

Technical Appendices

Programmatic Categorical Exclusion

State Route (SR) 87

Bridge over Overflow, Log Mile (LM) 3.88

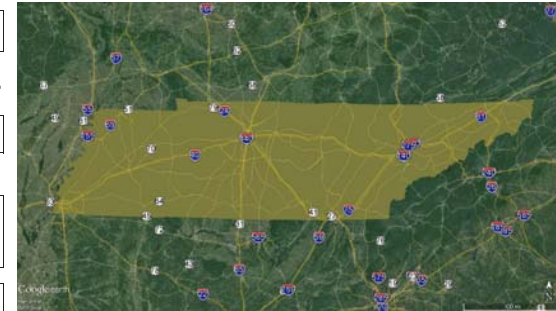
Lauderdale County

PIN 128113.05

State Transportation Improvement Program Fiscal Years 2017-2020

STIP Project List

STIP #	1799001	TDOT PIN #		LENGTH IN MILES		LEAD AGENCY	TDOT	
COUNTY	STATEWIDE - RURAL						TOTAL PROJECT COST	\$426,000,000
ROUTE								
TERMINI	SURFACE TRANSPORTATION BLOCK GRANT PROGRAM (STBGP) - GROUPING							
PROJECT DESCRIPTION	SEE APPENDIX STATE GROUPING DESCRIPTION FOR A COMPREHENSIVE LISTING OF ACTIVITIES INCLUDED BUT NOT LIMITED FOR ELIGIBILITY							
REMARKS								



COUNTY MAP

<u>FY</u>	<u>PHASE</u>	<u>FUNDING</u>	<u>TOTAL FUNDS</u>	<u>FED FUNDS</u>	<u>STATE FUNDS</u>	<u>LOCAL FUNDS</u>
2017	PE, ROW, CONST	STBG	106,500,000	85,200,000	21,300,000	
2018	PE, ROW, CONST	STBG	106,500,000	85,200,000	21,300,000	
2019	PE, ROW, CONST	STBG	106,500,000	85,200,000	21,300,000	
2020	PE, ROW, CONST	STBG	106,500,000	85,200,000	21,300,000	



VICINITY MAP

ALL SCHEDULES SUBJECT TO AVAILABILITY OF FUNDS

Appendices

Grouping Category	Function of Grouping Activities	Allowable Work Types
<p>Surface Transportation Block Grant Program (STBG) Grouping</p> <p>STIP# 1799001</p>	<p>Projects and programs for the preservation and improvement of the conditions and performance of Federal-aid highways and public roads, including:</p> <ul style="list-style-type: none"> ● Rehabilitation, resurfacing, restoration, preservation, and operational improvements on Federal-aid highways and designated routes of the Appalachian Development Highway System (ADHS) and local access roads under 40 USC 14501, ● Traffic operations on Federal-aid highways, ● Bridge and tunnel improvements on public roads, ● Safety improvements on public roads, ● Environmental mitigation ● Scenic and historic highway programs, ● Landscaping and scenic beautification, 	<p>Activities previously authorized under the Surface Transportation Program (STP):</p> <ul style="list-style-type: none"> ● Minor rehabilitation, pavement resurfacing, preventative maintenance, restoration, and pavement preservation treatments to extend the service life of highway infrastructure, including pavement markings and improvements to roadside hardware or sight distance ● Highway improvement work including slide repair, rock fall mitigation, drainage repairs, or other preventative work necessary to maintain or extend the service life of the existing infrastructure in a good operational condition ● Minor operational and safety improvements to intersections and interchanges such as adding turn lanes, addressing existing geometric deficiencies, and extending on/off ramps ● Capital and operating costs for intelligent transportation systems (ITS) and traffic monitoring, management, and control facilities and programs: <ul style="list-style-type: none"> ○ Infrastructure-based intelligent transportation systems (ITS) capital improvements ○ Traffic Management Center (TMC) operations and utilities ○ Freeway service patrols ○ Traveler information ● Bridge and tunnel construction (no additional travel lanes), replacement, rehabilitation, preservation, protection, inspection, evaluation, and inspector training and inspection and evaluation of other infrastructure assets, such as signs, walls, and drainage structures ● Development and implementation of a State Asset Management Plan including data collection, maintenance and integration, software costs, and equipment costs that support the development of performance-based management systems for infrastructure ● Rail-highway grade crossing improvements ● Highway safety improvements: <ul style="list-style-type: none"> ○ Installation of new or improvement of existing guardrail ○ Installation of traffic signs and signals/lights ○ Spot safety improvements ● Sidewalk improvements ● Pedestrian and/or bicycle facilities ● Traffic calming and traffic diversion improvements ● Transportation Alternatives as defined by 23 USC 213(B), 23 USC. 101(A)(29), and Section 1122 of MAP-21 ● Noise walls ● Wetland and/or stream mitigation ● Environmental restoration and pollution abatement ● Control of noxious weeds and establishment of native species <p>Activities previously authorized under the Transportation Enhancement Program:</p>

Appendices

<p>Surface Transportation Block Grant Program (STBG) Grouping</p> <p>(continued)</p> <p>STIP# 1799001</p>	<ul style="list-style-type: none"> ● Historic preservation, ● On- and off-road pedestrian and bicycle facilities, ● Infrastructure projects for improving non-driver access to public transportation and enhanced mobility, ● Community improvement activities, ● Recreational Trail Program projects, ● Safe Routes to School (SRTS) projects, ● Transportation Enhancement projects, ● Transportation Alternatives projects, ● Projects for the creation, rehabilitation, and maintenance of multi-use recreational trails. 	<ul style="list-style-type: none"> ○ Pedestrian and bicycle facilities, safety, and educational activities ○ Acquisition of scenic easements and scenic or historic sites ○ Scenic or historic highway programs ○ Landscaping and other scenic beautification activities ○ Historic preservation ○ Rehabilitation and operation of historic transportation buildings, structures, or facilities ○ Preservation of abandoned railway corridors ○ Inventory, control, and removal of outdoor advertising ○ Archaeological planning and research ○ Environmental mitigation to address water pollution due to highway runoff or reduce vehicle-caused wildlife mortality while maintaining habitat connectivity ○ Establishment of transportation museums ○ Activities under the Tennessee Roadscapes grant program, including landscaping, irrigation, benches, trash cans, paths and signage <p>Activities previously authorized under the Safe Routes to School Program (SRTS):</p> <ul style="list-style-type: none"> ● Sidewalk improvements ● Traffic calming and speed reduction improvements ● Pedestrian and bicycle crossing improvements ● On-street bicycle facilities ● Off-street bicycle and pedestrian facilities ● Secure bicycle parking facilities ● Traffic diversion improvements approximately within 2 miles of a school location ● Non-infrastructure related activities: <ul style="list-style-type: none"> ○ Public awareness campaigns and outreach to press and community leaders ○ Traffic education and enforcement in the vicinity of schools <ul style="list-style-type: none"> ▪ Student sessions on bicycle and pedestrian safety, health, and environment ▪ Funding for training, volunteers, and managers of safe routes to school program <p>Activities previously authorized under the Transportation Alternatives Program (TAP):</p> <ul style="list-style-type: none"> ● Construction, planning, and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation, including: <ul style="list-style-type: none"> ○ Sidewalk improvements ○ Bicycle infrastructure ○ Pedestrian and bicycle signals ○ Traffic calming techniques ○ Lighting and other safety-related infrastructure
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Previous Environmental Documents

Programmatic Categorical Exclusion

State Route (SR) 87

Bridge over Overflow, Log Mile (LM) 3.88 (IA)

Lauderdale County

PIN 124637.00

Submitted Pursuant to the National Environmental Policy Act of 1969, 42 U.S.C. 4332(2)

Environmental Commitments

Owner	Commitment
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**Ecology
EDEC001**

TDOT has committed to seasonal tree removal on this project. The USFWS has given TDOT a finding of "Not Likely to Adversely Affect" for the Indiana bat and Northern long-eared bat, provided that tree cutting on this project is done between October 15 and March 31.

Project Information

General Information

Route: SR-87
Termini: Bridge over Overflow, LM 3.88 (IA)
Municipality: Unincorporated (west of Henning)
County: Lauderdale
PIN: 124637.00
Plans: Transportation Investment Report (TIR)
Date of Plans: 04/02/2018

Project Funding

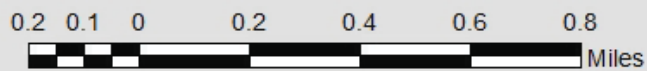
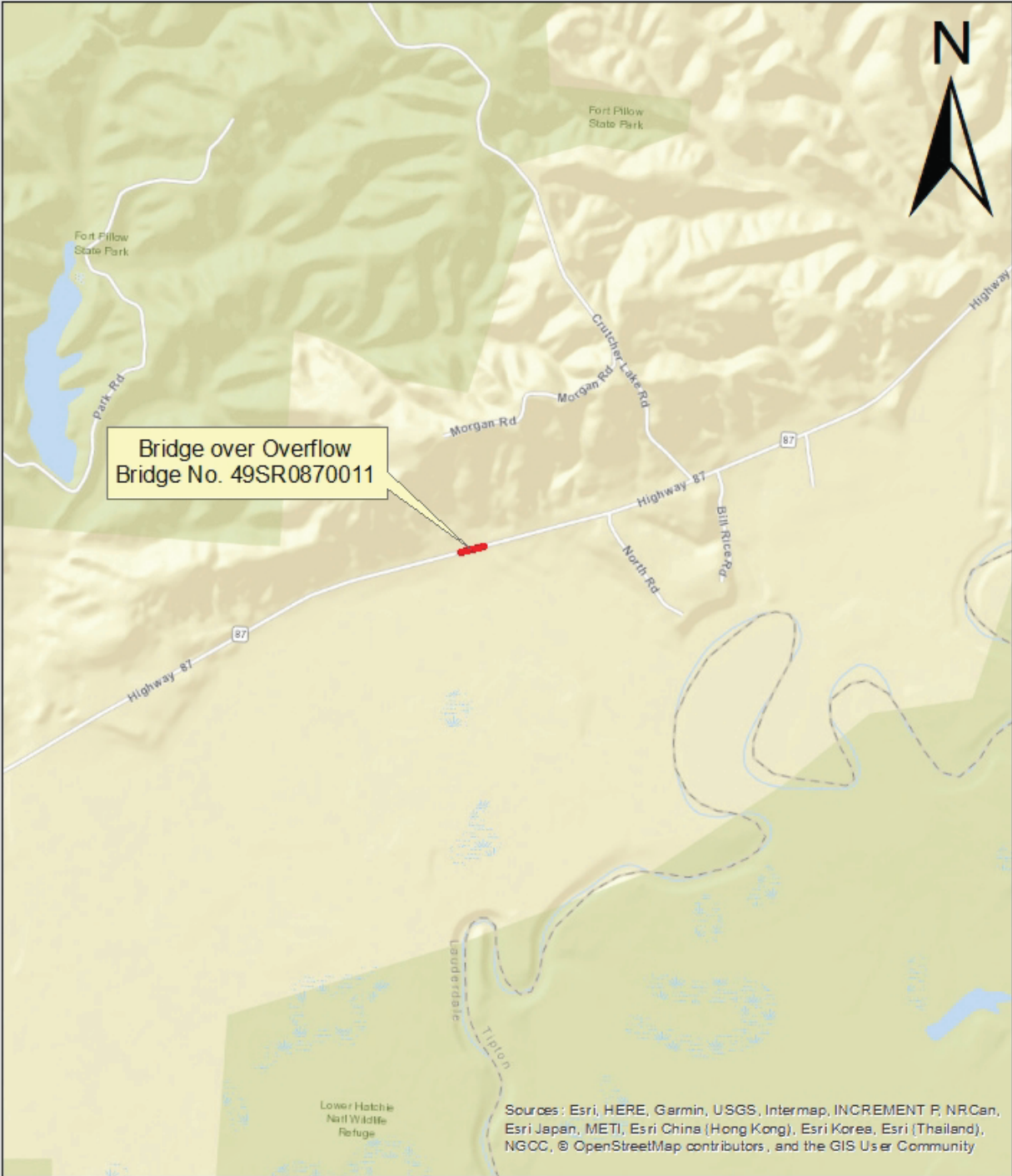
Planning Area: West Tennessee Rural Planning Organization (RPO)

STIP/TIP: 1799001 - Surface Transportation Block Grant Program (STBGP) - Grouping

Funding Source	Preliminary Engineering	Right-of-Way	Construction
Federal	BR-STP-87(9)	BR-STP-87(9)	BR-STP-87(9)
State	49006-1241-94	49006-2241-94	49006-3241-94

Project Location

Project Location Map PIN 124637.00 Lauderdale County SR-87 Bridge over Overflow, LM 3.88



Project Overview

Introduction

The Tennessee Department of Transportation (TDOT), in cooperation with the Federal Highway Administration (FHWA), proposes to replace the SR-87 bridge crossing an overflow of the Hatchie River in Lauderdale County, Tennessee.

Background

Every two years, TDOT performs a comprehensive inspection and subsequent evaluation of all public bridges across the state in order to determine the status of their working condition and operating limits to ensure that they are in accordance with the Federal Highway Administration (FHWA) National Bridge Inspection Standards (NBIS). These inspections are recorded and published in the National Bridge Inventory (NBI) Tennessee Inventory and Appraisal Report. One of the components of this evaluation is the designation of a sufficiency rating. A sufficiency rating is calculated for each individual bridge that is used to carry vehicular traffic. Ratings are measured on a scale of 0 to 100. A rating of 100 corresponds to a bridge that qualifies as an “entirely sufficient bridge,” while a rating of 0 denotes a bridge that is “entirely deficient.” Bridges that receive a sufficiency rating of less than 80.0 are eligible for rehabilitation; bridges that earn a rating below 50.0 are eligible for replacement. Another component of the NBI are the condition ratings. Condition ratings are used to describe the existing, in-place bridge as compared to the as-built condition. The physical condition of the deck, superstructure, and substructure components of a bridge are evaluated for a condition rating. Condition ratings are assigned codes ranging from 0-9, with 0 being failed condition and 9 being excellent condition.

The National Bridge Inventory (NBI) Tennessee Inventory and Appraisal Report published on 04/05/2016 listed the subject SR-87 bridge as having a sufficiency rating of 40.7, qualifying it for replacement. Since the time of the 2016 report, bridge repairs were performed to improve conditions until a full bridge replacement could occur. The Technical Appendices includes coordination with TDOT's Strategic Transportation Investment Division about the maintenance work, as well as the 2016 report and maintenance recommendations.

According the NBI Tennessee Inventory and Appraisal Report published on 07/27/2018, located in the Technical Appendices, the subject bridge has a sufficiency rating of 53.4. The bridge's superstructure received a condition rating of five or fair condition, indicating that all of the primary structural elements are sound but may have minor section loss, cracking, spalling or scour. The substructure, and stream channel and channel protection both received a condition rating of six or satisfactory condition, indicating that the structural elements show some minor deterioration. The bridge's deck received a condition rating of seven or satisfactory condition, with some structural elements exhibiting minor deterioration.

Project Development

Need

The proposed project is needed to address insufficient structural elements of the project SR-87 bridge as indicated by the assigned conditions ratings and overall sufficiency rating of 53.4.

Purpose

The purpose of the proposed project is to improve the structural elements of the project SR-87 bridge by replacing the existing bridge to meet current TDOT design standards.

Range of Alternatives

Other than the selected design, were any alternative build designs developed for this project?

No

No-Build

In the development of design solutions that address the needs outlined above and achieve the purpose of the project, TDOT evaluated the potential consequences should the project not be implemented. This option, known as the No-Build alternative, assumed the continuation of current conditions and set the baseline from which the impacts of the selected design were compared.

Public Involvement

Has there been any public involvement for the project?

No

Project Design

Existing Conditions and Layout

Based on the TIR, the project bridge was built in 1986, is a single span still I-beam bridge with a timber deck and asphalt overlay. The bridge has an out-to-out width of 28 feet-six inches and a length of 29 feet. The bridge carries two 10-foot lanes, one in either direction, and is classified as a rural major collector.

Scope of Work

The proposed would construct a single-span pre-stressed box beam bridge with a total length of 32 feet-three inches. The new bridge will also require the grade of the roadway to be raised 2.5 inches. According to the TIR, an additional option may be considered at the time of design to lower the vertical clearance of the proposed bridge by 2.5 inches. The proposed structure will consist of two 11-foot travel lanes with three-foot shoulders and single slope concrete parapets. The bridge would have an out-to-out width of 29 feet-4.5 inches. The project limits would extend 100 feet from the structure to the east and to the west in order to install 75 feet of guardrail each direction and provide the necessary length for the vertical curve run out.

Right-of-Way

Does this project require the acquisition of right-of-way or easements?

Yes

Right-of-Way Acquisition Table

Permanent Acquisition			Temporary Acquisition		
R.O.W Acquisition	Drainage Easements	Total	Slope Easements	Construction Easements	Total
0.140	0.000	0.140	0.000	0.000	0.000

*Measured in acres

As stated in the TIR, "It is estimated that four tracts of land will be affected resulting in approximately 0.14 acres of right-of-way (ROW) acquisition. It is also estimated that overhead utilities will need to be relocated."

Displacements and Relocations

Will this project result in residential, business or non-profit displacements and relocations?

No

Changes in Access Control

Will changes in access control impact the functional utility of any adjacent parcels?

No

Traffic and Access Disruption

At this time, are traffic control measures and temporary access information available?

Yes

Phased construction with one lane closed while the other remains open with temporary traffic signals and temporary barricades being utilized. The remaining travel lane must have a 10-foot width.

Environmental Studies

Water Resources

Are there any water resources, wetlands or natural habitat located within the project area? **Yes**

Water Resources				
Resource Type	Label	Quality	Impact Type	Amount
Perennial Stream	STR-1	Undetermined	Undetermined	100.00

*Units measured in linear feet.

Mitigation of impacts to streams or any other fluvial systems will be accomplished through the avoidance and minimization of potential impacts during the design process. Permanent stream alterations such as relocations, impoundments or channel modification will be mitigated on-site to the extent possible in order to return the channel to its most probable natural state. Impacts that cannot be mitigated on-site will be subject to a compensatory mitigation plan that may include restoration of a comparable resource or application of an in-lieu fee program.

Protected Species

Is the Grouped Programmatic No Effect Activities (2017) consultation and the TDEC-DNA (2015) MOA applicable to this project? **No**

Rare Species Dataviewer:

The TDEC Rare Species Dataviewer was reviewed on 04/18/2018.

Rare Species List			
Species Name	Status	Species Potential within Right-of-Way	Accommodations
<i>Juglans cinerea</i>	State	Low Potential: Present habitat unsuitable	BMP's
<i>Schisandra glabra</i>	State	Low Potential: Unreliable record	BMP's
<i>Hybognathus placitus</i>	State	Low Potential: Unreliable record	BMP's
<i>Anhinga anhinga</i>	State	Low Potential: Not observed during visit	Not practical
<i>Myotis austroriparius</i>	State	Low Potential: Present habitat unsuitable	Not practical
<i>Atractosteus spatula</i>	State	Low Potential: Present habitat unsuitable	BMP's
<i>Dendroica cerulean</i>	State	Low Potential: Not observed during visit	BMP's
<i>Neotoma floridana illinoensis</i>	State	Low Potential: Not observed during visit	BMP's
<i>Carex hyaline</i>	State	Low Potential: Present habitat unsuitable	Not practical
<i>Egretta caerulea</i>	State	Low Potential: Extinct or extirpated	BMP's
<i>Sternula antillarum athalassos</i>	Fed/State	Low Potential: Present habitat unsuitable	BMP's
<i>Ictinia mississippiensis</i>	State	Low Potential: Present habitat unsuitable	BMP's
<i>Ardea alba</i>	State	Low Potential: Not observed during visit	BMP's

No species were reported within a one mile radius of the project limits and 13 were found within a one to four mile radius of the project. A list of those species can be found in the table above.

U.S. Fish and Wildlife Service (USFWS):

Coordination with the USFWS was completed on 06/08/2018.

In a letter dated 06/08/2018, located in the Technical Appendices, the USFWS states, "the project is eligible for placement under the [Programmatic Bat Consultation] with determinations of 'not likely to adversely affect' for the Indiana bat and NLEB." The letter also states, "We are unaware of any other federally listed or proposed species that could potentially be impacted by the project. Therefore, based on the best information available at this time, we believe that the requirements of section 7 of the Endangered Species Act (Act) of 1973, as amended, are fulfilled for all species that currently receive protection under the Act. Obligations under the Act should be reconsidered if (1) new information reveals impacts of the proposed action that may affect listed species or critical habitat in a manner not previously considered, (2) the proposed action is subsequently modified to include activities which were not considered during this consultation, or (3) new species are listed or critical habitat designated that might be affected by the proposed action."

Tennessee Wildlife Resources Agency (TWRA):

Coordination with TWRA was completed on 05/15/2018.

In a letter dated 05/15/2018, located in the Technical Appendices, the TWRA states, "The implementation of standard BMP's will be sufficient to satisfy the needs of the Tennessee Wildlife Resources Agency for this proposed project."

Floodplain Management

Flood Zone: Zone X (Shaded Gray) - Area of 500-year Flood

Portions of this project are located in or near a FEMA defined floodplain however there is no detailed study. The project is located on Flood Insurance Rate Maps in Lauderdale County, Panel 325 of 500, Map # 47097C0325D. The design of the roadway system will be consistent with the Memorandum of Understanding (MOU) between FHWA and FEMA and with the floodplain management criteria set forth in the National Flood Insurance Regulations of Title 44 of the Code of Federal Regulations (CFR). It will be consistent with the requirements of floodplain management guidelines for implementing Executive Order 11988 and FHWA guidelines 23 CFR 650A. A portion of the FEMA FIRM is included in the Attachments.

Air Quality

Transportation Conformity:

Correspondence dated 04/13/2018 with TDOT's Air Quality and Noise Section states, "This project is in Lauderdale County which is in attainment for all regulated criteria pollutants. Therefore, conformity does not apply to this project."

Mobile Source Air Toxics (MSAT):

In the correspondence referenced above, it states, "This project qualifies as a categorical exclusion under 23 CFR 771.117 and, therefore, does not require an evaluation of MSATs per FHWA's [Federal Highway Administration] 'Interim Guidance Update on Air Toxic Analysis in NEPA [National Environmental Policy Act] Documents' dated October 2016."

Noise

In accordance with FHWA requirements and TDOT's Noise Policy this project is determined to be **Type III**

No significant noise impacts are anticipated for this project and a noise study is not needed.

Farmland

Is this project exempt from the provisions of the Farmland Protection Policy Act (FPPA)? **Yes**

FPPA Exemption: Small Acreage (3 acres or less for an existing bridge or interchange)

Section 4(f)

Does this project involve the use of property protected by Section 4(f) (49 USC 303)?

No

Section 6(f)

Does this project involve the use of property assisted by the L&WCF?

No

Cultural Resources

Does the Interstate Highway exemption or MOU between TDOT and the SHPO (2015) apply?

No

Are NRHP listed or eligible cultural resources within the project Area of Potential Effect (APE)?

No

Historic/Architectural Concurrence:

Concurrence from the TN State Historic Preservation Office (TN-SHPO) was received on 06/12/2018.

In a letter dated 06/12/2018, located in the Technical Appendices, the TN-SHPO states, "We concur that no architectural resources eligible for listing in the National Register of Historic Places will be affected by this undertaking. If project plans are changed or archaeological remains are discovered during project construction, please contact this office to determine what further action, if any will be necessary to comply with Section 106 of the National Historic Preservation Act."

Archaeology Concurrence:

Concurrence from the TN State Historic Preservation Office (TN-SHPO) was received on 06/21/2018.

In a letter dated 06/12/2018, located in the Technical Appendices, the TN-SHPO states, "We find that no archaeological resources eligible for listing in the National Register of Historic Places will be affected by this undertaking. If project plans are changed or archaeological remains are discovered during project construction, please contact this office to determine what further action, if any will be necessary to comply with Section 106 of the National Historic Preservation Act."

Native American Consultation

Does this project require Native American consultation?

Yes

Native American Consultation was requested on 04/30/2018. No tribes responded within the consultation period.

Native American Consultation

Sent	Response		Sent	Response	
<input type="checkbox"/>	<input type="checkbox"/>	Absentee Shawnee Tribe of Oklahoma	<input type="checkbox"/>	<input type="checkbox"/>	Muscogee (Creek) Nation
<input type="checkbox"/>	<input type="checkbox"/>	Cherokee Nation	<input type="checkbox"/>	<input type="checkbox"/>	Poarch Band of Creek Indians
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Chickasaw Nation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Quapaw Tribe of Oklahoma
<input type="checkbox"/>	<input type="checkbox"/>	Choctaw Nation of Oklahoma	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Shawnee Tribe
<input type="checkbox"/>	<input type="checkbox"/>	Eastern Band of Cherokee Indians	<input type="checkbox"/>	<input type="checkbox"/>	Thlopthlocco Tribal Town
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Eastern Shawnee Tribe of Oklahoma	<input checked="" type="checkbox"/>	<input type="checkbox"/>	United Keetoowah Band of Cherokee Indians
<input type="checkbox"/>	<input type="checkbox"/>	Kialegee Tribal Town	<input type="checkbox"/>	<input type="checkbox"/>	Other

Environmental Justice

Are there any disproportionately high or adverse effects on low-income or minority populations?

No

The proposed project does not have the potential to cause disproportionately high or adverse effects on low-income or minority populations.

Hazardous Materials

Does the project involve any asbestos containing materials?

No

Does the project involve any other hazardous material sites?

No

Bicycle and Pedestrian

Does this project include accommodations for bicycles and pedestrians?

No

Policy Exception: Other factors where there is a demonstrated absence of need or prudence.

Correspondence dated 04/17/2018 from the TDOT Multimodal Transportation Resources Division, located in the Technical Appendices, states, "This project is exempt from multimodal accommodations. As a bridge replacement project on a facility with no existing accommodations, there is a demonstrated absence of prudence."

Environmental Commitments

Does this project involve any environmental commitments?

Yes

Additional Environmental Issues

Are there any additional environmental concerns involved with this project?

No

Conclusion

Review Determination

Determination: Programmatic Categorical Exclusion

This federal-aid highway project qualifies for a Categorical Exclusion under 23 C.F.R 771.117(d) and does not exceed the thresholds listed in Section IV(A)(1)(b) of the 2016 Programmatic Agreement between the Federal Highway Administration, Tennessee Division and the Tennessee Department of Transportation. The Department has determined that the specific conditions and criteria for these CEs are satisfied and that significant environmental impacts will not result from this action. This project is therefore designated as a Programmatic Categorical Exclusion and does not require Administration approval.

Reference Material

All source material used in support of the information and conclusions presented in this document are included in the attachments and technical appendices. The attachments are located at the end of the environmental document and include information on funding, agency concurrence, applicable agency agreements, and special commitment support. The technical appendices are compiled as a separate document and include the project plans, technical reviews, reports and any other additional information.

Preparer Certification

By signing below, you certify that this document has been prepared in compliance with all applicable environmental laws, regulations and procedures. You can attest to the document's quality, accuracy, and completeness, and that all source material has been compiled and included in the attachments and technical appendices.

Abby
Harris

Digitally signed by
Abby Harris
Date: 2018.08.20
13:42:16 -05'00'

Document Preparer

Document Approval

By signing below, you officially concur that this document is in compliance with all applicable environmental laws, regulations and procedures. You have reviewed and verified the document's quality, accuracy, and completeness and that all source material has been compiled and included in the attachments and technical appendices.

Joseph D. Santangelo

Digitally signed by Joseph D. Santangelo
Date: 2018.08.20 13:47:00 -05'00'

Tennessee Department of Transportation

Attachments

Acronyms

AADT	Annual Average Daily Traffic	NRCS	Natural Resources Conservation Service
ADA	Americans with Disabilities Act	NRHP	National Register of Historic Places
APE	Area of Potential Effect	PCE	Programmatic Categorical Exclusion
BMP	Best Management Practice	PIN	Project Identification Number
CAA	Clean Air Act	PM	Particulate Matter
CE	Categorical Exclusion	PND	Pond
CEQ	Council on Environmental Quality	RCRA	Resource Conservation and Recovery Act
CFR	Code of Federal Regulations	ROW	Right-of-Way
CMAQ	Congestion Mitigation and Air Quality	ROD	Record of Decision
DEIS	Draft Environmental Impact Statement	RPO	Rural Planning Organization
FEMA	Federal Emergency Management Agency	SIP	State Implementation Plan
FONSI	Finding of No Significant Impact	SNK	Sinkhole
EA	Environmental Assessment	SR	State Route
EIS	Environmental Impact Statement	STIP	State Transportation Improvement Program
EJ	Environmental Justice	STR	Stream
EPA	Environmental Protection Agency	TDEC	TN Department of Environment and Conservation
EPH	Ephemeral Stream	TDOT	Tennessee Department of Transportation
FHWA	Federal Highway Administration	TIP	Transportation Improvement Program
FIRM	Flood Insurance Rate Map	SHPO	State Historic Preservation Office
FPPA	Farmland Protection Policy Act	TPO	Transportation Planning Organization
GHG	Greenhouse Gas	TVA	Tennessee Valley Authority
GIS	Geographic Information System	TWRA	Tennessee Wildlife Resources Agency
IAC	Interagency Consultation	USDOT	U.S. Department of Transportation
LWCF	Land and Water Conservation Fund	USACE	U.S. Army Corps of Engineers
LOS	Level of Service	USFWS	U.S. Fish and Wildlife Service
MOA	Memorandum of Agreement	UST	Underground Storage Tank
MOU	Memorandum of Understanding	VMT	Vehicle Miles Traveled
MPO	Metropolitan Planning Organization	VPD	Vehicles Per Day
MSAT	Mobile Source Air Toxics	WWC	Wet Weather Conveyance
NEPA	National Environmental Policy Act		

State Transportation Improvement Program

STIP Project List

STIP # 1799001 **TDOT PIN #** **LENGTH IN MILES** **LEAD AGENCY** TDOT
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<p>Surface Transportation Block Grant Program (STBG) Grouping</p> <p>STIP# 1799001</p>	<p>Projects and programs for the preservation and improvement of the conditions and performance of Federal-aid highways and public roads, including:</p> <ul style="list-style-type: none"> • Rehabilitation, resurfacing, restoration, preservation, and operational improvements on Federal-aid highways and designated routes of the Appalachian Development Highway System (ADHS) and local access roads under 40 USC 14501. • Traffic operations on Federal-aid highways. • Bridge and tunnel improvements on public roads. • Safety improvements on public roads. • Environmental mitigation • Scenic and historic highway programs. • Landscaping and scenic beautification. 	<p>Activities previously authorized under the Surface Transportation Program (STP):</p> <ul style="list-style-type: none"> • Minor rehabilitation, pavement resurfacing, preventative maintenance, restoration, and pavement preservation treatments to extend the service life of highway infrastructure, including pavement markings and improvements to roadside hardware or sight distance • Highway improvement work including slide repair, rock fall mitigation, drainage repairs, or other preventative work necessary to maintain or extend the service life of the existing infrastructure in a good operational condition • Minor operational and safety improvements to intersections and interchanges such as adding turn lanes, addressing existing geometric deficiencies, and extending on/off ramps • Capital and operating costs for intelligent transportation systems (ITS) and traffic monitoring, management, and control facilities and programs: <ul style="list-style-type: none"> ○ Infrastructure-based intelligent transportation systems (ITS) capital improvements ○ Traffic Management Center (TMC) operations and utilities ○ Freeway service patrols ○ Traveler information • Bridge and tunnel construction (no additional travel lanes), replacement, rehabilitation, preservation, protection, inspection, evaluation, and inspector training and inspection and evaluation of other infrastructure assets, such as signs, walls, and drainage structures • Development and implementation of a State Asset Management Plan including data collection, maintenance and integration, software costs, and equipment costs that support the development of performance-based management systems for infrastructure • Rail-highway grade crossing improvements • Highway safety improvements: <ul style="list-style-type: none"> ○ Installation of new or improvement of existing guardrail ○ Installation of traffic signs and signals/lights ○ Spot safety improvements • Sidewalk improvements • Pedestrian and/or bicycle facilities • Traffic calming and traffic diversion improvements • Transportation Alternatives as defined by 23 USC 213(B), 23 USC 101(A)(29), and Section 1122 of MAP-21 • Noise walls • Wetland and/or stream mitigation • Environmental restoration and pollution abatement • Control of noxious weeds and establishment of native species <p>Activities previously authorized under the Transportation Enhancement Program:</p>

Appendices

<p>Surface Transportation Block Grant Program (STBG) Grouping</p> <p>(continued)</p> <p>STIP# 1799001</p>	<ul style="list-style-type: none"> ● Historic preservation. ● On- and off-road pedestrian and bicycle facilities. ● Infrastructure projects for improving non-driver access to public transportation and enhanced mobility. ● Community improvement activities. ● Recreational Trail Program projects. ● Safe Routes to School (SRTS) projects. ● Transportation Enhancement projects. ● Transportation Alternatives projects. ● Projects for the creation, rehabilitation, and maintenance of multi-use recreational trails. 	<ul style="list-style-type: none"> ○ Pedestrian and bicycle facilities, safety, and educational activities ○ Acquisition of scenic easements and scenic or historic sites ○ Scenic or historic highway programs ○ Landscaping and other scenic beautification activities ○ Historic preservation ○ Rehabilitation and operation of historic transportation buildings, structures, or facilities ○ Preservation of abandoned railway corridors ○ Inventory, control, and removal of outdoor advertising ○ Archaeological planning and research ○ Environmental mitigation to address water pollution due to highway runoff or reduce vehicle-caused wildlife mortality while maintaining habitat connectivity ○ Establishment of transportation museums ○ Activities under the Tennessee Roadscapes grant program, including landscaping, irrigation, benches, trash cans, paths and signage <p>Activities previously authorized under the Safe Routes to School Program (SRTS):</p> <ul style="list-style-type: none"> ● Sidewalk improvements ● Traffic calming and speed reduction improvements ● Pedestrian and bicycle crossing improvements ● On-street bicycle facilities ● Off-street bicycle and pedestrian facilities ● Secure bicycle parking facilities ● Traffic diversion improvements approximately within 2 miles of a school location ● Non-infrastructure related activities: <ul style="list-style-type: none"> ○ Public awareness campaigns and outreach to press and community leaders ○ Traffic education and enforcement in the vicinity of schools <ul style="list-style-type: none"> ▪ Student sessions on bicycle and pedestrian safety, health, and environment ▪ Funding for training, volunteers, and managers of safe routes to school program <p>Activities previously authorized under the Transportation Alternatives Program (TAP):</p> <ul style="list-style-type: none"> ● Construction, planning, and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation, including: <ul style="list-style-type: none"> ○ Sidewalk improvements ○ Bicycle infrastructure ○ Pedestrian and bicycle signals ○ Traffic calming techniques ○ Lighting and other safety-related infrastructure
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Appendices

<p>Surface Transportation Block Grant Program (STBG) Grouping (continued)</p> <p>STIP# 1799001</p>	<ul style="list-style-type: none"> • Projects for the planning, design or construction of boulevards and other roadways largely in the right-of-way of former Interstate System routes or other divided highways. 	<ul style="list-style-type: none"> ○ Transportation projects to achieve compliance with the Americans with Disabilities Act of 1990 • Construction, planning, and design of infrastructure-related projects and systems that will provide safe routes for non-drivers, including children, older adults, and individuals with disabilities to access daily needs • Conversion and use of abandoned railroad corridors for trails for pedestrians, bicyclists, or other non-motorized transportation users • Construction of turnouts, overlooks, and viewing areas • Community improvement activities, which include but are not limited to: <ul style="list-style-type: none"> ○ Inventory, control, or removal of outdoor advertising ○ Historic preservation and rehabilitation of historic transportation facilities ○ Vegetation management in transportation rights-of-way to improve roadwaysafety, prevent invasive species, and provide erosion control ○ Archaeological activities relating to impacts from implementation of a transportation project eligible under Title 23 of the USC • Any environmental mitigation activity, including pollution prevention and pollution abatement activities and mitigation to: <ul style="list-style-type: none"> ○ Address stormwater management, control, and water pollution prevention or abatement related to highway construction or due to highway runoff ○ Reduce vehicle-caused wildlife mortality or to restore and maintain connectivity among terrestrial or aquatic habitats • Recreational Trails Program activities under 23 USC 206 • SRTS Program infrastructure-related projects, non-infrastructure-related activities (such as pedestrian and bicycle safety and educational activities advanced under the SRTS program), and SRTS Coordinator positions. • Planning, designing, or constructing boulevards and other roadways largely in the right-of-way of former Interstate System routes or other divided highways <p>Activities previously authorized under the Recreational Trails Program (RTP):</p> <ul style="list-style-type: none"> • Maintenance and restoration of existing recreational trails • Development and rehabilitation of trailside and trailhead facilities and trail linkages for recreational trails • Purchase and lease of recreational trail construction and maintenance equipment • Construction of new recreational trails • Acquisition of easements and fee simple title to property for recreational trails or recreational trail corridors • Assessment of trail conditions for accessibility and maintenance • Development and dissemination of publications and operation of educational programs to promote safety and environmental protection • Payment of costs to the State incurred in administering the program
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United States Department of the Interior

FISH AND WILDLIFE SERVICE

Tennessee ES Office
446 Neal Street
Cookeville, Tennessee 38501



June 8, 2018

Mr. Eric Philipps
Tennessee Department of Transportation
Environmental Technical Office
300 Benchmark Place,
Jackson, Tennessee 38301

Subject: FWS# 18-I-0517. Proposed State Route 87 Bridge replacement over an overflow to the Hatchie River at LM 3.88; PIN# 124637.00, Lauderdale County, Tennessee.

Dear Mr. Philipps:

Thank you for your correspondence dated May 17, 2018, regarding the proposed replacement of the State Route 87 Bridge over an overflow to the Hatchie River in Lauderdale County, Tennessee. The Tennessee Department of Transportation (TDOT) has chosen to place the project under the Range-wide Programmatic Consultation between the Federal Highway Administration, Federal Railroad Administration, Federal Transit Administration, and the U.S. Fish and Wildlife Service (Service) (Programmatic Bat Consultation), and has submitted project specific information through the IPaC Assisted Determination Key. Personnel of the Service have reviewed the subject proposal and offer the following comments.

The Programmatic Bat Consultation addresses transportation-related impacts to the federally endangered Indiana bat (*Myotis sodalis*) and threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*) from removal of potentially suitable summer roosting habitat. Under the Programmatic Bat Consultation, transportation-related activities resulting in a "not likely to adversely affect" finding include all wintertime forested clearing within 100 feet of roadway surface or railroad ballast that does not remove known roosts or documented foraging/travel corridors and is no closer than one-half mile from the entrance of a documented hibernaculum. Based on the information provided, the project is eligible for placement under the consultation herein referenced with determinations of "not likely to adversely affect" for the Indiana bat and NLEB.

We are unaware of any other federally listed or proposed species that could potentially be impacted by the project. Therefore, based on the best information available at this time, we believe that the requirements of section 7 of the Endangered Species Act (Act) of 1973, as amended, are fulfilled for all species that currently receive protection under the Act. Obligations under the Act should be reconsidered if (1) new information reveals impacts of the proposed action that may affect listed species or critical habitat in a manner not previously considered, (2) the proposed action is

subsequently modified to include activities which were not considered during this consultation, or (3) new species are listed or critical habitat designated that might be affected by the proposed action.

If you have any questions regarding our comments, please contact John Griffith at 931/525-4995 or by email at john_griffith@fws.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael Gale". The signature is written in a cursive style with a large, stylized initial "M".

Michael Gale
Acting Field Supervisor

Tennessee Wildlife Resource Agency Coordination

From: [Casey Parker](#)
To: [Eric Philipps](#); [TDOT Env.LocalPrograms](#)
Cc: [Rob Todd](#)
Subject: RE: Request for Comment; Lauderdale, SR-87 Bridge over Overflow, PIN 124637.00
Date: Tuesday, May 15, 2018 12:39:08 PM
Attachments: [image001.png](#)
[image002.png](#)

Subject: Request for Comment; Lauderdale, SR-87 Bridge over Overflow, PIN 124637.00

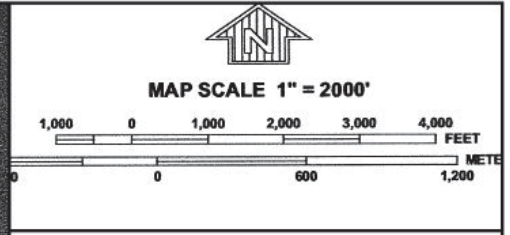
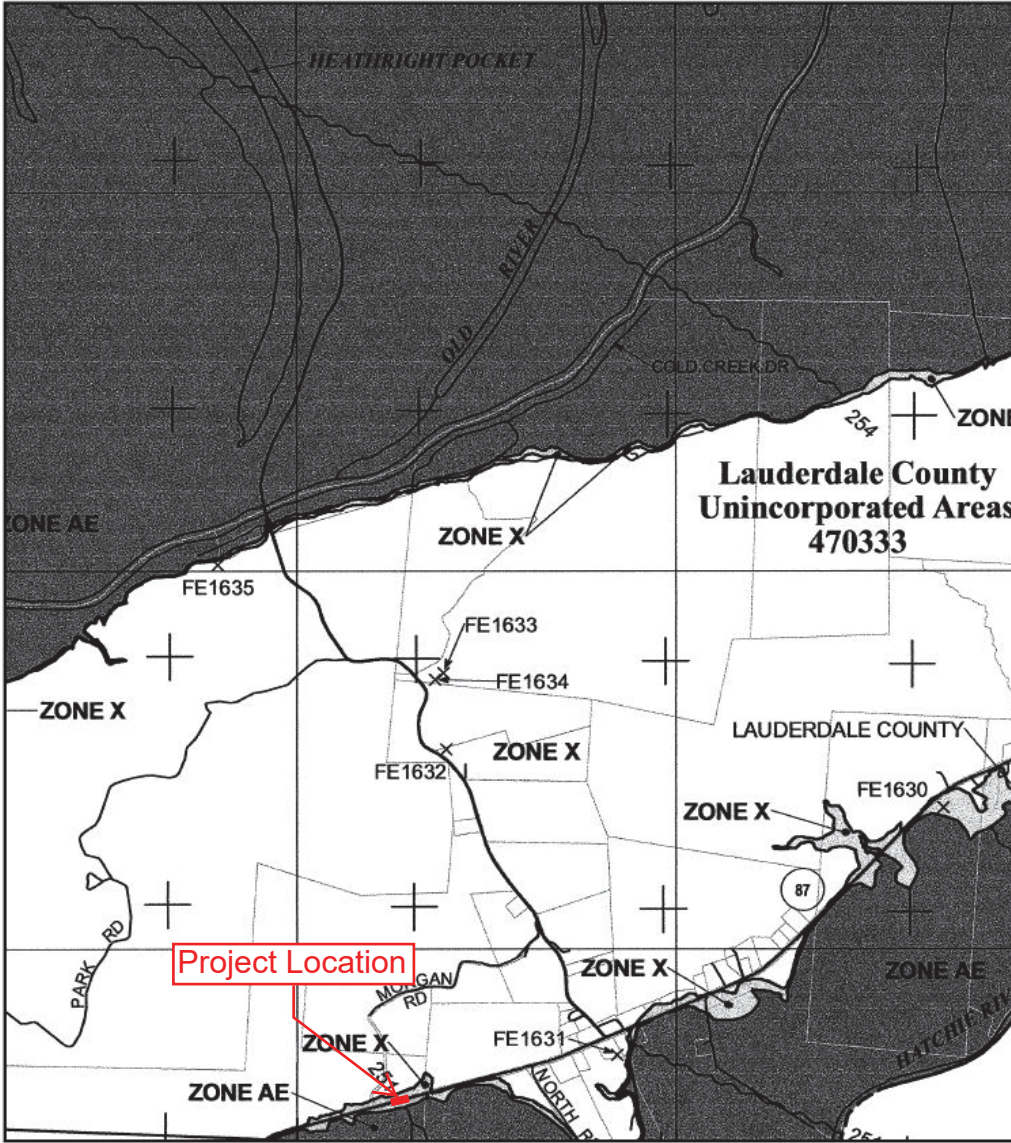
Mr. Eric Phillips,

I have reviewed the information that you provided regarding the proposed bridge replacement on SR-87 in Lauderdale County, Tennessee. The implementation of standard BMP's will be sufficient to satisfy the needs of the Tennessee Wildlife Resources Agency for this proposed project. Thank you for the opportunity to review and comment, please contact me if you need further assistance.

Casey Parker - Wildlife Biologist
Liaison to TDOT & Federal Highway Administration
Tennessee Wildlife Resources Agency
Environmental Services Division
Email: casey.parker@tn.gov



Floodplain Map



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0325D

FIRM
FLOOD INSURANCE RATE MAP
LAUDERDALE COUNTY, TENNESSEE
AND INCORPORATED AREAS

PANEL 325 OF 500
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
LAUDERDALE COUNTY	470333	0325	D

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
47097C0325D

EFFECTIVE DATE
SEPTEMBER 28, 2007

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps, check the FEMA Flood Map Store at www.msc.fema.gov



TENNESSEE HISTORICAL COMMISSION
STATE HISTORIC PRESERVATION OFFICE
2941 LEBANON PIKE
NASHVILLE, TENNESSEE 37243-0442
OFFICE: (615) 532-1550
www.tnhistoricalcommission.org

June 12, 2018

Ms. Katherine Looney
Tennessee Department of Transportation
505 Deaderick St
Suite 900
Nashville, TN 37243-1402

RE: FHWA / Federal Highway Administration, Replacement of the SR 87 Bridge over Overflow,
Log Mile 3.88/ PIN 124637.00, , Lauderdale County, TN

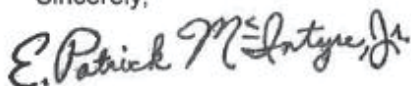
Dear Ms. Looney:

In response to your request, we have reviewed the architectural survey report and accompanying documentation submitted by you regarding the above-referenced undertaking. Our review of and comment on your proposed undertaking are among the requirements of Section 106 of the National Historic Preservation Act. This Act requires federal agencies or applicants for federal assistance to consult with the appropriate State Historic Preservation Office before they carry out their proposed undertakings. The Advisory Council on Historic Preservation has codified procedures for carrying out Section 106 review in 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739).

Considering the information provided, we concur that no architectural resources eligible for listing in the National Register of Historic Places will be affected by this undertaking. If project plans are changed or archaeological remains are discovered during project construction, please contact this office to determine what further action, if any, will be necessary to comply with Section 106 of the National Historic Preservation Act. Questions or comments may be directed to Casey Lee (615 253-3163).

Your cooperation is appreciated.

Sincerely,



E. Patrick McIntyre
Executive Director and
State Historic Preservation Officer

EPM/cjl



TENNESSEE HISTORICAL COMMISSION
STATE HISTORIC PRESERVATION OFFICE
2941 LEBANON PIKE
NASHVILLE, TENNESSEE 37243-0442
OFFICE: (615) 532-1550
www.tnhistoricalcommission.org

June 21, 2018

Mr. Phillip R. Hodge
Tennessee Department of Transportation
Suite 900, James K. Polk Building
505 Deaderick Street
Nashville, TN 37243-1402

RE: FHWA / Federal Highway Administration, SR-87 Bridge Replacement at Log Mile 3.88,
Lauderdale County, TN

Dear Mr. Hodge:

In response to your request, we have reviewed the archaeological report of investigations and accompanying documentation submitted by you regarding the above-referenced undertaking. Our review of and comment on your proposed undertaking are among the requirements of Section 106 of the National Historic Preservation Act. This Act requires federal agencies or applicants for federal assistance to consult with the appropriate State Historic Preservation Office before they carry out their proposed undertakings. The Advisory Council on Historic Preservation has codified procedures for carrying out Section 106 review in 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739).

Considering the information provided, we find that no archaeological resources eligible for listing in the National Register of Historic Places will be affected by this undertaking. If project plans are changed or archaeological remains are discovered during project construction, please contact this office to determine what further action, if any, will be necessary to comply with Section 106 of the National Historic Preservation Act. Complete and/or updated Tennessee Site Survey Forms should be submitted to the Tennessee Division of Archaeology for all sites recorded and/or revisited during the current investigation. Questions or comments may be directed to Jennifer Barnett (615) 687-4780.

Your cooperation is appreciated.

Sincerely,

E. Patrick McIntyre, Jr.
Executive Director and
State Historic Preservation Officer

EPM/jmb

Environmental Commitments

Project Commitments



Counties: **Route:** **PIN:**
Termini:
POA: **Public Involvement Level:** **Turn In Date:**

Filter Criteria
 Division Section: Search:

Commitment ID	Commitment Type	Source Division (Section)	Commitment Description	Plans Report	Status
EDHZ001	Environment	Environmental Division, Hazardous Materials	An Asbestos	<input checked="" type="checkbox"/>	Pending
EDEC001	Environment	Environmental Division, Ecology	TDOT has committed	<input type="checkbox"/>	Pending

Commitment Details

History | **Follow Up Details**
Commitment Description: TDOT has committed to seasonal tree removal on this project. The USFWS has given TDOT a finding of "Not Likely to Adversely Affect" for the Indiana bat and Northern long-eared bat, provided that tree cutting on this project is done between October 15 and March 31.
Commitment History Remark:
Station/Location:
GPS: **Commitment To:** **Long Term Maintenance Commitment:**
Consideration Made On: **Commitment Created By:** **Commitment Created On:**
Commitment Made Active: **Commitment Completed:**

Message from webpage

TDOT has committed to seasonal tree removal on this project. The USFWS has given TDOT a finding of "Not Likely to Adversely Affect" for the Indiana bat and Northern long-eared bat, provided that tree cutting on this project is done between October 15 and March 31./TDOT has committed to seasonal tree removal on this project. The USFWS has given TDOT a finding of "Not Likely to Adversely Affect" for the Indiana bat and Northern long-eared bat, provided that tree cutting on this project is done between October 15 and March 31.

Programmatic Categorical Exclusion

Notice of Activity

State Route (SR) 87

Bridge over Overflow, Log Mile (LM) 3.88

Lauderdale County

PIN 128113.05

Submitted Pursuant to the National Environmental Policy Act of 1969, 42 U.S.C. 4332(2)(c)

Joseph D. Santangelo

Digitally signed by Joseph D.
Santangelo

Date: 2018.10.11 08:24:10 -05'00'

10/11/2018

Tennessee Department of Transportation

Date

Environmental Commitments

Owner	Commitment
-------	------------

**Ecology
EDEC001**

TDOT has committed to seasonal tree removal on this project. The USFWS has given TDOT a finding of "Not Likely to Adversely Affect" for the Indiana bat and Northern long-eared bat, provided that tree cutting on this project is done between October 15 and March 31.

Project Information

General Information

Route: State Route (SR) 87
Termini: Bridge over Overflow, Log Mile (LM) 3.88
County: Lauderdale
PIN: 128113.05
Plans: Not Applicable
Date of Plans: N/A

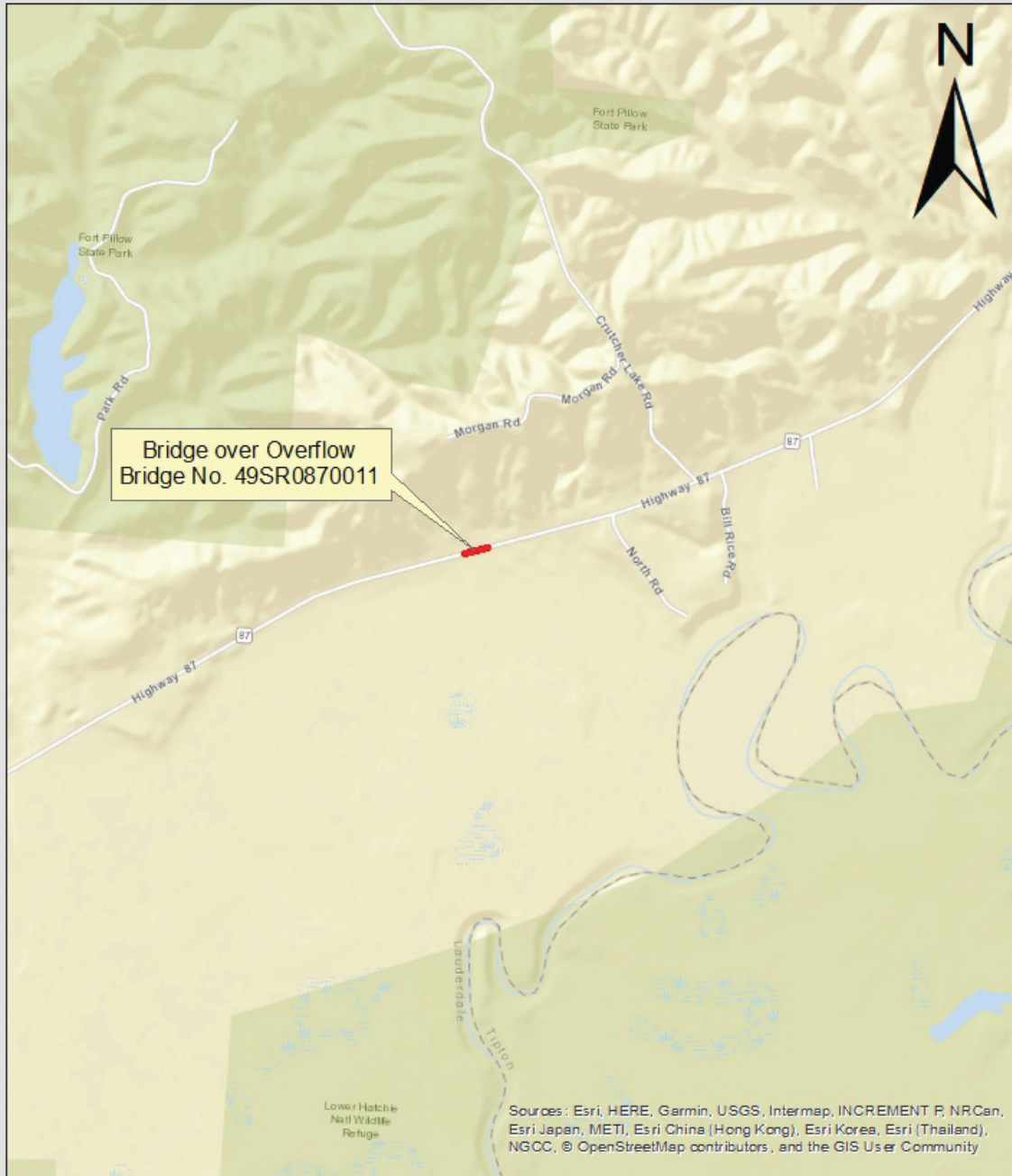
Project Funding

Planning Area: West Tennessee Rural Planning Organization (RPO)
STIP/TIP: 1799001 - Surface Transportation Program (STP) Grouping

Funding Source	Preliminary Engineering	Right-of-Way	Construction
Federal	BR-STP-87(9)	BR-STP-87(9)	BR-STP-87(9)
State	49006-1241-94	49006-2241-94	49006-3241-94

Project Location

Project Location Map PIN 128113.05 Lauderdale County SR-87 Bridge over Overflow, LM 3.88



-----End Section-----

Reevaluation Information

Reason for Reevaluation

- It has been more than three years since approval of the previous environmental documentation.
- Changes to applicable laws, regulations, and procedures.
- Changes to the project design or scope of work.
- Changes to the project location or existing conditions.
- Record of continuing project development and activity.

Previous Documentation

Document Type	Approval Date	Type of Plans	Date of Plans
Programmatic Categorical Exclusion	08/20/2018	Transportation Investment Report (TIR)	04/02/2018

Reevaluation Emphasis

Is this reevaluation focusing on a specific portion of the original project?

No

Project Overview

Introduction

The Tennessee Department of Transportation (TDOT), in cooperation with the Federal Highway Administration (FHWA), proposes to replace the SR-87 bridge crossing an overflow of the Hatchie River in Lauderdale County, Tennessee.

Background

A Programmatic Categorical Exclusion (PCE) was approved on 8/20/2018 for the proposed project under PIN 124367.00. Since the approval of the PCE, the project PIN has been changed. The proposed project is now being developed under PIN 128113.05. To date, no other changes to the proposed project have occurred. The PCE and documentation of the PIN change are located in the Technical Appendices.

Existing Conditions

Have there been any changes to the existing conditions?

No

-----End Section-----

Project Development

Purpose

Have there been any changes to the goals and purpose of the project?

No

Need

Have there been any changes to the conditions or issues the project is intending to address?

No

Range of Alternatives

Have any new build design alternatives been developed for this project?

No

Public Involvement

Has there been any public involvement since the approval of the previous documentation?

No

-----End Section-----

Project Design

Existing Layout

Have there been any changes to the existing layout?

No

Proposed Layout

Have there been any changes to the proposed layout?

No

Typical Section

Have there been any changes to the typical section?

No

Scope of Work

Have there been any changes to the scope of work?

No

Right-of-Way

Have there been changes to the amount of right-of-way or easements required for the project?

No

Relocations and Displacements

Have there been any changes to the amount of displacements and relocations?

No

Access Control

Have there been any changes that impact access to adjacent parcels?

No

Traffic Control

Have there been any changes to traffic control measures, detours or closures?

No

Environmental Studies

Does the project require any additional environmental studies at this time?

No

An evaluation of the current project design has determined that additional environmental studies are not required at this time. Should any changes occur, the project will be reassessed to determine if further studies are needed.

-----End Section-----

Conclusion

Determination

Does the original document designation remain valid for this project?

Yes

Designation: Programmatic Categorical Exclusion

This federal-aid highway project qualifies for a Categorical Exclusion under 23 C.F.R 771.117(d) and does not exceed the thresholds listed in Section IV(A)(1)(b) of the 2015 Programmatic Agreement between the Federal Highway Administration, Tennessee Division and the Tennessee Department of Transportation. The Department has determined that the specific conditions and criteria for these CE's are satisfied and that significant environmental impacts will not result from this action. This project is therefore designated as a Programmatic Categorical Exclusion and does not require Administration approval.

Supporting Material

All source material and supporting information is included in the attachments and technical appendices. The attachments are located at the end of the environmental document and include information on funding, agency coordination, and memoranda. The technical appendices are compiled as a separate document and include the project plans, technical study reports and other information.

Certification

By signing below, you certify that this document has been prepared in compliance with all applicable environmental laws, regulations and procedures. You can attest to the document's quality, accuracy, and completeness, and that all source material has been verified, compiled and included in the attachments and technical appendices.

Preparer: Abby Harris

Title: TESS - NEPA

Signature: Abby
Harris

Digitally signed
by Abby Harris
Date: 2018.10.10
12:12:09 -05'00'

Attachments

Acronyms

AADT	Annual Average Daily Traffic	NRCS	Natural Resource Conservation Service
ADA	American Disabilities Act	NRHP	National Register of Historic Places
APE	Area of Potential Effect	PCE	Programmatic Categorical Exclusion
BMP	Best Management Practice	PIN	Project Identification Number
CAA	Clean Air Act	PM	Particulate Matter
CE	Categorical Exclusion	PND	Pond
CEQ	Council of Environmental Quality	RCRA	Resource Conservation and Recovery Act
CFR	Code of Federal Regulations	ROW	Right-of-Way
CMAQ	Congestion Management and Air Quality	ROD	Record of Decision
DEIS	Draft Environmental Impact Statement	RPO	Rural Planning Organization
FEMA	Federal Emergency Management Act	SIP	State Implementation Plan
FONSI	Findings of No Significant Impact	SNK	Sinkhole
EA	Environmental Assessment	SR	State Route
EIS	Environmental Impact Statement	STIP	State Transportation Improvement Plan
EJ	Environmental Justice	STR	Stream
EPA	Environmental Protection Agency	TDEC	T.N. Department of Environment and Conservation
EPH	Ephemeral Stream	TDOT	Tennessee Department of Transportation
FHWA	Federal Highway Administration	TIP	Transportation Improvement Program
FIRM	Flood Insurance Rate Map	SHPO	T.N. State Historic Preservation Office
FPPA	Farmland Protection Policy Act	TPO	Transportation Planning Organization
GHG	Greenhouse Gas	TVA	Tennessee Valley Authority
GIS	Geographic Information System	TWRA	Tennessee Wildlife Resource Agency
IAC	Interagency Consultation	USDOT	U.S. Department of Transportation
LWCF	Land and Water Conservation Fund	USACE	U.S. Army Corps of Engineers
LOS	Level of Service	USFWS	U.S. Fish and Wildlife Service
MOA	Memorandum of Agreement	UST	Underground Storage Tank
MOU	Memorandum of Understanding	VMT	Vehicle Miles Travelled
MPO	Metropolitan Planning Organization	VPD	Vehicles Per Day
MSAT	Mobile Source Air Toxicity	WWC	Wet Weather Conveyance
NEPA	National Environmental Policy Act		

State Transportation Improvement Program

STIP Project List

STIP # 1799001 **TDOT PIN #** **LENGTH IN MILES** **LEAD AGENCY** TDOT

COUNTY STATEWIDE - RURAL **TOTAL PROJECT COST** \$426,000,000

ROUTE

TERMINI SURFACE TRANSPORTATION BLOCK GRANT PROGRAM (STBGP) - GROUPING

PROJECT DESCRIPTION SEE APPENDIX STATE GROUPING DESCRIPTION FOR A COMPREHENSIVE LISTING OF ACTIVITIES INCLUDED BUT NOT LIMITED FOR ELIGIBILITY

REMARKS



COUNTY MAP

FY	PHASE	FUNDING	TOTAL FUNDS	FED FUNDS	STATE FUNDS	LOCAL FUNDS
2017	PE, ROW, CONST	STBG	106,500,000	85,200,000	21,300,000	
2018	PE, ROW, CONST	STBG	106,500,000	85,200,000	21,300,000	
2019	PE, ROW, CONST	STBG	106,500,000	85,200,000	21,300,000	
2020	PE, ROW, CONST	STBG	106,500,000	85,200,000	21,300,000	



VICINITY MAP

ALL SCHEDULES SUBJECT TO AVAILABILITY OF FUNDS

Grouping Category	Function of Grouping Activities	Allowable Work Types
<p>Surface Transportation Block Grant Program (STBG) Grouping</p> <p>STIP# 1799001</p>	<p>Projects and programs for the preservation and improvement of the conditions and performance of Federal-aid highways and public roads, including:</p> <ul style="list-style-type: none"> • Rehabilitation, resurfacing, restoration, preservation, and operational improvements on Federal-aid highways and designated routes of the Appalachian Development Highway System (ADHS) and local access roads under 40 USC 14501. • Traffic operations on Federal-aid highways. • Bridge and tunnel improvements on public roads. • Safety improvements on public roads. • Environmental mitigation • Scenic and historic highway programs. • Landscaping and scenic beautification. 	<p>Activities previously authorized under the Surface Transportation Program (STP):</p> <ul style="list-style-type: none"> • Minor rehabilitation, pavement resurfacing, preventative maintenance, restoration, and pavement preservation treatments to extend the service life of highway infrastructure, including pavement markings and improvements to roadside hardware or sight distance • Highway improvement work including slide repair, rock fall mitigation, drainage repairs, or other preventative work necessary to maintain or extend the service life of the existing infrastructure in a good operational condition • Minor operational and safety improvements to intersections and interchanges such as adding turn lanes, addressing existing geometric deficiencies, and extending on/off ramps • Capital and operating costs for intelligent transportation systems (ITS) and traffic monitoring, management, and control facilities and programs: <ul style="list-style-type: none"> ○ Infrastructure-based intelligent transportation systems (ITS) capital improvements ○ Traffic Management Center (TMC) operations and utilities ○ Freeway service patrols ○ Traveler information • Bridge and tunnel construction (no additional travel lanes), replacement, rehabilitation, preservation, protection, inspection, evaluation, and inspector training and inspection and evaluation of other infrastructure assets, such as signs, walls, and drainage structures • Development and implementation of a State Asset Management Plan including data collection, maintenance and integration, software costs, and equipment costs that support the development of performance-based management systems for infrastructure • Rail-highway grade crossing improvements • Highway safety improvements: <ul style="list-style-type: none"> ○ Installation of new or improvement of existing guardrail ○ Installation of traffic signs and signals/lights ○ Spot safety improvements • Sidewalk improvements • Pedestrian and/or bicycle facilities • Traffic calming and traffic diversion improvements • Transportation Alternatives as defined by 23 USC 213(B), 23 USC 101(A)(29), and Section 1122 of MAP-21 • Noise walls • Wetland and/or stream mitigation • Environmental restoration and pollution abatement • Control of noxious weeds and establishment of native species <p>Activities previously authorized under the Transportation Enhancement Program:</p>

Appendices

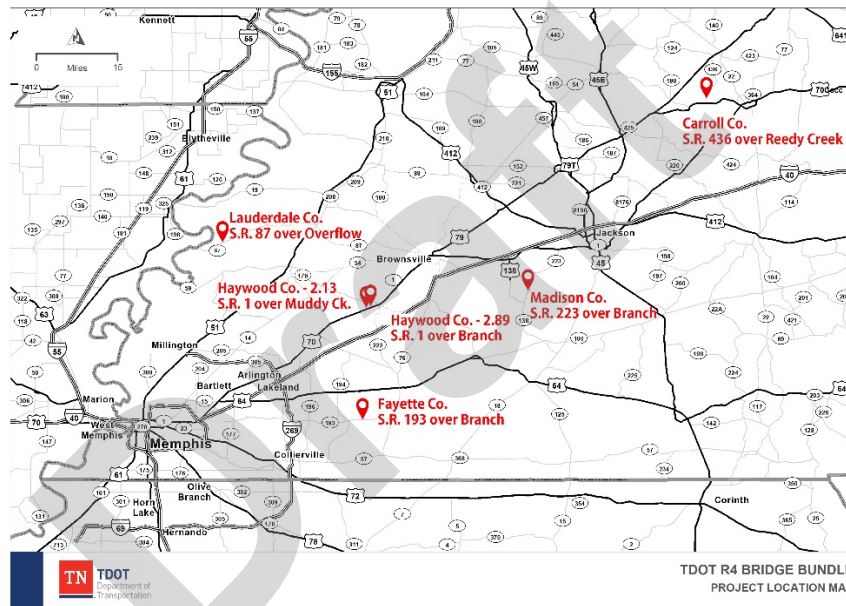
<p>Surface Transportation Block Grant Program (STBG) Grouping (continued)</p> <p>STIP# 1799001</p>	<ul style="list-style-type: none"> ● Historic preservation. ● On- and off-road pedestrian and bicycle facilities. ● Infrastructure projects for improving non-driver access to public transportation and enhanced mobility. ● Community improvement activities. ● Recreational Trail Program projects. ● Safe Routes to School (SRTS) projects. ● Transportation Enhancement projects. ● Transportation Alternatives projects. ● Projects for the creation, rehabilitation, and maintenance of multi-use recreational trails. 	<ul style="list-style-type: none"> ○ Pedestrian and bicycle facilities, safety, and educational activities ○ Acquisition of scenic easements and scenic or historic sites ○ Scenic or historic highway programs ○ Landscaping and other scenic beautification activities ○ Historic preservation ○ Rehabilitation and operation of historic transportation buildings, structures, or facilities ○ Preservation of abandoned railway corridors ○ Inventory, control, and removal of outdoor advertising ○ Archaeological planning and research ○ Environmental mitigation to address water pollution due to highway runoff or reduce vehicle-caused wildlife mortality while maintaining habitat connectivity ○ Establishment of transportation museums ○ Activities under the Tennessee Roadscapes grant program, including landscaping, irrigation, benches, trash cans, paths and signage <p>Activities previously authorized under the Safe Routes to School Program (SRTS):</p> <ul style="list-style-type: none"> ● Sidewalk improvements ● Traffic calming and speed reduction improvements ● Pedestrian and bicycle crossing improvements ● On-street bicycle facilities ● Off-street bicycle and pedestrian facilities ● Secure bicycle parking facilities ● Traffic diversion improvements approximately within 2 miles of a school location ● Non-infrastructure related activities: <ul style="list-style-type: none"> ○ Public awareness campaigns and outreach to press and community leaders ○ Traffic education and enforcement in the vicinity of schools <ul style="list-style-type: none"> ▪ Student sessions on bicycle and pedestrian safety, health, and environment ▪ Funding for training, volunteers, and managers of safe routes to school program <p>Activities previously authorized under the Transportation Alternatives Program (TAP):</p> <ul style="list-style-type: none"> ● Construction, planning, and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation, including: <ul style="list-style-type: none"> ○ Sidewalk improvements ○ Bicycle infrastructure ○ Pedestrian and bicycle signals ○ Traffic calming techniques ○ Lighting and other safety-related infrastructure
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Appendices

<p>Surface Transportation Block Grant Program (STBG) Grouping (continued)</p> <p>STIP# 1799001</p>	<ul style="list-style-type: none"> • Projects for the planning, design or construction of boulevards and other roadways largely in the right-of-way of former Interstate System routes or other divided highways. 	<ul style="list-style-type: none"> ○ Transportation projects to achieve compliance with the Americans with Disabilities Act of 1990 • Construction, planning, and design of infrastructure-related projects and systems that will provide safe routes for non-drivers, including children, older adults, and individuals with disabilities to access daily needs • Conversion and use of abandoned railroad corridors for trails for pedestrians, bicyclists, or other non-motorized transportation users • Construction of turnouts, overlooks, and viewing areas • Community improvement activities, which include but are not limited to: <ul style="list-style-type: none"> ○ Inventory, control, or removal of outdoor advertising ○ Historic preservation and rehabilitation of historic transportation facilities ○ Vegetation management in transportation rights-of-way to improve roadwaysafety, prevent invasive species, and provide erosion control ○ Archaeological activities relating to impacts from implementation of a transportation project eligible under Title 23 of the USC • Any environmental mitigation activity, including pollution prevention and pollution abatement activities and mitigation to: <ul style="list-style-type: none"> ○ Address stormwater management, control, and water pollution prevention or abatement related to highway construction or due to highway runoff ○ Reduce vehicle-caused wildlife mortality or to restore and maintain connectivity among terrestrial or aquatic habitats • Recreational Trails Program activities under 23 USC 206 • SRTS Program infrastructure-related projects, non-infrastructure-related activities (such as pedestrian and bicycle safety and educational activities advanced under the SRTS program), and SRTS Coordinator positions. • Planning, designing, or constructing boulevards and other roadways largely in the right-of-way of former Interstate System routes or other divided highways <p>Activities previously authorized under the Recreational Trails Program (RTP):</p> <ul style="list-style-type: none"> • Maintenance and restoration of existing recreational trails • Development and rehabilitation of trailside and trailhead facilities and trail linkages for recreational trails • Purchase and lease of recreational trail construction and maintenance equipment • Construction of new recreational trails • Acquisition of easements and fee simple title to property for recreational trails or recreational trail corridors • Assessment of trail conditions for accessibility and maintenance • Development and dissemination of publications and operation of educational programs to promote safety and environmental protection • Payment of costs to the State incurred in administering the program
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Project Development

Pre- RFQ Contractor Review Meeting
For
Bridge Replacement Bundle, Region 4
Design-Build Project DB1901
(BR-STP-REG4(199), 98400-1216-94)
Carroll, Haywood, Madison, Fayette, and Lauderdale Counties
June 18, 2019, 10:00 am (C.T.) - 12:00pm (C.T.)
Region 4 Auditorium
300 Benchmark Place, Jackson, TN 38301



The Pre- RFQ Proposal meeting was held on June 18, 2019, at 10:00 am. (C.T.), TDOT Region 4 Auditorium. The meeting introduced attendees to the Design Build Bridge Bundle contract delivery method prior to the release of the RFQ. The meeting gave an overall introduction to the project as scoped, and included an opportunity for TDOT to answer questions about the project and process. The TDOT Project Management team for the project was present.

PROJECT DESCRIPTION

The Tennessee Department of Transportation (TDOT) Construction Division is proposing construction of a Design-Build Bridge Replacement Project for TDOT Region 4 (Project). The Project is considered a pilot project for bundling bridge improvements under one Design-Build Contract (BR-STP-REG4(199), 98400-1216-94). The Project consists of the replacement of six (6) bridges, which are located in the following Tennessee counties: Carroll, Haywood, Madison, Fayette, and Lauderdale. The work generally includes the design and construction of the replacement structures and associated roadway, drainage, and pavement approaches and transitions. The bridges to be replaced are listed on the following pages. See additional information at the project website:

<https://www.tn.gov/tdot/tdot-construction-division/transportation-construction-alternative-contracting/bridge-replacement-bundle-region-4.html>

Bridge Replacement Bundle, Region 4

Design-Build Contract DB1901

(BR-STP-REG4(199), 98400-1216-94)

Carroll, Haywood, Madison, Fayette, and Lauderdale Counties

- **Bridge No. 1:** Log Mile 0.68 of SR-436 (Reedy Creek Road) over Reedy Creek in Carroll County – The current sufficiency rating of the bridge (ID 09S821330001) is 47.1. The existing structure consists of a four-span bridge with pre-stressed concrete beams and reinforced concrete deck having two (2) 9-foot travel lanes.
- **Bridge No. 2:** Log Mile 11.48 SR-193 (Macon Road) over Branch in Fayette County – The current sufficiency rating of the bridge (ID 24015420001) is 68.9. The existing structure consists of a two-span concrete channel beam bridge with timber substructures having two (2) 9-foot travel lanes.
- **Bridge No. 3:** Log Mile 2.89 SR-1 (US-70/79) over Branch in Haywood County – The current sufficiency rating of the bridge (ID 38SR0010003) is 37.1. The existing structure consists of a single-span precast concrete slab bridge with two (2) 12-foot travel lanes.
- **Bridge No. 4:** Log Mile 2.13 SR-1 (US-70/79) over Muddy Creek in Haywood County – The current sufficiency rating of the bridge (ID 38SR0010001) is 48.2. The existing structure consists of a two-span bridge with steel and concrete girders and reinforced concrete deck and two (2) 12-foot travel lanes.
- **Bridge No. 5:** Log Mile 3.88 SR-87 over Overflow in Lauderdale County – The current sufficiency rating of the bridge (ID 49SR0870011) is 49.5. The existing structure consists of a single-span steel I-beam with timber deck and asphalt overlay having two (2) 10-foot travel lanes.
- **Bridge No. 6:** Log Mile 2.28 SR-223 (Shady Grove Road) over Branch in Madison County – The sufficiency rating of the bridge (ID 57S81960003) is 27.4 (8/2017) and maintenance has replaced it with a temporary bridge. The original structure consisted of a single-span steel I-beam bridge with precast concrete deck panels having two (2) 9-foot travel lanes. The temporary bridge is a precast concrete slab.

Meeting Presentation Slides

Draft


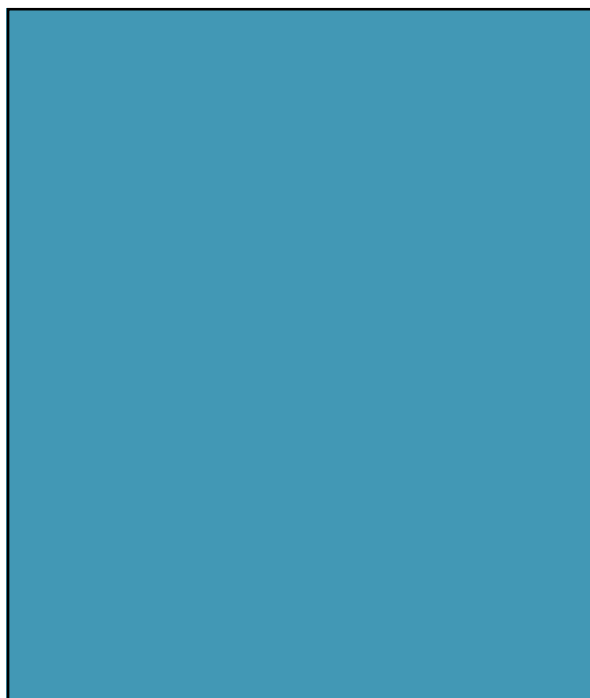


Bridge Replacement Bundle

Region 4 – DB1901



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01 TDOT Design-Build Process

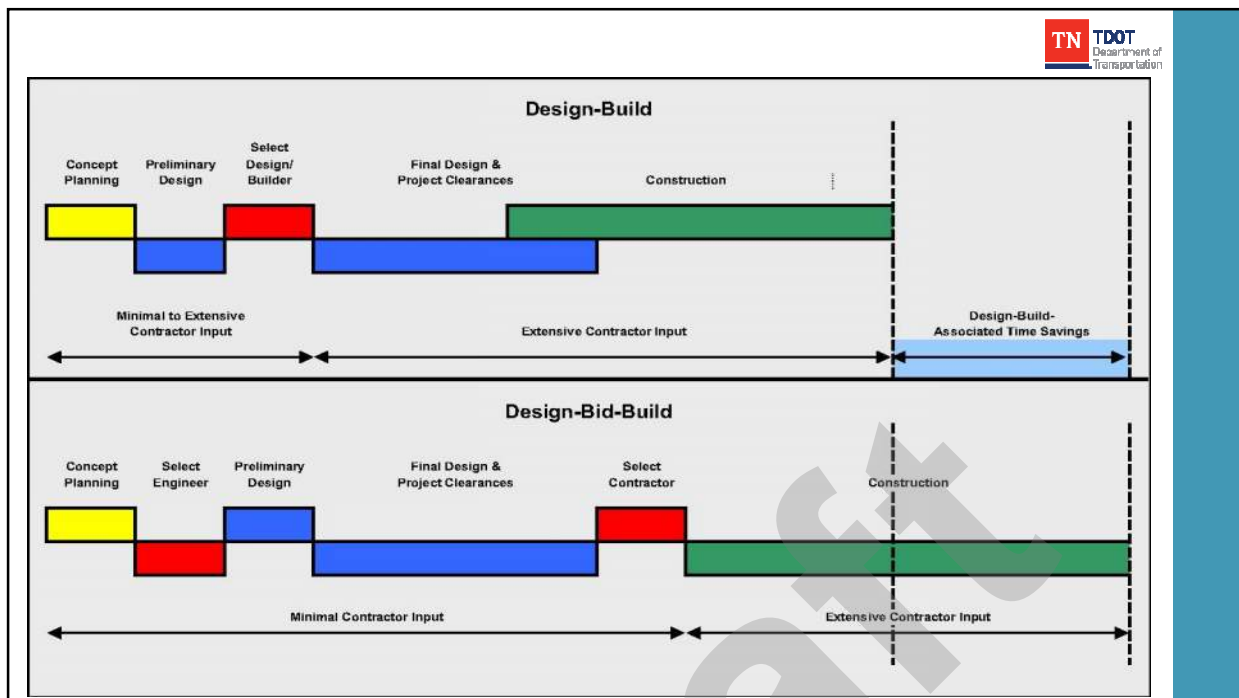
02 Project Specific Information

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01 TDOT Design-Build Process





Request for Qualifications (RFQ)

- Solicitation of RFQ (website only); RFQ Package is only released by email request to Lia Obaid (Lia.Obaid@tn.gov).
- The RFQ will:
 - Be released prior to the conclusion of the NEPA review process, if necessary.
 - State the general status of the NEPA process.
 - Outline the tentative general scope, description, location, and anticipated procurement process.
 - State the evaluation criteria and scoring of the Statement of Qualifications (SOQs)
 - Outline the basic SOQ format, schedule, stipend amount, DBE goal, and selection method for the RFP.
- The SOQ submittal package in response to the RFQ will need to include:
 - A letter of interest.
 - Response to all categories and evaluation criteria for scoring.
 - A demonstration of the Design-Builder's strengths and specialized capabilities.



SOQ Scoring Criteria

- Design-Builder Experience
- Key Personnel and Organization
- Project Understanding and Approach
- Project Management Approach

Draft



Short-Listing

- TDOT will short-list at least three (if any) of the most qualified Design-Builders.
- TDOT will notify all teams submitting SOQs of their selection results.
- The short-listed firms will be posted to the project website.
- Short-listed Design-Builders will be invited to submit proposals in response to the RFP.



Request for Proposals (RFP)

- Approval of FHWA is required to release the RFP.
- Release of the RFP will be to the short-listed Design-Builder's by email.
- The RFP will further define the:
 - Contract requirements,
 - Proposal submittal instructions,
 - Scope of Work,
 - Project description and location,
 - Procurement schedule,
 - Specific evaluation criteria of the Technical Proposal,
 - Submittal criteria for the Price Proposal,
 - Selection method for the DB project, and
 - Stipend



Request for Proposals (RFP continued)

- The RFP Document Structure will include:
 - RFP Contract Book 1 (Instructions to Design-Builders - ITDB)
 - RFP Contract Book 2 (Design-Build Contract)
 - RFP Contract Book 3 (Project Specific Information)
 - Reference Documents, such as the Department's:
 - DB Standard Guidance and Addendum,
 - Standard Specifications,
 - Supplemental Specifications,
 - Design Guidelines, and Addendums,
 - Construction Circular Letters,
 - Standard Drawings, and
 - Other programmatic plans and reference documents.

Request for Proposals (RFP continued)

- The Design-Builder's Technical Proposal package will include:
 - Response to all categories of the evaluation criteria including the Technical Solution (Concept).
 - A clear demonstration of the Design-Builder's approach to:
 - Project Delivery,
 - Project Management,
 - Schedule Management,
 - Environmental Compliance,
 - Implementing Innovation, and
 - Considering Context Sensitive Solutions.
 - Oral Presentation/Interview.
 - Technical Proposals will be evaluated as Pass/Fail.
 - From passing Technical Proposals, Award of the Project will be to lowest Price Proposal (A + B Bidding).

02 Project Information

Identifying and Allocating Risk

- This will be one Design-Build Contract with Six (6) Project Sites.
- Issues related to this Design-Build contract to consider include:

Utility Relocations	NEPA Commitments	Stream/Wetland Mitigation
Right-of-Way Acquisition	Permit Requirements	Staged Construction/MOT
Seismic Design	Hydraulic Design	Railroad Agreement
Third Party Involvement	DB Contract terms	Public Involvement
CPM Scheduling	Liquidated Damages	Geotechnical Investigations

Scope of Work

- The Design-Builder's Scope of Work for the Project is anticipated to include, but not be limited to:
 - Final Design including Geotechnical Investigation,
 - Railroad Coordination and Insurance (for survey),
 - Removing and Replacing the Existing Bridge Structures,
 - Reconstruction of Roadway Approaches, as needed,
 - Erosion and Sediment Control,
 - Pavement Markings and Roadway Signing,
 - Providing for Maintenance of Traffic during construction,
 - Obtaining and meeting all requirements for Environmental Permits,
 - Compliance with all NEPA Commitments including mitigation design and construction,
 - Environmental Services and NEPA Document Reevaluation for Design-Builder changes, and
 - Right-of-way Acquisition.

Scope of Work



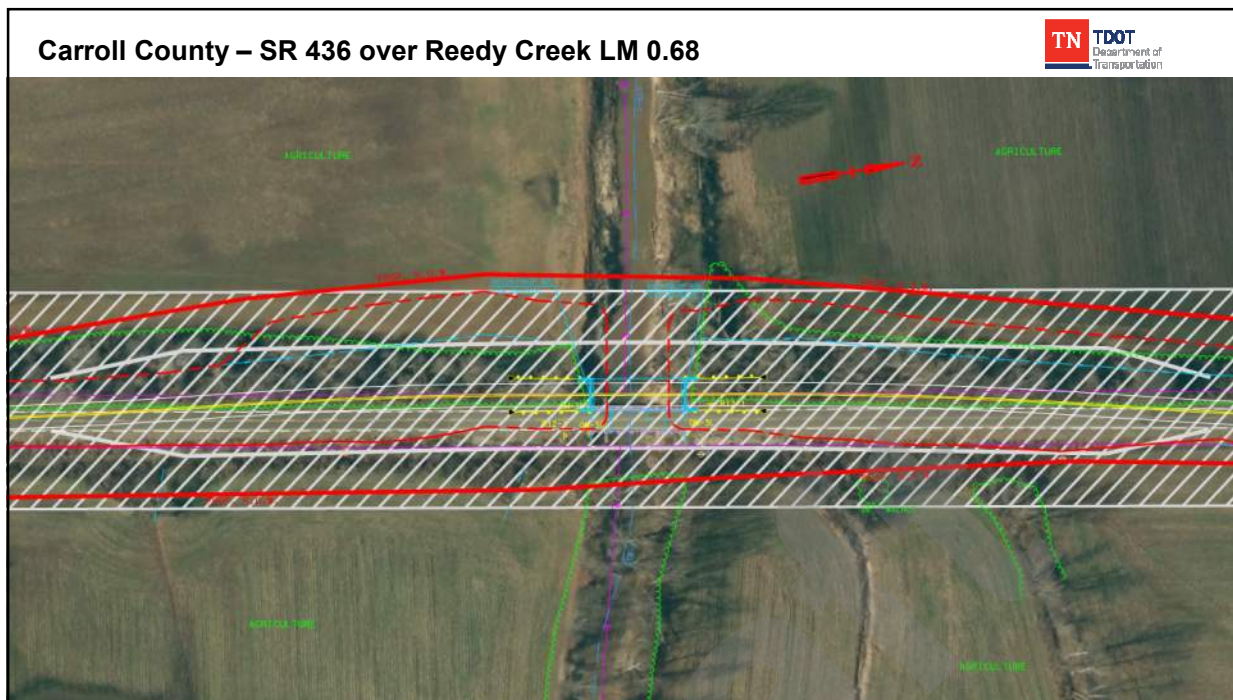
- TDOT's Scope of Work for the Project is anticipated to include but may not be limited to:
 - Utility Coordination for Chapter 86 Utility Relocations,
 - Railroad Coordination for access to railroad right-of-way (Haywood County), and
 - NEPA documentation for concept plans provided in the RFP.

NOTES:

1. The project is currently being re-evaluated for NEPA due to the changes in design since the TIR documents were prepared. The Re-evaluations will be complete prior to FHWA approval for issuing the RFP. Any further changes to design requiring NEPA re-evaluation, will be the responsibility of the Design-Builder.
2. No Alternate Technical Concepts requiring Design Exceptions will be allowed.

Carroll County – SR 436 over Reedy Creek, LM 0.68





Carroll County – SR 436 over Reedy Creek LM 0.68



TIR Comparison

TIR

- Design Speed - 50mph
- Typical: RD01-TS-2
- 2 Lanes @ 11' with 3' Shoulders
- Single Span 90' PS Girder
- 10' Alignment Shift
- ROW – 1.1 acres estimated
- MOT – One lane maintained with signal

Proposed

- Design Speed - 45mph
- Typical: RD11-TS-2
- 2 Lanes @ 11' with 4' Shoulders
- Single Span 90' PS Girder
- 24' Alignment Shift
- ROW – 4.2 acres estimated
- MOT – One 16' lane maintained with signal (limited closure and detour may be allowed)



Carroll County – SR 436 over Reedy Creek LM 0.68



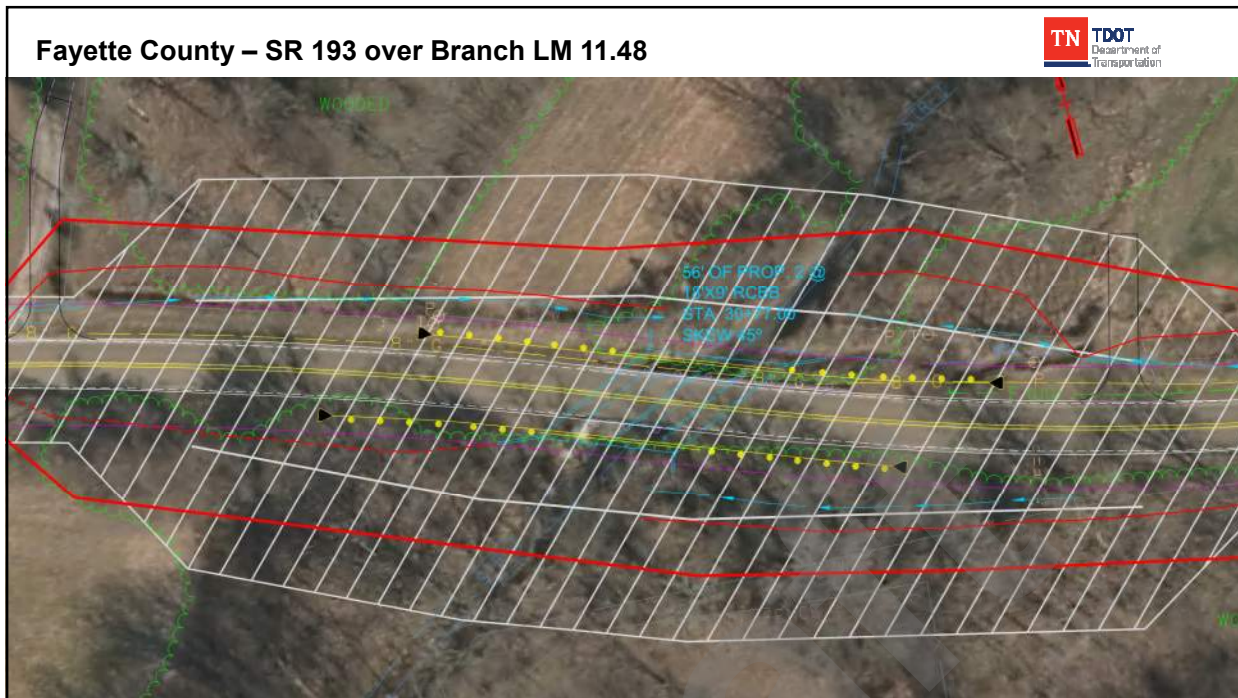
- Environmental Commitments
 - Seasonal Tree Removal for Bat Habitat
 - Cliff/Barn Swallows, Eggs, and Nests Disturbance Restrictions

- Utilities
 - OH Power (Carroll Co. Elec. Dept.)



Fayette County – SR 193 over Branch LM 11.48





Fayette County – SR 193 over Branch LM 11.48



TIR Comparison

<u>TIR</u>	<u>Proposed</u>
<ul style="list-style-type: none"> ▪ Design Speed - 50mph ▪ Typical: RD01-TS-2 ▪ 2 Lanes @ 11' with 6' Shoulders ▪ Double 18'x6' RCBB ▪ ROW – 0.16 acres estimated ▪ MOT – One lane maintained with signal 	<ul style="list-style-type: none"> ▪ Design Speed - 45mph ▪ Typical: RD11-TS-2 ▪ 2 Lanes @ 11' with 6' Shoulders ▪ Double 18'x9' RCBB ▪ ROW – 0.9 acres estimated ▪ MOT – One lane maintained with signal (however, closure and detour may be allowed)

Fayette County – SR 193 over Branch LM 11.48



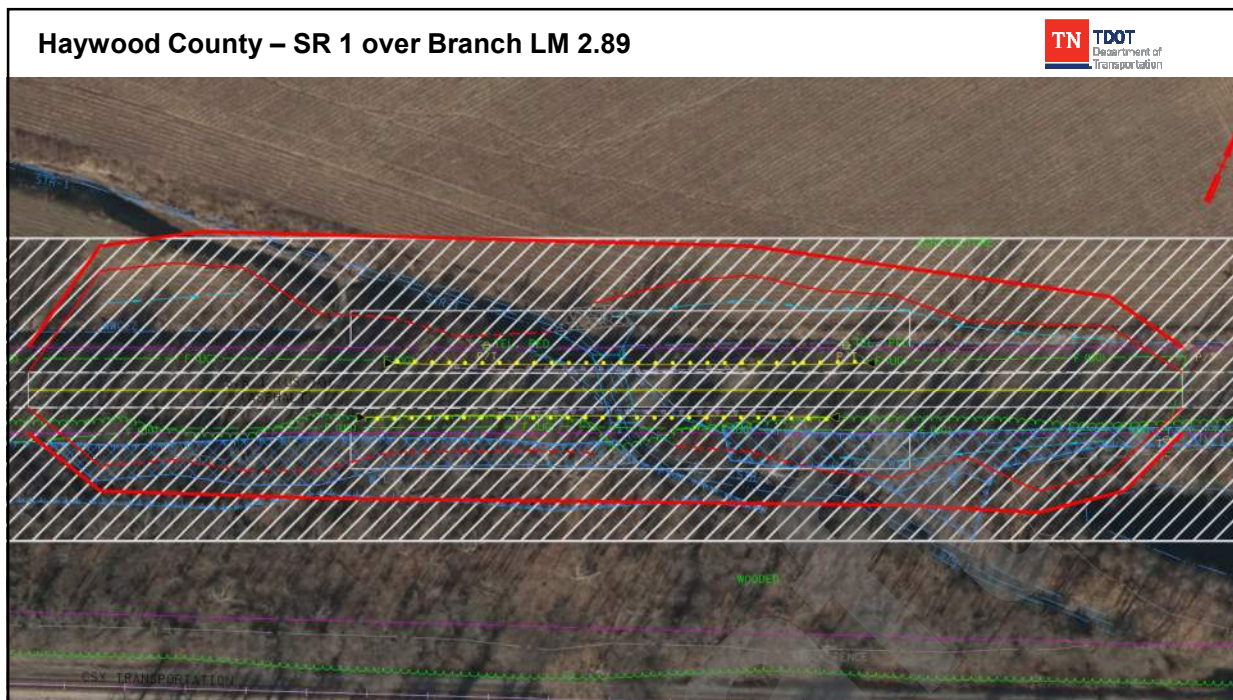
- Environmental Commitments
 - Cliff/Barn Swallows, Eggs, and Nests Disturbance Restrictions

- Utilities
 - Cable (AT&T)
 - Electric (Chickasaw Elec. Co-Op)
 - Gas (Somerville LG&W)
 - Telephone (AT&T)



Haywood County – SR 1 over Branch LM 2.89





Haywood County – SR 1 over Branch LM 2.89

TN TDOT
Department of
Transportation

TIR Comparison

<u>TIR</u>	<u>Proposed</u>
<ul style="list-style-type: none"> Design Speed - 55mph Typical: RD01-TS-3 2 Lanes @ 12' with 8' Shoulders Double 18'x16' RCBB ROW – 0.3 acres estimated MOT – Detour 	<ul style="list-style-type: none"> Design Speed - 55mph Typical: RD11-TS-3 2 Lanes @ 12' with 6' Shoulders Single 18'x16' RCBC ROW – 1.95 acres estimated MOT – One lane maintained with signal and closure is not allowed




Haywood County – SR 1 over Branch LM 2.89



- Environmental Commitments
 - Cliff/Barn Swallows, Eggs, and Nests Disturbance Restrictions
 - Also, Potential Wetland Impacts

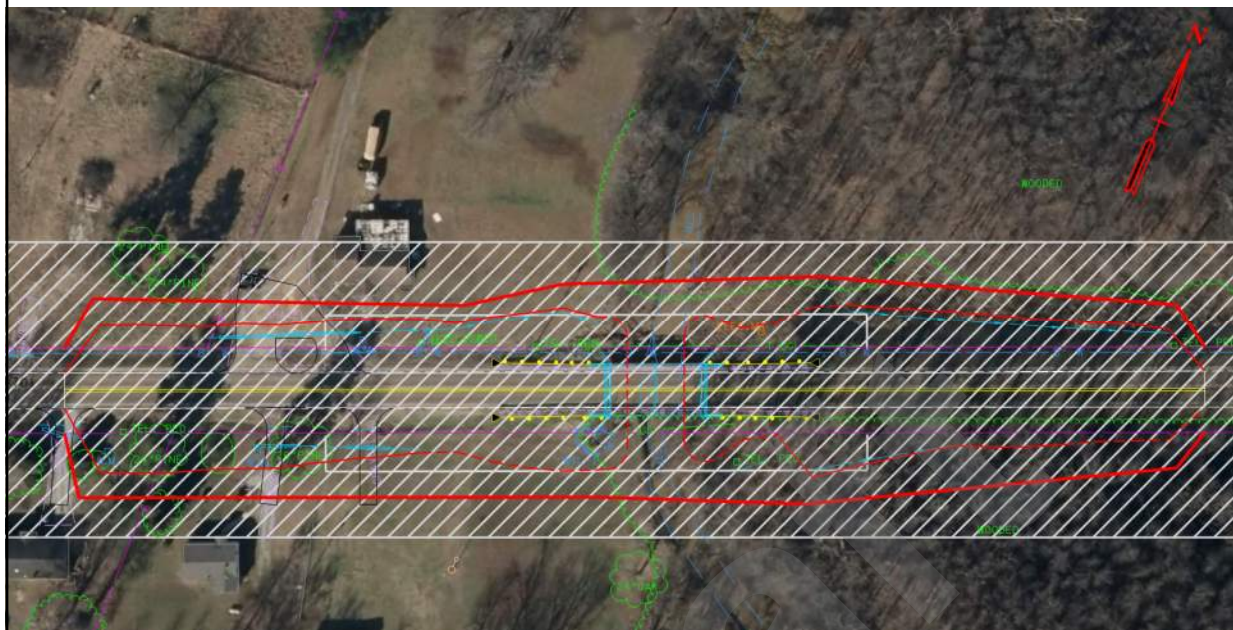
- Utilities
 - Cable (AT&T)
 - Electric (Southwest Elec. Memb.)
 - Telephone (AT&T)
 - Water (Town of Mason)



Haywood County – SR 1 over Muddy Creek LM 2.13



Haywood County – SR 1 over Muddy Creek LM 2.13



Haywood County – SR 1 over Muddy Creek LM 2.13



TIR Comparison

TIR

- Design Speed - 55mph
- Typical: RD01-TS-3
- 2 Lanes @ 12' with 8' Shoulders
- Two Span 30'-40' PS Girder
- ROW – 0.3 acres estimated
- MOT – Detour

Proposed

- Design Speed - 55mph
- Typical: RD11-TS-3
- 2 Lanes @ 12' with 6' Shoulders
- Single Span 70' PS Girder
- ROW – 1.47 acres estimated
- MOT – One lane maintained with signal and closure is not allowed.



Haywood County – SR 1 over Muddy Creek LM 2.13



▪ Environmental Commitments

- None
- However, Potential Wetland Impacts & 303d List Stream

▪ Utilities

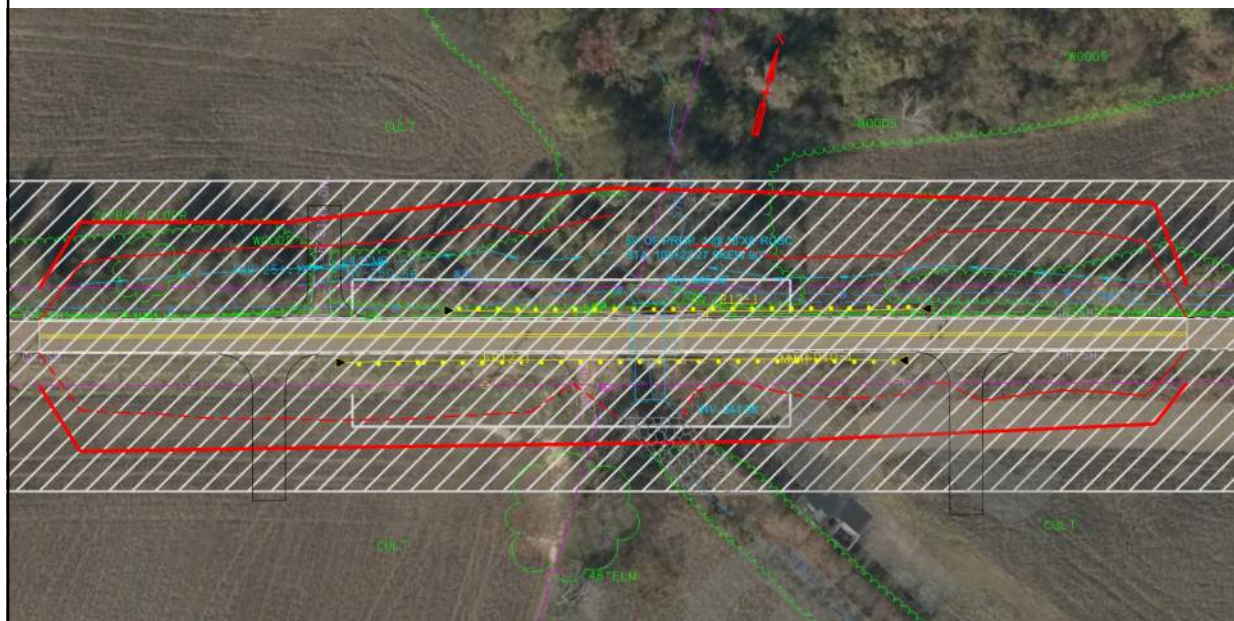
- Cable (AT&T)
- Electric (Southwest Elec. Memb.)
- Telephone (AT&T)
- Water (Town of Mason)



Lauderdale County – SR 87 over Overflow LM 3.88



Lauderdale County – SR 87 over Overflow LM 3.88



Lauderdale County – SR 87 over Overflow LM 3.88



TIR Comparison

TIR

- Design Speed - 55mph
- Typical: RD01-TS-2
- 2 Lanes @ 11' with 3' Shoulders
- Single Span 32' PS Girder
- ROW – 0.14 acres estimated
- MOT – One lane maintained with signal

Proposed

- Design Speed - 55mph
- Typical: RD11-TS-2
- 2 Lanes @ 11' with 4' Shoulders
- Single 18'x8' RCBC
- ROW – 1.3 acres estimated
- MOT – One 16' lane maintained with signal and closure is not allowed.



Lauderdale County – SR 87 over Overflow LM 3.88



- Environmental Commitments

- Seasonal Tree Removal (Bat Habitat)

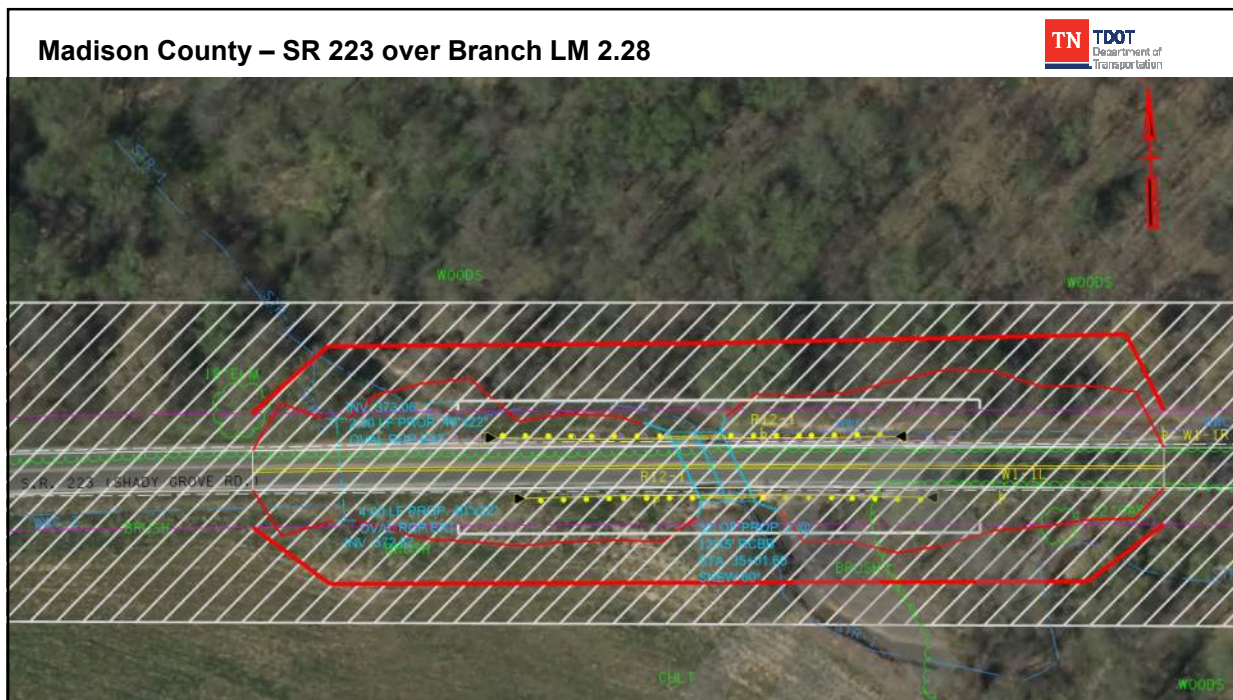
- Utilities

- Telephone (AT&T)
- Water (Lauderdale Co. Water Sys.)
- Electric (Southwest TN Elec. Membership Corp.)



Madison County – SR 223 over Branch LM 2.28





Madison County – SR 223 over Branch LM 2.28

TN TDOT
Department of
Transportation

TIR Comparison

<u>TIR</u>	<u>Proposed</u>
▪ Design Speed - 45mph	▪ Design Speed - 45mph
▪ Typical: RD01-TS-2	▪ Typical: RD11-TS-2
▪ 2 Lanes @ 11' with 3' Shoulders	▪ 2 Lanes @ 11' with 4' Shoulders
▪ Double 12'x5' RCBB	▪ Double 12'x5' RCBB
▪ ROW – 0.06 acres estimated	▪ ROW – 0.7 acres estimated
▪ MOT – Detour	▪ MOT – Detour (closure allowed)

See Project Web Site for Information

- <https://www.tn.gov/tdot/tdot-construction-division/transportation-construction-alternative-contracting/bridge-replacement-bundle-region-4.html>

The screenshot shows the TDOT website interface. At the top right is the TDOT logo. Below it is a navigation bar with a search bar and a 'Go to TN.gov' link. The main content area is titled 'Bridge Replacement Bundle Region 4' and includes a disclaimer: 'The files presented here are FOR INFORMATION ONLY. TDOT makes no warranty of any kind, express or implied, with respect to the file(s) and specifically makes no warranty that said file(s) shall be fit for any particular purpose. Furthermore, any description of said file(s) shall not be deemed to create an express warranty that such file(s) shall conform to said description. Receiver assumes all risk and liability for any losses, damages, claims or expenses resulting from the use or possession of any file(s) furnished by TDOT.' Below the disclaimer are links for 'Contractor Review Meeting Information - 5/28/19', 'Current Consultant Selection Results - 1/10/19', and 'Reference Material - Updated 04/03/19'. A large 'Draft' watermark is overlaid on the page.

Questions?



R4BB Industry Review Meeting – Q&A

Questions

1. Are Design-Builders precluded from contacting Utility owners that are potentially impacted by the project site?
 - a. No, the Design-Builders may contact the Utility owners directly but the teams will not be allowed to discuss the project with TDOT's Owner's Representative Consultant or anyone at TDOT other than Lia Obaid.
2. Has the ROW been purchased for the project sites?
 - a. No, it is currently planned for the Design-Builder to be responsible for Right-of-way (ROW) Acquisition
3. Have the existing bridges been evaluated for Asbestos Containing Material (ACM)?
 - a. Yes, results of the phase 1 studies are contained in the NEPA documents for each bridge site and available on the project web site. No ACM was detected at the bridge sites during the phase 1 studies.
4. Are the Design-Builder to provide full ROW services?
 - a. Yes, all services except for condemnation, which will be provided by the State.
5. Which party is responsible for writing the check for ROW and easement acquisition?
 - a. TDOT will pay the costs for purchasing ROW and easements, however, the Design-Builder will be responsible to provide (at their cost) all ROW acquisition services, such as appraisals, review appraisals, negotiations, relocations services, and all other services with the exception of those associated with condemnation.
6. Can bridge spans and culvert opening be modified from what is shown in the functional plans?
 - a. Yes, the Design-Builder can modify the structure type/span/etc. to give them the most economical solution at each site. Innovation is encouraged. The Design-Builder will be responsible for meeting TDOT design guidelines and specifications outlined in the RFP. Deviation from the design criteria or terms of the RFP will require an Alternate Technical Concept and TDOT approval. This process will be defined in the RFP.
7. The project will be awarded to Design-Builder with a passing technical proposal with the lowest price proposal using A+B bidding, is the "B" portion per site or per project?
 - a. The "B" portion of the bid will be based on the overall schedule. This will include ROW acquisition, Utility relocation, etc.
 - b. Note: each site is anticipated to have its own Liquidated Damages for exceeding the site specific construction durations specified in the RFP.
8. Are there timeline restrictions on TDOT's response to submitted ATC's?
 - a. ATC's will be submitted and evaluated prior to Design-Builder proposals are to be submitted. TDOT will hold one-on-one meetings with short listed teams to discuss design and ATC's. ATC's will be either accepted or denied at that time. ATC requirements and schedule, including deadline for TDOT response, will be further outlined in the RFP.
9. Has the stipend for this project been established?
 - a. No, this is still being evaluated but expected to be relatively similar to Polk County.
10. Have all Utility owners been notified of this project?
 - a. Yes, early utility contacts have been made to owners.
11. Will any project sites require Public Involvement/Meeting?
 - a. Public Involvement requirements have not been fully defined for the project sites but it is anticipated to be a Design-Builder scope of work.

Meeting Sign-In Sheets

Draft



Region 4 Bridge Bundle Design-Build
 Pre-RFQ Industry Review Meeting
 Tuesday, June 18, 2019

HDR

NAME	ORGANIZATION	PHONE	EMAIL
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Clint Butler	Arcadis	423-310-0201	clint.butler@arcadis.com
Kate Auzerman	Jones Bros Construction	270-230-3102	Kate.Auzerman@jbc.com
Charles Scott	Jones Bros Construction	615-215-9441	cscott@jonesbros.com
Jeff Hays	Arcadis	615-291-3124	johnrehm@arcadis.com
John Rehm	Arcadis	615-414-6299	johnrejm@arcadis.com
Jeff Aulds	SPELOR CONSTRUCTION	615-917-2233	jaulds@spelora.com
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Sianna Hollin	A24	901-372-0404	sianna@a24.com
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KEVIN CAGLE	HDR	615-629-2288 615-7526	Kevin.Cagle@HDRinc.com
Arthur Brandon	HDR	615-390-4550	arthur.brandon@HDRInc.com

NATIONAL BRIDGE INVENTORY TENNESSEE INVENTORY AND APPRAISAL REPORT



BRIDGE ID NUMBER: **49SR0870011**
 BRIDGE OWNER: **STATE OF TENNESSEE**
 FIPS CODE: **00000**
 ROAD NAME: **SR-87**
 CROSSING: **OVERFLOW**
 LOCATION: **1.68 MI. E OF SR-207 JCT.**

COUNTY: **LAUDERDALE**
 ROUTE: **SR087**
 SPECIAL CASE: **0**
 COUNTY SEQUENCE: **1**
 LOG MILE: **3.88**
 SUFFICIENCY RATING: **53.4**

IDENTIFICATION

(16a,b) LATITUDE: **N 35.62689 DEGREES**
 (17a,b) LONGITUDE: **W 89.82611 DEGREES**
 (98a) BORDER BRIDGE STATE CODE: **N/A**
 (98b) PERCENT SHARE: **N/A**
 (99) BORDER BRIDGE NUMBER: **NOT APPLICABLE**

BRIDGE TYPE AND MATERIAL

(43a) MAIN SPAN MATERIAL: **STEEL**
 (44a) APPR SPAN MATERIAL: **NOT APPLICABLE**
 (45) NUMBER OF MAIN SPANS: **1**
 (46) NUMBER OF APPROACH SPANS: **0**
 (107) TYPE OF DECK: **WOOD OR TIMBER**
 (108) TYPE OF WEARING SURFACE AND DECK PROTECTION:
 A) TYPE OF SURFACE: **ASPHALT**
 B) TYPE MEMBRANE: **NONE**
 C) TYPE PROTECTION: **NONE**

AGE AND SERVICE

(27) YEAR THE BRIDGE WAS BUILT: **1986**
 (106) YEAR THE BRIDGE WAS REHABILITATED: **N/A**
 (42a) SERVICE ON BRIDGE: **HIGHWAY**
 (42b) UNDER BRIDGE: **WATERWAY**
 (28a) NUMBER OF LANES CARRIED BY BRIDGE: **2**
 (28b) NUMBER OF LANES UNDER THE BRIDGE: **0**

GEOMETRIC DATA

(48) MAXIMUM SPAN LENGTH: **28.9 FT**
 (49) TOTAL BRIDGE LENGTH: **28.9 FT**
 (50a) LEFT SIDEWALK WIDTH: **0.0 FT**
 (50b) RIGHT SIDEWALK WIDTH: **0.0 FT**
 (51) BRIDGE CURB TO CURB WIDTH: **25.3 FT**
 (52) BRIDGE OUT TO OUT WIDTH: **28.5 FT**
 (32) APPROACH ROADWAY (W/ SHLDS) WIDTH: **28.9 FT**
 (33) BRIDGE MEDIAN: **NO MEDIAN**
 (34) BRIDGE SKEW: **0 DEGREES**
 (35) BRIDGE FLARE: **NO FLARE**
 (520) MIN VERTICAL CLEARANCE OVER RD: **NO RESTRICTION**
 (47) MIN HORIZONTAL CLEARANCE ON ROADWAY: **25.3 FT**
 (54a) VERT UNDERCLR: **NOT A HIGHWAY OR RAILROAD**
 (54b) MIN VERTICAL UNDERCLEARANCE: **NOT APPLICABLE**
 (55a) HORZ UNDERCLR: **NOT A HIGHWAY OR RAILROAD**
 (55b) MIN HORZ UNDERCLR ON RIGHT: **NOT APPLICABLE**
 (56) MIN HORZ UNDERCLR ON LEFT: **NOT APPLICABLE**

NAVIGATION DATA

(38) NAV CONTROL: **NO NAVIGATION CONTROL**
 (39) NAVIGATION VERTICAL CLEARANCE: **N/A**
 (116) LIFT BRIDGE VERT CLEARANCE: **N/A**
 (40) NAVIGATION HORZ CLEARANCE: **N/A**

CLASSIFICATION

(112) MEETS NBIS BRIDGE LENGTH: **YES**
 (104) NATIONAL HIGHWAY SYSTEM: **NOT A NHS ROUTE**
 (26) FUNCTIONAL CLASS: **RURAL MAJOR COLLECTOR**
 (101) PARALLEL BRIDGE: **NO PARALLEL BRIDGE**
 (102) TRAFFIC DIR: **2-WAY TRAFFIC**
 (103) TEMPORARY BRIDGE: **NOT APPLICABLE**
 (110) NATIONAL TRUCK ROUTE: **NOT ON TRUCK NETWORK**
 (37) HISTORICAL CLASS: **HISTORICAL SIGNIFICANCE HAS NOT BEEN DETERMINED**

CONDITION RATINGS

(58) DECK: **7**
 (59) SUPERSTRUCTURE: **5**
 (60) SUBSTRUCTURE: **6**
 (61) STREAM CHANNEL AND CHANNEL PROTECTION: **6**
 (62) CULVERT CONDITION (IF APPLICABLE): **N**

DESIGN LOAD AND WEIGHT POSTING

(31) DESIGN LOADING: **OTHER OR UNKNOWN**
 WEIGHT POSTING (2 AXLE VEHICLES): **ALL LEGAL LOADS**
 WEIGHT POSTING (3 OR MORE AXLES): **ALL LEGAL LOADS**
 (70) BRIDGE POSTING CODE: **5**
 (41) WT POSTING STATUS: **WEIGHT POSTED**

APPRAISAL

(67) STRUCTURAL EVALUATION: **5**
 (68) DECK GEOMETRY: **4**
 (69) UNDERCLEARANCE RATING: **N**
 (71) WATERWAY ADEQUACY: **6**
 (72) APPROACH ROADWAY ALIGNMENT: **8**
 (36) TRAFFIC SAFETY FEATURES: **0000**
 (113) SCOUR CONDITION RATING: **U**

RECOMMENDED IMPROVEMENTS

(75) TYPE OF WORK: **BRIDGE REPLACEMENT**
 (76) LENGTH OF BRIDGE IMPROVEMENT: **50.9 FT**
 (94) BRIDGE IMPROVEMENT COST: **\$338,000.00**
 (95) ROADWAY IMPROVEMENT COST: **\$34,000.00**
 (96) TOTAL PROJECT COST: **\$508,000.00**
 (97) YEAR OF IMPROVEMENT COST ESTIMATE: **2018**

INSPECTION DATES

(90) DATE OF LAST REGULAR INSPECTION: **3/7/2018**
 (91) REGULAR INSPECTION FREQUENCY (MONTHS): **24**
 (93b) DATE OF LAST UNDERWATER INSP (MO/YR): **N/A**
 (92b) UNDERWATER INSP FREQUENCY (MONTHS): **N**
 (93c) DATE OF SPECIAL INSPECTION (MO/YR): **N/A**
 (92c) SPECIAL INSP FREQUENCY (MONTHS): **N**

PUBLICATION DATE

16-Apr-19

**PRODUCED PURSUANT TO
PUBLIC RECORDS REQUEST**
 This document is covered by 23 USC §409
 and its production pursuant to a public
 document records request does not
 waive the provisions of §409

Project Design

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STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION BUREAU OF ENGINEERING

LAUDERDALE COUNTY

S.R. 87 BRIDGE REPLACEMENT
OVER OVERFLOW AT L.M. 3.88

PRELIMINARY

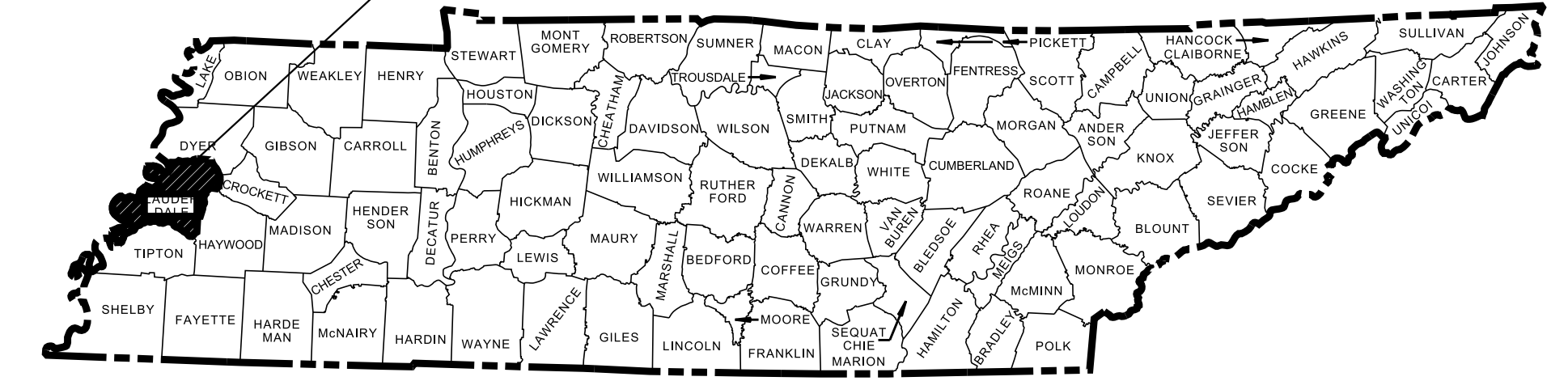
STATE HIGHWAY NO. 87 U.S. ROUTE NO.

DOES THIS PROJECT QUALIFY FOR UTILITY CHAPTER 86	YES X	NO
--------------------------------------------------	-------	----

TENN.	YEAR	SHEET NO.
	2019	1
FED. AID PROJ. NO.	BR-STP-87(9)	
STATE PROJ. NO.	49006-0241-94	

PROJECT LOCATION

BRIDGE ID. # 49SR0870011



PROJECT LOCATION

BRIDGE ID. #

NO EXCLUSIONS

PRELIMINARY
PLANS

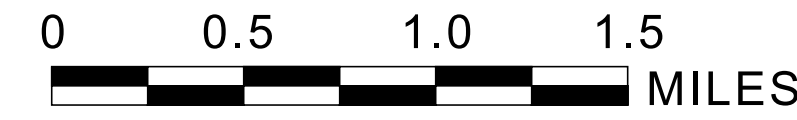
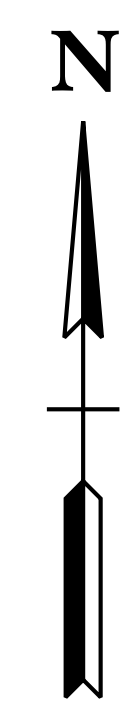
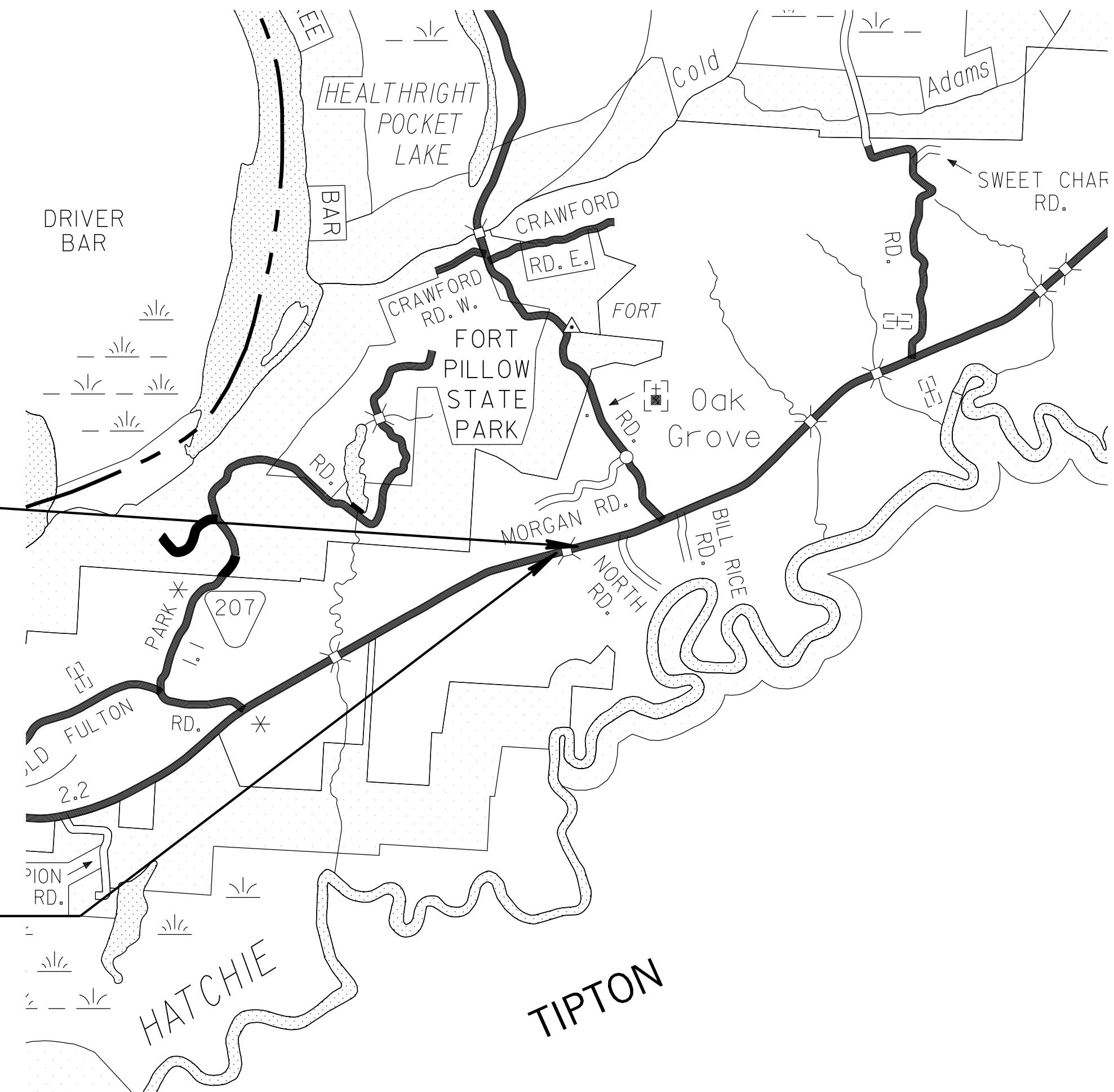
CAUTION!
PRELIMINARY
PLANS
SUBJECT TO
CHANGE

SEALED BY

APPROVED: *Paul D. Degges*
PAUL D. DEGGES, CHIEF ENGINEER

DATE:

APPROVED: *Clay Bright*
CLAY BRIGHT, COMMISSIONER



SCALE: 1" = 1/2 MILES

R.O.W. LENGTH	0.133 MILES
ROADWAY LENGTH	0.133 MILES
BRIDGE LENGTH	0.000 MILES
BOX BRIDGE LENGTH	0.000 MILES
BOX BRIDGE LENGTH	0.000 MILES ▲
PROJECT LENGTH	0.133 MILES

▲ Not included in the project length (Non Riding Surface).

49006-0241-94
END PROJECT NO. BR-STP-87(9) PRELIMINARY
STA. 111+50.00
N 493203.6035 E 832072.0596

49006-0241-94
BEGIN PROJECT NO. BR-STP-87(9) PRELIMINARY
STA. 104+50.00
N 493023.5480 E 831395.6142

SPECIAL NOTES

PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED JANUARY 1, 2015 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

TDOT C.E. MANAGER 1 OR
TDOT TRANSPORTATION MANAGER 1 : STEPHANIE KISSELL

DESIGNED BY : HDR ENGINEERING, INC.
DESIGNER : GREG CLUCKER CHECKED BY KEVIN CAGLE

P.E. NO. 49006-0241-94 (NEPA)
PIN NO. 128113.05

S.R. 87	
SURVEY 08-30-18	TRAFFIC DATA
	ADT (2022) 410
	ADT (2042) 490
	DHV (2042) 64
	D 65 - 35
	T (ADT) 14 %
	T (DHV) 9 %
	V 55 MPH

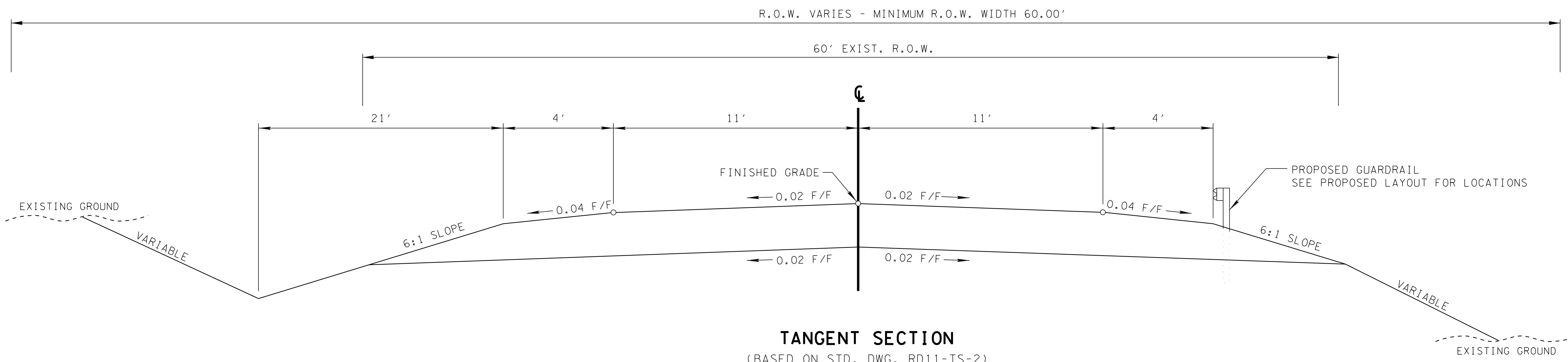
COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00005 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 03.

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

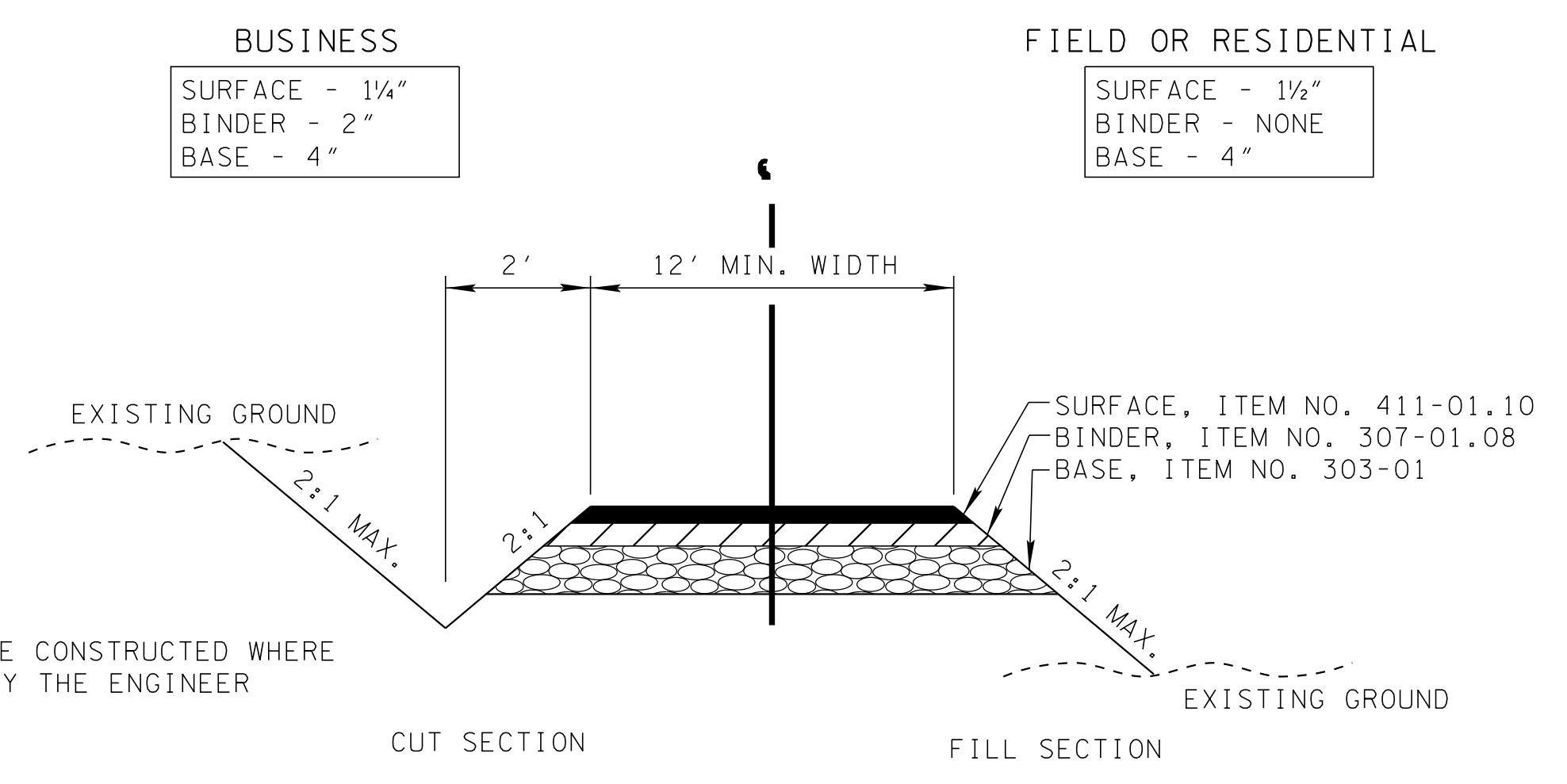
APPROVED: _____
DIVISION ADMINISTRATOR DATE

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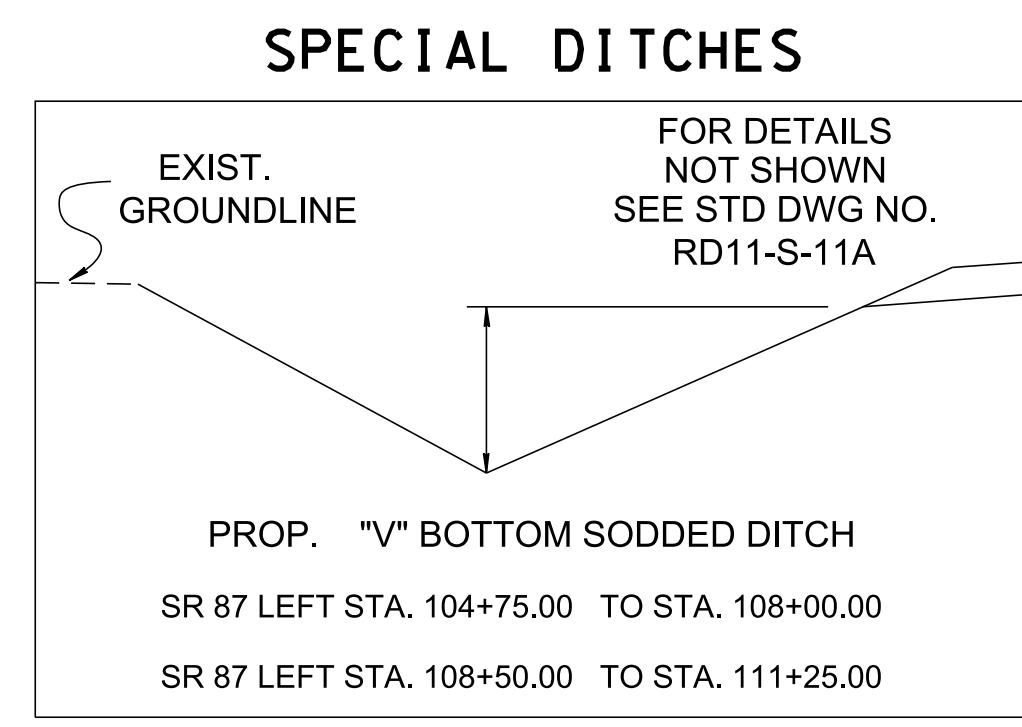
TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM	2019	BR-STP-87(9)	2B



TANGENT SECTION
(BASED ON STD. DWG. RD11-TS-2)
STA. 104+50.00 TO STA. 111+50.00



TYPICAL SECTION
PRIVATE DRIVE TO BUSINESS,
FIELD, OR RESIDENTIAL PROPERTY



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PRELIMINARY
PLANS
SUBJECT TO
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL
SECTIONS

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM	2019	BR-STP-87(9)	3

RIGHT-OF-WAY

- (1) ALL RAMPS MUST CONFORM TO THE DEPARTMENT'S "POLICY ON FINANCING CONSTRUCTION OF PUBLIC ROAD INTERSECTIONS AND DRIVEWAYS ON HIGHWAY RESURFACING, RECONSTRUCTION AND CONSTRUCTION PROJECTS ON NEW LOCATIONS", THE MANUAL ON RULES AND REGULATIONS FOR CONSTRUCTING DRIVEWAYS ON STATE HIGHWAY RIGHT-OF-WAY, STANDARD DRAWING RP-R-1, AND OTHER ACCEPTED DESIGN AND SAFETY STANDARDS.
- (2) EXISTING PAVED DRIVEWAY PER TRACT REMAINDER WILL BE REPLACED IN KIND TO A TOUCHDOWN POINT.
- (3) WHERE THE EXISTING DRIVEWAY IS UNPAVED AND THE PROPOSED DRIVEWAY EXCEEDS 7 PERCENT IN GRADE, EACH DRIVEWAY WILL BE PAVED TO A TOUCHDOWN POINT OR UNTIL THE GRADE IS LESS THAN 7 PERCENT.
- (4) WHERE THE EXISTING DRIVEWAY IS UNPAVED AND THE PROPOSED DRIVEWAY IS LESS THAN 7 PERCENT IN GRADE, EACH DRIVEWAY WILL BE PAVED A SHOULDER WIDTH FROM THE EDGE OF PAVEMENT AND THE REMAINDER OF THAT DRIVEWAY REPLACED IN KIND TO A TOUCHDOWN POINT.
- (5) ANY NECESSARY PAVING OF DRIVEWAYS WILL BE DONE DURING PAVING OPERATIONS ON THE MAIN ROADWAY.
- (6) NEW DRIVEWAYS PROVIDED IN THE PLANS WILL BE PAVED BASED ON THE 7 PERCENT CRITERIA. THOSE 7 PERCENT OR STEEPER IN GRADE WILL BE PAVED AND THOSE FLATTER THAN 7 PERCENT WILL BE COVERED WITH BASE STONE.
- (7) ON PROJECTS WITHOUT CURB AND GUTTER THAT ARE ON STATE ROUTES, IT WILL BE THE RESPONSIBILITY OF THE OWNER TO SECURE A PERMIT AND TO CONSTRUCT ADDITIONAL DRIVEWAYS AND FIELD ENTRANCES OTHER THAN THOSE PROVIDED IN THE PLANS.

UTILITY

- (1) THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE ONLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY CONTACTING THE UTILITY COMPANIES INVOLVED. NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC., AT 1-800-351-1111 AS REQUIRED BY TCA 65-31-106 WILL BE REQUIRED.
- (2) UNLESS OTHERWISE NOTED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR ITS REPRESENTATIVE. THE CONTRACTOR AND UTILITY OWNERS WILL BE REQUIRED TO COOPERATE WITH EACH OTHER IN ORDER TO EXPEDITE THE WORK REQUIRED BY THIS CONTRACT. ON CONTRACTS WHERE CONSTRUCTION STAKES, LINES, AND GRADES ARE CONTRACT ITEMS, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE RIGHT-OF-WAY OR SLOPE STAKES, DITCH OR STREAM BED GRADES, OR OTHER ESSENTIAL SURVEY STAKING TO PREVENT CONFLICTS WITH THE HIGHWAY CONSTRUCTION. FREQUENTLY, THIS WILL BE REQUIRED AS THE FIRST ITEM OF WORK AND AT ANY LOCATION ON THE PROJECT DIRECTED BY THE ENGINEER.
- (3) THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.
- (4) PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING OWNERS OF ALL AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED 'AROUND' UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS. ADVANCE CLEAR CUTTING MAY BE REQUIRED BY THE ENGINEER AT ANY LOCATION WHERE CLEARING IS CALLED FOR IN THE SPECIFICATIONS AND CLEAR CUTTING IS NECESSARY FOR A UTILITY RELOCATION. ANY ADDITIONAL COST WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE CLEARING ITEM SPECIFIED IN THE PLANS.
- (5) THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY IN ACCORDANCE WITH TCA 65-31-106.

UTILITY OWNERS

TELEPHONE:

AT&T

315 EAST COLLEGE ST.

JACKSON, TN 38301

CONTACT: COREY BARTHOLOMEW

OFFICE PHONE: 731-423- 0521

CELL PHONE:

Email:

WATER:

LAUDERDALE COUNTY WATER SYSTEM

550 CENTRAL CURVE RD.

RIPLEY, TN 38063

CONTACT: RANDY NEWMAN

OFFICE PHONE: 731-635- 2711

CELL PHONE:

Email: LAUDERDALEWATER@YAHOO.COM

ELETRIC:

SOUTHWEST TENNESSEE ELECTRIC

MEMBERSHIP CORPORATION

1800 HWY. 51 SOUTH.

COVINGTON, TN 38019

CONTACT: BRAD OSBORN

OFFICE PHONE: 901-476- 9839

CELL PHONE: 901-622- 0305

Email:

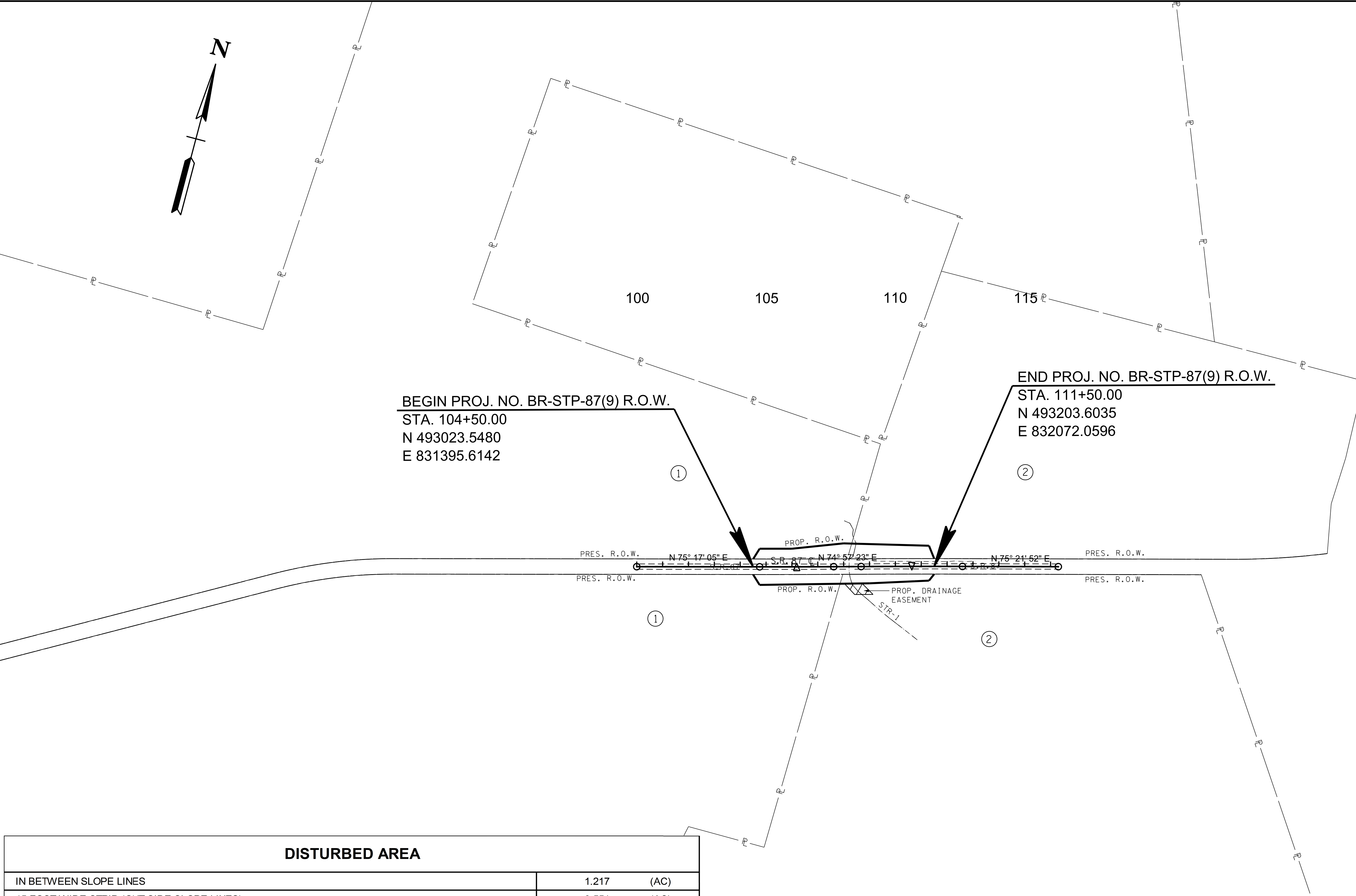
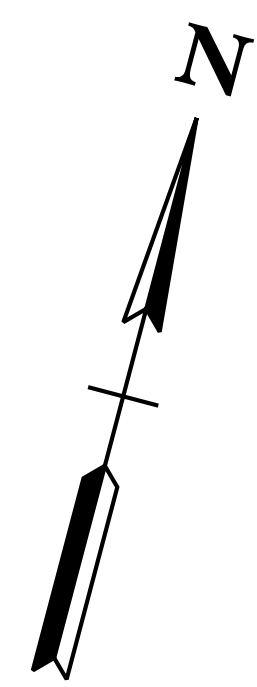
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DEPARTMENT OF TRANSPORTATION**

RIGHT-OF-WAY
NOTES,
UTILITY NOTES
AND
UTILITY OWNERS

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM	2019	BR-STP-87(9)	3A



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DISTURBED AREA	
IN BETWEEN SLOPE LINES	1.217 (AC)
15 FOOT WIDE STRIP (OUT SIDE SLOPE LINES)	0.551 (AC)
TOTAL DISTURBED AREA	1.768 (AC)

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00005 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 03.

**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION**

R.O.W. ACQUISITION TABLE

TRACT NO.	PROPERTY OWNERS	COUNTY RECORDS				TOTAL AREA (ACRES)			AREA TO BE ACQUIRED (ACRES)			AREA REMAINING (ACRES)		EASEMENT (ACRES)			
		TAX MAP NO.	PARCEL NO.	DEED DOCUMENT REFERENCE		LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	LEFT	RIGHT	PERMANENT	SLOPE	CONSTRUCTION	AIR RIGHTS
				BOOK	PAGE												
1	William F Ozment & Marilyn & Lanier John B -TR John Bussey Lanier Trust	147	006.00	681	419	305.320	191.470	496.790	0.387	0.287	0.674	304.933	191.183				
2	Richard Stephen Sullivan Richard Vanhersett & wife	147	007.00	168	444	37.290	132.210	169.500	0.396	0.253	0.649	36.894	131.957	2957 S.F.			
ACQUISITION TOTALS (ACRES)									1.323					2957 S.F.			

**PROPERTY MAP
AND
RIGHT-OF-WAY
ACQUISITION
TABLE**

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM	2019	BR-STP-87(9)	4

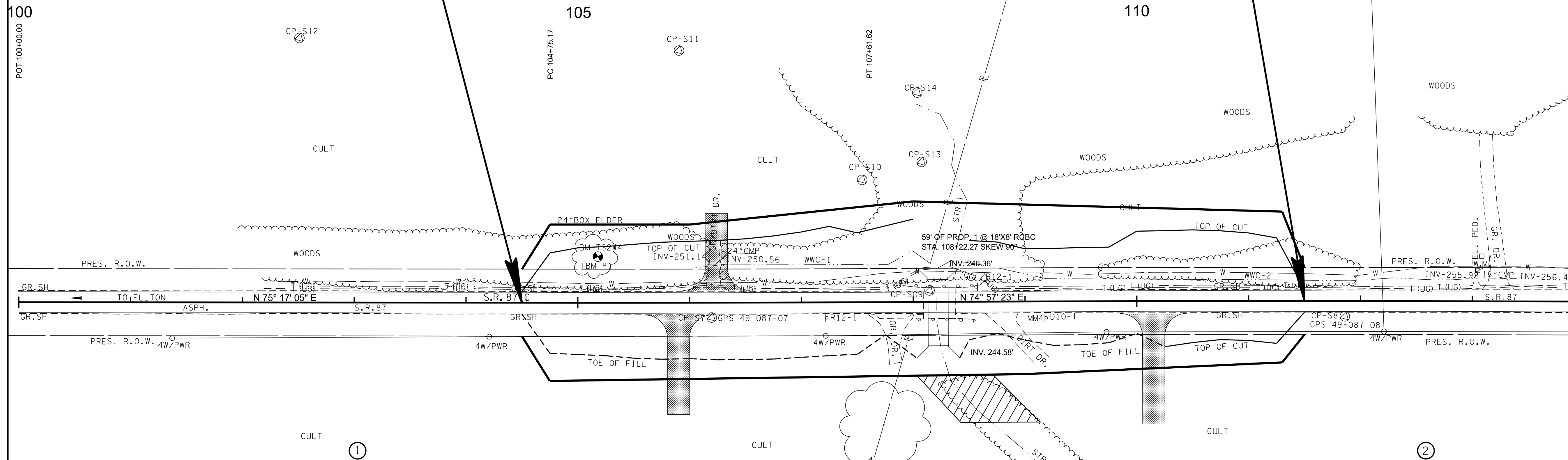
BEGIN PROJ. NO. BR-STP-87(9) R.O.W.
 STA. 104+50.00
 N 493023.5480
 E 831395.6142

END PROJ. NO. BR-STP-87(9) R.O.W.
 STA. 111+50.00
 N 493203.6035
 E 832072.0596

WILLIAM F OZMENT & MARILYN & LANIER
 JOHN B-TR JOHN BUSSEY LANIER TRUST

RICHARD STEPHEN SULLIVAN,
 RICHARD VANHURST & WIFE

POT 100+00.00



WILLIAM F OZMENT & MARILYN & LANIER
 JOHN B-TR JOHN BUSSEY LANIER TRUST

RICHARD STEPHEN SULLIVAN,
 RICHARD VANHURST & WIFE

Point	North	East	Station	Offset	Desc.
S7	493053.9886	831563.2732	106+19.85	13.3557	GPS 49-087-07
S8	493199.4572	832110.4706	111+86.10	13.7770	GPS 49-087-08
S09	493127.1037	831745.4092	108+14.69	-10.1804	XCP
S10	493207.4282	831661.8638	107+54.84	-109.4362	XCP
S11	493277.6215	831473.9452	105+90.82	-225.7091	XCP
S12	493201.8973	831142.8189	102+50.80	-236.7139	XCP
S13	493236.5575	831709.2647	108+08.19	-125.2645	XCP
S14	493295.5641	831689.6301	108+04.54	-187.3451	XCP

SR 87
 PI 106+18.40
 N 493,066.3247
 E 831,558.4908
 Δ 0° 19' 42" (LT)
 D 0° 06' 53"
 R 50,000.00
 L 286.45
 T 143.23
 SE NC
 DESIGN SPEED 55 MPH

SR 87
 PI 110+63.45
 N 493,181.8388
 E 831,988.2852
 Δ 0° 24' 29" (RT)
 D 0° 06' 15"
 R 55,000.00
 L 391.80
 T 195.90
 SE NC
 DESIGN SPEED 55 MPH

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COORDINATES ARE NAD 83(1995), ARE
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 TO THE NAVD 1988 WITH GEOID 03.

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

PRESENT
 LAYOUT

STA. 104+50 TO STA. 111+50
 SCALE: 1"= 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM	2019	BR-STP-87(9)	4A

BEGIN PROJ. NO. BR-STP-87(9) R.O.W.
 STA. 104+50.00
 N 493023.5480
 E 831395.6142

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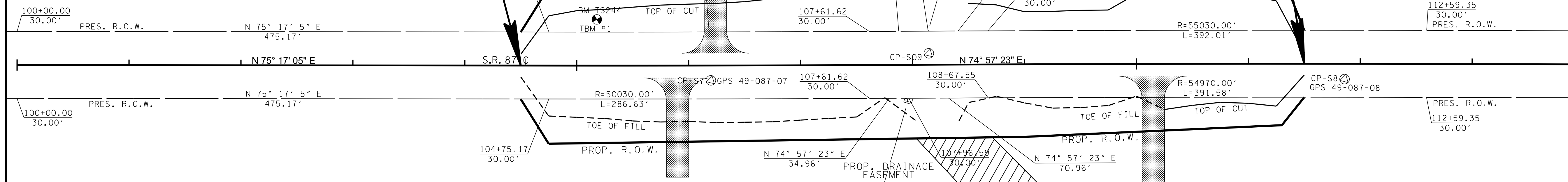
WILLIAM F OZMENT & MARILYN & LANIER
 JOHN B-TR JOHN BUSSEY LANIER TRUST

RICHARD STEPHEN SULLIVAN,
 RICHARD VANHURST & WIFE

100

105

110



WILLIAM F OZMENT & MARILYN & LANIER
 JOHN B-TR JOHN BUSSEY LANIER TRUST

RICHARD STEPHEN SULLIVAN,
 RICHARD VANHURST & WIFE

Point	North	East	Station	Offset	Desc.
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S11	493277.6215	831473.9452	105+90.82	-225.7091	XCP
S12	493201.8973	831142.8189	102+50.80	-236.7139	XCP
S13	493236.5575	831709.2647	108+08.19	-125.2645	XCP
S14	493295.5641	831689.6301	108+04.54	-187.3451	XCP

CAUTION!
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STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY
 DETAILS

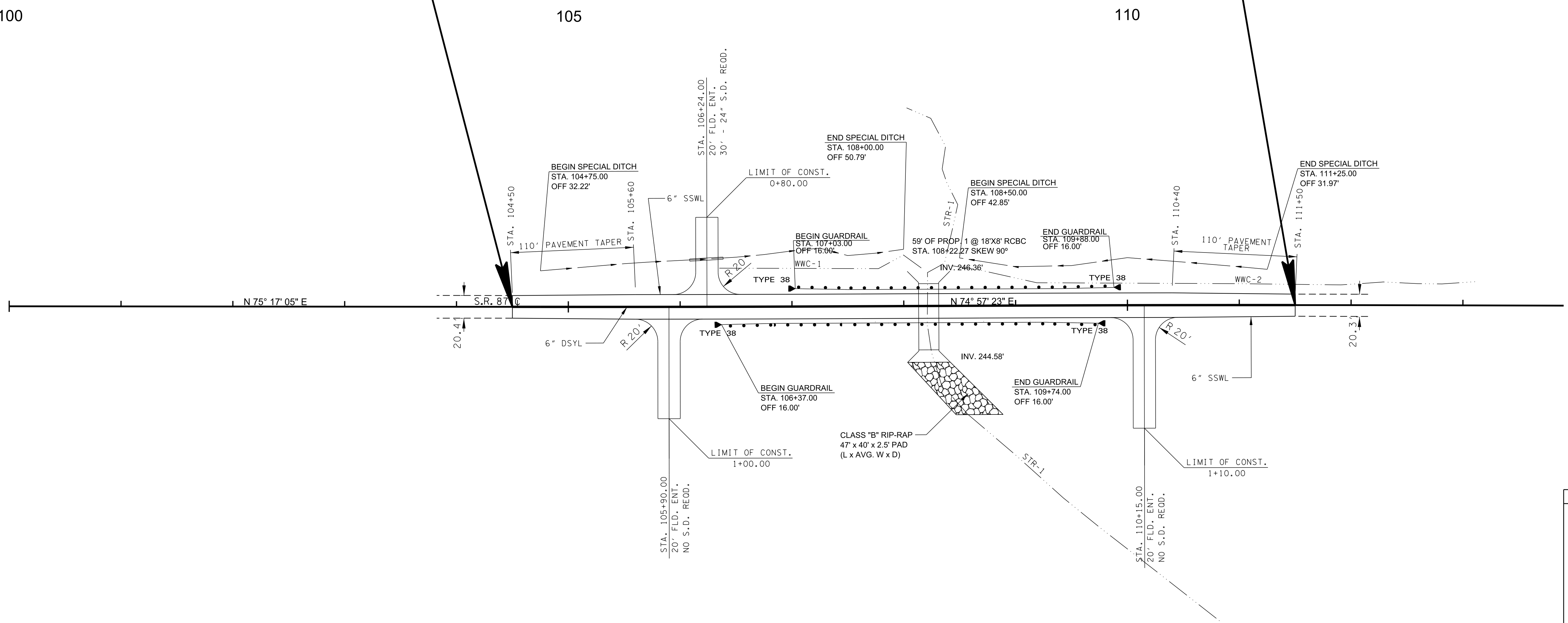
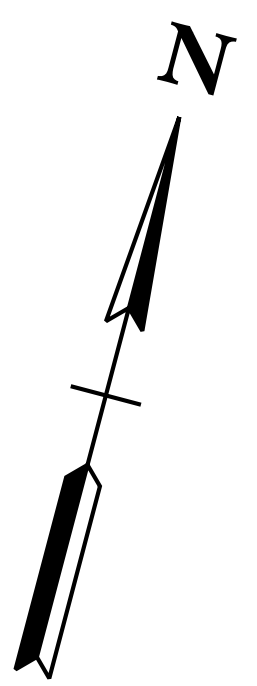
STA. 104+50 TO STA. 111+50
 SCALE: 1"= 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM	2019	BR-STP-87(9)	4B

BEGIN PROJ. NO. BR-STP-87(9) R.O.W.
 STA. 104+50.00
 N 493023.5480
 E 831395.6142

END PROJ. NO. BR-STP-87(9) R.O.W.
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 E 832072.0596

100



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SEALED BY

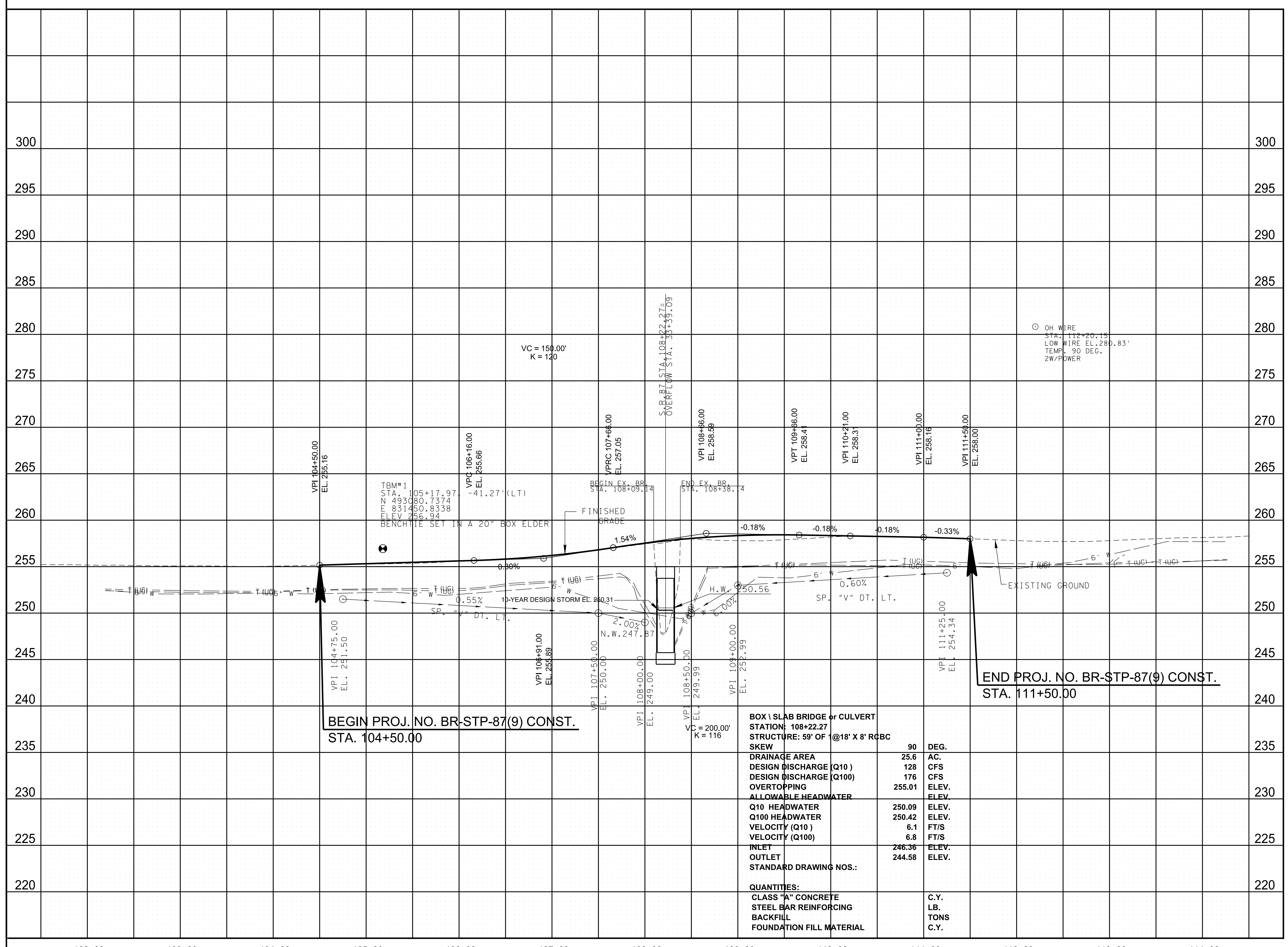
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 DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT
 STA. 104+50 TO STA. 111+50
 SCALE: 1"= 50'

6/12/2019 12:35:13 PM
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TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM	2019	BR-STP-87(9)	4C



CAUTION!
PRELIMINARY
PLANS
SUBJECT TO
CHANGE

END PROJ. NO. BR-STP-87(9) CONST.
STA. 111+50.00

BEGIN PROJ. NO. BR-STP-87(9) CONST.
STA. 104+50.00

BOX \ SLAB BRIDGE or CULVERT	
STATION:	108+22.27
STRUCTURE:	59' OF 1 @ 18' X 8' RCBC
SKEW	90 DEG.
DRAINAGE AREA	25.6 AC.
DESIGN DISCHARGE (Q10)	128 CFS
DESIGN DISCHARGE (Q100)	176 CFS
OVERTOPPING	255.01 ELEV.
ALLOWABLE HEADWATER	ELEV.
Q10 HEADWATER	250.09 ELEV.
Q100 HEADWATER	250.42 ELEV.
VELOCITY (Q10)	6.1 FT/S
VELOCITY (Q100)	6.8 FT/S
INLET	246.36 ELEV.
OUTLET	244.58 ELEV.
STANDARD DRAWING NOS.:	
QUANTITIES:	
CLASS "A" CONCRETE	C.Y.
STEEL BAR REINFORCING	LB.
BACKFILL	TONS
FOUNDATION FILL MATERIAL	C.Y.

SEALED BY

COORDINATES ARE NAD 83(1995). ARE DATUM ADJUSTED BY THE FACTOR OF 1.00005 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 03.

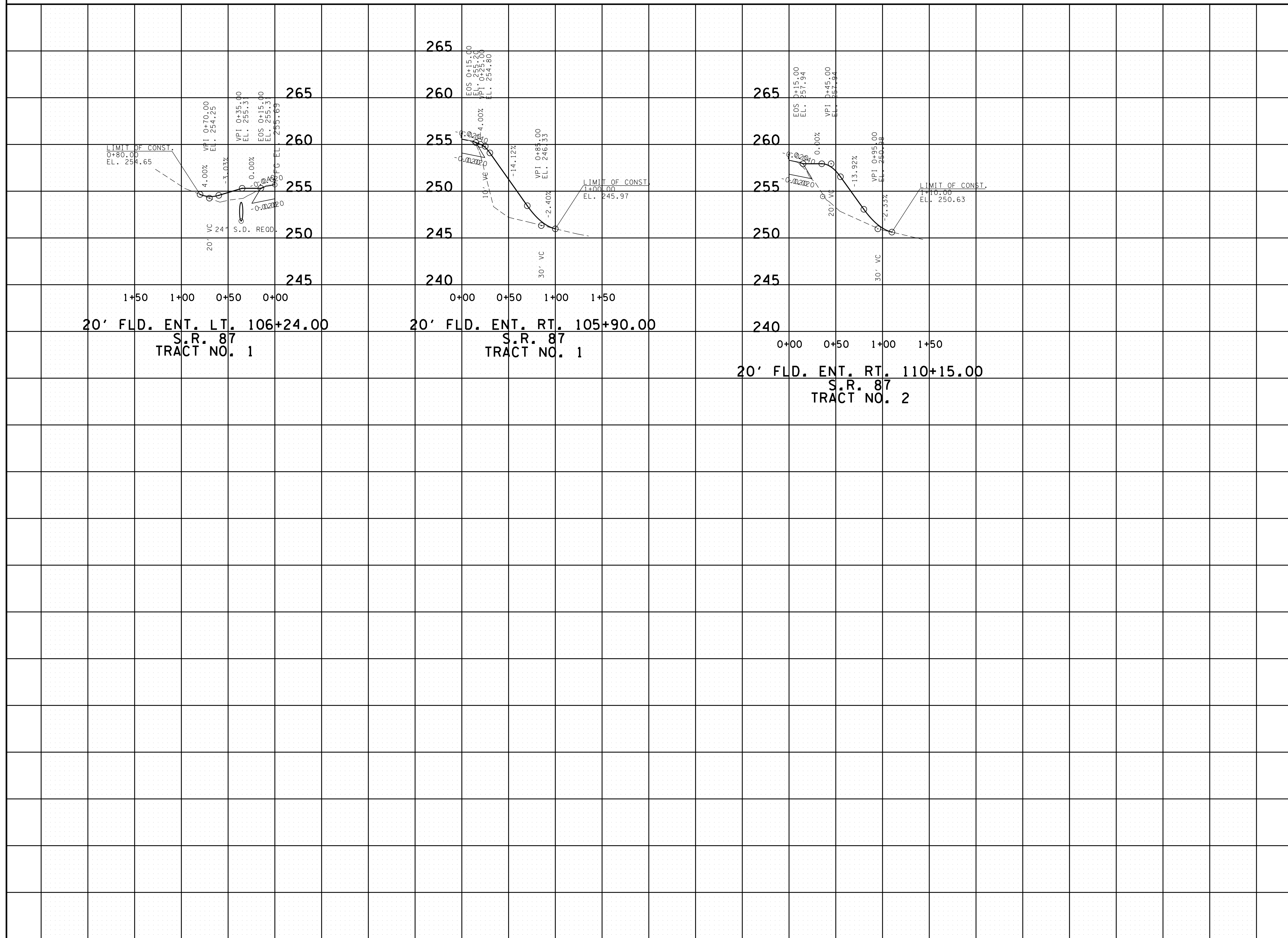
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED
PROFILE
 STA. 104+50 TO STA. 111+50

SCALE: 1"= 50' HORIZ.
 1"= 5' VERT.

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM	2019	BR-STP-87(9)	5



20' FLD. ENT. LT. 106+24.00
S.R. 87
TRACT NO. 1

20' FLD. ENT. RT. 105+90.00
S.R. 87
TRACT NO. 1

20' FLD. ENT. RT. 110+15.00
S.R. 87
TRACT NO. 2

CAUTION!
PRELIMINARY
PLANS
SUBJECT TO
CHANGE

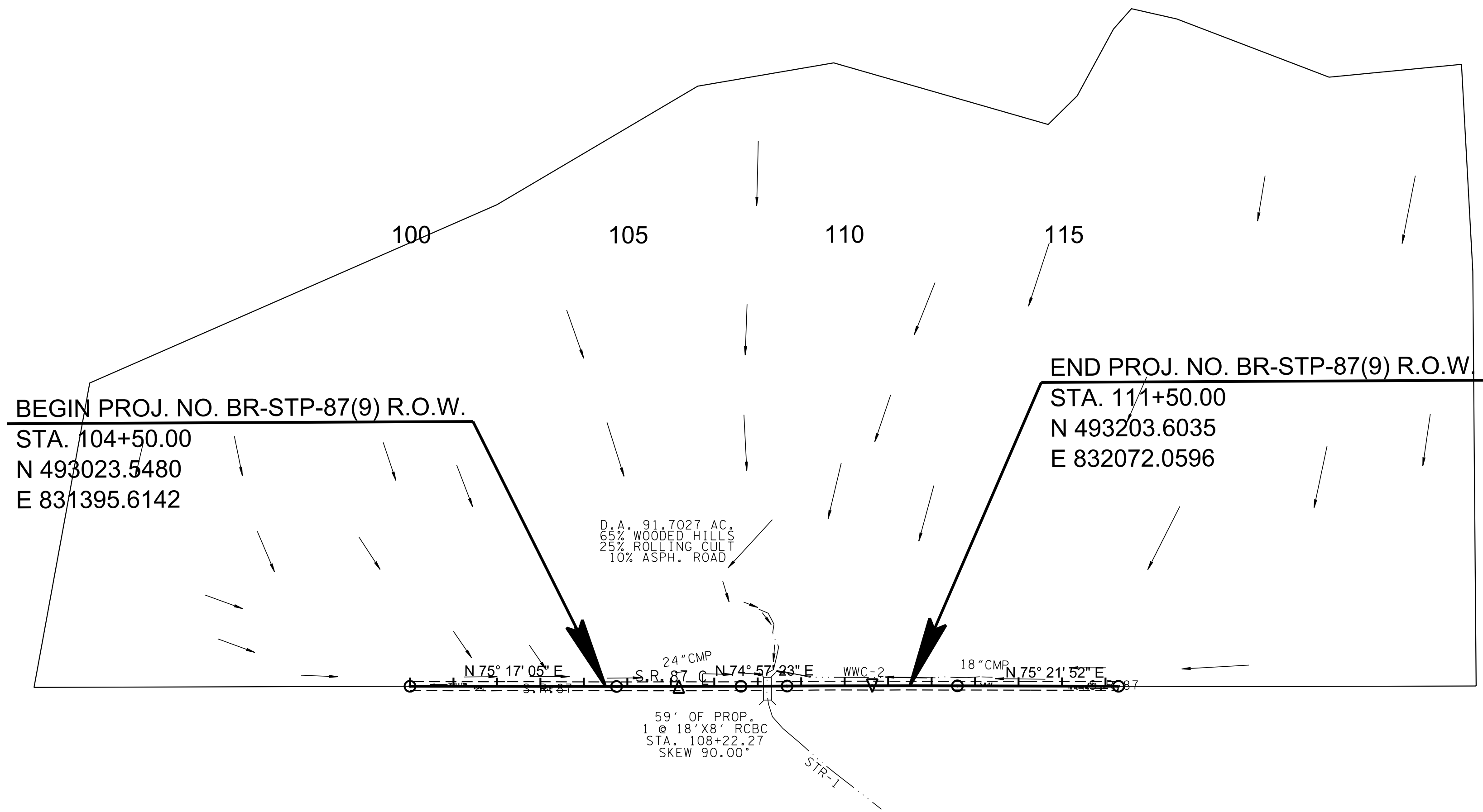
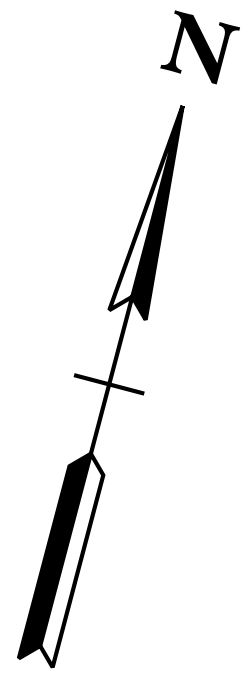
SEALED BY

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00005 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 03.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRIVATE DRIVE,
BUSINESS, AND
FIELD ENTRANCE
PROFILE

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM	2019	BR-STP-87(9)	6



**CAUTION!
PRELIMINARY
PLANS
SUBJECT TO
CHANGE**

SEALED BY

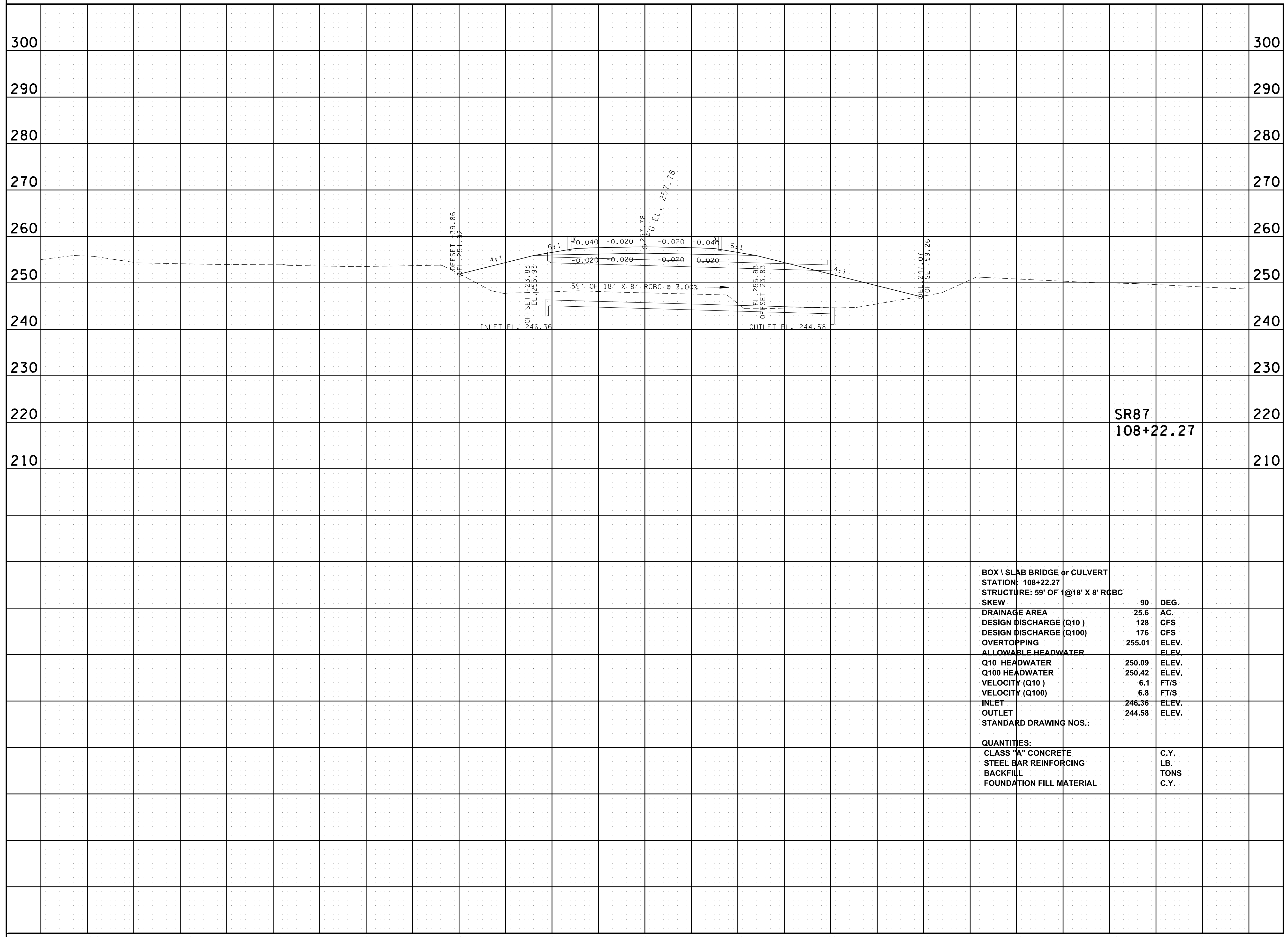
COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00005 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 03.

**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION**

**DRAINAGE
MAP**

STA. 104+50 TO STA. 111+50
SCALE: 1"=200'

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM	2019	BR-STP-87(9)	7



BOX \ SLAB BRIDGE or CULVERT		
STATION: 108+22.27		
STRUCTURE: 59' OF 1 @ 18' X 8' RCBC		
SKEW	90	DEG.
DRAINAGE AREA	25.6	AC.
DESIGN DISCHARGE (Q10)	128	CFS
DESIGN DISCHARGE (Q100)	176	CFS
OVERTOPPING	255.01	ELEV.
ALLOWABLE HEADWATER		ELEV.
Q10 HEADWATER	250.09	ELEV.
Q100 HEADWATER	250.42	ELEV.
VELOCITY (Q10)	6.1	FT/S
VELOCITY (Q100)	6.8	FT/S
INLET	246.36	ELEV.
OUTLET	244.58	ELEV.
STANDARD DRAWING NOS.:		
QUANTITIES:		
CLASS "A" CONCRETE		C.Y.
STEEL BAR REINFORCING		LB.
BACKFILL		TONS
FOUNDATION FILL MATERIAL		C.Y.

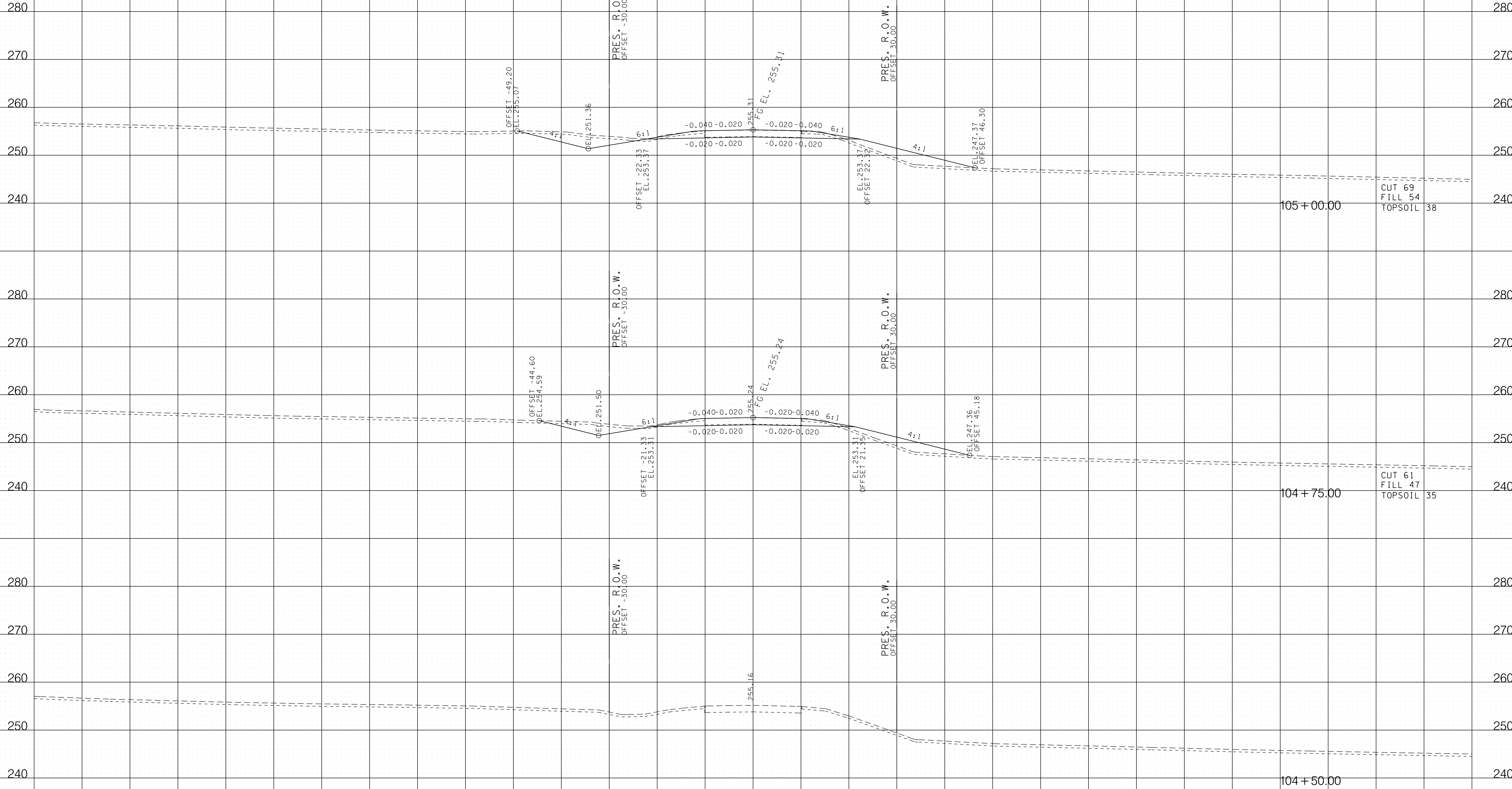
CAUTION!
PRELIMINARY
PLANS
SUBJECT TO
CHANGE

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CULVERT
SECTION

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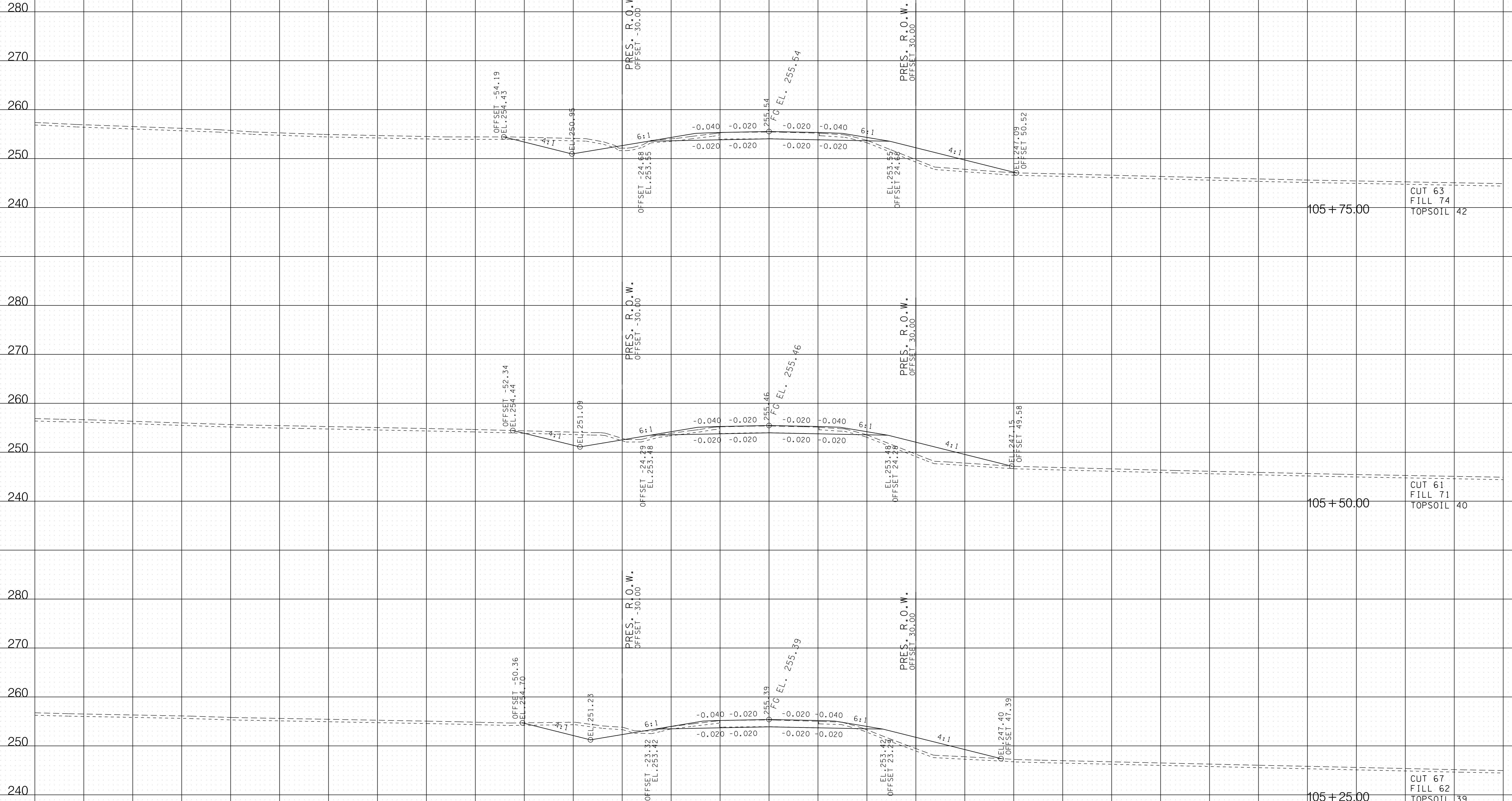
105 + 00.00
 CUT 69
 FILL 54
 TOPSOIL 38

104 + 75.00
 CUT 61
 FILL 47
 TOPSOIL 35

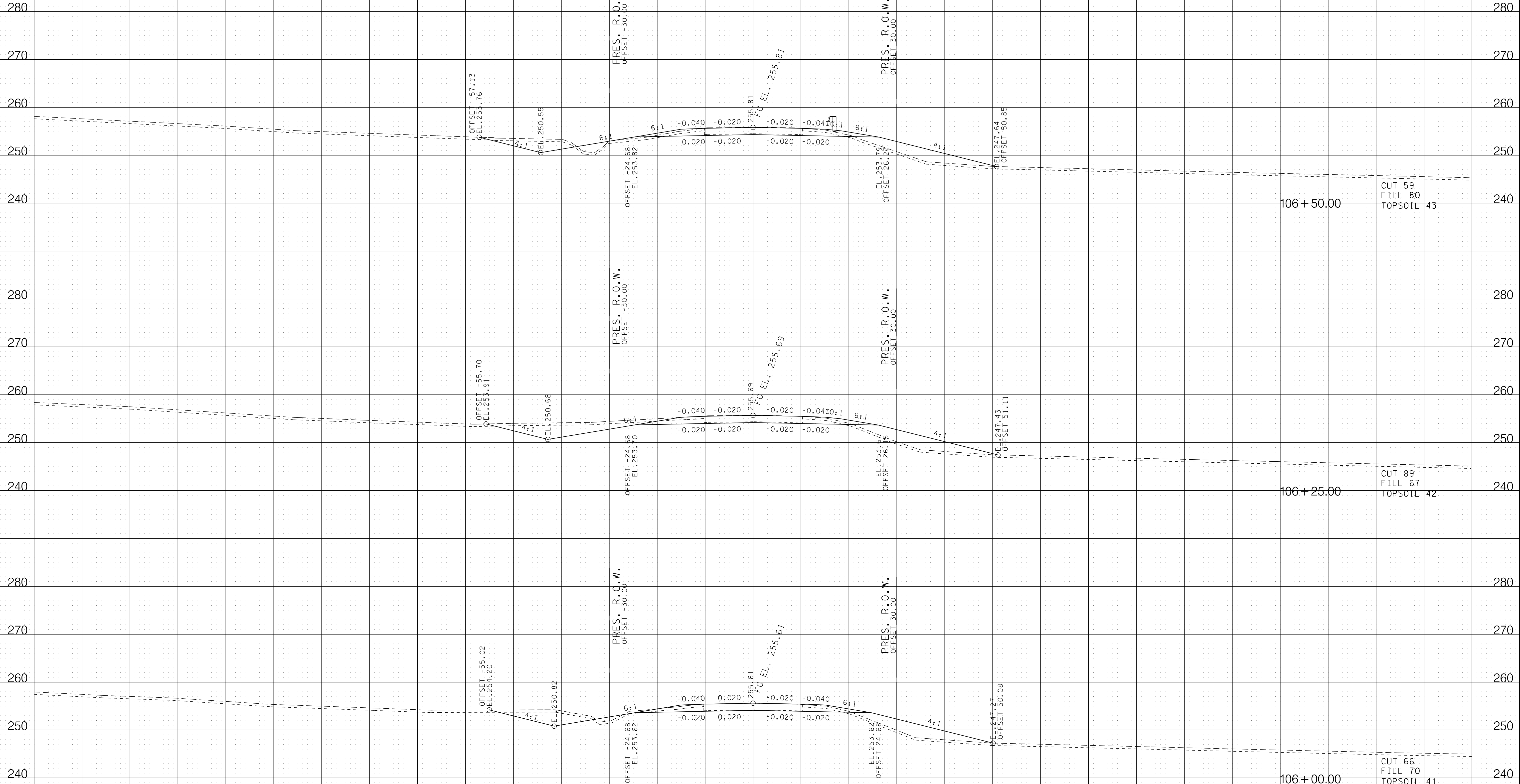
104 + 50.00

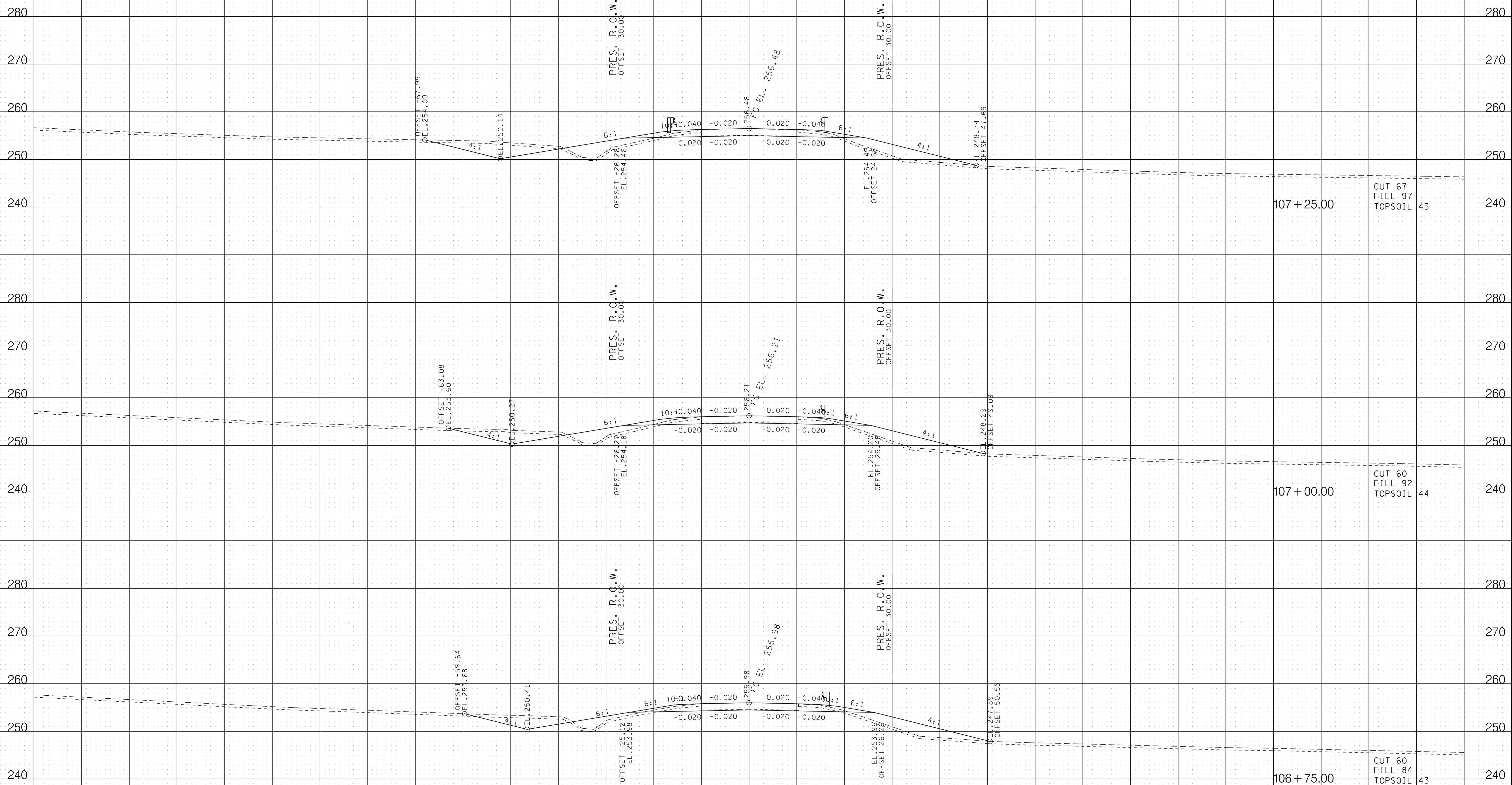
SR 87

BEGIN STA. 104 + 50.00
 END STA. 105 + 00.00

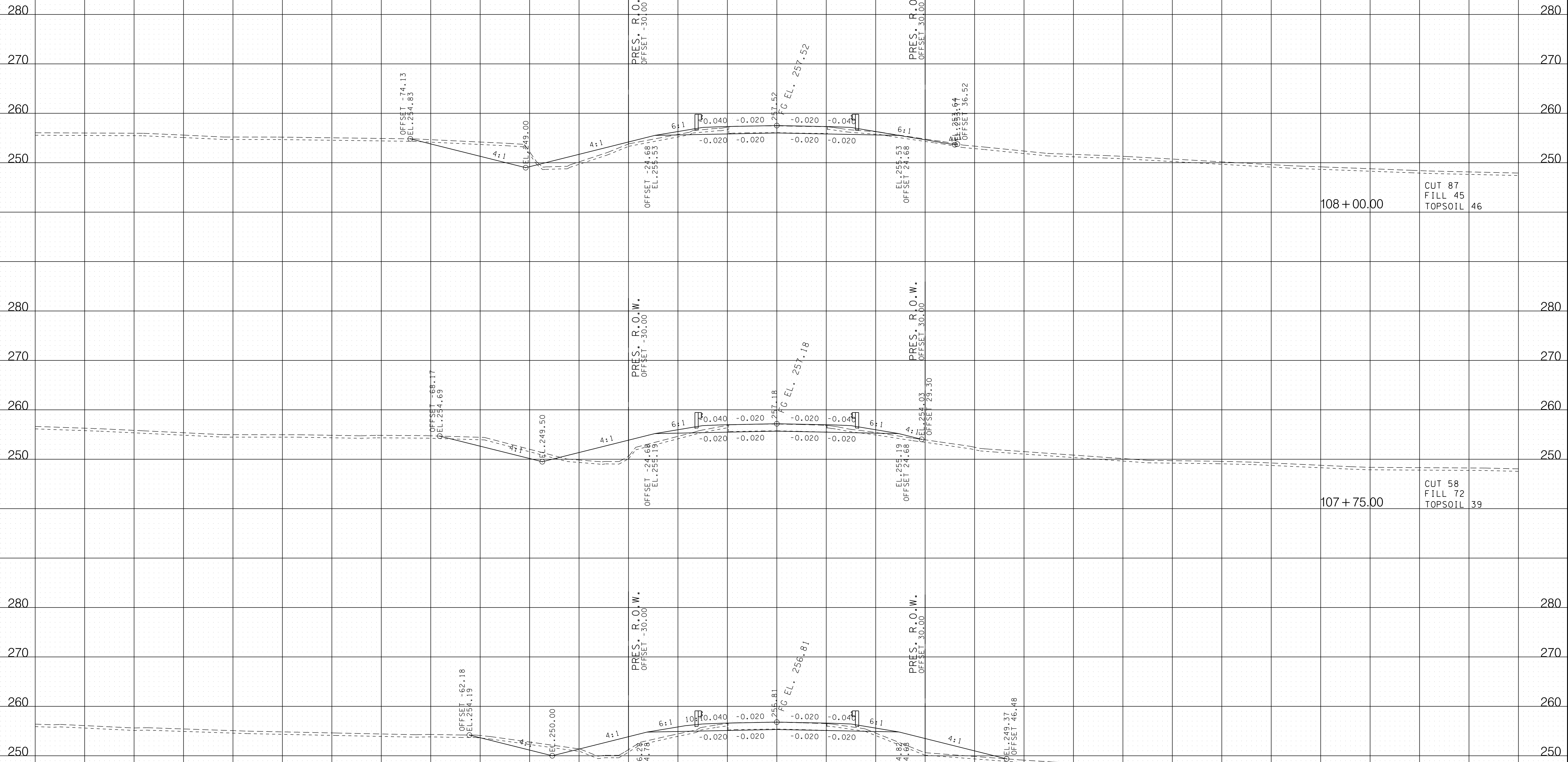


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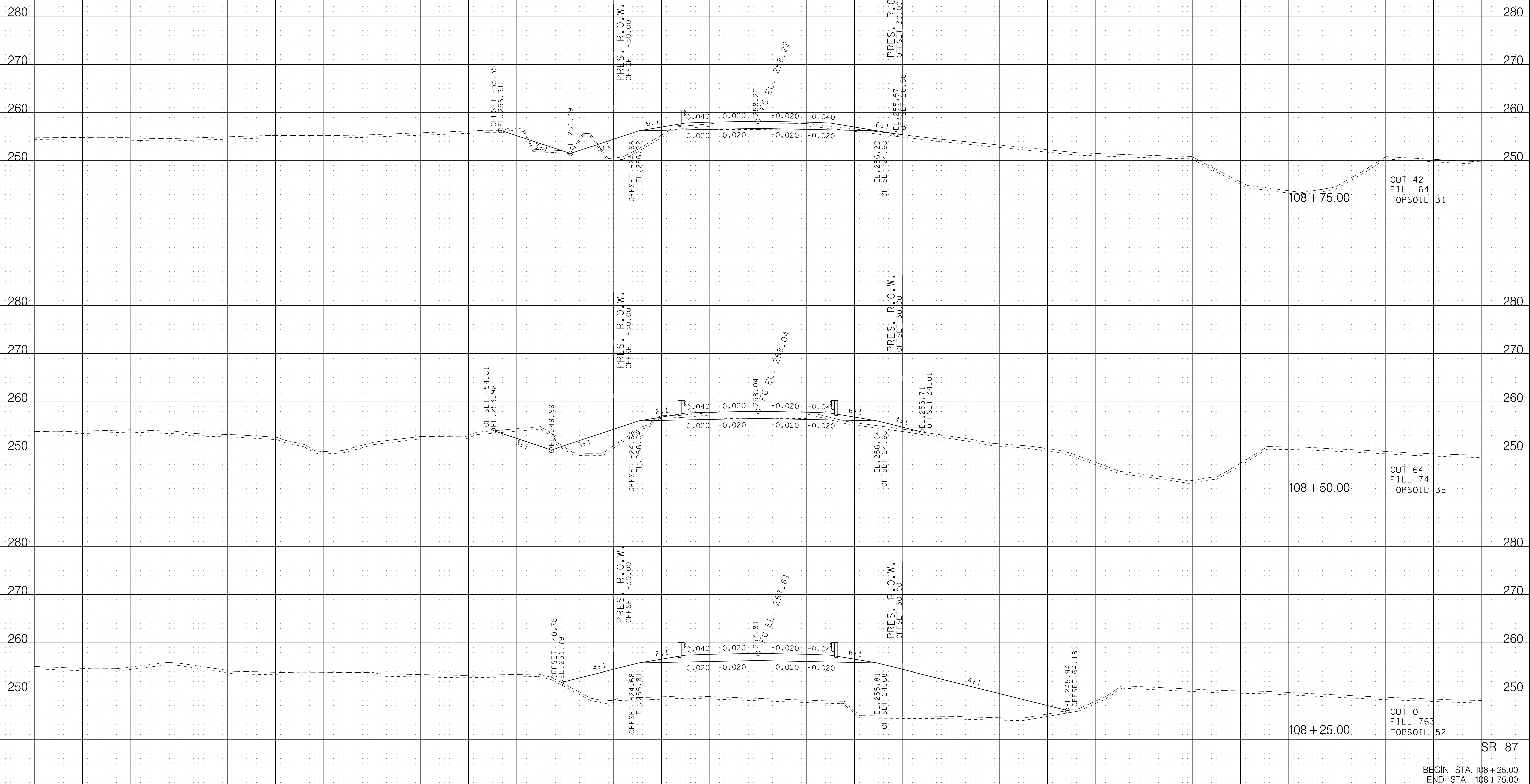
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SR 87

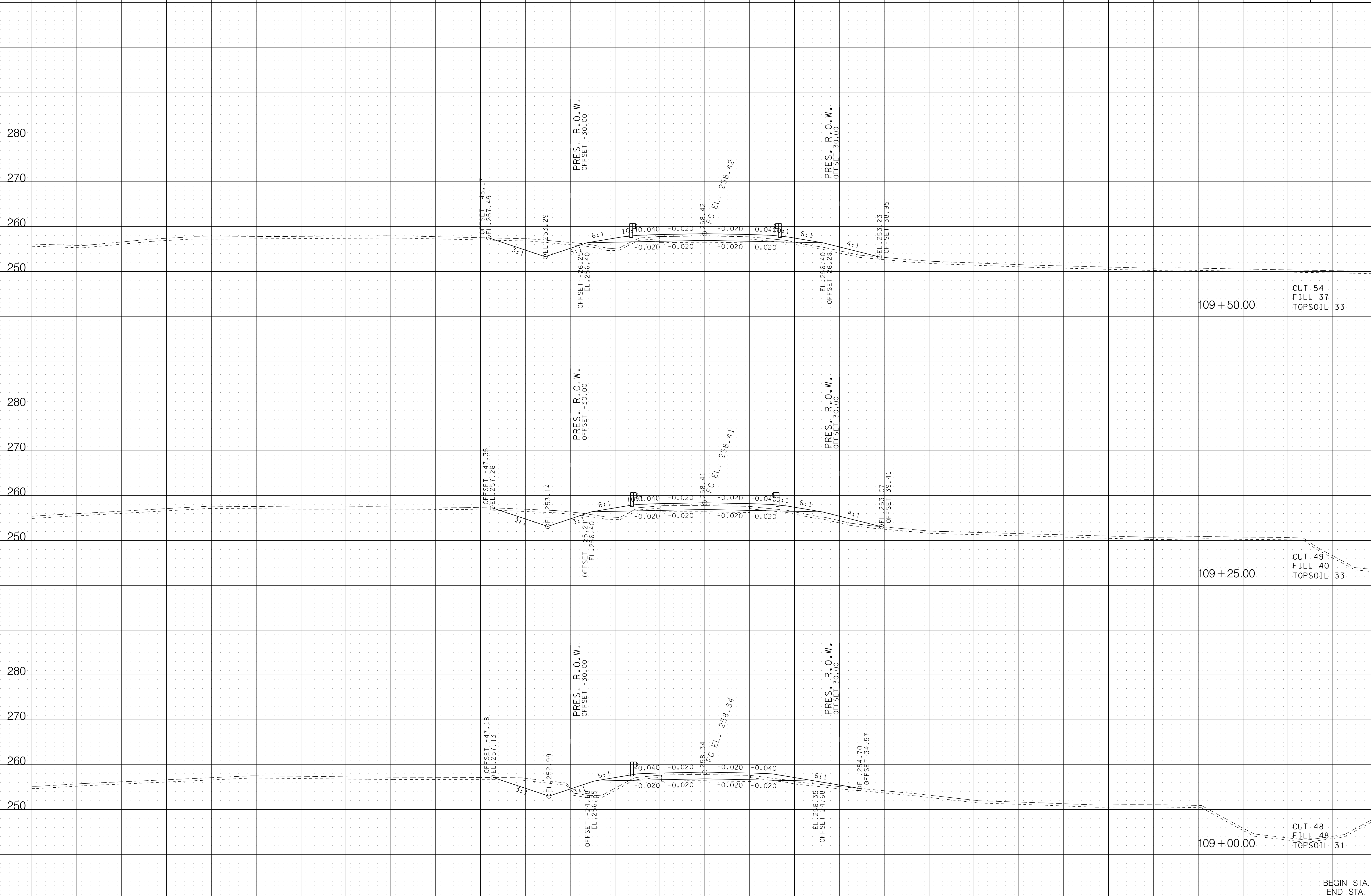
BEGIN STA. 107+50.00
END STA. 108+00.00



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SR 87

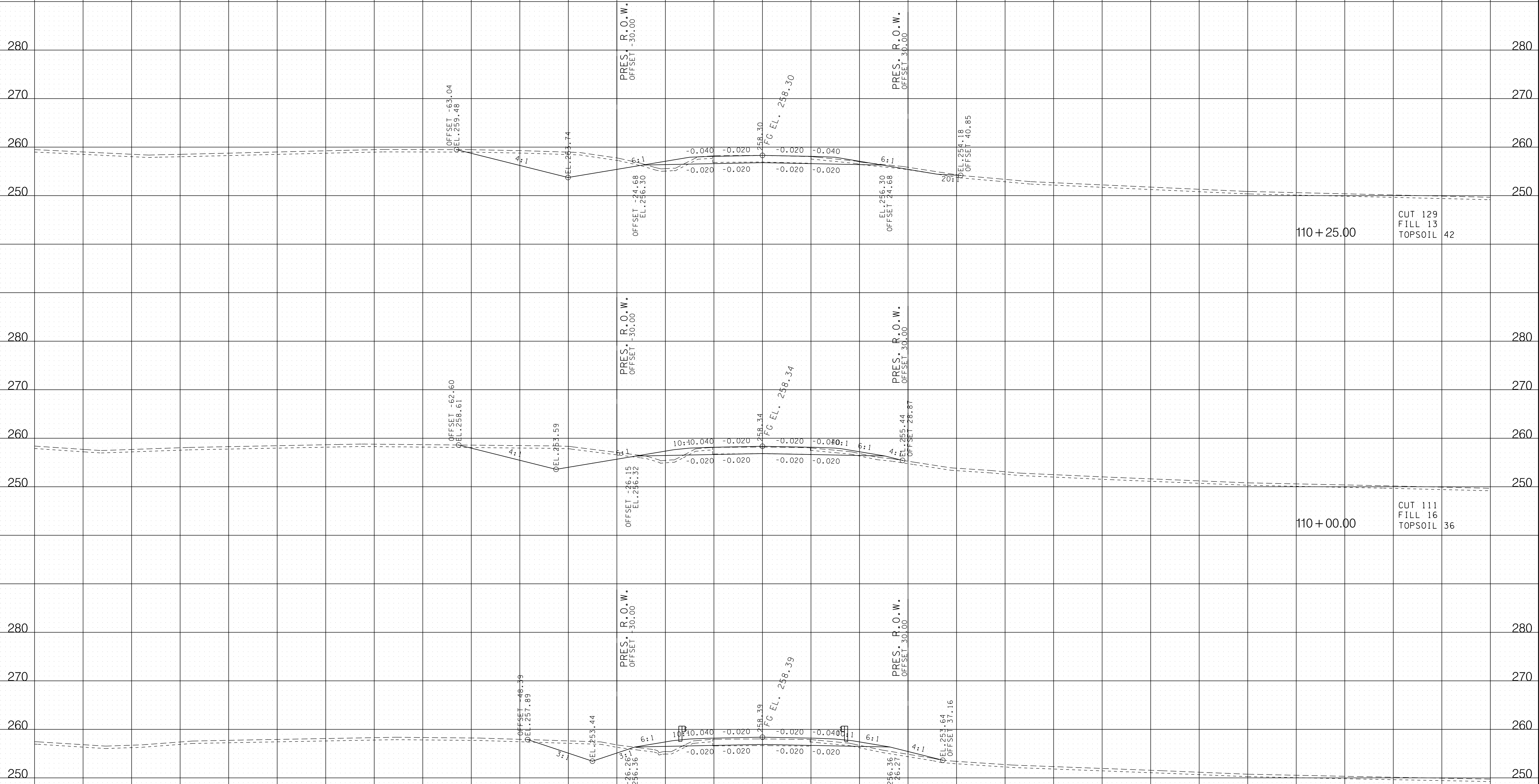
BEGIN STA. 108+25.00
END STA. 108+75.00



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SR 87

BEGIN STA. 109+00.00
END STA. 109+50.00



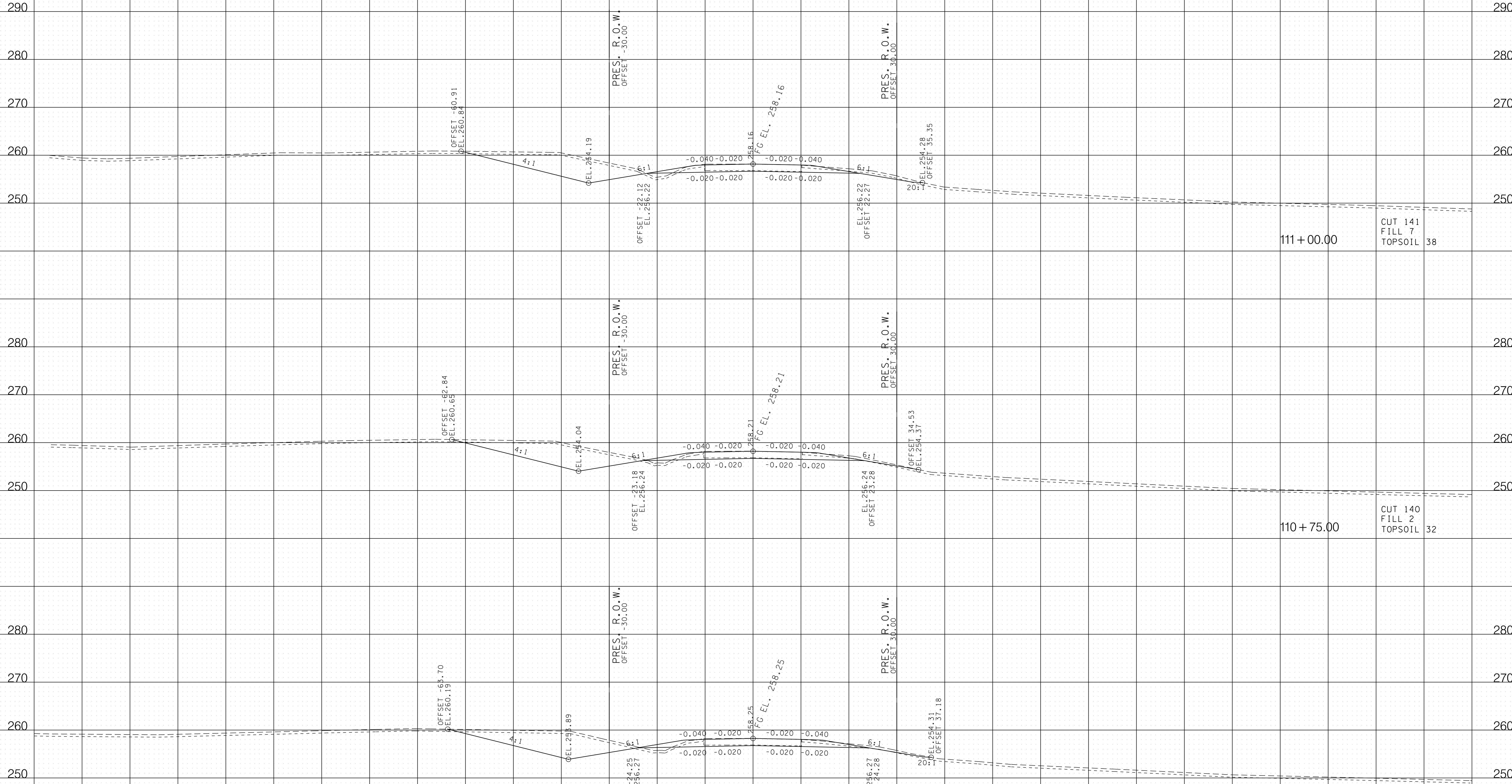
110 + 25.00
 CUT 129
 FILL 13
 TOPSOIL 42

110 + 00.00
 CUT 111
 FILL 16
 TOPSOIL 36

109 + 75.00
 CUT 65
 FILL 28
 TOPSOIL 33

SR 87

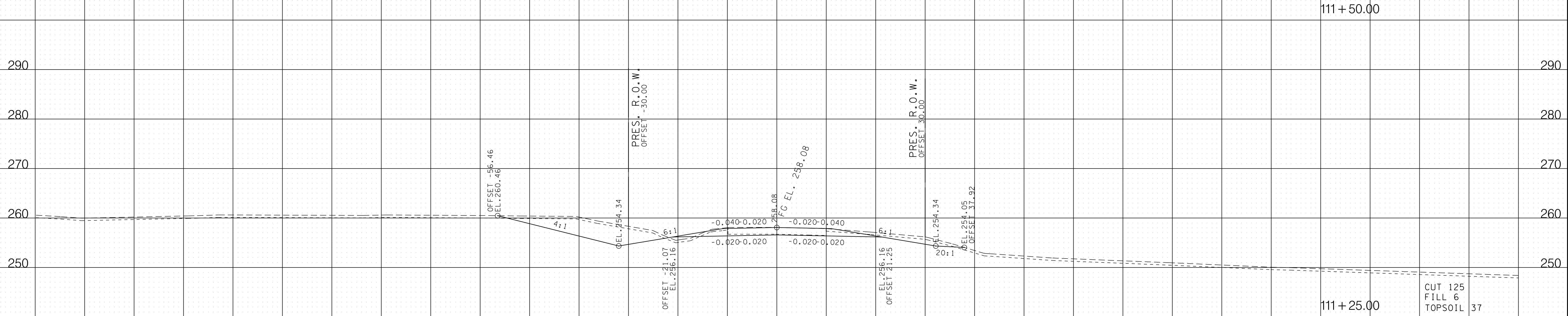
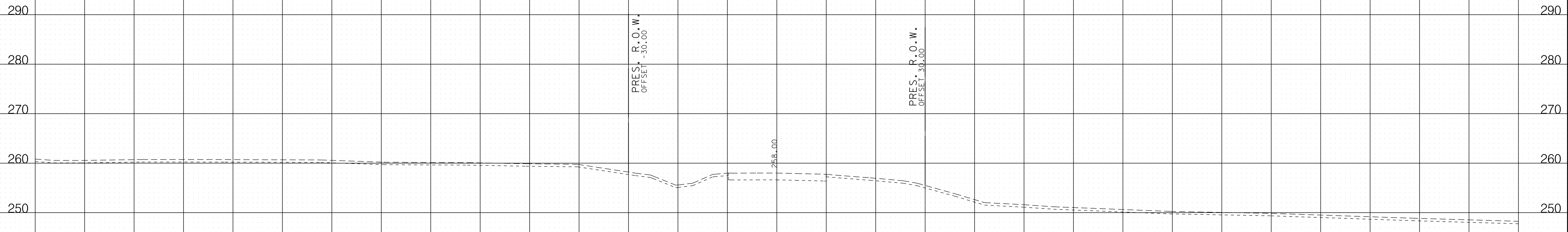
BEGIN STA. 109 + 75.00
 END STA. 110 + 25.00



BEGIN STA. 110+50.00
END STA. 111+00.00

SR 87

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM	2019	BR-STP-87(9)	17



SR 87
 BEGIN STA. 111+25.00
 END STA. 111+50.00

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Ecology

Environmental Studies Request

Project Information

Route: State Route 87
Termini: Bridge over Overflow, Log Mile (LM) 3.88
County: Lauderdale
PIN: 128113.05

Request

Request Type: Environmental Study Reevaluation
Project Plans: Initial Studies
Date of Plans: 06/12/2019
Location: Email Attachment

Certification

Requestor: Jonathan Knudsen
Title: TDOT Environmental Studies Specialist

Signature: Jonathan
Knudsen

Digitally signed by
Jonathan Knudsen
Date: 2019.06.14
10:38:53 -05'00'

Environmental Study

Technical Section

Section: Ecology

Study Results

According to the plans dated 6/12/2019, the environmental features for the project remain valid. However, the project commitment concerning federally endangered and threatened bat species has been removed due to distance from known hibernacula and habitat.

Commitments

Did the study of this project result in any environmental commitments?

No

Additional Information

Is there any additional information or material included with this study?

Yes

Type: Environmental Boundaries Report (EBR)


Location: FileNet

Certification

Responder: Dustin Tucker

Title: TESS Advanced

Signature: Dustin
Tucker

 Digitally signed by
Dustin Tucker
Date: 2019.07.24
07:19:27 -05'00'



Environmental Boundaries Report

SR-87, Bridge over Overflow, LM 3.88

Project No.: 49006-0241-94

PIN: 128113.05

Lauderdale County, Tennessee

**Prepared by:
Tennessee Department of Transportation – TDOT
Region 4**

Environmental Boundaries Report Index

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NEPA Impact Table.....	Page 7
Normal Rainfall Calculation.....	Page 8
Stream Data Sheets.....	Page 9
Wet Weather Conveyance Data Sheets.....	Page 10
Species Review.....	Page 16
Marked-up Plan Sheets.....	Page 23
Photo Log.....	Page 25



**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
REGION 4 ENVIRONMENTAL TECH OFFICE
300 BENCHMARK PLACE
JACKSON, TENNESSEE 38301
(731) 935-0139**

CLAY BRIGHT
COMMISSIONER

BILL LEE
GOVERNOR

MEMORANDUM

To: Stephanie Kissell
Design Division

From: Dustin Tucker
Environmental Tech Office, Region 4

Date: July 19, 2019

Subject: **Environmental Boundaries For:** Lauderdale County, SR-87, Bridge over
Overflow, LM 3.88
P.E.: 49006-0241-94



TDOT

Department of
Transportation

Digitally signed by
Dustin Tucker
Date: 2019.07.22
11:57:22 -05'00'

An ecological evaluation of the subject project has been conducted with the following results:

SPRINGS/STREAMS

There is **one (1)** stream within the project limits.

- Information concerning the quality and amount of impact can be found in the attached impact table.

WET WEATHER CONVEYANCES/UPLAND DRAINAGE FEATURES

There are two (2) wet weather conveyances/upland drainage features within the project limits.

WETLANDS

There are **no** wetlands within the project limits.

OTHER FEATURES

There are **no** other features noted within the project limits.

PROTECTED SPECIES

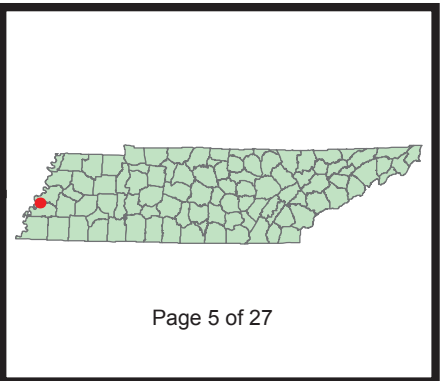
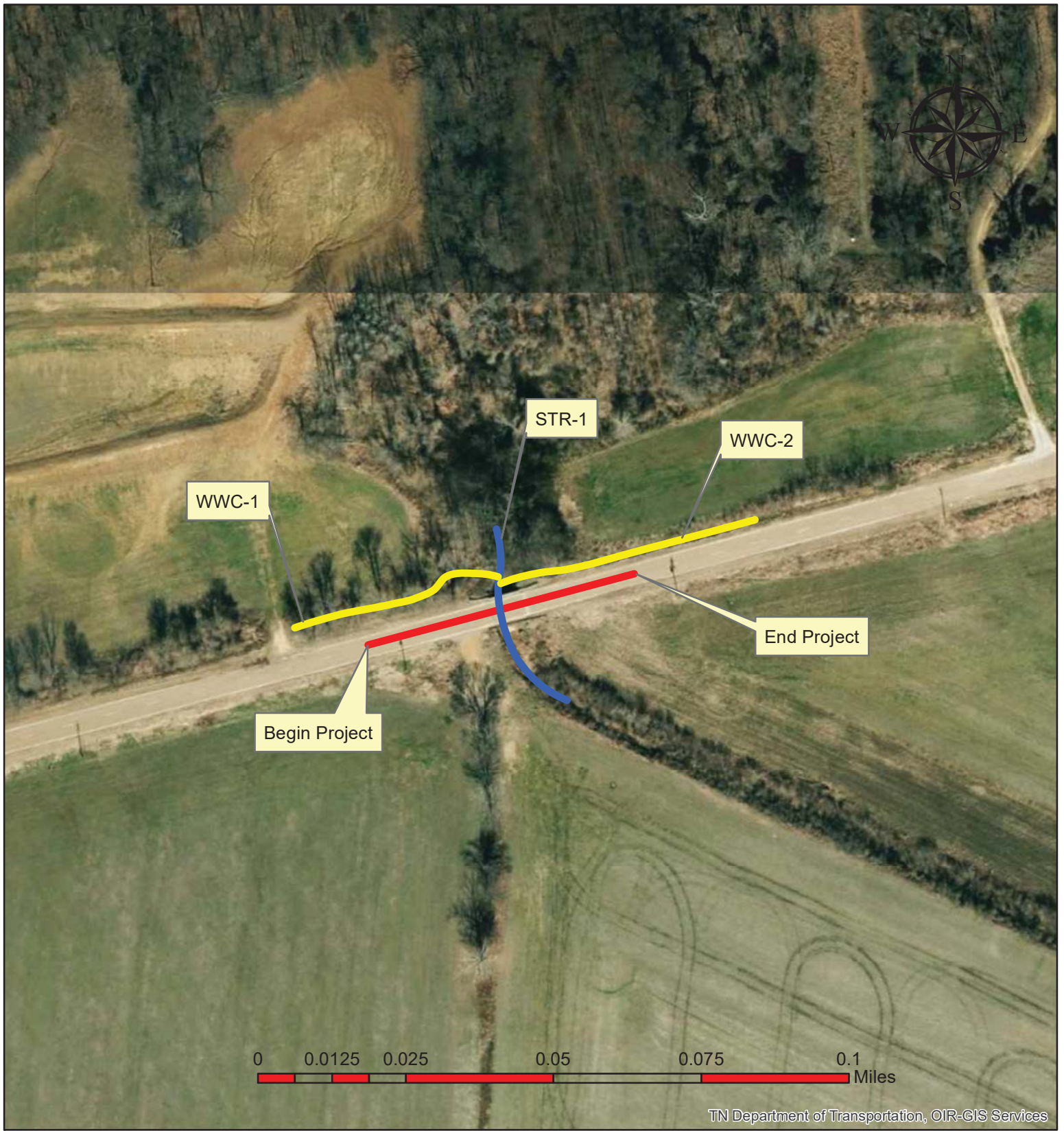
A search of the TDEC rare species database was performed on June 18, 2019. Coordination with TWRA and USFWS is included within this report.

The previous commitment concerning tree removal was removed due to distance for documented roosts, hibernacula, and habitat.

Your assistance is appreciated. If you have any questions or comments, please contact Dustin Tucker in the Region 4 Environmental Tech Office at 731-935-0101 or dustin.tucker@tn.gov.

xc: Rachel Webb
Gary Scruggs
Randall Mann
Lou Timms
Jared McCoy
Glen Blakenship
James Boyd
John Hewitt
D.J. Wiseman
Michael White
Khalid Ahmed
Sharon Sanders
Rita Thompson
Greg Harris

TDOT.ENV.NEPA
R4.ENVTechOffice
TDOT. Env. Ecology
TDOT.Env.Mitigation

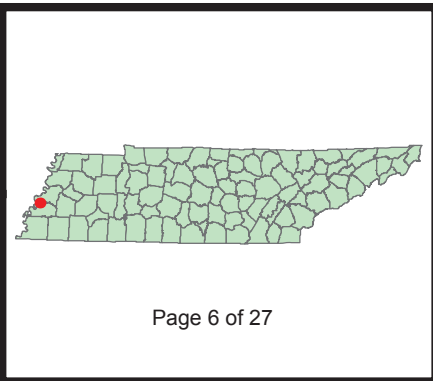
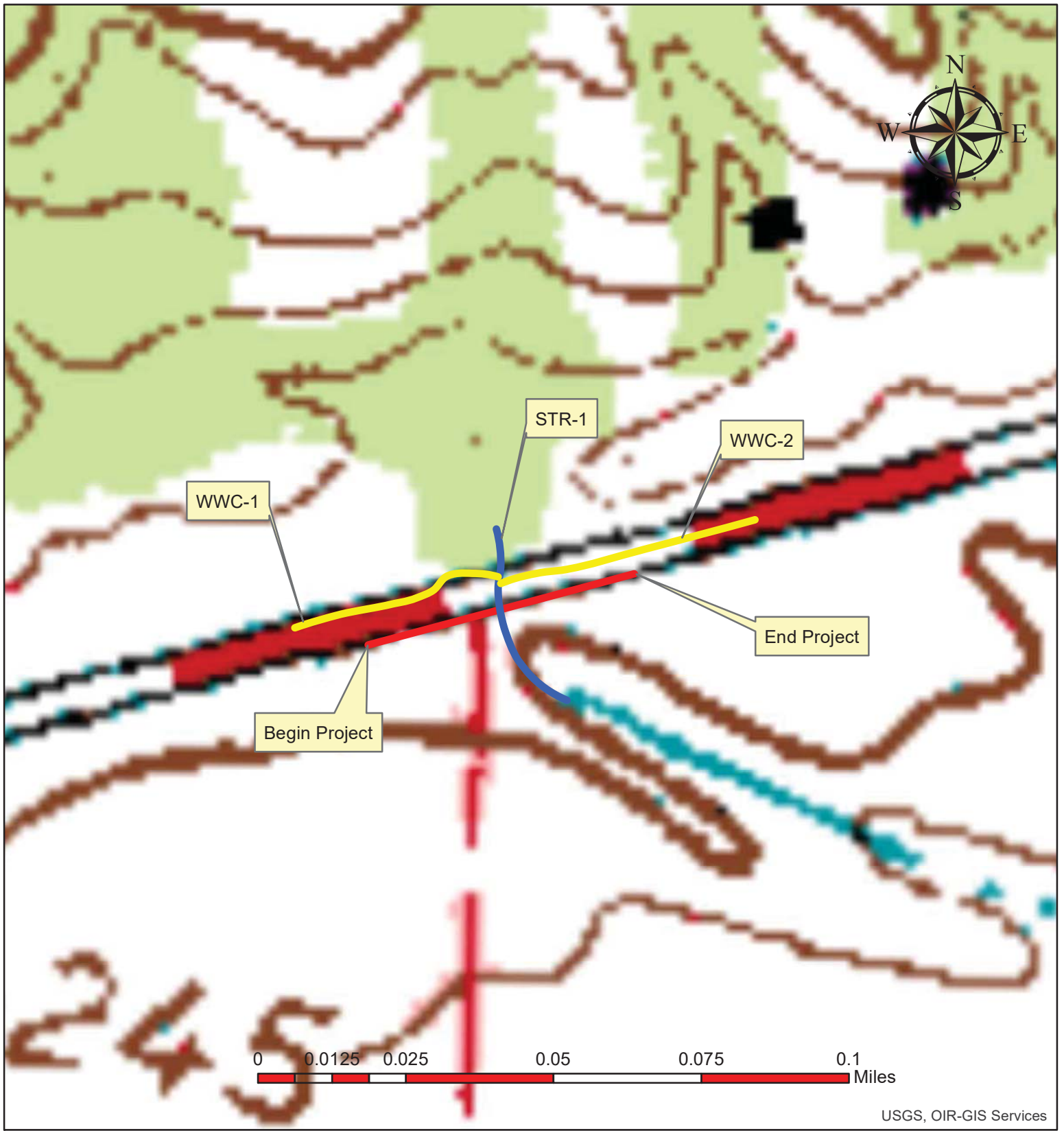


Lauderdale County; SR-87, Bridge over Overflow LM 3.88

PIN 124637.00

5/15/2018





Lauderdale County; SR-87, Bridge over Overflow LM 3.88

PIN 124637.00

5/15/2018



Preliminary Impact Form

County: Lauderdale Route: SR-87 PIN: 124637.00

Date Prepared: 5/15/18

Prepared by:
Eric Philipps

NOTE: *This document is for "preliminary" use only and will not be considered accurate until the time of permit application.*

Streams

Labels	Type *	Function	Quality	Impacts (feet)		
				Permanent	Temporary	Total
STR-1	Stream		Undetermined at this time	100.00		100.00
			Total	100.00		100.00

* Identification of features has not been reviewed by regulatory agencies and determinations could possibly be changed.

Table 1. Calculation of Normal Weather Conditions / Covington, TN - May 2018

		Long-term Rainfall Records								
	Month	Minus one Std. Dev (DRY)	Normal (Mean Inches)	Plus One Std. Dev. (WET)	Actual Rainfall	Condition	Condition Value	Month Weight Value	Product of Previous two columns	
1st month prior	Apr	3.17	4.4	5.2	3.41	Normal	2	3	6	
2nd Month prior	Mar	3.67	5.24	6.22	6.15	Normal	2	2	4	
3rd month prior	Feb	4.14	5.91	7.02	15.43	Wet	3	1	3	
								Sum	13	

Note:	
If sum is:	
6-9	then prior period has been drier than normal
10-14	then prior period has been normal
15-18	then prior period has been wetter than normal

Condition Value	
Dry =	1
Normal =	2
Wet=	3

Conclusions:

Prior period has been normal.

Ecology Field Data Sheet: Water Resources

Project:		SR-87, Bridge over Overflow, LM 3.88					
Biologist:	Eric Philipps	Affiliation:	TDOT	Date:	4/30/2018		
1-Station: from plans	Unavailable						
2-Map label and name	STR-1						
3-Latitude/Longitude	35.626942, -89.826218						
4-Potential impact	Runoff, Encapsulation, Fill, Relocation						
5-Feature description:							
-channel identification	perennial stream	intermittent stream	ephemeral stream	wwc			
-HD score (if applicable)							
-OHWM indicators	bed & banks <input checked="" type="checkbox"/>	deposition <input checked="" type="checkbox"/>	presence of litter / debris <input checked="" type="checkbox"/>	scour <input checked="" type="checkbox"/>	veg absent, bent, matted <input checked="" type="checkbox"/>		
	change in plant community <input checked="" type="checkbox"/>	destruction of terrestrial veg <input checked="" type="checkbox"/>	multiple observed flow events <input checked="" type="checkbox"/>	sediment sorting <input checked="" type="checkbox"/>	water staining <input checked="" type="checkbox"/>		
	change in soil character <input checked="" type="checkbox"/>	leaf litter disturbed absent <input checked="" type="checkbox"/>	natural line impressed on bank <input checked="" type="checkbox"/>	shelving <input type="checkbox"/>	wracking <input checked="" type="checkbox"/>		
-sinuosity	absent <input type="checkbox"/>	weak <input checked="" type="checkbox"/>	moderate <input type="checkbox"/>	strong <input type="checkbox"/>			
-channel bottom width	~3 ft		-top of bank width		~17 ft		
- avg. gradient of stream (%)	Low						
-bank height and slope ratio	LDB - ~6 ft			RDB - ~6 ft			
-water flow	fast <input type="checkbox"/>	moderate <input type="checkbox"/>	slow <input checked="" type="checkbox"/>	isolated pools <input type="checkbox"/>	none <input type="checkbox"/>		
-water depth (riffles / pools)	~(.5/1) ft		water width (riffles / pools)		~3 ft		
-bank stability: LDB, RDB	LDB: Stable <input checked="" type="checkbox"/>	Eroding <input type="checkbox"/>	Undercutting <input type="checkbox"/>	Sloughing <input type="checkbox"/>	Exposed Roots <input checked="" type="checkbox"/>		
	RDB: Stable <input checked="" type="checkbox"/>	Eroding <input type="checkbox"/>	Undercutting <input type="checkbox"/>	Sloughing <input type="checkbox"/>	Exposed Roots <input type="checkbox"/>		
-dominant riparian species: ------(LDB /RDB)-----	LDB: Boxelder, poison ivy, grapevine						
	RDB: Boxelder, poison ivy, grapevine						
-habitat assessment score	97						
	epifaunal substrate	14	channel alteration	13			
	channel substrate	10	channel sinuosity	5			
	pool variability	4	bank stability	LDB	7	RDB 7	
	sediment deposition	5	bank vegetative protection	LDB	4	RDB 4	
	channel flow status	20	riparian veg zone width	LDB	2	RDB 2	
-benthos	None observed						
-fish	None observed						
-algae or other aquatic life	Algae & periphyton observed						
6-photo numbers	1 & 2						
7-rainfall information	2.20" last 7 days						
8-HUC -12 Code & Name	080102080806 Hatchie River Outlet						
9-Confirmed by:							
10-Assessed	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>					
11-ETW	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>					
12-303 (d) List	yes <input type="checkbox"/>	siltation <input type="checkbox"/>	habitat: <input type="checkbox"/>	other: <input type="checkbox"/>			
	no <input checked="" type="checkbox"/>						
13-Notes							

Ecology Field Data Sheet: Water Resources

Project:		SR-87, Bridge over Overflow, LM 3.88					
Biologist:	Eric Philipps	Affiliation:	TDOT	Date:	4/30/2018		
1-Station: from plans	Unavailable						
2-Map label and name	WWC-1						
3-Latitude/Longitude	35.627003, -89.826286						
4-Potential impact	Runoff, Encapsulation, Fill, Relocation						
5-Feature description:							
-channel identification	perennial stream	intermittent stream	ephemeral stream	WWC			
-HD score (if applicable)	14						
-OHWM indicators	bed & banks <input type="checkbox"/>	deposition <input type="checkbox"/>	presence of litter / debris <input type="checkbox"/>	scour <input type="checkbox"/>	veg absent, bent, matted <input type="checkbox"/>		
	change in plant community <input type="checkbox"/>	destruction of terrestrial veg <input type="checkbox"/>	multiple observed flow events <input type="checkbox"/>	sediment sorting <input type="checkbox"/>	water staining <input type="checkbox"/>		
	change in soil character <input type="checkbox"/>	leaf litter disturbed absent <input type="checkbox"/>	natural line impressed on bank <input type="checkbox"/>	shelving <input type="checkbox"/>	wracking <input type="checkbox"/>		
-sinuosity	absent <input type="checkbox"/>	weak <input checked="" type="checkbox"/>	moderate <input type="checkbox"/>	strong <input type="checkbox"/>			
-channel bottom width	~2 ft		-top of bank width	~6 ft			
- avg. gradient of stream (%)	Low						
-bank height and slope ratio	LDB - ~4 ft			RDB - ~4 ft			
-water flow	fast <input type="checkbox"/>	moderate <input type="checkbox"/>	slow <input type="checkbox"/>	isolated pools <input checked="" type="checkbox"/>	none <input type="checkbox"/>		
-water depth (riffles / pools)	~1 in		water width (riffles / pools)	~1.5 ft			
-bank stability: LDB, RDB	LDB: Stable <input checked="" type="checkbox"/>	Eroding <input type="checkbox"/>	Undercutting <input type="checkbox"/>	Sloughing <input type="checkbox"/>	Exposed Roots <input checked="" type="checkbox"/>		
	RDB: Stable <input checked="" type="checkbox"/>	Eroding <input type="checkbox"/>	Undercutting <input type="checkbox"/>	Sloughing <input type="checkbox"/>	Exposed Roots <input checked="" type="checkbox"/>		
-dominant riparian species: ------(LDB /RDB)-----	LDB: Boxelder, American elm, sweetgum, virginia creeper						
	RDB: Boxelder, American elm, sweetgum, virginia creeper						
-habitat assessment score	0						
	epifaunal substrate		channel alteration				
	channel substrate		channel sinuosity				
	pool variability		bank stability		LDB	RDB	
	sediment deposition		bank vegetative protection		LDB	RDB	
	channel flow status		riparian veg zone width		LDB	RDB	
-benthos	None observed						
-fish	None observed						
-algae or other aquatic life	None observed						
6-photo numbers	3, 4						
7-rainfall information	2.20" last 7 days						
8-HUC -12 Code & Name	080102080806 Hatchie River Outlet						
9-Confirmed by:							
10-Assessed	yes <input type="checkbox"/>	no <input type="checkbox"/>					
11-ETW	yes <input type="checkbox"/>	no <input type="checkbox"/>					
12-303 (d) List	yes <input type="checkbox"/>	siltation <input type="checkbox"/>	habitat: <input type="checkbox"/>	other: <input type="checkbox"/>			
	no <input type="checkbox"/>						
13-Notes							

Hydrologic Determination Field Data Sheet

Tennessee Division of Water Pollution Control, Version 1.4

County: Lauderdale	Named Waterbody:	Date/Time: 4/30/2018
Assessors/Affiliation: Eric Philipps, TDOT	Project ID: 124637.00	
Site Name/Description: WWC-1		
Site Location: Approximately .48 miles west of intersection of SR-87 and Crutcher Lake Road		
USGS quad: Golddust, TN-AR 2016	HUC (12 digit): 080102080806	Lat/Long: 35.627003, -89.826286
Previous Rainfall (7-days) : 2.20"		
Precipitation this Season vs. Normal : very wet wet average dry drought unknown		
Source of recent & seasonal precip data : AgACIS		
Watershed Size : <0.03 sq miles	Photos: Yes	Number : 3, 4
Soil Type(s) / Geology : Adler silt loam, occasionally flooded		
Surrounding Land Use : Agricultural, Forested		
Degree of historical alteration to natural channel morphology & hydrology (circle one & describe fully in Notes) :		
Severe	Moderate	Slight Absent

Primary Field Indicators Observed

Primary Indicators	NO	YES
1. Hydrologic feature exists solely due to a process discharge	✓	WWC
2. Defined bed and bank absent, dominated by upland vegetation / grass	✓	WWC
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions	✓	WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	✓	WWC
5. Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase	✓	Stream
6. Presence of fish (except <i>Gambusia</i>)	✓	Stream
7. Presence of naturally occurring ground water table connection	✓	Stream
8. Flowing water in channel and 7 days since last precipitation in local watershed	✓	Stream
9. Evidence watercourse has been used as a supply of drinking water	✓	Stream

NOTE : If any Primary Indicators 1-9 = "Yes", then STOP; absent directly contradictory evidence, determination is complete.

In the absence of a primary indicator, or other definitive evidence, complete the secondary indicator table on page 2 of this sheet, and provide score below.

Guidance for the interpretation and scoring of both the primary & secondary indicators is provided in *TDEC-WPC Guidance For Making Hydrologic Determinations, Version 1.4*

Overall Hydrologic Determination = WWC

Secondary Indicator Score (if applicable) = 14

Justification / Notes :

Ecology Field Data Sheet: Water Resources

Project:		SR-87, Bridge over Overflow, LM 3.88			
Biologist:	Eric Philipps	Affiliation:	TDOT	Date:	4/30/2018
1-Station: from plans	Unavailable				
2-Map label and name	WWC-2				
3-Latitude/Longitude	35.626991, -89.826134				
4-Potential impact	Runoff, Encapsulation, Fill, Relocation				
5-Feature description:					
-channel identification	perennial stream	intermittent stream	ephemeral stream	WWC	
-HD score (if applicable)	17.5				
-OHWM indicators	bed & banks <input type="checkbox"/>	deposition <input type="checkbox"/>	presence of litter / debris <input type="checkbox"/>	scour <input type="checkbox"/>	veg absent, bent, matted <input type="checkbox"/>
	change in plant community <input type="checkbox"/>	destruction of terrestrial veg <input type="checkbox"/>	multiple observed flow events <input type="checkbox"/>	sediment sorting <input type="checkbox"/>	water staining <input type="checkbox"/>
	change in soil character <input type="checkbox"/>	leaf litter disturbed absent <input type="checkbox"/>	natural line impressed on bank <input type="checkbox"/>	shelving <input type="checkbox"/>	wracking <input type="checkbox"/>
-sinuosity	absent <input checked="" type="checkbox"/>	weak <input type="checkbox"/>	moderate <input type="checkbox"/>	strong <input type="checkbox"/>	
-channel bottom width	~2.5 ft		-top of bank width	~4.5 ft	
- avg. gradient of stream (%)	Low				
-bank height and slope ratio	LDB - ~3 ft		RDB - ~3 ft		
-water flow	fast <input type="checkbox"/>	moderate <input type="checkbox"/>	slow <input checked="" type="checkbox"/>	isolated pools <input type="checkbox"/>	none <input type="checkbox"/>
-water depth (riffles / pools)	~(2/3) in		water width (riffles / pools)	~2.5 ft	
-bank stability: LDB, RDB	LDB: Stable <input checked="" type="checkbox"/>	Eroding <input type="checkbox"/>	Undercutting <input type="checkbox"/>	Sloughing <input type="checkbox"/>	Exposed Roots <input type="checkbox"/>
	RDB: Stable <input checked="" type="checkbox"/>	Eroding <input type="checkbox"/>	Undercutting <input type="checkbox"/>	Sloughing <input type="checkbox"/>	Exposed Roots <input type="checkbox"/>
-dominant riparian species: ------(LDB /RDB)-----	LDB: American elm, grasses, boxelder, curlydock				
	RDB: American elm, grasses, boxelder, curlydock				
-habitat assessment score	0				
	epifaunal substrate		channel alteration		
	channel substrate		channel sinuosity		
	pool variability		bank stability	LDB	RDB
	sediment deposition		bank vegetative protection	LDB	RDB
	channel flow status		riparian veg zone width	LDB	RDB
-benthos	None observed				
-fish	None observed				
-algae or other aquatic life	None observed				
6-photo numbers	5, 6				
7-rainfall information	2.20" last 7 days				
8-HUC -12 Code & Name	080102080806 Hatchie River Outlet				
9-Confirmed by:					
10-Assessed	yes <input type="checkbox"/>	no <input type="checkbox"/>			
11-ETW	yes <input type="checkbox"/>	no <input type="checkbox"/>			
12-303 (d) List	yes <input type="checkbox"/>	siltation <input type="checkbox"/>	habitat: <input type="checkbox"/>	other: <input type="checkbox"/>	
	no <input type="checkbox"/>				
13-Notes					

Hydrologic Determination Field Data Sheet

Tennessee Division of Water Pollution Control, Version 1.4

County: Lauderdale	Named Waterbody:	Date/Time: 4/30/2018
Assessors/Affiliation: Eric Philipps, TDOT	Project ID: 124637.00	
Site Name/Description: WWC-2		
Site Location: Approximately .47 miles west of intersection of SR-87 and Crutcher Lake Road		
USGS quad: Golddust, TN-AR 2016	HUC (12 digit): 080102080806	Lat/Long: 35.626991, -89.826134
Previous Rainfall (7-days) : 2.20"		
Precipitation this Season vs. Normal : very wet wet average dry drought unknown		
Source of recent & seasonal precip data : AgACIS		
Watershed Size : <0.03 sq miles	Photos: Yes	Number : 5, 6
Soil Type(s) / Geology : Adler silt loam, occasionally flooded		
Surrounding Land Use : Agricultural, Forested		
Degree of historical alteration to natural channel morphology & hydrology (circle one & describe fully in Notes) : Severe Moderate Slight Absent		

Primary Field Indicators Observed

Primary Indicators	NO	YES
1. Hydrologic feature exists solely due to a process discharge	✓	WWC
2. Defined bed and bank absent, dominated by upland vegetation / grass	✓	WWC
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions	✓	WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	✓	WWC
5. Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase	✓	Stream
6. Presence of fish (except <i>Gambusia</i>)	✓	Stream
7. Presence of naturally occurring ground water table connection	✓	Stream
8. Flowing water in channel and 7 days since last precipitation in local watershed	✓	Stream
9. Evidence watercourse has been used as a supply of drinking water	✓	Stream

NOTE : If any Primary Indicators 1-9 = "Yes", then STOP; absent directly contradictory evidence, determination is complete.

In the absence of a primary indicator, or other definitive evidence, complete the secondary indicator table on page 2 of this sheet, and provide score below.

Guidance for the interpretation and scoring of both the primary & secondary indicators is provided in *TDEC-WPC Guidance For Making Hydrologic Determinations, Version 1.4*

Overall Hydrologic Determination = WWC

Secondary Indicator Score (if applicable) = 17.5

Justification / Notes :

Secondary Field Indicator Evaluation

A. Geomorphology (Subtotal =) 7		Absent	Weak	Moderate	Strong
1. Continuous bed and bank	3	0	1	2	3
2. Sinuous channel	0.5	0	1	2	3
3. In-channel structure: riffle-pool sequences	1.5	0	1	2	3
4. Sorting of soil textures or other substrate	0.5	0	1	2	3
5. Active/relic floodplain	0	0	1	2	3
6. Depositional bars or benches	0	0	1	2	3
7. Braided channel	0	0	1	2	3
8. Recent alluvial deposits	0.5	0	0.5	1	1.5
9. Natural levees	0	0	1	2	3
10. Headcuts	0	0	1	2	3
11. Grade controls	1	0	0.5	1	1.5
12. Natural valley or drainageway	0	0	0.5	1	1.5
13. At least second order channel on existing USGS or NRCS map		No = 0			

B. Hydrology (Subtotal =) 5.5		Absent	Weak	Moderate	Strong
14. Subsurface flow/discharge into channel	1	0	1	2	3
15. Water in channel and >48 hours since sig. rain	1	0	1	2	3
16. Leaf litter in channel (January – September)	1	1.5	1	0.5	0
17. Sediment on plants or on debris	0.5	0	0.5	1	1.5
18. Organic debris lines or piles (wrack lines)	0.5	0	0.5	1	1.5
19. Hydric soils in stream bed or sides of channel		Yes = 1.5			

C. Biology (Subtotal =) 5		Absent	Weak	Moderate	Strong
20. Fibrous roots in channel ¹	1	3	2	1	0
21. Rooted plants in channel ¹	1	3	2	1	0
22. Crayfish in stream (exclude in floodplain)	0	0	0.5	1	1.5
23. Bivalves/mussels	0	0	1	2	3
24. Amphibians	0.5	0	0.5	1	1.5
25. Macroinvertebrates (record type & abundance)	0	0	1	2	3
26. Filamentous algae; periphyton	1.5	0	1	2	3
27. Iron oxidizing bacteria/fungus	0	0	0.5	1	1.5
28. Wetland plants in channel ²	1	0	0.5	1	2

¹ Focus is on the presence of upland plants. ² Focus is on the presence of aquatic or wetland plants.

Total Points = 17.5

Under Normal Conditions, Watercourse is a Wet Weather Conveyance if Secondary Indicator Score < 19 points

Notes : Riprap acting as grade control, impeding water flow and allowing for development of wetland-type conditions in standing water. Water entering feature downslope of bluff off fallow fields at private driveway east of bridge. Feature enters STR-1 north of bridge, from the east.

Project: Lauderdale Co, SR-87, Bridge over Overflow LM 3.88

PE No.: 49006-0241-94

PIN: 128113.05

Date of field study: 6/20/2019

Date TDEC database checked: 6/18/2019

Completed by: Dustin Tucker

Species reported within 1 mile radius of project:

Species Scientific and common names, followed by (A) for animal or (P) for plant	Status		Species is potentially present in R-O-W because: (A) it is listed by TDEC within ROW (B) habitat is present (C) observed during site visit (D) critical habitat present within ROW	Species is considered likely NOT present in R-O-W because: (A) Present habitat unsuitable (B) Not observed during site visit (C) Original record questionable (D) Considered extinct/extirpated	Accommodations to minimize impacts: (A) BMPs are sufficient to protect species (B) Special Notes are included on project plans (C) Individuals will be impacted. (D) Accommodations not practical due to broad habitat description or mobility of species	Habitat (include blooming, breeding or other information; where found according to TDEC database; year last observed; reference)	Notes
	Fed	TN					
None							

Species reported within 1-mile to 4-mile radius of project:

Species Scientific and common names, followed by (A) for animal or (P) for plant	Status		Species is potentially present in R-O-W because: (A) it is listed by TDEC within ROW (B) habitat is present (C) observed during site visit (D) critical habitat present within ROW	Species is considered likely NOT present in R-O-W because: (A) Present habitat unsuitable (B) Not observed during site visit (C) Original record questionable (D) Considered extinct/extirpated	Accommodations to minimize impacts: (A) BMPs are sufficient to protect species (B) Special Notes are included on project plans (C) Individuals will be impacted. (D) Accommodations not practical due to broad habitat description or mobility of species	Habitat (include blooming, breeding or other information; where found according to TDEC database; year last observed; reference)	Notes
	Fed	TN					
Juglans cinerea, Butternut (P)		T		B	A	Rich Woods and Hollows; 2007/05/17	
Schisandra glabra, Red Starvine (P)		T		B	A	Rich Mesic Woods, Bluffs; 1988/06/30	
Hybognathus placitus, Plains Minnow (A)		D		B	A	Clear to highly turbid rivers and creeks with sandy bottoms; Mississippi River & imm. environs.; 1968	

Project: Lauderdale Co, SR-87, Bridge over Overflow LM 3.88

PE No.: 49006-0241-94

PIN: 128113.05

Species Scientific and common names, followed by (A) for animal or (P) for plant	Status		Species is potentially present in R-O-W because: (A) it is listed by TDEC within ROW (B) habitat is present (C) observed during site visit (D) critical habitat present within ROW	Species is considered likely NOT present in R-O-W because: (A) Present habitat unsuitable (B) Not observed during site visit (C) Original record questionable (D) Considered extinct/extirpated	Accommodations to minimize impacts: (A) BMPs are sufficient to protect species (B) Special Notes are included on project plans (C) Individuals will be impacted. (D) Accommodations not practical due to broad habitat description or mobility of species	Habitat (include blooming, breeding or other information; where found according to TDEC database; year last observed; reference)	Notes
Anhinga anhinga, Anhinga (A)		D		B	D	Swamps, lakes, and sluggish streams at low elevations; 1986/06	
Myotis austroriparius, Southeastern Myotis (A)		Rare		A	D	Caves, but especially hollow trees & abandoned buildings, usually near water; 2006/08/01	
Atractosteus spatula, Alligator Gar (A)		D		A	A	Sluggish pools of large rivers, oxbows, swamps, and backwaters; west Tennessee; 2001	
Dendroica cerulean, Cerulean Warbler (A)		D		B	D	Mature deciduous forest, particularly in floodplains or mesic condition; 1999/06/06	
Neotoma floridana illinoensis, Eastern Woodrat (A)		D		B	A	Forested areas, caves & outcrops; west Tennessee generally; 2007/05/17	
Carex hyaline, Tissue sedge (P)		S		B	A	Forested Bottomland Swamps; 1995/06/27	
Egretta caerulea, Little Blue Heron (A)		D		B	D	Bodies of calm shallow water; colonial nester; 1975	
Sternula antillarum athalassos, Interior Least Tern (A)	LE	E		B	D	Mississippi River sand bars & islands, dikes; 1996/07/25	
Ictinia mississippiensis, Mississippi Kite (A)		D		B	D	Undisturbed stands of lowland and floodplain forests and along major rivers; 1978	
Ardea alba, Great Egret, (A)		D		B	D	Marshes, swampy woods, streams, lakes, and ponds; also fields and meadows; colonial nester; 1986/02	

Project: Lauderdale Co, SR-87, Bridge over Overflow LM 3.88

PE No.: 49006-0241-94

PIN: 128113.05

Migratory Birds

List **significant concentrations** of migratory birds encountered within the project area (rookeries, aggregations, nesting areas, etc).

Species (Scientific and Common Name)	Approximate No. of Nests (or Individuals)	Location of Nests (or Individuals) (Include Latitude & Longitude)	Nesting Dates and Reference	Photograph #
None				

USFWS letter: Yes X (attached) No ___ (explain)

Biological Assessment: Yes ___ (response letter attached; see below) No X

Species (scientific and common names)	USFWS conclusion ¹
<i>Myotis sodalist</i> (Indiana bat)	Not likely to adversely affect
<i>Myotis septentrionalis</i> (Northern long-eared bat)	Not likely to adversely affect

¹ Choose from "no effect"; "not likely to adversely affect;" or "likely to adversely affect;". If "likely to adversely affect" is chosen, indicate "no jeopardy to species and no adverse modification to habitat" or "jeopardy to species, or adverse modification to habitat" based on FWS concurrence letter



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Tennessee ES Office
446 Neal Street
Cookeville, Tennessee 38501

July 16, 2019

Mr. Dustin Tucker
T.E.S.S. Advanced
Region 4 Biologist
Environmental Technical Office
300 Benchmark Place, Jackson, Tennessee 38301

Subject: FWS# 18-I-0517. Proposed State Route 87 Bridge replacement over an overflow to the Hatchie River at LM 3.88; PIN# 128113.05, Lauderdale County, Tennessee.

Dear Mr. Tucker:

Thank you for your correspondence dated June 21, 2019, regarding the proposed replacement of the State Route 87 Bridge over an overflow to the Hatchie River in Lauderdale County, Tennessee. The project would require the removal of some trees. The Tennessee Department of Transportation (TDOT) has determined that the project is “not likely to adversely affect” the federally endangered Indiana bat (*Myotis sodalis*) or threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*) due to distance from known occurrence records. Personnel of the U.S. Fish and Wildlife Service have reviewed the subject proposal and offer the following comments.

Upon review of available information, we concur with TDOT’s determinations of “not likely to adversely affect” for the Indiana bat and NLEB. We would not anticipate impacts to these or any other federally listed or proposed species as a result of the project. Therefore, based on the best information available at this time, we believe that the requirements of section 7 of the Endangered Species Act (Act) of 1973, as amended, are fulfilled for all species that currently receive protection under the Act. Obligations under the Act should be reconsidered if (1) new information reveals impacts of the proposed action that may affect listed species or critical habitat in a manner not previously considered, (2) the proposed action is subsequently modified to include activities which were not considered during this consultation, or (3) new species are listed or critical habitat designated that might be affected by the proposed action.

TDOT would implement standard best management practices to minimize the potential for sediment and other contaminants to enter this overflow stream. All instream work should be separated from water and scheduled during the low-flow period. Equipment staging and maintenance areas should be developed an adequate distance from the stream to avoid introduction of petroleum-based pollutants into the water. Concrete and cement dust must be contained as they alter water chemical properties and can be toxic to aquatic species.

If you have any questions regarding our comments, please contact John Griffith at 931/525-4995 or by email at john_griffith@fws.gov.

Sincerely,

A handwritten signature in blue ink that reads "Robert E. Sykes". The signature is written in a cursive style with a large, stylized "R" and "S".

Robert E. Sykes
Acting Field Supervisor

xc: Casey Parker, TWRA, Jackson, TN

From: [Casey Parker](#)
To: [Dustin Tucker](#); [TDOT.Env Ecology](#)
Cc: [Rob Todd](#)
Subject: RE: Request for Comment; Lauderdale County; SR-87; 128113.05
Date: Thursday, July 18, 2019 3:26:30 PM
Attachments: [image002.png](#)
[image003.png](#)

Subject: Request for Comment; Lauderdale County; SR-87; 128113.05

Mr. Dustin Tucker,

The Tennessee Wildlife Resources Agency has reviewed the new information regarding the PIN 124637.00 changed to a new PIN 128113.05 and the scope of the work has not changed, therefore our previous comments are still valid on this proposed project. Thank you for the update and the opportunity to review the new information, please contact me if you need further assistance.

Casey Parker - Wildlife Biologist
Liaison to TDOT & Federal Highway Administration
Tennessee Wildlife Resources Agency
Environmental Services Division
Email: casey.parker@tn.gov



From: Dustin Tucker
Sent: Friday, June 21, 2019 1:44 PM
To: Casey Parker
Cc: Lou Timms; Jared McCoy; Rita M. Thompson; Rob Todd
Subject: Request for Comment; Lauderdale County; SR-87; 128113.05

Casey,

TDOT proposes to replace the bridge at the attached location. This project was originally coordinated under the PIN 124637.00 and has since been moved into a different PIN. The scope of the project has not changed. Attached is the original coordination. Species and project information is included. If you have any questions, please let me know.

Thank you,



Dustin Tucker | Environmental Studies Specialist Advanced
Region 4, Environmental Tech Office
Project Development
Building A, 1st floor
300 Benchmark Place, Jackson, TN 38301
p. 731-935-0101 c. 731-412-2000
dustin.tucker@tn.gov
tn.gov/tdot

Index Of Sheets

PRELIMINARY INDEX OF SHEETS

TITLE SHEET..... 1
 TYPICAL SECTIONS.....2B
 RIGHT-OF-WAY NOTES, UTILITY NOTES and UTILITY OWNERS.....3
 RIGHT-OF-WAY ACQUISITION TABLE(S) and PROPERTY MAP(S).....3A
 PRESENT LAYOUT(S).....4
 RIGHT OF WAY DETAILS.....4A
 PROPOSED LAYOUT(S).....4B
 PROPOSED PROFILE(S).....4C
 PRIVATE DRIVE, BUSINESS, AND FIELD ENTRANCE PROFILE(S).....5
 DRAINAGE MAP(S).....6
 CULVERT SECTION(S).....7
 ROADWAY CROSS SECTIONS.....8-17

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 BUREAU OF ENGINEERING

LAUDERDALE COUNTY

S.R. 87 BRIDGE REPLACEMENT
 OVER OVERFLOW AT L.M. 3.88

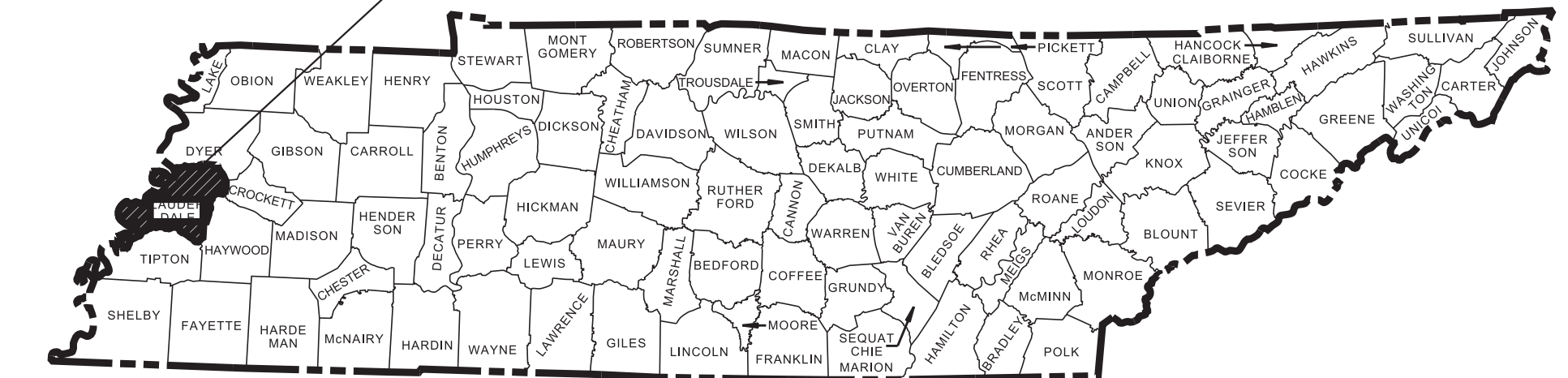
PRELIMINARY

STATE HIGHWAY NO. 87 U.S. ROUTE NO.

DOES THIS PROJECT QUALIFY FOR UTILITY CHAPTER 86	YES X	NO
--------------------------------------------------	-------	----

TENN.	YEAR 2019	SHEET NO. 1
FED. AID PROJ. NO.	BR-STP-87(9)	
STATE PROJ. NO.	49006-0241-94	

PROJECT LOCATION
 BRIDGE ID. # 49SR0870011



PROJECT LOCATION
 BRIDGE ID. #

**FOR USE IN THE
 ECOLOGY REPORT
 ONLY**

49006-0241-94
 END PROJECT NO. BR-STP-87(9) PRELIMINARY

STA. 111+50.00
 N 493203.6035 E 832072.0596

49006-0241-94
 BEGIN PROJECT NO. BR-STP-87(9) PRELIMINARY

STA. 104+50.00
 N 493023.5480 E 831395.6142

SPECIAL NOTES

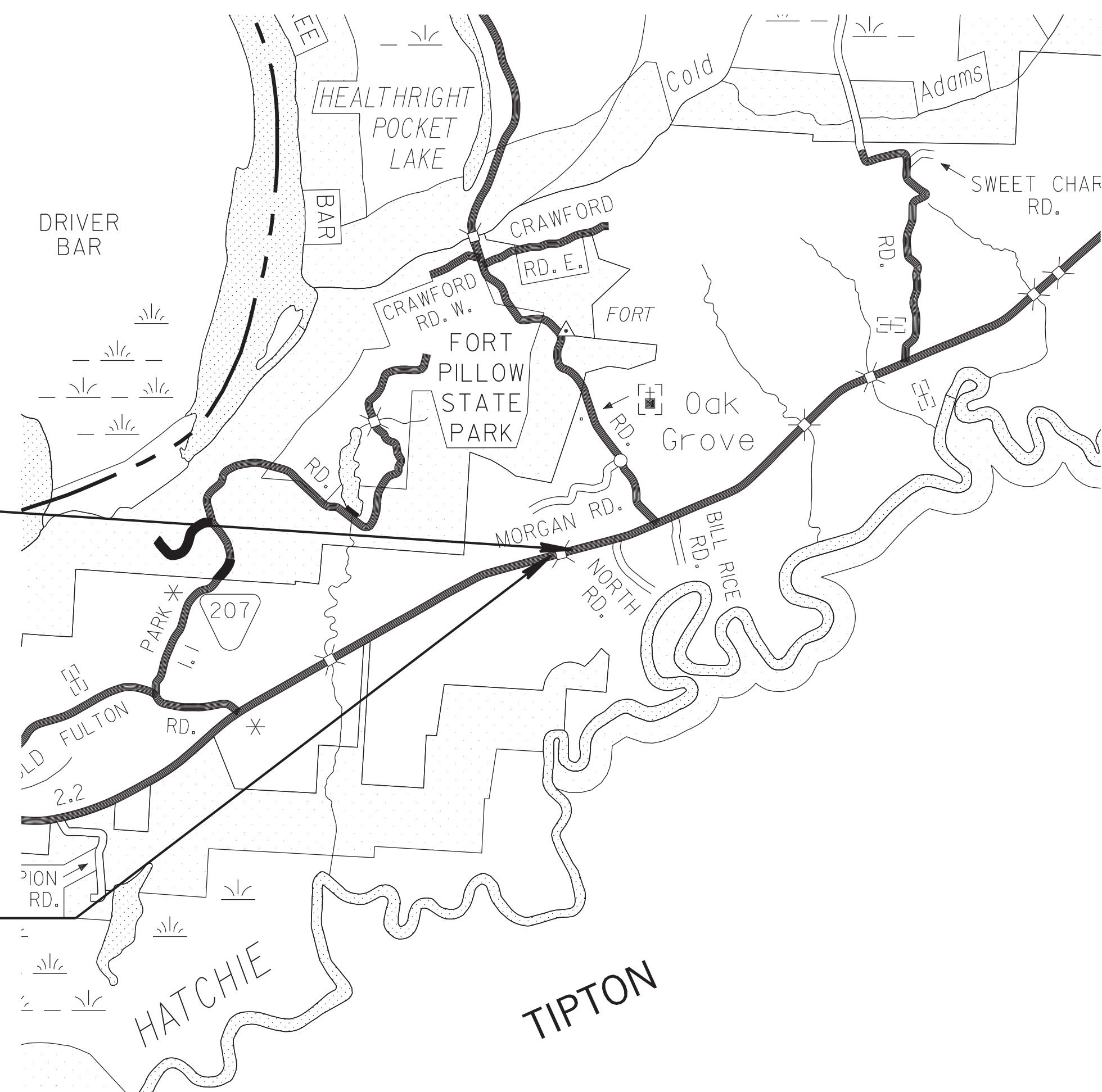
PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED JANUARY 1, 2015 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

TDOT C.E. MANAGER 1 OR
 TDOT TRANSPORTATION MANAGER 1: STEPHANIE KISSELL

DESIGNED BY: HDR ENGINEERING, INC.
 DESIGNER: GREG CLUCKER CHECKED BY: KEVIN CAGLE

P.E. NO. 49006-0241-94 (NEPA)
 PIN NO. 128113.05



SCALE: 1"= 1/2 MILES



R.O.W. LENGTH	0.133 MILES
ROADWAY LENGTH	0.133 MILES
BRIDGE LENGTH	0.000 MILES
BOX BRIDGE LENGTH	0.000 MILES
BOX BRIDGE LENGTH	0.000 MILES ▲
PROJECT LENGTH	0.133 MILES

▲ Not included in the project length (Non Riding Surface).

NO EXCLUSIONS

PRELIMINARY
 PLANS

CAUTION!
 PRELIMINARY
 PLANS
 SUBJECT TO
 CHANGE

SEALED BY

APPROVED: Paul D. Degges
 PAUL D. DEGGES, CHIEF ENGINEER

DATE:

APPROVED: Clay Bright
 CLAY BRIGHT, COMMISSIONER

S.R. 87

SURVEY 08-30-18	TRAFFIC DATA
	ADT (2022) 410
	ADT (2042) 490
	DHV (2042) 64
	D 65 - 35
	T (ADT) 14 %
	T (DHV) 9 %
	V 55 MPH

COORDINATES ARE NAD 83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00005 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 03.

U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION

APPROVED: _____
 DIVISION ADMINISTRATOR DATE

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM	2019	BR-STP-87(9)	4

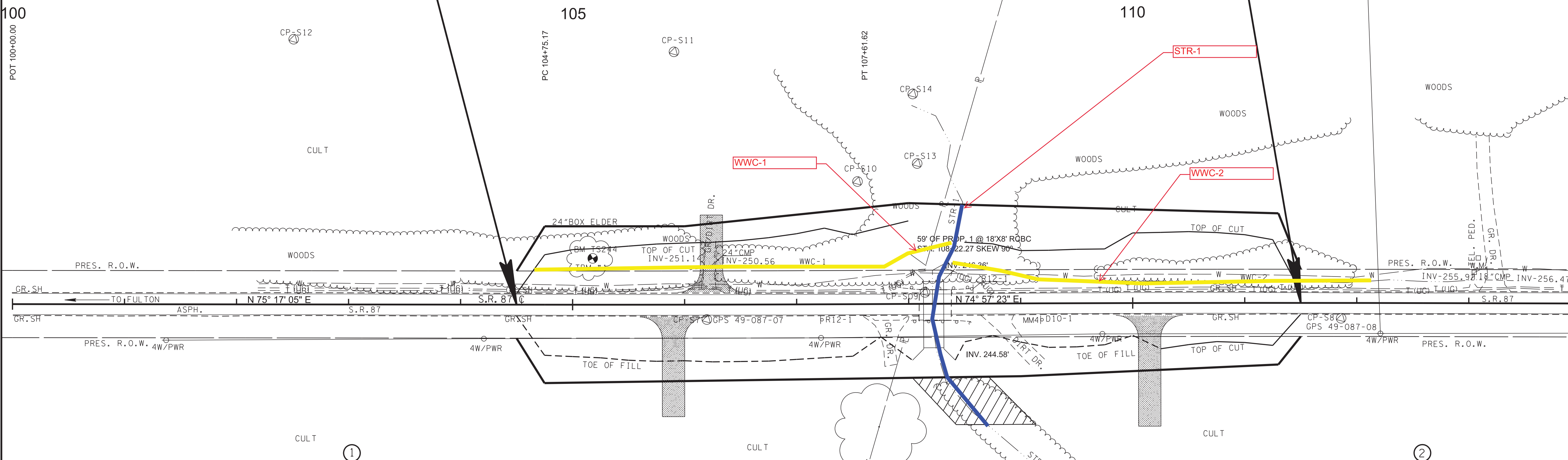
BEGIN PROJ. NO. BR-STP-87(9) R.O.W.
 STA. 104+50.00
 N 493023.5480
 E 831395.6142

END PROJ. NO. BR-STP-87(9) R.O.W.
 STA. 111+50.00
 N 493203.6035
 E 832072.0596

WILLIAM F OZMENT & MARILYN & LANIER
 JOHN B-TR JOHN BUSSEY LANIER TRUST

RICHARD STEPHEN SULLIVAN,
 RICHARD VANHURST & WIFE

POT 100+00.00



WILLIAM F OZMENT & MARILYN & LANIER
 JOHN B-TR JOHN BUSSEY LANIER TRUST

RICHARD STEPHEN SULLIVAN,
 RICHARD VANHURST & WIFE

Point	North	East	Station	Offset	Desc.
S7	493053.9886	831563.2732	106+19.85	13.3557	GPS 49-087-07
S8	493199.4572	832110.4706	111+86.10	13.7770	GPS 49-087-08
S09	493127.1037	831745.4092	108+14.69	-10.1804	XCP
S10	493207.4282	831661.8638	107+54.84	-109.4362	XCP
S11	493277.6215	831473.9452	105+90.82	-225.7091	XCP
S12	493201.8973	831142.8189	102+50.80	-236.7139	XCP
S13	493236.5575	831709.2647	108+08.19	-125.2645	XCP
S14	493295.5641	831689.6301	108+04.54	-187.3451	XCP

SR 87
 PI 106+18.40
 N 493,066.3247
 E 831,558.4908
 Δ 0° 19' 42" (LT)
 D 0° 06' 53"
 R 50,000.00
 L 286.45
 T 143.23
 SE NC
 DESIGN SPEED 55 MPH

SR 87
 PI 110+63.45
 N 493,181.8388
 E 831,988.2852
 Δ 0° 24' 29" (RT)
 D 0° 06' 15"
 R 55,000.00
 L 391.80
 T 195.90
 SE NC
 DESIGN SPEED 55 MPH

CAUTION!
PRELIMINARY
PLANS
SUBJECT TO
CHANGE

SEALED BY

COORDINATES ARE NAD 83(1995), ARE
 DATUM ADJUSTED BY THE FACTOR
 OF 1.00005 AND TIED TO THE TGRN.
 ALL ELEVATIONS ARE REFERENCED
 TO THE NAVD 1988 WITH GEOID 03.

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

PRESENT
 LAYOUT

STA. 104+50 TO STA. 111+50
 SCALE: 1"= 50'

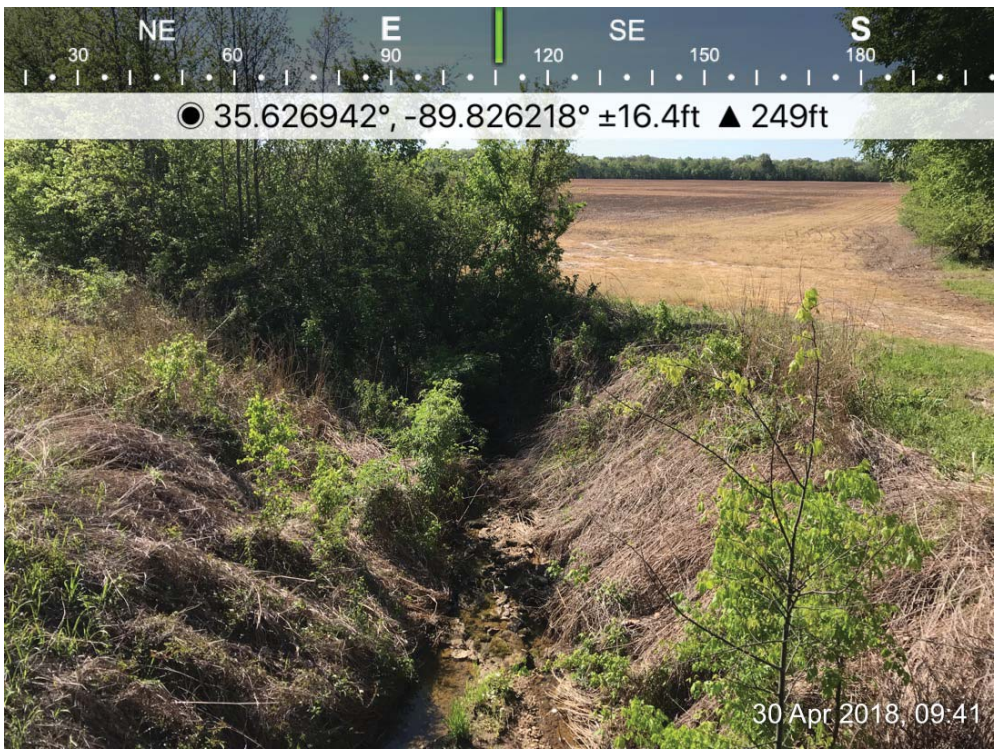


Photo 1. STR-1 — Looking downstream from bridge

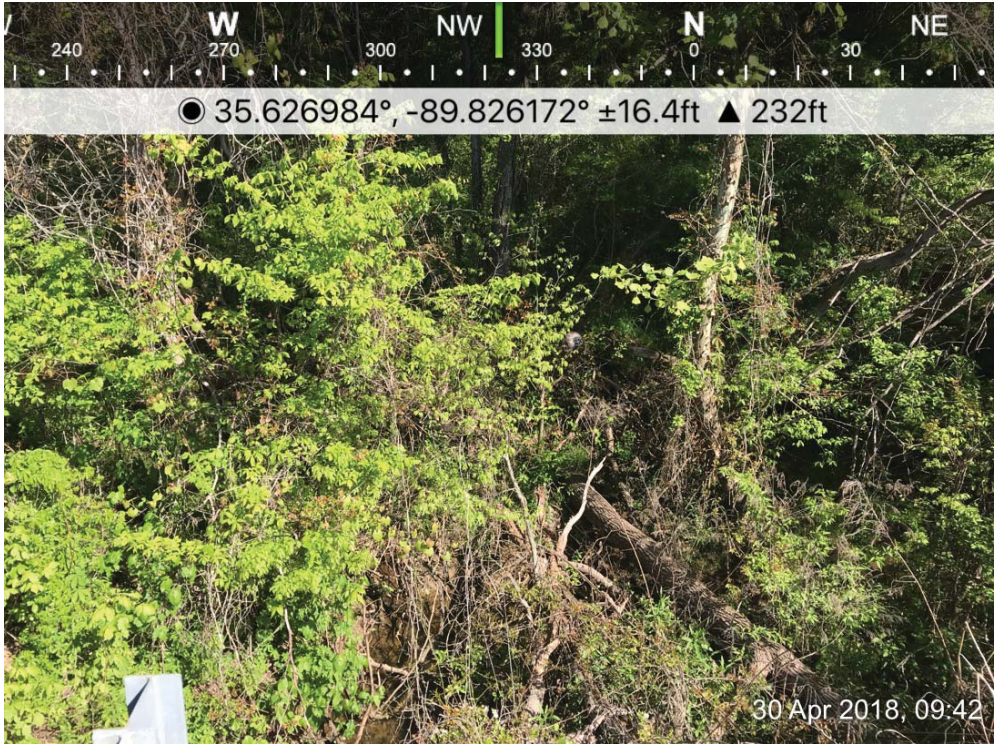


Photo 2. STR-1 — Looking upstream from bridge



Photo 3. WWC-1 — Looking up gradient



Photo 4. WWC-1 — Looking down gradient, toward confluence with STR-1

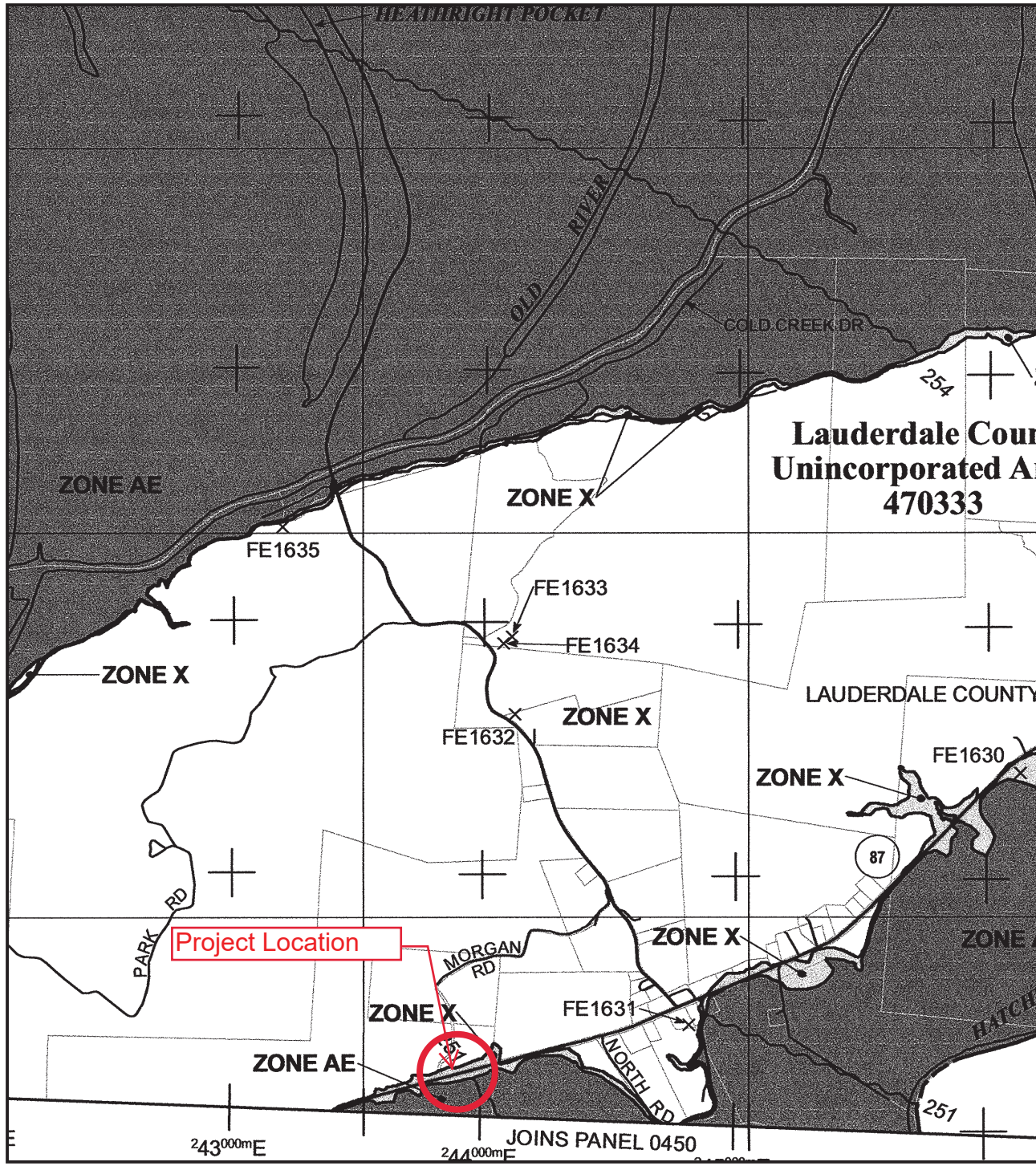


Photo 5. WWC-2 — Looking down gradient, toward confluence with STR-1

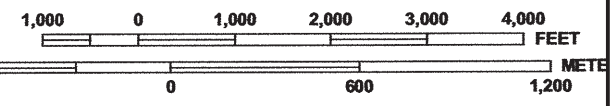


Photo 6. WWC-2 — Looking up gradient

Floodplain Management



MAP SCALE 1" = 2000'



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0325D

FIRM
FLOOD INSURANCE RATE MAP
LAUDERDALE COUNTY,
TENNESSEE
AND INCORPORATED AREAS

PANEL 325 OF 500
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
LAUDERDALE COUNTY	470333	0325	D

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
47097C0325D
EFFECTIVE DATE
SEPTEMBER 28, 2007



Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

Air and Noise

Environmental Studies Request

Project Information

Route: State Route 87
Termini: Bridge over Overflow, Log Mile (LM) 3.88
County: Lauderdale
PIN: 128113.05

Request

Request Type: Environmental Study Reevaluation
Project Plans: Initial Studies
Date of Plans: 06/12/2019
Location: Email Attachment

Certification

Requestor: Jonathan Knudsen
Title: TDOT Environmental Studies Specialist

Signature: Jonathan
Knudsen

Digitally signed by
Jonathan Knudsen
Date: 2019.06.14
10:38:53 -05'00'

Environmental Study

Technical Section

Section: Air and Noise

Study Results

AIR QUALITY

Transportation Conformity

This project is in Lauderdale County which is in attainment for all regulated criteria pollutants. Therefore, conformity does not apply to this project.

Mobile Source Air Toxics (MSATs)

This project qualifies as a categorical exclusion under 23 CFR 771.117 and, therefore, does not require an evaluation of MSATs per FHWA's "Interim Guidance Update on Air Toxic Analysis in NEPA Documents" dated October 2016.

NOISE

This project is Type III in accordance with the FHWA noise regulation in 23 CFR 772 and TDOT's noise policy; therefore, a noise study is not needed.

Commitments

Did the study of this project result in any environmental commitments?

No

Additional Information

Is there any additional information or material included with this study?

No

Certification

Responder: Chasity L. Stinson

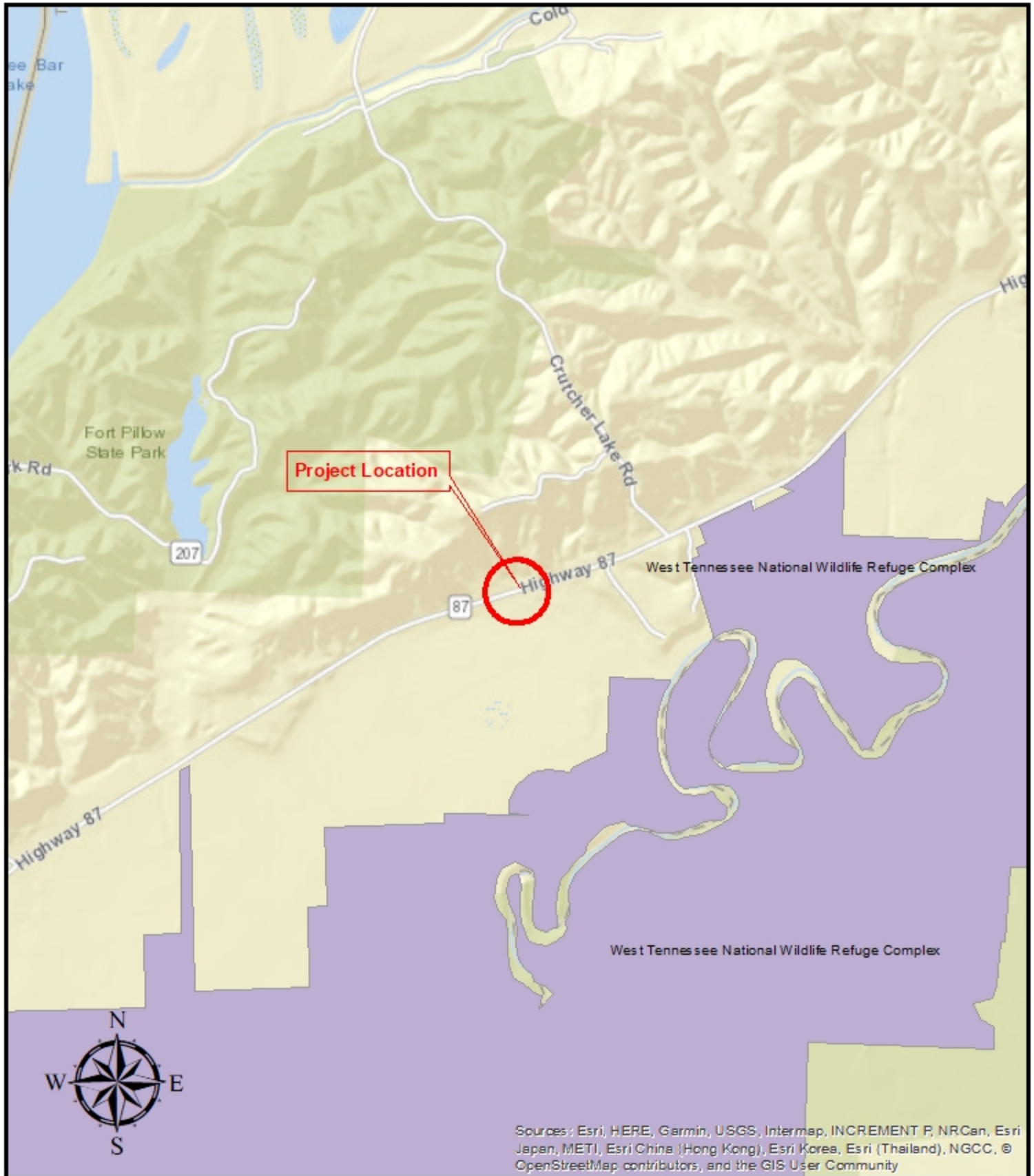
Title: TESS Advanced, TDOT Air and Noise Section

Signature: Chasity L.
Stinson

Digitally signed by
Chasity L. Stinson
Date: 2019.06.19
13:59:14 -05'00'

Section 4(f)

**Lower Hatchie River National Wildlife Refuge Boundary Map
State Route (SR) 87
S.R. Bridge Replacement over Overflow at L.M. 3.88
Lauderdale County
PIN 128113.05**



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

Miles

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Cultural Resources

Environmental Studies Request

Project Information

Route: State Route 87
Termini: Bridge over Overflow, Log Mile (LM) 3.88
County: Lauderdale
PIN: 128113.05

Request

Request Type: Environmental Study Reevaluation
Project Plans: Initial Studies
Date of Plans: 06/12/2019
Location: Email Attachment

Certification

Requestor: Jonathan Knudsen
Title: TDOT Environmental Studies Specialist

Signature: Jonathan
Knudsen

Digitally signed by
Jonathan Knudsen
Date: 2019.06.14
10:38:53 -05'00'

Environmental Study

Technical Section

Section: Archaeology

Study Results

In a letter dated June 21, 2018 the TN SHPO concurred that no NRHP listed, eligible, or potentially eligible properties would be affected by this undertaking.

Commitments

Did the study of this project result in any environmental commitments?

No

Additional Information

Is there any additional information or material included with this study?

No

Certification

Responder: Sarah Kate McKinney

Title: TESS Archaeology

Signature: Sarah Kate
McKinney

Digitally signed by
Sarah Kate McKinney
Date: 2019.06.17
14:27:32 -05'00'



TENNESSEE HISTORICAL COMMISSION
STATE HISTORIC PRESERVATION OFFICE
2941 LEBANON PIKE
NASHVILLE, TENNESSEE 37243-0442
OFFICE: (615) 532-1550
www.tnhistoricalcommission.org

June 21, 2018

Mr. Phillip R. Hodge
Tennessee Department of Transportation
Suite 900, James K. Polk Building
505 Deaderick Street
Nashville, TN 37243-1402

RE: FHWA / Federal Highway Administration, SR-87 Bridge Replacement at Log Mile 3.88,
Lauderdale County, TN

Dear Mr. Hodge:

In response to your request, we have reviewed the archaeological report of investigations and accompanying documentation submitted by you regarding the above-referenced undertaking. Our review of and comment on your proposed undertaking are among the requirements of Section 106 of the National Historic Preservation Act. This Act requires federal agencies or applicants for federal assistance to consult with the appropriate State Historic Preservation Office before they carry out their proposed undertakings. The Advisory Council on Historic Preservation has codified procedures for carrying out Section 106 review in 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739).

Considering the information provided, we find that no archaeological resources eligible for listing in the National Register of Historic Places will be affected by this undertaking. If project plans are changed or archaeological remains are discovered during project construction, please contact this office to determine what further action, if any, will be necessary to comply with Section 106 of the National Historic Preservation Act. Complete and/or updated Tennessee Site Survey Forms should be submitted to the Tennessee Division of Archaeology for all sites recorded and/or revisited during the current investigation. Questions or comments may be directed to Jennifer Barnett (615) 687-4780.

Your cooperation is appreciated.

Sincerely,

E. Patrick McIntyre, Jr.
Executive Director and
State Historic Preservation Officer

EPM/jmb

Environmental Studies Request

Project Information

Route: State Route 87
Termini: Bridge over Overflow, Log Mile (LM) 3.88
County: Lauderdale
PIN: 128113.05

Request

Request Type: Environmental Study Reevaluation
Project Plans: Initial Studies
Date of Plans: 06/12/2019
Location: Email Attachment

Certification

Requestor: Jonathan Knudsen
Title: TDOT Environmental Studies Specialist

Signature: Jonathan
Knudsen

Digitally signed by
Jonathan Knudsen
Date: 2019.06.14
10:38:53 -05'00'

Environmental Study

Technical Section

Section: Historic Preservation

Study Results

Based on a review of the 06/12/2019 Preliminary Plans, the TN-SHPO letter dated 06/12/2018 remains valid. The project APE does not contain historic properties listed or eligible for listing in the National Register of Historic Places as currently proposed.

Commitments

Did the study of this project result in any environmental commitments?

No

Additional Information

Is there any additional information or material included with this study?

No

Certification

Responder: Haley Seger

Title: TESS - Historic Preservation

Signature:

Haley Seger

Digitally signed by Haley
Seger
Date: 2019.06.17
14:34:13 -05'00'



TENNESSEE HISTORICAL COMMISSION
STATE HISTORIC PRESERVATION OFFICE
2941 LEBANON PIKE
NASHVILLE, TENNESSEE 37243-0442
OFFICE: (615) 532-1550
www.tnhistoricalcommission.org

June 12, 2018

Ms. Katherine Looney
Tennessee Department of Transportation
505 Deaderick St
Suite 900
Nashville, TN 37243-1402

RE: FHWA / Federal Highway Administration, Replacement of the SR 87 Bridge over Overflow,
Log Mile 3.88/ PIN 124637.00, , Lauderdale County, TN

Dear Ms. Looney:

In response to your request, we have reviewed the architectural survey report and accompanying documentation submitted by you regarding the above-referenced undertaking. Our review of and comment on your proposed undertaking are among the requirements of Section 106 of the National Historic Preservation Act. This Act requires federal agencies or applicants for federal assistance to consult with the appropriate State Historic Preservation Office before they carry out their proposed undertakings. The Advisory Council on Historic Preservation has codified procedures for carrying out Section 106 review in 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739).

Considering the information provided, we concur that no architectural resources eligible for listing in the National Register of Historic Places will be affected by this undertaking. If project plans are changed or archaeological remains are discovered during project construction, please contact this office to determine what further action, if any, will be necessary to comply with Section 106 of the National Historic Preservation Act. Questions or comments may be directed to Casey Lee (615 253-3163).

Your cooperation is appreciated.

Sincerely,

E. Patrick McIntyre
Executive Director and
State Historic Preservation Officer

EPM/cjl

Native American Consultation

Environmental Studies Request

Project Information

Route: State Route 87
Termini: Bridge over Overflow, Log Mile (LM) 3.88
County: Lauderdale
PIN: 128113.05

Request

Request Type: Environmental Study Reevaluation
Project Plans: Initial Studies
Date of Plans: 06/12/2019
Location: Email Attachment

Certification

Requestor: Jonathan Knudsen
Title: TDOT Environmental Studies Specialist

Signature: Jonathan
Knudsen

Digitally signed by
Jonathan Knudsen
Date: 2019.06.14
10:38:53 -05'00'

Environmental Study

Technical Section

Section: Native American Coordination

Study Results

NAC was sent to the Absentee Shawnee and the Thlopthlocco Tribal Town on July 16, 2019 to bring NAC up to date. Neither tribe responded.

Commitments

Did the study of this project result in any environmental commitments?

No

Additional Information

Is there any additional information or material included with this study?

No

Certification

Responder: Sarah Kate McKinney

Title: TESS Archaeology

Signature: Sarah Kate
McKinney

Digitally signed by
Sarah Kate McKinney
Date: 2019.08.27
13:01:52 -05'00'



**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION**

ENVIRONMENTAL DIVISION
SUITE 900, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-1402
(615) 741-3655

CLAY BRIGHT
COMMISSIONER

BILL LEE
GOVERNOR

July 15, 2019

Ms. Devon Frazier
Absentee Shawnee Tribe of Oklahoma
2025 South Gordon Cooper Dr.
Shawnee, OK 74801-9381

SUBJECT: Section 106 Initial Consultation for Proposed Bridge Replacement of State Route 87 Bridge over Overflow in Lauderdale County, Tennessee (TDOT PIN 124637.00).

Dear Ms. Frazier,

The Tennessee Department of Transportation (TDOT), in coordination with the Federal Highway Administration (FHWA), is proposing to replace the State Route 87 bridge over an overflow, log mile 3.88, in Lauderdale County, Tennessee (maps attached). The bridge will remain on the same alignment, however, approximately 0.14 acres of additional right-of-way is expected and there will be ground disturbance in the area of potential effects.

The National Historic Preservation Act (NHPA) recognizes that federally funded undertakings, like the subject project, can affect historic properties to which your tribe attaches religious, cultural, and historic significance. In accordance with 36 CFR 800 regulations implementing compliance with Section 106 of the NHPA, we are providing general project information so that you can determine if your tribe has an interest in the project area or nature of the work proposed and so you have an opportunity to bring to our attention any interests and concerns about the potential for impacts to properties of religious and cultural significance. In addition, do you wish to be a consulting party on the project? Early awareness of your concerns can serve to protect historic properties valued by your tribe.

If you act as a consulting party you will receive archaeological assessment reports and related documentation, be invited to attend project meetings with FHWA, TDOT, and the Tennessee State Historic Preservation Office (TN-SHPO), if any are held, and be asked to provide input throughout the process. If you choose to not act as a consulting party at this time, you can do so at a later date simply by notifying me.

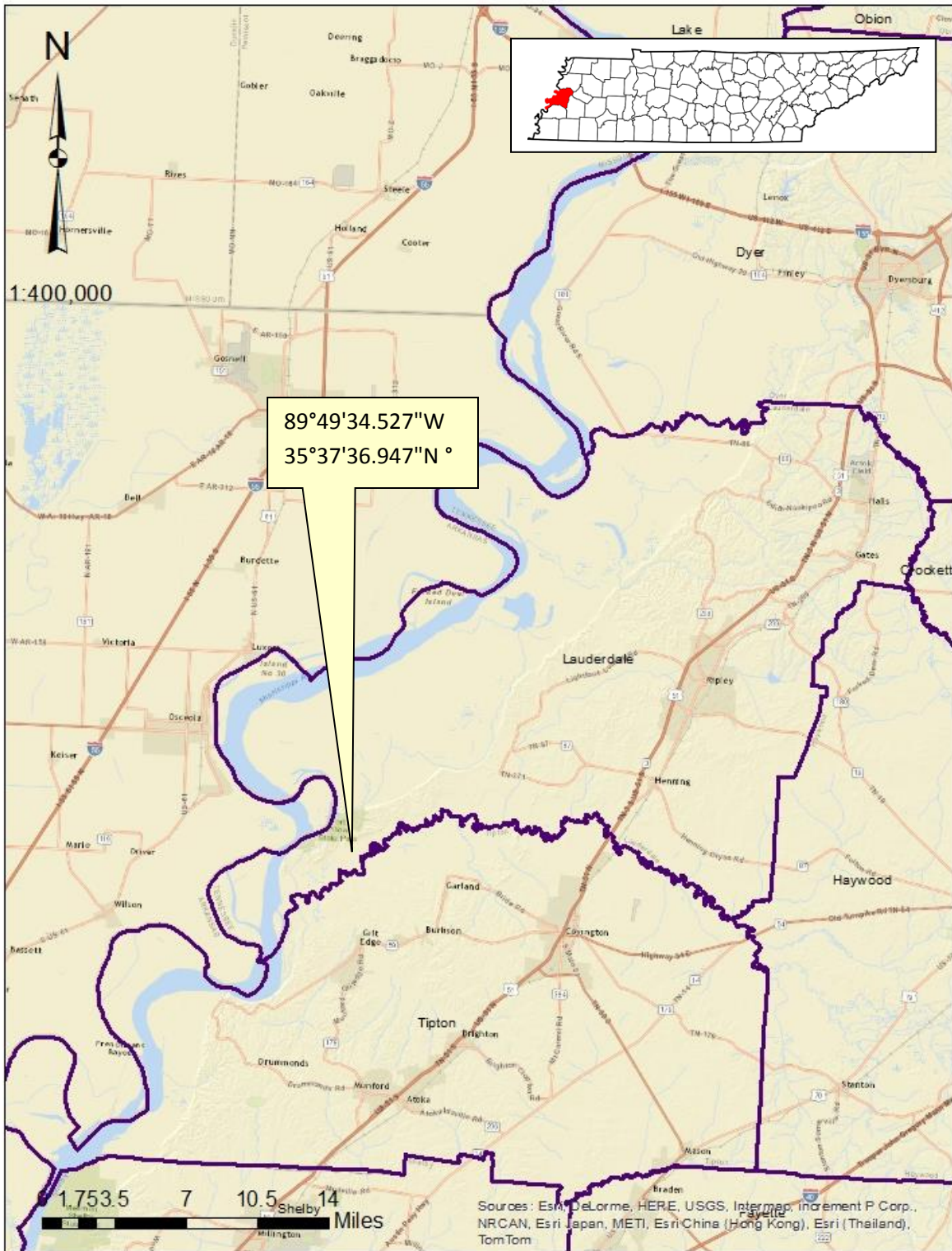
Please respond to me via letter, telephone (615-741-0977), fax (615-741-1098), or E-mail (Phillip.Hodge@tn.gov). I respectfully request responses (email is preferred) to project reports and other materials within thirty (30) days of receipt if at all possible. Thank you for your assistance.

Sincerely,

Phillip R. Hodge
Cultural Resources Manager

Enclosure

Lauderdale County, TN. PIN 124637.00



Project Vicinity Map

Lauderdale County, TN. PIN 124637.00

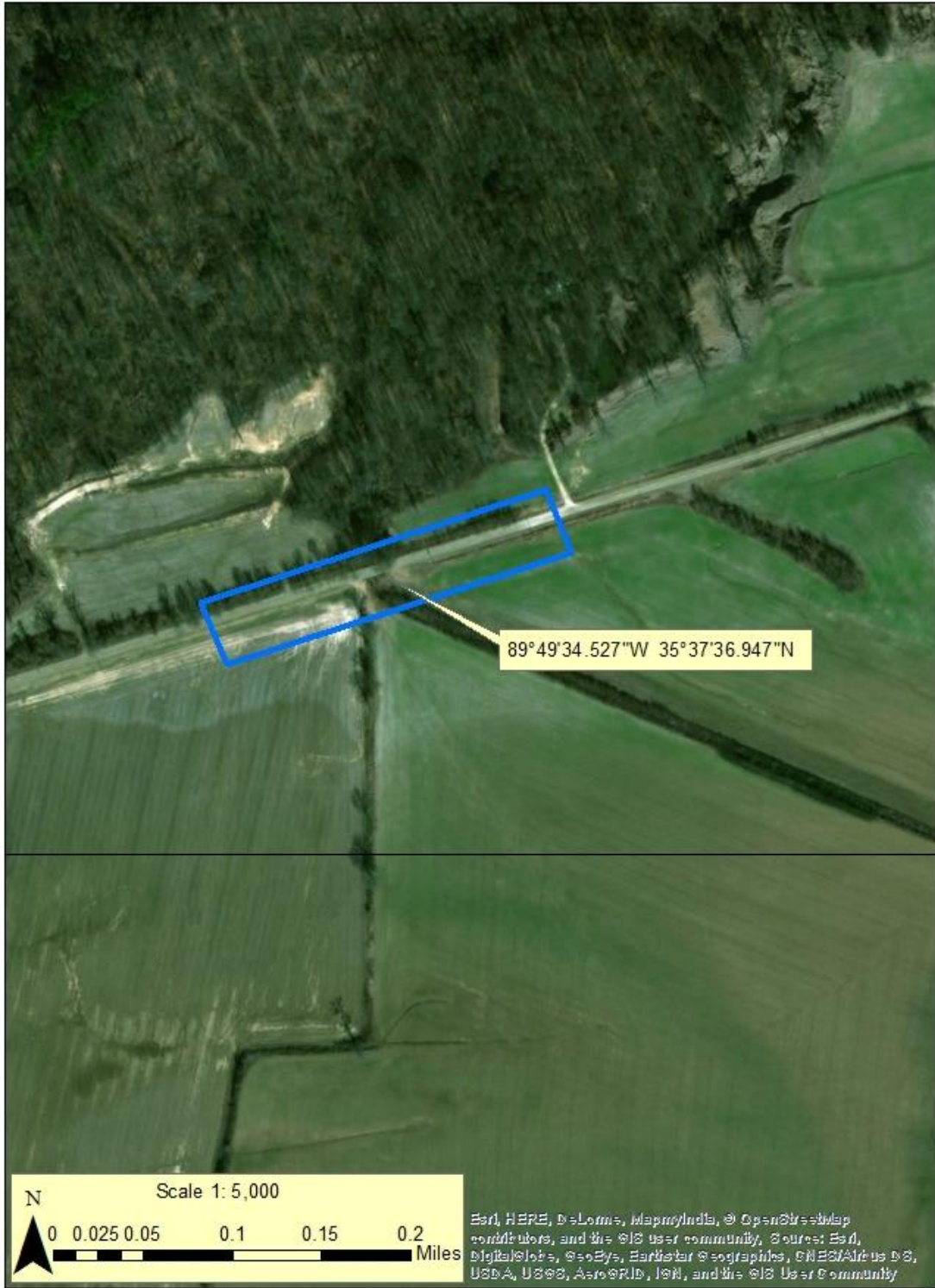
TDOT PIN 124637.00
Lauderdale County
USGS TOPO Golddust 407 NE



USGS Quad

Lauderdale County, TN. PIN 124637.00

TDOT PIN 124637.00
Lauderdale County
USGS TOPO Golddust 407 NE



Project Location: Aerial View

Phillip Hodge

From: TDOT TribalCoordination
Sent: Tuesday, July 16, 2019 4:59 PM
To: '106NAGPRA@astribe.com'
Subject: Section 106 Early Coordination; Carroll County, TN, West Tennessee Bridges (Region 4)
Attachments: Carroll SR436 Bridge 124139.00 NAC Frazier.pdf; Fayette SR 193 Bridge 124285.00 NAC Frazier.pdf; Haywood SR 1 Bridges 124505.00 and 124503.00 NAC Frazier.pdf; Lauderdale SR 87 Bridge 124637.00 NAC Frazier.pdf; Madison SR 223 Bridge 124712.00 NAC Frazier.pdf

Dear Ms. Frazier,

On behalf of the Federal Highway Administration, please find attached letters inviting Absentee Shawnee Tribe of Indians in Oklahoma to participate in the subject projects as a consulting party under Section 106 of the National Historic Preservation Act. These letters describe each project and include maps illustrating their location.

These projects were originally coordinated with federally recognized Native American nations in 2018. I am providing this information to you since at that time Carroll County was not included on FHWA's list of counties for Absentee Shawnee Tribe of Indians in Oklahoma's area of interest within Tennessee.

If you have any questions or need additional information, please feel free to call or email anytime. I appreciate your review of this information and look forward to your comments.

Sincerely,
Phil



Phillip Hodge | Cultural Resources Manager
Environmental Division
James K. Polk Building, 9th Floor
505 Deaderick St.
Nashville, TN 37243
p. 615-741-0977
Phillip.Hodge@tn.gov

Phillip Hodge

From: Phillip Hodge
Sent: Tuesday, July 16, 2019 4:59 PM
To: THPO@tttown.org
Subject: Section 106 Early Coordination; Carroll County, TN, West Tennessee Bridges (Region 4)
Attachments: Madison SR 223 Bridge 124712.00 NAC Cloud.pdf; Lauderdale SR 87 Bridge 124637.00 NAC Cloud.pdf; Haywood SR 1 Bridges 124505.00 and 124503.00 NAC Cloud.pdf; Carroll SR436 Bridge 124139.00 NAC Cloud.pdf

Dear Mr. Cloud,

On behalf of the Federal Highway Administration, please find attached letters inviting Thlopthlocco Tribal Town to participate in the subject projects as a consulting party under Section 106 of the National Historic Preservation Act. These letters describe each project and include maps illustrating their location.

These projects were originally coordinated with federally recognized Native American nations and tribes in 2018. I am providing this information to you since at that time Carroll County was not included on FHWA's list of counties for Thlopthlocco Tribal Town's area of interest within Tennessee.

If you have any questions or need additional information, please feel free to call or email anytime. I appreciate your review of this information and look forward to your comments.

Sincerely,
Phil



Phillip Hodge | Cultural Resources Manager
Environmental Division
James K. Polk Building, 9th Floor
505 Deaderick St.
Nashville, TN 37243
p. 615-741-0977
Phillip.Hodge@tn.gov

Hazardous Materials

Environmental Studies Request

Project Information

Route: State Route 87
Termini: Bridge over Overflow, Log Mile (LM) 3.88
County: Lauderdale
PIN: 128113.05

Request

Request Type: Environmental Study Reevaluation
Project Plans: Initial Studies
Date of Plans: 06/12/2019
Location: Email Attachment

Certification

Requestor: Jonathan Knudsen
Title: TDOT Environmental Studies Specialist

Signature: Jonathan
Knudsen

Digitally signed by
Jonathan Knudsen
Date: 2019.06.14
10:38:53 -05'00'

Environmental Study

Technical Section

Section: Hazardous Materials

Study Results

Based on the Preliminary Plans dated 12 June 2019, no known hazardous materials sites appear to affect this project as it is currently planned and no additional hazardous material studies are recommended at this time. The asbestos bridge survey has been completed, no asbestos was detected and the following project commitment has been submitted but is not shown in these plans.

In the event hazardous substances/wastes are encountered within the right-of-way, their disposition shall be subject to all applicable regulations, including the applicable sections of the Federal Resource Conservation and Recovery Act, as amended; the Comprehensive Environmental Response, Compensation, and Liability Act, as amended; and the Tennessee Hazardous Waste Management Act of 1983, as amended. Databases reviewed include: Google Earth imagery, EPA National Priorities List, EPA EnviroMapper, TDEC Registered UST database, TDEC Division of Water Resources Public Data Viewer, TDOT IBIS, and others as necessary.

Commitments

Did the study of this project result in any environmental commitments?

Yes

EDHZ001. An Asbestos Containing Material (ACM) survey was conducted on Bridge No. 49SR0870011, SR-87 over Overflow, LM 3.90 (49-SR087-03.90). No ACM was detected. No special accommodations for demolition and waste disposal are anticipated for these structures and the material can be deposited in a C&D landfill. Prior to the demolition or rehabilitation of any structure (bridge or building), the contractor is required to submit the National Emission Standards for Hazardous Air Pollutants standard 10-day notice of demolition to the TDEC Division of Air Pollution Control (per TDOT Standard Specifications for Road and Bridge Construction (January 1, 2015) Sections 107.08 D and 202.03).

Additional Information

Is there any additional information or material included with this study?

No

Certification

Responder: Kyle Kirschenmann

Signature:

Kyle Kirschenmann

Title: Transportation Manager 1, Hazardous Materials Section

Digitally signed by Kyle Kirschenmann
DN: cn=Kyle Kirschenmann, o=TDOT,
ou=Hazardous Materials Section,
email=kyle.kirschenmann@tn.gov,
c=US
Date: 2019.06.17 06:51:39 -0400



TENNESSEE DEPARTMENT OF TRANSPORTATION

ASBESTOS INSPECTION REPORT

SR-87 Bridge over Overflow
PE-N Number 49006-0240-04
PIN Number 124637.00
Bridge ID Number 49SR0870011



Prepared by:



K. S. WARE & ASSOCIATES, L.L.C.

54 Lindsley Avenue
Nashville, Tennessee 37210

February 23, 2018

KSWA Project Number: 100-17-0078

A handwritten signature in blue ink, which appears to read "Victoria Gallagher".

Victoria Gallagher

Tennessee Asbestos Inspector Accreditation A-I-109147-63293

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- Appendix A: Photographs
- Appendix B: Asbestos Sample Laboratory Analysis Data
- Appendix C: Asbestos Accreditations
- Appendix D: Health and Safety Plan
- Appendix E: Activity Hazard Analysis

1.0 INTRODUCTION

This report presents the findings of an inspection for asbestos-containing materials (ACM) completed on the bridge identified in Section 1.1. The inspection was completed in accordance with the State of Tennessee, Department of Transportation Environmental Division, Hazardous Materials Section requirements.

1.1 TDOT BRIDGE IDENTIFICATION

The bridge is identified in the TDOT Project System/Bridge Management System as:

TDOT PE-N Number: 49006-0240-04
TDOT PIN Number: 124637.00
Bridge Inventory Number: 49SR0870011
Termini: SR-87 Bridge over Overflow
Log Mile Number: 3.88

1.2 GENERAL DESCRIPTION

The SR-87 bridge over Overflow at LM 3.88 (49-SR087-0011) is a 29-foot, 2-lane, single-span bridge constructed of steel I-beams with a wooden deck and asphalt wearing surface. The bridge was originally constructed in 1986. The general location of the bridge is shown in **Figure – 1**. Photographs of the subject Lauderdale County bridge are presented in **Appendix A**. The analytical results of all the samples collected from the bridge and the chain-of-custody records are included in **Appendix B**.

2.0 INSPECTION

The identification of ACM was performed by collecting bulk samples of suspect materials and having those samples analyzed by a laboratory. ACM are those materials found to contain greater than one percent asbestos by calibrated visual area estimation (CVAE) using Polarized Light Microscopy (PLM).

Bulk sampling is a procedure in which representative homogeneous sampling areas in a structure are identified and then sampled. A homogeneous sampling area is defined as an area that contains material of the same type (uniform in color and texture) and is applied during the same general time period. Once the homogeneous sampling areas are identified, bulk samples of suspect materials are obtained at the discretion of our inspectors, based on site conditions and past experience.

2.1 PERSONNEL AND DATE(S) OF INSPECTION

The sampling and field activities were performed on January 18, 2018 by KWSA representative Ms. Victoria Gallagher. Ms. Gallagher is an accredited State of Tennessee Asbestos Inspector. A copy of Mr. Gallagher's current accreditation from the State of Tennessee is included in **Appendix C**. Field activities were conducted under a Health and Safety Plan (**Appendix D**) and an Activity Hazard Analysis (**Appendix E**) prepared prior to mobilizing to the site.

2.2 VISUAL SURVEY

The KSWA field crew began with a visual survey of the bridge. The visual survey consisted of:

- producing a sketch of the structure and/or verifying the plans provided;
- locating and identifying homogeneous areas of suspect materials that may contain asbestos minerals; and
- determining applicable sampling locations.

The homogeneous areas identified during the visual survey are listed in **Table – 1**. The general locations of the identified homogeneous areas are shown in **Figure – 2**.

Table – 1: Bridge Component Descriptions

Homogeneous Area	Description	Sample Numbers
A	Rubber Deck Padding	SR-01, SR-02, SR-03
B	Concrete Floor/Base	SR-04, SR-05, SR-06

2.3 ACCESS TO BRIDGE COMPONENTS

Individual bridge components were accessed by the following methods.

2.3.1 Rubber Deck Padding – Homogeneous Area A

The rubber deck padding was accessed and sampled from beneath on the southeast side of the bridge.

2.3.2 Concrete Floor/Base – Homogeneous Area B

The concrete floor/base was accessed and sampled from beneath the bridge.

2.4 BRIDGE DRAINAGE SYSTEM

The KSWA field crew did not observe a bridge drainage system on the subject Lauderdale County bridge.

2.5 UTILITY CONDUITS

The KSWA field crew did not observe utility conduits on the subject Lauderdale County bridge.

3.0 ANALYTICAL PROCEDURES

3.1 ASBESTOS ANALYSIS PROCEDURES

The bulk samples collected from the subject bridge were analyzed in the laboratory using PLM coupled with dispersion staining. PLM is used as an analytical method to identify the specific asbestos minerals by their unique optical properties. The optical properties are a result of the chemical composition, physical atomic structure, and visual morphology specific to that mineral. PLM is the recommended method of analysis for asbestos identification in bulk samples specified in the Environmental Protection Agency Toxic Substances Control Act (appendix E, subpart E, 40 CFR part 763, section 1).

Materials that contain multiple layers or have associated mastic or adhesive backing are separated and analyzed as multiple samples. Standard procedure for samples that are reported to contain 1% or less asbestos minerals is to complete a quantitative point count analysis by the laboratory for confirmation.

3.2 LABORATORY NAME AND ACCREDITATION

The bulk samples collected for this inspection were analyzed by a laboratory that has received accreditation from the National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP). The name and accreditation number of the analytical laboratory that analyzed the samples for this inspection are indicated in **Table - 2**:

Table – 2: Analytical Laboratory

Laboratory	EMSL Analytical, Inc.
NVLAP Number	102104-0

4.0 REGULATORY OVERVIEW

4.1 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

The EPA's National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations (40 CFR §61, Subpart M) require that all regulated asbestos-containing materials (RACM) be properly removed prior to any renovation or demolition activities that will disturb them. These regulations define RACM as:

- Friable ACM.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subject to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming, or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

4.1.1 Definitions

Significant definitions related to regulation of asbestos under NESHAP include:

Friable asbestos-containing material ACM is defined by the National Emissions Standard for Asbestos (subpart M, 40 CFR part 61) under NESHAP as “any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarizing Light Microscopy, that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure” (40 CFR §61.141).

Non-friable ACM is defined as “any materials containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarizing Light Microscopy, that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure” (40 CFR §61.141). The National Emission Standard for Asbestos (subpart M, 40 CFR part 61) also defines two categories of nonfriable ACM, Category I and Category II non-friable ACM, which are described as follows:

Category I non-friable ACM is defined as any “asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarizing Light Microscopy” (40 CFR §61.141).

Category II non-friable ACM is defined as “any material, excluding Category I nonfriable ACM, containing more than 1 percent asbestos as determined using the methods specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarizing Light Microscopy, that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure” (40 CFR §61.141).

Regulated Asbestos-Containing Material (RACM) is defined as any “(a) Friable asbestos material, (b) Category I nonfriable ACM that has become friable, (c) Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations” (40 CFR §61.141).

Friable materials are defined as those that can be crumbled, pulverized, or reduced to powder by hand pressure when dry. The NESHAP regulations also establish specific notification and control requirements for renovation and demolition work.

5.0 RESULTS

The results of the asbestos inspection are presented in the following sections.

5.1 RESULTS OF ASBESTOS BULK SAMPLE ANALYSIS

The KSWA field crew collected six (6) samples from the SR-87 Bridge over Overflow at LM 3.88. Multiple samples of each homogeneous area were collected in accordance with State of Tennessee, Department of Transportation Environmental Division, Hazardous Materials Section requirements and delivered to the laboratory for visual observation and microscopic analysis. The samples were selected based on the identified homogeneous areas of suspect materials, as described in Section 2.2.

Building material homogeneous areas sampled included: rubber deck padding and concrete floor/base.

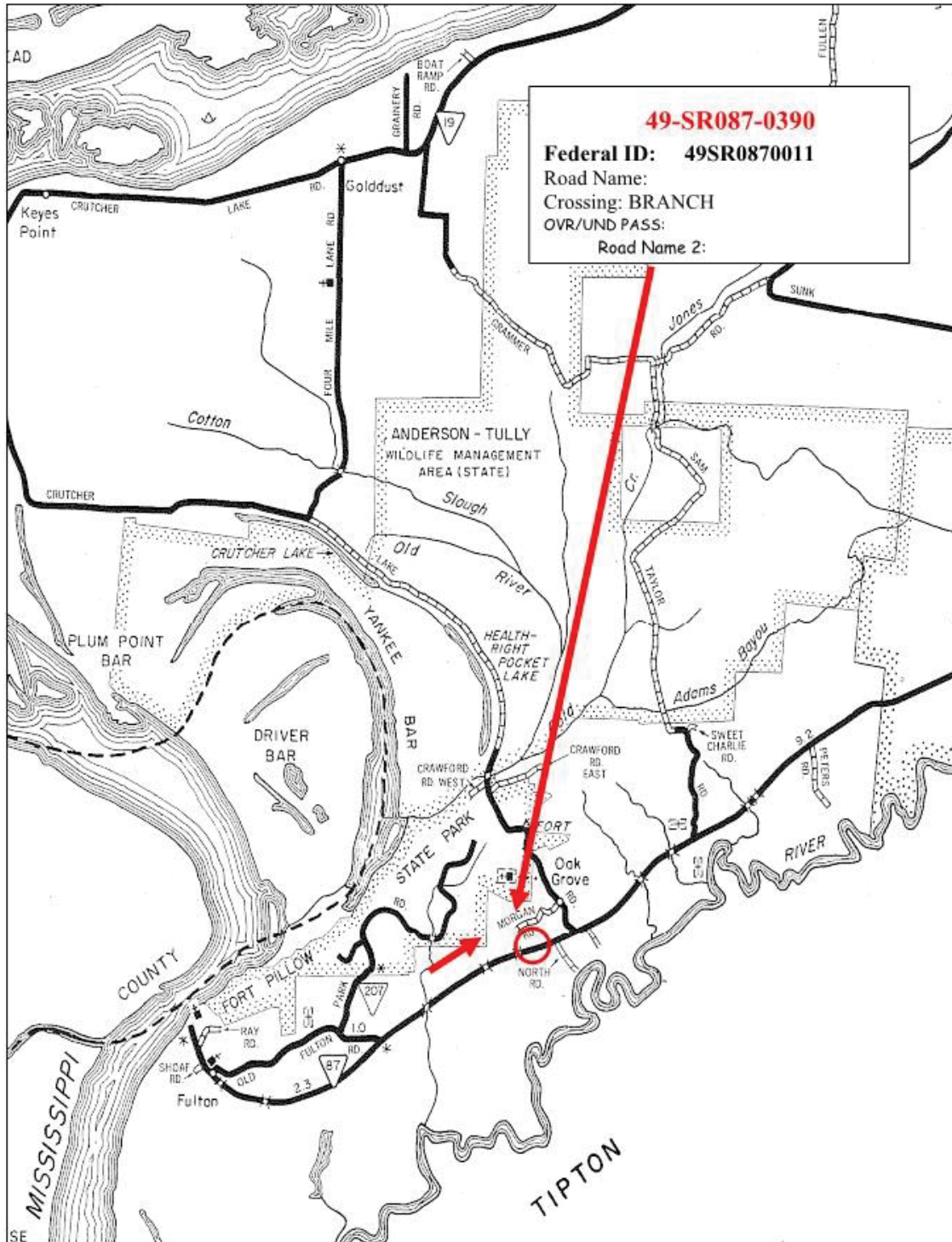
No asbestos was found to be present in any of the materials sampled from the SR-87 Bridge over Overflow at LM 3.88.

6.0 QUALIFICATIONS

The information presented herein is based on information obtained during the site visit and from previous experience. If additional information becomes available which might impact our conclusions or recommendations, K.S. Ware & Associates, L.L.C. requests the opportunity to review the information, reassess the potential concerns, and modify opinions, if warranted.

This report has been prepared on behalf of the Tennessee Department of Transportation. This document is not a Bid Document or a Contract Document. Use of this report or reliance upon information contained in this report by any other party implies an agreement by that party to the same terms and conditions under which service was provided. Furthermore, any party, other than our Client, relying on this document is cautioned that all conclusions made or decisions arrived at based on their review of this document are those solely of the third party, without warranty, guarantee or promise by the author. These findings are relevant to the dates of our services and should not be relied upon to represent conditions at substantially earlier or later dates.

Figure – 1: Site Vicinity Map Lauderdale County





Homogeneous Areas:

- A- Rubber Deck Padding
- B- Concrete Floor/Base

*Homogeneous area locations are generalized and do not represent actual sample locations.

FIG. NO. 2



49SR0870011 BRIDGE PROFILE HOMOGENEOUS AREAS

TERMINI:

SR-87 Bridge over Overflow, LM 3.88

COUNTY: Benton	INSPECTOR: Victoria Gallagher	ANALYTICAL LABORATORY: EMSL Kernersville, NC	DATES SAMPLED: 01/18/18
SCALE: NTS	TDOT PE-N NO: 49006-0240-04	PIN: 124637.00	Source: FIELD PHOTOGRAPHS
			KSWA PROJ.NO. 100-17-0078



APPENDIX A: PHOTOGRAPHS

Homogeneous areas that tested positive for asbestos are captioned in red.



Photo 1: View of HA-A on the SR-87 bridge over Overflow



Photo 2: View of HA-B on the SR-87 bridge over Overflow

APPENDIX B: ASBESTOS SAMPLE LABORATORY ANALYSIS DATA



EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284

Tel/Fax: (336) 992-1025 / (336) 992-4175

<http://www.EMSL.com> / greensborolab@emsl.com

EMSL Order: 021800673

Customer ID: KSWA77

Customer PO:

Project ID:

Attention: Victoria Gallagher
K.S. Ware LLC
54 Lindsley Avenue
Nashville, TN 37210

Phone: (615) 742-7476

Fax: (615) 256-5873

Received Date: 02/01/2018 9:15 AM

Analysis Date: 02/05/2018

Collected Date: 01/18/2018

Project: 100-17-0078 SR-87 Lauderdale

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
SR-01 <small>021800673-0001</small>	Rubber Deck Padding	Brown/Black Non-Fibrous Heterogeneous		100% Non-fibrous (Other)	None Detected
SR-02 <small>021800673-0002</small>	Rubber Deck Padding	Brown/Black Non-Fibrous Heterogeneous		100% Non-fibrous (Other)	None Detected
SR-03 <small>021800673-0003</small>	Rubber Deck Padding	Brown/Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
SR-04 <small>021800673-0004</small>	Concrete Floor /Base	Gray/Tan/Black Non-Fibrous Heterogeneous		30% Quartz 70% Non-fibrous (Other)	None Detected
SR-05 <small>021800673-0005</small>	Concrete Floor /Base	Gray/Tan Non-Fibrous Heterogeneous	<1% Cellulose	30% Quartz 70% Non-fibrous (Other)	None Detected
SR-06 <small>021800673-0006</small>	Concrete Floor /Base	Gray/Tan Non-Fibrous Homogeneous		30% Quartz 70% Non-fibrous (Other)	None Detected

Analyst(s)

Kristie Elliott (2)

Stephen Bennett (4)

Stephen Bennett, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC NVLAP Lab Code 102104-0, CA ELAP 2689, Virginia 3333-000228, West Virginia LT000321

Initial report from: 02/05/2018 16:26:19



Asbestos Bulk Building Material Chain of Custody

Kernersville, NC 27284

PHONE: (336) 992-1025

FAX: (336) 992-4175

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

EMSL Order Number (Lab Use Only):

673

Company: K.S. Ware & Associates, LLC		EMSL-Bill to: <input type="checkbox"/> Same <input checked="" type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: 54 Lindsley Ave		Third Party Billing requires written authorization from third party	
City: Nashville	State/Province: TN	Zip/Postal Code: 37210	Country: US
Report To (Name): Victoria Gallagher		Telephone #: 6152559702	
Email Address: vgallagher@kswarellc.com		Fax #: 6152559702	Purchase Order:
Project Name/Number: 100-17-0078 SR-87 Lauderdale		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email <input type="checkbox"/> Mail	
U.S. State Samples Taken: TN		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	

Turnaround Time (TAT) Options* - Please Check

3 Hour
 6 Hour
 24 Hour
 48 Hour
 72 Hour
 96 Hour
 1 Week
 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.

PLM - Bulk (reporting limit)	TEM - Bulk
<input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%)	<input type="checkbox"/> TEM EPA NOB - EPA 600/R-93/116 Section 2.5.5.1
<input type="checkbox"/> PLM EPA NOB (<1%)	<input type="checkbox"/> NY ELAP Method 198.4 (TEM)
Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%)	<input type="checkbox"/> Chatfield Protocol (semi-quantitative)
Point Count w/Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%)	<input type="checkbox"/> TEM % by Mass - EPA 600/R-93/116 Section 2.5.5.2
<input type="checkbox"/> NIOSH 9002 (<1%)	<input type="checkbox"/> TEM Qualitative via Filtration Prep Technique
<input type="checkbox"/> NY ELAP Method 198.1 (friable in NY)	<input type="checkbox"/> TEM Qualitative via Drop Mount Prep Technique
<input type="checkbox"/> NY ELAP Method 198.6 NOB (non-friable-NY)	Other
<input type="checkbox"/> OSHA ID-191 Modified	<input type="checkbox"/>
<input type="checkbox"/> Standard Addition Method	

Check For Positive Stop - Clearly Identify Homogenous Group Date Sampled: 1/18/2018

Samplers Name: Victoria Gallagher Samplers Signature: *[Signature]*

Sample #	HA #	Sample Location	Material Description
SR-01	A	SOUTHEAST	Rubber Deck Padding
SR-02	A	SOUTHEAST	Rubber Deck Padding
SR-03	A	SOUTHEAST	Rubber Deck Padding
SR-04	B	MIDDLE	Concrete Floor/Base
SR-05	B	MIDDLE	Concrete Floor/Base
SR-06	B	MIDDLE	Concrete Floor/Base

Client Sample # (s): SR-01A - SR-06B Total # of Samples: 6

Relinquished (Client): *[Signature]* Date: 1/29/18 Time: 3:00p.m.

Received (Lab): *[Signature]* Date: 2/1/18 Time: 9:15

Comments/Special Instructions: *3 EMSL fx 7934 2016 9166*

Please separate and analyze all layers.
Bill To: K.S. Ware & Associates, LLC, 54 Lindsley Ave, Nashville, TN, 37210, US
Attention: Jo-Ann Poharcvk Phone: 6152559702 Email: jopoharcvk@kswarellc.com

APPENDIX C: ASBESTOS ACCREDITATIONS

THE STATE OF TENNESSEE

Department of Environment and Conservation
Division of Solid Waste Management
Toxic Substances Program

104560433923



Date Issued 8/18/2017

Initial

Victoria M Gallagher

DOB	Sex	HGT	WGT
23-Nov-1990	F	5'10"	180

Discipline	Accreditation	Expiration
Inspector	A-1-100147-00260	Aug-31-2019

Asbestos Accreditation



THE STATE OF TENNESSEE

Department of Environment and Conservation Division of Solid Waste Management
Toxic Substances Program

William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 14th Floor Nashville TN 37243

By virtue of the authority vested by the Division of Solid Waste Management, the Company named below is hereby accredited to offer and/or conduct Asbestos activities pursuant to Rule 1200-01-20:

K. S. Ware and Associates, LLC

54 Lindsley Avenue Nashville TN, 37210

to conduct ASBESTOS ACTIVITIES in schools or public and commercial buildings in Tennessee.
This firm is responsible for compliance with the applicable requirements of Rule 1200-01-20.

Discipline	Type	Accreditation Number	Effective Date	Expiration Date
Accreditation	Re-Accreditation	A-F-620-62396	November 01, 2017	November 30, 2018



Given under the Seal of the State of Tennessee in Nashville.

This 2nd Day of November 2017

Division of Solid Waste Management
Toxic Substance Program

CN-1324 (Rev 6/13)

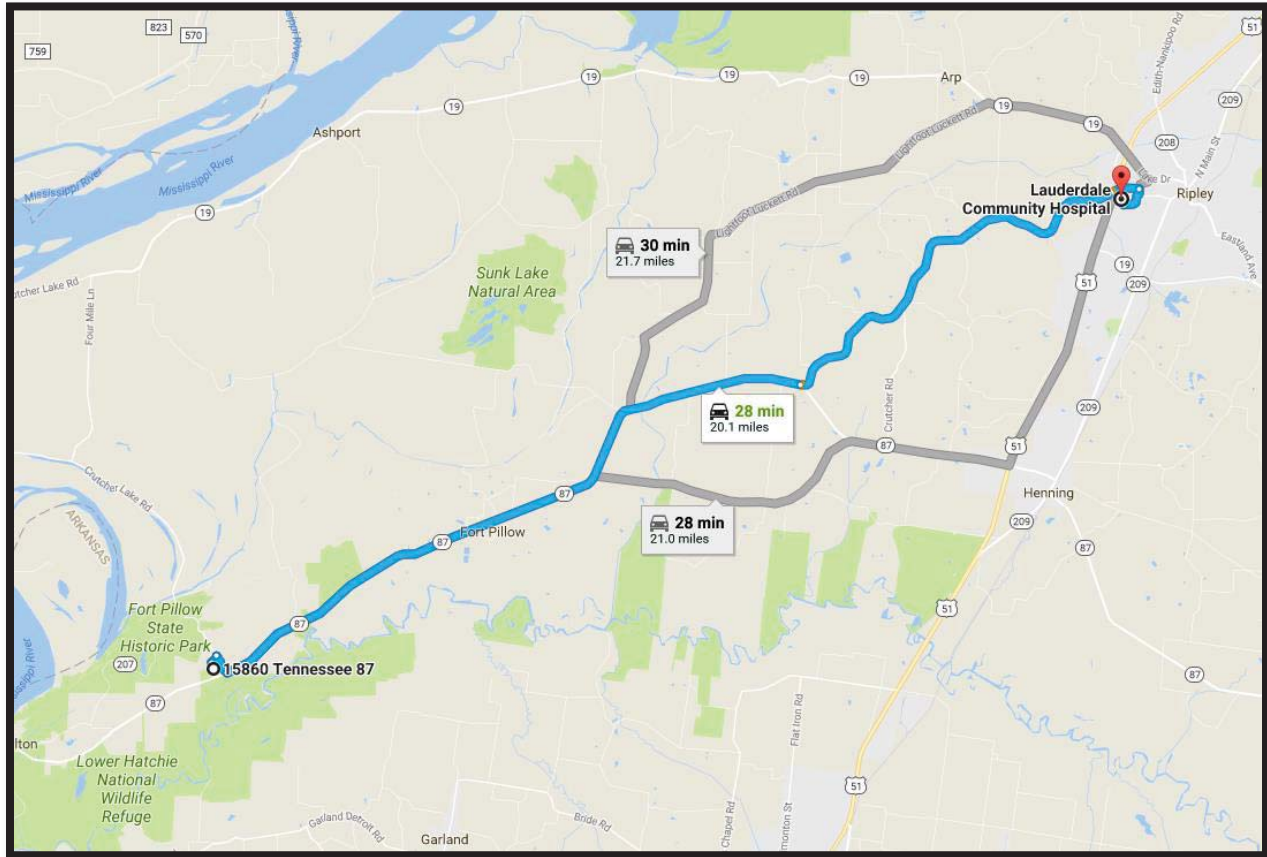
RDA-3020

APPENDIX D: HEALTH AND SAFETY PLAN

HEALTH AND SAFETY PLAN FOR ASBESTOS CONTAINING MATERIALS SURVEY SERVICES

K. S. WARE AND ASSOCIATES, L.L.C.

54 Lindsley Ave.
Nashville, Tennessee 37210



Directions to Hospital

Head NE on TN-87 (11.3 mi)
Continue onto Asbury Glimp Rd./Asbury Ave. (7.7 mi)
Turn right onto Willow Creek Dr. (0.5 mi)
Turn right onto Lankford Dr. (0.1 mi)

Hospital Address

Lauderdale Community Hospital
326 Asbury Ave.
Ripley, TN 38063
(731) 221-2200



This facility has been verified as mappable by phone (goo.gl/og4u1K):

Project Number: 100-17-0078
Name: TDOT Lauderdale Co SR-87 Bridge ACM Survey
Location: Lauderdale County, Tennessee
Client: Tennessee Department of Transportation
Client Contact : Kyle Kirschenmann
Phone No.: (615) 598-1522

KSWA Personnel Contact Information:

<u>Title</u>	<u>Name</u>	<u>Work</u>	<u>Mobile</u>
Field Safety Coordinator	Tori Gallagher	(615) 255-9702	(931) 808-9199
Project Manager	Tori Gallagher	(615) 255-9702	(931) 808-9199
Health and Safety QA	Ryan Elliott	(850) 530-9209	(850) 865-3056

Review and Approval:

Field Safety Coordinator		September 20, 2017
	Tori Gallagher	Date
Project Manager		September 20, 2017
	Tori Gallagher	Date
Health and Safety QA		September 20, 2017
	Ryan Elliott, PE	Date

Responsibilities for Field Safety Coordinator:

- Primary on-site contact for KSWA's health and safety procedures during field activities.
- Has the authority to stop KSWA operations if conditions are judged to be hazardous to on-site personnel or the public.
- Perform discretionary audits to determine compliance of Health and Safety Plan requirements.
- Responsible for providing access to the health and safety for all on-site employees.
- Responsible for instructing on-site personnel on the location of emergency communication equipment (i.e. phones and radios as necessary).
- Has no responsibility for health and safety procedures of any contractor, subcontractor, client personnel or others on the site.

Date of Plan Preparation

September 20, 2017

Dates of Planned Field Activities

September 2017

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13.0 FIELD SAFETY COORDINATOR'S SUMMARY15

1.0 PURPOSE

The purpose of this health and safety plan (HASP) is to provide standards for worker safety and protection during field activities conducted on a frequent or routine basis. The plan outlines standards and mandatory procedures relative to physical and chemical hazards encountered at sites, communication, training, worker health monitoring, decontamination procedures and levels of personal protection. Any questions concerning this information should be directed to the K.S. Ware and Associates, L.L.C. (KSWA) Project Manager identified at the beginning of this Health and Safety Plan, at 615-255-9702.

2.0 APPLICABILITY

This plan is applicable to all personnel working at the above referenced site, where mandatory worker health and safety training is required by State or Federal agencies. It is intended for use at the above referenced site where information regarding potential site hazards is available in the form of background research, personal communication with past or present property owners or workers, previous sampling results, etc.

A site specific hazard evaluation is included in Section 4. Available information should be provided to site workers as outlined in Section 5.

Sampling of items that may contain asbestos containing material (ACM) and other routine field activities are activities for which this plan is applicable. Activities involving contact with unknown substances and activities on sites where little background information is available will require more extensive and specific HASP development.

This plan does not cover procedures for entry into confined spaces. Project-specific attachments should be prepared and appended to this Health and Safety Plan if those activities are planned. Work of this nature shall be performed in accordance with 29 CFR 1926.250 subpart P "Excavation, Trenching and Shoring", 29 CFR 1910.146 "Permit Required Confined Space Entry" and the KSWA "Employee Confined Space Entry Program".

3.0 SITE DESCRIPTION AND HISTORY

The project consists of performing an asbestos bridge survey on one bridge located on SR-87 over Overflow in Lauderdale County, Tennessee.

The SR-87 Bridge over Overflow is a 29-foot, 2-lane, single-span bridge constructed of steel I-beams with a concrete deck and asphalt wearing surface. The bridge was constructed in 1986 and is scheduled for repair.

3.1 BRIDGE INSPECTION EQUIPMENT

KSWA will be on site to perform an asbestos survey on the SR-87 Bridge. Equipment to be used during the survey will include asbestos sample collection equipment.

3.2 WORK PRECAUTIONS

- No eating, drinking, using tobacco products, chewing gum, or putting hands in mouth while on the site.
- Wear the TDOT required roadway safety gear (hard hat, Class III reflective vest, boots) at all times while on the project site.
- Wear gloves at applicable times while at the work site.
- Wear protective eyewear at applicable times while at the work site.
- Wash all exposed skin areas with soap and water before departing from the site.
- Remove and change any non-impervious clothing that becomes contaminated during site activities.
- Do not go anywhere on the site other than where directed by the Field Safety Coordinator.
- Use safe and legal procedures for sample storage and shipment.

3.3 DISPOSAL RESTRICTIONS

Treat disposable items as ordinary refuse except when gross contamination is expected. In the event that refuse including disposable personnel protective equipment is suspected of being contaminated, the refuse will be collected and stored on site for future disposal.

4.0 HAZARD EVALUATION

4.1 PHYSICAL HAZARDS

4.1.1 Operational Hazards

Prior to commencement of field activities, the Field Safety Coordinator will conduct a site reconnaissance to identify any visible or operational hazards.

Additionally, because there is a possibility that asbestos may be present at the site, the appropriate Personal Protective Equipment (PPE) will be worn at all times that work is being performed.

4.1.2 Fall Hazards

Field activities can have the potential for fall hazards. Be aware of any uneven terrain, clear paths of debris and materials that may be a hazard. While on the bridges, be aware of slick surfaces and gaps while accessing the different components.

4.1.3 Heat Stress

Field activities in hot climates create a potential for heat stress. The warning symptoms of heat stress include fatigue; loss of strength; reduced accuracy; comprehension and retention; and reduced alertness and mental capacity. To prevent heat stress, personnel shall drink adequate amounts of water and/or electrolyte replacement fluids, and maintain scheduled work/rest periods.

4.1.4 Cold Stress

Field activities in cold climates create a potential for cold stress. The warning symptoms of cold stress include fatigue; shivering; numbness; blue or pale skin; and reduced alertness and mental capacity. To prevent cold stress, personnel shall wear adequate clothing, and maintain scheduled work/rest periods.

4.1.5 Tools and Equipment

Tools and equipment used by KSWA shall be inspected and maintained to be safe and adequate for their designated use. Housekeeping of the site shall be maintained as to prevent tripping hazards.

4.1.6 Traffic Hazard

Field activities will encounter traffic on this project. Be aware of surroundings and watch for traffic.

4.1.7 Noise Hazard

Operation of equipment may present a noise hazard to workers. KSWA personnel will be provided with hearing protection to be utilized when noise levels are excessive.

4.1.8 Water Hazards

Field activities will encounter a creek on this project. Use caution in or near the creek. Additional PPE including but not limited to a personal flotation device (PFD) and waders shall be taken to the project area and utilized if necessary.

4.1.9 Asbestos Containing Material

Collecting samples from bridge components may release asbestos fibers into the air. KSWA personnel will wear a respirator while sampling, and all sampling equipment will be properly decontaminated between sample collection and after field activities. KSWA personnel will limit exposure by adhering to this health and safety plan.

4.2 CHEMICAL HAZARDS

Chemical hazards are not anticipated at this site.

4.3 BIOLOGICAL HAZARDS

4.3.1 Stinging Insects

The most common stinging insects are bees, wasps, and ants. Few species of ants have medically significant stings. While most bees possess a defensive sting, and will sting if grasped or crushed, only a few social species sting often enough, or have sufficiently venomous stings to be of medical significance. These include the honeybees and the bumblebees. Most fatalities from bee and wasp stings occur in hypersensitive individuals; death is most often induced by a single sting, and occurs most often within 1 hour after the sting. The victim is typically over 40 years of age and stung on the head or neck. Most deaths are caused by respiratory dysfunction with the second most common cause being anaphylaxis; arteriosclerosis may be a compounding factor. If stung, seek medical attention immediately.

Precautions: In order to reduce the health and safety risk to workers due to physical hazards at the project site, the following precautions will be observed:

- 5 ANSI Class III High Visibility clothing will be worn by personnel at all times on the project site.
- 6 Hard hats shall include high visibility reflective tape.
- 7 Protective eyewear will be worn by personnel in the work area when appropriate.
- 8 Hearing protection will be worn by personnel as deemed necessary by the Field Safety Coordinator (typically noised levels greater than 85 dBA).
- 9 Safety toed boots with non-conductive soles will be worn by personnel at all times on the project site.
- 10 Hand protection (leather gloves) will be worn by personnel when moving and/or lifting equipment as well as when using large hand tools (machetes, sledges, shovels, etc.).
- 11 All equipment and related support equipment and vehicles shall have a daily safety inspection (29 CFR 1926.550). The inspections shall include, but are not limited to: all hydraulic lines and fittings for wear and damage, all cable systems and pull ropes for damage and proper installation, exhaust systems and drill controls, electrical lines for damage and/or contact with standing water, etc. Inspection schedules, the vehicle and equipment description, nomenclature, the license plate or ID number for the equipment, the findings of the inspections and the corrective action(s) taken shall be maintained.
- 12 Before beginning each work shift, the area will be checked for site hazards including overhead lines, underground lines, above ground obstructions, tripping hazards, etc.
- 13 All vehicles will be fitted with a cab-top rotating or strobe light bar. Light bar is to be active when vehicle is on site.

5.0 COMMUNICATIONS AND TRAINING

Workers at State and Federally listed or recognized sites must be provided with adequate information and training to recognize and evaluate potential hazards. Training shall comply with applicable regulations including 29 CFR 1910.1200 "Hazard Communication Standard".

5.1 COMMUNICATION

The Field Safety Coordinator shall supply all on site personnel with readily available access to this Health and Safety Plan. This plan shall cover, at a minimum, the following topics:

- A. A brief description of the history of the location with regard to health and environmental hazards.
- B. A description of the activities to which the hazard evaluation summary is applicable.
- C. A description of any hazards which may be encountered, including:
 - 1. Physical Hazards - terrain, traffic, equipment, severe weather (heat stress and frostbite), electrical hazards, noise, water hazards.
 - 2. Chemical Hazards - materials used and stored at the site, materials released at the site.
 - 3. Biological Hazards - insects, plants, animals, pathogens, and infectious materials.
- D. A description of the levels of protection selected for the operation.
- E. Equipment decontamination procedure if different from those specified herein.
- F. Summary of emergency contacts for use in the event of fire, explosion, medical emergency or other emergency, including the project address and phone number to provide to emergency personnel.
 - 1. Emergency 911
 - 2. Lauderdale County Ambulance Authority (731) 635-3242
 - 3. Ripley Fire Department (731) 635-2284
- G. A map showing the route to the nearest hospital.

Prior to any employee or subcontractor beginning work on the site, the Field Safety Coordinator shall brief all KSWA employees as well as subcontractors on the contents of this plan. Personnel will have the opportunity to review the plan, and ask questions about the planned work or hazards. Also, the Field Safety Coordinator will conduct site reconnaissance in order to familiarize all personnel with site conditions, boundaries, and physical hazards.

By KSWA voluntarily sharing this information with subcontractors and contractors, those firms are not relieved of the responsibility to provide their personnel with adequate and proper supervision, safety information, instruction, and equipment.

5.2 HEALTH AND SAFETY TRAINING

All personnel will be provided with approved health and safety training as outlined in 29 CFR 1910.120(e). Documentation for KSWA employees should also be maintained at a central location at the KSWA office.

5.3 RESPIRATOR USAGE TRAINING AND FIT TESTING

Prior to assignment to a site where respirator use may be required, employees will be provided with respirator training as outlined in 29 CFR 1910.134(e)(5). Respirator fit tests are to be conducted at 6 to 10 month intervals, or at any time when a condition that may change the fit of a respirator has occurred, such as change in weight, change in facial structure, extensive dental work, etc. All use of respirators shall comply with KSWA's written respiratory program.

6.0 SITE CONTROL - WORK ZONES

It is anticipated that conditions will not require special measures to achieve site security or restriction of normal site activities and access. The work area includes the SR-87 bridge and adjacent areas. The work will be performed along the side and underneath the bridge. The work zone will be delineated in accordance with TDOT temporary lane closure guidelines. Work zones will be identified with flashing lights, illuminated and non-illuminated signage, traffic spotter, etc.

7.0 PERSONAL PROTECTION

PPE and safety requirements must be appropriate to protect against the known or worst potential hazards on the site. Protective equipment should be selected based on the concentrations and possible routes of exposure to known or potential worst case substances. All KSWA engineering or assessment personnel engaged in work on site will be participants in the KSWA medical monitoring program described in Section 11, or a similar program.

KSWA anticipates that Level D protection and basic site safety measures will be sufficient at this project site. Level D PPE is described in Section 8. Any conditions warranting upgrading of the required level of protection to Level C, B, or A will cause for all personnel to immediately leave the work site. The site will be re-evaluated and a new site Health and Safety Plan will be prepared which incorporates the additional site information.

8.0 LEVELS OF PROTECTION

This plan is not intended for use at sites where levels of protection above Level D is required. Levels D is described below.

8.1 LEVEL D

Level D is the basic work uniform for all site operations. Level D should be selected when performing environmental sampling involving dilute concentrations of contaminants on sites that have been characterized by previous analyses or research.

8.1.1 Personal Protective Equipment

The following equipment is necessary for Level D personal protection:

- Standard work clothing.
- Optional disposable chemical-resistant clothing appropriate for known or expected levels of contamination.
- Boots/Shoes - safety or chemical-resistant boots.
- Safety glasses or safety goggles.
- Gloves - disposable latex or nitrile.
- Optional moisture resistant outer gloves.
- Hardhat.

8.1.2 Criteria for Use of Level D

The following criteria indicate situations where Level D personal protection is adequate:

- No indication of airborne health hazards present.
- No gross indication, above background concentrations, on the photoionization detector and/or organic vapor analyzer.

Additionally, a half-face, full-face, or powered air purifying respirator will be used with appropriate particulate filter(s).

9.0 DECONTAMINATION PROCEDURES

9.1 PERSONNEL DECONTAMINATION

If Level D protection is used, any disposable inner gloves or protective clothing should be sealed in a plastic bag and disposed of properly. Moisture resistant outer gloves and outer boots should be scrubbed with a stiff brush in soapy water, then rinsed to remove possible residual contamination. Disposable equipment should be used whenever possible.

9.2 EQUIPMENT DECONTAMINATION

Proper decontamination of all equipment is necessary to avoid transferring contaminants from the site, thereby increasing potential for exposure of on site and off site personnel. The measures described below should be followed prior to leaving all sites, as applicable to the equipment being used. Any variations from the procedures described below for reasons of worker health or safety must be described by the Project Manager in the site-specific hazard summary.

These measures are separate from, and may not be substituted for, other decontamination procedures associated with proper sampling protocol.

- A. The equipment may be thoroughly rinsed with clean water or an appropriate cleaning solution and wiped dry with paper towels before leaving the work site. Alternatively, the equipment may be wrapped in absorbent material and/or stored in plastic bags sealed to prevent contact with workers, vehicles, etc.
- B. The rinse water from this operation will be allowed to percolate into the ground or as specified.

10.0 EMERGENCY PROCEDURES

10.1 INHALATION

If warning signals such as: dizziness, nausea, headache, shortness of breath, burning sensation in mouth, throat or lung or symptoms specific to hazard found at the site are apparent, the victim should leave the contaminated air space immediately. Have someone contact emergency services and obtain health and safety information about potential contaminants.

If unconscious, the victim should be pulled out of the contaminated area immediately if they do not have any injuries which would prohibit moving them (i.e. spinal injury). The rescuers should make sure that the area is safe to enter. If the area cannot be safely entered, attempt to ventilate this area. Do not attempt a rescue. Rescuers should make sure they are properly trained in First Aid and rescue and that they are wearing proper respiratory and protective equipment before attempting the rescue.

If the victim is no longer breathing, mouth-to-mouth resuscitation or some other form of artificial respiration should be administered by a person who is properly trained and certified in a location away from the contaminated area.

Medical attention should be obtained immediately.

10.2 SKIN EXPOSURE

The skin should be washed with copious amounts of soap and water. If clothing is contaminated, it should be removed immediately and the skin washed thoroughly with running water. If a shower is available, it should be used immediately. Clothes should be removed while showering. This procedure may be life-saving as certain highly toxic chemicals are rapidly absorbed through the skin.

All contaminated parts of the body, including the hair, should be thoroughly decontaminated. It may be necessary to wash repeatedly.

10.3 INGESTION

A poison control center or emergency service should be contacted immediately to determine an appropriate course of action. If possible, have health and safety information on the poison available when you call for help. Vomiting should be induced except when the substance presents an aspiration hazard, such as from a petroleum product; or when the substance is a strong acid or base. To induce vomiting, a tablespoon of salt or powdered mustard in a glass of warm water, or syrup of ipecac from the First Aid Kit, can be taken as an emetic.

Drinking plenty of water and placing a finger down the throat may also be effective in inducing vomiting. The treatment should be repeated until vomit is clear.

Medical attention should be obtained immediately.

10.4 EYES

If a toxicant should get in the eyes, they should be washed with plenty of water. The eye itself should be held open, rotated, and flooded with water so that all surfaces are washed thoroughly. Washing should be continued for at least 15 minutes.

Medical attention should be obtained immediately.

10.5 EXPOSURE TO HEAT OR COLD

When working under severe weather conditions, personnel should be aware of the signs of heat stress, hypothermia and frostbite as well as the appropriate response actions.

Heat Stress - If a worker shows signs of heat stroke (dry, hot, red skin, high body temperature) or heat exhaustion (cool, moist, pale or red skin, dilated pupils, nausea, dizziness), the worker must be removed from the work area and cooled. Loosen clothing, elevate feet, and provide cool liquids. Heat stroke can be life threatening and requires rapid action.

Hypothermia - If a worker shows signs of hypothermia (shivering, impaired judgement, drowsiness, clumsiness) the worker must be removed from the work area and warmed gradually.

Frostbite - If a worker shows signs of frostbite (skin color changes to white or grayish-yellow then grayish-blue), the worker must be moved to a warm place. The affected area should be placed in warm (100-105°F) water. Do not rub or massage.

10.6 STINGS AND BITES

If still present, remove stinger with fingernail. Wash the the location of the sting with soap and water, cover with bandage and apply ice. If severe allergic reactions appear (hives, itching, rash, nausea, vomiting, dizziness, swelling) seek medical attention immediately.

10.7 PERSONAL INJURY

A first aid kit shall be readily available in case of an injury. Administer first aid and/or seek medical help, if necessary. Medical emergencies take precedence over decontamination procedures. A map showing the route to the nearest hospital is provided at the end of this Health and Safety Plan. It is the responsibility of the field safety coordinator to ensure that a phone is readily available on-site, and to identify which personnel have phones and provide this information to all on site personnel.

10.8 SPILL OR RELEASE OF HAZARDOUS MATERIAL

Clean up, isolate or contain spill as appropriate. Contact emergency response personnel, project manager, and/or client company officials as appropriate.

10.9 POTENTIAL OR ACTUAL FIRE/EXPLOSION

If it is safe to do so, on site personnel may use available fire fighting equipment to control or extinguish the fire, and remove or isolate materials which may contribute to the fire. Contact the fire department project manager and/or client company officials as appropriate.

10.10 EVACUATION

In the event of an emergency that requires an evacuation of the site, verbal instruction will be given by the Field Safety Coordinator to evacuate the area. Personnel will immediately exit the site to the pre-designated upwind "clean" location. The Field Safety Coordinator will account for KSWA personnel, and will advise personnel of further instructions, if necessary. The Field Safety Coordinator will also advise responding off site emergency personnel, if necessary. Personnel shall not re-enter the site until the emergency conditions have been corrected and the Field Safety Coordinator has authorized re-entry.

11.0 MEDICAL MONITORING

All engineering and assessment personnel engaged in on site activities shall be participants in a medical monitoring program similar to the following. As participants in this program, these individuals will have had recent physical examinations.

The following personnel will be accessing the site during field activities and the dates at which their medical monitoring program was last updated:

1. Victoria Gallagher (April 2017)

The primary goal of this medical monitoring program is to provide evaluation and ongoing surveillance of the health status of employees potentially exposed to toxic substances as a result of their work-related activities. An active health monitoring program for those employees potentially at risk is an important tool in evaluating the effects of chronic low-level exposures or acute exposures related to operations at hazardous waste sites. The effects of low-level exposures may not become apparent until years after the initial exposure.

This medical monitoring program includes laboratory testing, personnel medical history evaluation, physical examination and other specific testing.

Each participant in this medical monitoring program undergoes a complete occupational history evaluation and baseline physical examination including the following parameters:

- Pulmonary Function Studies
- Complete Blood Count
- Chemical Blood Profile
- Urinalysis
- Chest X-Ray
- Electrocardiogram
- Specific parameters as necessary dependent upon exposure

Following the establishment of each participant's baseline values for the above parameters, an annual re-evaluation is conducted to monitor potential changes due to work with hazardous materials.

In addition to this annual re-examination, provisions are made for specific post-exposure examinations in the event of a suspected exposure during a particular field event.

The program shall meet or exceed the minimum requirements established in OSHA standard 20 CFR 1910.120.

13.0 FIELD SAFETY COORDINATOR'S SUMMARY

(To be completed by Field Safety Coordinator after completion of each phase of field work, and returned to Project Manager.)

Project Summary

Project Name:	TDOT Lauderdale Co. SR-87 Bridge ACM Survey
Project Number:	100-17-0078
Activities Completed:	Asbestos Bridge Survey
Date of Activities:	1/18/18

During the execution of the activities covered by this Health and Safety Plan, there were:

- a) No violations of the Safety Plan provisions and no obvious contamination of KSWA employees or subcontractors.
- b) The following incidents, violations of the Safety Plan provisions, or obvious contamination of KSWA personnel or subcontractors. (Give details of who, when, type of contamination, circumstances, first aid or medical assistance administered in the space below.)

Time and Date of Incident	People Involved	Description of Incident

Signature  Date 1/18/18
Field Safety Coordinator

APPENDIX E: ACTIVITY HAZARD ANALYSIS

ACTIVITY HAZARD ANALYSIS

Asbestos Survey
SR-87 Bridge over Overflow, LM 3.88
Lauderdale County, Tennessee

PIN: 124637.00

TDOT Project No.: 49006-0240-04

Bridge No.: 49SR0870011

KSWA Project Number: 100-17-0078

Prepared by:



K. S. WARE AND ASSOCIATES, L.L.C
54 Lindsley Avenue
Nashville, Tennessee 37210

September 20, 2017

ACTIVITY HAZARD ANALYSIS FOR ASBESTOS SURVEY

EM 385-1-1 Reference:

Hard hats and safety toe boots are mandatory. Eye and hearing protection are mandatory during sampling and as appropriate.

Principal Steps	Potential Hazards	Action to Minimize Hazard
1. Asbestos exposure	1. Inhalation, skin irritation	1. All personnel that will be present on the project must wear the proper PPE. Use all safety precautions to ensure that all state and federal guidelines are followed and to limit the exposure to asbestos. Asbestos samplers are to use a respirator when sampling.
2. Heat stress exposure	2. Heat stroke	2. Monitor all personnel for signs of fatigue, dizziness or other physical abnormalities. Personnel should wear clothing suited for the weather conditions and breaks will be given for intake of fluids, etc. Ensure that water or sports hydration fluid (Gatorade, PowerAde) is available on site.
3. Cold stress exposure	3. Hypothermia, frostbite, trench foot	3. Monitor all personnel for signs of shivering, loss of coordination, confusion, disorientation, slowed pulse and breathing, and loss of consciousness. Personnel should wear clothing suited for the weather conditions, including effects of wind and extreme cold. Ensure that a location shielded from the wind and with a heat source is available. If cold temperatures and wind chill conditions are present, warming breaks should be planned to avoid prolonged exposure.
4. Traffic Hazards	4. Moving vehicles	4. Field activities will encounter traffic on this project. Be aware of your surroundings, watch for traffic when performing in areas that have moving vehicles. Use a spotter or traffic control when sampling in the roadway or crossing the road. Maintain safe positioning. Use "Men Working" signs to delineate the work area and slow down drivers.
5. Site Maintenance	5. Slip, trip, and fall.	5. Prior to field activities, the Field Safety Coordinator should observe the terrain on site and monitor the conditions throughout the survey. Be aware of steep and/or rocky slopes. Also be aware of potholes around the bridge.
6. Overhead Utilities	6. Electrocution, explosion, fire	6. Be aware of fallen or low hanging utility lines while on the ground level. Remain at least 10 feet from all utility lines with all equipment.
7. Biological Hazards	7. Small animals, insects	7. Be aware of animal habitat in and around the work area. Do not put hands into areas you cannot inspect for potential insects, mammals, and reptiles. Beware of waterborne snakes, colonies of stinging insects, and vector species that could transmit disease.
8. Noise	8. Damage to hearing	8. Operations that generate sound levels 85 dBA and above require hearing protection. Either muffs or plugs are acceptable. Heavy traffic can be a cause.

Principal Steps	Potential Hazards	Action to Minimize Hazard
9. Hand/Finger Protection	9. Physical injury to personnel	9. Wear gloves when there is exposure to potential hazards that could produce scrapes and cuts. Do not wear jewelry. Any jewelry can be dangerous. Handle sharp or pointed tools with extreme care. Be careful when using a hammer to not smash hand or fingers. Use the proper gloves for the job at hand.
10. Hand Tools and Equipment	10. Physical injury to personnel	10. Use the right tool or piece of equipment for the job. Use only tools in safe condition. Tools and equipment must be used properly and not abused. Take precautions to avoid injury by cutting tools by keeping them sheathed until use.
11. Ladders	11. Fall from excessive height	11. Use caution and maintain three points of contact when climbing a ladder. Always have other site personnel support the ladder while in use. Maintain a safe distance from overhead utilities and obstructions. Always place the ladder on stable, even ground.
12. Severe Weather	12. Thunderstorms, lightning hazard	12. Cease work immediately and take cover in a vehicle or structure until lightning has ceased.
13. Waterways	13. Rise/fall of water level, current, holes in waterbed, slippery surfaces	13. Be conscious of the water level and current. When walking through water, be careful when stepping in case of holes and/or slippery surfaces. Use a personal flotation device (PFD) if water is above knee height or is swift moving.

This Activity Hazard Analysis has been prepared by K.S. Ware and Associates.

The KSWA field safety coordinator for this project will be Ms. Tori Gallagher. Ms. Gallagher's health and safety training and certifications include:

- Completed OSHA 10 Hour Construction Safety Course
- Completed OSHA 40 Hour HAZWOPER Course

Multimodal

Environmental Studies Request

Project Information

Route: State Route 87
Termini: Bridge over Overflow, Log Mile (LM) 3.88
County: Lauderdale
PIN: 128113.05

Request

Request Type: Environmental Study Reevaluation
Project Plans: Initial Studies
Date of Plans: 06/12/2019
Location: Email Attachment

Certification

Requestor: Jonathan Knudsen
Title: TDOT Environmental Studies Specialist

Signature: Jonathan
Knudsen

Digitally signed by
Jonathan Knudsen
Date: 2019.06.14
10:38:53 -05'00'

Environmental Study

Technical Section

Section: Multimodal

Study Results

This project accommodates bicyclists with 4' shoulders in a rural area.

Commitments

Did the study of this project result in any environmental commitments?

No

Additional Information

Is there any additional information or material included with this study?


No

Certification

Responder: Jessica Wilson

Title: Transportation Program Supervisor

Signature: Jessica
Wilson

 Digitally signed by
Jessica Wilson
Date: 2019.06.19
10:46:13 -05'00'



MULTIMODAL ACCESS POLICY

EFFECTIVE DATE:

July 31, 2015

AUTHORITY:

TCA 4-3-2303

If any portion of this policy conflicts with applicable state or federal laws or regulations, that portion shall be considered void. The remainder of this policy shall not be affected thereby and shall remain in full force and effect.

PURPOSE:

To create and implement a multimodal transportation policy that encourages safe access and mobility for users of all ages and abilities through the planning, design, construction, maintenance, and operation of new construction, reconstruction and retrofit transportation facilities that are federally or state funded. Users include, but are not limited to, motorists, transit-riders, freight-carriers, bicyclists and pedestrians.

APPLICATION:

The policy applies to Department of Transportation employees, consultants and contractors involved in the planning, design, construction, maintenance, and operation of state and federally funded projects, and local governments managing and maintaining transportation projects with funding through TDOT's Local Programs Development Office.

DEFINITIONS:

- Highway: A main road or thoroughfare, such as a street, boulevard, or parkway, available to the public for use for travel or transportation.
- Multimodal: For the purposes of this policy, multimodal is defined as the movement of people and goods on state and functionally-classified roadways. Users include, but are not limited to, motorists, transit-riders, freight-carriers, bicyclists and pedestrians, including those with disabilities.
- Reconstruction: Complete removal and replacement of the pavement structure or the addition of new continuous traffic lanes on an existing roadway.

- Retrofit: Changes to an existing highway within the general right-of-way, such as adding lanes, modifying horizontal and vertical alignments, structure rehabilitation, safety improvements, and maintenance.
- Roadway: The portion of a highway, including shoulders, that is available for vehicular, bicycle or pedestrian use.

POLICY:

The Department of Transportation recognizes the benefits of integrating multimodal facilities into the transportation system as a means to improve the mobility, access and safety of all users. The intent of this policy is to promote the inclusion of multimodal accommodations in all transportation planning and project development activities at the local, regional and statewide levels, and to develop a comprehensive, integrated, and connected multimodal transportation network. TDOT will collaborate with local government agencies and regional planning agencies through established transportation planning processes to ensure that multimodal accommodations are addressed throughout the planning, design, construction, maintenance, and operation of new construction, reconstruction and retrofit transportation facilities as outlined in TDOT's Multimodal Access Policy Implementation Plan.

TDOT is committed to the development of a transportation system that improves conditions for multimodal transportation users through the following actions:

1. Provisions for multimodal transportation shall be given full consideration in new construction, reconstruction and retrofit roadway projects through design features appropriate for the context and function of the transportation facility.
2. The planning, design and construction of new facilities shall give full consideration to likely future demand for multimodal facilities and not preclude the provision of future improvements. If all feasible roadway alternatives have been explored and suitable multimodal facilities cannot be provided within the existing or proposed right of way due to environmental constraints, an alternate route that provides continuity and enhances the safety and accessibility of multimodal travel should be considered.
3. Existing multimodal provisions on roadways shall not be made more difficult or impossible by roadway improvements or routine maintenance projects.
4. Intersections and interchanges shall be designed (where appropriate based on context) to accommodate the mobility of bicyclists and pedestrians to cross corridors as well as travel along them in a manner that is safe, accessible, and convenient.
5. While it is not the intent of resurfacing projects to expand existing facilities, opportunities to provide or enhance bicycle and pedestrian facilities shall be given full consideration during the program development stage of resurfacing projects.
6. Pedestrian facilities shall be designed and built to accommodate persons with disabilities in accordance with the access standards required by the Americans with Disabilities Act

(ADA). Sidewalks, shared use paths, street crossings (including over- and under-crossings) and other infrastructure shall be constructed so that all pedestrians, including those with disabilities, can travel independently.

7. Provisions for transit-riders, pedestrians, and bicyclists shall be included when closing roads, bridges or sidewalks for construction projects where pedestrian, bicycle, or transit traffic is documented or expected.

EXCEPTIONS:

It is TDOT's expectation that full consideration of multimodal access will be integrated in all appropriate new construction, reconstruction and retrofit infrastructure projects. However, there are conditions where it is generally inappropriate to provide multimodal facilities. Examples of these conditions include, but are not limited to:


1. Controlled access facilities where non-motorized users are prohibited from using the roadway. In this instance, a greater effort may be necessary to accommodate these users elsewhere within the same transportation corridor.
2. The cost of accommodations would be excessively disproportionate to the need and probable use. Excessively disproportionate is defined as exceeding twenty percent (20%) of the total cost of the project. The twenty percent figure should be used in an advisory rather than an absolute sense, especially in instances where the cost may be difficult to quantify. Compliance with ADA requirements may require greater than 20% of project cost to accommodate multimodal access. Costs associated with ADA requirements are NOT an exception.
3. Areas in which the population and employment densities or level of transit service around the facility, both existing and future, does not justify the incorporation of multimodal alternatives.
4. Inability to negotiate and enter into an agreement with a local government to assume the operational and maintenance responsibility of the facility.
5. Other factors where there is a demonstrated absence of need or prudence, or as requested by the Commissioner of the Department of Transportation.

Exceptions for not accommodating multimodal transportation users on State roadway projects in accordance with this policy shall be documented describing the basis and supporting data for the exception, and must be approved by TDOT's Chief Engineer and Chief of Environment and Planning or their designees.


DESIGN GUIDANCE:

The Department recognizes that a well-planned and designed transportation network is responsive to its context and meets the needs of its users. Therefore, facilities will be designed and constructed in accordance with current applicable laws and regulations, using best practices and guidance, including but not limited to the following: TDOT Standard Drawings and guidelines, American Association of State Highway and Transportation Officials (AASHTO) publications, Institute of Transportation Engineers (ITE) publications, the Manual on Uniform Traffic Control Devices (MUTCD), National Association of City Transportation Officials (NACTO) publications, the Public Rights-of-Ways Accessibility Guidelines (PROWAG), and the Americans with Disabilities Act Accessibility Guidelines (ADAAG).

Signed:



PAUL DEGGES
Chief Engineer/Deputy Commissioner



TOKS OMISHAKIN
Chief of Planning/Deputy Commissioner



JOHN SCHROER
Commissioner