

ATTACHMENT A

Special Use Construction Permit Submittal



APPLICATION FOR SPECIAL PARK USE PERMIT (Short Form)

Natchez Trace Parkway
2680 Natchez Trace Parkway
Tupelo, MS 38804
Tom Berryhill, Lands Resource Specialist
Phone: 662-255-9987 Email: thomas_berryhill@nps.gov

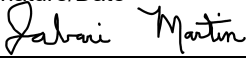
Please supply the information requested below. **Attach additional sheets to provide required information.** A nonrefundable processing fee of **\$265.00** must accompany this application unless the requested use is an exercise of a First Amendment right. You must allow enough time for the park to process your request; check with the park for guidelines. You will be notified of the status of the application and the necessary steps to secure your final permit. Your permit may require the payment of cost recovery charges and proof of liability insurance naming the United States of America an additional insured.

Example of acceptable "Description of Proposed Activity", block below::

XYZ Electric Co-op proposes crossing the Natchez Trace Parkway at or near Parkway milepost 266.1, near MS Hwy 145, Parkway Section 3D, (GPS if available) for the purpose of providing Fiber Optic Cable (FOC) service to our customers using the horizontal bore method. The minimal depth of the bore on Park Lands shall be 4 feet except when crossing Parkway paved surfaces where the minimum shall be 6 feet. The proposed plan is to use the existing utility crossing by stringing FOC to the nearest existing pole outside the Park boundary, transitioning the FOC to underground, crossing Park Lands to the nearest existing pole off Park Lands, transitioning the FOC from underground to resume aerially. The length of the bore will be approximately XXX feet across Park Lands. "Bore-pits" shall be placed off Park Lands, if possible, if necessary to have "bore pits" on Park Lands, monitoring by Park Service staff maybe required with sites pre-approved. (Plans shall show "bore pit" sites)

Applicant Name Jabari Martin, Supervisor, Environment		Company/Organization Name Texas Eastern Transmission, LP	
Tax Identification Number* 72-0378240			
Street Address 555 Marriot Drive, Suite 600			
City Nashville	State TN	Zip Code 37214	
Telephone Number (615) 767-3085		Contact Name	
Cell Phone Number (615) 767-3085		Fax Number	
Email Address			

Description of Proposed Activity (attach diagram and/or additional pages). Refer to Form RM-02.	
The proposed Project will include the installation of armoring and articulating grout mat atop the existing Line 14, 18, and 31 pipelines within Lindsey Creek (latitude: 32.319056, longitude: -90.373738) to cover and armor the exposed pipeline and stabilize creek banks/sidewalls to prevent erosive flows and potential debris from striking the pipeline.	
Texas Eastern plans to access the Project location via its existing right-of-way from the I-20 Frontage Road located at 32.343343°, -90.358414°.	
Jabari Martin, Supervisor, Environment	Texas Eastern Transmission, LP
Requested Location (Nearest Parkway Milepost or Road Crossing, County, City) Milepost 85	

Set-Up Begins	Activity Begins	Activity Ends	Removal Completed
Date 7/1/2024 Time 07:00 <input checked="" type="checkbox"/> AM <input type="checkbox"/> PM	Date 7/15/2024 Time 07:00 <input checked="" type="checkbox"/> AM <input type="checkbox"/> PM	Date 11/1/2024 Time 19:00 <input type="checkbox"/> AM <input checked="" type="checkbox"/> PM	Date N/A Time <input type="checkbox"/> AM <input type="checkbox"/> PM
Maximum Number of Participants (Best Estimate) 5 - 10	Maximum Number of Vehicles <div> <div>Cars</div> <div>Vans/Light Trucks</div> <div>Utility Vans/Trucks</div> <div>Buses/Oversized Vehicles</div> </div> <div> <div>0</div> <div>0</div> <div>4-6</div> <div>0</div> </div>		
Support equipment (list all equipment; attach additional pages if necessary)			
List support personnel including addresses and telephones; attach additional pages if necessary			
Name Douglas White		Company Name Texas Eastern Transmission, LP	Cell Phone Number (601) 940-3193
Individual in charge of activity onsite who is authorized to make decisions related to the permitted activity (name and email): Douglas White, Area Supervisor			Cell Phone Number (601) 940-3193
Is this an exercise of First Amendment Rights?			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Have you visited the requested area?			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Have you obtained a permit from the National Park Service in the past? (If yes, provide a list of permit dates and locations on a separate page.)			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Do you plan to advertise or issue a press release before the event?			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Will you distribute printed material?			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Is there any reason to believe attempts to disrupt, protest or prevent your event? (If yes, please explain on a separate page.)			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Do you intend to solicit donations or offer items for sale? (These activities may require an additional permit.)			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
You are encouraged to attach additional pages with information useful in evaluating your permit request. Refer to Form RM-02 regarding needed information for construction permits. <i>The applicant by his or her signature certifies that all the information given is complete and correct, and that no false or misleading information or statements have been given.</i>			
Printed Name/ Title Jabari Martin / Supervisor, Environmental			
Signature/Date  12/21/2023			

NOTICES

IMPORTANT NOTICE TO APPLICANT

This is an application **only** and does not serve as permission to conduct any special activity in the park. The information provided will be used to determine whether a permit will be issued. Send the completed application along with the application fee in the form of a cashier's check, money order or personal check made payable to the **National Park Service** to Natchez Trace Parkway at the address and/or email found on the first page of this application. If your request is approved, a permit containing applicable terms and conditions will be sent you. The permit must be signed by the responsible person and returned to the park for final approval by the Park Superintendent before the permitted activity may begin.

Customers Making Payment by Personal Check

When you provide a check as payment, you authorize us either to use information from your check to make a one-time electronic fund transfer from your account or to process the payment as a check transaction. When we use information from your check to make an electronic fund transfer, funds may be withdrawn from your account as soon as the same day we receive your payment, and you will not receive your check back from your financial institution.

Privacy Act Statement

General: This information is provided pursuant to Public Law 93-579 (Privacy Act of 1974), December 21, 1984, for individuals completing this application.

Authority: The authority to collect information on the attached form is derived from 54 U.S.C. 100101, Promotion and regulation; 54 U.S.C. 100751(a), Regulations; 54 U.S.C. 103104, Recovery of costs associated with special use permits; and 54 U.S.C Commercial Filming.

Purpose: The purposes of the system are (1) to provide a park superintendent with information to approve or deny requests for activities that provide a benefit to an individual, group or organization, rather than the public at large; and (2) to assist park staff to manage the activity to ensure that the permitted activity does not interfere with the enjoyment of the park by visitors and that the natural and cultural resources of the park are protected..

Routine Uses: In addition to those disclosures generally permitted under 5 U.S.C.552a(b) of the Privacy Act, records or information contained in this system may be disclosed outside the National Park Service as a routine use pursuant to 5 U.S.C. 552a(b)(3) to other Federal, State, territorial, local, tribal, or foreign agencies and other authorized organizations and individuals based on an authorized routine use when the disclosure is compatible with the purpose for which the records were compiled as described under the system of records notice for this system

Effects of Nondisclosure: It is in your best interest to answer all the questions. The U.S. Criminal Code, Title 18 U.S.C. 1001, provides that knowingly falsifying or concealing a material fact is a felony that may result in fines of up to \$10,000 or 5 years in prison, or both. Deliberately and materially making false or fraudulent statements on this form will be grounds for not granting you a Special Use Permit

Information Regarding Disclosure of Your Social Security Number Under Public Law 93-579 Section 7(b): Your Social Security Number (SSN) is needed to identify records unique to you. Applicants are required to provide their social security or taxpayer identification number for activities subject to collection of fees and charges by the National Park Service. Failure to disclose your SSN may prevent or delay the processing of your application. The authority for soliciting your SSN is 54 U.S.C.103104. The information gathered through the use of the SSN will be used only as necessary for processing this application and collecting and reporting any delinquent financial obligations. Use of the social security number will be carried out in accordance with established regulations and published notices of system of records.

Paperwork Reduction Act Statement

We are collecting this information subject to the Paperwork Reduction Act (44 U.S.C. 3501) to provide the park managers the information needed to decide whether to allow the requested use. All applicable parts of the form must be completed for your request to be considered. You are not required to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

Estimated Burden Statement

Public reporting burden for this form is estimated to average 30 minutes per response including the time it takes to read, gather and maintain data, review instructions and complete the form. Direct comments regarding this burden estimate, or any aspects of this form, to the Information Collection Clearance Officer, National Park Service, 12201 Sunrise Valley Drive, Mail Stop 242, Reston, VA 20192. Please do not send your form to this address.

INTERNAL AGENCY USE ONLY

Construction Permit Number	PEPC
Section/Milepost	District
Organization Name NATR	

**National Park Service
Department of Interior**

**Natchez Trace Parkway
Mississippi/Alabama/Tennessee**



Special Use Construction Permit Additional Information

General Information for Construction Permits Natchez Trace Parkway

DESCRIPTION

A Construction Permit (CP) is a type of Special Use Permit (Form 10-114) issued by the Natchez Trace Parkway (Parkway) authorizing a government agency, public utility, or an individual to utilize Park lands or waters in the lawful exercise of a right or privilege concerning the construction of public and private roads or the installation of utilities. Construction Permits are only granted if a lawful right exists, such as a deed reserved easement.

A CP must be obtained from the Parkway before any construction activity can occur on Park lands within a deed reserved easement or right-of-way. This includes the installation of utilities and road construction. All construction activity must occur within the geographic limits of the deed reserved easement and construction equipment is not allowed to trespass outside of the easement.

DEED RESERVED EASEMENTS

Deed reserved easements are property rights held on Parkway lands by public road system entities, utility companies, and private landowners adjacent to the Parkway. These deeded easements generally function as rights-of-way. The easements are recorded in the chancery clerk's office in the respective county in which the easement is geographically located.

UTILITY PLACEMENT SPECIFICATIONS

- Utilities may only be placed within road rights-of-way or within deed reserved utility easements.
- All utilities to be placed along a public road right-of-way must be placed in the managed corridor of the road.
- Utilities may not be placed in previously undisturbed ground and no woody vegetation can be disturbed.
- Utilities may be installed by either trenching or boring methods with a depth that reasonably protects the utility from damage or ensures that the utility is not a safety hazard.
- When trenching, utilities must be installed a minimum depth of 3' with metal warning tape installed 1' above utility.
- Utilities installed within public road rights-of-way should be placed within 10' of edge-of-pavement. However, if boring is necessary to avoid bridge structures, the boring must occur 10' from the outermost extent of the bridge. Therefore, the utility will be placed within 10' of pavement edge except in the vicinity of the bridge.
- When installing a utility along a public road that crosses under the Parkway motor-road, trenching is allowed along the extent of the project if the bridge structure will not be damaged. Otherwise, the utility must be installed under the Parkway motor-road by boring 10' from the outermost extent of the bridge, while trenching is used for the remainder of the project.
- If the utility will cross the motor-road at-grade, either within a road right-of-way or a deed reserved utility easement, boring is required. However, in these cases, trenching is allowed up to the base of the Parkway motor-road shoulder.
- Bores under the Parkway motor-road must be at a minimum depth of 6'.

PROCESSING TIME

The average processing time for an approved construction permit is two to three months. Incomplete application forms or those lacking sufficient detail/map will not be processed. CP processing steps are as follows:

- Parkway staff evaluates the impact of the proposed construction activity on the Parkway. If the impact is acceptable, a permit is prepared with the concurrence of the State Historic Preservation Office.
- Permit is sent to applicant for signature.
- Applicant returns the signed permit to the Parkway Superintendent for authorization signature.
- Superintendent returns copy of authorized permit to applicant. No construction work may occur until an approved construction permit has been issued.

LIABILITY INSURANCE AND PERFORMANCE BOND

- Liability insurance in the amount of \$1 million per occurrence/\$3 million aggregate for liability insurance is the default requirement. Changes in these amounts can be discussed for non-standard projects that are especially large or small.
- Performance bonds may be required to guarantee compliance with permit conditions or to reimburse the Parkway for damage to resources or facilities as a result of the permittee's activities.
- The bond amount is based on the cost of deconstruction, cleanup, or repair for any potential damage.
- The requirement for a bond will be discussed on an individual basis depending on the project type

Internal Agency Use
PEPC: _____
Parkway Section: _____
Milepost: _____ District: _____
Start: _____

Information requested in addition to NPS Form 10-930 for a construction or right-of-way permit.

A. Primary Project Information:

Project Title:	Natchez Trace Revetment Project
Project Location:	Texas Eastern Transmission, LP Pipeline, near MP 85
Parkway Mile Marker (nearest tenth):	85.1
Section/Township/Range and/or GPS coordinates:	Section 35, Township 6N, Range 2W
Street:	Natchez Trace Parkway
City:	
County:	Hinds County
State:	Mississippi
Other geographic information (i.e., landmarks):	Latitude: 32.319200°, Longitude: -90.373819°

B. Location Map of Proposed Work:

Attach a map that includes the following:

- Parkway boundary and motor-road can be located
- Scale bar is provided
- North arrow is provided
- Alignment of proposed work

Is the project in 100 or 500 year floodplain or flash flood hazard area? ☒ Yes ☐ No

C. Detailed Drawing of Proposed Work:

Attach a drawing that includes the following:

- Parkway boundary
- All dimensions and labels necessary for illustrating technical aspects of project for example:
 - installation depth
 - distance from road edge
 - construction extent

D. Contractor Information (leave blank if not contracted):

Name:	
Address:	
Telephone:	
Fax:	
Email:	

E. Project Information (check applicable):

- ☒ Utility (power line; water line etc.)
- ☐ Public Road
- ☐ Private Road
- ☐ Other

F. Construction Level (check applicable):

- ☐ New Construction – Permanent
- ☐ New Construction – Temporary
- ☒ Replacement/Maintenance/Rehabilitation/Removal
- ☐ Other (please explain below):

The proposed Project consists of the installation of an articulating grout mat for armoring and protection of the existing Line 14, 18, and 31 pipeline right of way to prevent additional erosion and exposure within Lindsey Creek.

Texas Eastern Transmission plans to access the Project area via its existing right-of-way from the I-20 Frontage Road located at 32.343343°, -90.358414°.

Please see attached field assessment and permitting documentation:

1. Project Location Map
2. Project Alignment Drawings
3. Completed wetland delineation survey report dated November 19, 2019.
4. U.S. Army Corps of Engineers Pre-construction Notification (Nationwide Permit 12 and Nationwide Permit 13) – submitted November 11, 2019
5. Verification via email for Pre-Construction Notification (MVK-2019-910) indicating no PCN is required for the Project – dated November 26, 2019.
6. U.S. Fish and Wildlife Service Threatened and Endangered Species consultations (included in PCN) – Concurrence received November 15, 2019.
7. Mississippi Department of Wildlife, Fisheries, and Parks consultations (included in PCN) – Concurrence received November 12, 2019.
8. Completed State Historic Preservation Office (SHPO) consultations (Included in PCN) – Concurrence received November 14, 2019.

G. Legal Basis of Location:

- ☒ Within deed-reserved or National Park Service issued right-of-way
- ☐ Within the public road right-of-way
- ☐ Within deed-reserved private access easement
- ☐ Other (please explain below):

FBMS Customer Request Form

[Save and Submit](#)

To request a new customer or an update to an existing customer, complete this form.

Remedy Issue ID _____

Requestor Information

Date (Enter MM/DD/YYYY) May 12, 2023	Bureau NPS	Request Type Routine (within 48 hrs) <input checked="" type="radio"/> Emergency (Notify VMM helodesk by phone) <input type="radio"/>
Requestor Name Jabari Martin	Phone Number (615) 767-3085	Email Address Jabari.Martin@enbridge.com

Action(s) Requested

<input checked="" type="radio"/> Create a new customer	DOI Commercial - Reserved for businesses both domestic and foreign (Account group: Z501) <input checked="" type="radio"/>	DOI Consumer - Individuals, including employees and former employees (Account group: Z503) <input type="radio"/>	DOI Federal Government US - US Federal government customers (Account group: Z500) <input type="radio"/>	DOI Foreign- Foreign Governments only (Account group: Z502) <input type="radio"/>	DOI Local and State Government - Local and state governments, and universities (Account group: Z506) <input type="radio"/>
<input type="radio"/> Change					
<input type="checkbox"/> Link to corresponding vendor					
<input type="checkbox"/> Customer Needed as Real Estate Business Partner					

Customer Information

Last Name (Business Name) Texas Eastern Transmission, LP	First Name	Middle Initial	
Address 555 Marriot Drive, Suite 600			
City Nashville	State Tennessee	Postal Code 37214	Country United States

Customer Contact for Request

Name Jabari Martin	Phone (615) 767-3085	Email Address Jabari.Martin@enbridge.com
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Business Information

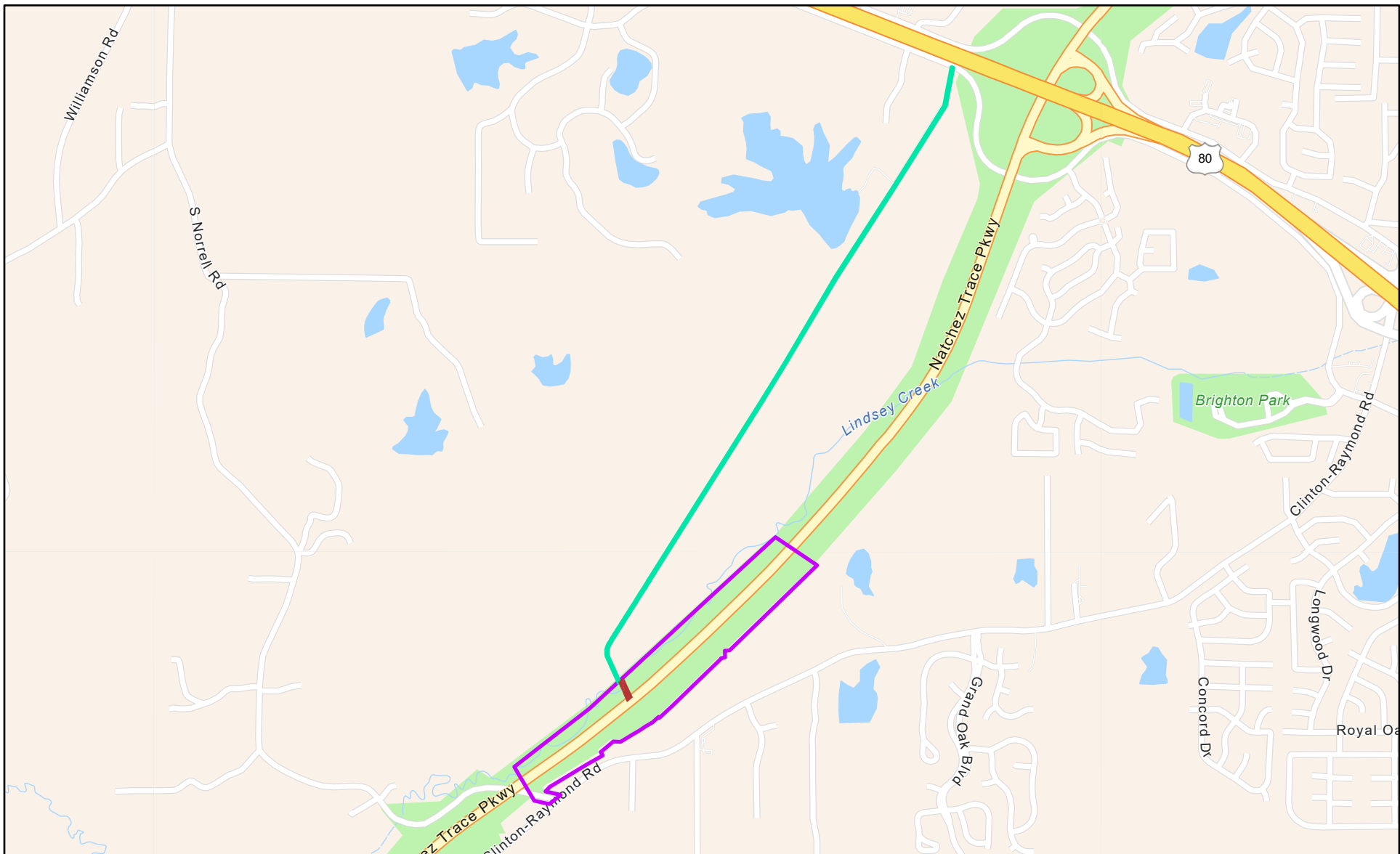
		DUNS
Social Security Number (DO NOT ADD DASHES)	Taxpayer Identification Number (DO NOT ADD DASHES)	

Financial Institution Information

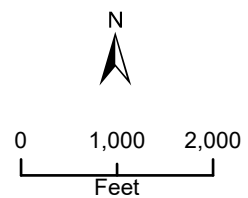
<input checked="" type="checkbox"/> Select if Bank Data is not required or do not select if Bank Data is required (for refunds, etc.)	Bank Name	ABA Number	Account Number	Account Type <input checked="" type="radio"/> Checking <input type="radio"/> Saving
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Other Special Instructions

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- Legend**
- Project Location
 - Access
 - Lindsey Creek Natchez Trace Boundary
 - Existing Pipeline



Scale: 1:24,000



Figure 1
Project Vicinity Map

Texas Eastern Transmission, LP
Natchez Trace Revetment Project
Hinds County, Mississippi

DWG. NO.	DWG. TITLE
UCHC-CLIN_MP 307 TO_MP 307.9 NATCHEZ TRACE REVETMENT PROJECT	
DRAWING INDEX	
UCHC-C-8210	COVER SHEET, VICINITY MAP
UCHC-L-1100	ACCESS & OVERVIEW MAP
UCHC-X-0442	PLD-442 (REFERENCE)
UCHC-X-0442A	PLD-442A (REFERENCE)
UCHC-A-1010	PROPOSED REVETMENT - PLAN, PROFILE & SECTIONS
STANDARD SHEET 1 OF 2	
ES-0029	TEMPORARY EQUIPMENT BRIDGE (EQUIPMENT PADS WITH OR WITHOUT CULVERTS)
ES-0030	TEMPORARY EQUIPMENT BRIDGE (CRUSHED STONE WITH CULVERTS)
ES-0031	TEMPORARY EQUIPMENT BRIDGE (FLEX-FLOAT OR PORTABLE BRIDGE)
ES-0032	TYPICAL STANDARD WETLAND CROSSING
ES-0033	TYPICAL WET WATERBODY CROSSING
ES-0034	TYPICAL FLUME WATERBODY CROSSING
ES-0035	TYPICAL DAM-AND-PUMP WATERBODY CROSSING
STANDARD SHEET 2 OF 2	
ES-0018	PERMANENT SLOPE BREAKER
ES-0019	CHEVRON SLOPE BREAKER
P4200	TYPICAL TEMPORARY BRIDGE
SP-1000	PIPELINE CROSSING MAT
XX-XXXX	FABRIFORM ARTICULATING BLOCK
REFERENCE DRAWINGS	
UCHC-CLIN 14 SHT. 079	EXISTING ALIGNMENT
UCHC-CLIN 18 SHT. 033	EXISTING ALIGNMENT
UCHC-CLIN 31 SHT. 079	EXISTING ALIGNMENT

TEXAS EASTERN TRANSMISSION SYSTEM
UCHC - CLIN, MP 307 & MP 307.9
NATCHEZ TRACE REVETMENT PROJECT
HINDS COUNTY, MISSISSIPPI
2023

DATE	ISSUE	LEAD DFRS.	SECT. SUPV.	APPROVALS		
				PROJ. DESIGN	ENG./MGR.	PROJECT DIRECTOR
06/26/2023	<input checked="" type="checkbox"/> ISSUED FOR REVIEW - 60% (A)	LGF		RWG	AC	
07/14/2023	<input checked="" type="checkbox"/> ISSUED FOR BID - (B)	LGF		RWG	AC	
08/18/2023	<input checked="" type="checkbox"/> ISSUED FOR CONSTRUCTION - (0)	LGF		RWG	AC	
12/11/2023	<input checked="" type="checkbox"/> ISSUED FOR PERMIT - (1)	LGF		RWG	AC	

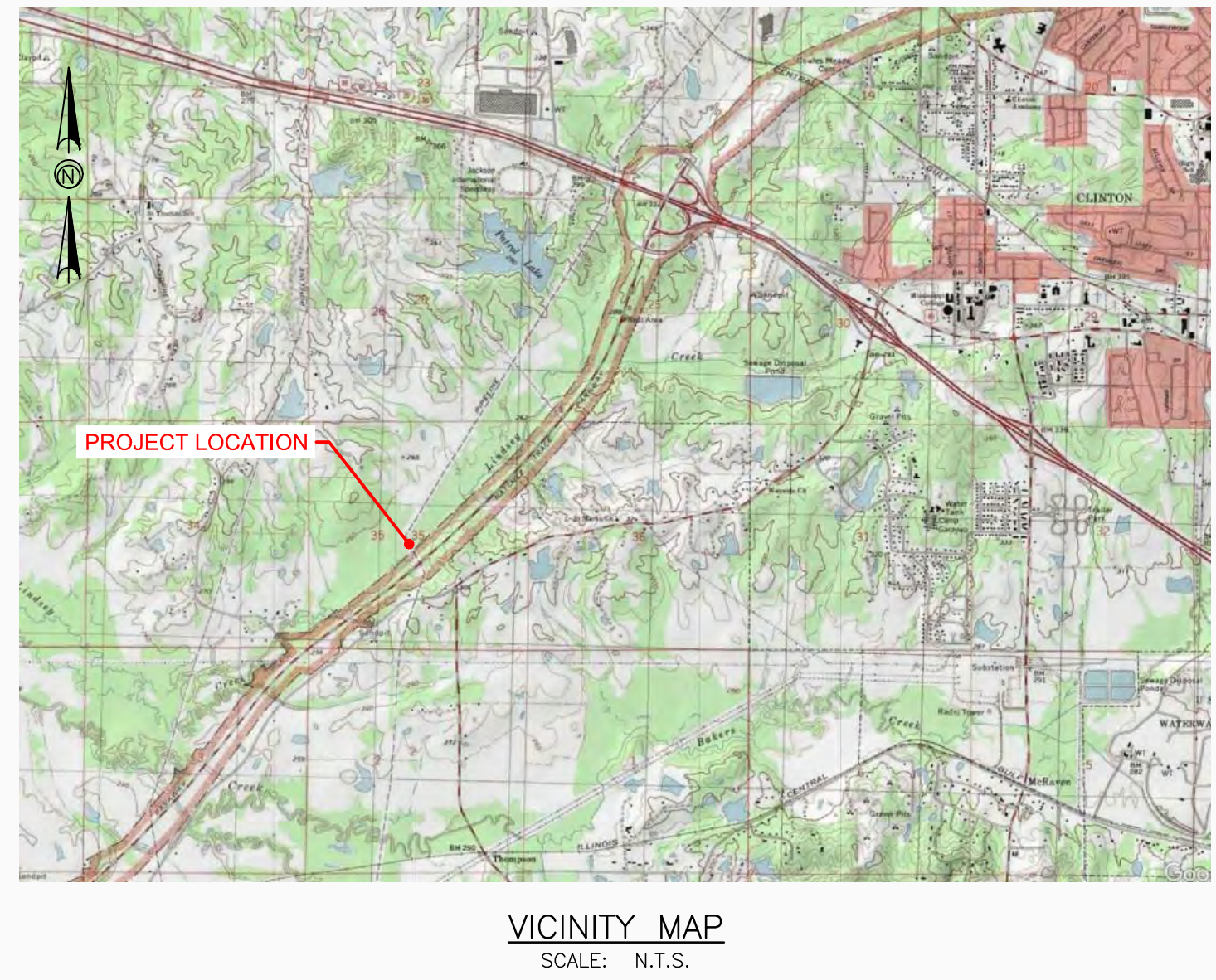


EXHIBIT A
SRO NO. PUR-5020-2008277
PLANT W.O. NO. _____
PIPELINE A.F.E. NO. MC.400189.003
YEAR 2023

ISSUED FOR
12/11/23
PERMIT

PREPARED BY:

audubon
Field Solutions
10205 WESTHEIMER ROAD
SUITE 100
HOUSTON, TEXAS 77042
PHONE: (281) 669-0590




Texas Eastern Transmission, LP
915 North Eldridge Parkway, Suite 1100, Houston, TX 77079 713-627-5400



<div style="border: 2px solid red; padding: 5px; text-align: center; color: red; font-weight: bold;"> ISSUED FOR 12/11/23 INFORMATION </div>				△				
				△	LGF	RG	ISSUED FOR PERMIT	(12/11/2023)
				△	LGF	RG	ISSUED FOR CONSTRUCTION	(08/18/2023)
				△	LGF	RG	ISSUED FOR BID	(07/14/2023)
				△	LGF	RG	ISSUED FOR REVIEW	(06/26/2023)
				△	LGF	RG	ISSUED FOR PERMIT	(06/02/2023)
DWG. NO.	DESCRIPTION		REV	DSN	CK	DESCRIPTION		ITE
REFERENCE DRAWINGS			REVISIONS					

ITEM NO.	DESCRIPTION MATERIALS	QTY



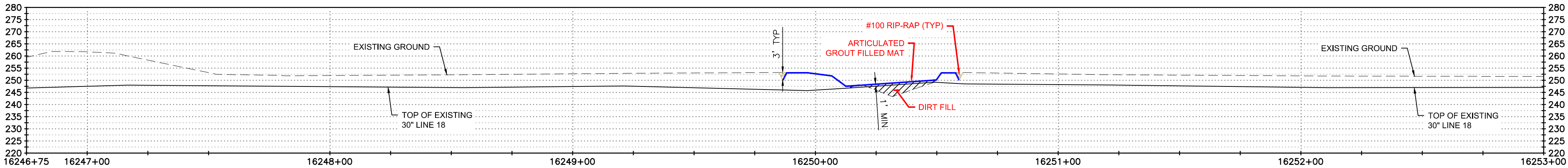
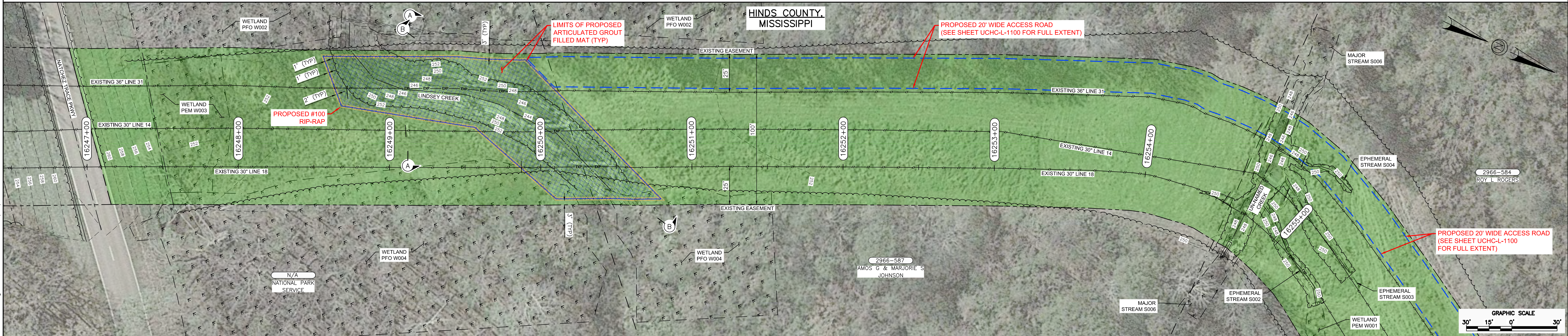
audubon
Engineering
10205 WESTHEIMER ROAD
SUITE 100
HOUSTON, TX 77042
PHONE: (281) 669-0590

	ENGINEERING APPROVALS			
DRAWN BY:	BID		CONSTRUCTION	
LGF				
TITLE	SIGNATURE	DATE	SIGNATURE	DATE

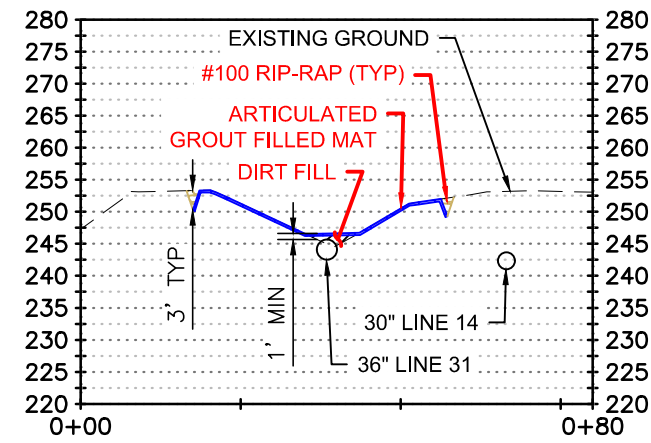
TEXAS EASTERN TRANSMISSION SYSTEM UCHC-CLIN, MP 307 & MP 307.9 NATCHEZ TRACE REVETMENT PROJECT ACCESS AND OVERVIEW MAP		
LOC.	HINDS COUNTY, MISSISSIPPI	
YEAR: 2023	A.F.E. MC.400189.003	SCALE: 1"=20'

			
<p align="center">Texas Eastern Transmission, LP 915 North Eldridge Parkway, Suite 1100, Houston, TX 77079 713-627-5400</p>			
00'	DWG.	UCHC—L—1100	REV. 1

S:\AE\Projects\Enbridge\TETLP\026050-001\870_Mapping\001_Alignment\026050-001 Natchez Trace Plan_Profile_Sections.dwg - PLOT TIME: 12/8/2023 10:17 AM



PROFILE VIEW - REVETMENT OVER EXISTING 30" LINE 18
STA. 16246+75 TO STA. 16256+00
SCALE: 1"=30'H, 1"=30'V

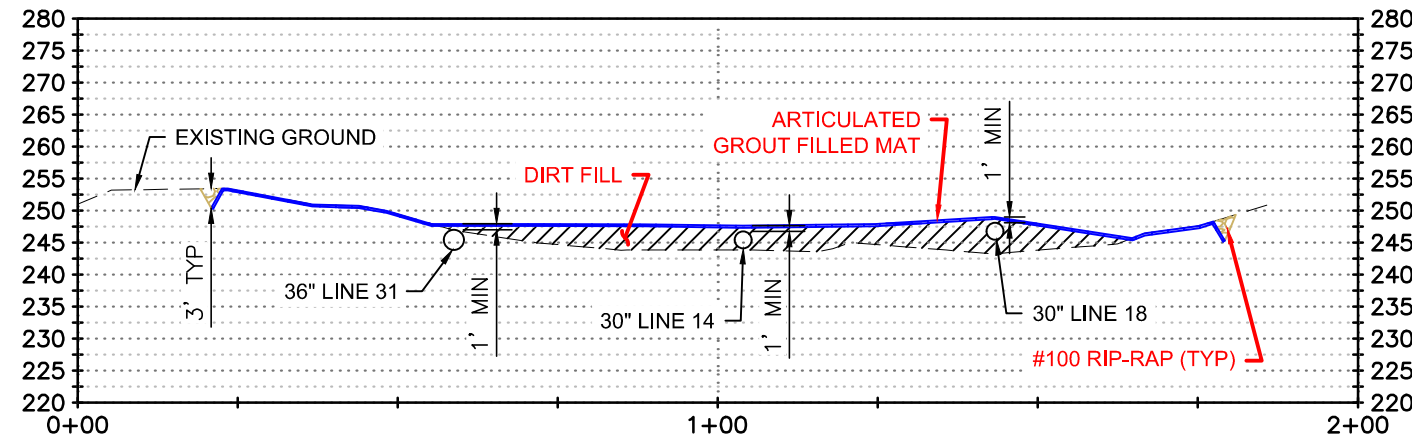


SECTION A
LOOKING UP STATION
SCALE: 1"=30'H, 1"=30'V

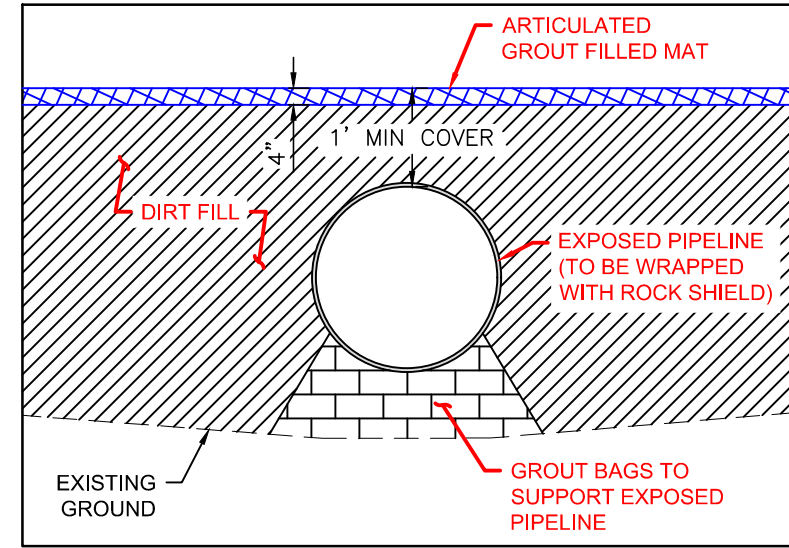
NOTES:

- BEARINGS AND DISTANCES ARE REFERENCED TO THE MISSISSIPPI STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM 1983 (NAD 83).
- CIVIL SURVEY WAS PERFORMED BY AUDUBON FIELD SERVICES IN MAY 2023.
- ILI TOOL DATA PROVIDED BY ENBRIDGE.
- THE PROPERTY LINES SHOWN HEREON ARE NOT THE RESULT OF A BOUNDARY SURVEY AND ARE BASED ON TAX MAPS.
- CONTRACTOR WILL BE REQUIRED TO ISOLATE THE EXPOSED PIPE, CREATE A DRY ENVIRONMENT, INSPECT THE COATING AND REPAIR AS NEEDED. CONTRACTOR SHALL EXPOSE, REMOVE EXISTING COATING (AS NEEDED), SANDBLAST AND RECOAT EXPOSED PIPE EXTENDING A MINIMUM OF 10 FT. INSIDE EACH BANK. CONTRACTOR WILL ASSIST WITH NDE INSPECTION AS NEEDED.
- CONTRACTOR SHALL PROVIDE AND REPAIR COATING UTILIZING #B19 COATING REPAIRS FOR UNDERWATER PIPELINES (2S) (DENSO S28 EPOXY) PER ENBRIDGE FIELD AND SHOP APPLIED BELOW GROUND COATINGS DS-FSC1.
- CONTRACTOR SHALL PROVIDE AND INSTALL FILL TO PROVIDE 1 FT. OF COVER OVER EXPOSED PIPELINES. FILL MAY BE ACQUIRED ONSITE FROM CUT AREAS TO RE-ESTABLISH CREEK AND ADDITIONAL FILL SHALL BE BROUGHT IN TO COMPLETE PIPELINE COVERAGE AND BANK RE-CONFIGURATION.
- CONTRACTOR SHALL PROVIDE AND INSTALL APPROX. 9,648 SQ. FT. OF RO 60 NON-WOVEN GEOTEXTILE FABRIC OR EQUIVALENT. THE GEOTEXTILE FABRIC SHALL BE PLACED BELOW AND TIED-IN WITH THE ARTICULATED (GROUT FILLED) BLOCK MATS (ABM). SEE ATTACHED ABM TYPICAL SECTION DRAWING FOR DETAILS REGARDING MATERIALS AND DESIGN.
- CONTRACTOR SHALL PROVIDE AND INSTALL ONE APPROX. 9,648 SQ. FT. OF 4 INCH OF ARTICULATED (GROUT FILLED) BLOCK MAT (ABM) WITH 3 FT. DEEP TOE-IN ON ALL SIDES. THE TOE-IN SHALL BE MADE UTILIZING 100# ROCK RIP-RAP WHERE INDICATED, AND DIRT AND SOIL WHERE INDICATED. CONTRACTOR IS TO PROVIDE SUFFICIENT 100# ROCK RIP-RAP TO COMPLETE INSTALLATION OF THE TOE-IN OF THE ABM. CONTRACTOR MAY MAKE ADJUSTMENTS IN THE LOCATION OF THE ABM AS REQUIRED TO ACHIEVE CORRECT CONTOUR OF BANK AND COVERAGE OVER THE PIPE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY PERMITTING REQUIRED TO TRANSPORT THE FILL MATERIAL, ABM AND THE 100# ROCK RIP-RAP FOR TOE-IN TO THE WORK SITE.
- CONTRACTOR TO BE AWARE OF AND TAKE ALL PRECAUTIONS WHEN WORKING AROUND OVERHEAD POWER LINES AND POWER LINE SUPPORTS.
- CONTRACTOR SHALL FOLLOW THE FOLLOWING DESIGN GUIDELINES:
 - ALL WORK MUST BE CONDUCTED INSIDE OF 100' EASEMENT
 - USE BIODEGRADABLE MATERIALS, WHERE POSSIBLE
 - NO PLASTIC NETTING
 - TRY TO USE NATURAL FIBER MATERIALS
 - RE-SEEDING (NATIVE VEGETATION, SEEDS MIXES, WILDFLOWERS)
 - NATIVE STONE COLORS (ON RIP-RAP, IF POSSIBLE)

NATCHEZ TRACE VOLUMES	
FILL TYPE	LINDSEY CREEK QUANTITIES
ROCK FILL	97 CU YDS
SOIL FILL	166 CU YDS
GROUT BAGS	118 CU YDS
TOTAL FILL	381 CU YDS



SECTION B
LOOKING UP STATION
SCALE: 1"=30'H, 1"=30'V



TYPICAL SECTION SHOWING
ARTICULATED GROUT FILLED MAT AND COVER
SCALE: NTS

LEGEND

- EXISTING PIPELINE (SURVEY DATA) ---
- EXISTING EXPOSED PIPELINE (SURVEY DATA) --- EXP
- EXISTING PIPELINE EASEMENT ---
- EXISTING CONTOUR W/ ELEVATION (FT.) --- -248-
- TREE CANOPY LINE ---
- CENTERLINE OF CREEK ---
- TOP OF BANK ---
- TOE OF SLOPE ---
- PROPERTY LINE ---
- PROPOSED ACCESS ROAD ---
- ENVIRONMENTAL STREAM ---
- ENVIRONMENTAL WETLAND FEATURE ---
- TEMPORARY WORKSPACE/ EXISTING PIPELINE EASEMENT ---
- PROPOSED ARTICULATED GROUT FILLED MAT REVETMENT ---
- PROPOSED #100 RIP-RAP ---
- PROPOSED DIRT FILL ---

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12/11/23
PERMIT

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REVISIONS								
MATERIALS								

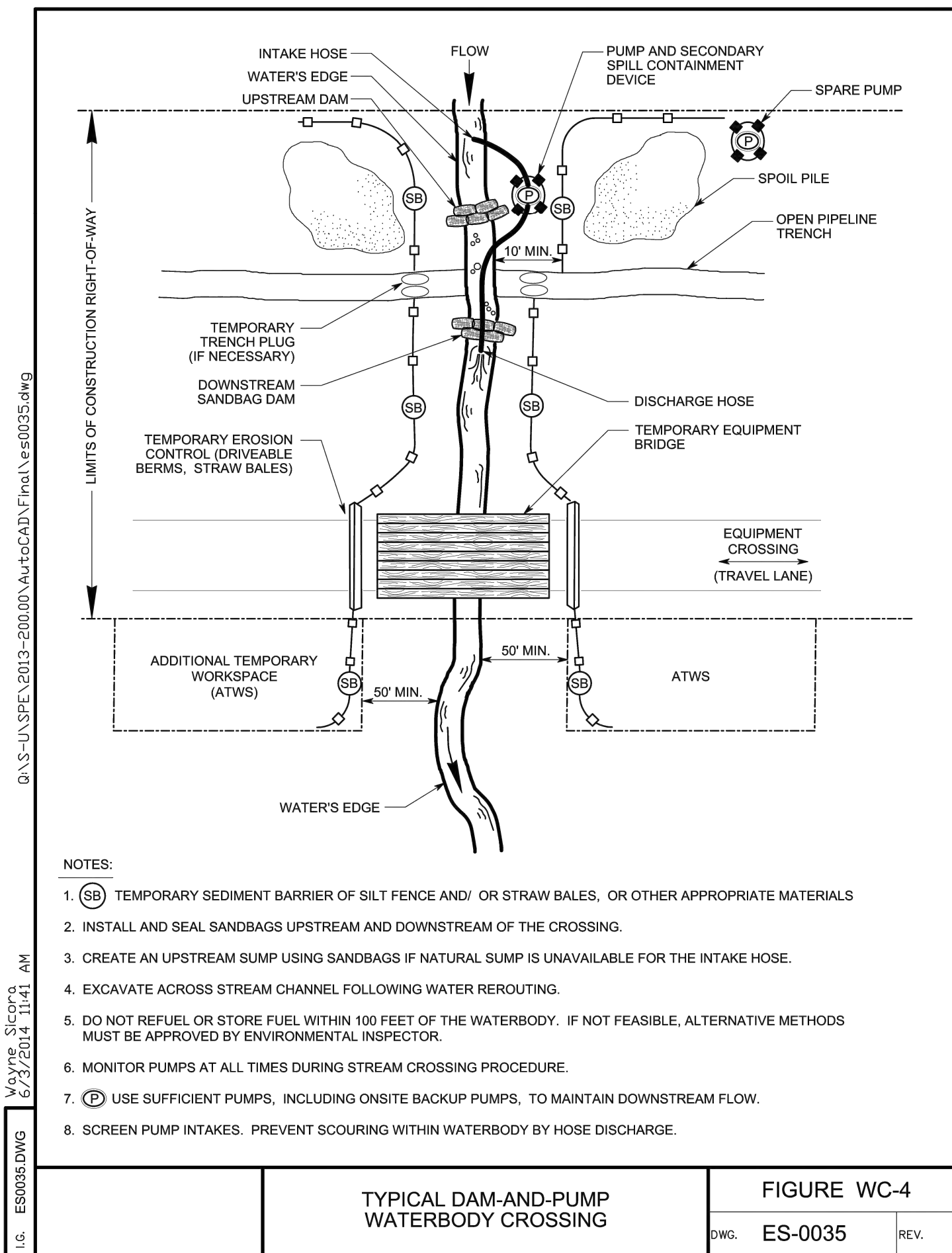
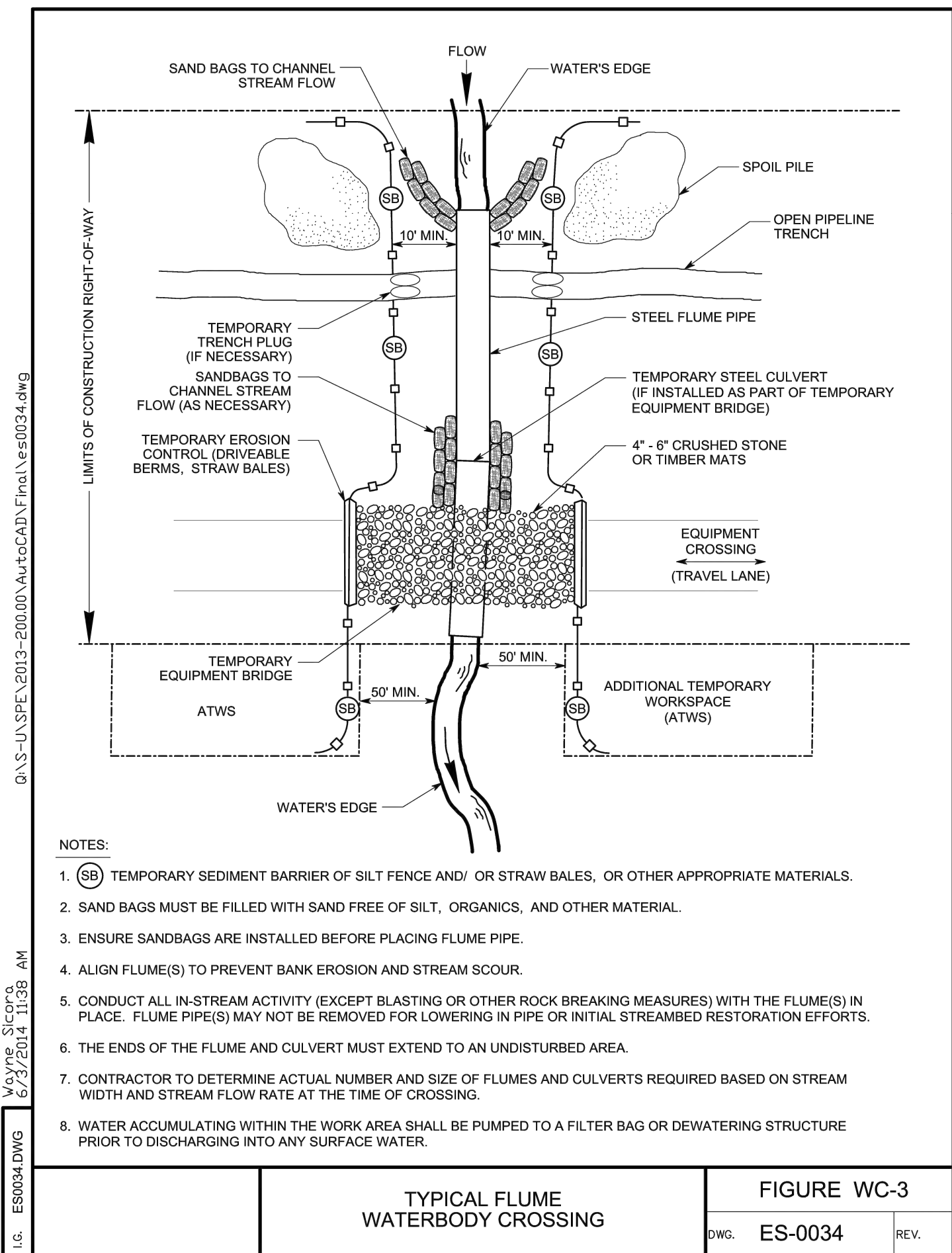
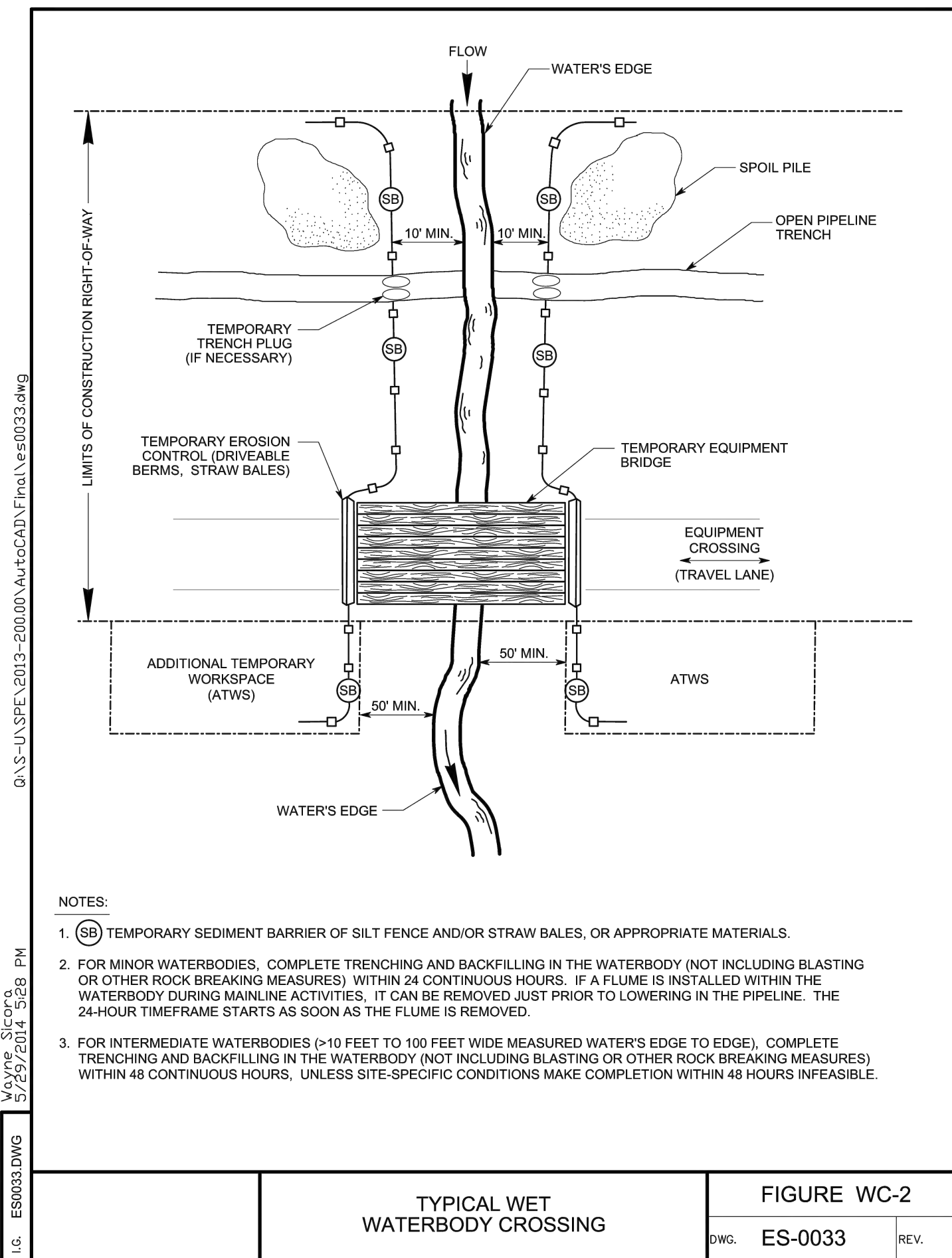
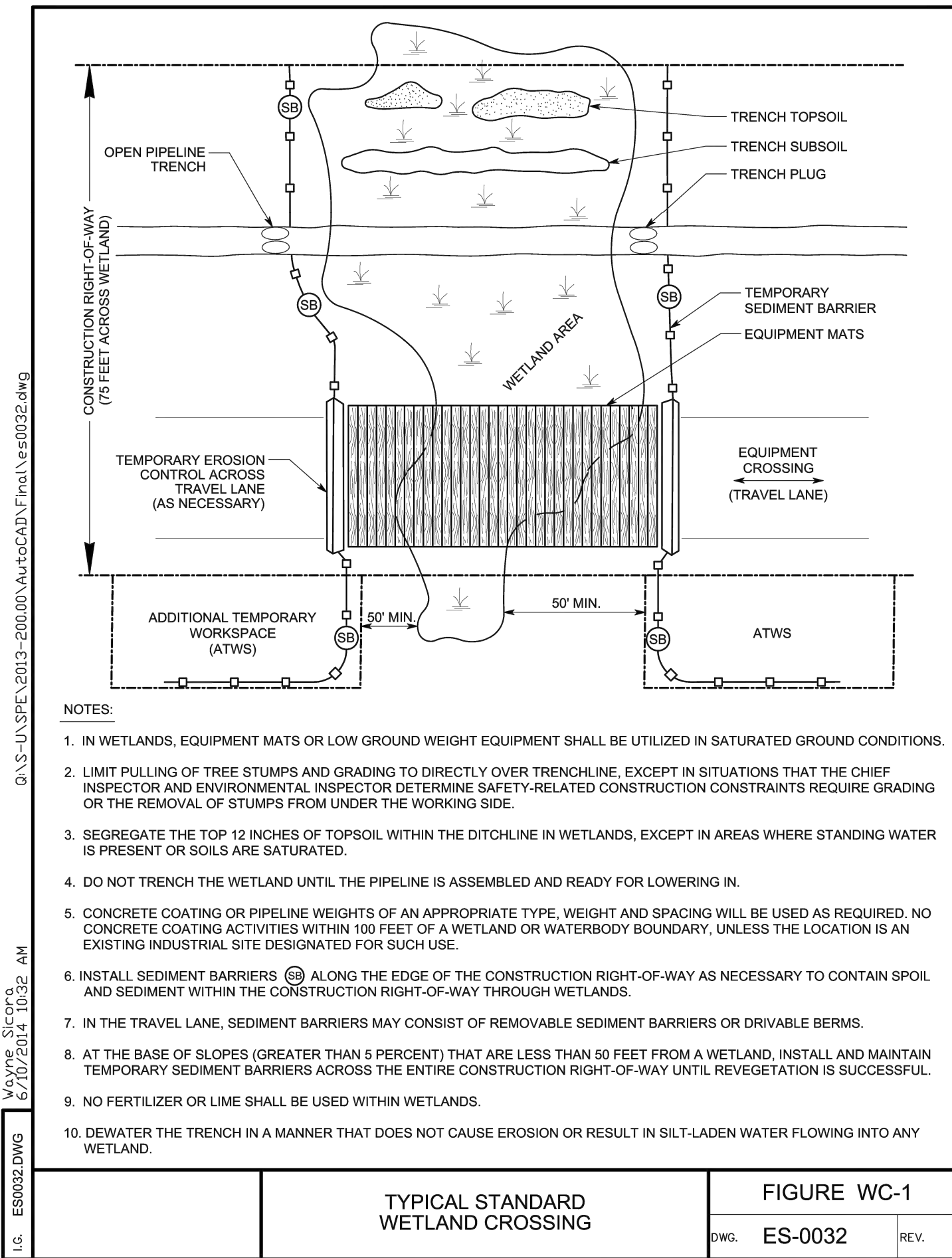
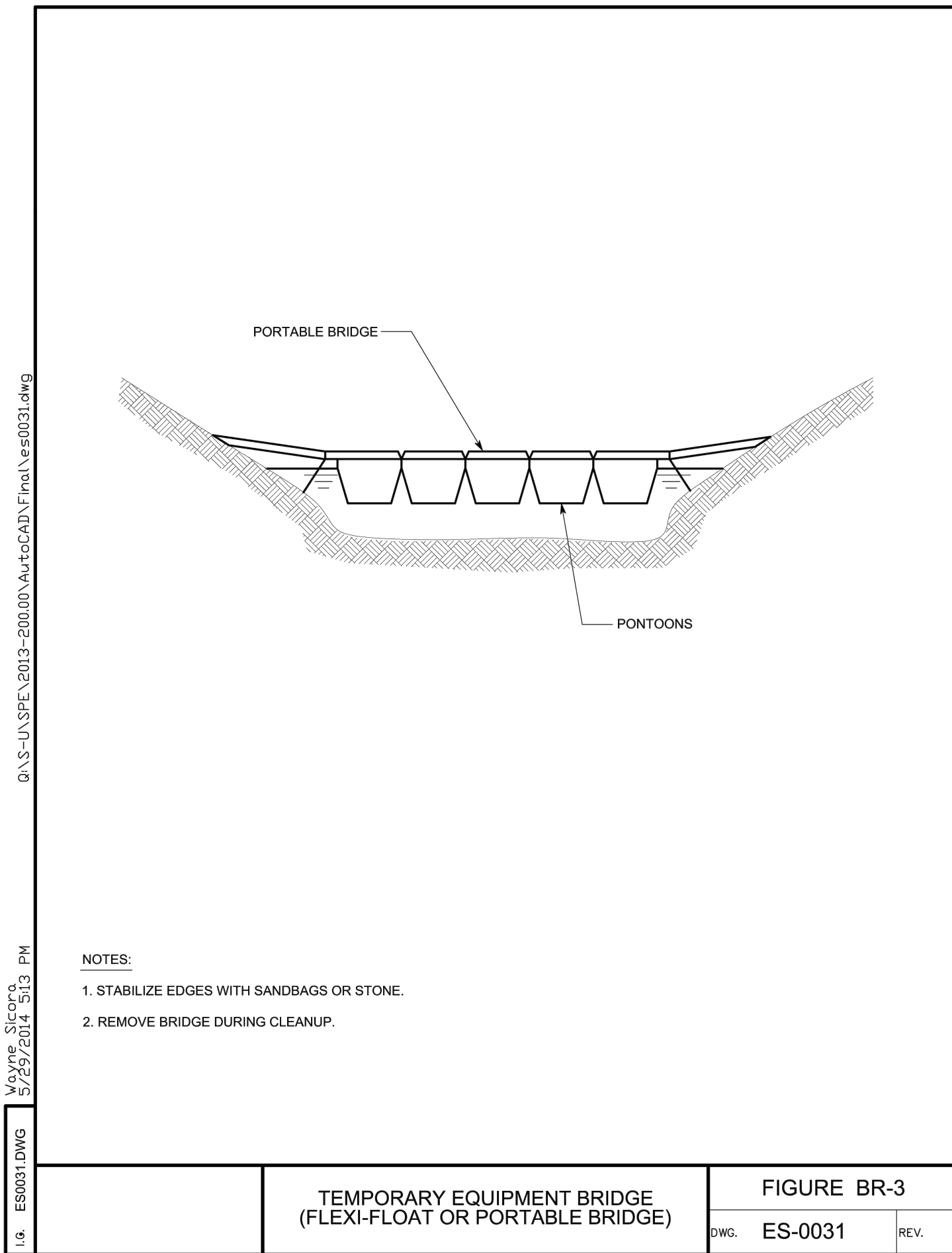
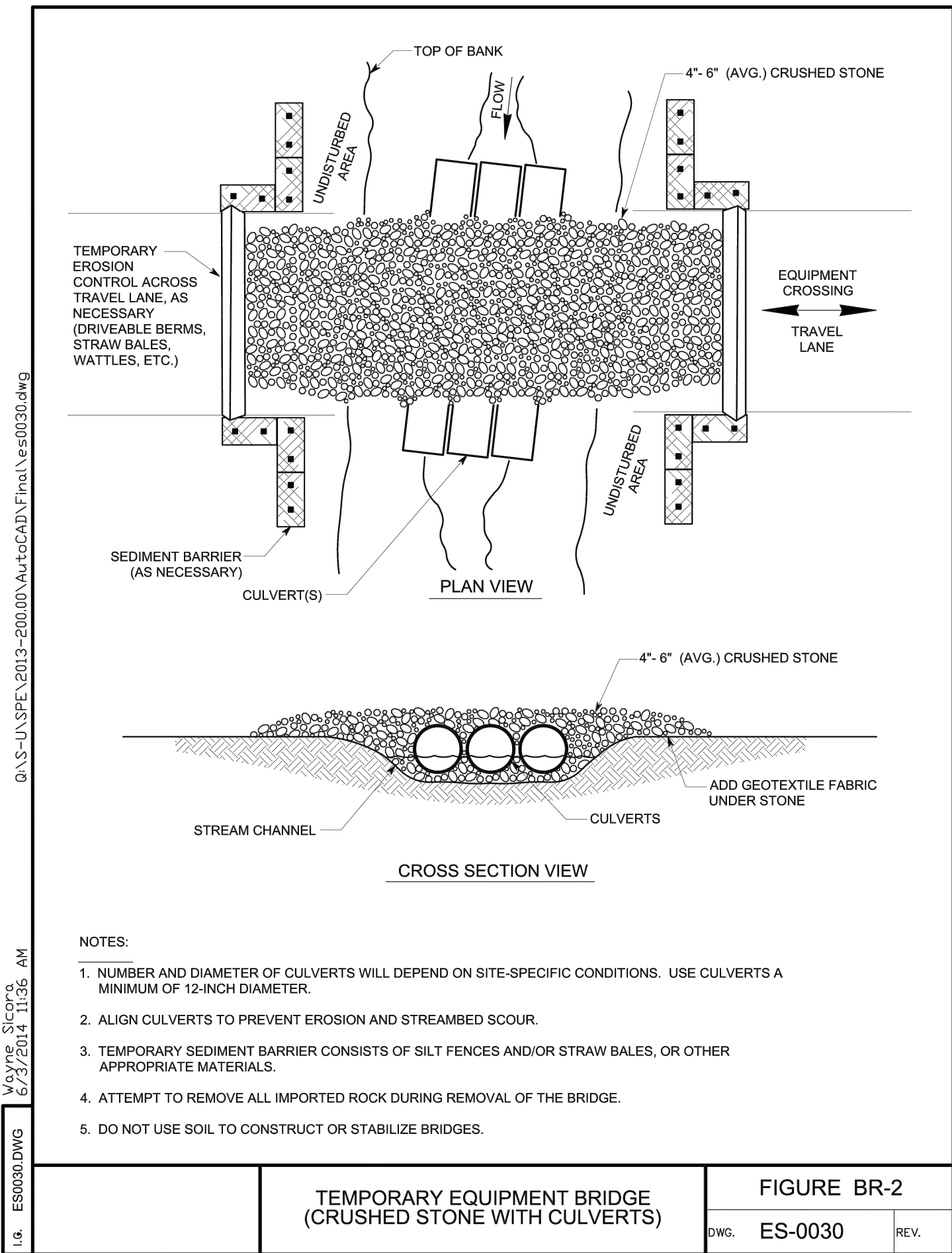
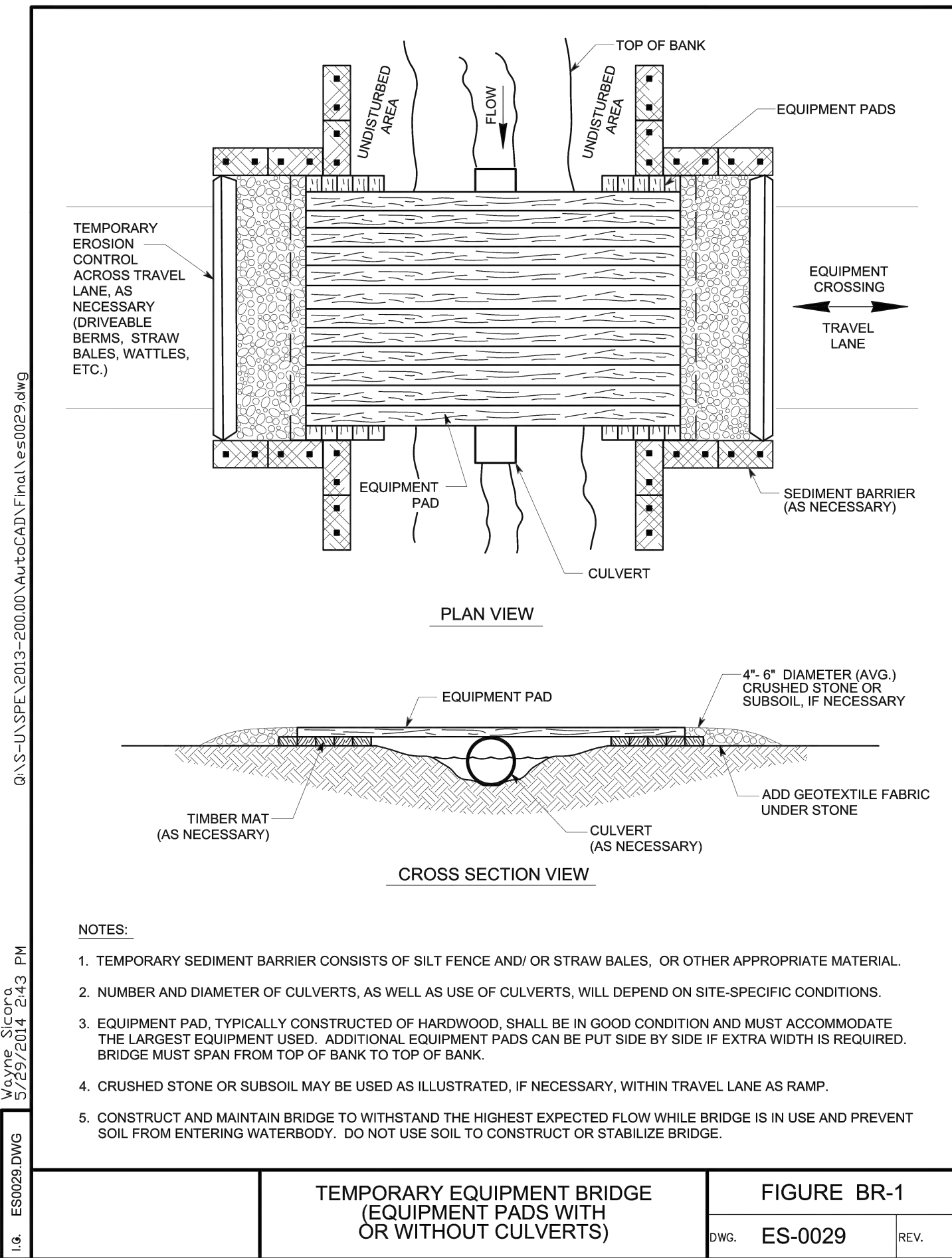
audubon
Field Solutions
10205 WESTMEIER ROAD
SUITE 100
HOUSTON, TEXAS 77042
PHONE: (281) 669-0590

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LOC.	HINDS COUNTY, MISSISSIPPI		
YEAR: 2023	A.F.E. MC.400189.003	SCALE: 1"=30'H, 1"=30'V	


ENBRIDGE
Texas Eastern Transmission, LP
5400 Westheimer Ct. Houston, TX 77056-5310 713 / 627-5400

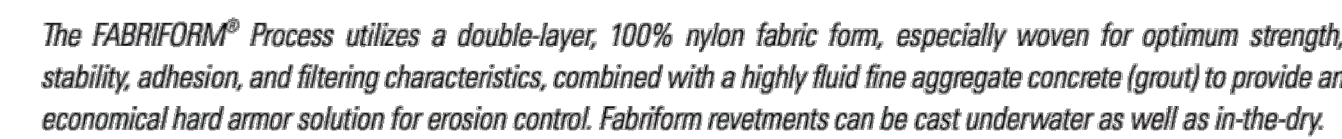
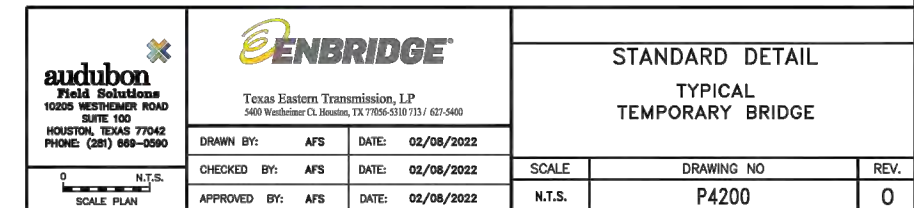
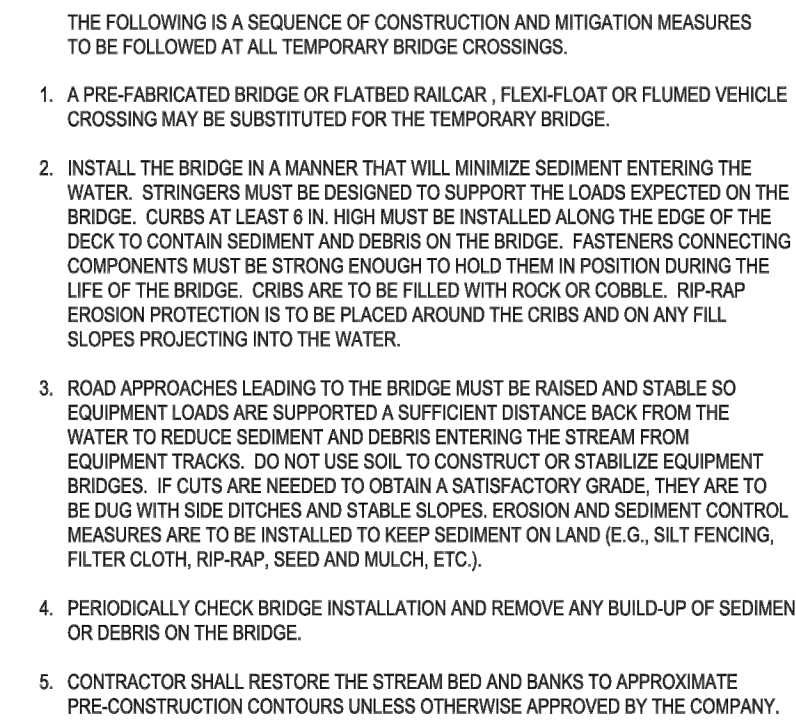
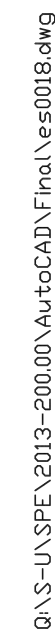
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INFORMATION

<div>ISSUED FOR 06/26/23 INFORMATION</div>										<div><div> audubon Engineering 10205 WESTHEIMER ROAD SUITE 100 HOUSTON, TX 77042 PHONE: (281) 669-0590</div></div>										<div>ENGINEERING APPROVALS</div> <table><tr><td>DRAWN BY:</td><td colspan="2">BID</td><td colspan="3">CONSTRUCTION</td></tr><tr><td>LGF</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>TITLE</td><td>SIGNATURE</td><td>DATE</td><td>SIGNATURE</td><td>DATE</td><td></td></tr></table>					DRAWN BY:	BID		CONSTRUCTION			LGF																		TITLE	SIGNATURE	DATE	SIGNATURE	DATE		<div>TEXAS EASTERN TRANSMISSION SYSTEM UCHC-CLIN, MP 307 & MP 307.9 NATCHEZ TRACE REVETMENT PROJECT STANDARDS</div>					<div> Texas Eastern Transmission, LP 915 North Eldridge Parkway, Suite 1100, Houston, TX 77079 713-627-5400</div>				
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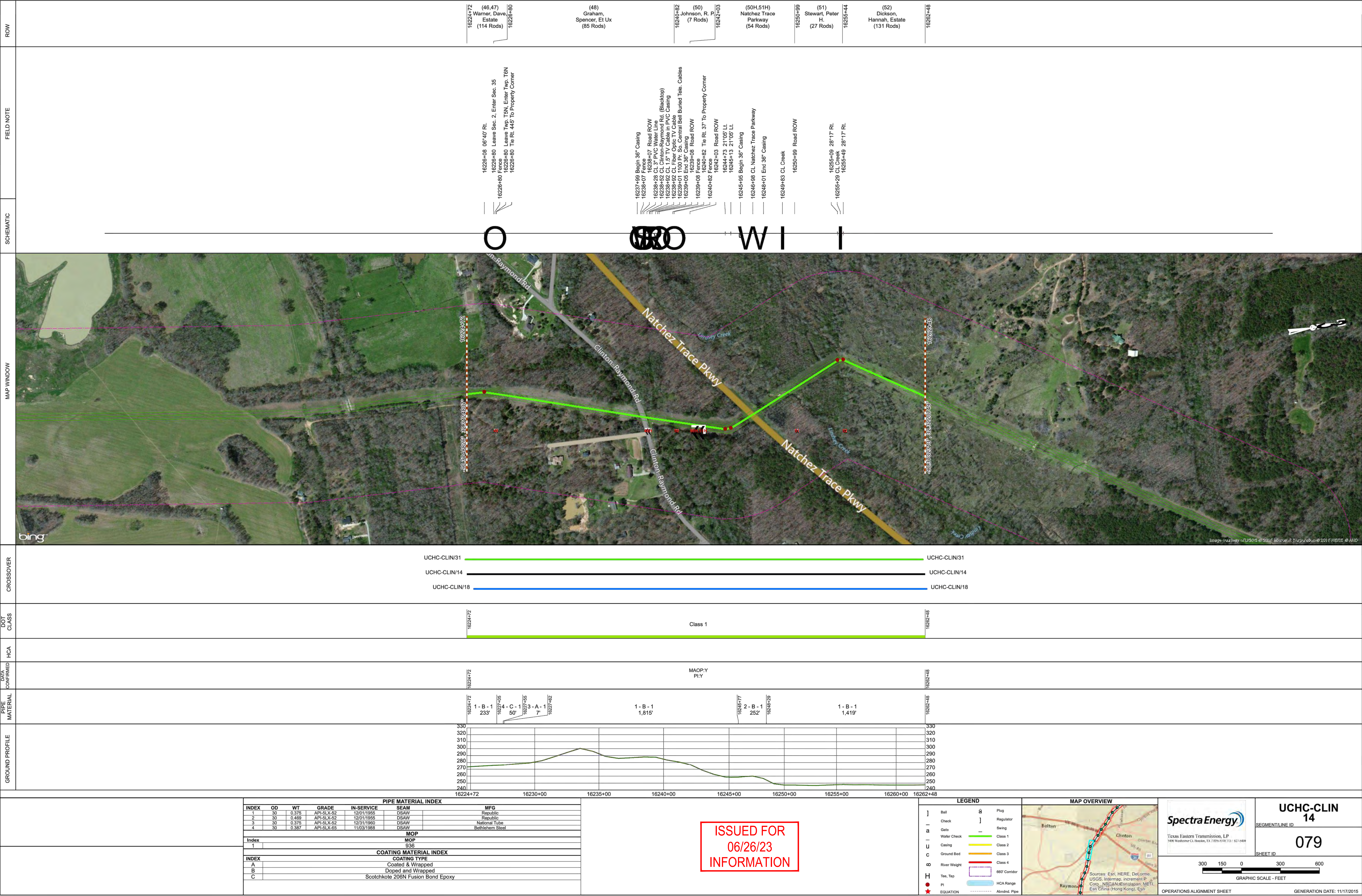
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Engineering
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06/26/23
INFORMATION



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Wetland Delineation and Waterbody Survey Report

Natchez Trace Revetment Project (Ref ID 1633) Hinds County, Mississippi

August 2023

Prepared for:



Enbridge Energy Partners
915 North Eldridge Parkway, Suite 1100
Houston, Texas 77079

Prepared by:



Edge Engineering and Science, LLC
16285 Park Ten Place; Suite 300
Houston, Texas 77084

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1.0 INTRODUCTION

Edge Engineering and Science, LLC (EDGE) conducted a wetland delineation survey on behalf of Texas Eastern Transmission (Texas Eastern), a wholly-owned subsidiary of Enbridge Energy Partners (Enbridge) for the proposed pipeline revetment project along its existing Lines 14, 18, and 31 natural gas pipelines (Project) in Hinds County, Mississippi. A Project Location Map is enclosed as Figure 1. This report describes the methodology and results of the wetland delineation survey which was conducted in October 2019.

2.0 METHODS

2.1 Map and Database Review

The following information sources were consulted prior to and during the field delineation to assist identification of potential wetlands and waterbodies within the survey area:

- + 7.5-minute series, 1:24,000 USGS topographic quadrangle for Hinds County, Mississippi, including the Clinton, Mississippi Quadrangle (USGS 2019);
- + U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) digital map for the State of Mississippi (USFWS 2019);
- + U.S. Department of Agriculture - Natural Resources Conservation Service (NRCS) - Soil Survey Geographic (SSURGO) Database and soil survey for Hinds County, Mississippi (NRCS 1979); and
- + 2019 aerial photography data.

2.2 Field Survey

On October 15, 2019, EDGE conducted a wetland delineation survey of the proposed 0.75-acre survey area within an existing pipeline right-of-way (ROW). The workspace is located at latitude: 32.319056, longitude: -90.373738 near the Natchez Trace Parkway. Field conditions during the survey were seasonally consistent and ranged from inundated wetlands to vegetated uplands. Field conditions did not hinder pedestrian access of the proposed survey area.

2.2.1 Wetland Delineation

As required under Section 404 of the Clean Water Act, wetlands were delineated using the routine method described in the U.S. Army Corps of Engineers (USACE) *1987 Wetlands Delineation Manual* (1987 Manual; USACE 1987) and the *USACE Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0)* (Regional Supplement; USACE 2010). Wetland types and boundaries were determined through initial review of the NWI digital map, followed by field work involving the examination of three parameters: vegetation, soils, and hydrology. Delineation criteria and indicators for each of these parameters are outlined in the 1987 Manual and the Regional Supplement. The Regional Supplement presents wetland indicators, delineation guidance, and other information that is specific to the Atlantic and Gulf Coast Plain Region. Wetlands were classified according to the system used for the USFWS's NWI and described in *Wetlands and Deepwater Habitats of the United States* (Cowardin *et al.* 1979) and *National Park Service Procedural Manual #77-1: Wetland Protection* (National Park Service, 2016).

For this wetland delineation, multiple data points were strategically positioned for adequate coverage across the survey area. Data points were recorded with a Trimble GeoXT global positioning system (GPS) with sub-meter accuracy. Tables containing wetland name, location, type, size, watershed name, and watershed hydrologic unit code (HUC) can be found in Tables 3.3-1. All wetland data was recorded on field data sheets contained in Appendix A. Representative photographs were captured and are included in Appendix B.

Vegetation Evaluation

In accordance with the procedure set forth in the 1987 Manual and Regional Supplement, the hydrophytic status of vegetation communities was determined through an iterative process involving identification of dominant species and, if necessary, sequential calculation of a "Prevalence Index".

To provide a complete assessment of resident plant communities at each sampling station, most or all species in each vegetation stratum (i.e., Forested, Saplings and Shrubs, Herbaceous, and Woody Vines) were initially identified and recorded. Subsequently, to identify the dominant species in each stratum, the 50/20 rule was applied. The 50/20 rule states that "dominant species are the most abundant plant species (when ranked in descending order of abundance and cumulatively totaled) that immediately exceed 50 percent of the total dominance measure for the stratum, plus any additional species comprising 20 percent or more of the total dominance measure for the stratum." The dominance measure used in this delineation is absolute percent cover. Data drawn from discrete sampling points were supplemented, where appropriate, by data drawn from general observations over a wider area.

Individual plant species names were verified using the *2018 National Wetland Plant List* (USACE 2018) and their regional wetland indicator status determined. Species are classified as Obligate Wetland if they almost always occur in wetlands (>99 percent of the time), Facultative Wetland if they usually occur in wetlands (67-99 percent of the time), Facultative if they are equally likely to occur in wetlands or non-wetlands (34-66 percent of the time), Facultative Upland if they usually occur in non-wetlands (67-99 percent of the time), and Obligate Upland if they almost always occur in non-wetlands (>99 percent of the time). A "No Indicator" status is recorded for those species for which insufficient information is available to determine an indicator status.

Soil Profile Evaluation

Hydric soils are defined as soils that are "saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part" (NRCS 2019). The anaerobic conditions created by repeated or prolonged saturation or flooding, results in permanent changes in soil color and chemistry which are used to differentiate hydric from non-hydric soils.

In areas where the absence of inundation or heavy saturation is allowed, one or more soil pits were excavated at each data point to a depth of at least 14 inches to reveal soil profiles and to determine whether positive indicators of hydric (wetland) soils were present. Hydric soil indicators relate to color, structure, organic content, and the presence of reducing conditions. Color characteristics (hue, value, and chroma) were recorded using Munsell® Charts (Munsell 2009).

Hydrology Evaluation

Land is characterized as having wetland hydrology when, under normal circumstances, the surface is either inundated or the upper portion of the soil is saturated at a sufficient frequency and duration to create anaerobic conditions. Hydrological conditions are further defined in the 1987 Manual as occurring

when an area “is inundated either permanently or periodically at mean water depths less than or equal to 6.6 feet, or the soil is saturated to the surface at some time during the growing season of the prevalent vegetation.” Hydrology is controlled by such factors as seasonal and long-term rainfall patterns, local geology, and topography, soil type, local water table conditions, and drainage.

During the field survey, wetland hydrology was determined by observation of positive indicators such as saturated soils, standing surface water, algal mat, aquatic fauna, high water table, iron deposits, sparsely vegetated concave surface, geomorphic position, water-stained leaves, and surface soil cracks.

3.0 RESULTS

3.1 NWI Classification

Based on a review of NWI digital map for Mississippi, the Project area contains two wetland types consisting of palustrine scrub-shrub, broad-leaved deciduous, temporarily flooded (PSS1A) wetland and palustrine forested, broad-leaved deciduous temporarily flooded (PFO1A) wetland. A PEM1C classification was given to palustrine emergent wetlands within the Project area.

3.2 SSURGO Database

According to the SSURGO Database and as shown in Figure 2, one mapped soil unit is represented in the survey area. As shown in Figure 2, the soil within the Project area is classified as Oaklimeter silt loam, 0 to 2 percent slopes, occasionally flooded, north (Oa). Oaklimeter silt loam is generally described as non-hydric, level, moderately well drained, floodplain soil that is primarily used for pastureland and cultivation (NRCS 1979).

3.3 Wetland Field Survey

As shown in the aerial photo-based Field Survey and Impacts Map (Figure 3), a total of five wetlands were identified within the survey area. Tables summarizing the wetlands delineated during field surveys are presented in Tables 3.3-1.

3.3.1 Wetlands

In total, five wetlands were identified within the 0.75-acre survey area. These five wetlands included a total of two PFO wetlands and three PEM wetlands (Figure 3; Appendix A). Combined, all five wetlands subsume 0.35 acre (46.7%) of the total survey area, including 0.226 acre (30.1%) of PEM wetlands and 0.124 acre (16.5%) of PFO wetlands. Detailed descriptions of each wetland identified during the field survey are provided in Table 3.3-1 below. Permanent and temporary wetlands impacts are described in Table 3.3-2.

Table 3.3-1: Representative Wetlands Identified within the Survey Area

Wetland ID	Wetland Type	Acres	Watershed (HUC 8)	Watershed Name
W-002	PFO	0.012	08060202	Lower Big Black
W-003	PEM	0.092	08060202	Lower Big Black
W-004	PFO	0.112	08060202	Lower Big Black

W-005	PEM	0.131	08060202	Lower Big Black
W-006	PEM	0.004	08060202	Lower Big Black

Table 3.3-2: Permanent and Temporary Wetland Impacts

Wetland ID	Wetland Type	Total Impacts (Acres)	Permanent Impacts (Acres)	Temporary Impacts (Acres)
W-002	PFO	0.012	0.00	0.012
W-003	PEM	0.092	0.00	0.092
W-004	PFO	0.112	0.005	0.107
W-005	PEM	0.131	0.130	0.001
W-006	PEM	0.004	0.000	0.004

Vegetation

Table 3.3-3 lists the representative taxa encountered within the survey area by vegetation stratum and includes the common and scientific names of each. Representative photographs of the survey area are included in Appendix B.

Table 3.3-3: Representative Taxa Identified within the Survey Area

Vegetation Stratum	Common Species Name	Scientific Species Name
Forested	American elm, sweetgum	<i>Ulmus americana</i> , <i>Liquidambar styraciflua</i>
Sapling and Shrub	American elm, boxelder	<i>Ulmus americana</i> , <i>Acer negundo</i>
Herbaceous	alligatorweed, barnyardgrass	<i>Alternanthera philoxeroides</i> , <i>Echinochloa crusgalli</i>
Woody Vines	N/A	N/A

Soils

Subsurface soil profile obtained within the survey area was generally consistent with the SSURGO Database and NRCS county soil survey reference materials (NRCS 1979 & 2019). Soil texture was a silty clay loam, and generally exhibited matrix hue of 10YR (Munsell 2009).

Hydrology

Wetland hydrological indicators noted in the field included saturated soils, standing surface water, water marks, geomorphic position, and a high water table.

4.0 CONCLUSIONS

As a result of the environmental desktop assessment and the field survey completed on October 15, 2019, two PFO wetlands and three PEM wetlands were identified within the Project area (Figure 3). The survey area associated with the proposed Project is located entirely within an existing pipeline ROW.

5.0 REFERENCES

Persons Performing the Wetland Delineation

Jenny Lam and Ghazi Ibrahim of EDGE conducted the wetland delineation survey.

Reference Documents

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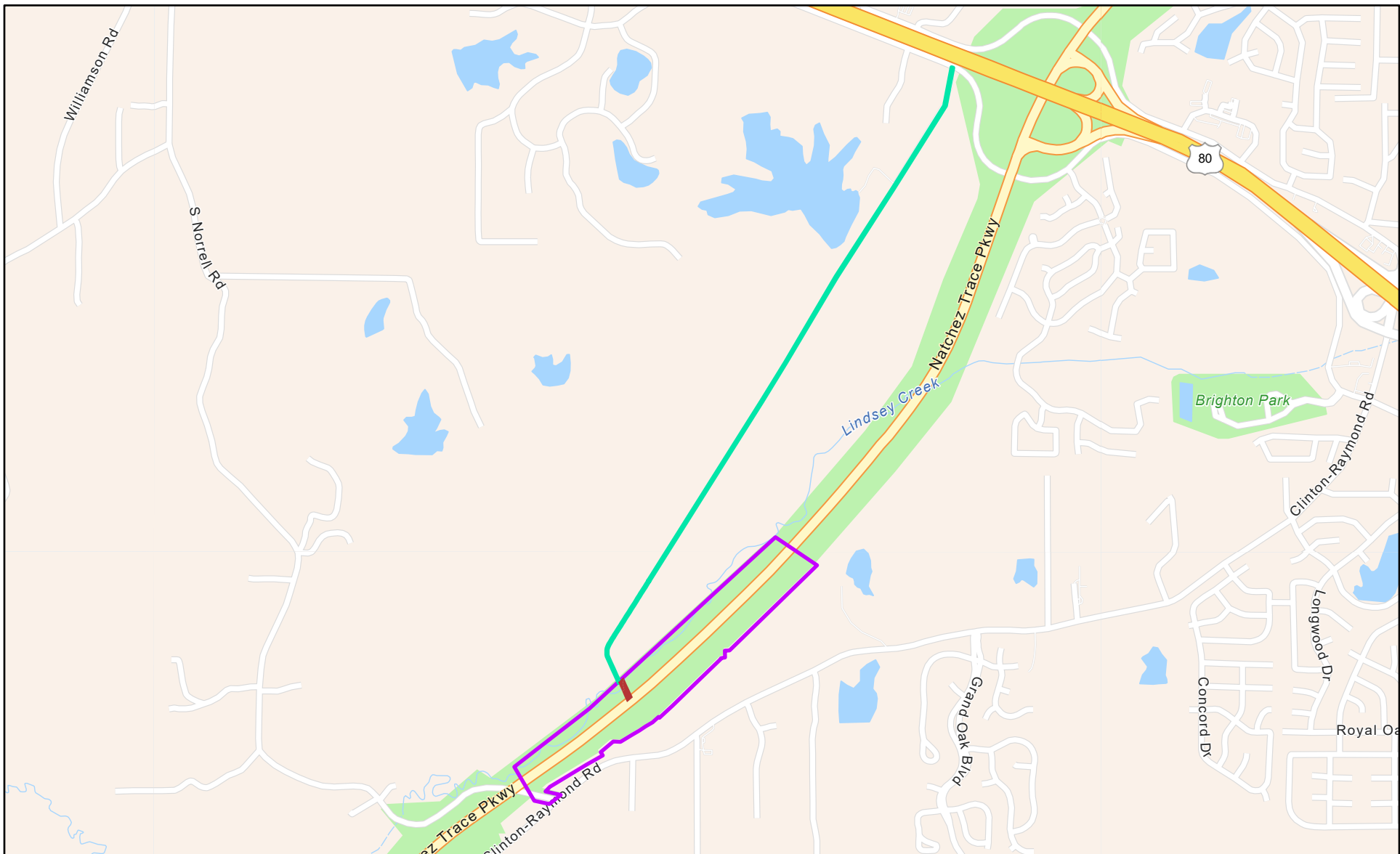
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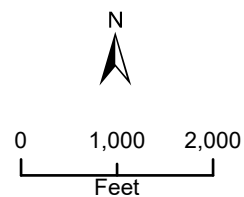
<https://viewer.nationalmap.gov/basic/?basemap=b1&category=histtopo,ustopo&title=Map%20View>.

Figures

FIGURE 1:
PROJECT LOCATION MAP



- Legend**
- Project Location
 - Access
 - ▭ Lindsey Creek Natchez Trace Boundary
 - Existing Pipeline



Scale: 1:24,000



Figure 1
Project Vicinity Map

Texas Eastern Transmission, LP
Natchez Trace Revetment Project
Hinds County, Mississippi

FIGURE 2:

NHD HYDROGRAPHY, NWI WETLANDS, FEMA FLOODPLAIN, SSURGO SOILS MAP

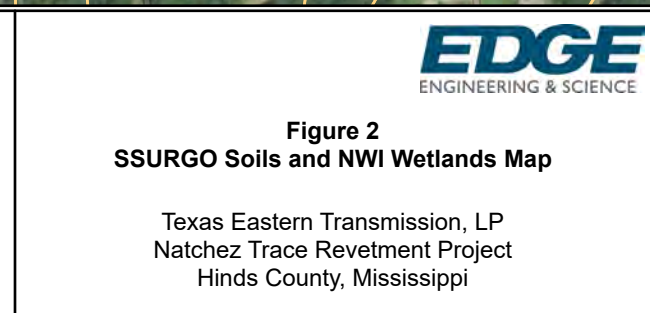
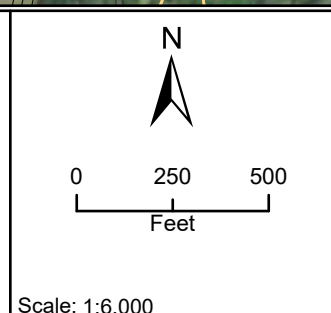
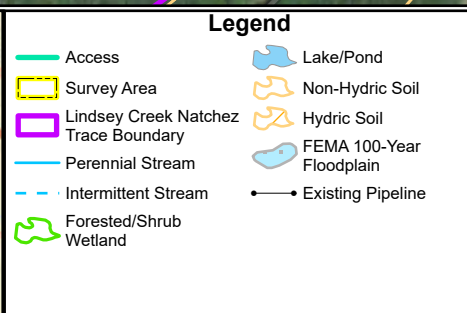
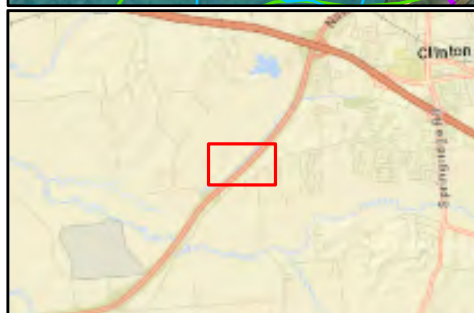
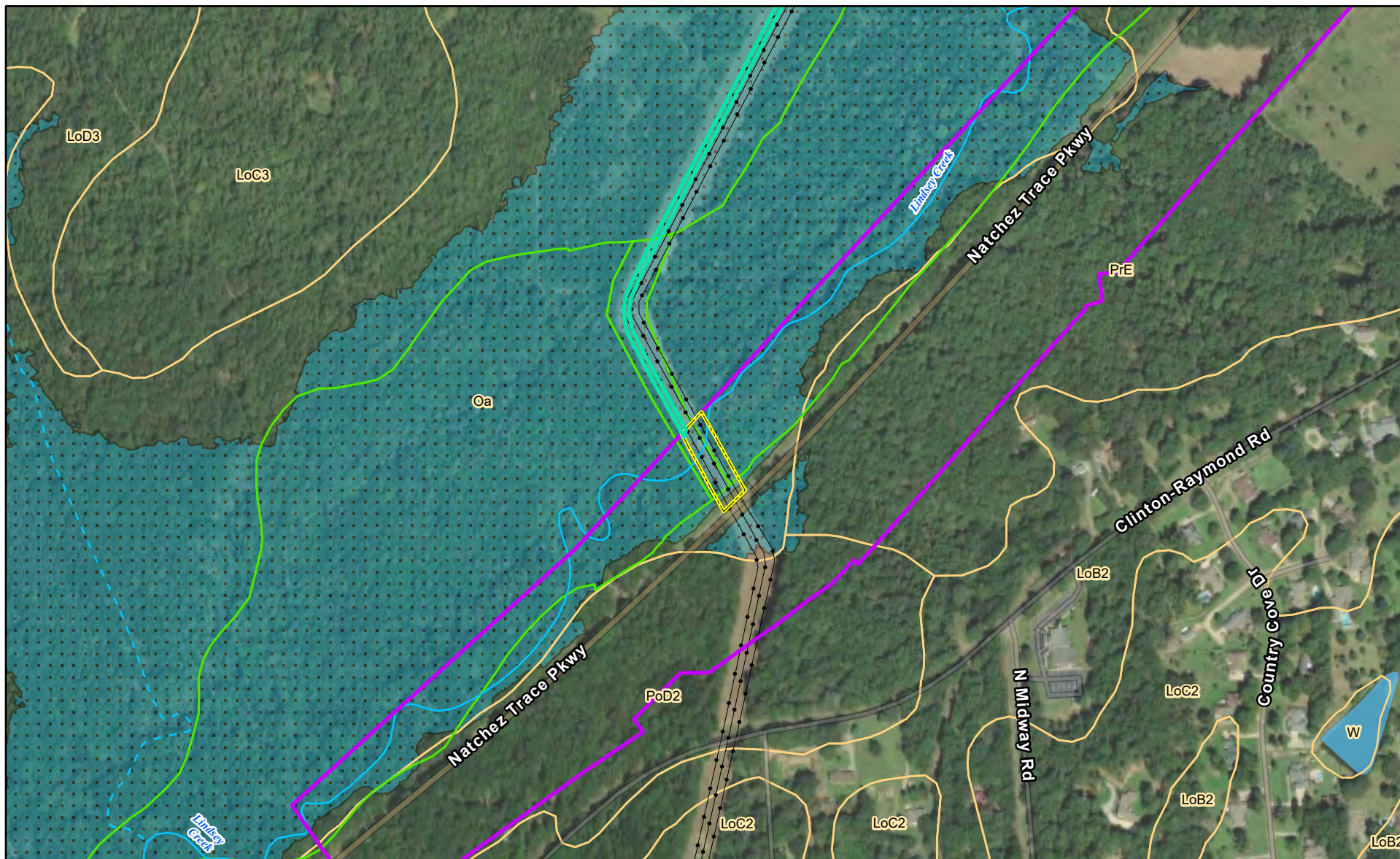
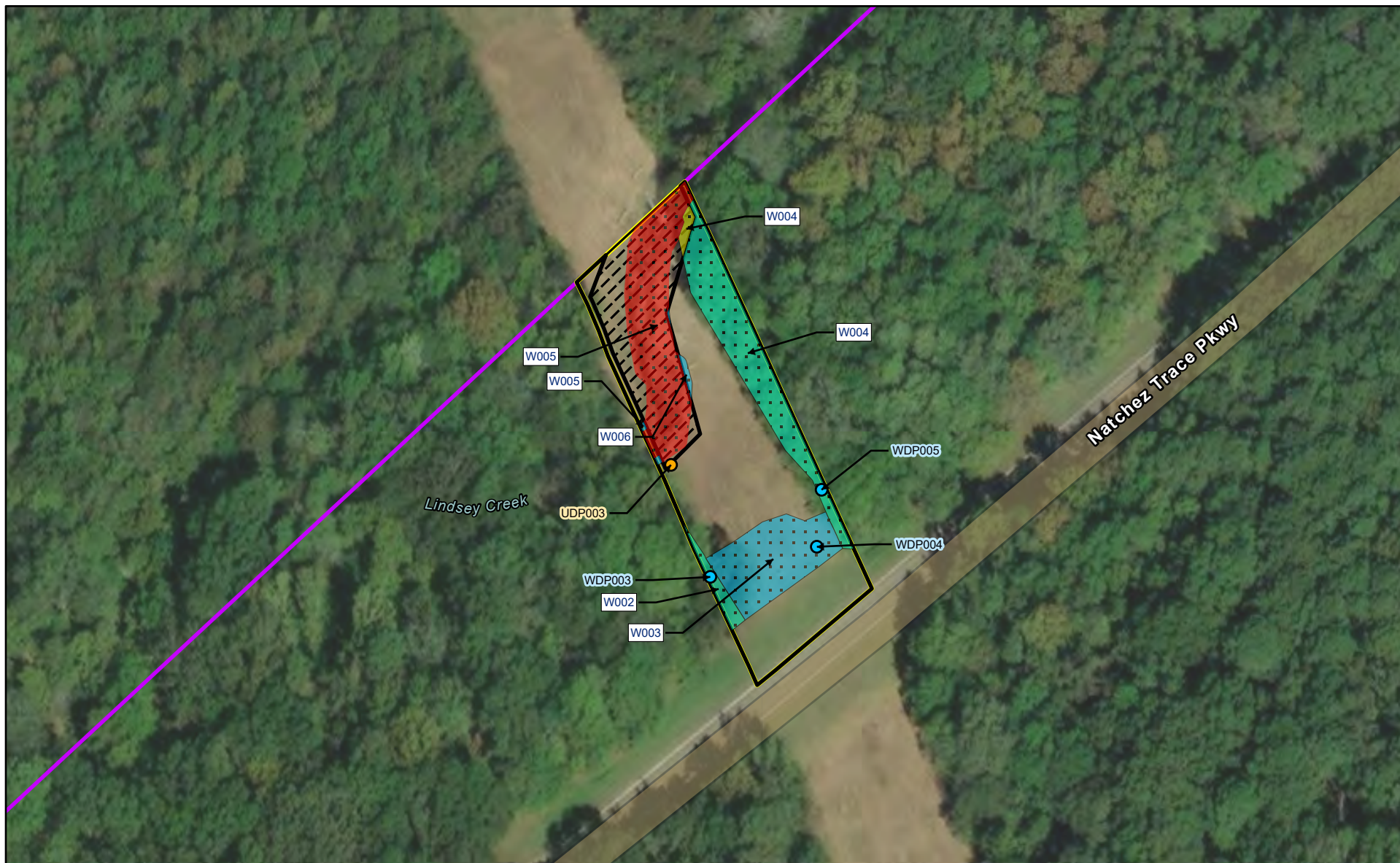
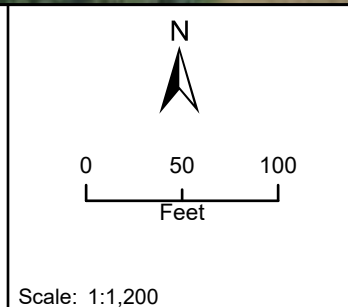


FIGURE 3:
FIELD SURVEY AND IMPACTS MAP



Legend	
●	Wetland Data Point
●	Upland Data Point
 	Permanent PEM Impacts (0.130-ac.)
 	Permanent PFO Impacts (0.005-ac.)
 	Temporary PEM Impacts (0.096-ac.)
 	Temporary PFO Impacts (0.120-ac.)
 	Permanent Workspace
 	Temporary Workspace
 	Survey Area
	Lindsey Creek Natchez Trace Boundary
—	Existing Pipeline








Figure 3
Field Survey and Impacts Map

Texas Eastern Transmission, LP
Natchez Trace Revetment Project
Hinds County, Mississippi

Appendix A

FIELD DATA SHEETS

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: SE-19-10722 Natchez Trace Revetment Project City/County: Hinds County Sampling Date: 10/15/2019
 Applicant/Owner: Texas Eastern Transmission, LP State: MS Sampling Point: UDP003
 Investigator(s): J. Lam, G. Ibrahim Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): flats Local relief (concave, convex, none): convex Slope (%): 0-2
 Subregion (LRR or MLRA): LRR P (MLRA 134) Lat: 32.318780 Long: -90.373746 Datum: WGS1984
 Soil Map Unit Name: Oaklimeter silt loam NWI classification: PSS1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☒
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: Heavy precipitation occurred prior to and during field survey	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>0"</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>0"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2"</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 		
Remarks: Saturation presence likely due to heavy precipitation that occurred prior to and during the field survey.		

VEGETATION (Five Strata) – Use scientific names of plants.

 Sampling Point: UDP003

Tree Stratum (Plot size: <u>30' x 30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		
Sapling Stratum (Plot size: <u>15' x 15'</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		
Shrub Stratum (Plot size: <u>15' x 15'</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		
Herb Stratum (Plot size: <u>5' x 5'</u>)				
1. <u>Helenium amarum</u>	35	Y	FACU	
2. <u>Symphotrichum cordifolium</u>	25	Y	UPL	
3. <u>Paspalum urvillei</u>	15	N	FAC	
4. <u>Solidago canadensis</u>	10	N	FACU	
5. <u>Cirsium horridulum</u>	10	N	FAC	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>47.5</u>		20% of total cover: <u>19</u>		
Woody Vine Stratum (Plot size: <u>30' x 30'</u>)				
1. <u>Nekemias arborea</u>	25	Y	FAC	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>12.5</u>		20% of total cover: <u>5</u>		
Remarks: (If observed, list morphological adaptations below).				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 3 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>25</u>	x 3 = <u>75</u>
FACU species <u>45</u>	x 4 = <u>180</u>
UPL species <u>25</u>	x 5 = <u>125</u>
Column Totals: <u>95</u> (A)	<u>380</u> (B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:
☐ 1 - Rapid Test for Hydrophytic Vegetation
☐ 2 - Dominance Test is >50%
☐ 3 - Prevalence Index is ≤3.0¹
☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present?
 Yes ☐ No ☒

SOIL

 Sampling Point: UDP003

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5"	10YR4/3	100					SiLo	
5-16"	10YR6/3	100					SiLo	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.
²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histic Sol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> (MLRA 153B)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: SE-19-10722 Natchez Trace Revetment Project City/County: Hinds County Sampling Date: 10/15/2019
 Applicant/Owner: Texas Eastern Transmission, LP State: MS Sampling Point: WDP003
 Investigator(s): J. Lam, G. Ibrahim Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): flats Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR P (MLRA 134) Lat: 32.318538 Long: -90.373776 Datum: WGS1984
 Soil Map Unit Name: Oaklimeter silt loam NWI classification: PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☒
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Heavy precipitation occurred prior to and during field survey.			

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>0"</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>0"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>16"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five Strata) – Use scientific names of plants.

 Sampling Point: WDP003

Tree Stratum (Plot size: <u>30' x 30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Ulmus americana</u>	35	Y	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Liquidambar styraciflua</u>	25	Y	FAC															
3. _____																		
4. _____																		
5. _____																		
6. _____																		
60 = Total Cover																		
50% of total cover: <u>30</u>		20% of total cover: <u>12</u>																
Sapling Stratum (Plot size: <u>15' x 15'</u>)																		
1. _____				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>10</u></td> <td>x 2 = <u>20</u></td> </tr> <tr> <td>FAC species <u>80</u></td> <td>x 3 = <u>240</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>90</u> (A)</td> <td><u>260</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.9</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>10</u>	x 2 = <u>20</u>	FAC species <u>80</u>	x 3 = <u>240</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>90</u> (A)	<u>260</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>10</u>	x 2 = <u>20</u>																	
FAC species <u>80</u>	x 3 = <u>240</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>90</u> (A)	<u>260</u> (B)																	
2. _____																		
3. _____																		
4. _____																		
5. _____																		
6. _____																		
0 = Total Cover																		
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>																
Shrub Stratum (Plot size: <u>15' x 15'</u>)																		
1. <u>Ulmus americana</u>	5	Y	FAC	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)														
2. <u>Acer negundo</u>	5	Y	FAC															
3. _____																		
4. _____																		
5. _____																		
6. _____																		
10 = Total Cover																		
50% of total cover: <u>5</u>		20% of total cover: <u>2</u>																
Herb Stratum (Plot size: <u>5' x 5'</u>)																		
1. <u>Chasmanthium laxum</u>	10	Y	FACW	Definitions of Five Vegetation Strata: Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, <u>and</u> woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine – All woody vines, regardless of height.														
2. <u>Chasmanthium latifolium</u>	10	Y	FAC															
3. _____																		
4. _____																		
5. _____																		
6. _____																		
7. _____																		
8. _____																		
9. _____																		
10. _____																		
11. _____																		
20 = Total Cover																		
50% of total cover: <u>10</u>		20% of total cover: <u>4</u>																
Woody Vine Stratum (Plot size: <u>30' x 30'</u>)																		
1. _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>														
2. _____																		
3. _____																		
4. _____																		
5. _____																		
6. _____																		
0 = Total Cover																		
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>																
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: WDP003

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|---|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalve Below Surface (S8) (LRR S, T, U) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Stratified Layers (A5) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) | (MLRA 153B) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Marl (F10) (LRR U) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | |
- ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: SE-19-10722 Natchez Trace Revetment Project City/County: Hinds County Sampling Date: 10/15/2019
 Applicant/Owner: Texas Eastern Transmission, LP State: MS Sampling Point: WDP004
 Investigator(s): J. Lam, G. Ibrahim Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): flats Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR P (MLRA 134) Lat: 32.31862 Long: -90.373409 Datum: WGS1984
 Soil Map Unit Name: Oaklimeter silt loam NWI classification: PSS1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☒
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Heavy precipitation occurred prior to and during field survey.			

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>16"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 		
Remarks: 		

VEGETATION (Five Strata) – Use scientific names of plants.

 Sampling Point: WDP004

Tree Stratum (Plot size: <u>30' x 30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				
Sapling Stratum (Plot size: <u>15' x 15'</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				
Shrub Stratum (Plot size: <u>15' x 15'</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				
Herb Stratum (Plot size: <u>5' x 5'</u>)				
1. <i>Polygonum hydropiperoides</i>	60	Y	OBL	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>30</u> 20% of total cover: <u>12</u>				
Woody Vine Stratum (Plot size: <u>30' x 30'</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				
Remarks: (If observed, list morphological adaptations below).				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 1 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>60</u>	x 1 = <u>60</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>60</u> (A)	<u>60</u> (B)

Prevalence Index = B/A = 1

Hydrophytic Vegetation Indicators:
☐ 1 - Rapid Test for Hydrophytic Vegetation
☒ 2 - Dominance Test is >50%
☒ 3 - Prevalence Index is ≤3.0¹
☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

SOIL

Sampling Point: WDP004

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|---|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) | (MLRA 153B) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input checked="" type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Marl (F10) (LRR U) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | |
- ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: SE-19-10722 Natchez Trace Revetment Project City/County: Hinds County Sampling Date: 10/15/2019
 Applicant/Owner: Texas Eastern Transmission, LP State: MS Sampling Point: WDP005
 Investigator(s): J. Lam, G. Ibrahim Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): flats Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR P (MLRA 134) Lat: 32.31874 Long: -90.373336 Datum: WGA1984
 Soil Map Unit Name: Oaklimeter silt loam NWI classification: PFOA1

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☒
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Heavy precipitation occurred prior to and during field survey.			

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>16"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five Strata) – Use scientific names of plants.

 Sampling Point: WDP005

Tree Stratum (Plot size: <u>30' x 30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <i>Ulmus americana</i>	70	Y	FAC	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
70 = Total Cover				
50% of total cover: <u>35</u>		20% of total cover: <u>14</u>		
Sapling Stratum (Plot size: <u>15' x 15'</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
0 = Total Cover				
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		
Shrub Stratum (Plot size: <u>15' x 15'</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
0 = Total Cover				
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		
Herb Stratum (Plot size: <u>5' x 5'</u>)				
1. <i>Echinochloa crus-galli</i>	15	Y	FACW	
2. <i>Polygonum hydropiperoides</i>	5	N	OBL	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
20 = Total Cover				
50% of total cover: <u>10</u>		20% of total cover: <u>4</u>		
Woody Vine Stratum (Plot size: <u>30' x 30'</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
0 = Total Cover				
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		
Remarks: (If observed, list morphological adaptations below).				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>5</u>	x 1 = <u>5</u>
FACW species <u>15</u>	x 2 = <u>30</u>
FAC species <u>70</u>	x 3 = <u>210</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>90</u> (A)	<u>245</u> (B)

Prevalence Index = B/A = 2.7

Hydrophytic Vegetation Indicators:
☐ 1 - Rapid Test for Hydrophytic Vegetation
☒ 2 - Dominance Test is >50%
☒ 3 - Prevalence Index is ≤3.0¹
☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

SOIL

Sampling Point: WDP005

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|---|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalve Below Surface (S8) (LRR S, T, U) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) | (MLRA 153B) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input checked="" type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Marl (F10) (LRR U) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | |
- ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Appendix B

ENVIRONMENTAL SURVEY PHOTOGRAPH

Environmental Survey Photographs
SE-19-10722 Natchez Trace Revetment Project
Hinds County, Mississippi
October 15, 2019



Photograph #1 – Representative view of Lindsey Creek, located within the pipeline right-of-way, facing north.



Photograph #2 – Representative view of the Palustrine Emergent Wetland (W003), facing northwest.

Environmental Survey Photographs
SE-19-10722 Natchez Trace Revetment Project
Hinds County, Mississippi
October 15, 2019



Photograph #3 – Representative view of the Palustrine Forested Wetland (W002), facing west.



Photograph #4 – Representative view of upland vegetation within the Survey area, facing southeast.

November 11, 2019

Mr. Bryan Williamson
Acting Chief, Permit Section
Regulatory Branch
U.S. Army Corps of Engineers
Attn: CEMVK-OD-FP
4155 Clay Street, Room 233
Vicksburg, Mississippi 39183-3435

Subject: Natchez Trace Revetment Project (SE-19-10722)
Hinds County, Mississippi
Texas Eastern Transmission Pipeline
Nationwide Permit No. 13 and No. 12 Pre-Construction Notification
(USACE File # unassigned)

Dear Mr. Williamson,

Texas Eastern Transmission (Texas Eastern), a wholly-owned subsidiary of Enbridge Energy Partners (Enbridge), is proposing to sand blast and recoat its existing Lines 14,18, and 31 natural gas pipelines, install rock shield over the pipelines, and conduct stream stabilization activities to deter future erosional processes in Hinds County, Mississippi (Project). Construction of the Project will also involve the installation of a concrete articulating grout mat and stream and bank stabilization activities that exceed 1 cubic yard per running foot.

The affected feature is a perennial waterbody, Lindsey Creek which is considered a potentially jurisdictional water (PJW) of the U.S. The PJW impacted by the Project is subject to regulation by the U.S. Army Corps of Engineers (USACE), Vicksburg District, under Section 404 of the Clean Water Act. The Project, as planned, does not cross any waters considered to be Section 10 navigable waters subject to regulation by the USACE under the Rivers and Harbors Act of 1899.

Texas Eastern is of the opinion that the proposed construction activities require prior authorization from the USACE-Vicksburg District. Pursuant to the requirements for notification as outlined in the Regional General Conditions of the Department of the Army's Nationwide Permit (NWP) Program, Edge Engineering and Science, LLC (EDGE) has prepared this permit application on behalf of Texas Eastern, which includes a Pre-Construction Notification (PCN) under NWP Nos. 12 and 13 (Utility Line Activities and Bank Stabilization). Texas Eastern contracted EDGE to manage the required environmental studies, including biological field surveys, a cultural desktop assessment, and has approved EDGE to act as its authorized agent for the Project. This PCN includes a brief Project description, a statement regarding the Project's purpose and need, a summary of the general construction methods, descriptions of the completed environmental studies along with copies of all agency consultations and reporting, table containing the estimated PJW impact calculations, as well as a summary of the proposed plan to mitigate for unavoidable impacts to PJWs.

The following attachments are included for your review:

- + Attachment 1: ENG Form 6082;
- + Attachment 2: Preliminary Jurisdictional Determination (PJD) Form;
- + Attachment 3: Project Vicinity Map;
- + Attachment 4: Aerial Photo-based Impacts Map;
- + Attachment 5: USGS Topographic Impacts Map;
- + Attachment 6: Construction Drawings;
- + Attachment 7: Wetland Delineation and Waterbody Survey Report;
- + Attachment 8: Protected Species General Habitat Assessment Report and Agency Consultations; and
- + Attachment 9: Cultural Categorical Exclusion Agreement and Unanticipated Discoveries Plan

Project Description

As is illustrated in Attachments 3, 4, and 5, the proposed Project is located approximately 3.4 miles west of Clinton, in Hinds County, Mississippi within Lindsey Creek and an existing Texas Eastern right-of-way (ROW). Construction is currently scheduled to begin in January 2020 and is estimated to be complete by the end of February 2020.

Purpose and Need

Texas Eastern has three existing pipelines (Lines 14, 18, and 31) below Lindsey Creek which is subject to erosion as a result of the stream channel. Exposed pipe is a safety concern for the following reasons: 1) the pipe may be struck by debris during high water conditions and become damaged, increasing the risk for rupture; 2) the pipe may cause debris to accumulate and create a dam, causing upstream flooding; and 3) the protective coating on exposed pipe may be damaged or disbanded, leading to corrosion, thus weakening the pipe wall.

Texas Eastern believes that the segment of these pipelines warrant maintenance in order to continue safely operating the pipeline and protecting the surrounding environment. If the segments of Lines 14, 18, and 31 are not repaired and replaced, their exposure will continue to worsen over time.

Lines 14, 18, and 31 Maintenance

Texas Eastern proposed to complete the maintenance work by first sandblasting and recoating an approximately 45-foot-long segment of the existing pipe. All excavation associated with the replacement and lowering of the pipe will be completed within the existing 100-foot-wide permanent ROW. Following sandblasting and recoating of the pipe segment, a rock shield will be installed on the pipelines and the stream bed and banks will be graded and re-contoured. Additionally, a concrete articulating grout mat will be installed within Lindsey Creek.

Lindsey Creek Stream Restoration Activities

The proposed stream restoration activities will be completed within the existing ROW. In general, restoration activities will include the installation of fill material along the banks of Lindsey Creek followed by the grading and recontouring of the creek to restore the original stream channel contours. Grading and contouring are anticipated to cover an approximately 45-foot-wide by 175-foot-long area.

General Pipeline Construction Methods

In general, construction will be conducted in accordance with applicable federal, state, and local regulations, permits, and approvals. The Project was designed and constructed in accordance with the requirements of the U.S. Department of Transportation's minimal federal safety standards for natural gas pipelines, pursuant to 49 CFR Part 192.

In general, construction will employ the open-cut technique using bulldozers, track-hoes, and pipelayer/sideboom machinery. Construction drawings are provided in Attachment 6.

Access roads necessary to construct the Project will consist of direct access from Natchez Trace Parkway, an existing public road which will not require improvements. Existing roads and the maintained permanent easements will be used for routine operations and maintenance of the pipelines.

During construction, Texas Eastern would adhere to and implement the FERC *Upland Erosion Control, Revegetation and Maintenance Plan* as well as the FERC *Wetland and Waterbody Construction and Mitigation Procedures*. Following construction, Texas Eastern will restore land surface contours to pre-construction conditions, restoring the site hydrology. The temporary construction workspaces will be allowed to revegetate naturally. The permanent easement will be maintained in an herbaceous state, as a pipeline ROW. The entire process will be coordinated in a manner intended to minimize the total time a given tract of land is disturbed, exposed to erosion, and temporarily precluded from normal use.

Environmental Resource Studies

In October 2019, EDGE's biologists completed biological surveys including a wetland delineation and waterbody survey as well as a general habitat assessment for federally protected species. In addition, EDGE completed a desktop cultural assessment of the proposed Project area. Texas Eastern maintains a Categorical Exclusion for activities occurring within the Lines 14, 18, and 31 ROW which is a Federal Energy Regulatory Commission (FERC) regulated pipeline under Section 7 of the Natural Gas Act. Because no activities will occur outside of the ROW, no Phase I archaeological surveys are required for this Project.

Wetlands and Waterbodies

In October 2019, EDGE completed the wetland delineation and waterbody survey of the area that encompassed all Project workspaces. All fieldwork was conducted in accordance with the methods described in the USACE 1987 *Wetland Delineation Manual* (USACE 1987), *Regulatory Guidance Letter: Ordinary High Water Mark Identification* (USACE 2005), and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region* (Version 2.0) (USACE 2010).

The results of the surveys are provided in the enclosed report prepared by EDGE titled *Wetland Delineation and Waterbody Survey Report*, provided as Attachment 7. In total, three wetlands were identified during the field survey. More specifically, two palustrine forested (PFO) wetlands and one palustrine emergent (PEM) wetland was identified within the survey area; however, the Project will impact only the PEM wetland and impacts would be temporary. Additionally, one waterbody was recorded within the survey area and consisted of one perennial stream (Lindsey Creek) which would be impacted by the Project. Texas Eastern acknowledges that all recorded wetlands and waterbodies are considered PJWs and requests your review be based upon the enclosed PJW Form, included as Attachment 2.

Wetland Impacts

Three wetlands were identified during biological field surveys consisting of two PFO wetlands and one PEM wetland (see Table 1). Although in the survey area, the PFO wetlands (W002 and W004) would not be impacted by the proposed Project; however, the PEM wetland (W003) would be impacted by the Project. Impacts to this wetland would be associated with access to the Project area and would be considered temporary.

TABLE 1 Proposed Wetland Impacts within the Project Area in Hinds County, Mississippi							
Feature ID	Wetland Type	Temporary Impacts	Permanent Fill	Permanent Conversion	Total Impact Acres	Watershed (Hydrologic Unit Code 8)	Watershed Name
W002	PFO	0.00	0.00	0.00	0.00	08060202	Lower Big Black
W003	PEM	0.09	0.00	0.00	0.09	08060202	Lower Big Black
W004	PFO	0.00	0.00	0.00	0.00	08060202	Lower Big Black

Wetland Mitigation

Federal mitigation requirements are outlined in the Compensatory Mitigation for Losses of Aquatic Resources that were jointly developed and issued by the USACE (33 CFR Part 332) and the U.S. Environmental Protection Agency (40 CFR Part 230) on April 10, 2008. As discussed above, impacts to wetland W003 would be temporary during the proposed Project; therefore, no compensatory mitigation associated with wetlands will be required for this Project.

Waterbody Impacts

Maps showing the waterbody impacts are provided in Attachments 4 and 5. Based on the proposed plans, EDGE has calculated that 0.23-acres of Lindsey Creek exceed 1 cubic yard per running foot as measured along the length of the bank. Texas Eastern has calculated that 1.23-cubic yards per running foot will be necessary within the Lindsey Creek to complete the Project. Attachment 6 depicts that proposed materials for use as part of the stream restoration activities.

TABLE 2 Proposed Waterbody Impacts within the Project Area in Hinds County, Mississippi							
Feature ID	Waterbody Type	Temporary Impacts	Permanent Fill	Permanent Conversion	Total Impact Acres	Watershed (Hydrologic Unit Code 8)	Watershed Name
S001	Perennial stream	0.10	0.00	0.00	0.10	08060202	Lower Big Black

Avoidance and Minimization Measures

To minimize impacts during construction, Texas Eastern will utilize the following measures, where possible, and will adhere to the USACE's NWP General Conditions and Mississippi's Regional Conditions, where applicable:

- + Construction equipment operating within the temporary construction workspace will be limited to that necessary for clearing, excavation, sand blasting, pipe recoating, culvert installation, backfilling, and restoration. All non-essential equipment will use upland access roads to the extent practicable.

- + Temporary erosion and sediment control measures will be installed before the initial disturbance of wetland soils across the temporary construction workspace as needed, to control spoil and along the edges of the workspace where runoff may enter the adjacent stream.
- + Temporary erosion and sediment control measures will be inspected and maintained regularly until final stabilization.
- + In areas of temporary impact, wetland vegetation may be cut at ground level, leaving existing root systems in place to promote re-growth. Where conditions allow, these areas will be graded to pre-existing contours.
- + Stumps will be removed if their retention presents a safety concern.
- + Where feasible following construction, Texas Eastern will restore land surface contours to pre-construction conditions will allow the temporary construction workspace to naturally revegetate.

By adhering to proper avoidance and minimization measures, Texas Eastern believes that it has demonstrated that there are no feasible or practicable less environmentally damaging alternatives that will achieve the Project purpose.

Protected Species

Desktop Review

In accordance with Section 7(a) of the Endangered Species Act, EDGE's professional biologists completed a desktop review of the Project area to determine if the proposed construction activities might jeopardize the continued existence of federally protected species or adversely modify designated critical habitats. EDGE initiated this work by submitting an online request using the U.S. Fish and Wildlife Service's (USFWS's) online Information for Planning and Consultation (IPaC) System. Review of the IPaC System indicates that two federally listed species potentially occur in the vicinity of the surveyed area (see Table and Attachment 8; USFWS 2019).

The northern long-eared bat prefers to roost under the bark of mature live or dead trees. The wood stork is found within cypress or mangrove swamps with freshwater marshes, narrow tidal creeks, or flooded ponds. In addition, EDGE requested data from the Mississippi Department of Wildlife and Fisheries (MDWF) Natural Heritage Program (NHP) for known occurrences of listed species within the vicinity of the Project. No response has been received from MDWF; however, once one is received a copy of the correspondence will be forwarded to your office for review.

TABLE 3 Federal Listed Threatened and Endangered Species Located in the Project Vicinity ^a			
Common Name	Scientific Name	Federal Status	Recommended Determination
Northern long-eared bat	<i>Myotis septentrionalis</i>	T	No effect
Wood stork	<i>Mycteria americana</i>	T	No effect
E – Endangered; T – Threatened ^a USFWS 2019.			

General Habitat Assessment

In October 2019, EDGE performed a general habitat assessment concurrent with the wetland and waterbody surveys described above. As a result of the general habitat assessment, EDGE did not record any occurrences of federally or state listed species during the field assessment. The dominant vegetative species observed within the Project area included sneezeweed (*Helenium amarum*), blue wood aster (*Symphyotrichum cordifolium*), smartweed (*Polygonum hydropiperoides*), American elm (*Ulmus americana*), sweetgum (*Liquidambar styraciflua*) and boxelder (*Acer negundo*).

Northern Long-Eared Bat

The northern long-eared bat (*Myotis septentrionalis*) hibernates in caves and abandoned mines and then migrates to wooded areas during the warm summer months. This species generally utilizes roost sites beneath exfoliating bark of large, often dead, trees. In 2016, a final rule was published prohibiting incidental take within a quarter-mile of a hibernaculum or from activities that cut down or remove known occupied maternity roost trees, or any trees within 150-feet of a maternity roost tree during the pup-rearing season (June 1 to July 31). No trees with exfoliating bark were observed during field surveys. Additionally, no tree clearing or trimming activities are proposed for the Project area and the anticipated construction date is in January 2020; therefore, EDGE recommends that the Project will have *no effect* on the northern long-eared bat.

Wood Stork

The wood stork (*Mycteria americana*) is a highly colonial species with a range extending along the Atlantic and Gulf coasts. Along the Gulf coast, this species is known from Texas and Louisiana, northward through into Arkansas and Tennessee along the Mississippi River Valley. Wood storks occur seasonally in Mississippi during the non-breeding season, from May to October. The wood stork nests primarily in cypress or mangrove swamps and feed in freshwater marshes, narrow tidal creeks, or flooded tidal pools. Although PEM and PFO wetlands were identified in the Project area, none of these wetlands contained habitat that would be suitable for the wood stork. More specifically, the PEM wetland did not contain standing water or optimal foraging habitat and tree species consisted of American elm (*Ulmus americana*), sweetgum (*liquidambar styraciflua*), and boxelder (*Acer negundo*) which would not be considered suitable for this species. Therefore, EDGE recommends that the Project will have no effect on the wood stork or critical habitat for the wood stork.

USFWS Consultation

On October 31, 2019 EDGE requested an online regulatory review using the USFWS's IPaC System. On November 4, 2019, based on the potential for listed species in the vicinity of the Project, EDGE submitted a formal request for determination to the USFWS Mississippi Ecological Services field office in Jackson. To date, the USFWS has not returned comment. Upon receipt, EDGE will forward USFWS comments to your office. A copy of our correspondence is provided as part of Attachment 8 of this PCN.

Cultural Resources

On October 16, 2019, in compliance with Section 106 of the National Historic Preservation Act, as amended, EDGE's staff archaeologist conducted a review of MDAH's online *Historical Resources Inventory Database*. The review indicated that no historic properties, or any cultural resources, have been recorded within or adjacent to the Project area. All work will take place within the existing pipeline ROW. No excavation will be required below the original depth of excavation that was obtained during installation across Lindsey Creek. No additional temporary workspace is needed. Therefore, EDGE's professional archaeologist and Texas Eastern are of the opinion that the proposed activities described above qualify for blanket clearance under 36 CFR 800.13 in

accordance with *Historic and Archaeological Categorical Exclusion Agreement for Pipeline Construction/Maintenance Activities in Mississippi* (Agreement). EDGE submitted a letter to MDAH notifying the agency that Texas Eastern plans to proceed with the Project in accordance with the terms of the Agreement. In the event that cultural resources are inadvertently discovered during the proposed Project, Texas Eastern will initiate protocols described in its Unanticipated Discoveries and Emergency Procedures (UDP). A copy of the consultation letter and UDP are provided as part of Attachment 9 of this PCN.

Concluding Remarks

Texas Eastern believes that the Project qualifies for coverage under NWP Nos. 12 and 13; therefore, concurrence and authorization to proceed are requested from your office. Should you need additional information to assist with your review, please contact me at (832) 772-3015 or relevert@edge-es.com. You may also contact Texas Eastern's Environmental Project Manager Jonathan Martensen (936) 524-0819 or by email at Jonathan.Martensen@enbridge.com.

Sincerely,

Rachel Levert, P.W.S.
Environmental Professional
Edge Engineering and Science, LLC
Authorized Project Agent of Texas Eastern

Literature Cited

- Mississippi Wildlife, Fisheries, and Parks (MDWFP). 2019. Heritage Programs – Hinds County, Mississippi. Available online at: <https://www.mdwfp.com/museum/seek-study/heritage-program/nhp-online-data/>. Accessed October 2019.
- U.S. Army Corps of Engineers (USACE). 1987. *Corps of Engineers Wetland Delineation Manual*. Technical Report Y-87-1, U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS.
- U.S. Army Corps of Engineers (USACE). 2005. Regulatory Guidance Letter: *Ordinary High Water Mark Identification*. No. 05-05. Available online: <http://www.usace.army.mil/Portals/2/docs/civilworks/RGLS/rgl05-05.pdf>. Accessed October 2019.
- U.S. Army Corps of Engineers (USACE). 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plains Region* (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- U.S. Fish and Wildlife Service (USFWS). 2019. Information for Planning and Consultation (IPaC) System. Available at: <https://ecos.fws.gov/ipac/>. Accessed October 2019.

Attachment 1

ENG Form 6082

Attachment 2

Preliminary Jurisdictional Determination (PJD) Form

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD):

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:

Applicant:
Enbridge Energy Partners (Enbridge)
Jonathan Martensen
1001 Louisiana Street, Suite 1000
Houston, Texas 77002

Agent:
Edge Engineering and Science, LLC (EDGE)
Rachel E. Levert
16285 Park Ten Place, Suite 400
Houston, Texas 77084

C. DISTRICT OFFICE, FILE NAME, AND NUMBER: Vicksburg District (file name and # unassigned)

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION: See PJD Form Appendix A.

(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES)

State: Mississippi
County/parish/borough: Hinds County
City: N/A

Center coordinates of site (lat/long in degree decimal format): 32.319056°, -91.373738°

Universal Transverse Mercator: 15 S, 653083.70 m E, 3576963.24 m N

Name of nearest waterbody: Lindsey Creek

Identify (estimate) amount of waters in the review area: See PJD Form Appendix A.

Non-wetland waters: 189 linear feet: 45 width (ft) and/or

Cowardin Class: Perennial Stream

Stream Flow: Perennial

Wetlands: One Palustrine Emergent Wetland and two Palustrine Forested Wetlands

Cowardin Class: PEM1C and PFO1A

Name of any water bodies on the site that have been identified as Section 10 waters: None

Tidal: None

Non-Tidal: None

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☐ Office (Desk) Determination. Date:

☐ Field Determination. Date(s):

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested

this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit or a Nationwide General Permit (NWP) or other general permit verification requiring “pre-construction notification” (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) The permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant’s acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

This preliminary JD finds that there “*may be*” waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
EDGE on behalf of Enbridge.
- ☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
- ☐ Office concurs with data sheets/delineation report.
- ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps: .
- ☐ Corps navigable waters' study: .
- ☒ U.S. Geological Survey Hydrologic Atlas: ORM.
- ☒ USGS NHD data.
- ☒ USGS 8 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite scale & quad name: 7.5-minute (1:24,000)
quadrangle: Clinton, Mississippi Quadrangle
- ☒ USDA Natural Resources Conservation Service (NRCS) Soil Survey.
- Citation:
- United States Department of Agriculture - Natural Resources Conservation
Service (NRCS). 19. Soil Survey of Hinds County, Mississippi. Available online
at:
https://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/mississippi/hindsMS1979/Hinds.pdf
- ☒ National Wetlands Inventory map(s). Cite name: See PCN Attachment 5.
- ☐ State/Local wetland inventory map(s): .
- ☒ FEMA/FIRM map 28049C0278H, effectively 11/18/2009
- ☒ 100-year Floodplain Elevation is: N/A (National Geodetic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date): TX Orthoimagery Program 2018
or ☐ Other (Name & Date): .
- ☐ Previous determination(s). File no. and date of response letter: .
- ☐ Other information (please specify): .

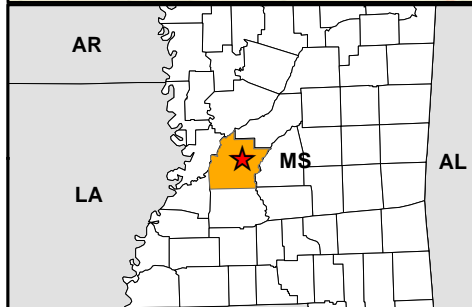
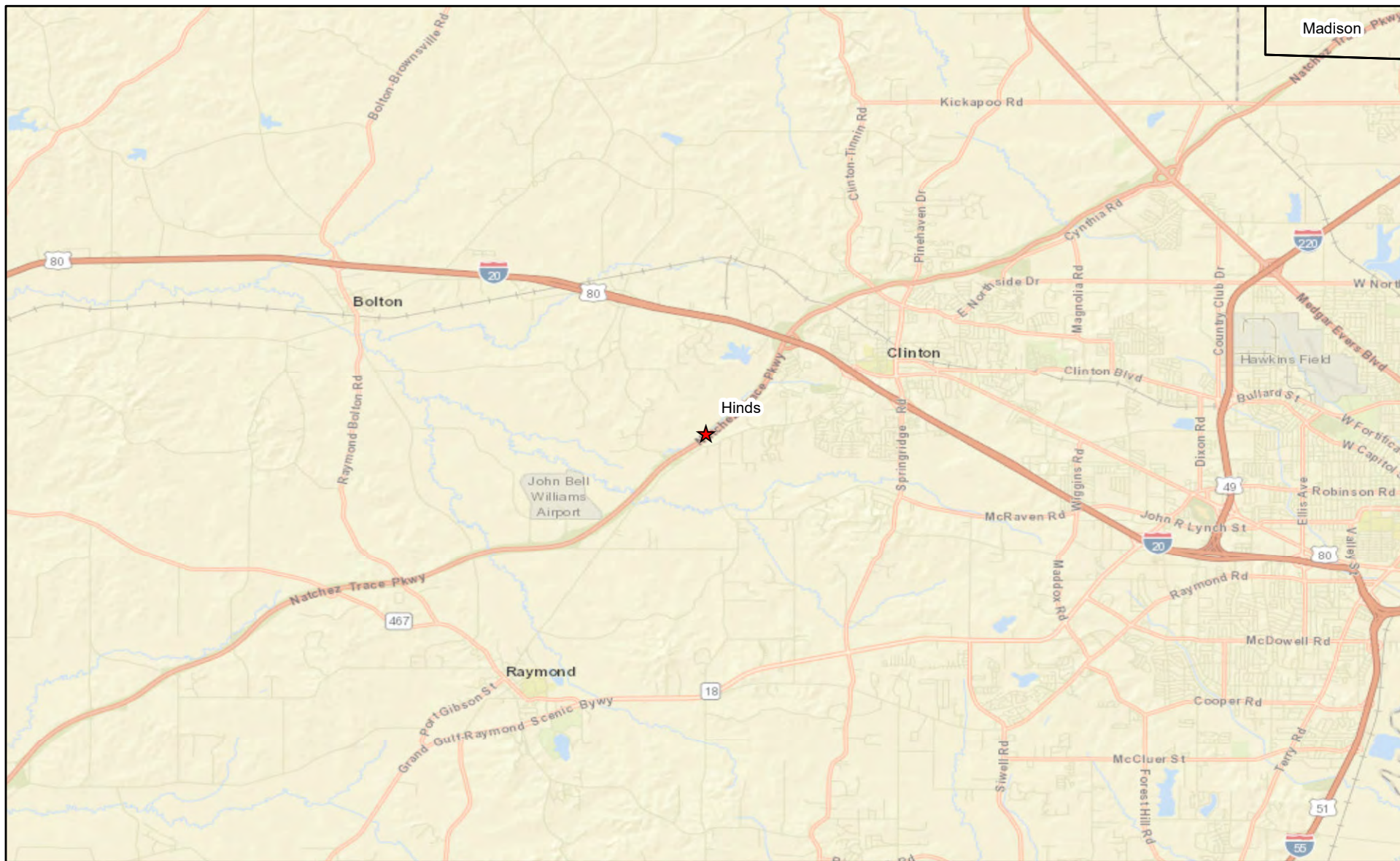
IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Signature and date of
Regulatory Project Manager
(REQUIRED)

Signature and date of
person requesting preliminary JD
(REQUIRED, unless obtaining the
signature is impracticable)

Attachment 3

Project Vicinity Map



Legend

- ★ Site Location
- County Boundary

North Arrow

0 1.25 2.5 Miles

Scale: 1:150,000

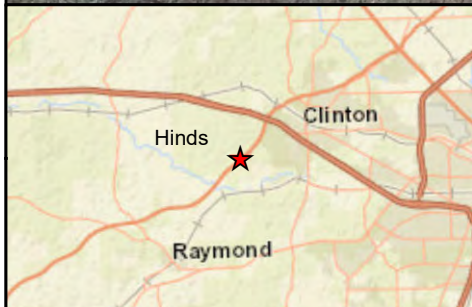
Texas Eastern Transmission, LP
Natchez Trace Revetment Project

Attachment 3
 Project Vicinity Map

Hinds County, Mississippi

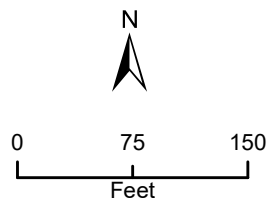
Attachment 4

Aerial Photo-based Impacts Map



Legend

- Existing Pipeline
- Stream
- PEM
- Workspace



Scale: 1:1,500



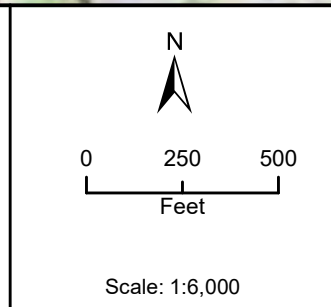
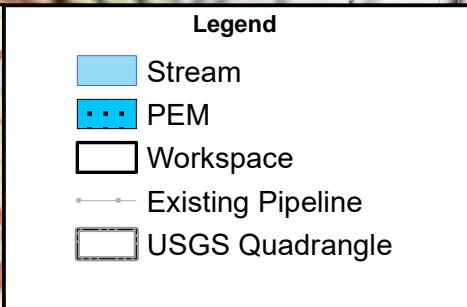
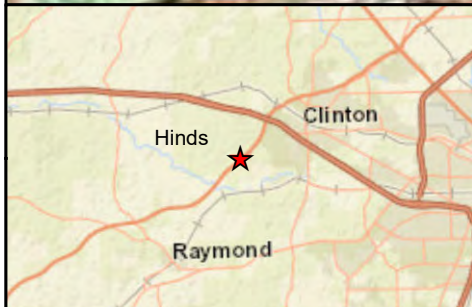
Texas Eastern Transmission, LP
Natchez Trace Revetment Project

Attachment 4
Aerial Photo-based Impacts Maps

Hinds County, Mississippi

Attachment 5

USGS Topographic Impacts Map



Attachment 6

Construction Drawings

DWG. NO.	DWG. TITLE
UCHC-CLIN_MP 307 TO_MP 307.9 NATCHEZ TRACE REVETMENT PROJECT	
DRAWING INDEX	
UCHC-C-8210	COVER SHEET, VICINITY MAP
UCHC-L-1100	ACCESS & OVERVIEW MAP
UCHC-X-0442	PLD-442 (REFERENCE)
UCHC-X-0442A	PLD-442A (REFERENCE)
UCHC-A-1010	PROPOSED REVETMENT - PLAN, PROFILE & SECTIONS
STANDARD SHEET 1 OF 2	
ES-0029	TEMPORARY EQUIPMENT BRIDGE (EQUIPMENT PADS WITH OR WITHOUT CULVERTS)
ES-0030	TEMPORARY EQUIPMENT BRIDGE (CRUSHED STONE WITH CULVERTS)
ES-0031	TEMPORARY EQUIPMENT BRIDGE (FLEX-FLOAT OR PORTABLE BRIDGE)
ES-0032	TYPICAL STANDARD WETLAND CROSSING
ES-0033	TYPICAL WET WATERBODY CROSSING
ES-0034	TYPICAL FLUME WATERBODY CROSSING
ES-0035	TYPICAL DAM-AND-PUMP WATERBODY CROSSING
STANDARD SHEET 2 OF 2	
ES-0018	PERMANENT SLOPE BREAKER
ES-0019	CHEVRON SLOPE BREAKER
P4200	TYPICAL TEMPORARY BRIDGE
SP-1000	PIPELINE CROSSING MAT
XX-XXXX	FABRIFORM ARTICULATING BLOCK
REFERENCE DRAWINGS	
UCHC-CLIN 14 SHT. 079	EXISTING ALIGNMENT
UCHC-CLIN 18 SHT. 033	EXISTING ALIGNMENT
UCHC-CLIN 31 SHT. 079	EXISTING ALIGNMENT

TEXAS EASTERN TRANSMISSION SYSTEM
UCHC - CLIN, MP 307 & MP 307.9
NATCHEZ TRACE REVETMENT PROJECT
HINDS COUNTY, MISSISSIPPI
2023

DATE	ISSUE	LEAD DFRS.	SECT. SUPV.	APPROVALS		
				PROJ. DESIGN	ENG./MGR.	PROJECT DIRECTOR
06/26/2023	<input checked="" type="checkbox"/> ISSUED FOR REVIEW - 60% (A)	LGF		RWG	AC	
07/14/2023	<input checked="" type="checkbox"/> ISSUED FOR BID - (B)	LGF		RWG	AC	
08/18/2023	<input checked="" type="checkbox"/> ISSUED FOR CONSTRUCTION - (0)	LGF		RWG	AC	
12/11/2023	<input checked="" type="checkbox"/> ISSUED FOR PERMIT - (1)	LGF		RWG	AC	

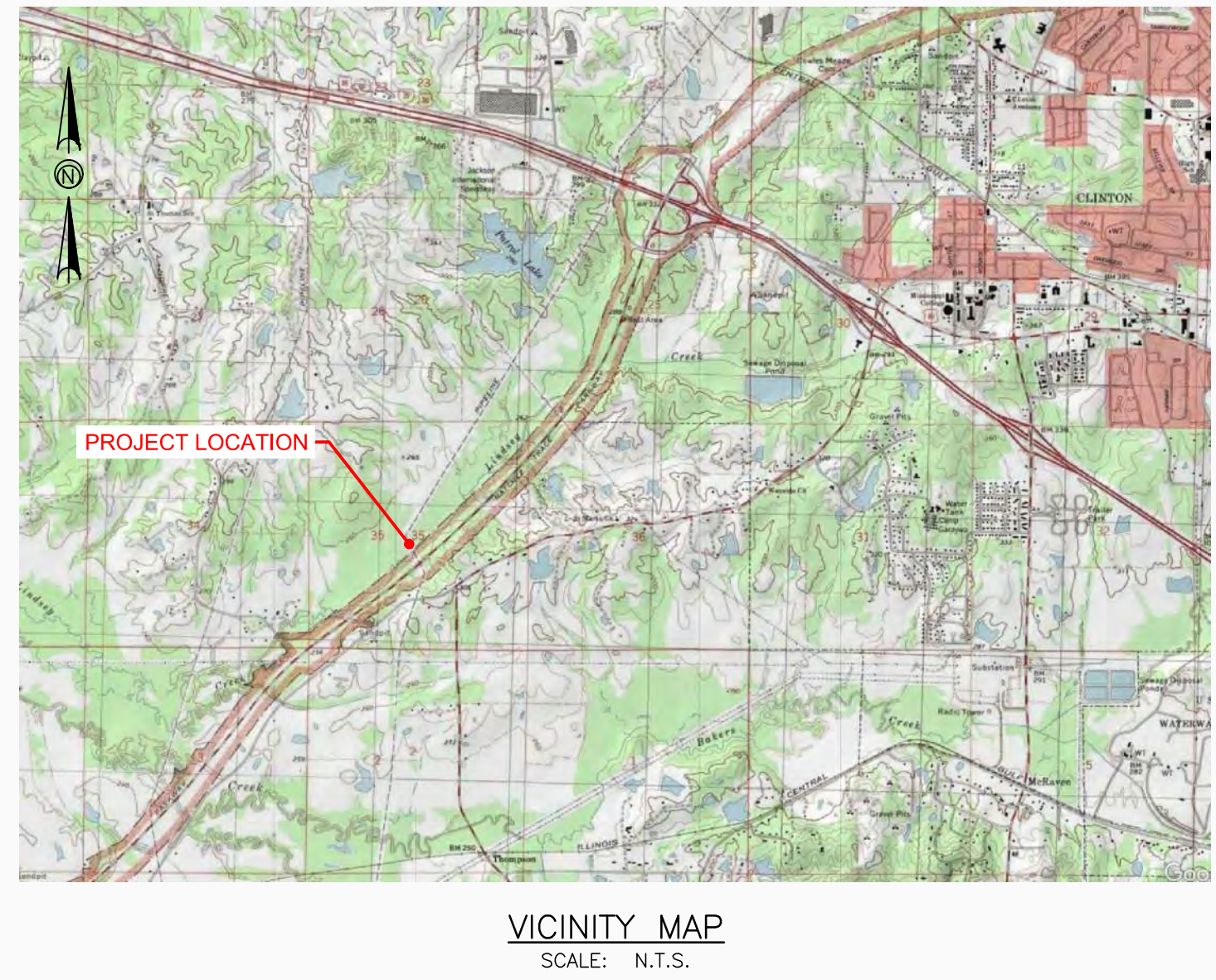



EXHIBIT A
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PLANT W.O. NO. _____
PIPELINE A.F.E. NO. MC.400189.003
YEAR 2023

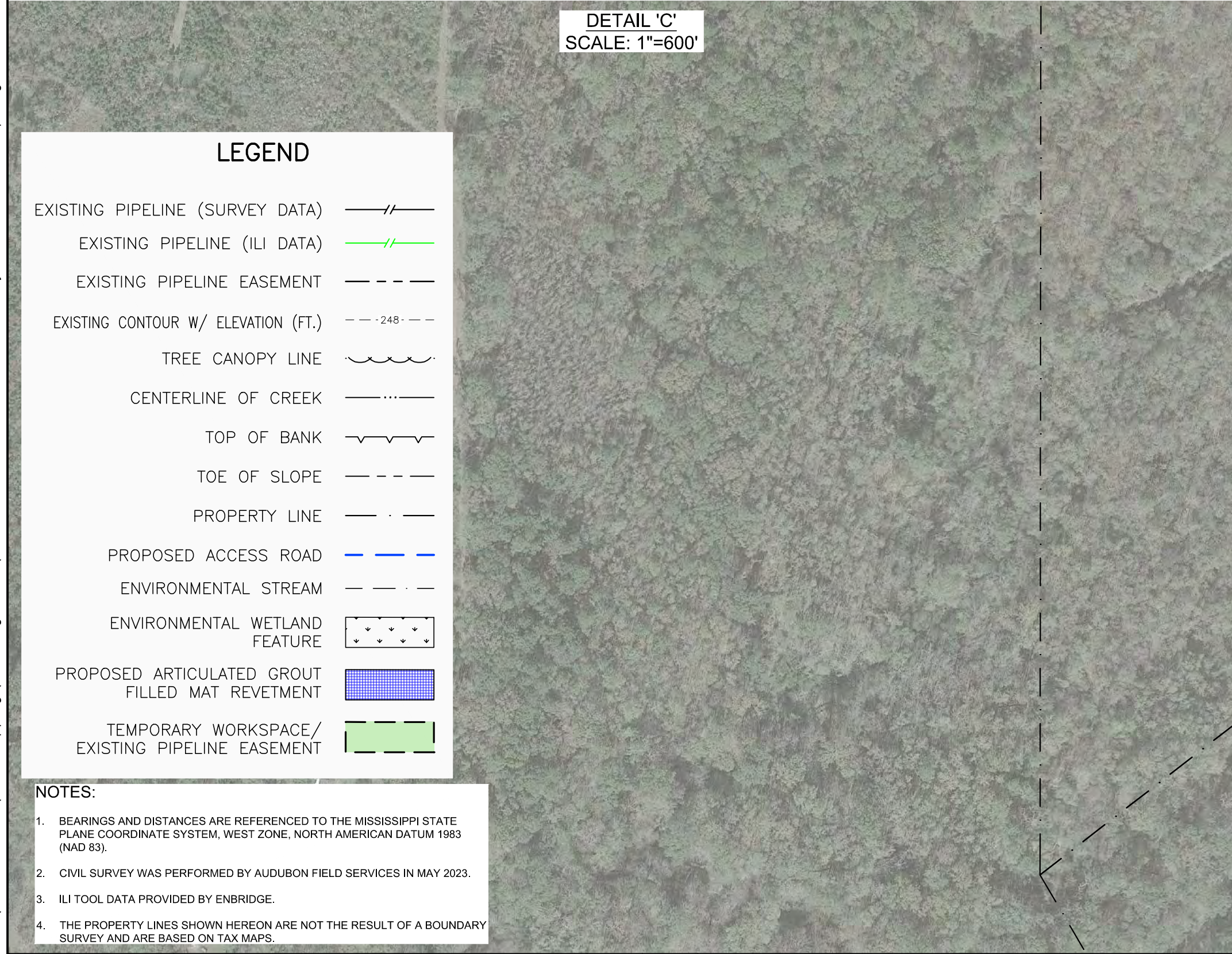
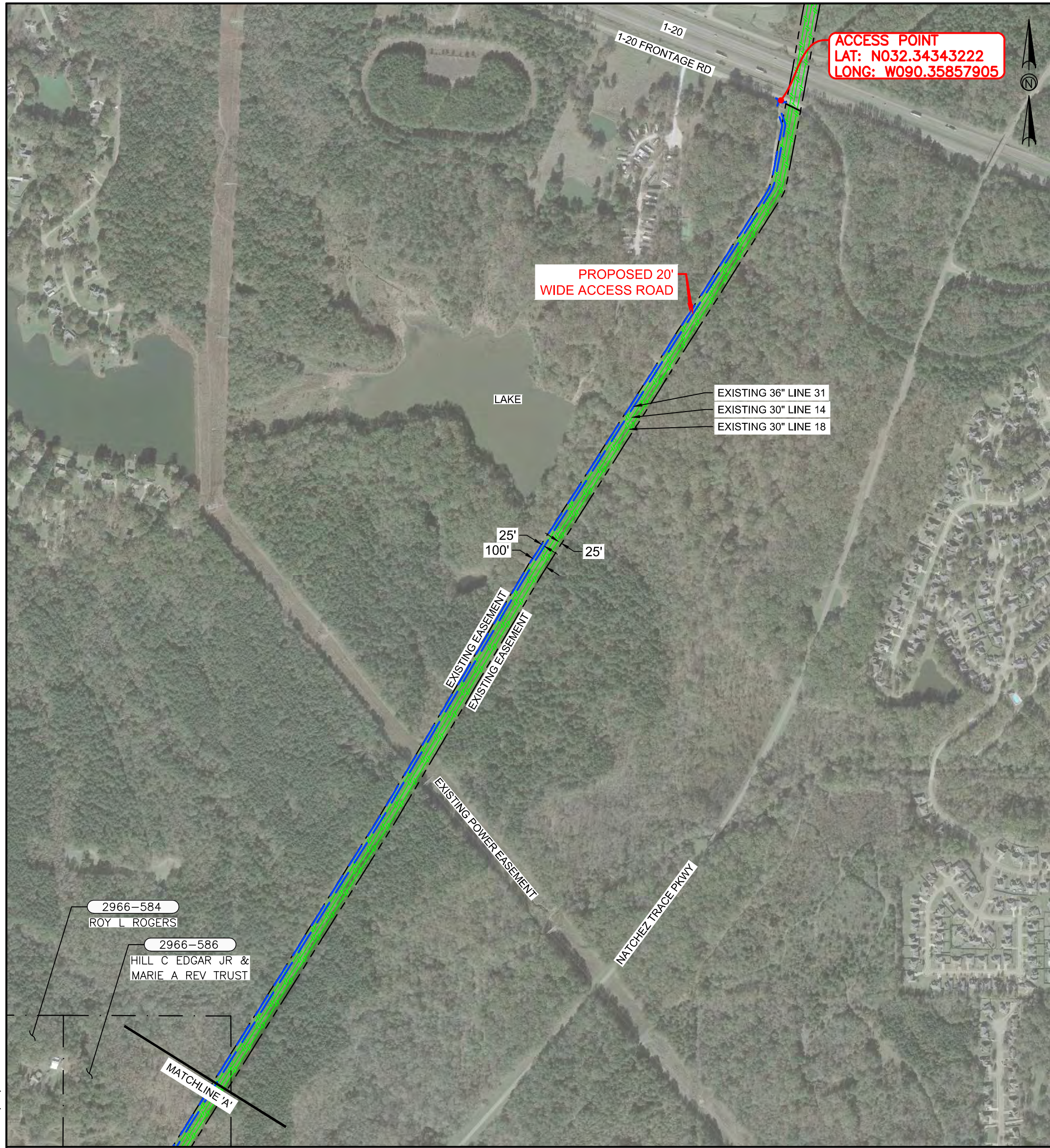
ISSUED FOR
12/11/23
PERMIT

PREPARED BY:

audubon
Field Solutions
10205 WESTHEIMER ROAD
SUITE 100
HOUSTON, TEXAS 77042
PHONE: (281) 669-0590





Texas Eastern Transmission, LP
915 North Eldridge Parkway, Suite 1100, Houston, TX 77079 713-627-5400

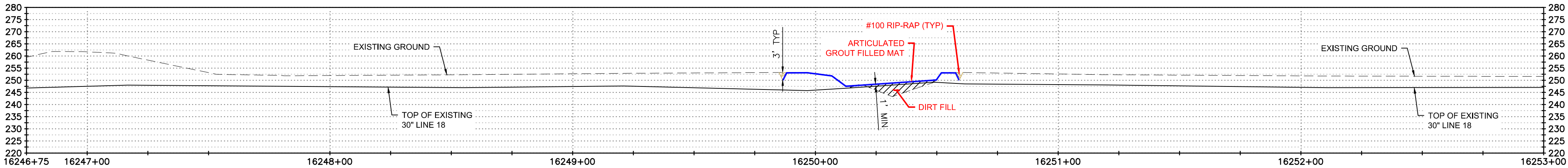
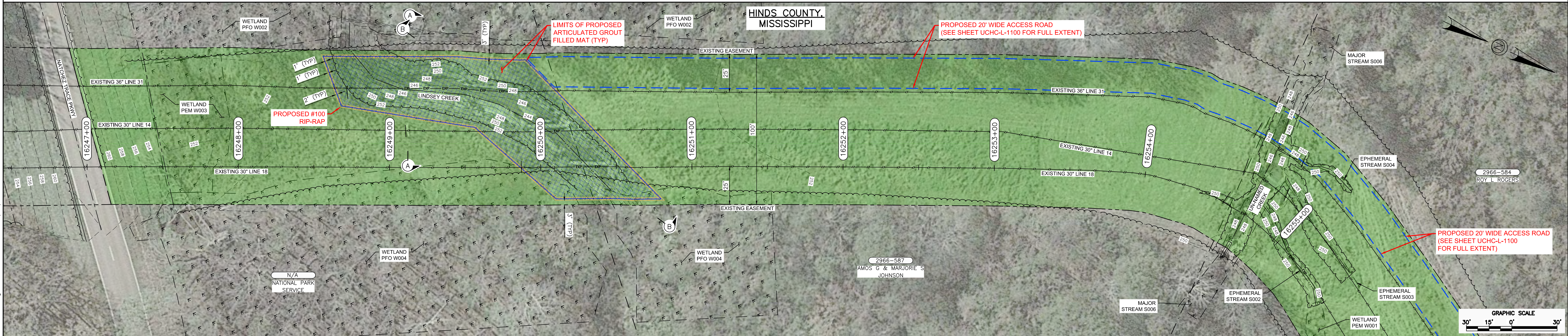
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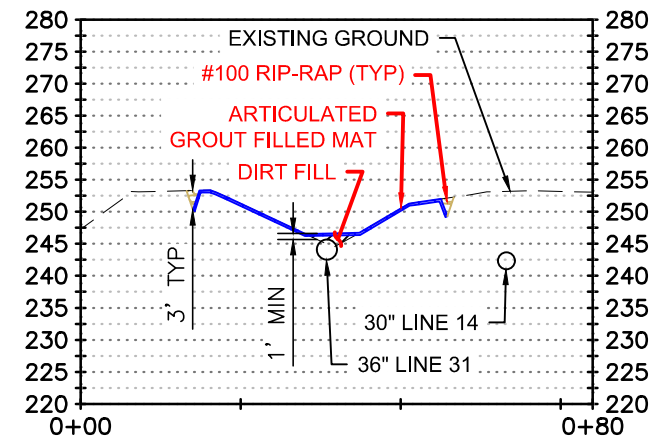
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		△	LGF	RG	ISSUED FOR PERMIT	(12/11/2023)					
		△	LGF	RG	ISSUED FOR CONSTRUCTION	(08/18/2023)					
		△	LGF	RG	ISSUED FOR BID	(07/14/2023)					
		△	LGF	RG	ISSUED FOR REVIEW	(06/26/2023)					
DWG. NO.	DESCRIPTION	REV	DSN	CK	DESCRIPTION	ITEM NO.	DESCRIPTION	MATERIALS	QTY		
REFERENCE DRAWINGS					REVISIONS		MATERIALS				

 audubon Engineering 10205 WESTHEIMER ROAD SUITE 100 HOUSTON, TX 77042 PHONE: (281) 669-0590		ENGINEERING APPROVALS				TEXAS EASTERN TRANSMISSION SYSTEM UCHC-CLIN, MP 307 & MP 307.9 NATCHEZ TRACE REVETMENT PROJECT ACCESS AND OVERVIEW MAP		 Texas Eastern Transmission, LP 915 North Eldridge Parkway, Suite 1100, Houston, TX 77079 713-627-5400	
		DRAWN BY:	BID	CONSTRUCTION		LOC.	HINDS COUNTY, MISSISSIPPI		
		LGF				YEAR: 2023	A.F.E. MC.400189.003	SCALE: 1"=200'	DWG. UCHC-L-1100
						TITLE	SIGNATURE	DATE	REV. 1

S:\AE\Projects\Enbridge\TETLP\026050-001\870_Mapping\001_Alignment\026050-001 Natchez Trace Plan_Profile_Sections.dwg - PLOT TIME: 12/8/2023 10:17 AM



PROFILE VIEW - REVETMENT OVER EXISTING 30" LINE 18
STA. 16246+75 TO STA. 16256+00
SCALE: 1"=30'H, 1"=30'V

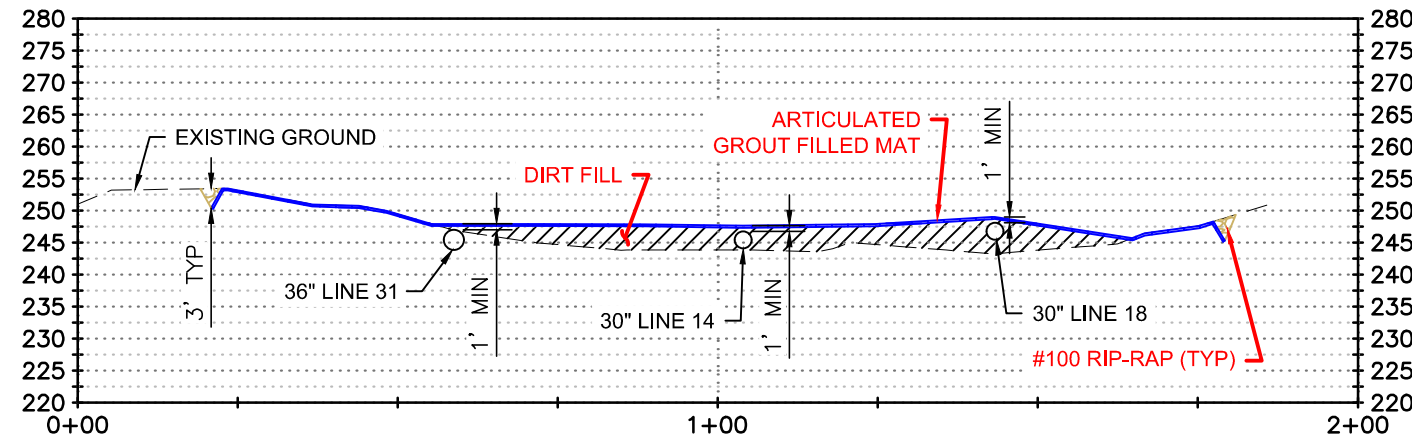


SECTION A
LOOKING UP STATION
SCALE: 1"=30'H, 1"=30'V

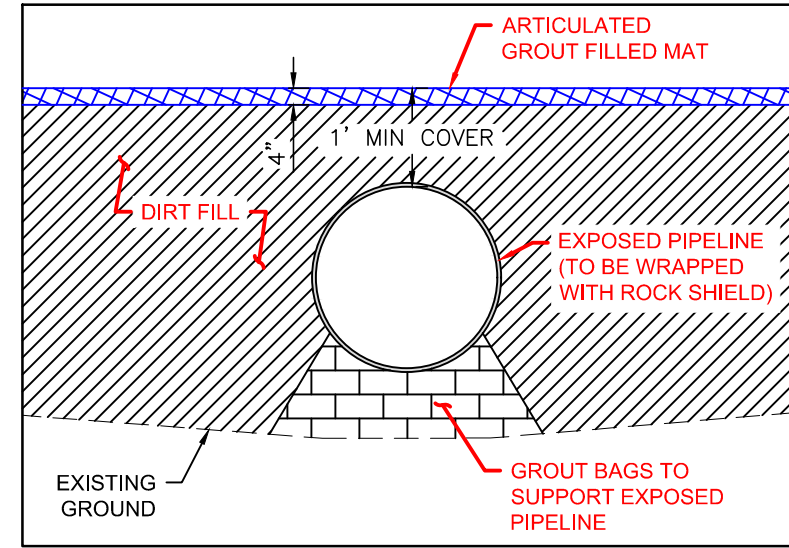
NOTES:

- BEARINGS AND DISTANCES ARE REFERENCED TO THE MISSISSIPPI STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM 1983 (NAD 83).
- CIVIL SURVEY WAS PERFORMED BY AUDUBON FIELD SERVICES IN MAY 2023.
- ILI TOOL DATA PROVIDED BY ENBRIDGE.
- THE PROPERTY LINES SHOWN HEREON ARE NOT THE RESULT OF A BOUNDARY SURVEY AND ARE BASED ON TAX MAPS.
- CONTRACTOR WILL BE REQUIRED TO ISOLATE THE EXPOSED PIPE, CREATE A DRY ENVIRONMENT, INSPECT THE COATING AND REPAIR AS NEEDED. CONTRACTOR SHALL EXPOSE, REMOVE EXISTING COATING (AS NEEDED), SANDBLAST AND RECOAT EXPOSED PIPE EXTENDING A MINIMUM OF 10 FT. INSIDE EACH BANK. CONTRACTOR WILL ASSIST WITH NDE INSPECTION AS NEEDED.
- CONTRACTOR SHALL PROVIDE AND REPAIR COATING UTILIZING #B19 COATING REPAIRS FOR UNDERWATER PIPELINES (2S) (DENSO S28 EPOXY) PER ENBRIDGE FIELD AND SHOP APPLIED BELOW GROUND COATINGS DS-FSC1.
- CONTRACTOR SHALL PROVIDE AND INSTALL FILL TO PROVIDE 1 FT. OF COVER OVER EXPOSED PIPELINES. FILL MAY BE ACQUIRED ONSITE FROM CUT AREAS TO RE-ESTABLISH CREEK AND ADDITIONAL FILL SHALL BE BROUGHT IN TO COMPLETE PIPELINE COVERAGE AND BANK RE-CONFIGURATION.
- CONTRACTOR SHALL PROVIDE AND INSTALL APPROX. 9,648 SQ. FT. OF RO 60 NON-WOVEN GEOTEXTILE FABRIC OR EQUIVALENT. THE GEOTEXTILE FABRIC SHALL BE PLACED BELOW AND TIED-IN WITH THE ARTICULATED (GROUT FILLED) BLOCK MATS (ABM). SEE ATTACHED ABM TYPICAL SECTION DRAWING FOR DETAILS REGARDING MATERIALS AND DESIGN.
- CONTRACTOR SHALL PROVIDE AND INSTALL ONE APPROX. 9,648 SQ. FT. OF 4 INCH OF ARTICULATED (GROUT FILLED) BLOCK MAT (ABM) WITH 3 FT. DEEP TOE-IN ON ALL SIDES. THE TOE-IN SHALL BE MADE UTILIZING 100# ROCK RIP-RAP WHERE INDICATED, AND DIRT AND SOIL WHERE INDICATED. CONTRACTOR IS TO PROVIDE SUFFICIENT 100# ROCK RIP-RAP TO COMPLETE INSTALLATION OF THE TOE-IN OF THE ABM. CONTRACTOR MAY MAKE ADJUSTMENTS IN THE LOCATION OF THE ABM AS REQUIRED TO ACHIEVE CORRECT CONTOUR OF BANK AND COVERAGE OVER THE PIPE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY PERMITTING REQUIRED TO TRANSPORT THE FILL MATERIAL, ABM AND THE 100# ROCK RIP-RAP FOR TOE-IN TO THE WORK SITE.
- CONTRACTOR TO BE AWARE OF AND TAKE ALL PRECAUTIONS WHEN WORKING AROUND OVERHEAD POWER LINES AND POWER LINE SUPPORTS.
- CONTRACTOR SHALL FOLLOW THE FOLLOWING DESIGN GUIDELINES:
 - ALL WORK MUST BE CONDUCTED INSIDE OF 100' EASEMENT
 - USE BIODEGRADABLE MATERIALS, WHERE POSSIBLE
 - NO PLASTIC NETTING
 - TRY TO USE NATURAL FIBER MATERIALS
 - RE-SEEDING (NATIVE VEGETATION, SEEDS MIXES, WILDFLOWERS)
 - NATIVE STONE COLORS (ON RIP-RAP, IF POSSIBLE)

NATCHEZ TRACE VOLUMES	
FILL TYPE	LINDSEY CREEK QUANTITIES
ROCK FILL	97 CU YDS
SOIL FILL	166 CU YDS
GROUT BAGS	118 CU YDS
TOTAL FILL	381 CU YDS



SECTION B
LOOKING UP STATION
SCALE: 1"=30'H, 1"=30'V



TYPICAL SECTION SHOWING
ARTICULATED GROUT FILLED MAT AND COVER
SCALE: NTS

LEGEND

- EXISTING PIPELINE (SURVEY DATA) ---
- EXISTING EXPOSED PIPELINE (SURVEY DATA) --- EXP ---
- EXISTING PIPELINE EASEMENT ---
- EXISTING CONTOUR W/ ELEVATION (FT.) --- -248- ---
- TREE CANOPY LINE ---
- CENTERLINE OF CREEK ---
- TOP OF BANK ---
- TOE OF SLOPE ---
- PROPERTY LINE ---
- PROPOSED ACCESS ROAD ---
- ENVIRONMENTAL STREAM ---
- ENVIRONMENTAL WETLAND FEATURE ---
- TEMPORARY WORKSPACE/ EXISTING PIPELINE EASEMENT ---
- PROPOSED ARTICULATED GROUT FILLED MAT REVETMENT ---
- PROPOSED #100 RIP-RAP ---
- PROPOSED DIRT FILL ---

ISSUED FOR
12/11/23
PERMIT

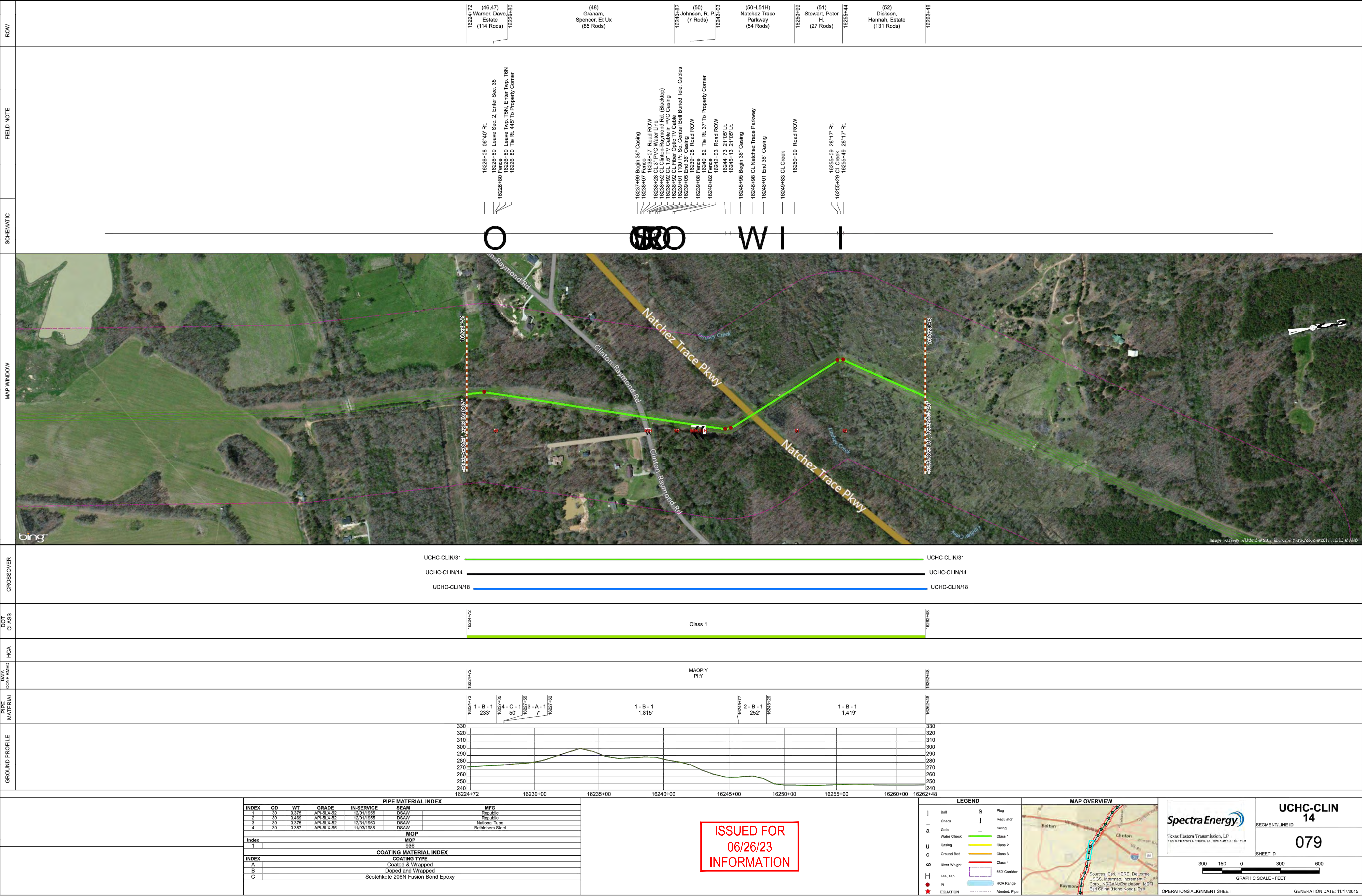
DWG. NO.	DESCRIPTION	REV	DSN	CK	DESCRIPTION	ITEM NO.	DESCRIPTION	QTY
REFERENCE DRAWINGS								
REVISIONS								
MATERIALS								

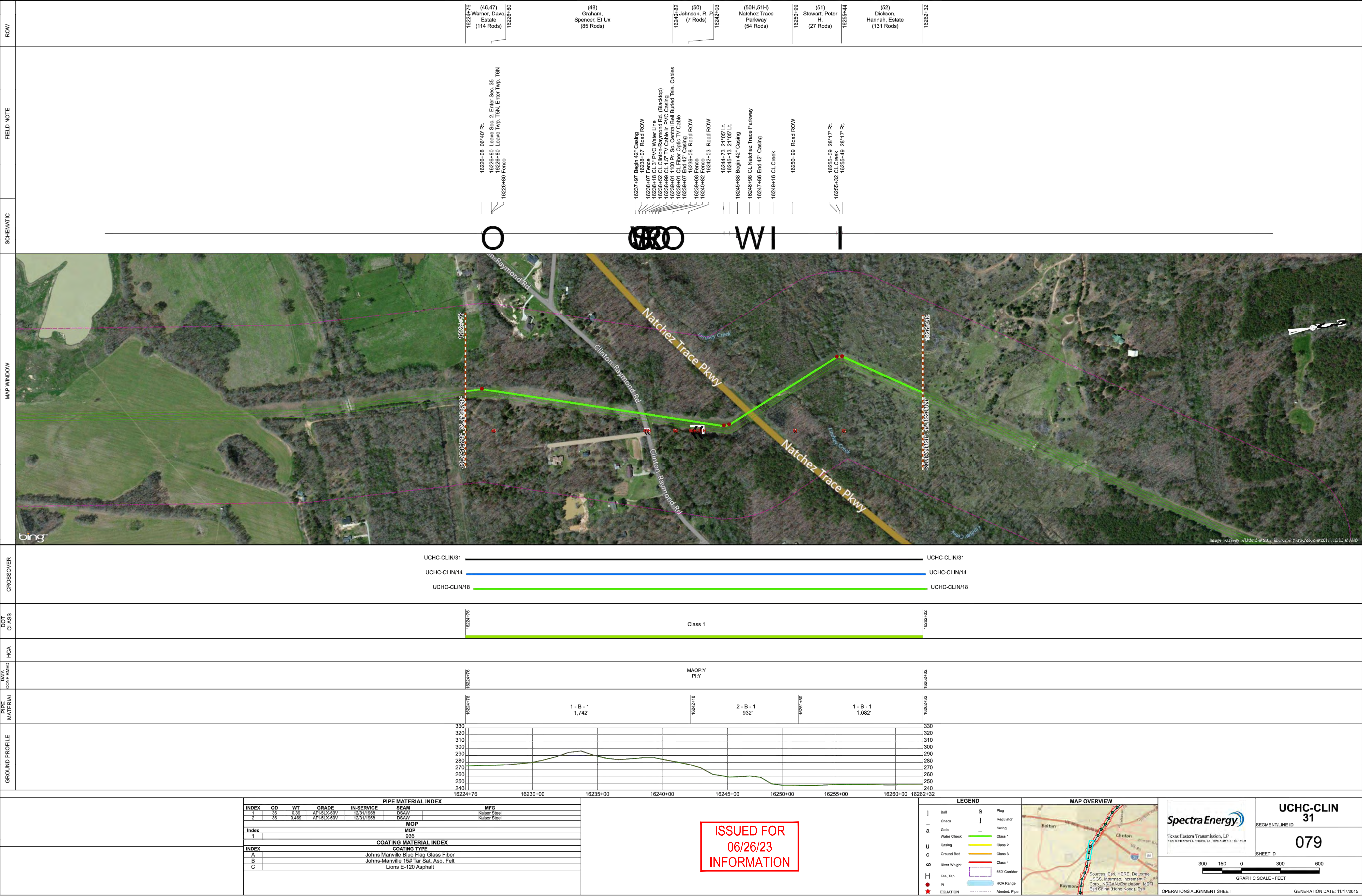
audubon
Field Solutions
10205 WESTMEIER ROAD
SUITE 100
HOUSTON, TEXAS 77042
PHONE: (281) 669-0590

DRAWN BY:	ENGINEERING APPROVALS	
	BID	CONSTRUCTION
LGF		
TITLE	SIGNATURE	DATE

TEXAS EASTERN TRANSMISSION SYSTEM UCHC-CLIN, MP 307 & MP 307.9 NATCHEZ TRACE REVETMENT PROJECT PROPOSED REVETMENT - PLAN, PROFILE & SECTIONS			
LOC. HINDS COUNTY, MISSISSIPPI			
YEAR: 2023	A.F.E. MC.400189.003	SCALE: 1"=30'H, 1"=30'V	DWG. UCHC-A-1010

ENBRIDGE
Texas Eastern Transmission, LP
5400 Westheimer Ct. Houston, TX 77056-5310 713 / 627-5400





Attachment 7

Wetland Delineation and Waterbody Survey Report

Wetland Delineation and Waterbody Survey Report

Natchez Trace Revetment Project (SE-19-10722) Hinds County, Mississippi

November 2019

Prepared for:



Enbridge Energy Partners
5400 Westheimer Court
Houston, Texas 77056

Prepared by:



Edge Engineering and Science, LLC
16285 Park Ten Place; Suite 400
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Appendix B	Waterbody Data Table
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1.0 INTRODUCTION

Edge Engineering and Science, LLC (EDGE) conducted a wetland delineation and waterbody survey on behalf of Texas Eastern Transmission (Texas Eastern), a wholly-owned subsidiary of Enbridge Energy Partners (Enbridge) for the proposed pipeline revetment project along its existing Lines 14, 18, and 31 natural gas pipelines (Project) in Hinds County, Mississippi. A Project Location Map is enclosed as Figure 1 and Figure 2 depicts the survey area on the 7.5-minute United States Geological Survey (USGS) topographic quadrangle. This report describes the methodology and results of the wetland delineation and waterbody survey which was conducted in October 2019.

2.0 METHODS

2.1 Map and Database Review

The following information sources were consulted prior to and during the field delineation to assist identification of potential wetlands and waterbodies within the survey area:

- + 7.5-minute series, 1:24,000 USGS topographic quadrangle for Hinds County, Mississippi, including the Clinton, Mississippi Quadrangle (USGS 2019);
- + U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) digital map for the State of Mississippi (USFWS 2019);
- + U.S. Department of Agriculture - Natural Resources Conservation Service (NRCS) - Soil Survey Geographic (SSURGO) Database and soil survey for Hinds County, Mississippi (NRCS 1979); and
- + 2019 aerial photography data.

2.2 Field Survey

On October 15, 2019, EDGE conducted a wetland delineation and waterbody survey of the proposed 3.16-acre survey area within an existing pipeline right-of-way (ROW). The workspace is located at latitude: 32.319056, longitude: -90.373738 near the Natchez Trace Parkway. Field conditions during the survey were seasonally consistent and ranged from inundated wetlands to vegetated uplands. Field conditions did not hinder pedestrian access of the proposed survey area.

2.2.1 Wetland Delineation

As required under Section 404 of the Clean Water Act, wetlands were delineated using the routine method described in the U.S. Army Corps of Engineers (USACE) *1987 Wetlands Delineation Manual* (1987 Manual; USACE 1987) and the *USACE Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0)* (Regional Supplement; USACE 2010). Wetland types and boundaries were determined through initial review of the NWI digital map, followed by field work involving the examination of three parameters: vegetation, soils, and hydrology. Delineation criteria and indicators for each of these parameters are outlined in the 1987 Manual and the Regional Supplement. The Regional Supplement presents wetland indicators, delineation guidance, and other information that is specific to the Atlantic and Gulf Coast Plain Region. Wetlands and waterbodies were classified according to the system used for the USFWS's NWI and described in *Wetlands and Deepwater Habitats of the United States* (Cowardin *et al.* 1979).

For this wetland delineation, multiple data points were strategically positioned for adequate coverage across the survey area. Data points were recorded with a Trimble GeoXT global positioning system (GPS) with sub-meter accuracy. Tables containing wetland and waterbody name, location, type, size, watershed name, and watershed hydrologic unit code (HUC) can be found in Appendix A and B, respectively. All wetland data was recorded on field data sheets contained in Appendix C. Representative photographs were captured at each data point location and are included in Appendix D.

Vegetation Evaluation

In accordance with the procedure set forth in the 1987 Manual and Regional Supplement, the hydrophytic status of vegetation communities was determined through an iterative process involving identification of dominant species and, if necessary, sequential calculation of a "Prevalence Index".

To provide a complete assessment of resident plant communities at each sampling station, most or all species in each vegetation stratum (i.e., Forested, Saplings and Shrubs, Herbaceous, and Woody Vines) were initially identified and recorded. Subsequently, to identify the dominant species in each stratum, the 50/20 rule was applied. The 50/20 rule states that "dominant species are the most abundant plant species (when ranked in descending order of abundance and cumulatively totaled) that immediately exceed 50 percent of the total dominance measure for the stratum, plus any additional species comprising 20 percent or more of the total dominance measure for the stratum." The dominance measure used in this delineation is absolute percent cover. Data drawn from discrete sampling points were supplemented, where appropriate, by data drawn from general observations over a wider area.

Individual plant species names were verified using the *2018 National Wetland Plant List* (USACE 2018) and their regional wetland indicator status determined. Species are classified as Obligate Wetland if they almost always occur in wetlands (>99 percent of the time), Facultative Wetland if they usually occur in wetlands (67-99 percent of the time), Facultative if they are equally likely to occur in wetlands or non-wetlands (34-66 percent of the time), Facultative Upland if they usually occur in non-wetlands (67-99 percent of the time), and Obligate Upland if they almost always occur in non-wetlands (>99 percent of the time). A "No Indicator" status is recorded for those species for which insufficient information is available to determine an indicator status.

Soil Profile Evaluation

Hydric soils are defined as soils that are "saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part" (NRCS 2019). The anaerobic conditions created by repeated or prolonged saturation or flooding, results in permanent changes in soil color and chemistry which are used to differentiate hydric from non-hydric soils.

In areas where the absence of inundation or heavy saturation is allowed, one or more soil pits were excavated at each data point to a depth of at least 14 inches to reveal soil profiles and to determine whether positive indicators of hydric (wetland) soils were present. Hydric soil indicators relate to color, structure, organic content, and the presence of reducing conditions. Color characteristics (hue, value, and chroma) were recorded using Munsell® Charts (Munsell 2009).

Hydrology Evaluation

Land is characterized as having wetland hydrology when, under normal circumstances, the surface is either inundated or the upper portion of the soil is saturated at a sufficient frequency and duration to create anaerobic conditions. Hydrological conditions are further defined in the 1987 Manual as occurring

when an area “is inundated either permanently or periodically at mean water depths less than or equal to 6.6 feet, or the soil is saturated to the surface at some time during the growing season of the prevalent vegetation.” Hydrology is controlled by such factors as seasonal and long-term rainfall patterns, local geology, and topography, soil type, local water table conditions, and drainage.

During the field survey, wetland hydrology was determined by observation of positive indicators such as saturated soils, standing surface water, algal mat, aquatic fauna, high water table, iron deposits, sparsely vegetated concave surface, geomorphic position, water-stained leaves, and surface soil cracks.

2.2.2 Waterbody Survey

With respect to the linear waterbodies located within the survey area, physical and biological data were recorded including water channel width or Ordinary High Water Mark (OHWM) and flow classification (i.e., perennial, intermittent, or ephemeral [including ditches]) using methods provided by the USACE (USACE 2005). The location, linear configuration, and various dimensions of each waterbody were recorded using the same Trimble GeoXT GPS that was used for the wetland delineation with sub-meter accuracy.

3.0 RESULTS

3.1 NWI Classification

Based on a review of NWI digital map for Mississippi, the Project area contains two wetland types consisting of palustrine scrub-shrub, broad-leaved deciduous, temporarily flooded (PSS1A) wetland and palustrine forested, broad-leaved deciduous temporarily flooded (PFO1A) wetland. A PEM1C classification was given to palustrine emergent wetlands within the Project area.

3.2 SSURGO Database

According to the SSURGO Database and as shown in Figure 3, one mapped soil unit is represented in the survey area. As shown in Figure 3, the soil within the Project area is classified as Oaklimeter silt loam, 0 to 2 percent slopes, occasionally flooded, north (Oa). Oaklimeter silt loam is generally described as non-hydric, level, moderately well drained, floodplain soil that is primarily used for pastureland and cultivation (NRCS 1979).

3.3 Wetlands and Waterbodies Field Survey

As shown in the aerial photo-based field-delineated Waters of the U.S. Map (Figure 4), a total of three wetlands and one waterbody were identified within the survey area. Tables summarizing the wetlands and waterbodies delineated during field surveys are presented in Appendices A and B, respectively. Acreages of the delineated features identified within the survey area do not represent acreages that will be impacted during Project construction and operation.

3.3.1 Wetlands

In total, three wetlands were identified within the 3.16-acre survey area. These three wetlands included a total of two PFO wetlands and one PEM wetland (Figure 4; Appendices A and C). Combined, all three wetlands subsume 2.08 acres (65.8%) of the total survey area, including 0.09 acre (2.8%) of PEM wetlands

and 1.99 acres (63%) of PFO wetlands. Detailed descriptions of each wetland identified during the field survey are provided in Table 3.3-1 below and Appendix C.

Table 3.3-1: Representative Wetlands Identified within the Survey Area

Wetland ID	Waterbody Type	Acres	Watershed (HUC 8)	Watershed Name
W-002	PFO	1.13	08060202	Lower Big Black
W-003	PEM	0.09	08060202	Lower Big Black
W-004	PFO	0.86	08060202	Lower Big Black

Vegetation

Table 3.3-2 lists the representative taxa encountered within the survey area by vegetation stratum and includes the common and scientific names of each. Representative photographs of the survey area are included in Appendix D.

Table 3.3-2: Representative Taxa Identified within the Survey Area

Vegetation Stratum	Common Species Name	Scientific Species Name
Forested	American elm, sweetgum	<i>Ulmus americana</i> , <i>Liquidambar styraciflua</i>
Sapling and Shrub	American elm, boxelder	<i>Ulmus americana</i> , <i>Acer negundo</i>
Herbaceous	alligatorweed, barnyardgrass	<i>Alternanthera philoxeroides</i> , <i>Echinochloa crusgalli</i>
Woody Vines	N/A	N/A

Soils

Subsurface soil profile obtained within the survey area was generally consistent with the SSURGO Database and NRCS county soil survey reference materials (NRCS 1979 & 2019). Soil texture was a silty clay loam, and generally exhibited matrix hue of 10YR (Munsell 2009).

Hydrology

Wetland hydrological indicators noted in the field included saturated soils, standing surface water, water marks, geomorphic position, and a high water table.

3.3.2 Waterbodies

One waterbody was recorded within the survey area and was not classified as a Section 10 waterbody. This waterbody, known as Lindsey Creek, is classified as a perennial waterbody (Figures 3 and 4; Table 3.3-3). Lindsey Creek was observed as being approximately 45 feet wide and containing perennial flow at the time of field surveys.

Table 3.3-3: Representative Waterbodies Identified within the Survey Area

Waterbody ID	Waterbody Type	Linear Feet	Watershed (HUC 8)	Watershed Name
S001	Perennial Stream	413	08060202	Lower Big Black

4.0 CONCLUSIONS

As a result of the environmental desktop assessment and the field survey completed on October 15, 2019, two PFO wetlands, one PEM wetland, and one perennial stream were identified within the Project area (Figure 4). The survey area associated with the proposed Project is located primarily within an existing pipeline ROW. As mentioned in Section 3.3 above, acreages of the delineated features identified associated within the survey area do not represent actual acreages that will be impacted during Project construction and operation.

5.0 REFERENCES

Persons Performing the Wetlands/Waterbody Delineation

Jenny Lam and Ghazi Ibrahim of EDGE conducted the wetland delineation and waterbody survey.

Reference Documents

Cowardin, L. M., V. Carter, F. C. Golet, and E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Fish and Wildlife Service, Washington, D.C. FWS/OBS-79/31.

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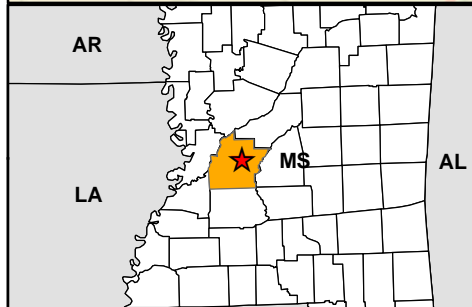
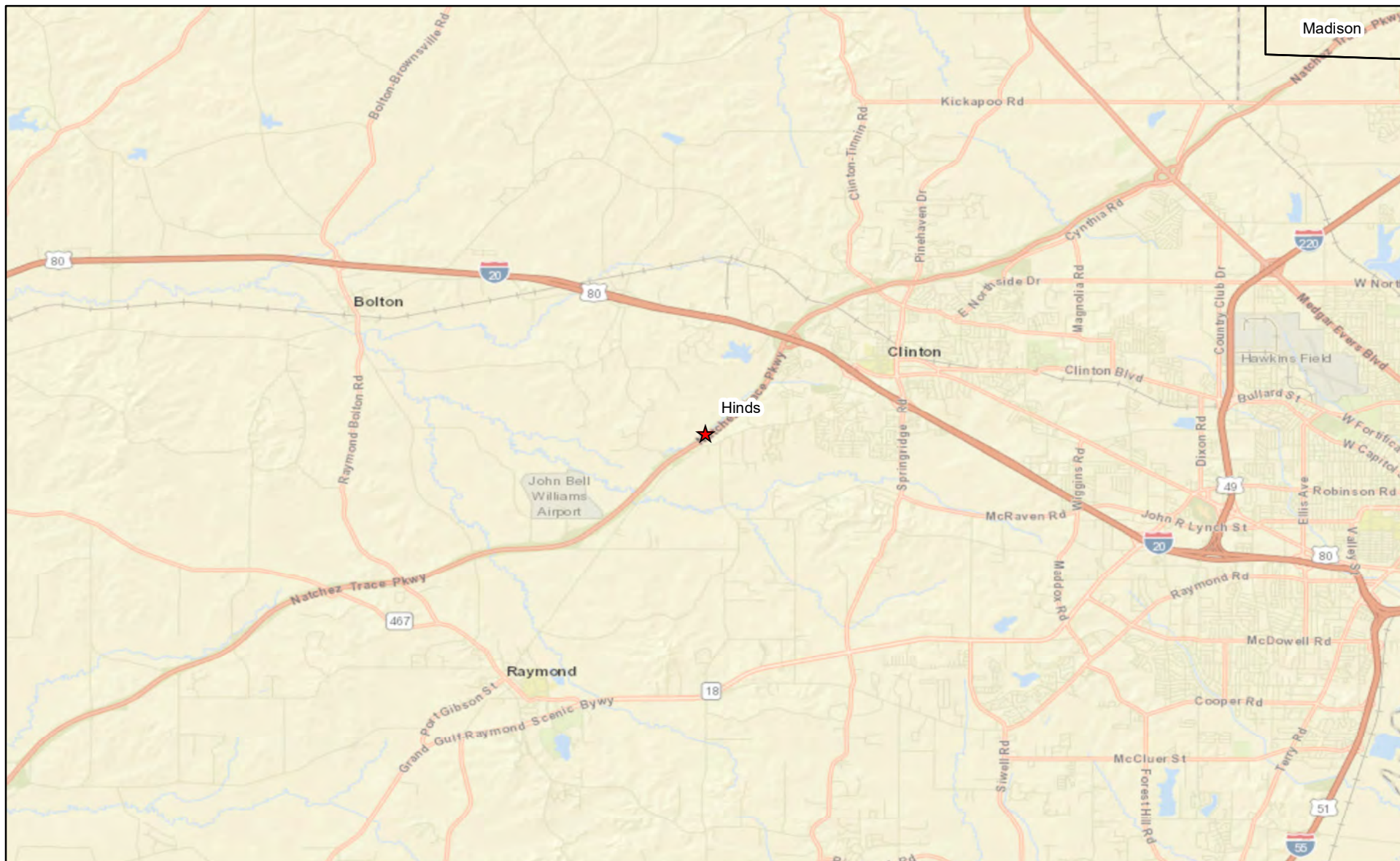
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- U.S. Geological Service (USGS). 2019. 7.5-Minute Series Topographic Clinton, Mississippi. Available online: <https://viewer.nationalmap.gov/basic/?basemap=b1&category=histtopo,ustopo&title=Map%20View>.

Figures

FIGURE 1:
PROJECT LOCATION MAP





Legend

- ★ Site Location
- County Boundary

N

0 1.25 2.5
Miles

Scale: 1:150,000

**Texas Eastern Transmission, LP
Natchez Trace Revetment Project**

Figure 1
Project Location Map

Hinds County, Mississippi

FIGURE 2:
USGS TOPOGRAPHIC VICINITY MAP



Legend

- Survey Area
- Pipeline
- USGS Quadrangle

N

0 400 800

Feet

Scale: 1:8,000

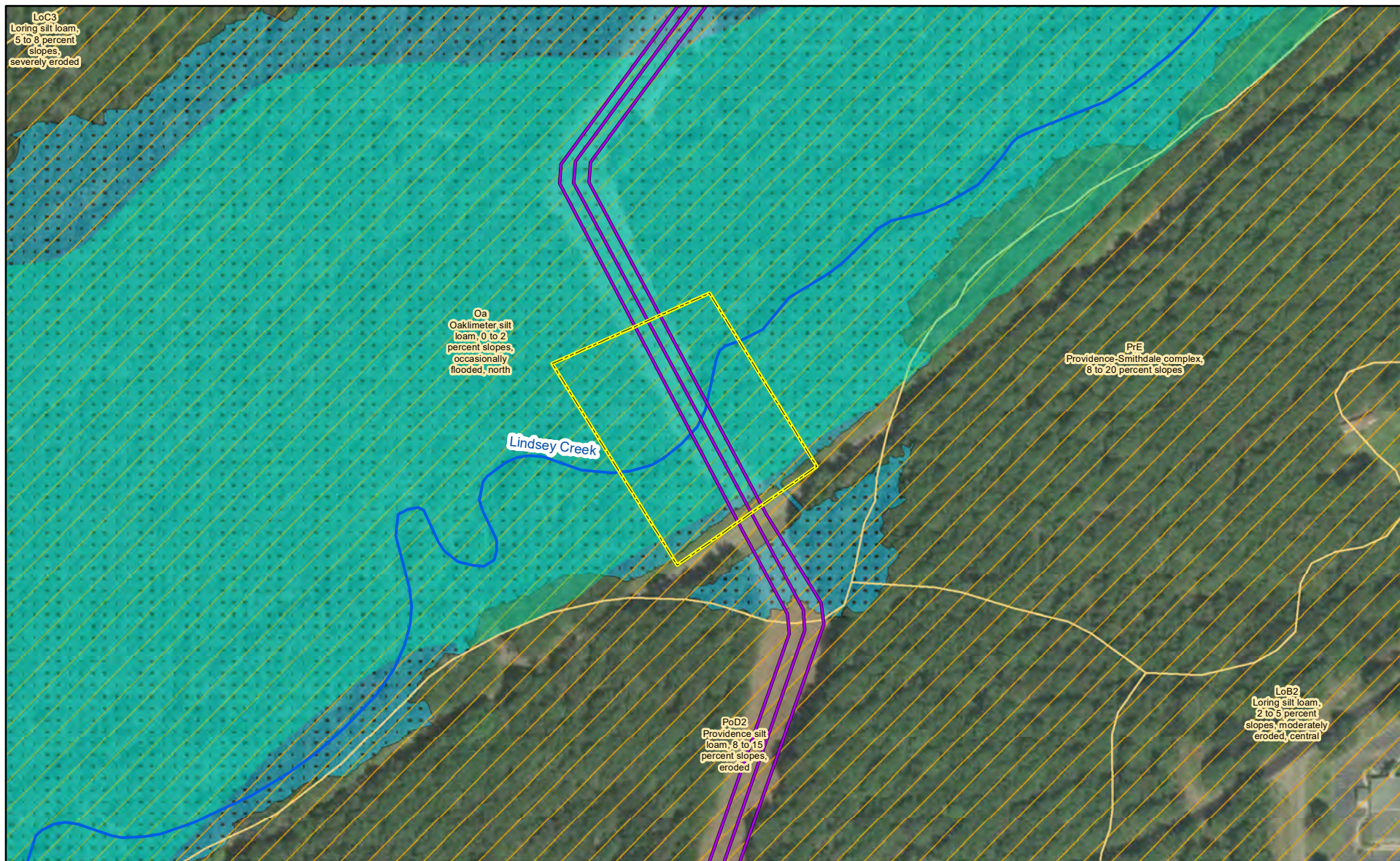
Texas Eastern Transmission, LP
Natchez Trace Revetment Project

Figure 2
 USGS Topographic Vicinity Map

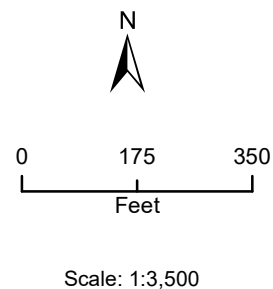
Hinds County, Mississippi

FIGURE 3:

NHD HYDROGRAPHY, NWI WETLANDS, FEMA FLOODPLAIN, SSURGO SOILS MAP



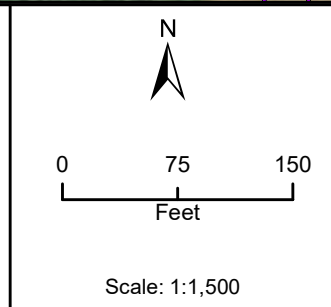
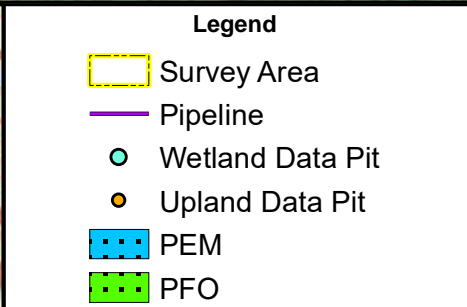
- Legend**
- Survey Area
 - Pipeline
 - Perennial Stream (USGS)
 - + Forested/Shrub Wetland (NWI)
 - 100-Year Floodplain (FEMA)
- SSURGO Soils**
- Non-Hydric
 - Hydric





**Texas Eastern Transmission, LP
Natchez Trace Revetment Project**

Figure 3
NHD Hydrography, NWI Wetlands,
FEMA Floodplain, and SSURGO Soils Map
Hinds County, Mississippi

FIGURE 4:
WATERS OF THE U.S. MAPS



Texas Eastern Transmission, LP
Natchez Trace Revetment Project

Figure 4
Waters of the U.S. Map

Hinds County, Mississippi

Appendix A

WETLANDS DATA TABLE

Appendix A - Wetland Data Table
Natchez Trace Revetment Project
Hinds County, Mississippi
Enbridge Energy Partners

Wetland ID	Wetland Type	Area (Acres)	Watershed (HUC 8)	Watershed Name
W-002	PFO	1.13	8060202	Lower Big Black
W-003	PEM	0.09	8060202	Lower Big Black
W-004	PFO	0.86	8060202	Lower Big Black

Appendix B

WATERBODY DATA TABLE

Appendix B - Waterbody Data Table
Natchez Trace Revetment Project
Hinds County, Mississippi
Enbridge Energy Partners

Waterbody ID	Waterbody Type	Linear Feet	Watershed (HUC 8)	Watershed Name
S001	Perennial Stream	413	8060202	Lower Big Black

Appendix C

FIELD DATA SHEETS

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: SE-19-10722 Natchez Trace Revetment Project City/County: Hinds County Sampling Date: 10/15/2019
 Applicant/Owner: Texas Eastern Transmission, LP State: MS Sampling Point: UDP002
 Investigator(s): J. Lam, G. Ibrahim Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): flats Local relief (concave, convex, none): convex Slope (%): 0-2
 Subregion (LRR or MLRA): LRR P (MLRA 134) Lat: 32.318780 Long: -90.373746 Datum: WGS1984
 Soil Map Unit Name: Oaklimeter silt loam NWI classification: PSS1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☒
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: Heavy precipitation occurred prior to and during field survey	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>0"</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>0"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 		
Remarks: Saturation presence likely due to heavy precipitation that occurred prior to and during the field survey.		

VEGETATION (Five Strata) – Use scientific names of plants.

 Sampling Point: UDP002

Tree Stratum (Plot size: <u>30' x 30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		
Sapling Stratum (Plot size: <u>15' x 15'</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		
Shrub Stratum (Plot size: <u>15' x 15'</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		
Herb Stratum (Plot size: <u>5' x 5'</u>)				
1. <u>Helenium amarum</u>	35	Y	FACU	
2. <u>Symphotrichum cordifolium</u>	25	Y	UPL	
3. <u>Paspalum urvillei</u>	15	N	FAC	
4. <u>Solidago canadensis</u>	10	N	FACU	
5. <u>Cirsium horridulum</u>	10	N	FAC	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>47.5</u>		20% of total cover: <u>19</u>		
Woody Vine Stratum (Plot size: <u>30' x 30'</u>)				
1. <u>Nekemias arborea</u>	25	Y	FAC	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>12.5</u>		20% of total cover: <u>5</u>		
Remarks: (If observed, list morphological adaptations below).				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>25</u>	x 3 = <u>75</u>
FACU species <u>45</u>	x 4 = <u>180</u>
UPL species <u>25</u>	x 5 = <u>125</u>
Column Totals: <u>95</u> (A)	<u>380</u> (B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:
☐ 1 - Rapid Test for Hydrophytic Vegetation
☐ 2 - Dominance Test is >50%
☐ 3 - Prevalence Index is ≤3.0¹
☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☐ No ☒

SOIL

Sampling Point: UDP002

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|---|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) | (MLRA 153B) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Marl (F10) (LRR U) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | |
- ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: SE-19-10722 Natchez Trace Revetment Project City/County: Hinds County Sampling Date: 10/15/2019
 Applicant/Owner: Texas Eastern Transmission, LP State: MS Sampling Point: WDP002
 Investigator(s): J. Lam, G. Ibrahim Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): flats Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR P (MLRA 134) Lat: 32.318538 Long: -90.373776 Datum: WGS1984
 Soil Map Unit Name: Oaklimeter silt loam NWI classification: PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☒
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Heavy precipitation occurred prior to and during field survey.			

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>0"</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>0"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>16"</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five Strata) – Use scientific names of plants.

 Sampling Point: WDP002

Tree Stratum (Plot size: <u>30' x 30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Ulmus americana</u>	<u>35</u>	<u>Y</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Liquidambar styraciflua</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
60 = Total Cover																		
50% of total cover: <u>30</u>		20% of total cover: <u>12</u>																
Sapling Stratum (Plot size: <u>15' x 15'</u>)																		
1. _____	_____	_____	_____	Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>10</u></td> <td>x 2 = <u>20</u></td> </tr> <tr> <td>FAC species <u>80</u></td> <td>x 3 = <u>240</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>90</u> (A)</td> <td><u>260</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.9</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>10</u>	x 2 = <u>20</u>	FAC species <u>80</u>	x 3 = <u>240</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>90</u> (A)	<u>260</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>10</u>	x 2 = <u>20</u>																	
FAC species <u>80</u>	x 3 = <u>240</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>90</u> (A)	<u>260</u> (B)																	
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
0 = Total Cover																		
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>																
Shrub Stratum (Plot size: <u>15' x 15'</u>)																		
1. <u>Ulmus americana</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)														
2. <u>Acer negundo</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
10 = Total Cover																		
50% of total cover: <u>5</u>		20% of total cover: <u>2</u>																
Herb Stratum (Plot size: <u>5' x 5'</u>)																		
1. <u>Chasmanthium laxum</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	Definitions of Five Vegetation Strata: Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine – All woody vines, regardless of height.														
2. <u>Chasmanthium latifolium</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
20 = Total Cover																		
50% of total cover: <u>10</u>		20% of total cover: <u>4</u>																
Woody Vine Stratum (Plot size: <u>30' x 30'</u>)																		
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
0 = Total Cover																		
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>																
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: WDP002

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|--|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Stratified Layers (A5) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) | (MLRA 153B) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Marl (F10) (LRR U) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | |
- ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: SE-19-10722 Natchez Trace Revetment Project City/County: Hinds County Sampling Date: 10/15/2019
 Applicant/Owner: Texas Eastern Transmission, LP State: MS Sampling Point: WDP003
 Investigator(s): J. Lam, G. Ibrahim Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): flats Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR P (MLRA 134) Lat: 32.31862 Long: -90.373409 Datum: WGS1984
 Soil Map Unit Name: Oaklimeter silt loam NWI classification: PSS1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☒
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Heavy precipitation occurred prior to and during field survey.			

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>16"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 		
Remarks: 		

VEGETATION (Five Strata) – Use scientific names of plants.

 Sampling Point: WDP003

Tree Stratum (Plot size: <u>30' x 30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>	
Sapling Stratum (Plot size: <u>15' x 15'</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>	
Shrub Stratum (Plot size: <u>15' x 15'</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>	
Herb Stratum (Plot size: <u>5' x 5'</u>)			
1. <u>Polygonum hydropiperoides</u>	<u>60</u>	<u>Y</u>	<u>OBL</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: <u>30</u>		20% of total cover: <u>12</u>	
Woody Vine Stratum (Plot size: <u>30' x 30'</u>)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>	

Remarks: (If observed, list morphological adaptations below).

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 1 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>60</u>	x 1 = <u>60</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>60</u> (A)	<u>60</u> (B)

 Prevalence Index = B/A = 1

Hydrophytic Vegetation Indicators:
☐ 1 - Rapid Test for Hydrophytic Vegetation
☒ 2 - Dominance Test is >50%
☒ 3 - Prevalence Index is ≤3.0¹
☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:
Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

SOIL

Sampling Point: WDP003

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|---|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) | (MLRA 153B) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input checked="" type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Marl (F10) (LRR U) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | |
- ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: SE-19-10722 Natchez Trace Revetment Project City/County: Hinds County Sampling Date: 10/15/2019
 Applicant/Owner: Texas Eastern Transmission, LP State: MS Sampling Point: UDP003
 Investigator(s): J. Lam, G. Ibrahim Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): flats Local relief (concave, convex, none): convex Slope (%): 0-2
 Subregion (LRR or MLRA): LRR P (MLRA 134) Lat: 32.318715 Long: -90.373495 Datum: WGS1984
 Soil Map Unit Name: Oaklimeter silt loam NWI classification: PSS1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☒
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: Heavy precipitation occurred prior to and during field survey	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>0"</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>0"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Saturation presence likely due to heavy precipitation that occurred prior to and during the field survey.		

VEGETATION (Five Strata) – Use scientific names of plants.

 Sampling Point: UDP003

Tree Stratum (Plot size: <u>30' x 30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		
Sapling Stratum (Plot size: <u>15' x 15'</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		
Shrub Stratum (Plot size: <u>15' x 15'</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		
Herb Stratum (Plot size: <u>5' x 5'</u>)				
1. <u>Helenium amarum</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Symphotrichum cordifolium</u>	<u>25</u>	<u>Y</u>	<u>UPL</u>	
3. <u>Paspalum urvillei</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
4. <u>Solidago canadensis</u>	<u>15</u>	<u>N</u>	<u>FACU</u>	
5. <u>Cirsium horridulum</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>50</u>		20% of total cover: <u>20</u>		
Woody Vine Stratum (Plot size: <u>30' x 30'</u>)				
1. <u>Nekemias arborea</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>7.5</u>		20% of total cover: <u>3</u>		
Remarks: (If observed, list morphological adaptations below).				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
 Total Number of Dominant Species Across All Strata: 4 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>45</u>	x 3 = <u>135</u>
FACU species <u>45</u>	x 4 = <u>180</u>
UPL species <u>25</u>	x 5 = <u>125</u>
Column Totals: <u>115</u> (A)	<u>440</u> (B)

Prevalence Index = B/A = 3.8

Hydrophytic Vegetation Indicators:
☐ 1 - Rapid Test for Hydrophytic Vegetation
☐ 2 - Dominance Test is >50%
☐ 3 - Prevalence Index is ≤3.0¹
☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present?
 Yes ☐ No ☒

SOIL

Sampling Point: UDP003

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-5"	10YR4/3	100					SiLo
5-16"	10YR6/3	100					SiLo

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histic Sol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> (MLRA 153B)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: SE-19-10722 Natchez Trace Revetment Project City/County: Hinds County Sampling Date: 10/15/2019
 Applicant/Owner: Texas Eastern Transmission, LP State: MS Sampling Point: WDP004
 Investigator(s): J. Lam, G. Ibrahim Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): flats Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR P (MLRA 134) Lat: 32.31874 Long: -90.373336 Datum: WGA1984
 Soil Map Unit Name: Oaklimeter silt loam NWI classification: PFOA1

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☒
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Heavy precipitation occurred prior to and during field survey.			

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>16"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 		
Remarks: 		

VEGETATION (Five Strata) – Use scientific names of plants.

 Sampling Point: WDP004

Tree Stratum (Plot size: <u>30' x 30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <i>Ulmus americana</i>	70	Y	FAC	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
70 = Total Cover				
50% of total cover: <u>35</u>		20% of total cover: <u>14</u>		
Sapling Stratum (Plot size: <u>15' x 15'</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
0 = Total Cover				
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		
Shrub Stratum (Plot size: <u>15' x 15'</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
0 = Total Cover				
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		
Herb Stratum (Plot size: <u>5' x 5'</u>)				
1. <i>Echinochloa crus-galli</i>	15	Y	FACW	
2. <i>Polygonum hydropiperoides</i>	5	N	OBL	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
20 = Total Cover				
50% of total cover: <u>10</u>		20% of total cover: <u>4</u>		
Woody Vine Stratum (Plot size: <u>30' x 30'</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
0 = Total Cover				
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		
Remarks: (If observed, list morphological adaptations below).				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>5</u>	x 1 = <u>5</u>
FACW species <u>15</u>	x 2 = <u>30</u>
FAC species <u>70</u>	x 3 = <u>210</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>90</u> (A)	<u>245</u> (B)

Prevalence Index = B/A = 2.7

Hydrophytic Vegetation Indicators:
☐ 1 - Rapid Test for Hydrophytic Vegetation
☒ 2 - Dominance Test is >50%
☒ 3 - Prevalence Index is ≤3.0¹
☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

SOIL

Sampling Point: WDP004

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|---|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) | (MLRA 153B) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input checked="" type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Marl (F10) (LRR U) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | |
- ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: SE-19-10722 Natchez Trace Revetment Project City/County: Hinds County Sampling Date: 10/15/2019
 Applicant/Owner: Texas Eastern Transmission, LP State: MS Sampling Point: UDP004
 Investigator(s): J. Lam, G. Ibrahim Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): flats Local relief (concave, convex, none): convex Slope (%): 0-2
 Subregion (LRR or MLRA): LRR P (MLRA 134) Lat: 32.319482 Long: -90.373877 Datum: WGS1984
 Soil Map Unit Name: Oaklimeter silt loam NWI classification: PSS1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☒
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: Heavy precipitation occurred prior to and during field survey	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>0"</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>0"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 		
Remarks: Saturation presence likely due to heavy precipitation that occurred prior to and during the field survey.		

VEGETATION (Five Strata) – Use scientific names of plants.

 Sampling Point: UDP004

Tree Stratum (Plot size: <u>30' x 30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		
Sapling Stratum (Plot size: <u>15' x 15'</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		
Shrub Stratum (Plot size: <u>15' x 15'</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		
Herb Stratum (Plot size: <u>5' x 5'</u>)				
1. <u>Symphytichum cordifolium</u>	<u>30</u>	<u>Y</u>	<u>UPL</u>	
2. <u>Helenium amarum</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Paspalum urvillei</u>	<u>15</u>	<u>N</u>	<u>FAC</u>	
4. <u>Solidago canadensis</u>	<u>15</u>	<u>N</u>	<u>FACU</u>	
5. <u>Cirsium horridulum</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>47.5</u>		20% of total cover: <u>19</u>		
Woody Vine Stratum (Plot size: <u>30' x 30'</u>)				
1. <u>Nekemias arborea</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>12.5</u>		20% of total cover: <u>5</u>		
Remarks: (If observed, list morphological adaptations below).				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 3 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>50</u>	x 3 = <u>150</u>
FACU species <u>40</u>	x 4 = <u>160</u>
UPL species <u>30</u>	x 5 = <u>150</u>
Column Totals: <u>120</u> (A)	<u>460</u> (B)

Prevalence Index = B/A = 3.8

Hydrophytic Vegetation Indicators:
☐ 1 - Rapid Test for Hydrophytic Vegetation
☐ 2 - Dominance Test is >50%
☐ 3 - Prevalence Index is ≤3.0¹
☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☐ No ☒

SOIL

Sampling Point: UDP004

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-5"	10YR4/3	100					SiLo
5-16"	10YR6/3	100					SiLo

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histic Sol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> (MLRA 153B)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
---	--

Remarks:

Appendix D

ENVIRONMENTAL SURVEY PHOTOGRAPH

Environmental Survey Photographs
SE-19-10722 Natchez Trace Revetment Project
Hinds County, Mississippi
October 15, 2019



Photograph #1 – Representative view of Lindsey Creek, located within the pipeline right-of-way, facing north.



Photograph #2 – Representative view of the Palustrine Emergent Wetland (W003), facing northwest.

Environmental Survey Photographs
SE-19-10722 Natchez Trace Revetment Project
Hinds County, Mississippi
October 15, 2019



Photograph #3 – Representative view of the Palustrine Forested Wetland (W002), facing west.



Photograph #4 – Representative view of upland vegetation within the Survey area, facing southeast.

Attachment 8

Protected Species General Habitat Assessment Report and Agency Consultations

November 4, 2019

Stephen Ricks
Field Supervisor
U.S. Fish and Wildlife Service
Mississippi Ecological Services Field Office
6578 Dogwood View Parkway,
Jackson, MS 39213

RE: Request for Threatened and Endangered Species Concurrence:
Texas Eastern Transmission, LP Proposed Natchez Trace Revetment Project (SE-19-10722)
Hinds County, Mississippi

Dear Mr. Ricks:

Texas Eastern Transmission, LP (Texas Eastern), an indirect wholly owned subsidiary of Enbridge Energy Partners (Enbridge), is proposing to perform a pipeline revetment project on its existing Lines 14, 18, and 31 natural gas pipelines in Hinds County, Mississippi (Project). More specifically, Texas Eastern is proposing to commence work at a discrete location (SE-19-10722), near MP 307.7 of Lines 14, 18, and 31 (see Attachment 1). The goal of the Project is to recoat and armor the exposed pipelines within Lindsey Creek with rock shield, recontour the banks of Lindsey Creek, then install a concrete articulating mat where a portion of the pipeline is exposed to prevent further erosion. The Project workspace will consist of an area that is approximately 175 feet long by 45 feet wide along the existing right-of-way (ROW). Additionally, the Project area will be accessed directly from Natchez Trace Parkway (see Attachment 2). No improvements to the access road or ROW for access will occur during the Project. The Project will be centered around latitude: 32.319056, longitude: -90.373738. The Project is subject to Federal Energy Regulatory Commission (FERC) regulation under Section 7 of the Natural Gas Act in accordance with Texas Eastern's Blanket Certificate associated with Lines 14, 18, and 31.

To ensure compliance with Section 7 of the Endangered Species Act, Edge Engineering and Science, LLC (EDGE), on behalf of Texas Eastern, submits this letter to the U.S. Fish and Wildlife Service (USFWS) for pipeline operations maintenance activities in Mississippi. To complete the Project, Texas Eastern is coordinating with the U.S. Army Corps of Engineers (USACE) to obtain a Nationwide Permit (NWP) for NWP-13 – Bank Stabilization activities. As such, Texas Eastern is submitting a Pre-Construction Notification (PCN) to the USACE; therefore, Texas Eastern has initiated consultation with the USFWS to ensure the Project will have no impact on federally listed threatened and endangered species in the vicinity of the Project.

PROJECT SITE CHARACTERIZATION

The Project area consists primarily of open land utilized for existing pipeline right-of-way, surrounded by undeveloped forest habitat. Open land in the Project area consisted of sneezeweed (*Helenium amarum*), common blue wood aster (*Symphyotrichum cordifolium*), Vasey's grass (*Paspalum urvillei*), and swamp smartweed (*Polygonum hydropiperoides*). Forested vegetation consisted of American elm (*Ulmus americana*), sweetgum (*Liquidambar styraciflua*), and boxelder (*Acer negundo*).

THREATENED AND ENDANGERED SPECIES ASSESSMENT

On behalf of Texas Eastern, EDGE consulted with the USFWS Information for Planning and Consultation (IPaC) System to identify federally listed threatened, endangered, and candidate species that could occur within the Project area (see Attachment 3). Federally designated critical habitat was also reviewed during the assessment; however, no critical habitat was identified in the Project area, according to IPaC. Table 1 identifies the federally listed species identified in the Project vicinity via IPaC, which are further summarized below.

TABLE 1.
Federally Listed Threatened and Endangered Species in the Project Area

Common Name	Scientific Name	Listing Status	Habitat Description	Potential for Occurrence / Determination of Effects
Mammals				
Northern Long-eared bat	<i>Myotis septentrionalis</i>	Threatened	Northern long-eared bats spend winter hibernating in caves and mines. They use areas in various sized caves or mines with constant temperatures, high humidity, and no air currents. During the summer, the bats roost singly or in colonies underneath bark, in cavities or in crevices of both live trees and snags. The bats are flexible in selecting roosts, choosing roost trees based on suitability to retain bark or provide cavities or crevices. They rarely roost in human structures such as barns and sheds.	<i>No effect.</i> Project activities will be located within the existing pipeline right-of-way. Tree clearing and trimming activities are not proposed for Project completion. Additionally, observed trees within the Survey area did not contain shaggy bark preferred by this species. Furthermore, construction for the Project would occur outside of the pup season (June 1 to July 31) for the northern long-eared bat.
Birds				
Wood stork	<i>Mycteria Americana</i>	Threatened	The wood stork is a highly colonial species which occurs in Mississippi during the non-breeding season from May to October. This species nests primarily in cypress or mangrove swamps and feed in freshwater marshes, narrow tidal creeks, or flooded ponds.	<i>No effect.</i> Although Palustrine emergent (PEM) and Palustrine forested (PFO) wetlands were identified in the Project area, these areas did not contain habitat that would be preferred by the wood stork. More specifically, the PEM wetland did not contain standing water or optimal foraging habitat for the wood stork and tree species within the PFO wetlands consisted of American elm (<i>Ulmus americana</i>), sweetgum (<i>Liquidambar styraciflua</i>), and boxelder (<i>Acer negundo</i>) which would not be considered suitable habitat for the wood stork.

Texas Eastern is respectfully requesting written concurrence documenting compliance with the ESA of 1973 (16 U.S.C. 1531-1543). If the USFWS cannot concur with this determination, Texas Eastern would appreciate receiving the protected species habitat information or supplemental published documentation on which your conclusions are based.

Texas Eastern and EDGE appreciate your assistance. Should you have any questions or comments, please contact me at (832) 772-3015 or via email relevert@edge-es.com

Sincerely,



Rachel Levert, P.W.S.
Environmental Professional
Edge Engineering and Science, LLC

Enc.

CC: Reina Ingham

Attachments:

- Attachment 1: Topographic Map of the Natchez Trace Revetment (SE-19-10722) Project Area
- Attachment 2: Aerial Photo Based Map of the Natchez Trace Revetment (SE-19-10722) Project Area
- Attachment 3: Information, Planning and Conservation System Species List

Attachment 1

Topographic Maps of the Natchez Trace Revetment (SE-19-10722) Project Area



Legend

- Survey Area
- Pipeline
- USGS Quadrangle

N

0 400 800

Feet

Scale: 1:8,000

Texas Eastern Transmission, LP
Natchez Trace Revetment Project
(SE-19-10722)

Attachment 1
 USGS Topographic Vicinity Map

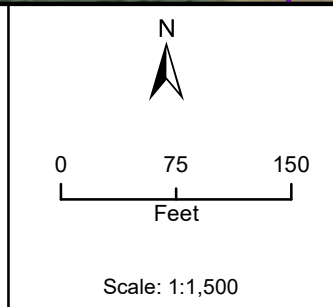
Hinds County, Mississippi

Attachment 2

Aerial Photo-Based Map of the Natchez Trace Revetment (SE-19-10722) Project Area



Legend	
	Survey Area
	Pipeline
	Wetland Data Pit
	Upland Data Pit
	Stream OHWM
	PEM
	PFO



**Texas Eastern Transmission, LP
Natchez Trace Revetment Project
(SE-19-10722)**

Attachment 2
Waters of the U.S. Map

Attachment 3

Information, Planning and Conservation System Official Species List



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Mississippi Ecological Services Field Office
6578 Dogwood View Parkway, Suite A
Jackson, MS 39213-7856
Phone: (601) 965-4900 Fax: (601) 965-4340
<http://www.fws.gov/mississippiES/endsp.html>

In Reply Refer To:
Consultation Code: 04EM1000-2020-SLI-0080
Event Code: 04EM1000-2020-E-00178
Project Name: Natchez Trace

October 31, 2019

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
 - USFWS National Wildlife Refuges and Fish Hatcheries
 - Migratory Birds
 - Wetlands
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Mississippi Ecological Services Field Office

6578 Dogwood View Parkway, Suite A

Jackson, MS 39213-7856

(601) 965-4900

Project Summary

Consultation Code: 04EM1000-2020-SLI-0080

Event Code: 04EM1000-2020-E-00178

Project Name: Natchez Trace

Project Type: OIL OR GAS

Project Description: Revetment

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/32.31893903502904N90.3737491690255W>



Counties: Hinds, MS

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Birds

NAME	STATUS
Wood Stork <i>Mycteria americana</i> Population: AL, FL, GA, MS, NC, SC No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8477	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

-
1. The [Migratory Birds Treaty Act](#) of 1918.
 2. The [Bald and Golden Eagle Protection Act](#) of 1940.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Kestrel <i>Falco sparverius paulus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Apr 1 to Aug 31
Kentucky Warbler <i>Oporornis formosus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 20
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10

NAME	BREEDING SEASON
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ “Proper Interpretation and Use of Your Migratory Bird Report” before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

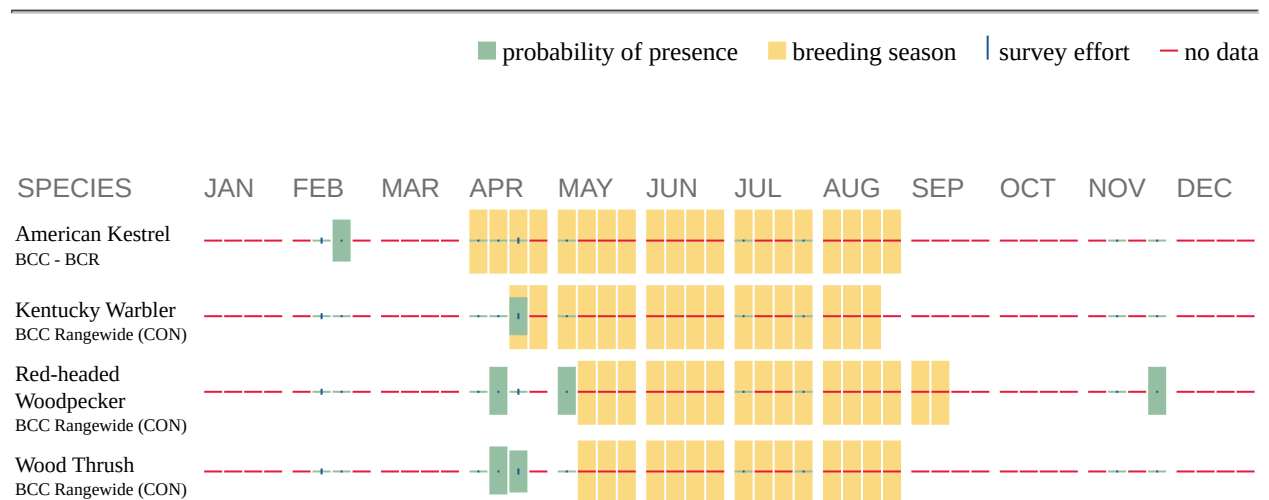
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in

the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In

contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER FORESTED/SHRUB WETLAND

- [PFO1A](#)
 - [PSS1A](#)
-



Mississippi Department of Wildlife, Fisheries, and Parks

Sam Polles, Ph.D.
Executive Director

November 12, 2019

EDGE Engineering & Science, LLC
16285 park 10 place
Suite 400
Houston, TX 77084

Re: Natchez Trace
Revetment
Hinds County, MS

Project # ENB2019-0018
Internal Id 1243

To Rachel Levert:

In response to your request for information dated **October 24, 2019**, we have searched our database for occurrences of state or federally listed species and species of special concern that occur within 2 miles of the site of the proposed project. Please find our concerns and recommendations below.

The following species of concern may occur within 2 miles of the proposed project area:

Scientific Name	Common Name	Federal Status	State Status	State Rank
Ambystoma texanum	Smallmouth Salamander			S3
Asarum canadense	Canada Wild-ginger			S3
Plethodon websteri	Webster's Salamander			S2
Rana palustris	Pickereel Frog			S3S4
Verbesina walteri	Carolina Crownbeard			S3S4

State Rank

S1 - Critically imperiled in Mississippi because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because of some factor(s) making it vulnerable to extirpation.

S2 - Imperiled in Mississippi because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it vulnerable to extirpation.

S3 - Rare or uncommon in Mississippi (on the order of 21 to 100 occurrences).

State and Federal Status**LE Endangered** - A species which is in danger of extinction throughout all or a significant portion of its range.**LT Threatened** - A species likely to become endangered in foreseeable future throughout all or a significant portion of its range.

Based on the information provided, we conclude that if best management practices are properly implemented, monitored, and maintained (particularly measures to prevent, or at least, minimize negative impacts to water quality), the proposed project likely poses no threat to listed species or their habitats.

Recommendations:

As listed above, there are 5 species of concern in our database within a 2-mile radius of the proposed project in Hinds county, MS (32.31904000, -90.37369900), as well as the Natchez Trace Parkway being adjacent to the project site. Activities that modify the landscape can be detrimental because they can adversely affect water quality by increasing herbicide and pesticide load, silt load, exhaust runoff from roads, and other unintentional pollutants. These factors may negatively impact habitat conditions by detrimentally affecting respiration, feeding, and reproduction of amphibians, bats, birds, fishes, insects, turtles, and vegetation. Furthermore, maintenance of natural floodplain vegetation and hydrology are important factors contributing to the survival these species. Because many amphibian species rely heavily on wetland habitats surrounded by forested uplands, destruction and/or disturbance to these habitats may pose serious risks to survival and recruitment in amphibian species. Stream stabilization projects such as armoring or using riprap / concrete, while providing needed erosion control on-site, can sometimes lead to increased erosion in other areas of the same waterbody due to increased stream velocities and a lack of vegetation to reduce flow energy. Such changes can also change the hydrology of an area, disturbing the habitat. As such, precautions should be taken to ensure that the proposed actions do not result in increased stream flow or further stream channel, bed, or bank degradation upstream or downstream of the proposed project site. We recommend that best management practices be properly implemented, maintained, and monitored regularly for compliance, both upstream and downstream. Specific emphasis should be placed on measures that help look for signs of increased erosion, and minimize the occurrence of excess sedimentation, suspended particulate matter, and contaminants at the project site and surrounding areas from leaving in stormwater run-off or from direct entry into nearby streams and waterbodies. If such signs are discovered, then appropriate actions to address the issue should be taken. Please check MS Department of Environmental Quality for BMP.

Please feel free to contact us if we can provide any additional information, resources, or assistance that will help minimize negative impacts to the species and/or ecological communities identified in this review. We are happy to work with you to ensure that our state's precious natural heritage is conserved and preserved for future Mississippians.

Completed by Quentin Fairchild

The Mississippi Natural Heritage Program (MNHP) has compiled a database that is the most complete source of information about Mississippi's rare, threatened, and endangered plants, animals, and ecological communities. The quantity and quality of data collected by MNHP are dependent on the research and observations of many individuals and organizations. In many cases, this information is not the result of comprehensive or site-specific field surveys; most natural areas in Mississippi have not been thoroughly surveyed and new occurrences of plant and animal species are often discovered. Heritage reports summarize the existing information known to the MNHP at the time of the request and cannot always be considered a definitive statement on the presence, absence or condition of biological elements on a particular site.

Attachment 9

Cultural Categorical Exclusion Agreement and Unanticipated Discoveries Plan

November 7, 2019

Mr. John R. Underwood
Chief Archaeologist
Mississippi Department of Archives and History
P.O. Box 571
Jackson, Mississippi 39205-0571
601-576-6945
junderwood@mdah.ms.gov

Re: Section 106 Notification/Compliance: Natchez Trace Revetment, Hinds County, Mississippi
Lead Federal Agency: The Federal Energy Regulatory Commission

Dear Mr. Underwood,

This letter serves as notification of the proposed activities to be conducted in accordance with the current Historic and Archaeological Categorical Exclusion Agreement for Pipeline Construction/Maintenance Activities in Mississippi (Agreement; [see Attachment 1]). Texas Eastern Transmission (Texas Eastern), a wholly-owned subsidiary of Enbridge Energy Partners, Inc. (Enbridge), requested that Edge Engineering and Science, LLC (EDGE) perform a desktop assessment and to initiate consultation with your office pursuant to Section 106 of the National Historic Preservation Act for the proposed Natchez Trace Revetment Project (Project) in Hinds County, Mississippi (see Figures 1 and 2). The objective of the desktop assessment was to determine if the proposed Project activities would affect historic properties. The Lead Federal Agency has been identified as the Federal Energy Regulatory Commission. The proposed Project area is located on property owned by the National Park Service (NPS). Texas Eastern has initiated separate consultations with NPS representatives.

Erosional processes within Lindsey Creek have resulted in the exposure of three of Texas Eastern's existing pipelines, identified as Lines 14, 18, and 31. Project activities will include recoating the exposed portions of pipe, reshaping the natural contours of the creek banks, covering the pipelines with a rock shield, and installing a concrete mat over the pipeline crossing to prevent further erosion. All work will take place within the existing pipeline easement within an area measuring approximately 175 feet long by 45 feet wide. The area of potential effects (APE) measures 0.18 acre. No excavation will be required below the original depth of excavation that was obtained during installation across Lindsey Creek. No additional temporary workspace is needed.

On October 16, 2019, EDGE's staff archaeologist conducted a review of the Mississippi Department of Archives and History's online *Historical Resources Inventory Database*. The review indicated that no historic properties, or any cultural resources, have been recorded within or adjacent to the APE (see Figures 1 and 2). As such, EDGE is of the opinion that a finding of "No Historic Properties Affected" per 36 CFR 800.4(d)(1) is appropriate for the Project.

Based on a lack of known historic properties within the pipeline easement, EDGE's professional archaeologist and Texas Eastern are of the opinion that the Project activities qualify for blanket clearance under 36 CFR 800.13 in accordance with the current Agreement. Therefore, Texas Eastern plans to proceed. In the event that cultural resources are inadvertently discovered during the proposed Project, Texas Eastern will initiate protocols described in its *Unanticipated Discoveries and Emergency Procedures* (see Attachment 2).

Sincerely,



Kristi Soltysiak
Staff Archaeologist and Principal Investigator
Edge Engineering and Science, LLC

Cc:

Mr. Jonathan Martensen, Texas Eastern

Enc.

Figure 1: Topographic Map of the Project Area, Hinds County, Mississippi

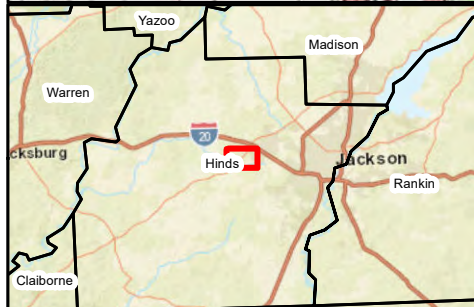
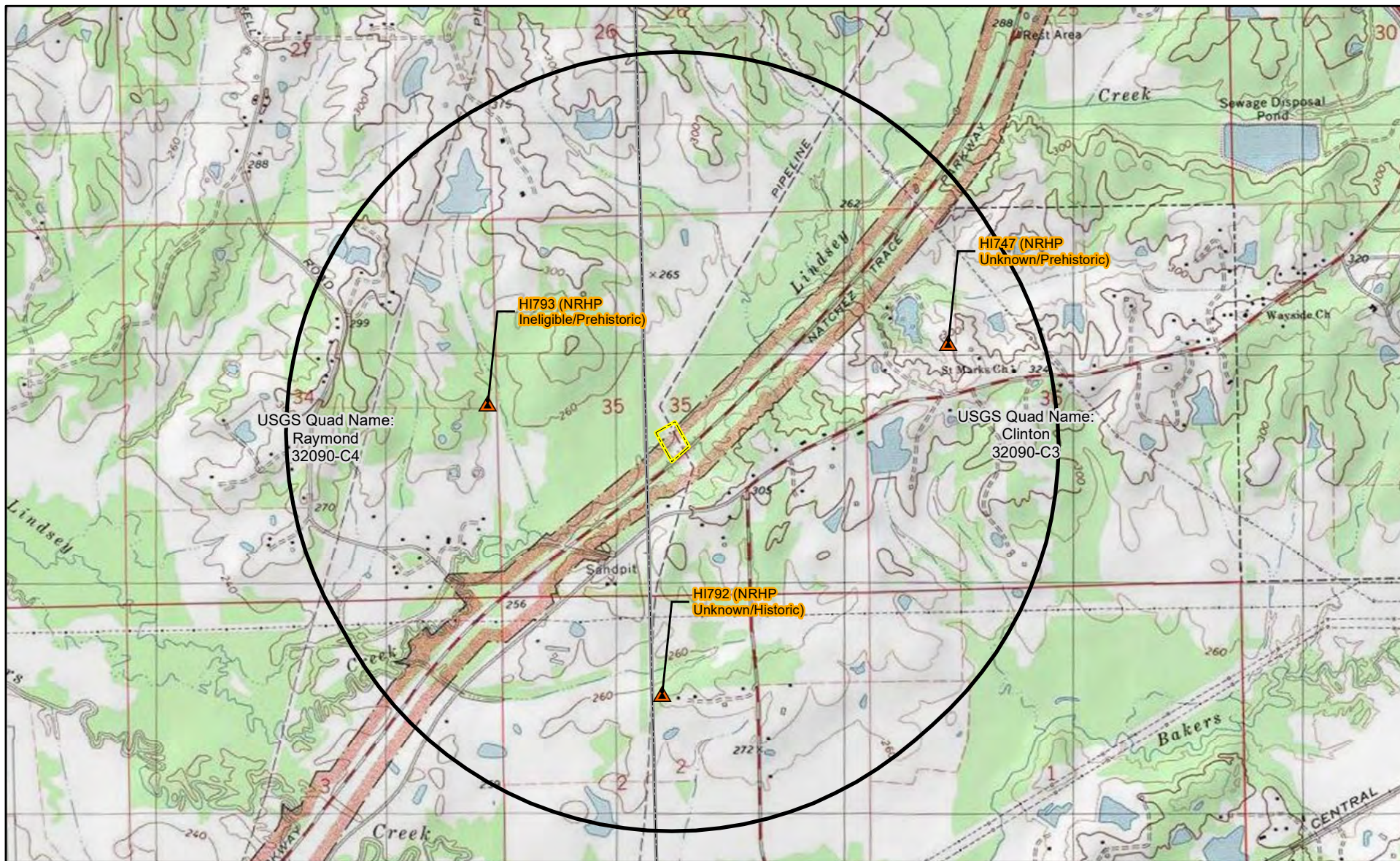
Figure 2: Aerial Photo-based Map of the Project Area, Hinds County, Mississippi

Attachment 1: Historic and Archaeological Categorical Exclusion Agreement for Pipeline Construction/Maintenance Activities in Mississippi

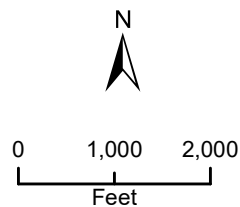
Attachment 2: *Unanticipated Discoveries and Emergency Procedures*

Figure 1

Topographic Map of the Project Area, Hinds County, Mississippi



- Legend**
- Archeological Site
 - Project
 - 1-Mile Buffer
 - USGS Quadrangle



Scale: 1:24,000



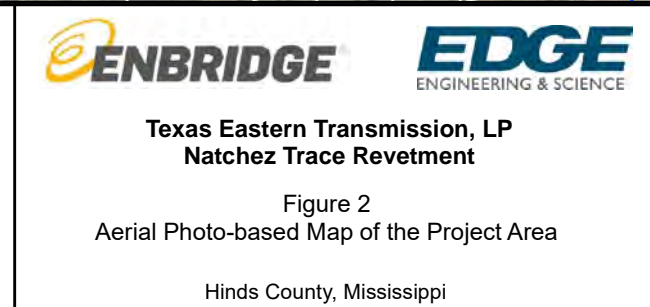
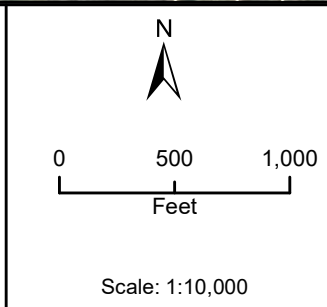
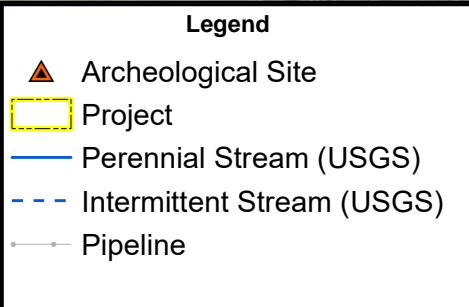
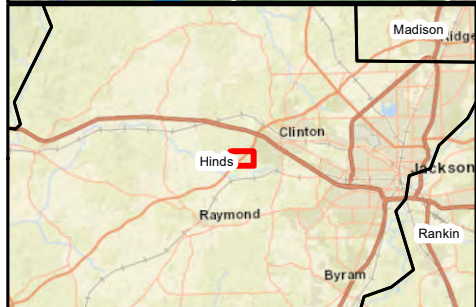
**Texas Eastern Transmission, LP
Natchez Trace Revetment**

Figure 1
Topographic Map of the Project Area

Hinds County, Mississippi

Figure 2

Aerial Photo-based Map of the Project Area, Hinds County, Mississippi



Attachment 1

**Historic and Archaeological Categorical Exclusion Agreement for Pipeline
Construction/Maintenance Activities in Mississippi**



HISTORIC PRESERVATION DIVISION
P. O. BOX 571
Jackson, MS 39205-0571
Phone 601-576-6940 Fax 601-576-6955
Website: mdah.ms.gov

December 12, 2018

Mr. William B. Brett
Texas Eastern Transmission, LP
890 Winter Street, Suite 300
Waltham, Massachusetts 02451

RE: Proposed categorical exclusion agreement renewal for pipeline construction and maintenance for Texas Eastern Transmission, LP, (FERC) MDAH Project Log #12-032-18, multiple counties

Dear Mr. Brett:

We have reviewed your December 5, 2018, request for a categorical exclusion agreement renewal, received on December 11, 2018, for the above referenced project in accordance with our responsibilities under Section 106 of the National Historic Preservation Act and 36 CFR Part 800. After review, under Stipulation 1(a), MDAH requests to be contacted and provided a location map, description of the construction and other activities on existing ROW, and the opportunity to assess and comment upon the effects of said activities to cultural resources immediately adjacent to the Texas Eastern Transmission, LP ROW. Portions of known cultural resources may extend within the existing ROW and will require SHPO review and comment on project-by-project basis.

As for the remainder of the stipulations, MDAH is in concurrence/agreement.

Please note that Jim Woodrick is now the Deputy SHPO, in place of Ken P'Pool on the signatory page of your document.

If we can be of further assistance, please do not hesitate to contact us at (601) 576-6940.

Sincerely,

Hal Bell
Review and Compliance Officer

FOR: Katie Blount
State Historic Preservation Officer

**HISTORIC AND ARCHAEOLOGICAL REVIEW PROCEDURES FOR
PROJECTS IN MISSISSIPPI – JANUARY 1, 2018 THROUGH DECEMBER 31, 2018**

TEXAS EASTERN TRANSMISSION, LP

1. Where the Texas Eastern Transmission, LP (Texas Eastern) right-of-way (ROW) is maintained (i.e., periodic mowing) and has been previously disturbed by the original installation, then, for the following types of projects, there will be no contact with the Mississippi Historical Commission, the office of the State Historic Preservation Officer (SHPO):
 - a. construction and other activities on existing ROW, including the installation and maintenance, relocation, replacement, or abandonment and removal of receipt and delivery taps, meters, regulators, valves, pipe, points of delivery (POD), and other auxiliary pipeline facilities, as well as investigatory activities within existing, previously disturbed ROW;
 - b. construction maintenance, relocation, replacement and/or abandonment projects within existing, previously-disturbed, and generally fenced compressor and metering and regulating (M&R) stations, yards and gas processing plants, and the installation of field compressors or dehydrators on an existing ROW;
 - c. use of existing access roads and existing ROW as access to all construction and/or maintenance projects including minor maintenance or upgrades such as adding gravel, re-grading, and side trimming (pruning) of trees; and
 - d. the acquisition of existing facilities by lease or purchase (no new ROW required).
2. A transmittal letter is required to serve as documentation of consultation with the Mississippi SHPO for projects not in the categories described in Stipulation 1:
 - a. Texas Eastern will provide the Mississippi SHPO with a project description, a project map, a summary of its cultural resources review, and any other material helpful to the SHPO in making its recommendations for the project.
3. For projects located on Federal lands, the land managing agency or lead federal agency will be consulted.

Identification of Historic Properties

In the unlikely event that an archaeological site is identified in the process of undertaking any of the activities listed above, ground disturbance will cease, and Texas Eastern will confer with the Mississippi SHPO. For other construction and maintenance activities beyond the horizontal and vertical limits of prior ground disturbance, Texas Eastern will put forth an adequate effort to identify historic properties within the area of potential effect and begin consultation with the Mississippi SHPO as required under Section 106 of the National Historic Preservation Act of 1966, as amended (36 CFR 800).



11/22/17

Sabrina Hepburn Date
Supervisor, Environmental Construction Permitting
Texas Eastern Transmission, LP

Ken P'Pool Date
Deputy State Historic Preservation Officer
Mississippi SHPO



Attn: Sabrina Hepburn
Environmental Construction Permitting
Sabrina.Hepburn@enbridge.com

Texas Eastern Transmission, LP
890 Winter Street, Suite 300
Waltham, MA 02451

November 22, 2017

Ken P'Pool
Deputy State Historic Preservation Officer
Mississippi Department of Archives & History
P.O. Box 571
Jackson, Mississippi 39205-0571

Attn.: Greg Williamson

Re: **Texas Eastern Transmission, LP
Historic and Archaeological Categorical Exclusion Agreement for Pipeline Construction/Maintenance
Activities in Mississippi
MDAH Project Log #11-007-15**

Dear Mr. P'Pool:

Texas Eastern Transmission, LP (Texas Eastern) is requesting a categorical exclusion agreement renewal for the period January 1, 2018 through December 31, 2018 for pipeline construction and maintenance activities in Mississippi. Enclosed please find a copy of the current agreement which expires at the end of this year, along with a consultation agreement with similar language to that included in the previous agreement. Also, enclosed is an overview map for Texas Eastern's facilities in Mississippi. If you concur with this request, please sign and date the enclosed agreement and return it to the following address:

*Texas Eastern Transmission, LP
Attn.: Sabrina Hepburn
890 Winter Street, Suite 300
Waltham, MA 02451*

All written correspondence should be directed to the above address. Texas Eastern believes that this agreement will continue to facilitate Texas Eastern's operations in Mississippi while still protecting potentially significant cultural resources.

If you have any questions or require additional information, please do not hesitate to contact Jonathan Martensen at 713-627-6062 or Jonathan.Martensen@Enbridge.com, at your convenience. We appreciate your time and attention to this matter.

Sincerely,

Sabrina Hepburn
Supervisor
Environmental Construction Permitting

Enclosure



December 12, 2016

Sabrina Hepburn
Supervisor, Southeast Supply Header
890 Winter Street, Suite 300
Waltham, MA 02451

RE: Proposed Historic and Archaeological Categorical Exclusion Agreement for
Pipeline Construction/Maintenance Activities in Mississippi, MDAH Log
#11-129-16, Multiple Counties

Dear Sabrina:

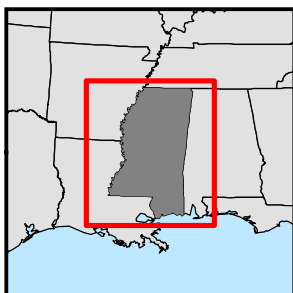
We have reviewed your November 15, 2016, request for a categorical exclusion for historic and archaeological activities in Mississippi, received on November 23, 2016. After reviewing the information provided, we agree with the provisions of the agreement. A signed copy of the Categorical Exclusion is enclosed.

There remains the possibility that unrecorded cultural resources may be encountered during routine activities in the right-of-way, access roads or existing facilities. Should this occur, we would appreciate your contacting this office immediately in order that we may offer appropriate comments under 36 CFR 800.13.

Sincerely,

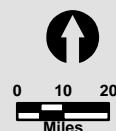

Jim Woodrick
Acting Review and Compliance Officer

FOR: Katie Blount
State Historic Preservation Office



LEGEND

- TEXAS EASTERN TRANSMISSION
- FREEWAY SYSTEM
- STATE BOUNDARY
- COUNTY BOUNDARY
- 1-X PIPELINE I.D. NO.



Data Sources: ESRI, Spectra.
Coordinate System: NAD 1983 UTM Zone 16N

ENBRIDGE
Texas Eastern
Transmission
Natural Gas Transmission
System in Mississippi
General Overview Map

Created by: **TRC** 12/3/2010

UNANTICIPATED DISCOVERIES AND EMERGENCY PROCEDURES

Because archeological or historical sites occasionally are discovered during construction projects, even when the project area has been subjected to a cultural resource survey and inventory, a plan has been developed for the proposed Natchez Trace Revetment Project in Hinds County, Mississippi in the event of such discoveries. The proposed Project is being developed by Texas Eastern Transmission, LP (Texas Eastern), an indirect wholly-owned subsidiary of Enbridge, Inc. and the Lead Federal Agency has been identified as the Federal Energy Regulatory Commission (FERC).

When the initial steps in the Section 106 compliance process (identification and evaluation of historic properties) indicate that historic properties may be discovered during an undertaking, a plan generally is developed for the treatment of such properties. The plan is included in any documentation submitted to the appropriate State Historic Preservation Office (SHPO) as part of the effort to assess the effects of the undertaking in compliance with Federal Regulation 36 CFR 800.13. In the State of Mississippi, the Mississippi Department of Archives and History (MDAH) acts as the SHPO. This document represents such a plan.

Unanticipated Cultural Resources

If any member of the Project construction work force believes that he or she has found a cultural resource discovery, all work within 100 feet both sides of the discovery will stop and the lead Environmental Inspector will be notified. The area of work stoppage will be adequate to provide for the security, protection, and integrity of the materials. A cultural resource discovery could consist of, for example:

- An area containing charcoal or charcoal-stained soil;
- An arrowhead, stone tool, or stone chips;
- A cluster of bones or burned rocks in association with stone tools or chips; or
- A cluster of glass bottles and/or other domestic refuse appearing older than 50 years.

If previously undocumented cultural resources are discovered, several steps will be undertaken. Initially, Texas Eastern will make reasonable efforts to avoid or minimize damage to the resource, as specified in 36 CFR 800.13(b). At a minimum, the immediate area of the discovery site will be flagged. Vehicles and equipment will not be permitted to traverse the discovery site. Work in the immediate area will not be re-started until treatment of the discovery has been completed. The MDAH and FERC will be contacted within 24 hours and advised of the discovery. Texas Eastern will provide a professional archeologist to undertake an evaluation of the National Register eligibility of the resource, applying the National Register Criteria for Evaluation (36 CFR §60.4 [a-d]). As much information as possible concerning the cultural resource, including characterization of the resource type (e.g., archeological or architectural), its location and size, and any information on its eligibility for listing in the National Register of Historic Places (NRHP), will be provided to the MDAH and the FERC.

The MDAH and FERC will be provided an opportunity to review and comment on the need for additional examination of the find. If the MDAH and the FERC concur that the resource is not eligible for listing in the NRHP, they will notify Texas Eastern of their determination. If the FERC and the MDAH concur that the resource is National Register eligible, Texas Eastern will avoid adverse impacts on the resource. However, if avoidance is not feasible, a treatment plan for mitigating adverse effects to the cultural resource will be prepared. This plan will be submitted to the MDAH and FERC for review and comment. It will be the policy of the Texas Eastern to avoid further destruction of the resource until the approved formal data recovery or other mitigation plan can be implemented.

Disposition of Human Remains

The discovery and/or disturbance of human remains is a sensitive issue that must be addressed in the event that a prehistoric burial site, an unmarked grave, or a cemetery is impacted by planned construction. It shall be the policy of Texas Eastern, its agents, and subcontractors to treat all discovered human remains with dignity and respect. In addition, Texas Eastern, its agents, and subcontractors will comply with the requirements related to the discovery of human remains and specified by the National Historic Preservation Act of 1966, as amended, as well as the applicable state and local regulations regarding human remains, including Texas State statutes cited in the Texas Health and Safety Code. As with the unexpected discovery of cultural resources during construction, the MDAH and the FERC will be contacted within 24 hours and advised of the discovery. The additional steps to be followed are presented below.

- All sub-surface work within 100 feet both sides of the find will cease at once. The area of work stoppage will be adequate to provide for the security, protection, and integrity of the remains. The lead Environmental Inspector will be notified immediately.
- If preliminary identification by the Project archaeologist indicates the remains are human, the FERC, the MDAH, and the appropriate state police authorities will be notified at once.
- In consultation with the police, coroner, and MDAH, it will be established whether or not the individual(s) in question were buried at a time sufficiently far in the past so as not to be of concern to law enforcement authorities.
- If the police relinquish jurisdiction in the matter, and if the nature, style, position or material accompanying the burial indicate that the individual was a Native American, the appropriate tribal authorities will be notified, based on consultation with the MDAH and FERC; an acceptable plan for handling the remains will be developed if Project avoidance is not feasible.
- If after initial examination of the burial site, during which the bones will be disturbed as little as possible, the cultural affiliation of the remains is still in doubt, a forensic or physical anthropologist with experience in field identification of ethnicity will be contacted in consultation with the MDAH and invited to the site.
- Once the ethnic affiliation has been determined, an attempt will be made to identify and notify next of kin or lineal descendants; if the remains are found not likely to be Native American, and if modification of construction plans to avoid impact is not feasible, the remains will be excavated following professional standards of record-keeping, care and curation, and reburied at an appropriate cemetery; if the remains are found likely to be Native American, procedures outlined above will be followed.
- If Project modification to avoid the burial is feasible, the area around the interment which would be subject to Project impact will be archeologically investigated to determine whether or not additional grave sites might be present.

- If the FERC in consultation with the MDAH determines that the remains are eligible for the NRHP, the historic property will be treated in a manner consistent with the Unanticipated Cultural Resources section of this document.

Agency/Stakeholder	Contact Person	Phone Number	Mailing Address
Federal Contacts			
Federal Energy Regulatory Commission (FERC), Office of Energy Projects	[To be Determined], Project Archaeologist	(202) 502-####	888 First Street, NE Washington, DC 20426
State and Local Contacts			
Mississippi Department of Archives and History (MDAH)	Mark Wolfe, State Historic Preservation Officer	(601)576-6850	P.O. Box 571 Jackson, MS 39205-0571
Edge Engineering and Science, LLC	Kristi Soltysiak, Project Archaeologist	(281) 814-8618	16285 Park Ten Place, Suite 400 Houston, TX 77084
Hinds County Sheriff	Victor Mason	(601) 974-2900	407 E Pascagoula St, Jackson, MS 39205

From: [Bourne, Gerald G Jr CIV CEMVK CEMVD \(US\)](#)
To: [Rachel Levert](#)
Cc: [Williamson, Stanley B CIV CEMVK CEMVD \(US\)](#)
Subject: MVK-2019-910_Texas Eastern Transmission Pipeline Maintenance Project (UNCLASSIFIED)
Date: Tuesday, November 26, 2019 7:49:31 AM
Attachments: [Enclosure 1 Application.pdf](#)
[Enclosure 2 NWP 12 Special Conditions.pdf](#)
[Enclosure 3 2017 NWPs General Conditions, DEs Decision, Further Informat....pdf](#)
[Enclosure 4 Regional Conditions and WOC.PDF](#)

CLASSIFICATION: UNCLASSIFIED

Ms. Levert,

Based upon the information provided to our office (enclosure 1), it appears Department of the Army permit requirements for the proposed Texas Eastern Transmission Pipeline maintenance project will be authorized by Nationwide Permit No. 12 (Utility Line Activities), with no pre-construction notification required, as specified in the January 6, 2017, Federal Register, Issuance and Reissuance of Nationwide Permits; Final Rule; Notice (82 FR 1860-2008), provided the activity complies with the Special Conditions (enclosure 2), the General Conditions (enclosure 3), and the Regional Conditions (enclosure 4). It is your responsibility to read and become familiar with the enclosed conditions in order for you to ensure that the activity authorized herein complies with the Nationwide Permit.

Thank you for advising us of your plans. If you change your plans for the proposed work, or if the proposed work does not comply with the conditions of the Nationwide Permit, please contact me at (601) 631 5441. In any future correspondence concerning this project, please refer to Identification no. MVK-2019-910.

Very Respectfully,

Jerry Bourne
Environmental Specialist
USACE Regulatory Branch
Vicksburg District
601-631-5441 (Office)
Gerald.G.Bourne@usace.army.mil

CLASSIFICATION: UNCLASSIFIED