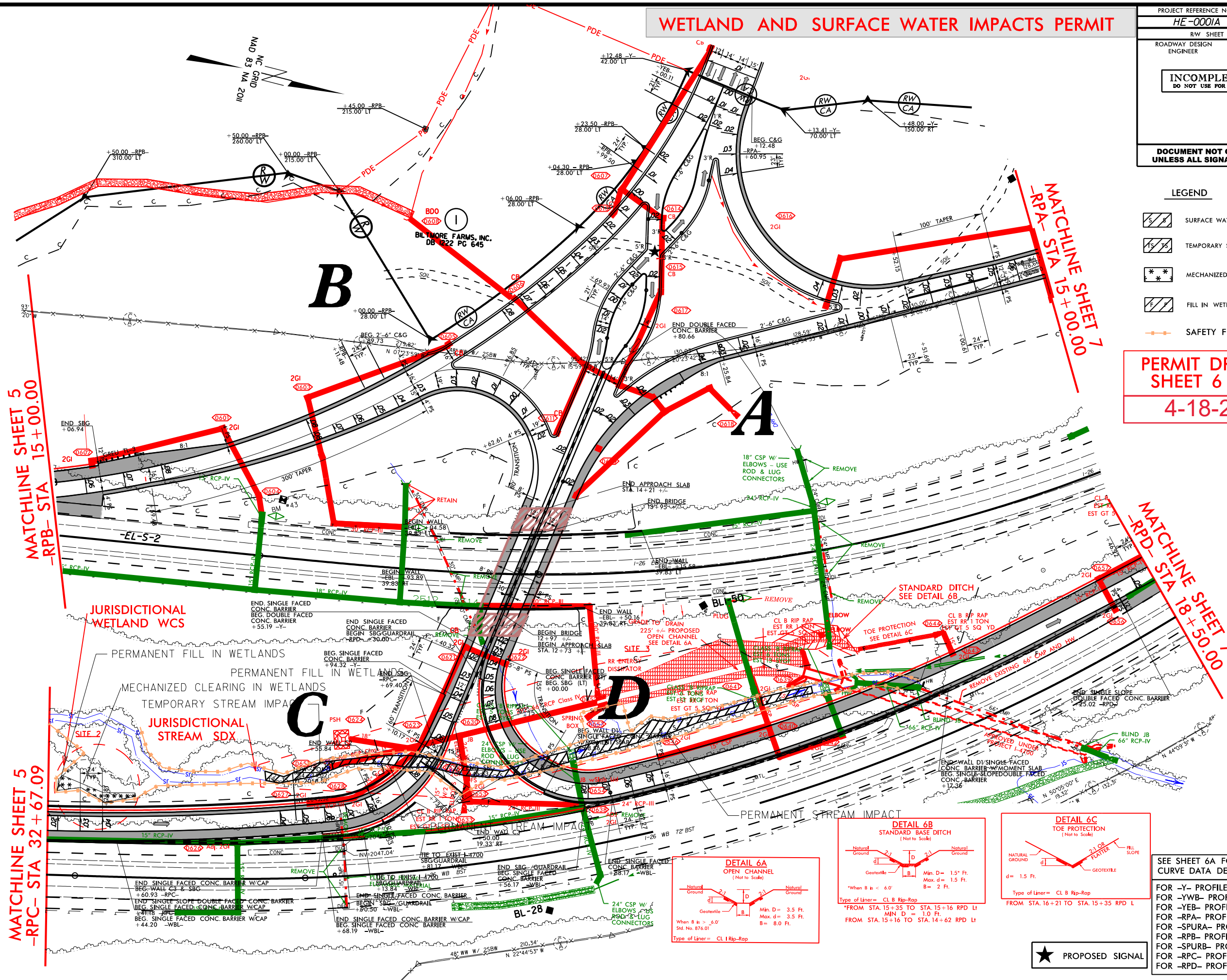
WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
HE-0001A	6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

LEGEND

- SURFACE WATER IMPACTS
- TEMPORARY SURFACE WATER IMPACTS
- MECHANIZED CLEARING (GRUBBING)
- FILL IN WETLAND
- SAFETY FENCE

PERMIT DRAWING
SHEET 6 OF 19
4-18-2023



SEE SHEET 6A FOR INTERCHANGE CURVE DATA (RDY SHEETS)

FOR -Y- PROFILE SEE SHEET 9
FOR -YWB- PROFILE SEE SHEET 10
FOR -RPA- PROFILE SEE SHEET 11-12
FOR -SPURA- PROFILE SEE SHEET 12
FOR -RPB- PROFILE SEE SHEET 12
FOR -SPURB- PROFILE SEE SHEET 12
FOR -RPD- PROFILE SEE SHEET 14

★ PROPOSED SIGNAL

8/17/99

REVISIONS

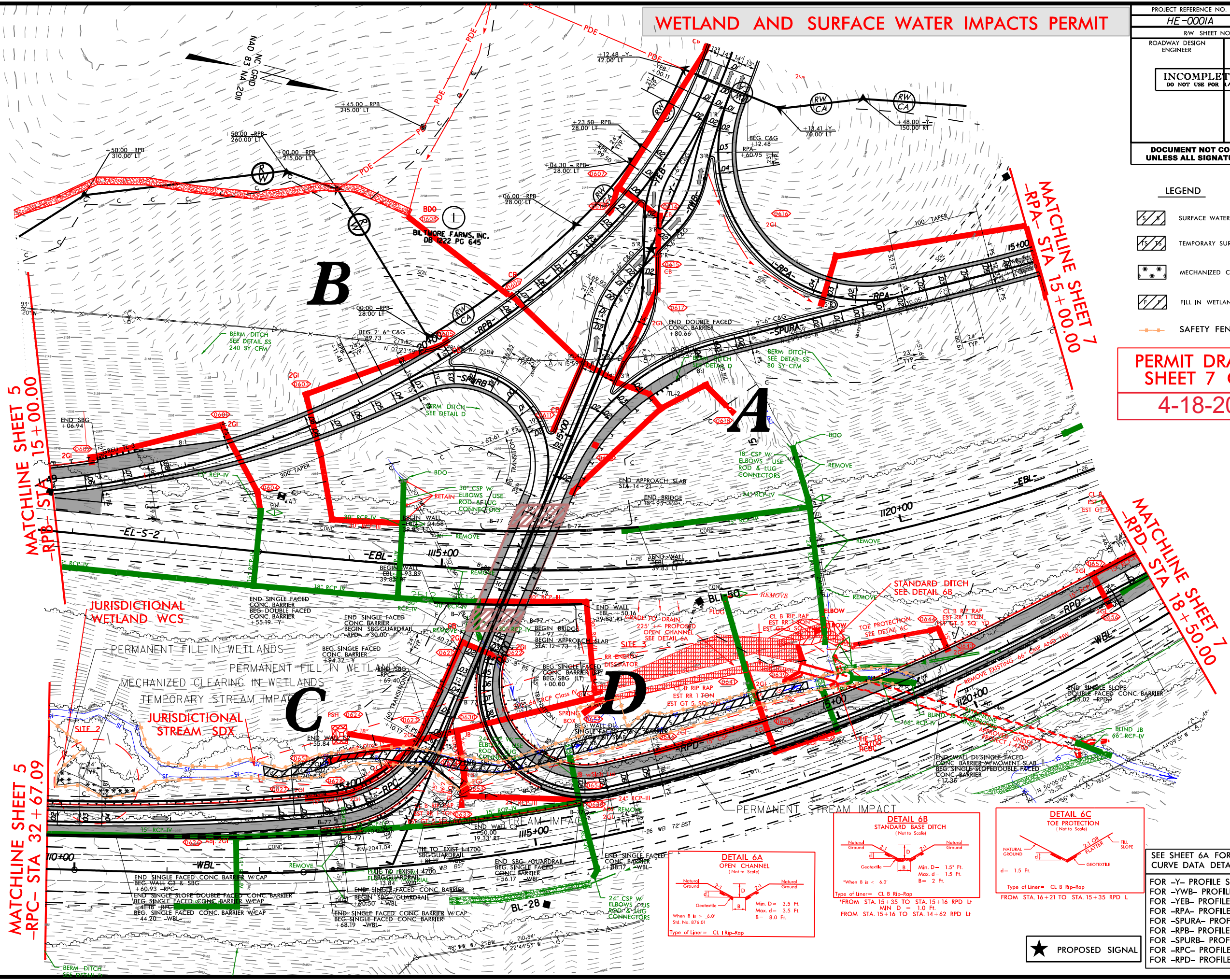
WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
HE-0001A	6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

LEGEND

- SURFACE WATER IMPACTS
- TEMPORARY SURFACE WATER IMPACTS
- MECHANIZED CLEARING (GRUBBING)
- FILL IN WETLAND
- SAFETY FENCE

PERMIT DRAWING
SHEET 7 OF 19
4-18-2023

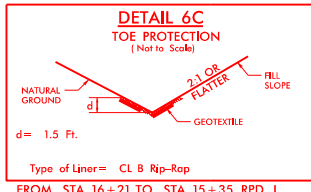
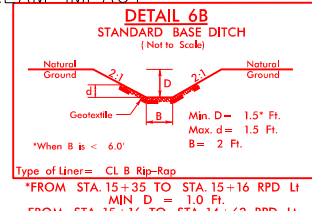
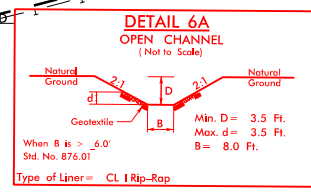


MATCHLINE SHEET 5
-RPB- STA 15+00.00

MATCHLINE SHEET 5
-RPC- STA 32+67.09

MATCHLINE SHEET 7
-RPA- STA 15+00.00

MATCHLINE SHEET 7
-RPD- STA 18+50.00



SEE SHEET 6A FOR INTERCHANGE
CURVE DATA (RDY SHEETS)

FOR -Y- PROFILE SEE SHEET 9
FOR -YWB- PROFILE SEE SHEET 10
FOR -RPA- PROFILE SEE SHEET 11-12
FOR -SPURA- PROFILE SEE SHEET 12
FOR -RPB- PROFILE SEE SHEET 12
FOR -SPURB- PROFILE SEE SHEET 12
FOR -RPC- PROFILE SEE SHEET 13
FOR -RPD- PROFILE SEE SHEET 14

★ PROPOSED SIGNAL

8/17/99

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

~~4-18-2023~~

SURFACE WATER IMPACTS

MECHANIZED CLEARING (GRUBBING)

1
BILTMORE FARMS, INC.
DB 1222 PG 645

NAD 83/2011

— PERMANENT STREAM IMPACT

-TEMPORARY STREAM IMPACT

MECHANIZED CLEARING
IN WETLANDS

**JURISDICTIONAL
STREAM SA-A**

MATCHLINE
SHEET 8
-L- STA
1133 + 55.00

END CONSTRUCTION
-WBL- STA. 1131+50.00

-RPA-	-RPD-
PI Sta. 21+00.43	PI Sta. 20+68.18
$\Delta = 33^{\circ} 23' 24.2" (LT)$	$\Delta = 14^{\circ} 14' 37.8" (LT)$
$D = 2' 36" 15.7"$	$D = 4' 46" 28.7"$
$L = 1,282.09'$	$L = 298.32'$
$T = 659.82'$	$T = 149.93'$
$R = 2,200.00'$	$R = 1,200.00'$
$SE = 06$	$SE = 05$
$RO = 96'$	$RO = 120'$
$DS = 55MPH$	$DS = 55MPH$

FOR -RPA- PROFILE SEE RDY SHEET 16-17
FOR -RPD- PROFILE SEE RDY SHEET 19

WETLAND AND SURFACE WATER IMPACTS PERMIT

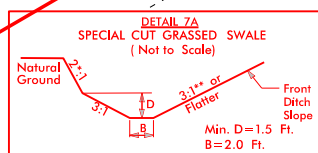
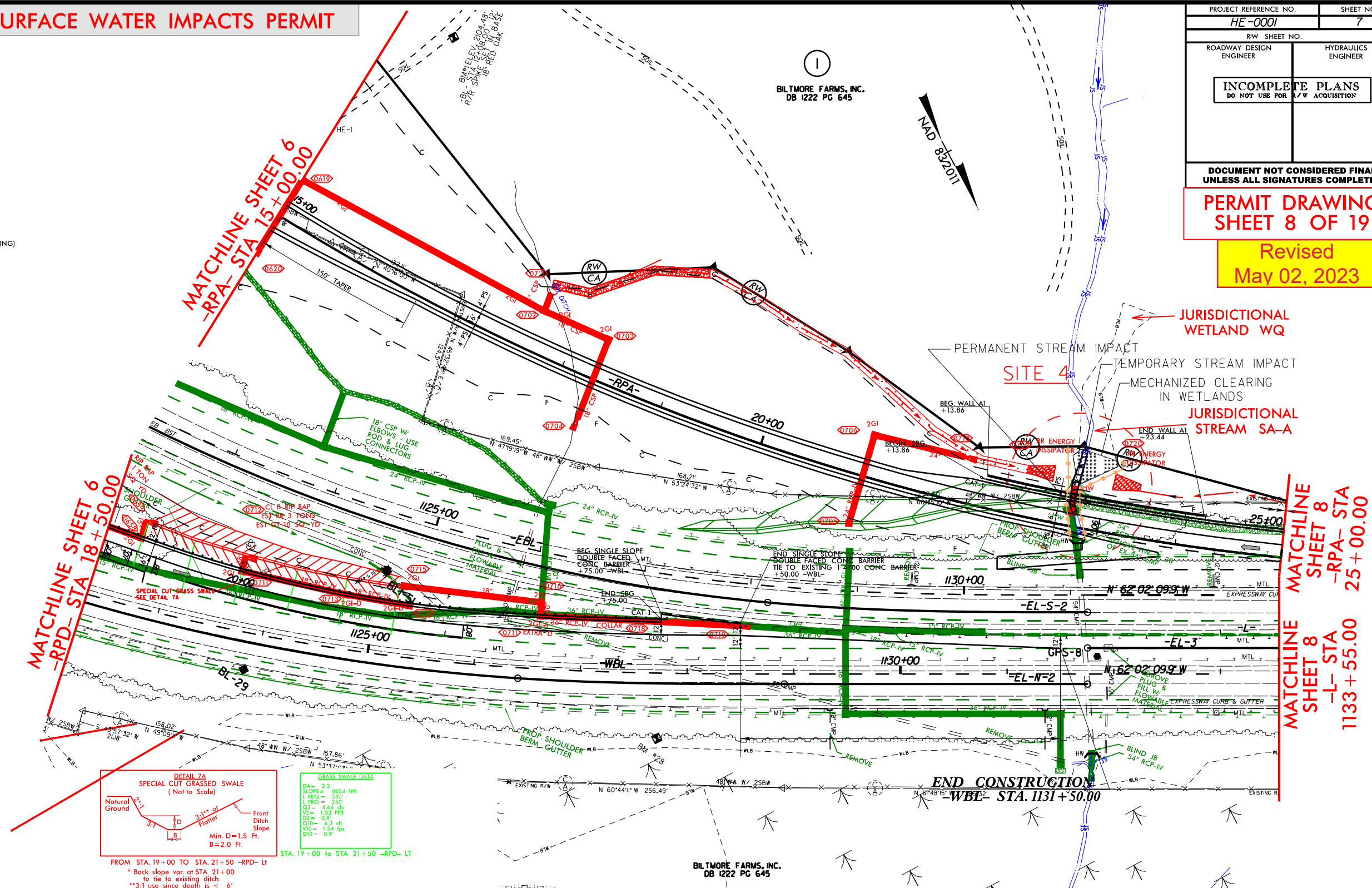
PROJECT REFERENCE NO.	SHEET NO.
HE-0001	7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 8 OF 19

Revised
May 02, 2023

- LEGEND
- SURFACE WATER IMPACTS
 - MECHANIZED CLEARING (GRUBBING)
 - SAFETY FENCE



GRASS SWALE DATA

DA = 2.3
SLOPE = .0034 H/H
REQ = 230'
LPRO = 230'
Q2 = 4.66 cfs
V2 = 1.93 FPS
D2 = 0.8'
Q10 = 6.2 cfs
V10 = 1.54 FPS
D10 = 0.9'

FROM STA. 19+00 TO STA. 21+50 -RPD- LT
 * Back slope var. at STA. 21+00 to tie to existing ditch
 **3:1 use since depth is < 6'

-EBL- (EXISTING I-4700 ALIGNMENT)	
PI Sta 1122+20.40	Pis Sta 1128+98.34
$\Delta = 41' 31" 40.7" (LT)$	$\Theta_s = 5' 52" 46.8"$
$D = 3' 30" 00.0"$	$L_s = 335.98'$
$L = 1186.51'$	$LT = 224.11'$
$T = 620.67'$	$ST = 112.11'$
$R = 1,637.02'$	
-WBL- (EXISTING I-4700 ALIGNMENT)	
PI Sta 1119+62.02	Pis Sta 1127+02.89
$\Delta = 39' 21" 04.6" (LT)$	$\Theta_s = 5' 02" 22.9"$
$D = 3' 00" 00.0"$	$L_s = 335.98'$
$L = 1,311.71'$	$LT = 224.08'$
$T = 682.91'$	$ST = 112.08'$
$R = 1,909.86'$	

-RPA-	-RPD-
PI Sta 21+00.43	PI Sta 20+68.18
$\Delta = 33' 23' 24.2" (LT)$	$\Delta = 14' 14' 37.8" (LT)$
$D = 2' 36' 15.7"$	$D = 4' 46' 28.7"$
$L = 1,282.09'$	$L = 298.32'$
$T = 659.82'$	$T = 149.93'$
$R = 2,200.00'$	$R = 1,200.00'$
$SE = 06$	$SE = 05$
$RO = 96$	$RO = 120'$
$DS = 55MPH$	$DS = 55MPH$

FOR -RPA- PROFILE SEE RDY SHEET 16-17
 FOR -RPD- PROFILE SEE RDY SHEET 19

WETLAND AND SURFACE WATER IMPACTS PERMIT

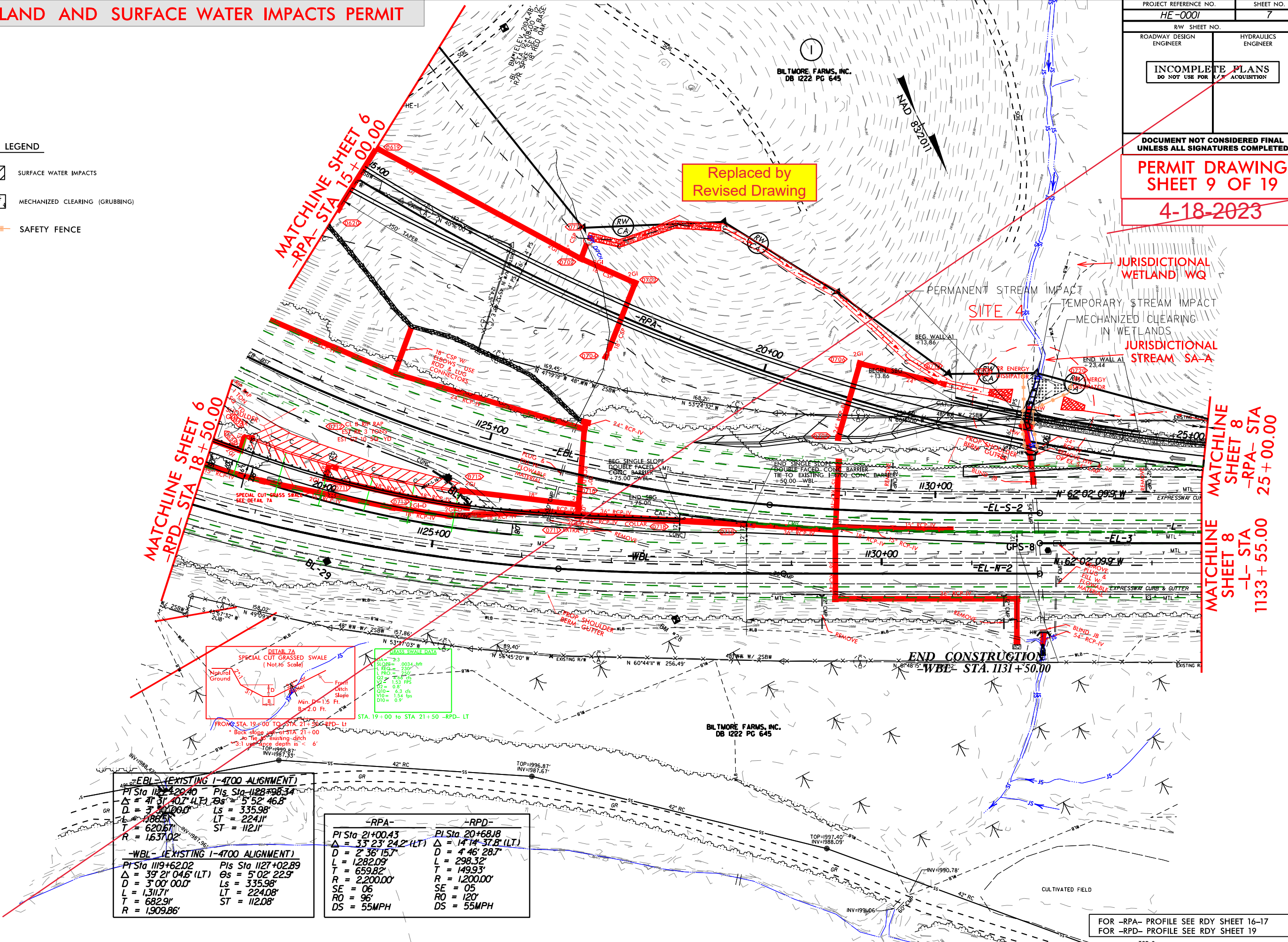
PROJECT REFERENCE NO.	SHEET NO.
HE-0001	7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/C ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 9 OF 19

4-18-2023

- LEGEND
- SURFACE WATER IMPACTS
 - MECHANIZED CLEARING (GRUBBING)
 - SAFETY FENCE



-EBL- (EXISTING I-4700 ALIGNMENT)	
PI Sta 1124+20.40	PIs Sta 1128+98.34
$\Delta = 41' 31" 40.7' (LT)$	$\Theta_s = 5' 52' 46.8"$
$D = 3' 30' 00.0"$	$L_s = 335.98'$
$T = 1188.51'$	$LT = 224.11'$
$R = 620.57'$	$ST = 112.11'$
$R = 1637.02'$	
-WBL- (EXISTING I-4700 ALIGNMENT)	
PI Sta 1119+62.02	PIs Sta 1127+02.89
$\Delta = 39' 21' 04.6' (LT)$	$\Theta_s = 5' 02' 22.9"$
$D = 3' 00' 00.0"$	$L_s = 335.98'$
$L = 1,311.71'$	$LT = 224.08'$
$T = 682.91'$	$ST = 112.08'$
$R = 1,909.86'$	

-RPA-	-RPD-
PI Sta 21+00.43	PI Sta 20+68.18
$\Delta = 33' 23' 24.2' (LT)$	$\Delta = 14' 14' 37.8' (LT)$
$D = 2' 36' 15.7"$	$D = 4' 46' 28.7"$
$L = 1,282.09'$	$L = 298.32'$
$T = 659.82'$	$T = 149.93'$
$R = 2,200.00'$	$R = 1,200.00'$
$SE = 06$	$SE = 05$
$RO = 96$	$RO = 120'$
$DS = 55MPH$	$DS = 55MPH$

FOR -RPA- PROFILE SEE RDY SHEET 16-17
FOR -RPD- PROFILE SEE RDY SHEET 19

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
HE-0001	7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 9 OF 19

Revised
May 02, 2023

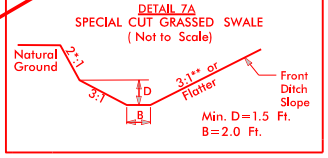
- LEGEND
- SURFACE WATER IMPACTS
 - MECHANIZED CLEARING (GRUBBING)
 - SAFETY FENCE

MATCHLINE SHEET 6
-RPA- STA 15+00.00

MATCHLINE SHEET 6
-RPD- STA 18+50.00

MATCHLINE SHEET 8
-RPA- STA 25+00.00

MATCHLINE SHEET 8
-L- STA 1133+55.00



GRASS SWALE DATA

DA= 2.3
SLOPE= .0034 H/H
REG= 230
L PRO= 230'
Q2= 4.66 cfs
V2= 1.93 fps
D2= 0.8'
Q10= 6.2 cfs
V10= 1.54 fps
D10= 0.9'

-EBL- (EXISTING I-4700 ALIGNMENT)

PI Sta 1122+20.40	Pis Sta 1128+98.34
$\Delta = 41' 31" 40.7" (LT)$	$\Theta_s = 5' 52" 46.8"$
$D = 3' 30" 00.0"$	$L_s = 335.98'$
$L = 1186.51'$	$LT = 224.11'$
$T = 620.67'$	$ST = 112.11'$
$R = 1,637.02'$	

-WBL- (EXISTING I-4700 ALIGNMENT)

PI Sta 1119+62.02	Pis Sta 1127+02.89
$\Delta = 39' 21" 04.6" (LT)$	$\Theta_s = 5' 02" 22.9"$
$D = 3' 00" 00.0"$	$L_s = 335.98'$
$L = 1,311.71'$	$LT = 224.08'$
$T = 682.91'$	$ST = 112.08'$
$R = 1,909.86'$	

-RPA-	-RPD-
PI Sta 21+00.43	PI Sta 20+68.18
$\Delta = 33' 23' 24.2" (LT)$	$\Delta = 14' 14' 37.8" (LT)$
$D = 2' 36' 15.7"$	$D = 4' 46' 28.7"$
$L = 1,282.09'$	$L = 298.32'$
$T = 659.82'$	$T = 149.93'$
$R = 2,200.00'$	$R = 1,200.00'$
SE = 06	SE = 05
RO = 96	RO = 120'
DS = 55MPH	DS = 55MPH

FOR -RPA- PROFILE SEE RDY SHEET 16-17
FOR -RPD- PROFILE SEE RDY SHEET 19

DETAIL 8A
TOE PROTECTION
 (Toe Not to Scale)

Natural Ground

b

d

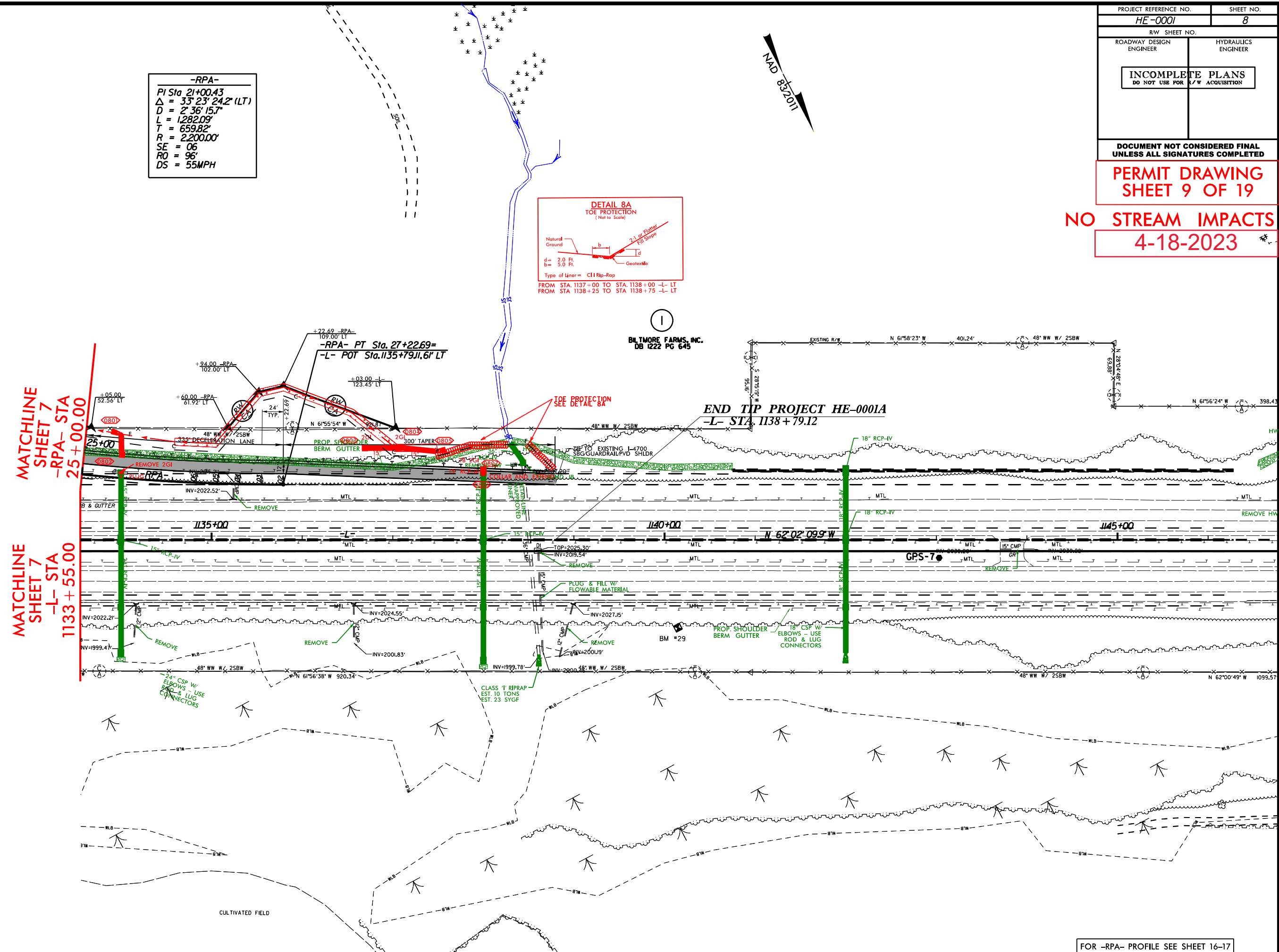
$d = 2.0$ Ft.
 $b = 5.0$ Ft.

2:1 or flatter
 Fill Slope

Geotextile

Type of Liner = CII Rip-Rap

FROM STA. 1137+00 TO STA. 1138+00 -L- LT
 FROM STA. 1138+25 TO STA. 1138+75 -L- LT



FOR -RPA- PROFILE SEE SHEET 16-17

8/17/99

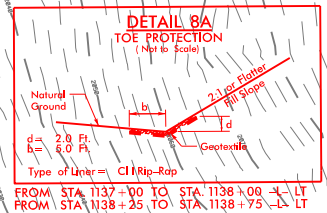
PROJECT REFERENCE NO.	SHEET NO.
HE-0001	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 9 OF 19

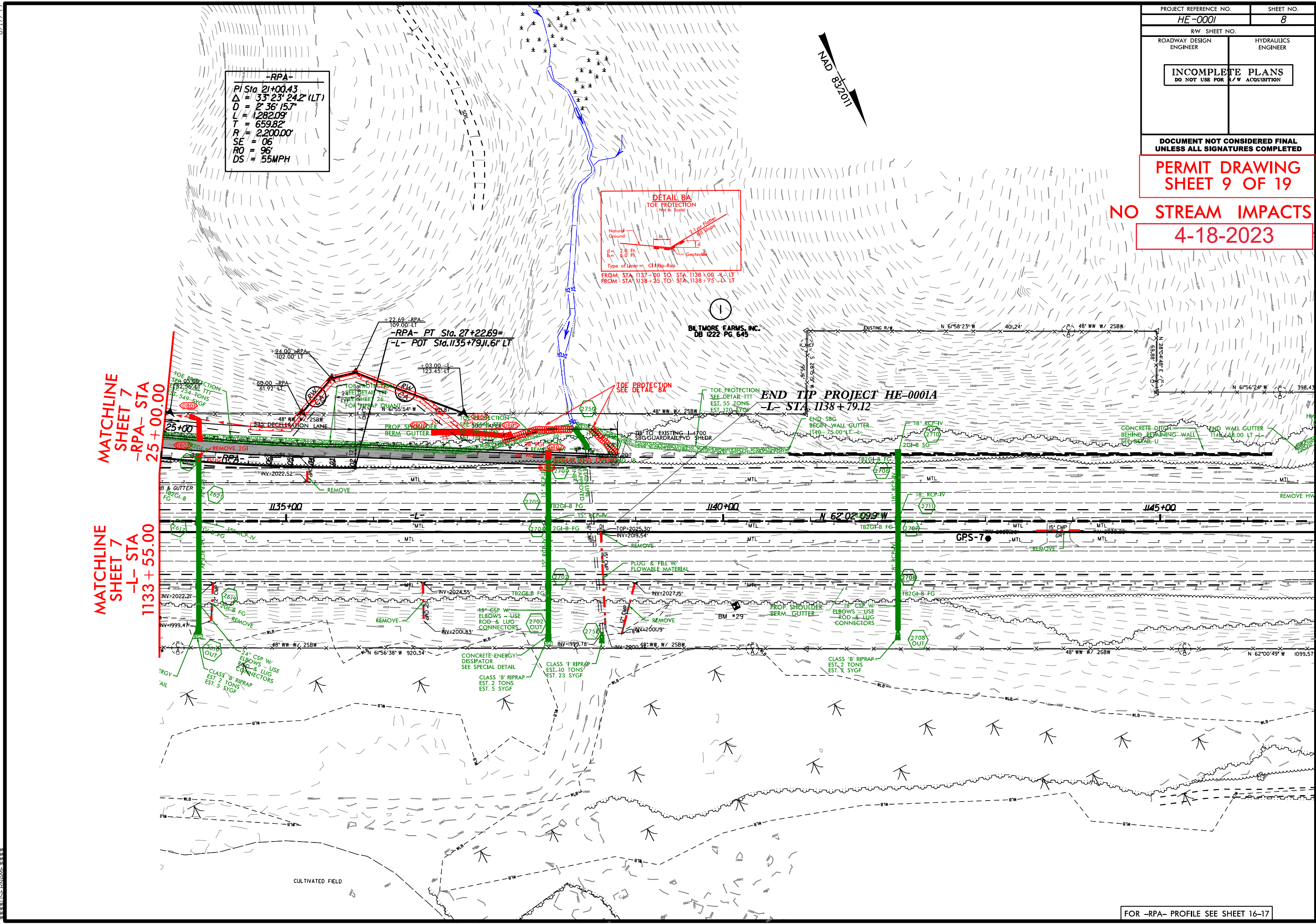
NO STREAM IMPACTS
4-18-2023

-RPA-
PI Sta. 21+00.43
 $\Delta = 33^{\circ}23'24.2"$ (LT)
D = 2' 36" 15.7"
L = 1282.09'
T = 659.82'
R = 2200.00'
SE = 06
RO = 96
DS = 55MPH



MATCHLINE
SHEET 7
-RPA- STA
25+00.00

MATCHLINE
SHEET 7
-L- STA
1133+55.00



FOR -RPA- PROFILE SEE SHEET 16-17

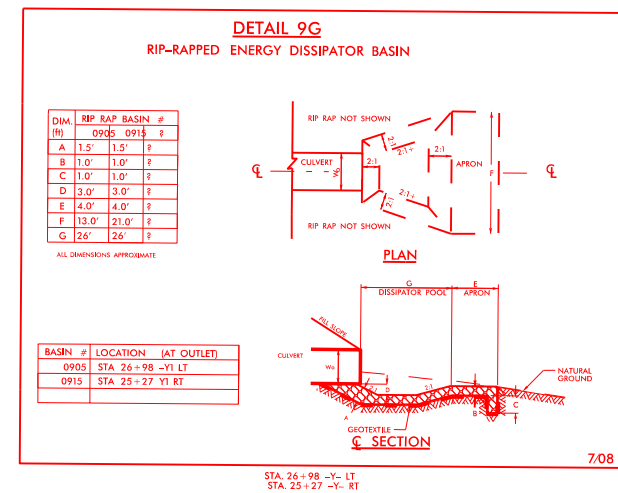
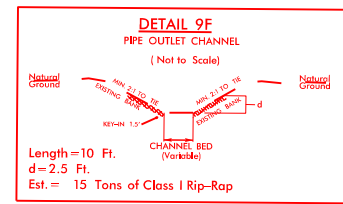
WETLAND AND SURFACE WATER IMPACTS PERMIT

LEGEND

SURFACE WATER IMPACTS

TEMPORARY SURFACE WATER IMPACTS

SAFETY FENCE



PROJECT REFERENCE NO. **HE-0001B** SHEET NO. **9**

R/W SHEET NO.

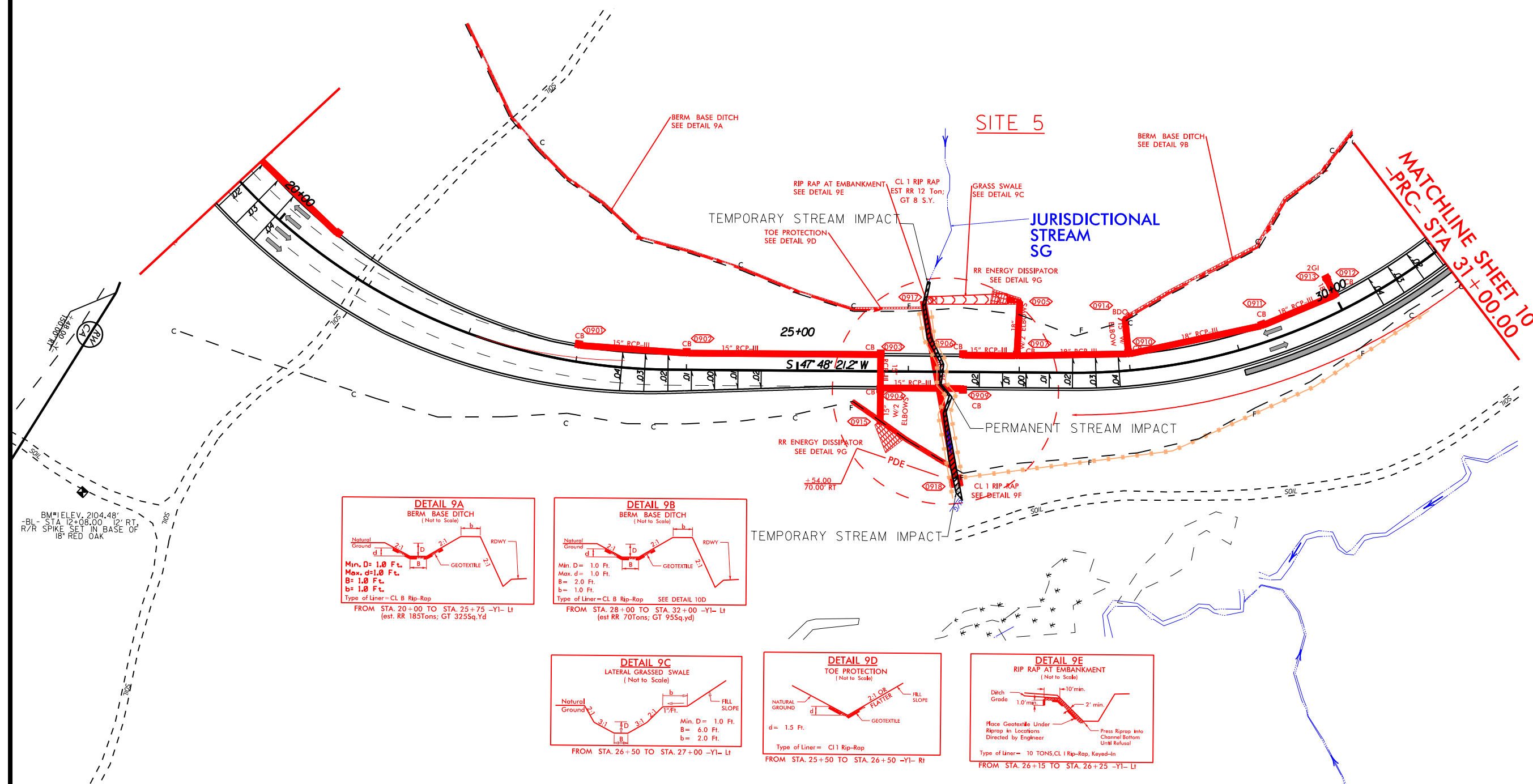
ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 12 OF 19
4-18-2023



WETLAND AND SURFACE WATER IMPACTS PERMIT

LEGEND



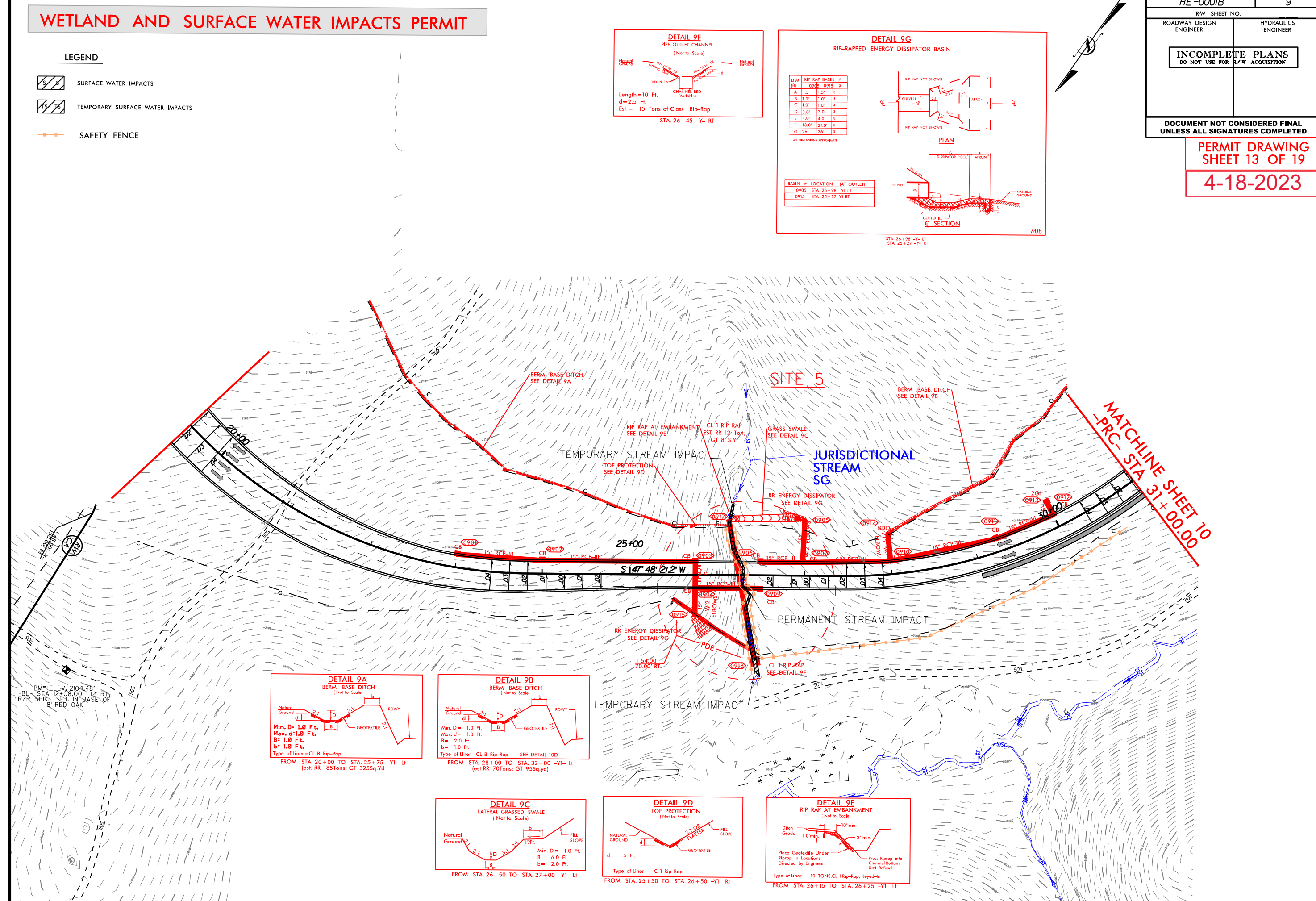
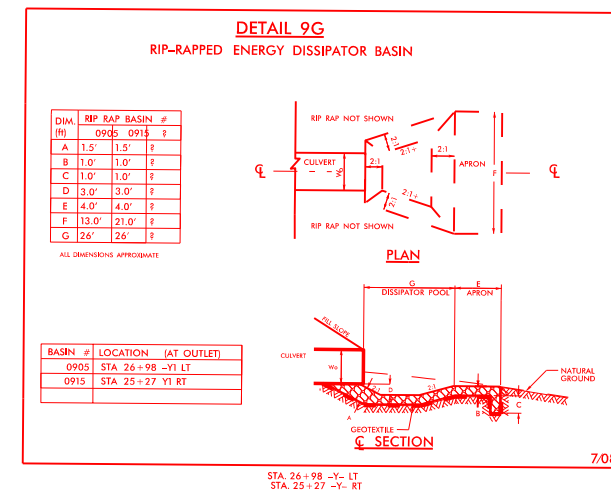
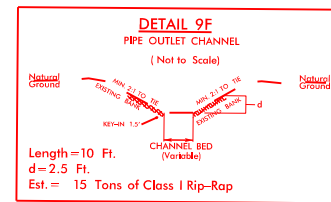
SURFACE WATER IMPACTS



TEMPORARY SURFACE WATER IMPACTS



SAFETY FENCE



WETLAND AND SURFACE WATER IMPACTS PERMIT

LEGEND

- SURFACE WATER IMPACTS
- TEMPORARY SURFACE WATER IMPACTS
- MECHANIZED CLEARING (GRUBBING)
- SAFETY FENCE

TEMPORARY STREAM IMPACT

PERMANENT STREAM IMPACT

SITE 6

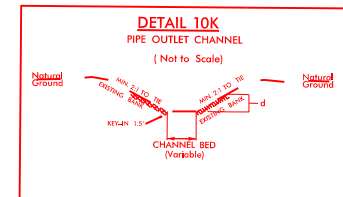
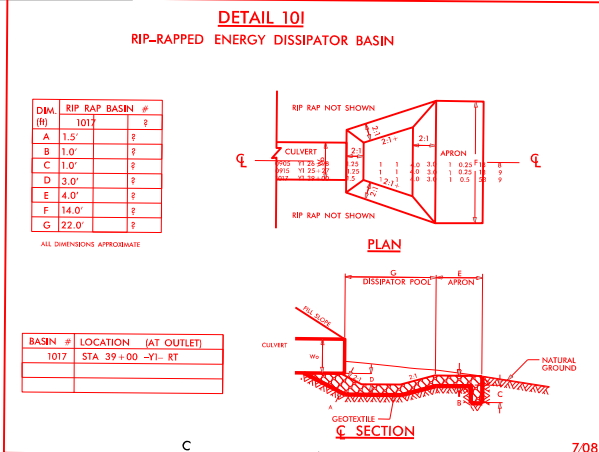
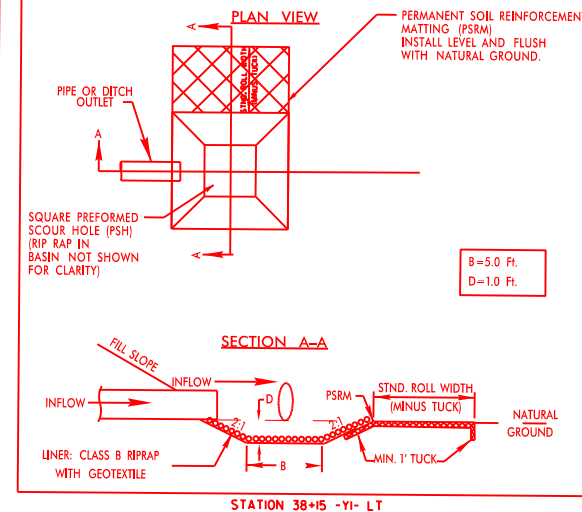
JURISDICTIONAL
STREAM
SE

TEMPORARY STREAM IMPACT

SITE 7

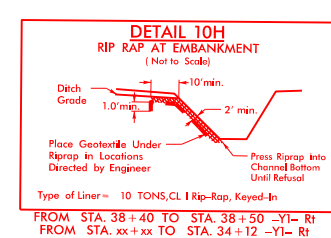
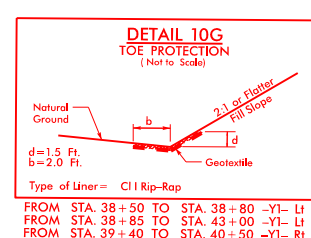
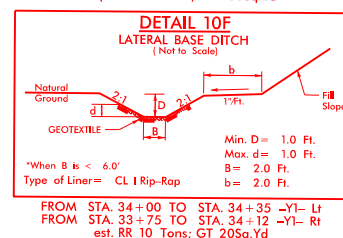
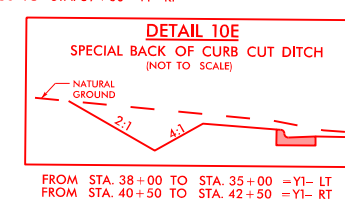
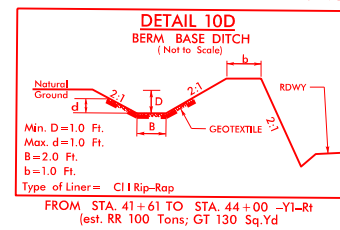
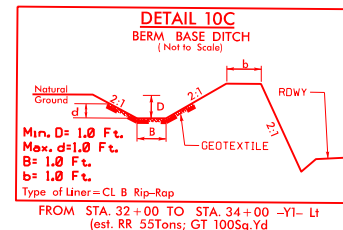
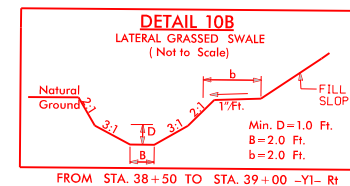
JURISDICTIONAL
STREAM
SA

DETAIL 10J PREFORMED SCOUR HOLE



STA. 34+20 -Y- RT Length=10 Ft.
d=2.0 Ft.
Est. = 13 Tons of Class 1 Rip-Rap

STA. 38+80 -Y- RT Length=12 Ft.
d=1.5 Ft.
Est. = 11 Tons of Class 1 Rip-Rap



PROJECT REFERENCE NO. HE-000IB	SHEET NO. 10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PERMIT DRAWING
SHEET 14 OF 19
4-18-2023

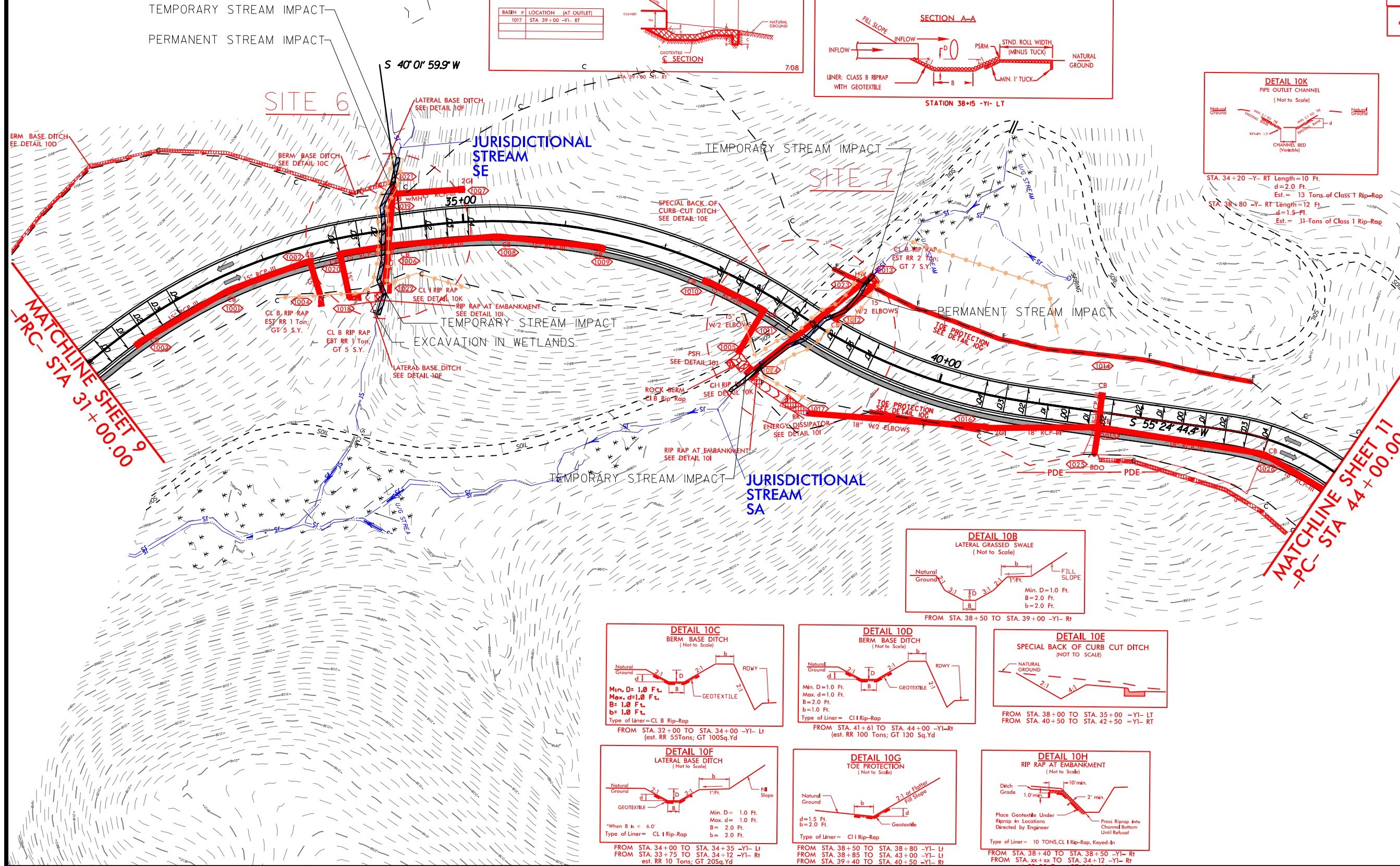
WETLAND AND SURFACE WATER IMPACTS PERMIT

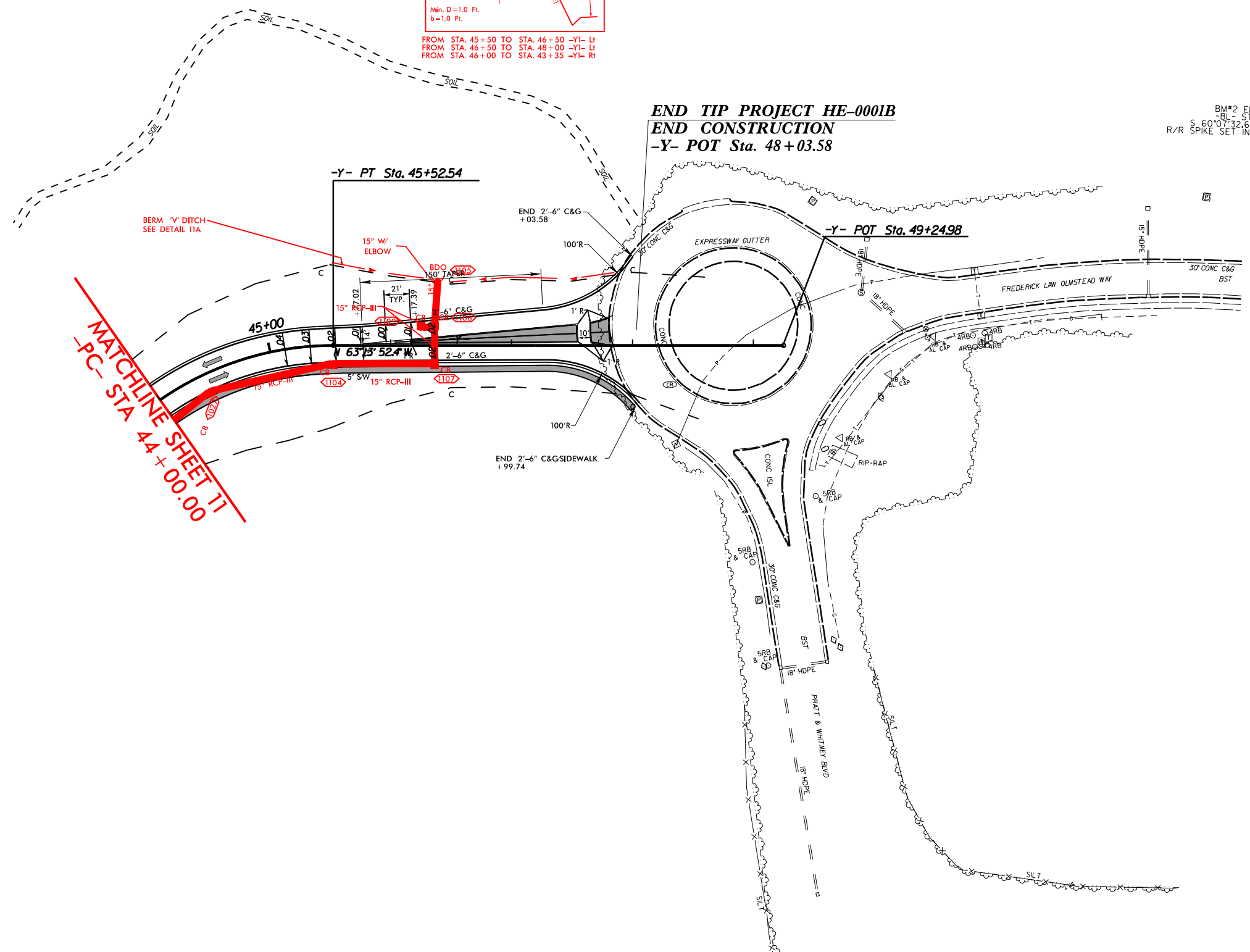
LEGEND

- SURFACE WATER IMPACTS
- TEMPORARY SURFACE WATER IMPACTS
- MECHANIZED CLEARING (GRUBBING)
- SAFETY FENCE

PROJECT REFERENCE NO.	SHEET NO.
HE-0001B	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

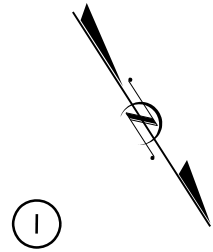
PERMIT DRAWING
SHEET 15 OF 19
4-18-2023





-Y-
PI Sta 44+33.13
 $\Delta = 61' 21" 23.2' (RT)$
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 $R = 250.00'$
 $SE = 04'$
 $RO = 42'$
 $DS = 30MPH$

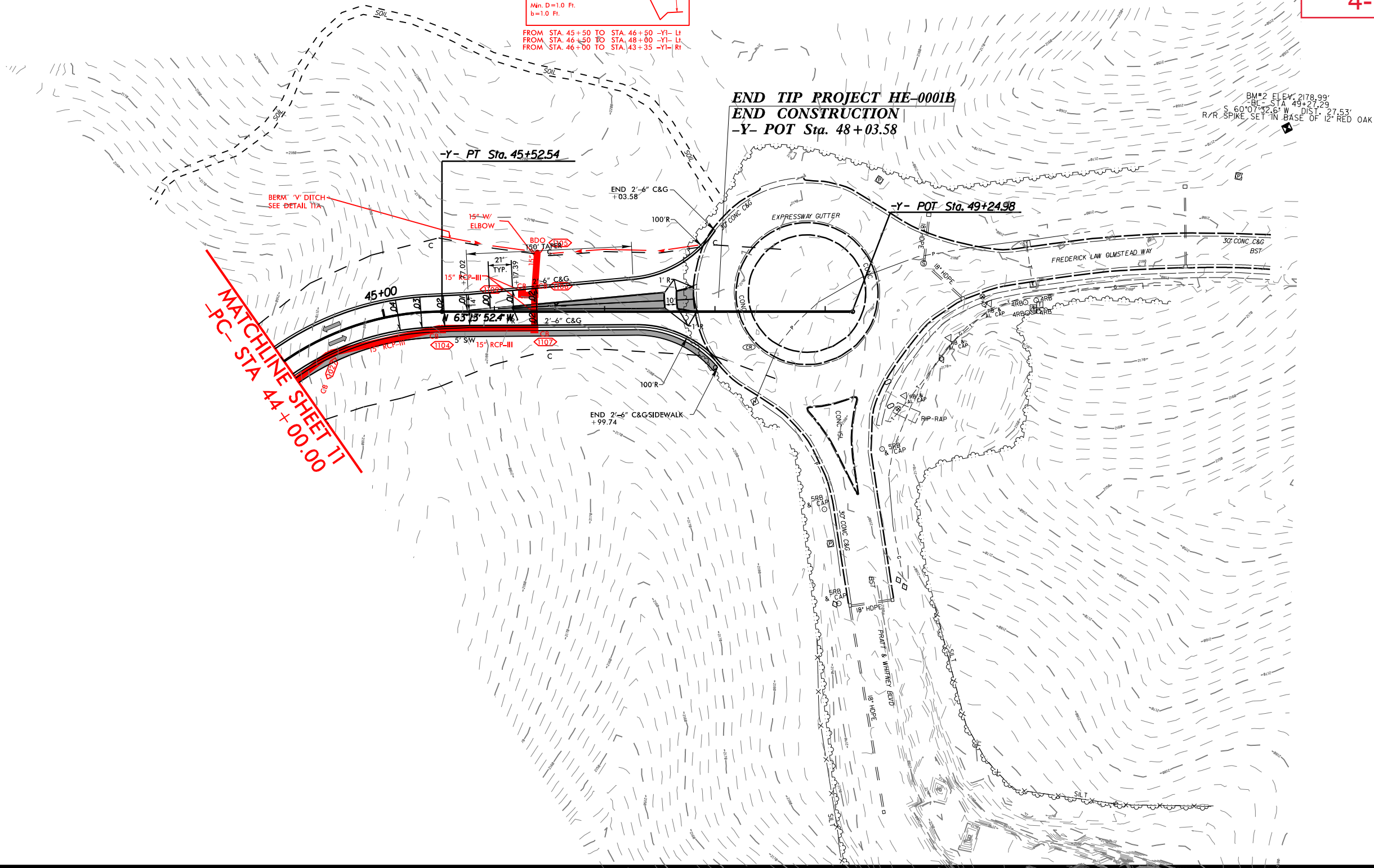
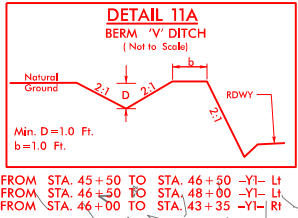
WETLAND AND SURFACE WATER IMPACTS PERMIT



PROJECT REFERENCE NO.	SHEET NO.
HE-0001B	11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PERMIT DRAWING
SHEET 17 OF 19

NO STREAM IMPACTS
4-18-2023



WETLAND AND SURFACE 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	RPC 25+17 to 25+30 LT	Fill in Wetlands/Mechanized Clearing Due to Roadway Widening	< 0.01			0.01						
2	RPC 31+75 to 32+62 LT	Fill in Wetlands/Mechanized Clearing due to Roadway Widening	0.02			0.03						
3	RPC 34+99 to 36+35 RPD 11+38 to 15+16 LT	Stream relocated to Proposed Channel Due to Roadway Widening and Extension of Proposed 9'X7' RCBC and 66in RCP (292')	< 0.01							512	73	
4	RPA 22+89 to 23+34	Inlet of Proposed 54in RCP/Mechanized Clearing Due to Roadway Widening and Installation of Proposed 54in RCP extension				0.02				50	16	
5	-Y- 26+12 to 26+39	Proposed 30in RCP								160	40	
6	-Y- 33+95 to 34+08	Excavation in Wetland Due to Outlet of Proposed 24in RCP			0.01							
6	-Y- 34+08 to 34+46	Proposed 24in RCP								114	45	
7	-Y- 38+34 to 38+94	Proposed 36in RCP								145	16	
TOTALS*:			0.03		0.01	0.06				981	190	0

NOTES:

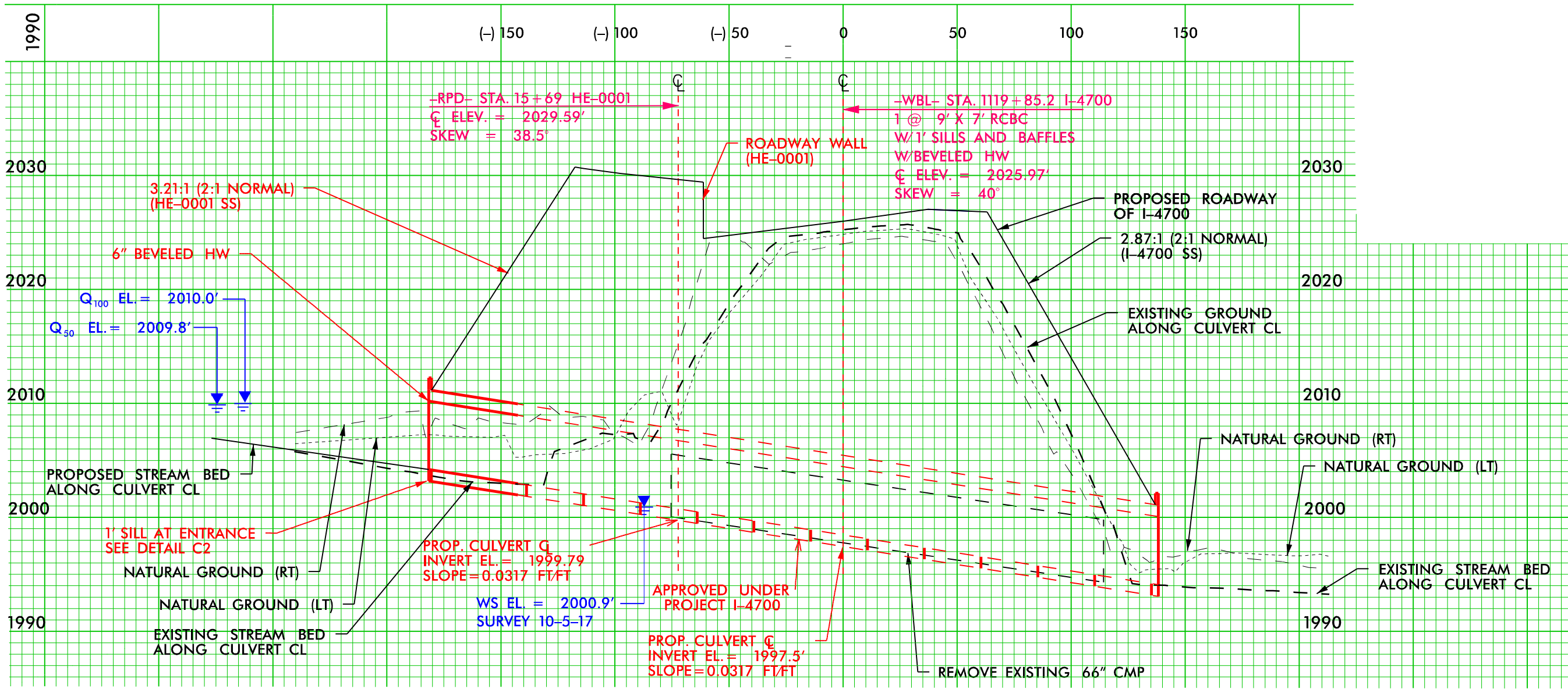
4-18-2023

8/17/95

REVISIONS

PERMIT DRAWING
SHEET 19 OF 19
4-18-2023

PROJECT REFERENCE NO.	SHEET NO.
HE-0001	15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



Protected Species/ Section 7



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Asheville Field Office
160 Zillicoa Street Suite B
Asheville, North Carolina 28801



January 13, 2023

Marissa Cox
Biological Surveys Group
North Carolina Department of Transportation
1000 Birch Ridge Drive
Raleigh, North Carolina 27610

Subject: Reinitiation of Informal Consultation and Conference Report for the New I-26 Interchange at Exit 35 and Roadway Connection to Fredrick Law Olmstead Way East, Asheville, Buncombe County, North Carolina (TIP No. HE-0001, Service Log #21-330)

Dear Marissa Cox:

On November 21, 2022, we received (via e-mail) your request to reinitiate informal consultation and initiate conference procedures under section 7 for effects the subject project may have on the newly uplisted northern long-eared bat (*Myotis septentrionalis*) and recently proposed tricolored bat (*Perimyotis subflavus*). We have reviewed the information you submitted along with information from three prior informal concurrence letters (November 18, 2021, March 16, 2022, and July 22, 2022) and the administrative record summarized in those letters, and the following is provided in accordance with the provisions of the National Environmental Policy Act (42 U.S.C. § 4321 et seq.) and section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 - 1543) (Act). This concurrence compliments and does not supersede the July 22, 2022 concurrence letter.

On July 5, 2022, the U.S. District Court of the Northern District Court of California vacated the 2019 regulations implementing section 7 of the Act. On September 21, 2022, the Ninth Circuit Court of Appeals granted a request to stay the U.S. District Court of Northern California's July 5, 2022, order that vacated the 2019 regulations of the Act. As a result, the 2019 regulations are again in effect, and the U.S. Fish and Wildlife Service (Service) has relied upon the 2019 regulations in issuing our written concurrence on the action agency's "may affect, not likely to adversely affect" determination. However, because the outcome of the legal challenges to the 2019 regulations is still unknown, we considered whether our substantive analyses and conclusions would have been different if the pre-2019 regulations were applied in this informal consultation and conference report. Our analysis included the prior definition of "effects of the action." We considered all the "direct and indirect effects" and the "interrelated and interdependent activities" when determining the "effects of the action." We then considered whether any "effects of the action" that overlap with applicable ranges of listed species would be wholly beneficial, insignificant, or discountable to the species. As a result, we determined the substantive analysis and conclusions would have been the same, irrespective of which regulations applied.

Project Description

A full project description is included in the previous concurrence letters. Since the last concurrence letter was signed, resource agencies reviewed draft hydraulic (stormwater) plans at the Merger Team CP4B Meeting on August 17, 2022. Several agencies including ours also submitted comments on the final hydraulic plans in November and December 2022. A Merger Team CP4C Meeting is currently scheduled

for January 2023. Finally, North Carolina Department of Transportation (NCDOT) also submitted a schedule change with the reinitiation request: construction is anticipated to take 18-24 months from project letting, scheduled for August 2023. NCDOT and the Service developed conservation measures during prior informal consultations for gray bat (*Myotis grisescens*) to minimize and avoid impacts from lighting, tree removal, and impaired water quality. Because the effects of the action on northern long-eared bat and tricolored bat are similar to those for gray bat, the conservation measures outlined in the previous consultation (dated July 22, 2022) will also be protective of these species. Therefore, NCDOT did not develop additional conservation measures for reducing adverse effects to northern-long eared bat and tricolored bat. Of primary importance to northern long-eared bat and tricolored bat and our concurrence is the commitment to remove all trees (19.5 to 26 acres) during the inactive season, from November 15 through March 15.

Federally Listed Species

While extensive acoustic, tracking, mist netting, and roost count surveys for gray bat have been done throughout the habitat surrounding the action area, access to the action area outside of the I-26 corridor has been very limited and no surveys for northern long-eared bat or tricolored bat have been completed. Additionally, while Indiana State University and NCDOT completed acoustic surveys in the surrounding area, results for northern long-eared bat and tricolored bat were not reported because that work focused on gray bat. The closest records of northern long-eared bat and tricolored bat are about 4.5 miles from the action area. The closest northern long-eared bat record reveals consistent captures of the species between 2008 to 2018. Additionally, current northern long-eared bat records exist 14 miles east and west of the action area in large tracts of continuous forest, roughly separated by the action area and development south of the City of Asheville. Finally, the action area is surrounded on three sides by the French Broad River. Based on this information, the flexible habitat requirements of the northern-long eared bat and tricolored bat, and the presence of suitable habitat within the action area, NCDOT has assumed presence of northern-long eared bat and tricolored bat in the action area.

NCDOT discusses the effects of the action on northern-long eared bat and tricolored bat in their request for reinitiation. While effects are similar to those outlined for gray bat in the original consultations for this project, they are not identical. The use of trees by northern-long eared bat and tricolored bat is much more extensive and widespread. They are both tree-roosting bats and routinely establish tree roosts throughout much of the active season including maternity colonies. However, based on previously established conservation measures, including the commitment to remove trees in the winter, we concur with the NCDOT's determination that the effects of the action will be insignificant and therefore not likely to adversely affect the northern long-eared bat and tricolored bat.

Conservation Recommendations

Section 7(a)(1) of the ESA directs federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species.

Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

- Conduct acoustic surveys per the most recent *Indiana Bat and Northern Long-eared Bat Survey Guidelines* prior to tree removal (Summer 2023) at locations within or near the action area that are likely to yield high-quality calls to expand knowledge of the distribution of rare populations of northern long-eared bat and tricolored bat in Western North Carolina in a rapidly developing area.

For the Service to be kept informed of actions benefitting listed species or their habitats, we request written notification of the implementation of any conservation recommendations along with the results of any monitoring.

Reinitiation Notice

We believe the requirements under section 7 of the Act are fulfilled for the federally listed species discussed above. However, obligations under section 7 must be reconsidered if: (1) new information reveals impacts of this proposed action that may affect listed species or critical habitat in a manner not previously considered, (2) this proposed action is subsequently modified in a manner that was not considered in this review, or (3) a new species is listed, or critical habitat is determined that may be affected by the proposed action.

Because we have concurred with your determination that the project may affect, but it not likely to adversely affect, the tricolored bat in this conference report, you do not need to reinitiate section 7 solely due to any final effective listing of the tricolored bat.

We appreciate the opportunity to provide these comments. Please contact Ms. Lauren B. Wilson of our staff at lauren_wilson@fws.gov if you have any questions. In any future correspondence concerning this project, please reference our Service Log #21-330.

Sincerely,

Janet Mizzi
Field Supervisor



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Asheville Field Office
160 Zillicoa Street Suite B
Asheville, North Carolina 28801



July 22, 2022

Marissa Cox
Biological Surveys Group
North Carolina Department of Transportation
1000 Birch Ridge Drive
Raleigh, North Carolina 27610

Subject: Revised Informal Consultation for the New I-26 Interchange at Exit 35 and Roadway Connection to Fredrick Law Olmstead Way East, Asheville, Buncombe County, North Carolina (TIP No. HE-0001)

Dear Marissa Cox:

This responds to your request for a revised concurrence letter on the subject proposed action. On June 16, 2021, we attended an external scoping meeting with regulatory partners where the North Carolina Department of Transportation (NCDOT) introduced the HE-0001 project and indicated its placement in the Merger Process. On June 24, 2021, we received (via e-mail) NCDOT's request for informal consultation and section 7 concurrence on effects the subject project may have on federally listed species. On June 29, 2021, we met with you and your staff to discuss the informal consultation request and initial comments. We then submitted written comments to NCDOT on July 7, 2021. On September 16, 2021, we received (via e-mail) an updated request for informal consultation and section 7 concurrence. We attended additional meetings with NCDOT staff to discuss issues and concerns. We sent you an informal concurrence letter dated November 18, 2021. Members of your staff provided additional information on January 18 and 31, 2022. We reviewed the CP3 Merger Packet provided on January 26, 2022, sent additional comments and questions to you on February 4, 2022, and received NCDOT's responses on February 14, 2022, which included a request for a revised concurrence letter. This letter also includes a revision to Conservation Measure TREE 1 per information provided during a July 20, 2022, CP4A Merger Meeting and associated emails. The following is provided in accordance with the provisions of the National Environmental Policy Act (42 U.S.C. § 4321 et seq.); the Fish and Wildlife Coordination Act, as amended (16 U.S.C. 661 - 667e); and section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 - 1543) (Act). This revised informal concurrence letter supersedes our previous letters dated November 18, 2021 and March 16, 2022.

Project Description

A full project description is included in the original concurrence letter signed November 18, 2022. NCDOT is not able to implement all the lighting conservation measures requested by the U.S. Fish and Wildlife Service (Service) and provided additional information on nighttime lighting, stormwater, and inclusion of development as an indirect effect. Most agencies concurred with the use of Detailed Study Alternative 3 (Figure 2) at the CP3 Merger Meeting on February 9, 2022. The North Carolina State Historic Preservation Office abstained. The study area (Figure 1) remains the same though the action area is likely to narrow in the future when final designs are completed.

For HE-0001, NCDOT will analyze the project using the Stochastic Empirical Loading and Dilution Model (SELDM) Catalog for North Carolina (NC-SELDM) to determine recommendations for

stormwater treatment goals. The model returns one of three recommendations for stormwater treatment 1) a direct discharge is acceptable; 2) minimization measures are sufficient; or 3) implement toolbox best management practices. Based on the analysis from the NC-SELDM Catalog, NCDOT will implement stormwater controls as needed to guard against erosion and to protect water quality. Stormwater design information is limited at this stage of project development.

NCDOT provided additional information on construction sediment and erosion control (SEC) measures. NCDOT follows design requirements based on peak flow and designs devices to handle the 25-year or 10-year peak flow storm event. Runoff velocities must be controlled so that the peak runoff from the 10-year frequency storm occurring during or after construction will not damage the receiving stream channel at the discharge point. The velocity must not exceed the greater of the maximum non-erosive velocity of the existing channel, based on soil texture or peak velocity in the channel prior to disturbance. If neither condition can be met, then protective measures must be applied to the receiving channel. As stated in the BE, NCDOT will default to the most-restrictive SEC measure requirements.

NCDOT has committed to the following conservation measures in their BE dated September 15, 2021, in emails dated January 18 and 31, 2022, or did not object to their inclusion in the November 18, 2021 concurrence letter. Conservation measures have been modified for clarity as needed, numbered consecutively, and named based on the type of measure.

Conservation Measures for Gray Bat

TREE 1: As the proposed action will impact suitable habitat for gray bat throughout the action area, all tree clearing will occur between November 15 – March 15, which is outside of the bat active season for gray bat in the French Broad River (FBR) Basin. There will be one exception to this moratorium, the minimal tree clearing associated with geotechnical field investigations that will occur starting in August 2022. This exception will allow equipment access for geotechnical borings planned on the -y-line (i.e., connector road) and the bifurcated section. The equipment will work around trees to the greatest extent practical.

TREE 2: Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal in excess of what is required to implement the project safely.

TREE 3: Ensure tree removal is limited to that specified in project plans and ensure that clearing limits are clearly marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits).

LIGHT 1: Permanent lighting will be confined to the interchange portion of this project along I-26 and will meet safety requirements for fully controlled access roadways. The roadway connection to Frederick Law Olmstead Way East will remain a dark forested corridor.

LIGHT 2: Lighting used for construction will be limited to what is necessary to maintain safety standards and will only be directed toward active work areas, not into adjacent wooded areas or inactive work sites.

LIGHT 3: NCDOT will use the shortest light pole that meets highway requirements and safety parameters and limits light in suitable bat habitat.

LIGHT 4: NCDOT will use light emitting diode (LED) fixtures with a Type II distribution pattern. This pattern projects light from the fixture further along the road and less across the road.

LIGHT 5: In all cases, the BUG (Backlight, Uplight, and Glare) rating will not exceed 3-0-3.

LIGHT 6: NCDOT will meet the AASHTO minimum requirements of 0.6 fc at 4:1 uniformity, which represents a 25% reduction in the average light on the pavement surface (compared with using the 0.8 fc standard) and should reduce the amount of light reaching suitable bat habitat.

LIGHT 7: NCDOT will eliminate all high mast light poles within the action area.

SEC 1: NCDOT will implement Design Standards for Sensitive Watersheds to minimize impacts to surface waters and wetlands which support aquatic macroinvertebrates, a food source for gray bats.

Conservation Measures for Appalachian Elktoe

Sediment and Erosion Control (SEC)

SEC 2: A combination of Design Standards in Sensitive Watersheds (DSSW, 15A NCAC 04B .0124), Environmentally Sensitive Areas, and the NC Division of Water Quality (NCDWQ) Construction General Permit (NCG01) terms and conditions that allow for stormwater discharge under the National Pollutant Discharge Elimination System (NPDES) apply and NCDOT will default to the most-restrictive SEC measure requirements.

SEC 3: The sedimentation and erosion control plan (SECP) will be in place prior to any ground disturbance for all pipe replacements and construction. When needed, combinations of SEC measures (such as silt bags in conjunction with a stilling basin) will be used to ensure that the most protective measures are implemented.

SEC 4: The SECP shall adhere to the DSSW for portions of the project draining directly or indirectly to the FBR. Consideration will be given to any on the ground practical application which is most protective of the resource. For example, there may be some areas where NCDOT would not extend a measure of the DSSW (e.g., cut trees to construct a basin) which would have greater impact to sensitive resources.

SEC 5: Environmentally Sensitive Areas will be demarcated within the action area and will be defined by a 50-foot buffer zone on both sides of jurisdictional streams measured from top of streambank, in which the following shall apply:

- The contractor may perform clearing operations, but not grubbing operations until immediately prior to beginning grading operations.
- Once grading operations begin, work shall progress in a continuous manner until complete.
- Erosion control devices shall be installed immediately following the clearing operation.
- Seeding and mulching shall be performed on the areas disturbed by construction immediately following final grade establishment.
- Seeding and mulching shall be done in stages on cut and fill slopes that are greater than 20 feet in height measured along the slope, or greater than 2 acres in area, whichever is less.
- All SEC measures, throughout the project limits, must be cleaned out when half full of sediment, when applicable, to ensure proper function.

Monitoring Effectiveness of SEC Devices

SEC 6: One Construction Project Inspector will monitor SEC devices for the life of the project.

SEC 7: Inspections of erosion control devices will be done on the standard inspection schedule (weekly, or after a rainfall event of one inch or greater).

SEC 8: NCDOT will self-report to the Service any SEC device failures or sediment loss resulting from exceeding the capacity of the measures. The NCDOT inspector will report any failures or sediment loss to the Division Environmental Officer, who will contact the agency within 24 hours. If there are any failures or sediment loss, NCDOT will meet with resource agencies and work to adaptively manage SEC devices for further storm events while construction continues.

Agency Coordination (AC)

AC 1: NCDOT will invite representatives from the Service, U.S. Army Corp of Engineers, and the North Carolina Wildlife Resources Commission to the preconstruction meeting for the proposed project, as well as to all subsequent field inspections prior to construction, to ensure compliance with all special project commitments.

AC 2: NCDOT shall provide the Service with the SECP and allow 30 calendar days for review.

Stormwater Control Measures (SCM):

SCM 1: NCDOT has developed stormwater commitment guidance, which will apply to any portion of the NCDOT stormwater conveyance system draining to an outfall discharging to the FBR within the NCDOT right of way.

SCM 2: NCDOT will prepare a stormwater management plan (SMP) that implements structural and non-structural post-construction stormwater best management practices (BMPs) to the maximum extent practical, which is consistent with NPDES Post-Construction Stormwater Program.

SCM 3: NCDOT will use a hierarchical BMP selection process, which is optimized to treat silt, nutrients, and heavy metals.

SCM 4: NCDOT will evaluate the use of emerging BMP technologies that NCDOT has yet to publish in its BMP Toolbox. These emerging BMP technologies include bioswales, bioembankments, biofiltration conveyances, and soil improvements that maximize infiltration.

Federally Listed Species

Appalachian elktoe (Alasmidonta raveneliana)

Appalachian elktoe occur in the FBR upstream and downstream of the project. While the project may not directly impact the FBR, the project will impact jurisdictional streams SA and SDX that flow into the FBR. The jurisdictional streams themselves do not provide suitable habitat for Appalachian elktoe, but they do affect the water quality of the FBR. Tree clearing, land clearing, and stormwater management may all result in effects to the FBR, as discussed in the BE.

The BE states that due to the implementation of conservation measures related to sediment and erosion control and stormwater, any sedimentation or water quality impacts associated with construction of HE-0001 will be insignificant or discountable as it is not expected to reach the main stem of the FBR.

Based on the conservation measures outlined above, we concur with NCDOT's determination that the project may affect, but is not likely to adversely affect Appalachian elktoe.

Gray bat (Myotis grisescens)

While many gray bats forage and commute over water, some choose to fly over land including heavily wooded areas in the FBR basin and near the project study area (Weber et al., 2020, Figure 3).

Additionally, several studies indicate that bad weather in spring and fall can cause gray bats to leave primary feeding locations along water bodies for forest canopies (LaVal et al. 1977, Stevenson and Tuttle 1981). Based on this information and the facts that follow, we believe gray bats forage and commute throughout the action area:

- 1) a primary gray bat roost occurs within 0.65 miles of the action area boundary,
- 2) the action area is located within a bend of the FBR that is a well-documented foraging and commuting corridor for gray bats, which creates opportunity for the action area to serve as an overland bypass for gray bats traveling north or south along the river, and
- 3) the action area is within a small undeveloped forested corridor – connecting the U.S. Forest Service's Bent Creek Experimental Forest with the undeveloped portions of Biltmore properties – that we believe may serve as an important commuting and foraging overland flyway.

Because gray bats are expected to be foraging, commuting, and potentially roosting within the action area, artificial lighting and tree removal may cause avoidance behavior in gray bats during construction and operation of the proposed project. Studies (e.g., Rydell 1992; Blake et al. 1994; Stone et al. 2009, 2012) have shown that road lighting deters many bat species, notably slow-flying, woodland-adapted species such as members of the genus *Myotis*, from approaching the road. Deforestation at foraging sites and along commuting routes is likely to have negative effects due to the removal of prey abundance and

reduced cover from natural predators (Tuttle 1979). Recently-volant young are especially susceptible to the effects of deforestation, as they require the protection of forest cover while becoming proficient fliers.

Based on the best available science, information above, and the information provided, we believe that tree removal and new artificial lighting may have short and long-term effects on the gray bat. Conservation measures for this project aim to address these concerns and ensure effects are insignificant. Winter tree clearing and other tree-related measures should reduce any impacts to gray bats including impacts to bats that may temporarily roost in trees during migration (Samoray et al. 2020). Lighting measures aim to address and reduce the amount of light leaving paved surfaces.

Based on the information provided in the BE, including the conservation measures listed above, we concur with NCDOT that the project may affect, but is not likely to adversely affect the gray bat.

Northern long-eared bat (Myotis septentrionalis, NLEB)

Suitable habitat for NLEB is present within the action area. Based on the information provided, the project is consistent with the final section 4(d) rule, codified at 50 C.F.R. § 17.40(o) and effective February 16, 2016 for NLEB. This rule exempts take of this species for any tree cutting activity that occurs more than 0.25 miles from a known hibernation site or more than 150 feet from a known maternity roost during the pup rearing season (June 1 - July 31). Because this project meets the “exempt” criteria, any take associated with the project has already been addressed in the Biological Opinion for the 4(d) rule, and no further action under section 7 of the Act is required for this species at this time.

The Service is currently reevaluating the listing status of NLEB, and a final listing decision is expected in 2022. Consultations that use the 4(d) rule for NLEB may need to be reinitiated if the 4(d) rule is rescinded or the listing status of the species changes during the life of the project.

Other Species

While the following species occur in the region, the action area is outside the current range and/or area of influence for blue ridge goldenrod (*Solidago spithamea*), Carolina northern flying squirrel (*Glaucomys sabrinus coloratus*), roan mountain bluet (*Hedyotis purpurea* var. *montana*), spreading avens (*Geum radiatum*), and spruce-fir moss spider (*Microhexura montivaga*). While the action area is within the current range and/or area of influence for mountain sweet pitcherplant (*Sarracenia rubra* ssp. *jonesii*) and rock gnome lichen (*Gymnoderma lineare*), no suitable habitat is present within the action area for either species. Therefore, no further section 7 review for these species is required.

Little brown bat (*Myotis lucifugus*) and tricolored bat (*Perimyotis subflavus*) are at-risk species (ARS). ARS are not legally protected under the Act and are not subject to any of its provisions, including section 7, unless they are formally proposed or listed as endangered or threatened. The Service is expected to make listing determinations on these species in the near future. While lead federal agencies are not prohibited from jeopardizing the continued existence of an ARS or proposed species unless the species becomes listed, the prohibition against jeopardy and taking a listed species under section 9 of the Act applies as soon as a listing becomes effective, regardless of the stage of completion of the proposed action. We include this notification to make you aware of their current status and potential occurrence within the action area and to request your assistance in protecting them. Depending on the timeline of the subject project and final listing determinations, reinitiation may be required.

Conservation Recommendations

Section 7(a)(1) of the ESA directs federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of

a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

- Consider timing clearing and grading operations (not including tree cutting) such that follow-up seeding and mulching activities avoid the coldest winter months of January and February when growth of winter rye is slow and may not perform well as a protective BMP for sediment and erosion control. This measure may be most effective when applied to Environmentally Sensitive Areas.
- Use only low-pressure sodium (LPS), high-pressure sodium (HPS), or LED light sources that emit “warm” light. “Warm” light sources are those that contain low amounts of blue light in their spectrum. Choosing light sources with a color temperature of no more than 3,000 Kelvins will minimize the effects of blue light exposure. For additional information and actions that can be taken to reduce outdoor light pollution, visit: <https://www.darksky.org/our-work/lighting/lighting-for-citizens/lighting-basics/>.
- Consider the conservation needs of the Appalachian elktoe when designing SEC and SCM plans for HE-0001. Include SCMs that provide control of water quantity to prevent downstream flooding and erosion of Streams SA and SDX. We encourage the use of wet detention basins which maintain a permanent pool of water and attenuates peak stormwater flows (NCDOT BMP Toolbox Chapter 12, 2014). Wet detention basins will benefit gray bats as they have been shown to use them in Weaverville and will improve the aesthetics of the roadway for users and the Blue Ridge Parkway viewshed.
- Develop a study to monitor the new roadway’s impacts to Stream SA. We are concerned about the long-term implications of increased impervious surfaces within the watersheds of Appalachian elktoe, and this situation presents an opportunity to observe and learn, on a small scale, what happens to stable streams when well-designed roadway projects that include SCMs are introduced on the landscape. We are ultimately interested in creating adaptive feedback loops that can inform freshwater mussel recovery in a landscape that is under constant development pressure.

For the Service to be kept informed of actions benefitting listed species or their habitats, we request written notification of the implementation of any conservation recommendations along with the results of any monitoring.

Reinitiation Notice

We believe the requirements under section 7 of the Act are fulfilled for the federally listed species discussed above. However, obligations under section 7 must be reconsidered if: (1) new information reveals impacts of this proposed action that may affect listed species or critical habitat in a manner not previously considered, (2) this proposed action is subsequently modified in a manner that was not considered in this review, or (3) a new species is listed, or critical habitat is determined that may be affected by the proposed action.

We appreciate the opportunity to provide these comments. Please contact Ms. Lauren B. Wilson of our staff at lauren_wilson@fws.gov if you have any questions. In any future correspondence concerning this project, please reference our Log Number 21-330.

Sincerely,

- - *original signed* - -

Janet Mizzi
Field Supervisor

Enclosures: maps

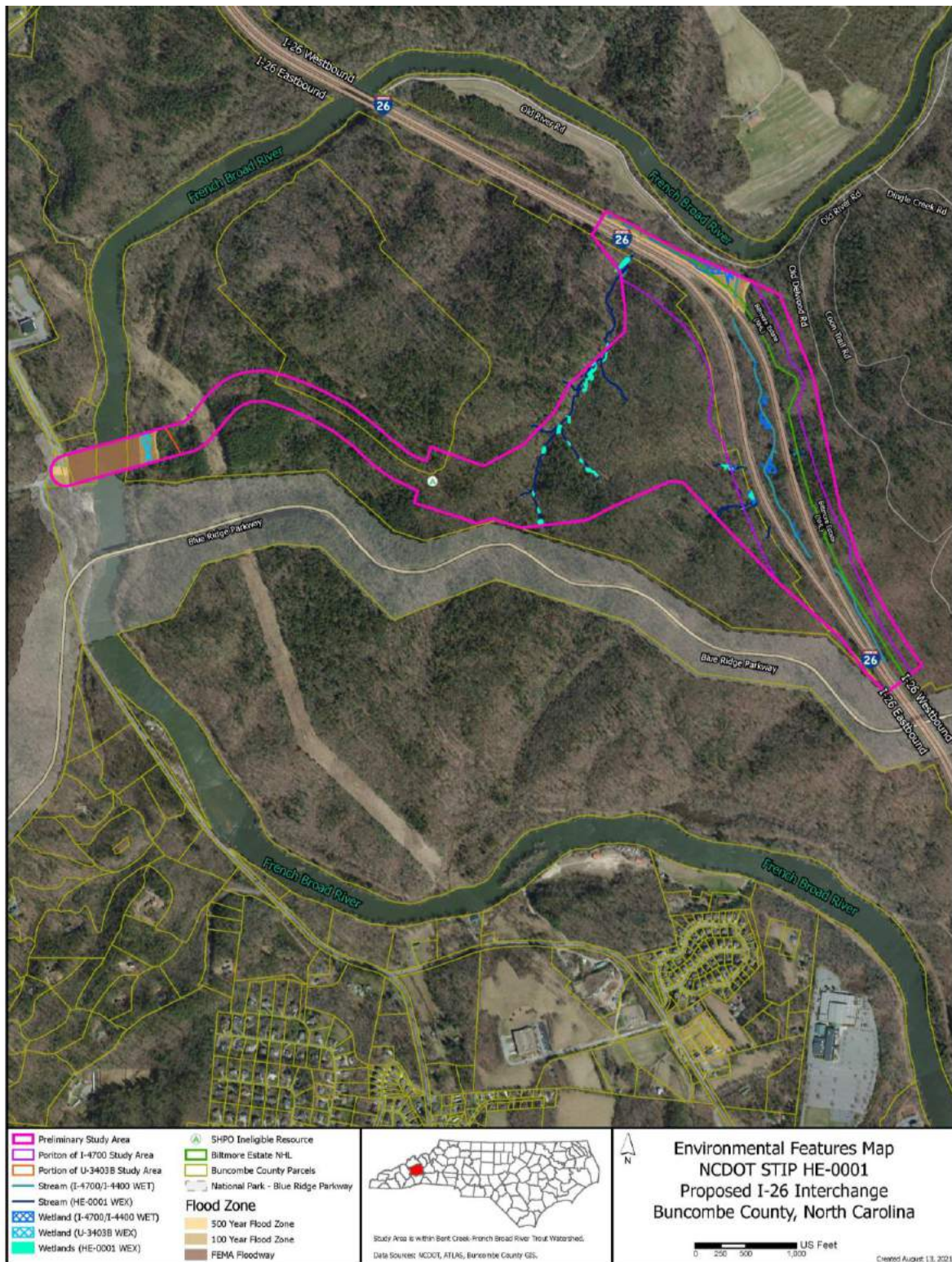


Figure 1. Stream SA and SDX in the Action Area. Map shows results of the jurisdictional determination for streams and wetlands within the action area.

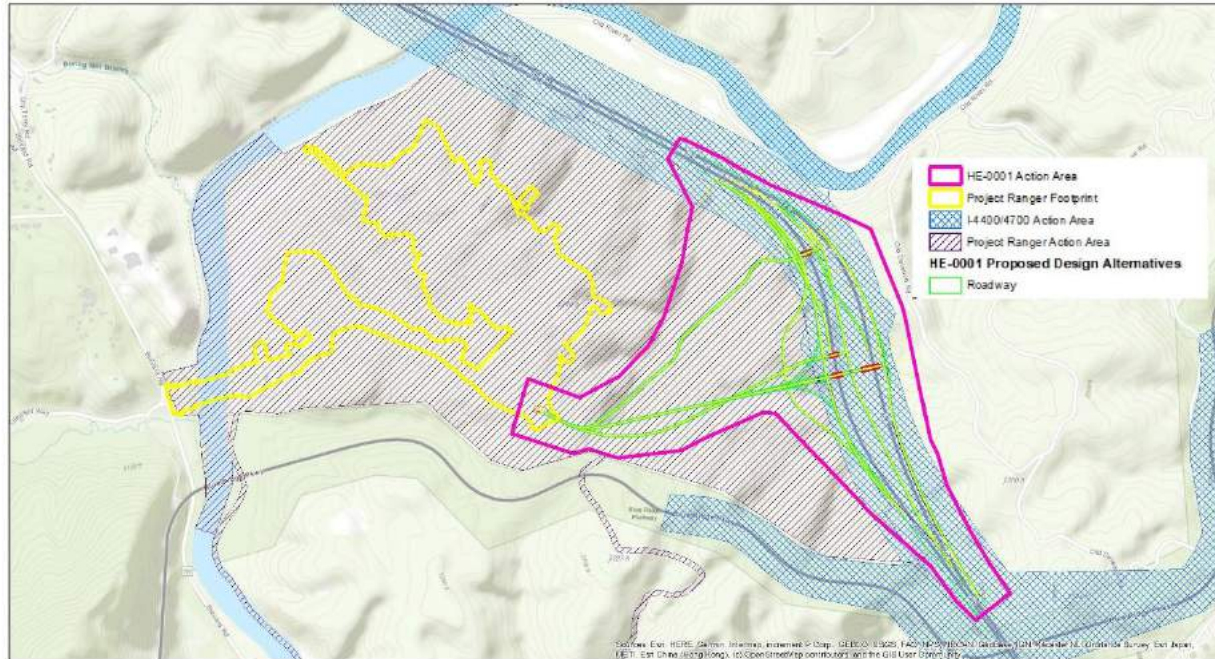


Figure 2. HE-0001 Detailed Study Alternatives and Consultation History in Project Vicinity. Includes action areas for Project Ranger (FWS Log No. 19-328) and I-26 Widening Project (I-4400/I-4700). Merger agencies choose Detailed Study Alternative 3, the northern most green road, as the least environmentally damaging practicable alternative.

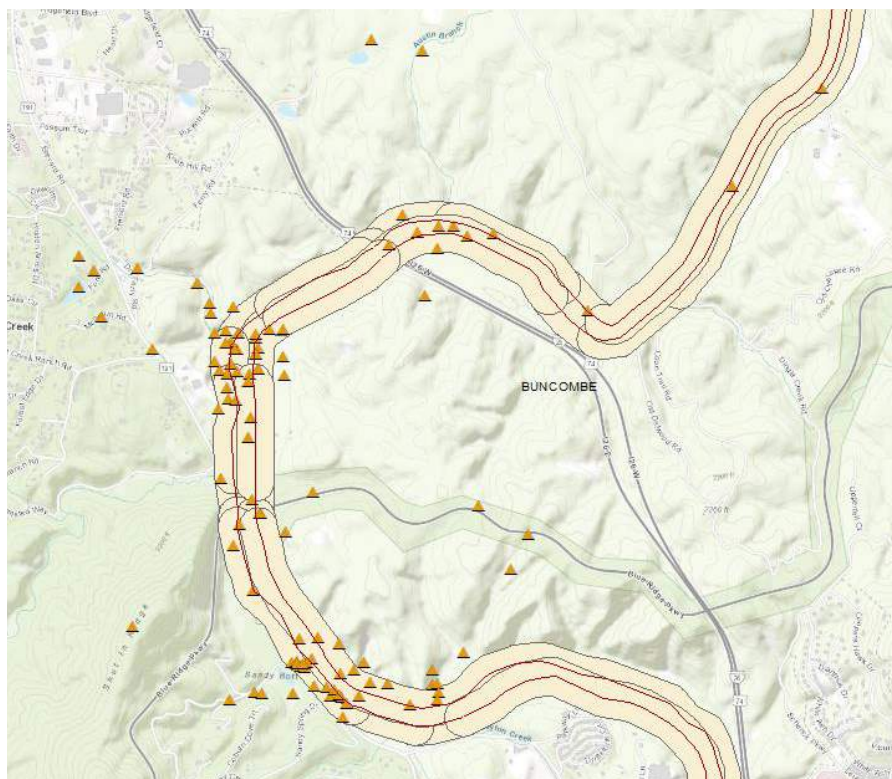


Figure 3. Gray Bat Locations Near the Action Area. Known gray bat foraging locations (orange triangles) from Weber et al. (2020) in the vicinity of the action area. The map shows the French Broad River (cream colored polygon with red outline) and a 100 m buffer (cream polygon with a gray outline).

Archaeology



**North Carolina Department of Natural and Cultural Resources
State Historic Preservation Office**

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary D. Reid Wilson

Office of Archives and History
Deputy Secretary, Darin J. Waters, Ph.D.

June 20, 2022

MEMORANDUM

TO: Matt Wilkerson mtwilkerson@ncdot.gov
Environmental Analysis Unit
NCDOT Division of Highways

FROM: Ramona M. Bartos, Deputy State Historic Preservation Officer *Re: for Ramona M. Bartos*

SUBJECT: TIP HE-0001, WBS No. 49473, Transportation Programmatic Agreement Project
21 05-0002, Buncombe County, ER 21-1559

Thank you for your submission of March 10, 2021, for the above-referenced project. We have reviewed the information provided and offer the following comments:

The **No National Register of Historic Places Eligible or Listed Archaeological Sites Affected Form** submitted for the area of potential effects (APE) for the proposed TIP HE-0001 (PA Project 21-05-0002) project reports that impacts to all 18 archaeological sites (31BN1046, 31BN1052, 31BN1090, 31BN1093, 31BN1094, 31BN1091, 31BN1092, 31BN1118, and 31BN1119-31BN1128) identified or revisited in the 2021 survey will be avoided. In our memo of January 14, 2022, we concurred that recently identified sites 31BN1091, 31BN1092, 31BN1118, and 31BN1120-31BN1128 were not eligible for listing in the National Register of Historic Places (NRHP), and no additional archaeological investigations were required ahead of construction.

Site 31BN1119 was determined to be NRHP eligible, and at the TIP HE-0001 Effects Meeting held of February 4, 2022, three detailed study alternatives were presented and discussed (DSA1, DSA2, and DSA3). In the subsequent Concurrence Point 3 (CP3) meeting held on February 9, 2022, DSA3 was selected as the Least Environmentally Damaging Practicable Alternative (LEDPA)/Preferred Alternative because it avoids impacts to any portion of site 31BN1119.

Given that DSA3 has been selected as the LEDPA, we concur that HE-0001 will have no adverse effect on eligible archaeological resources, including site 31BN1119, and no further archaeological work is necessary.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.

cc:	Damon Jones, NC DOT	cdjones2@ncdot.gov
	Donnie Brew, FHWA	donnie.brew@dot.gov
	Lori Beckwith, USACE	loretta.a.beckwith@usace.army.mil
	Andrew Triplett, NPS	andrew_triplett@nps.gov
	Scott Shumate, Biltmore Estate	sshumate@biltmore.com
	Wenonah Haire, Catawba Nation	wenonahh@ccppcrafts.com
	Russell Townsend, ECBI THPO	russtown@nc-chokeee.com
	Stephen Yerka, ECBI THPO	syerka@ebci-nsn.gov
	Elizabeth Toombs, CN THPO	elizabeth-toombs@chokeee.org
	Acee Watt, UKB THPO	awatt@ukb-nsn.gov
	LeeAnne Wendt, MCN THPO	lwendt@mcn-nsn.gov
	Roger Bryan, NCDOT Division 13	rdbryan@ncdot.gov
	McCray Coates, NCDOT Division 13	hmcoates@ncdot.gov
	Mark Gibbs, NCDOT Division 13	mgibbs@ncdot.gov
	Adam Archual, Gannett Fleming, Inc.	aarchual@gfnet.com
	Rick Tipton, Gannett Fleming, Inc.	rtipton@gfnet.com



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

March 10, 2022

Ms. Ramona Bartos, Deputy State Historic Preservation Officer
North Carolina State Historic Preservation Office
4617 Mail Service Center
Raleigh, North Carolina 27699-4617

Dear Ms. Bartos

Subject: TIP HE-0001, WBS No. 49473, Transportation Programmatic Agreement Project 21-05-0002, Buncombe County, ER 21-1559

Enclosed please find a copy of the *No National Register of Historic Places Eligible or Listed Archaeological Sites Affected Form* for the subject project documenting the 2021 investigations for TIP HE-0001 (PA Project 21-05-0002) and archaeological site 31BN1119, which is recommended eligible for the National Register of Historic Places (NRHP) under Criterion D. TIP HE-0001 in Buncombe County is subject to the terms and conditions of the Programmatic Agreement (PA) among the Federal Highway Administration, United States Army Corps of Engineers (Wilmington District), North Carolina Department of Transportation, Advisory Council on Historic Preservation, and North Carolina State Historic Preservation Officer for the Transportation Program in North Carolina (PA) as executed on December 7, 2020. FHWA is the lead federal agency in relation to Section 106 of the NHPA. This documentation is being provided as per stipulation V.C.1.a.1 of the PA.

Although the results of the initial investigation and site evaluation for 31BN1119 remain unchanged from the *Archaeological Effects Required Form* submitted to your office dated December 10, 2021; a finding of no effects for 31BN1119 is being submitted due to avoidance of the site. Construction activities for HR-0001 will not impact site 31BN1119. Please contact Mr. C. Damon Jones at 919-707-6076 or cdjones@ncdot.gov or me at 919-707-6089 or mtwilkerson@ncdot.gov should you have any questions regarding this project.

Sincerely,

Matthew Wilkerson
Archaeology Team Leader
Environmental Analysis Unit

Enclosures (PA form)

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

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

Location:
1000 BIRCH RIDGE DRIVE
RALEIGH, NC 27610

Cc Donnie Brew, FHWA
Lori Beckwith, USACE
Andrew Triplett, NPS
Scott Shumate, Biltmore Estate
Wenonah Haire, Catawba Nation
Russell Townsend, ECBI THPO
Stephen Yerka, ECBI THPO
Elizabeth Toombs, CN THPO
Acee Watt, UKB THPO
LeeAnne Wendt, MCN THPO
Roger Bryan, NCDOT Division 13
McCray Coates, NCDOT Division 13
Mark Gibbs, NCDOT Division 13
Adam Archual, Gannett Fleming, Inc.
Rick Tipton, Gannett Fleming, Inc.



NO NATIONAL REGISTER OF HISTORIC PLACES ELIGIBLE OR LISTED ARCHAEOLOGICAL SITES AFFECTED 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 Team.



PROJECT INFORMATION

Project No: **HE-0001** County: Buncombe
 WBS No: 49473 Document: Federal CE
 F.A. No: na Funding: ☐ State ☒ Federal
 Federal Permit Required? ☒ Yes ☐ No Permit Type: FHWA & USACE

Project Description:

The project calls for the construction of new interchange on I-26 connecting with an internal road network under construction on the Biltmore Farms property in Buncombe County. The archaeological Area of Potential Effects (APE) of the project encompasses approximately 211 acres. It is bounded by the French Broad River to the north and the Blue Ridge Parkway property to the south. The APE along its maximum extent measures approximately 5,400 feet from the northwest to the southeast and 4,100 feet from the northeast to the southwest. The APE also extends to the west along an internal roadway crossing the French Broad River on a new bridge and intersection with NC 191. A portion of the APE was previously surveyed during Project Ranger (Webb and Nelson 2019a, 2019b, 2020, 2021) and was excluded from the current survey. However, its results are still valid.

This project is federally funded. As a result, this archaeological review was conducted in accordance with Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance (36 CFR Part 800).

SUMMARY OF ARCHAEOLOGICAL FINDINGS

The North Carolina Department of Transportation (NCDOT) Archaeology Team has 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)
- ☒ There are National Register listed ARCHAEOLOGICAL SITES within the project's area of potential effects. (Attach any notes or documents as needed).
- ☐ 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.

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

An intensive archaeological survey and evaluation for the proposed construction of a new interchange on I-26 in Buncombe County (TIP HE-0001) was conducted by TRC from August to October 2021 (Figures 1–3). The survey report and "Archaeological Effect Required" form were completed on December 7, 2021, with copies submitted to the North Carolina State Historic Preservation Office (SHPO), the Tribal Historic Preservation Offices (THPO), the National Park Service (NPS), Biltmore Estate, and other concerned parties on December 10, 2021.

In summary, seven archaeological sites (31BN1046, 31BN1052, and 31BN1090–31BN1094) were identified within the project limits prior to the current investigations. The current HE-0001 survey by TRC revisited and expanded two of those sites (31BN1091 and 31BN1092) and recorded 11 new resources (31BN1118–31BN1128); no additional survey or evaluation was necessary at the other five previously identified sites (31BN1046, 31BN1052, 31BN1090, 31BN1093, and 31BN1094) as they were covered under Project Ranger (Webb and Nelson 2019a, 2019b, 2020, 2021) (see Figures 2 and 3).

Of the 13 resources identified or revisited by the current project, one precontact site (31BN1119) is recommended eligible for the NRHP under Criterion D, but lack the characteristics needed for eligibility under Criteria A–C. This site appears to have the potential to contain intact cultural features and deposits associated with multiple Archaic to Woodland period occupations. Site 31BN1119 is recommended for avoidance; however, preservation in place is not warranted. If adverse effects to this site cannot be avoided, data recovery excavations are required to mitigate those adverse effects prior to construction.

The other 12 sites (31BN1091, 31BN1092, 31BN1118, and 31BN1120–31BN1128) identified or revisited during the HE-0001 survey are recommended not eligible for NRHP under all four criteria, and no further archaeological work is required at these sites. However, additional investigations will be necessary at 31BN1092, 31BN1123, and 31BN1125 if the APE expands at these resources since the three sites may extend outside of the current project limits.

Of the five sites that were not revisited, one (31BN1046) has been determined eligible for the NRHP under Criterion D and has been the subject of recent data recovery excavations (Idol and Webb 2020). No additional consideration of that site within the APE is required as part of HE-0001. The other four sites (31BN1052, 31BN1090, 31BN1093, and 31BN1094) were previously determined not eligible for the NRHP under all four criteria, and no additional archaeological work was needed under HE-0001 (Webb and Nelson 2019a, 2019b, 2020, 2021). If the APE boundaries are expanded, additional survey and site delineation might be necessary to further investigate sites 31BN1052 and 31BN1090, and/or additional data recovery excavations might be necessary at 31BN1046, since these resources extend outside of the current project limits.

The TIP HE-0001 Effects Meeting was held on February 4, 2022. Three proposed detailed study alternatives (DSA1, DSA2, and DSA3) were presented. An adverse effect to site 31BN1119 was determined for DSA1 and DSA2 with SHPO and FHWA concurring. At least 100 percent of the site would be impacted with DSA1 (Figure 4), while DSA2 would impact at least 21 percent (Figure 5). DSA3 would have no effect on site 31BN1119 as it would be avoided (Figure 6). SHPO and FHWA both concurred. No additional archaeological investigations are required at any other sites as the project will not exceed the surveyed APE.

Concurrence Point 3 (CP3) was subsequential held on February 9, 2022. DSA3 was selected the Least Environmentally Damaging Practicable Alternative (LEDPA)/Preferred Alternative (see Figure 6). DSA3 would avoid impacts to site 31BN1119. As a result, HE-0001 will have no effect on the eligible archaeological resource, and no further archaeological work is necessary.

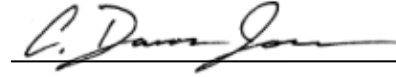
This project falls within a North Carolina County in which the Catawba Nation, the Eastern Band of Cherokee Indians, the Cherokee Nation, the United Keetoowah Band of Cherokee Indians, and Muscogee (Creek) Nation have expressed an interest. We recommend that you ensure that this documentation is forwarded to these tribes using the process described in the current NCDOT Tribal Protocol and PA Procedures Manual.

SUPPORT DOCUMENTATION

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

Other:

Signed:



March 10, 2022

C. Damon Jones
NCDOT ARCHAEOLOGIST

Date

REFERENCES CITED

Idol, Bruce, and Paul Webb

- 2020 *Management Summary: Archaeological Data Recovery Excavations at Site 31BN1046, Buncombe County, North Carolina.* TRC Environmental Corporation, Asheville, North Carolina. Submitted to Biltmore Farms, LLC, Asheville.

United States Geological Survey (USGS)

- 2016 Asheville, North Carolina 7.5 minute quadrangle map.
2016 Skyland, North Carolina 7.5 minute quadrangle map.

Webb, Paul, and Michael Nelson

- 2019a Background Study and Field Reconnaissance of the Northern Parcel of the Biltmore Park West Tract, Buncombe County, North Carolina. TRC Environmental Corporation, Asheville, North Carolina. Submitted to Biltmore Farms, LLC, Asheville.
2019b *Archaeological Survey and Site Evaluation for Project Ranger, Buncombe County, North Carolina.* TRC Environmental Corporation, Asheville, North Carolina. Submitted to Biltmore Farms, LLC, Asheville.
2020 *Archaeological Survey and Site Evaluation for Project Ranger, Buncombe County, North Carolina: Addendum 1.* TRC Environmental Corporation, Asheville, North Carolina. Submitted to Biltmore Farms, LLC, Asheville.
2021 *Archaeological Survey and Site Evaluation for Project Ranger, Buncombe County, North Carolina: Addendum 2.* TRC Environmental Corporation, Asheville, North Carolina. Submitted to ARCADIS.



**North Carolina Department of Natural and Cultural Resources
State Historic Preservation Office**

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary D. Reid Wilson

Office of Archives and History
Deputy Secretary, Darin J. Waters, Ph.D.

January 18, 2022

MEMORANDUM

TO: Matt Wilkerson
Office of Human Environment
NCDOT Division of Highways

FROM: Ramona M. Bartos, Deputy State Historic Preservation Officer *RMB for Ramona M. Bartos*

SUBJECT: HE-0001, WBS No. 49473, PA 05-0002, Buncombe County, ER 21-1559

Thank you for your submission of December 10, 2021, concerning the above-referenced undertaking. We have reviewed the information provided and offer the following comments:

The Archaeological Effects Required Form submitted for the archaeological survey conducted within the area of potential effects (APE) for the proposed project reports that thirteen (13) archaeological sites were identified and evaluated for National Register of Historic Places (NRHP). Of these, twelve (12) archaeological sites (31BN1091, 31BN1092, 31BN1118, and 31BN1120-31BN1128) are recommended not eligible for inclusion in the NRHP. Sites 31BN1092, 31BN1123, and 31BN1125 extend outside the APE and may require additional investigation and assessment for eligibility, should the project's APE expand to include the portions of these sites that were not tested.

Archaeological site 31BN1119 is a multicomponent precontact site that is recommended eligible for the NRHP under Criterion D. If adverse effects to this site cannot be avoided by the proposed undertaking, NCDOT recommends data recovery investigations. We concur with the Determination of Eligibility and recommendation.

Additionally, five (5) archaeological sites, investigated as part of a previous survey for Project Ranger (ER 19-4972), intersect with the current APE (31BN1046, 31BN1052, 31BN1090, 31BN1093, and 31BN1094). All these sites were previously investigated and determined not eligible or were subject to data recovery, and no further work is recommended ahead of the currently proposed undertaking. In the case of 31BN1052 and 31BN1090, NCDOT has concluded that additional investigation may be necessary, if the current APE expands to encompass portions of these sites. We concur with these recommendations and appreciate the continued effort to minimize adverse effects to significant cultural resources in the vicinity.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.

cc: Damon Jones, NCDOT
 Donnie Brew, FHWA
 Lori Beckwith, USAGE
 Andrew Triplett, NPS
 Scott Shumate, Biltmore Estate
 Wenonah Haire, Catawba Nation
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ARCHAEOLOGICAL EFFECTS REQUIRED
 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 Team.



PROJECT INFORMATION

Project No: **HE-0001** County: Buncombe
 WBS No: 49473 Document: Federal CE
 F.A. No: na Funding: ☐ State ☒ Federal
 Federal Permit Required? ☒ Yes ☐ No Permit Type: FHWA & USACE

Project Description:

The project calls for the construction of new interchange on I-26 connecting with an internal road network under construction on the Biltmore Farms property in Buncombe County. The archaeological Area of Potential Effects (APE) of the project encompasses approximately 211 acres. It is bounded by the French Broad River to the north and the Blue Ridge Parkway property to the south. The APE along its maximum extent measures approximately 5,400 feet from the northwest to the southeast and 4,100 feet from the northeast to the southwest. The APE also extends to the west along an internal roadway crossing the French Broad River on a new bridge and intersection with NC 191. A portion of the APE was previously surveyed during Project Ranger (Webb and Nelson 2019a, 2019b, 2020, 2021) and was excluded from the current survey. However, its results are still valid.

This project is federally funded. As a result, this archaeological review was conducted in accordance with Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance (36 CFR Part 800).

SUMMARY OF ARCHAEOLOGICAL FINDINGS, RESULTS AND CONCLUSIONS

An intensive archaeological survey and evaluation for the proposed construction of a new interchange on I-26 in Buncombe County (TIP HE-0001) was conducted by TRC from August to October 2021. The results of archaeological investigations and their recommendations are included in the attached report.

Seven archaeological sites (31BN1046, 31BN1052, and 31BN1090–31BN1094) were identified within the project limits prior to the current investigations. The current HE-0001 survey by TRC revisited and expanded two of those sites (31BN1091 and 31BN1092) and recorded 11 new resources (31BN1118–31BN1128); no additional survey or evaluation was necessary at the other five previously identified sites (31BN1046, 31BN1052, 31BN1090, 31BN1093, and 31BN1094) as they were covered under Project Ranger (Webb and Nelson 2019a, 2019b, 2020, 2021).

Of the 13 resources identified or revisited by the current project, one precontact site (31BN1119) is recommended eligible for the NRHP under Criterion D, but lack the characteristics needed for eligibility under Criteria A–C. This site appears to have the potential to contain intact cultural features and deposits associated with multiple Archaic to Woodland period occupations. Site 31BN1119 is recommended for avoidance; however, preservation in place is not warranted. If adverse effects to this site cannot be avoided, data recovery excavations are required to mitigate those adverse effects prior to construction.

The other 12 sites (31BN1091, 31BN1092, 31BN1118, and 31BN1120–31BN1128) identified or revisited during the HE-0001 survey are recommended not eligible for NRHP under all four criteria, and no further archaeological work is required at these sites. However, additional investigations will be necessary at 31BN1092, 31BN1123, and 31BN1125 if the APE expands at these resources since these three sites may extend outside of the current project limits.

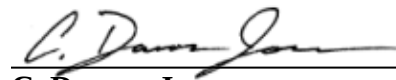
Of the five sites that were not revisited, one (31BN1046) has been determined eligible for the NRHP under Criterion D and has been the subject of recent data recovery excavations (Idol and Webb 2020). No additional consideration of that site within the APE is required as part of HE-0001. The other four sites (31BN1052, 31BN1090, 31BN1093, and 31BN1094) were previously determined not eligible for the NRHP under all four criteria, and no additional archaeological work was needed under HE-0001 (Webb and Nelson 2019a, 2019b, 2020, 2021). If the APE boundaries are expanded, additional survey and site delineation might be necessary to further investigate sites 31BN1052 and 31BN1090, and/or additional data recovery excavations might be necessary at 31BN1046 since these resources extend outside of the current project limits.

This project falls within a North Carolina County in which the Catawba Nation, the Eastern Band of Cherokee Indians, the Cherokee Nation, the United Keetoowah Band of Cherokee Indians, and Muscogee (Creek) Nation have expressed an interest. We recommend that you ensure that this documentation is forwarded to these tribes using the process described in the current NCDOT Tribal Protocol and PA Procedures Manual.

SUPPORT DOCUMENTATION

See attached: ☐ Map(s) ☐ Previous Survey Info ☐ Photos ☐ Correspondence
Other: **HE-0001 Archaeological Report**

SIGNED:



C. Damon Jones
NCDOT ARCHAEOLOGIST

December 7, 2021

Date

REFERENCES CITED

Idol, Bruce, and Paul Webb

- 2020 *Management Summary: Archaeological Data Recovery Excavations at Site 31BN1046, Buncombe County, North Carolina.* TRC Environmental Corporation, Asheville, North Carolina. Submitted to Biltmore Farms, LLC, Asheville.

Webb, Paul, and Michael Nelson

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- 2020 *Archaeological Survey and Site Evaluation for Project Ranger, Buncombe County, North Carolina: Addendum 1.* TRC Environmental Corporation, Asheville, North Carolina. Submitted to Biltmore Farms, LLC, Asheville.
- 2021 *Archaeological Survey and Site Evaluation for Project Ranger, Buncombe County, North Carolina: Addendum 2.* TRC Environmental Corporation, Asheville, North Carolina. Submitted to ARCADIS.



ARCHAEOLOGICAL SURVEY REQUIRED 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 Team.



PROJECT INFORMATION

Project No: **HE-0001** County: Buncombe
 WBS No: 49473 Document: Federal CE
 F.A. No: na Funding: ☐ State ☒ Federal
 Federal Permit Required? ☒ Yes ☐ No Permit Type: FHWA & USACE

Project Description:

The project calls for the construction of new interchange on I-26 connecting with an internal road network under construction on the Biltmore Farms property in Buncombe County. The archaeological Area of Potential Effects (APE) of the project encompasses approximately 288 acres. It is bounded by the French Broad River to the north and the Blue Ridge Parkway property to the south. The APE along its maximum extent measures approximately 5,900 feet from the northwest to the southeast and 4,100 feet from the northeast to the southwest. The APE also extends to the west along an internal roadway crossing the French Broad River on a new bridge and intersection with NC 191. A portion of the APE has already been previously surveyed, and this section will be excluded. The APE could also be reduced upon agreement of the stakeholders at a later date.

This project is federally funded. As a result, this archaeological review was conducted in accordance with Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance (36 CFR Part 800).

SUMMARY OF ARCHAEOLOGICAL RESOURCES REVIEW: SURVEY REQUIRED

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

The I-26 interchange project is located just south of Asheville in Buncombe County, North Carolina. The project area is plotted at the southern end of the Asheville USGS 7.5' topographic quadrangle (Figure 1).

A site file search was conducted using data from the Office of State Archaeology (OSA) on May 10, 2021. Eight known archaeological sites (31BN1046, 31BN1052, 31BN1084, and 31BN1090–31BN1094) are reported within the proposed project area. These were recorded during archaeological surveys and field reconnaissance for PSNC Energy T-072 natural gas pipeline (Nagle 2018), the proposed NC 191 realignment project (TIP U-3403B), and Project Ranger (also referred to Biltmore Park West project) (Webb and Nelson 2019a, 2019b, 2020, and 2021). According to the North Carolina State Historic Preservation Office online data base (HPOWEB 2021), there are no known National Registered, listed, or determined eligible historic architectural resources within the APE. However, three ineligible architectural resources are within the project area: The American ENKA Water Intake (BN6469), Riverside Dairy (BN6470), and Campsite (BN6471). The Riverside Dairy, also referred to as Johnson Farm, corresponds to archaeological site 31BN1052. Topographic maps, USDA soil survey maps, aerial photographs (NC One Map), historic maps (North Carolina maps website), and Google Street View application were further examined 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 APE consists mostly of steep hillside slopes, but fairly level landforms are found along the ridges, the French Broad floodplain, and the stream terraces and/or benches associated with tributaries of the French

Broad River (Figure 2). The property is forested except for a few small open areas; however, large scale clearing is ongoing for urban development by Biltmore Farms. These recently disturbed areas have been previously surveyed and are located primary outside of the project area (Webb and Nelson 2019a, 2019b, 2020, and 2021). Other modern disturbances include an electrical transmission line and a sewage pipeline at the western extension near the French Broad River. Several dirt roads and trail cross the property as well. Otherwise, ground disturbance is limited to past farming activities and soil erosion.

The USDA soil survey shows the APE composed of ten soil types (USDA NRCS 2021). The floodplain is made up of Biltmore loamy sand (BeA), Iotla loam (IoA), and Rosman fine sandy loam (RsA). These soils have a slope of 3 percent or less and are subject to occasional flooding. They are also considered well drained except for the Iotla series, which is somewhat poorly drained. The stream terraces and benches consist of Clifton clay loam (CkC2), Clifton sandy loam (CsB; CsC), the Evard-Cowee complex (EwC), and Unison loam (UnC). These soils generally have a slope of 8 to 15 percent with the CsB variant being 2 to 8 percent. All are well drained, and erosion is moderate on CkC2 variant. The hillsides and ridges are composed of the Braddock clay loam (BkD2), Clifton clay loam (CkD2), Clifton sandy loam (CsD), the Evard-Cowee complex (Evd2; EvE2; EwD; EwE), and Tate loam (TaD; TkD). Slope is 15 percent or more and all are well drained. Erosion is moderate on the BkD2, CkD2, Evd2, and EvE2 variants. Lastly, soils adjacent to I-26 are the Udorthents-Urban land complex (UhE). These are disturbed soils in which the natural characteristics have been altered. Soils with potentially evidence for early settlement activities should be well drained with no heavy disturbance on a landform with slope of 15 percent or less. These soils within the APE will require subsurface testing.

The site file review shows that TRC previously carried out a background study and field reconnaissance of the Biltmore Park West Tract property between the Blue Ridge Parkway, I-26, and the French Broad River as part of Project Ranger (Webb and Nelson 2019a). This investigation includes the current APE for the proposed I-26 interchange. Results confirmed the potential of significant archaeological sites and recommended an intensive survey. The archaeological survey for Project Ranger was conducted by TRC in 2019, 2020, and 2021 but covered only a smaller section of the overall property (Webb and Nelson 2019b, 2020, and 2021) (Figure 3). The current APE's western extent towards the French Broad was included in this survey. These field surveys along with testing for the PSNC Energy T-072 natural gas pipeline (Nagle 2018) and the proposed NC 191 realignment project (TIP U-3403B) resulted in the identification of eight archaeological sites (31BN1046, 31BN1052, 31BN1084, and 31BN1090–31BN1094). All except for 31BN1046 have been determined not eligible for the National Register within the limits of Project Ranger. Site 31BN1046 on the other hand was determined eligible for the National Register, and data recovery was carried out (report forthcoming). No further work is needed at these sites within the Project Ranger limits, but further work maybe necessary if the current I-26 APE expands past the Project Ranger limits. The background study also identified the potential of one other historic site (PS-3) within the current APE. PS-3 is a pair of structures that appear on Biltmore Estate maps from 1891 through 1896. No intensive effort to locate these structures were made during the field reconnaissance, but they are very likely related to the historic architectural resource known as Campsite (BN6471).

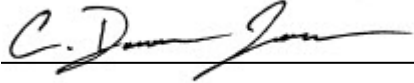
The current PA review concurs with TRC's field reconnaissance and background study. An archaeological survey is recommended for the proposed I-26 interchange project (HE-0001) in Buncombe County. However, testing is not needed in area previously surveyed for Project Ranger. Known sites evaluated during Project Ranger required no further work unless the I-26 APE extends past the Project Ranger limits. Subsurface testing in the form of shovel tests in well drained and level areas is needed to identify and evaluate any significant archaeological resources that may be impacted by the I-26 project.

This project falls within a North Carolina County in which the Catawba Nation, the Eastern Band of Cherokee Indians, the Cherokee Nation, the United Keetoowah Band of Cherokee Indians, and Muscogee (Creek) Nation have expressed an interest. We recommend that you ensure that this documentation is forwarded to these tribes using the process described in the current NCDOT Tribal Protocol and PA Procedures Manual.

SUPPORT DOCUMENTATION

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

FINDING BY NCDOT ARCHAEOLOGIST – SURVEY REQUIRED



5/20/21

C. Damon Jones
NCDOT ARCHAEOLOGIST

Date

TBD

Proposed fieldwork completion date

REFERENCES CITED

HPOWEB

- 2021 North Carolina State Historic Preservation Office GIS Web Service.
<https://nc.maps.arcgis.com/apps/webappviewer/index.html?id=79ea671ebdcc45639f0860257d5f5ed7>. Accessed May 10, 2021.

Nagle, Kimberly

- 2018 Letter to NCSHPO Additional Information – Blue Ridge Parkway T-072 Pipeline Project. S&ME, Columbia, South Carolina. Submitted to North Carolina State Historic Preservation Office, Raleigh.

United States Department of Agriculture Natural Resources Conservation Services (USDA NRCS)

- 2021 Buncombe County Soil Survey. Available online at
<http://webosilsurvey.nrcs.usda.gov/app/>. Accessed May 19, 2021.

United States Geological Survey (USGS)

- 2016 Asheville, North Carolina 7.5 minute quadrangle map.
 2016 Skyland, North Carolina 7.5 minute quadrangle map.

Webb, Paul, and Michael Nelson

- 2019a Background Study and Field Reconnaissance of the Northern Parcel of the Biltmore Park West Tract, Buncombe County, North Carolina. TRC Environmental Corporation, Asheville, North Carolina. Submitted to Biltmore Farms, LLC, Asheville.
 2019b *Archaeological Survey and Site Evaluation for the Project Ranger, Buncombe County, North Carolina*. TRC Environmental Corporation, Asheville, North Carolina. Submitted to Biltmore Farms, LLC, Asheville.
 2020 *Archaeological Survey and Site Evaluation for the Project Ranger, Buncombe County, North Carolina, Addendum 1*. TRC Environmental Corporation, Asheville, North Carolina. Submitted to Biltmore Farms, LLC, Asheville.
 2021 *Archaeological Survey and Site Evaluation for the Project Ranger, Buncombe County, North Carolina, Addendum 2*. TRC Environmental Corporation, Asheville, North Carolina. Submitted to Biltmore Farms, LLC, Asheville.

Historic Architecture and Landscapes

21-05-0002



HISTORIC ARCHITECTURE AND LANDSCAPES ASSESSMENT OF EFFECTS 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:	HE-0001	County:	Buncombe
WBS No.:	49473	Document Type:	CE
Fed. Aid No:		Funding:	☐ State ☒ Federal
Federal Permit(s):	☒ Yes ☐ No	Permit Type(s):	USACE

Project Description:

The North Carolina Department of Transportation (NCDOT) proposes to construct a new interchange on I-26 in the project study area (PSA). The proposed project is located approximately 6 miles south of Asheville along I-26, north of the Blue Ridge Parkway and south of the French Broad River bridge. The proposed interchange would be constructed primarily within the existing right-of-way of I-26, which currently is under construction to be widened from 2 lanes in each direction to 4 lanes in each direction as part of STIP project I-4700. The proposed interchange and new roadway would ultimately connect to NC 191 via a road (East Frederick Law Olmsted Way, or East FLOW) that is currently under construction by a private developer (Biltmore Farms, LLC). The private developer constructing East FLOW has graded the corridor to accommodate a 4-lane roadway. That actual roadway will be paved as a 2-lane facility upon completion. This road is anticipated to open to traffic in 2022 and would become a State-maintained road upon meeting NCDOT standards and acceptance. NCDOT's proposed roadway connection would be graded for a 2-lane roadway with auxiliary lanes at intersection approaches to meet operational needs (e.g., turn lanes).

The purpose of the project is to provide access to I-26 and improve east-west connectivity within the project vicinity to accommodate current and planned growth. Three alternatives were considered at the February 4, 2022 meeting and the preferred alternative was selected on February 9, 2022.

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

Description of review activities, results, and conclusions:

NCDOT architectural historian reviewed HPOWeb in June 2021 and reviewed the previous historic architecture surveys for NCDOT TIP #U-3403B (Improvements to NC 191), NCDOT TIP# I-4400 (Improvements to I-26), and the Pratt & Whitney Manufacturing Center (Project Ranger). As a result, the NCDOT architectural historian recommended an effects assessment for the following National Register-eligible or listed properties within or adjacent to the project study area: BN 1835 Biltmore Estate (NHL), NC 0001 Blue Ridge Parkway (DE, NHL pending), BN 6468 French Broad River Gaging Station (DE), and BN 0898 Bent Creek Campus (NR). **Effects assessments for the Biltmore Estate, the French Broad River Gauging**

Station, and the Bent Creek Campus were made during a meeting between NCDOT, FHWA, and HPO on February 4, 2022. Consultation with the National Park Service with regard to the effects on the Blue Ridge Parkway continued with the parties through June 29, 2022.

ASSESSMENT OF EFFECTS

Property Name:	Bent Creek Campus	Status:	NR, Criteria A&C
Survey Site No.:	BN0898	PIN:	960456690300000
Effects ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> None of the three alternatives will have direct impacts to the Bent Creek Campus. USFS manages the campus and agrees that the project will incur no effects on their property.			
<u>List of Environmental Commitments:</u> none			

Property Name:	French Broad River Gauging Station	Status:	DE, Criteria A&C
Survey Site No.:	BN6468	PIN:	963507722200000
Effects ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> None of the three alternatives will have direct impacts to the French Broad River Gauging Station			
<u>List of Environmental Commitments:</u> none			

Property Name:	Biltmore Estate	Status:	NR and NHL, Criteria A,B,&C
Survey Site No.:	BN1835	PIN:	963598538600000
Effects			

☐ No Effect	☒ No Adverse Effect	☐ Adverse Effect
<u>Explanation of Effects Determination:</u> Alternatives 1 and 3 will have no direct impacts to the Biltmore Estate. Alternative 2 will require approximately 4.3 acres of tree removal and ROW along the exiting interstate. Retaining walls will be placed within the existing ROW on the opposite side of the interstate but will be faced with a faux ashlar stone. Therefore Alternative 1 & 3 will have no effect, while Alternative 2 would result in no adverse effects. Representatives from the Biltmore Estate agree with this assesment		
<u>List of Environmental Commitments:</u> none		

Property Name:	Blue Ridge Parkway	Status:	DE and NHL(pending), Criteria A,B,&C
Survey Site No.:	NC0001	PIN:	none
Effects ☐ No Effect ☒ No Adverse Effect ☐ Adverse Effect			
<u>Explanation of Effects Determination:</u> None of the alternatives will have direct impacts to the Blue Ridge Parkway (BRP). Several discussions with the staff of the BRP resulted in the following environmental commitments for a finding of no adverse effect. NCDOT, FHWA, NC HPO, and the Superintendent of the BRP have agreed to the following minimization measures to avoid an adverse effect to the historic property:			
List of Environmental Commitments: (1) Control of Access (C/A) • NCDOT will include 1,000-foot control of access (C/A) fencing along the HE-0001 portion of East Frederick Law Olmsted Way west of the eastbound I-26 on- and off-ramp intersection that will prohibit the construction of driveways or access points. This design element will limit access to adjacent land from the proposed road within 1,000 feet of the interchange. (2) Vegetative screening • NCDOT will design, install, and maintain approximately 900 feet of vegetative screening along the southside of the HE-0001 portion of East Frederick Law Olmsted Way closest to the BRP. The vegetative screening will be within the NCDOT right of way and will screen the proposed project from the BRP. • NCDOT will commit to produce a vegetative screening plan with the 65% roadway design plan (late summer/fall 2022) submittal and provide to NPS and NC HPO for review and comment. (3) Tree clearing			

- NCDOT will minimize tree clearing consistent with conservation measures for the Gray bat. NCDOT is committed to avoid tree removal beyond what is required to implement the project safely. NCDOT will ensure that tree removal is limited to that specified in the project plans. This will limit lines-of-sight between the BRP and the proposed project.

(4) Future intersecting road(s)

- NCDOT will not construct or maintain any new road or access points that intersect or cross the HE-0001 portion of East Frederick Law Olmsted Way, from the roundabout to I-26.
- If NCDOT assumes maintenance of East Frederick Law Olmsted Way from NC 191 to the roundabout, NCDOT will review driveway access permits to East Frederick Law Olmsted Way according to current NCDOT procedure and in consultation with NPS and NC HPO. This condition may be revisited through consultation with NPS and NC HPO associated with future state transportation projects.

(5) Lighting

- NCDOT will not install roadway lighting along the access roadway portion of HE-0001 (i.e., East Frederick Law Olmsted Way); lighting will be required for the interchange.
 - Interchange lighting will be designed and installed in accordance with the conservation measures included in the US Fish and Wildlife Informal Consultation letter dated March 16, 2022.
 - If NCDOT allows roadway/pedestrian lighting of East Frederick Law Olmsted Way through an encroachment agreement with a separate/private entity, NCDOT will require implementation of NPS Sustainable Outdoor Lighting Principles for any roadway/pedestrian lighting.
 - NPS Sustainable Outdoor Lighting Principles
 - Light only IF you need it
 - Light only WHEN you need (use timers, sensors, and other controls)
 - Light only WHAT/WHERE you need it (shield light sources and direct downward, minimize height of light sources)
 - Use appropriate color spectra (no white/blue light), use amber or yellow
 - Use minimum number of lumens necessary (500 lumens or less per fixture if possible)
 - Choose energy efficient lamps and fixtures (minimum possible)

(6) Future capacity improvements

- NCDOT will coordinate review of any future capacity improvements to HE-0001 (including widening, pedestrian, or safety modifications) with the NPS and NC HPO prior to the approval of any federal or state action (i.e., NEPA document, permit).

(7) Blue Ridge Parkway Overlay District (Buncombe County)

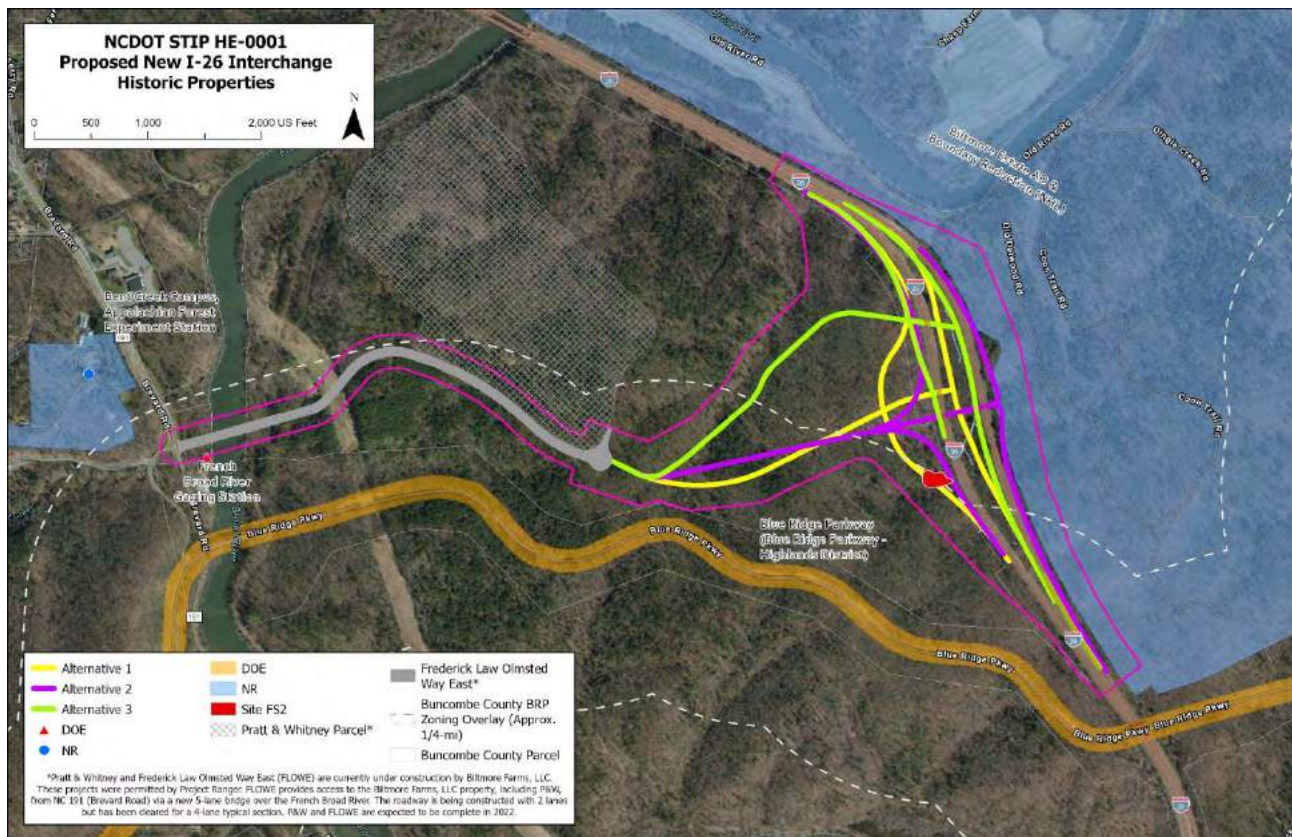
- Buncombe County is an interested party in the HE-0001 project, as referenced by its current overlay district and zoning powers that protect the BRP corridor. NCDOT will coordinate with Buncombe County and request the County to notify and request

comments from NPS and NC HPO regarding any future proposed changes to the Blue Ridge Parkway Overlay District (Section 78-643).

FHWA Intends to use the State Historic Preservation Office's concurrence as a basis for a "de minimis" finding for the following properties, pursuant to Section 4(f):
Biltmore Estate- Alternative 2

SUPPORT DOCUMENTATION

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



FINDING BY NCDOT AND STATE HISTORIC PRESERVATION OFFICE

Historic Architecture and Landscapes – ASSESSMENT OF EFFECTS

DocuSigned by: <i>Mary Pope Furr</i> ED3110443890489...	07/14/2022
NCDOT Architectural Historian	Date
DocuSigned by: <i>Renee Gledhill-Earley</i> C26A1556A275464...	07/14/2022
State Historic Preservation Office Representative	Date
DocuSigned by: Donald W. Brew B96E8B70991E42C...	07/14/2022
FHWA Representative	Date



United States Department of the Interior

NATIONAL PARK SERVICE
Blue Ridge Parkway
199 Hemphill Knob Road
Asheville, North Carolina 28803



IN REPLY REFER

1.A.1 Resource Management

June 17, 2022

McCray Coates, PE
Division Project Manager
Division 13
N. C. Department of Transportation
55 Orange Street
Asheville, NC 28802

Subject: NCDOT STIP Project HE-0001

Dear Mr. Coates,

This letter is in response to the North Carolina Department of Transportation (NCDOT) / Federal Highway Administration (FHWA) letter of April 05, 2022 regarding National Park Service (NPS) comments on HE-0001, a proposed new interchange along Interstate 26 in Buncombe County, NC on lands adjacent to the Blue Ridge Parkway, a unit of the National Park System.

The NPS comment letter dated February 02, 2022, outlined the NPS position that cumulative effects of HE-0001, including changes to traffic levels, circulation patterns, associated development, and overall reduction in vegetative screening, should be considered and assessed in accordance with the National Historic Preservation Act. Specifically, the NPS maintains that the HE-0001 project in combination with the eight planned or ongoing STIP projects and associated private development within three miles of HE-0001 should be considered cumulatively, rather than as individual projects, when analyzing impacts.

The FHWA is considered the responsible federal agency under the National Historic Preservation Act for this undertaking, and the NPS is not a consulting party for individual undertakings subject to review under the 2020 *Programmatic Agreement Among the Federal Highway Administration, United States Army Corps of Engineers, Wilmington District, North Carolina Department of Transportation, Advisory Council on Historic Preservation and North Carolina State Historic Preservation Officer for the Transportation Program in North Carolina*. The FHWA and NCDOT response of April 05, 2022, stated the transportation agencies' position that each STIP project is a fully independent undertaking, and therefore, the agencies would not consider cumulative effects with nearby, similar and connected, fully independent undertakings. Based on this assessment, the transportation agencies concluded that the only foreseeable potential effects to the Blue Ridge

Parkway attributable to HE-0001 are those potential visual, audible, and traffic effects directly caused by the undertaking, and that consideration of cumulative effects is not warranted.

The NPS does not support this conclusion; however, in order to advance the overall project, the NPS endorses adoption of the project conditions outlined below.

- NCDOT has previously agreed to maintain Frederick Law Olmsted Way East from NC 191 to the intersection with HE-0001. Frederick Law Olmsted Way East will remain as currently designed with no further access, and NCDOT will not construct or maintain any new road or access points that intersect or cross the HE-0001 portion of Frederick Law Olmsted Way East.
- NCDOT will not install roadway lighting along the access roadway portion of HE-0001 (i.e., Frederick Law Olmsted Way East); lighting will be required for the interchange only. Interchange lighting will be designed and installed in accordance with the conservation measures included in the US Fish and Wildlife Informal Consultation letter dated November 18, 2021.
- If NCDOT allows roadway lighting of Frederick Law Olmsted Way East through an encroachment agreement with a separate/private entity, NCDOT will require implementation of NPS Sustainable Outdoor Lighting Principles for any pedestrian lighting.
 - Light only IF you need it
 - Light only WHEN you need (use timers, sensors, and other controls),
 - Light only WHAT/WHERE you need it (shield light sources and direct downward, minimize height of light sources)
 - Use appropriate color spectra (no white/blue light), use amber or yellow
 - Use minimum number of lumens necessary (500 lumens or less per fixture if possible)
 - Choose energy efficient lamps and fixtures (minimum possible)
- NCDOT will coordinate review of any future capacity improvements within the existing project limits of HE-0001 (including widening, pedestrian, or safety modifications) with the NPS and NC SHPO prior to the approval of any federal or state action (i.e., NEPA document, permit). This condition is not applicable to NCDOT capacity improvements that are considered an exempt activity under the current NCDOT Section 106 Programmatic Agreement.
- Buncombe County is an interested party in the HE-0001 project, as referenced by its current overlay district and zoning powers that protect the Blue Ridge Parkway corridor. NCDOT will coordinate with Buncombe County and request the County to notify and request comments from the NPS and NC SHPO regarding any future proposed changes to the Blue Ridge Parkway Overlay District (Section 78-643).
- NCDOT will commit to produce a vegetative screening plan with the 65% roadway design plan (late summer/fall 2022) submittal and provide to the NPS and NC SHPO for

review and comment.

The conditions listed above are in addition to the mitigations previously committed to by NCDOT:

- 1,000-foot Control of Access (C/A);
- Tree Clearing Minimization; and
- 900-foot Vegetative Screening (NCDOT to maintain 75% survival rate of planted specimens).

With these conditions and mitigations in place, and pending review of updated visual simulations of the diamond divided interchange and of planned interchange lighting, the NPS will not further oppose the FHWA's finding of "No Adverse Effect" to the Blue Ridge Parkway.

The NPS continues to support sustainable growth and maintains that with coordinated planning well-designed development can be achieved while protecting the Blue Ridge Parkway's historic character and setting. To facilitate sustainable planning moving forward, please include the NPS on any NCDOT Merger Teams for projects that may affect Blue Ridge Parkway natural and cultural resources and values, even if no direct, physical encroachment is anticipated on NPS lands. If you have any questions regarding this letter, please contact David Sheehan, Resident Landscape Architect at david_sheehan@nps.gov or (828) 348-3435.

Sincerely,

Tracy Swartout
Superintendent

cc: Renee Gledhill-Earley, Environmental Review Coordinator
North Carolina State Historic Preservation Office



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

June 15, 2022

Tracy Swartout
Superintendent
National Park Service
Blue Ridge Parkway
199 Hemphill Knob Road
Asheville, NC 28803

Subject: Request for Resolution of Effects Consultation, Blue Ridge Parkway (NC0001)
NCDOT STIP Project HE-0001
NPS Reference 1.A.1 Resource Management

Dear Ms. Swartout,

This letter is in follow up to the previous Section 106 effects consultation held between NCDOT, FHWA, NC HPO and NPS-Blue Ridge Parkway staff on May 11, 2022.

Per FHWA's April 5, 2022 letter to you, and supported by materials provided and information presented at three previous effects consultations between February 4 and May 11, 2022, FHWA and NCDOT ("transportation agencies") are recommending a No Adverse Effect, with conditions finding for the Blue Ridge Parkway (NC0001) for NCDOT STIP Project HE-0001 in Buncombe County. The transportation agencies will request NC HPO's concurrence in this No Adverse Effect, with conditions finding at the June 29, 2022 Effects Meeting #4.

The transportation agencies are formally requesting that NPS personnel with decision-making authority attend the June 29, 2022 Effects Meeting #4. It is the transportation agencies intent to resolve the Section 106 consultation process pursuant to the National Historic Preservation Act, as amended, and implementing regulations at 36 CFR 800 and in accordance with the 2020 *Programmatic Agreement Among the Federal Highway Administration, United States Army Corps of Engineers, Wilmington District, North Carolina Department of Transportation, Advisory Council on Historic Preservation and North Carolina State Historic Preservation Officer for the Transportation Program in North Carolina (PA)*.

In addition to the materials submitted and presented in association with previous effects consultations (see attached Blue Ridge Parkway Effects Consultation Timeline), the following materials are provided for your review prior to the Effects Meeting #4:

- Updated visualizations with diverging diamond interchange (DDI) design as viewed from the Blue Ridge Parkway bridge over I-26 in daytime and nighttime. Additionally, an updated birdseye view rendering is provided with the DDI design.

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION 13
55 ORANGE STREET
ASHEVILLE, NC 28801

Telephone: (828) 250-3000
Fax: (828) 251-6394
Customer Service: 1-877-368-4968

Location:
55 ORANGE STREET
ASHEVILLE, NC 28801

Website: www.ncdot.gov

- Memorandum addressing NPS's request for comparative details regarding capacity of a diamond interchange versus a DDI.
- List of conditions NCDOT will commit to implement as part of NCDOT STIP Project HE-0001 to avoid an adverse effect to the Blue Ridge Parkway.

The transportation agencies respectfully request that any questions, concerns, or proposed modifications regarding the information contained herein be provided to the NCDOT Project Manager, McCray Coates (hmcates@ncdot.gov, 828-658-7030) at least five days before the Effects Meeting #4 (by Friday June 24th) so that the transportation team may prepare a response.

Sincerely,

DocuSigned by:

T. W. Anderson P.E.

CD10D468D13A4B3...

Tim Anderson, P.E.

Division Engineer, NCDOT Division 13

Attachments

cc: David Clarke, Federal Preservation Officer, FHWA
Mandy Ranslow, FHWA Liaison, ACHP
Donnie Brew, Preconstruction and Environment Engineer, FHWA
Renee Gledhill-Earley, Environmental Review Coordinator, NC Historic Preservation Office
David Sheehan, Landscape Architect, Blue Ridge Parkway, NPS
Alexa Viets, Chief of Staff, Blue Ridge Parkway, NPS
Andrew Triplett, Cultural Resources Specialist, Blue Ridge Parkway, NPS
Dawn Leonard, Community Planner, Blue Ridge Parkway, NPS
Lori Beckwith, Project Manager, USACE
H. McCray Coates, P.E., Resident Engineer, Project Manager
Mark Gibbs, P.E., Western Deputy Chief Engineer, NCDOT
Roger D. Bryan, Environmental Program Supervisor, NCDOT Division 13
Brendan Merithew, P.E., Division Project Team Lead, NCDOT Division 13
Nathan Moneyham, P.E., Division Construction Engineer, NCDOT Division 13
Jamie Lancaster, Cultural Resources Group Leader, NCDOT Environmental Analysis Unit
Mary Pope Furr, Historic Architecture Team Lead, NCDOT Environmental Analysis Unit



U.S. Department
of Transportation
Federal Highway Administration

North Carolina Division

April 5, 2022

310 New Bern Avenue, Suite 410
Raleigh, North Carolina 27601
(919) 856-4346
www.fhwa.dot.gov/ncdiv

Tracy Swartout
Superintendent
National Park Service
Blue Ridge Parkway
199 Hemphill Knob Road
Asheville, NC 28803

Subject: NCDOT STIP Project HE-0001 (NPS Reference 1.A.1 Resource Management)

Dear Ms. Swartout,

In accordance with Section 106 of the National Historic Preservation Act, as amended, and implementing regulations (36 CFR Part 800), the Federal Highway Administration (FHWA) and North Carolina Department of Transportation (NCDOT) (collectively referred to as the transportation agencies) have assessed the potential effects caused by HE-0001 that may alter, diminish, or damage the characteristics and features that contribute to the National Register of Historic Places (NRHP) eligibility of the Blue Ridge Parkway (NC0001) –noting a National Historic Landmark (NHL) designation is pending.

In accordance with 36 CFR Part 800.5 (a)(1) *Criteria of adverse effect*, adverse effects may include reasonably foreseeable effects caused by the undertaking (in this case HE-0001) that may occur later in time, be farther removed in distance or be cumulative. Based on the transportation agencies' assessment of indirect and cumulative effects, within the area of potential effect, there are no reasonably foreseeable effects to the Blue Ridge Parkway caused by HE-0001. This conclusion is supported by information provided during consultation and summarized in the attachment. Based on the attached considerations, following all appropriate measures to minimize harm, and including conditions to avoid adverse effects, FHWA has determined HE-0001 will have no adverse effect to the Blue Ridge Parkway.

FHWA and NCDOT respectfully request your concurrence in this finding, pursuant to Section 106 of the National Historic Preservation Act, as amended. NCDOT will schedule a follow-up meeting in the next two weeks to discuss these items and determine the appropriate path forward.

Respectfully,

John F. Sullivan, III, PE
Division Administrator, Federal Highway Administration

Attachment

cc: David Clarke, Federal Preservation Officer, FHWA
Mandy Ranslow, FHWA Liaison, ACHP
Donnie Brew, Preconstruction and Environment Engineer, FHWA
Renee Gledhill-Earley, Environmental Review Coordinator, NC Historic Preservation Office
David Sheehan, Landscape Architect, NPS
Lori Beckwith, Project Manager, USACE
Mark Gibbs, Division Engineer, NCDOT Division 13
McCray Coates, Division Project Manager, NCDOT Division 13
Roger D. Bryan, Environmental Program Supervisor, NCDOT Division 13
Brendan Merithew, Division Project Team Lead, NCDOT Division 13
Jamie Lancaster, Cultural Resources Group Leader, NCDOT Environmental Analysis Unit
Mary Pope Furr, Historic Architecture Team Lead, NCDOT Environmental Analysis Unit



United States Department of the Interior

NATIONAL PARK SERVICE
Blue Ridge Parkway
199 Hemphill Knob Road
Asheville, North Carolina 28803



IN REPLY REFER

1.A.1 Resource Management

February 2, 2022

McCray Coates, PE
Division Project Manager
Division 13
N. C. Department of Transportation
55 Orange Street
Asheville, NC 28802

Subject: NCDOT STIP Project HE-0001

Dear Mr. Coates,

This letter is in response to the North Carolina Department of Transportation (NCDOT) State Transportation Improvement Program Project (STIP) HE-0001, a proposed new interchange along Interstate 26 (I-26) in Buncombe County, NC, on lands adjacent to the Blue Ridge Parkway (Parkway), a unit of the National Park Service (NPS). This project also includes a proposed two-lane roadway (Frederick Law Olmsted Way East) that would connect the proposed interchange to a road that is currently under construction by Biltmore Farms. The NPS has reviewed the proposed interchange designs and considered the cumulative effects of this project in addition to other public and private adjacent projects as outlined below and concludes that the proposed interchange is likely to have an adverse effect on the Parkway under the National Historic Preservation Act (NHPA) and mitigations should be evaluated.

The NHPA requires any Federally-funded undertaking to assess effects to historic properties from proposed activities. Per 36 CFR part 800, potential effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative. Potential effects may also include actions that change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance, or that introduce visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features.

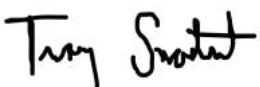
Since its inception in the early 1930s, the Parkway has retained an exceptionally high degree of integrity to its original design which provided for a continuous leisurely driving experience through a range of idyllic mountain, rural, and pastoral landscapes. Recreation areas, the designed landscape, and scenic, experiential integrity are fundamental to the Parkway's character, setting, and value as both a treasured unit of the NPS and a driver for the local economy. Without mitigation, this set of planned projects is likely to have a cumulative impact that is unacceptable to the historic character and unique experience of the Parkway under NHPA.

The proposed interchange will likely increase traffic between the NC-191 and I-26 corridors, including to and from the Pratt and Whitney Advanced Manufacturing Center site via connected roadway and new five-lane bridge over the French Broad River, and may increase traffic to and from the Parkway. In addition, the project, associated development and increased cross traffic at River Road and Halfway Road may be visible from the Parkway, adversely affecting the natural, rural view from the Parkway and its overlooks. Within three miles of this project there are eight other NCDOT projects planned or under construction, as well as private development including over 1200 proposed dwelling units, a 120-room hotel, and hundreds of thousands of square feet of proposed industrial space. Combined impacts from these projects, including changes to traffic levels, circulation patterns, associated development, and an overall reduction in vegetative screening will be cumulative with HE-0001. Further evaluation is needed to assess impacts of this project on the Parkway, including an evaluation of impacts to Parkway congestion as well as visual and auditory impacts.

When completed, the combined projects have the potential to permanently change the character and visitor experience of the Blue Ridge Parkway between the French Broad Overlook and I-26. Rather than the fully forested woodland experienced by visitors to the Parkway in this two-mile section now, the set of projects will likely convert this landscape into a densely developed residential, commercial, and industrial area. This change would represent a compromise of the experience of natural beauty and degrade the leisurely driving experience that was envisioned for the Parkway when it was created. In addition, the view of forested hillside from the Parkway's French Broad Overlook, which is a contributing feature for the Parkway's *National Historic Landmark* (NHL) nomination, may change significantly with these combined projects, thereby jeopardizing the Parkway's overall eligibility for *NHL* designation.

Impacts on NPS lands should be fully evaluated and mitigations included for all projects that may affect the Parkway's historic character, visitor experiences, and setting, even if no physical encroachment is anticipated. Our team looks forward to working with NCDOT on these mitigations moving forward. If you have any questions regarding this or any other any NCDOT projects that may affect the Parkway, please contact David Sheehan, Resident Landscape Architect, at david_sheehan@nps.gov or (828) 348-3435.

Sincerely,

A handwritten signature in black ink, appearing to read "Tracy Swartout". The signature is fluid and cursive, with the first name "Tracy" and last name "Swartout" clearly distinguishable.

Tracy Swartout
Superintendent

cc: Renee Gledhill – Earley, Environmental Review Coordinator
North Carolina State Historic Preservation Office

21-05-0002

**HISTORIC ARCHITECTURE AND LANDSCAPES******EFFECTS 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:	HE-0001	County:	Buncombe
WBS No.:	49473	Document Type:	CE
Fed. Aid No:	unknown	Funding:	☐ State ☒ Federal
Federal Permit(s):	☒ Yes ☐ No	Permit Type(s):	USACE

Project Description:

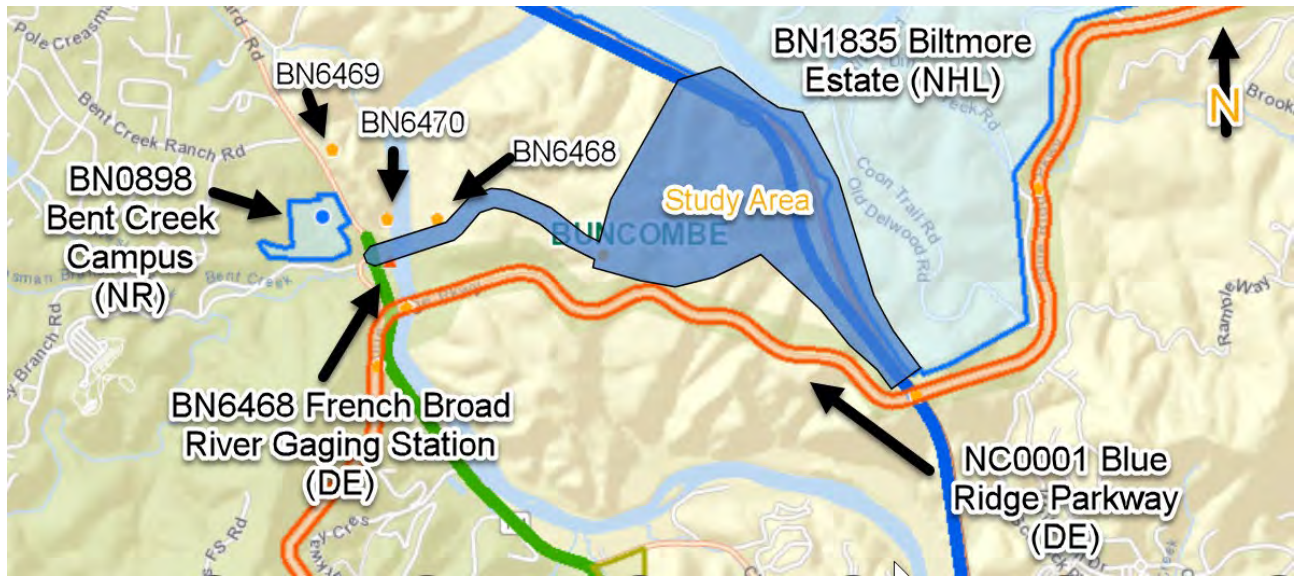
Construct new interchange (Future Exit 35) on I-26 north of the Blue Ridge Parkway for the Pratt & Whitney Manufacturing Center that is under construction. The proposed project includes construction of a 0.5 to 1 mile, two-lane roadway tie which would connect to the private developer's two-lane roadway which includes a new bridge over the French Broad River and intersects with NC 191 (Brevard Road).

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW**Description of review activities, results, and conclusions:**

NCDOT architectural historian reviewed HPOWeb in June 2021 and reviewed the previous historic architecture surveys for NCDOT TIP #U-3403B (Improvements to NC 191), NCDOT TIP# I-4400 (Improvements to I-26), and the Pratt & Whitney Manufacturing Center (Project Ranger). All three reports were reviewed by the NC-HPO and determinations of eligibility confirmed. Due to the comprehensive surveys conducted for these three recent projects, there is no need for additional survey to identify unknown historic structures or landscapes. As such, the NCDOT architectural historian recommends an effects assessment for the following National Register-eligible or listed properties within or adjacent to the project study area: BN 1835 Biltmore Estate (NHL), NC 0001 Blue Ridge Parkway (DE, NHL pending), BN 6468 French Broad River Gaging Station (DE), and BN 0898 Bent Creek Campus (NR). Please provide design plans that show the proposed alignment(s) along with the boundaries of the four historic properties to the NCDOT architectural historian so that an effects assessment meeting can be scheduled.

SUPPORT DOCUMENTATION

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



Base map from HPOWeb (June 2021)

FINDING BY NCDOT ARCHITECTURAL HISTORIAN

Historic Architecture and Landscapes -- ****EFFECTS REQUIRED****

Mary Pope Furr

June 15, 2021

NCDOT Architectural Historian

Date

Tribal Coordination

From: [Stephen Yerka](#)
To: [Brew, Donnie \(FHWA\)](#); [Damon Jones](#)
Cc: [Bryan, Roger D](#); [Coates, McCray](#); [Wilkerson, Matt T](#); [Archual, Adam J.](#)
Subject: RE: HE-0001 EBCI THPO consultation
Date: Monday, March 21, 2022 2:59:48 PM
Attachments: [image001.png](#)

[EXTERNAL EMAIL]: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Thank you Donnie,
(and thank you, Damon, for sending the GIS files also)
We really appreciate you all being available to respond to the EBCI THPO's questions about the project status.
I will review the materials a little more, and the EBCI THPO is glad to hear the eligible site (119) is being avoided with Alt 3.

Thank you,
Stephen

Stephen J. Yerka
Historic Preservation Specialist, THPO
Eastern Band of Cherokee Indians (<https://ebci.com/>)
syerka@ebci-nsn.gov
(828) 359-6852



From: Brew, Donnie (FHWA) <Donnie.Brew@dot.gov>
Sent: Monday, March 21, 2022 2:06 PM
To: Stephen Yerka <syerka@ebci-nsn.gov>; Stephen Yerka <syerka@ebci-nsn.gov>; Damon Jones <cdjones2@ncdot.gov>
Cc: Bryan, Roger D <rdbryan@ncdot.gov>; Coates, McCray <hmcoates@ncdot.gov>; Wilkerson, Matt T <mtwilkerson@ncdot.gov>; Archual, Adam J. <aarchual@GFNET.com>
Subject: RE: HE-0001 EBCI THPO consultation

Good afternoon Stephen,

It was good catching up with you this afternoon.

I've attached a visual for HE-0001 that is pretty helpful. It shows the HE-0001 project area including the 3 detailed study alternatives. The alternatives and eligible historic resources are labeled on the visual. We are planning to move forward with the green alternative

(Alternative 3).

There is a footnote in the map key that describes the activities that are part of Project Ranger.

Have a great afternoon and let us know if we can help answer any other questions that may come up.

Talk to you soon,

Donnie

Donnie Brew
Preconstruction & Environment Engineer
Federal Highway Administration
310 New Bern Ave, Suite 410
Raleigh, NC 27601
donnie.brew@dot.gov
919-747-7017

Please consider the environment before printing this email.

-----Original Appointment-----

From: Stephen Yerka <syerka@ebci-nsn.gov>

Sent: Monday, March 14, 2022 2:08 PM

To: Stephen Yerka; Damon Jones

Cc: Brew, Donnie (FHWA); Bryan, Roger D; Coates, McCray; Wilkerson, Matt T; Archual, Adam J.

Subject: HE-0001 EBCI THPO consultation

When: Monday, March 21, 2022 1:00 PM-3:00 PM (UTC-05:00) Eastern Time (US & Canada).

Where: Microsoft Teams Meeting

CAUTION: This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

From: [Jones, Damon](#)
To: [Stephen Yerka](#)
Cc: [Brew, Donnie \(FHWA\)](#); [Wilkerson, Matt T](#); [Bryan, Roger D](#); [Coates, McCray](#); [Archual, Adam J.](#)
Subject: HE-0001 GIS files
Date: Monday, March 21, 2022 2:42:41 PM
Attachments: [image001.png](#)
[HE-0001 Archaeological APE.zip](#)
[HE-0001 & Project Ranger Sites.zip](#)
[HE-0001 Alternative #3.zip](#)
[Project Ranger Archaeological Survey Area.zip](#)

[EXTERNAL EMAIL]: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Steven,

Nice talking with you today.

Attached are the GIS files you requested

- HE-0001 Archaeological APE/Study Area
- Sites including those from both HE-0001 and Project Ranger
- Micro Station files for the Preferred Alternative Alt 3
- The Project Ranger APE/Survey Area

They should be projected in NAD 83 NC Stateplane (Feet).

Let me know if have any questions about the files.

Have a great day.

Damon Jones
Archaeologist
Environmental Analysis Unit
N.C. Department of Transportation
901 340 7921 mobile/home
919 707 6076 office
919 250 4224 fax
cdjones2@ncdot.gov

1020 Birch Ridge Drive
1598 Mail Service Center
Raleigh, NC 27699-1598



Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.

From: [Jones, Damon](#)
To: [Wenonah Haire](#); [Stephen Yerka](#); [elizabeth-toombs@cherokee.org](#); [Acee Watt](#); [ukbthpo@ukb-nsn.gov](#); [LeeAnne Wendt](#); [sshumate@biltmore.com](#); [andrew_triplett@nps.gov](#)
Cc: [Brew, Donnie \(FHWA\)](#); [Bryan, Roger D](#); [Coates, McCray](#); [Wilkerson, Matt T](#); [Archual, Adam J.](#); [Tipton, Rick A.](#)
Subject: NCDOT; TIP HE-0001 (Buncombe County, NC); Archaeology No NRHP Sites Affected
Date: Thursday, March 10, 2022 3:22:28 PM
Attachments: [image001.png](#)
[HE-0001_HPO_No_Effects_Transmittal_Letter.pdf](#)
[AR21-05-0002noeffects.pdf](#)

[EXTERNAL EMAIL]: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good Afternoon,

Please find the attached **No NRHP Eligible or Listed Archaeological Sites Affected** PA form and the HPO Transmittal Letter for the HE-0001 Project (construction of Exit 35 on I-26) in Buncombe County, North Carolina (PA Project 21-05-0002).

NCDOT is providing this information to your office on behalf of the Federal Highway Administration (FHWA), the designated lead federal agency for this undertaking, so that you may have the opportunity to offer any comments. In addition to the SHPO, copies of the survey report are being provided to the National Park Service, the US Army Corps of Engineers, The Catawba Nation, The Eastern Band of Cherokee Indians, the Cherokee Nation, The Muscogee (Creek) Nation, the Keetoowah Band of Cherokee Indians, and the Biltmore Estate.

The Archaeological Survey Report and Effect Required form for HE-0001 were provided to you in an email dated December 10, 2021, from me.

During the last Merger Meeting on Feb 9, 2022, Alternative 3 (DSA3) was selected as the Least Environmentally Damaging Practicable Alternative (LEDPA)/Preferred Alternative. This alternative is being carried forward and will have no effect to eligible site 31BN1119 as it will be avoided by the project.

If you have any questions, please let me know
Thank you.

Damon Jones
Archaeologist
Environmental Analysis Unit
N.C. Department of Transportation
901 340 7921 mobile/home
919 707 6076 office
919 250 4224 fax
cdjones2@ncdot.gov

1020 Birch Ridge Drive
1598 Mail Service Center

Raleigh, NC 27699-1598

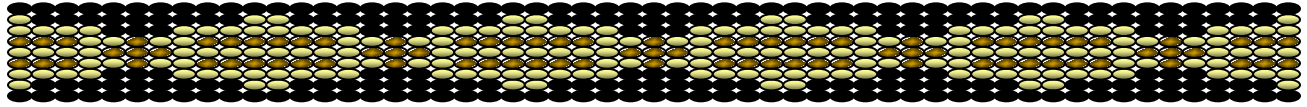


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North Carolina Public Records Law and may be disclosed to third parties.*

Email correspondence to and from this sender is subject to the N.C. Public Records Law and may be disclosed to third parties.

Catawba Indian Nation
Tribal Historic Preservation Office
1536 Tom Steven Road
Rock Hill, South Carolina 29730

Office 803-328-2427
Fax 803-328-5791



January 31, 2022

Attention: Matthew Wilkerson
NC Department of Transportation
159 Mail Service Center
Raleigh, NC 27699

Re. THPO #	TCNS #	Project Description
2020-193-53		TIP HE-0001, WBS No. 49473, Transportation Programmatic Agreement Project 21-05-0002, Buncombe Co.

Dear Mr. Wilkerson,

The Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. **However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project.**

If you have questions please contact Caitlin Rogers at 803-328-2427 ext. 226, or e-mail Caitlin.Rogers@catawba.com.

Sincerely,

Wenonah G. Haire
Tribal Historic Preservation Officer

From: [Jones, Damon](#)
To: [Beckwith, Loretta A SAW](#); [andrew_triplett@nps.gov](#); [sshumate@biltmore.com](#); [Wenonah Haire](#); [Caitlin Rogers](#); [Elizabeth Toombs](#); [russtown@nc-chokeee.com](#); [Stephen Yerka](#); [ukbthpo@ukb-nsn.gov](#); [lwendt@mcn-nsn.gov](#)
Cc: [Donnie Brew \(Donnie.Brew@dot.gov\)](#); [Bryan, Roger D](#); [Coates, McCray](#); [Gibbs, Mark T](#); [Wilkerson, Matt T](#); [Archual, Adam J](#); [Tipton, Rick A](#)
Subject: NCDOT; TIP HE-0001 (Buncombe County, NC); Archaeological Survey Report
Date: Friday, December 10, 2021 11:29:34 AM
Attachments: [image001.png](#)
[HE-0001_HPO_Effects_Transmittal_Letter.pdf](#)

[EXTERNAL EMAIL]: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Greetings,

Please find attached North Carolina DOT's transmittal letter dated December 10, 2021 to the North Carolina State Historic Preservation Office (SHPO) transmitting the **Archaeological Effects Required Form** detailing the results of the archaeological survey investigations within the HE-0001 (PA Project 21-05-0002) Area of Potential Effects (APE) in Buncombe County, North Carolina.

NCDOT is providing this information to your office on behalf of the Federal Highway Administration (FHWA), the designated lead federal agency for this undertaking, so that you may have the opportunity to offer any comments. In addition to the SHPO, copies of the survey report are being provided to the National Park Service, the US Army Corps of Engineers, The Catawba Nation, The Eastern Band of Cherokee Indians, the Cherokee Nation, The Muscogee (Creek) Nation, the Keetoowah Band of Cherokee Indians, and the Biltmore Estate. An electronic version of the report and site forms are available at the following link: <https://gfnet.sharefile.com/d-sf5b9dcbf067743c2b04d4bf371662253>

Hard copies are being sent to the Catawba Nation and can be provided to others upon request. Please let me know at cdjones2@ncdot.gov.

Please forward all questions and comments to Roger Bryan with NCDOT Division 13 at rdbryan@ncdot.gov by Monday, January 10, 2022.

Thank you,

Damon Jones
Archaeologist
Environmental Analysis Unit
N.C. Department of Transportation
901 340 7921 mobile/home
919 707 6076 office
919 250 4224 fax
cdjones2@ncdot.gov

1020 Birch Ridge Drive
1598 Mail Service Center



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

December 10, 2021

Dr. Wenonah Haire
Tribal Historic Preservation Office
Catawba Indian Nation
1536 Tom Steven Road
Rock Hill, South Carolina 29730

Dear Dr. Haire

Subject: TIP HE-0001, WBS No. 49473, Transportation Programmatic Agreement Project 21-05-0002, Buncombe County.

Enclosed please find a copy of the *Archaeological Effects Required Form* detailing the results of the archaeological survey investigations within the HE-0001 (PA Project 21-05-0002) Area of Potential Effects (APE). We are providing this information to your office on behalf of the Federal Highway Administration (FHWA), the designated lead federal agency for this undertaking, so that you may have the opportunity to offer any comments. Copies of the survey report are also being provided to the North Carolina State Historic Preservation Office, National Park Service, the US Army Corps of Engineers, The Eastern Band of Cherokee Indians, the Cherokee Nation, The Muscogee (Creek) Nation, the Keetoowah Band of Cherokee Indians, and the Biltmore Estate. An electronic version of the report will be emailed the week of October 13, 2021, to all interested parties. Please forward all questions and comments to Roger Bryan with NCDOT Division 13 at rdbryan@ncdot.gov by Monday, January 10, 2022.

Sincerely,

A handwritten signature in blue ink, appearing to read "Matthew Wilkerson", with a long horizontal flourish extending to the right.

Matthew Wilkerson
Archaeology Team Leader
Environmental Analysis Unit

Enclosures (Archaeological Report)

Cc Donnie Brew, FHWA
Roger Bryan, NCDOT Division 13
McCray Coates, NCDOT Division 13
Mark Gibbs, NCDOT Division 13
Adam Archual, Gannett Fleming, Inc.
Rick Tipton, Gannett Fleming, Inc.

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

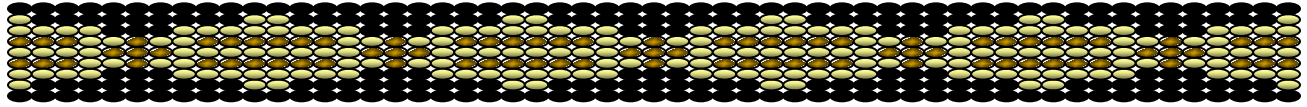
Telephone: (919) 707-6000
Fax: (919) 212-5785
Customer Service: 1-877-368-4968

Website: www.ncdot.gov

Location:
1000 BIRCH RIDGE DRIVE
RALEIGH, NC 27610

Catawba Indian Nation
Tribal Historic Preservation Office
1536 Tom Steven Road
Rock Hill, South Carolina 29730

Office 803-328-2427
Fax 803-328-5791



October 14, 2021

Attention: Roger Bryan
NC Department of Transportation
55 Orange Street
Asheville, NC 28801

Re. THPO #	TCNS #	Project Description
2021-193-178		Construction of a new interchange with Interstate 26 and a roadway extension to connect with a future state road in Buncombe Co., NC HE-0001

Dear Mr. Bryan,

The Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. **However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project.**

If you have questions please contact Caitlin Rogers at 803-328-2427 ext. 226, or e-mail Caitlin.Rogers@catawba.com.

Sincerely,

Wenonah G. Haire
Tribal Historic Preservation Officer



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CHEROKEE NATION®
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918-453-5000 • www.cherokee.org

Chuck Hoskin Jr.
Principal Chief
ᎠᎩᏍᏔ ᎠᎩᏍᏔ
ᎠᎩᏍᏔ

Bryan Warner
Deputy Principal Chief
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ᎠᎩᏍᏔ ᎠᎩᏍᏔ ᎠᎩᏍᏔ

October 8, 2021

Roger Bryan
North Carolina Department of Transportation
55 Orange Street
Asheville, NC 28801

Re: HE-0001, I-26 Interchange and Roadway Extension

Mr. Roger Bryan:

The Cherokee Nation (Nation) is in receipt of your correspondence about **HE-0001**, and appreciates the opportunity to provide comment upon this project. Please allow this letter to serve as the Nation's interest in acting as a consulting party to this proposed project.

The Nation maintains databases and records of cultural, historic, and pre-historic resources in this area. Our Historic Preservation Office reviewed this project, cross referenced the project's legal description against our information, and found instances where this project is within close proximity to such resources. Thus, the Nation recommends that a cultural resources survey is conducted for this project, and requests a copy of the related report with comments from the State Historic Preservation Officer. The Nation requires that cultural resources survey personnel and reports meet the Secretary of Interior's standards and guidelines.

However, the Nation requests that the North Carolina Department of Transportation (NCDOT) halt all survey activities immediately and re-contact our Offices for further consultation if items of cultural significance are discovered during the course of this survey. Additionally, the Nation requests that NCDOT conduct appropriate inquiries with other pertinent Tribal and Historic Preservation Offices regarding historic and prehistoric resources not included in the Nation's databases or records.

If you require additional information or have any questions, please contact me at your convenience. Thank you for your time and attention to this matter.

Wado,

Elizabeth Toombs, Tribal Historic Preservation Officer
Cherokee Nation Tribal Historic Preservation Office
elizabeth-toombs@cherokee.org
918.453.5389



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

September 9, 2021

Russell Townsend
Tribal Historic Preservation Officer
Eastern Band of Cherokee Indians (EBCI)
2077 Governors Island Road
Bryson City, NC 28713

Whitney Warrior
Tribal Historic Preservation Officer
United Keetoowah Band of
Cherokee Indians
PO Box 1245
Tahlequah, OK 74465

Elizabeth Toombs
Tribal Historic Preservation Officer
Cherokee Nation
PO Box 948
Tahlequah, OK 74465

Dr. Wenonah Haire (via mail)
Catawba Indian Nation
Tribal Historic Preservation Office
1536 Tom Steven Road
Rock Hill, SC 29730

LeeAnne Wendt
Muscogee (Creek) Nation
P.O. Box 580
Okmulgee, OK 74447

Dear Sir/Madam:

The North Carolina Department of Transportation is starting the project development, environmental, and engineering studies for construction of a new interchange with Interstate 26 (I-26) and a roadway extension to connect with a future state road in Buncombe County, NC as project HE-0001. The Federal Highway Administration (FHWA) is the lead federal agency for compliance with the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA) and a Permit is anticipated under the Section 404 Process with the USACE. The coordinates of this project are approximately 35.504013, -82.571906.

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
DIVISION THIRTEEN
55 ORANGE STREET
ASHEVILLE, NC 28801-2340

Telephone: (828) 250-3000
Fax: (828) 251-6394
Customer Service: 1-877-368-4968
Website: www.ncdot.gov

Location:
55 ORANGE STREET
ASHEVILLE, NC 28801-2340

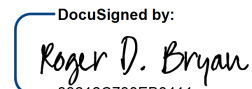
The project vicinity and NCDOT Survey Required Form are attached. Archaeological field investigations are underway and expected to conclude in winter 2021. The results of these investigations can be shared with you upon request.

We would appreciate any information you might have that would be helpful in evaluating potential environmental impacts of the project including recommendation of alternates to be studied. Your comments may be used in the preparation of a NEPA/ State Environmental Policy Act (SEPA) Environmental Document.

In accordance with Section 106 of the NHPA, we also request that you inform us of any historic properties of traditional religious or cultural importance that you are aware of that may be affected by the proposed project. Be assured that, in accordance with confidentiality and disclosure stipulations in Section 304 of the NHPA, we will maintain strict confidentiality about certain types of information regarding historic properties.

Please respond by October 9th so that your comments can be used in the scoping of this project. If you have any questions concerning this project, or would like any additional information, please contact me at rdbryan@ncdot.gov or 828-250-3005.

Thank you,

DocuSigned by:

33212C738EB8411...
Roger D. Bryan
NCDOT Division 13 Environmental Supervisor

cc: Matt Wilkerson, NCDOT Archaeology Team Leader
Donnie Brew, Federal Highway Administration
Lori Beckwith, US Army Corps of Engineers

Section 404/ NEPA Merger



*Excellence Delivered **As Promised***

Project: HE-0001, New Interchange with I-26

Project No.: 064926.050

Subject: External Scoping Meeting Summary

Date: June 16, 2021 8:30 am

Location: Remote (GoTo Meeting)

Attendees:

Name	Representing	Email
McCray Coates	NCDOT-Division 13	hmcoates@ncdot.gov
Mark Gibbs	NCDOT-Division 13	mgibbs@ncdot.gov
Roger Bryan	NCDOT-Division 13	rdbryan@ncdot.gov
Derrick Weaver	NCDOT-EPU	dweaver@ncdot.gov
John Jamison	NCDOT-EPU	johnjamison@ncdot.gov
Mike Sanderson	NCDOT-EPU	jmsanderson@ncdot.gov
Marissa Cox	NCDOT-Biological Surveys	mrcox@ncdot.gov
Cheryl Knepp	NCDOT-Biological Surveys	clknepp@ncdot.gov
Tyler Stanton	NCDOT-Biological Surveys	tstanton@ncdot.gov
Donnie Brew	FHWA	Donnie.Brew@dot.gov
Joe Geigle	FHWA	Joseph.Geigle@dot.gov
Lori Beckwith	USACE	Loretta.A.Beckwith@usace.army.mil
Kevin Mitchell	NCDWR	Kevin.Mitchell@ncdenr.gov
Amanetta Somerville	USEPA	Somerville.Amanetta@epa.gov
Holland Youngman	USFWS	Holland.Youngman@fws.gov
Lauren Wilson	USFWS	lauren_wilson@fws.gov
Marla Chambers	NCWRC	Marla.Chambers@ncwildlife.org
Tristan Winkler	FBRMPO	tristan@landofsky.org
John Ridout	FBRMPO	john@landofsky.org
Heather Wallace	NV5	Heather.Wallace@nv5.com
Rick Tipton	Gannett Fleming	rtipton@gfnet.com
Adam Archual	Gannett Fleming	aarchual@gfnet.com
John Thomas	Gannett Fleming	jthomas@gfnet.com

This project proposes to construct a new interchange (future Exit 35) with I-26 and connecting roadway to access the Pratt & Whitney (P&W) Manufacturing Center currently under construction. The project is located approximately 6 miles south of Asheville in Buncombe

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County. NCDOT-Division 13 is managing the project and anticipates federal funding. The Division is targeting an October 2022 construction let date.

The intent of this meeting was to provide information about the proposed project to the state and federal resource agency partners and collect feedback and direction in the development of the project. The PowerPoint Presentation is attached to this summary and the meeting packet may be accessed via the NCDOT [file transfer site](#). The following topics were discussed at the meeting:

- Jurisdictional Resources
 - o NCDOT will spot check approved delineations completed for I-4700 and U-3403B while delineating the remainder of the study area. Full delineation within the previously surveyed areas is not required but delineations should be field checked.
 - The Project Ranger delineation expires in October of 2021 and will not be relied on by this project.
 - o NCDOT should plan on a field verification with the USACE and NCDWR; that should be expected later this summer.
 - o The JD submittal should explain the history and status of the intersecting JDs, their status, and results of spot checks; these features should also be provided in the mapping.
- Agency Input/Comments
 - o USACE
 - Due to conflicting resources and the unique situation of this project overlapping the I-4700 project currently under construction, the USACE agrees with the decision to proceed in the Merger process.
 - Requested that the project purpose statement does not offer a solution to the project need statement (available in the External Scoping Meeting packet).
 - o NCDWR
 - Agreed with decision to proceed in the Merger process.
 - In review of the 2016 Project Ranger JD, noted the presence of several pocket, headwater wetlands adjacent to first order tributaries to the French Broad River.
 - The streams and habitat are in good condition based on past observations.
 - Avoidance and minimization will be important.

- A good stormwater management plan is necessary associated with concerns for downstream aquatic habitat for endangered Appalachian elktoe (*Alasmidonta raveneliana*) in the French Broad River.
- o USFWS
 - Agreed with plan to observe/incorporate/consider the conservation measures and commitments NCDOT made for the I-4700 project and Project Ranger (FWS log # 19-328).
 - Recommend consider tree clearing in the winter in regard for concerns with the threatened Northern long-eared bat (*Myotis septentrionalis*), soon after the proposed October 2022 construction let date.
- o USEPA
 - Requested additional detail on the annual average daily traffic (AADT) in future discussions to support this project would not adversely affect I-4700.
 - Will the French Broad River bridge currently under construction by the private developer accommodate future traffic needs?
 - The private developer is constructing the bridge with five lanes and the roadway is being constructed with two-lanes but has been cleared and graded for four-lanes.
- o NCWRC
 - Agrees with Merger decision.
 - Will review the U-3403B and I-4700 WRC letters and resend to the appropriate members of this group.
 - Will be looking for proper passage of fish and wildlife.
 - Will also need to plan to treat stormwater to prevent degradation of the French Broad River.
- o FBRMPO
 - Working on amending the MTP with target of this month but reserving the option to hold amendments until August if additional conversation is warranted.
 - Some concerns have been voiced by the TCC about this project and its impacts to funding availability for other planned transportation projects in the MTP.
 - It was noted that land-use modeling and socioeconomic data for this TAZ is a high-growth area. This was coded before the proposed project was conceived.
- o SHPO (not present)

- In the absence of SHPO, the team was informed that coordination has begun with Mary Pope Furr and Matt Wilkerson and these studies are underway.
- General Conversation
 - o Need and Purpose
 - USACE suggested holding a CP 1-2 pre-meeting with the MOU signatories and noted that the “direct access” in the preliminary purpose statement would have to be taken under consideration internally.
 - o Merger
 - The new Merger procedure has not been finalized yet, but some of the ideas in that procedure update may be applied to this project with the team’s approval.
 - USACE stated that information about the impacts of this project on the I-26 LOS will be necessary prior to a CP 3/LEDPA decision.
 - FHWA clarified that they cannot approve the IAR (Interchange Access Report), and ultimately the project, if it results in significant adverse effect on the interstate. However, it is possible that an LOS less than service level D could be considered not adverse.
 - It was noted that the I-4700 traffic analysis uses a 2040 design year, whereas this project is a 2045 design year.
 - o Study Area
 - A reduced study area was presented to the team.
 - USEPA asked whether the reduction would limit design options under consideration.
 - NCDOT noted that the reduction was based on evaluation of design factors and environmental factors. The northern section of the larger study area present conflicts with the French Broad River FEMA floodplains and jurisdictional wetlands identified in environmental studies for I-4700. Also, topography west of a blue-line stream bisecting the parcel west of I-26 presented design concerns that would be lessened by alternatives to the east of the stream.
 - o USACE replied that alternatives and/or associated study area limits should not be discarded without agencies review and comment.

- NCDOT noted that reducing the study area made sense because it would reduce the time and effort associated with field data collection (e.g., archaeology) in areas that we would not expect to build in.
- USEPA requested that this explanation be documented.

This concludes the summary of the discussions held during the HE-0001 External Scoping Meeting to the best of my recollection.

Adam Archual
June 17, 2021



Gannett Fleming

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Project: HE-0001, New Interchange with I-26
Project No.: 064926.050
Subject: Merger Meeting, Concurrence Points 1 & 2
Date: July 15, 2021 9:00 am
Location: Remote (GoTo Meeting)

Attendees:

Name	Representing	Email
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This project proposes to construct a new interchange (future Exit 35) with I-26 and roadway extension to connect to a future state road (Frederick Law Olmsted East). The project is located approximately 6 miles south of Asheville in Buncombe County. NCDOT-Division 13 is managing the project and anticipates federal funding. The Division is targeting an October 2022 construction let date.

The intent of this meeting was to reach concurrence on the Project Need and Purpose and Study Area (CP 1) and Detailed Study Alternatives to be Carried Forward (CP 2); to review the information contained in the CP 1 and CP 2 Meeting Packet; and to answer questions from the Merger Team about the materials provided. The PowerPoint Presentation is attached to this summary and the meeting packet may be accessed via the NCDOT [file transfer site](#). The following topics were discussed at the meeting:

Concurrence Point 1

- Project Need and Purpose
 - o No comments were received at the meeting regarding the project need and purpose statements as presented.
- Study Area Defined
 - o USACE requested additional information from NCDOT to explain the factors involved in determining the extent of the study area and why an interchange would not work anywhere else between NC 191/Brevard Road (Exit 33) and NC 146/Long Shoals Road (Exit 37).
 - In addition to the information contained on page 4 of the meeting packet, the Consultant replied on behalf of NCDOT that an interchange north of the French Broad River (FBR) on I-26 would result in traffic accessing the current and planned growth at Biltmore Park West (BPW) to make two turns and rely on NC 191. Such a scenario would put additional pressure on the local road network (NC 191) and result in less efficient traffic operations, in addition to the reasons discussed in the meeting packet.
 - o SHPO asked about the character of the planned development.
 - The Consultant replied that the Pratt & Whitney Manufacturing Center (P&W) is the first development within BPW. BPW is bound by I-26 to the east, the FBR to the north, NC 191 to the west, and the Blue Ridge Parkway (BRP) to the south (see Exhibit 1 in meeting packet). Additional development is planned. Table 3 (page 7) of the meeting packet quantifies the type of planned development which would include development of a work force training facility by Asheville-Buncombe Technical College.

Specifics about the placement of individual developments within the site are not known.

- SHPO remarked that the effects assessment for HE-0001 should not be limited to the transportation infrastructure alone but also review the secondary and/or foreseeable development that would occur closer to the BRP.
 - FHWA replied that development at BPW is coming regardless of the proposed access to the interstate under HE-0001; access to the BPW has been established by the bridge over the FBR. HE-0001 would provide direct access to I-26.
 - SHPO stated that the desirability and pace of future development would be greater with the proposed interchange than it would be with access from NC 191 only. Project HE-0001 is intended to increase connectivity and that will spur development.
 - FHWA noted that the five-lane bridge over the FBR is being constructed; the Frederick Law Olmsted Way East roadway is also under construction to connect to P&W (under construction); and reiterated that the expectation is that development of the site will continue without this project (HE-0001).
 - SHPO would expect pushback from the BRP and the tribes like that experienced for the bridge project (a.k.a., Project Ranger).
 - FHWA stated that Project Ranger is a separate independent project and HE-0001 is a separate and independent project. This project would introduce additional transportation resources in response to the current and planned development.
 - SHPO stated the Section 106 Area of Potential Effect (APE) needs to include the BRP.
 - FHWA replied that a proposed APE would not be limited by the NEPA study area.
- USFWS asked why the meeting materials did not address this project in the context of these other projects, i.e., Project Ranger and NCDOT STIP I-4700. (*post-meeting note: refer to External Scoping Meeting Presentation, slide 8.*)
 - FHWA responded that “current and planned growth” is intended to capture that.
 - The Consultant replied that P&W is the only known, named project in BPW.

- USFWS asked why this project was not included in either Project Ranger or NCDOT STIP I-4700.
 - FHWA replied that at the time I-4400/I-4700 was under development, this project was not known. On the other hand, the private development occurred outside of the state and federal transportation purview.
 - USFWS requested that the timeline and sequencing of events be included in the meeting summary. (*See Attachment 1*)
- Concurrence Point 1
 - USACE surveyed the Merger Team for verbal concurrence on Project Need and Purpose and Study Area. The following agencies concurred at the meeting:
 - FHWA
 - USACE
 - NCDOT
 - USFWS (*note: Lauren Wilson will serve as FWS lead for HE-0001*)
 - NCDWR
 - SHPO
 - FBRMPO
 - The USEPA and NCWRC abstained from verbal concurrence because both agency representatives responsible for Merger concurrence did not attend the meeting (*note: USEPA was represented at the meeting; however, the USEPA Merger representative responsible for project concurrence was not in attendance*).
 - NCDOT noted that slight modifications may be made to the signature lines to reflect the USEPA and NCWRC abstention at the meeting with option to concur following meeting.

Concurrence Point 2

- Detailed Study Alternatives (DSAs) to be Carried Forward
 - NCDWR asked whether the stream in the bifurcated section would be avoided, or bridged, in DSA 2.
 - The Consultant replied that a bridge would have to span the stream in the bifurcated section in this configuration due to the proximity of the stream to the interstate.
 - NCDOT remarked that this would be discussed in greater detail at CP2A.
 - USFWS asked if there was more information about any other alternatives, noting the meeting packet mentioned 15 concept designs.
 - The Consultant replied that those concepts were variations of the three alternatives proposed here. The other design concepts explored options to tie the interchange to the roundabout.

- USFWS asked whether the transportation team looked at a tight diamond configuration on DSA 1, for example.
 - The Consultant replied that such a concept was looked at but the large cut on the eastbound lanes and the distance between the interchange ramp terminals were considered in the retention of the current DSA 1 configuration.
- USACE remarked that environmental agencies want to know how the transportation team determined what would work with traffic while also avoiding impacts to resources.
 - USFWS stated that it was unclear how these designs were completed to meet traffic needs in the context of resource locations.
 - The Consultant replied that available stream information was used to layout concept designs and impacts avoided to the extent possible at first pass, noting there remain opportunities for minimization.
 - NCDOT remarked that avoidance and minimization efforts completed to date will be documented following field verification of surface water resources. There should be more information available on this topic at CP2A.
 - USFWS reminded the Merger Team that minimization of tree clearing is also an important consideration.
 - NCDOT replied that additional information will be shared with USFWS regarding tree clearing.
- SHPO asked why NCDOT was forwarding DSA 2 which has 6.8 acres of impacts to the Biltmore Estate National Historic Landmark (NHL) (and more aquatic resources impacts) while there are two other alternatives that do not impact the NHL.
 - FHWA replied that DSA 2 is the only “traditional” right exit / entrance interchange alternative. For that reason alone, FHWA is encouraging NCDOT to carry DSA 2 forward for more detailed study.
 - SHPO further remarked that DSA 2 is the closest alternative to the BRP which is in the process of becoming an NHL.
 - FHWA responded that from a preliminary standpoint DSA 2 appears to be the most impactful and may not raise to LEDPA. However, FHWA is advocating that DSA 2 be carried forward to further explore the potential Section 106 effects and aquatic resource impacts. There is the potential that FHWA-Headquarters will not approve a left exit / entrance on the interstate without documentation that it is the only viable option.

- USACE noted that Consultants are delineating resources currently and USACE and NCDWR will field verify. As a result, potential impacts presented today for streams and wetlands may change or vary at CP2A.
- USACE asked NCDOT to explain to the group what the following sentence on the CP 2 Form meant: "If the traffic forecast shows that only two lanes are required for the roadway tie, Concurrence Point 2 will be revisited."
 - The Consultant responded that the traffic forecast was recently completed and is being processed currently to determine whether a two-lane typical section between the interstate and the roundabout would function acceptably.
 - The Consultant noted that the potential impacts reviewed at CP 1-2 are worst-case scenario, for a four-lane curb and gutter roadway cross section.
 - NCDOT noted that right of way would be acquired for a four-lane roadway; however, at this time is anticipating a two-lane roadway would function acceptably.
 - USACE reminded the Merger Team that if the forecast showed a two-lane roadway would function the Corps can only permit those impacts to waters of the U.S. that would be necessary for a two-lane roadway.
 - USACE concluded that if CP 2 needed to be revisited by the Merger Team because the forecast shows that a two-lane roadway would function, an email will most likely suffice, particularly with the prospect that the impacts would decrease. Clear documentation of the decision is required. NCDOT, FHWA and NCDWR agreed to the approach to revisit with the Merger Team by email so long as the request is clear.
 - NCDOT clarified that should the two-lane roadway cross section work and additional materials (e.g., updated impacts) explaining this are provided to the Merger Team via email such a revision would not reopen the interchange alternatives to be carried forward for detailed study. Whether a new CP2 concurrence form is required based on this revision (opposed to updated via email) will be evaluated and coordinated with the Merger Team.
- Concurrence Point 2
 - USACE surveyed the Merger Team for verbal concurrence on Detailed Study Alternatives to be Carried Forward. The following agencies concurred at the meeting:

- FHWA
- USACE
- NCDOT
- USFWS
- NCDWR
- SHPO
- FBRMPO
- The USEPA and NCWRC abstained from verbal concurrence for the reasons mentioned above for CP 1.
 - NCDOT noted that slight modifications may be made to the signature lines to reflect the USEPA and NCWRC abstention at the meeting with option to concur following meeting.

This concludes the summary of the discussions held during the HE-0001 External Scoping Meeting to the best of my recollection.

Adam Archual
July 26, 2021 (Draft)

ATTACHMENT 1: I-4400/I-4700 AND PROJECT RANGER PROJECT TIMELINES

Project	Date	Milestone
I-4400/I-4700	May 2001	Environmental Assessment (EA) completed
I-4400/I-4700	January 2002	Finding of No Significant Impact (FONSI) completed
I-4400/I-4700	2013 to 2016	Project technical reports
I-4400/I-4700	August 2016	Draft Environmental Impact Statement (DEIS)
I-4400/I-4700	Oct. 13, 2016	Public hearing
Project Ranger	2016	Biltmore Farms, Inc. secures preliminary JD (SAW-2016-01112)
I-4400/I-4700	Jan. 18, 2017	Least Environmentally Damaging Practicable Alternative (LEDPA)
I-4400/I-4700	2018	Right of way acquisition begins
I-4400/I-4700	Spring 2019	USFWS issues final BO
I-4400/I-4700	Spring 2019	Final Environmental Impact Statement / Record of Decision (FEIS/ROD)
I-4400/I-4700	October 2019	Construction begins
Project Ranger	2020	USACE receives SHPO determination (ER 19-4972)
Project Ranger	2020	USACE issues NWP 14 and 25 FBR bridge (SAW-2019-01867)
Project Ranger	2020	USFWS issues a BO (FWS Log # 19-328)
Project Ranger	2020	P&W announces 1 million sq foot advanced manufacturing center on 100-acre site
Project Ranger	2020	Buncombe County resolution and Incentive Agreement with P&W
HE-0001	2021	Preliminary Engineering and Environmental begins
HE-0001	2022	Environmental Document
HE-0001	2022	Right of way acquisition begins
HE-0001	October 2022	Construction begins
I-4400/I-4700	2024	Construction complete
HE-0001	2024	Construction complete

Section 404/NEPA Merger Project Team Meeting Agreement

Concurrence Point 1

Study Area Defined and Project Need and Purpose

Project Name/Description: I-26, New Interchange (Future Exit 35), Buncombe County

STIP Project: HE-0001

Project Need: The proposed project is needed to address the lack of network connectivity between NC 191 and I-26 in southern Buncombe County to accommodate current and planned growth.

Project Purpose: The purpose of the project is to provide access to I-26 and improve east-west connectivity within the project vicinity to accommodate current and planned growth.

The Project Team has concurred on this date, **July 15, 2021**, on the above project need and purpose and the study area defined (**Figure 2**) for STIP Project HE-0001.

FHWA (lead federal agency)	DocuSigned by: <i>Donald W Brew</i> B96E8B70991E42C...	
USACE		DocuSigned by: <i>Lori Beckwith</i> BE7189E4BA384E3...
NCDOT	DocuSigned by: <i>McCray Coates</i> 0C47CF5B950645D...	
USEPA		DocuSigned by: <i>Amanetta Somerville</i> 4A37089ED457408...
USFWS	DocuSigned by: <i>[Signature]</i> 6B574C520CDE43C...	
NCWRC (Abstaining)		DocuSigned by: <i>Marla Chambers</i> B1D3DCA076AD4C9...
NCDWR	DocuSigned by: <i>Kevin Mitchell</i> D9ACAD48D566453...	
SHPO		DocuSigned by: <i>Renee Gledhill-Earley</i> C26A1556A275464...
FBRMPO	DocuSigned by: <i>Tristan Winkler</i> E58F96DB10AB42E...	

Section 404/NEPA Merger Project Team Meeting Agreement

Concurrence Point 2

Detailed Study Alternatives Carried Forward

Project Name/Description: I-26, New Interchange (Future Exit 35), Buncombe County

STIP Project: HE-0001

Project Need: The proposed project is needed to address the lack of network connectivity between NC 191 and I-26 in southern Buncombe County to accommodate current and planned growth.

Project Purpose: The purpose of the project is to provide access to I-26 and improve east-west connectivity within the project vicinity to accommodate current and planned growth.

The Project Team has concurred on this date, **July 15, 2021**, that all checked alternatives will be carried forward to be studied in detail for STIP Project HE-0001.

If the traffic forecast shows that only two lanes are required for the roadway tie, Concurrence Point 2 will be revisited.

DSA	Carried Forward (Y/N)	Description	Figures
No Build	Y	The No-Build Alternative does not meet the project's need and purpose but will be retained to provide a basis for comparing adverse impacts and benefits of the detailed study alternatives.	NA
Build Alt. 1	Y	Modified diamond interchange configuration located in the center of the I-26 bifurcated section and includes a left exit/entrance ramp.	3 & 4
Build Alt. 2	Y	Diverging diamond interchange (DDI) configuration located in the center of the I-26 bifurcated section and includes a right exit/entrance ramp.	5 & 6
Build Alt. 3	Y	Tight diamond interchange configuration located at north end of the I-26 bifurcated section and includes a left exit/entrance ramp.	7 & 8

FHWA (lead federal agency)	DocuSigned by: <i>Donald W Brew</i> B96E8B70991E42C...	
USACE		DocuSigned by: <i>Lori Beckwith</i> BE7189E4BA384E3...
NCDOT	DocuSigned by: <i>McCray Coates</i> 0C47CF5B950645D...	
USEPA		DocuSigned by: <i>Amanetta Somerville</i> 4A37089ED457408...
USFWS	DocuSigned by: <i>L. A. W.</i> 6B574C520CDE43C...	
NCWRC (Abstaining)		DocuSigned by: <i>Marla Chambers</i> B1D3DCA076AD4C9...
NCDWR	DocuSigned by: <i>Kevin Mitchell</i> D9ACAD48D566453...	
SHPO		DocuSigned by: <i>Renee Gledhill-Earley</i> C26A1556A275464...
FBRMPO	DocuSigned by: <i>Tristan Winkler</i> E58F96DB10AB42E...	



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Project: HE-0001, New Interchange with I-26
Project No.: 064926.050
Subject: Merger Meeting, Concurrence Points 2A
Date: September 16, 2021, 10:00 am
Location: Remote (GoTo Meeting)

Attendees:

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This project proposes to construct a new interchange (future Exit 35) with I-26 and roadway extension to connect to a future state road (Frederick Law Olmsted East). The project is located approximately 6 miles south of Asheville in Buncombe County. NCDOT-Division 13 is managing the project and anticipates federal funding. The Division is targeting an October 2022 construction let date.

The intent of this meeting was to provide a CP 2 Update to summarize the project-specific traffic forecast and two-lane roadway decision as well as to update potential impacts presented at CP 1-2 with field verified aquatic resources; reach concurrence on CP 2A (there are no proposed hydraulic structures or major crossings requiring bridging decisions); review potential avoidance and minimization measures; and answer questions and receive comments from the Merger Team about the materials provided. The PowerPoint Presentation is attached to this summary and the meeting packets may be accessed via the NCDOT [file transfer site](#). The following topics were discussed at the meeting:

- USACE asked why the potential impacts went up after the field delineation.
 - o The Consultant clarified the comparison on Slide 12 showed potential impacts for a 4-lane roadway, not 4-lane versus 2-lane potential impacts. The additional stream impacts came from more accurate data from the field delineation.
- SHPO asked why potential visual impacts to the Blue Ridge Parkway (BRP) are not included in the estimated impact summary.
 - o The Consultant answered that each alternative would have similar potential impacts, so it was not included in the summary to compare the three alternatives. Additionally, the analysis is not finished, and the Consultant was reporting known potential impacts.
 - o FHWA asked if we could look at the images for where each alternative ties into the private road to see where they fall compared to the BRP.
 - The consultant showed each alternative, highlighting the common tie point and the similar proximity to the BRP.
 - o SHPO followed up that the same developers own the entire area, so direct and indirect effects need to consider indirect visual impacts of future development.
 - o NPS would like to be included in the discussions of potential visual impact to the BRP moving forward.

- o NCWRC stated all three alternatives have similar locations of their closest point to the BRP but emphasized the viewsheds for each alternative may differ from various locations along the BRP.
- o NCWRC stated that secondary and cumulative impacts is a big concern of theirs and recommended that a full secondary and cumulative impact analysis be completed prior to CP 3.
 - NCDOT replied that an indirect and cumulative analyses is currently underway and results will be available prior to CP 3.
- o NCWRC stated that the Pratt and Whitney Project (aka Project Ranger, private development) was developed in a dishonest way and that the reviewing resource agencies involved in the Project Ranger permit review were led to believe that an interchange with I-26 was not feasible.
 - NCDOT replied that the NCDOT has no control over the acts of a private developer on privately owned property.
 - USACE added that if any agency has questions or concerns about the honesty or transparency of another agency involved in the Merger Process, those need to be submitted in writing.
- o USACE asked SHPO what is needed for the viewshed analysis prior to CP 3. SHPO pointed out NPS was on the call and can help facilitate a viewshed analysis. SHPO stated that NPS should be asked what is needed for the viewshed analysis and stated that development will be spurred (as a result of the proposed project).
 - NCDOT responded that renderings were currently being developed according to past experience with the NPS and would be submitted to facilitate the discussion.
 - NCDOT also noted that the noise study would address potential noise impacts to the BRP.
 - NCDOT will consult with NPS regarding the potential effects of HE-0001 to the BRP.
- SHPO mentioned the tribes had expressed interest during consultation conducted for Project Ranger and requested a status on NCDOT's tribal consultation.
 - o The Consultant responded the Division sent scoping materials and the NCDOT Archaeology Survey Required Form to the tribes according to NCDOT tribal consultation procedure. (*Note that Consultation Letters were submitted 9/9/21.*) The tribes have 30 days to respond. It was also noted that the USACE Public Notice was issued 9/2/21, which is also sent to tribal governments.

- USFWS asked how the potential impacts included in the summary table were determined.
 - o NCDOT responded they try to factor in all potential impacts, but the summary table focuses on known potential impacts at this stage of the planning process. Unknown impacts were not included.
 - o USFWS asked if acreage of tree clearing and Threatened and Endangered species can be included moving forward in the merger process.
 - NCDOT responded they will be included in the potential impacts table for the LEDPA meeting prior to CP 3.
 - USFWS stated they would be interested in any metrics that may relate to the species of interest in the project area. As bats are a concern, tree clearing is a metric of interest.
 - *Post-meeting Note: USFWS clarified that acreage of land clearing may be another example most relevant to water quality effects to listed mussels (or acreage of land clearing within x feet of a waterway, etc.). It would be good to see these kinds of indicators, where they are relevant, included in the impacts tables that are used to make LEDPA decisions for this and other Merger projects.*
- NCWRC asked if Potential Crossing #1 – DSA 1 is a potential stream impact if not for a bridge.
 - o The Consultant replied that it would result in a potential stream impact if the stream was not bridged.
- NCWRC stated usually we (the resource agencies) see the environmental documents before CP 3 to help make a decision. NCWRC asked what the environmental document is going to be for this project.
 - o The Consultant noted that the project is being processed as a Categorical Exclusion (CE).
 - o NCWRC asked if the CE would be done and available for review prior to CP 3.
 - o The Consultant responded that that is not the schedule presented to date.
 - o NCWRC would like the project to move forward with an EIS and full Indirect and Cumulative Effects (ICE) report.
 - o FHWA responded that the project will continue to be developed following the Merger Process, and agencies will be provided the appropriate information, as part of the Merger agreement, prior to the CP 3 meeting.
 - o Based on available information, FHWA stated the appropriate NEPA Class of Action for the project is a Categorical Exclusion (CE), due to the lack of potential for significant environmental effects associated with the project (HE-0001).

- o FHWA stated that the ICE (Indirect and Cumulative Effects) process is an iterative process. The transportation agencies are following their established process and the results of each step of the process inform what step to take next.
- o USEPA asked what criteria was used to determine a CE was appropriate and why an Environmental Assessment (EA) is not being used given the concerns raised through Merger.
 - FHWA responded that the question that is being asked when determining the class of action is “significance”. Is there potential that a proposed project will result in significant environmental effects that would warrant an EIS (Environmental Impact Statement)? If the answer is yes, then an EIS will be developed; if the answer is we’re not sure, then an EA will be developed. For this project, based on available information, it is not anticipated the effects of the project would warrant an EIS.
 - FHWA noted that a lot of the concerns stated by the agencies pertains to potential future development on the parcel (Biltmore Farms). FHWA clarified that HE-0001 is separate and independent from the private development project underway, known as Project Ranger. Through Project Ranger, a bridge over the French Broad River has been permitted by the resource agencies and is under construction providing transportation access to the privately owned parcel from NC 191. HE-0001 is not creating access to the parcel. That access already exists. HE-0001 is in response to the transportation needs associated with current and future development.
 - USEPA feels the potential impacts to endangered species are not being addressed appropriately.
 - FHWA responded the project team is working to ensure compliance with all applicable environmental laws and regulations and consulting with the appropriate resource and regulatory agencies. The magnitude of potential effects for each alternative is likely similar. More information will be available prior to CP 3.
- o SHPO would like additional information on the planned development in this area and any associated planning and zoning for Asheville and Buncombe County.
 - *Post-meeting Note: The private developer has not submitted any development plans to Buncombe County, the local planning and zoning jurisdiction. The private developer provided NCDOT a potential land use concept in May 2021 for traffic analyses purposes only. This concept included a potential land use density*

scenario (e.g., number of housing units, square feet of retail/office) considered to be a representative development scenario at that time. However, the private developer made clear that these are concepts and subject to change. These density figures have been provided to the Merger Team (see Table 3 in CP 1-2 Packet [July 15, 2021]).

- *Two (2) Buncombe County Zoning Districts intersect the project study area: (1) Employment District (EMP) and (2) Residential District (R-3). Buncombe County Zoning Districts are defined in the County's Code of Ordinances (Chapter 78, Article VI, Division 4, Sec. 78-636) (www.buncombecounty.org/common/planning/zoning-ordinance.pdf).*
- o NCWRC stated Pratt and Whitney is not the only development of concern noting that their concerns extend to the potential additional development to the area because of the project.
 - FHWA responded indirect effects from HE-0001 will be considered, but there is already access to these parcels from the private road connecting to NC 191. Therefore, the project is not creating access but adding additional access.
- USFWS stated that they have received a draft Biological Conclusion document from the NCDOT Biological Surveys Group for Endangered Species Act (ESA) Section 7 consultation and have submitted comments. USFWS went on to state the comments submitted are intended to develop a fuller picture of the potential impacts to Threatened and Endangered Species.
- USFWS followed up asking why the environmental document is a CE instead of an EA.
 - o FHWA responded that when it comes to class of action the question is whether the project can result in significant effects to the environment. If there is potential for a significant environmental impact, then an EIS would be appropriate. If significant environmental impacts are possible, an EA would be appropriate. However, based on the available information, significant adverse impacts are not anticipated because of HE-0001; therefore, a CE is appropriate. If information changes or new information becomes available, the level of environmental document may be revisited.
- NCWRC asked if the project will limit development along the project through use of control of access.
 - o NCDOT responded control of access will be closely coordinated with FHWA and will be implemented on the interchange ramps. NCDOT does not anticipate the entirety of the roadway being full control of access.
 - o NCWRC clarified that the rest of the property will be open to development.

- The Consultant replied that access to the property already exists because of the private road connection to NC 191.
- o USFWS asked if the private road would extend through more of the property if HE-0001 not to be developed.
 - The Consultant responded this may be a question of timing. At the time a roadway extension becomes economically beneficial, then the private developer would likely extend the road.
 - USFWS says the ICE and Land Use Scenario Assessment (LUSA) will shed light on this issue when they are finished.
- FBRMPO asked why the typical includes a grass shoulder and not a paved shoulder.
 - o The Consultant clarified that the 8-foot shoulder includes 4 feet of pavement and 4 feet of grass.
- USACE surveyed the Merger Team for verbal concurrence on the CP 2 Update and CP 2A. The following agencies concurred at the meeting:
 - o FHWA
 - o USACE
 - o NCDOT
 - o EPA
 - o USFWS
 - o NCWRC
 - o NCDWR
 - o FBRMPO
- SHPO abstained from verbal concurrence because the agency representative left the meeting early. They will review the meeting summary and determine whether SHPO will sign or abstain.
- NPS asked what will be decided in CP 3.
 - o NCDOT responded that will be when the Merger Team can equate a NEPA Preferred Alternative with the Section 404 Least Environmentally Damaging Practicable Alternative (LEDPA).
 - o USACE followed up, stating CP 3 is the point where one alternative is chosen as the LEDPA and the other alternatives are discarded.
 - NPS stated concern that there will not be enough time to review a viewshed analysis prior to CP 3.
 - The Consultant is currently working with NCDOT to develop materials (i.e., renderings, visualizations) and schedule a small group meeting to discuss the Blue Ridge Parkway with SHPO and NPS prior to CP 3.

- USACE asked if the auxiliary lanes associated with the two-lane roadway typical section would be known at CP 3.
 - o The Consultant responded those will be developed later in the project's design. Additional turn lanes in intersection approaches would not be expected to increase potential impacts because those potential impacts have been reported for slope stakes plus 40 feet. Turn lanes should fall within that area of potential impact. Once a Preferred Alternative is decided on, then the design will progress, and the intersection designs laid out.
- NCDWR stated there appears to be an opportunity to implement additional avoidance and minimization measures relative to the main stream system on the west side of I-26, specifically the location and alignment of the roadway connection in Alternative 3. Is this something that will be discussed further in CP 3?
 - o The Consultant responded that avoidance and minimization will continue going forward and agreed that there does appear to be additional opportunities to avoid and minimize the referenced stream system in Alternative 3. However, we do not anticipate that the roadway alignment will be updated prior to CP 3. Additional avoidance and minimization will be applied to the selected alternative..

This concludes the summary of the discussions held during the HE-0001 CP2A Merger Meeting. A recording of the meeting may be made available upon request.

Adam Archual
October 13, 2021

Section 404/NEPA Merger Project Team Meeting Agreement**Concurrence Point 2A****Bridging Decisions and Alignment Review**

Project Name/Description: I-26, New Interchange (Future Exit 35), Buncombe County

STIP Project: HE-0001

Project Need: The proposed project is needed to address the lack of network connectivity between NC 191 and I-26 in southern Buncombe County to accommodate current and planned growth.

Project Purpose: The purpose of the project is to provide access to I-26 and improve east-west connectivity within the project vicinity to accommodate current and planned growth.

As agreed at the July 15, 2021, CP 1-2 Merger Meeting, NCDOT provided the Merger Team with a **CP 2 Update**. This update summarized the results of the Traffic Forecast for HE-0001 and NCDOT's decision to proceed with a 2-lane with shoulder typical section proposed roadway, noting the anticipated need for auxiliary lanes at proposed intersections to accommodate traffic operations. The CP 2 Update also revisited potential impacts reported at CP 1-2 to include verified jurisdictional resources in place of the GIS data sets.

The Project Team has concurred on this date, **September 16, 2021**, that there are no proposed hydraulic structures or major crossings requiring bridging decisions for STIP Project HE-0001. (However, NCDOT would likely bridge stream "SDX" [I-4700 PJD] in Alternative 2 due to proximity of the stream to the I-26 travel lanes.)

FHWA (lead federal agency)	DocuSigned by: Donald W Brew	10/13/2021
USACE	B96E8B70991E420... DocuSigned by: <i>Lori Beckwith</i>	10/13/2021
NCDOT	DocuSigned by: <i>McCray Coates</i>	10/14/2021
USEPA	0C47CF5B9506450... DocuSigned by: <i>Amanetta Somerville</i>	10/14/2021
USFWS	DocuSigned by: <i>L S H</i>	10/19/2021
NCWRC	6B574C520CDE430... DocuSigned by: <i>Marla Chambers</i>	10/14/2021
NCDWR	DocuSigned by: <i>Kevin Mitchell</i>	10/14/2021
SHPO (Abstaining)	D9ACAD48D566456... DocuSigned by: <i>Renee Gledhill-Earley</i>	10/26/2021
FBRMPO	DocuSigned by: <i>Tristan Winkler</i>	10/27/2021
	E58F96DB10AB42E...	



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Project: HE-0001, New Interchange with I-26
Project No.: 064926.050
Subject: CP 3 Merger Meeting Summary
Date: February 9, 2022, 2:00 pm
Location: Remote (Microsoft Teams Meeting)
Attendees:

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Anne Gamber	Gannett Fleming	agamber@gfnet.com

This project proposes to construct a new interchange (future Exit 35) with I-26 and roadway extension to connect to a future state road (Frederick Law Olmsted Way East [FLOWE]). The project is located approximately 6 miles south of Asheville in Buncombe County. NCDOT Division 13 is managing the project and anticipates federal funding.

The intent of this meeting was to reach agreement on Concurrence Point (CP) 3, the Least Environmentally Damaging Practicable Alternative (LEDPA)/Preferred Alternative Selection. The CP 3 Merger Meeting Packet was distributed two weeks prior to the meeting and can be found on the NCDOT file transfer site ([link](#)). It was noted that USFWS and NCDWR submitted questions via email prior to the meeting. (*Note: Though not mentioned in the meeting, NCWRC also submitted questions prior to the meeting. All agency emails are attached to this summary.*) The PowerPoint Presentation is attached to the meeting summary. The following topics were discussed at this meeting:

- SHPO and OSA stated that the locational information for the archeology site included in the CP 3 Merger Meeting Packet is strictly confidential. It is being shared with the agencies only for the purposes of the LEDPA discussion; it shall not be shared with the public.
 - o USACE recommended that the file be flagged by individual agencies within their respective project files (e.g., append file name with “_not for FOIA”). This should notify any future agency representative of the presence of sensitive information.
- NCDOT and FHWA recommended Detailed Study Alternative (DSA) 3 as the Preferred Alternative.
- USFWS asked that the noise analysis update be explained.
 - o The Consultant replied that the noise analysis was conducted based on NCDOT and FHWA policy and guidelines. The draft Traffic Noise Report (TNR) is currently in review. The TNR addresses three noise sensitive resources, the Biltmore Farms Horse Trail, the Mountains-to-Sea Trail, and the Bent Creek River Park (Buncombe County), because they support frequent human outdoor uses (these are defined as Activity Category C). The preliminary analysis indicates that one “equivalent residence” (ER) would be impacted in each noise study area (NSA). NCDOT Noise Policy requires that potential noise abatement measures, e.g., a noise wall, be considered feasible if it would benefit (i.e., reduce the sound at) two impacted ERs. The relatively low frequency of human use associated with these noise sensitive resources is a contributing factor to these results. It was noted that the existing

sound levels associated with these resources near I-26 are currently loud and that increases could be partially attributed to organic traffic growth.

- FBRMPO asked how some of the safety concerns raised in public comments associated with a left exit will be addressed, noting the terrain and the expected use of the exit by trucks.
 - o FHWA stated that responses to public comments are currently being reviewed and that from their perspective they will be looking to NCDOT to meet or exceed minimum safety and design standards.
 - o The Consultant noted that there are not too many left exits to draw comparisons to but reiterated that all safety and design standards would have to be met or exceeded. Adequate advance signing and good visibility are some elements that will be further evaluated and implemented in the projects design.
 - NCDOT noted there are three left exits in proximity to this proposed project.
 - o FBRMPO wondered if left exits are not common because of safety concerns. FBRMPO went to state that it will be important to convey how safety concerns are being addressed through communications with the public.
 - The Consultant agreed there are less opportunities where left exits would work with the configuration of the interstate.
 - o FBRMPO asked about truck restrictions to the right lane on I-26 and how those restrictions will be factored into this project.
 - NCDOT responded that I-26 is currently signed for truck restrictions to the right lane as an uphill climbing lane. This will be further evaluated, and truck restrictions updated should a left exit be selected as the LEDPA.
 - The Consultant remarked that truck restrictions may not be as critical following the widening of I-26 project (STIP I-4400/I-4700).
 - USACE asked how this project corresponds with the I-4400/I-4700 project.
 - o The Consultant replied that the intent is to let this project for construction while the I-26 widening is under construction.
 - USFWS asked about the need for a sidewalk between Project Ranger and the interstate. While Project Ranger created first access and access to the parcel, the road (FLOWE) currently "dead ends" in the roundabout. This project (HE-0001) provides the first access to the forested area between Project Ranger and I-26. The Land Use Scenario Assessment (LUSA) does not entirely address indirect and cumulative effects as defined in section 7.
 - o NCDOT responded that they are in discussion with the FBRMPO and Buncombe County to decide on the future need of a sidewalk, noting the County has trail systems in place (i.e., greenways) and plans to expand these. NCDOT must consider these types of accommodations (e.g., pedestrians) under their "Complete Streets Policy" ([link](#)). Ultimately, the local jurisdiction's need for a sidewalk will inform this decision. However, nothing has been decided yet.
 - o SHPO indicated that this information makes them uncomfortable, referring to prior stated concerns with the five-lane bridge (being constructed by Project Ranger). Now the Merger Team is being told about sidewalks and complete streets. How does NCDOT intend to preserve the integrity of setting of the Blue Ridge Parkway?
 - o Regarding the sidewalk, FHWA replied that the transportation agency's job is to provide safe accommodation for all users, not just vehicles.
 - o Regarding USFWS remark about access and indirect effects, FHWA reminded the Merger Team that this is a privately owned parcel that was previously landlocked and inaccessible

before Project Ranger. The local jurisdiction (Buncombe County) zoned this area for development. The purpose of HE-0001 is to accommodate current and planned growth. Buncombe County zoning and the establishment of access by Project Ranger point to future development. Based on NCDOT's analyses, this project does not appear to change future development patterns. There is nothing preventing the private developer from continuing a road to the east and it is a misconception that that area east of Project Ranger is not accessible.

- USFWS agreed development will happen without this project, but still thinks NCDOT is providing first access to the area between the current development and I-26. Development in the "Blue Area" (see *Probable Development Area [PDA] 2 in Merger Packet, Exhibit 5, page 18*) would be considered an indirect effect under section 7 for this project.
- FHWA reiterated the position that these effects are attributable to Project Ranger because the bridge and roadway "unlocked" the parcel.
- SHPO asked whether it is foreseeable that this project will eventually be widened, noting that the inclusion of sidewalk would widen the footprint. Would this not make future crossings of the Blue Ridge Parkway more attractive and in turn damage the integrity of setting that makes the Blue Ridge Parkway significant? The inclusion of sidewalk (a complete street design) in this project, in addition to the five-lane bridge over the French Broad River (being constructed as part of Project Ranger), indicate the County's favorable position for development of the area and an adverse outcome to the Blue Ridge Parkway.
 - FHWA agreed that the County is under development pressure but did not agree on what is reasonably foreseeable. Based on the traffic forecast for this project, future (2045) traffic volumes will be accommodated by a two-lane roadway connecting to the roundabout currently under construction. FHWA cannot say the widening of this roadway to four lanes is reasonably foreseeable. What is reasonably foreseeable is that DOT is proposing to build a two-lane roadway and is receptive to conversations about sidewalks rather than a shoulder section.
 - SHPO asked if NCDOT stated they would look favorably on complete street design?
 - FHWA responded that complete street design would consider bicycle and pedestrian accommodations in addition to the roadway.
 - SHPO remarked that complete streets also include u-turns and service roads, etc. The complete streets statement indicates there is already a thought, or discussions with the County, to move to more access and a larger footprint.
 - NCDOT stated that the County approached the Department with a request to consider sidewalks for a possible future greenway connection in this area. As part of NCDOT's Complete Streets Policy, bicycle and pedestrian facilities must be considered to meet local community needs. NCDOT included the sidewalk in the meeting packet for transparency and general knowledge that these conversations are occurring. Nothing has been determined to date, and a sidewalk may not be feasible.
 - NCDOT also noted the intent to include 1,000 feet of control of access (C/A) west of the interchange (i.e., sidewalk would not be permitted here). Further, the private developer is including

- sidewalk on FLOWE, east of this project between the bridge and the roundabout.
 - FBRMPO also participates in the Complete Streets Policy and requests that bicycle and pedestrian, and transit, accommodations be reviewed for almost every project. The region has a growing number of pedestrian fatalities. FBRMPO is looking at a sidewalk as a potential safety counter measure.
- USFWS stated the sidewalk is new information and informs their stance that this project creates additional access and has indirect effects under Section 7.
 - The Consultant added that the Department is required to at least talk to the local government about the addition of sidewalk. The addition of sidewalks is typically paid for through a local match. It needs to be evaluated because it is the most economical time to build a sidewalk. The footprint of the project would essentially be the same and acknowledged that complete streets had not been discussed in prior meetings. While the paved shoulders were discussed as potential bicycle accommodations, NCDOT had not discussed striping or otherwise specific bicycle and pedestrian accommodations for this project.
 - SHPO remarked that this must be included in future discussion of Section 106 effects. SHPO requested NCDOT and FHWA to invite the County to the next meeting regarding Section 106 effects.
 - FHWA reminded the Merger Team that the Buncombe County Zoning Overlay provides some protections for the Blue Ridge Parkway and will remain in place. The County will be invited to future Section 106 effects meeting(s). The development that is coming is not being caused by the project. The Merger Team agreed that the project need and purpose is to accommodate current and planned growth.
- USACE confirmed that USFWS (under Section 7) and SHPO (under Section 106) are concerned with the project's indirect effects.
 - SHPO clarified their concerns also are about the *current* effects. There had been discussion at the prior Effects Meeting that perhaps a no adverse effect with certain conditions on the project was possible. However, perhaps those conditions cannot be put into place if in fact the County is looking towards future development as a partner to NCDOT on those developments. This will need far more discussion.
 - USACE asked whether USFWS's and SHPO's concerns regarding indirect effects are best addressed through Section 7 and Section 106 consultation, respectively, and if these concerns will affect their ability to make a LEDPA decision.
 - USFWS agreed that indirect effect concerns are best addressed through Section 7 and that these concerns will not affect their LEDPA decision.
 - SHPO will abstain from LEDPA.
- NPS added their concerns about cumulative impacts to the Blue Ridge Parkway as this is one of eight NCDOT projects in the vicinity. The sheer volume of work NCDOT is conducting in the area is something the NPS would like to further discuss in the Section 106 consultation process.
- The Consultant likened the Complete Streets Policy to handicap accessibility for a building permit – it is something that must be considered. This is not to say a sidewalk will be built but just that they need to follow the policy as part of the process.

- NCDWR expressed support for DSA 3 because DSAs 1 and 2 impact the upper reaches of the streams and wetlands associated with Stream SA. Also, because DSA 3 includes the least acreage of wetland impacts. (*Post-meeting note: In follow-up conversation, NCDWR identified potential impacts to Wetland IDs WD and WF, specifically, by DSAs 1 and 2.*) However, NCDWR does have concerns with DSA 3's proximity to Stream SA and asked NCDOT to address whether the roadway could be shifted away from that stream. Additionally, NCDWR asked generally about stormwater measures and whether there would be room for BMPs with the alignment that close to Stream SA.
 - o The Consultant stated that it does appear to be possible to shift the roadway away from Stream SA, which would provide additional room for stormwater BMPs.
 - o NCDOT agreed there could be adjustments to the roadway alignment to minimize impacts moving forward. NCDOT stated that hydraulic design has not yet been completed.
 - o USFWS seconded NCDWR's comments regarding stormwater, noting they provided some comments prior to the meeting on the subject. USFWS has concerns about stormwater runoff impacting Stream SA and outletting sediment into the French Broad River. USFWS requested that as many stormwater control measures (SCMs) as can be designed. The primary concern is control of peak flow.
 - From a process and policy standpoint, NCDOT will analyze the receiving water with the project included and return a recommendation(s) based on the NC-SELDM Catalog tool, developed by USGS, which leverages the Stochastic Empirical Loading and Dilution Model (SELDM), a water quality mixing model. Additionally, any projects designed for NCDOT follow the hydraulic guidelines including compliance with the "Stormwater Outlet Protection" rule (15A NCAC 04B .0109), a post-construction stormwater erosion policy rule to evaluate stormwater discharge velocities to guard against accelerated erosion in the receiving stormwater conveyance. These methods will evaluate erosion of the stream and water quality concerns.
- NCDOT relayed a question from NCWRC regarding consideration of increasing design standard from 10 year to 25-year storm.
 - o In response, NCDOT clarified that post-construction stormwater controls for treatment are not designed to 10-year or 25-year storms but are designed to capture and treat the 80th to 90th percentile storm. In Asheville that is 0.83-inch to 1.28-inch storms, per Table 2-2 of the NCDOT Stormwater BMP Toolbox, Version 2, April 2014. Conveyance systems are typically designed for the 10-year storm. These are specifically post-construction controls.
 - o The Consultant added that the erosion control will likely be designed to a 25-year storm, noting the proximity to a stream would have a bearing on that.
 - o NCDOT will address these more thoroughly at following Merger Meetings as design progresses.
 - o NCDOT added that sections of the I-26 Widening Project close to the French Broad River are designed for 25-year storms.
 - o NCWRC stated their biggest concern will be with stormwater management regardless of the alternative selected.
 - o The Consultant noted that stormwater measures are being evaluated for both stream systems, Stream SA and SDX, which are going to the French Broad River. DSAs 1 and 2 are in the center of the bifurcated section and are more impactful to Stream SDX. DSA 3 is less impactful to Stream SDX because it is located at the northern end of the bifurcated section, which eases the stormwater impacts to Stream SDX.



- USACE stated that DSA 3 is NCDOT's Preferred Alternative and asked each agency whether they concur with DSA 3 as the LEDPA:
 - o FHWA concurred
 - o USACE concurred
 - o USEPA concurred
 - o USFWS concurred
 - o NCWRC concurred
 - o NCDWR concurred
 - o SHPO abstained
 - o FBRMPO concurred but indicated a desire for additional conversations regarding safety interventions.

This concludes the summary of the discussions held during the HE-0001 CP 3 Merger Meeting. The meeting recording may be made available upon request.

Adam Archual
March 4, 2022

From: [Mitchell, Robert K](#)
To: [Archual, Adam J.](#); [Coates, McCray](#)
Cc: [Donnie Brew \(Donnie.Brew@dot.gov\)](#); [Beckwith, Loretta A CIV USARMY CESAW \(USA\)](#); [Jamison, John](#); [Patterson, Robert D](#)
Subject: FW: Stormwater HE-0001
Date: Friday, February 4, 2022 12:55:07 PM

[EXTERNAL EMAIL]: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Adam and McCray,

Sorry for the multiple emails and if I left some folks off the first correspondence. I have a few other questions including the question in my previous email which I have included below:

1. Regarding stormwater in paragraph 3 page 7 of 24 in the packet, you discuss the curb and gutter section and utilizing stormwater treatment devices such as basins and swales. DWR has concerns about the proximity of alternative 3 to Stream SA. How will stormwater be treated in this section that is closest to Stream SA? It would be helpful to discuss this during LEDPA.
2. We have also discussed the potential to shift the your preferred alternative 3 further upslope away from Stream SA. I think it would be helpful to touch on this during the meeting. Can the alignment be moved further upslope away from Stream SA? If not – provide justification.
3. My question from my previous email was regarding the paragraph on page 8 of 24 which read, “Based on a preliminary drainage review, construction and maintenance of stormwater BMPs in the bifurcated section (associated with Stream ID SDX) would be more difficult to implement when compared to stormwater BMPs associated with Stream ID SA. NCDOT-Division 13 staff are working under similar constraints to construct stormwater BMPs for STIP I-4400/I-4700 and have found the terrain and median constraints to be difficult. Stormwater BMPs upgradient of Stream ID SA would be easier to install and maintain and could additionally benefit from grass swales rather than basins solely.” Wouldn’t all three alternatives still be affected by this issue?
4. The first paragraph on page 10 of 24 states, “NCDOT believes that stormwater BMPs will be more effective in association with Stream ID SA.” Can you elaborate on that as well. Is that referring to Alternative 3? If so, please explain.

Thanks for your help and feel free to reach out to me if you need any clarification.

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From: Mitchell, Robert K
Sent: Friday, February 4, 2022 7:44 AM
To: Archual, Adam J. <aarchual@gfnet.com>
Cc: Beckwith, Loretta A CIV USARMY CESAW (USA) <Loretta.A.Beckwith@usace.army.mil>; Jamison, John <johnjamison@ncdot.gov>; Patterson, Robert D <robert.patterson@ncdenr.gov>
Subject: Stormwater HE-0001

Adam,

Hope you are well. I was a little confused about the paragraph on page 8 of 24 of the CP3 packet. Wouldn't all three alternatives still be affected by this issue? See below:

Based on a preliminary drainage review, construction and maintenance of stormwater BMPs in the bifurcated section (associated with Stream ID SDX) would be more difficult to implement when compared to stormwater BMPs associated with Stream ID SA. NCDOT-Division 13 staff are working under similar constraints to construct stormwater BMPs for STIP I-4400/I-4700 and have found the terrain and median constraints to be difficult. Stormwater BMPs upgradient of Stream ID SA would be easier to install and maintain and could additionally benefit from grass swales rather than basins solely.

Kevin Mitchell
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Archual, Adam J.

To: Jamison, John; Cox, Marissa R
Subject: RE: [External] HE-0001 CP3 Merger Packet Comments

From: Wilson, Lauren B <lauren_wilson@fws.gov>
Sent: Friday, February 4, 2022 2:37 PM
To: Coates, McCray <hmcoates@ncdot.gov>; Jamison, John <johnjamison@ncdot.gov>; Brew, Donnie (FHWA) <Donnie.Brew@dot.gov>
Cc: Knepp, Cheryl L <clknepp@ncdot.gov>; Mizzi, Janet <janet_mizzi@fws.gov>; Beckwith, Loretta A CIV USARMY CESAW (USA) <Loretta.A.Beckwith@usace.army.mil>; Mitchell, Robert K <kevin.mitchell@ncdenr.gov>
Subject: [External] HE-0001 CP3 Merger Packet Comments

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to [Report Spam](#).

Hi All - I'm writing to provide feedback on HE-0001 prior to the CP3 Merger Meeting next week. I've reviewed the CP3 Merger Packet. I talked to Lori about how to structure my comments and whom to send them too. She recommended including the MOU signatories and DOT BSG POCs. Please give me a call if you'd like to discuss any of this prior to the meeting. I've already talked with Cheryl and John.

The following are items that will aid in my ability to concur on the LEDPA decision at our CP3 meeting next week:

1. **Pg 7 of the Merger Packet, Section Design Evaluation & Refinement Prior to CP3** states: *"Through coordination with FBRMPO and Buncombe County, NCDOT is currently evaluating the inclusion of a sidewalk on the proposed roadway which would require a curb and gutter section opposed to the current shoulder section. This decision has not been made yet but would be finalized prior to CP 4A. A curb and gutter section would require conveyance of stormwater in a closed drainage system. Based on preliminary drainage review, stormwater treatment devices would likely include a combination of stormwater basins and swales consistent with Design Standards for Sensitive Watersheds (DSSW)." And Pg 8 DSA Impact Comparison states: "Based on a preliminary drainage review, construction and maintenance of stormwater BMPs in the bifurcated section (associated with Stream ID SDX) would be more difficult to implement when compared to stormwater BMPs associated with Stream ID SA. NCDOT-Division 13 staff are working under similar constraints to construct stormwater BMPs for STIP I-4400/I-4700 and have found the terrain and median constraints to be difficult. Stormwater BMPs upgradient of Stream ID SA would be easier to install and maintain and could additionally benefit from grass swales rather than basins solely. "*
 - a. We support the DSA that would provide the most opportunity and commitment towards construction of infiltration/bioretenion basins / similar SCM to reduce stormwater peak flows to tributaries SA and SDX. Our concern is that increases in stormwater peak flows, caused by increases in impervious surfaces, will erode the tributaries, sending large amounts of sediment into the FBR, impacting app elktoe habitat. Below I suggest some ways this information might be integrated into the CP3 Package.
2. **Pg 7 & 10 LEDPA/Preferred Alternative Selection:** *"DSA 3 would introduce the least amount of impervious surface within the French Broad River" .."DSA 3 would construct the least amount of impervious surface within the FBR watershed"*
 - a. Can we add the amount of impervious surface for each alternative to Table 2 for each DSA? Contextualizing this to the SA/SDX/Other watershed would also be helpful. Consider including paved roadway and compacted shoulders / lawns that have reduced infiltration abilities vs current conditions (forest).

3. **Pg 8 DSA Impact Comparison:** *"Based on a preliminary drainage review, construction and maintenance of stormwater BMPs in the bifurcated section (associated with Stream ID SDX) would be more difficult to implement when compared to stormwater BMPs associated with Stream ID SA. NCDOT-Division 13 staff are working under similar constraints to construct stormwater BMPs for STIP I-4400/I-4700 and have found the terrain and median constraints to be difficult. Stormwater BMPs upgradient of Stream ID SA would be easier to install and maintain and could additionally benefit from grass swales rather than basins solely."* **Pg 10 Section LEDPA states:** *"Though DSA 3 has the highest potential impacts to Stream ID SA (approx. 700 ft), it has the lowest overall impacts to potential jurisdictional aquatic resources (approx. 1,500 ft. of streams and 0.1 ac of wetlands). For this reason, NCDOT and FHWA support DSA 3 as the LEDPA and least impactful to the aquatic environment. Further, NCDOT believes that stormwater BMPs will be more effective in association with Stream ID SA."*

a. Is there some quantifiable way to include this comparison in Table 2?

4. **Pg 15 Section 7 Consultation (ESA):** *"FWS provided a draft response to NCDOT's request for concurrence on November 18, 2021."*

a. Our response was not a draft. It was a contingent concurrence letter - that is, an informal concurrence letter that required additional CMs for gray bat. We are now negotiating these additional CMs with NCDOT and we will send NCDOT a revised concurrence letter when our discussions are complete.

The following are items that are not needed to support our LEDPA concurrence at the CP3 Meeting next week but warrant consideration:

1. Same sections as above
 - a. How much of the Stream ID SA watershed is going to be converted to impervious surface? We estimated about 10%. A 10-20% increase in impervious surface may cause some channel alteration and channel alteration would cause effects (increase sediment load) to mussel habitat in the FBR. Can your hydrologist model this?
 - b. We do not have concerns with a curb and gutter system vs current shoulder section if the stormwater in the closed drainage system travels to an infiltration/bioretention basin or similar SCM that would reduce peak storm flows to Stream SA.
 - c. The section 7 informal concurrence letter lists the conservation measures (CM) that DOT has incorporated into the project - do the stormwater mgmt CMs that DOT has so far proposed address the above concerns? We can ask this question under our Section 7 process.
 - d. Our aquatics recovery lead has an interest in putting in some monitoring stations on SA to monitor the long-term impacts in this system. It represents a great opportunity to understand, on a small scale, what is happening at a larger scale across the species range.
5. **Page 11 Table 3 DSA 3-Y-Line AMM** *"Shifted the roadway alignment to the southeast to minimize potential impacts to Stream ID SA."*
 - a. Can you explain why DSA 3 has to run so close to wetland/stream ID SA? I see that you have already shifted it away from SA but why not further? Topography?
6. **Pg 7 of the Merger Packet, section Design Evaluation & Refinement Prior to CP3** states: *"Through coordination with FBRMPO and Buncombe County, NCDOT is currently evaluating the inclusion of a sidewalk on the proposed roadway which would require a curb and gutter section opposed to the current shoulder section."* **Pg. 12 of the Merger Packet Section Indirect and Cumulative Analysis** states: *"Existing conditions include the ongoing development permitted by Project Ranger, specifically the transportation infrastructure (i.e., French Broad River bridge and Frederick Law Olmsted Way East roadway) and the P&W Advanced Manufacturing Facility currently under construction and expected to be complete in 2022. This project (HE-0001) would provide additional access –*

it will not provide the only access, or the first access – within the FLUSA, therefore supporting current and planned development of the area." And Pg 13 Indirect and Cumulative Discussion states: "If the proposed project (HE-0001) is not constructed, development within the FLUSA is anticipated to proceed as planned and zoned anyway."

- a. I am making the following comment to ensure it is part of the administrative record. I believe NCDOT and FHWA have made it clear that they do not believe development to be an indirect effect/cumulative effect of HE-0001. Therefore, I do not need a specific response unless NCDOT / FHWA would like to revise their previous position or supplement the admin record.
- b. The project is now considering a sidewalk between a manufacturing facility and the freeway. I understand that the MPO has requested this as part of their greenway planning efforts. Inclusion or consideration of a pedestrian / bike path is an indication that future development is reasonably certain to occur here as is county zoning that supports development here. The purpose of HE-0001 is to support future and planned development. It still appears to the Service that development, caused by the new road, is an important consideration for this project. While it is true that the Project Ranger road provided the first direct access to the PDA 2 parcel, the Project Ranger road only provides access up to and including the footprint of the P&W facility; its a dead end street. About half of PSA 2 (in blue Figure 5) is not accessible because there is no road. DOT is proposing to build a new road to provide the first access to the blue part of PDA 2. Access creates the opportunity for development, therefore development here is caused by DOT's new road. While the LUSA may be correct that the Build and No Build scenarios are the same, what matters here is that DOT's HE-0001 road is creating the access for that future development in the blue section. Just because the road would be built by a private entity if DOT did not build HE-0001, does not mean development is not an indirect or cumulative effect of HE-0001. This project is creating access to a previously undeveloped parcel. That access is reasonably certain to result in development and that development can't occur without a road. The Service is charged with analyzing the environmental impact of this project under Section 7 thus we have provided these comments to our Section 7 points of contact for consideration under ESA Section 7a2.

Lauren B. Wilson

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From: [McHenry, David G](#)
To: [Coates, McCray](#)
Cc: [Mitchell, Robert K](#); [Jamison, John](#); [Beckwith, Loretta A CIV USARMY CESAW \(USA\)](#); [Wilson, Lauren B](#); [Donnie.Brew@dot.gov](#); [Archual, Adam J.](#)
Subject: HE-0001 meeting WRC follow-up
Date: Tuesday, February 8, 2022 11:34:51 AM

[EXTERNAL EMAIL]: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good to speak with you on the phone earlier McCray.

As mentioned, I've recently picked up this project for WRC and have gotten familiar with it from various conversations. Some questions have been raised in advance of CP3 and I wanted to ask consideration of a couple related ones tomorrow, as possible. In recognition of limitations regarding designs at this stage, my questions are:

- 1) would post-construction stormwater controls for any alternative meet 25-year design frequency (versus 10 from design guidelines)?, and
- 2) would there be possibility of minor alignment tweaks, (e.g. upper end of alt. 3 where there is encroachment in the ESA of the mainstem stream SA?

I recognize that the second question may be contingent on having more design, and of course the alignment is liberally shown with 25 feet added to slope stakes, but nonetheless something that could have later bearing on stormwater considerations.

Looking forward to the meeting tomorrow.

Thanks

Dave McHenry
NCWRC Western DOT Coordinator

Section 404/NEPA Merger Project Team Meeting Agreement**Concurrence Point 3****Least Environmentally Damaging Practicable Alternative (LEDPA)/Preferred Alternative Selection**

Project Name/Description: I-26, New Interchange (Future Exit 35), Buncombe County

STIP Project: HE-0001

Project Need: The proposed project is needed to address the lack of network connectivity between NC 191 and I-26 in southern Buncombe County to accommodate current and planned growth.

Project Purpose: The purpose of the project is to provide access to I-26 and improve east-west connectivity within the project vicinity to accommodate current and planned growth.

The Merger Project Team has concurred on this date, **February 9, 2022**, that the checked alternative is the **Least Environmentally Damaging Practicable Alternative** for **STIP Project HE-0001**.

	DSA 1	• left exit/entrance ramp • Diamond configuration • center of the I-26 bifurcated section
	DSA 2	• right-exit/entrance ramp • Diverging diamond (DDI) configuration • center of the I-26 bifurcated section
X	DSA 3	• left exit/entrance ramp • Diamond configuration • North end of the I-26 bifurcated section

FHWA (lead federal agency)	DocuSigned by: <i>Donnie Brew</i>	2/24/2022
USACE	DocuSigned by: <i>Lori Beckwith</i>	2/24/2022
NCDOT	DocuSigned by: <i>McCray Coates</i>	2/24/2022
USEPA	DocuSigned by: <i>Amarretta Somerville</i>	2/24/2022
USFWS	DocuSigned by: <i>Lauren B. Wilson</i>	2/24/2022
NCWRC	DocuSigned by: <i>Dave McHenry</i>	2/24/2022
NCDWR	DocuSigned by: <i>Kevin Mitchell</i>	2/24/2022
SHPO (abstained)	DocuSigned by: <i>Renee Gledhill-Earley</i>	2/23/2022
FBRMPO	DocuSigned by: <i>Tristan Winkler</i>	2/23/2022



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Project: HE-0001, New Interchange with I-26

Project No.: 064926.050

Subject: CP 4A Merger Meeting Summary

Date: July 20, 2022, 2:00 pm

Location: Remote (Microsoft Teams Meeting)

Attendees:

Name	Representing	Email
Lori Beckwith	USACE	loretta.a.beckwith@usace.army.mil
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This project proposes to construct a new interchange (future Exit 35) with I-26 and roadway extension to connect to a future state road (Frederick Law Olmsted Way East [FLOWE]). The project is located approximately 6 miles south of Asheville in Buncombe County. NCDOT Division 13 is managing the project and anticipates federal funding.

The intent of this meeting was to reach agreement on Concurrence Point (CP) 4A, Avoidance and Minimization. The CP 4A Merger Meeting Packet was distributed on June 1, 2022 two weeks prior to a June 15, 2022 meeting ([link](#)). However, due to schedule conflicts and prior commitments, the CP 4A Merger Meeting was rescheduled to July 20, 2022. It was noted that a couple agencies submitted questions via email prior to the meeting. The PowerPoint Presentation is attached to this meeting summary. The following topics were discussed at this meeting:

- NCWRC asked whether the BMPs included in the right column of Table 2 of the packet (slide 14) are synonymous with NCDOT's stormwater management goals; what are the treatment goals?
 - o The Consultant replied that NC-SELDM Catalog was used to identify treatment recommendations. The goal would be to treat everything as well as we can for sediment and velocity. At three sites the NC-SELDM Catalog returned a "BMP Toolbox" recommendation. The Consultant preliminarily evaluated appropriate stormwater treatment devices at these locations, noting the treatment goals and the challenges the existing topography pose. The NC-SELDM Catalog recommendation for five sites is use of 'minimum measures' and the remaining one site indicated that a direct discharge would not likely affect water quality. However, it is NCDOT policy to use minimum measures to the maximum extent practicable.
 - o NCWRC asked for clarity on what the Merger Team is agreeing to for the purposes of CP 4A and whether the preliminary stormwater management plan was being approved by the agencies today.
 - NCDOT-EPU stated there is no intent or need to nail down what these devices may be today. The intent is to give the agencies a preview of what NCDOT is considering, ensuring the stormwater management plan generally meets agency expectations, and to collect any feedback or recommendations from the agencies on BMPs.
 - NCDOT-Hydraulics stated the purpose of the Preliminary Stormwater Management Plan (pSMP) is not to decide on a specific device type at a given location but to set a goal, or an expectation, for each project section and answer the question whether a BMP from the NCDOT Stormwater BMP Toolbox will be needed at a given location or whether minimum measures (e.g., vegetated swale) will be sufficient. Specific device types will have to be teased out through the design process and determined with input about what the pollutant of concern is at a given location and what the site-specific constraints will allow.
 - USACE stated that these will be reviewed in greater detail at CP 4B and CP 4C.
 - NCDOT replied that specific device types at specific location will be reviewed at CP 4B and CP 4C.
- NC HPO stated that the sidewalk included on slide 13 had not been previously presented to NC HPO or NPS through Section 106 consultation.

- *Post-meeting note: Through follow-up email exchange on July 20, 2022, NC HPO verified that the sidewalk had been presented in Section 106 consultation and no additional action relative to the sidewalk and Section 106 was required.*
- FBRMPO asked why the sidewalk ends 1,000 feet before the interchange.
 - NCDOT stated that the control of access (C/A) extends 1,000 feet from the interchange. Since there is no access to the east side of I-26 (Biltmore Estate) as part of this project, NCDOT will not encourage pedestrians to approach the interstate.
- USFWS asked for a brief description of how NC SELDM generates the BMP recommendations.
 - NCDOT-Hydraulics replied that the SELDM Model is the Stochastic Empirical Loading and Dilution Model (SELDM) developed by USGS. NC-SELDM Catalog used the SELDM and included NC transportation stormwater research data in their database, or catalog. NCDOT entered receiving water data, which came from USGS Stream Stats Application, and project-specific data (e.g., impervious drainage area, slope, etc.). The dilution model takes the flows and quantities and concentrations of roadway and mixes with the in-stream water data and gives a result if there is (or is not) a risk to water quality based off percent change to in-stream pollutant concentrations. USGS pre-ran over 75,000 project/receiving waterbody scenarios through the SELDM model to generate the NC-SELDM Catalog. The project-specific model references those previous 75,000+ model runs and reports back a stormwater treatment recommendation, including a direct discharge, minimal measures (e.g., vegetative conveyance), or that a higher-level toolbox BMP designed specifically for treatment is needed.
 - USFWS asked that, in consideration of the model inputs (e.g., drainage area, new impervious surface, slope, stream characteristics, etc.), if SELDM determines the project would result in more water than the stream can handle, NCDOT receives a higher-level recommendation.
 - NCDOT-Hydraulics responded that this is correct. SELDM identified those locations where some level of toolbox BMPs or minimum measures are recommended. It is NCDOT policy to maximize minimum measures to the extent practicable. However, if during design there are site-specific constraints that prevent treatment, SELDM recommendations may be referenced to illustrate whether there would be a risk to water quality.
 - *Post-meeting note: SELDM looks at in-stream pollutant concentration which considers the drainage area, percent impervious, slopes, water volumes, ecoregion, and typical pollutant concentrations. The change in the in-stream pollutant concentration determines the level of treatment recommended in the NC-SELDM Catalog. To clarify the discussion in the meeting, neither SELDM, nor the NC-SELDM Catalog, is reporting the ability for a stream to handle more quantity of water. A designer should be following the NCDOT Guidelines for Drainage Studies and Hydraulic Design for pre/post analysis that looks at quantity, velocities, etc. SELDM and the NC-SELDM Catalog are strictly a water quality tool, they are not for water quantity.*
 - USFWS asked whether there would be impacts to the streams at locations where a toolbox BMP is recommended if NCDOT determines during design that a treatment device is not practicable?
 - NCDOT-Hydraulics replied that if a toolbox BMP is recommended in the pSMP the designer would have to document why it is not practicable in

the final SMP and what was done to meet NCDOT's maximum extent practicable policy.

- *Post-meeting note: For more information about NCDOT's Stormwater Program, please visit the NCDOT-Hydraulics Unit, Highway Stormwater Program Connect site: <https://connect.ncdot.gov/resources/hydro/Pages/Highway-Stormwater-Program.aspx>. You will find links to the new Post-Construction Stormwater Program Manual (PCSP) (2022), the current BMP Toolbox Manual (2014), the excel version of the Preliminary Stormwater Management Plan (pSMP)/Stormwater Management Plan (SMP), and the NC-SELDM Catalog.*
- USACE asked each agency whether they concur with CP 4A Avoidance and Minimization:
 - o FHWA concurred
 - o USACE concurred
 - o NCDOT concurred
 - o USEPA concurred
 - o USFWS concurred
 - o NCWRC concurred
 - o NCDWR concurred
 - o NC HPO concurred
 - o FBRMPO concurred
- The Consultant asked the Merger Team whether there were any concerns regarding the potential need for minimal tree clearing associated with geotechnical field investigations, scheduled to begin in the coming weeks. The geotechnical boring plan is to begin on the -y- line (i.e., connector road) and move into the bifurcated section.
 - o USFWS asked for clarity regarding the tree clearing.
 - NCDOT-EPU noted geotechnical field investigations are focused on drilling holes, not clearing trees, and will work around trees to the greatest extent practical. However, sometimes a tree needs to be cut here-or-there to access borings. Essentially this is considered "survey activities" and NCDOT operates under the USACE Nationwide Permit for survey activities, if there are any associated stream or wetland impacts.
 - USFWS referenced the March 2022 consultation letter and the conservation measure for winter tree clearing and asked whether that needed to be updated.
 - NCDOT-BSG suggested that a follow-up discussion be had to determine whether an updated letter is necessary.
 - The Consultant confirmed that borings will be staked in the field the week after next (i.e., August 1) and that borings would take place immediately after that. The drill rigs used for this work are relatively small and maneuverable and the work crews are generally avoiding trees.
 - *Post-meeting note: FWS followed up with NCDOT-BSG and discussed this topic. FWS sent NCDOT a revised section 7 concurrence letter on July 22, 2022, which now includes some limited tree clearing associated with geotechnical field investigations.*

This concludes the summary of the discussions held during the HE-0001 CP 4A Merger Meeting. The meeting recording may be made available upon request.

Adam Archual
August 12, 2022

Section 404/NEPA Merger Project Team Meeting Agreement**Concurrence Point 4A****Avoidance and Minimization**

Project Name/Description: I-26, New Interchange (Future Exit 35), Buncombe County

STIP Project: HE-0001

Project Need: The proposed project is needed to address the lack of network connectivity between NC 191 and I-26 in southern Buncombe County to accommodate current and planned growth.

Project Purpose: The purpose of the project is to provide access to I-26 and improve east-west connectivity within the project vicinity to accommodate current and planned growth.

The Merger Team has concurred on this date, **July 20, 2022**, with the following **Avoidance and Minimization Measures** for **STIP Project HE-0001**.

Specific avoidance and minimization measures included in the design:

Location	Avoidance and Minimization Measure
Implemented in Preliminary Design Development	
Project Study Area	Reduce PSA to avoid and minimize potential impacts to the FBR floodplain and known potential jurisdictional resources.
Two-lane -Y-Line Typical Section	Two-lane roadway typical section (opposed to 4-lane divided typical section) to accommodate future traffic volumes, noting auxiliary lanes will likely be required at intersection approaches. This will minimize impacts at proposed stream crossings and reduce tree clearing requirements.
-Y-Line Alignment	Shift the roadway alignment to the southeast to minimize potential impacts to Stream SA. Following CP 3, NCDOT shifted -y-line alignment to: - improve Stream SA crossing skew, reducing potential impacts by approx. 100 ft, - avoid 0.03 ac impact to Wetland WD, and - avoid 0.01 ac impact to Wetland WH.
Ramp -C- and Ramp -D- Retaining Walls	Prior to CP 3, incorporate approx. 1,400 feet of retaining walls to avoid and minimize approx. 1,100 feet of potential impacts to Stream SDX and approx. <0.1 ac of wetlands in the I-26 bifurcated section. Following CP 3, retaining walls were refined in conjunction with the DDI design and Ramp-C- Alignment shift (described below) in the same general locations.
Ramp -C- Alignment	Following CP 3, shift ramp alignment between <1 ft to about 18 ft to the east to: - improve constructability of the proposed retaining walls, - avoid approx. 120 ft of impacts to Stream SDY and Stream SDZ, - avoid approx. <0.1 ac impacts to Wetland WCR, - minimize impact to Stream SDX by approx. 175 ft, and - minimize impacts to Wetland IDs WCS and WCN by approx. <0.1 ac.
Reviewed in Preliminary Design Development, Not Implemented	
Ramp -C- Alignment	NCDOT reviewed a revised Ramp -C- alignment because of challenges associated with bridging Stream SDX (discussed at CP 2A). An approx. 325-ft bridge was reviewed in the I-26 bifurcated section to avoid and minimize potential impacts to Stream SDX and Wetland WCN. The bridge clearance was 6 feet and would not provide the environmental benefit for the wetland feature.

The following commitments have been determined or are being developed and will be discussed again at the CP 4B and CP 4C meetings:

- Through section 7 informal consultation with USFWS, NCDOT has committed to several conservation measures (see attached USFWS Informal Consultation letter dated March 16, 2022).
- Final designs are not yet available and stormwater design plans continue to be developed. Therefore, specific avoidance and minimization measures associated with these developing design plans will be addressed in CP 4B and 4C. NCDOT has committed to implementing Design Standards in Sensitive Watersheds (DSSW) to minimize impacts to surface waters and wetlands. Further, a combination of DSSW (15A NCAC 04B .0124), Environmentally Sensitive Areas, and the NC Division of Water Quality (NCDWQ) Construction General Permit (NCG01) terms and conditions that allow for stormwater discharge under the National Pollutant Discharge Elimination System (NPDES) apply and NCDOT will default to the most restrictive SEC measure requirements.
- NCDOT and FHWA continue to refine measures to minimize harm to the Blue Ridge Parkway through the Section 106 consultation process. These preliminary measures to minimize harm will be finalized through the Section 106 process.

The following avoidance and minimization measures were discussed at CP 4A and will be implemented or further evaluated, as appropriate.

Location	AAM Measure
N/A	No additional AAM measures discussed at CP 4A Merger Meeting

FHWA (lead federal agency)	DocuSigned by: <i>Donnie Brew</i>	7/21/2022
USACE	B96E8B70991E42C... DocuSigned by: <i>Lori Beckwith</i>	7/21/2022
NCDOT	DocuSigned by: <i>McCray Coates</i>	7/21/2022
USEPA	0C47CF5B950645D... DocuSigned by: <i>Amanetta Somerville</i>	7/21/2022
USFWS	DocuSigned by: <i>Lauren B. Wilson</i>	7/21/2022
NCWRC	6B574C520CDE43C... DocuSigned by: <i>Dave McHenry</i>	7/21/2022
NCDWR	DocuSigned by: <i>Kevin Mitchell</i>	7/21/2022
SHPO	D9ACAD48D566453... DocuSigned by: <i>Renee Gledhill-Earley</i>	7/27/2022
FBRMPO	DocuSigned by: <i>Tristan Winkler</i>	7/28/2022
	E58F96DB10AB42E...	



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Project: HE-0001, New Interchange with I-26
Project No.: 064926.050
Subject: CP 4B Merger Meeting Summary
Date: August 17, 2022, 1:00 pm
Location: Remote (GoTo Meeting)

Attendees:

Name	Representing	Email
Lori Beckwith	USACE	loretta.a.beckwith@usace.army.mil
Kevin Mitchell	NCDWR	kevin.mitchell@ncdenr.gov
Seth Wilcher	FHWA	seth.wilcher@dot.gov
Lauren Wilson	USFWS	lauren_wilson@fws.gov
Renee Gledhill-Earley	NC HPO	renee.gledhill-earley@ncdcr.gov
Dylan Clark	NCDCR	dylan.clark@ncdcr.gov
Dave McHenry	NCWRC	david.mchenry@ncwildlife.org
Tristan Winkler	FBRMPO	tristan@landofsky.org
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John Thomas	Gannett Fleming	jthomas@gfnet.com
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This project proposes to construct a new interchange (future Exit 35) with I-26 and roadway extension to connect to a future state road (East Frederick Law Olmsted Way [EFLOW]). The project is located approximately 6 miles south of Asheville in Buncombe County. NCDOT Division 13 is managing the project and anticipates federal funding.

The intent of this meeting was to discuss with agencies the preliminary drainage design of the project and address any questions or concerns of the stormwater and erosion control plans. The CP 4B Hydraulic Plans displaying the drainage concept for HE-0001 was distributed on August 3, 2022 two weeks prior to the August 17, 2022 meeting ([link](#)). NCDOT received questions from USFWS and NCWRC prior to the 4B Meeting regarding NCDOT stormwater analysis and design procedure and protocol. NCDOT replied to these questions on August 15, 2022 (attached). The hydraulics plans presented at the CP 4B Meeting are attached to this summary. The following are the topics discussed for each plan sheet at this meeting:

- The Consultant (Gannett Fleming [GF]) noted that the design would utilize the proposed drainage from STIP I-4700 (I-26 Widening), currently under construction. It was also noted that Plan Sheet 4 did not include any proposed new roadway drainage entering jurisdictional areas.
- USFWS requested clarification and confirmation that the streams identified in the CP 4A Merger Meeting Packet (dated June 15, 2022¹) with an NC SELDM Recommendation of "BMP Toolbox" devices were addressed in the hydraulic concepts.
 - o The Consultant (GF) stated that the drainage directed to the streams are collected in a stormwater system and directed to basins before entering jurisdictional areas.
- NCDWR asked what types of basins were being considered.
 - o The Consultant (GF) replied that dry detention would more than likely be used but would know more once the geotechnical analysis was available.
- NCDOT commented that pipes near wetlands should not be buried, or embedded, to eliminate the potential of draining the wetlands. A waiver would be required from the USACE in such an event.
- NCWRC requested a check of the velocity in SA downstream from the proposed discharge point(s) near I-26 to assess what effect the project may have on Stream ID SA.
 - o The Consultant (GF) acknowledged the request and responded that they would attempt to comply to the maximum extent practicable.
- NCWRC asked whether stormwater discharges would be presented at CP 4C.
 - o The Consultant (GF) replied that they would be.
- The agencies expressed concern that the outlets would be erosive.
 - o The Consultant (GF) stated that the outlets would have velocity control devices and noted that velocity calculations will be completed and included in the CP 4C Meeting.
- NCDWR asked that the preformed scour hole be further away from the wetland to avoid temporary and/or permanent impacts left of Ramp-A- on plan sheet 7.
 - o The Consultant (GF) agreed that the preformed scour hole would need to be moved to avoid impacts.
- NCDWR asked that no direct discharge be allowed at Stream ID SG.
 - o The Consultant (GF) noted the topography was restricting but would evaluate and install treatment to the maximum extent practicable.

¹ The CP4A Merger Meeting was held on June 20, 2022.



The Project Team anticipates requesting the CP 4C Merger Meeting before the end of the year (2022), and likely this fall.

This concludes the summary of the discussions held during the HE-0001 CP 4B Merger Meeting to the best of my recollection.

Anne Gamber
September 13, 2022

Dave McHenry, NCWRC Western DOT Coordinator, posed the following CP 4B Advance Questions in an email dated 7/28/2022. NCDOT, FHWA, USACE, NCDWR, and USFWS were included in the email.

1. *Stream SA appeared relatively stable, but at the lower end nearer I-26 it becomes moderately incised and sinuous . . . Streams in the SA watershed are of particular interest. What are the 10-year velocities for streams SA, SE, and SG that will be used to determine whether outlet protection is needed in those streams under 15A NCAC 04B .0109?*

The NC Administrative Code (15A NCAC 04B .0109) applies to the receiving stormwater conveyance to, and including, the discharge point. The discharge point is the point location where runoff leaves the tract of land where the land-disturbing activities are occurring or the outfall location where the runoff discharges into the stream. We concur that an analysis of NCDOT outfalls is needed to ensure a stable discharge point. However, it should be noted that the maximum permissible velocities described in the rule do not apply to in-stream flows. The analysis of the stormwater conveyance system is based on the ten-year discharge (Q10) with a minimum time of concentration of ten minutes. Rainfall intensities are obtained from NOAA Atlas 14, and peak discharge is calculated using an appropriate acceptable peak discharge method from the NCDOT Hydraulic Guidelines, Chapter 7, Table 2.

2. *Related to the preceding questions, proportionally how much will the peak discharge volume increases be off-set at the outlet sites with the BMPs, in particular a potential 0.07 ac-ft basin at site 1, but also swales, level spreaders, or scour holes at other sites?*

The initial conservative target water quality volume was determined using the total drainage area including off-site drainage. In the design, the off-site drainage will be separated from the roadway discharge. This will allow for a smaller device. More detailed design is required to accurately determine effects of any stormwater control measure on post-construction peak discharge. In general, the stormwater controls that provide a capture volume, basin component, are better at controlling peak flow than flow-through type stormwater control measures. However, both can be effective at removing targeted parameters of concern. The BMPs and water quality volumes presented in the 4A meeting were preliminary assessments to facilitate discussions with the agencies. As design progresses and more information is available the project team will discuss appropriate BMPs at future merger meetings. Final BMP selections will be documented in the SMP.

3. *Is there sufficient “flat” terrain for level spreaders or preformed scour holes to provide infiltration and maintain diffuse flow at sites 2-4?*

NCDOT concurs that level spreaders and preformed scour holes need to be sited on flat terrain for them to function properly. Adjacent to the stream are some flatter areas. All attempts will be made to facilitate infiltration and maintain diffuse flow in those areas.

4. *Do “encroachments” require hydraulic analysis for say tie-ins of ditch-lines into the DOT roadway system, or do encroachers . . . only need to comply with the “Stormwater Outlet Protection” rule (15A NCAC 04B .0109) at the run-on point to the NCDOT system?*

NCDOT reviews encroachment tie-ins per the NCDOT Guidelines for Drainage Studies and Hydraulic Design, and standard design practices. NCDOT requires hydraulic analysis of both ditch and pipe tie-ins to evaluate their impact to the highway facility and neighboring properties. At ditch tie-ins velocities, shear stresses, and flow depths are evaluated to ensure

the ditches are stable and that they are sized appropriately to convey the design-storm event. On most encroachments this includes a pre/post analysis to aid in the evaluation of impacts.

5. *SELDM assesses JS crossings, but not all potential outfalls (?). So, presumably there may be potential to “split” outfalls, say for additional between crossing measures, as needed?*

The NC-SELDM Catalog can be used to analyze a roadway segment at any ‘blue line’ crossing as depicted in the USGS StreamStats application. The analysis includes all the roadway drainage area that is contributing to the runoff at that stream location, conservatively analyzing as a single point. The application is not splitting analysis into individual outfall locations.

6. *Are the measures for this project being pursued generally in keeping with the “special waters” process in the Construction Stormwater Management (PCSM) guidance, or is this a standard project approach? I know the PCSM is relatively new to us all.*

Stormwater control measures being pursued will be in compliance with the NPDES Post-Construction Stormwater Program (PCSP) manual. Construction stormwater, aka Sediment and Erosion Control measures, will be employed and designed appropriately and in compliance with the NCG01 and NPDES permits.

In addition to the above questions, Dave McHenry submitted the following comments on 7/28/2022 in response to the Draft CP 4A Merger Meeting Summary:

7. *I believe the consultant later (or earlier) responded to my follow-up question that the BMPs listed in the far-right hand column were the target devices being pursued, as practicable. Please advise if I misunderstood.*
- *In reference to: The Consultant replied that NC-SELDM Catalog was used to identify treatment recommendations. The goal would be to treat everything as well as we can for sediment and velocity. At three sites the NC-SELDM Catalog returned a “BMP Toolbox” recommendation. The Consultant preliminarily evaluated appropriate stormwater treatment devices at these locations, noting the treatment goals and the challenges the existing topography pose. The NC-SELDM Catalog recommendation for five sites is use of ‘minimum measures’ and the remaining one site indicated that a direct discharge would not likely affect water quality. However, it is NCDOT policy to use minimum measures to the maximum extent practicable.*

The NC-SELDM Catalog returns a recommendation for level of stormwater treatment needed to minimize risk to water quality. The table presented at the 4A meeting included the NC-SELDM Catalog recommendation for each stream crossing. The table further showed the consultants preliminarily recommended BMP to meet the NC-SELDM Catalog recommendation. This is a preliminary BMP that is subject to change based off site constraints as the consultant continues with the drainage design. Documentation of these recommendations, measures taken to meet these treatment goals, or restrictions to implementation will be included in the final Stormwater Management Plan (SMP).

8. *The BMP toolbox (2014) lists swales and preformed scour holes as BMPs. However, it is notable that there is some overlap in what is a minimum measure and what is considered a BMP when comparing the PCSP to the 2014 toolbox. For example, the PCSP mentions preformed as way to get energy dissipation, which is the minimum measure. Little confusing to me.*

- *In reference to: NCDOT-Hydraulics stated the purpose of the Preliminary Stormwater Management Plan (pSMP) is not to decide on a specific device type at a given location but to set a goal, or an expectation, for each project section and answer the question whether a BMP from the NCDOT Stormwater BMP Toolbox will be needed at a given location or whether minimum measures (e.g., vegetated swale) will be sufficient. Specific device types will have to be teased out through the design process and determined with input about what the pollutant of concern is at a given location and what the site-specific constraints will allow.*

Swales and preformed scour holes are Toolbox BMPs that meet certain design requirements. Swales are a type of vegetated conveyance; however, a swale meets specific geometric and functional characteristics that increase pollutant removal capacity in comparison to a grass-lined ditch. Similarly, preformed scour holes are an energy dissipator but has specific siting criteria that provides for treatment through dispersing discharge in the surrounding area encouraging filtration, sedimentation, and infiltration of runoff before reaching a receiving waterbody. NCDOT will consider revising the terminology in the PCSP to avoid confusion between minimum measures and Toolbox BMPs.

9. *Thanks for this post-meeting clarification. As referenced above and expressed earlier, increased velocity and run-off (volume) should be primary considerations here, and most western streams generally, due to potential effects on stream stability. The extent to which a measure addresses these, if even constructable, depends on design and predicted performance information which I understand we will be examining more at 4B (?).*
 - *In reference to: Post-meeting note: SELDM looks at in-stream pollutant concentration which considers the drainage area, percent impervious, slopes, water volumes, ecoregion, and typical pollutant concentrations. The change in the in-stream pollutant concentration determines the level of treatment recommended in the NC-SELDM Catalog. To clarify the discussion in the meeting, neither SELDM, nor the NC-SELDM Catalog, is reporting the ability for a stream to handle more quantity of water. A designer should be following the NCDOT Guidelines for Drainage Studies and Hydraulic Design for pre/post analysis that looks at quantity, velocities, etc. SELDM and the NC-SELDM Catalog are strictly a water quality tool, they are not for water quantity.*

As previously noted, the NC-SELDM Catalog provides a recommendation for treatment from a water quality or pollutant concentration perspective. The NCDOT Guidelines and the 15A NCAC 04b .0109 rule provide guidance that considers velocity and other characteristics for designing a stable non-erosive stormwater conveyance up to and including the discharge point. If any of these guidance documents indicate a BMP is needed, there is a BMP Selection Guide to aid in selection of an appropriate BMP.

(connect.ncdot.gov/resources/hydro/HSPDocuments/BMP%20Decision%20Support%20Matrix%20and%20POC.pdf). This chart considers issues such as runoff reduction, removal efficiencies, site constraints, cost, and other criteria. Ultimately the design will determine the actual percentages.

10. *Thanks for the post-meeting note here. I believe for [HE-0001] that toolbox BMPs are being planned (see PCSP "special waters" -Appendix A) but in this case with SELDM as supporting/screening analysis (?).*
 - *In reference to: Post-meeting note: For more information about NCDOT's Stormwater Program, please visit the NCDOT-Hydraulics Unit, Highway Stormwater Program*

Connect site: <https://connect.ncdot.gov/resources/hydro/Pages/Highway-Stormwater-Program.aspx>. You will find links to the new Post-Construction Stormwater Program Manual (PCSP) (2022), the current BMP Toolbox Manual (2014), the excel version of the Preliminary Stormwater Management Plan (pSMP)/Stormwater Management Plan (SMP), and the NC-SELDM Catalog.

The project sections are draining to a “special water”. Therefore, the target will be to provide treatment through a Toolbox BMP. SELDM could be used to help support if the site constraints don't allow for a Toolbox BMP.

Lauren Wilson, USFWS NCDOT Liaison, submitted the following comment by email 8/1/2022. Cheryl Knepp, NCDOT Biological Surveys Group, replied by email 8/1/2022

11. *I also want to make sure that what is in the section 7 consultation is correct . . . From the post-meeting additions to the CP4A Draft Meeting Notes and a quick review of the materials on the NCDOT's stormwater program pages, it sounds like SELDM and preliminary stormwater info presented at CP4A addresses water quality issues from roadway pollutants (including sediment runoff from roads/construction?). SELDM does not appear to address/consider a project's impact on water velocity/volume inputs and any resulting impact to a stream's stability (and any resulting sediment releases caused by that instability). Is that right? Do CP4B/4C address this?*
- *In reference to: The BE [Biological Evaluation] states that due to the implementation of conservation measures related to sediment and erosion control and stormwater, any sedimentation or water quality impacts...will be insignificant or discountable as it is not expected to reach the main stem of the FBR.*

NCDOT's Post-Construction Stormwater Program (PCSP) manager clarified that the NC-SELDM Catalog addresses the water quality side of design in regard to mixing roadway runoff with instream water and determining need for treatment, i.e., this tool helps determine if a stormwater BMP designed specifically for removing pollutants is needed.

The water quantity/velocity comes in during the pre/post analysis and maintaining compliance with the NC Administrative Code (15A NCAC 04B .0109) on Stormwater Outlet Protection to ensure that stormwater discharge velocities will not result in accelerated erosion in the receiving stormwater conveyance, up to and including the discharge point. That analysis will be done as the design progresses, drainage systems are laid out, etc. At that time, if the pre/post analysis determines there is a need for quantity/velocity control (i.e., an increase in quantity or velocity that would cause erosion), then either additional stormwater BMPs would be included in the design that are more specifically designed to control flow, or the conveyance channel could be improved or reinforced. Note these types of devices still improve water quality but the primary function of these would be for quantity control.

Between the tools, design standards and administrative code compliance, NCDOT will be implementing stormwater controls as needed to guard against erosion into the stream or any detriment to water quality. This language and NCDOT compliance workflow are correctly reflected in the referenced Section 7 consultation statement, “While effects are expected to be insignificant, conservation measures have been developed to further minimize those effects to surface waters and wetlands.”

NEPA Document

Type III Categorical Exclusion Action Classification Form

STIP Project No.	<u>HE-0001</u>
WBS Element	<u>49742.1.2</u>
Federal Project No.	<u></u>

A. Project Description:

The North Carolina Department of Transportation (NCDOT) proposes to construct a new interchange on I-26 in the project study area (PSA), approximately 6 miles south of Asheville, north of the Blue Ridge Parkway and south of the French Broad River bridge (**Figure 1**).

The proposed interchange would be constructed primarily within the existing right-of-way of I-26, which is currently under construction to be widened from 2 lanes in each direction to 4 lanes in each direction as part of STIP project I-4700. The proposed interchange and new roadway would ultimately connect to NC 191 via a road (East Frederick Law Olmsted Way, or East FLOW) that is currently under construction by a private developer (Biltmore Farms, LLC) (**Figure 2**). The private developer constructing East FLOW has graded the corridor to accommodate a 4-lane roadway, but it will be paved as a 2-lane facility upon completion. This road is anticipated to open to traffic in 2022 and would become a State-maintained road upon meeting NCDOT standards and acceptance. NCDOT's proposed roadway connection would be graded for a 2-lane roadway with auxiliary lanes at intersection approaches to meet operational needs (e.g., turn lanes).

Land use in the project vicinity is mixed and includes manufacturing/distribution facilities, single- and multi-family residential neighborhoods, open space, and commercial and recreational uses. North of the intersection of Clayton Road (SR 3501) and NC 191, the corridor is characterized by preserved open space in proximity to the French Broad River, Pisgah National Forest, and the Blue Ridge Parkway. The Blue Ridge Parkway crosses over NC 191 on a bridge and is accessible via an access road at the signalized intersection with NC 191 at the west end of the East FLOW corridor.

NCDOT has utilized the Section 404/NEPA Merger Process to formally coordinate with, and garner concurrence from, applicable regulatory and resource agencies. The Merger documentation is available in NCDOT's files and has been provided to all agencies involved.

B. Description of Need and Purpose:

Need: The proposed project is needed to address the lack of network connectivity between NC 191 and I-26 in southern Buncombe County to accommodate current and planned growth.

Purpose: The purpose of the project is to provide access to I-26 and improve east-west connectivity within the project vicinity to accommodate current and planned growth.

Other desirable outcomes of the proposed project include:

- improved traffic safety due to greater separation of local traffic from interstate traffic;
- improved emergency response times to the area including Pratt & Whitney Manufacturing Center, Biltmore Park West property, and sections of NC 191 and I-26;

- consistency with local and regional economic development initiatives in the project vicinity;
- improved access to current and anticipated regional employment opportunities and improved access to tourist destinations.

C. Categorical Exclusion Action Classification: Type III

D. Proposed Improvements:

The NCDOT evaluated three Build Alternatives for the proposed project. These Detailed Study Alternatives (DSA's) are summarized in **Table 1** and detailed in multiple Merger Concurrence Meetings.

Table 1. Detailed Study Alternative (DSA) Description

DSA	Description
1	• left exit/entrance ramp • center of the I-26 bifurcated section
2	• right-exit/entrance ramp • center of the I-26 bifurcated section
3	• left exit/entrance ramp • North end of the I-26 bifurcated section

Preferred Alternative/LEDPA:

The Merger Team concurred that DSA 3 is the Least Environmentally Damaging Practicable Alternative (LEDPA)/Preferred Alternative on February 9, 2022. (See **Figure 3**.)

The Preferred Alternative is anticipated to have the lowest overall impacts to potential jurisdictional aquatic resources. The Preferred Alternative would construct the least amount of impervious surface within the French Broad River watershed and would result in the least amount of tree clearing associated with the proposed project. No impacts to FEMA floodplains are anticipated. The Preferred Alternative would have No Effect to the adjacent Biltmore Estate National Historic Landmark (NHL), No Effect to the National Register (NR)-eligible archaeology site (31BN119), and No Adverse Effect (with conditions) to the NR-eligible Blue Ridge Parkway (NHL pending).

E. Special Project Information:

Project Study Area (PSA) Development

The PSA development is detailed in a Study Area memo dated March 30, 2022. The PSA generally includes approximately 210 acres along and west of I-26, south of the French Broad River and north of the Blue Ridge Parkway. The PSA avoids impacts to the bridge infrastructure associated with the French Broad River (to the north) and the Blue Ridge Parkway (to the south) and accounts for ramp length requirements. The PSA was also initially developed to incorporate all of East FLOW and its intersection with NC 191 in order to consider any future traffic needs along that corridor.

When considering the lack of network connectivity between NC 191 and I-26 in southern Buncombe County, NCDOT reviewed environmental and engineering constraints and opportunities for potential interstate access locations between Exit 33 (NC 191) and Exit 37 (NC 146/Long Shoals Road).

The following opportunities and benefits were identified for the PSA:

- The PSA covers the area of optimal interchange spacing (approximately 2 miles) between exits 35 and 37, respectively, meeting FHWA and NCDOT interchange spacing guidance for interstate access.
- The I-26 bifurcated section allows NCDOT to evaluate left exit/entrance interchange alternatives that avoid impacts to the Biltmore Estate NHL.
- The construction of East FLOW allows NCDOT to evaluate alternatives to connect to a modern roadway facility currently under construction by a private developer. The construction project also includes capacity and operational upgrades at an existing signalized intersection with NC 191, maximizing investment and improving east-west connectivity.
- Utilizing a connection to East FLOW would also provide direct access to current and planned development, consistent with local population and employment growth goals.
- The undeveloped property west of I-26 will not require any displacements or relocations of homes or businesses.

Relationship to Adjacent STIP Projects

STIP project HE-0001 overlaps three other STIP projects (**Table 2**).

Table 2. Adjacent STIP Projects

STIP Project No.	Description	Schedule (Fiscal Year)
I-4700	I-26. NC280 (Exit 40) to I-40 at Asheville. Add additional lanes.	<i>Under Construction</i>
U-3403B	NC 191 (Brevard Road-Old Haywood Road). SR 3498 (Ledbetter Road) to North of Blue Parkway. Widen roadway	R/W 2029 Const. Post Year
HO-0002A	I-40 in Asheville to I-77 at I-485 (South) in Charlotte. Install Broadband.	<i>Under Construction</i>
Source: NCDOT, 2020-2029 Current State Transportation Improvement Program (May 2022)		

To minimize temporal impacts and avoid duplication, Division 13 plans to let STIP project HE-0001 for construction while STIP project I-4700 is under construction.

Roadway Cross-section and Alignment

Based on the Traffic Forecast for HE-0001, NCDOT determined that a 2-lane curb and gutter typical section for the roadway connection from the I-26 interchange to East FLOW will accommodate projected traffic volumes (19,500 AADT in 2045 Build) (**Exhibit 1**). The proposed roadway alignment will efficiently connect the proposed new interchange with East FLOW while minimizing impacts to the natural environment.

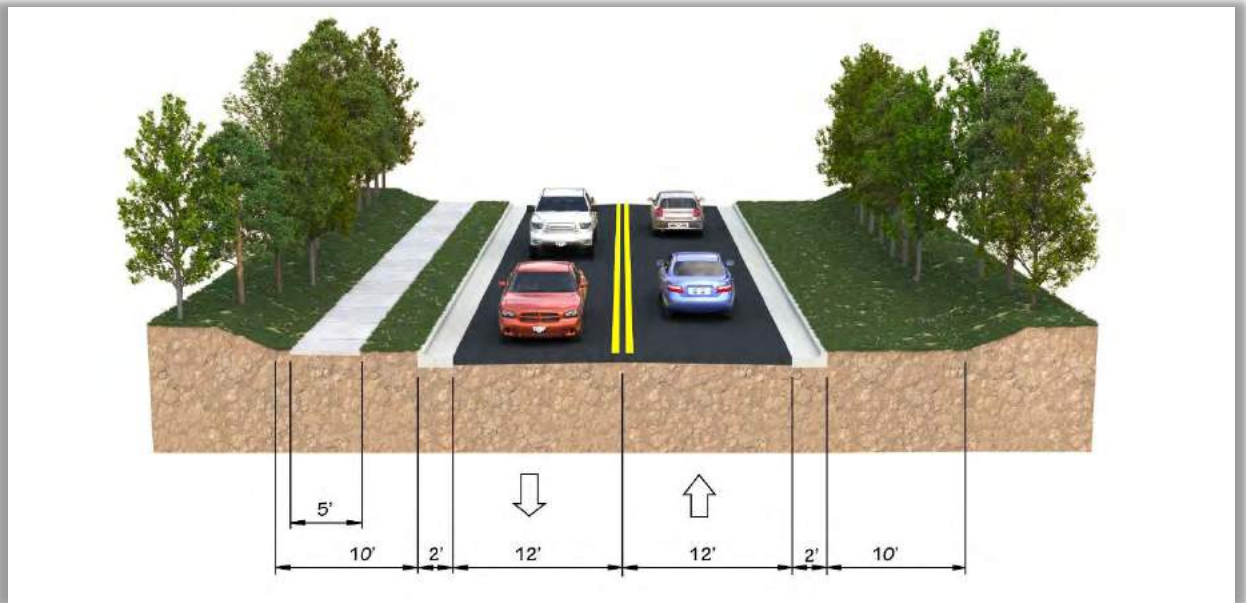


Exhibit 1. East Frederick Law Olmsted Way Extension Proposed Typical Section

Right-of-Way and Access Control

Access along I-26 will remain fully controlled. The proposed interchange, including free-flow on- and off-ramps, will likewise be full access control. The proposed interchange will be constructed mostly within existing right of way. New right of way will be required for the I-26 eastbound ramps.

The proposed roadway connection will be constructed primarily within new right of way between the proposed interchange and East FLOW, the road currently under construction by the private developer which is expected to later become a State maintained road upon acceptance. NCDOT will acquire right of way to accommodate an ultimate 4-lane boulevard typical section but will construct the 2-lane typical section in **Exhibit 1**. Based on a Section 106 agency commitment, the proposed roadway connection will be full access control for 1,000 feet west of the I-26 eastbound ramp terminal.

Speed Limit

There would be no changes to posted speed limits on I-26 (60 mph) as part of this project. The proposed 2-lane roadway extension connection will be posted at 35 mph.

Design Speed

There would be no changes to design speed on I-26 (70 mph) as part of this project. The design speed for the proposed 2-lane roadway connection is 40 mph.

Anticipated Design Exceptions

There are no design exceptions anticipated at this stage of planning and design.

Service Roads

There are no existing or planned service roads in the PSA.

Noise Barriers

See Section G, Item 27 below.

Work Zone, Traffic Control and Construction

It is anticipated that construction of HE-0001 will occur at the same time as the on-going I-26 widening construction. Work Zone, Traffic Control, and Construction of HE-0001 will be coordinated with the on-going I-4700 project activities.

Cost Estimate

Cost estimates (as of December 28, 2021) for the Preferred Alternative are provided below in **Table 3**.

Table 3. Cost Estimate for the LEDPA/Preferred Alternative

	Cost Estimate
Project Development & Design	\$3,127,200
Property Acquisition	\$100,000
Construction Cost	\$25,200,000
Total Cost	\$28,427,200

Public Involvement

September 3, 2021 - NCDOT hosted a one-hour virtual Local Officials' Informational Meeting. Invitations to the Informational Meeting were sent on August 20, 2021, via email to representatives with the following organizations: North Carolina Congress (Senate and House), City of Asheville, Buncombe County, and French Broad River Metropolitan Planning Organization (FBRMPO). Representatives from the NC House of Representatives, City of Asheville, FBRMPO, and Buncombe County attended the virtual meeting.

September 2–October 4, 2021 - Public comments were solicited by the USACE Public Notice (Merger Application) issued September 2, 2021 (SAW-2021-01535-PN), and by NCDOT-Division 13 and NCDOT-Public Involvement outreach efforts. The USACE received written comments from NOAA's National Marine Fisheries Service (NMFS), the Catawba Tribe, the Cherokee Nation, the North Carolina Wildlife Resources Commission (NCWRC), and the NC Historic Preservation Office (NC HPO). NCDOT received 259 comments by phone, email and through the project website (www.publicinput.com/I26-exit35-buncombe) during the comment period. NCDOT prepared a comment-response memorandum to address substantive questions and comments about the proposed project and reviewed the comments with relevant regulatory agencies in preparation for the CP3 Merger meeting.

February 23, 2022 - NCDOT announced the selection of the Preferred Alternative and directed the public to review updated information, mapping, and the comment-response memorandum available on the project website.

Section 404/NEPA Merger and Interagency Coordination

HE-0001 is utilizing NCDOT's Section 404/NEPA Merger Process. Merger Meetings and interagency coordination and consultation is summarized below. Signed Concurrence Forms are attached.

July 15, 2021 - The Merger Team concurred with the Project Need and Purpose and Study Area and the Detailed Study Alternatives (DSAs) Carried Forward at the combined Concurrence Point (CP) 1 and CP 2 Merger Meeting.

September 16, 2021 - The Merger Team concurred with the Bridging Decisions and Alignment Review at the CP 2A Merger Meeting. NCDOT also presented a CP 2 Update at this meeting by summarizing the Traffic Forecast and the decision to proceed with a 2-lane typical section for the connecting roadway, noting the anticipated need for auxiliary lanes at proposed intersections to accommodate traffic operations. The CP 2 Update also revisited potential impacts reported at the combined CP 1 and CP 2 Merger Meeting to include field verified jurisdictional resources in place of the GIS data sets.

October 18, 2021 - NCDOT and FHWA hosted a CP 3 Pre-meeting with USFWS.

October 19, 2021 - NCDOT and FHWA hosted a CP 3 Pre-meeting with NCWRC.

October 20, 2021 - NCDOT and FHWA hosted a CP 3 Pre-meeting with USEPA.

October 27, 2021 - NCDOT and FHWA hosted a CP 3 Pre-meeting with USACE and NCDWR.

October 27, 2021 - NCDOT and FHWA hosted a CP 3 Pre-meeting with FBRMPO.

February 9, 2022 - The Merger Team concurred with the LEDPA/Preferred Alternative Selection at the CP 3 Merger Meeting.

Section 4(f) of the US Department of Transportation Act

NCDOT and FHWA considered the potential use of Section 4(f) properties by STIP project HE-0001. Section 4(f) properties in and adjacent to the PSA include the historic sites discussed in Section G Item 13, and recreational resources (i.e., Mountains-to Sea Trail). The Blue Ridge Parkway is a historic site and a public park adjacent to the PSA. No right of way acquisition is required from Section 4(f) properties; thus, a permanent incorporation or permanent easement use is not applicable. No temporary easement will be required from Section 4(f) properties; thus, a temporary occupancy use is not applicable.

Constructive use involves an indirect impact to a Section 4(f) property of such magnitude as to effectively act as a permanent incorporation. In such a scenario, a project does not physically incorporate the property but is close enough to it to severely impact important features, activities or attributes associated with it, and to substantially impair it. Proximity effects to the Blue Ridge Parkway were considered through Section 106 Consultation (see Section G, Item 13). However, it was determined that visual effects do not severely impact important features, activities or attributes associated with the Parkway, nor will visual impacts substantially impair the property. NCDOT evaluated future potential noise impacts to the Parkway as well (see Section G, Checklist Item 27). This project would not substantially alter future sound levels along the studied portion of the Blue Ridge Parkway adjacent to the proposed project. The traffic analyses concluded that construction of HE-0001 would not attract additional trips to the Parkway. As a result, no Section 4(f) constructive uses result from STIP project HE-0001.

Avoidance and Minimization Measures

NCDOT evaluated and presented the following avoidance and minimization measures to the Merger Team at the CP 4A Merger Meeting for the Preferred Alternative (**Table 4**).

Additional avoidance and minimization measures may be evaluated as the project design progresses through coordination with the Merger Team.

Table 4. HE-0001, Avoidance and Minimization Measures

Location (if applicable)	Avoidance and Minimization Measure
Implemented in Preliminary Design Development	
Concept Development	Eliminated concepts from consideration during the scoping phase of the project for a variety of factors and feasibility concerns, including avoiding and minimizing potential impacts to the French Broad River floodplain/wetland complex, residential and commercial developments north of the French Broad River, and the Biltmore Estate NHL property.
Project Study Area	Reduce PSA to avoid and minimize potential impacts to the French Broad River floodplain and known potential jurisdictional resources.
Detailed Study Alternatives	• Did not consider alternatives with the potential to have direct effects to the Blue Ridge Parkway. • Considered and eliminated alternatives with the potential to have direct effects to the Biltmore Estate NHL.
Two-lane -Y-Line Typical Section	Two-lane roadway with curb and gutter typical section (opposed to 4-lane divided with grassed shoulder typical section) to accommodate future traffic volumes, noting auxiliary lanes will likely be required at intersection approaches. This results in less right of way requirements and will minimize impacts at proposed stream crossings and reduce tree clearing requirements.
-Y-Line Alignment	Shift the roadway alignment to the southeast to minimize potential impacts to Stream SA. Following CP 3, per NCDWR request, NCDOT shifted -y-line alignment to: • improve Stream SA crossing skew, reducing potential impacts by approx. 100 ft, • avoid 0.03 ac impact to Wetland WD, and • avoid 0.01 ac impact to Wetland WH.
Ramp -C- and Ramp -D- Retaining Walls	• Prior to CP 3, incorporate approx. 1,400 feet of retaining walls to avoid and minimize approx. 1,100 feet of potential impacts to Stream SDX and approx. <0.1 ac of wetlands in the I-26 bifurcated section. • Following CP 3, retaining walls were refined in conjunction with the DDI design and Ramp-C- Alignment shift (described below) in the same general locations.
Ramp -C- Alignment	Following CP 3, shift ramp alignment between <1 ft to about 18 ft to the east to: • improve constructability of the proposed retaining walls, • avoid approx. 120 ft of impacts to Stream SDY and Stream SDZ, • avoid approx. <0.1 ac impacts to Wetland WCR, • minimize impact to Stream SDX by approx. 175 ft, and • minimize impacts to Wetlands WCS and WCN by approx. <0.1 ac.
Reviewed in Preliminary Design Development, Not Implemented	
Ramp -C- Alignment	NCDOT reviewed a revised Ramp -C- alignment because of challenges associated with bridging Stream SDX (discussed at CP 2A). An approx. 325-ft bridge was reviewed in the I-26 bifurcated section to avoid and minimize potential impacts to Stream SDX and Wetland WCN. The bridge clearance was 6 feet and would not provide the environmental benefit for the wetland feature.

Preliminary Impacts

The following impacts are anticipated because of the project (**Table 5**).

Table 5. Impact Matrix for the Preferred Alternative

Resource	Impact
Relocations (Business, Residential, Non-profit)	0
Minority /Low Income Populations (Disproportionate Impacts)	0
Historic Properties (Adverse Effects)	0
Community Facilities Impacted	0
Section 4(f) Impacts	0
Noise Receptor Impacts	4
Prime Farmland (acres)	0.8
FEMA Floodplain (acres)	0
Tree Clearing ¹ (acres)	23.6
Streams ^{2, 3, 4} (In ft)	980
Wetlands (acres)	0.1
<i>Federally Protected Species</i> ⁵	
Appalachian elktoe / <i>Alasmodonta raveneliana</i>	MANLAA ⁶
Gray bat / <i>Myotis grisescens</i>	MANLAA ⁶
Northern long-eared bat / <i>Myotis septentrionalis</i>	4(d) rule exemption ⁷
¹ Calculated with preliminary design slope stakes plus 10 feet; I-4700 tree clearing was removed from this calculation. ² Potential Waters of the US (WOTUS) impacts calculated with preliminary design slope stakes plus 10 feet. ³ The potential WOTUS impacts exclude I-4700 permitted permanent impacts. ⁴ The HE-0001 PJD delineated to active I-4700 construction limits or control of access (C/A) fence resulting in some overlap with the I-4700 PJD. In these cases, the HE-0001 (i.e., more recent) delineation was used and the I-4700 PJD feature removed from potential impact calculations. This overlap did not affect the I-4700 PJD in the I-26 bifurcated section. ⁵ IPaC data checked on August 10, 2022. ⁶ MANLAA = May Affect Not Likely to Adversely Affect ⁷ On March 23, 2022, the Service published a proposal to reclassify the NLEB as endangered under the ESA; a new final listing determination for the NLEB is expected by November 2022. The proposed reclassification, if finalized, would remove the current 4(d) rule for the NLEB and the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed.	

F. Project Impact Criteria Checklists:

F3. Type III Actions			
Proposed improvement(s) that fit Type III Actions (NCDOT-FHWA CE Programmatic Agreement, Appendix C) answer questions below. • <i>NCDOT will certify the Categorical Exclusion for FHWA approval.</i> • <i>If any questions are marked "Yes" then additional information will be required for those questions in Section G.</i>			
		Yes	No
1	Does the project involve potential effects to Threatened or Endangered species listed by the US Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS)?	☒	☐
2	Does the project result in impacts subject to the conditions of the Bald and Golden Eagle Protection Act (BGEPA)?	☐	☒
3	Does the project generate substantial controversy or public opposition, for any reason, following appropriate public involvement?	☐	☒
4	Does the project cause disproportionately high and adverse impacts relative to low-income and/or minority populations?	☐	☒
5	Does the project involve substantial residential or commercial displacements or right of way acquisition?	☐	☒
6	Does the project include a determination under Section 4(f)?	☐	☒
7	Is a project-level analysis for direct, indirect, or cumulative effects required based on the NCDOT community studies screening tool?	☒	☐
8	Does the project impact anadromous fish spawning waters?	☐	☒
9	Does the project impact waters classified as Outstanding Resource Waters (ORW), High Quality Waters (HQW), Water Supply Watershed Critical Areas, 303(d)-listed impaired water bodies, buffer rules, or submerged aquatic vegetation (SAV)?	☐	☒
10	Does the project impact Waters of the United States in any of the designated mountain trout streams?	☐	☒
11	Does the project require a US Army Corps of Engineers (USACE) Individual Section 404 Permit?	☒	☐
12	Will the project require an easement from a Federal Energy Regulatory Commission (FERC) licensed facility?	☐	☒
13	Does the project include Section 106 of the National Historic Preservation Act (NHPA) effects determination other than a No Effect, including archaeological remains?	☒	☐
14	Does the project involve GeoEnvironmental Sites of Concerns such as gas stations, dry cleaners, landfills, etc.?	☐	☒
15	Does the project require work encroaching and adversely effecting a regulatory floodway or work affecting the base floodplain (100-year flood) elevations of a water course or lake, pursuant to Executive Order 11988 and 23 CFR 650 subpart A?	☐	☒
16	Is the project in a Coastal Area Management Act (CAMA) county and substantially affects the coastal zone and/or any Areas of Environmental Concern (AEC)?	☐	☒

<u>Type III Actions (continued)</u>		Yes	No
17	Does the project require a US Coast Guard (USCG) permit?	☐	☒
18	Does the project involve construction activities in, across, or adjacent to a designated Wild and Scenic River present within the project area?	☐	☒
19	Does the project involve Coastal Barrier Resource Act (CBRA) resources?	☐	☒
20	Does the project impact federal lands (e.g., US Forest Service (USFS), US Fish and Wildlife Service (USFWS), etc.) or Tribal (Trust) Lands?	☐	☒
21	Does the project involve any changes in access control or the modification or construction of an interchange on an interstate?	☒	☐
22	Does the project have a permanent adverse effect on local traffic patterns or community cohesiveness?	☐	☒
23	Will maintenance of traffic cause substantial disruption?	☐	☒
24	Is the project inconsistent with the STIP, and where applicable, the Metropolitan Planning Organization's (MPO's) Transportation Improvement Program (TIP)?	☐	☒
25	Does the project require the acquisition of lands under the protection of Section 6(f) of the Land and Water Conservation Act, the Federal Aid in Fish Restoration Act, the Federal Aid in Wildlife Restoration Act, TVA, Tribal Lands, or other unique areas or special lands that were acquired in fee or easement with public-use money and have deed restrictions or covenants on the property?	☐	☒
26	Does the project involve Federal Emergency Management Act (FEMA) buyout properties under the Hazard Mitigation Grant Program (HMGP)?	☐	☒
27	Is the project considered a Type I under the NCDOT's Noise Policy?	☒	☐
28	Is there prime or important farmland soil impacted by this project as defined by the Farmland Protection Policy Act (FPPA)?	☒	☐
29	Is the project in an Air Quality non-attainment or maintenance area for a National Ambient Air Quality Standard (NAAQS)?	☐	☒
30	Are there other issues that arose during the project development process that affected the project decision?	☐	☒

G. Additional Documentation as Required from Section F (ONLY for questions marked 'Yes'):

Checklist Item 1: Federally Protected Species

The United States Fish and Wildlife Service (USFWS) list the following federally protected species within the PSA, under the Endangered Species Act (ESA) (**Table 6**).

Table 6. ESA federally protected species listed¹ for Buncombe County

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Alasmidonta raveneliana</i>	Appalachian elktoe	E	No	MANLAA**
<i>Solidago spithamea</i>	Blue Ridge goldenrod	T	No	NE
<i>Glyptemys muhlenbergii</i>	bog turtle	T(S/A)	No	Not Required
<i>Glaucomys sabrinus coloratus</i>	Carolina Northern flying squirrel	E	No	NE
<i>Myotis grisescens</i>	Gray bat	E	Yes	MANLAA**
<i>Sarracenia rubra ssp. jonesii</i>	Mountain sweet pitcher plant	E	No	NE
<i>Myotis septentrionalis</i>	Northern long-eared bat	T	Yes	4(d) rule exemption***
<i>Gymnoderma lineare</i>	Rock gnome lichen	E	No	NE
<i>Hedyotis purpurea var. montana</i>	Roan Mountain bluet	E	No	NE
<i>Geum radiatum</i>	Spreading avens	E	No	NE
<i>Microhexura montivaga</i>	Spruce-fir moss spider	E	No	NE
<i>Spiraea virginiana</i>	Virginia spiraea	T*	No	Not Required

¹ USFWS County List dated June 17, 2021, IPaC countywide data checked on July 28, 2021

E - Endangered; T - Threatened; T(S/A) - Threatened due to similarity of appearance; MANLAA - May Affect–Not Likely to Adversely Affect; NE - No Effect

* Historical record (the species was last observed in the county more than 50 years ago) per previous USFWS County list dated July 17, 2020.

** Biological Conclusion includes NCDOT commitment implementation of Conservation Measures outlined in a Revised Informal Consultation USFWS letter dated July 22, 2022.

*** On March 23, 2022, the Service published a proposal to reclassify the NLEB as endangered under the ESA; a new final listing determination for the NLEB is expected by November 2022. The proposed reclassification, if finalized, would remove the current 4(d) rule for the NLEB and the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed.

Appalachian elktoe

USFWS Recommended Survey Window: March 1–November 1 (optimal)

Biological Conclusion: May Affect Not Likely to Adversely Affect

A review of NHP records on July 28, 2021, indicates one known occurrence within 1.0 mile of the study area (EO ID 21150, last observed September 29, 2019). The Biological Conclusion includes NCDOT commitment implementation of Conservation Measures outlined in a Revised Informal Consultation USFWS letter dated July 22, 2022.

Gray bat

USFWS Recommended Survey Window: Structure Checks: May 15-August 15. Mist netting and/or acoustic bat surveys are dependent on results of bat structure checks or USFWS requirements. Mist Netting Surveys: June 1-August 15, Acoustic Surveys: May 15-August 15.

Biological Conclusion: May Affect Not Likely to Adversely Affect

A review of NHP records on July 28, 2021, indicates two known occurrences within 1.0 mile of the study area. EO ID 39015 was last observed July 18, 2018, and EO 40722 was last observed in 2019. EO 40722 falls within the boundaries of the National Park Service, Blue Ridge Parkway. The Biological Conclusion includes NCDOT commitment implementation of Conservation Measures outlined in a Revised Informal Consultation USFWS letter dated July 22, 2022.

Northern long-eared bat

USFWS Recommended Survey Window: Structure Checks: May 15-August 15. Mist netting and/or acoustic bat surveys are dependent on results of bat structure checks or USFWS requirements. Mist Netting Surveys: June 1-August 15, Acoustic Surveys: May 15-August 15.

Biological Conclusion: 4(d) Rule Exemption

A review of NHP records on July 28, 2021, indicates no known occurrences within 1.0 mile of the study area. A 4(d) rule exemption concurrence was included in a Revised Informal Consultation USFWS letter dated July 22, 2022. On March 23, 2022, the Service published a proposal to reclassify the northern long-eared bat (NLEB) as endangered under the Endangered Species Act. The US District Court for the District of Columbia has ordered the USFWS to complete a new final listing determination for the NLEB by November 2022 (Case 1:15-cv-00477, March 1, 2021). The bat, currently listed as threatened, faces extinction due to the range-wide impacts of white-nose syndrome, a deadly fungal disease affecting cave-dwelling bats across the continent. The proposed reclassification, if finalized, would remove the current 4(d) rule for the NLEB, as these rules may be applied only to threatened species. Depending on the type of effects a project has on NLEB, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective (anticipated to occur by December 30, 2022).

Checklist Items 7: Direct, Indirect, or Cumulative Effects

The proposed project may impact travel patterns, reduce travel time, affect access to properties in the area, or open areas for development or redevelopment. Due to the potential transportation impact-causing activities, this project may influence nearby land uses or stimulate growth. For these reasons, an Indirect and Cumulative Effects (ICE) and Land Use Scenario Assessment (LUSA) was completed according to NCDOT procedure.

The LUSA Matrix concluded that the rankings for the various development categories are similar for the future (2045) No-Build and Build scenarios. This does not imply that additional development is not anticipated to occur within the Probable Development Areas (PDAs), but that effects of additional development are not quantifiably different between the future No-Build and Build scenarios (i.e., with or without HE-0001). Based on the results from the LUSA Matrix a Cumulative Effects Assessment is not required.

Checklist Items 11: Waters and Corps 404 Permit

The project will require a permit from the US Army Corps of Engineers for Section 404 wetland and stream impacts, but it is yet to be determined whether the permit would be an Individual Permit or a Nationwide or General Permit.

Checklist Items 13: Section 106 of the National Historic Preservation Act (NHPA)

Historic Architecture and Landscape Resources

The NCDOT architectural historian identified the following National Register (NR) -eligible or -listed properties in the project area of potential effects (APE):

- Biltmore Estate (BN1835) – National Historic Landmark (NHL)
- Blue Ridge Parkway (NC0001) – Determined NR eligible, NHL pending
- French Broad River Gaging Station (BN6468) – Determined NR eligible
- Bent Creek Campus (BN0898) – Determined NR eligible

NCDOT recommended an effects assessment for the above-listed historic properties in the Effects Required Form dated June 15, 2021 (attached).

Archaeological Resources

The NCDOT archaeologist determined an archaeological resource survey was required for the project APE on May 20, 2021. An intensive archaeological survey and evaluation was conducted for the APE from August to October 2021. Of the 13 resources identified or revisited by the survey, one precontact site (31BN1119) was recommended eligible. NCDOT submitted the Archaeological Effects Required Form to NC Historic Preservation Office (HPO) and tribes (see tribal coordination below) on December 10, 2021. On January 18, 2022, NC HPO concurred with NCDOT's Determination of Eligibility and recommendation for data recovery investigations to mitigate adverse effects to the site that cannot be avoided by the proposed project. (See attachments.)

Effects Assessment

In accordance with Section 106 of the NHPA, NCDOT and FHWA consulted with appropriate parties in the determination of effects to the four above-ground historic architectural properties and one archaeological property at a series of meetings:

October 7, 2021 - NCDOT and FHWA hosted a Pre-effects Meeting with the NC HPO and the National Park Service-Blue Ridge Parkway (NPS). The Blue Ridge Parkway was the topic of discussion.

February 4, 2022 - NCDOT and FHWA hosted an Effects Meeting with NC HPO, NC Office of State Archaeology (OSA), NPS, and Biltmore Estate. All historic properties were reviewed for potential effects. Concurrence was reached on all historic properties except the Blue Ridge Parkway (see **Table 7**).

- Following the selection of the Least Environmentally Damaging Practicable Alternative (LEDPA)/Preferred Alternative at Concurrence Point 3 on February 9, 2022, NCDOT submitted the No National Register of Historic Places Eligible or Listed Archaeological Sites Form to NC HPO on March 10, 2022. NC HPO concurred by letter dated June 20, 2022, that HE-0001 will have no adverse effect on eligible archaeological resources, including site 31BN1119. (See attachments.)

March 18, 2022 - NCDOT and FHWA hosted a follow-up Effects Meeting for the Blue Ridge Parkway with NC HPO, NPS, Buncombe County, and Biltmore Farms, LLC (landowner).

May 11, 2022 - NCDOT and FHWA hosted a second follow-up Effects Meeting for the Blue Ridge Parkway with NC HPO, NPS, Buncombe County, and Biltmore Farms, LLC.

June 29, 2022 - NCDOT and FHWA hosted a final Effects Meeting for the Blue Ridge Parkway with NC HPO, NPS, Buncombe County, and Biltmore Farms, LLC. A No Adverse Effect, with conditions

determination was concurred to for the Blue Ridge Parkway. These conditions are included in the HE-0001 project commitments (green sheet).

The following effects determinations were made for the Preferred Alternative (also see attached Effects Form):

Table 7. Effects to Historic Properties

Historic Property (State ID)	Status	Effect
Biltmore Estate (BN1835)	NHL	No Effect
Blue Ridge Parkway (NC0001)	NR eligible; NHL pending	No Adverse Effect, with conditions
French Broad River Gaging Station (BN6468)	NR eligible	No Effect
Bent Creek Campus (BN0898)	NR eligible	No Effect
Archaeological site (31BN1119)	NR eligible	No Adverse Effect

Tribal Coordination

NCDOT initiated contact with the following tribal governments consistent with the current NCDOT protocol on September 9, 2021:

- Eastern Band of Cherokee Indians (EBCI)
- United Keetoowah Band of Cherokee Indians
- Cherokee Nation*
- Catawba Indian Nation*
- Muscogee (Creek) Nation

*NCDOT received a response from these tribes.

NCDOT transmitted the Archaeological Effects Form and details regarding the results of the archaeological survey investigations to the above-listed tribal governments and NC HPO on December 10, 2021. The Catawba Indian Nation replied by letter dated January 31, 2022.

Following selection of the LEDPA/ Preferred Alternative on February 9, 2022, NCDOT transmitted updated information based on the No National Register of Historic Places Eligible or Listed Archaeological Sites Affected Form to the above-listed tribal governments on March 10, 2022. NCDOT and FHWA met with Eastern Band of Cherokee Indians on March 21, 2022, and provided additional information. (See attachments.)

Checklist Item 21: Interstate Interchange Construction and/or Modification or changes in Access Control

FHWA reviewed the Interstate Access Report (IAR) for this project and deemed the proposed interchange acceptable based on safety, operations, and engineering considerations. Final approval of this new interchange may be given by the FHWA-NC Division Administrator provided that the scope and design of the selected alternative in the approved environmental document is consistent with the IAR, dated October 18, 2021.

Access along I-26 will remain fully controlled. The proposed project will introduce a new interchange near mile marker 35 that will access only the west side of I-26; no access will be provided east of I-26 on the Biltmore Estate property. The proposed roadway connection will be controlled access for 1,000 feet west of the I-26 eastbound on- and off-ramp terminals.

Checklist Item 27: NCDOT Noise Policy Type 1 Project

The source of this traffic noise information is “Traffic Noise Report, I-26 Interchange (Exit 35), STIP Project HE-0001, Buncombe County, NC”, Gannett Fleming, April 2022.

For the purposes of the traffic noise study, NCDOT evaluated two alternatives: Right Exit and Left Exit (Preferred Alternative) alternatives. The Right Exit is the closest alternative to the Biltmore Estate and Blue Ridge Parkway while the Left Exit alternative is the furthest alternative from both the Biltmore Estate and Blue Ridge Parkway. The analyses of these two alternatives adequately assess the potential traffic noise impacts associated with all three DSAs.

Blue Ridge Parkway

NCDOT analyzed traffic noise impacts to the Blue Ridge Parkway for purposes of consultation under Section 106 of the National Historic Preservation Act (NHPA). While noise analysis of the Blue Ridge Parkway is not required by 23 CFR 772 or the 2021 NCDOT Traffic Noise Policy, NCDOT recognizes that the setting and feeling of the Blue Ridge Parkway are characteristics that contribute to the property’s NR eligibility (NHL is pending). This project would not substantially alter future sound levels along the studied portion of the Blue Ridge Parkway adjacent to the proposed project.

Traffic Noise Impacts

The maximum number of receptors in the Preferred Alternative predicted to be impacted by future traffic noise is shown in **Table 8**. The table includes those receptors expected to experience traffic noise impacts by either approaching or exceeding the FHWA Noise Abatement Criteria or by a substantial increase in exterior noise levels as defined in the NCDOT Traffic Noise Policy.

Table 8. Predicted Traffic Noise Impacts*

Alternative	Residential (NAC B)	Places of Worship/Schools, Parks, etc. (NAC C & D)	Businesses (NAC E)	Total
Preferred Alternative	0	4	0	4
*Per TNM®2.5 and in accordance with 23 CFR Part 772				

Traffic Noise Abatement Measures

Measures for reducing or eliminating the traffic noise impacts, including noise barriers, were considered for all impacted receptors in each alternative. Noise barriers include two basic types: earthen berms and noise walls. These structures act to diffract, absorb, and reflect highway traffic noise.

One impact was identified within each of the project’s four noise study areas (NSA). In accordance with the NCDOT noise policy feasibility requirements, a minimum of two impacted receptors must benefit from a noise abatement measure; therefore, noise abatement is not feasible for this project.

Based on this preliminary study, traffic noise abatement is not recommended, and no noise abatement measures are proposed. This evaluation completes the highway traffic noise requirements of Title 23 CFR Part 772. No additional noise analysis will be performed for this project unless warranted by a substantial change in the project’s design concept or scope.

In accordance with NCDOT Traffic Noise Policy, the Federal/State governments are not responsible for providing noise abatement measures for new development for which building permits are issued after the Date of Public Knowledge. The Date of Public Knowledge of the proposed highway project will be the approval date of the Categorical Exclusion. NCDOT strongly advocates the planning, design and construction of noise-compatible development and encourages its practice among planners, building officials, developers and others.

Checklist Item 28: Farmland Protection Policy Act (FPPA)

A preliminary screening of farmland conversion impacts in the PSA has been completed (NRCS Form AD-1006 for point projects, Part VI only) and a total score of 37 out of 160 points was calculated for the project site. Since the total site assessment score does not exceed the 60-point threshold established by Natural Resources Conservation Service (NRCS), farmland conversion impacts may be anticipated, but are not considered notable.

H. Project Commitments (attach as Green Sheet to CE Form):

NCDOT PROJECT COMMITMENTS

STIP Project No. **HE-0001**
I-26 Interchange (Future Exit 35)
Buncombe County
Federal Aid Project No. Federal Aid Number
WBS Element 49742.1.2

PROJECT COMMITMENTS

I-26 Exit 35, Construct New Interchange

T.I.P Number: HE-0001

Buncombe

Federal Aid Number:

WBS: 49742.1.2

COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

Division Office - Tree clearing - Preconstruction

As the proposed action will impact suitable habitat for Gray bat throughout the action area, all tree clearing will occur between November 15– March 15, which is outside of the bat active season for Gray bat in the French Broad River (FBR) Basin. There will be one exception to this moratorium, the minimal tree clearing associated with geotechnical field investigations that will occur starting in August 2022. This exception will allow equipment access for geotechnical borings planned on the -y- line (i.e., connector road) and the bifurcated section. The equipment will work around trees to the greatest extent practical.

NCDOT will modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal in excess of what is required to implement the project safely.

Division Environmental Staff - Agency coordination and review - Preconstruction

Based on Section 7 coordination, NCDOT will invite representatives from the FWS, U.S. Army Corps of Engineers (COE), NC Division of Water Resources, NC Division of Land Quality, and the North Carolina Wildlife Resources Commission (WRC) to the preconstruction meeting for the proposed project, as well as to all subsequent field inspections prior to construction, to ensure compliance with all special project commitments.

NCDOT shall provide the FWS with the SECP and allow 30 calendar days for review.

Division Office - Blue Ridge Parkway - Blue Ridge Parkway Overlay District

a. Buncombe County is an interested party in the HE-0001 project, as referenced by its current overlay district and zoning powers that protect the BRP corridor. NCDOT will coordinate with Buncombe County and request the County to notify and request comments from NPS and NC HPO regarding any future proposed changes to the Blue Ridge Parkway Overlay District (Section 78-643).

Division Office - Blue Ridge Parkway - Future capacity improvements

NCDOT will coordinate review of any future capacity improvements to HE-0001 (including widening, pedestrian, or safety modifications) with the NPS and NC HPO prior to the approval of any federal or state action (i.e., NEPA document, permit). This condition is not applicable to NCDOT capacity improvements that are considered an exempt activity under the current NCDOT Section 106 Programmatic Agreement.

Division Office - Blue Ridge Parkway - Future intersecting road(s)

NCDOT will not construct or maintain any new road or access points that intersect or cross the HE-0001 portion of East Frederick Law Olmsted Way, from the roundabout to I-26.

If NCDOT assumes maintenance of East Frederick Law Olmsted Way from NC 191 to the roundabout, NCDOT will review driveway access permits to East Frederick Law Olmsted Way according to current NCDOT procedure and in consultation with NPS and NC HPO. This condition may be revisited through consultation with NPS and NC HPO associated with future state transportation projects.

Division Office - Blue Ridge Parkway - Lighting

NCDOT will not install roadway lighting along the access roadway portion of HE-0001 (i.e., East Frederick Law Olmsted Way); lighting will be required for the interchange. Interchange lighting will be designed and installed in accordance with the conservation measures included in the US Fish and Wildlife Informal Consultation letter dated March 16, 2022 and revised July 22, 2022. If NCDOT allows roadway/pedestrian lighting of East Frederick Law Olmsted Way through an encroachment agreement with a separate/private entity, NCDOT will require implementation of NPS Sustainable Outdoor Lighting Principles for any roadway/pedestrian lighting.

1. NPS Sustainable Outdoor Lighting Principles
 - a. Light only IF you need it
 - b. Light only WHEN you need (use timers, sensors, and other controls)
 - c. Light only WHAT/WHERE you need it (shield light sources and direct downward, minimize height of light sources)
 - d. Use appropriate color spectra (no white/blue light), use amber or yellow
 - e. Use minimum number of lumens necessary (500 lumens or less per fixture if possible)
 - f. Choose energy efficient lamps and fixtures (minimum possible)

EAU – Cultural Resources, Division Office - Blue Ridge Parkway - Vegetative Screening

NCDOT will design, install, and maintain approximately 900 feet of vegetative screening along the southside of the HE-0001 portion of East Frederick Law Olmsted Way closest to the Blue Ridge Parkway.

NCDOT will commit to produce a vegetative screening plan with the 65% roadway design plan (late summer/fall 2022) submittal and provide to NPS and NC HPO for review and comment.

Division Office - Design Standards in Sensitive Watersheds - Preconstruction

NCDOT will utilize Design Standards in Sensitive Watersheds (DSSW, 15A NCAC 04B .0124) for stormwater discharge under the National Pollutant Discharge Elimination System (NPDES).

Division Office - Lighting (Bats) - Preconstruction

Based on Section 7 coordination for bats, permanent lighting will be confined to the interchange portion of this project along I-26 and will meet safety requirements for fully controlled access roadways. The roadway connection to Frederick Law Olmstead Way East will remain a dark forested corridor. NCDOT will use the shortest light pole that meets highway requirements and safety parameters and limits light in suitable bat

habitat. NCDOT will use light emitting diode (LED) fixtures with a Type II distribution pattern. This pattern projects light from the fixture further along the road and less across the road. In all cases, the BUG (Backlight, Uplight, and Glare) rating will not exceed 3-0-3.

NCDOT will meet the AASHTO minimum requirements of 0.6 fc at 4:1 uniformity, which represents a 25% reduction in the average light on the pavement surface (compared with using the 0.8 fc standard) and should reduce the amount of light reaching suitable bat habitat. NCDOT will eliminate all high mast light poles within the action area.

Division Environmental Staff, Hydraulics - Stormwater control measures (A. elktoe) - Preconstruction

Based on Section 7 coordination, NCDOT has developed stormwater commitment guidance which will apply to any portion of the NCDOT stormwater conveyance system draining to an outfall discharging to the French Broad River within the NCDOT right of way. NCDOT will prepare a stormwater management plan (SMP) that implements structural and non-structural post-construction stormwater best management practices (BMPs) to the maximum extent practical, which is consistent with NPDES Post-Construction Stormwater Program. NCDOT will use a hierarchical BMP selection process, which is optimized to treat silt, nutrients, and heavy metals.

NCDOT will evaluate the use of emerging BMP technologies that NCDOT has yet to publish in its BMP Toolbox. These emerging BMP technologies include bioswales, bioembankments, biofiltration conveyances, and soil improvements that maximize infiltration.

Hydraulics - Sediment and erosion control plan (SECP) - Preconstruction

Based on Section 7 coordination, the sedimentation and erosion control plan (SECP) will be in place prior to any ground disturbance for all pipe replacements and construction. When needed, combinations of SEC measures (such as silt bags in conjunction with a stilling basin) will be used to ensure that the most protective measures are implemented. The SECP shall adhere to the DSSW for portions of the project draining directly or indirectly to the FBR. Consideration will be given to any on the ground practical application which is most protective of the resource. For example, there may be some areas where NCDOT would not extend a measure of the DSSW (e.g., cut trees to construct a basin) which would have greater impact to sensitive resources.

Division Office, Construction Office - Blue Ridge Parkway - Control of Access

NCDOT will include 1,000-foot control of access (C/A) fencing along the HE-0001 portion of East Frederick Law Olmsted Way west of the eastbound I-26 on- and off-ramp intersection that would prohibit the construction of driveways or access points.

Construction Office - Blue Ridge Parkway - Tree clearing

NCDOT will minimize tree clearing consistent with Section 7 conservation measures. NCDOT is committed to avoid tree removal beyond what is required to implement the project safely. NCDOT will ensure that tree removal is limited to that specified in the project plans.

Construction Office - Lighting (Bats) - Construction

Based on Section 7 coordination for bats, lighting used for construction will be limited to what is necessary to maintain safety standards and will only be directed toward active work areas, not into adjacent wooded areas or inactive work sites.

Division Environmental Staff - Sediment and erosion control monitoring effectiveness - Construction

Based on Section 7 coordination, one Construction Project Inspector will monitor SEC devices for the life of the project. Inspections of erosion control devices will be done on the standard inspection schedule (weekly, or after a rainfall event of one inch or greater). NCDOT will self-report to the FWS any SEC device failures or sediment loss resulting from exceeding the capacity of the measures. The NCDOT inspector will report any failures or sediment loss to the Division Environmental Officer, who will contact the agency within 24 hours. If there are any failures or sediment loss, NCDOT will meet with resource agencies and work to adaptively manage SEC devices for further storm events while construction continues.

Division Environmental Staff - Tree Clearing (Bats) - Construction

Based on Section 7 coordination regarding bat habitat, NCDOT will ensure tree removal is limited to that specified in project plans and ensure that clearing limits are clearly marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits).

COMMITMENTS FROM PERMITTING

No commitments developed during project permitting.

*******END OF PROJECT COMMITMENTS*******

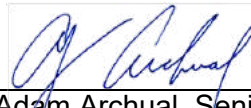
I-26 Exit 35, construct new interchange

I. Categorical Exclusion Approval:

STIP Project No.	HE-0001
WBS Element	49742.1.2
Federal Project No.	Federal Aid Number

Prepared By:

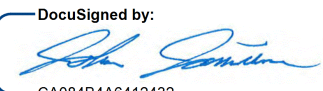
8/11/2022
Date


Adam Archual, Senior Environmental Planner
Gannett Fleming

Prepared For: North Carolina Department of Transportation Division 13

Reviewed By:

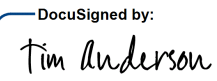
08/12/2022
Date

DocuSigned by:

CA084B4A6412432...
John Jamison, EPU Western Regional Team Lead
North Carolina Department of Transportation

☐ **Approved**

☒ **Certified** • If classified as Type III Categorical Exclusion.

08/12/2022
Date

DocuSigned by:

CD10D468D13A4B3...
Tim Anderson, PE, Division Engineer, Division 13
North Carolina Department of Transportation

FHWA Approved: For Projects Certified by NCDOT (above), FHWA signature required.

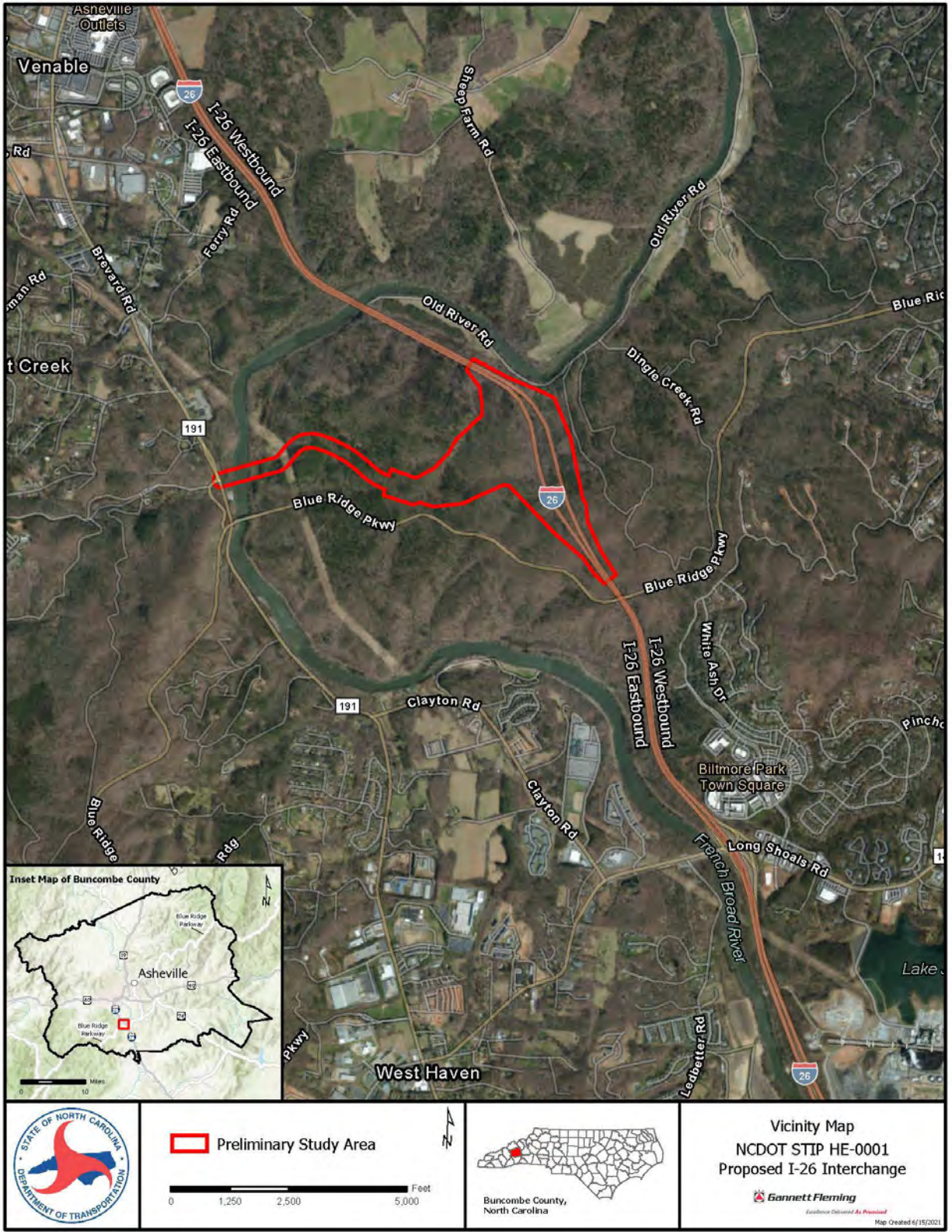
08/12/2022
Date

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for John F. Sullivan, III, PE, Division Administrator
Federal Highway Administration

Note: Prior to ROW or Construction authorization, a consultation may be required (please see Section VII of the NCDOT-FHWA CE Programmatic Agreement for more details).

FIGURE 1. PROJECT VICINITY MAP



French Broad River

Old River Rd

Blue Ridge Pkwy

Brevard Rd

Clayton Rd

Kay-Lou Ln

Interstate 26

Inset Map of Buncombe County

Asheville

Legend:

- Project Study Area
- Preferred Alternative Centerline
- Frederick Law Olmsted Way East (Constructed By others)

Scale: 0, 0.13, 0.25, 0.5 Miles

North Arrow

Buncombe County, North Carolina

**Connection to Frederick Law Olmsted Way East
NCDOT STIP HE-0001
Proposed I-26 Interchange
{Figure 2}**

Gannett Fleming

Evidence Delivered As Presented
Map Created 9/29/2020

FIGURE 3. LEDPA/PREFERRED ALTERNATIVE (DSA 3)

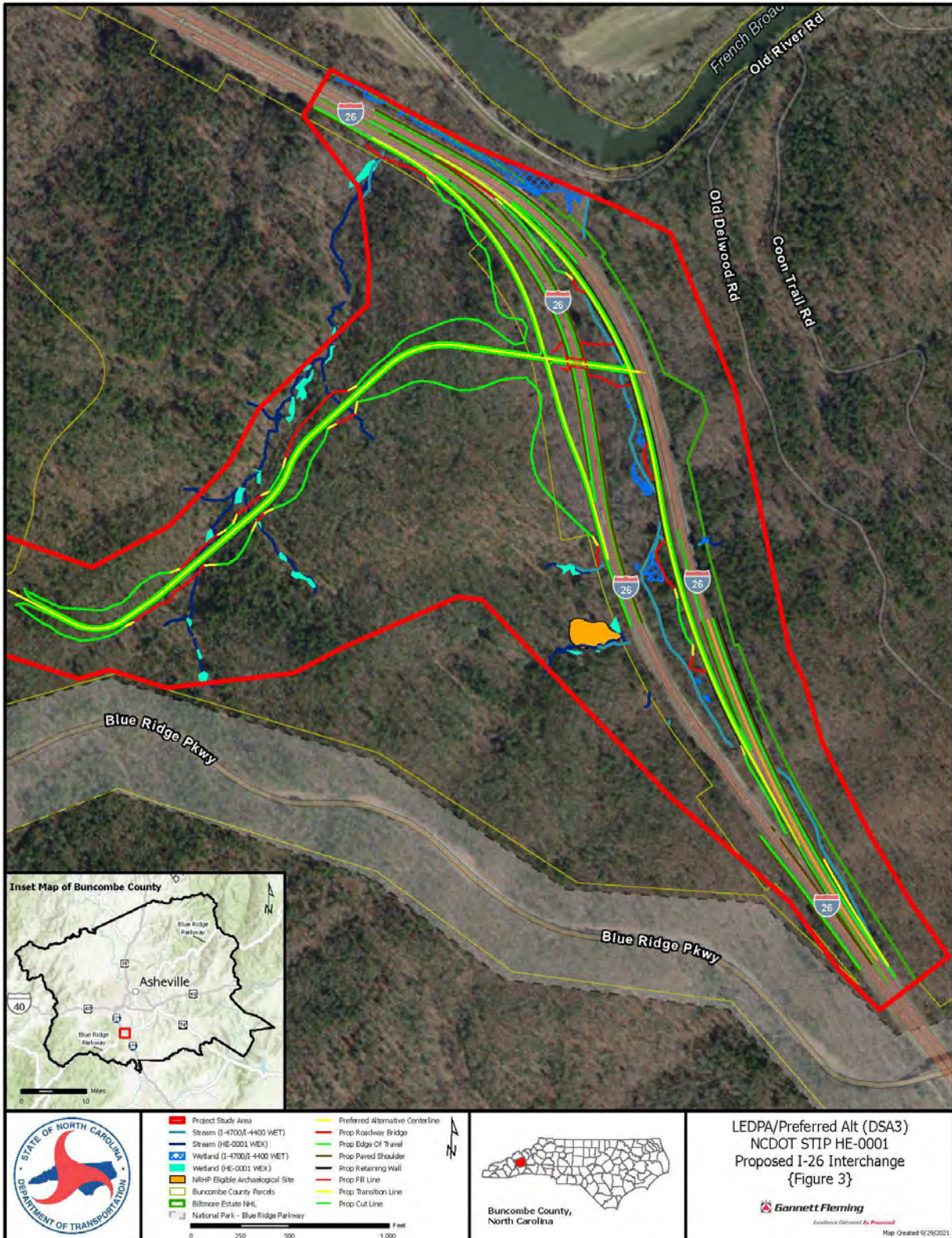


FIGURE 4. ENVIRONMENTAL FEATURES MAP

