

# **Appalachian Highway Corridor H Parsons to Davis and Kerens to Parsons Section 5 Projects Core Boring Activities**

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*Tucker County, WV*

*State Projects X347-H-55.68.00 and X342-H-40.21*

*Federal Projects ACNH-0484(290) and NHPP 0484(316)*

## **CATEGORICAL EXCLUSION**

**Final - Revised**

**SEPTEMBER 11, 2023**





## WEST VIRGINIA DIVISION OF HIGHWAYS

### Programmatic Categorical Exclusion Type 2

(For projects that will not result in significant environmental impacts and/or substantive public controversy)

#### I. PROJECT INFORMATION

Project Name:

State Project Number:  Federal Project Number:

Route Number:  County:  Coordinates:

Average Daily Traffic (ADT): Existing:  Projected:

Prepared By:

Category (Identified in 23CFR771.117 (c) or (d)):

Select Categorical Exclusion #:

WVDOH Approval:

Does this project have a federal nexus?

Is this project FHWA federally aide eligible?

Is FHWA approval required?

FHWA Approval:

Existing Conditions:

Preferred Alternative:

Other Alternatives Considered:

A. SOCIOECONOMIC IMPACTS

1. Maintenance of Traffic

2. Public Controversy \*

3. Environmental Justice

(ONLY ANSWER (3) if the PCE Category DOES NOT fall within (c) 1-21)

a. Are you taking any right of way?

i. Temporary?

ii. Approximate acreage, if known

iii. Permanent?

iv. Approximate acreage, if known

b. Is the project within an EJ community?

c. Are there any displacements \*?

i. residential?

How many?

ii. non- residential?

How many?

d. Will there be any changes to access?

If yes, explain (temporary, permanent, etc.)

e. Was there public involvement for the project?

If yes, were there any environmental justice issues that could result in a disproportionately high and adverse effect raised during the public involvement?

f. Project justification (can be beneficial or not)?

## **B. CULTURAL RESOURCES**

3 of 6

### **1. History**

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#### **a. Adverse Effects \***

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### **2. Archaeology**

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#### **a. Adverse Effects \***

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## **C. FORESTS, PARKS & REC AREAS COORDINATION**

### **1. U.S. Forest Service**

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### **2. US Army Corps of Engineers**

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### **3. National Park Service**

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#### **a. Wild and Scenic River (Bluestone River)\***

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### **4. National Wildlife Refuge**

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### **5. State Park**

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### **6. State Forest**

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### **7. State Wildlife Management Area**

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### **8. Other Park or Recreational Area**

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**D. SECTION 4(f) IMPACTS**

4 of 6

**1. Historic Property \***

☐

**If yes, what type of 4(f)?**

**2. Park, Recreational \***

☐

**If yes, what type of 4(f)?**

**E. SECTION 6(f) IMPACTS**

**1. Land and Water Conservation Funds 6(f) Used**

☐

**If yes, what was purchased with the funds?**

**2. Is there a *CONVERSION* of 6(f) property \***

☐

**F. NATURAL RESOURCES COORDINATION**

**1. US Fish and Wildlife**

**a. Formal Consultation \***

**2. Division of Natural Resources**

**3. Farmland Involvement**

☐

**a. if yes, approximately how much?**

☐

**4. Floodplain Encroachment (increase to the regulated surface water elevation (100-year floodplain) of a stream, river or lake)\***

## H. PERMITS REQUIRED

5 of 6

1. USACE 404

☐

a. Nationwide/Regional

☐

b. Individual \*

☐

2. USCG (Section 9 involving a bridge) \*

☐

3. USCG (Section 10 doesn't involve a bridge) \*

☐

4. Federal Special Use Permit (construction) \*

☐

a. National Forest Service \*

☐

b. National Park Service \*

☐

c. US Fish and Wildlife Service \*

☐

### I. Noise Impacts

☐

a. (Mitigation Required) \*

☐

### J. Air Quality Impacts

☐

K. Hazard Waste/ Underground Tanks  
known within project area?

☐

a. If yes, where?

L. Airport Coordination(within 2 miles)

☐

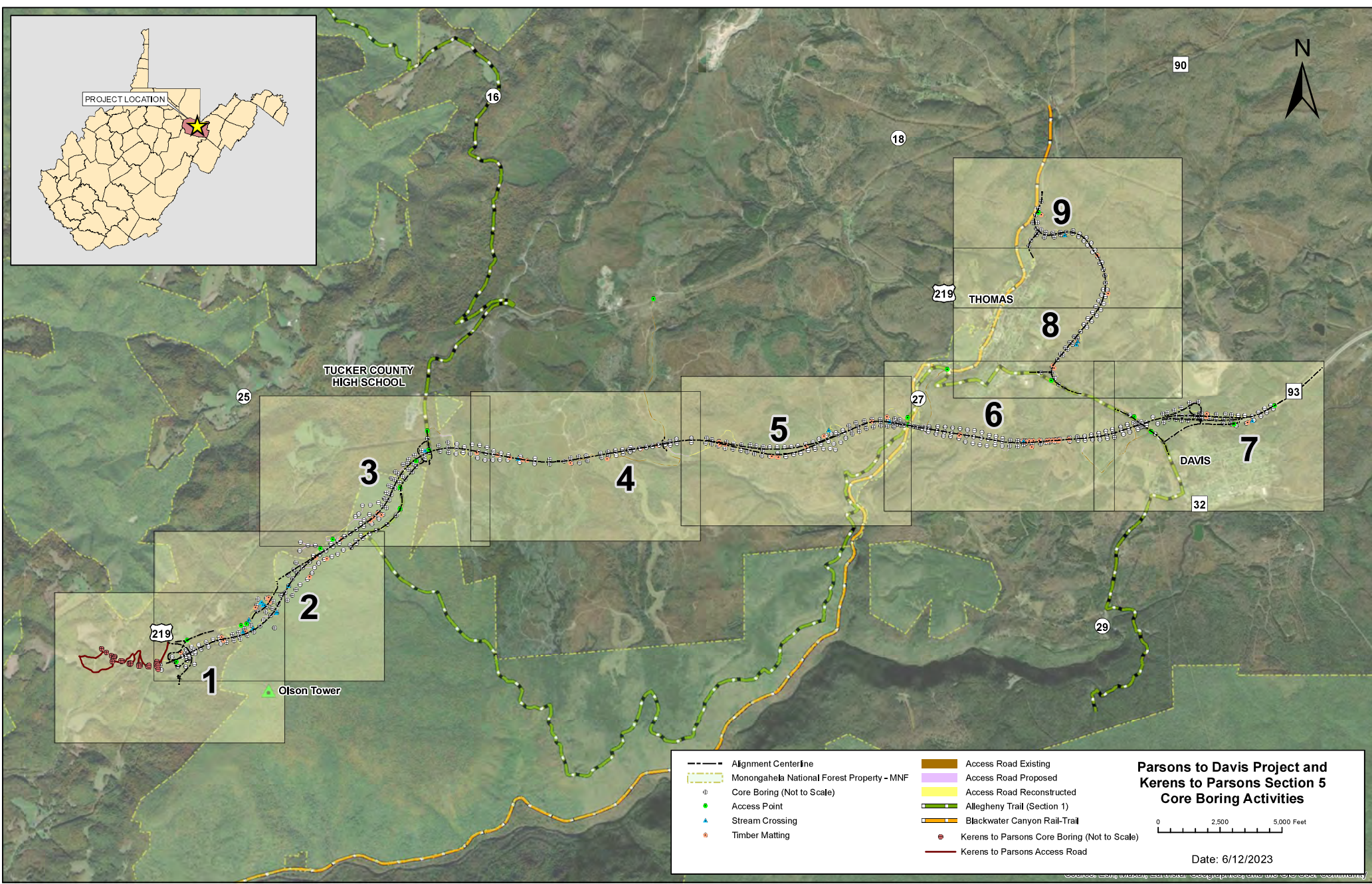
a. If yes, which airport?

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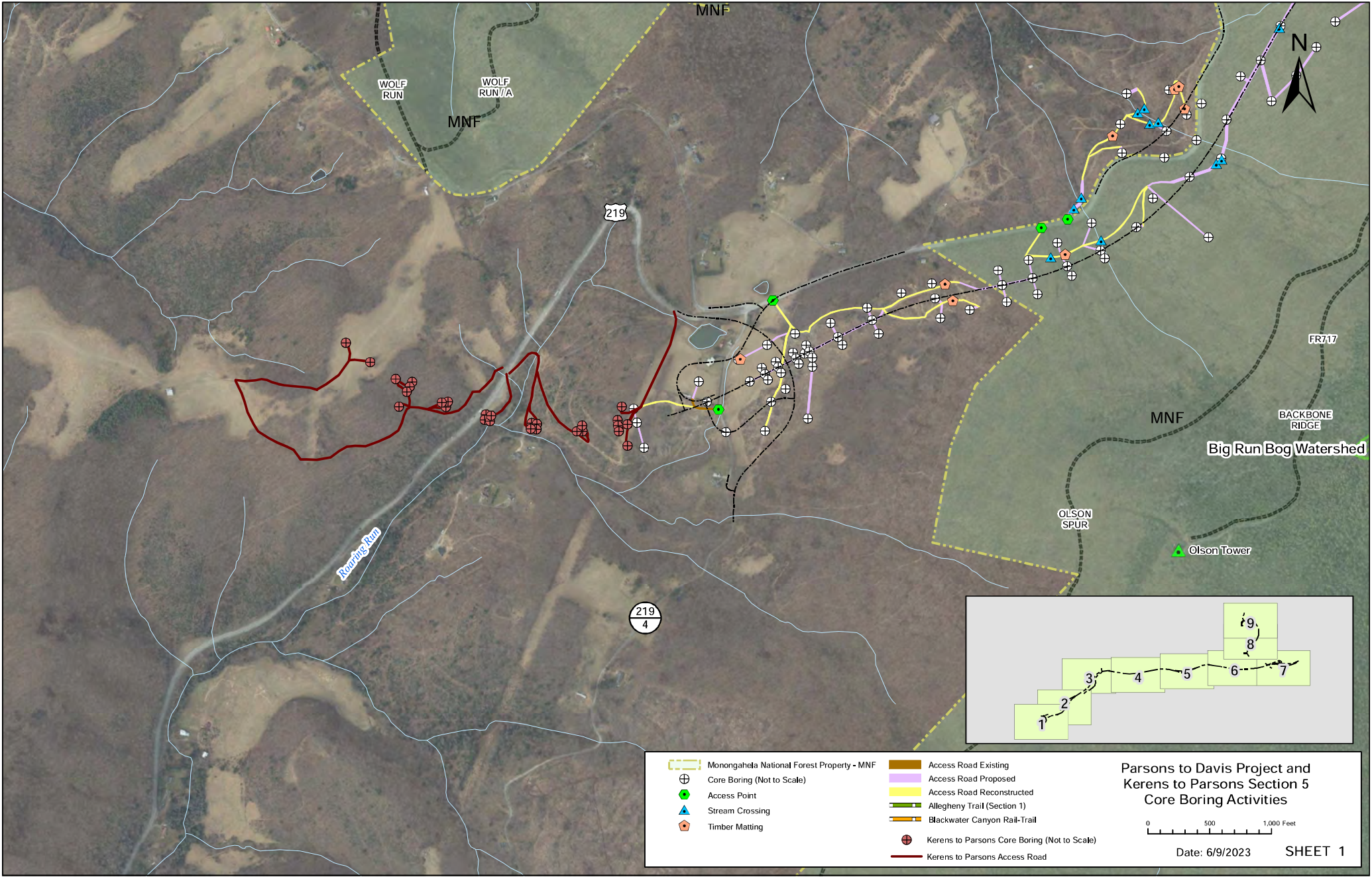
**\* If you have answered "yes" to any of the \*red questions then this project cannot be cleared as a Type 2 PCE (Programmatic Categorical Exclusion). It will need to be processed as a Categorical Exclusion requiring FHWA approval or a higher level of NEPA documentation.**

**If the project has changes that are not in this document the project needs to be resubmitted to the NEPA Compliance and Permitting Section for reevaluation. Waste and borrow areas outside of the project limits require a separate clearance document.**

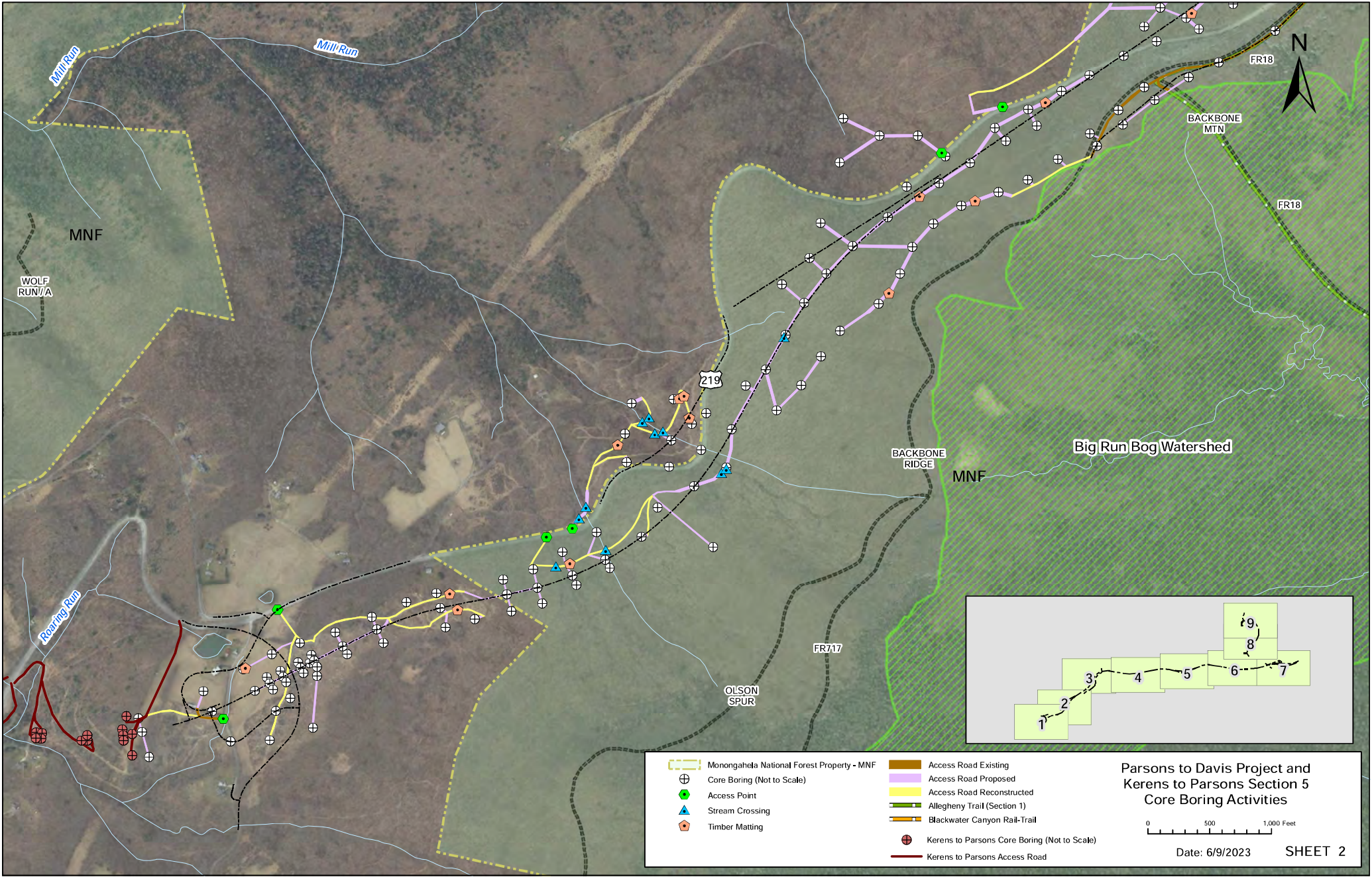
**Attachment 1:**  
**Core Boring and Access**  
**Locations**



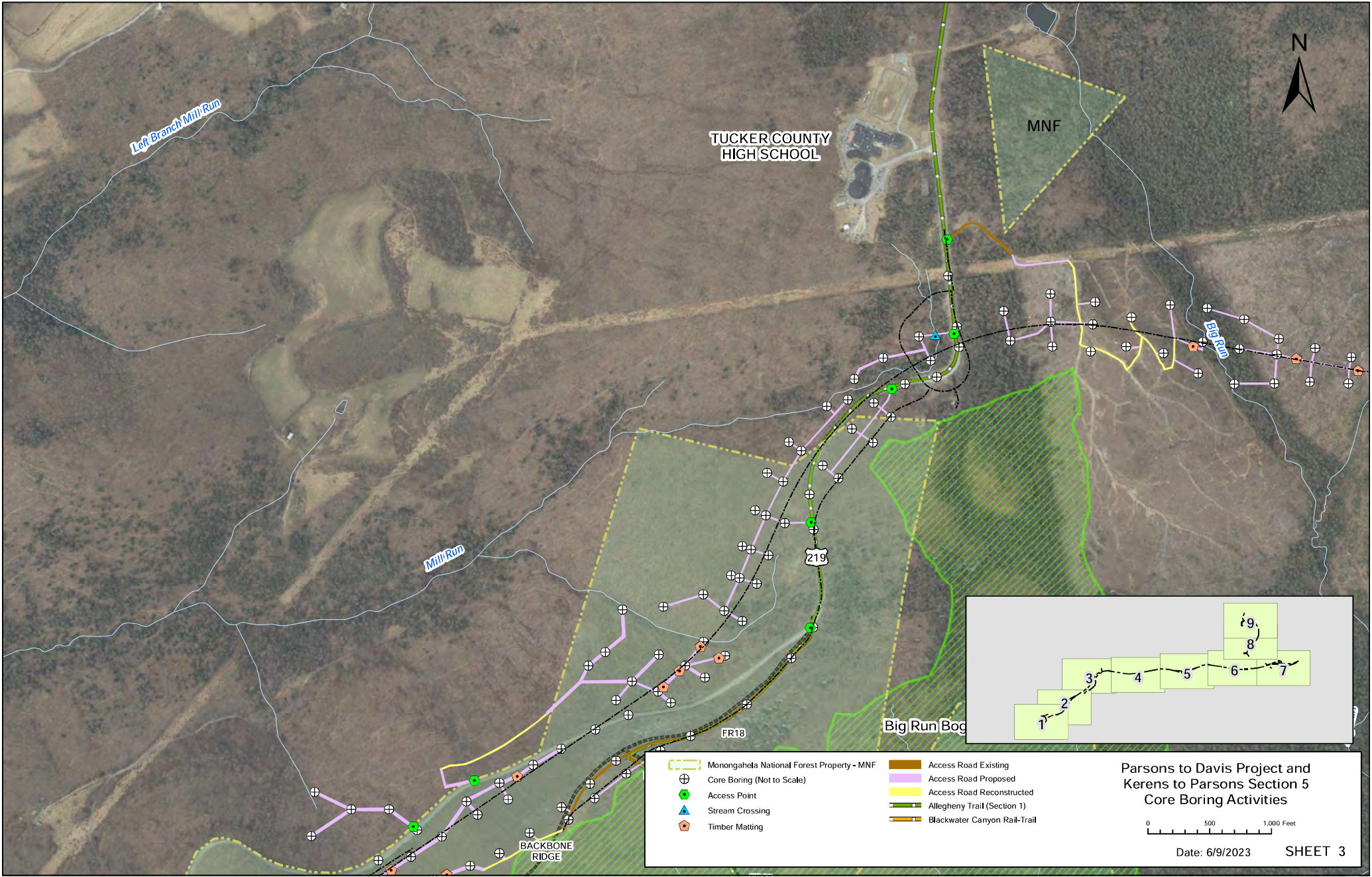




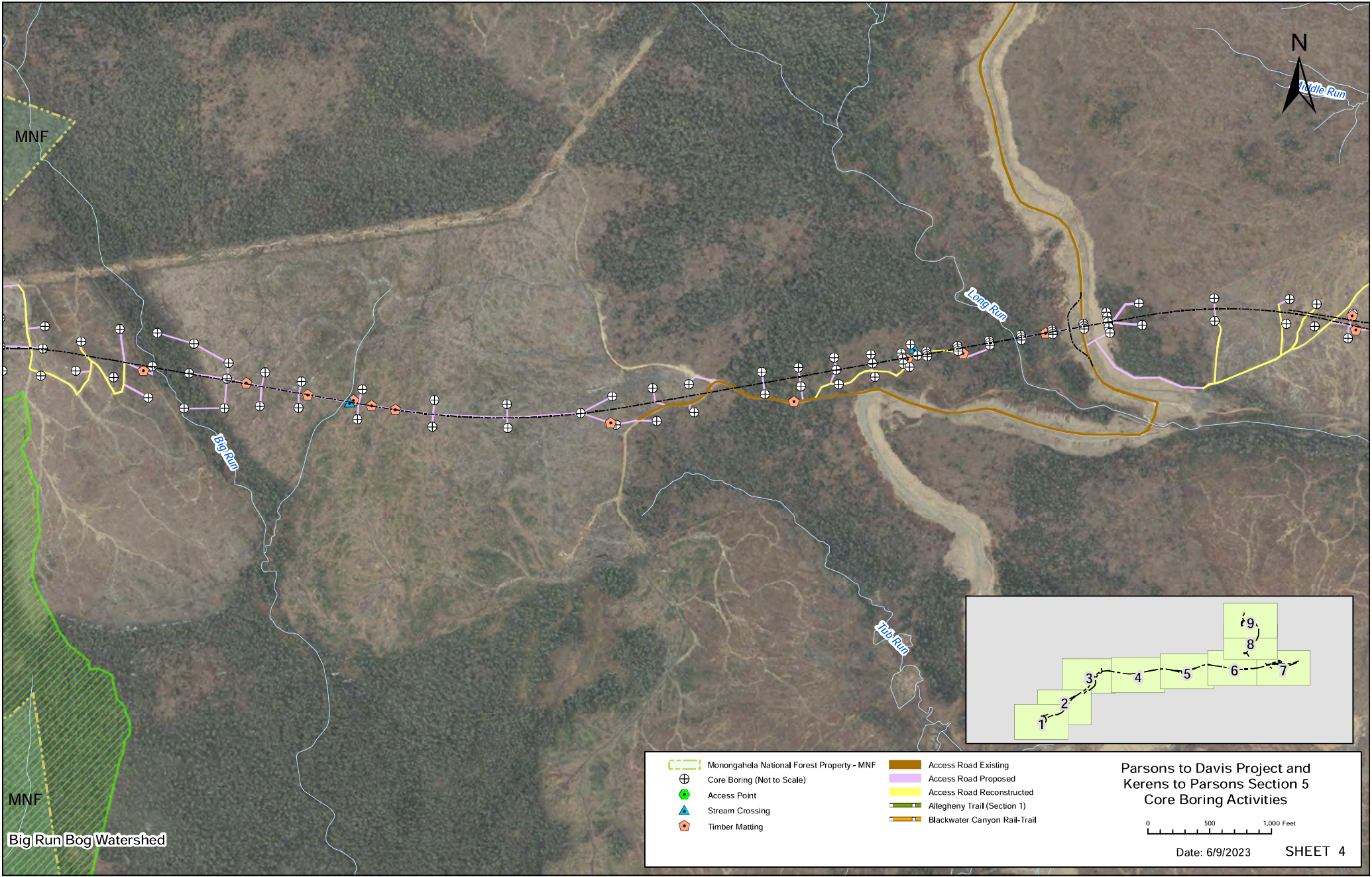










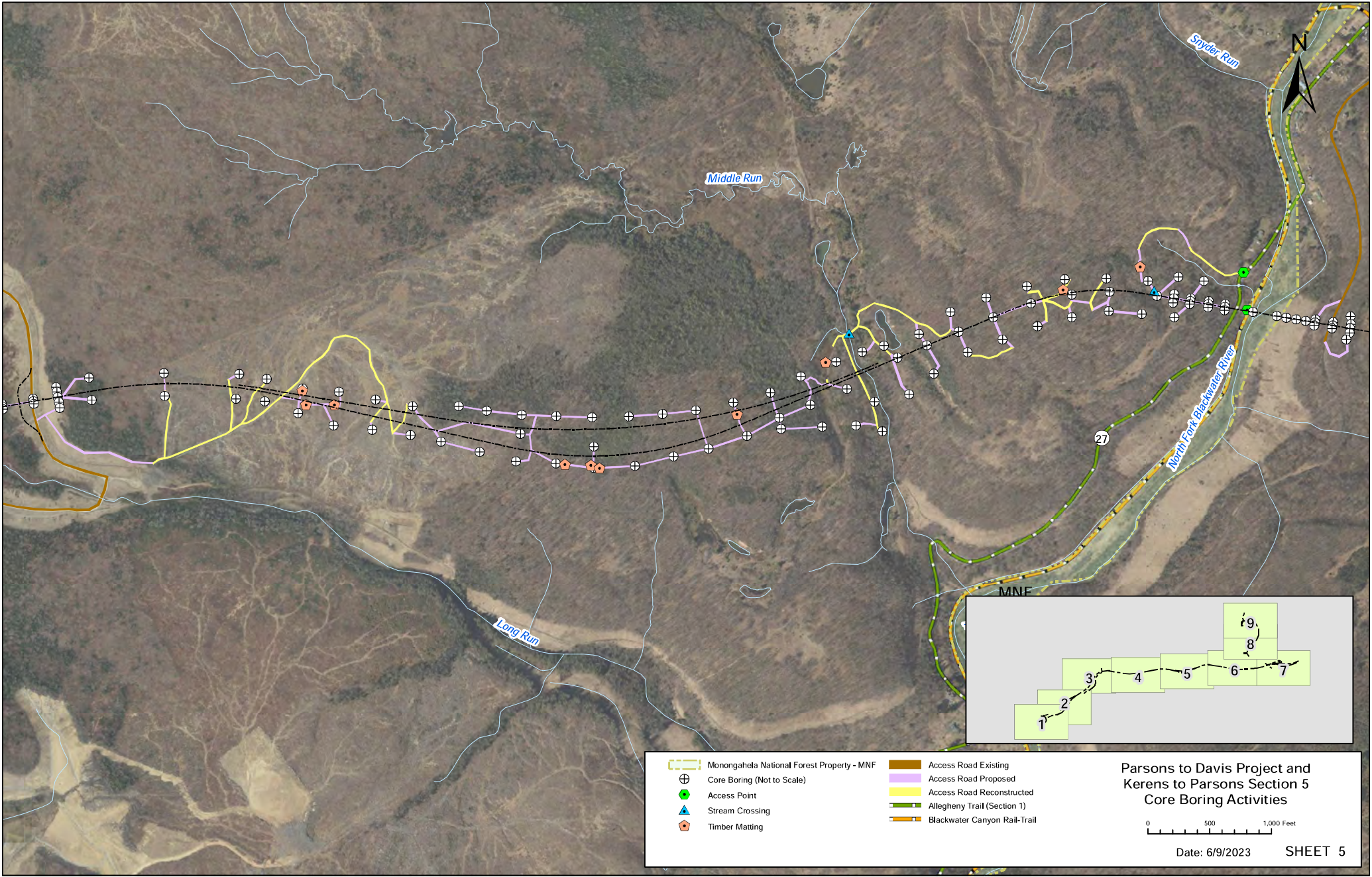


Parsons to Davis Project and  
Kerens to Parsons Section 5  
Core Boring Activities

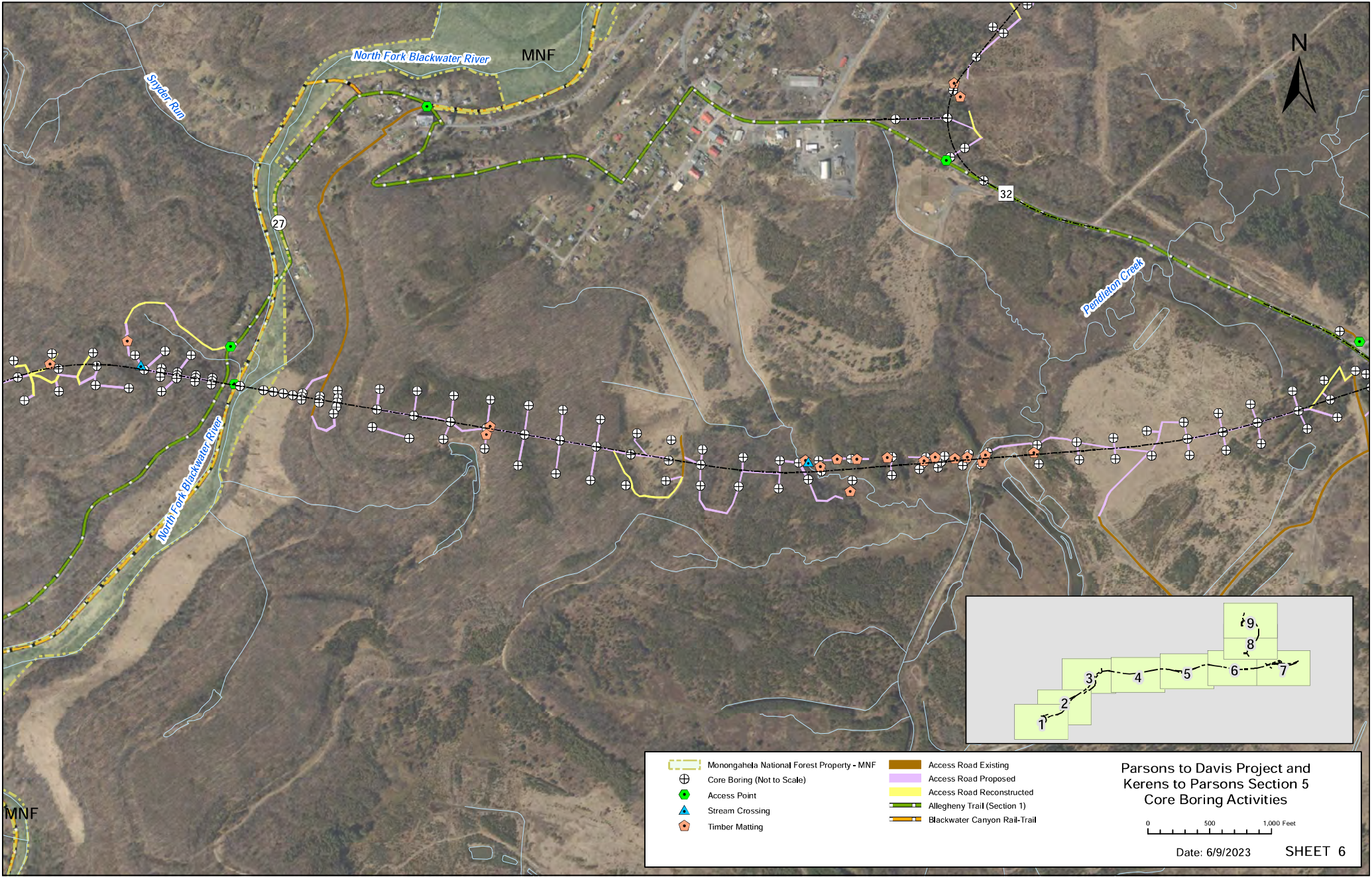
Date: 6/9/2023

SHEET 4









Monongahela National Forest Property - MNF

Core Boring (Not to Scale)

Access Point

Stream Crossing

Timber Matting

Access Road Existing

Access Road Proposed

Access Road Reconstructed

Allegheny Trail (Section 1)

Blackwater Canyon Rail-Trail

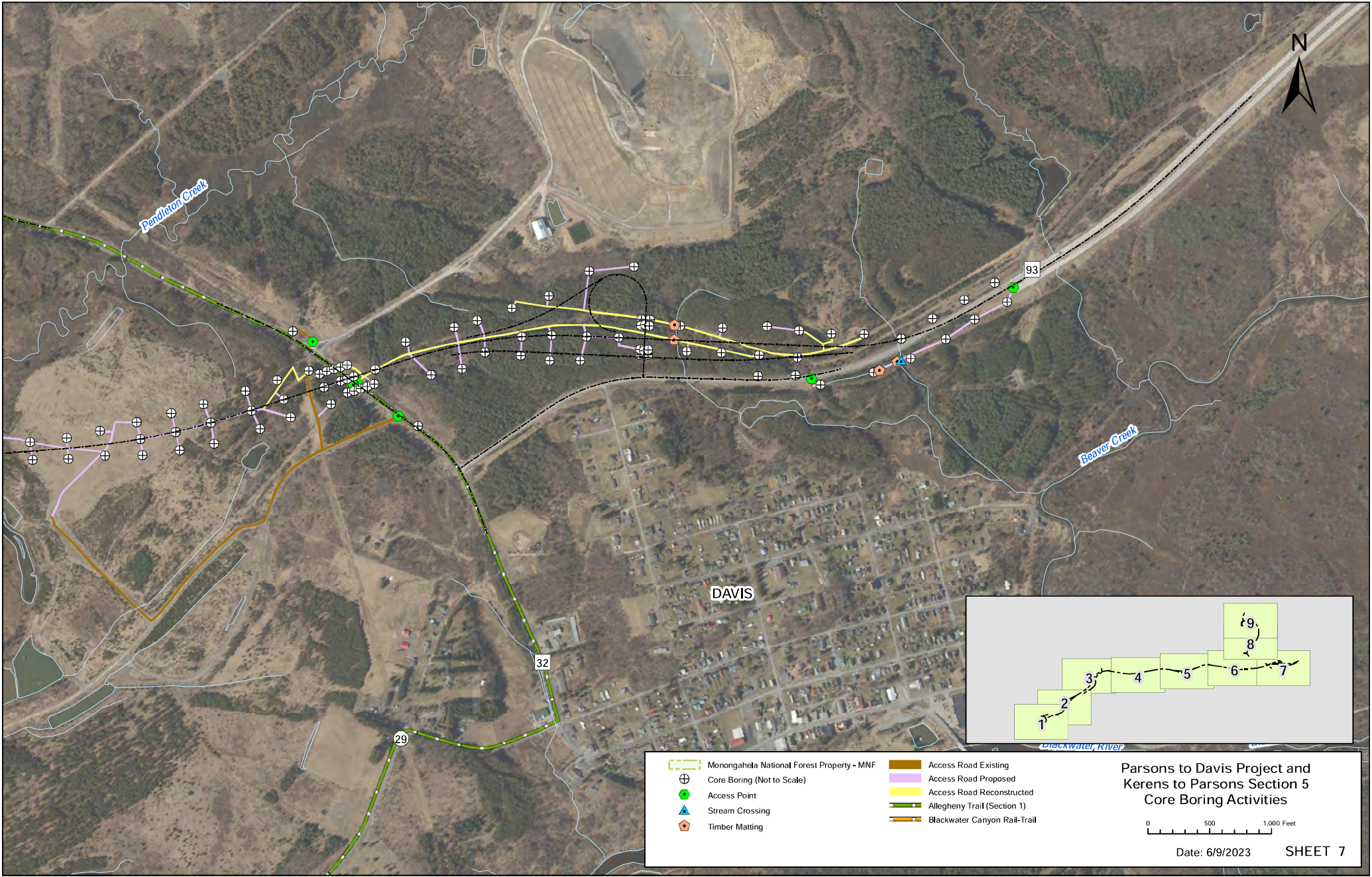
**Parsons to Davis Project and  
Kerens to Parsons Section 5  
Core Boring Activities**

0 500 1,000 Feet

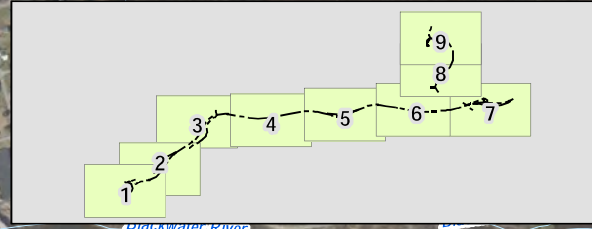
Date: 6/9/2023

**SHEET 6**

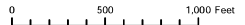




- |  |                              |
|--|------------------------------|
| Monongahela National Forest Property - MNF | Access Road Existing         |
| Core Boring (Not to Scale)                 | Access Road Proposed         |
| Access Point                               | Access Road Reconstructed    |
| Stream Crossing                            | Allegheny Trail (Section 1)  |
| Timber Matting                             | Blackwater Canyon Rail-Trail |



**Parsons to Davis Project and  
Kerens to Parsons Section 5  
Core Boring Activities**





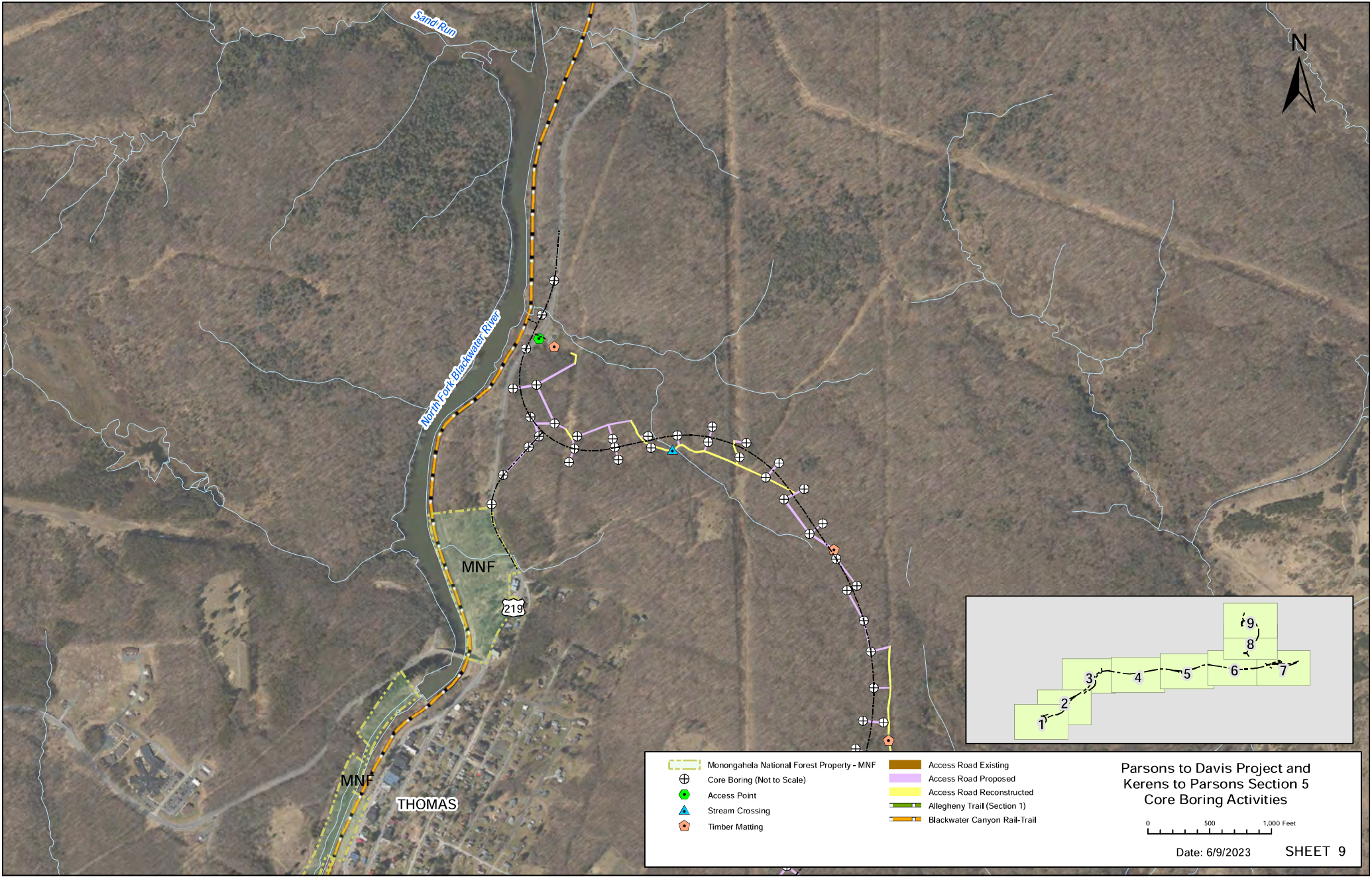


- |  |                              |
|--|------------------------------|
| Monongahela National Forest Property - MNF | Access Road Existing         |
| Core Boring (Not to Scale)                 | Access Road Proposed         |
| Access Point                               | Access Road Reconstructed    |
| Stream Crossing                            | Allegheny Trail (Section 1)  |
| Timber Matting                             | Blackwater Canyon Rail-Trail |

Parsons to Davis Project and  
Kerens to Parsons Section 5  
Core Boring Activities

0 500 1,000 Feet





**Parsons to Davis Project and  
Kerens to Parsons Section 5  
Core Boring Activities**

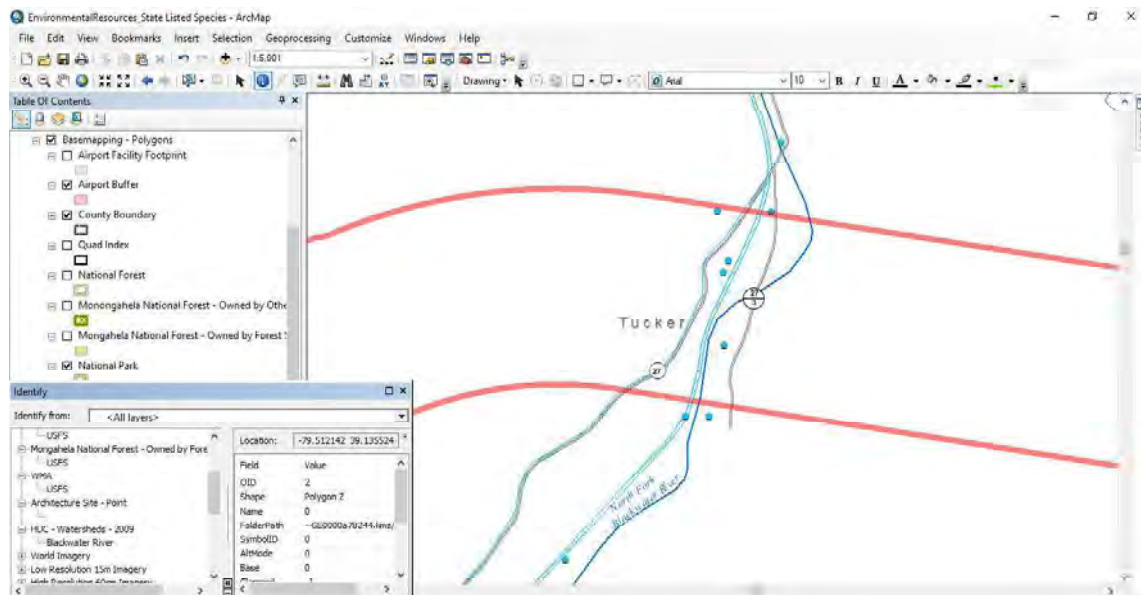
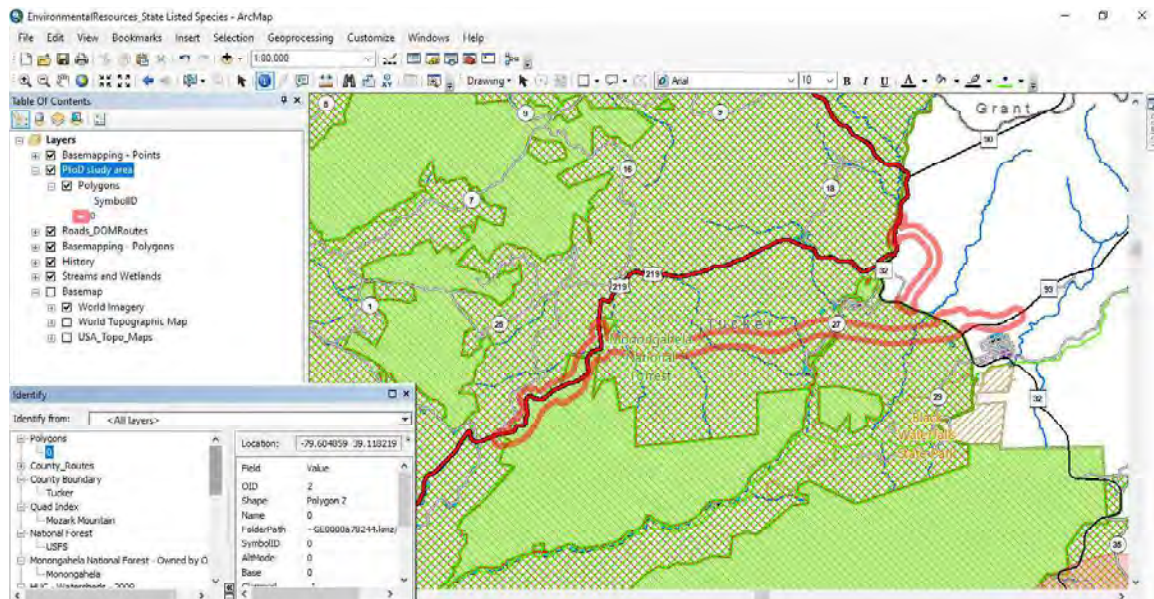
0 500 1,000 Feet

Date: 6/9/2023

SHEET 9

**Attachment 2:**  
**ArcGIS Screening**





6/5/2023

Appalachian Highway Corridor H  
 Parsons to Davis and Kerens to Parsons Core Boring Activities  
 X347-H-55.68 and X342-H-40.21  
 ACNH-0484(290) & NHPP-0484(316)  
 Tucker County

Within Mon National Forest, Forest Owned & Non-Forest Ownership

Architecture Site Points near North Fork Blackwater River

**Attachment 3:**  
**EJScreen Report**

## EJScreen Report (Version 2.11)

1 mile Ring around the Area

WEST VIRGINIA, EPA Region 3

Approximate Population: 1,443

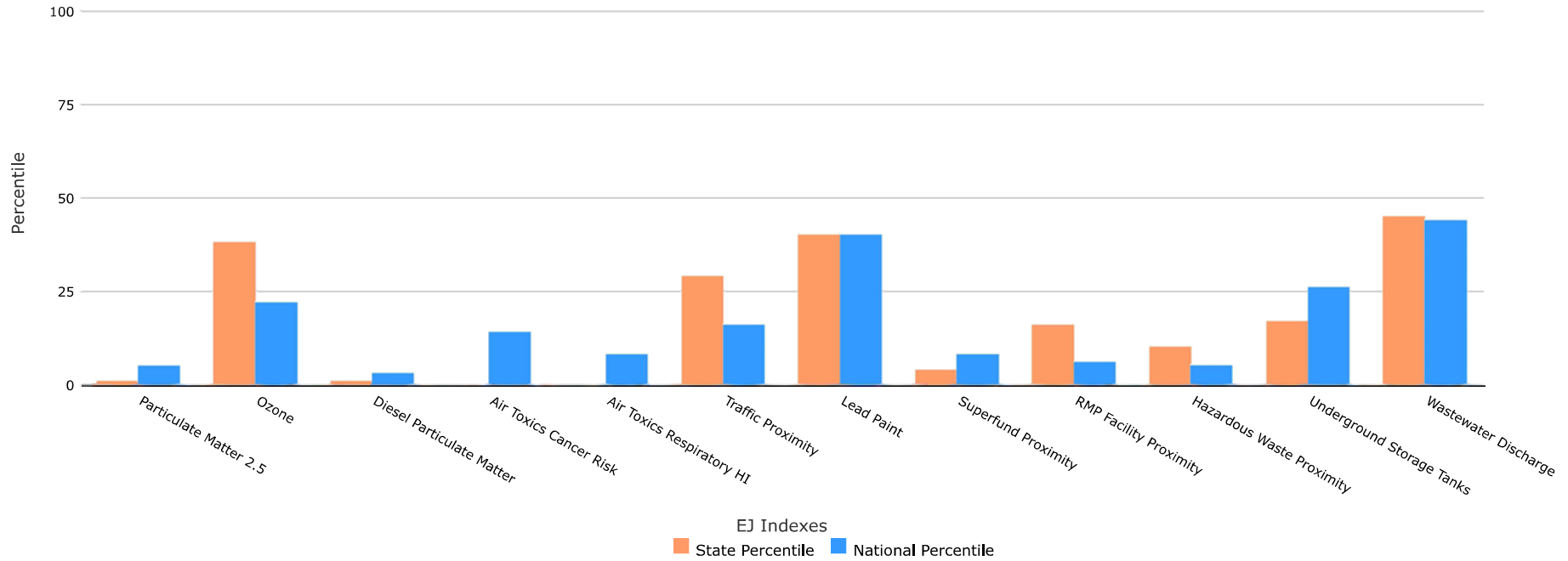
Input Area (sq. miles): 30.58

sketched CB

Selected Variables	Percentile in State	Percentile in USA
<b>Environmental Justice Indexes</b>		
Particulate Matter 2.5 EJ Index	1	5
Ozone EJ Index	38	22
Diesel Particulate Matter EJ Index*	1	3
Air Toxics Cancer Risk EJ Index*	0	14
Air Toxics Respiratory HI EJ Index*	0	8
Traffic Proximity EJ Index	29	16
Lead Paint EJ Index	40	40
Superfund Proximity EJ Index	4	8
RMP Facility Proximity EJ Index	16	6
Hazardous Waste Proximity EJ Index	10	5
Underground Storage Tanks EJ Index	17	26
Wastewater Discharge EJ Index	45	44

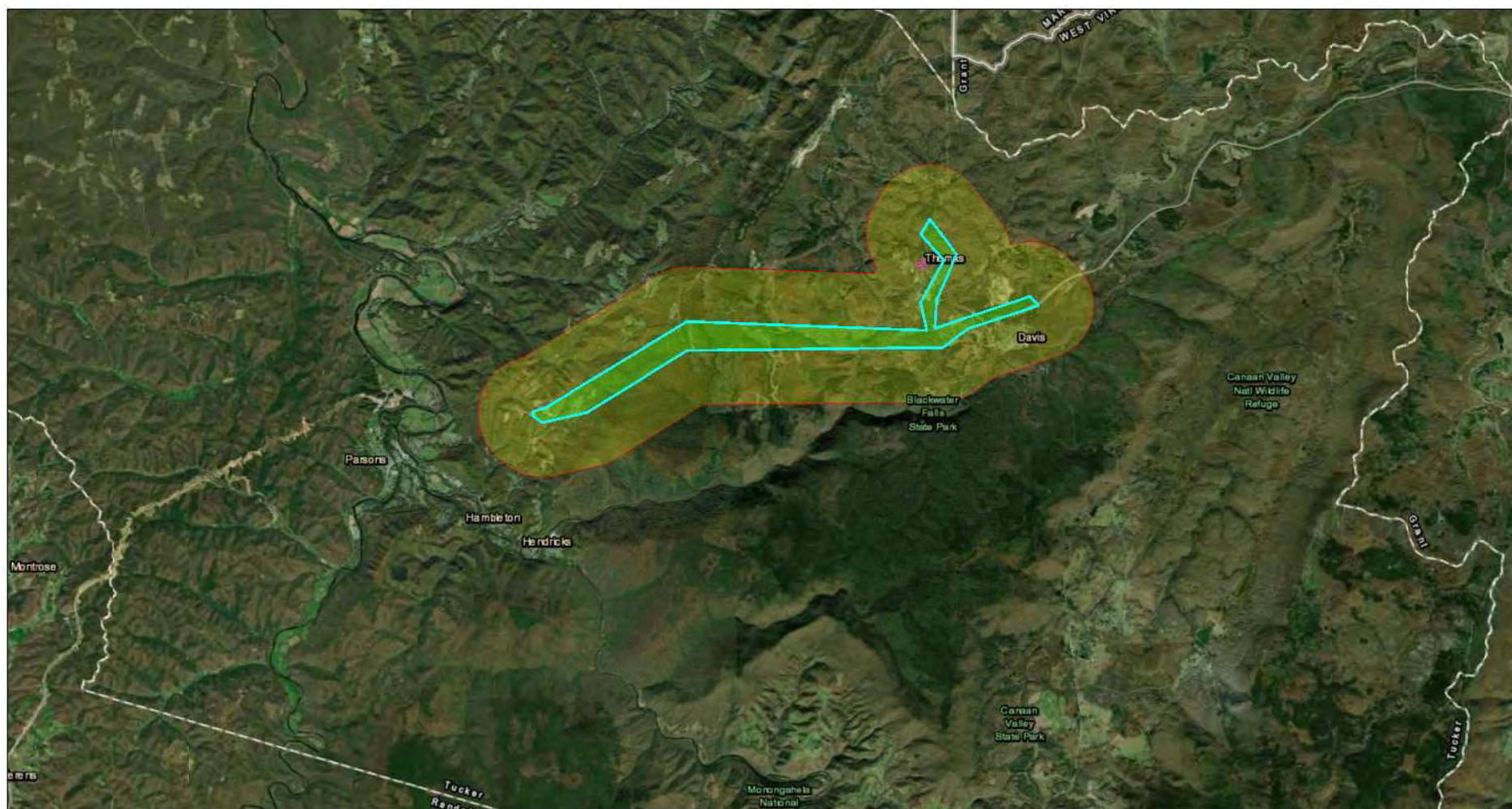
EJ Indexes - The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator

## EJ Index for the Selected Area Compared to All People's Blockgroups in the State/US



\*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: <https://www.epa.gov/haps/air-toxics-data-update>. (<https://www.epa.gov/haps/air-toxics-data-update>)



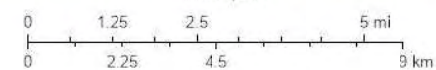


May 17, 2023

 sketched CB

 Search Result (point)

1:144,448



Earthstar Geographics, VITA, Esri, HERE, Garmin

Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0

Selected Variables	Value	State		USA	
		Avg.	%tile	Avg.	%tile
Pollution and Sources					
Particulate Matter 2.5 (µg/m³)	6.13	7.62	1	8.67	5
Ozone (ppb)	39.6	39.9	47	42.5	29
Diesel Particulate Matter* (µg/m³)	0.0478	0.129	1	0.294	<50th
Air Toxics Cancer Risk* (lifetime risk per million)	20	29	0	28	<50th
Air Toxics Respiratory HI*	0.2	0.34	0	0.36	<50th
Traffic Proximity (daily traffic count/distance to road)	48	250	40	760	23
Lead Paint (% Pre-1960 Housing)	0.33	0.34	53	0.27	61
Superfund Proximity (site count/km distance)	0.015	0.092	6	0.13	11
RMP Facility Proximity (facility count/km distance)	0.056	0.5	19	0.77	7
Hazardous Waste Proximity (facility count/km distance)	0.036	0.83	13	2.2	6
Underground Storage Tanks (count/km²)	0.036	2	20	3.9	24
Wastewater Discharge (toxicity-weighted concentration/m distance)	2.3	2.5	87	12	95
Socioeconomic Indicators					
Demographic Index	15%	24%	22	35%	20
Supplemental Demographic Index	14%	16%	38	15%	55
People of Color	2%	8%	32	40%	6
Low Income	28%	37%	29	30%	50
Unemployment Rate	5%	7%	52	5%	61
Limited English Speaking	0%	0%	92	5%	0
Less Than High School Education	17%	12%	70	12%	74
Under Age 5	3%	5%	37	6%	33
Over Age 64	33%	20%	89	16%	92
Low Life Expectancy	20%	22%	27	20%	56

EJScreen is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJScreen documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJScreen outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.

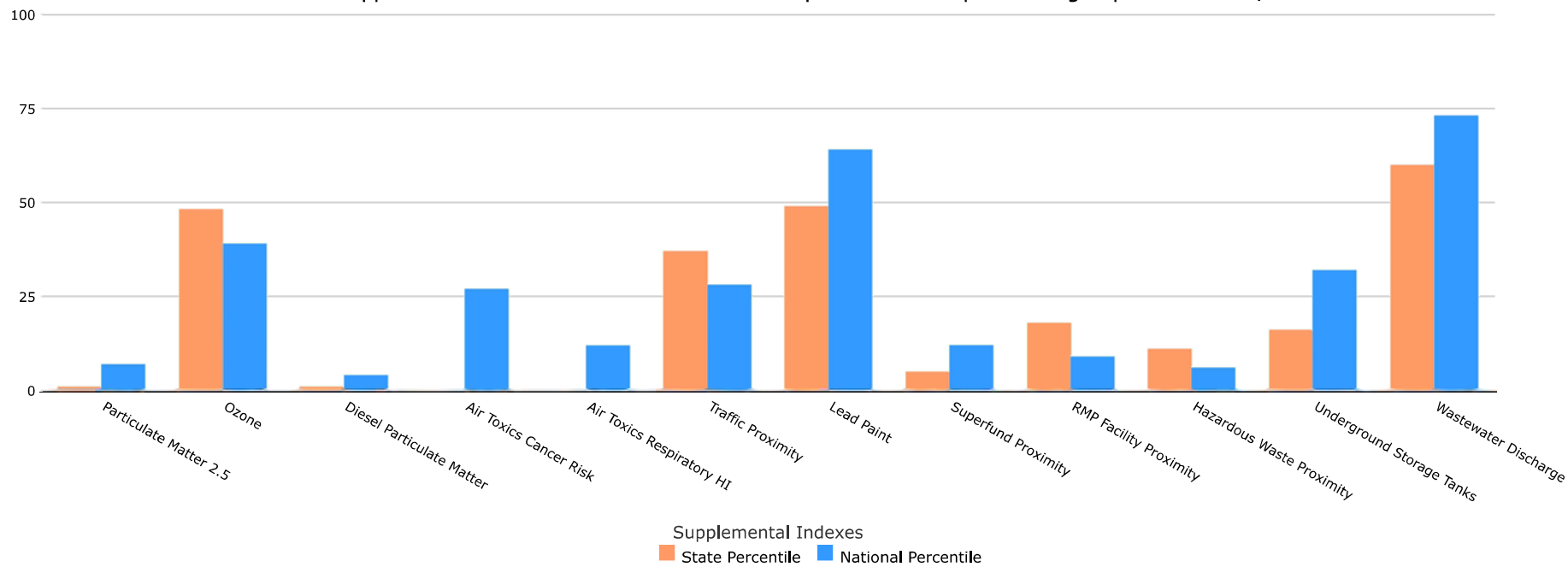
Selected Variables	Percentile in State	Percentile in USA
<b>Supplemental Indexes</b>		
Particulate Matter 2.5 Supplemental Index	1	7
Ozone Supplemental Index	48	39
Diesel Particulate Matter Supplemental Index*	1	4
Air Toxics Cancer Risk Supplemental Index*	0	27
Air Toxics Respiratory HI Supplemental Index*	0	12
Traffic Proximity Supplemental Index	37	28
Lead Paint Supplemental Index	49	64



Superfund Proximity Supplemental Index	5	12
RMP Facility Proximity Supplemental Index	18	9
Hazardous Waste Proximity Supplemental Index	11	6
Underground Storage Tanks Supplemental Index	16	32
Wastewater Discharge Supplemental Index	60	73

Supplemental Indexes - The supplemental indexes offer a different perspective on community-level vulnerability. They combine data on low-income, limited English speaking, less than high school education, unemployed, and low life expectancy populations with a single environmental indicator.

Supplemental Index for the Selected Area Compared to All People's Blockgroups in the State/US



This report shows the values for environmental and demographic indicators, EJScreen indexes, and supplemental indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJScreen documentation for discussion of these issues before using reports. For additional information, see: [www.epa.gov/environmentaljustice](http://www.epa.gov/environmentaljustice)

**Attachment 4:**  
**SHPO Coordination**



West Virginia Department of  
**ARTS, CULTURE  
AND HISTORY**

**The Culture Center**  
1900 Kanawha Blvd., E.  
Charleston, WV 25305-0300

**Randall Reid-Smith, Curator**  
Phone 304.558.0220 • [www.wvculture.org](http://www.wvculture.org)  
Fax 304.558.2779 • TDD 304.558.3562  
EEO/AA Employer

May 2, 2023

Mr. Travis E. Long  
Director  
Technical Support Division  
WV Division of Highways  
1334 Smith Street  
Charleston, West Virginia 25301

RE: Appalachian Corridor H  
Parson to Davis Project Core Boring Activities  
State Project No. X316-H-125.16; Federal Project No. NHPP-0484(118)  
FR#: 91-246-MULTI-392

Dear Mr. Long:

We reviewed the archaeological site forms that were submitted in support of the above-referenced project. As required by Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties," we submit our comments.

We understand that the West Virginia Division of Highways (WVDOH) is proposing to perform core boring activities along the Parsons to Davis segment of Corridor H. We also understand that an archaeological survey has been conducted but that the technical report is not expected to be completed for several weeks. During the survey, five new archaeological sites were identified (46TU499 – 46TU502). No further work is recommended for any of the sites. Due to the immediate need to complete the core borings, WVDOH would like our concurrence on the determination that the sites are not eligible for inclusion in the National Register of Historic Places.

Sites 46TU499 is described as the ruins of two poured concrete structures situated on a terrace of the North Fork of the Blackwater River between US 219 and the former grade of the Western Maryland Railroad. Site 46TU500 consists of the remains of a cut stone foundation located adjacent to an old unimproved road. No artifacts or other deposits were identified in association with either of these resources. Site 46TU501 is described as a scatter of historic era artifacts dating primarily to the late 19<sup>th</sup> – early 20<sup>th</sup> century. All artifacts were recovered from the A horizon. No evidence of cultural features or other subsurface deposits were encountered. Site 46TU502 consists of a small (n=18)

Mr. Long  
May 2, 2023  
FR# 91-246-Multi-392  
Page 2

historic era artifact scatter associated with a small poured-concrete foundation and a square eroded depression. Archival records indicate structures were present in the general area circa 1916 – 1958, after which they were razed. Site 46TU503 is described as a historic trash midden/dump and consists of a large surface scatter of late 19<sup>th</sup> – early 20<sup>th</sup> century artifacts. No cultural features or subsurface deposits were identified in association with the artifacts. Based on the nature of the material remains identified, we concur that the sites are not eligible for inclusion in the National Register of Historic Place and that the proposed core borings will have no effect on archaeological historic properties.

We appreciate the opportunity to be of service. *If you have questions regarding our comments or the Section 106 process, please contact Lora A Lamarre-DeMott, Senior Archaeologist, at (304) 558-0240.*

Sincerely,



Susan M. Pierce  
Deputy State Historic Preservation Officer

SMP/LLD



West Virginia Department of  
**ARTS, CULTURE  
AND HISTORY**

The Culture Center  
1900 Kanawha Blvd., E.  
Charleston, WV 25305-0300

**Randall Reid-Smith, Curator**  
Phone 304.558.0220 • [www.wvculture.org](http://www.wvculture.org)  
Fax 304.558.2779 • TDD 304.558.3562  
EEO/AA Employer

May 10, 2023

Mr. Travis E. Long  
Director  
Technical Support Division  
WV Division of Highways  
1334 Smith Street  
Charleston, West Virginia 25301

RE: Appalachian Corridor H Parson to Davis and Kerens to Parson Projects Core Boring Activities  
State Project No. X342-H-55.68.00 and X342-H-40.21  
Federal Project No. ACNH-0484(290) and NHPP-0484(316)  
FR#: 91-246-MULTI-393

Dear Mr. Long:

We have reviewed the above-mentioned project to determine its effects to cultural resources. As required by Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR § 800: "Protection of Historic Properties," we submit our comments.

According to submitted information, the West Virginia Division of Highways (WVDOH) is proposing to perform core boring activities along the Parsons to Davis and Kerens to Parson segments of Corridor H. The archaeological portion of the project was addressed in an earlier review letter, dated May 2, 2023.

We have reviewed the submitted information and determined that the proposed core boring projects will affect no architectural properties eligible for or included in the National Register of Historic Places. No further consultation is necessary regarding architectural resources; however, we ask that you contact our office if your project should change.

We appreciate the opportunity to be of service. *If you have questions regarding our comments or the Section 106 process, please contact Benjamin M. Riggle, Structural Historian, at (304) 558-0240.*

Sincerely,

Susan M. Pierce  
Deputy State Historic Preservation Officer

SMP/BMR

**Attachment 5:**  
**MNF Coordination**

---

**From:** Hale, Gavin - FS, WV <John.Hale@usda.gov>

**Sent:** Monday, June 12, 2023 4:29 PM

**To:** Fuess, Martin <Mfuess@mbakerintl.com>; Gale, Larry <LGale@mbakerintl.com>

**Cc:** Facemire, Lovell R <lovell.r.facemire@wv.gov>; Barger, John - FS, WV <john.barger@usda.gov>; Piehler, Kirk - FS, WV <kirk.piehler@usda.gov>; Morgan, Jonathan - FS, WV <jonathan.morgan@usda.gov>; Heuer, Sarah - FS, WV <Sarah.Heuer@usda.gov>; Whetsell, Robert - FS, WV <robert.whetsell@usda.gov>; randy.t.epperly@wv.gov; Demott, Rodney C <rodney.c.demott@wv.gov>; Craig, Thomas - FS, WV <Thomas.Craig@usda.gov>

**Subject:** RE: [External Email]FW: EXTERNAL: Clearance Letter For Core Borings Parsons to Davis

Thank you, Martin – I have received and reviewed the summary letter. You provided sufficient information to demonstrate the terms and conditions of permit #CHT360 were met during archaeological investigations within Monongahela National Forest. I have no questions at this time.

Lovell et al – The summary letter submitted by Michael Baker International, Inc., along with the concurrence letters from WV SHPO dated May 2 and May 10, 2023, are sufficient to determine the anticipated core boring proposal would have no adverse effect to historic properties within Monongahela National Forest. The Forest Service will formalize a determination upon review of a complete and accepted permit application for the core boring. We will uphold our nation-to-nation obligations with tribal governments during the application review.

Let me know if you have any questions.

-gavin



**J. Gavin Hale**  
**Heritage Program Manager/Tribal Liaison**

**Forest Service**  
**Monongahela National Forest**

**c: 304-642-4929**

**[john.hale@usda.gov](mailto:john.hale@usda.gov)**

200 Sycamore Street  
Elkins, WV 26241

## DoByns, Martha Young

---

**From:** Facemire, Lovell R <lovell.r.facemire@wv.gov>  
**Sent:** Friday, April 21, 2023 6:45 AM  
**To:** Gale, Larry; DoByns, Martha Young  
**Subject:** EXTERNAL: Fwd: [External Email]PtoD core Borings  
**Attachments:** CHT202003\_Stipulations.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

All,  
This is from John. "We can just use it and only include the things that apply. For example, I don't think the last section (EE) will apply. "

----- Forwarded message -----

From: **Barger, John - FS, WV** <[john.barger@usda.gov](mailto:john.barger@usda.gov)>  
Date: Fri, Apr 21, 2023 at 9:19 AM  
Subject: RE: [External Email]PtoD core Borings  
To: Facemire, Lovell R <[lovell.r.facemire@wv.gov](mailto:lovell.r.facemire@wv.gov)>

Lovell,

Are you referring to the stipulations (attached) from previous sections?



**John Barger, PE**  
**WV DOT Liaison**  
**Forest Service**

**Monongahela National Forest**

**p: 304-635-4426**

**[john.barger@usda.gov](mailto:john.barger@usda.gov)**

200 Sycamore St  
Elkins, WV 26241

[www.fs.fed.us](http://www.fs.fed.us)



**Caring for the land and serving people**



**From:** Facemire, Lovell R <[lovell.r.facemire@wv.gov](mailto:lovell.r.facemire@wv.gov)>  
**Sent:** Thursday, April 20, 2023 2:27 PM  
**To:** Barger, John - FS, WV <[john.barger@usda.gov](mailto:john.barger@usda.gov)>  
**Subject:** [External Email]PtoD core Borings

**[External Email]**

If this message comes from an **unexpected sender** or references a **vague/unexpected topic**;  
Use caution before clicking links or opening attachments.  
Please send any concerns or suspicious messages to: [Spam.Abuse@usda.gov](mailto:Spam.Abuse@usda.gov)

John,

What special conditions are you going to ask for to do the borings on the Parsons to Davis Project?

--



**Lovell R Facemire PE PS**  
Engineer  
Technical Support Division  
WV Division of Highways  
1334 Smith Street  
Charleston WV, 25301  
☎304-414-6441

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**Attachment 6:**  
**Contract Document**

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PARSONS - DAVIS  
ACCESS ROAD CONSTRUCTION  
CONTRACT DOCUMENTS**

**STATE PROJECT NO. X347-H-55.68 00  
FEDERAL PROJECT NO. ACNH-0484(290) (ENG)  
TUCKER COUNTY, WEST VIRGINIA**

**ISSUED FOR BIDDING  
MAY 2023**

**PREPARED BY:**



Greenman Pedersen, Inc.  
58 Mission Way, Suite 201  
Scott Depot, WV 25560

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ATTACHMENT #3	NPDES PERMIT APPLICATION DOCUMENTS
ATTACHMENT #4	BORING TABLE WITH PRIORITIZATION

# NOTICE TO BIDDERS

**SUBJECT:**   **State Project:** X347-H-55.68 00  
              **Federal Project:** ACNH-0484(290) (ENG)  
              **Project Description:** Parsons - Davis  
              **County:** Tucker County, West Virginia

To Whom It May Concern:

You are invited to submit a proposal for the performance of work described in and governed by the attached documents. General information and instructions for submitting a proposal are as follows:

## Instruction to Bidders and General Conditions

### 1.0 PURPOSE:

Greenman-Pedersen, Inc. (otherwise referred to herein as “GPI” or “Consultant” or “Engineer”) has been engaged by the West Virginia Department of Transportation, Division of Highways (WVDOH), to prepare plans and specifications for the subject project. The Consultant's agreement with the WVDOH provides that the Consultant shall solicit and receive bids for the reconstruction of existing access roads, construction of proposed access roads and drill rig pads, and other construction activities required to facilitate site access and accessibility of core boring locations, and, subject to the approval of the WVDOH, award the contract.

### 2.0 LOCATION OF WORK:

The project is located in Tucker County, West Virginia, in the vicinity of the towns of Parsons, Thomas, and Davis. A vicinity map is included in Attachment #1.

### 3.0 SCOPE OF WORK:

#### 3.1 GENERAL:

Project Length: A total of 31.3 miles of existing, reconstructed and new access roads. 25.7 miles in Phase 1 and 5.6 miles in Phase 2.

Access road locations are indicated in the Plans included here as Attachment #3. Access roads are broken into two phases. Phase 1 access roads are outside of Monongahela National Forest (MNF) and Phase 2 access roads are within the MNF, or access borings through the MNF.

#### 3.2 SPECIFIC:

The work shall consist of furnishing all tools, equipment, materials, supplies, labor, incidentals, and supervision necessary for the installation, maintenance, and subsequent reclamation of proposed core boring access roads and drill rig pads, installation and maintenance of erosion and settlement control devices, and other construction activities required to facilitate site access and accessibility of core boring locations specified herein and as indicated on the attached plans, and as specified herein in accordance with the governing specifications.

The following construction items shall be included in this Proposal:

- a. Maintain approximately 23,668 linear feet of existing access road.



- b. Grade, prepare base, and install material for approximately 97,751 linear feet of new access road to provide a travel way suitable for four-wheel drive vehicles, Utility Terrain Vehicles (UTVs), and ATV mounted and track mounted drill rigs with a gross vehicle weight of 12,000 to 20,000 lbs.
- c. Re-grade, prepare base, and install material for approximately 43,541 linear feet of existing skid road to provide a travel way suitable for four-wheel drive vehicles, Utility Terrain Vehicles (UTVs), and truck-mounted drill rigs.
- d. Grade and construct drill rig pads necessary to position a drill rig and support equipment at boring locations, where required.
- e. Excavation and maintenance of sumps near each drilling site to hold drilling muds and water-based drilling fluids.
- f. Tree cutting and removal of stumps, brush, logging slash, and other objectionable material within the proposed travel way. Brush clearing shall be limited to the minimum width necessary to allow access for drill rigs and associated equipment. All such material will be disposed of by chipping, burning, burying, or otherwise removed from the site in accordance with Section 201.7 of the WVDOH Standard Specifications and as approved by the Consultant. A Commercial Burning Permit must be obtained by the Contractor from the West Virginia Division of Forestry for all open burning on this project. All Division of Forestry burning guidelines shall be strictly adhered to.
- g. Install temporary culverts and/or ditches at all natural drainage locations, such as natural swales or topographic depressions, that cross the access road alignment. Culverts shall not be placed in streams indicated in the plans or as identified by the Project Compliance/Erosion and Sediment Control Coordinator (PCC).
- h. Construct ditches along access roads to capture hillside runoff crossing the access road alignment and convey runoff to temporary culvert locations described above. Constructed ditches shall not redirect the flow of streams indicated in the plans or as identified by the PCC.
- i. Install 20 Stream Crossings where indicated in the plans.
- j. Install and maintain timber matting within wetlands as necessary for temporary access roads and drilling/equipment staging platforms.
- k. Provide parking and laydown areas suitable for storage of materials or equipment, field offices, and storage containers where designated in the plans and as approved by the Consultant.
- l. Install, inspect, maintain, and repair Erosion & Sediment (E&S) control measures identified within the approved E&S Control Plans and in accordance with the West Virginia Department of Environmental Protection **Erosion and Sediment Control Best Management Practice Manual** and the 2019 NPDES Construction Stormwater General Permit. Installation details and directions shall be in accordance with the approved E&S Control Plan and shall follow all manufacturer specifications. A copy of the submitted permit application is included here as Attachment #3. Notice to proceed will follow the approval of the permit package.
- m. Installation and maintenance of approved construction signage where required. Construction zone signage shall be approved by the Consultant.
- n. Provide suitable designated water access points to facilitate drilling operations.
- o. Perform spot repairs to forest routes and/or existing privately owned access roads utilized by vehicles and other equipment upon request by the Engineer.
- p. Maintain all access roads in good repair throughout the duration of all drilling operations.
- q. Reclamation of all temporary access roads, drill rig pads, and sumps, including but not limited to, removal of temporary fills in their entirety and restoration of

affected areas to pre-construction contours, seeding, fertilizing, and mulching, and maintenance and final removal of E&S control measures.

#### **4.0 WORKING TIME:**

It is anticipated that the project will have a Notice to Proceed (NTP) issued between June 12 and June 16, 2023. The NTP date shall be given once an approved NPDES permit is received so that work can begin on Phase 1 access roads. Work shall be started on Phase 1 access roads within seven (7) calendar days after written notice from the Consultant to proceed. Phase 2 access roads shall begin within seven (7) calendar days after the receipt of the Special Use Permit from the National Forest Service (NFS). Construction of the access roads, installation of temporary timber water crossings, stream crossings, drill rig pads, and all applicable E&S control measures, shall be completed in a manner which facilitates continuous, uninterrupted workflow for three (3) Drilling Contractors with a total of fourteen (14) drill rigs. The Drilling Contractors shall be supported with simultaneous progress of exploratory drilling operations within two geotechnical segments. The first segment is from Mainline US 48 Station 5890+00 to Station 6148+00 and the second segment is from Mainline US 48 Station 6148+00 to Station 6880+50 and including the entire length of relocated WV 32. The Contractor shall supply the resources, equipment, and personnel necessary to assign a minimum of five (5) crews to the project. A core coring prioritization table is provided in Attachment #4.

Following the completion of all exploratory drilling operations in a single geotechnical segment, the Contractor may begin reclamation activities with the approval of the Consultant. All reclamation as described herein shall be commenced within forty-eight (48) hours of approval from the Consultant and completed within five (5) calendar days following commencement

Where rain or inclement weather halts construction or reclamation operations as described in Section 201.6, the completion date will be adjusted accordingly. Erosion and Sediment Control features shall be immediately inspected after all rain events and shall be maintained throughout any weather-related shutdowns.

The final completion date is expected to be on or before December 31, 2023.

#### **5.0 PLAN HOLDERS LIST AND PRE-AWARD QUESTIONS:**

All Contractors interested in bidding the project shall send an email to **GPI, Attn: James (J.D.) Simpson, PE, at: [CorridorH-ParsonstoDavis-AccessRoadBid@gpinet.com](mailto:CorridorH-ParsonstoDavis-AccessRoadBid@gpinet.com)** on or before **4:00 PM, May 22, 2023**. The email shall include the name of the company interested in bidding, the point of contact for the firm, and any pre-award questions. All Contractors that have submitted an email with the above content, by the date provided, shall become Plan Holders and shall be eligible to bid on the project. All questions by Plan Holders about the meaning or intent of the Contract Documents are to be directed to **CorridorH-ParsonstoDavis-AccessRoadBid@gpinet.com**. Interpretation or clarification considered necessary by the Consultant to such questions will be issued by Addenda emailed to all Plan Holders recorded by the Consultant. All questions, as stated above, shall be submitted by May 22, 2023. Any questions submitted after May 22, 2023, may not be answered. Responses will be provided by May 29, 2023 and shall be shared with all Plan Holders. Only questions answered by formal written Addenda are binding. Any bid received from a Contractor that has not submitted for the Plan Holders list shall be considered irregular and therefore not accepted. No bid is required from a Contractor on the Plan Holders list.

#### **6.0 THE PROPOSAL and OPENING OF BIDS:**

The proposal shall be made on the forms included as pages P-1 through P-5 of this document. It shall be delivered to **GPI, Attn: James (J.D.) Simpson, PE, 58 Mission Way, Suite 201,**

**Scott Depot, WV 25560** on or before **4:00 PM, June 5, 2023**, at which time all bids will be publicly opened and read aloud. In-person attendance at the bid opening is not mandatory.

In addition to the required Proposal Form and the information required to be submitted as set forth in the Proposal Form, the proposal must also be accompanied by:

- Five (5) executed copies of the Free Competitive Bidding Affidavit (Page P-10), and
- Three (3) executed copies of the Non-Discrimination Clause (Pages P-11 through P-13)

The Consultant and/or WVDOH may consider irregular any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. The proposer is alerted to the fact that the selection shall not be based on bid price alone.

## **7.0 CONTACT PERSONNEL:**

All questions after 4:00 PM, May 15, 2023 relating to the project can be emailed to any of the individuals below at [CorridorH-ParsonstoDavis-AccessRoadBid@gpinet.com](mailto:CorridorH-ParsonstoDavis-AccessRoadBid@gpinet.com). In addition to Mr. Simpson, any of the following personnel below may respond from the foregoing email to the questions posed:

- 1. Engineer (Project Manager):**  
**Name:** James (J.D.) Simpson, P.E.
- 2. Deputy Project Manager:**  
**Name:** John Taylor
- 3. Stake Out / Survey / Right of Entry:**  
**Name:** J.B. Chambers
- 4. Geotechnical Engineer:**  
**Name:** John Nottingham, P.E.
- 5. Project Compliance/Erosion and Sediment Control Coordinator (PCC):**  
**Name:** Christie Bonniwell
- 6. On-Site Field Coordinator:**  
**Name:** Keith Loar

## **8.0 REJECTION OF BIDS**

Consultant and WVDOH reserve the right to reject any or all bids, including without limitation the right to reject any or all nonconforming, missing any required signatures and/or notarizations, nonresponsive, unbalanced, or conditional bids and to reject the bid of any Bidder if the Consultant or WVDOH believes that it would not be in the best interest of the project to make an award to that Bidder whether because the bid is not responsive or if the Bidder is unqualified or doubtful financial ability or fails to meet any pertinent standards or criteria established by WVDOH.

## **9.0 LIST OF INCORPORATED DOCUMENTS**

# PROPOSAL FORM

**State Project:** X347-H-55.68 00

**Federal Project:** ACNH-0484(290) (ENG)

**County:** Tucker County, West Virginia

**Length:** 31.3 miles of access roads

**TO:** Greenman-Pedersen, Inc. (GPI)

**BID OPENING:** 4:00 PM

June 5, 2023

(Name of Bidder)

The above signed bidder, having full knowledge of the site, the Notice to Bidders, the Plans, the Specifications, and the conditions of this Contract, agrees to furnish all tools, equipment, transportation, materials, supplies, labor, incidentals, and supervision necessary to perform the entire scope of work; to complete the Contract within the timeframe specified in the Notice to Bidders and General Provisions; and to perform all work incident thereto, all in accordance with the Proposal, Plans, and Specifications, or specified by the Consultant; and to accept in full, compensation for all work necessary to complete the project at the unit prices listed in the following schedule:

PROJECT ITEM NO.	WVDOH ITEM NO. (for information only)	ITEM DESCRIPTION	APPROX QTY	UNIT	ITEMIZED PROPOSAL	
					UNIT BID PRICE	BID AMOUNT
1	204001-000	MOBILIZATION AND DEMOBILIZATION	1	LS		
2	201001-000	CLEARING AND GRUBBING	50	AC		
3	207034-000	FABRIC FOR SEPARATION	62,795	SY		
4	307001-000	AGGREGATE BASE COURSE, CLASS 1	6,977	CY		
5		RECONSTRUCTED ACCESS ROAD	43,541	LF		
6		NEW ACCESS ROAD	97,751	LF		
7		DRILL RIG PAD	313,200	SF		
8		TIMBER MATTING	125,300	SF		
9		STREAM CROSSINGS	20	EA		
10		LAYDOWN AREAS	85,000	SF		
11		TEMPORARY STEEL BRIDGE	1	LS		
12	642016-003	COMPOST FILTER SOCK, 18 IN	225,192	LF		
13	642016-004	COMPOST FILTER SOCK, 24 IN	100	LF		
14	642015-001	SUPER SILT FENCE	100	LF		
15		SMART FENCE	100	LF		
16		RECLAMATION	50	AC		
17		CORE DRILLING WATER SUPPLY	1	LS		
18	640001-001	STANDARD FIELD OFFICE AND STORAGE BUILDING	7	Month		
19		ACCESS POINTS	22	EA		
20		RECALL	1	LS		
Total						

**Note:** The proposed price bid for Mobilization shall not exceed fifteen percent (15%) of the proposed total cost of the contract excluding Mobilization and Demobilization. The proposed price bid for Recall shall not exceed twenty-five percent (25%) of the proposed price bid for Mobilization. Items shall be paid for by the Project Item Number. WVDOH Item Numbers have been provided for certain items that are subject to the descriptions stated in the West Virginia Department of Transportation, Division of Highways, Standard Specifications, Roads and Bridges, dated 2023. Any technical errors, math errors or omissions on the proposal form will deem bid as irregular and will be cause for complete rejection of bid.

Along with the Price Proposal, the undersigned bidder shall also provide the following information in the areas designated on this form. Additional sheet(s) may be attached as necessary to provide the required information in full.

1. Describe current and future workload and ability to proceed promptly.

2. Describe previous work in environmentally sensitive areas occurring in the past five (5) years.

3. Describe previous work in Monongahela National Forest along with applicable dates.

4. List any WVDEP Stormwater Construction NPDES registrations as permittee (co-permittee #1) for the WVDOH in the past five (5) years.

5. List any WVDEP Stormwater Construction NPDES registrations for non-WVDOH entities in the past five (5) years.



6. List any WVDEP notice of violations associated with any Stormwater Construction NPDES registration for WVDOH or non-WVDOH entities, or any WVDEP notice of violations received by WVDOH or non-WVDOH entities as a result of the Bidder's work in the past five (5) years.

7. List any WVDEP fines associated with any Stormwater Construction NPDES registration for WVDOH or non-WVDOH entities, or any WVDEP fines received by WVDOH or non-WVDOH entities as a result of the Bidder's work in in the past five (5) years.

8. List any successful instances of obtaining notice of termination for Stormwater Construction NPDES registration in the past five (5) years.

9. Describe GPS controls on equipment planned for use on this contract.

10. Attach certification that Contractor has a Contractor's License through the West Virginia Division of Labor and has registered with the following entities:

- a) West Virginia Secretary of State
- b) wvOASIS
- c) West Virginia Purchasing Division
- d) West Virginia Tax Department

11. List any OSHA Citations in the past five (5) years.

--

12. List any violations issued by the US Environmental Protection Agency ("EPA") or any state environmental agency or authority in the past five (5) years.

--

On acceptance of this Proposal, the undersigned agrees to do the following, and within the time limit stated in the Specifications:

- 1. Enter into a written contract in accordance with 103.8 of the General Specifications and GPI Standard Terms & Conditions;
- 2. Furnish a Contract Bond in accordance with 103.5 of the General Specifications;
- 3. Begin work on Phase 1 access roads within seven (7) calendar days from the notice to proceed.
- 4. Create all reconstructed and new access roads for three (3) Drilling Subcontractors with a total of fourteen (14) drill rigs to be fully utilized for the duration of the seven (7) month (or two hundred and thirteen (213) calendar day) contract from commencement of work;
- 5. Is ready, able, and willing to timely furnish the labor and materials required to complete the contract;
- 6. Is in compliance with all applicable federal laws and the laws of the State of West Virginia; and
- 7. Following the Consultant's approval, begin reclamation work within forty-eight (48) hours following completion of the drilling operations in a geotechnical segment, and complete the reclamation work within five (5) calendar days; and

The undersigned also agrees that the Consultant may adjust final access road locations and quantities in writing, if necessary, to accommodate revised or additional core boring locations, or to add, modify or change the description of the work to be performed, to the contract price, or to any other terms and conditions of the contract. Any addition, modification or change to the work to be performed, to the contract price, or to any other term or condition of the contract shall be signed and dated by a written authorization by Consultant and Contractor. Any addition or deletion of work shall not constitute a basis for withdrawal of this Proposal. Payment for changes in quantities shall be made in accordance with the unit prices included in this Contract. Drilling Subcontractors shall be hired by GPI.

Accompanying this Proposal is a bid bond or certified check for 10% of the bid price which is to be forfeited, as liquidated damages, if, in the event that this Proposal is accepted, the undersigned shall fail to execute the Contract and furnish satisfactory contract bond under the conditions and time set forth in the Specifications.

DATE: \_\_\_\_\_

\_\_\_\_\_  
(Name of Bidder)

BY: \_\_\_\_\_

\_\_\_\_\_  
(Type of Organization) \*

\_\_\_\_\_  
(P.O. Address)

\*Partnership, Proprietorship, Corporation, etc.

# PROPOSAL GUARANTY BOND

**State Project:** X347-H-55.68 00

**Federal Project:** ACNH-0484(290) (ENG)

**County:** Tucker County, West Virginia

KNOW ALL PERSONS BY THESE PRESENTS, That we, \_\_\_\_\_

\_\_\_\_\_

hereinafter called the "Principal" and \_\_\_\_\_,

a corporation incorporated under the laws of the State of \_\_\_\_\_,

duly authorized to do business in the State of West Virginia, hereinafter called the "Surety" are

held and firmly bound unto \_\_\_\_\_ dollars

(\$\_\_\_\_\_), lawful money of the United States of America, to be paid to Greenman-

Pedersen, Inc. (GPI), which payment will and truly to be made and done, we bind ourselves,

our heirs, executors, administrators, and successors, jointly and severally firmly by these

presents.

SIGNED, sealed and dated this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

The condition of the above obligation is such that whereas the Principal has submitted to

\_\_\_\_\_ a Proposal attached hereto and hereby made a part

hereof, to enter into a contract in writing for State Project No. X347-H-55.68 00.

NOW, THEREFORE,

(a) If said Proposal shall be rejected by GPI,

or in the alternative,

(b) If said Proposal shall be accepted by GPI,

and the Principal shall duly execute the Contract and furnish the required Contract Bond

within the stipulated time, then this obligation shall be void; otherwise the same shall remain

in force and effect, and the Principal and Surety will pay unto the obligee the amount of this

bond, it being expressly understood and agreed that the liability of the Surety for any and all

claims hereunder shall, in no event, exceed the amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligation of said Surety and its bond shall be in no way impaired or affected by any extension of the time within which GPI may accept such Proposal; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers.

\_\_\_\_ (Seal)  
Contractor (Name of Corporation)

By: \_\_\_\_\_

Its: \_\_\_\_\_  
Title of Officer Signing

\_\_\_\_ (Seal)  
Surety Company

By: \_\_\_\_\_

\_\_\_\_\_  
Print Name of Attorney-in-Fact Signing

(For Contractor if a Corporation)

STATE OF \_\_\_\_\_ COUNTY OF \_\_\_\_\_

The foregoing instrument was acknowledged before me this \_\_\_\_ day of

\_\_\_\_\_, 20\_\_\_\_.

By \_\_\_\_\_  
(Name of Officer) (Title of Officer)

\_\_\_\_\_  
(Insert Name of Corporation)

A \_\_\_\_\_ Corporation, on behalf of the Corporation.  
(State of Incorporation)

My commission expires \_\_\_\_\_  
NOTARY PUBLIC

(For Surety if Corporation)

STATE OF \_\_\_\_\_ COUNTY OF \_\_\_\_\_

The foregoing instrument was acknowledged before me this \_\_\_\_ day of

\_\_\_\_\_, 20\_\_\_\_.

By \_\_\_\_\_ as Attorney-in-Fact on behalf of

\_\_\_\_\_  
(Insert Name of Corporation)

A \_\_\_\_\_ Corporation, on behalf of the Corporation.  
(State of Incorporation)

My commission expires \_\_\_\_\_  
NOTARY PUBLIC



## **FREE COMPETITIVE BIDDING AFFIDAVIT**

Prior to approval of the Contract for this work, there should be filed a sworn statement executed by, or on behalf of, the person, firm, association, or corporation to whom such contract is to be awarded, certifying that such person, firm, association, or corporation has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with such contract. This sworn statement in the form of an affidavit on the attached form, executed and sworn to by each bidder, shall be submitted in duplicate with the proposal for construction of this project.

This affidavit must be sworn to before a Notary Public who must affix his seal thereto if outside the State of West Virginia.

# FREE COMPETITIVE BIDDING AFFIDAVIT

23 United States Code § 112

State of \_\_\_\_\_

County of \_\_\_\_\_

I, \_\_\_\_\_ by  
(Contractor)

\_\_\_\_\_  
(Name and Title of Authorized Representative)

being duly sworn to depose, say and certify: That said contractor has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the contract for State Project X347-H-55.68 00 in Tucker County, West Virginia.

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Name and Title of Authorized  
Representative

Taken, subscribed, and sworn before me this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

My commission expires \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

**State Project:** X347-H-55.68 00

## **NON-DISCRIMINATION OF MINORITY BUSINESS ENTERPRISES**

The WVDOT hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

## **NON-DISCRIMINATION OF EMPLOYEES**

The Contractor agrees as follows: During the performance of this contract, the Contractor and any of its sub-contractors shall provide equal employment opportunities for all qualified persons and shall not discriminate against any employee or applicant because of race, color, or national origin. The Contractor and its sub-contractor shall comply with the Executive Orders of the Governor of the State of West Virginia, dated October 16, 1963, and December 15, 1965, and conform to Presidential Order No. 11246, and the Civil Rights Act of 1964.

During the performance of this contract, the Contractor for itself, its assignees, and its successors in interest (hereinafter called Contractor) agree as follows:

1. Compliance with Regulations: The Contractor will comply with the regulations of the Department of Transportation relative to non- discrimination in federally assisted programs of the Department of Transportation, (Title 49, Code of Federal Regulations), which are herein incorporated by reference and made a part of this contract.
2. Non-Discrimination: The Contractor, with regard to the work performed by it after award, and shall not discriminate on the grounds of race, color, or national origin in the selection and retention of sub-contractors, including procurement of materials and leases of equipment. The Contractor will not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices, when the contract covers a program set forth in Appendix B of the Regulations.
3. Solicitations for Sub-contractors, including Procurement of Materials and Equipment: In all solicitations either by competitive bid or negotiation made by the Contractor for work to be performed under a sub-contract, including procurement of materials or equipment, each potential sub-contractor or supplier shall be notified by the Contractor of the Contractor's obligations under this contract and the regulations relative to non-discrimination on the grounds of race, color, or national origin.
4. Information and Reports: The Contractor will provide all information and reports required by the Regulations, or orders and instructions issued pursuant thereto, and will permit access to its books, records, accounts, and other sources of information, and its facilities as may be determined by the Engineer, the WVDOH or the Federal Highway Administration (FHWA) to be pertinent to ascertain compliance with such regulations or directives. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the Engineer, the WVDOH, or the FHWA, as appropriate, and shall set forth what efforts it has made to obtain the information.
5. Sanctions for Non-Compliance: In the event of the Contractor's non- compliance with the non-discrimination provisions of this contract, the Engineer shall impose such contract sanctions as it, the WVDOH or the FHWA, may determine to be appropriate, including, but not limited to,
  - (a) withholding of payments to the Contractor under the contract until the Contractor complies; and/or
  - (b) cancellation, termination, or suspension of the contract, in whole or in part.

6. Incorporation of Provisions: The Contractor will include the provisions of paragraphs (1) through (6) in every sub-contract, including procurement of materials and leases of equipment, unless exempt by the regulations, or directives issued pursuant thereto. The Contractor shall take such action with respect to any sub-contract or procurement as the Engineer, the WVDOT, or the FHWA may direct as a means of enforcing such provisions including sanctions for non-compliance; provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a sub-contractor or supplier as a result of such direction, the Contractor may request the Engineer or the WVDOT to enter into such litigation to protect the interest of the State, and in addition, the Contractor may request the United States to enter into such litigation to protect the interest of the United States.

These provisions shall be fully and effectively enforced, and failure to comply therewith shall be regarded as a material breach of this agreement.

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Date

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Signature

# PARSONS - DAVIS ACCESS ROAD CONSTRUCTION

**State Project:** X347-H-55.68 00

**Federal Project:** ACNH-0484(290) (ENG)

**County:** Tucker County, West Virginia

## CONTRACT

1. THIS AGREEMENT, made and entered into this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by and between Greenman-Pedersen, Inc. (heretofore and hereinafter called the ("Engineer", "Consultant" or "GPI"), party of the first part and \_\_\_\_\_ hereinafter called the "Contractor", party of the second part.

2. WHEREAS, the said Consultant did invite proposals for PARSONS - DAVIS ACCESS ROAD CONSTRUCTION as described in the "Notice to Bidders" and attachments thereto, for State Project X347-H-55.68 00, in Tucker County, West Virginia.

AND WHEREAS, Pursuant to said invitation, the said Contractor submitted in writing the Proposal and Bid hereto attached for **construction of core boring access roads and drill rig pads, and all related work** including the provision of materials to be furnished, according to said Notice to Bidders and attachments thereto.

3. NOW, THEREFORE, THIS AGREEMENT WITNESSETH: That the said Contractor has agreed and by these presents does agree with the said Consultant for the consideration of the prices set forth in the said Proposal mentioned, to furnish at his own proper cost and expense, all labor, tools, personal protective equipment, materials, supplies, equipment, machinery, and transportation to do all work necessary to complete the **construction of core boring access roads and drill rig pads, and all related work** according to, and in the manner provided by the said Notice to Bidders and attachments thereto, which have been examined by the said Contractor on the day and date hereinbefore mentioned in said Proposal.

4. The Contractor agrees that he is fully informed as to all conditions affecting the work to be done, as well as to the labor, equipment and materials to be furnished for the completion of this contract and that such information was secured by personal investigation and research and not wholly from the plan of the Consultant or information provided by the West Virginia Department of Transportation, Division of Highways (hereafter "Department"); and that Contractor will make no claim against the Consultant or the

WVDOH by reason of estimates, tests, or representations heretofore made by any officer or agent of said Engineer or the Department.

5. The work to be done under this contract shall be performed in accordance with the true intent and meaning hereof and by said Notice to Bidders and attachments thereto which are hereby referred to and made a part of this contract, without expense of any nature whatsoever to said Consultant, other than the consideration named in this contract.
6. The work to be performed under this Contract shall be commenced not later than seven (7) calendar days after notice to proceed. The Contractor shall create all reconstructed and new access roads for three (3) Drilling Subcontractors with a total of fourteen (14) drill rigs to be fully utilized for the duration of the seven (7) month contract from commencement of work.
7. On the faithful performance of the work herein embraced as set forth in said Notice to Bidders and Attachments thereto, which are part hereof and upon certification by the Consultant, the Consultant agrees to pay the Contractor partial payments and final payments according to the schedule set forth in the Specifications at the amounts named in the Proposal hereto attached and made a part of this Contract.
8. Contractor understands and agrees Consultant's receipt of payment from West Virginia Department of Transportation, Division of Highways on account of Contractor's Work, is an express and absolute condition precedent to Consultant's obligation to pay Contractor. Contractor hereby assumes the risk of default or nonpayment by West Virginia Department of Transportation, Division of Highways for any reason whatsoever. The Consultant shall pay the Contractor within ten (10) business days of the Consultant's receipt of payment from West Virginia Department of Transportation, Division of Highways. Contractor will only be paid for accepted work. Any work deemed defective or non-confirming will be reperformed by Contractor at no cost to Consultant or WVDOH.
9. Contractor and Consultant agree to enter into a written authorization, signed and dated by Contractor and Consultant, for any additions, modifications, or changes to the description of work to be performed, to the contract price, or to any other changes to the terms and conditions of the contract – subject to the written approval of WVDOH.
10. Contractor warrants and affirms that it has a valid and current insurance policy in the limits set forth in GPI's Standard Terms and Conditions.
11. Contractor agrees that any contract it enters into with any subcontractor that the Contractor hires to perform work on the Project, the written contract between Contractor

and any subcontractor will include all relevant provisions, terms and conditions, including a statement that the subcontractor has a valid and current general liability insurance policy.

12. Contractor agrees that all of its employees, including employees of any subcontractor, are legally authorized to work in the United States.

13. It is understood and agreed that the Notice to Bidders, and attachments thereto, copies of which are hereto attached are each made a part of this Contract, and that for each and every provision thereof not herein specifically set forth shall be considered as binding upon the parties hereto as though same were herein written.

14. IN WITNESS WHEREOF, the said Consultant has caused this instrument to be signed, and the said party of the second part has hereunto set its hand and seal this the \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

Party of the First Part:

\_\_\_\_\_

BY \_\_\_\_\_ (Seal)

Party of the Second Part:

\_\_\_\_\_

BY \_\_\_\_\_ (Seal)

(For Contractor if a Corporation)

STATE OF \_\_\_\_\_ COUNTY OF \_\_\_\_\_

The foregoing instrument was acknowledged before me this \_\_\_\_ day of

\_\_\_\_\_, 20\_\_\_\_.

By \_\_\_\_\_

(Name of Officer)

(Title of Officer)

\_\_\_\_\_

(Insert Name of Corporation)

A \_\_\_\_\_ Corporation, on behalf of the Corporation.

(State of Incorporation)

My commission expires \_\_\_\_\_

NOTARY PUBLIC



# **GPI STANDARD TERMS & CONDITIONS**

Contractor agrees to be bound to GPI's Standard Terms & Conditions, in addition to West Virginia Department of Transportation, Division of Highways ("WVDOH") Standard Specifications for Roads and Bridges 2023 Edition.

## **1.0 BIDDING ESTIMATES**

Bidder agrees to hold Consultant and West Virginia Department of Transportation, Division of Highways harmless for any miscalculations by Bidder based upon quantities appearing in the proposal form.

## **2.0 INDEMNIFICATION**

Contractor agrees to save harmless, indemnify, defend and represent Consultant and WVDOH, and its officers, agents and employees against any and all claims for bodily injury, property damage, or environmental pollution/damage, or any other claim arising out of or related to the work covered by the Agreement whether or not specifically authorized or in conformance with the description of the work for which Agreement was entered into. Contractor's aforesaid indemnity, hold harmless and release agreement, shall not be applicable to any liability caused by the sole negligence or willful misconduct of Consultant, its officers, agents or employees. Contractor agrees and understands that the obligations set forth herein are binding upon their sub-contractors, successors, transferors, assigns, sureties and guarantors.

## **3.0 INSURANCE**

The Contractor shall comply with the following:

- (a) Worker's Compensation Insurance: Contractor shall carry Worker's Compensation Insurance and Employer Liability coverage, or must be self-insured in accordance with West Virginia Code, in the amount of at least \$1,000,000 per occurrence.
- (b) General Liability, Bodily Injury and Property Damage: Contractor shall maintain insurance coverage for completed operations, contractual liability and shall not contain any XCU exclusions. Contractor's insurance shall provide protection against all claims for damages to public or private property, and injuries to persons, arising out of and during the progress of the work, and to its completion and where specified, similar insurance to protect the owner of premises on or near which construction operations are to be performed.
- (c) Automobile Insurance: The minimum limits of property damage and bodily injury liability covering Contractor shall be a combined single limit of \$1,000,000 for bodily injury and property damage combined.
- (d) Contractors Pollution Liability (CPL): Contractor and all its subcontractors that it retains in performance of the work shall provide CPL insurance with a limit not

less than \$5,000,000 per claim and \$5,000,000 aggregate limit for the work being performed (including, but not limited to, asbestos or lead abatement, testing, remediation, use of equipment that might emit fumes or contaminants, or work that might release or exacerbate in situ contaminants). Contractor and all of its subcontractor's CPL policy shall be maintained in full force and effect for the term of this Consultant Agreement and for a period of three (3) years after the completion of any and all of the Contractor's services hereunder, if and to the extent it is available. In the alternative, Contractor may provide an Extended Reporting Period or "tail" coverage for claims-made policies, for three (3) years following the completion of its services. If coverage is written on a claims-made form, any retroactive date or prior acts exclusion to which such coverage is subject shall predate both the date upon which any services hereunder are commenced and the date of this Agreement.

- (e) Umbrella/Excess Liability: Contractor and all its subcontractors that it retains in performance of the work shall provide Umbrella/Excess Liability insurance with a limit of not less than \$5,000,000 per occurrence and \$5,000,000 in the aggregate and such coverage shall apply excess of Contractor's General Liability, Business Automobile Liability, Employers Liability, Pollution Liability, policies, on a following-form basis.
- (f) Certificates of Insurance: Before commencing its performance of this Agreement, the Contractor shall furnish to the Consultant Certificates of Insurance in the form satisfactory to the Consultant showing that the Contractor has procured the required insurance and that such insurance is in force. The Contractor shall provide the Consultant with current insurance certificates confirming its maintenance of the required insurance coverage during the term of this Agreement and for a period of five (5) years thereafter. Contractor shall be responsible for securing certificates of insurance from all subcontractors evidencing the insurance coverages required above.
- (g) Cancellation and Notice: Contractor shall not cancel or reduce the coverage of any insurance required in these Terms and Conditions without providing a thirty (30) day prior written notice to Consultant. All insurance policies and binders must include an endorsement by which the insurer shall agree to notify Consultant, in writing, immediately of any cancellation or reduction in insurance coverage. Contractor shall cease operations if any insurance is canceled or reduced and shall not resume operations until new insurance in accordance with these Terms & Conditions is in place.
- (h) Minimum Requirements: The insurance coverages and limits required herein are designed to meet the minimum requirements of the Consultant and WVDOT. They are not designed as a recommended insurance program for Contractor or its subcontractors. Meeting these minimum requirements shall in no way limit or relieve the Contractor's liability and obligations under any other provision of the Agreement.

- (i) Termination: Failure to maintain the required insurance coverages as outlined in this agreement is a material breach and will result in termination.
- (j) Endorsements: Contractor, and all of its subcontractors, must also name GPI's subsidiaries, affiliates, parent companies, and the officers, directors, agents, employees and assigns, and WVDOH as an additional insured. Contractor's insurance is primary to, and not contributing with, any insurance carried by, or for the benefit of GPI or WVDOH. Contractor shall also provide a waiver of subrogation in favor of GPI and WVDOH on all policies.

All insurance policies and binders shall include the following endorsements, verbatim:

“ADDITIONAL INSURED: Greenman Pedersen, Inc., including its subsidiaries, affiliates, parent companies, and the officers, directors, agents, employees and assigns of Greenman Pedersen, Inc., the West Virginia Department of Transportation, and the West Virginia Department of Highways.”

## **4.0 SAFETY**

Contractor agrees to comply with all applicable federal and state safety regulations, including but not limited to those of the Occupational Safety and Health Act (OSHA), West Virginia Division of Labor, West Virginia Department of Transportation Division of Highways 2023 Edition of Standard Specifications Roads and Bridges ([2023 Standard \(12-16-22\).pdf - https://transportation.wv.gov/Pages/default.aspx](https://transportation.wv.gov/Pages/default.aspx)), Federal and State Construction and environmental regulations and standards as they pertain to the work of this contract. Any costs (legal or punitive) associated with work stoppages, remediation, fines or citations resulting from non-compliance of these regulations and standards by the Contractor, or its employees or subcontractors of Contractor, will be the sole responsibility of the Contractor. Contractor is required to submit a Safety and Health Plan which confirms to WVDOH's standards.

## **5.0 DISPUTES**

All claims, disputes, and other matters in question between the Consultant and Contractor arising out of, or relating to, the Contract Documents or the breach thereof (except for claims which have been waived by the making or acceptance of final payment or otherwise agreed to in writing) will first be submitted to WVDOH in writing. WVDOH will review the submission and make a decision on the matter. Notwithstanding the WVDOH's decision, Consultant and Contractor reserve the right to submit this matter to the Circuit Court of Kanawha County, West Virginia. Consultant and Contractor further agree that, consistent with this paragraph and subject to the approval of the WVDOH, either party may file a motion to transfer the Circuit Court action to the West Virginia Business Court, without objection by the non-moving party.

## **6.0 TAXES**

The Contractor shall include, and will be deemed to have included, in its base bid and contract price all applicable West Virginia taxes which have been enacted into law as of the date the bid is submitted.

## **7.0 LIQUIDATED DAMAGES**

Contractor agrees that time is of the essence to the contract, therefore, it is important that the work be vigorously prosecuted until completion. Contractor agrees and understands that if the project is not timely completed, even with extensions, it would be very difficult to ascertain the actual damages sustained by Consultant and WVDOH because of the delay. Contractor hereby waives any defense to the validity of the liquidated damages stated herein on the grounds that such liquidated damages are void as a penalty or are not reasonably related to actual damages. Therefore, Contractor explicitly acknowledges that it shall be subject to any and all liquidated damages provisions contained in the WVDOH Standard Specifications, Roads and Bridges 2023 Edition or any applicable WVDOH specifications relating to State Project X347-H-55.68 00. To the extent any delay which triggers the liquidated damages provisions arises from the acts or omissions of Contractor, Contractor shall be liable to Consultant to the same extent that Consultant is liable to WVDOH for any and all liquidated damages imposed, the said sum being specifically agreed upon between Consultant and WVDOH as a measure of damage by reason of delay in the completion of the work.

## **8.0 NON-DISCRIMINATION OF EMPLOYEES**

The Contractor agrees as follows:

During the performance of this contract, the Contractor and any of its sub-contractors shall provide equal employment opportunities for all qualified persons and shall not discriminate against any employee or applicant because of race, color, or national origin. The Contractor and its sub-contractor shall comply with the Executive Orders of the Governor of the State of West Virginia, dated October 16, 1963, and December 15, 1965, and conform to Presidential Order No. 11246, and the Civil Rights Act of 1964.

During the performance of this contract, the Contractor for itself, its assignees, and its successors in interest (hereinafter called Contractor) agree as follows:

1. Compliance with Regulations: The Contractor will comply with the regulations of the Department of Transportation relative to non-discrimination in federally assisted programs of the Department of Transportation, (Title 49, Code of Federal Regulations), which are herein incorporated by reference and made a part of this contract.
2. Non-Discrimination: The Contractor, with regard to the work performed by it after award, and shall not discriminate on the grounds of race, color, or national origin in the selection and retention of sub-contractors, including procurement of materials and leases of equipment. The Contractor will not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices, when the contract covers a program set forth in Appendix B of the Regulations.
3. Solicitations for Sub-contractors, including Procurement of Materials and Equipment: In all solicitations either by competitive bid or negotiation made by the Contractor for work to be performed under a sub-contract, including procurement of materials or equipment, each potential sub-contractor or supplier shall be notified by the Contractor of the Contractor's obligations under this contract and the regulations relative to non-discrimination on the grounds of race, color, or national origin.

4. Information and Reports: The Contractor will provide all information and reports required by the Regulations, or orders and instructions issued pursuant thereto, and will permit access to its books, records, accounts, and other sources of information, and its facilities as may be determined by the Engineer, the WVDOT or the Federal Highway Administration (FHWA) to be pertinent to ascertain compliance with such regulations or directives. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the Engineer, the WVDOT, or the FHWA, as appropriate, and shall set forth what efforts it has made to obtain the information.
5. Sanctions for Non-Compliance: In the event of the Contractor's non-compliance with the non-discrimination provisions of this contract, the Engineer shall impose such contract sanctions as it, the WVDOT or the FHWA, may determine to be appropriate, including, but not limited to,
  - (c) withholding of payments to the Contractor under the contract until the Contractor complies; and/or
  - (d) cancellation, termination, or suspension of the contract, in whole or in part.
6. Incorporation of Provisions: The Contractor will include the provisions of paragraphs (1) through (6) in every sub-contract, including procurement of materials and leases of equipment, unless exempt by the regulations, or directives issued pursuant thereto. The Contractor shall take such action with respect to any sub-contract or procurement as the Engineer, the WVDOT, or the FHWA may direct as a means of enforcing such provisions including sanctions for non-compliance; provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a sub-contractor or supplier as a result of such direction, the Contractor may request the Engineer or the WVDOT to enter into such litigation to protect the interest of the State, and in addition, the Contractor may request the United States to enter into such litigation to protect the interest of the United States.

These provisions shall be fully and effectively enforced, and failure to comply therewith shall be regarded as a material breach of this agreement.

## CONTRACT BOND

KNOW ALL PERSONS BY THESE PRESENTS, That we, \_\_\_\_\_

hereinafter called the "Principal" and \_\_\_\_\_

a corporation incorporated under the laws of the State of \_\_\_\_\_,

hereinafter called the "Surety" are held and firmly bound unto \_\_\_\_\_

Greenman-Pedersen, Inc. (GPI) hereinafter called "Engineer," in the full and just sum of

\_\_\_\_\_ dollars (\$\_\_\_\_\_),

lawful money of the United States of America, to be paid to GPI, which payment will and truly to be made and done, we bind ourselves, our heirs, executors, administrators, and successors jointly and severally firmly by these presents.

Sealed with our respective seals and dated this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

The Condition of this obligation is such that, whereas, the "principal" has entered into a contract date \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, with GPI, for the **performance of the installation, maintenance, and subsequent reclamation of core boring access roads and drill rig pads, and all related work** for State Project X347-H-55.68 00, Parsons - Davis.

WHEREAS, it was one of the conditions of the award of GPI, pursuant to which said contract was entered into, that these presents should be executed.

NOW, THEREFORE, if the above "Principal" as Contractor, shall in all respects comply with the terms of the contract and conditions of said contract, and his, their, or its obligations thereunder, including the specifications therein referred to and made part thereof, and such alterations as may be made in such specifications as herein provided for, and shall well and truly, and in a manner satisfactory to GPI, complete the work contracted for, including without limitation any recall work required by the "Engineer" within six (6) months after the initial mobilization has been terminated, and shall save harmless the

"Engineer" and the State of West Virginia from any expense incurred through the failure of said Contractor to complete the work as specified, or for any damages growing out of the carelessness of said Contractor or his, their, or its agents, or for any liability for payment of wages due to material furnished to said Contractor, and shall well and truly pay all and every person furnishing material and performing labor in and about the **access road construction and all related work** of said State Project X347-H-55.68 00 all and every sum or sums of money due him, them, or any of them, for all such labor and materials for which the Contractor is liable.

And also shall save and keep harmless the said "Engineer" and the State of West Virginia against and from all losses to it from any cause whatever, including patent, trade-mark, and copyright infringements in the manner of performing **access road construction and all related work** of said project; then this obligation shall be void or otherwise to be and remain in full force and virtue.

\_\_\_\_ (Seal)  
Contractor (Name of Corporation)

By: \_\_\_\_\_

Its: \_\_\_\_\_  
Title of Officer Signing

\_\_\_\_ (Seal)  
Surety Company

By: \_\_\_\_\_

\_\_\_\_\_  
Print Name of Attorney-in-Fact Signing

(For Contractor if a Corporation)

STATE OF \_\_\_\_\_ COUNTY OF \_\_\_\_\_

The foregoing instrument was acknowledged before me this \_\_\_\_ day of

\_\_\_\_\_, 20\_\_\_\_.

By \_\_\_\_\_

(Name of Officer)

(Title of Officer)

\_\_\_\_\_  
(Insert Name of Corporation)

A \_\_\_\_\_ Corporation, on behalf of the Corporation.

(State of Incorporation)

My commission expires \_\_\_\_\_

NOTARY PUBLIC

(For Surety if Corporation)

STATE OF \_\_\_\_\_ COUNTY OF \_\_\_\_\_

The foregoing instrument was acknowledged before me this \_\_\_\_ day of

\_\_\_\_\_, 20\_\_\_\_.

By \_\_\_\_\_ as Attorney-in-Fact on behalf of

\_\_\_\_\_  
(Insert Name of Corporation)

A \_\_\_\_\_ Corporation, on behalf of the Corporation.

(State of Incorporation)

My commission expires \_\_\_\_\_

NOTARY PUBLIC



***STANDARD SPECIFICATIONS  
FOR  
ACCESS ROAD CONSTRUCTION***

*DIVISION 100 –  
GENERAL PROVISIONS*

## **SECTION 101 – DEFINITION OF TERMS**

- 101.1. **AASHTO:** American Association of State Highway and Transportation Officials.
- 101.2. **AWARD:** The acceptance by the Engineer of a bid.
- 101.3. **BIDDER:** An individual firm, corporation or combination thereof, acting directly or through a duly authorized representative, and qualified according to the requirements and provisions of the Contract, submitting a bid for the proposed work.
- 101.4. **CALENDAR DAY:** Every day shown on the calendar.
- 101.5. **CHANGE ORDER:** A general term referring to force account work orders, supplemental agreements, and work orders of the Contract.
- 101.6. **COMMISSIONER:** West Virginia Commissioner of Highways.
- 101.7. **CONTRACT:** The written agreement between the Engineer and the Contractor covering the performance of the work, the furnishing of labor, equipment, and materials and the basis of payment. The Contract includes the invitation for bids, proposal, specifications, special provisions, plans, notice to proceed, any change orders and supplemental agreements that are required to complete the construction of the work in an acceptable manner, including authorized extensions thereof, all of which constitutes one instrument.
- 101.8. **CONTRACT BOND:** The approved form of security executed by the Contractor and his surety guaranteeing completion of the work and payment of all legal debts pertaining to completion of the project.
- 101.9. **CONTRACT PERIOD:** The period from the specified date of commencement of work to the specified date of completion of the work, both dates inclusive, as is specified in the Contract.
- 101.10. **CONTRACT TIME:** The number of work or calendar days specified in the proposal, indicating the time allowed for the completion of the work contemplated, including authorized time extensions. In case a calendar date of completion is specified in the proposal, the work shall be complete by that date, or any approved extension thereof.
- 101.11. **CONTRACTOR:** The individual, firm or corporation, party of the second part to the Contract, acting directly or through his or their agents, employees, or subcontractors.
- 101.12. **COUNTY:** The County or Counties of West Virginia in which the work is to be done.
- 101.13. **DEPARTMENT:** West Virginia Department of Transportation (WVDOT).
- 101.14. **DIVISION:** West Virginia Division of Highways (WVDOH).
- 101.15. **EASEMENT:** A right acquired by one party to use land belonging to another party for a specified purpose.

- 101.16. **EMPLOYEE:** Any person working on behalf of the project who is under the direction of the contractor or any subcontractor.
- 101.17. **ENGINEER:** The Engineer is the Consulting Engineer awarding the Contract or his duly authorized representative; or the WVDOH when the Division awards the Contract.
- 101.18. **EQUIPMENT:** All machinery and equipment, together with the necessary supplies for upkeep and maintenance, and also tools and apparatus necessary for the proper performance and acceptable completion of the work.
- 101.19. **ESTIMATES:** The official written itemization of the value of materials in place and work performed.
- 101.20. **HIGHWAY:** The entire improvement comprising the entire right of way. See 101.38.
- 101.21. **NOTICE TO BIDDERS:** The notice to Contractors containing all necessary information as to provisions, requirements, date and time of submitting Proposals.
- 101.22. **INTERPRETATIONS:** In order to avoid cumbersome and confusing repetition of expressions in these specifications, it is provided that whenever anything is, or is to be done, if, as, or, when, or where "contemplated, required, determined, directed, specified, authorized, ordered, given, designated, indicated, considered necessary, deemed necessary, permitted, reserved, suspended, established, approval, approved, disapproved, acceptable, unacceptable, suitable, accepted, satisfactory, unsatisfactory, sufficient, insufficient, rejected, or condemned," it shall be understood as if the expression were followed by the words "by the Engineer" or "to the Engineer."
- 101.23. **INSPECTOR:** The Engineer's authorized representative assigned to make any or all necessary inspection of the Work.
- 101.24. **INVITATION FOR BIDS:** The advertisement for bids, as required by law, inviting bids for work to be performed or material to be furnished.
- 101.25. **ITEM:** A specifically described unit of work for which a price is provided in the Contract.
- 101.26. **LAYDOWN AREA:** An area of the site shown as such in Attachment #3 where the Contractor may locate equipment, materials, storage containers, field offices, and other temporary facilities for use during the Work.
- 101.27. **MAJOR AND MINOR CONTRACT ITEMS:** Any item having a contract value of 10% or more of the original contract amount shall be considered as a major item. All other items shall be considered minor items.
- 101.28. **NOTICE TO PROCEED:** Written notice to the Contractor to proceed with the contract work including, when applicable, the date of beginning of contract time.
- 101.29. **OWNER:** The Owner is the West Virginia Division of Highways (WVDOH).

- 101.30. **PLANS:** Working drawings, or exact reproductions thereof, which show the location, character, dimensions, and details of the work to be done.
- 101.31. **PROJECT:** The specific section of the highway or designated area on which work is to be performed under the Contract.
- 101.32. **PROJECT COMPLIANCE/EROSION AND SEDIMENT CONTROL COORDINATOR (PCC):** Designee responsible for observing the erosion and sediment control components of the contract and ensuring conformity with the E&S Control Plans and reporting back to the permit authorities as required by law.
- 101.33. **PROPOSAL:** The offer of a bidder, on the prescribed form to perform the work at the prices quoted.
- 101.34. **PROPOSAL FORM:** The approved form on which the Engineer requires a bid to be prepared and submitted for the work.
- 101.35. **PROPOSAL GUARANTY:** The security furnished with a bid to guarantee that the bidder will enter into the contract if his bid is accepted.
- 101.36. **QUALIFICATION STATEMENT:** The statement in which the Contractor furnishes information as to his ability to perform work, his experience, manpower, equipment, and financial condition.
- 101.37. **RECALL:** It is anticipated that all work on this project will be done at one time. It is possible, however, that access roads and/or drill rig pads for additional borings may be necessary after the equipment has left the project. If this occurs, it will be necessary to mobilize equipment at a later date to provide equipment access for the additional borings. The Contractor shall mobilize the required equipment, labor, and materials to perform the additional work within seven (7) calendar days after notification to proceed. The bid item "RECALL" is to compensate the Contractor for this recall of equipment.
- 101.38. **RIGHT OF WAY:** A general term denoting land, property, or interest therein, usually in a strip, acquired for or devoted to a highway.
- 101.39. **RIGHT OF ENTRY:** Permission to enter upon private or public properties for the purpose of gaining access to or performing borings or related work.
- 101.40. **ROAD:** A general term denoting a public way for purposes of vehicular travel, including the entire area within the right of way, or needed for the maintenance of travel.
- 101.41. **SPECIAL PROVISIONS:** Additions and revisions to the Standard and Supplemental Specifications covering conditions peculiar to an individual project.
- 101.42. **SPECIAL USE PERMIT:** A permit granted or issued by the National Forest Service (NFS) which allows occupancy, use, rights, or privileges of NFS land for a specific use of the land for a specific period of time.
- 101.43. **SPECIFICATIONS:** A general term applied to all directives, provisions, and requirements pertaining to performance of the work.

- 101.44. **STATE:** The State of West Virginia
- 101.45. **STREAM CROSSINGS:** A generic term used to describe a heavy equipment mat made up of thick, solid timbers bolted together. The timbers within a stream crossing have a common thickness, are green in moisture content, and are generally not graded for quality or strength. Stream crossings are used for short-term water crossings over narrow spans as designated in the Plans.
- 101.46. **STRUCTURES:** Bridges, culverts, retaining walls, cribbing, or buildings.
- 101.47. **SUBCONTRACTOR:** An individual, firm, or corporation to whom the Contractor sublets part of the Contract.
- 101.48. **SUBSTRUCTURE:** All of the structure below the bearings of simple and continuous spans, skewbacks of arches and tops of footing of rigid frames, together with the back walls, wingwalls, and wing protection railings.
- 101.49. **SUPERINTENDENT:** The Contractor's authorized representative in responsible charge of the work.
- 101.50. **SURETY:** The corporation, partnership, or individual other than the Contractor, executing a bond furnished by the Contractor.
- 101.51. **TIMBER MAT:** A generic term used to describe a heavy equipment mat made up of thick, solid timbers bolted together. The timbers within a timber mat have a common thickness, are green in moisture content, and are generally not graded for quality or strength. Timber mats are used for temporary access roads, work pads, laydown areas, and to stabilize the ground beneath heavy equipment, particularly within suboptimal areas of mud, sand, or permafrost.
- 101.52. **TITLES:** The titles or headings of the sections and subsections herein are intended for convenience of reference and shall not be considered as having any bearing on this interpretation except those titles and headings used in conjunction with the definition of terms.
- 101.53. **UTILITIES:** Electric power, water, and fuel production and transmission companies, T.V. cables, or others.
- 101.54. **WATER BAR:** Water bars are a small berm and swale construction across a road to direct surface water off the road and into a stabilized vegetated area.
- 101.55. **WORK:** Work shall mean the furnishing of all labor, materials, equipment, and other incidentals necessary or convenient to the successful completion of the project and the carrying out of all duties and obligations imposed by the Contractor.
- 101.56. **WORK ORDER:** A written order, signed by the Engineer, requiring certain performance by the Contractor without negotiation. Such order shall not change quantities of major items beyond the twenty-five percent (25%) limitations, shall not create new items, nor make revisions to item prices.

## **SECTION 102 – PROPOSAL REQUIREMENTS AND CONDITIONS**

### **102.1. CONTENTS OF PROPOSAL FORMS**

Upon request, the Engineer will furnish bidders, or their authorized representatives, with proposal forms. The proposal forms will show the location of the various quantities of work to be performed or materials to be furnished, the amount of the proposal guaranty, the number of calendar days or date on which the work is to be completed, and the date, time, and place of opening of proposals. The form will also include any special provisions or requirements not contained in these Specifications. All papers bound with or attached to the proposal form are considered a part thereof and must not be detached or altered. The Plans, Specifications, and other documents designated in the proposal are considered a part of the proposal form whether attached or not.

### **102.2. INTERPRETATION OF APPROXIMATE ESTIMATES**

The quantities appearing in the proposal form are approximate only and are prepared for the comparison of bids. Payment to the Contractor will be made only for the actual quantities of work performed and materials furnished in accordance with the Contract. If upon completion of the work the actual quantities shown either increase or decrease the unit bid prices offered in the proposal will prevail except as further provided herein.

### **102.3. EXAMINATION OF PLANS, SPECIFICATIONS, SPECIAL PROVISIONS, AND SITE OF WORK**

The bidder is required to carefully examine the Plans, Specifications, Special Provisions, Contract Form, and the site of the work contemplated. The submission of a bid shall be considered prima facie evidence that the bidder has made such examination and has judged for and satisfied himself as to the character, quality, and quantity of work to be performed and material required to be furnished under the Contract.

### **102.4. PREPARATION OF PROPOSAL**

The bidder must submit his proposal on the form furnished by the Engineer. The proposal must be filled in for each and every time for which a quantity is given. The bidder must fill in prices in ink or typewriting. The Proposal must be signed in ink by the bidder or his qualified and authorized agent; by one or more bidders or officers of each firm represented in a joint venture; by one or more officers of a corporation duly qualified and authorized to act for, and on behalf of the corporation; or by one of the partners or an authorized agent for a partnership.

The Proposal must contain the name and post office address of an individual bidder, the name and post office address for each individual or firm represented in a joint venture; the name and business address of a corporation and its corporate officials; and the name and post office address of each member of a partnership.

### **102.5. REJECTION OF IRREGULAR PROPOSALS**

Proposals may be rejected for irregularities which will be deemed to include but not limited to the following reasons:

1. If on form other than that furnished by the Engineer;
2. If the form is altered or any part thereof detached;

3. If there are additions, reservations, conditions, or alternates not invited;
4. If the proposal does not contain a unit price for each pay item listed; and
5. If the proposal is unbalanced, indefinite, or otherwise incomplete.

**102.6. PROPOSAL GUARANTY**

No proposal will be considered unless accompanied by a guaranty in the form of a certified or cashier's check, or bid bond, in the amount specified in the proposal, made payable to the Engineer. Bid bonds will be accepted only if executed in the official form furnished by the Engineer, and any proposal accompanied by a bond executed on a copy, duplicate, or facsimile will be rejected.

**102.7. DELIVERY OF PROPOSALS**

Each proposal shall be submitted in a sealed envelope. The envelope shall be endorsed on the outside as follows:

Proposal for Parsons - Davis Access Road Construction  
State Project X347-H-55.68 00  
Federal Project ACNH-0484(290) (ENG)  
Tucker County, West Virginia

and shall have the name of the bidder thereon. Envelopes shall be addressed to the Engineer and shall have the name and address of the bidder thereon. Proposals shall be deposited at the proper address prior to the hour set in the proposal for opening of bids. Proposals received after the time for opening of bids will be returned to the bidder unopened.

**102.8. WITHDRAWAL OF PROPOSALS**

At any time prior to the opening of proposals, bidders may withdraw proposals already deposited with the Engineer, provided the request is made in writing.

**102.9. PUBLIC OPENING OF PROPOSALS**

Proposals will be opened and read publicly at the time and place indicated in the proposal. Bidders, their authorized agents, and other interested parties are invited to be present.

**102.10. DISQUALIFICATION OF BIDDERS**

The submission of more than one (1) proposal from any individual firm, partnership, corporation, or association or combination thereof, under the same or different names will result in the rejection of all of its proposals for that project. Reasonable grounds for believing that a bidder is interested in more than one proposal for the work contemplated will cause the rejection of all proposals in which such bidder is interested. Proposals shall be rejected if there is evidence that collusion exists among the bidders, and persons or firms participating in such collusion shall not be permitted to bid in future proposals for the same work, and, at the discretion of the Engineer, may be disqualified from bidding on other work.

Proposals in which the prices obviously are unbalanced may be rejected. No contract will be awarded except to a bidder considered by the Engineer to be capable of performing the class of work contemplated.



## **SECTION 103 – AWARD AND EXECUTION OF CONTRACT**

### **103.1. CONSIDERATION OF PROPOSALS**

The Engineer reserves the right to select the bidder that it deems to be in the best interest to accomplish the project as specified herein. After proposals are opened and read, the bidders will be compared based on the detailed responses entered into the proposal forms.

There is no specific DBE goal for this project. However, all Contractors are encouraged to consider DBEs for subcontract work as well as for the supply of materials and services needed for the performance of this work.

The results of such comparisons will be made immediately available to the public. In the event of discrepancy between unit bid prices and extensions, the unit bid price shall govern.

The right is reserved to reject any or all proposals, to waive technicalities, or to advertise for new proposals, if in the judgment of the Engineer the best interests of the public will be promoted thereby.

### **103.2. AWARD OF CONTRACT**

The award of contract, if it be awarded, will be made within twenty (20) calendar days after the opening of proposals to the most competent bidder. The Engineer may agree with the bidder to withhold award for any length of time. The successful bidder will be notified by letter, mailed to the address shown on his proposal, that his bid has been accepted and that he has been awarded the Contract.

### **103.3. CANCELLATION OF AWARD**

The Engineer reserves the right to cancel the award of any Contract at any time before the execution of the said Contract by all parties without any liability against the Engineer.

### **103.4. RETURN OF PROPOSAL GUARANTY**

All proposal guaranties, except those of the three most competent bidders based on the selection process, will be returned immediately following the opening and checking of the proposals. The retained proposal guaranty of the three most competent bidders will be returned within ten (10) calendar days after a contract bond has been furnished and the Contract has been executed with the successful bidder.

### **103.5. REQUIREMENT OF CONTRACT BOND**

At the time of the execution of the Contract, the successful bidder shall execute and deliver to the Engineer a good and sufficient surety or collateral Bond payable to the Engineer in the amount of one hundred (100) percent of the contract price. As an alternate, the successful bidder may furnish cash bond, U.S. Government Bonds, or West Virginia Road Bonds in the amount of one hundred (100) percent of the Contract amount.

### **103.6. INSURANCE REQUIREMENTS**

The Contractor shall be required, in addition to any other form of insurance or bonds required under the terms of the Contract and Specifications, to procure and maintain during the life of the Contract, the following types of insurance in the amounts set forth below. In addition, GPI and the WVDOH shall be named as an additional insured on all policies of insurance obtained, except for policies of worker's compensation insurance.

#### **103.6.1. CONTRACTOR'S PUBLIC LIABILITY AND PROPERTY DAMAGE LIABILITY INSURANCE**

The Contractor shall furnish evidence to the Engineer that, with respect to the operations he performs, he carries regular Contractor's Public Liability Insurance providing for a limit of not less than \$500,000 for all damages arising out of bodily injuries to or death of one person, and, subject to that limit for each person, a total limit of \$1,000,000 for all damages arising out of bodily injuries to or death of two or more persons in any one accident, and regular Contractor's Property Damage Liability Insurance providing for a limit of not less than \$100,000 for all damages arising out of injury to or destruction of property in any one accident and subject to that limit per accident, a total (or aggregate) limit of \$500,000 for all damages arising out of injury to or destruction of property during the life of the Contract. Policy shall be written or endorsed to cover the hazards of operation of mechanical equipment on streets and highways.

If any part of the work is sublet, it shall be the duty of the contractor to see that similar insurance is provided by or on behalf of the subcontractors to cover their operations.

#### **103.6.2. CONTRACTOR'S PROTECTIVE PUBLIC LIABILITY AND PROPERTY DAMAGE LIABILITY INSURANCE**

The Contractor shall furnish evidence to the Engineer that, with respect to the operations performed for him by subcontractors, he carried in his own behalf, regular Contractor's Protective Public Liability Insurance providing for a limit of not less than \$500,000 for all damages arising out of bodily injuries to or death of one person, and subject to that limit for each person, a total limit of \$1,000,000 for all damages arising out of bodily injuries to or death of two or more persons in any one accident, and regular Contractor's Protective Property Damage Liability Insurance providing for a limit of not less than \$100,000 for all damages arising out of injury to or destruction of property in any one accident and subject to that limit per accident, a total (or aggregate) limit of \$500,000 for all damages arising out of injury to or destruction of property during the life of the Contract. Policy shall be written or endorsed to cover the hazards of operation of mechanical equipment on streets or highways.

#### **103.6.3. AUTOMOBILE INSURANCE**

The Contractor shall furnish evidence to the Engineer that, with respect to the operations he performs, he carries in his own behalf Automobile Insurance providing a limit of not less than \$100,000 for all damages arising out of bodily injuries to or death of one person, and subject to that limit for each person, a total limit of \$300,000 for all damages arising out of bodily injuries to, or death of, two or more persons in any one accident and Property Damage Liability Insurance having a total (or aggregate) limit of \$100,000. This policy shall cover all owned, hired, or non-owned vehicles used on the project.

#### **103.6.4. WORKMEN'S COMPENSATION ACT**

It shall be the responsibility of the Contractor to furnish proof to the Engineer that he is in compliance with the requirements of the "Workmen's Compensation Act." A certificate demonstrating compliance with the act, in the Contractor's home state, shall be submitted to the Engineer prior to mobilization to the project.

#### **103.6.5. COUNTERSIGNATURE OF RESIDENT WEST VIRGINIA AGENT**

The policy or policies of insurance herein required must be countersigned by a Resident Agent of the State of West Virginia in accordance with the applicable statute of the State of West Virginia.

**103.7. SPECIAL BONDS AND INSURANCE**

When the work is of such nature that special bond or insurance is required, the special requirements will be detailed and included in the proposal for the project.

**103.8. EXECUTION OF CONTRACT**

The Contract shall be executed by the bidder to whom the Contract has been awarded, the bond executed by the principal and the sureties, and the Contract and bond returned to the Engineer within ten (10) calendar days after the date of the notice of the award.

**103.9. FAILURE TO EXECUTE CONTRACT**

Failure by the bidder to execute the contract and file acceptable bond within ten (10) calendar days after notice of award shall be just cause for the annulment of the award; and it is understood by the bidder, in the event of such an annulment of award or of the contract, the amount of the guaranty deposited with the proposal shall be retained by the Engineer, not as a penalty, but as liquidated damages.

**103.10. RAILROAD INSURANCE**

If work is required to be performed on the property of a Railroad, insurance shall be procured and maintained as required by the Railroad.

## **SECTION 104 – SCOPE OF WORK**

### **104.1. INTENT OF CONTRACT**

The intent of the Contract is to provide for the completion in detail of the work described, in full compliance with the Plans, Specifications, Special Provisions, Proposal, and Contract. Should any misunderstanding arise as to the intent or meaning of the Plans, Specifications, Special Provisions, Proposal, or Contract, or any discrepancy appear in any, the decision of the Engineer shall be final.

The Contractor shall perform all items of work covered and stipulated in the Contract and shall perform all altered and extra work, as described further therein, in accordance with the Plans, or as ordered by the Engineer; and shall provide all materials, implements, machinery, equipment, tools, supplies, transportation, labor, supervision, and incidentals necessary.

### **104.2. ALTERATIONS OF PLANS OR CHARACTER OF WORK**

The Engineer reserves the right to make alterations in the Plans or in the quantities of work as may be necessary, either before or after the beginning of work under the Contract, to ensure completion of the work. Such alterations shall not be considered as a waiver of any conditions of the Contract nor invalidate any of the provisions thereof, provided such alterations do not decrease or increase the total cost of the project more than twenty-five (25) percent, based on the original Contract quantities and the unit bid prices, and provided further that such alterations do not result in an increase or decrease of more than twenty-five (25) percent in quantity of any one major Contract item. When alterations are made in excess of those herein specified, then either party to the Contract, upon written demand, shall be entitled to a revised Contract consideration to be fixed and agreed upon in a written supplemental agreement, covering the necessary changes, executed between the contracting parties.

A major item shall be defined as any item whose total cost is equal to or greater than ten (10) percent of the total original Contract cost. Items appearing as minor items in the original proposal shall be construed as becoming major items when increased to the extent that the total cost of the item is equal to or greater than ten (10) percent of the total original cost.

The Engineer may omit any item or items in the Contract, provided that notice of intent to omit such item or items is given to the Contractor before any material has been purchased or labor involved has been performed, and such omission shall not constitute grounds for any claim for damages or loss of anticipated profits. The Engineer may omit any item or items shown in the estimate, at any time, by agreeing to compensate the contractor for the reasonable expense already incurred.

### **104.3. SPECIAL PROVISIONS**

Proposed work or requirements not covered by these Specifications will be covered by Special Provisions. The Special Provisions shall govern the work as though part of these Specifications and shall take precedence whenever in conflict therewith.

### **104.4. MAINTENANCE OF LOCAL TRAFFIC**

If the performance of the work in any way involves obstructing, or otherwise making impassable, with safety, the traveled surfaces of any existing public roads, the Contractor shall continuously, while any such condition exists, construct or otherwise provide and shall maintain in safe and passable conditions, such detours, by-passes, and temporary approaches, crossings, and structures as may be necessary to accommodate, without undue

delay thereto, traffic which normally passes over such public roads. In all such cases, and in all other cases in which anything done in the performance of the work shall in any way impede traffic or endanger persons or property moving over public roads, the Contractor shall provide all such flagmen and warning signs and signals and all such other traffic and safety controls, as may be necessary for the adequate protection of the traveling public against all hazards created or involved. All traffic control shall correlate with and so far as possible conform to the systems set forth in the most recent edition of the Federal Highway Administration (FHWA) ***Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD)*** and the WVDOH ***Manual on Temporary Traffic Control for Streets and Highways***. These requirements only apply to the work performed by the Contractor in the development of the access roads. The Contractor is not responsible for maintenance of traffic for the individual core drilling operations. The Drilling Contractors shall be responsible for their own maintenance of traffic.

#### **104.5. FINAL CLEANUP**

The Contractor shall maintain the site in a neat and orderly condition throughout the work. Upon completion of the work and before acceptance and final payment shall be made, the Contractor will be required to remove from the work site all mud, trash, temporary structures, and other debris and surplus materials which resulted from his operations. The Contractor will be further required to repair all lawns, fences, fields, buildings, or any other item which he removed or damaged in the process of doing the work, reclaim all temporary access roads to pre-construction contours, and restore the entire site to a clean and acceptable condition as determined by the Engineer.



## **SECTION 105 – CONTROL OF WORK**

### **105.1. AUTHORITY OF THE ENGINEER**

The Engineer will decide all questions which may arise as to the quantity, quality, and acceptability of work performed and as to the rate of progress of the work; all questions which may arise as to the interpretation of the Plans and Specifications; and all questions as to the acceptable fulfillment of the Contract on the part of the Contractor. The decision of the Engineer shall be final.

The Engineer will have the authority to suspend the work wholly or in part due to the failure of the Contractor to correct conditions unsafe for the workmen or the general public; for failure to carry out provisions of the Contract; for failure to carry out orders; for such periods as he may deem necessary due to unsuitable weather; for conditions considered unsuitable for the prosecution of the work or for any other condition or reason deemed to be in the public interest.

### **105.2. COORDINATION OF CONTRACT DOCUMENTS**

These Specifications, the Plans, Special Provisions, and all Supplementary Documents are essential parts of the Contract, and a requirement occurring in one is as binding as though occurring in all.

The Contractor shall take no advantage of any apparent error or omission in the Plans or Specifications. In the event the Contractor discovers such an error or omission, he shall immediately notify the Engineer. The Engineer will then make such corrections and interpretations as may be deemed necessary for fulfilling the intent of the Plans and Specifications.

### **105.3. COOPERATION BY CONTRACTOR**

The Contractor shall give the work the constant attention necessary to facilitate the progress thereof, and shall cooperate with the Engineer, his inspectors, other contractors, and utilities in every way possible.

The Contractor shall have on the work at all times, as his agent, a competent Superintendent capable of reading and thoroughly understanding the Plans and Specifications, and thoroughly experienced in the type of work being performed, who shall receive instructions from the Engineer or his authorized representatives. The Superintendent shall have full authority to execute orders or directions of the Engineer without delay, and to promptly supply such materials, equipment, tools, labor, and incidentals as may be required. Such superintendence shall be furnished irrespective of the amount of work sublet.

The Contractor will furnish, to the Engineer, a list of addresses and telephone numbers of his personnel who may be reached in case of emergency during hours when no work is being performed. On weekends and during storms the Contractor shall alert certain members of his personnel to stand by and shall inform the Engineer of arrangements so made.

An acceptable schedule of work shall be submitted, indicating the order in which the Contractor proposes to carry out the work and the dates he will start and complete the work on the various items. Submission of the first progress estimate by the Engineer shall be contingent on acceptance by the Engineer of the Schedule of Work.

#### **105.4. COOPERATION WITH UTILITIES**

The locations of all known utilities are shown on the plans based on the best available information. There is no guarantee as to their exact locations. It is the Contractor's responsibility to ascertain the status and location of each utility when performing work which may affect these facilities, including probing, excavation, or any other precaution required to confirm location. The Contractor shall provide the necessary protection to avoid damage to the utilities. The Contractor will be responsible for any damage or disruption to utility lines which are known active and are to remain in operation.

The Contractor shall contact WV 811 and shall notify all applicable non-WV 811 participating utilities prior to beginning excavation or other activities which may affect utilities. [<https://wv811.com/>]

#### **105.5. LOCATION OF ACCESS ROADS**

The approximate locations of proposed access roads are as indicated in the Plans provided in Attachment #3. The final determination of road layout, desired grade, and access point location shall be by the Engineer. The Engineer will provide a Global Positioning System (GPS) data set for horizontal alignments of the core boring access roads. The Contractor is required to have GPS controlled equipment to perform the work in this contract.

#### **105.6. INSPECTION**

All work and material shall be at all times subject to inspection by the Engineer or by representatives of the Division. Inspectors employed by the Engineer will be authorized to inspect all work done and materials furnished. Such inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. The Inspector is not authorized to alter or waive the provisions of the Contract. The Inspector is authorized to call the attention of the Contractor to any failure of the work or materials to conform to the Specifications and Contract. The Inspector is authorized to reject materials which do not meet specification requirements or suspend the portion of the work involved until any question at issue can be referred to the Engineer/Project Manager. The Inspector is not authorized to issue instructions contrary to the Plans and Specifications. The Inspector shall not act as foreman or perform other duties for the Contractor, nor interfere with the management of the work by the latter.

#### **105.7. LOAD RESTRICTION**

The Contractor shall comply with all legal load restrictions in the hauling of materials on public roads. A special permit will not relieve the Contractor of liability for damage which may result from the moving of equipment.

#### **105.8. FINAL ACCEPTANCE**

Upon due notice from the Contractor of presumptive completion of the entire project, the Engineer will make an inspection and if all work provided for and contemplated by the Contract is found completed to his satisfaction, that inspection shall constitute the final inspection and the Engineer will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of the final inspection.

If, however, the inspection discloses any work, in whole or in part, as being unsatisfactory, the Engineer will give the Contractor the necessary instruction for correction of same, and the Contractor shall immediately comply with and execute such instructions. Upon correction of the work another inspection will be made which shall constitute the final inspection provided the work has been satisfactorily completed. In such event, the Engineer

will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of final inspection.

## **SECTION 106 – LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC**

### **106.1. LAWS TO BE OBSERVED**

The Contractor shall keep fully informed of all Federal and State laws, all local laws, ordinances, and regulations and all orders and decrees of bodies or tribunals having jurisdiction or authority, which in any manner affect those engaged or employed on the work, or which in any way affect the conduct of the work. He shall at all times observe and comply with all such laws, ordinances, regulations, orders and decrees; and shall protect and indemnify the Engineer and the Division against any claim or liability arising from or based on the violation of any such laws, ordinances, regulations, orders, or decrees, whether by himself, his sub-contractor, or his employees.

### **106.2. PERMITS, LICENSES, AND TAXES**

The Engineer shall procure all permits and licenses, pay all charges, fees, and taxes, and give all notices necessary and incidental to the due and lawful prosecution of the work.

The Engineer is responsible for developing and implementing a site-specific Storm Water Pollution Prevention Plan (SWPPP), Groundwater Protection Plan (GPP), and Karst Mitigation Plan (KMP) included in the West Virginia Department of Environmental Protection (WVDEP) National Pollutant Discharge Elimination System (NPDES) registration. These draft permit applications have been developed and submitted for review by the various agencies and are included in Attachment #3.

The Contractor shall be responsible for water quality throughout the duration of construction in accordance with the NPDES permit registration with the WVDEP. Noncompliance with permit conditions constitutes a violation of the Federal Clean Water Act and State Code and is subject to enforcement action by the WVDEP. The Contractor shall be responsible for any Notices of Violation, enforcement actions and/or fines associated with any violations. If the Contractor incurs a fine for any Notice of Violation and Consent Order, the Contractor must provide the Consultant documentation that the fine is paid, or the amount of the fine will be withheld from the Contractor's next invoice.

The Contractor shall additionally be responsible for conducting authorized activities according to the Forest Service Special Use Permit.

### **106.3. PATENTED DEVICES, MATERIALS, AND PROCESSES**

If the Contractor employs any design, device, material, or process covered by letters of patent or copyright, he shall provide for such use by suitable legal agreement with the patentee or owner. The Contractor and the surety shall indemnify and save harmless the Engineer, the Department, any affected third party, or political subdivision from any claims for infringement by reason of the use of any mark or copyright, and shall indemnify the Engineer and the Department for any costs, expenses, and damages which it may be obliged to pay be reason of any infringement, at any time during the prosecution or after the completion of the work.

### **106.4. FEDERAL AID PROVISIONS**

When the United States Government pays any portion of the cost of a project, the Federal laws and the rules and regulations made pursuant to such laws must be observed by the Contractor, and the work shall be subject to the inspection of the appropriate Federal agency.

Such inspection shall in no sense make the Federal Government a party to this contract and will in no way interfere with the rights of either party hereunder.

**106.5. SANITARY PROVISIONS**

The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for the use of his employees as may be necessary to comply with the requirements of the State and local Boards of Health, or of other bodies or tribunals having jurisdiction. He shall not create, commit, or maintain a public nuisance.

**106.6. PUBLIC CONVENIENCE AND SAFETY**

The Contractor shall at all times so conduct his work as to assure the least possible obstruction to traffic. The safety and convenience of the general public and the residents along the highway and the protection of persons and property shall be provided for by the Contractor as specified under Subsection 104.4.

**106.7. BARRICADES AND WARNING SIGNS**

The Contractor shall provide, erect, and maintain all necessary barricades, suitable and sufficient lights, danger signals, signs, and other traffic control devices and shall take all necessary precautions for the protection of the work and safety of the public. Highways closed to traffic shall be protected by effective barricades and obstructions shall be illuminated during hours of darkness. All traffic control and warning signs shall be in accordance with the WVDOT's *Manual on Temporary Traffic Control for Streets and Highways*, latest edition.

The Contractor shall erect warning signs in advance of any place on the project where operations may interfere with the use of the road by traffic.

All barricades, warning lights, lights, temporary signals, and other protective devices must conform with the *Manual on Uniform Traffic Control Devices for Streets and Highways* published by the Federal Highway Administration.

**106.8. PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE**

The Contractor shall be responsible for the preservation of all public and private property and shall protect carefully from disturbance or damage all land monuments and property marks.

The Contractor shall be responsible for all damage or injury to property of any character, during the prosecution of the work, resulting from any act, omission, neglect, or misconduct in his manner or method of executing the work, or at any time due to defective work or materials, and said responsibility will not be released until the work shall have been completed and accepted.

When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or in consequence of the nonexecution thereof by the Contractor, he shall restore, at his own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, rebuilding, or otherwise restoring as may be directed, or he shall make good such damage or injury in an acceptable manner.

**106.9. FOREST PROTECTION**

In carrying out work within or adjacent to State or National Forests, the Contractor shall comply with all regulations of the State Fire Marshall, Division of Natural Resources, or any



other authority having jurisdiction, governing the protection of forests and carrying out regulations with respect to the performance of work in forest areas. He shall keep the areas in an orderly condition, dispose of all refuse, obtain permits for the construction and maintenance of all refuse, obtain permits for the construction and maintenance of all construction camps, stores, warehouses, residences, latrines, cesspools, septic tanks, and other structures in accordance with the requirements of the Forest Supervisor.

The Contractor shall take all reasonable precaution to prevent and suppress forest fires and shall require his employees and subcontractors, both independently and at the request of forest officials, to do all reasonably within their power to prevent and suppress and to assist in preventing and suppressing forest fires and to make every possible effort to notify a forest official at the earliest possible moment of the location and extent of any fire seen by them.

#### **106.10. RESPONSIBILITY FOR DAMAGE CLAIMS**

To the fullest extent permitted by law, the Contractor agrees to defend, indemnify and hold harmless, the Department and any officers, agents or employees of the Department, including the Engineer, from and against all suits, claims, damages, liability, losses and expenses, including but not limited to attorney's fees and costs of investigations, arising out of, pertaining to or resulting from the operations of the Contractor, including all claims, damages, losses or expenses which are attributable to bodily injury, sickness, disease or death, or damage to or destruction of property, whether caused either wholly or in part by the negligence, actions, omissions, any consequence of any neglect in safeguarding the work or misconduct of the Contractor; or because of any claims or amounts recovered from any infringements of patent, trademark or copyright; or any claims or amounts arising or received from the "Workmen's Compensation Act," or any other law, ordinance, order or decree; and so much of the money due Contractor under and by virtue of the contract as may be considered necessary by the Engineer or the Department for such purpose, may be retained for the use of the Engineer or the Department or, in the case where no money is due, the Contractor's surety may be held until such suits, action or actions, claim or claims, for injuries or damages as aforesaid shall have been settled and suitable evidence to that effect furnished to the Engineer and the Department; except that money due the Contractor will not be withheld when the Contractor provides satisfactory evidence to the Engineer and the Department that he is adequately protected by public liability and property damage insurance.

#### **106.11. CONTRACTOR'S RESPONSIBILITY FOR WORK**

Until final written acceptance of the work by the Engineer, the Contractor shall have the charge and care thereof and shall take every precaution against injury or damage to any part thereof by the action of the elements, or from any other cause, whether arising from the execution or from the nonexecution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof except damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God, of the public enemy or governmental authorities.

In case of suspension of work from any cause whatever, the Contractor shall be responsible for the project and shall take such precautions as may be necessary to prevent damage to the project, provide for normal drainage, and to erect any necessary temporary structures, signs, or other facilities at his expense.

#### **106.12. CONTRACTOR'S RESPONSIBILITY FOR UTILITY PROPERTY AND SERVICES**

At points where the Contractor's operations are adjacent to properties of railway, telegraph, telephone, power, and gas and water companies, TV cable companies, fire alarm, etc., or are adjacent to other property, damage to which might result in considerable expense, loss, or inconvenience, the Contractor will inform the proper parties of the intended work and the work shall not be commenced until all arrangements necessary for the protection thereof have been made.

In the event of interruption to water or utility services as a result of accidental breakage, the Contractor shall promptly notify the Engineer and the proper authority and shall cooperate with the said authority in the restoration of services. If water service is interrupted, repair work shall be continuous until the service is restored. No work shall be undertaken around fire hydrants until provisions for continued service have been approved by the local fire authority.

The Contractor will be required to obtain all permits required for work on or crossing Railroad property and will observe all pertinent safety regulations. Cost of railroad flagmen will be borne by the Contractor.

#### **106.13. WORK ON PRIVATE PROPERTY**

It shall be the responsibility of the Engineer to make arrangements with the owners of the property upon which proposed access roads are located or over which access to the proposed location is necessary, with respect to any work thereon. The Engineer is additionally responsible for obtaining the authorized Special Use Permit (SUP) for access to Monongahela National Forest land.

The Contractor shall not enter upon private property without confirming that the Engineer has secured written authorization to perform work on or access across the landowner's property. It shall be the responsibility of the Contractor to make final detailed arrangements with the owner of the property upon which the access road(s) are located or over which access to the access road(s) is/are necessary, with respect to any work thereon. The Contractor shall be responsible for any related damages and reclamation of the property. A list of property owners is included in Attachment #2.

If the Contractor is denied access to enter a property, he shall immediately notify the Engineer. Immediate notification should be verbal and followed in writing within twenty-four (24) hours. The Engineer shall contact the property owners to determine the reason for denial of access. If the Engineer cannot obtain access from the property owner, the Engineer should contact the Division to obtain the right-of-entry.

#### **106.14. WORK ON PUBLIC THOROUGHFARES**

It will be the responsibility of the Contractor to make the necessary arrangements with the appropriate governmental agency to avoid undue hazard, obstruction, and interference with pedestrian and vehicular traffic at these locations.

#### **106.15. PERSONAL LIABILITY OF PUBLIC OFFICIALS**

In carrying out any of the provisions to these specifications, or in exercising any power or authority granted to them by or within the scope of the contract, there shall be no liability upon the Commissioner or his authorized representatives, either personally or as officials of the State, it being understood that in all such matters they act solely as agents and representatives of the Division.

#### **106.16. POLLUTION**

The Contractor shall comply with all applicable Federal, State and Local environmental statutes, rules and regulations, including but not limited to all environmental and cultural resource concerns. Pollutants, such as chemicals, fuels, lubricants, bitumens, raw sewage and other harmful waste shall not be discharged into or alongside of rivers, streams, impoundments or into natural or manmade channels leading thereto. In addition, the Contractor shall follow the West Virginia Department of Environmental Protection ***Erosion and Sediment Control Best Management Practice Manual*** as well as the applicable sections within the latest edition of the West Virginia Division of Forestry ***Best Management Practice Guidelines for Controlling Soil Erosion and Sedimentation from Logging Operations In West Virginia***. Further, upon request of the Engineer or the Department, the Contractor shall furnish all documentation of such compliance.

## **SECTION 107 – PROSECUTION AND PROGRESS**

### **107.1. SUBLETTING OF CONTRACT**

The Contractor shall not sublet, sell, transfer, assign, or otherwise dispose of the Contract or Contracts or any portion thereof, or of his right, title, or interest therein without written consent of the Engineer. In case such consent is given, the Contractor will be permitted to sublet a portion thereof, but shall perform with his own organization, a work amounting to not less than 50 percent of the total contract cost, except that any items designated in the Contract as "specialty items" may be performed by subcontract and the cost of any such specialty items so performed by subcontract may be deducted from the total cost before computing the amount of work required to be performed by the Contractor with his own organization. No subcontracts, or transfer of contract, shall in any case release the Contractor of his liability under the Contract and Bonds.

### **107.2. NOTICE TO PROCEED**

The "Notice to Proceed" will stipulate the date on which it is expected the Contractor will begin and from which date contract time will be charged. Commencement of work by the Contractor may be deemed and taken as a waiver on his part of this notice.

### **107.3. PROSECUTION AND PROGRESS**

The Contractor, when required, shall furnish the Engineer with a "Progress Schedule" for his approval. The Progress Schedule may be used as the basis for establishing operations and as a check on the progress of the work. The Contractor shall provide sufficient materials, equipment, and labor to guarantee the completion of the Project in accordance with the Plans and Specifications within the time set forth in the proposal. Should the prosecution of the work for any reason be discontinued, the Contractor shall notify the Engineer at least twenty-four (24) hours in advance of resuming operations.

### **107.4. CHARACTER OF WORKMEN, METHODS, AND EQUIPMENT**

Contractor shall at all times employ sufficient labor and equipment for prosecuting the several classes of work to full completion in the manner and time required by these Specifications.

All workmen shall have sufficient skill and experience to perform properly, the work assigned to them. Workmen engaged in special or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform all work properly and satisfactorily.

Any person, who, in the opinion of the Engineer, does not perform his work in a proper and skillful manner or is intemperate or disorderly, shall, at the request of the Engineer, be removed forthwith. Any Contractor or his subcontractor employing such persons shall not reemploy such persons on the project without the written approval of the Engineer.

Should a Contractor fail to remove such person or persons as required above or fail to furnish suitable and sufficient personnel for the proper prosecution of the work, the Engineer may suspend the work by written notice until such order is complied with.

All equipment which is proposed to be used on the work shall be of sufficient size and in such mechanical condition as to meet requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the project shall be such that no injury to the roadway, adjacent property, or other highways will result from its use.

When the methods and equipment to be used by the Contractor in accomplishing the work are not prescribed in the Contract, the Contractor is free to use any methods or equipment that he demonstrates to the satisfaction of the Engineer will accomplish the Contract work in conformity with the requirements of the Contract.

When the Contract specifies that the work is to be performed using certain methods and equipment, such methods and equipment shall be used unless others are authorized by the Engineer. Should the Contractor desire to use a method or type of equipment other than specified in the contract, he may request authority from the Engineer to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed to be used and an explanation of the reasons for desiring to make the change. If approval is given, it will be on the condition that the contractor will be fully responsible for producing work in conformity with the contract requirements. If, after trial use of the substituted methods or equipment, the Engineer determines that the work produced does not meet contract requirements, the Contractor shall discontinue the use of the substitute method or equipment and shall complete the remaining work with the specified methods or equipment.

#### **107.5. DETERMINATION AND EXTENSION OF CONTRACT TIME**

The number of days allowed for the completion of the work included in the contract will be stated in the Proposal and Contract and will be known as the "Contract Time."

The Contract time shall be on a calendar day basis, and it shall consist of the number of calendar days stated in the contract counting from the effective date of the Engineer's notice to proceed and the Engineer's order to resume work, including all Sundays, legal holidays, and non-workdays. All calendar days elapsing between the effective dates of any orders of the Engineer to suspend work and to resume work for suspensions not the fault of the Contractor shall be excluded.

The number of days for performance allowed in the contract awarded is based on the original quantities as defined in Subsection 102.2. If satisfactory fulfillment of the contract requires performance of work in greater quantities than those set forth in the proposal, the contract time allowed for performance shall be increased on a basis commensurate with the amount and difficulty of the added work.

If the Contractor finds it impossible for reasons beyond his control to complete the work within the contract time as specified or as extended in accordance with the provisions of the subsection, he may, at any time prior to the expiration of the contract time as extended, make a written request to the Engineer for an extension of time setting forth therein the reasons which he believes will justify the granting of his request. The Contractor's plea that insufficient time was specified is not a valid reason for extension of time. If the Engineer finds that the work was delayed because of conditions beyond the control and without the fault of the Contractor, he may extend the time for completion in such amounts as the conditions justify. The extended time for completion shall then be in full force and effect the same as though it were the original time for completion.

When final acceptance has been duly made by the Engineer as prescribed in Subsection 105.8, the daily time charge will cease.



**107.6. FAILURE TO COMPLETE ON TIME**

For each calendar day, as specified, that any work shall remain uncompleted, after the contract time specified for the completion of the work provided for in the contract has expired, the sum specified in the contract for daily deduction will be charged to the Contractor not as a penalty but as liquidated damages, provided, however, that due account shall be taken of any adjustment of the contract time for completion of the work granted under the provisions of subsection 107.5. The liquidated damages shall be retained by the Engineer.

Permitting the Contractor to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended will in no way operate as a waiver on the part of the Engineer of any of its rights under the Contract.

**107.7. LIQUIDATED DAMAGES AGREEMENT**

Work and calculation of working time for the Project will begin as stipulated elsewhere in the specifications.

The parties hereto expressly stipulated and agreed that time is of the essence of the contract, therefore, it is important that the work be vigorously prosecuted until completion.

It is also expressly stipulated and agreed that it would be impracticable to estimate and ascertain the actual damage sustained by the Engineer when the contract is not completed by the Contractor within the number of calendar days specified. Therefore, for each day that any work shall remain incomplete after the expiration of the contract time specified herein, or within such extensions of the contract time as any allowed by Subsection 107.5, the sum per calendar day, given in the Schedule of Liquidated Damages shown below, shall be deducted from any money due the Contractor, not as a penalty, but as liquidated damages, the said sum being specifically agreed upon as a measure of damage to the Engineer by reason of delay in the completion of the work.

The daily charge schedule to be used will be in the same unit (or calendar days) as the contract time shown on the last sheet of the contractor's proposal for each project.

<u>SCHEDULE OF DEDUCTIONS FOR EACH DAY OF OVERRUN IN CONTRACT TIME</u>		
<u>ORIGINAL CONTRACT AMOUNT</u>		<u>DAILY CHARGE PER</u>
<u>FROM GREATER THAN</u>	<u>TO AND INCLUDING</u>	<u>CALENDAR DAY</u>
\$0	\$1,000,000	\$10,000
\$1,000,001	\$2,000,000	\$20,000
\$2,000,001	\$3,000,000	\$30,000
\$3,000,001		\$40,000

**107.8. DEFAULT AND TERMINATION OF CONTRACT**

If the Contractor:

1. Fails to begin the work under the Contract within the time specified in the "Notice to Proceed";
2. Fails to facilitate continuous, uninterrupted workflow for three (3) Drilling Contractors with a total of fourteen (14) drill rigs.
3. Fails to perform the work with sufficient qualified workmen and/or equipment or with sufficient materials to assure the prompt completion of said work;

4. Performs the work unsuitably or neglects or refuses to remove materials, refuses to replace workmen as identified in Subsection 107.4 or to perform anew such work as may be rejected as unacceptable and unsuitable;
5. Discontinues the prosecution of the work;
6. Fails to resume work, which has been discontinued, within a reasonable time after notice to do so;
7. Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency;
8. Allows any final judgment to stand against him unsatisfied for a period of ten days;
9. Makes an assignment for the benefit of creditors; or
10. For any other cause whatsoever, fails to carry out the contract terms in an acceptable manner, the Engineer will give notice in writing to the Contractor and his surety of such delay, neglect, or default.

If the Contractor or Surety, within a period of ten (10) days after such notice, shall not proceed in accordance therewith, then the Engineer will have full power and authority without violating the contract, to take the prosecution of the work out of the hands of the said Contractor. The Engineer may appropriate or use any or all materials and equipment on the ground as may be suitable and acceptable and may enter into an agreement for the completion of said contract according to the terms and provisions thereof or use such other methods as in the opinion of the Engineer will be required for the completion of said contract in an acceptable manner.

All cost charges incurred by the Engineer, together with the cost of completing the work under contract, will be deducted from any monies due or which may become due said Contractor. If such expense exceeds the sum which would have been payable under the contract, then the Contractor and the Surety shall be liable and shall pay to the Engineer the amount of such excess.

#### **107.9. TERMINATION OF CONTRACT FOR CONVENIENCE OF THE STATE**

The performance of work under a contract may be terminated by the State in whole, or from time to time in part whenever the Commissioner with the approval of the Federal Highway Administration, where applicable, shall determine that such termination is in the best interest of the State. Any such termination shall be affected by delivery to the Contractor of a Notice of Termination specifying the extent to which performance of work under the contract is terminated and the date upon which such termination becomes effective.

When contracts, or any portion thereof, are terminated before completion of all items of work in the Contract, payment will be made for the actual number of units or items of work completed at the contract unit price, or as mutually agreed for items of work partially completed or not started. No claim for loss of anticipated profits will be considered.

Reimbursement for organization of the work, when not otherwise included in the Contract, and moving equipment to and from the job will be considered where the volume of work completed is too small to compensate the Contractor for these expenses under the contract unit prices, the intent being that an equitable settlement will be made with the Contractor.

Acceptable materials obtained by the Contractor for the work that have been inspected, tested, and accepted by the Engineer, and that are not incorporated in the work may, at the option of the Contractor, be purchased from the Contractor at actual cost as shown by

receipted bills and actual cost records at such points of delivery as may be designated by the Engineer.

Termination of a Contract or a portion thereof shall not relieve the Contractor of his responsibilities for the completed work, nor shall it relieve his surety of its obligation for and concerning any just claims arising out of the work performed.

**107.10. ACCESS TO RECORDS**

The Engineer, the Department, and the FHWA shall at all times have access to the work for the purpose of inspection, accounting, and auditing; and the Contractor shall provide facilities to effect access in order to accomplish such inspection.

The Contractor and his sub-contractor(s) are to maintain all books, documents, papers, accounting records, and other evidence pertaining to cost incurred and to make such material available at their respective offices at all reasonable times during the contract period and for three years from the date of final payment under the contract, for inspection by the Engineer, the Department, the FHWA, or any authorized representative of the Federal Government, and copies thereof shall be furnished if requested.

*DIVISION 200 –  
OPERATIONAL DETAILS*

## **SECTION 201 – CONSTRUCTION REQUIREMENTS**

### **201.1. HOUSEKEEPING**

The Contractor shall provide and make available dumpsters and make available containers for regular removal of site trash and associated miscellaneous debris from the job site. No littering; no trash is to be left anywhere on the job site, including but not limited to cigarette butts, food wrappers, lunch items, plastic bottles, tools, piping, and miscellaneous materials. All materials that are taken into the access roads will be brought back out and properly disposed.

### **201.2. TOILETS**

The Contractor shall provide and make available toilet facilities for the use of all project staff in designated lay down areas in accordance with OSHA Title 29 CFR 1926.51(c)(1).

### **201.3. ROAD CLEANING**

The Contractor shall provide and make available equipment to brush and clean any road of mud or debris, as directed by the Consultant, which may include but not be limited to skid steer with fresh roller and bucket, push brooms, and flat shovels.

### **201.4. EQUIPMENT**

All equipment and tools shall be subject to the approval of the Engineer. All equipment that is proposed to be used on the work shall be of sufficient size and in such mechanical condition as to meet the requirements of the work and to produce a satisfactory quality of work.

All equipment must be free of soil, seeds, plant parts, and other material that could contain or hold seeds when such vehicles and equipment arrive on National Forest Service land. If such equipment leaves National Forest Service land and becomes soiled, it must be cleaned to the above standard prior to re-entering National Forest Service land. Cleaning may not be conducted on National Forest Service land.

### **201.5. MATERIALS**

All materials furnished by the Contractor shall be in accordance with the West Virginia Department of Transportation, Division of Highways, Standard Specifications, Roads and Bridges, adopted January 1, 2023, and the Contract Documents, and shall be subject to the approval of the Engineer.

### **201.6. CONFORMITY WITH PLANS AND SPECIFICATIONS**

All work shall be in reasonably close conformity with the lines, grades, sections, details, and dimensions that are specified in the Contract Documents and governing specifications.

The term “reasonably close conformity” shall not be construed as waiving the Contractor’s responsibility to complete work in accordance with the Contract Documents and governing specifications. The term shall not be construed as waiving the Engineer’s responsibility to insist on strict compliance with the requirements of the Contract Documents and governing specifications during the Contractor’s execution of work, when, in the Engineer’s opinion, such compliance is essential to provide an acceptable finished portion of the work.

The term “reasonably close conformity” is also intended to provide the Engineer with the authority to use sound engineering judgment in their determinations to accept work that is not in strict conformity but will provide a finished product equal to or better than that required by the Contract Documents and governing specifications.



The Engineer will not be responsible for the Contractor's means, methods, techniques, sequences, or procedures of construction or the safety precautions incident thereto, unless previously mentioned above.

#### **201.7. PERMITTING**

The Engineer will obtain a WVDEP National Pollutant Discharge Elimination System (NPDES) Permit, U.S. Army Corps of Engineers' (USACE) Regional General Permit (RGP) under Section 404 of the Clean Water Act, and a Monongahela National Forest (MNF) Special Use Permit (SUP) for access. Upon approval of the NPDES Permit and MNF SUP, the Engineer will issue written Notice to Proceed (NTP) for the authorized work. The Contractor shall not commence construction activity until their authorization to discharge under these permits goes into effect.

#### **201.8. PRE-CONSTRUCTION MEETING**

Immediately following NTP and prior to start of construction, the Engineer will schedule a Pre-construction Meeting with the Contractor and all Drilling Contractors involved with the project. Items the Contractor will need for meeting include:

1. List of equipment and personnel for each crew. The list shall include name, job title years of experience, and company. Crew leader shall be named.
2. List of all Subcontractors and employees provided by the Subcontractors. Using the same format above.
3. Stone hauling means and methods
4. Water pumping plan (see Section 201.28)

#### **201.9. RAIN DAYS**

Rain days will be called in the field by the authorized field representative of the Engineer based on the current weather and weather forecast for that day. If precipitation conditions create wet and muddy conditions that impede access or cause erosion and sedimentation issues, then a rain day will be issued. Rain Day will be communicated verbally to the superintendent and by email within twenty-four (24) hours. The completion date will be adjusted accordingly.

#### **201.10. COMMERCIAL TIMBER**

Western Pocahontas Properties, LP (WPP) reserves the right to allow for commercial timber to be cut under a Timber Contract prior to installation of access roads, or to recover any timber displaced on WPP land during installation of access roads. Timing stipulations, cutting restrictions, and wildlife protections will be identified with the Timber Contract. The Contractor shall coordinate the recovery of any fallen timber with WPP prior to removal from the site.

#### **201.11. BRUSH CLEARING**

Brush clearing shall be limited to the minimum width necessary to allow access for drill rigs and associated equipment. There are no restrictions on the diameter of trees or brush that may be cut. Large diameter trees should be avoided when possible with the approval of the Engineer. Trees and brush that are dead or have been downed can be cut to allow access and shall be marked with an 'X' using yellow paint to allow verification that the trees and brush were dead or downed prior to cutting. No trees or brush shall be cut unless deemed necessary for access. Tree or brush cutting deemed necessary shall be authorized by the Designated Local Forest Officer and/or PCC.

#### **201.12. ACCESS POINTS**

Construct stone construction entrances at all new construction access points, where repeated access is required, from existing state, local, or private roadways in accordance with WVDEP ***Erosion and Sedimentation Control Best Management Practices***, Section 3.02 Stabilized Construction Entrance. Existing driveways that are used will have existing surface restored (e.g., adding and spreading stone of equal quality and gradation) as agreed upon by the Engineer and property owner.

The Contractor is responsible for all detailed arrangements with property owner for access, usage, damage restoration, and final clean up, per Sections 104.5 and 106.13. Access Points that require stone construction entrance are indicated in Attachment #3. No other access points shall be constructed.

#### **201.13. ROAD SURFACING**

Crushed rock or gravel surfacing shall be applied as soon as possible after grading and construction (while soil surface is still freshly disturbed) to reduce soil erosion and ensure a good bond between the soil and surfacing material.

#### **201.14. DRILL RIG PADS**

Drill rig pads are twenty (20) feet by thirty (30) feet areas in which drill rigs shall be setup by the Contractor to perform core borings. Drill rig pads shall be cleared of vegetation, and a level pad shall be constructed to accommodate the drill rig, sump, and any ancillary equipment associated with the operation. Timber matting shall be employed to support drill rigs and equipment in wetland areas to minimize impacts from drilling operations in sensitive wetland environments. Sump location and size shall be determined by the Consultant. The anticipated size of most sumps is five (5) feet by five (5) feet by two (2) feet deep.

No core holes shall be drilled below the ordinary high watermark (OHWM) of any streams. Borings shall be drilled so no drill fluid/water drains into a stream. The drill pad shall be constructed, as shown in the drill pad typical drawings included in the NPDES permit, to direct drill fluid/water away from the streams.

Reclamation of the drill rig pads shall start after approval by the Engineer. Drill rig pads shall be reshaped to prevent erosion and to establish contours that are generally compatible with the adjacent areas or shall be ripped to reduce compaction and aid revegetation and, if appropriate, seeded and mulched to minimize erosion. Sumps will be backfilled and covered with stockpiled topsoil saved during sump excavation. Erosion and Sediment Control features shall remain in place until 70% of the area has become revegetated.

#### **201.15. WORK OUTSIDE OF PROPOSED RIGHT-OF-WAY**

Pursuant with Section 106 Legal Relations and Responsibility to Public, 106.9 – Forest Protection, special care shall be taken in conducting operations outside the proposed Corridor Right-of-Way to minimize environmental effects caused by this project and to ensure public safety. Specific provisions that shall be followed during the core boring access program outside of the proposed Corridor Right-of-Way are as follows:

1. The Geotechnical Engineer and PCC shall be notified before any work begins outside the proposed Corridor Right-of-Way for a pre-work conference with the Division and National Forest Service, as required, and again upon completion so that an inspection of the area may be made for damages and adherence to the conditions of this permit.

2. All roads or other routes approved for motorized vehicle use or access outside the proposed Corridor Right-of-Way must be restored at a minimum to the approximate condition that existed prior to construction. Disturbance inside the proposed Corridor Right-of-Way will need to be stabilized, seeded, and mulched in accordance with Subsection 201.27.
3. The Contractor shall pack out or otherwise remove from the job site all refuse resulting from operations on a daily basis.
4. All surface disturbances to the National Forest Service land caused by the core boring access road activities shall be repaired and stabilized according to these Provisions approved by the National Forest Service Designated Local Forest Officer and the PCC.

#### **201.16. TEMPORARY TIMBER MAT FOR WETLANDS**

Timber matting is required in all wetland areas. Operating heavy equipment in wetlands shall be minimized, and such equipment other than drill rigs shall not be stored, maintained, fueled, or repaired in wetlands unless the equipment is broken down and cannot be easily removed. Timber mats will be utilized when laydown areas or additional workspace, including support of drilling rigs, is required within wetlands.

Matted wetland crossings should be monitored to assure correct functioning of the mats during use. Mats which become imbedded must be reset or layered to prevent mud from covering them or water passing over them.

Matting should be removed by “backing” out of the site, removing mats one at a time. Any rutting or significant indentations identified during mat removal should be regraded immediately, taking care not to compact soils.

Special precautions should be taken to promptly stabilize areas of disturbed soil located near wetlands and streams. Matted areas within wetlands shall be restored to their original condition and elevation.

#### **201.17. STREAM CROSSINGS**

Stream crossings are required at all streams designated on the plans. Timber bridges shall be used as detailed in the NDPES Permit documents. Timber bridges shall span the ordinary high water (OHW) mark of the stream. The OHW shall be defined by the Engineer or the PCC in the field.

#### **201.18. TEMPORARY STEEL BRIDGE**

A temporary steel bridge is anticipated at the Pendleton Creek crossing as shown in the plans. The Contractor shall provide temporary bridge plans designed and sealed by a licensed Professional Engineer in the State of West Virginia. Plans must be submitted to the Engineer for approval prior to installation of the bridge. The temporary bridge shall span the ordinary high-water mark of the stream, with no in-stream obstructions, as defined by the Engineer or the PCC.

#### **201.19. BEST MANAGEMENT PRACTICES (BMPs)**

The Contractor shall exercise every reasonable precaution throughout the life of the Project to prevent pollution of rivers, streams, or impoundments. Best Management Practices (BMPs) in accordance with Section 106.16 shall be followed. In addition, a Project Compliance/Erosion and Sediment Control Coordinator (PCC) will be on site to deal with

environmental issues that may arise. The WVDEP ***Erosion and Sedimentation Control Best Management Practice Manual***, dated 2006 can be found online at:

[https://dep.wv.gov/wwe/programs/stormwater/csw/pages/esc\\_bmp.aspx](https://dep.wv.gov/wwe/programs/stormwater/csw/pages/esc_bmp.aspx)

In addition to the above, the Contractor shall make themselves familiar with all requirements contained within the WVDEP's General Water Pollution Control Permit, Stormwater associated with Construction Activities Permit Number WV0115924. A copy of this permit is available online at:

<https://dep.wv.gov/WWE/Programs/stormwater/csw/Pages/home.aspx>

#### **201.20. EROSION AND SEDIMENT CONTROL PLAN**

The Engineer shall be responsible for developing and submitting a final Erosion and Sediment (E&S) Control Plan which is included in the NPDES Permit application documents in Attachment #3. Any details not shown in the plans shall be in accordance with the latest version of the WVDEP ***Erosion and Sediment Control Best Management Practices Manual***.

During construction the Contractor shall be responsible for:

1. Implementing remedial action to correct and/or repair failing erosion and sediment control features.
2. Implementing storm and winter shutdown procedures.
3. Shaping the earthwork prior to the suspension of grading operations each day in a manner that will permit storm runoff with minimum erosion.
4. Installing, operating, and maintaining erosion and sediment control features in an acceptable condition.
5. Cleaning out and restoring to original conditions any erosion or sediment control feature that has reached half of its capacity. For sediment basins, one half of its capacity is considered as wet volume storage.
6. Directing the construction, operation, maintenance and dismantling of temporary erosion and sediment control features.

#### **201.21. SPILL PREVENTION, CONTROL, AND COUNTERMEASURES (SPCC) PLAN**

The Contractor shall prepare a Spill Prevention, Control, and Countermeasures (SPCC) plan that itemizes specific measures that will be implemented to prevent and clean up chemical and petroleum product spills that may occur during all phases of construction. Fuel storage and refueling activities, equipment maintenance activities and equipment washing will be kept at least 500 feet away from any watercourse or wetland.

#### **201.22. WATER BAR REQUIREMENTS**

For road grades between 2% and 5%, water bars shall be installed every 100 feet. For road grades between 5% and 20%, water bars shall be installed every 50 feet. For road grades exceeding 20%, water bars shall be installed every 40 feet. Water bars shall conform to the line, grade, and section as specified on the plans. The outlet ends of water bars shall terminate onto well-vegetated areas.

Water bars shall be constructed and placed in accordance with the most recent version of the West Virginia Division of Forestry, West Virginia Silvicultural Best Management Practices for Controlling Soil Erosion and Sedimentation from Logging Operations available online at:

<https://wvforestry.com/pdf/DOFbmpManual2018.pdf>

Additional water bars may be required by the National Forest Service or Project Compliance/Erosion and Sediment Control Coordinator (PCC) as deemed necessary to control flow and minimize erosion and sedimentation.

#### **201.23.      MOTORIZED VEHICLE USE**

Motorized vehicle use is allowed only on existing state- or county-owned routes, Abandoned Mine Land (AML) roads, access roads, woods roads, skid trails, and terrain that are not excessively wet and are physically capable of supporting the use. Motorized vehicle uses elsewhere outside the proposed Corridor Right-of-Way or on National Forest Service land is not authorized, unless approved by the Engineer and/or the National Forest Service Land Officer.

If a UTV or other vehicle travels on a skid trail or woods road multiple times, vary the path of travel slightly to avoid creating tracks and ruts that could damage the roots of perennial vegetation and prevent soil erosion. Any ruts shall be repaired, stabilized, and vegetated.

Equipment and other motorized vehicles may not cross through streams containing water unless appropriate permits have been obtained. Motorized vehicles may cross streams only if a structure, such as a culvert or bridge, is present.

#### **201.24.      LAYDOWN AREAS**

The Contractor shall provide adequate space for parking and laydown areas suitable for storage of materials or equipment and installation of field offices and storage containers where designated in the plans and as approved by the Engineer. The area of disturbance for parking and laydown areas shall be limited to an area fifty (50) feet by one hundred (100) feet. Laydown areas shall be constructed of FABRIC FOR SEPARATION with a minimum of 3" of compacted AGGREGATE BASE COURSE.

#### **201.25.      CONSTRUCTION SIGNAGE**

Where conditions warrant, safety signage and a flagging crew(s) may be required to inform oncoming public traffic of all hazards resulting from the Contractor's operations. This shall be done while working along any road where traffic is likely to occur. Signs for Public Notice, Outlet Markers, Access Points, and Emergency Rally Points shall be posted. Templates for the Public Notice and Outlet Marker signs are provided in the NPDES Permit applicant documents in Attachment #3. The Access Point and Emergency Rally Point signage shall be approved by the Consultant.

#### **201.26.      NATIONAL FOREST SERVICE ROADS**

National Forest Service roads, when encountered, may require spot treatment with crushed rock or gravel in areas of poor road conditions. Input from the designated Local Forest Officer will be used to determine where spot road treatment will be used. Payment for spot treatments to gravel surfaces shall be at the unit cost price bid for AGGREGATE BASE COURSE, CLASS 1. Any ruts on National Forest Service roads created as a result of construction shall be repaired, stabilized, and vegetated.

#### **201.27.      SNOW REMOVAL**

If snow removal is required, it shall be conducted in a manner that protects roads, ensures safe and efficient transportation of materials, and prevents erosion damage to roads, streams, and adjacent lands. The Contractor shall:

1. Remove snow from the entire width of the road surface, including turnouts;



2. Remove snow slides, earth slides, fallen timber, and boulders that obstruct the road surface;
3. Remove snow, ice, and debris from ditches and culverts so that the drainage system will function efficiently at all times;
4. Deposit all debris, except snow and ice, removed from the road surface and ditches at locations approved by the PCC and away from stream channels;
5. Leave at least two (2) inches of snow to protect the road;
6. Restore any damage resulting from snow removal in a timely manner;
7. Ensure that snow plowing is conducted in accordance with a Traffic Control Plan.

Regarding snow removal, the Drilling Contractor shall not:

1. Undercut constructed slopes or remove gravel or other surfacing material from the road surface;
2. Leave snow berms on the road surface. Berms on the shoulder of the road shall be removed or drainage holes shall be opened and maintained. Drainage holes shall be spaced as necessary to obtain satisfactory surface drainage without discharge on erodible fills;
3. Use equipment with cleats or other tracks to plow snow without prior written approval of the Engineer or the National Forest Service.

## **201.28. RECLAMATION**

Reclamation shall be the responsibility of the Contractor. Reclamation shall include but not be limited to the following:

- 1) Core bore plugging and backfilling;
- 2) Core bore site regrading and sump backfill;
- 3) Regrading of associated access road to the core boring and associated access roads;
- 4) Seeding, fertilizing, and mulching;
- 5) Removal of silt sock and silt fence, and Erosion and Sediment Control Measures (E&SCM) maintenance and final removal.

Reclamation will include, but not be limited to, backfilling and regrading of access roads to approximate original contours with track hoe, dozer back-dragging, regrading, core boring backfill, sump backfill, seeding, fertilizing, straw mulching, compost filter sock disposal, spot treatment of existing roads with varying thickness aggregate base, cross pipe installation, roadside ditch clean out, and any associated implementation of Best Management Practices for E&SC. The quantities for E&SCM provided for information only in the NPDES Permit application documents are maximum quantities based on all temporary access roads and drill sites requiring grading and being disturbed.

## **201.29. EROSION AND SEDIMENT CONTROL MEASURES (E&SCM)**

### **201.29.1 INSTALLATION**

Installation of the E&SCM shall be as indicated in the NPDES Permit application documents.

### **201.29.2 MAINTENANCE**

All installed E&SCM are to be maintained throughout the project duration, especially within eight (8) hours after every precipitation event. E&SCM are to be inspected

immediately following precipitation events. Coordinate with PCC on required maintenance measures.

#### **201.30. SEEDING AND MULCHING**

Any soil disturbances or damage to vegetation, or improvements resulting from construction or drilling activities will be seeded and/or mulched according to the seeding and mulching plan contained in the NPDES Permit application documents for either temporary or permanent seeding.

Within the MNF, boring located within the designated Tier 3 Watershed Mill Run (delineated as UNTSHMR01B-INT-SR02) shall be reclaimed within twenty-four (24) hours of the Engineer's approval. Seed mix, following the table above, shall be a native and weed free mix. Straw mulch only will be used for this project. Hay mulch shall not be allowed. The Contractor shall establish acceptable erosion prevention measures to ensure re-vegetation on areas of ground disturbance in the project area. Re-vegetation measures shall be applied in such a manner and at times as directed by the National Forest Service and/or PCC to establish an acceptable grass or legume cover. Failure to achieve an acceptable ground cover may result in the requirement for a second application of seed, fertilizer, etc.

#### **201.31. CORE DRILLING WATER SUPPLY**

The Contractor is responsible for providing water to all core drilling equipment on the project. As previously noted, there shall be fourteen (14) drill rigs operating at any one time on the project. Water shall be supplied continuously to keep the drill rigs productive. It is estimated that the water usage per drill rig will be approximately 500 gal/day to 1250 gal/day depending on the type of rock and depth of hole.

##### **201.31.1 WATER ACCESS POINTS**

Water access points used for pumping for drilling and related purposes are shown in the NPDES Permit application documents. The ponds/streams that have been approved sources are the unnamed pond at Mackeyville Interchange, Long Run, Middle Run, North Fork of the Blackwater River at Coketon and Thomas, and Pendleton Creek. Water pumping shall be prohibited from Mill Run (and its tributaries), Big Run Bog Watershed, and Big Run. Flow shall be maintained in all streams used as water access points. Under no circumstances can any stream be completely dewatered. Private ponds may be used for water access with written permission from the landowner. Intake lines shall be equipped with screens to prevent drawing in any aquatic life from the listed streams.

##### **201.31.2 DESIRED WATER QUALITY**

Finding water with suitable water quality is important for drilling purposes. The Contractor shall use a field-testing kit or similar methods to obtain a rough estimate of pH in determining suitable water access points. Water used in drilling operations must be in the slightly acidic, neutral, or alkaline range (pH  $\geq$  6.0). Acidic water (pH < 6.0) including water sources affected by coal mine drainage will not be considered suitable. It is the Contractor's responsibility to determine whether the water sources identified in 201.26 meet these requirements. If potable water is required to meet these guidelines the Contractor must receive written approval from the Engineer to use potable water. Potable water shall not be permitted for use in the MNF. Every effort shall be made to use a water source from a location inside the watershed where the boring is being drilled.

### **201.31.3 WATER LINES**

The Contractor is to lay water lines for drilling to minimize crossing impacts. Water line leaks are to be repaired immediately to avoid creating an Erosion and Sediment Control issue on access roads. Water lines shall have a 1" minimum diameter unless otherwise directed by the Engineer.

### **201.31.4 WATER PUMPING PLAN**

The Contractor shall provide a hand marked up set of core boring access road plans showing the proposed plan for obtaining, transferring, pumping, and delivering water to the core boring locations. At a minimum, the plan will show all proposed water pumping locations, tank locations, water truck use and transfer areas, and approximate water piping locations to each core boring. The plan will be provided at the Pre-Construction Meeting described in Section 201.5.

### **201.31.5 WATER WITHDRAWAL**

For water derived from waters of the state, withdrawals shall only be made during times when stream flow is sufficient to support both aquatic life and the withdrawal. During periods of active withdrawal, the Contractor shall consult the West Virginia Department of Environmental Protection, Division of Water and Waste Management (DWWM) Water Withdrawal Guidance Tool daily and document the recommendations. Withdrawals shall only be taken when the tool indicates that it is safe by the statement "it should be safe to withdraw from any stream in the area". Use of the tool does not guarantee protection of aquatic life and best professional judgment must still be used when making withdrawals, as the tool cannot account for all localized conditions and may not react to the withdrawal dependent on its proximity to the stream gage. The tool provides useful information on general stream adequacy to assist the Contractor with withdrawal decisions. The tool may be found at the following link: <https://tagis.dep.wv.gov/wwts/>

### **201.32. ENDANGERED OR SENSITIVE SPECIES**

If any federally listed or Forest Service sensitive species are encountered during project implementation, the designated Local Forest Officer and/or PCC shall be notified by the Contractor immediately so the appropriate management actions can be implemented.

Any timber rattlesnakes or turtles that are encountered shall not be harmed or harassed.

Should operations be ongoing between March 1 and July 25, all Contractor personnel are to report any large stick bird nests that are discovered to the Local Forest Officer and/or PCC and halt any construction operations in the area until identification of species is made, and appropriate mitigation is determined.

### **201.33. HUNTING SEASON**

Special coordination is required with Western Pocahontas Properties, LP, and The Mountain Top Hunting Club, Inc. during West Virginia DNR hunting and trapping seasons, including the Tucker County bear firearms season. Construction operations are to be suspended during the two-week buck firearms deer hunting season unless otherwise directed by the Engineer. The 2023 buck firearms season is scheduled to open on November 20, 2023, and close on December 3, 2023.

**201.34. LARGE STICK BIRD NESTS**

Should operations be ongoing between March 1 and July 25, all Contractor personnel are to report any large stick bird nests that are discovered to the National Forest Service and halt operations in the area until identification of species is made in appropriate mitigation is determined.

**201.35. TIMBER RATTLESNAKE AND TURTLES**

Any timber rattlesnakes or turtles that are encountered shall not be harmed or harassed.

**201.36. CULTURAL RESOURCES**

Any cultural resources discovered during activities related to this Contract shall be reported to the Project Compliance/Erosion and Sediment Control Coordinator (PCC) at the time of discovery and work shall stop immediately in that area.

**201.37. PROPERTY BORDERS**

Land corners and boundary lines shall be protected. If damaged, a registered surveyor shall replace them at the Contractor's expense.

***SECTION 202 – MEASUREMENT AND PAYMENT***

**202.1. BASIS OF PAYMENT**

All work performed under the terms of this contract shall be incorporated into the unit prices bid for the Project Pay Items listed in the proposal. Measurement and payment for the individual items shall be paid for at the contract unit price based on the Method of Measurement and Basis of Payment for the individual pay item as specified in the current edition of the West Virginia Department of Transportation, Division of Highways, Standard Specifications, Roads and Bridges, dated 2023 or as indicated below.

**202.1.1. MOBILIZATION AND DEMOBILIZATION**

The Contractor shall be paid a lump sum for the first mobilization of equipment to the project. This lump sum shall also constitute payment for all work necessary for final cleanup and the removal of equipment from the project. No deduction will be made, nor will any increase be made, in the lump sum mobilization item amount regardless of decreases or increases in the final total contract amount or for any other cause.

**202.1.2. CLEARING AND GRUBBING**

The Engineer will provide a Global Positioning System (GPS) data set for horizontal alignments of the core boring access roads. The Contractor shall use GPS controlled equipment for clearing and grading of the reconstructed and new access roads. All work shall be performed according to the details contained in the West Virginia Department of Transportation, Division of Highways, Standard Specifications, Roads and Bridges, dated 2023, except that the payment shall be by acre cleared and grubbed.

**202.1.3. FABRIC FOR SEPARATION**

Fabric for separation shall be used beneath aggregate base course on all laydown areas and other areas of the reconstructed access and the new access roads on the project as directed by the Engineer. Fabric shall conform to the requirements of Section 207 Excavation and Embankment contained in the West Virginia Department of Transportation, Division of Highways, Standard Specifications, Roads and Bridges, dated 2023.

**202.1.4. AGGREGATE BASE COURSE, CLASS 1**

AGGREGATE BASE COURSE shall be placed on laydown areas as indicated and shall be used to stabilize reconstructed access and the new access roads on the project as directed by the Engineer. AGGREGATE BASE COURSE shall conform to the requirements of Section 307 Crushed Aggregate Base Course contained in the West Virginia Department of Transportation, Division of Highways, Standard Specifications, Roads and Bridges, dated 2023.

**202.1.5. RECONSTRUCTED ACCESS ROAD**

Any existing roadway that will be utilized for core boring access that was previously used for timbering operations or other overland operations has been classified as a reconstructed access road. Limited grading work is anticipated on roads with this designation; however, the level of effort may vary based on exact location. As the site dictates Contractor's methods and means, opportunities for minimization of disturbance are to be implemented. Minimization of impact is a priority. Dozer work and blading should be kept to an absolute minimum. The completed roadway shall be traversable by all standard core drilling rigs. All work and labor to create a roadway meeting the width requirements as shown in the NPDES Permits application documents, including but not limited to water bars, drainage ditching, fiber matting, temporary seeding and mulching, shall be included in the pay item for RECONSTRUCTED ACCESS ROAD and paid by the linear foot of roadway constructed.

**202.1.6. NEW ACCESS ROAD**

New Access Roads are roads that do not currently exist. Grading of New Roads will be through previously undisturbed areas and will therefore be more intensive work, however, the level of effort may vary based on exact location. As the site dictates Contractor's methods and means, opportunities for minimization of disturbance are to be implemented. Minimization of impact is a priority. Dozer work and blading should be kept to an absolute minimum. The completed roadway shall be traversable by all standard core drilling rigs. All work and labor to create a roadway meeting the width requirements as shown in the NPDES Permit application documents, including but not limited to water bars, drainage ditching, fiber matting temporary seeding and mulching, shall be included in the pay item for NEW ACCESS ROAD and paid by the linear foot of roadway constructed.

**202.1.7. DRILL RIG PAD**

Drill Rig Pads shall be as defined in 201.14 above. All work and labor to create a DRILL RIG PAD meeting the requirements in the NPDES Permit application documents shall be included in the pay item for DRILL RIG PAD and paid by the square foot of pad constructed.

**202.1.8. TIMBER MATTING**

Timber matting shall be as defined in 201.16 above. All work and labor to install TIMBER MATTING meeting the requirements in the NPDES Permit application documents shall be included in the pay item for TIMBER MATTING and paid by the square foot of timber matting installed.

**202.1.9. STREAM CROSSINGS**

Stream crossings shall be as defined in 201.17 above. All work and labor to install STREAM CROSSINGS meeting the requirements in the NPDES Permit application



documents shall be included in the pay item for STREAM CROSSINGS and paid by the square foot of stream crossings installed.

**202.1.10. LAYDOWN AREAS**

LAYDOWN AREAS shall be as defined in 201.24 above. All work and labor to install LAYDOWN AREAS meeting the requirements in the NPDES Permit application documents shall be included in the pay item for LAYDOWN AREAS and paid by the square foot of laydown area installed.

**202.1.11. TEMPORARY STEEL BRIDGE**

Temporary steel bridge shall be as defined in 201.18 above. All work and labor to design and install the temporary steel bridge meeting the requirements in the NPDES Permit application documents shall be included in the pay item for TEMPORARY STEEL BRIDGE and paid by a lump sum cost.

**202.1.12. COMPOST FILTER SOCK, 18 IN**

COMPOST FILTER SOCK shall conform to the requirements of Section 642 Temporary Pollution Control contained in the West Virginia Department of Transportation, Division of Highways, Standard Specifications, Roads and Bridges, dated 2023. All work and labor to install COMPOST FILTER SOCK, 18 IN shall meet the requirements in the NPDES Permit application documents and be included in the pay item for COMPOST FILTER SOCK, 18 IN paid by the linear foot installed.

**202.1.13. COMPOST FILTER SOCK, 24 IN**

COMPOST FILTER SOCK shall conform to the requirements of Section 642 Temporary Pollution Control contained in the West Virginia Department of Transportation, Division of Highways, Standard Specifications, Roads and Bridges, dated 2023. All work and labor to install COMPOST FILTER SOCK, 24 IN shall meet the requirements in the NPDES Permit application documents and be included in the pay item for COMPOST FILTER SOCK, 24 IN paid by the linear foot installed.

**202.1.14. SUPER SILT FENCE**

SUPER SILT FENCE shall conform to the requirements of Section 642 Temporary Pollution Control contained in the West Virginia Department of Transportation, Division of Highways, Standard Specifications, Roads and Bridges, dated 2023. All work and labor to install SUPER SILT FENCE shall meet the requirements in the NPDES Permit application documents and be included in the pay item for SUPER SILT FENCE paid by the linear foot installed.

**202.1.15. SMART FENCE**

All work and labor to install SMART FENCE shall meet the requirements in the NPDES Permit application documents and be included in the pay item for SMART FENCE paid by the linear foot installed.

**202.1.16. RECLAMATION**

Reclamation shall be as defined in 201.28 above. All work and labor to perform the reclamation of the access roads, drill rig pads, timber matting, stream crossings, temporary steel bridge shall be included in the pay item for RECLAMATION and paid by acre reclaimed.

**202.1.17. STANDARD FIELD OFFICE AND STORAGE BUILDING**

The Contractor shall provide a standard field office and storage building, for the Engineer's use, meeting the requirements of Section 640 Field Office and Storage Building contained in the West Virginia Department of Transportation, Division of Highways, Standard Specifications, Roads and Bridges, dated 2023. All work and labor associated with setting up and maintaining the field office, as well as, items included in Sections 201.1 and 201.2 shall be included in the pay item STANDARD FIELD OFFICE AND STORAGE BUILDING and paid by the month.

**202.1.18. CORE DRILLING WATER SUPPLY**

Core drilling water supply shall be as defined in 201.31 above. All work and labor to supply water for the core drilling operations shall be included in the pay item for CORE DRILLING WATER SUPPLY and paid by a lump sum cost. Payments shall be made based on the percentage of total bore holes drilled.

**202.1.19. ACCESS POINTS**

Access points shall be as defined in 201.12 above. All work and labor to construct and maintain the access points, including work described in the work described in Section 201.3, shall be included in the pay item for ACCESS POINTS and paid by a lump sum cost. Payments shall be made based on the percentage of total access points constructed.

**202.1.20. RECALL**

The Contractor may be subject to recall to perform work that may be added or to complete work which could not be accurately located by the Engineer during the initial mobilization. The Contractor shall be paid a lump sum at the contract unit price listed in the proposal for the recall work. The unit price included in the proposal shall not exceed 25 percent of the cost bid for mobilization.

The Contractor will be required to perform the work necessary for the recall at the bid prices bid during a period of six months after work done under the initial mobilization has been terminated. After the six-month period, consideration will be given to adjustment of the bid prices.

**202.2. SCOPE OF PAYMENT**

The Contractor shall accept the compensation as provided herein, as full payment for furnishing all materials, labor, tools, and equipment necessary to the completed work, and for performing all work contemplated, embraced, and performed under the contract; also, for all loss and damage arising from the nature of the work, action of the elements, and all other unforeseen difficulties, also for all expenses incurred in consequence of the suspension or discontinuities of the work as herein specified, and for all warranties, guaranties, and indemnities furnished by the contractor hereunder, and for completing the work according to the plans and specifications. Any written work order, signed by the Engineer, requiring certain performance by the Contractor beyond maximum bid quantities shall not change quantities of major items beyond a twenty-five percent (25%) limitation, shall not create new items, nor make revisions to item unit bid prices.

Contractor understands and agrees Engineer's receipt of payment from West Virginia Department of Transportation, Division of Highways on account of Contractor's Work, is an express and absolute condition precedent to Engineer's obligation to pay Contractor. Contractor hereby assumes the risk of default or nonpayment by West Virginia Department of Transportation, Division of Highways for any reason whatsoever. The Engineer shall pay

the Contractor within ten (10) business days of the Engineer's receipt of payment from West Virginia Department of Transportation, Division of Highways.

**202.3. PARTIAL PAYMENTS**

Payment may be made monthly, based on Progress Reports submitted by the Contractor to the Engineer. Progress reports shall include breakdown of all installed work into measurable units for each individual pay item. Upon receipt, review, and approval of properly documented invoices, the Engineer will submit partial payments of the compensation specified in the agreement to the Division for payment. Payment will be made in the amount of sums earned less previous partial payments and less an established retainage. Retainage shall be 15% of the sums earned. If work is suspended and recall is necessary, retainage will be released for that portion of the work which has been accepted.

**202.4. ACCEPTANCE AND FINAL PAYMENT**

Upon the final acceptance (Section 105.8) of all the work required under the contract, the Contractor shall certify to the Engineer in writing the total amount of work performed and earned compensation. The Contractor shall be paid the full amount of the compensation earned less the total of all partial payments previously made; however, before receiving final payment, the Contractor will be required to furnish satisfactory evidence that he and his subcontractors have paid all payrolls, bills, expenses, and costs of every type and nature whatsoever connected with the performance of the contract. The Contractor's acceptance of final payment shall operate as a release to the Engineer and the Division from all claim(s) and liabilities of every type and nature owing to the Contractor in connection with the performance of the contract. The date of the approval of the aforesaid certificate will be the date of acceptance of the work.

## ATTACHMENT #1 – VICINITY MAP



# WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

## DIVISION OF HIGHWAYS

### ENGINEERING DIVISION

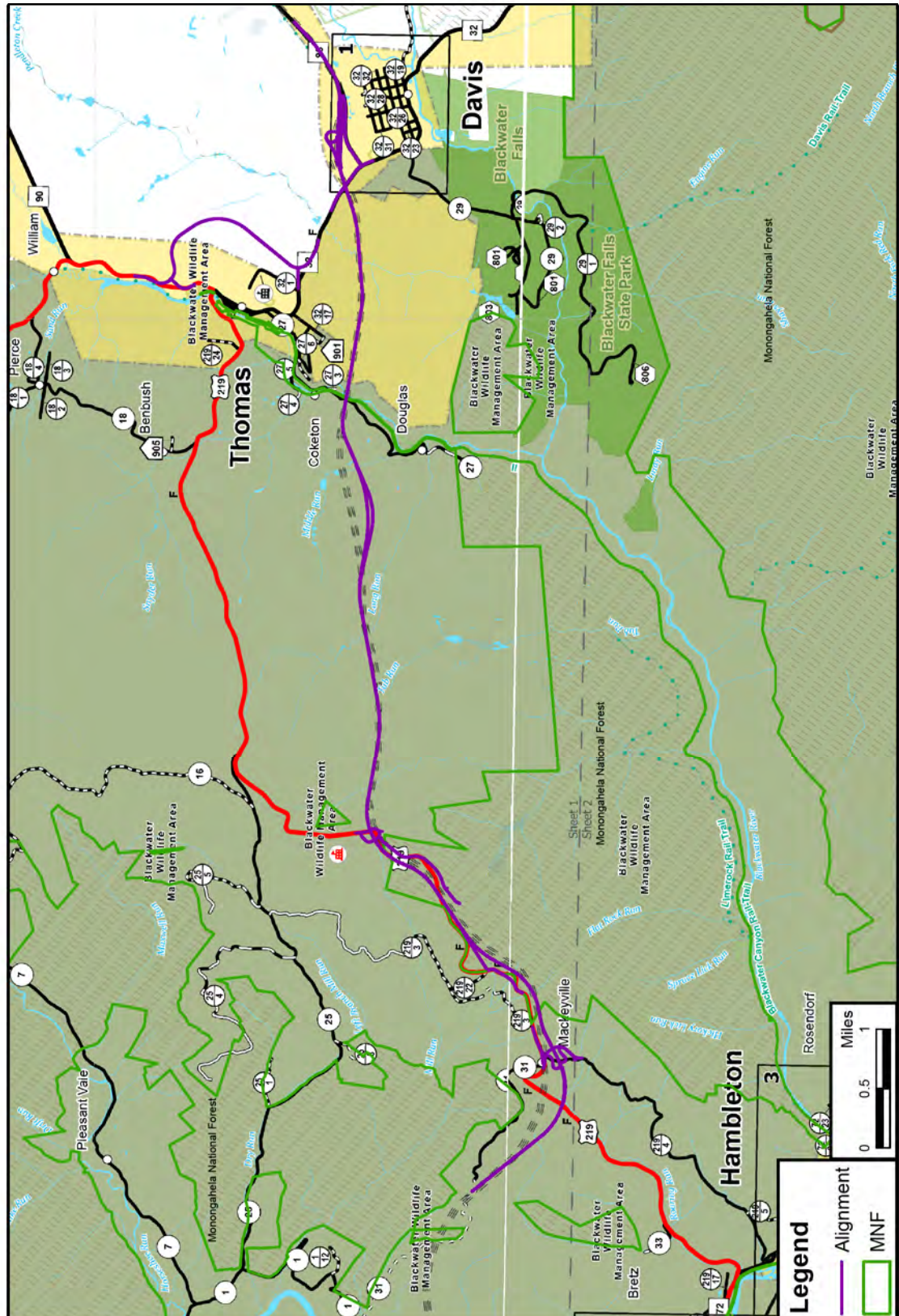
**GPI** Engineering  
Design  
Planning  
Construction Management  
Greenman-Pedersen, Inc.  
58 Mission Way, Suite 201  
Scott Depot, WV 25560  
Certificate of Authorization #C01145-00

PARSONS-DAVIS  
ATTACHMENT #1

SHEET  
1 OF 1

PROJECT NUMBERS  
STATE FEDERAL  
X347-H-55.68 00 NHPP-0484(292)

DISTRICT COUNTY  
08 TUCKER





## ATTACHMENT #2 – LIST OF PROPERTY OWNERS

Property Owner	Address	Phone No.	Project Parcel Number	Borings Located on Property	Remarks or Special Requirements
West Virginia Department of Transportation, Division of Highways	West Virginia Department of Transportation Division of Highways Right of Way Division 1900 Kanawha Boulevard, East Building 5, Room 618 Charleston, WV 25305	Katrena Parsons 304-414-6472	N/A	B-734A, B-767, B-769 through B-775, B-831, B-839, B-841, MK-1 through MK-12, R-001 through R-026, R-043, R-045, R-049,R-053, R-070, R-075, R-080, R-095, R-100, R-129, R-132, R-134, R-148 through R-151, T-003, T-011 through T-013, US219-1, US219-2, US219-4, US219-5, WV32-3, WV32-10	Portion of Access Road to R-002 and R-003 is within a 100' Electric Transmission Right-of-Way.
Bernettie P. Gnegy, Donna Gnegy Spradlin, and Deborah G. Graham	342 Carriage Lane, Troutville, VA 24175 4230 McCoy Rd., Blacksburg, VA 24060	540-580-1654 540-953-1995	2-3	R-027, R-030	Permission refused without compensation for damages associated with core drilling.
William K. Collette	319 Silver Fox Rd., Hambleton, WV 26269	304-478-4440	3	R-044, R-047, R-048, R-051, R-052, R-052A	
United States of America	200 Sycamore St., Elkins, WV 26241	John Barger, PE 304-635-4426	4-1	R-028, R-029, R-031 through R-042, R-046, R-050, R-054 through R-069, R-071, R-072, R-076, R-078, R-079, R-081 through R-094, R-096, R-097, R-101, R-106, R-111, R-118, R-122, R-135, R-136, R-138A, R-139	Special Use Permit must be obtained.
			4-2	R-098, R-099, R-102 through R-105, R-107 through R-110, R-112 through R-117, R-119 through R-121, R-123 through R-128, R-130, R-131	
			4-3	NF-16, NF-17	
Mary A. Sharp, Jocie A. Mullenax, and Rena J. Harper	1332 Luke Mullenax Rd., Hambleton, WV 26269	304-478-4279 304-457-4832	N/A	Access Road Only	
Western Pocahontas Properties Limited Partnership	5260 Irwin Rd., Huntington, WV 25705	Rich Flanigan 304-522-5757	5-1	R-133, R-137, R-140, R-141, R-144, R-146, R-147, T-001, T-002, T-004 through T-006, US219-3, US219-6 through US219-10	Core Drilling and Construction of Access Roads must have preapproved consent. Right of Entry Agreement WV0033ROE492 will terminate December 31, 2023.
			5-2	B-600 through B-665, R-138, R-138A, R-142, R-143, R-143A, R-145, R-152 through R-203, LR-1 through LR-20, NF-1 through NF-15, T-007 through T-010, G-001 through G-007	
			5-4	B-840	
			5-5	B-731, B-736 through B-756, B-758, B-759, B-761, B-762, B-764, B765, B-776 through B-830, B-832 through B-838 DS-1 through DS-10, WV32-1, WV32-2, WV32-5, WV32-6, WV32-9, WV32-13, WV32-15	
			5-6	B-666 thorough B-730, B-732 through B-734, NF-18 through NF-31, SP-1 through SP-9, WV32-4, WV32-7, WV32-8, WV32-11, WV32-12, WV32-14, WV32-16	

## ATTACHMENT #3 – NPDES PERMIT APPLICATION DOCUMENTS



**Applicant: GREENMAN-PEDERSEN, INC.**  
**Reference ID: Parsons-Davis Core Borings (03/07/2023)**  
**Status: ERIS - Tech Corr Received**

**Type: New NPDES/State Storm Water Construction #1**  
**Permit ID: WVR112141**  
**Printed: May. 10, 2023 10:50 AM**

### Sections 1 - 3: Project Information

1.	Project Name:	Parsons-Davis Core Borings					
2.	Applicant's Name:	GREENMAN-PEDERSEN, INC.					
	Attention:	Douglass Robb					
	Address:	11000 BROKEN LAND PARKWAY SUITE 500					
	City:	COLUMBIA	State:	MD ▼	Postal Code:	21044	PostalCode Ref.
	Telephone No.:	410-880-3055	(###-###-####)	Fax Number:		(###-###-####)	
	Email Address:	drobb@gpinet.com		Country:	United States of America ▼		
	Same As Applicant's Address? :	No ▼	Contractor Known?	No ▼			
3.	Contractor:						
	Attention:						
	Address:						
	City:		State:	WV ▼	Postal Code:		PostalCode Ref.
	Telephone No.:		(###-###-####)	Fax Number:		(###-###-####)	
	Email Address:		Country:	United States of America ▼			

### Section 4: Preparer's Information

4.	Preparer's Name:	Anna Vanderlaan					
	Company's Name:	Greenman-Pedersen, Inc. (GPI)					
	Address:	58 Mission Way					
		Suite 201					
	City:	Scott Depot	State:	WV ▼	Postal Code:	25560	PostalCode Ref.
	Telephone No.:	304-507-8118	(###-###-####)	Fax Number:		(###-###-####)	
	Email Address:	avanderlaan@gpinet.com		Country:	United States of America ▼		



**Applicant: GREENMAN-PEDERSEN, INC.**  
**Reference ID: Parsons-Davis Core Borings (03/07/2023)**  
**Status: ERIS - Tech Corr Received**

**Type: New NPDES/State Storm Water Construction #1**  
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**Printed: May. 10, 2023 10:51 AM**

#### Sections 5 - 8: Site Information

5. Acres disturbed:

Rain Fall Zone:  Precipitation Zones

Application Fee:  Fees Schedule

Is this proposed project acreage included within or part of a previously permitted project or area?:  
☒ No ☐ Yes

Previously permitted project permits number(s):

6. Beginning Point Latitude:  
Degrees:  Minutes:  Seconds:  N (ss.ssss)

Beginning Point Longitude:  
Degrees:  Minutes:  Seconds:  W (ss.ssss) Interactive Mapper

☒ Is this a linear project?

MidPoint Latitude:  
Degrees:  Minutes:  Seconds:  N (ss.ssss)

MidPoint Longitude:  
Degrees:  Minutes:  Seconds:  W (ss.ssss) Interactive Mapper for MidPoint

Ending Point Latitude:  
Degrees:  Minutes:  Seconds:  N (ss.ssss)

Ending Point Longitude:  
Degrees:  Minutes:  Seconds:  W (ss.ssss) Interactive Mapper for Ending Point

Geospatial Method:  ▼

Datum:  ▼ UTM Zone:  ▼

UTM Northing:  UTM Easting:

If project is located within a TMDL watershed, enhanced BMP's are required.  
Topographic Map with site located:

7. Facility Address:

Nearest Town:

County Name:  ▼

County Route:

Postal Code:  PostalCode Ref.

8. Name of Immediate Receiving Stream ☐ Unnamed Tributary of

tributary of  tributary of

tributary of  tributary of

Major Basin:  ▼

Municipal System Operator (if applicable):

Is this project located within the city limits of a municipality or a MS4? ☐ Yes ☒ No.

#### Directions to Site:

From Kanawha City, take I-64 W/I-77 N. Use the right two lanes at the I-64/I-77 split to stay on I-77 N towards Parkersburg. At the I-77/I-79 split, use the right two lanes to stay on I-79 N towards Clarksburg. Continue on I-79 N to exit 99. Merge onto US 33 E. Continue on US 33 E for approximately 40 miles. Turn right onto US 219 N and continue for approximately 20 miles to the beginning of the project at Mackeyville.





**Applicant: GREENMAN-PEDERSEN, INC.**  
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**Sections 9 - 11: Description of Project, Estimates, and Cubic Yards**

**9. Project Description:**

The project involves exploratory core borings associated with the Parsons-Davis section of Cor H, including a relocated section of WV 32. Subsurface information obtained from the core boring project will be utilized for the design of the proposed roadway and bridges for the Parsons-Davis section of Cor H. The first phase of the project will include borings located outside the Monongahela National Forest and that do not require access from Forest Service Lands. Approximately 475 borings are anticipated for Phase 1.

Drill holes will be backfilled, and drill pads and new and reconstructed access roads will be reclaimed as specified in the SWPPP and contract documents.

**10. Estimated Start Date for Project:**

06/01/2023



**Estimated Completion Date for Project:**

02/28/2024



**11. Cubic Yards of Excavation (Cut/Fill) and Waste/Borrow Sites (*Attached Soils Report*):**

There will be minimal earthwork with this project. No waste or borrow sites are anticipated. Areas will be restored to approximate original contours.

**Sections 12 - 14: Relative Time Line, Sediment Controls, and Sequence**

**12. Relative Time Line of Construction Activities:**

June 2023 - February 2024

- Mobilization of equipment to the project site (June - mid-June 2023)
- Installations of BMPs (June 2023 - February 2024)
- Construction of access roads and drill pads (June 2023 - February 2024)
- Drilling of core borings (June 2023 - February 2024)
- Reclamation of drill pads and access roads (June 2023 - February 2024)

**Note: If any of the following conditions apply, submit a notarized, signed statement for billing so that the project can be sent out to public notice**

1 Grading phase of construction will last for 1 year or longer

2 Disturbance of 100 acres or more

3 Discharge to Tier 3 water

See instructions for detail and notice process

☒ No ☐ Yes If yes, you must fill out the Statement For Billing Form.

**13. Narrative description of Erosion and Sediment Controls:**

See SWPPP Section 6.0 - 6.2.

**14. Sequence of Construction:**

See SWPPP Section 5.4.



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**Sections 15 - 18: Site Maps, Discharge Area Maps, Storm Water Management**

**15.** Detailed Site Map(s) of Erosion and Sediment Controls:(Attach)

**16.** Site Map of the Final Conditions Showing the Stormwater Management Facilities (Attach):

**17.** ☒ Yes ☐ No Click 'Yes' if this is a linear project, otherwise click 'No'.  
Pre and Post Development Discharge Area Maps Identifying Discharge Points and Supporting Calculations (Attach):


**17.A** Pre-Development Peak Discharge Rate(s) for 1yr/24 Hour Storm:  
Qpre=Qpost, areas to be restored to approximate original contours


**17.B** Post-Development Peak Discharge Rate(s) for 1yr/24 Hour Storm:  
Qpre=Qpost, areas to be restored to approximate original contours

**18.** Narrative Description of the Final Soil Stabilization Techniques:  
See SWPPP Section 7.0 - 7.6.

**Section 19 - 20: Permanent Stormwater Management Facility and Public Sign**

**19.** DO YOU HAVE A PERMANENT STORM WATER MANAGEMENT FACILITY ON THIS PROJECT? CHECK THE APPROPRIATE BOX. IF YES, COMPLETE 19A.  
☐ Yes ☒ No  
**A:** WHICH OF THE FOLLOWING BEST MANAGEMENT PRACTICES (BMPS) WILL BE UTILIZED FOR THIS PROJECT? ALSO, WHAT IS THE AMOUNT OF DRAINAGE ACREAGE (IN ACRES) THAT WILL FLOW THROUGH THESE BMPS WHILE ACTING AS PERMANENT STORM WATER MANAGEMENT FACILITIES?


**1**  
Best Management Practice:   
Latitude:  °  '  " ss.ssss  
Longitude:  °  '  " ss.ssss  Interactive Mapper  
Geo Spatial Method:   
Datum:   
Acres Drained:

A list of BMPs and their definitions may be found by clicking the ICON to the right. 

**20. PUBLIC NOTICE SIGN** (SEE INSTRUCTIONS AND SECTION II. B. OF THE GENERAL PERMIT). ALL APPLICANTS ARE REQUIRED TO POST A PUBLIC NOTICE SIGN ONSITE WITHIN 24 HOURS OF SUBMITTED APPLICATION. ATTACH SITE SPECIFIC TEMPLATE.

**Information: Supplemental Information**

**A.** Supplemental Information: (If none click Section Complete)  
See SWPPP Sections 5.11 and 5.15 for TMDL information.

	<b>Applicant: GREENMAN-PEDERSEN, INC.</b> <b>Reference ID: Parsons-Davis Core Borings (03/07/2023)</b> <b>Status: New</b>	<b>Type: New NPDES/State Storm Water Construction</b> <b>Permit ID: New/Pending</b> <b>Printed: Apr. 07, 2023 11:54 AM</b>

**Certification: Signature Page**

BY COMPLETING AND SUBMITTING THIS APPLICATION, I HAVE REVIEWED AND UNDERSTAND AND AGREE TO THE TERMS AND CONDITIONS OF THE GENERAL PERMIT ISSUED ON January 10, 2019. I UNDERSTAND THAT PROVISIONS OF THE PERMIT ARE ENFORCEABLE BY LAW. VIOLATION OF ANY TERM AND CONDITION OF THE GENERAL PERMIT AND/OR OTHER APPLICABLE LAW OR REGULATIONS CAN LEAD TO ENFORCEMENT ACTION.

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED ON THIS FORM AND ALL ATTACHMENTS AND THAT, BASED ON MY INQUIRING OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT I FURTHER UNDERSTAND THAT I WILL BE OPERATING UNDER THE REISSUED STORM WATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY EFFECTIVE FEBRUARY 9, 2019 AND I AGREE TO ABIDE BY THE TERMS OF THE PERMIT.

OFFICIAL SIGNATURE



Print Name:

Douglass Robb

Print Title:

Branch Manager/Regional Officer

Date:

4/10/2023 

PRIOR TO FILING THIS APPLICATION, YOU MAY WISH TO OBTAIN A COPY OF THE LEGISLATIVE RULES OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, TITLE 47, SERIES 26, WATER POLLUTION CONTROL PERMIT FEE SCHEDULE IN ORDER TO DETERMINE THE APPROPRIATE PERMIT APPLICATION FEE REQUIRED TO ACCOMPANY YOUR SUBMISSION OF THIS APPLICATION. YOU CAN OBTAIN A COPY OF THE REGULATION FROM THE SECRETARY OF STATE'S OFFICE, STATE CAPITOL BUILDING, CHARLESTON, WV 25305. HOWEVER, YOU MAY WISH TO USE THE TABLE FOUND IN ITEM V. OF THE ATTACHED INSTRUCTIONS.

YOUR CHECK OR MONEY ORDER FOR THE APPROPRIATE APPLICATION FEE MUST BE MADE PAYABLE TO THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION.

**ALL SPILLS OR ACCIDENTAL DISCHARGES ARE REQUIRED TO BE REPORTED IMMEDIATELY TO THE EMERGENCY RESPONSE SPILL ALERT SYSTEM TOLL FREE TELEPHONE NUMBER 1-800-642-3074. CALLS FROM OUT OF STATE SHOULD BE MADE TO 304-348-8899.**

**Please Print, Sign, Scan and attach this document rather than mailing as a wet ink signature is no longer required.**




**Applicant: GREENMAN-PEDERSEN, INC.**  
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**Printed: May. 10, 2023 10:57 AM**

**New Module: 1. Facility Changes (Activity/Storage)**

A.	Have you made any activity or storage changes to the facility during the previous permit term?
	Yes <input type="radio"/> No <input checked="" type="radio"/>


B.	Outlet Number:
	<input type="text"/>
C.	Discharge Point Location Info:
	<input type="text"/> ° <input type="text"/> ' <input type="text"/> " N Latitude
	<input type="text"/> ° <input type="text"/> ' <input type="text"/> " W Longitude  <a href="#">Interactive Map</a>
D.	Description:
	<input type="text"/>

**Section A: GPP Facility**

**1. Name and Address of Facility**

a. Facility Name:	<input type="text" value="Cor H Parsons-Davis"/>	
b. Location (Street or Highway):	<input type="text" value="US 48"/>	
City:	<input type="text" value="Davis"/>	
Postal Code:	<input type="text" value="26260"/>	<input type="text" value="PostalCode Ref."/>
Facility Telephone Number:	<input type="text" value="304-406-8373"/>	(###-###-####)
c. County:	<input type="text" value="Tucker"/> ▼	

**d. Latitude:**  
Degrees:  Minutes:  Seconds:  N (ss.ssss)

**Longitude:**  
Degrees:  Minutes:  Seconds:  W (ss.ssss)  [Interactive Mapper](#)

Geospatial Method:  ▼

Datum:  ▼

☐ Is the Mailing Address of this Facility different from Facility Address?

e. Facility Address:	<input type="text"/>	
Address Line 1:	<input type="text"/>	
Address Line 2:	<input type="text"/>	
Address City:	<input type="text"/>	
Address State:	<input type="text"/>	
Address Postal Code:	<input type="text"/>	<input type="text" value="PostalCode Ref."/>
Email Address:	<input type="text"/>	
Country:	<input type="text" value="United States of America"/> ▼	

**2. Person Developing the GPP**

a. Name:	<input type="text" value="Anna Vanderlaan"/>	
b. Address Line 1:	<input type="text" value="58 Mission Way"/>	
Address Line 2:	<input type="text" value="Suite 201"/>	
Address City:	<input type="text" value="Scott Depot"/>	
Address State:	<input type="text" value="West Virginia"/>	
Address Postal Code:	<input type="text" value="25560"/>	<input type="text" value="PostalCode Ref."/>
c. Telephone No.:	<input type="text" value="304-507-8118"/>	(###-###-####)

Email Address:

Country:  ▼

**3. Person Responsible for Implementing GPP**

a. Name:

b. Address Line 1:

Address Line 2:

Address City:

Address State:

Address Postal Code:

c. Telephone No.:  (###-###-####)

d. Email Address:

**4.**  
**Brief Description of Facility Operation:**

Earthwork associated with creating new access roads and reconstructed access roads and drill pads for exploratory core boring associated with the Parsons-Davis section of Cor H.

**Section B: GPP Section B**

**2. Person Developing GPP**

List all the activities that are conducted at your facility that require a GPP (grading, concrete/asphalt work, painting, stucco, storing fuel, fertilizer and other chemicals, etc.). List actual activities; do not quote the regulation.

Say: store diesel fuel in 1,000-gallon underground storage tank.

Don't say: "Storing, treating, disposing, or related handling of hazardous waste.....in tanks, drums, or other containers, or in piles."

Include all activities at your site subject to the regulation, even if protective practices are already being implemented.

Give complete details about aboveground and underground tanks, including

1. Number of each type of tank
2. Capacity of each tank
3. Identification of contents of each tank

**Section C: GPP Section C**

- For each activity listed in Section B, describe the practice (BMP) that will be used to protect groundwater. The BMPs must be described. Simply stating that BMPs will be used is unacceptable.
- Practices in SPCC or Storm Water Pollution Prevention Plans (SWPPP) may be used in the GPP provided, that they are equally protective of groundwater.
- Include all activities at your site subject to the regulation, even if protective practices are already being implemented.
- Information about secondary containment for ASTs must include the kind of material (metal, concrete, asphalt) making up the floor and berms (sides) of the containment area.
- Tanks that are double-walled are considered secondarily contained.





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#### **Section D: GPP Section D**

- The GPP must be implemented upon approval.  
Having a GPP on file in an office somewhere does not keep a facility in compliance WV0115924. The GPP must be retained and implemented at the site for which it was developed.
- Procedures for protecting groundwater when designing and adding new equipment and operations. Adequate design of these operations should be considered in the GPP when making changes in areas of karst, wetlands, faults, subsidence, areas determined by the Bureau for Public Health to be delineated wellhead protection areas, or other areas determined by the Director to be vulnerable based upon geologic or hydrogeologic information.
- The permittee must revise the GPP within 30 calendar days to address any newly delineated areas or other vulnerable areas upon notification by the Director or the Bureau for Public Health.

The GPP will be implemented once construction begins and will be maintained onsite. The GPP will be revised within 30 calendar days to address any newly delineated areas or other vulnerable areas identified.

#### **Section E: GPP Section E**

- You are developing a Groundwater Protection Plan; therefore, training must focus on groundwater protection.  
Training must include educating the employees about the importance of groundwater protection and include all aspects of the GPP. Briefly describe topics to be covered in training the employees about groundwater protection practices.
- Procedures for protecting groundwater when designing and adding new equipment and operations. Adequate design of these operations should be considered in the GPP when making changes in areas of karst, wetlands, faults, subsidence, areas determined by the Bureau for Public Health to be delineated wellhead protection areas, or other areas determined by the Director to be vulnerable based upon geologic or hydrogeologic information.
- The permittee must revise the GPP within 30 calendar days to address any newly delineated areas or other vulnerable areas upon notification by the Director or the Bureau for Public Health.

See GPP Sections 4.1 and 4.2.3

The GPP will be revised within 30 calendar days to address any newly delineated areas or other vulnerable areas identified.

#### **Section F: GPP Section F**

Inspections are conducted to insure that the practices selected to prevent groundwater pollution are being used and are properly functioning.

- State the frequency of the inspections and what is to be inspected.
- Include an Inspection Checklist. The checklist is documentation that you are implementing the GPP. The checklist must include date, name of inspector, what is to be inspected, observations, actions taken, if any.

See GPP Section 8.0



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**Section G: GPP Section G**

- Waste material will not be used for deicing, fill, or any other use, unless that use is allowed by regulation or permit.

Waste material will not be used for deicing, fill, or any other use, unless that use is allowed by regulation or permit.

**Section H: GPP Section H**

- Material Safety Data Sheets or Safety Data Sheets shall be provided for all chemicals, or substances, used or stored on site.

Material Safety Data Sheets or Safety Data Sheets shall be provided for all chemicals, or substances, used or stored on site.

**Section I: GPP Section I**

- Provide all available groundwater quality data for the facility as well as well locations or other sampling points.

Existing groundwater data for the project site is not known.


**Section J: GPP Section J**

- (a) Sinkhole Mitigation shall be carried out according to the WVDEP Sinkhole Mitigation Guidance Document (August 2005, revised 2018), or other applicable standards as recommended by the G or PE and approved by the West Virginia Department of Environmental Protection (WVDEP).



**Design Requirements**

- The location of all sinkholes shall be shown on the existing conditions scale drawing, included with the preliminary plan submission. The edge of the sinkhole is to be considered the last closed contour based on five foot (5') contour mapping.
- All sinkholes identified prior to construction shall be either remediated or separated from construction by a minimum one hundred-feet (100').
- Remediation shall be carried out under the direction of a qualified Geologist or Geotechnical Engineer. Mitigation shall be carried out according to the WVDEP Sinkhole Management Guidance Document (August 2005 et. seq.), or other applicable standards as recommended by the G or PE and approved by the WVDEP.
- Any improvements planned to fall within one hundred feet (100') of any sinkhole (remediated or not), shall require a thorough subsurface investigation conducted by a qualified G or PE to ensure that the planned improvements do not present a threat to human health, safety, or the environment. Should these investigations detect previously unknown sinkhole features, paragraph 2 applies.
- For any subsurface investigations requiring boreholes, such as air track drilling or rock coring, the boreholes must be grouted upon completion. All air track drilling operations used to determine the depth of overburden and continuity of bedrock shall be monitored full-time by a G or PE or other qualified individual.
- Underground utilities located within one-hundred feet (100') of a karst feature, then a dike of clay or other suitable material shall be placed across the trench at twenty-foot (20') intervals or less along the entire length which passes through the one hundred foot (100') radius, or as directed by a G or PE.
- Do not apply any fertilizer, pesticides, or other chemicals within at least one-hundred feet (100') of a sinkhole.
- Immediately (within 24 hours) after disturbing any soil, lightly fertilize, seed, and mulch the area to control erosion. A geotextile may be needed on steep slopes.
- At least one subsurface cross section should be submitted with the storm water plan, showing confining layers, depth to bedrock, and water table, if encountered. It should extend through the centerline of any proposed impounding storm water facility.
- Natural karst swales should be protected whenever possible as an effective element in storm water design in karst regions.

A section on the western end of the project falls within a Karst Area based on the WVDEP interactive mapper. A Karst Mitigation Plan is attached.

	<b>Applicant: GREENMAN-PEDERSEN, INC.</b> <b>Reference ID: Parsons-Davis Core Borings (03/07/2023)</b> <b>Status: New</b>	<b>Type: New NPDES/State Storm Water Construction</b> <b>Permit ID: New/Pending</b> <b>Printed: Apr. 07, 2023 11:54 AM</b>

**Certification: GPP Certification**

<ul style="list-style-type: none"> <li>The person who can make the managerial and/or financial decisions that are required to implement your plan should be the one signing the certification statement.</li> <li>Use the following certification statement verbatim.</li> </ul> <p>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</p> <p>Use the following certification statement verbatim.</p> <p>Designated Representative: <table border="1"><tr><td>Douglass Robb</td></tr></table></p> <p>Title: <table border="1"><tr><td>Branch Manager/Regional Officer</td></tr></table></p> <p>Signature: </p> <p>Date: <table border="1"><tr><td>4/10/2023</td></tr></table> </p> <p><b>Please Print, Sign, Scan and attach this document rather than mailing as a wet ink signature is no longer required.</b></p>	Douglass Robb	Branch Manager/Regional Officer	4/10/2023
Douglass Robb			
Branch Manager/Regional Officer			
4/10/2023			









CORE BORINGS COORDINATES - PHASE 1				
BORING NAME	NORTHING	EASTING	LATITUDE	LONGITUDE
B-600	231172.5680	1957074.4630	N39°08'04.86490"	W79°32'25.00397"
B-601	230992.0380	1957057.6480	N39°08'03.08046"	W79°32'25.21634"
B-602	231094.8880	1957365.7280	N39°08'04.09839"	W79°32'21.30703"
B-603	230897.1140	1957326.5380	N39°08'02.14341"	W79°32'21.80330"
B-604	231069.0090	1957657.4290	N39°08'03.84384"	W79°32'17.60486"
B-605	230795.6500	1957615.9930	N39°08'01.14177"	W79°32'18.12925"
B-606	231005.0820	1957954.4830	N39°08'03.21322"	W79°32'13.83457"
B-607	230761.4360	1957928.6520	N39°08'00.80490"	W79°32'14.16111"
B-608	230951.6830	1958255.9220	N39°08'02.68663"	W79°32'10.00869"
B-609	230718.3370	1958239.3000	N39°08'00.38017"	W79°32'10.21845"
B-610	230665.9440	1958483.7650	N39°07'59.86327"	W79°32'07.11569"
B-611	230954.1750	1958628.6510	N39°08'02.71272"	W79°32'05.27836"
B-612	230915.9020	1958853.6420	N39°08'02.33528"	W79°32'02.42279"
B-613	230583.1550	1958796.7570	N39°07'59.04618"	W79°32'03.14312"
B-614	230884.1760	1959139.3510	N39°08'02.02275"	W79°31'58.79669"
B-615	230728.5770	1959126.5160	N39°08'00.48476"	W79°31'58.95885"
B-616	230505.7810	1959091.3570	N39°07'58.28250"	W79°31'59.40401"
B-617	230870.8820	1959416.4240	N39°08'01.89234"	W79°31'55.28027"
B-618	230490.7390	1959413.7610	N39°07'58.13498"	W79°31'55.31235"
B-619	230861.0180	1959708.7090	N39°08'01.79586"	W79°31'51.57082"
B-620	230451.7060	1959719.7140	N39°07'57.75024"	W79°31'51.42937"
B-621	230626.0730	1959720.5000	N39°07'59.47369"	W79°31'51.42015"
B-622	230869.9110	1960005.5860	N39°08'01.88475"	W79°31'47.80317"
B-623	230469.1680	1960055.6800	N39°07'57.92396"	W79°31'47.16574"
B-624	230889.9780	1960278.6970	N39°08'02.08398"	W79°31'44.33719"
B-625	230546.5530	1960369.2650	N39°07'58.68984"	W79°31'43.18639"
B-626	230918.6300	1960549.0560	N39°08'02.36803"	W79°31'40.90615"
B-627	230610.5710	1960651.4740	N39°07'59.32347"	W79°31'39.60515"
B-628	230713.0800	1960959.5670	N39°08'00.33760"	W79°31'35.69555"
B-629	230981.7380	1960851.3220	N39°08'02.99270"	W79°31'37.07031"
B-630	230768.6950	1961237.5360	N39°08'00.88809"	W79°31'32.16805"
B-631	230858.2600	1961224.4470	N39°08'01.77332"	W79°31'32.33449"
B-632	231061.2230	1961149.8260	N39°08'03.77921"	W79°31'32.28225"
B-633	230962.7440	1961472.7980	N39°08'02.80674"	W79°31'29.18302"
B-634	230784.8660	1961570.1600	N39°08'01.04885"	W79°31'27.94677"
B-635	231191.1040	1961398.4320	N39°08'05.06365"	W79°31'30.12761"
B-636	230796.3800	1961845.8000	N39°08'01.16338"	W79°31'24.44865"
B-637	231090.9860	1961772.3050	N39°08'04.07508"	W79°31'25.38237"
B-638	231312.6130	1961686.0630	N39°08'06.26543"	W79°31'26.47763"
B-639	231048.6110	1962057.3950	N39°08'00.69176"	W79°31'21.76314"
B-640	230987.8920	1961994.8290	N39°08'03.05667"	W79°31'22.55794"
B-641	231398.9710	1961806.2160	N39°08'07.11931"	W79°31'24.95302"
B-641A	231216.0340	1961879.7160	N39°08'05.31134"	W79°31'24.01961"
B-642	231443.2640	1962071.1120	N39°08'07.55778"	W79°31'21.59128"
B-643	231047.9530	1962273.2560	N39°08'03.65100"	W79°31'19.02458"
B-644	231344.9370	1962180.9760	N39°08'06.58618"	W79°31'20.19685"
B-645	231217.2570	1962473.2960	N39°08'05.32489"	W79°31'16.48635"
B-646	231534.3480	1962356.0040	N39°08'08.45875"	W79°31'17.97590"
B-647	231445.7040	1962418.3170	N39°08'07.58274"	W79°31'17.18479"
B-648	231554.2260	1962675.9640	N39°08'08.65597"	W79°31'13.91522"
B-649	231714.5500	1962608.9880	N39°08'10.24046"	W79°31'14.75571"
B-650	231388.3920	1962747.4920	N39°08'07.01702"	W79°31'13.00695"
B-651	231491.8920	1963029.4700	N39°08'08.04063"	W79°31'09.42856"
B-652	231672.4760	1962955.0650	N39°08'09.82537"	W79°31'10.37336"
B-653	231832.8670	1962899.1500	N39°08'11.41056"	W79°31'11.08345"
B-654	231600.3560	1963313.6800	N39°08'09.11328"	W79°31'05.82182"
B-655	231784.5910	1963260.1240	N39°08'10.93416"	W79°31'06.50200"
B-656	231924.0440	1963226.8450	N39°08'12.31245"	W79°31'06.92473"
B-657	231978.7110	1963335.6370	N39°08'12.85399"	W79°31'03.00538"
B-658	231673.6770	1963590.7020	N39°08'09.83853"	W79°31'02.30620"
B-659	231856.5750	1963589.8080	N39°08'11.64630"	W79°31'02.31799"
B-660	231985.0650	1963870.1760	N39°08'12.91682"	W79°30'58.75998"
B-661	231722.4630	1963889.4580	N39°08'10.32128"	W79°30'58.51466"
B-662	231878.4010	1963897.8480	N39°08'11.86260"	W79°30'58.40853"
B-663	231698.8630	1964159.3390	N39°08'10.08849"	W79°30'55.08941"
B-664	231965.8990	1964208.9710	N39°08'12.72797"	W79°30'54.46008"
B-665	231847.4150	1964280.7650	N39°08'11.55698"	W79°30'53.54865"
B-666	231382.2010	1966128.8360	N39°08'06.96115"	W79°30'30.09321"
B-667	231692.3720	1966187.6470	N39°08'10.02695"	W79°30'29.34717"
B-668	231526.4850	1966165.1640	N39°08'08.38729"	W79°30'29.63232"
B-669	231676.3030	1966492.8120	N39°08'09.86838"	W79°30'25.47416"
B-670	231294.0750	1966427.7050	N39°08'06.09037"	W79°30'26.30007"
B-671	231476.4110	1966465.2610	N39°08'07.89262"	W79°30'25.82362"
B-672	231286.3730	1966704.3880	N39°08'06.01445"	W79°30'22.78860"
B-673	231639.0500	1966788.6930	N39°08'09.50038"	W79°30'21.71897"
B-674	231425.4540	1966762.7660	N39°08'07.38917"	W79°30'22.04783"
B-675	231604.6100	1967086.0270	N39°08'09.16015"	W79°30'17.94534"
B-676	231375.9600	1967055.7920	N39°08'06.89962"	W79°30'18.32890"
B-677	231210.3180	1967040.2300	N39°08'05.26293"	W79°30'18.56229"
B-678	231073.5870	1967310.1260	N39°08'03.91161"	W79°30'15.10089"
B-679	231559.0160	1967393.9090	N39°08'08.70965"	W79°30'14.03785"
B-680	231323.9340	1967360.6440	N39°08'06.38608"	W79°30'14.45990"
B-681	231521.0890	1967670.7790	N39°08'08.33488"	W79°30'10.52397"
B-682	231274.2830	1967649.5250	N39°08'05.89544"	W79°30'10.79361"
B-683	231007.5270	1967614.5190	N39°08'03.25880"	W79°30'11.23776"
B-684	231444.2700	1967974.8940	N39°08'07.57568"	W79°30'06.66431"
B-685	231225.2350	1967940.4880	N39°08'05.41072"	W79°30'07.10090"
B-686	230951.1740	1967895.7870	N39°08'02.70188"	W79°30'07.66813"

CORE BORINGS COORDINATES - PHASE 1				
BORING NAME	NORTHING	EASTING	LATITUDE	LONGITUDE
B-687	231161.6800	1968222.7900	N39°08'04.78255"	W79°30'03.51813"
B-688	230913.0950	1968182.5950	N39°08'02.32556"	W79°30'04.02822"
B-689	231333.3840	1968273.0070	N39°08'06.47972"	W79°30'02.88084"
B-690	231280.8720	1968547.8870	N39°08'05.96070"	W79°29'59.39225"
B-691	231111.5100	1968528.7000	N39°08'04.28672"	W79°29'59.63576"
B-692	230949.9930	1968504.6030	N39°08'02.69028"	W79°29'59.94158"
B-693	231202.6330	1968801.1610	N39°08'05.18737"	W79°29'56.17790"
B-694	231079.9250	1968787.1000	N39°08'03.97452"	W79°29'56.35636"
B-695	230910.6680	1968783.8450	N39°08'02.30157"	W79°29'56.39770"
B-696	230901.1320	1969096.1950	N39°08'02.20727"	W79°29'52.43364"
B-697	231140.3240	1969130.9500	N39°08'04.57144"	W79°29'51.99249"
B-698	230885.2900	1969419.2210	N39°08'02.05059"	W79°29'48.33410"
B-699	231113.1870	1969428.5720	N39°08'04.30313"	W79°29'48.21532"
B-700	231096.7100	1969583.2120	N39°08'04.14021"	W79°29'46.25276"
B-701	230929.2080	1969672.3800	N39°08'02.48457"	W79°29'45.12121"
B-702	231113.7830	1969743.5150	N39°08'04.30889"	W79°29'44.21832"
B-703	231026.9900	1969763.9830	N39°08'03.45101"	W79°29'43.95861"
B-704	230954.1500	1970015.1890	N39°08'02.73092"	W79°29'40.77057"
B-705	231125.6090	1970006.1080	N39°08'04.42564"	W79°29'40.88569"
B-706	230991.1930	1970336.6810	N39°08'03.09685"	W79°29'36.69045"
B-707	231141.3390	1970338.6260	N39°08'04.58090"	W79°29'36.66563"
B-708	231238.8090	1971511.4640	N39°08'05.54319"	W79°29'21.78075"
B-709	231085.8880	1971524.6000	N39°08'04.03170"	W79°29'21.61427"
B-710	231261.4910	1971832.2960	N39°08'05.76699"	W79°29'17.70896"
B-711	231117.8970	1971852.5130	N39°08'04.34767"	W79°29'17.45262"
B-712	231295.2730	1971219.3120	N39°08'06.10049"	W79°29'13.93939"
B-713	231126.6280	1972144.2700	N39°08'04.43357"	W79°29'13.74986"
B-714	231351.2050	1972399.0530	N39°08'06.65293"	W79°29'10.51592"
B-715	231151.2140	1972439.4730	N39°08'04.67615"	W79°29'10.00379"
B-716	231421.3940	1972697.6800	N39°08'07.34621"	W79°29'06.72581"
B-717	231157.3160	1972744.8110	N39°08'04.73598"	W79°29'06.12821"
B-718	231287.5460	1972728.1690	N39°08'06.02320"	W79°29'06.33914"
B-719	231195.1200	1973042.4600	N39°08'05.10912"	W79°29'02.30560"
B-720	231342.2300	1973014.2300	N39°08'06.56322"	W79°29'02.70854"
B-721	231496.3760	1972978.8140	N39°08'08.08686"	W79°29'03.15767"
B-722	231247.5530	1973324.5610	N39°08'05.62686"	W79°28'58.77027"
B-723	231569.6200	1973238.6980	N39°08'08.81034"	W79°28'59.85921"
B-724	231418.9860	1973296.4710	N39°08'07.32137"	W79°28'59.12635"
B-725	231517.3000	1973627.6900	N39°08'08.29247"	W79°28'54.92249"
B-726	231676.9850	1973578.0110	N39°08'09.87090"	W79°28'55.55258"
B-727	231370.5050	1973697.1110	N39°08'06.84140"	W79°28'54.04182"
B-728	231761.8800	1973835.0300	N39°08'10.70949"	W79°28'52.29041"
B-729	231606.3520	1973885.6540	N39°08'09.17214"	W79°28'51.64833"
B-730	231462.6450	1973943.3780	N39°08'07.75161"	W79°28'50.91612"
B-731	232160.4180	1973961.8780	N39°08'14.64839"	W79°28'50.67943"
B-734A	231392.2720	1974972.9290	N39°08'07.05366"	W79°28'37.84994"
B-736	232071.2460	1974872.4370	N39°08'13.76492"	W79°28'39.12316"
B-737	231804.4990	1975080.6280	N39°08'11.12786"	W79°28'36.48175"
B-738	231854.2340	1975329.3090	N39°08'11.61879"	W79°28'33.32543"
B-739	232194.1340	1975267.7130	N39°08'14.97863"	W79°28'34.10604"
B-740	232213.0030	1975471.0550	N39°08'15.16450"	W79°28'31.52521"
B-741	231990.0550	1975516.7280	N39°08'12.96075"	W79°28'30.94632"
B-742	232302.0870	1975793.7480	N39°08'16.04412"	W79°28'27.42935"
B-743	231963.3550	1975806.3060	N39°08'12.69604"	W79°28'27.27120"
B-744	232115.3600	1975814.0600	N39°08'14.19844"	W79°28'27.17224"
B-745	232412.8510	1976026.3150	N39°08'17.13824"	W79°28'24.47725"
B-746	231890.3100	1976036.1870	N39°08'11.97340"	W79°28'24.35392"
B-747	232127.3900	1976056.7600	N39°08'14.31665"	W79°28'24.09192"
B-748	231922.7360	1976287.9120	N39°08'12.29315"	W79°28'21.15901"
B-749	232646.8190	1976359.5260	N39°08'19.44980"	W79°28'20.24728"
B-750	232117.5100	1976340.5900	N39°08'14.21815"	W79°28'20.49868"
B-751	232108.1180	1976600.5880	N39°08'14.12451"	W79°28'17.18990"
B-752	232684.0330	1976724.2390	N39°08'19.81649"	W79°28'15.61820"
B-753	232201.8330	1977097.4670	N39°08'15.04918"	W79°28'10.88327"
B-754	231997.0330	1977151.0830	N39°08'13.02475"	W79°28'10.20367"
B-755	231985.4920	1977429.3410	N39°08'12.90733"	W79°28'06.67218"
B-756	232186.9900	1977440.3730	N39°08'14.90131"	W79°28'06.53127"
B-757	231964.2290	1977737.3840	N39°08'12.69848"	W79°28'02.76271"
B-758	232199.5980	1977800.6400	N39°08'15.02465"	W79°28'01.95880"
B-761	231898.4920	1978081.0970	N39°08'12.04748"	W79°27'58.40075"
B-762	232167.5320	1978060.1550	N39°08'14.70676"	W79°27'58.66526"
B-764	232138.1180	1978319.8370	N39°08'14.41506"	W79°27'55.36959"
B-765	232134.5060	1978586.2140	N39°08'14.37832"	W79°27'51.96345"
B-767	232098.6200	1978885.7260	N39°08'14.02244"	W79°27'48.18771"
B-769	232264.0320	1979141.6420	N39°08'15.65633"	W79°27'44.93883"
B-770	232124.7920	1979233.1970	N39°08'14.27972"	W79°27'43.77758"
B-771	232256.3770	1979480.7090	N39°08'15.57925"	W79°27'40.63511"
B-772	232412.2130	1979396.8100	N39°08'17.11996"	W79°27'41.69949"
B-773	232551.0300	1979643.6400	N39°08'18.49091"	W79°27'38.56599"
B-774	232396.6900	1979744.9150	N39°08'16.96497"	W79°27'37.28149"
B-775	233378.7920	1971077.9250	N39°08'26.69534"	W79°29'27.28016"
B-776	233569.8120	1970180.2980	N39°08'28.58365"	W79°29'30.67675"
B-777	233641.6060	1970926.3030	N39°08'29.29315"	W79°29'29.20428"
B-778	233876.2700	1970365.4810	N39°08'31.61305"	W79°29'36.32226"
B-779	233866.6650	1970786.8680	N39°08'31.71540"	W79°29'30.97377"
B-780	234109.5890	1970832.0890	N39°08'33.91886"	W79°29'30.39954"
B-781	234379.1590	1971020.2310	N39°08'36.58307"	W79°29'28.01177"
B-782	234664.5640	1971085.2410	N39°08'39.40968"	W79°29'27.18565"



CORE BORINGS COORDINATES - PHASE 1				
BORING NAME	NORTHING	EASTING	LATITUDE	LONGITUDE
R-021	222888.8900	1936685.4010	N39°06'42.81775"	W79°36'43.63459"
R-022	222778.0550	1936739.3350	N39°06'41.72292"	W79°36'42.94858"
R-023	223108.8190	1936923.4400	N39°06'44.99446"	W79°36'40.61803"
R-024	223183.2510	1937169.7170	N39°06'45.73315"	W79°36'37.49463"
R-025	223063.4950	1937196.9930	N39°06'44.54981"	W79°36'37.14671"
R-026	222906.0940	1937240.9380	N39°06'42.99459"	W79°36'36.58672"
R-027	222971.1620	1937476.7360	N39°06'43.64057"	W79°36'33.59614"
R-043	224241.0950	1938707.7910	N39°06'56.20715"	W79°36'17.99643"
R-044	224472.9560	1938694.4570	N39°06'58.49872"	W79°36'18.16905"
R-045	224205.3700	1939051.1540	N39°06'55.85799"	W79°36'13.63940"
R-047	224719.9750	1938746.5570	N39°07'00.94087"	W79°36'17.51167"
R-048	224418.4270	1939068.9370	N39°06'57.96405"	W79°36'13.41690"
R-049	224343.3970	1939312.5720	N39°06'57.22522"	W79°36'10.32461"
R-051	224552.8550	1939234.2630	N39°06'59.29463"	W79°36'11.32123"
R-052	224752.5940	1939088.1280	N39°07'01.26719"	W79°36'13.17830"
R-052A	225014.5870	1939316.5370	N39°07'03.85934"	W79°36'10.28405"
R-053	224639.7070	1939352.9780	N39°07'00.15442"	W79°36'09.81624"
R-070	226333.4830	1940677.5180	N39°07'16.91040"	W79°35'53.03400"
R-075	226472.6840	1940975.7580	N39°07'18.28947"	W79°35'49.25161"
R-080	226718.2010	1941289.7860	N39°07'20.71950"	W79°35'45.27027"
R-095	227532.2130	1942730.6650	N39°07'28.78003"	W79°35'26.99742"
R-100	227648.9100	1942999.7960	N39°07'29.93614"	W79°35'23.58380"
R-129	229151.6820	1944499.5060	N39°07'44.80400"	W79°35'04.57126"
R-132	229434.5430	1944465.8850	N39°07'47.59949"	W79°35'05.00130"
R-134	229724.1920	1944492.9270	N39°07'50.46265"	W79°35'04.66159"
R-141	230339.3390	1944950.1100	N39°07'56.54700"	W79°34'58.86693"
R-142	230177.3840	1944985.0720	N39°07'54.94655"	W79°34'58.42134"
R-143	230063.4140	1945125.5380	N39°07'53.82134"	W79°34'56.63740"
R-143A	230125.3070	1945308.3580	N39°07'54.43475"	W79°34'54.31801"
R-144	230376.4530	1945082.4600	N39°07'56.91504"	W79°34'57.18774"
R-145	230230.3830	1945206.9820	N39°07'55.47241"	W79°34'55.60576"
R-146	230659.7440	1945379.5430	N39°07'59.71778"	W79°34'53.42077"
R-147	230519.7540	1945444.9150	N39°07'58.33470"	W79°34'52.58953"
R-148	230387.0170	1945496.4410	N39°07'57.02318"	W79°34'51.93410"
R-149	231206.6220	1945589.9000	N39°08'05.12502"	W79°34'50.75738"
R-150	230792.8830	1945657.8360	N39°08'01.03621"	W79°34'49.89048"
R-151	230630.6140	1945674.6270	N39°07'59.43249"	W79°34'49.67554"
R-152	230890.9220	1946037.2630	N39°08'02.00857"	W79°34'45.07627"
R-153	230643.9840	1946097.4360	N39°07'59.56835"	W79°34'44.30985"
R-154	231060.2940	1946415.7520	N39°08'03.68592"	W79°34'40.27470"
R-155	230834.1710	1946417.5510	N39°08'01.45092"	W79°34'40.24938"
R-156	230632.4420	1946433.2920	N39°07'59.45716"	W79°34'40.04739"
R-157	230992.1570	1946777.8530	N39°08'03.01552"	W79°34'35.67848"
R-158	230814.2170	1946759.1560	N39°08'01.25660"	W79°34'35.91384"
R-159	230593.0490	1946741.5790	N39°07'59.07042"	W79°34'36.13452"
R-160	230869.7140	1947070.1780	N39°08'01.80774"	W79°34'31.96724"
R-161	230631.7730	1947027.4370	N39°07'59.45557"	W79°34'32.50713"
R-162	230968.7030	1947384.3280	N39°08'02.78874"	W79°34'27.98139"
R-163	230578.2080	1947332.0410	N39°07'58.92865"	W79°34'28.64085"
R-164	230941.0250	1947685.2880	N39°08'02.51762"	W79°34'24.16159"
R-165	230668.4390	1947647.1540	N39°07'59.82306"	W79°34'24.64272"
R-166	230415.1810	1947612.4200	N39°07'57.31957"	W79°34'25.08089"
R-167	230852.0160	1947984.0870	N39°08'01.64025"	W79°34'20.36859"
R-168	230612.2520	1947943.7100	N39°07'59.27009"	W79°34'20.87856"
R-169	230329.2790	1947903.7970	N39°07'56.47285"	W79°34'21.38219"
R-170	230697.4730	1948263.4510	N39°08'00.11494"	W79°34'16.82161"
R-171	230569.3400	1948248.8230	N39°07'58.84836"	W79°34'17.00596"
R-172	230331.4210	1948229.3520	N39°07'56.49660"	W79°34'17.25067"
R-173	230619.4480	1948558.1000	N39°07'59.34604"	W79°34'13.08145"
R-174	230347.3990	1948516.3160	N39°07'56.65677"	W79°34'13.60902"
R-175	230546.2340	1948851.6800	N39°07'58.62464"	W79°34'09.35493"
R-176	230332.8910	1948829.0610	N39°07'56.51578"	W79°34'09.63990"
R-177	230484.5720	1949345.2130	N39°07'58.01889"	W79°34'03.09097"
R-178	230238.9400	1949305.4910	N39°07'55.59075"	W79°34'03.59273"
R-179	230395.4880	1949930.5180	N39°07'57.14266"	W79°33'55.66211"
R-180	230178.4780	1949912.0270	N39°07'54.99759"	W79°33'55.89477"
R-181	230362.2750	1950517.3900	N39°07'56.81854"	W79°33'48.21393"
R-182	230169.1540	1950522.2000	N39°07'54.90976"	W79°33'48.15116"
R-183	230291.4000	1951113.2050	N39°07'56.12210"	W79°33'40.65194"
R-183A	230421.9310	1951371.2080	N39°07'57.41400"	W79°33'37.37880"
R-183B	230194.2690	1951403.9610	N39°07'55.16399"	W79°33'36.96119"
R-184	230492.8970	1951697.8610	N39°07'58.11758"	W79°33'33.23389"
R-185	230224.8770	1951728.1350	N39°07'55.46865"	W79°33'32.84745"
R-186	230523.0350	1951990.8980	N39°07'58.41735"	W79°33'29.51524"
R-187	230295.4280	1952034.6340	N39°07'56.16796"	W79°33'28.95833"
R-188	230623.4880	1952580.7080	N39°07'59.41395"	W79°33'22.03082"
R-189	230442.1610	1952607.5010	N39°07'57.62187"	W79°33'21.68936"
R-190	230661.1280	1952875.8550	N39°07'59.78779"	W79°33'18.28542"
R-191	230505.2610	1952894.9180	N39°07'58.24731"	W79°33'18.04229"
R-192	230739.4390	1953166.4650	N39°08'00.56356"	W79°33'14.59790"
R-193	230640.9450	1953181.5130	N39°07'59.59013"	W79°33'14.40618"
R-194	230522.6160	1953203.5340	N39°07'58.42069"	W79°33'14.12581"

CORE BORINGS COORDINATES - PHASE 1				
BORING NAME	NORTHING	EASTING	LATITUDE	LONGITUDE
R-195	230765.4950	1953462.1610	N39°08'00.82284"	W79°33'10.84542"
R-196	230693.0560	1953476.8940	N39°08'00.10694"	W79°33'10.65790"
R-197	230582.8000	1953495.9100	N39°07'59.01727"	W79°33'10.41575"
R-198	231144.9070	1955638.3300	N39°08'04.58474"	W79°32'43.23007"
R-199	231003.1960	1955658.6510	N39°08'03.18416"	W79°32'42.97126"
R-200	231218.3750	1956241.4730	N39°08'05.31384"	W79°32'35.57591"
R-201	231036.8810	1956246.2540	N39°08'03.51997"	W79°32'35.51412"
R-202	231213.8900	1956851.9570	N39°08'05.27234"	W79°32'27.82808"
R-203	231014.1920	1956825.1240	N39°08'03.29839"	W79°32'28.16746"
SP-1	231148.2940	1970756.3100	N39°08'04.64931"	W79°29'31.36471"
SP-2	231102.3360	1970734.3760	N39°08'04.19508"	W79°29'31.64313"
SP-3	231057.5210	1970713.0130	N39°08'03.75214"	W79°29'31.91430"
SP-4	231162.1850	1970930.8470	N39°08'04.78645"	W79°29'29.14960"
SP-5	231116.0660	1970908.8500	N39°08'04.33063"	W79°29'29.42883"
SP-6	231071.2510	1970887.4740	N39°08'03.88769"	W79°29'29.70017"
SP-7	231175.9150	1971105.3070	N39°08'04.92199"	W79°29'26.93548"
SP-8	231129.7970	1971083.2970	N39°08'04.46618"	W79°29'27.21487"
SP-9	231084.9820	1971061.9340	N39°08'04.02324"	W79°29'27.48605"
T-001	231009.6540	1945390.1500	N39°08'03.17640"	W79°34'53.29019"
T-002	230872.5760	1945253.2560	N39°08'01.82029"	W79°34'55.02594"
T-003	231135.1750	1945573.6770	N39°08'04.41869"	W79°34'50.96246"
T-004	230654.7270	1945146.0980	N39°07'59.66609"	W79°34'56.38335"
T-005	230502.6440	1945290.7290	N39°07'58.16420"	W79°34'54.54609"
T-006	230611.5100	1945531.8260	N39°07'59.24240"	W79°34'51.48761"
T-007	231075.7020	1945680.6030	N39°08'03.83181"	W79°34'49.60476"
T-008	230258.0780	1945654.6150	N39°07'55.75015"	W79°34'49.92528"
T-009	230336.6000	1945655.6920	N39°07'56.52628"	W79°34'49.91250"
T-010	230485.0050	1945698.3390	N39°07'57.99349"	W79°34'49.37296"
T-011	230956.8380	1945641.5910	N39°08'02.65661"	W79°34'50.09852"
T-012	231093.6290	1945621.9030	N39°08'04.00848"	W79°34'50.34994"
T-013	231059.7810	1945579.8160	N39°08'03.67355"	W79°34'50.88368"
US219-1	230330.2390	1945358.8240	N39°07'56.46076"	W79°34'53.67992"
US219-2	230372.5300	1945332.9410	N39°07'56.87853"	W79°34'54.00888"
US219-3	230399.3260	1945376.7260	N39°07'57.14377"	W79°34'53.45352"
US219-4	230357.0350	1945402.6080	N39°07'56.72600"	W79°34'53.12457"
US219-5	230379.1750	1945358.9670	N39°07'56.94444"	W79°34'53.67867"
US219-6	230596.6400	1945195.7860	N39°07'59.09240"	W79°34'55.75209"
US219-7	230545.8190	1945226.8880	N39°07'58.59037"	W79°34'55.35679"
US219-8	230572.6150	1945270.6730	N39°07'58.85562"	W79°34'54.80143"
US219-9	230623.4360	1945239.5700	N39°07'59.35765"	W79°34'55.19674"
US219-10	230565.9710	1945244.6470	N39°07'58.78971"	W79°34'55.13165"
WW32-1	231883.8300	1974518.9400	N39°08'11.91334"	W79°28'43.61019"
WW32-2	231854.0630	1974427.3260	N39°08'11.61933"	W79°28'44.77300"
WW32-3	231823.6750	1974333.8010	N39°08'11.31919"	W79°28'45.96007"
WW32-4	231793.9050	1974242.1790	N39°08'11.02515"	W79°28'47.12298"
WW32-5	231819.0790	1974539.9790	N39°08'11.27329"	W79°28'43.34337"
WW32-6	231789.3120	1974448.3650	N39°08'10.97928"	W79°28'44.50618"
WW32-7	231758.9240	1974354.8400	N39°08'10.67914"	W79°28'45.69324"
WW32-8	231729.1540	1974263.2180	N39°08'10.38510"	W79°28'46.85615"
WW32-9	231754.3340	1974561.0160	N39°08'10.63330"	W79°28'43.07657"
WW32-10	231724.5670	1974469.4020	N39°08'10.33929"	W79°28'44.23938"
WW32-11	231694.1790	1974375.8770	N39°08'10.03915"	W79°28'45.42644"
WW32-12	231664.4030	1974284.2570	N39°08'09.74505"	W79°28'46.58932"
WW32-13	231936.6100	1974503.1240	N39°08'12.43506"	W79°28'43.81076"
WW32-14	231828.6820	1974169.1080	N39°08'11.36905"	W79°28'48.05026"
WW32-15	231723.6360	1974626.0410	N39°08'10.32972"	W79°28'42.25140"
WW32-16	231612.5730	1974299.7610	N39°08'09.23273"	W79°28'46.39270"

ACCESS POINT COORDINATES - PHASE 1
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Publ:c Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
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CORE BORINGS COORDINATES - PHASE 2				
BORING NAME	NORTHING	EASTING	LATITUDE	LONGITUDE
NF-16	231716.3280	1965057.1060	N39°08'10.26247"	W79°30'43.69545"
NF-17	231690.2940	1965209.9460	N39°08'10.00535"	W79°30'41.75564"
R-028	223291.8540	1937706.9630	N39°06'46.81306"	W79°36'30.68014"
R-029	223172.6290	1937739.2390	N39°06'45.63502"	W79°36'30.26882"
R-030	223035.8910	1937775.1550	N39°06'44.28392"	W79°36'29.81105"
R-031	223374.7220	1937952.0460	N39°06'47.63505"	W79°36'27.57196"
R-032	223227.3060	1937986.4160	N39°06'46.17839"	W79°36'27.13366"
R-033	223097.5290	1938025.0840	N39°06'44.89612"	W79°36'26.64110"
R-034	223515.5440	1938187.5720	N39°06'49.02971"	W79°36'24.58589"
R-035	223325.1700	1938267.5410	N39°06'47.14899"	W79°36'23.56843"
R-036	223249.5370	1938301.6520	N39°06'46.40183"	W79°36'23.13452"
R-037	223675.0360	1938463.9370	N39°06'50.60937"	W79°36'21.08193"
R-038	223452.2270	1938535.8760	N39°06'48.40796"	W79°36'20.16588"
R-039	223386.7890	1938570.9770	N39°06'47.76157"	W79°36'19.71956"
R-040	223640.6050	1938827.5200	N39°06'50.27326"	W79°36'16.46847"
R-041	223875.0230	1938958.6200	N39°06'52.59177"	W79°36'14.80859"
R-041A	224028.2160	1938858.9810	N39°06'54.10479"	W79°36'16.07503"
R-042	223716.5130	1939220.7770	N39°06'51.02804"	W79°36'11.48015"
R-046	224012.0140	1939292.8830	N39°06'53.94960"	W79°36'10.56960"
R-050	224197.9880	1939513.4120	N39°06'55.79026"	W79°36'07.77429"
R-054	224490.9840	1939598.1640	N39°06'58.68720"	W79°36'06.70319"
R-055	224861.1940	1939669.9300	N39°07'02.34717"	W79°36'05.79795"
R-056	224661.3460	1939920.5030	N39°07'00.37465"	W79°36'02.61582"
R-057	224992.8890	1939833.4460	N39°07'03.65067"	W79°36'03.72513"
R-058	224866.5180	1940120.5030	N39°07'02.40479"	W79°36'00.08113"
R-059	225272.8140	1939993.5190	N39°07'06.41924"	W79°36'01.69807"
R-060	225098.4710	1940281.6430	N39°07'04.69919"	W79°35'58.03983"
R-061	225689.5720	1939887.5230	N39°07'10.53731"	W79°36'03.04891"
R-062	225531.5440	1940144.8390	N39°07'08.97820"	W79°35'59.78174"
R-063	225306.2480	1940436.2490	N39°07'06.75455"	W79°35'56.08107"
R-064	225895.9170	1940188.9580	N39°07'12.58016"	W79°35'59.22707"
R-064A	226008.9720	1940006.7370	N39°07'13.69560"	W79°36'01.54080"
R-065	225770.3790	1940325.1040	N39°07'11.34083"	W79°35'57.49781"
R-066	225524.8350	1940749.0650	N39°07'08.91846"	W79°35'52.11499"
R-067	226180.5870	1940277.3720	N39°07'15.39482"	W79°35'58.10923"
R-068	225992.8780	1940538.0760	N39°07'13.54234"	W79°35'54.79861"
R-069	225770.6520	1940920.9040	N39°07'11.34997"	W79°35'49.93800"
R-071	226225.2970	1940822.2550	N39°07'15.84264"	W79°35'51.19598"
R-072	225984.9130	1941020.3060	N39°07'13.46880"	W79°35'48.67967"
R-076	226171.4360	1941190.0930	N39°07'15.31420"	W79°35'46.52784"
R-078	226503.5930	1941239.6590	N39°07'18.59778"	W79°35'45.90342"
R-079	226318.8800	1941416.5060	N39°07'16.77393"	W79°35'43.65694"
R-081	226664.6560	1941489.5020	N39°07'20.19236"	W79°35'42.73536"
R-082	226481.2600	1941671.6460	N39°07'18.38157"	W79°35'40.42169"
R-083	226947.7420	1941687.3120	N39°07'22.99246"	W79°35'40.22914"
R-084	226842.6140	1941778.1060	N39°07'21.95431"	W79°35'39.07564"
R-085	226573.2380	1941890.2020	N39°07'19.29295"	W79°35'37.64968"
R-086	227097.7470	1941956.5700	N39°07'24.47790"	W79°35'36.81448"
R-087	226966.3980	1942026.5970	N39°07'23.18036"	W79°35'35.92416"
R-088	226778.4980	1942123.2910	N39°07'21.32414"	W79°35'34.69473"
R-089	227247.3230	1942226.7020	N39°07'25.95908"	W79°35'33.38868"
R-090	226982.3920	1942401.4560	N39°07'23.34227"	W79°35'31.16774"
R-091	226802.1570	1942516.2270	N39°07'21.56198"	W79°35'29.70907"
R-092	227377.2220	1942453.4220	N39°07'27.24531"	W79°35'30.51346"
R-093	227092.6370	1942687.3890	N39°07'24.43481"	W79°35'27.54092"
R-094	226976.4120	1942723.9860	N39°07'23.28640"	W79°35'27.07504"
R-096	227279.4990	1942898.2260	N39°07'26.28386"	W79°35'24.86795"
R-097	227174.3470	1942980.1320	N39°07'25.24535"	W79°35'23.82729"
R-098	227993.1150	1942713.3080	N39°07'33.33543"	W79°35'27.22359"
R-099	227770.3190	1942899.4220	N39°07'31.13516"	W79°35'24.85903"
R-101	227358.0980	1943256.9410	N39°07'27.06428"	W79°35'20.31711"
R-102	228136.2010	1942839.3850	N39°07'34.75096"	W79°35'25.62555"
R-102A	228249.9530	1943066.2480	N39°07'35.87753"	W79°35'22.74817"
R-103	227922.7130	1943029.3000	N39°07'32.64271"	W79°35'23.21288"
R-104	227873.2880	1943212.2800	N39°07'32.15600"	W79°35'20.89031"
R-105	227766.0890	1943319.8030	N39°07'31.09749"	W79°35'19.52455"
R-106	227477.6710	1943500.4720	N39°07'28.24851"	W79°35'17.22836"
R-107	228411.1040	1943029.8410	N39°07'37.47000"	W79°35'23.21221"
R-108	228140.3700	1943245.2150	N39°07'34.79617"	W79°35'20.47574"
R-109	228050.4600	1943458.6920	N39°07'33.90958"	W79°35'17.76566"
R-110	227951.0990	1943616.9550	N39°07'32.92902"	W79°35'15.75613"
R-111	227735.8880	1943962.4300	N39°07'30.80518"	W79°35'11.36956"
R-112	228526.4800	1943280.9350	N39°07'38.61284"	W79°35'20.02731"
R-113	228242.8150	1943609.1760	N39°07'35.81228"	W79°35'15.85846"
R-114	228127.8070	1943783.2860	N39°07'34.67721"	W79°35'13.64763"
R-115	228507.9050	1943481.0540	N39°07'38.43120"	W79°35'17.48760"
R-116	228529.2570	1943714.3620	N39°07'38.64450"	W79°35'14.52721"
R-116A	228463.6630	1943824.6680	N39°07'37.99722"	W79°35'13.12663"
R-117	228362.3680	1943991.0320	N39°07'36.99760"	W79°35'11.01426"
R-118	228110.0030	1944318.5820	N39°07'34.50631"	W79°35'06.85468"
R-119	228755.4490	1943877.7930	N39°07'40.88175"	W79°35'12.45606"
R-120	228715.9390	1943979.0740	N39°07'40.49220"	W79°35'11.17032"
R-121	228685.8880	1944076.0550	N39°07'40.19609"	W79°35'09.93927"

CORE BORINGS COORDINATES - PHASE 2				
BORING NAME	NORTHING	EASTING	LATITUDE	LONGITUDE
R-122	228359.5050	1944495.7300	N39°07'36.97405"	W79°35'04.60971"
R-123	228998.8280	1943967.1340	N39°07'43.23817"	W79°35'11.32530"
R-124	228936.0360	1944092.8400	N39°07'42.65873"	W79°35'09.72931"
R-125	228912.5760	1944187.8830	N39°07'42.43774"	W79°35'08.52292"
R-126	229270.3750	1944088.3200	N39°07'45.97330"	W79°35'09.79073"
R-127	229218.4690	1944214.9380	N39°07'45.45146"	W79°35'08.18329"
R-128	229174.7290	1944326.8430	N39°07'45.03018"	W79°35'06.76266"
R-130	229568.3560	1944204.2810	N39°07'48.91965"	W79°35'08.32276"
R-131	229489.8810	1944345.3880	N39°07'48.14533"	W79°35'06.53111"
R-133	229812.1040	1944358.5610	N39°07'51.33032"	W79°35'06.36782"
R-135	229616.5380	1944645.2370	N39°07'49.40000"	W79°35'02.72742"
R-136	229501.0400	1944787.6850	N39°07'48.25973"	W79°35'00.91833"
R-137	230112.0590	1944638.7960	N39°07'54.29769"	W79°35'02.81505"
R-138	230006.0730	1944755.8720	N39°07'53.25120"	W79°35'01.32802"
R-138A	229917.7340	1944882.2000	N39°07'52.37922"	W79°34'59.72380"
R-139	229857.3940	1944976.8670	N39°07'51.73368"	W79°34'58.52172"
R-140	230202.6240	1944774.8080	N39°07'55.13410"	W79°35'01.09003"

ACCESS POINT COORDINATES - PHASE 2		
ACCESS POINT	LATITUDE	LONGITUDE
AP-3	N39°06'50.23354"	W79°36'26.24384"
AP-5	N39°07'20.56688"	W79°35'46.67012"
AP-6	N39°07'24.70828"	W79°35'39.42038"
AP-7	N39°07'36.96340"	W79°35'04.93052"
AP-8	N39°07'45.37747"	W79°35'04.85435"
AP-14	N39°08'10.44106"	W79°30'44.28052"

STREAM CROSSING COORDINATES - PHASE 2		
STREAM CROSSING	LATITUDE	LONGITUDE
SC-2	N39°06'47.88263"	W79°36'25.25594"
SC-3	N39°06'49.17992"	W79°36'20.19841"
SC-8	N39°06'55.36733"	W79°36'08.27739"
SC-9	N39°06'55.98053"	W79°36'07.50051"
SC-10	N39°07'06.17535"	W79°36'01.86791"
SC-10A	N39°07'37.16440"	W79°35'11.3206"

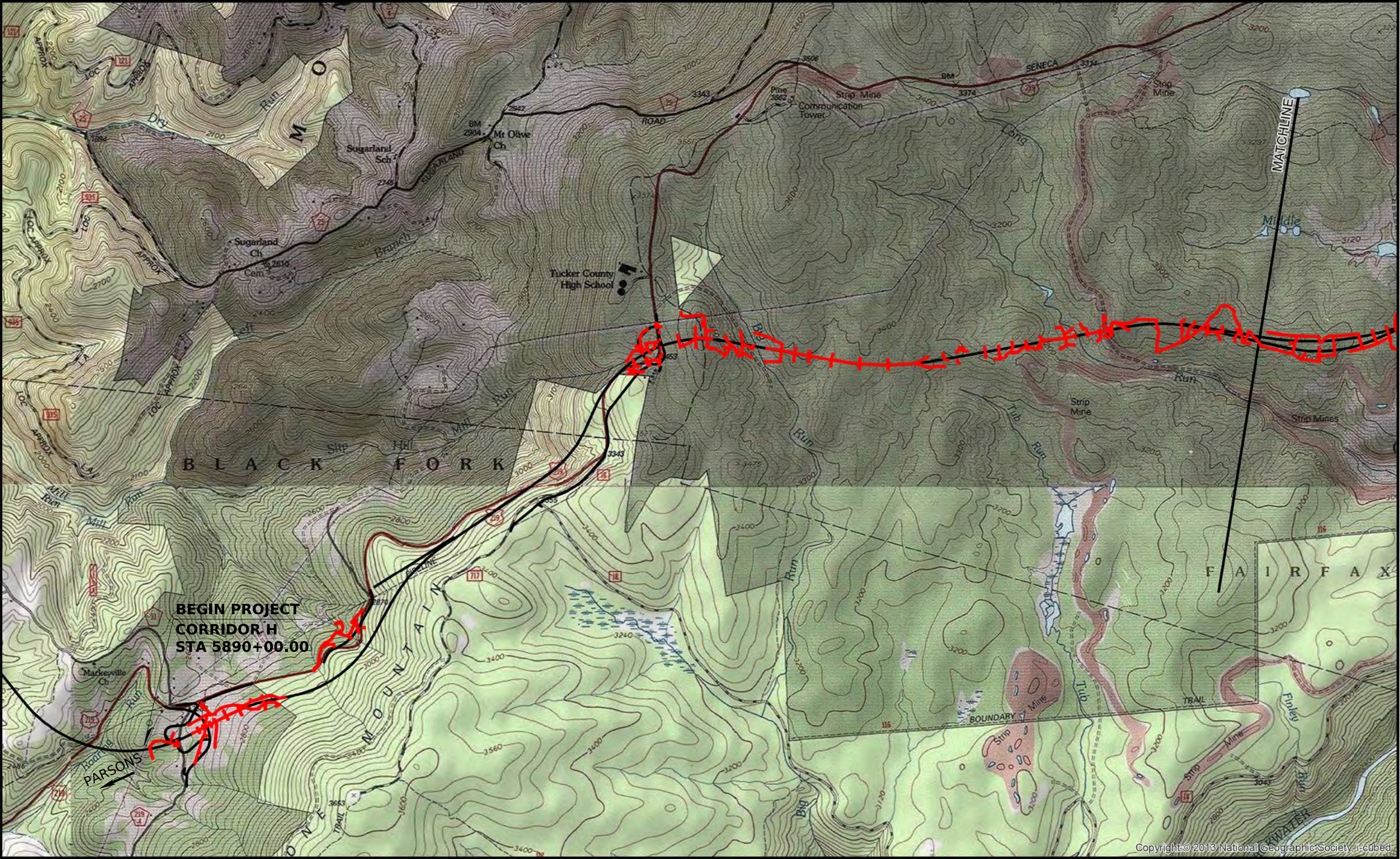
DISCHARGE POINT COORDINATES - PHASE 2		
DISCHARGE POINT	LATITUDE	LONGITUDE
DP-3	N39°06'47.8608"	W79°36'43.8759"
DP-4	N39°06'51.8936"	W79°36'23.0372"
DP-5	N39°06'52.8243"	W79°36'22.3481"
DP-6	N39°06'59.5604"	W79°36'16.4060"
DP-7	N39°07'01.0238"	W79°36'17.6946"
DP-15	N39°08'10.1395"	W79°30'41.9327"
DP-26	N39°06'50.1992"	W79°36'25.6470"
DP-27	N39°07'05.4555"	W79°36'08.0153"
DP-28	N39°07'37.72856"	W79°35'22.83531"
DP-29	N39°07'55.32898"	W79°35'01.44691"

<b>GPI</b>		Engineering Design Planning Construction Management	Greenman-Pedersen, Inc. 58 Mission Way, Suite 201 Scott Depot, WV 25560 Certificate of Authorization #C01145-00
304.507.8101		GPI.NET.COM	
DESIGN BY: LJB	CHECK BY: ASC	DRAWN BY: LJB	CHECK BY: ASC
DATE: 3/2023	DATE: 3/2023	DATE: 3/2023	DATE: 3/2023

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY	

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
LOCATION TABLES  
PHASE 2





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Greenman-Pedersen, Inc.  
58 Mission Way, Suite 201  
Scott Depot, WV 25560  
Certificate of Authorization #C01145-00

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DATE:	3/2023	DATE:	3/2023	DATE:	3/2023	DATE:	3/2023

REVISION NUMBER	SHEET NUMBER
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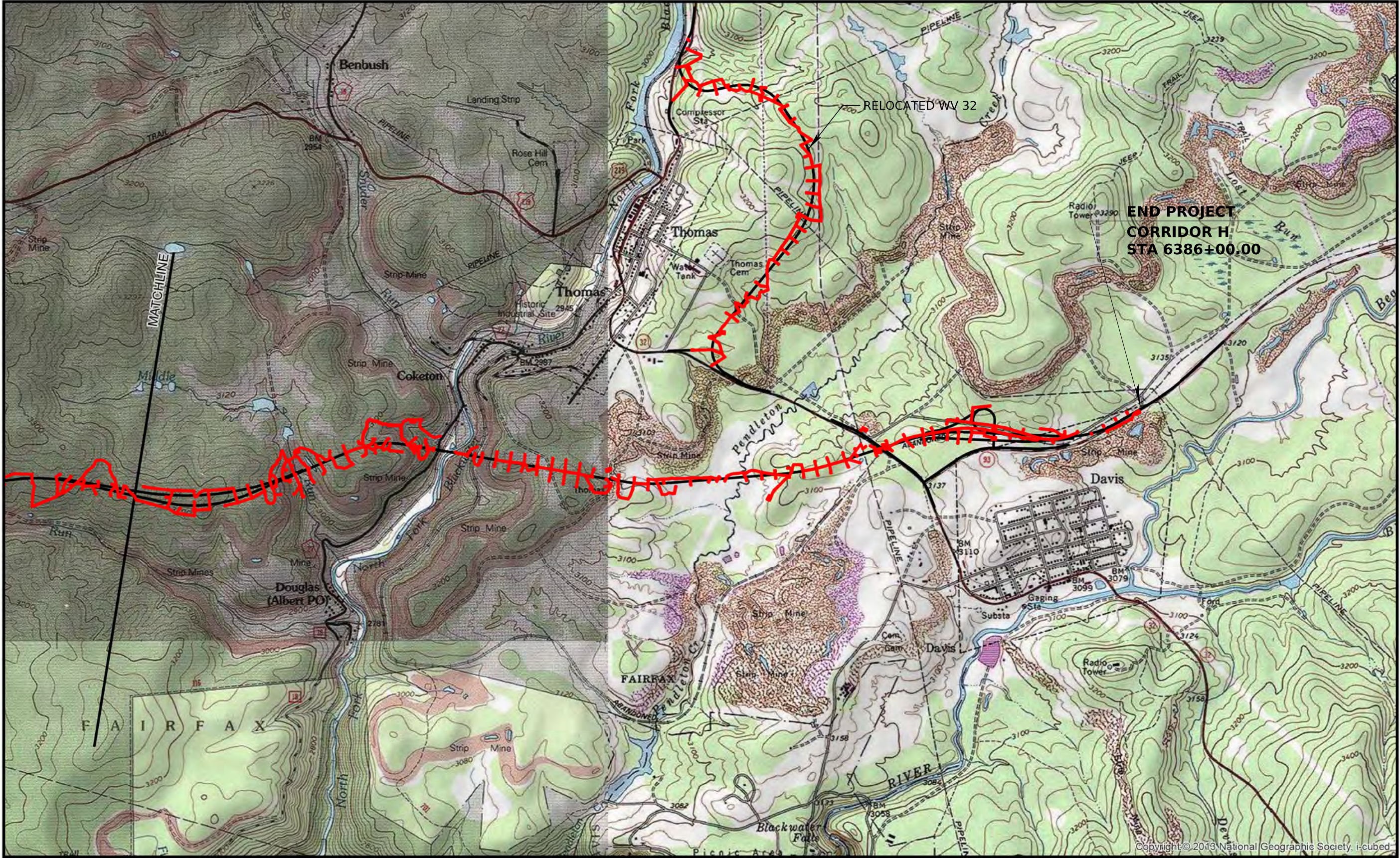
REVISION

DATE

BY

**THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**  
**USGS TOPOGRAPHIC MAP**  
**PHASE 1 (SHEET 1 OF 2)**



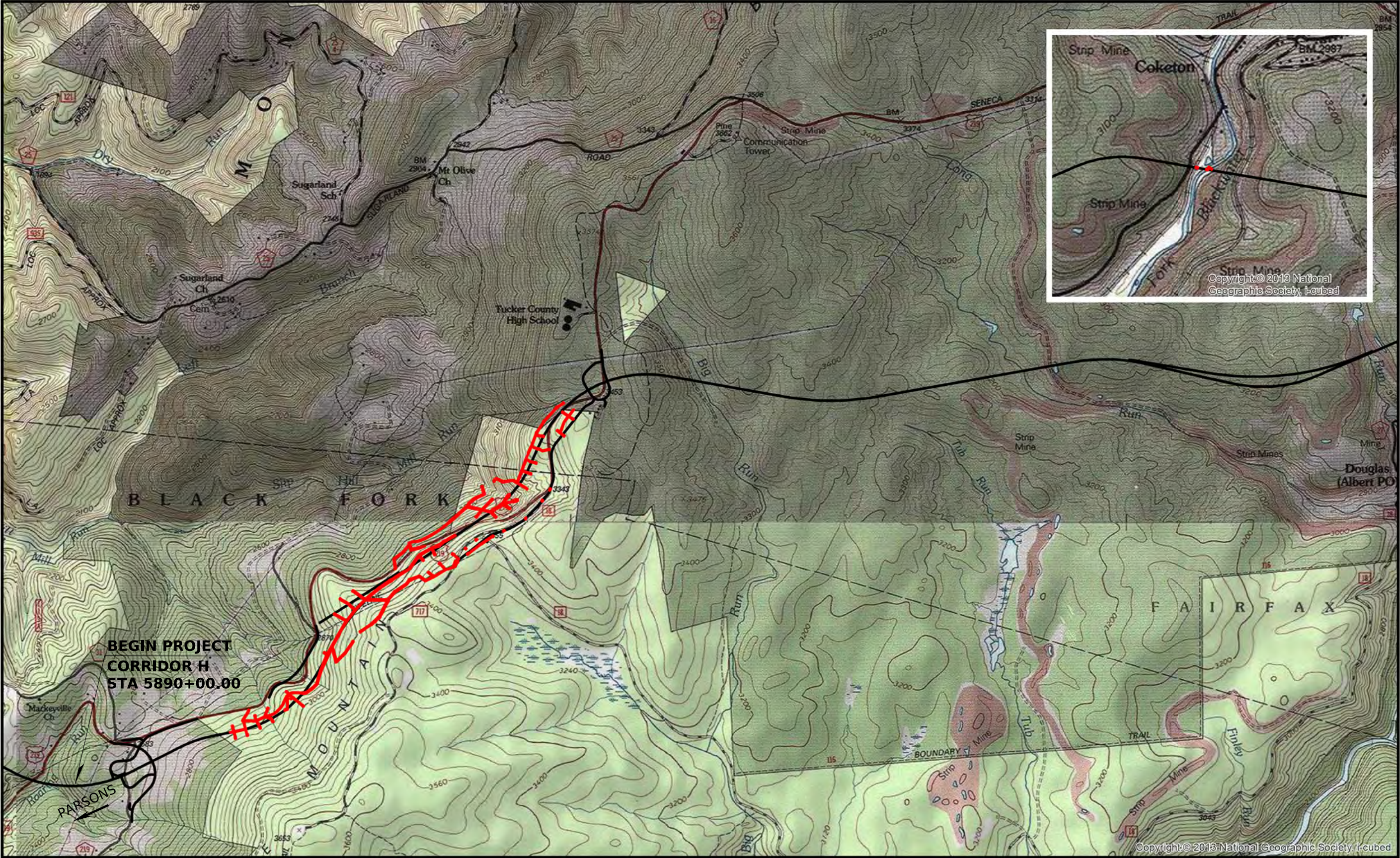


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304.507.8101		GRINET.COM							
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DATE:	3/2023	DATE:	3/2023	DATE:	3/2023	DATE:	3/2023	NUMBER	NUMBER
				REVISION				DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
USGS TOPOGRAPHIC MAP  
PHASE 1 (SHEET 2 OF 2)



Public Roads Dist.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W.V.	08	X347 -H- 55.68 00	NHPP 0484(292)	2023	TUCKER	8	51



BEGIN PROJECT  
CORRIDOR H  
STA 5890+00.00

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Engineering  
Design  
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Construction Management

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58 Mission Way, Suite 201  
Scott Depot, WV 25560  
Certificate of Authorization #C01145-00

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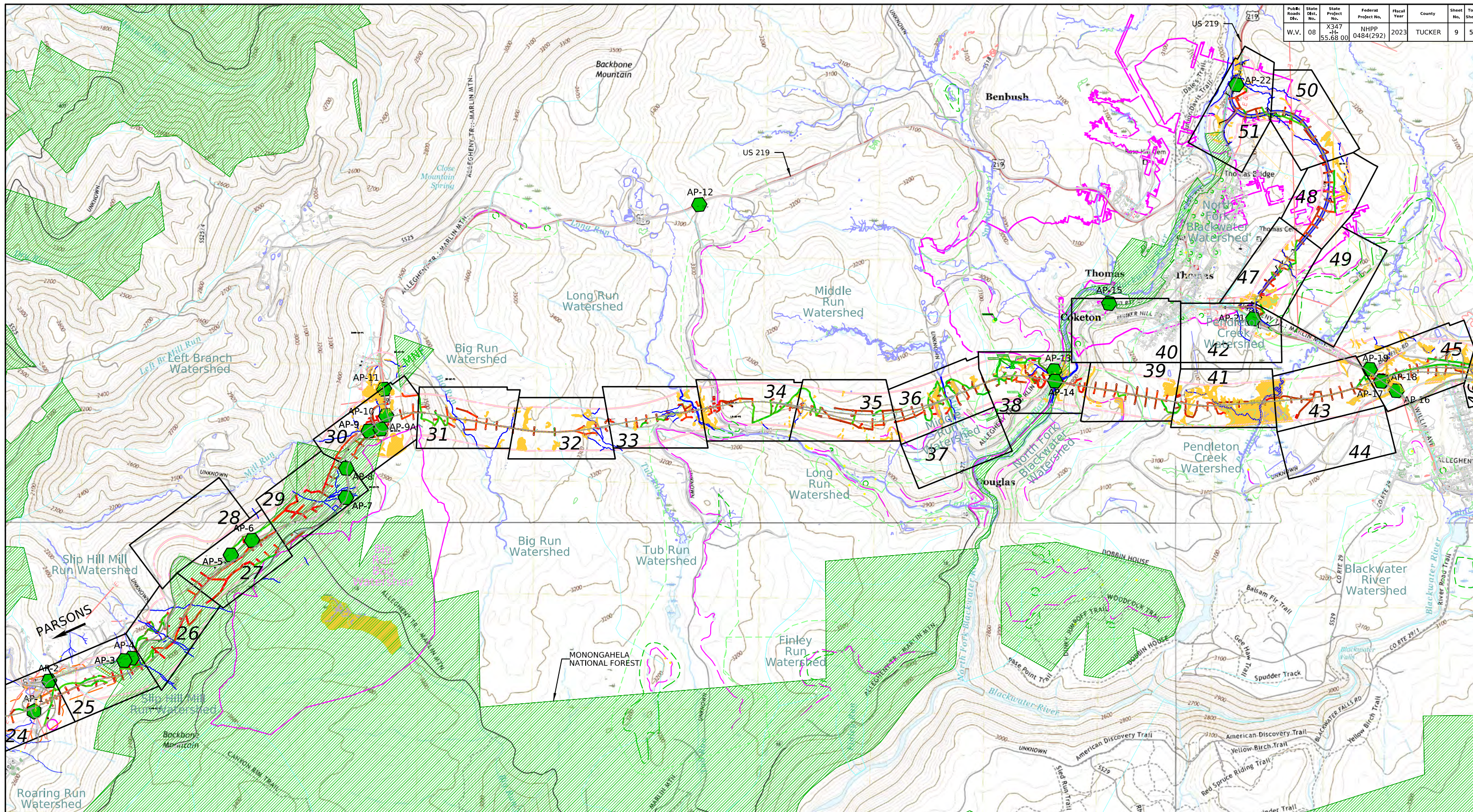
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DATE: 3/2023 DATE: 3/2023 DATE: 3/2023 DATE: 3/2023

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
USGS TOPOGRAPHIC MAP  
PHASE 2




Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W.V.	08	X347 -H- 55 68 00	NHPP 0484(292)	2023	TUCKER	9	5



- |  |                                 |  |                                   |  |                                    |  |                          |  |   |  |                           |
|--|---------------------------------|--|-----------------------------------|--|------------------------------------|--|--------------------------|--|---|--|---------------------------|
|  | EX. ROAD                        |  | AREA NOT TO BE DISTURBED          |  | DRILL RIG PAD 20'x30' (TYP.) (LOD) |  | PROP. STREAM CROSSING    |  | PROP. DISCHARGE POINT                       |  | PROP. WATER TANK LOCATION |
|  | RECONSTRUCTED ACCESS ROAD (LOD) |  | WETLAND AREA                      |  | LAY DOWN AREAS (LOD)               |  | WATERBAR SLOPE: <5%      |  | WATERBAR SLOPE: >20%                        |  |                           |
|  | NEW ACCESS ROAD (LOD)           |  | MONONGAHELA NATIONAL FOREST       |  | PROP. ACCESS POINT                 |  | WATERBAR SLOPE: 5% - 20% |  | UNDERGROUND MINING AREAS (PREVIOUSLY MINED) |  |                           |
|  | BOTANICAL STUDY AREA BOUNDARY   |  | TIMBER MATTING (16' W TYP.) (LOD) |  |                                    |  |                          |  |   |  |                           |
|  | STREAM                          |  | PROP. ROADWAY CORE BORING         |  |                                    |  |                          |  |   |  |                           |
|  | WATERSHED BOUNDARY              |  | PROP. STRUCTURE CORE BORING       |  |                                    |  |                          |  |   |  |                           |
|  | BIG BOG RUN WATERSHED BOUNDARY  |  |                                   |  |                                    |  |                          |  |   |  |                           |
|  | ARR STUDY AREA BOUNDARY         |  |                                   |  |                                    |  |                          |  |   |  |                           |
|  | DRILL ACCESS ROAD ID            |  |                                   |  |                                    |  |                          |  |   |  |                           |

NOTE: CUT ROADWAY WIDTHS VARY 12' TO 24'


 <b>Engineering Design Planning Construction Management</b> 304.507.8101    GPI.NET.COM	Greenman-Pedersen, Inc. 58 Mission Way, Suite 201 Scott Depot, WV 25560 Certificate of Authorization #C01145-00									<b>THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION</b> <b>DIVISION OF HIGHWAYS</b>  <b>OVERVIEW MAP</b>
<b>DESIGN BY: LAM</b> DATE: 12/2022	<b>CHECK BY: JDS</b> DATE: 12/2022	<b>DRAWN BY: KVM</b> DATE: 12/2022	<b>CHECK BY: JDS</b> DATE: 12/2022	<b>REVISION NUMBER</b>	<b>SHEET NUMBER</b>	<b>REVISION</b>	<b>DATE</b>	<b>BY</b>		



2-MAY-2023

PHASE 1 ACCESS ROAD FINAL CONDITIONS			
DRAINAGE BASIN	ACCESS ROAD TYPE	LENGTH (FT)	FINAL CONDITION
ROARING RUN	EXISTING	264	R-001 THROUGH R-019, R-022, MK-1 THROUGH MK-12 STABILIZED, SEEDED, AND/OR GRAVELED AS NEEDED
	RECONSTRUCTED	2289	STABILIZED AND RE-SEEDED
	NEW	3595	RECLAIMED TO APPROXIMATE ORIGINAL CONTOURS AND DISTURBANCE RE-SEEDED
	R-020, R-021, R-023 THROUGH R-027, R-043 THROUGH R-045, R-047 THROUGH R-049, R-051 THROUGH R-053, R-070, R-075, R-080, R-095, R-100, R-129, R-132, R-134, R-141 THROUGH R-156, T-001 THROUGH T-013, U5219-1 THROUGH U5219-10		
	EXISTING	662	STABILIZED, SEEDED, AND/OR GRAVELED AS NEEDED
SLIP HILL MILL RUN	RECONSTRUCTED	4487	STABILIZED AND RE-SEEDED
	NEW	6678	RECLAIMED TO APPROXIMATE ORIGINAL CONTOURS AND DISTURBANCE RE-SEEDED
			R-157 THROUGH R-180, R-182
BIG RUN	EXISTING	0	STABILIZED, SEEDED, AND/OR GRAVELED AS NEEDED
	RECONSTRUCTED	2255	STABILIZED AND RE-SEEDED
	NEW	6603	RECLAIMED TO APPROXIMATE ORIGINAL CONTOURS AND DISTURBANCE RE-SEEDED
TUB RUN	EXISTING	881	R-181, R-183 TO R-187 STABILIZED, SEEDED, AND/OR GRAVELED AS NEEDED
	RECONSTRUCTED	0	STABILIZED AND RE-SEEDED
	NEW	2120	RECLAIMED TO APPROXIMATE ORIGINAL CONTOURS AND DISTURBANCE RE-SEEDED
LONG RUN	B-600 THROUGH B-610, B-613, B-615, B-616, B-618, B-620, B-621, B-623, B-625, B-627, G-001 THROUGH G-007, LR-1 THROUGH LR-20, R-188 THROUGH R-203		
	EXISTING	9865	STABILIZED, SEEDED, AND/OR GRAVELED AS NEEDED
	RECONSTRUCTED	5784	STABILIZED AND RE-SEEDED
	NEW	11045	RECLAIMED TO APPROXIMATE ORIGINAL CONTOURS AND DISTURBANCE RE-SEEDED
SNYDER RUN			NONE
	EXISTING	1067	STABILIZED, SEEDED, AND/OR GRAVELED AS NEEDED
	RECONSTRUCTED	0	STABILIZED AND RE-SEEDED
	NEW	0	RECLAIMED TO APPROXIMATE ORIGINAL CONTOURS AND DISTURBANCE RE-SEEDED
MIDDLE RUN	B-611, B-612, B-614, B-617, B-619, B-622, B-624, B-626, B-628 THROUGH B-650, B-652, B-653		
	EXISTING	0	STABILIZED, SEEDED, AND/OR GRAVELED AS NEEDED
	RECONSTRUCTED	5647	STABILIZED AND RE-SEEDED
	NEW	6035	RECLAIMED TO APPROXIMATE ORIGINAL CONTOURS AND DISTURBANCE RE-SEEDED
NORTH FORK BLACKWATER RIVER	B-651, B-654 THROUGH B-680, B-683, NF-1 THROUGH NF-15, NF-18 THROUGH NF-31, B-811 THROUGH B-841		
	EXISTING	3063	STABILIZED, SEEDED, AND/OR GRAVELED AS NEEDED
	RECONSTRUCTED	6714	STABILIZED AND RE-SEEDED
	NEW	13318	RECLAIMED TO APPROXIMATE ORIGINAL CONTOURS AND DISTURBANCE RE-SEEDED
PENDLETON CREEK	B-681, B-682, B-684 THROUGH B-731, B-734A, B-736 THROUGH B-747, B-749, B-750, B-775 THROUGH B-810, SP-1 THROUGH SP-9, WV32-1 THROUGH WV32-16		
	EXISTING	4996	STABILIZED, SEEDED, AND/OR GRAVELED AS NEEDED
	RECONSTRUCTED	7811	STABILIZED AND RE-SEEDED
	NEW	23705	RECLAIMED TO APPROXIMATE ORIGINAL CONTOURS AND DISTURBANCE RE-SEEDED
BEAVER CREEK	B-748, B-751 THROUGH B-756, B-758, B-759, B-761, B-762, B-764, B-765, B-767, B-769 THROUGH B-774, DS-1 THROUGH DS-10		
	EXISTING	0	STABILIZED, SEEDED, AND/OR GRAVELED AS NEEDED
	RECONSTRUCTED	4572	STABILIZED AND RE-SEEDED
	NEW	2068	RECLAIMED TO APPROXIMATE ORIGINAL CONTOURS AND DISTURBANCE RE-SEEDED

WATERSHED	LOCATION	LENGTH (FT) / NO. OF PADS (EA)	SEEDING & MULCHING		COMPOST FILTER SOCKS	SMART FENCE AND SUPER SILT FENCE	SEED MIX TEMPORARY	SEED MIXTURE	STRAW MULCH	FERTILIZER	FIBER MATTING (IF APPLICABLE)	AGRICULTURAL LIMESTONE
			SF	ACRES	LF	LF	LB	LB	TON	TON	SY	TON
ROARING RUN	RECONSTRUCTED + NEW ROAD LENGTH (12' - 24' DISTURBED WIDTH)	5,884	65,417	1.50	5,884	0	51	201	12.00	2.70	0	12.00
	LAYDOWN AREAS (50'x100')	2	10,000	0.23	400	0	8	31	1.84	0.41	0	1.84
	DRILLING PADS (20'X30' TYP.)	31	16,932	0.39	4,650	0	14	53	3.12	0.70	0	3.12
SLIP HILL MILL RUN	RECONSTRUCTED + NEW ROAD LENGTH (12' - 24' DISTURBED WIDTH)	11,165	129,709	2.98	11,165	0	102	400	23.84	5.36	1,476	23.84
	LAYDOWN AREAS (50'x100')	1	5,000	0.11	250	0	4	15	0.88	0.20	0	0.88
	DRILLING PADS (20'X30' TYP.)	49	27,410	0.63	7,350	0	22	85	5.04	1.13	0	5.04
BIG RUN	RECONSTRUCTED + NEW ROAD LENGTH (12' - 24' DISTURBED WIDTH)	8,858	98,005	2.25	8,858	0	77	302	18.00	4.05	0	18.00
	LAYDOWN AREAS (50'x100')	1	5,000	0.11	200	0	4	15	0.88	0.20	0	0.88
	DRILLING PADS (20'X30' TYP.)	25	15,171	0.35	3,750	0	12	47	2.80	0.63	0	2.80
TUB RUN	RECONSTRUCTED + NEW ROAD LENGTH (12' - 24' DISTURBED WIDTH)	2,120	22,359	0.51	2,120	0	18	69	4.08	0.92	0	4.08
	LAYDOWN AREAS (50'x100')	0	0	0.00	0	0	0	0	0.00	0.00	0	0.00
	DRILLING PADS (20'X30' TYP.)	8	4,749	0.11	1,200	0	4	15	0.88	0.20	0	0.88
LONG RUN	RECONSTRUCTED + NEW ROAD LENGTH (12' - 24' DISTURBED WIDTH)	16,829	193,312	4.44	16,829	0	151	595	35.52	7.99	1,186	35.52
	LAYDOWN AREAS (50'x100')	2	10,000	0.23	400	0	8	31	1.84	0.41	0	1.84
	DRILLING PADS (20'X30' TYP.)	59	34,243	0.79	8,850	0	27	106	6.32	1.42	0	6.32
MIDDLE RUN	RECONSTRUCTED + NEW ROAD LENGTH (12' - 24' DISTURBED WIDTH)	11,682	129,171	2.97	11,682	0	101	398	23.76	5.35	0	23.76
	LAYDOWN AREAS (50'x100')	1	5,000	0.11	150	0	4	15	0.88	0.20	0	0.88
	DRILLING PADS (20'X30' TYP.)	34	20,069	0.46	5,100	0	16	62	3.68	0.83	0	3.68
NORTH FORK BLACKWATER RIVER	RECONSTRUCTED + NEW ROAD LENGTH (12' - 24' DISTURBED WIDTH)	20,032	263,285	6.04	20,032	0	206	810	48.32	10.87	7,233	48.32
	LAYDOWN AREAS (50'x100')	3	15,000	0.34	600	0	12	46	2.72	0.61	0	2.72
	DRILLING PADS (20'X30' TYP.)	84	48,147	1.11	12,600	0	38	149	8.88	2.00	0	8.88
PENDLETON CREEK	RECONSTRUCTED + NEW ROAD LENGTH (12' - 24' DISTURBED WIDTH)	31,516	355,825	8.17	31,516	0	278	1,095	65.36	14.71	0	65.36
	LAYDOWN AREAS (50'x100')	5	25,000	0.57	1,050	0	20	77	4.56	1.03	0	4.56
	DRILLING PADS (20'X30' TYP.)	109	65,381	1.50	18,600	0	51	201	12.00	2.70	0	12.00
BEAVER CREEK	RECONSTRUCTED + NEW ROAD LENGTH (12' - 24' DISTURBED WIDTH)	6,640	69,661	1.60	6,640	0	55	215	12.80	2.88	0	12.80
	LAYDOWN AREAS (50'x100')	1	5,000	0.11	100	0	4	15	0.88	0.20	0	0.88
	DRILLING PADS (20'X30' TYP.)	30	18,761	0.43	4,500	0	15	58	3.44	0.77	0	3.44
TOTALS			1,657,607	38.04	184,476	0	1302	5106	304.32	68.47	9,895	304.32

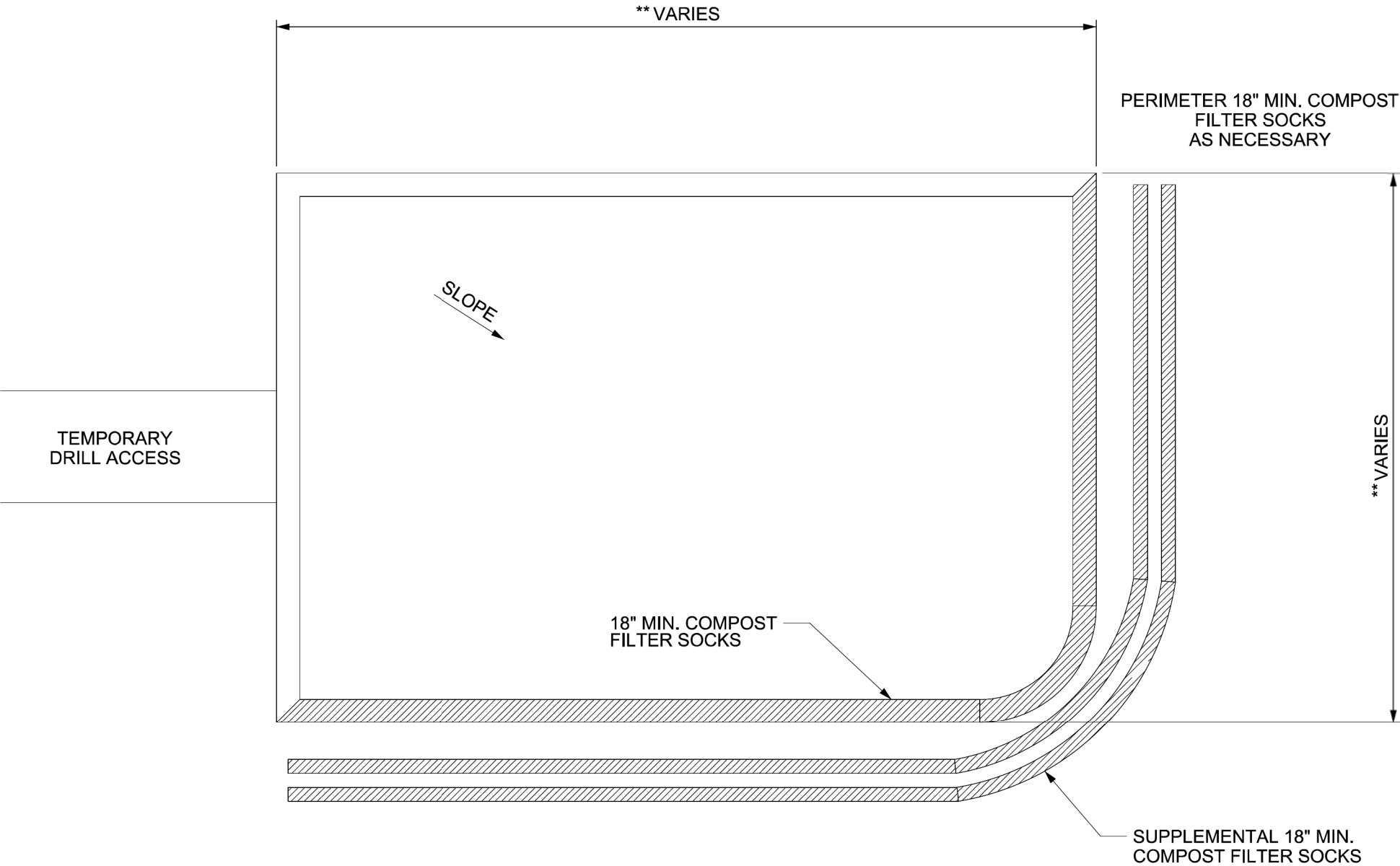
 <b>GPI</b> Engineering Design Planning Construction Management	Greenman-Pedersen, Inc. 58 Mission Way, Suite 201 Scott Depot, WV 25560 Certificate of Authorization #C01145-00								
DESIGN BY: ADB	CHECK BY: ASC	DRAWN BY: ADB	CHECK BY: ASC	REVISION	SHEET				
DATE: 3/20/23	DATE: 3/20/23	DATE: 3/20/23	DATE: 3/20/23	NUMBER	NUMBER				BY

**THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
QUANTITIES SUMMARY  
PHASE 1**





Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W.V.	08	X347-H-55.68 00	NHPP 0484(292)	2023	TUCKER	12	51



TEMPORARY DRILL ACCESS PLAN VIEW

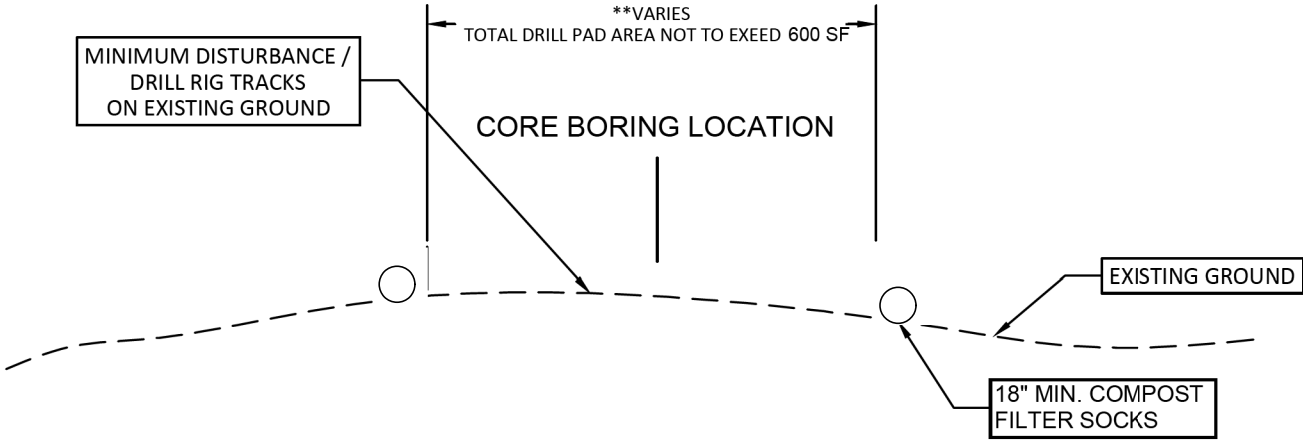
COMPOST FILTER SOCKS TO BE PLACED ALONG THE DOWNSLOPE SIDE OF PAD  
\*\*TOTAL DRILL PAD AREA NOT TO EXCEED 600 SF

SCALE:  
N.T.S.

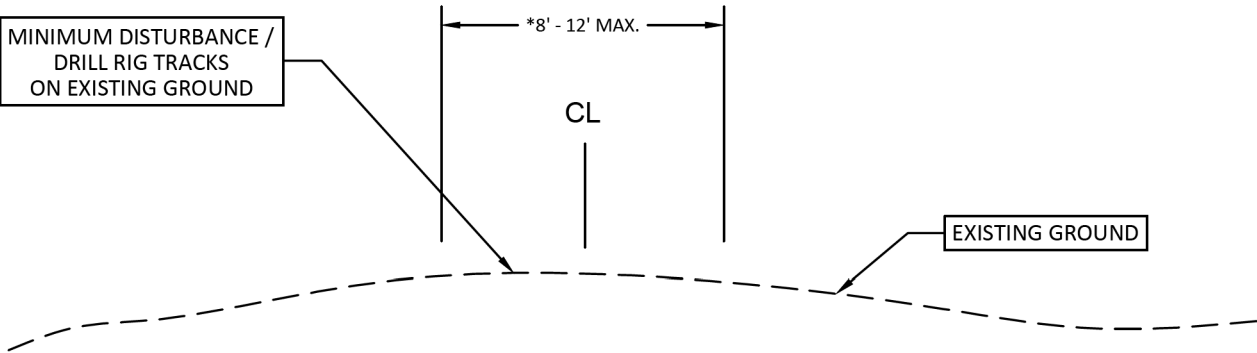
<b>GPI</b>		Engineering Design Planning Construction Management		Greenman-Pedersen, Inc. 58 Mission Way, Suite 201 Scott Depot, WV 25560 Certificate of Authorization #C01145-00							
DESIGN BY:	ADB	CHECK BY:	ASC	DRAWN BY:	ADB	CHECK BY:	ASC	REVISION	SHEET		
DATE:	3/2023	DATE:	3/2023	DATE:	3/2023	DATE:	3/2023	NUMBER	NUMBER	REVISION	DATE BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
**TEMPORARY DRILL SITE  
DETAIL**

Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W.V.	08	X347-H-55.68 00	NHPP 0484(292)	2023	TUCKER	13	51

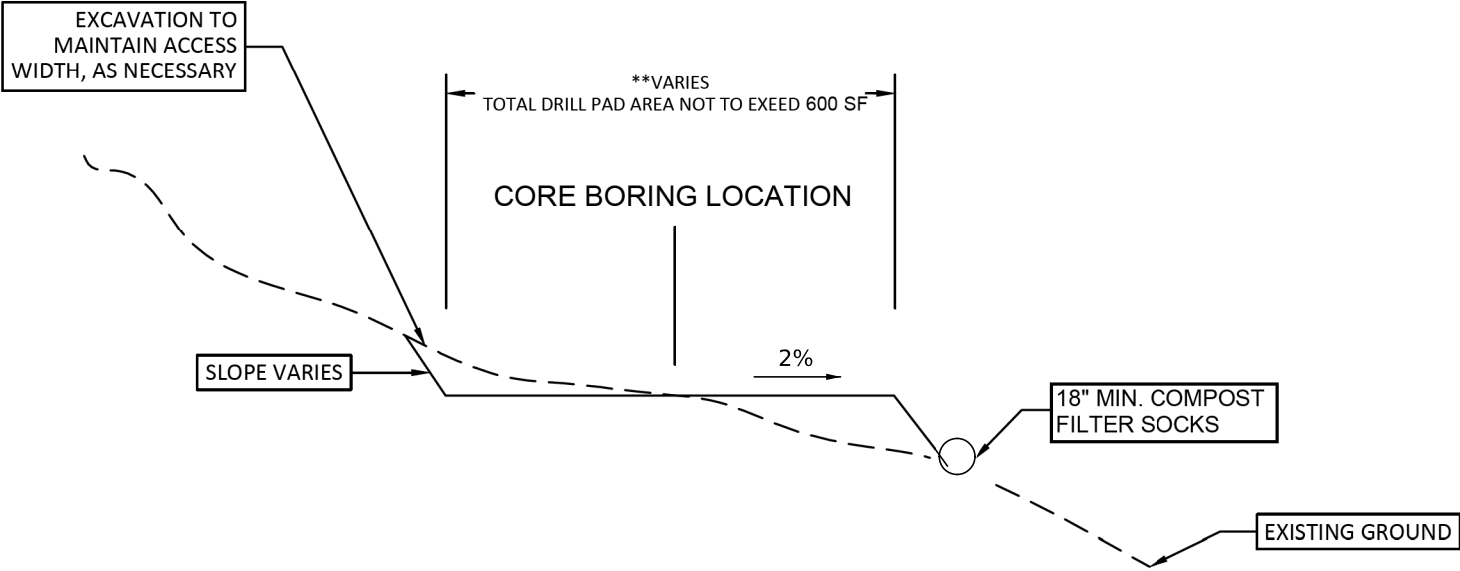


TEMPORARY DRILL SITE ON EXISTING GROUND

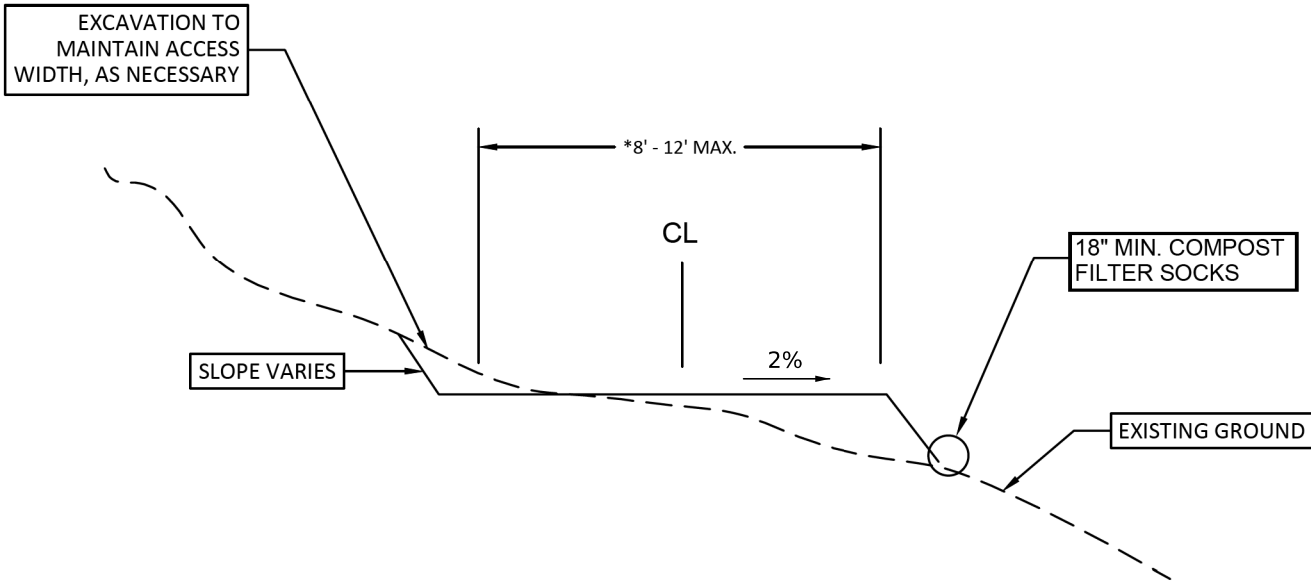


TEMPORARY DRILL ACCESS ON EXISTING GROUND

\* ROAD WIDTH SHALL BE MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE.



TEMPORARY DRILL SITE ON SLOPING EXISTING GROUND



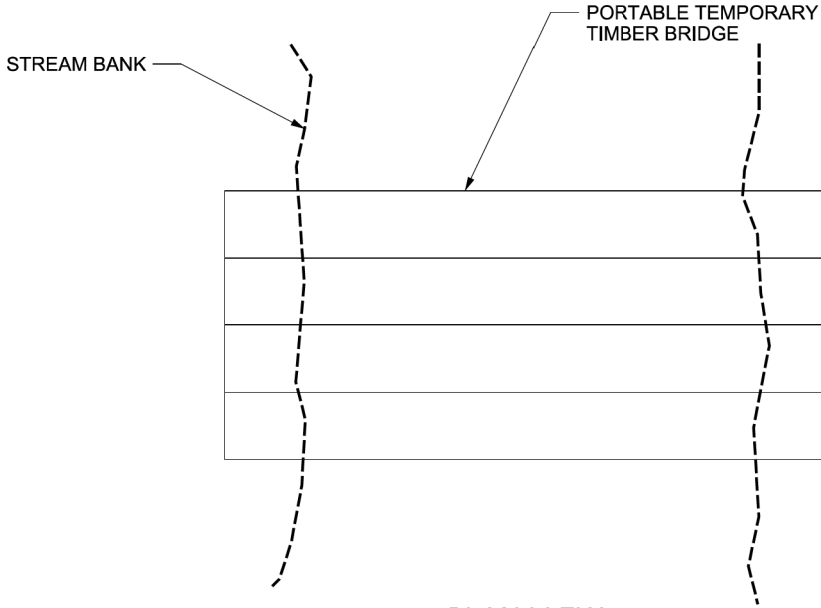
TEMPORARY DRILL ACCESS ON SLOPING EXISTING GROUND

\* ROAD WIDTH SHALL BE MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE.

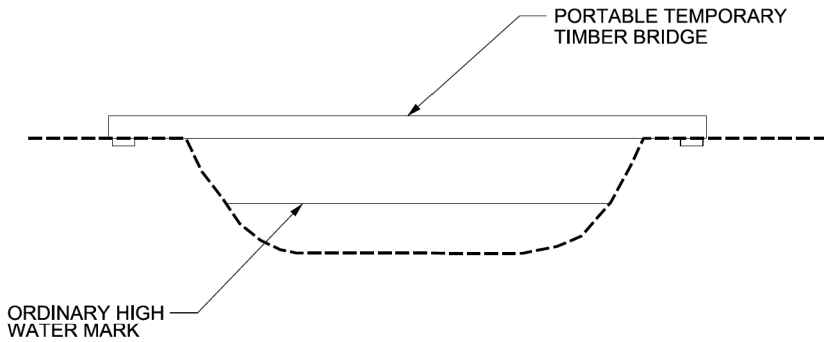
SCALE:  
N.T.S.

<div><div><div>GPI</div><div>Engineering Design Planning Construction Management</div></div><div><div>Greenman-Pedersen, Inc. 58 Mission Way, Suite 201 Scott Depot, WV 25560 Certificate of Authorization #C01145-00</div></div></div>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W.V.	08	X347-H-55.68 00	NHPP 0484(292)	2023	TUCKER	14	51



PLAN VIEW



ELEVATION VIEW

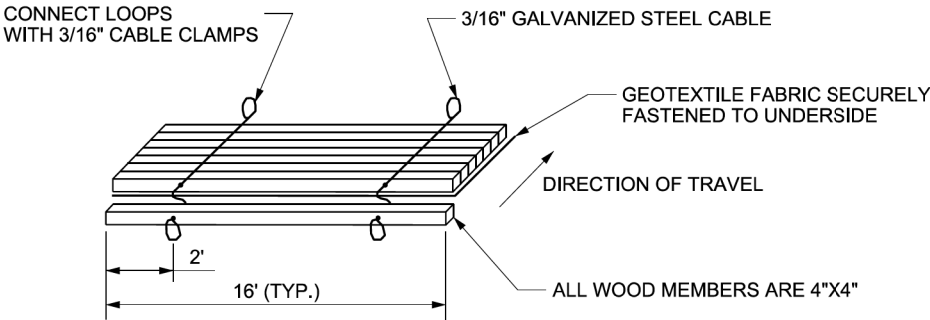
NOTES:

\*PORTABLE TIMBER BRIDGE SHOULD CROSS STREAM AT A 90-DEGREE ANGLE.

PORTABLE TIMBER BRIDGE MUST BE PLACED ABOVE ORDINARY HIGH WATER AND NO DISTURBANCE BELOW WILL BE ALLOWED.

ADDITIONAL DETAILS CAN BE FOUND IN FOREST SERVICE PUBLICATION "PORTABLE TIMBER BRIDGES AS A BEST MANAGEMENT PRACTICE IN FOREST MANAGEMENT".

PORTABLE TEMPORARY BRIDGE FOR STREAM CROSSING



NOTES:

IF TEMPORARY TRENCH DEWATERING IS NECESSARY, ALL PUMPED WATER MUST PASS THROUGH A FILTER BAG. THE FILTER BAG MUST BE SURROUNDED BY A FILTER SOCK AND PUMPED WATER SHOULD NOT DRAIN AWAY FROM THE WETLAND.

WOOD MAT WIDTH MAY BE INCREASED IF WIDER EQUIPMENT IS USED.

WOOD MATTING REQUIRED IN ALL WETLAND AREAS.

TEMPORARY WOOD MAT FOR WETLAND CROSSING

SCALE:  
N.T.S.

**GPI**

Engineering  
Design  
Planning  
Construction Management

Greenman-Pedersen, Inc.

58 Mission Way, Suite 201  
Scott Depot, WV 25560

Certificate of Authorization #C01145-00

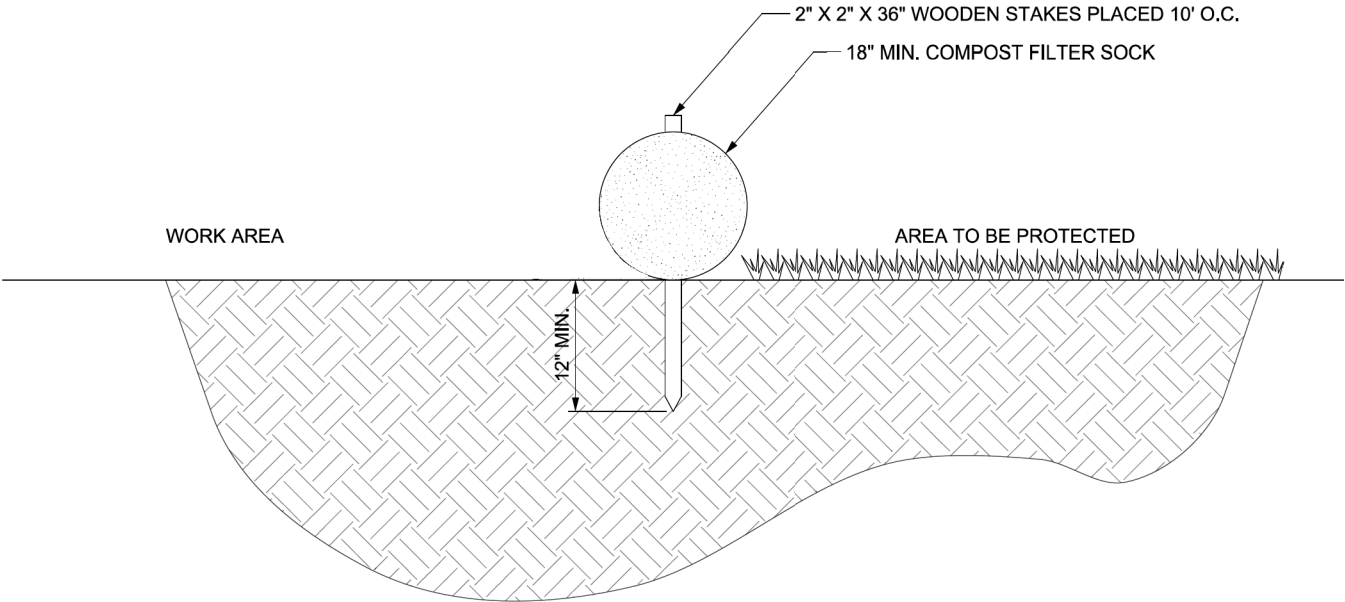
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THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

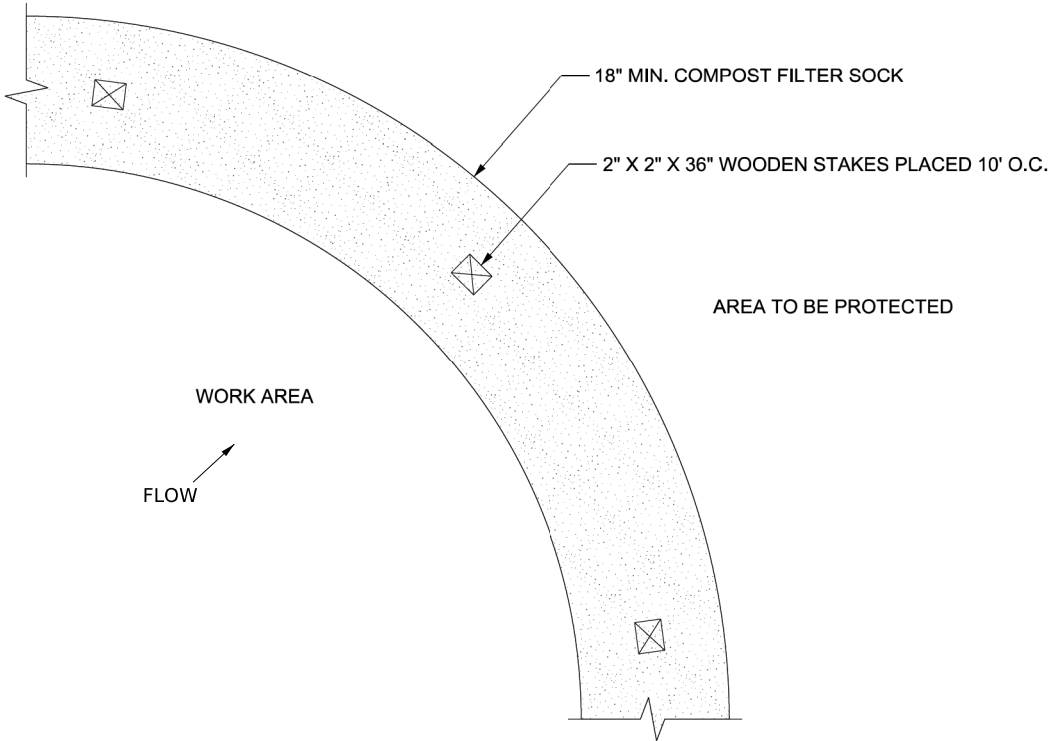
TEMPORARY STREAM  
AND WETLAND CROSSING



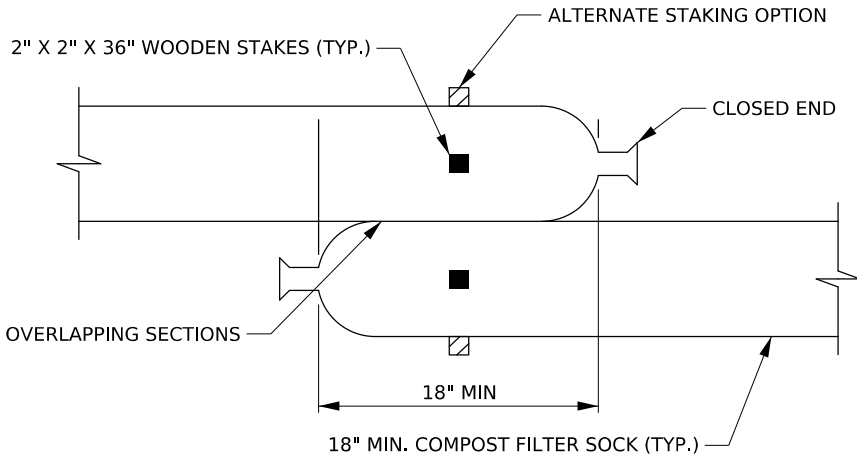
Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W.V.	08	X347-H-55.68 00	NHPP 0484(292)	2023	TUCKER	15	51



SECTION



PLAN



OVERLAP DETAIL

- NOTES:
1. ALL MATERIAL TO MEET MANUFACTURER'S SPECIFICATIONS.
  2. FILTER MEDIA FILL TO MEET APPLICATION/MANUFACTURER'S REQUIREMENTS.
  3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

COMPOST FILTER SOCKS

SCALE:  
N.T.S.

**GPI**

Engineering  
Design  
Planning  
Construction Management

Greenman-Pedersen, Inc.

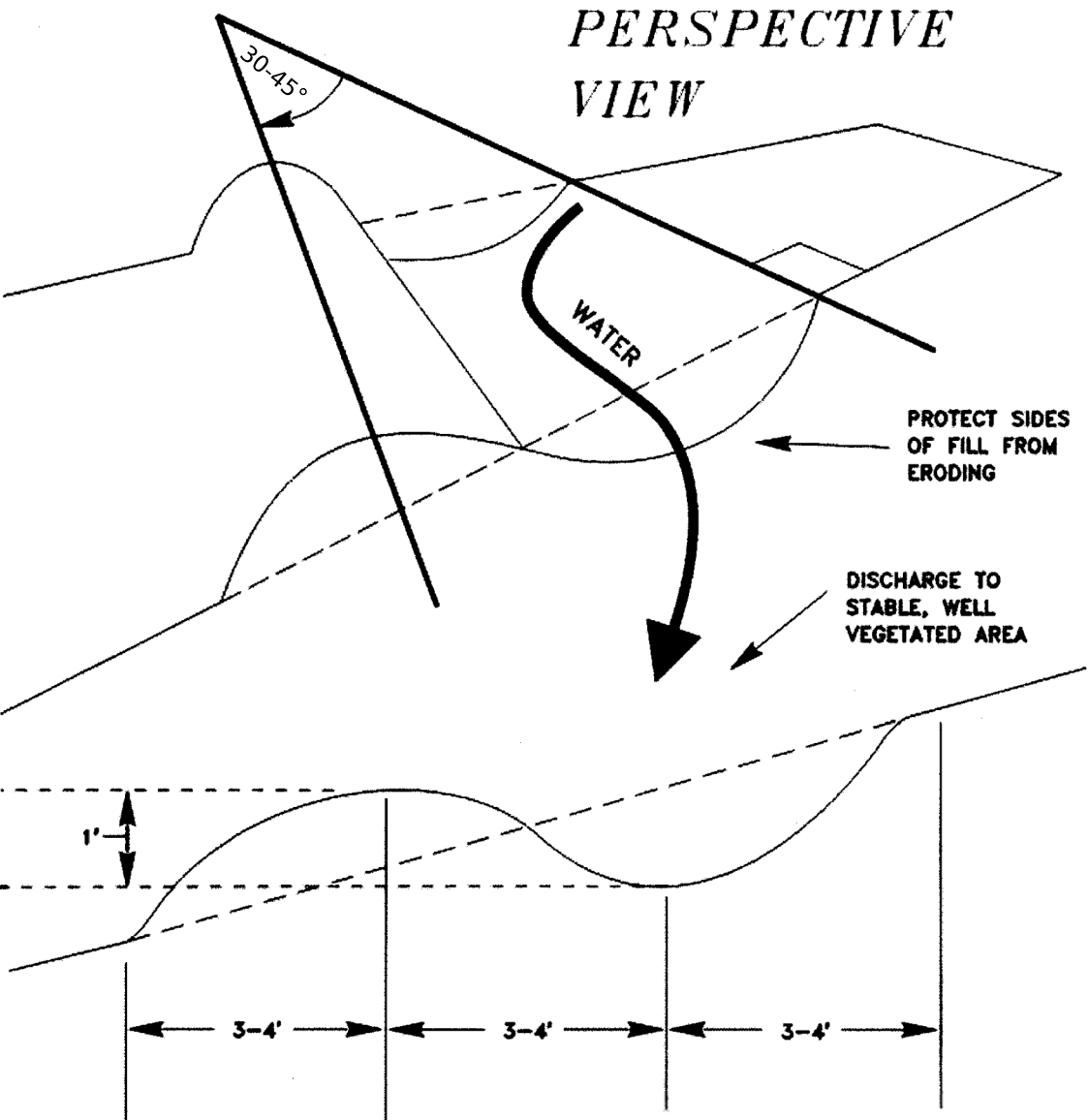
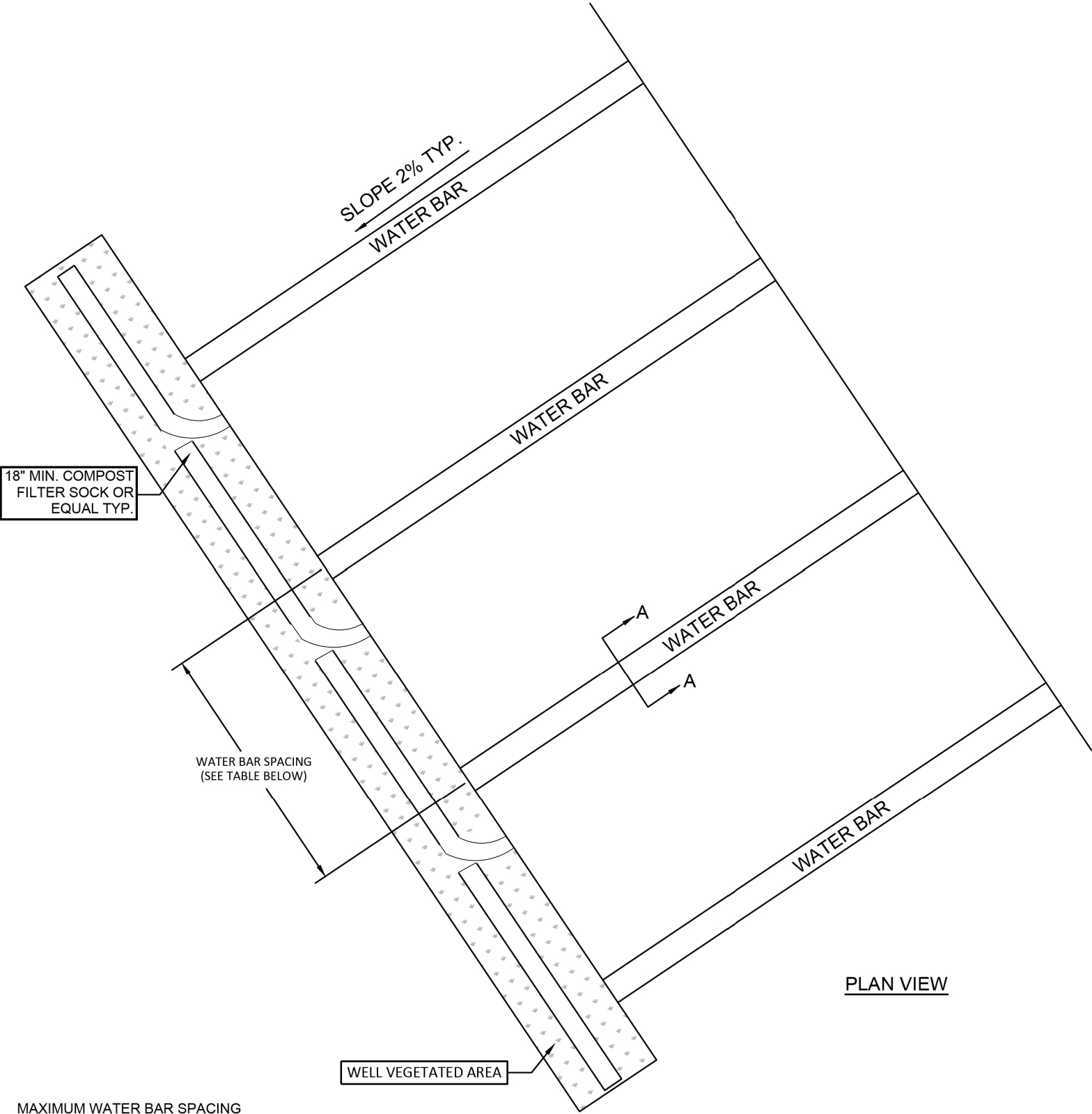
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THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

COMPOST FILTER SOCK DETAIL



- NOTES:
1. WATER BARS SHALL BE CONSTRUCTED TO INTERCEPT AND DIVERT WATER OFF THE ACCESS ROADS BUT SHOULD NEVER DAM THE WATER.
  2. WATER BARS SHALL BE CONSTRUCTED AT A 30 TO 45 DEGREE ANGLE ACROSS THE ENTIRE ACCESS ROAD ON A 2% DOWNHILL SLOPE IN THE LOCATIONS SHOWN ON THE PLANS.
  3. WATER BARS SHALL BE SPACED AT INCREMENTS SHOWN ON THE PLANS AND IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE WEST VIRGINIA DIVISION OF FORESTRY, WEST VIRGINIA SILVICULTURAL BEST MANAGEMENT PRACTICES FOR CONTROLLING SOIL EROSION AND SEDIMENTATION FROM LOGGING OPERATIONS.
  4. WATER BARS SHOULD DISCHARGE TO FULLY OPEN, WELL-VEGETATED AREAS.

MAXIMUM WATER BAR SPACING	
PERCENT SLOPE	SPACING(FT)
<5	100
5-20	50
>20	40

SCALE:  
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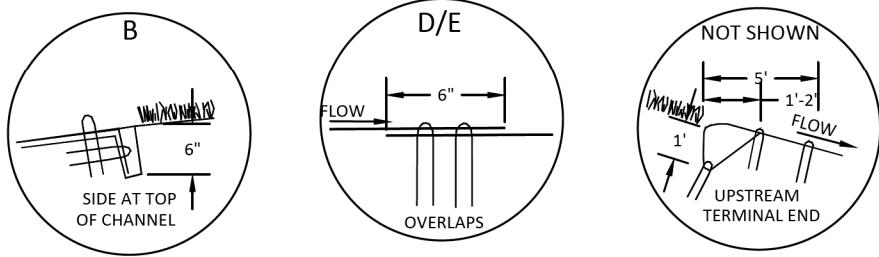
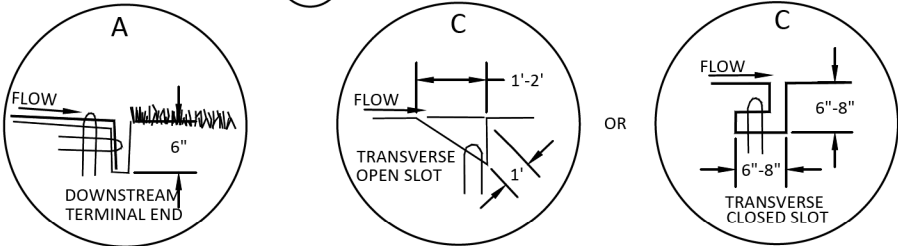
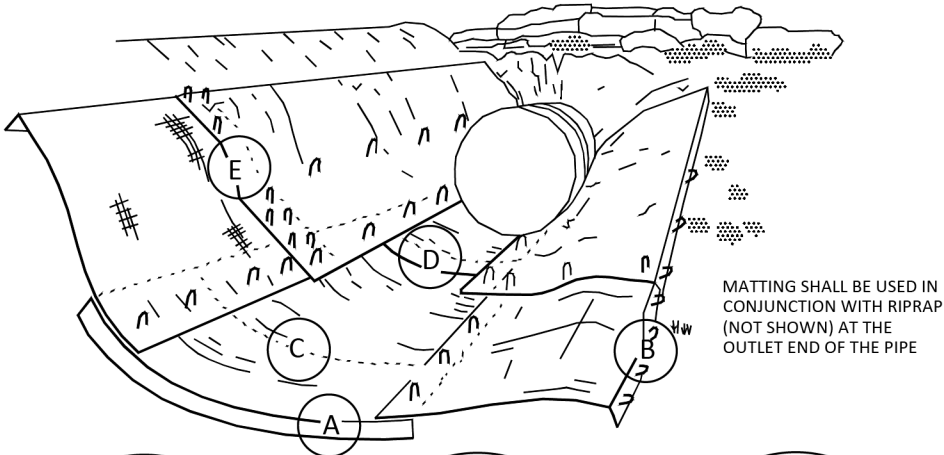
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THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**WATER BAR DETAIL**

ROLLED EROSION CONTROL PRODUCTS (RECP)

GENERAL PROCEDURE, PREPARE A STABLE AND FIRM SOIL SURFACE FREE OF ROCKS AND OTHER OBSTRUCTIONS. APPLY SOIL AMENDMENTS AS NECESSARY TO PREPARE SEEDBED. APPLY SEED AND FERTILIZER IN ACCORDANCE WITH THE PERMANENT SEEDING SPECIFICATION. TYPICALLY, RECPS ARE UNROLLED PARALLEL TO THE PRIMARY DIRECTION OF FLOW. ENSURE THE PRODUCT MAINTAINS INTIMATE CONTACT WITH THE SOIL SURFACE OVER THE ENTIRETY OF THE INSTALLATION. DO NOT STRETCH OR ALLOW MATERIAL TO BRIDGE OVER SURFACE INCONSISTENCIES. STAPLE/STAKE RECPS TO SOIL SUCH THAT EACH STAPLE/STAKE IS FLUSH WITH UNDERLYING SOIL. INSTALL ANCHOR TRENCHES, SEAMS AND TERMINAL ENDS AS SPECIFIED.



CHANNEL INSTALLATIONS: CONSTRUCT AN ANCHOR TRENCH AT THE BEGINNING OF THE CHANNEL ACROSS ITS ENTIRE WIDTH ACCORDING TO SECTION (A)(2) ABOVE. FOLLOW THE MANUFACTURER'S INSTALLATION GUIDELINES IN CONSTRUCTING ADDITIONAL ANCHOR TRENCHES OR STAKE/STAPLE CHECK SLOTS AT INTERVALS ALONG THE CHANNEL REACH AND AT THE TERMINAL END OF THE CHANNEL, ACCORDING TO PARAGRAPH (A) ABOVE RESPECTIVELY. UNROLL RECPS DOWN THE CENTER OF THE CHANNEL IN THE PRIMARY WATER FLOW DIRECTION. SECURELY FASTEN ALL RECPS TO THE SOIL BY INSTALLING STAKES/STAPLES AT A MINIMUM RATE OF 2/YD<sup>2</sup>. SIGNIFICANTLY HIGHER ANCHOR RATES AND LONGER STAKES/STAPLES MAY BE NECESSARY IN SANDY, LOOSE, OR WET SOILS AND IN SEVERE APPLICATIONS. FOR ADJACENT AND CONSECUTIVE ROLLS OF RECPS FOLLOW SEAMING INSTRUCTIONS DETAILED IN SECTION (B) ABOVE. ALL TERMINAL ENDS OF THE RECPS MUST BE ANCHORED USING ONE OF THE METHODS DETAILED IN SECTION (C) ABOVE.

RECP DITCH LINING

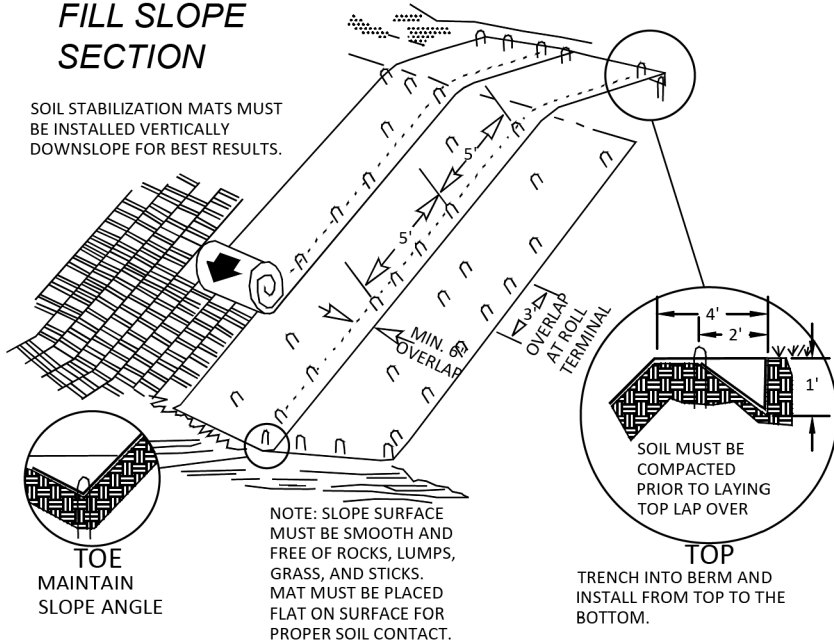
INSTALL RECPS AFTER APPLICATION OF SEED, FERTILIZER, MULCHES (IF NECESSARY) AND OTHER NECESSARY SOIL AMENDMENTS, UNLESS SOIL IN-FILLING OF THE TRM IS REQUIRED. FOR TRMS OF SOIL IN-FILLING, INSTALL TRM, APPLY SEED AND OTHER SOIL AMENDMENTS, AND LIGHTLY BRUSH OR RAKE 0.3 TO 0.7 IN. OF TOPSOIL INTO TRM MATRIX TO FILL THE PRODUCT THICKNESS. IF IN-FILLING WITH A HYDRAULICALLY-APPLIED MATRIX OR MEDIUM IS REQUIRED; INSTALL TRM, THEN INSTALL HYDRAULICALLY-APPLIED MATRIX OR MEDIUM AT THE MANUFACTURER'S SUGGESTED APPLICATION RATE.

APPLY MULCH CONTROL NETTINGS (MCNs) (MATERIALS TYPE 1.A., 2.A., 3.A.) IMMEDIATELY AFTER DRY MULCH APPLICATION.

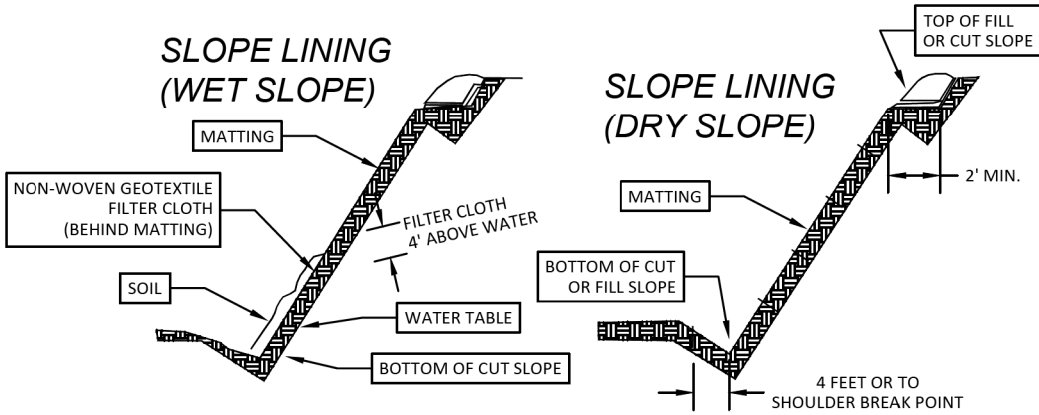
WITH ANY RECP INSTALLATION, ENSURE SUFFICIENT STAPLES TO RESIST UPLIFT FROM HYDRAULICS, WIND, MOWERS, AND FOOT TRAFFIC. FOR THE MOST EFFECTIVE INSTALLATION OF RECPS, IT IS RECOMMENDED TO USE STAKE/STAPLE PATTERNS AND DENSITIES AS RECOMMENDED BY THE MANUFACTURER.

FILL SLOPE SECTION

SOIL STABILIZATION MATS MUST BE INSTALLED VERTICALLY DOWNSLOPE FOR BEST RESULTS.



SLOPE LINING (WET SLOPE)



SLOPE INSTALLATIONS: AT THE TOP OF SLOPE, ANCHOR THE RECPS ACCORDING TO ONE OF THE METHODS DETAILED IN SECTIONS (A) ABOVE. SECURELY FASTEN ALL RECPS TO THE SOIL BY INSTALLING STAKES/STAPLES AT A MINIMUM RATE OF 1.5/YD<sup>2</sup>. FOR THE MOST EFFECTIVE RECP INSTALLATION, USE STAKE/STAPLE PATTERNS AND DENSITIES AS RECOMMEND BY THE MANUFACTURER. FOR ADJACENT AND CONSECUTIVE ROLLS OF RECPS, FOLLOW SEAMING INSTRUCTIONS DETAILED IN SECTION (B) ABOVE. THE TERMINAL END OF THE RECPS INSTALLATION MUST BE ANCHORED USING ONE OF THE METHODS DETAILED IN SECTIONS (C) ABOVE.

RECP SLOPE LINING (ECB)

- (A) ANCHOR TRENCHES = UTILIZE ONE OF THE METHODS DETAILED BELOW FOR INITIAL ANCHORING OF RECPS:
1. STAPLES. INSTALL THE RECPS 3 FT. BEYOND THE SHOULDER OF THE SLOPE ONTO FLAT FINAL GRADE. SECURE ROLL END WITH A SINGLE ROW OF STAKES/STAPLES ON 1 FT. CENTERS.
  2. ANCHOR TRENCH. EXCAVATE A 6 IN. BY 6 IN. (150 MM BY 150 MM) ANCHOR TRENCH. EXTEND THE UPSLOPE TERMINAL END OF THE RECPS 3 FT. PAST THE ANCHOR TRENCH. USE STAKES OR STAKES TO FASTEN THE PRODUCT INTO THE BOTTOM OF THE ANCHOR TRENCH ON 1 FT. CENTERS. BACKFILL THE TRENCH AND COMPACT THE SOIL INTO THE ANCHOR TRENCH. APPLY SEED AND ANY NECESSARY SOIL AMENDMENTS TO THE COMPACTED SOIL AND COVER WITH REMAINING 1 FT. TERMINAL END OF THE RECPS. SECURE TERMINAL END OF RECPS A SINGLE ROW OF STAKES OR STAPLES ON 1 FT. CENTERS.
  3. CHECK SLOT. CONSTRUCT A STAKE/STAPLE CHECK SLOT ALONG THE TOP EDGE OF THE RECPS BY INSTALLING TWO ROWS OF STAGGERED STAKES/STAPLES 4 IN. APART ON 4 IN. CENTERS.

- (B) SEAMS = UTILIZE ONE OF THE METHODS DETAILED BELOW FOR SEAMING OF RECPS:
1. ADJACENT SEAMS. OVERLAP EDGES OF ADJACENT RECPS BY 6 IN. OR BY ABUTTING PRODUCTS AS DEFINED BY MANUFACTURER. USE A SUFFICIENT NUMBER OF STAKES OR STAPLES TO PREVENT SEAM OR ABUTTED ROLLS FROM SEPARATING.
  2. CONSECUTIVE ROLLS. SHINGLE AND OVERLAP CONSECUTIVE ROLLS 6 IN. IN THE DIRECTION OF FLOW, I.E. COVER THE DOWNSLOPE ROLL WITH THE NEXT UPSLOPE ROLL.
  3. CHECK SEAM. CONSTRUCT A STAKE/STAPLE CHECK SEAM ALONG THE TOP EDGE OF RECPS FOR SLOPE APPLICATION AND AT SPECIFIED INTERVALS IN A CHANNEL BY INSTALLING TWO STAGGERED ROWS OF STAKES/STAPLES 4 IN. APART ON 4 IN. CENTERS.

- (C) TERMINAL ENDS = UTILIZE ONE OF THE METHODS DETAILED BELOW FOR ALL TERMINAL ENDS OF RECPS:
1. STAPLES. INSTALL THE RECPS 3 FT. BEYOND THE END OF THE CHANNEL AND SECURE END WITH A SINGLE ROW OF STAKES/STAPLES ON 1 FT. CENTERS. STAKES/STAPLES FOR SECURING RECPS TO THE SOIL ARE TYPICALLY 8 IN. LONG. USE LONGER STAPLES IN SANDY SOILS.
  2. ANCHOR TRENCH. EXCAVATE A 6 IN. BY 6 IN. ANCHOR TRENCH. EXTEND THE TERMINAL END OF THE RECPS 3 FT. PAST THE ANCHOR TRENCH. USE STAKES OR STAPLES TO FASTEN THE PRODUCT INTO THE BOTTOM OF THE ANCHOR TRENCH ON 1 FT. CENTERS. BACKFILL THE TRENCH AND COMPACT THE SOIL INTO THE ANCHOR TRENCH. APPLY SEED AND ANY NECESSARY SOIL AMENDMENTS TO THE COMPACTS SOIL AND COVER WITH REMAINING 1 FT. TERMINAL END OF THE RECPS. SECURE TERMINAL END OF RECPS WITH A SINGLE ROW OF STAKES OR STAPLES ON 1 FT. CENTERS.
  3. CHECK SLOT. CONSTRUCT A STAKE/STAPLE CHECK SLOT ALONG THE TERMINAL END OF THE RECPS BY INSTALLING TWO ROWS OF STAGGERED STAKES/STAPLES 4 IN. APART ON 4 IN. CENTERS.

SCALE:  
N.T.S.

<b>GPI</b>		Engineering Design Planning Construction Management	Greenman-Pedersen, Inc. 58 Mission Way, Suite 201 Scott Depot, WV 25560 Certificate of Authorization #C01145-00
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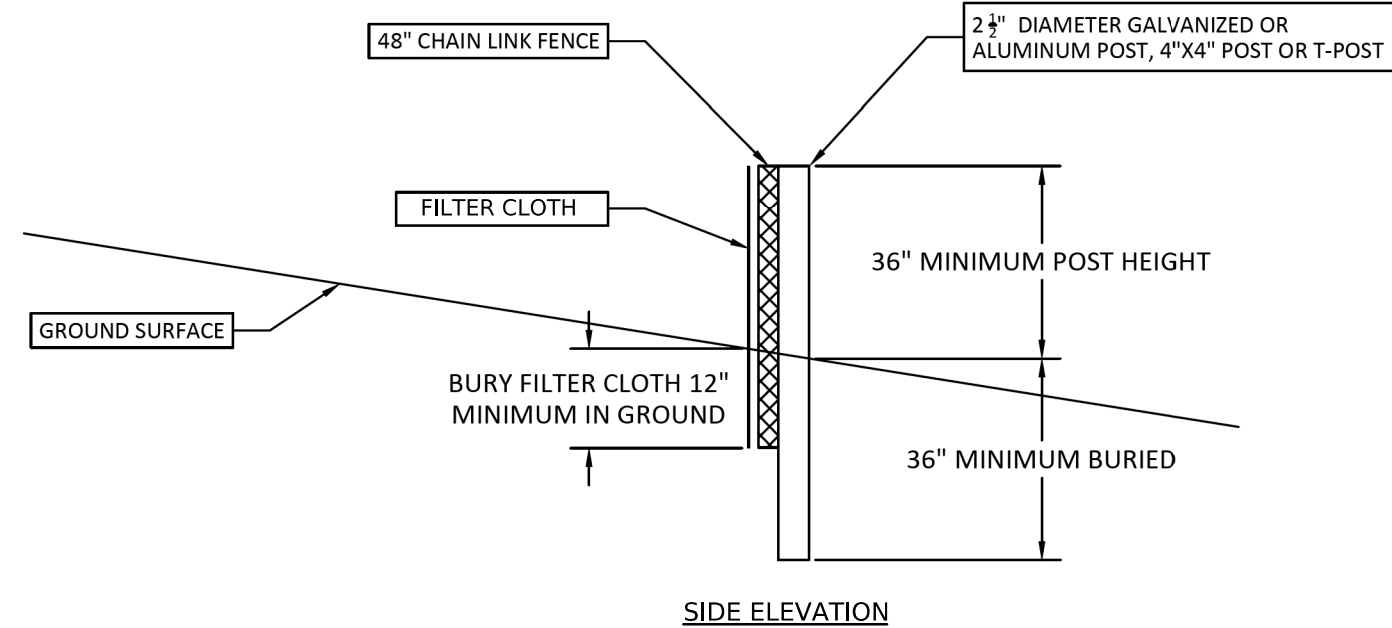
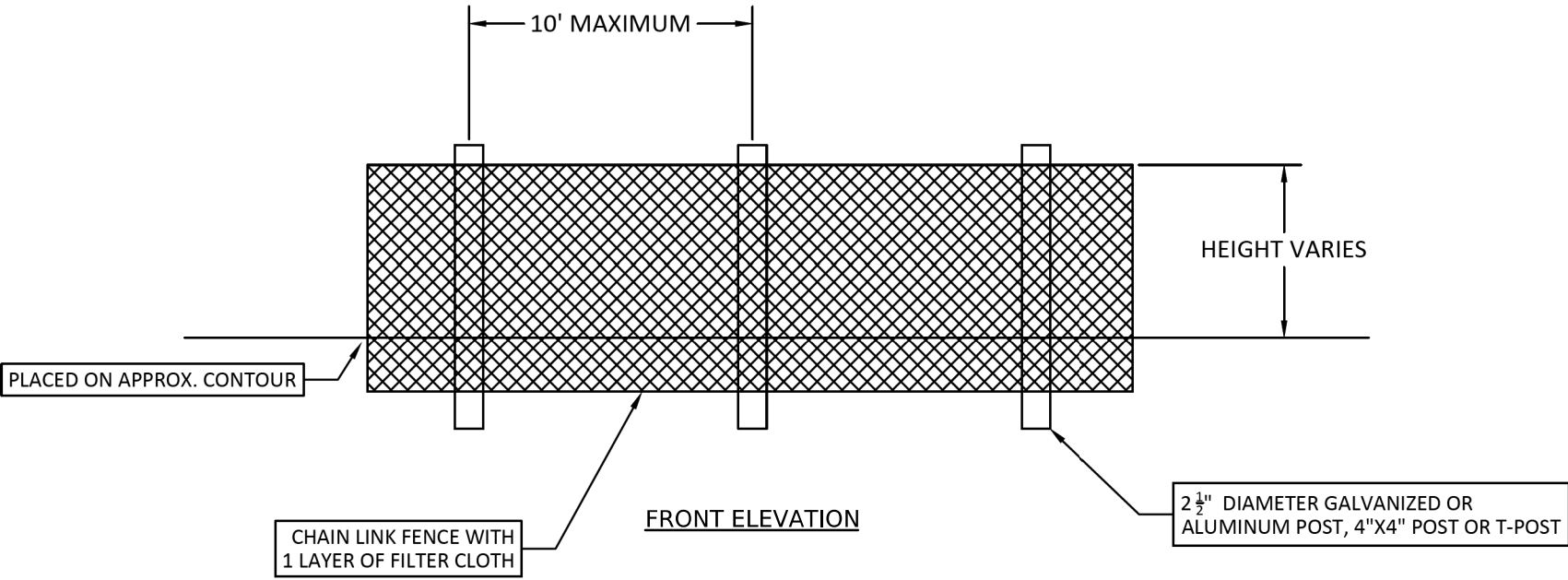
Table 3.13.1 ECTC STANDARD SPECIFICATION FOR TEMPORARY ROLLED EROSION CONTROL PRODUCTS						
For use where natural vegetation alone will provide permanent erosion protection						
ULTRA SHORT TERM - Typically 3 month functional longevity.			SLOPE APPLICATION*		CHANNEL APPLICATION*	MINIMUM
TYPE	PRODUCT DESCRIPTION	MATERIAL COMPOSITION	MAX. GRADIENT	C FACTOR <sup>2,5</sup>	MAX. SHEAR STRESS <sup>3,4,6</sup>	TENSILE STRENGTH <sup>1</sup>
1.A	Mulch Control Net	A photo degradable synthetic mesh or woven biodegradable natural fiber netting	5:1 (H:V)	≤ 0.10 @ 5:1	0.25 lbs/ft <sup>2</sup> (12 Pa)	5 lbs/ft (0.073 kN/m)
1.B	Netless Rolled Erosion Control Blanket	Natural and/or polymer fibers mechanically interlocked and/or chemically adhered together to form a RECP.	4:1 (H:V)	≤ 0.10 @ 4:1	0.5 lbs/ft <sup>2</sup> (24 Pa)	5 lbs/ft (0.073 kN/m)
1.C	Single-net Erosion Control Blankets & Open Weave Textiles	Processed degradable natural and/or polymer fibers mechanically bound together by a single rapidly degrading, synthetic or natural fiber netting or an open weave textile of processed rapidly degrading natural polymer yarns or twines woven into a continuous matrix.	3:1 (H:V)	≤ 0.15 @ 3:1	1.5 lbs/ft <sup>2</sup> (72 Pa)	50 lbs/ft (0.73 kN/m)
1.D	Double-net Erosion Control Blankets	Processed degradable synthetic mesh or woven biodegradable natural fiber nettings.	2:1 (H:V)	≤ 0.20 @ 2:1	1.75 lbs/ft <sup>2</sup> (84 Pa)	75 lbs/ft (1.09 kN/m)
SHORT TERM - Typical 12 month functional longevity.						
2.A	Mulch Control Nets	A photodegradable synthetic mesh or woven biodegradable natural fiber netting.	5:1 (H:V)	≤ 0.10 @ 5:1	0.25 lbs/ft <sup>2</sup> (12 Pa)	5 lbs/ft (0.073 kN/m)
2.B	Netless Rolled Erosion Control Blanket	Natural and/or polymer fibers mechanically interlocked and/or chemically adhered together to fom a RECP.	4:1 (H:V)	≤ 0.10 @ 4:1	0.5 lbs/ft <sup>2</sup> (24 Pa)	5 lbs/ft (0.073 kN/m)
2.C	Single-net Erosion Control Blankets & Open Weave Textiles	An erosion control blanket composed of processed degradable natural or polymer fibers mechanically bound together by a single degradable synthetic or natural fiber netting to form a continuous matrix or an open weave textile composed of processed degradable natural or polymer yarns or twines woven into a continuous matrix.	3:1 (H:V)	≤ 0.15 @ 3:1	1.5 lbs/ft <sup>2</sup> (72 Pa)	50 lbs/ft (0.73 kN/m)
2.D	Double-net Erosion Control Blankets	Processed degradable natural and/or polymer fibers mechanically bound together between two degradable, synthetic or natural fiber nettings.	2:1 (H:V)	≤ 0.20 @ 2:1	1.75 lbs/ft <sup>2</sup> (84 Pa)	75 lbs/ft (1.09 kN/m)
EXTENDED TERM - Typical 24 month functional longevity						
3.A	Mulch Control Nets	A slow degrading synthetic mesh or woven natural fiber netting.	5:1 (H:V)	≤ 0.10 @ 5:1	0.25 lbs/ft <sup>2</sup> (12 Pa)	25 lbs/ft (0.36 kN/m)
3.B	Erosion Control Blankets & Open Weave Textiles	An erosion control blanket composed of processed slow degrading natural or polymer fibers mechanically bound together between two slow degrading synthetic or natural fiber nettings to form a continuous matrix or an open weave textile composed of processed slow degrading natural or polymer yarns or twines woven into a continuous matrix.	1.5:1 (H:V)	≤ 0.25 @ 1.5:1	2.00 lbs/ft <sup>2</sup> (96 Pa)	100 lbs/ft (1.45 kN/m)
LONG TERM - Typical 36 month functional longevity						
4	Erosion Control Blankets & Open Weave Textiles	An erosion control blanket composed of processed slow degrading natural or polymer fibers mechanically bound together between two slow degrading synthetic or natural fiber nettings to form a continuous matrix or an open weave textile composed of processed slow degrading natural or polymer yarns or twines woven into a continuous matrix.	1:1 (H:V)	≤ 0.25 @ 1:1	2.25 lbs/ft <sup>2</sup> (108 Pa)	125 lbs/ft (1.82 kN/m)
* "C" factor and shear stress for Types 1.A., 2.A. and 3.A mulch control nettings must be obtained with netting used in conjunction with pre-applied mulch material.						
<sup>1</sup> Minimum Average Roll Values, Machine direction using ECTC Mod. ASTM D 5035.						
<sup>2</sup> "C" Factor calculated as ratio of soil loss from RECP protected slope (texted at specified or greater gradient, h:v) to ratio of soil loss from unprotected (control) plot in large-scale testing. These performance text values should be supported by periodic bench scale testing under similar test conditions using Erosion Control Technology Council (ECTC) Test Method # 2.						
<sup>3</sup> Required minimum shear stress RECP (unvegetated) can sustain without physical damage or excess erosion (>12.7 mmm(0.5 in) soil loss) during a 30-minute flow event in large-scale testing. These performance test values should be supported by bench scale testing under similar test conditions using Erosion Contrl Technology Council (ECTC) Test Method # 3.						
<sup>4</sup> The permissible shear stress levels established for each performance category are based on historical experience with products characterized by Manning's roughness coefficients in the range of 0.01 - 0.05.						
<sup>5</sup> Acceptable large-scale test methods may include ASTM D6459, Erosion Control Technology Council (ECTC) Test Method #2, or other independent testing deemed acceptable by the engineer.						
<sup>6</sup> Per the engineers discretion. Recommended acceptable large-scale testing protocol may include ASTM D6460, Erosion Control Technology Council (ECTC) Test Method #3 or other independent testing deemed acceptable by the engineer.						

Table 3.13.2 ECTC STANDARD SPECIFICATION FOR PERMANENT ROLLED EROSION CONTROL PRODUCTS					
For applications where vegetation alone will not sustain expected flow condition and/or provide sufficient long-term erosion protection.					
Permanent <sup>1</sup> - All categories of TRMs must have a minimum thickness of 0.25 inches (6.35mm) per ASTM D 6525 and U.V. stability of 80% per ASTM D 4355 (500 hours exposure).					
TYPE	PRODUCT DESCRIPTION	MATERIAL COMPOSITION	SLOPE APPLICATIONS	CHANNEL APPLICATIONS	MINIMUM
			MAX. GRADIENT	MAX. SHEAR STRESS <sup>4,5</sup>	TENSILE STRENGTH <sup>2,3</sup>
5.A	Turf Reinforcement Mat	Turf Reinforcement Mat (TRM) - A rolled erosion control product composed of non-degradable synthetic fibers, filaments, nets,wire mesh and/or other elements, processed into a permanent, three-dimensional matrix of sufficient thickness. TRMs which may be supplemented with degradable components, are designed to impart immediate erosion protection, enhance vegetation establishment and provide long-term functionality by permanently reinforcing vegetation during and after maturation. Note: TRMs are typically used in hydraulic applications, such as high flow ditches and channels, steep slopes, stream banks, and shorelines, where erosive forces may exceed the limits of natural unreinforced vegetation or in areas where limited vegetation establishment is anticipated.	0.5:1 (H:V)	6.0 lbs/ft <sup>2</sup> (288 Pa)	125 lbs/ft (1.82 kN/m)
5.B	Turf Reinforcement Mat		0.5:1 (H:V)	8.0 lbs/ft <sup>2</sup> (384 Pa)	150 lbs/ft (2.19 kN/m)
5.C	Turf Reinforcement Mat		0.5:1 (H:V)	10.0 lbs/ft <sup>2</sup> (480 Pa)	175 lbs/ft (2.55 kN/m)
<sup>1</sup> For TRMs containing degradable components, all property values must be obtained on the non-degradable portion of the matting along.					
<sup>2</sup> Minimum Average Roll Values, machine direction only for tensile strength determination using ASTM D6818 (Superseded Mod. ASTM D5035 for RECPs)					
<sup>3</sup> Field Conditions with high loading and/or high survivability requirements may warrant the use of a TRM with a tensile strength of 44 kN/m (3,000 lb/ft) or greater.					
<sup>4</sup> Required minimum shear stress TRM (fully vegetated) can sustain without physical damage or excess erosion (> 12.7mm (0.5in.) soil loss) during a 30-minute flow event in large scale testing. These performance test values should be supported by periodic bench scale testing under similar test conditions and failure criteria using Erosion Control Technology Council (ECTC) Test Method #3.					
<sup>5</sup> Acceptable large-scale testing protocol may include ASTM D6460, Erosion Control Technology Council (ECTC) Test Method #3, or other independent testing deemed acceptable by the engineer.					





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FENCING SHALL BE 48 INCHES IN HEIGHT AND CONSTRUCTED IN ACCORDANCE WITH THE WV DOT, DIVISION OF HIGHWAYS SPECIFICATION FOR CHAIN LINK FENCING. THE DOT SPECIFICATION FOR AN 8-FOOT FENCE SHALL BE USED, SUBSTITUTING 48-INCH FABRIC AND 6-FOOT LENGTH POSTS. THE FILTER FABRIC SHALL MEET THE REQUIREMENTS OF 715.11.5/AASHTO M 228, SECTION 7, CLASS 1.

1. THE POLES DO NOT NEED TO SET IN CONCRETE.
2. CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES.
3. GEOTEXTILE FABRIC SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24" AT THE TOP AND MID SECTION.
4. GEOTEXTILE FABRIC SHALL BE EMBEDDED A MINIMUM OF 12" INTO THE GROUND.
5. WHEN TWO SECTIONS OF GEOTEXTILE FABRIC ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
6. METAL POSTS AS SPECIFIED BY DOH CAN BE REPLACED BY PRESSURE-TREATED 4" x 4" POSTS OR T-POST.
7. SPLICE LOCATION WITH SSF TO BE PER DEP MANUAL SECTION 3.28.2

SUPER SILT FENCE

SCALE:  
N.T.S.

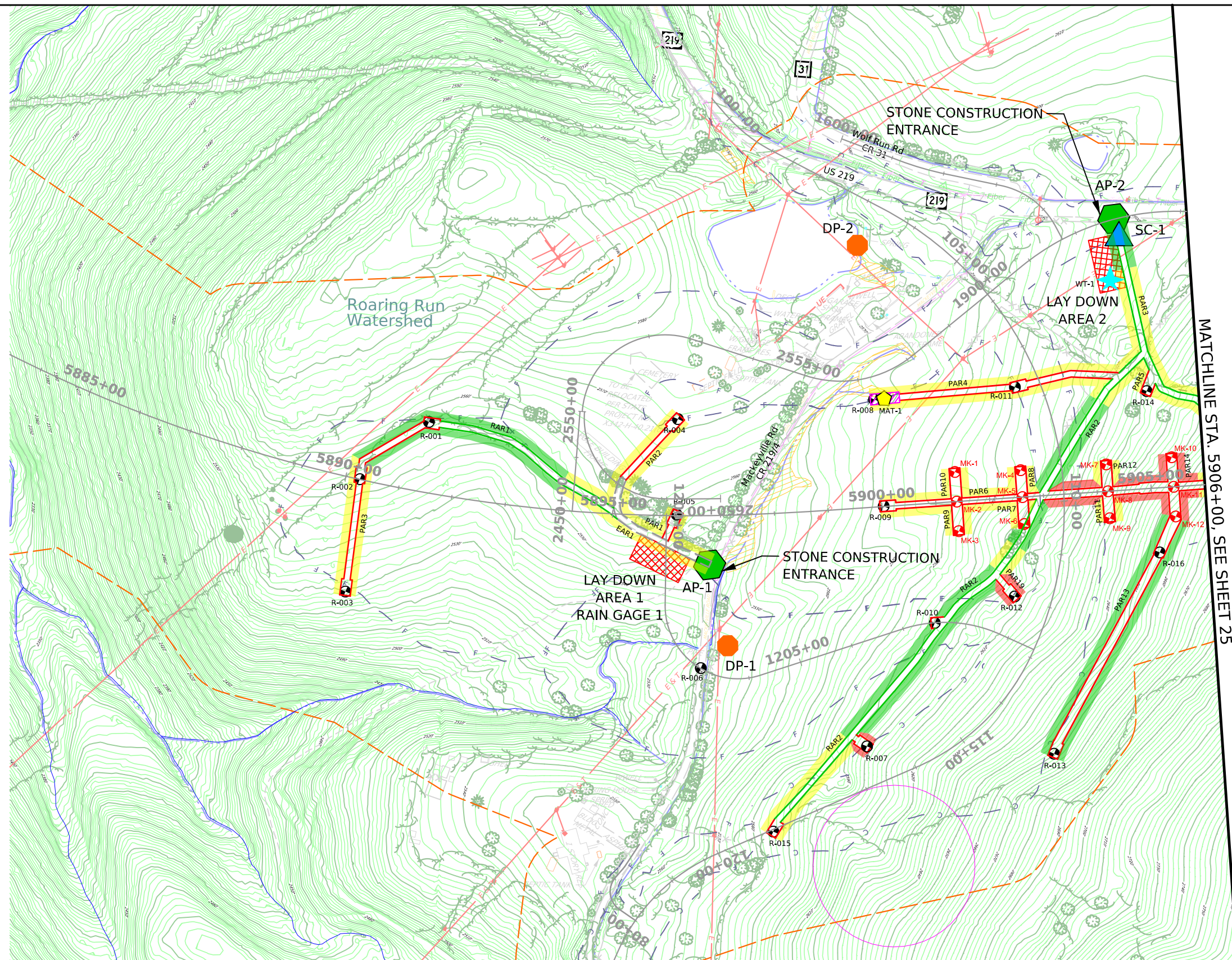
<div><div><div>GPI</div><div>Engineering Design Planning Construction Management</div></div><div><div>Greenman-Pedersen, Inc.</div><div>58 Mission Way, Suite 201 Scott Depot, WV 25560</div><div>Certificate of Authorization #C01145-00</div></div></div>	REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY	THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS  SUPER SILT FENCE	
DESIGN BY: ADB DATE: 3/2023	CHECK BY: ASC DATE: 3/2023	DRAWN BY: ADB DATE: 3/2023	CHECK BY: ASC DATE: 3/2023				







Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
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- |  |                                |  |                                  |  |                                    |  |                          |  |   |  |                           |
|--|--------------------------------|--|----------------------------------|--|------------------------------------|--|--------------------------|--|---|--|---------------------------|
|  | EX. ROAD                       |  | AREA NOT TO BE DISTURBED         |  | DRILL RIG PAD 20'x30' (TYP.) (LOD) |  | PROP. STREAM CROSSING    |  | PROP. DISCHARGE POINT                       |  | PROP. WATER TANK LOCATION |
|  | NEW ACCESS ROAD (LOD)          |  |                                  |  | LAY DOWN AREAS (LOD)               |  | WATERBAR SLOPE: <5%      |  | WATERBAR SLOPE: >20%                        |  |                           |
|  | BOTANICAL STUDY AREA BOUNDARY  |  | WETLAND AREA                     |  |                                    |  | WATERBAR SLOPE: 5% - 20% |  | UNDERGROUND MINING AREAS (PREVIOUSLY MINED) |  |                           |
|  | STREAM                         |  | MONONGAHELA NATIONAL FOREST      |  | PROP. ACCESS POINT                 |  |                          |  |   |  |                           |
|  | WATERSHED BOUNDARY             |  |                                  |  |                                    |  |                          |  |   |  |                           |
|  | BIG BOG RUN WATERSHED BOUNDARY |  | TIMBER MATTING (16' W TYP) (LOD) |  |                                    |  |                          |  |   |  |                           |
|  | ARR STUDY AREA BOUNDARY        |  |                                  |  |                                    |  |                          |  |   |  |                           |
|  | DRILL ACCESS ROAD ID           |  | PROP. ROADWAY CORE BORING        |  |                                    |  |                          |  |   |  |                           |
|  |                                |  | PROP. STRUCTURE CORE BORING      |  |                                    |  |                          |  |   |  |                           |

NOTE: CUT ROADWAY WIDTHS VARY 12' TO 24'

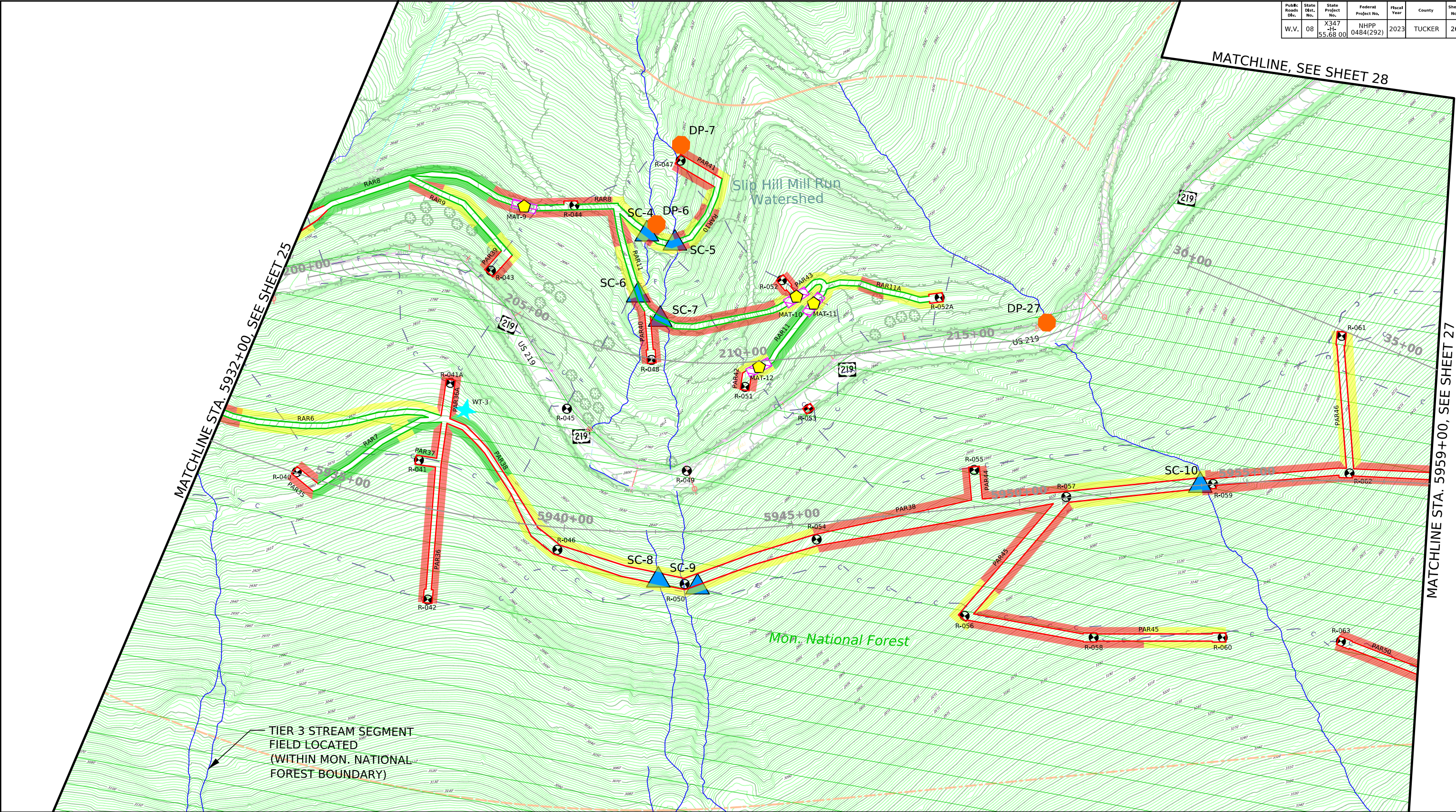
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304.507.8101 GPINET.COM  
Greenman-Pedersen, Inc.  
58 Mission Way, Suite 201  
Scott Depot, WV 25560  
Certificate of Authorization #C01145-00  
**THE WEST VIRGINIA ENGINEERING SOCIETY**  
**E&S**







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EX. ROAD

RECONSTRUCTED ACCESS ROAD (LOD)

NEW ACCESS ROAD (LOD)

BOTANICAL STUDY AREA BOUNDARY

STREAM

WATERSHED BOUNDARY

BIG BOG RUN WATERSHED BOUNDARY

ARR STUDY AREA BOUNDARY

DRILL ACCESS ROAD ID

EAR1

RAR1

PAR1

AREA NOT TO BE DISTURBED

WETLAND AREA

MONONGAHELA NATIONAL FOREST

TIMBER MATTING (16' W TYP) (LOD)

PROP. ROADWAY CORE BORING

PROP. STRUCTURE CORE BORING

DRILL RIG PAD 20'x30' (TYP.) (LOD)

LAY DOWN AREAS (LOD)

PROP. ACCESS POINT

PROP. STREAM CROSSING

WATERBAR SLOPE: <5%

WATERBAR SLOPE: 5% - 20%

PROP. DISCHARGE POINT

WATERBAR SLOPE: >20%

UNDERGROUND MINING AREAS (PREVIOUSLY MINED)

PROP. WATER TANK LOCATION

SCALE: 0 100 ft.

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58 Mission Way, Suite 201

Scott Depot, WV 25560

Certificate of Authorization #C01145-00

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DRAWN BY: KVM

CHECK BY: JDS

DATE: 12/2022

REVISION NUMBER

SHEET NUMBER

REVISION

DATE

BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

E&S PLAN (BORINGS)

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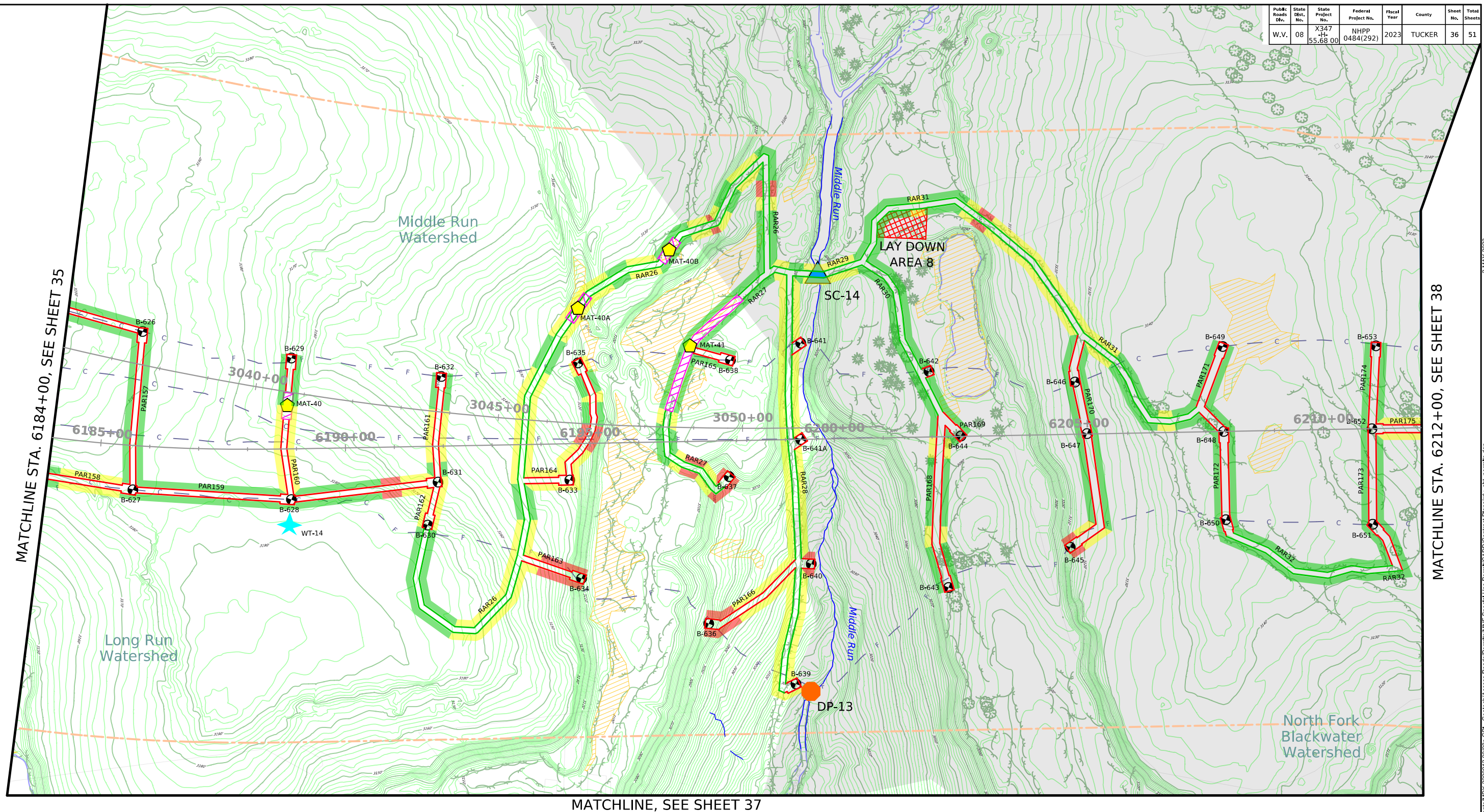








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MATCHLINE, SEE SHEET 37

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**DIVISION OF HIGHWAYS**







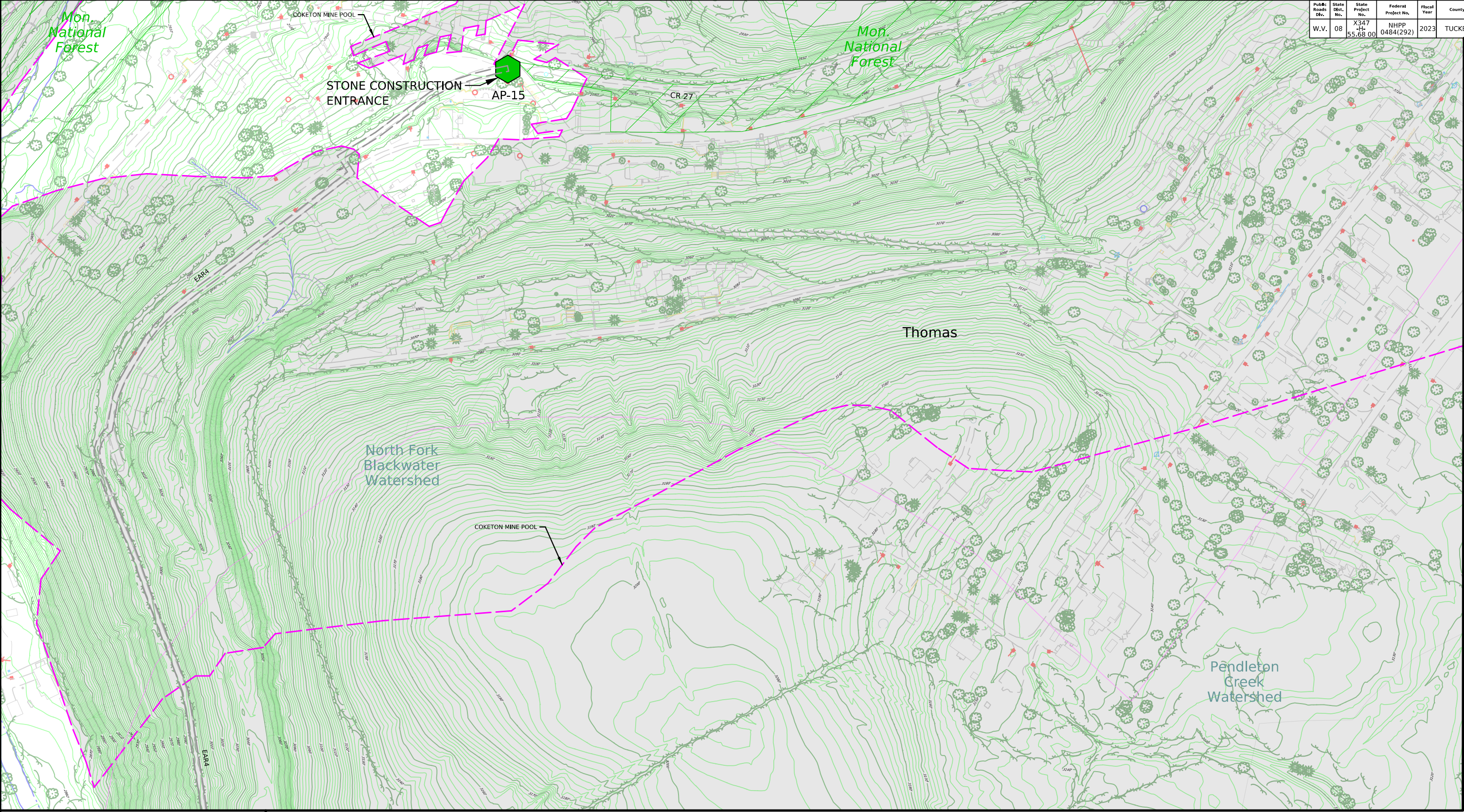








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MATCHLINE, SEE SHEET 38

MATCHLINE, SEE SHEET 39

EX. ROAD

RECONSTRUCTED ACCESS ROAD (LOD)

NEW ACCESS ROAD (LOD)

BOTANICAL STUDY AREA BOUNDARY

STREAM

WATERSHED BOUNDARY

BIG BOG RUN WATERSHED BOUNDARY

ARR STUDY AREA BOUNDARY

DRILL ACCESS ROAD ID

AREA NOT TO BE DISTURBED

WETLAND AREA

MONONGAHELA NATIONAL FOREST

TIMBER MATTING (16' W TYP) (LOD)

PROP. ROADWAY CORE BORING

PROP. STRUCTURE CORE BORING

DRILL RIG PAD 20'x30' (TYP.) (LOD)

LAY DOWN AREAS (LOD)

PROP. ACCESS POINT

NOTE: CUT ROADWAY WIDTHS VARY 12' TO 24'

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DIVISION OF HIGHWAYS

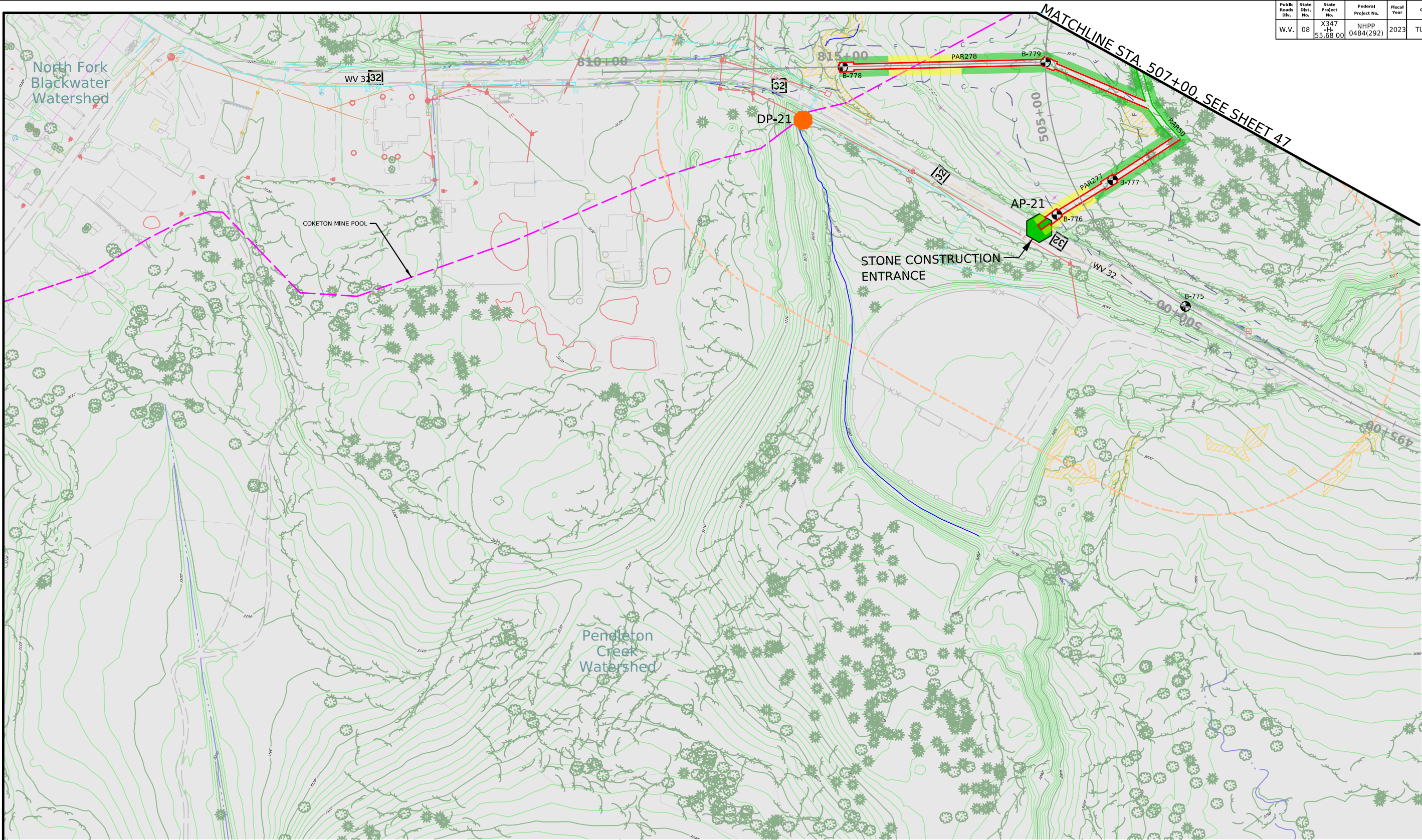
E&S PLAN (BORINGS)







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EX. ROAD

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RECONSTRUCTED ACCESS ROAD (LOD)

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NEW ACCESS ROAD (LOD)

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AREA NOT TO BE DISTURBED

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DRILL RIG PAD 20'x30' (TYP.) (LOD)

▨

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▲

PROP. STREAM CROSSING

▨

▨

●

PROP. DISCHARGE POINT

▨

▨

★

PROP. WATER TANK LOCATION

SCALE: 0 100 ft.

N

NOTE: CUT ROADWAY WIDTHS VARY 12' TO 24'

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Design  
Planning  
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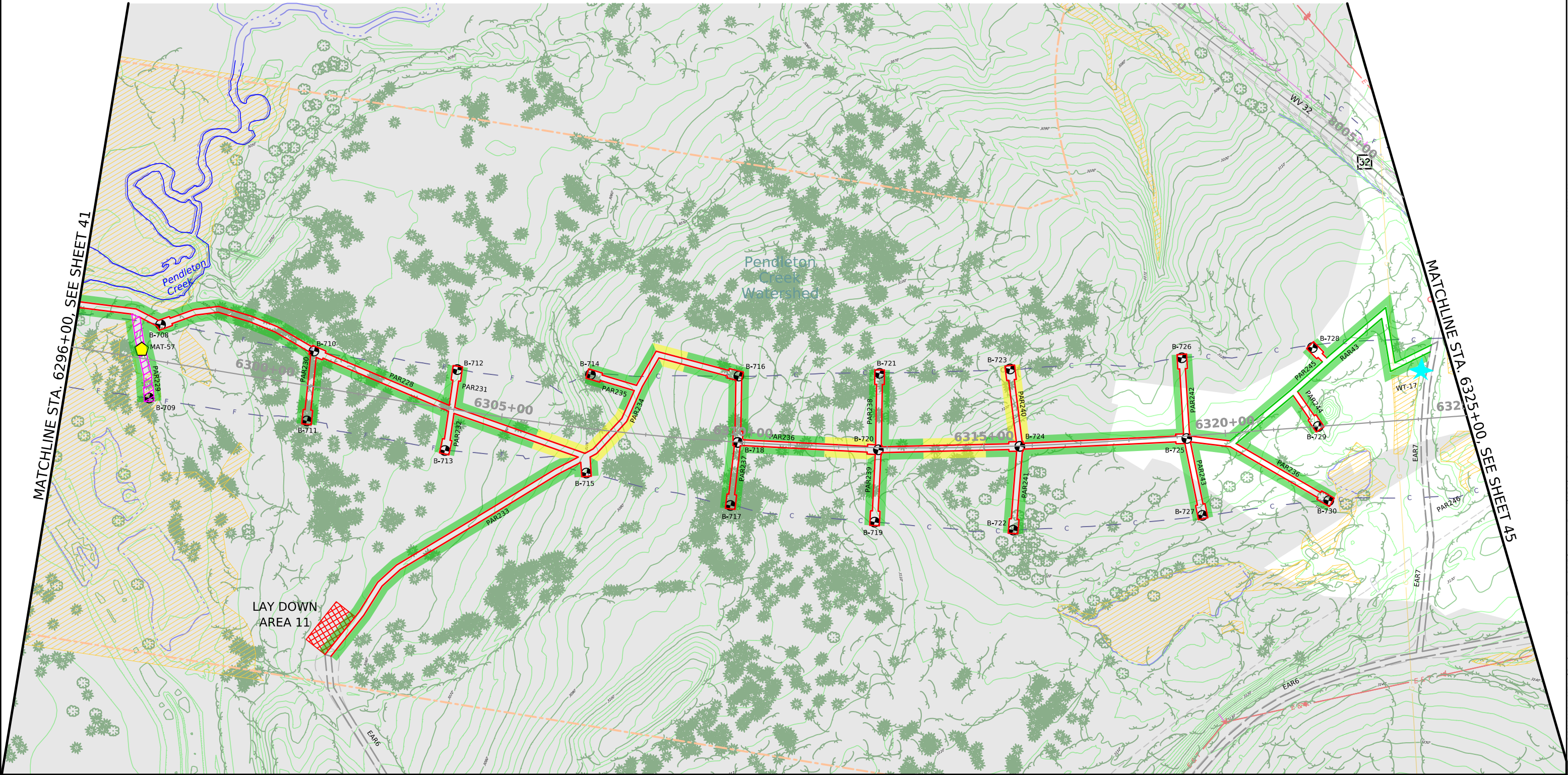
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DIVISION OF HIGHWAYS

E&S PLAN (BORINGS)





EX. ROAD

RECONSTRUCTED ACCESS ROAD (LOD)

NEW ACCESS ROAD (LOD)

BOTANICAL STUDY AREA BOUNDARY

STREAM

WATERSHED BOUNDARY

BIG BOG RUN WATERSHED BOUNDARY

ARR STUDY AREA BOUNDARY

DRILL ACCESS ROAD ID

AREA NOT TO BE DISTURBED

WETLAND AREA

MONONGAHELA NATIONAL FOREST

TIMBER MATTING (16' W TYP) (LOD)

PROP. ROADWAY CORE BORING

PROP. STRUCTURE CORE BORING

DRILL RIG PAD 20'x30' (TYP.) (LOD)

LAY DOWN AREAS (LOD)

PROP. ACCESS POINT

PROP. STREAM CROSSING

WATERBAR SLOPE: <5%

WATERBAR SLOPE: 5% - 20%

PROP. DISCHARGE POINT

WATERBAR SLOPE: >20%

UNDERGROUND MINING AREAS (PREVIOUSLY MINED)

PROP. WATER TANK LOCATION

SCALE:  
0 100 ft.

NOTE: CUT ROADWAY WIDTHS VARY 12' TO 24'

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DATE: 12/2022	DATE: 12/2022	DATE: 12/2022	DATE: 12/2022						

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DIVISION OF HIGHWAYS

E&S PLAN (BORINGS)

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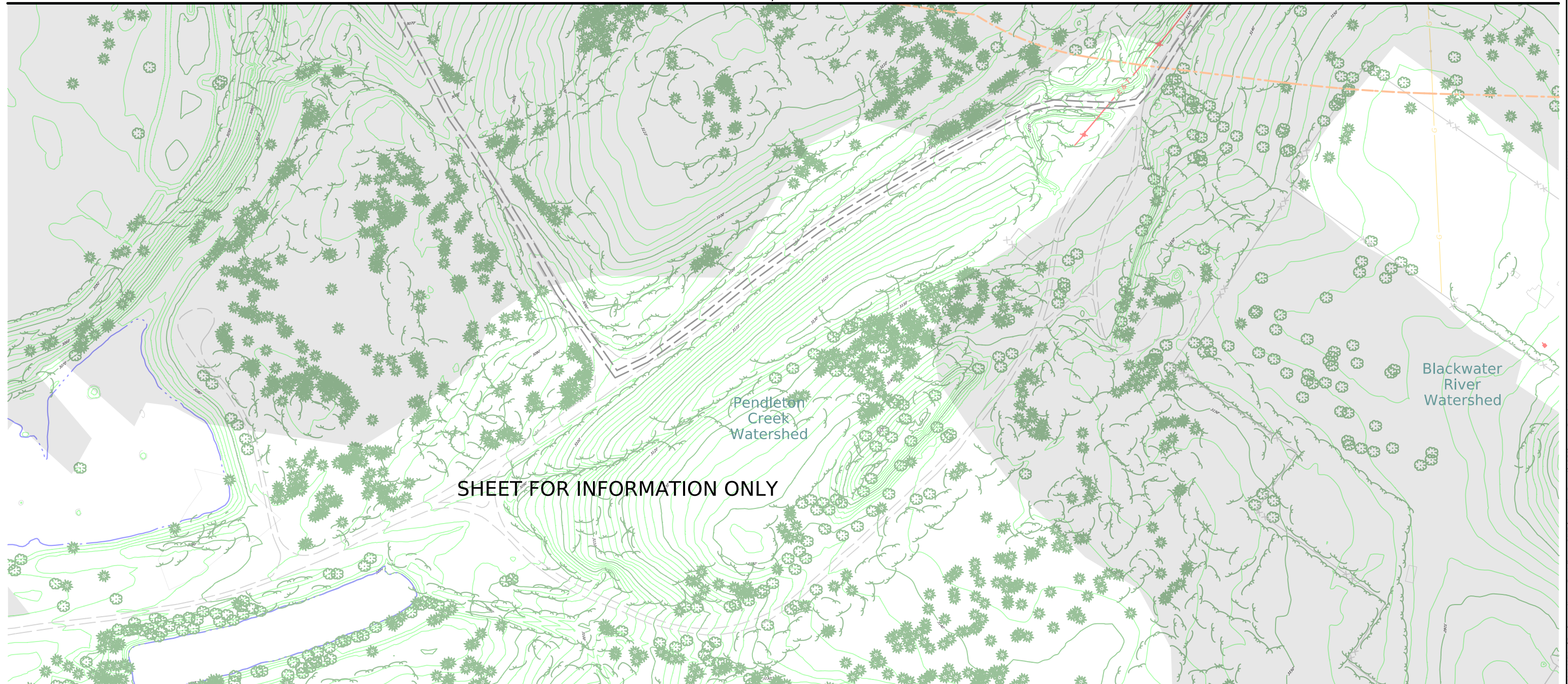
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MATCHLINE, SEE SHEET 43



EX. ROAD  
RECONSTRUCTED ACCESS ROAD (LOD)  
NEW ACCESS ROAD (LOD)  
BOTANICAL STUDY AREA BOUNDARY  
STREAM  
WATERSHED BOUNDARY  
BIG BOG RUN WATERSHED BOUNDARY  
ARR STUDY AREA BOUNDARY  
DRILL ACCESS ROAD ID

NOTE: CUT ROADWAY WIDTHS VARY 12' TO 24'

AREA NOT TO BE DISTURBED  
WETLAND AREA  
MONONGAHELA NATIONAL FOREST  
TIMBER MATTING (16' W TYP) (LOD)  
PROP. ROADWAY CORE BORING  
PROP. STRUCTURE CORE BORING


DRILL RIG PAD 20'x30' (TYP.) (LOD)  
LAY DOWN AREAS (LOD)  
PROP. ACCESS POINT

PROP. STREAM CROSSING  
WATERBAR SLOPE: <5%  
WATERBAR SLOPE: 5% - 20%

PROP. DISCHARGE POINT  
WATERBAR SLOPE: >20%  
UNDERGROUND MINING AREAS (PREVIOUSLY MINED)

PROP. WATER TANK LOCATION

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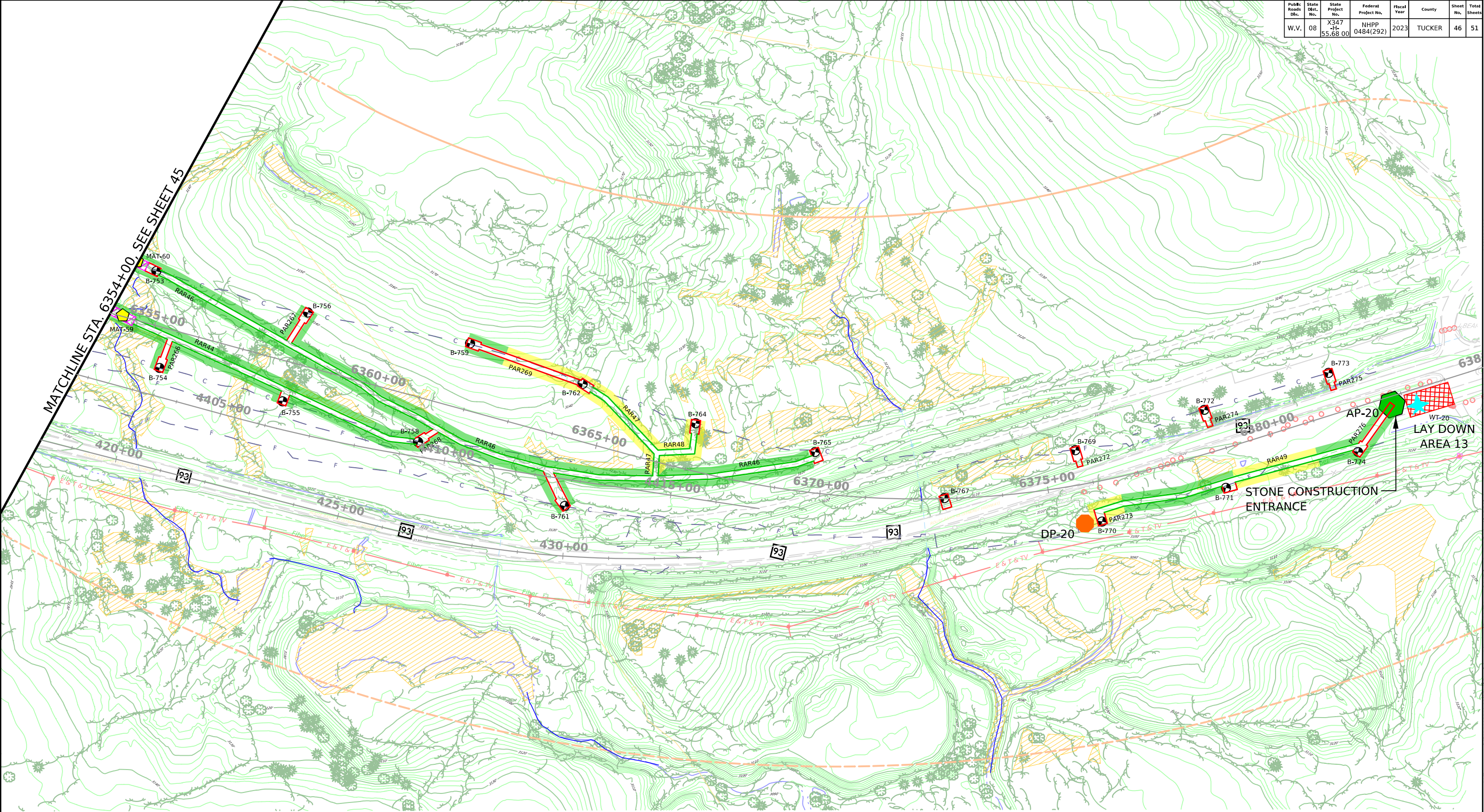
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<b>DATE: 12/2022</b>													
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<b>DRAWN BY: KVM</b>													
<b>DATE: 12/2022</b>													







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EX. ROAD

RECONSTRUCTED ACCESS ROAD (LOD)

NEW ACCESS ROAD (LOD)

BOTANICAL STUDY AREA BOUNDARY

STREAM

WATERSHED BOUNDARY

BIG BOG RUN WATERSHED BOUNDARY

ARR STUDY AREA BOUNDARY

DRILL ACCESS ROAD ID

AREA NOT TO BE DISTURBED

WETLAND AREA

MONONGAHELA NATIONAL FOREST

TIMBER MATTING (16' W TYP) (LOD)

PROP. ROADWAY CORE BORING

PROP. STRUCTURE CORE BORING

DRILL RIG PAD 20'x30' (TYP.) (LOD)

LAY DOWN AREAS (LOD)

PROP. ACCESS POINT

PROP. STREAM CROSSING

WATERBAR SLOPE: <5%

WATERBAR SLOPE: 5% - 20%

PROP. DISCHARGE POINT

WATERBAR SLOPE: >20%

UNDERGROUND MINING AREAS (PREVIOUSLY MINED)

PROP. WATER TANK LOCATION

SCALE:  
0 100 ft.

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Scott Depot, WV 25560

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DATE: 12/2022

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REVISION

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**E&S PLAN (BORINGS)**

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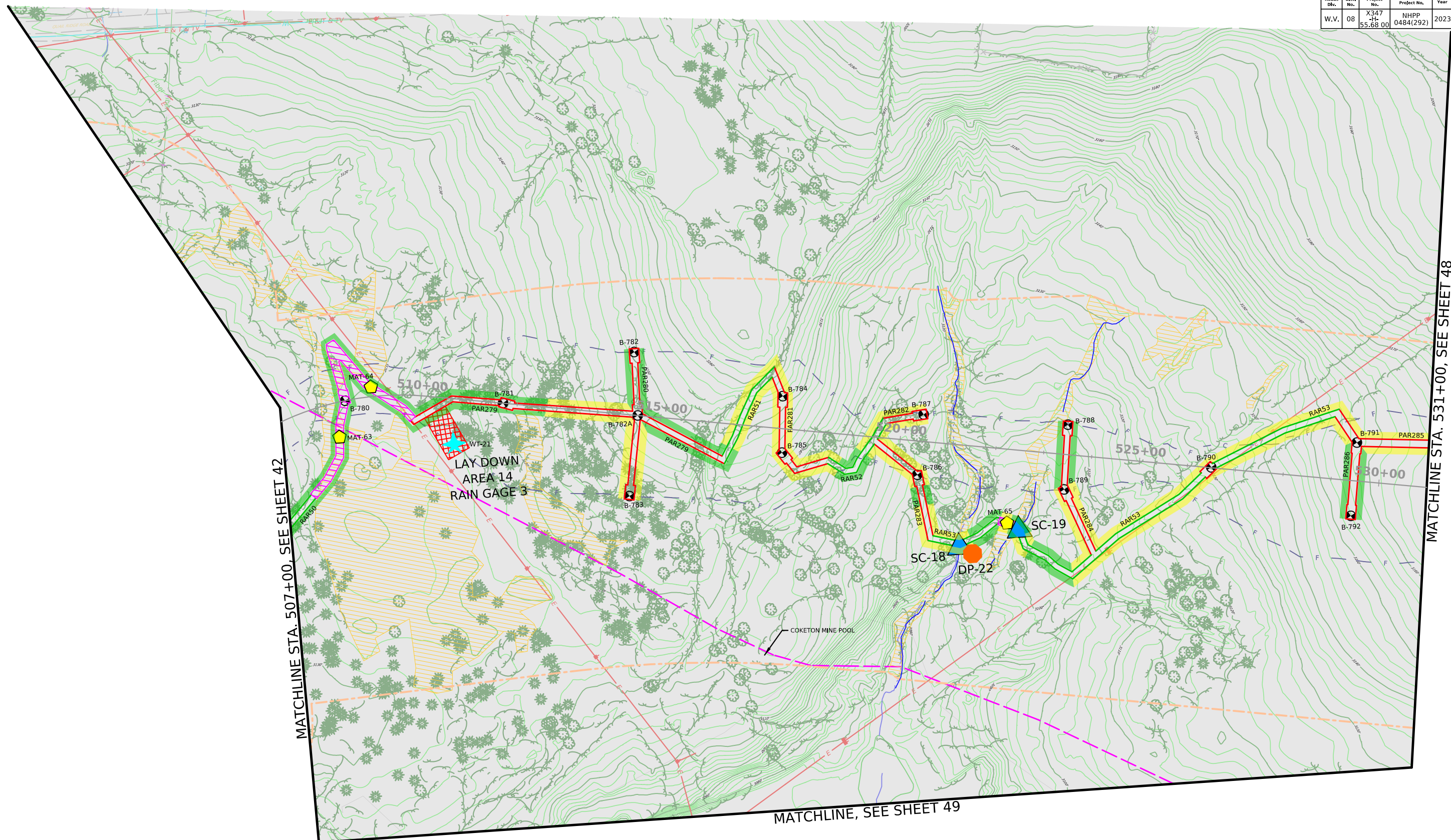
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Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W.V.	08	X347 -H- 55.68 00	NHPP 0484(292)	2023	TUCKER	47	51



- |  |                                 |  |                                  |  |                                    |  |                          |  |   |  |                           |
|--|---------------------------------|--|----------------------------------|--|------------------------------------|--|--------------------------|--|---|--|---------------------------|
|  | EX. ROAD                        |  | AREA NOT TO BE DISTURBED         |  | DRILL RIG PAD 20'x30' (TYP.) (LOD) |  | PROP. STREAM CROSSING    |  | PROP. DISCHARGE POINT                       |  | PROP. WATER TANK LOCATION |
|  | RECONSTRUCTED ACCESS ROAD (LOD) |  |                                  |  | LAY DOWN AREAS (LOD)               |  | WATERBAR SLOPE: <5%      |  | WATERBAR SLOPE: >20%                        |  |                           |
|  | NEW ACCESS ROAD (LOD)           |  | WETLAND AREA                     |  | PROP. ACCESS POINT                 |  | WATERBAR SLOPE: 5% - 20% |  | UNDERGROUND MINING AREAS (PREVIOUSLY MINED) |  |                           |
|  | BOTANICAL STUDY AREA BOUNDARY   |  | MONONGAHELA NATIONAL FOREST      |  |                                    |  |                          |  |   |  |                           |
|  | STREAM                          |  | TIMBER MATTING (16' W TYP) (LOD) |  |                                    |  |                          |  |   |  |                           |
|  | WATERSHED BOUNDARY              |  | PROP. ROADWAY CORE BORING        |  |                                    |  |                          |  |   |  |                           |
|  | BIG BOG RUN WATERSHED BOUNDARY  |  | PROP. STRUCTURE CORE BORING      |  |                                    |  |                          |  |   |  |                           |
|  | ARR STUDY AREA BOUNDARY         |  |                                  |  |                                    |  |                          |  |   |  |                           |
|  | DRILL ACCESS ROAD ID            |  |                                  |  |                                    |  |                          |  |   |  |                           |

NOTE: CUT ROADWAY WIDTHS VARY 12' TO 24'

 <div> <div>Engineering Design Planning Construction Management</div> <div>304.507.8101      GPINET.COM</div> </div>	Greenman-Pedersen, Inc. 58 Mission Way, Suite 201 Scott Depot, WV 25560 Certificate of Authorization #C01145-00								
DESIGN BY: LAM	CHECK BY: JDS	DRAWN BY: KVM	CHECK BY: JDS	REVISION	SHEET				
DATE: 12/2022	DATE: 12/2022	DATE: 12/2022	DATE: 12/2022	NUMBER	NUMBER	REVISION		DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

## E&S PLAN (BORINGS)



















# Karst Mitigation Plan (KMP)

Parsons – Davis  
Core Boring Project  
Tucker County

State Project No. X347-H-55.68 00  
Federal Project No. NHPP-0484(292)

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Submitted to:

West Virginia Department of Environmental Protection  
601 57<sup>th</sup> Street SE  
Charleston, West Virginia 25304

Prepared by:



Greenman Pedersen, Inc.  
58 Mission Way, Suite 201  
Scott Depot, WV 25560

March 2023



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## 1.0 INTRODUCTION

Projects located in Berkeley, Fayette (south of CR 25), Grant, Greenbrier, Hampshire, Hardy, Jefferson, Mercer, Mineral, Monroe, Morgan, Monongalia (east of I-79) Pendleton, Pocahontas, Randolph, Summers, and Tucker Counties require a Karst Mitigation Plan (KMP). The KMP must be included in the West Virginia Department of Environmental Protection (WVDEP) NPDES registration.

This KMP addresses the assessment and mitigation of potential hazards associated with land disturbance on the Parsons-Davis Core Boring Project (X347-H-55.68 00) in karst terrain. Hazards include the potential to impact sensitive karst features during access road and drilling pad construction and the core boring operation.

Karst feature assessment and mitigation efforts that are covered in this plan will take place within the limits of land disturbance (LOD) along the project alignment that is in areas with karst topography. The LOD identified in this Plan is an area where ground cover will be removed or where the grade will be temporarily altered, through project construction activities (clearing and grubbing, excavation, boring or drilling).

### 1.1 KARST HAZARDS ASSESSMENT

The proposed work associated with the project involves exploratory core borings and access road and drill pad construction necessary for the core boring operation to occur. Based on the rock type shapefile found on the WVDEP/TAGIS website, a limestone area crosses the western end of the project in a northeasterly direction near Mackeyville, WV. Areas of the proposed alignment located within the limestone area identified on the Parsons-Davis Potential Karst Area Map were field assessed to confirm presence or absence of sinkholes during the environmental study phase of the project. No sinkholes were found during the field investigation. Borings will not be located over known sinkholes or other karst features and access roads and drill pads will avoid known sinkholes or other karst features to the maximum extent practicable.

Avoidance of a karst feature constitutes the first and foremost recommendation for mitigating impact. If an identified karst feature cannot be reasonably avoided, or if a previously unidentified karst feature is encountered or forms during construction, this KMP provides recommendations for impact mitigation and feature stabilization.

Geotechnical Engineers will confirm, monitor, and recommend measures to mitigate, if necessary, existing karst features, and to assess and recommend measures to mitigate previously unidentified karst features that are encountered or observed to form during the access road and drilling pad construction and core boring operation.

### 1.2 OVERVIEW OF POTENTIAL KARST HAZARDS

**The term “karst” refers to a type of landform or terrain that is characterized by the presence of sinkholes, caves, caverns, irregular “pinnacled” bedrock surface, and karst springs.** The development of karst terrain is a result of the presence of soluble bedrock such as limestone, dolomite, marble or gypsum. Any landscape that is underlain by soluble bedrock has the potential to develop a karst terrain landform.

The most commonly encountered karst features observed are sinkholes. Sinkholes fall into two broad categories, **termed “vault-collapse” sinkholes, or “cover-collapse” sinkholes. Vault-collapse type sinkholes (i.e., where a cavern “vault” or roof has failed catastrophically) are relatively rare in karst terrain.** However, cover-collapse type sinkholes are more commonly observed.

Cover-collapse sinkholes typically develop by the raveling or erosion of overburden into solution channels within the bedrock mass, in which water is the transport medium for the movement of the fine particles. The natural raveling process is generally slow such that sinkhole development



generally occurs over a long period of time. However, various changes at a site can sometimes lead to the sudden and unanticipated development of sinkholes.

The most common changes that may initiate sinkhole development are:

- Increase or redirection of overland or subsurface water flow paths, which accelerates the raveling of fine particles;
- Removal of vegetation cover and topsoil (i.e., clearing and grubbing), which can reduce the cohesive strength of overburden that overlies a conduit; and
- Sudden changes in the elevation of the water table (such as drought, over-pumping of wells, or quarry dewatering), which removes the neutral buoyancy of the water supporting a conduit plug and may result in rapid collapse.

## 2.0 KARST TERRAIN INSPECTION PRIOR TO AND DURING CONSTRUCTION

Any karst feature located within the LOD is likely to be minor in its extent and nature and a candidate for mitigation and stabilization prior to disturbance.

The Geotechnical Engineers and the Contractor will determine the best course of action prior to tree clearing in the vicinity of an identified karst feature. It is anticipated that the most common karst feature requiring mitigation will be cover-collapse sinkholes (discussed below). Karst feature stabilization will be completed in accordance with WVDEP requirements.

The Geotechnical Engineers and the Contractor will monitor the area for potential karst feature development during construction activities (clearing and grubbing, excavation, boring or drilling) within karst terrain. The goal is to observe construction activities to assist in limiting potential negative impacts, and to inspect, assess, and if necessary, mitigate karst features that are encountered or form during construction in accordance with WVDEP requirements.

### 2.1 LEVEL 1 INSPECTION OF A KARST FEATURE

A Level 1 Inspection of a karst feature will entail observation and documentation of the following ground and feature characteristics:

- soil subsidence;
- rock collapse;
- sediment filling;
- swallet (sinking stream) or notable increased surface water infiltration;
- spring / seep / flooding;
- cave or void space;
- clogging; and/or
- other changes in morphology or function that might indicate potential impact to the karst stratum caused by the work.

The inspection will be documented in a report including digital photographs, GPS coordinates and reference to the nearest milepost. The inspection report will be kept on file at the Project field office with other permit documents.

If any of the representative changes listed above are observed at a karst feature, the Geotechnical Engineers and/or Contractor will complete a Level 2 Inspection (discussed below).

## 2.2 LEVEL 2 INSPECTION OF A KARST FEATURE

The Level 2 Inspection will be conducted and documented as follows:

The Geotechnical Engineers and/or Contractor will examine the suspected karst feature to identify potential connectivity to the subterranean environment and risk for impacting groundwater quality or quantity. The choice of characterization methods will be determined by the Geotechnical Engineers and Contractor, and will include any combination of, but not be limited to:

- visual assessment and physical inspection,
- geophysical survey,
- track drill probes,
- infiltration or dye trace testing, or
- other techniques utilized to facilitate subsurface characterization of karst features.

If the karst feature does not appear to have connectivity to the subterranean environment and risk for impacting groundwater quality, the Contractor will implement stabilization measures for the feature and construction activities will continue after the feature is stabilized.

If it is determined that the feature has connectivity to the subterranean environment and potential to impact groundwater, the Geotechnical Engineers and the Contractor will determine appropriate mitigation. Mitigation activities would be conducted in accordance with WVDEP requirements.

A weekly Level 1 Inspection of the stabilized or mitigated feature will be completed and documented while construction activities (clearing and grubbing, excavation, boring or drilling) are on-going within 150 feet of any Karst feature.

Mitigation or stabilization activities will be documented in a report and kept on file at the Project field office.

## 3.0 MANAGEMENT OF NEWLY IDENTIFIED KARST FEATURES

If a suspected karst feature is intercepted or forms within the LOD during construction activities (clearing and grubbing, excavation, boring or drilling), the Geotechnical Engineers and/or the Contractor will conduct a combined Level 1 and Level 2 Inspection of the feature following the procedural outlines above for Level 1 and Level 2 Inspections.

Suspected karst features include:

- Sinkhole,
- Spring,
- Bedrock enclosed conduit(s) or void,
- Solution pocket that extends beyond visual examination range (and therefore may be open),
- Soil void,
- Highly fractured karst bedrock.

### 3.1 SINKHOLE STABILIZATION

Sinkholes are common surficial geomorphic expressions of karst terrain. If a sinkhole is located within the proposed LOD and cannot be reasonably avoided, the sinkhole will be stabilized prior to construction in accordance with WVDEP Sinkhole Mitigation Guidance.

A weekly Level 1 Inspection of the stabilized feature will be completed and documented while construction activities (clearing and grubbing, excavation, boring or drilling) are on-going within 150 feet of any karst feature.



Mitigation activities will be documented upon completion in accordance with WVDEP requirements. See the following sections of this report for activities to be followed under this KMP for karst features other than sinkholes that are located within the LOD.

#### 4.0 MEASURES TO AVOID IMPACTS TO THE KARST AQUIFER AND ENVIRONMENT

The following procedures will be used during construction activities (clearing and grubbing, excavation, boring or drilling) to limit potential impact to karst features and related water resources.

1. Protect known and/or future mapped recharge areas of cave streams and other karst features by following relevant conservation standards, specifically those pertaining to stream and wetland crossings, erosion and sediment control, and spill prevention, containment, and control.
2. Construction activities (clearing and grubbing, excavation, boring or drilling) will be conducted in a manner that minimizes alteration of existing grade and hydrology of karst features:
  - a. In linear excavations adjacent to karst features, spoils will be stockpiled and managed upslope of the excavation, and runoff controlled according to the SWPPP and GPP.
  - b. Surface water control measures, including, but not limited to diversion (direct water flow into trench or off right-of-way areas past the area of concern), detention, or collection and transportation will be utilized to prevent construction-influenced surface water from free flowing into karst features.
  - c. Karst features will not be utilized for the disposal of water.
3. The intent of the Erosion and Sediment Control Plan and related Best Management Practices (BMPs) is to confine project-related disturbance to the LOD, protect sensitive karst features, and minimize erosion and enhance revegetation in those areas. In addition to erosion and sediment control BMPs for standard construction, additional or enhanced BMPs will be implemented.

#### 5.0 POST-CONSTRUCTION MONITORING

After project construction and stabilization are completed, WVDOH District Forces will monitor any karst features through routine inspection and operations.

#### 6.0 SINKHOLE MITIGATION

Sinkhole mitigation will be performed in accordance with WVDEP Division of Water and Waste Management, Groundwater Protection Program, Sinkhole Mitigation Guidance.

##### 6.1 PURPOSE

Sinkhole mitigation designs serve to allow the filling of sinkholes while maintaining recharge to the aquifer, reducing potential contamination threats to groundwater, and eliminating safety hazards at sinkhole entries.

##### 6.2 GENERAL

Consideration should be given to the method used for removing contaminated materials from sinkholes and reducing or eliminating direct inflow of surface water into sinkholes. Land treatment methods that improve the filtration and infiltration of surface water should be used along with the mitigation of the sinkhole.

Before selecting a treatment option, the following should be considered:

- Land use
- Existing and planned land treatment
- Sinkhole drainage area
- Dimensions of the sinkhole opening
- Safe outlet for diverted surface water
- **Environmentally safe disposal of sinkhole “clean out” material**
- Availability and quality of filter material
- Safety of equipment and operators and laborers during installation

### 6.3 TREATMENT FOR SINKHOLES WITH DRAINAGE AREAS LESS THAN 5 ACRES

Treat the sinkhole using the mitigation design in Figure 1 of this KMP. The treatment site should be inspected after periods of heavy precipitation because some material may be transported into adjacent sinkhole voids causing a surface depression. In this case, maintenance will include adding soil material at the surface. The existing land use or practice may continue over the treated sinkhole as long as the treatment is maintained.

### 6.4 TREATMENT FOR SINKHOLES WITH DRAINAGE AREAS OF 5 ACRES OR MORE AND HAVING A SAFE OUTLET

The following additional treatment criteria are applicable to sinkholes with drainage areas of 5 acres or more where a safe outlet can be provided to divert surface water away from the sinkhole. A safe outlet is one that does not erode, divert surface water to another sinkhole or injection well, or cause flood damage to crops, property, buildings, or highways/roads.

Surface water control measures should be situated to reduce the internal drainage area around the sinkhole to less than 5 acres. The choice of surface water control measures is generally based on site-specific conditions.

### 6.5 TREATMENT FOR SINKHOLES WITH DRAINAGE AREAS OF 5 TO 15 ACRES AND HAVING NO SAFE OUTLET

Treat the sinkhole using the mitigation design in Figure 2 of this guidance document. The site should be inspected after periods of heavy precipitation because some material may be transported into adjacent sinkhole voids causing a surface depression. In this case, maintenance will include adding soil material at the surface. The sinkhole should remain as unused land.

### 6.6 VEGETATED BUFFER AREA

A vegetated buffer area should be installed around the sinkhole to improve runoff water quality by filtration and adsorption of contaminants. The vegetated buffer area should be installed within the sinkhole drainage area and should begin at the treated sinkhole.

The minimum width (in feet) of the vegetated buffer area is determined by multiplying the sinkhole drainage area (in acres) by seven. This width should provide beneficial filtering for some distance outside the sinkhole because surface water runoff may be temporarily held before reaching the treated sinkhole.



Appropriate vegetation should be used for the buffer area. Use native vegetation as much as possible. DO NOT use noxious plants or weeds. It is recommended that a plant nursery be consulted for the appropriate vegetation.

## 6.7 ACCEPTABLE MATERIALS

Engineering fabric - must meet the applicable requirements of AASHTO M288.

Aggregates – fine aggregates, gravel, or rock rip rap that conforms to the WVDOH Standard Specifications for Roads and Bridges, Sections 702, 703, and 704.

## 6.8 SPECIFICATIONS

Use the following guidance for installing a mitigation design for sinkholes and sinkhole areas with drainage areas of less than 5 acres:

1. Remove and properly dispose of materials dumped in and around the sinkhole in accordance with applicable federal, state, and local laws.
2. Excavate loose material from the sinkhole and expose the solution void(s) in the bottom. Enlarge the sinkhole, as necessary, to allow for installation of the filter material.
3. Select stone that is approximately 1.5 times larger than the solution void(s). Place the stone into the void(s) forming a competent bridge. Stone used for the bridge should have rock strength equal to, at least, moderately hard (e.g., resistant to abrasion or cutting by a knife blade but can be easily dented or broken by light blows with a hammer). Shale or similar soft, non-durable rock is not acceptable.
4. Place a layer of filter material over the bridge to a minimum thickness of 24 inches. Approximately 35 percent of the material should be larger than the opening between the bridge and the void(s). There should be no discernable large openings around the bridge. The material should be either gabion stone, stone for rip rap, or stone for special rock fill that conforms to WVDOH Standard Specification Roads and Bridges, Section 704.
5. Place a layer of smaller size filter material over the previous layer to a minimum thickness of 10 inches. The size of the material should be  $\frac{1}{4}$  to  $\frac{1}{2}$  the size of that used in the previous layer. The material should be No. 57 aggregate, which conforms to West Virginia Department of Highways, Standard Specifications Roads and Bridges, Sections 703.1.1, 703.1.2, 703.1.3, 704.1.4, and 703.2.1. Unacceptable filter material consists of pea gravel or slags (steel, electromagnetic, or power plant).
6. Place a layer of sand-sized filter material over the previous layer at to a minimum thickness of 10 inches. The sand must be compatible in size with the previous layer to prevent piping. The material should be fine aggregate that conforms to West Virginia Department of Highways, Standard Specification Roads and Bridges, Sections 702.1.1, 702.1.2, and 702.1.3.
7. Engineering fabric conforming to AASHTO M 288 may be substituted for the stone and sand filter materials discussed in 5 and 6.
8. Backfill over the top filter layer or engineering fabric with soil material to the surface. This should be mineral soil with at least 12 percent fines. Reuse soil material excavated from the sinkhole as much as possible and place any available topsoil over the backfill. Overfill by about 5 percent to allow for settling.

9. Establish vegetation on the mitigated sinkhole and other disturbed areas of the site.

Use the following guidance for installing a mitigation design for sinkholes and sinkhole areas with drainage areas of 5 to 15 acres:

1. Remove and properly dispose of materials dumped in and around the sinkhole.
2. Excavate loose material from the sinkhole.
3. Place a layer of filter material into the sinkhole, allowing the stone to fill the void(s) below the bottom of excavated sinkhole. The size should be  $\frac{1}{4}$  to  $\frac{1}{2}$  the size of the void(s). This material can be WVDOH gabion stone, rip rap stone, or special rock fill stone.
4. Place a layer of the same size filter material to a thickness of about  $\frac{3}{4}$  TD (TD = total depth) above the sinkhole bottom.
5. Place a layer of smaller size filter material over the previous layer to a thickness of about  $\frac{1}{4}$  D. Bring this layer to surface level. The size should be  $\frac{1}{4}$  to  $\frac{1}{2}$  the size of the previous layer. The material should be No. 57 aggregate, which conforms to WVDOH Standard Specification for Roads and Bridges, Sections 703.1.1, 703.1.2, 703.1.3, 703.2.1, and 704.1.4. Unacceptable stone consists of pea gravel or slags (steel, electrometallurgical, or power plant slags).
6. Shale or similar soft and non-durable rock is not acceptable.
7. Establish vegetation on the mitigated sinkhole and disturbed areas of the site.

#### 6.9 ENGINEERING FABRIC REQUIREMENTS FOR SUBSURFACE DRAINAGE

Engineering fabric used in the mitigation of sinkholes should meet the applicable requirements of AASTHO M 288, Section 7.2.

#### 6.10 ENGINEERING FABRIC INSTALLATION

Proper construction and installation techniques are essential to ensure that the intended function of the engineering fabric is fulfilled.

- When sewn seams are necessary, the seam strength must be equal to or greater than 90 percent of the specified grab strength, as measured in accordance with ASTM D 4632.
- When sewn seams are used for the seaming of the engineering fabric, the thread must be high strength polypropylene, or polyester. Nylon thread is unacceptable.
- For Sinkhole Mitigation Design A, place the engineering fabric loosely, with no wrinkles or folds, and with no void spaces between the fabric and the bridge. Overlap successive sheets of engineering fabric a minimum of 12 inches, with the upstream sheet overlapping the downstream sheet.
- Prior to covering, the engineering fabric should be inspected to ensure that it has not been **damaged (e.g. holes, tears, rips) during installation. An engineer or the engineer's designated representative should conduct the inspection. The designated representative should be a certified field inspector.**
- Damaged fabric must be repaired immediately. Cover the damaged area with an engineered fabric patch that overlaps to 12 inches beyond the damaged area.
- Any damaged engineering fabric that cannot be repaired shall be replaced as directed by the engineer.



- Place material over the engineering fabric in such a manner as to avoid stretching and subsequently tearing the fabric. Do not drop stone and soil placement from a height greater than 3 feet. Do not allow stone with a mass of more than 220 pounds to roll down the slope of the sinkhole.
- Grading the sinkhole slope is not permitted if the grading will result in the movement of the stone directly above the engineering fabric.

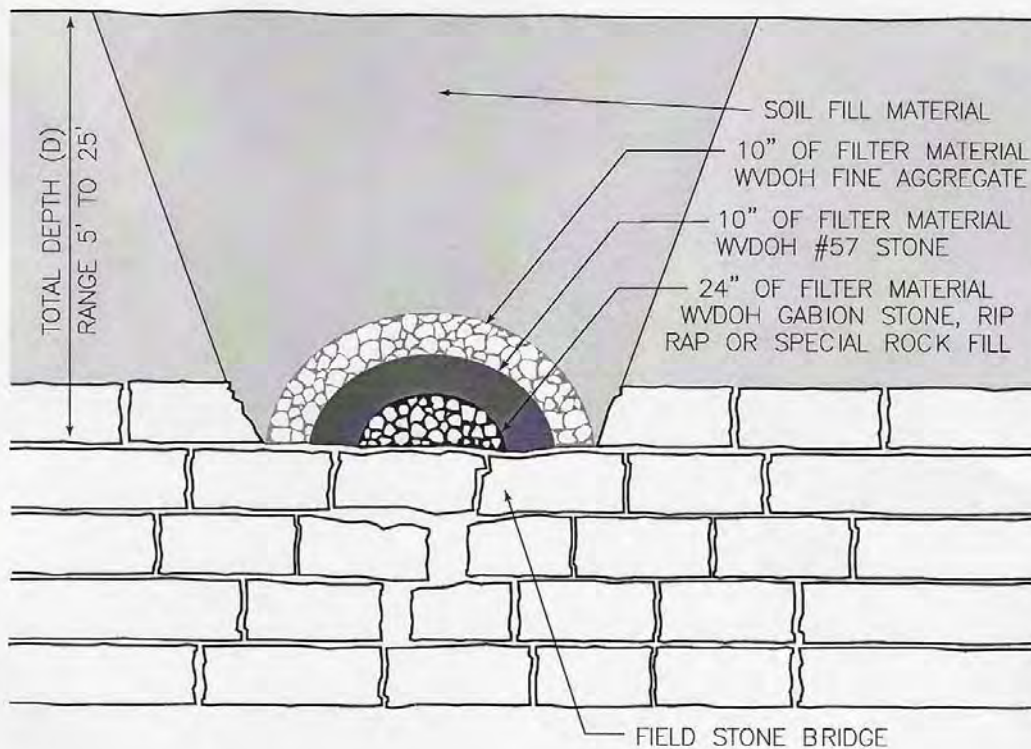
#### 6.11 OPERATION AND MAINTENANCE

The Contractor will be responsible for maintaining the mitigated sinkhole and sinkhole area during Project construction and WVDOH will be responsible after the Contractor is released from the contract. At a minimum, the following maintenance practices should be performed:

1. Mow grass and plantings as necessary to promote vigorous growth.
2. Inspect mitigation measures during standard inspection and operational procedures of WVDOH Highway System. Repairs to the sinkhole mitigation measures should be made promptly where warranted.

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
SINKHOLE MITIGATION GUIDANCE

FIGURE 1



NOTE:

A NONWOVEN GEOTEXTILE MEETING AASHTO M288,  
SECTIONS 7.1+7.2 MAY BE SUBSTITUTED FOR THE  
WVDH #57 STONE AND WVDH FINE AGGREGATE

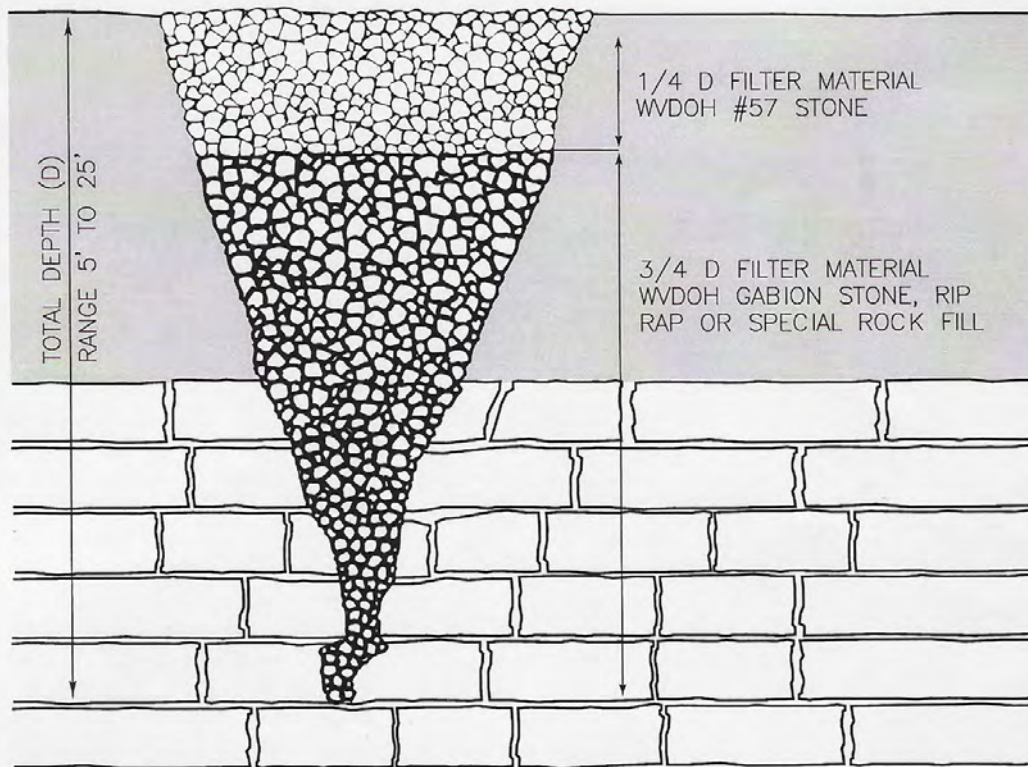
## SINKHOLE MITIGATION

(DRAINAGE AREA LESS THAN 5 ACRES)



WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
SINKHOLE MITIGATION GUIDANCE

FIGURE 2



## SINKHOLE MITIGATION

(DRAINAGE AREA 5 TO 15 ACRES)

APPENDIX A  
POTENTIAL KARST AREA MAP



# WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

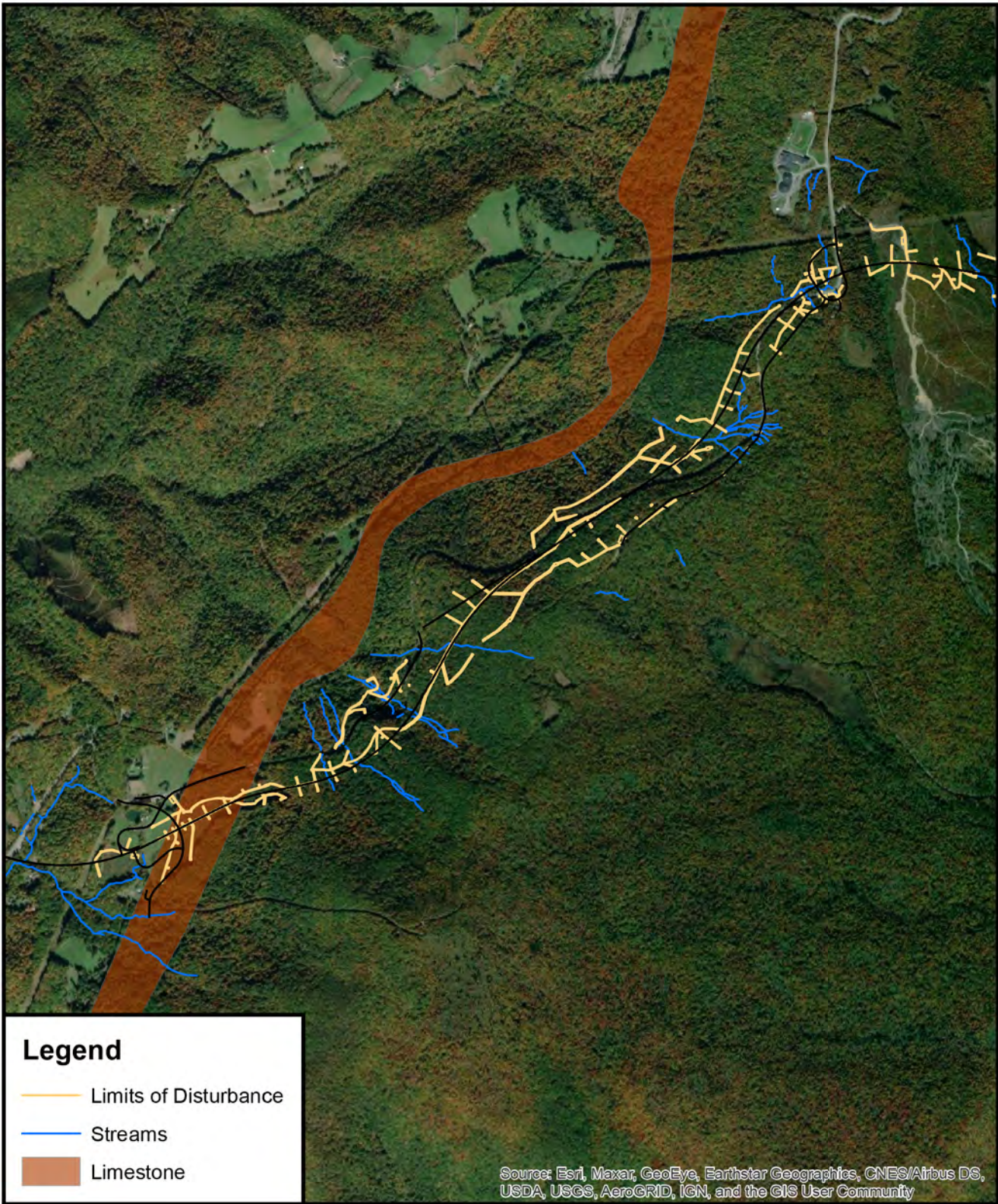
## DIVISION OF HIGHWAYS

### ENGINEERING DIVISION

**GPI** Engineering  
Design  
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Construction Management  
  
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58 Mission Way, Suite 201  
Scott Depot, WV 25560  
Certificate of Authorization #C01145-00

PARSONS-DAVIS  
  
POTENTIAL KARST AREA

PROJECT NUMBERS		DISTRICT	COUNTY
STATE	FEDERAL		
X347-H-55.68 00	NHPP-0484(292)	08	TUCKER



**Legend**

--- Limits of Disturbance

--- Streams

Limestone

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

# **Storm Water Pollution Prevention Plan (SWPPP)**

**Parsons – Davis  
Core Boring Project  
Phase 1  
Tucker County**

**State Project No. X347-H-55.68 00  
Federal Project No. NHPP-0484(292)**

---

## **Submitted to:**

West Virginia Department of Environmental Protection  
601 57<sup>th</sup> Street SE  
Charleston, West Virginia 25304

## **Prepared by:**

**GPI**

Greenman Pedersen, Inc.  
58 Mission Way, Suite 201  
Scott Depot, WV 25560

March 2023



## CERTIFICATIONS

### To Be Completed by Permittee (Plans and Specifications Operational Control)

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for attesting to false information, including the possibility of fine and imprisonment for knowing violations."

Douglass Robb, Executive V.P.  
Name and Title

(410) 880-3055  
Telephone Number

  
Signature

4/5/2023  
Date

### To Be Completed by Construction Site Operator/Co-Permittee (Day-to-Day Operational Control)

"I certify that I have reviewed this document and all attachments that were prepared under professional supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for attesting to false information, including the possibility of fine and imprisonment for knowing violations."

\_\_\_\_\_  
Name and Title

\_\_\_\_\_  
Telephone Number

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

## SWPPP Revision Documentation Form

This storm water pollution prevention plan (SWPPP) should be revised and updated to address changes in site conditions, new or revised government regulations, and additional on-site storm water pollution controls. The signature of this representative attests that the SWPPP revision information is true and accurate. Previous authors and facility representatives are not responsible for the revisions.

[illegible]



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**APPENDICES**

**APPENDIX A, General Location Map and Site Map**

**APPENDIX B, Sediment and Erosion Control Plan**

**APPENDIX C, Soil Report and Soil Map**

**APPENDIX D, WVDEP Storm Water Construction General Permit**

**APPENDIX E, Record Keeping Forms**

**APPENDIX F, Public Notice Sign and Outlet Marker Sign**



## 1.0. CONTACT INFORMATION

<i>PERMITTEE</i>	<i>PHONE/FAX/MOBILE</i>	<i>ADDRESS</i>
<i>Greenman-Pedersen, Inc. (GPI) Attention: Douglass Robb</i>	<i>(410) 880-3055</i>	<i>11000 Broken Land Parkway Suite 500 Columbia, MD 21044</i>
<i>PROJECT CONTRACTOR</i>		
<i>TBD</i>		
<i>QUALIFIED PERSON/ 24-HOUR CONTACT</i>		
<i>Keith Loar</i>	<i>(304) 406-8373</i>	<i>58 Mission Way Suite 201 Scott Depot, WV 25560</i>
<i>OTHER</i>		

## 2.0 OBJECTIVE

A storm water pollution prevention plan (SWPPP) has been prepared for storm water discharges that will reach Waters of West Virginia and to identify and address potential sources of pollution that are reasonably expected to affect the quality of discharges from the construction site, including material storage, equipment staging, vehicle repair, and fueling areas, etc., used by the permitted project. The SWPPP describes and ensures the implementation of practices that will be used to reduce the pollutants in storm water discharges associated with construction activity at the construction site and assure compliance with the terms and conditions of the general permit.

## 3.0 NON-STORM WATER DISCHARGES

All discharges authorized by this permit shall be composed entirely of storm water.

## **4.0 SWPPP REVIEW AND AMENDMENTS**

### **4.1 Review**

This SWPPP shall be retained on-site at the construction site or, if the site is inactive or does not have an on-site location to store the plan, a notice will be posted describing the location of the SWPPP. This SWPPP shall be made readily available at the time of an on-site inspection.

### **4.2 Amendments**

This SWPPP will be revised or updated when the following occurs:

1. Change in design, construction, operation, or maintenance that has a significant effect on the discharge of pollutants that has not been previously addressed in this SWPPP.
2. Results of inspections or investigations indicating this SWPPP is proving ineffective in eliminating or significantly minimizing pollutants in discharges authorized under the general permit.
3. To identify any new Contractor and/or Subcontractor that will implement a measure of the SWPPP.

All other permittees implementing portions of the SWPPP that will be impacted by a change to the SWPPP will be notified of the change in a timely fashion.

Revisions to the SWPPP will be documented on the "SWPPP Revision Documentation Form" found in the front of this document. The authorized representative with regulatory authority (corporate officer or proprietor) to approve the SWPPP shall sign the modified plan certifying that the SWPPP revision information is true and accurate.

## **5.0 SITE OR PROJECT DESCRIPTION**

### **5.1 Site Location**

The Parsons – Davis project is located in Tucker County, beginning near Mackeyville, West Virginia and traverses approximately 10 miles in a northeasterly direction towards existing Corridor H near Davis, West Virginia. Beginning on the western end of the project and moving along the proposed Corridor H alignment to its eastern terminus, the project falls within the Dry Fork – Black Fork, Minear Run – Cheat River, and Lower and



Middle Blackwater River watersheds on the Mozark Mountain, Lead Mine, and Davis USGS 7.5-minute quadrangles. The project begins near 39.10959° N, 79.61890° W on the western end and extends to approximately 39.13841° N, 79.46022° W at its eastern terminus. In addition to the Corridor H alignment, a section of WV 32 near Thomas, West Virginia will be relocated. The relocated section of WV 32 falls within the Lower and Middle Blackwater River watersheds on Davis USGS 7.5-minute quadrangle and begins on existing WV 32 east of Thomas, West Virginia near 39.14054° N, 79.49046° W and traverse approximately 2 miles to existing US 219 north of Thomas, WV near 39.16171° N, 79.49331° W.

## 5.2 Description of Construction Activity & Environmental Impacts

The project involves exploratory core borings associated with the Parsons to Davis section of Corridor H, including a relocated section of WV 32. The first phase of the core drilling project will include borings located outside the Monongahela National Forest and that do not require access from Forest Service Lands. Approximately 475 boring locations are anticipated for Phase 1. Disturbance associated with the construction of new access roads, reconstructed access roads, drill pads, and lay down areas totals approximately 38.1 acres for Phase 1. Tree clearing will be necessary but limited to the minimum extent practicable.

Enhanced erosion and sediment control best management practices (BMPs) will be installed in accordance with the 2019 NPDES Construction Stormwater General Permit.

## 5.3 Construction Activity with Potential Pollutants and Sources

Construction activities or materials that have the potential to contribute pollutants, including sediment, to stormwater runoff include the following:

Construction Activity and/or Material	Potential Pollutant
• Excavation	• Sediment – TSS, turbidity, oil and grease, TPH
• Filling	• Sediment – TSS, turbidity, oil and grease, TPH
• Grading	• Sediment – TSS, turbidity, oil and grease, TPH

## 5.4 Major Activities Schedule

The following schedule sheet is an intended schedule or sequence of the major activities anticipated for the core drilling operation. The proposed schedule may vary based on weather conditions. Details are provided in Appendix B.

- June 2023 – Estimated project initiation.
- June 2023 – February 2024
  - Mobilization of construction, core drilling, and support equipment to the project site (June – mid-June 2023).
  - Installations of BMPs (June 2023 – February 2024).
  - Construction of access roads and drill pads (June 2023 – February 2024).
  - Drilling of core borings (June 2023 – February 2024).
  - Reclamation of drill pads and access roads (June 2023 – February 2024).
- February 2024 – Estimated project completion.

## 5.5 Property Acreage

The maximum anticipated area of soils that may be disturbed in Phase 1 is 38.1 acres.

## 5.6 Construction Activity Acreage

The total number of acres of construction activities associated with Phase 1 is listed below:

Phase 1 - Activity or Material	Acres
Access Roads to Core Boring Locations <sup>1</sup>	30.5
Core Boring Pads <sup>2</sup>	5.8
Lay Down Areas <sup>3</sup>	1.8

1. Includes new and reconstructed access roads with 12 - 24 LF disturbance and 16 LF timber matting width.

2. Core boring pad 20'x30' typical.

3. Lay Down area 50'x100' typical.

## 5.7 Soil Data

Soil data obtained from the Natural Resource Conservation Service (NRCS) Web Soil Survey identified 35 principal soil types within the Phase 1. Data associated with the identified soil types are shown in the table below and in the NRCS Custom Soil Resource Report generated for Corridor H Parsons – Davis Core Borings included in Appendix C.



**Soil Characteristics**  
**Tucker County and Northern Randolph County, West Virginia**

Map Unit	Map Unit Name	Acres in LOD (acres)	Percent of LOD (%)	Hydrologic Soils Group
BnD	Belmont channery silt loam, 15 to 25 percent slopes, very stony	0.6	1.5	B
BnE	Belmont channery silt loam, 25 to 35 percent slopes, very stony	0.1	0.3	B
BrB	Brinkerton mucky silt loam, moist, 3 to 8 percent slopes	0.9	2.2	D
BXC	Brinkerton-Lickdale association, 0 to 15 percent slopes, very rubbly	0.7	1.8	C/D
ByC	Brinkerton-Nolo complex, 3 to 15 percent slopes, rubbly	7.2	19.0	C/D
ChD	Cateache channery silt loam, 15 to 25 percent slopes	0.2	0.4	C
CnE	Cateache channery silt loam, 15 to 35 percent slopes, rubbly	0.4	1.0	C
CrD	Cedarcreek extremely channery loam, moderately steep	6.7	17.7	A
CxB	Cookport silt loam, moist, 3 to 8 percent slopes	0.9	2.4	C/D
CzB	Cookport cobbly silt loam, moist, 3 to 8 percent slopes, extremely stony	0.1	0.2	C/D
DaB	Dekalb channery loam, 3 to 8 percent slopes	2.8	7.4	A
DaC	Dekalb channery loam, 8 to 15 percent slopes	1.5	3.9	A

Map Unit	Map Unit Name	Acres in LOD (acres)	Percent of LOD (%)	Hydrologic Soils Group
DaD	Dekalb channery loam, 15 to 25 percent slopes	1.2	3.3	A
DaE	Dekalb channery loam, 25 to 35 percent slopes	0.8	2.1	A
DaF	Dekalb channery loam, 35 to 65 percent slopes	0	0.1	A
DkB	Dekalb loam, 3 to 8 percent slopes	0.4	0.9	A
DmC	Dekalb very cobbly loam, 3 to 15 percent slopes rubbly	1.6	4.1	A
DmE	Dekalb very cobbly loam, 15 to 35 percent slopes, rubbly	0.5	1.4	A
DmF	Dekalb very cobbly loam, 35 to 70 percent slopes, rubbly	0.2	0.6	A
DrE	Dekalb very cobbly loam, 15 to 35 percent slopes, very rubbly	0.7	1.8	A
EnC	Ernest silt loam, moist, 8 to 15 percent slopes	0.8	2.2	D
ErC	Ernest cobbly silt loam, moist, 3 to 15 percent slopes, rubbly	1.8	4.8	D
ErE	Ernest cobbly silt loam, moist, 15 to 35 percent slopes, rubbly	0.1	0.4	D
ExC	Ernest cobbly silt loam, moist, 3 to 15 percent slopes, very rubbly	0.3	0.9	D
ExE	Ernest cobbly silt loam, moist, 15 to 35 percent slopes, very rubbly	0.5	1.3	D
GcC	Gilpin channery silt loam, moist, 8 to 15 percent slopes	0.3	0.9	C



Map Unit	Map Unit Name	Acres in LOD (acres)	Percent of LOD (%)	Hydrologic Soils Group
LkC	Leetonia very cobbly loamy sand, 3 to 15 percent slopes, very rubbly	1.6	4.2	B
LmA	Lickdale silt loam, 0 to 5 percent slopes	0.7	1.8	C/D
McB	Meckesville silt loam, 3 to 8 percent slopes	0.2	0.5	C
McC	Meckesville silt loam, 8 to 15 percent slopes	0.5	1.4	C
MkD	Meckesville silt loam, 15 to 25 percent slopes, very stony	1.8	4.7	C
NoA	Nolo silt loam, 0 to 3 percent slopes	0.7	2.0	D
NoB	Nolo silt loam, 3 to 8 percent slopes	1.2	3.0	D
Ud	Udorthents, smoothed	0	0.0	N/A

## 5.8 General Location Map

A general location map is included in Appendix A.

## 5.9 Erosion and Sediment Control Plans

Plans showing core boring locations, access roads, and proposed erosion and sediment control features are included in Appendix B.

## 5.10 Industrial Discharges

- This project **does not** involve discharges associated with industrial activities other than commercial construction activities.
- There **are not** dedicated concrete or asphalt plants associated with this project.

The Contractor will implement measures needed to separate water-based drilling fluids from stormwater. Prior to commencing the drilling activities, the Contractor shall install a sump to collect water-based drilling fluids and drilling cuttings. In addition to stream and pond water sources, potable water obtained from a local Public Service District may be utilized in the drilling

operation. Water-based drilling fluids will be allowed to seep into the ground, while excess drilling cuttings will be disposed of in an upland area away from streams and wetlands.

There will be no discharge of process wastewater from concrete or asphalt plants. Water from equipment and vehicle washing, wheel washing, concrete and bituminous washout, and washout from paints, oils, and other construction materials is production wastewater and cannot be disposed of on site or discharged without an individual NPDES permit. It must be contained and removed for processing and proper disposal.

Waste materials, such as used oil, shall be stored in suitable containers with appropriate secondary containment while awaiting proper disposal. These waste materials, along with used erosion and sediment control materials, will be taken to WVDEP approved recycling and/or disposal sites.

Good housekeeping measures will be performed during access road construction and/or reconstruction and the core drilling operation to maintain a clean and orderly project site. Good housekeeping measures to be employed include:

- Proper and orderly storage of construction materials and containerized fluids. Oils, fuels, hydraulic fluids, etc. will be stored in suitable containers.
- Routine collection of trash and construction debris and disposal in accordance with the Code of West Virginia and Legislative Rule Title 33 Series 1 (Solid Waste Management Rule).
- Minimizing exposure of onsite construction materials and waste to stormwater.
- Keeping roads clean by providing stone construction entrances at access locations and removing debris, mud, and dirt tracked onto roads from the project site at a frequency necessary to keep the roads clean.
- Preventing trash, fuels, hydraulic fluids, oils, and other harmful substances from entering Waters of the State.
- Familiarizing employees on good housekeeping measures and protocols.

### **5.11 Receiving Waters**

The first named waterbodies that may receive stormwater discharges from the site are listed below.

- Roaring Run, Slip Hill Mill Run, Big Run, Tub Run, Long Run, Middle Run, North Fork Blackwater River, Pendleton Creek, and Beaver Creek.



The entire project site is located within the Cheat watershed (HUC 05020004). Stormwater from the western end of the project may discharge into Unnamed Tributaries of Roaring Run. Continuing in a northeasterly direction along the alignment up Backbone Mountain towards Tucker County High School, stormwater may discharge into Unnamed Tributaries of Slip Hill Mill Run. Continuing in an easterly direction towards Davis, stormwater may discharge into Big Run, Tub Run, Long Run, Middle Run, North Fork Blackwater River, Pendleton Creek, Beaver Creek and/or Unnamed Tributaries to each.

Most named streams within the project limits are impaired and have Total Maximum Daily Loads (TMDLs). Big Run (WVMC-60-D-1) has a TMDL for pH. Tub Run (WVMC-60-D-2), Middle Run (WVMC-60-D-3-B), North Fork Blackwater River (WVMC-60-D-3), and Beaver Creek (WVMC-60-D-5) have TMDLs for pH, aluminum, and iron. Long Run (WVMC-60-D-3-A) has TMDLs for CNA-Biological, pH, aluminum, and iron. These streams are classified as Category 4A.

Pendleton Creek (WVMC-60-D-4), Slip Hill Mill Run (WVMC-56-B), and Roaring Run (WVMC-60-A) are not considered impaired.

Minimal land disturbance is anticipated for the construction of temporary access roads, drilling pads, and lay down areas. Disturbances associated with the project will be temporary and disturbed areas will be reclaimed to approximate original conditions and stabilized. As such, drainage patterns within the project limits are anticipated to remain the same after reclamation as they were prior to work being initiated. Erosion and sediment controls will remain in place until the project area meets stabilization criteria.

#### **5.12 WVDEP Construction General Permit, WV0115924**

A copy of the WVDEP Construction General Permit, WV0115924 is included in Appendix D.

#### **5.13 Threatened and/or Endangered Species**

To be eligible for coverage under the construction stormwater permit, facilities must provide documentation on whether a listed endangered or threatened species, or critical habitat, are found with the proximity of the project.

Within the project area, coordination with the United States Fish and Wildlife Service (USFWS) is ongoing and habitat surveys, presence/absence surveys, and mist netting and telemetry surveys have been conducted for potential threatened and endangered plants and animals. Potential

threatened and endangered plants and animals within the project area include Small Whorled Pogonia, Northern Long-Eared Bat, Indiana Bat, Virginia Big-Eared Bat, Rusty Patched Bumblebee, and Cheat Mountain Salamander. While presence/absence surveys for Running Buffalo Clover were also performed, Running Buffalo Clover was delisted by the USFWS in September 2021.

Presence/absence surveys did not find the presence of Small Whorled Pogonia within the core boring project limits. However, the presence of Small Whorled Pogonia was found just outside the Corridor H project limits in one area of the project.

Mist netting surveys have been conducted for Northern Long-Eared Bat and Indiana Bat. The initial surveys performed in 2012 and 2019 for Northern Long-Eared Bat resulted in captures on the western end of the project area, while surveys since 2019 have not resulted in any captures within the project area. Surveys for Indiana Bat have resulted in no captures within the project area.

Mist netting surveys and telemetry surveys have been conducted for Virginia Big-Eared Bat. Surveys conducted in the Mackeyville area resulted in no captures, while surveys conducted outside the Mackeyville area indicate presence of Virginia Big-Eared Bat.

Habitat and presence/absence surveys have been conducted for Rusty Patched Bumblebee in the areas east of Mackeyville. Habitat was found to be present, but presence of Rusty Patched Bumblebee was not found during the surveys. Independent investigation by others indicated presence of Rusty Patched Bumblebee within the Monongahela National Forest.

Habitat and habitat suitability surveys have been conducted for the Cheat Mountain Salamander. Presence/absence surveys will be conducted in 2023.

Supporting habitat for threatened and endangered species does occur within the project area. Critical habitat as defined under the Endangered Species Act and determined by the USFWS does not occur within the project area.

Potential threatened and endangered species within the project area will be addressed in the Biological Assessment provided to the USFWS. Work associated with the core boring operation will not begin until concurrence has been received from the USFWS and a Programmatic Categorical Exclusion has been signed by the Federal Highway Administration.



#### 5.14 Historical Determination

The adverse effects on historic properties must be considered before a facility can be covered by the construction general permit.

A review of historic resources within the project limits was conducted. Determination of Eligibility was sent to the West Virginia State Historic Preservation Officer (SHPO) in May 2022. In June 2022, the SHPO concurred the only historic resources within the project limits were two historic districts, Blackwater Industrial Complex Archaeological and History District and WV Central and Pittsburgh Railway District.

Work associated with the core boring operation will not begin until concurrence has been received from the SHPO and a Programmatic Categorical Exclusion has been signed by the Federal Highway Administration.

#### 5.15 Total Maximum Daily Loading (TMDL)

Receiving streams with established TMDL limits that would be regulated for potential pollutants from the construction site are listed below.

Water Body	Parameter	Designated Uses
Big Run	pH	None
Tub Run	pH, Aluminum, Iron	None
Long Run	CNA-Biological, pH, Aluminum, Iron	None
Middle Run	pH, Aluminum, Iron	None
North Fork Blackwater River	pH, Aluminum, Iron	None
Beaver Creek	pH, Aluminum, Iron	None

## **6.0 EROSION AND SEDIMENT CONTROLS**

This section includes descriptions of control measures that may be implemented to control pollutants in the storm water discharges. The control measures shall, at a minimum, be designed to effectively minimize the discharge of pollutants by design, installation, and maintenance, in order to meet effluent limitations required by 40 CFR 450.21.

### **6.1 Short and Long-Term Goals/Criteria**

- Retain sediment on-site to the extent practicable with consideration for local topography, soil type, and rainfall.
- Select, install, and maintain control measures according to the manufacturer or designer's specifications.
- Remove sediment accumulations if sediment escapes from the site at a frequency to minimize further negative effects and, whenever feasible, prior to the next storm event.
- Remove sediment from silt fences and compost filter socks before reaching 50% of the BMP's height above ground.

### **6.2 Site-Specific Erosion and Sediment Controls**

A site-specific Erosion and Sediment Control (E&SC) Plan has been developed for the exploratory core boring operation. Boring locations are spread throughout the project limits and accesses to these locations have been laid out.

Approximately 475 boring locations are anticipated for Phase 1. Existing roads, reconstructed roads, and newly constructed roads will be utilized to access the boring locations. Access point locations from existing roads have been identified and stone will be placed at construction entrances to paved roads.

Work associated with constructing new access roads, reconstructing access roads, constructing drilling pads, installing and maintaining E&SC features, and reclaiming access roads and drilling pads will be performed by a Contractor other than the Drilling Contractors.

Once construction equipment has been mobilized to the site, the Contractor will use existing roads to access new access road and reconstructed access road locations. E&SC features identified in the approved Plan will be installed by the Contractor with initial clearing and grubbing limited to what is necessary to establish the E&SC features for the proposed disturbed area. Utilizing small bulldozers and excavators the Contractor will create or reconstruct accesses to the boring locations and construct the drilling pads and sumps necessary for the drilling operation. Drilling pads will be

constructed to constrain drilling water and cuttings to the drilling pad to minimize disturbance and control runoff from the drilling location.

As the drilling pads and access roads to them are being established, the Drilling Contractors will mobilize drilling equipment to the boring locations and drill the identified borings. After the borings have been drilled and the required water levels recorded, the Drilling Contractor will backfill the bore holes.

Reclamation of drill pads and access roads by the Contractor will be an ongoing process. Once a bore hole has been backfilled, the drill pad and access to the drilling pad will be seeded with a temporary seed mixture and mulched within four days in areas that will not be re-disturbed or reclaimed for more than 14 days. Drilling pads and access roads to them that will be reclaimed to approximate original conditions within 14 days of backfilling the bore hole will be seeded with a permanent seed mixture and mulched within four days of being reclaimed.

While existing roads will be used to access boring locations where feasible, access to most locations will be through reconstructed access roads and new access roads. The calculated disturbance for the drilling operation is based on a 12-foot to 24-foot estimated cut-fill footprint with 16-foot timber matting locations, 20-foot by 30-foot drilling pads, and 50-foot by 100-foot lay down areas. With the exception of one temporary steel bridge crossing Pendleton Creek, portable timber bridges or timber matting, depending upon stream width, will be used at identified stream crossings. No impacts below the Ordinary High Water (OHW) mark of any stream shall be allowed. Timber matting will be used to cross identified wetlands to minimize disturbance to the wetland and other low-lying areas that may be wet but were not considered to be a stream or wetland.

ES&C features utilized for the new access road and reconstructed access road construction, drilling pad construction, and lay down areas will include 18" minimum compost filter socks and water bars. Super silt fence, 36-inch smart fence and/or 42-inch smart fence may be used, if deemed necessary, to minimize or prevent sediment laden stormwater from leaving the project site. Fiber matting will be utilized on cut and fill slopes 3:1 or steeper.

Water bars will be used on new access roads and reconstructed access roads to prevent high velocity flows from streaming down the proposed access roads. Water bar spacing will be as follows:

Slope	Spacing
<5%	100'
5%-20%	50'
>20%	40'



If any of the components of the approved E&SC Plan prove ineffective at minimizing or preventing sediment laden stormwater from leaving the project site, the Contractor, after collaboration with the GPI Engineer or his representative, shall implement additional BMPs to provide a more effective means of controlling/eliminating erosion and siltation from stormwater runoff. If approved BMPs are ineffective at protecting receiving waters and the Contractor is unable to identify and employ BMPs capable of preventing sediment laden runoff from leaving the project site, the Contractor shall immediately cease further land disturbance until such time that the unauthorized discharge ceases.

The E&SC features used are shown in the "Erosion and Sediment Control Plan" included in Appendix B.

## **7.0 STABILIZATION PRACTICES**

The site stabilization practices described in this SWPPP include temporary and permanent stabilization measures that ensure that disturbed portions of the site are stabilized, and that existing vegetation is preserved when possible. Final stabilization measures may include but are not limited to permanent protection such as pavement, compacted gravel, permeable pavements/pavers, buildings, stable waterways (riprap, concrete, grass or pipe), a healthy, vigorous stand of grass or natural vegetation that uniformly covers at least 70 percent of the ground, stable outlet channels with velocity dissipation that directs site runoff to a natural watercourse, and any other approved structure or material.

Temporary seeding and mulching within four days will be performed in areas that will not be re-disturbed or reclaimed within 14 days. Permanent seeding and mulching within four days will be performed in areas that have been reclaimed.

### **7.1 Deadline to Initiate Stabilization Measures**

The types of activities that constitute the initiation of stabilization include, but are not limited to:

- Prepping soil for vegetative or non-vegetative stabilization
- Applying mulch or other non-vegetative product
- Seeding or planting
- Starting stabilization practices on a portion of the area to be stabilized
- Finalizing arrangements to have stabilization product fully installed.

Except as noted below, stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 4 days.

- When the initiation of stabilization measures by the 4<sup>th</sup> day after construction activity temporarily or permanently ceases is precluded by natural causes, stabilization measures shall be initiated as soon as conditions allow.
- When construction activity will resume on a portion of the site within 14 days from when activities ceased, (i.e., the total time that construction activity is temporarily halted is less than 14 days) then stabilization measures do not have to be initiated on that portion of the site by the fourth day after construction activities have temporarily ceased.
- Areas where the seed has failed to germinate adequately (uniform perennial vegetative cover with a density of 70%) within 30 days after seeding and mulching shall be reseeded immediately, or as soon as weather conditions allow.

## **7.2 Temporary Seeding and Mulching**

Section 642 “Temporary Pollution Control” of the 2023 WVDOH Standard Specifications for Roads and Bridges establishes measures to be performed to control water pollution throughout the life of the project. Measures related to temporary seeding and mulching include:

- Temporary seed mixtures, application scheduling and rates, and planting seasons
- Mulch and fertilizer types and application rates
- Agricultural limestone specifications and application rates

Subsection 642.5.3 of the 2023 WVDOH Standard Specifications for Roads and Bridges specifies temporary seeding shall be done on any area subject to further construction work prior to project completion. Temporary seed, such as annual ryegrass and weeping lovegrass, used in seed mixture D shall be commercial grade meeting State Seed Law requirements and be applied within one year of the germination test date shown on the label. Temporary seed labeled “germination below standard” shall not be used. Asphalt emulsion shall not be used as a tackifier and wood cellulose fiber shall not be used as a stand-alone mulch for temporary erosion control. Temporary seed mixtures to be used will be determined by the Engineer or his representative in accordance with the temporary seed mixture information shown below.

Temporary Seeding Mixtures		
Seed Variety	Spring & Fall	Summer
	(LB/Acre)	(LB/Acre)
Annual ryegrass ( <i>Lolium multiflorum</i> )	7	8
Perennial ryegrass ( <i>Lolium perenne</i> )	7	3
Spring Oats ( <i>Avena sativa</i> )	3	
Brown Top Millet ( <i>Panicum ramosum</i> )		4
TOTAL	17	15

Mulching, fertilizing, and liming shall follow Subsection 642.5.4 – Mulch, Fertilizer and Lime of the 2023 WVDOH Standard Specifications for Roads and Bridges and be in accordance with the following requirements:

- Two tons per acre of straw mulch shall be applied on slopes of 1 ½ to 1 or flatter.
- Application of mulch alone on embankments or cuts 1 ½ to 1 or flatter that are susceptible to critical erosion during periods of cold weather may require two tons per acre application of straw - mulch for temporary erosion control and later seeding as directed by the Engineer or his representative.

When the weather becomes favorable in the spring, these areas shall be seeded using normal application rates of seed, fertilizer, and lime. If additional mulch is needed, straw shall be used as directed by the Engineer or his representative.

### 7.3 Permanent Seeding and Mulching

Section 652 “Seeding and Mulching” of the 2023 WVDOH Standard Specifications for Roads and Bridges covers all operations incidental to the establishment of grass and legume vegetation. Operations related to permanent seeding and mulching include:

- Permanent seed mixtures, application scheduling and rates, and planting seasons
- Mulch and fertilizer types and application rates
- Agricultural limestone specifications and application rates

Temporary seed, such as annual ryegrass and weeping lovegrass, used in seed mixture D shall be commercial grade meeting State Seed Law



requirements and be applied within one year of the germination test date shown on the label. Temporary seed labeled “germination below standard” shall not be used. Asphalt emulsion shall not be used as a tackifier.

Permanent seeding shall be performed between March 1 to June 15 and August 1 to October 15 and be accomplished by approved methods that provide for uniform distribution of Type D Seed Mixture. Application rates and seed mixture components shall be in accordance with the following information unless otherwise specified on the Plans.

<b>Permanent Seed Mixture</b>	
<b>Seed Variety</b>	<b>Cut and Fill Slopes (Including Benches and Bifurcated Median)</b>
	<b>(LB/Acre)</b>
Kentucky 31 Fescue	20
Red Fescue (Pennlawn)	20
Red or White Clover	20
Annual Ryegrass 08/01 - 05/15 Or Weeping Lovegrass 05/15 - 08/01	7  3

Mulching and fertilizing shall follow Subsection 652.6 – Applying Mulch and Fertilizer of the 2023 WVDOH Standard Specifications for Roads and Bridges and be in accordance with the following requirements:

- Two tons per acre of straw mulch shall be applied on slopes of 1 ½ to 1 or flatter.

#### **7.4 Deadline to Complete Installation of Stabilization Measures**

As soon as practicable, but no later than 4 days after initiation of soil stabilization measures, the site will have completed:

- Vegetative Stabilization – initial seeding or planting, and/or
- Non-Vegetative – installation or application of stabilization measures.

With extenuating circumstances like frozen conditions, stabilization measures will be completed as soon as practicable. Routine inspections will be continued until final stabilization requirements are met.

## 7.5 Other Deadlines

Where the site is affected by circumstances beyond the control of the Stormwater Permittee, and vegetative stabilization measures are proposed, the following deadlines apply:

- Immediately initiate, and within 4 days complete installation of temporary non-vegetative measures to prevent erosion.
- As soon as conditions allow, the activities required to plant and initially establish vegetation shall proceed.

The circumstances that led to the inability to complete the deadlines outlined in sections 7.1 and 7.4 of this SWPPP will be documented, with the outline of a schedule for initiating and completing stabilization.

## 7.6 Core Boring Access

Boring locations throughout the project limits will be accessed using existing, new, and/or reconstructed access roads. Existing roads will be utilized to access boring locations where feasible. Multiple access points have been identified along existing roads. Identified access points and access roads are shown in the “Erosion and Sediment Control Plan” included in Appendix B. The following table includes access road type, length, and final condition by watershed for Phase 1.

WATERSHED	ACCESS ROAD TYPE	LENGTH (FT)	FINAL CONDITION
ROARING RUN	R-001 THROUGH R-019, R-022, MK-1 THROUGH MK-12		
	EXISTING	264	STABILIZED, SEEDED, AND/OR GRAVELED AS NEEDED
	RECONSTRUCTED	2289	STABILIZED AND RE-SEEDED
	NEW	3595	RECLAIMED TO APPROXIMATE ORIGINAL CONTOURS AND DISTURBANCE RE-SEEDED
SLIP HILL MILL RUN	R-020, R-021, R-023 THROUGH R-027, R-043 THROUGH R-045, R-047 THROUGH R-049, R-051 THROUGH R-053, R-070, R-075, R-080, R-095, R-100, R-129, R-132, R-134, R-141 THROUGH R-156, T-001 THROUGH T-013, US219-1 THROUGH US219-10		
	EXISTING	662	STABILIZED, SEEDED, AND/OR GRAVELED AS NEEDED
	RECONSTRUCTED	4487	STABILIZED AND RE-SEEDED
	NEW	6678	RECLAIMED TO APPROXIMATE ORIGINAL CONTOURS AND DISTURBANCE RE-SEEDED

WATERSHED	ACCESS ROAD TYPE	LENGTH (FT)	FINAL CONDITION
BIG RUN	R-157 THROUGH R-180, R-182		
	EXISTING	0	STABILIZED, SEEDED, AND/OR GRAVELED AS NEEDED
	RECONSTRUCTED	2255	STABILIZED AND RE-SEEDED
	NEW	6603	RECLAIMED TO APPROXIMATE ORIGINAL CONTOURS AND DISTURBANCE RE-SEEDED
TUB RUN	R-181, R-183 TO R-187		
	EXISTING	881	STABILIZED, SEEDED, AND/OR GRAVELED AS NEEDED
	RECONSTRUCTED	0	STABILIZED AND RE-SEEDED
	NEW	2120	RECLAIMED TO APPROXIMATE ORIGINAL CONTOURS AND DISTURBANCE RE-SEEDED
LONG RUN	B-600 THROUGH B-610, B-613, B-615, B-616, B-618, B-620, B-621, B-623, B-625, B-627, G-001 THROUGH G-007, LR-1 THROUGH LR-20, R-188 THROUGH R-203		
	EXISTING	9865	STABILIZED, SEEDED, AND/OR GRAVELED AS NEEDED
	RECONSTRUCTED	5784	STABILIZED AND RE-SEEDED
	NEW	11045	RECLAIMED TO APPROXIMATE ORIGINAL CONTOURS AND DISTURBANCE RE-SEEDED
SNYDER RUN	NONE		
	EXISTING	1067	STABILIZED, SEEDED, AND/OR GRAVELED AS NEEDED
	RECONSTRUCTED	0	STABILIZED AND RE-SEEDED
	NEW	0	RECLAIMED TO APPROXIMATE ORIGINAL CONTOURS AND DISTURBANCE RE-SEEDED
MIDDLE RUN	B-611, B-612, B-614, B-617, B-619, B-622, B-624, B-626, B-628 THROUGH B-650, B-652, B-653		
	EXISTING	0	STABILIZED, SEEDED, AND/OR GRAVELED AS NEEDED
	RECONSTRUCTED	5647	STABILIZED AND RE-SEEDED
	NEW	6035	RECLAIMED TO APPROXIMATE ORIGINAL CONTOURS AND DISTURBANCE RE-SEEDED



WATERSHED	ACCESS ROAD TYPE	LENGTH (FT)	FINAL CONDITION
NORTH FORK BLACKWATER RIVER	B-651, B-654 THROUGH B-680, B-683, NF-1 THROUGH NF-15, NF-18 THROUGH NF-31, B-811 THROUGH B-841		
	EXISTING	3063	STABILIZED, SEEDED, AND/OR GRAVELED AS NEEDED
	RECONSTRUCTED	6714	STABILIZED AND RE-SEEDED
	NEW	13318	RECLAIMED TO APPROXIMATE ORIGINAL CONTOURS AND DISTURBANCE RE-SEEDED
PENDLETON CREEK	B-681, B-682, B-684 THROUGH B-731, B-734A, B-736 THROUGH B-747, B-749, B-750, B-775 THROUGH B-810, SP-1 THROUGH SP-9, WV32-1 THROUGH WV32-16		
	EXISTING	4996	STABILIZED, SEEDED, AND/OR GRAVELED AS NEEDED
	RECONSTRUCTED	7811	STABILIZED AND RE-SEEDED
	NEW	23705	RECLAIMED TO APPROXIMATE ORIGINAL CONTOURS AND DISTURBANCE RE-SEEDED
BEAVER CREEK	B-748, B-751 THROUGH B-756, B-758, B-759, B-761, B-762, B-764, B-765, B-767, B-769 THROUGH B-774, DS-1 THROUGH DS-10		
	EXISTING	0	STABILIZED, SEEDED, AND/OR GRAVELED AS NEEDED
	RECONSTRUCTED	4572	STABILIZED AND RE-SEEDED
	NEW	2068	RECLAIMED TO APPROXIMATE ORIGINAL CONTOURS AND DISTURBANCE RE-SEEDED

## 8.0 STRUCTURAL CONTROLS

### 8.1 Structural Control Requirements

In accordance with Parts I.C.1. and II.H.3.b.2. of the 2019 Construction Stormwater General Permit, enhanced BMPs shall be used to protect sensitive receiving streams with established TMDLs. Therefore, 18" compost filter socks, or equivalent sediment controls detailed in the plans are required for all down slope boundaries (and for those side slope boundaries deemed appropriate as dictated by individual site conditions) of the construction, unless infeasible.

## 9.0 OTHER CONTROLS

### 9.1 Other Control Requirements

To minimize off-site tracking of sediments and generation of dust, typical controls may include stabilized construction entrances, shoveling and sweeping, watering for dust control, etc. All construction and waste materials that pose a potential pollutant source to the storm water runoff from the construction site will be stored in such a manner so as to prevent or minimize storm water contact.

To demonstrate that all applicable state and local regulations governing waste disposal, sanitary sewer or septic systems are being obeyed, the following practices are in place:

- The site will have the typical waste found on a construction site. Either a roll off dumpster or wire fence containment will be provided for storing trash and rubbish until it can be properly disposed of. The dumpster or fence containment will be covered when not in use to prevent storm water from coming into contact with the trash and rubbish.
- Any controls required for endangered or threatened species or their habitat, and/or those required by the State Historic Preservation Officer (SHPO) will be installed properly and maintained accordingly.

### 9.2 Other Controls at the Site:

If any other controls will be used, it will be described on the Other Control Sheet found in the Site Information in the appendix.

Controls	Rationale
Dust -	Water as needed
Off-site Tracking -	Shoveling or sweeping as needed
Sewage -	Port-a-toilets for workers; POTW for residence
Construction Litter and Trash -	Covered dumpster to minimize waste materials contact with storm water

## 10.0 MAINTENANCE

All erosion and sediment control measures and other protective measures identified in this SWPPP must be maintained in effective operating condition. If through inspections the permittee determines that BMPs are not operating

effectively, maintenance must be performed within 24 hours for active construction sites and before the next anticipated storm event to maintain the continued effectiveness of storm water controls. If maintenance prior to the next anticipated storm event is impracticable, maintenance must be scheduled and accomplished as soon as practicable. Erosion and sediment controls that have been intentionally disabled, run-over, removed, or otherwise rendered ineffective must be replaced or corrected immediately upon discovery.

## **11.0 INSPECTIONS OF CONTROLS**

The permittee shall ensure site inspections are conducted by a Qualified Person in accordance with this section. The purpose of the inspections is to ensure compliance with the approved plan, and when the approved plan is not effective at protecting water quality, the inspection is to document that plan improvements are needed.

The person(s) inspecting the site may be a staff person or a third party hired to conduct such inspections if they meet the definition of a Qualified Person. Once an inspection has been completed, the inspector must complete an inspection report within 24 hours documenting the inspection findings. The site must be inspected as listed below.

- Once every four (4) days, and;
- Within 24-hours of the occurrence of a precipitation event of 0.25 inches or greater.

To determine if a precipitation event of 0.25 inch or greater has occurred on the site, properly maintained rain gages will be placed at three representative locations throughout the project limits.

Reductions in inspection frequency may occur in accordance with the following:

Stabilized areas:

The permittee may reduce the frequency of inspections to twice per month, no more than 14 calendar days apart, in any area of the site where final stabilization has been completed. If construction activity resumes in this portion of the site at a later date, the inspection frequency immediately increases to that required previous to the reduced frequency. The beginning and ending dates of this period must be recorded in the inspection report.

Exceptions:

For “linear projects”, where disturbed portions have undergone final stabilization at the same time active construction continues elsewhere, the



permittee may reduce the frequency of inspections to twice per month no more than 14 calendar days apart, in any area of the site where the final stabilization has been completed. Inspect once more within 24 hours of the occurrence of a precipitation event of 0.25 inches or greater. If there are no issues or evidence of stabilization problems, further inspections may be suspended. If “wash-out” of stabilization materials and/or sediment is observed, following re-stabilization, the reduced inspection frequency is suspended. Inspections must continue until final stabilization is visually confirmed following a precipitation event of 0.25 inches or greater.

Frozen conditions:

If the permittee suspends construction activities due to frozen conditions, inspections on the site may be temporarily suspended until thawing conditions begin to occur if:

- Runoff is unlikely due to continuous frozen conditions that are likely to continue at the site for at least three (3) months based on historic seasonal averages. If unexpected weather conditions (such as above freezing temperatures or rain events) make discharges likely, the permittee must immediately resume the regular inspection frequency as applicable;
- Land disturbances have been suspended and all disturbed areas of the site have been stabilized.

If still conducting construction activities during frozen conditions, the permittee may reduce the inspection frequency to once per month if:

- Runoff is unlikely due to continuous frozen conditions that are likely to continue at the site for at least three (3) months based on historic seasonal averages. If unexpected weather conditions (such as above freezing temperatures or rain events) make discharges likely, the permittee must immediately resume the regular inspection frequency; and
- Except for areas undergoing construction activities, disturbed areas of the site have been stabilized, the beginning and ending dates of this period must be documented in the inspection report.

## **12.0 CONTRACTORS' AND SUBCONTRACTORS' RESPONSIBILITY**

All Contractors and Subcontractors working at the site are informed of the terms and conditions of the SWPPP and their obligation to follow the plan. In doing so, they agree not to perform their operations counter to the plan without first contacting the Permittee in order that the necessary adjustments to the SWPPP plan can be made to assure that pollutants are not discharged from the site in the storm water runoff.

### **13.0 EMERGENCY NOTIFICATION**

In the event of an unauthorized discharge that causes an emergency condition, the operator shall notify the WVDEP spill alert hotline at (800) 642-3074 and the National Response Center at (800) 424-8802 no later than one hour after learning of the discharge. Notification will be made regardless of the amount of the discharge. A written notification shall be provided within five (5) calendar days after the telephone notification, in accordance with the general permit requirements. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and time, and if, the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

### **14.0 EMPLOYEE TRAINING**

An employee training program will be provided by the Contractor for all on-site personnel directly involved with construction activities at all levels of responsibility that reiterates the components and goal of the SWPPP.

- Training should address topics such as spill and leak response and internal reporting, good housekeeping, and routine inspection and maintenance.
- Training shall be on a quarterly basis while construction activities are occurring.
- A list of attendees and topics covered at each training session shall be documented and maintained in the SWPPP.

**APPENDIX A**  
**General Location Map and Site Map**







## **APPENDIX B**

### **Sediment and Erosion Control Plan**









CORE BORINGS COORDINATES - PHASE 1				
BORING NAME	NORTHING	EASTING	LATITUDE	LONGITUDE
B-600	231172.5680	1957074.4630	N39°08'04.86490"	W79°32'25.00397"
B-601	230992.0380	1957057.6480	N39°08'03.08046"	W79°32'25.21634"
B-602	231094.8880	1957365.7280	N39°08'04.09839"	W79°32'21.30703"
B-603	230897.1140	1957326.5380	N39°08'02.14341"	W79°32'21.80330"
B-604	231069.0090	1957657.4290	N39°08'03.84384"	W79°32'17.60486"
B-605	230795.6500	1957615.9930	N39°08'01.14177"	W79°32'18.12925"
B-606	231005.0820	1957954.4830	N39°08'03.21322"	W79°32'13.83457"
B-607	230761.4360	1957928.6520	N39°08'00.80490"	W79°32'14.16111"
B-608	230951.6830	1958255.9220	N39°08'02.68663"	W79°32'10.00869"
B-609	230718.3370	1958239.3000	N39°08'00.38017"	W79°32'10.21845"
B-610	230665.9440	1958483.7650	N39°07'59.86327"	W79°32'07.11569"
B-611	230954.1750	1958628.6510	N39°08'02.71272"	W79°32'05.27836"
B-612	230915.9020	1958853.6420	N39°08'02.33528"	W79°32'02.42279"
B-613	230583.1550	1958796.7570	N39°07'59.04618"	W79°32'03.14312"
B-614	230884.1760	1959139.3510	N39°08'02.02275"	W79°31'58.79669"
B-615	230728.5770	1959126.5160	N39°08'00.48476"	W79°31'58.95885"
B-616	230505.7810	1959091.3570	N39°07'58.28250"	W79°31'59.40401"
B-617	230870.8820	1959416.4240	N39°08'01.89234"	W79°31'55.28027"
B-618	230490.7390	1959413.7610	N39°07'58.13498"	W79°31'55.31235"
B-619	230861.0180	1959708.7090	N39°08'01.79586"	W79°31'51.57082"
B-620	230451.7060	1959719.7140	N39°07'57.75024"	W79°31'51.42937"
B-621	230626.0730	1959720.5000	N39°07'59.47369"	W79°31'51.42015"
B-622	230869.9110	1960005.5860	N39°08'01.88475"	W79°31'47.80317"
B-623	230469.1680	1960055.6800	N39°07'57.92396"	W79°31'47.16574"
B-624	230889.9780	1960278.6970	N39°08'02.08398"	W79°31'44.33719"
B-625	230546.5530	1960369.2650	N39°07'58.68984"	W79°31'43.18639"
B-626	230918.6300	1960549.0560	N39°08'02.36803"	W79°31'40.90615"
B-627	230610.5710	1960651.4740	N39°07'59.32347"	W79°31'39.60515"
B-628	230713.0800	1960959.5670	N39°08'00.33760"	W79°31'35.69555"
B-629	230981.7380	1960851.3220	N39°08'02.99270"	W79°31'37.07031"
B-630	230768.6950	1961237.5360	N39°08'00.88809"	W79°31'32.16805"
B-631	230858.2600	1961224.4470	N39°08'01.77332"	W79°31'32.33449"
B-632	231061.2230	1961149.8260	N39°08'03.77921"	W79°31'32.28225"
B-633	230962.7440	1961472.7980	N39°08'02.80674"	W79°31'29.18302"
B-634	230784.8660	1961570.1600	N39°08'01.04885"	W79°31'27.94677"
B-635	231191.1040	1961398.4320	N39°08'05.06365"	W79°31'30.12761"
B-636	230796.3800	1961845.8000	N39°08'01.16338"	W79°31'24.44865"
B-637	231090.9860	1961772.3050	N39°08'04.07508"	W79°31'25.38237"
B-638	231312.6130	1961686.0630	N39°08'06.26543"	W79°31'26.47763"
B-639	231048.6110	1962057.3950	N39°08'00.69176"	W79°31'21.76314"
B-640	230987.8920	1961994.8290	N39°08'03.05667"	W79°31'22.55794"
B-641	231398.9710	1961806.2160	N39°08'07.11931"	W79°31'24.95302"
B-641A	231216.0340	1961879.7160	N39°08'05.31134"	W79°31'24.01961"
B-642	231443.2640	1962071.1120	N39°08'07.55778"	W79°31'21.59128"
B-643	231047.9530	1962273.2560	N39°08'03.65100"	W79°31'19.02458"
B-644	231344.9370	1962180.9760	N39°08'06.58618"	W79°31'20.19685"
B-645	231217.2570	1962473.2960	N39°08'05.32489"	W79°31'16.48635"
B-646	231534.3480	1962356.0040	N39°08'08.45875"	W79°31'17.97590"
B-647	231445.7040	1962418.3170	N39°08'07.58274"	W79°31'17.18479"
B-648	231554.2260	1962675.9640	N39°08'08.65597"	W79°31'13.91522"
B-649	231714.5500	1962608.9880	N39°08'10.24046"	W79°31'14.75571"
B-650	231388.3920	1962747.4920	N39°08'07.01702"	W79°31'13.00695"
B-651	231491.8920	1963029.4700	N39°08'08.04063"	W79°31'09.42856"
B-652	231672.4760	1962955.0650	N39°08'09.82537"	W79°31'10.37336"
B-653	231832.8670	1962899.1500	N39°08'11.41056"	W79°31'11.08345"
B-654	231600.3560	1963313.6800	N39°08'09.11328"	W79°31'05.82102"
B-655	231784.5910	1963260.1240	N39°08'10.93416"	W79°31'06.50200"
B-656	231924.0440	1963226.8450	N39°08'12.31245"	W79°31'06.92473"
B-657	231978.7110	1963335.6370	N39°08'12.85399"	W79°31'03.00538"
B-658	231673.6770	1963590.7020	N39°08'09.83853"	W79°31'02.30620"
B-659	231856.5750	1963589.8080	N39°08'11.64630"	W79°31'02.31799"
B-660	231985.0650	1963870.1760	N39°08'12.91682"	W79°30'58.75998"
B-661	231722.4630	1963889.4580	N39°08'10.32128"	W79°30'58.51466"
B-662	231878.4010	1963897.8480	N39°08'11.86260"	W79°30'58.40853"
B-663	231698.8630	1964159.3390	N39°08'10.08849"	W79°30'55.08941"
B-664	231965.8990	1964208.9710	N39°08'12.72797"	W79°30'54.46008"
B-665	231847.4150	1964280.7650	N39°08'11.55698"	W79°30'53.54865"
B-666	231382.2010	1966128.8360	N39°08'06.96115"	W79°30'30.09321"
B-667	231692.3720	1966187.6470	N39°08'10.02695"	W79°30'29.34717"
B-668	231526.4850	1966165.1640	N39°08'08.38729"	W79°30'29.63232"
B-669	231676.3030	1966492.8120	N39°08'09.86838"	W79°30'25.47416"
B-670	231294.0750	1966427.7050	N39°08'06.09037"	W79°30'26.30007"
B-671	231476.4110	1966465.2610	N39°08'07.89262"	W79°30'25.82362"
B-672	231286.3730	1966704.3880	N39°08'06.01445"	W79°30'22.78860"
B-673	231639.0500	1966788.6930	N39°08'09.50038"	W79°30'21.71897"
B-674	231425.4540	1966762.7660	N39°08'07.38917"	W79°30'22.04783"
B-675	231604.6100	1967086.0270	N39°08'09.16015"	W79°30'17.94534"
B-676	231375.9600	1967055.7920	N39°08'06.89962"	W79°30'18.32890"
B-677	231210.3180	1967040.2300	N39°08'05.26293"	W79°30'18.56229"
B-678	231073.5870	1967310.1260	N39°08'03.91161"	W79°30'15.10089"
B-679	231559.0160	1967393.9090	N39°08'08.70965"	W79°30'14.03785"
B-680	231323.9340	1967360.6440	N39°08'06.38608"	W79°30'14.45990"
B-681	231521.0890	1967670.7790	N39°08'08.33488"	W79°30'10.52397"
B-682	231274.2830	1967649.5250	N39°08'05.89544"	W79°30'10.79361"
B-683	231007.5270	1967614.5190	N39°08'03.25880"	W79°30'11.23776"
B-684	231444.2700	1967974.8940	N39°08'07.57568"	W79°30'06.66431"
B-685	231225.2350	1967940.4880	N39°08'05.41072"	W79°30'07.10090"
B-686	230951.1740	1967895.7870	N39°08'02.70188"	W79°30'07.66813"

CORE BORINGS COORDINATES - PHASE 1				
BORING NAME	NORTHING	EASTING	LATITUDE	LONGITUDE
B-687	231161.6800	1968222.7900	N39°08'04.78255"	W79°30'03.51813"
B-688	230913.0950	1968182.5950	N39°08'02.32556"	W79°30'04.02822"
B-689	231333.3840	1968273.0070	N39°08'06.47972"	W79°30'02.88084"
B-690	231280.8720	1968547.8870	N39°08'05.96070"	W79°29'59.39225"
B-691	231111.5100	1968528.7000	N39°08'04.28672"	W79°29'59.63576"
B-692	230949.9930	1968504.6030	N39°08'02.69028"	W79°29'59.94158"
B-693	231202.6330	1968801.1610	N39°08'05.18737"	W79°29'56.17790"
B-694	231079.9250	1968787.1000	N39°08'03.97452"	W79°29'56.35636"
B-695	230910.6680	1968783.8450	N39°08'02.30157"	W79°29'56.39770"
B-696	230901.1320	1969096.1950	N39°08'02.20727"	W79°29'52.43364"
B-697	231140.3240	1969130.9500	N39°08'04.57144"	W79°29'51.99249"
B-698	230885.2900	1969419.2210	N39°08'02.05059"	W79°29'48.33410"
B-699	231113.1870	1969428.5720	N39°08'04.30313"	W79°29'48.21532"
B-700	231096.7100	1969583.2120	N39°08'04.14021"	W79°29'46.25276"
B-701	230929.2080	1969672.3800	N39°08'02.48457"	W79°29'45.12121"
B-702	231113.7830	1969743.5150	N39°08'04.30889"	W79°29'44.21832"
B-703	231026.9900	1969763.9830	N39°08'03.45101"	W79°29'43.95861"
B-704	230954.1500	1970015.1890	N39°08'02.73092"	W79°29'40.77057"
B-705	231125.6090	1970006.1080	N39°08'04.42564"	W79°29'40.88569"
B-706	230991.1930	1970336.6810	N39°08'03.09685"	W79°29'36.69045"
B-707	231141.3390	1970338.6260	N39°08'04.58090"	W79°29'36.66563"
B-708	231238.8090	1971511.4640	N39°08'05.54319"	W79°29'21.78075"
B-709	231085.8880	1971524.6000	N39°08'04.03170"	W79°29'21.61427"
B-710	231261.4910	1971832.2960	N39°08'05.76699"	W79°29'17.70896"
B-711	231117.8970	1971852.5130	N39°08'04.34767"	W79°29'17.45262"
B-712	231295.2730	1971219.3120	N39°08'06.10049"	W79°29'13.93939"
B-713	231126.6280	1972144.2700	N39°08'04.43357"	W79°29'13.74986"
B-714	231351.2050	1972399.0530	N39°08'06.65293"	W79°29'10.51592"
B-715	231151.2140	1972439.4370	N39°08'04.67615"	W79°29'10.00379"
B-716	231421.3940	1972697.6800	N39°08'07.34621"	W79°29'06.72581"
B-717	231157.3160	1972744.8110	N39°08'04.73598"	W79°29'06.12821"
B-718	231287.5460	1972728.1690	N39°08'06.02320"	W79°29'06.33914"
B-719	231195.1200	1973042.4600	N39°08'05.10912"	W79°29'02.30560"
B-720	231342.2300	1973014.2300	N39°08'06.56322"	W79°29'02.70854"
B-721	231496.3760	1972978.8140	N39°08'08.08686"	W79°29'03.15767"
B-722	231247.5530	1973324.5610	N39°08'05.62686"	W79°28'58.77027"
B-723	231569.6200	1973238.6980	N39°08'08.81034"	W79°28'59.85921"
B-724	231418.9860	1973296.4710	N39°08'07.32137"	W79°28'59.12635"
B-725	231517.3000	1973627.6900	N39°08'08.29247"	W79°28'54.92249"
B-726	231676.9850	1973578.0110	N39°08'09.87090"	W79°28'55.55258"
B-727	231370.5050	1973697.1110	N39°08'06.84140"	W79°28'54.04182"
B-728	231761.8800	1973835.0300	N39°08'10.70949"	W79°28'52.29041"
B-729	231606.3520	1973885.6540	N39°08'09.17214"	W79°28'51.64833"
B-730	231462.6450	1973943.3780	N39°08'07.75161"	W79°28'50.91612"
B-731	232160.4180	1973961.8780	N39°08'14.64839"	W79°28'50.67943"
B-734A	231392.2720	1974972.9290	N39°08'07.05366"	W79°28'37.84994"
B-736	232071.2460	1974872.4370	N39°08'13.76492"	W79°28'39.12316"
B-737	231804.4990	1975080.6280	N39°08'11.12786"	W79°28'36.48175"
B-738	231854.2340	1975329.3090	N39°08'11.61879"	W79°28'33.32543"
B-739	232194.1430	1975267.7130	N39°08'14.97863"	W79°28'34.10604"
B-740	232213.0030	1975471.0550	N39°08'15.16450"	W79°28'31.52521"
B-741	231990.0550	1975516.7280	N39°08'12.96075"	W79°28'30.94632"
B-742	232302.0870	1975793.7480	N39°08'16.04412"	W79°28'27.42935"
B-743	231963.3550	1975806.3060	N39°08'12.69604"	W79°28'27.21200"
B-744	232115.8600	1975814.0600	N39°08'14.19844"	W79°28'27.17224"
B-745	232412.0510	1976026.3150	N39°08'17.13824"	W79°28'24.47725"
B-746	231890.3100	1976036.1870	N39°08'11.97340"	W79°28'24.35392"
B-747	231217.3900	1976056.7600	N39°08'14.31665"	W79°28'24.09192"
B-748	231922.7360	1976287.9120	N39°08'12.29315"	W79°28'21.15901"
B-749	232646.8190	1976359.5260	N39°08'19.44980"	W79°28'20.24728"
B-750	232117.5100	1976340.5900	N39°08'14.21815"	W79°28'20.48968"
B-751	232108.1800	1976600.5880	N39°08'14.12451"	W79°28'17.18990"
B-752	232684.0330	1976724.2390	N39°08'19.81649"	W79°28'15.61820"
B-753	232201.8330	1977097.4670	N39°08'15.04918"	W79°28'10.88327"
B-754	231997.0330	1977151.0830	N39°08'13.02475"	W79°28'10.20367"
B-755	231985.2490	1977429.3410	N39°08'12.90733"	W79°28'06.67218"
B-756	232186.9900	1977440.3730	N39°08'14.90131"	W79°28'06.53127"
B-757	231964.2920	1977737.3840	N39°08'12.69848"	W79°28'02.76271"
B-758	232199.5980	1977800.6400	N39°08'15.02465"	W79°28'01.95880"
B-761	231898.4920	1978081.0970	N39°08'12.04748"	W79°27'58.40075"
B-762	232167.5320	1978060.1550	N39°08'14.70676"	W79°27'58.66529"
B-764	232138.1180	1978319.8370	N39°08'14.41506"	W79°27'55.36959"
B-765	232134.5060	1978588.2140	N39°08'14.37832"	W79°27'51.96345"
B-767	232098.6200	1978885.7260	N39°08'14.02244"	W79°27'48.18771"
B-769	232264.0320	1979141.6420	N39°08'15.65633"	W79°27'44.93883"
B-770	232124.7920	1979233.1970	N39°08'14.27970"	W79°27'43.77758"
B-771	232256.3770	1979480.7090	N39°08'15.57925"	W79°27'40.63551"
B-772	232412.2130	1979396.8100	N39°08'17.11990"	W79°27'41.69949"
B-773	232551.0300	1979643.6400	N39°08'18.49091"	W79°27'38.56599"
B-774	232396.6900	1979744.9150	N39°08'16.96497"	W79°27'37.28149"
B-775	233378.7920	1971077.9250	N39°08'26.69534"	W79°29'27.28016"
B-776	233569.8120	1970881.2980	N39°08'28.58365"	W79°29'30.67675"
B-777	233641.6060	1970926.3030	N39°08'29.29315"	W79°29'29.20428"
B-778	233876.2700	1970365.4810	N39°08'31.61305"	W79°29'36.32226"
B-779	233886.6650	1970786.8680	N39°08'31.71545"	W79°29'30.97377"
B-780	234309.5890	1970832.0890	N39°08'33.91880"	W79°29'30.39954"
B-781	234379.1590	1971020.2310	N39°08'36.58307"	W79°29'28.01177"
B-782	234664.5640	1971085.2410	N39°08'39.40396"	W79°29'27.18565"



CORE BORINGS COORDINATES - PHASE 1				
BORING NAME	NORTHING	EASTING	LATITUDE	LONGITUDE
R-021	222888.8900	1936685.4010	N39°06'42.81775"	W79°36'43.63459"
R-022	222778.0550	1936739.3350	N39°06'41.72292"	W79°36'42.94858"
R-023	223108.8190	1936923.4400	N39°06'44.99446"	W79°36'40.61803"
R-024	223183.2510	1937169.7170	N39°06'45.73315"	W79°36'37.49463"
R-025	223063.4950	1937196.9930	N39°06'44.54981"	W79°36'37.14671"
R-026	222906.0940	1937240.9380	N39°06'42.99459"	W79°36'36.58672"
R-027	222971.1620	1937476.7360	N39°06'43.64057"	W79°36'33.59614"
R-043	224241.0950	1938707.7910	N39°06'56.20715"	W79°36'17.99643"
R-044	224472.9560	1938694.4570	N39°06'58.49872"	W79°36'18.16905"
R-045	224205.3700	1939051.1540	N39°06'55.85799"	W79°36'13.63940"
R-047	224719.9750	1938746.5570	N39°07'00.94087"	W79°36'17.51167"
R-048	224418.4270	1939068.9370	N39°06'57.96405"	W79°36'13.41690"
R-049	224343.3970	1939312.5720	N39°06'57.22522"	W79°36'10.32461"
R-051	224552.8550	1939234.2630	N39°06'59.29463"	W79°36'11.32123"
R-052	224752.5940	1939088.1280	N39°07'01.26719"	W79°36'13.17830"
R-052A	225014.5870	1939316.5370	N39°07'03.85934"	W79°36'10.28405"
R-053	224639.7070	1939352.9780	N39°07'00.15442"	W79°36'09.81624"
R-070	226333.4830	1940677.5180	N39°07'16.91040"	W79°35'53.03400"
R-075	226472.6840	1940975.7580	N39°07'18.28947"	W79°35'49.25161"
R-080	226718.2010	1941289.7860	N39°07'20.71950"	W79°35'45.27027"
R-095	227532.2130	1942730.6650	N39°07'28.78003"	W79°35'26.99742"
R-100	227648.9100	1942999.7960	N39°07'29.93614"	W79°35'23.58380"
R-129	229151.6820	1944499.5060	N39°07'44.80400"	W79°35'04.57126"
R-132	229434.5430	1944465.8850	N39°07'47.59949"	W79°35'05.00130"
R-134	229724.1920	1944492.9270	N39°07'50.46265"	W79°35'04.66159"
R-141	230339.3390	1944950.1100	N39°07'56.54700"	W79°34'58.86693"
R-142	230177.3840	1944985.0720	N39°07'54.94655"	W79°34'58.42134"
R-143	230063.4140	1945125.5380	N39°07'53.82134"	W79°34'56.63740"
R-143A	230125.3070	1945308.3580	N39°07'54.43475"	W79°34'54.31801"
R-144	230376.4530	1945082.4600	N39°07'56.91504"	W79°34'57.18774"
R-145	230230.3830	1945206.9820	N39°07'55.47241"	W79°34'55.60576"
R-146	230659.7440	1945379.5430	N39°07'59.71778"	W79°34'53.42077"
R-147	230519.7540	1945444.9150	N39°07'58.33470"	W79°34'52.58953"
R-148	230387.0170	1945496.4410	N39°07'57.02318"	W79°34'51.93410"
R-149	231206.6220	1945589.9000	N39°08'05.12502"	W79°34'50.75738"
R-150	230792.8830	1945657.8360	N39°08'01.03621"	W79°34'49.89048"
R-151	230630.6140	1945674.6270	N39°07'59.43249"	W79°34'49.67554"
R-152	230890.9220	1946037.2630	N39°08'02.00857"	W79°34'45.07627"
R-153	230643.9840	1946097.4360	N39°07'59.56835"	W79°34'44.30985"
R-154	231060.2940	1946415.7520	N39°08'03.68592"	W79°34'40.27470"
R-155	230834.1710	1946417.5510	N39°08'01.45092"	W79°34'40.24938"
R-156	230632.4420	1946433.2920	N39°07'59.45716"	W79°34'40.04739"
R-157	230992.1570	1946777.8530	N39°08'03.01552"	W79°34'35.67848"
R-158	230814.2170	1946759.1560	N39°08'01.25660"	W79°34'35.91384"
R-159	230593.0490	1946741.5790	N39°07'59.07042"	W79°34'36.13452"
R-160	230869.7140	1947070.1780	N39°08'01.80774"	W79°34'31.96724"
R-161	230631.7730	1947027.4370	N39°07'59.45557"	W79°34'32.50713"
R-162	230968.7030	1947384.3280	N39°08'02.78874"	W79°34'27.98139"
R-163	230578.2080	1947332.0410	N39°07'58.92865"	W79°34'28.64085"
R-164	230941.0250	1947685.2880	N39°08'02.51762"	W79°34'24.16159"
R-165	230668.4390	1947647.1540	N39°07'59.82306"	W79°34'24.64272"
R-166	230415.1810	1947612.4200	N39°07'57.31957"	W79°34'25.08089"
R-167	230852.0160	1947984.0870	N39°08'01.64025"	W79°34'20.36859"
R-168	230612.2520	1947943.7100	N39°07'59.27009"	W79°34'20.87856"
R-169	230329.2790	1947903.7970	N39°07'56.47285"	W79°34'21.38219"
R-170	230697.4730	1948263.4510	N39°08'00.11494"	W79°34'16.82161"
R-171	230569.3400	1948248.8230	N39°07'58.84836"	W79°34'17.00596"
R-172	230331.4210	1948229.3520	N39°07'56.49660"	W79°34'17.25067"
R-173	230619.4480	1948558.1000	N39°07'59.34604"	W79°34'13.08145"
R-174	230347.3990	1948516.3160	N39°07'56.65677"	W79°34'13.60902"
R-175	230546.2340	1948851.6800	N39°07'58.62464"	W79°34'09.35493"
R-176	230332.8910	1948829.0610	N39°07'56.51578"	W79°34'09.63990"
R-177	230484.5720	1949345.2130	N39°07'58.01889"	W79°34'03.09097"
R-178	230238.9400	1949305.4910	N39°07'55.59075"	W79°34'03.59273"
R-179	230395.4880	1949930.5180	N39°07'57.14266"	W79°33'55.66211"
R-180	230178.4780	1949912.0270	N39°07'54.99759"	W79°33'55.89477"
R-181	230362.2750	1950517.3900	N39°07'56.81854"	W79°33'48.21393"
R-182	230169.1540	1950522.2000	N39°07'54.90976"	W79°33'48.15116"
R-183	230291.4000	1951113.2050	N39°07'56.12210"	W79°33'40.65194"
R-183A	230421.9310	1951371.2080	N39°07'57.41400"	W79°33'37.37880"
R-183B	230194.2690	1951403.9610	N39°07'55.16399"	W79°33'36.96119"
R-184	230492.8970	1951697.8610	N39°07'58.11758"	W79°33'33.23389"
R-185	230224.8770	1951728.1350	N39°07'55.46865"	W79°33'32.84745"
R-186	230523.0350	1951990.8980	N39°07'58.41735"	W79°33'29.51524"
R-187	230295.4280	1952034.6340	N39°07'56.16796"	W79°33'28.95833"
R-188	230623.4880	1952580.7080	N39°07'59.41395"	W79°33'22.03082"
R-189	230442.1610	1952607.5010	N39°07'57.62187"	W79°33'21.68936"
R-190	230661.1280	1952875.8550	N39°07'59.78779"	W79°33'18.28542"
R-191	230505.2610	1952894.9180	N39°07'58.24731"	W79°33'18.04229"
R-192	230739.4390	1953166.4650	N39°08'00.56356"	W79°33'14.59790"
R-193	230640.9450	1953181.5130	N39°07'59.59013"	W79°33'14.40618"
R-194	230522.6160	1953203.5340	N39°07'58.42069"	W79°33'14.12581"

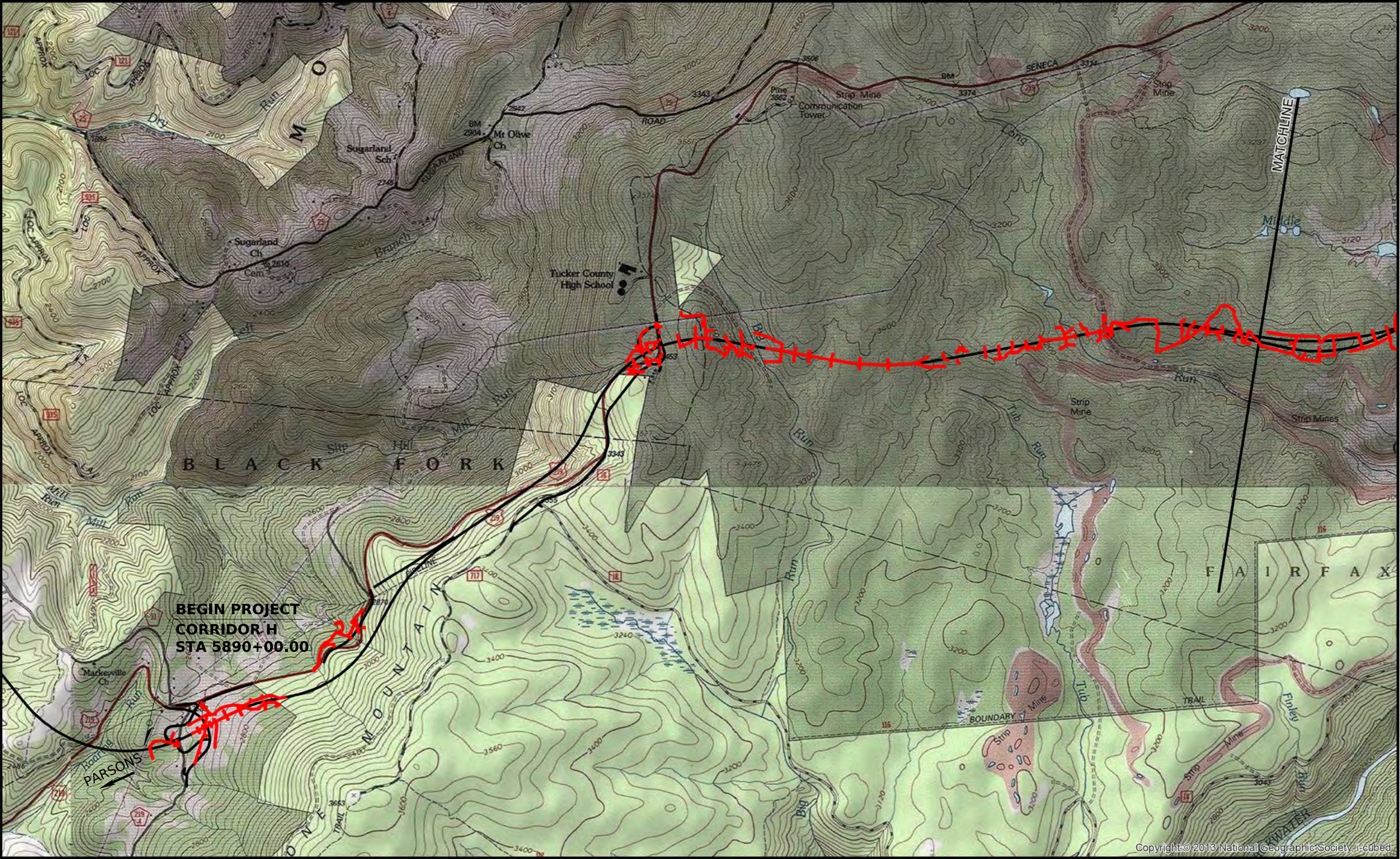
CORE BORINGS COORDINATES - PHASE 1				
BORING NAME	NORTHING	EASTING	LATITUDE	LONGITUDE
R-195	230765.4950	1953462.1610	N39°08'00.82284"	W79°33'10.84542"
R-196	230693.0560	1953476.8940	N39°08'00.10694"	W79°33'10.65790"
R-197	230582.8000	1953495.9100	N39°07'59.01727"	W79°33'10.41575"
R-198	231144.9070	1955638.3300	N39°08'04.58474"	W79°32'43.23007"
R-199	231003.1960	1955658.6510	N39°08'03.18416"	W79°32'42.97126"
R-200	231218.3750	1956241.4730	N39°08'05.31384"	W79°32'35.57591"
R-201	231036.8810	1956246.2540	N39°08'03.51997"	W79°32'35.51412"
R-202	231213.8900	1956851.9570	N39°08'05.27234"	W79°32'27.82808"
R-203	231014.1920	1956825.1240	N39°08'03.29839"	W79°32'28.16746"
SP-1	231148.2940	1970756.3100	N39°08'04.64931"	W79°29'31.36471"
SP-2	231102.3360	1970734.3760	N39°08'04.19508"	W79°29'31.64313"
SP-3	231057.5210	1970713.0130	N39°08'03.75214"	W79°29'31.91430"
SP-4	231162.1850	1970930.8470	N39°08'04.78645"	W79°29'29.14960"
SP-5	231116.0660	1970908.8500	N39°08'04.33063"	W79°29'29.42883"
SP-6	231071.2510	1970887.4740	N39°08'03.88769"	W79°29'29.70017"
SP-7	231175.9150	1971105.3070	N39°08'04.92199"	W79°29'26.93548"
SP-8	231129.7970	1971083.2970	N39°08'04.46618"	W79°29'27.21487"
SP-9	231084.9820	1971061.9340	N39°08'04.02324"	W79°29'27.48605"
T-001	231009.6540	1945390.1500	N39°08'03.17640"	W79°34'53.29019"
T-002	230872.5760	1945253.2560	N39°08'01.82029"	W79°34'55.02594"
T-003	231135.1750	1945573.6770	N39°08'04.41869"	W79°34'50.96246"
T-004	230654.7270	1945146.0980	N39°07'59.66609"	W79°34'56.38335"
T-005	230502.6440	1945290.7290	N39°07'58.16420"	W79°34'54.54609"
T-006	230611.5100	1945531.8260	N39°07'59.24240"	W79°34'51.48761"
T-007	231075.7020	1945680.6030	N39°08'03.83181"	W79°34'49.60476"
T-008	230258.0780	1945654.6150	N39°07'55.75015"	W79°34'49.92528"
T-009	230336.6000	1945655.6920	N39°07'56.52628"	W79°34'49.91250"
T-010	230485.0050	1945698.3390	N39°07'57.99349"	W79°34'49.37296"
T-011	230956.8380	1945641.5910	N39°08'02.65661"	W79°34'50.09852"
T-012	231093.6290	1945621.9030	N39°08'04.00848"	W79°34'50.34994"
T-013	231059.7810	1945579.8160	N39°08'03.67355"	W79°34'50.88368"
US219-1	230330.2390	1945358.8240	N39°07'56.46076"	W79°34'53.67992"
US219-2	230372.5300	1945332.9410	N39°07'56.87853"	W79°34'54.00888"
US219-3	230399.3260	1945376.7260	N39°07'57.14377"	W79°34'53.45352"
US219-4	230357.0350	1945402.6080	N39°07'56.72600"	W79°34'53.12457"
US219-5	230379.1750	1945358.9670	N39°07'56.94444"	W79°34'53.67867"
US219-6	230596.6400	1945195.7860	N39°07'59.09240"	W79°34'55.75209"
US219-7	230545.8190	1945226.8880	N39°07'58.59037"	W79°34'55.35679"
US219-8	230572.6150	1945270.6730	N39°07'58.85562"	W79°34'54.80143"
US219-9	230623.4360	1945239.5700	N39°07'59.35765"	W79°34'55.19674"
US219-10	230565.9710	1945244.6470	N39°07'58.78971"	W79°34'55.13165"
WW32-1	231883.8300	1974518.9400	N39°08'11.91334"	W79°28'43.61019"
WW32-2	231854.0630	1974427.3260	N39°08'11.61933"	W79°28'44.77300"
WW32-3	231823.6750	1974333.8010	N39°08'11.31919"	W79°28'45.96007"
WW32-4	231793.9050	1974242.1790	N39°08'11.02515"	W79°28'47.12298"
WW32-5	231819.0790	1974539.9790	N39°08'11.27329"	W79°28'43.34337"
WW32-6	231789.3120	1974448.3650	N39°08'10.97928"	W79°28'44.50618"
WW32-7	231758.9240	1974354.8400	N39°08'10.67914"	W79°28'45.69324"
WW32-8	231729.1540	1974263.2180	N39°08'10.38510"	W79°28'46.85615"
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ACCESS POINT COORDINATES - PHASE 1
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Certificate of Authorization #C01145-00

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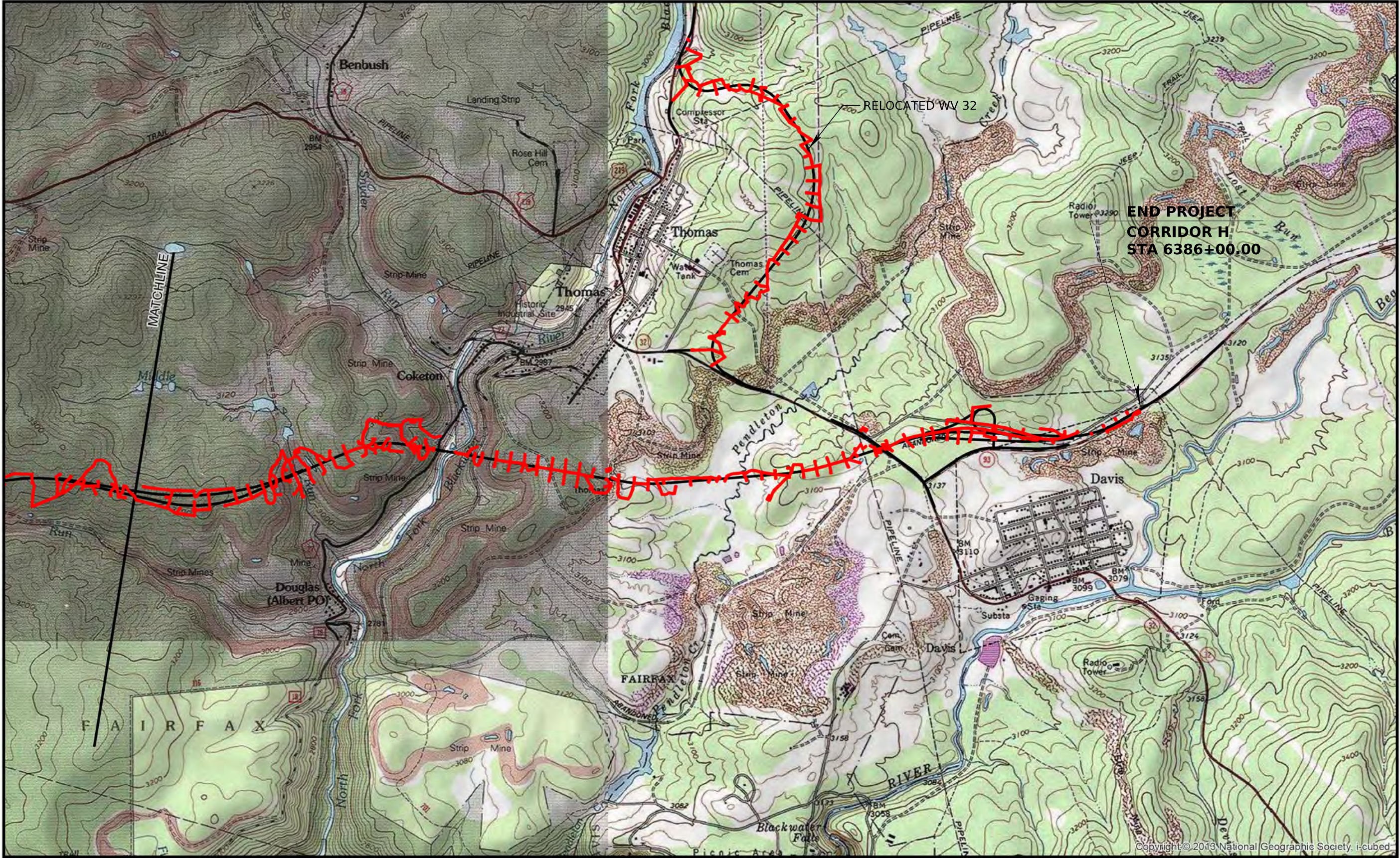
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THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
USGS TOPOGRAPHIC MAP  
PHASE 1 (SHEET 1 OF 2)





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THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
USGS TOPOGRAPHIC MAP  
PHASE 1 (SHEET 2 OF 2)









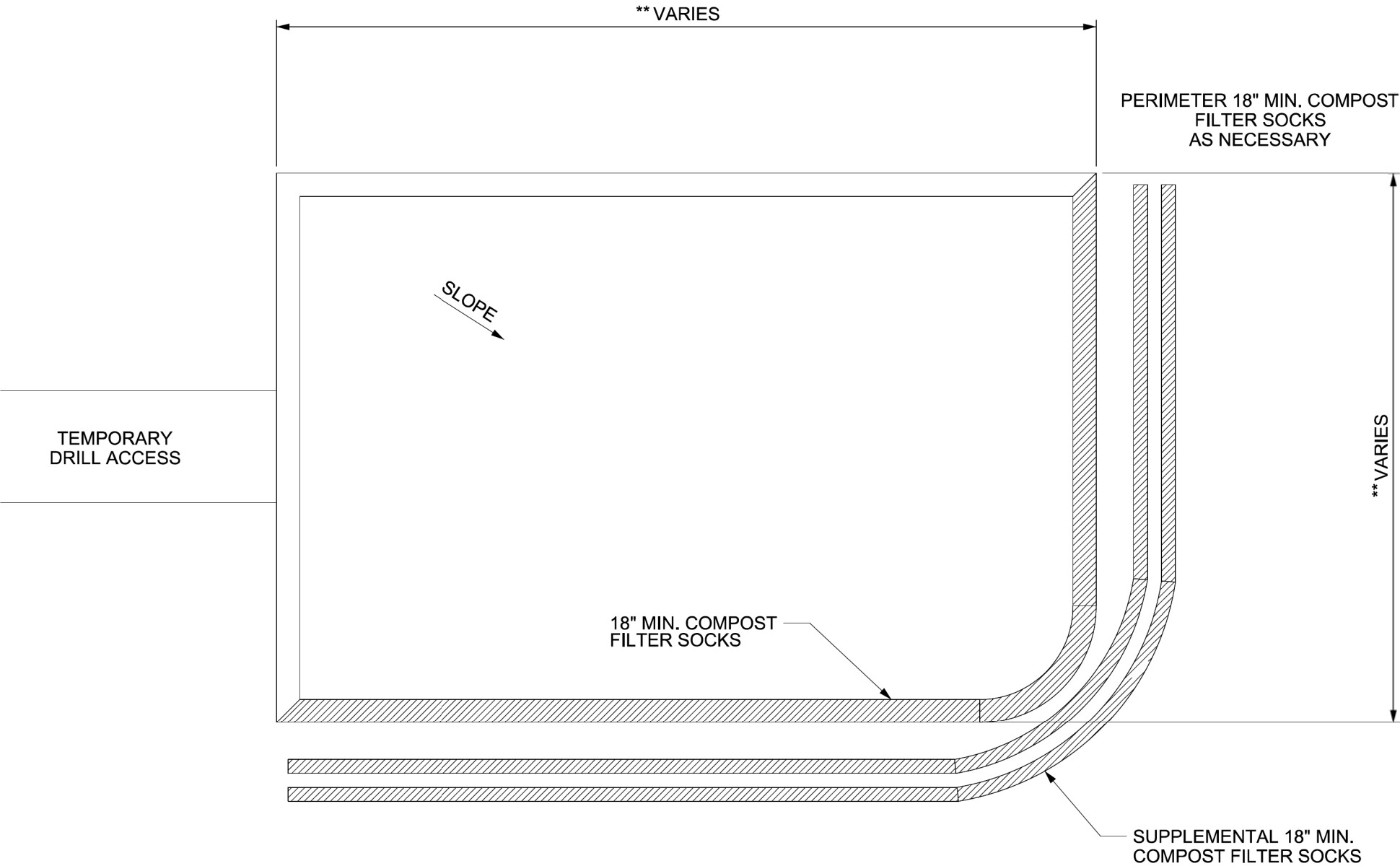








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TEMPORARY DRILL ACCESS PLAN VIEW

COMPOST FILTER SOCKS TO BE PLACED ALONG THE DOWNSLOPE SIDE OF PAD  
\*\*TOTAL DRILL PAD AREA NOT TO EXCEED 600 SF

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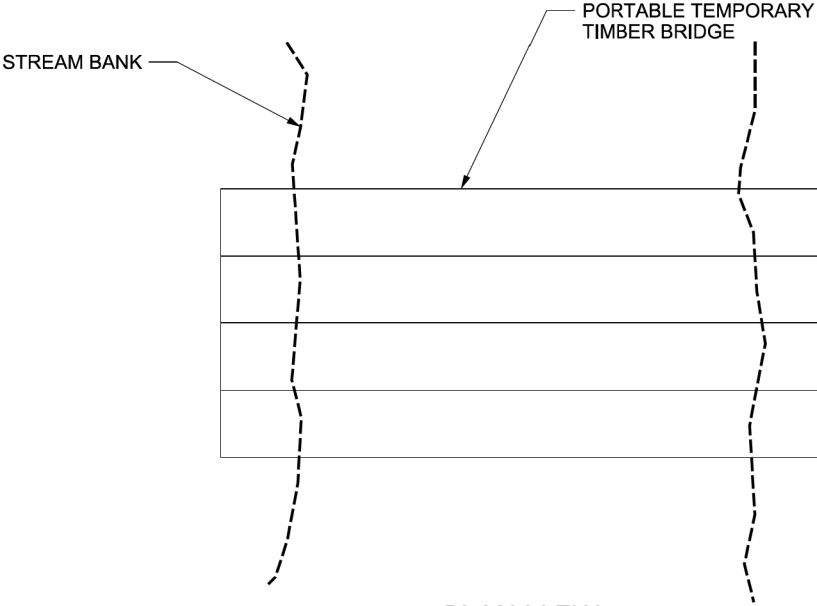

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

TEMPORARY DRILL SITE  
DETAIL

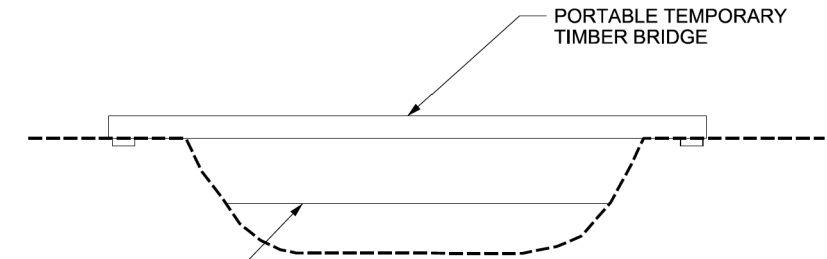




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PLAN VIEW



ELEVATION VIEW

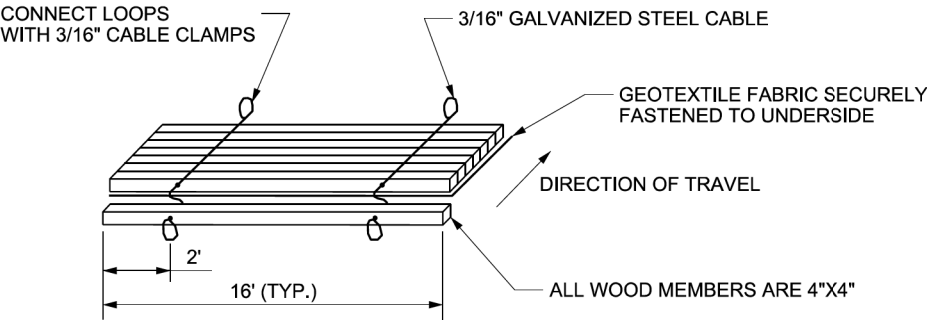
NOTES:

\*PORTABLE TIMBER BRIDGE SHOULD CROSS STREAM AT A 90-DEGREE ANGLE.

PORTABLE TIMBER BRIDGE MUST BE PLACED ABOVE ORDINARY HIGH WATER AND NO DISTURBANCE BELOW WILL BE ALLOWED.

ADDITIONAL DETAILS CAN BE FOUND IN FOREST SERVICE PUBLICATION "PORTABLE TIMBER BRIDGES AS A BEST MANAGEMENT PRACTICE IN FOREST MANAGEMENT".

PORTABLE TEMPORARY BRIDGE FOR STREAM CROSSING



NOTES:

IF TEMPORARY TRENCH DEWATERING IS NECESSARY, ALL PUMPED WATER MUST PASS THROUGH A FILTER BAG. THE FILTER BAG MUST BE SURROUNDED BY A FILTER SOCK AND PUMPED WATER SHOULD NOT DRAIN AWAY FROM THE WETLAND.

WOOD MAT WIDTH MAY BE INCREASED IF WIDER EQUIPMENT IS USED.

WOOD MATTING REQUIRED IN ALL WETLAND AREAS.

TEMPORARY WOOD MAT FOR WETLAND CROSSING

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THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

TEMPORARY STREAM  
AND WETLAND CROSSING

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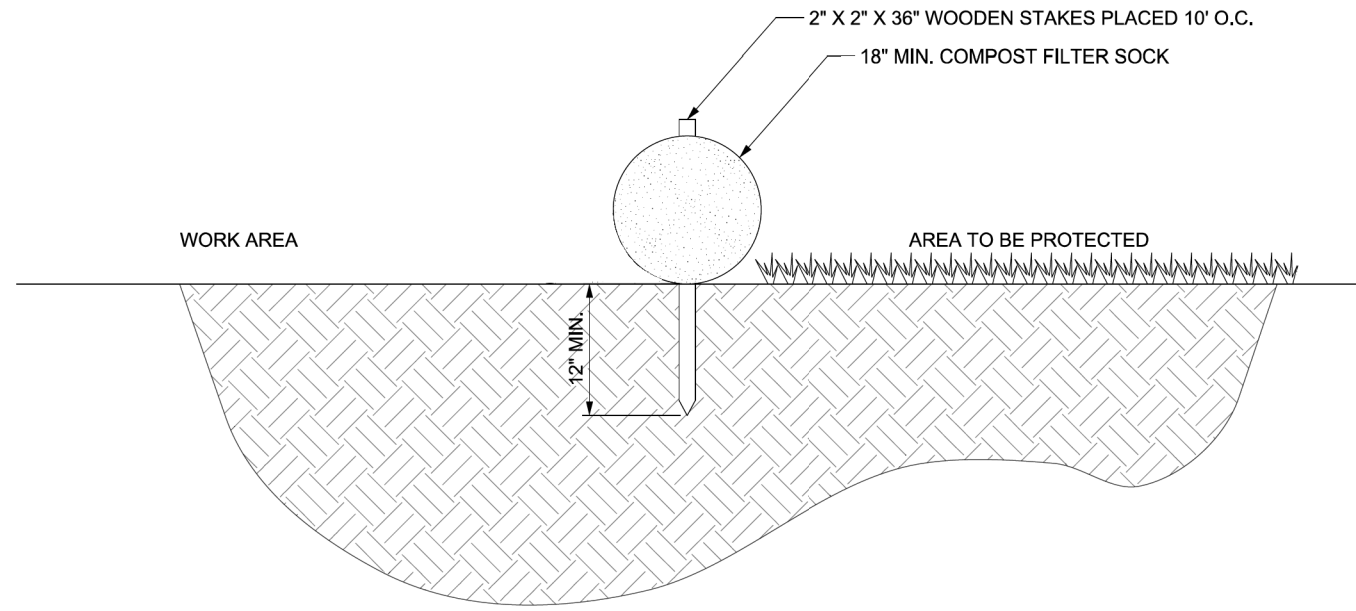
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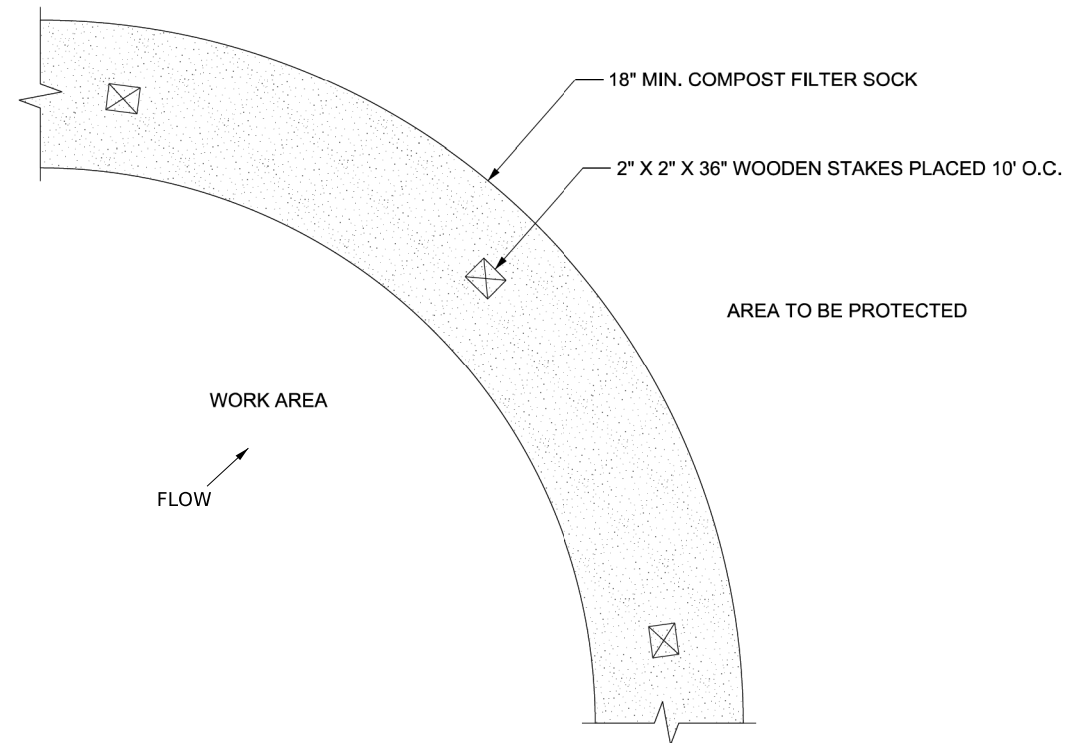
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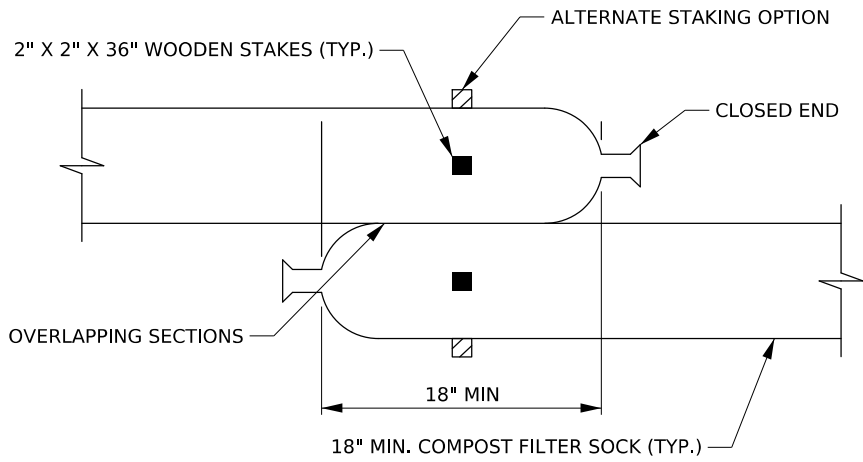
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## SECTION



## PLAN




## OVERLAP DETAIL

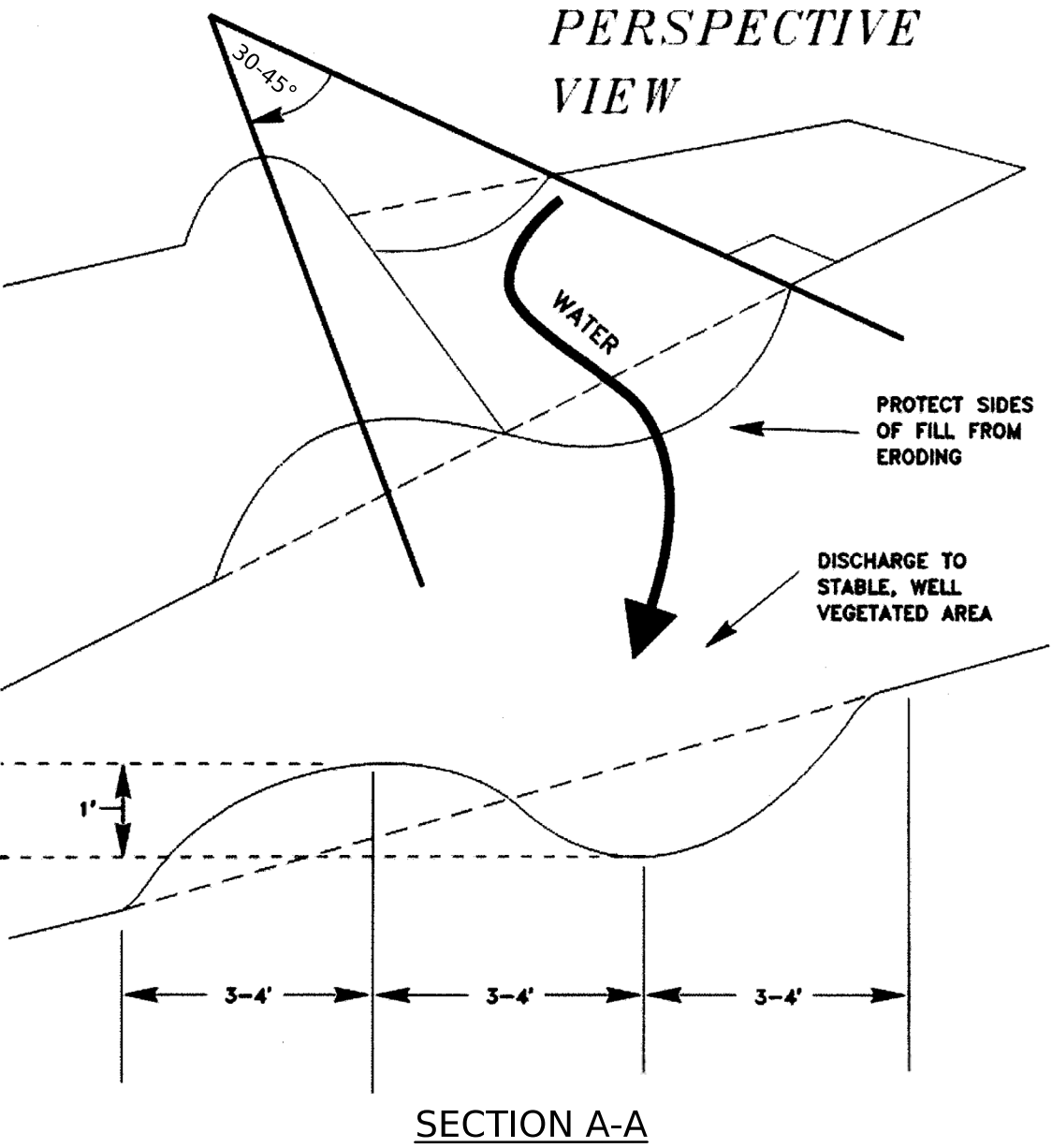
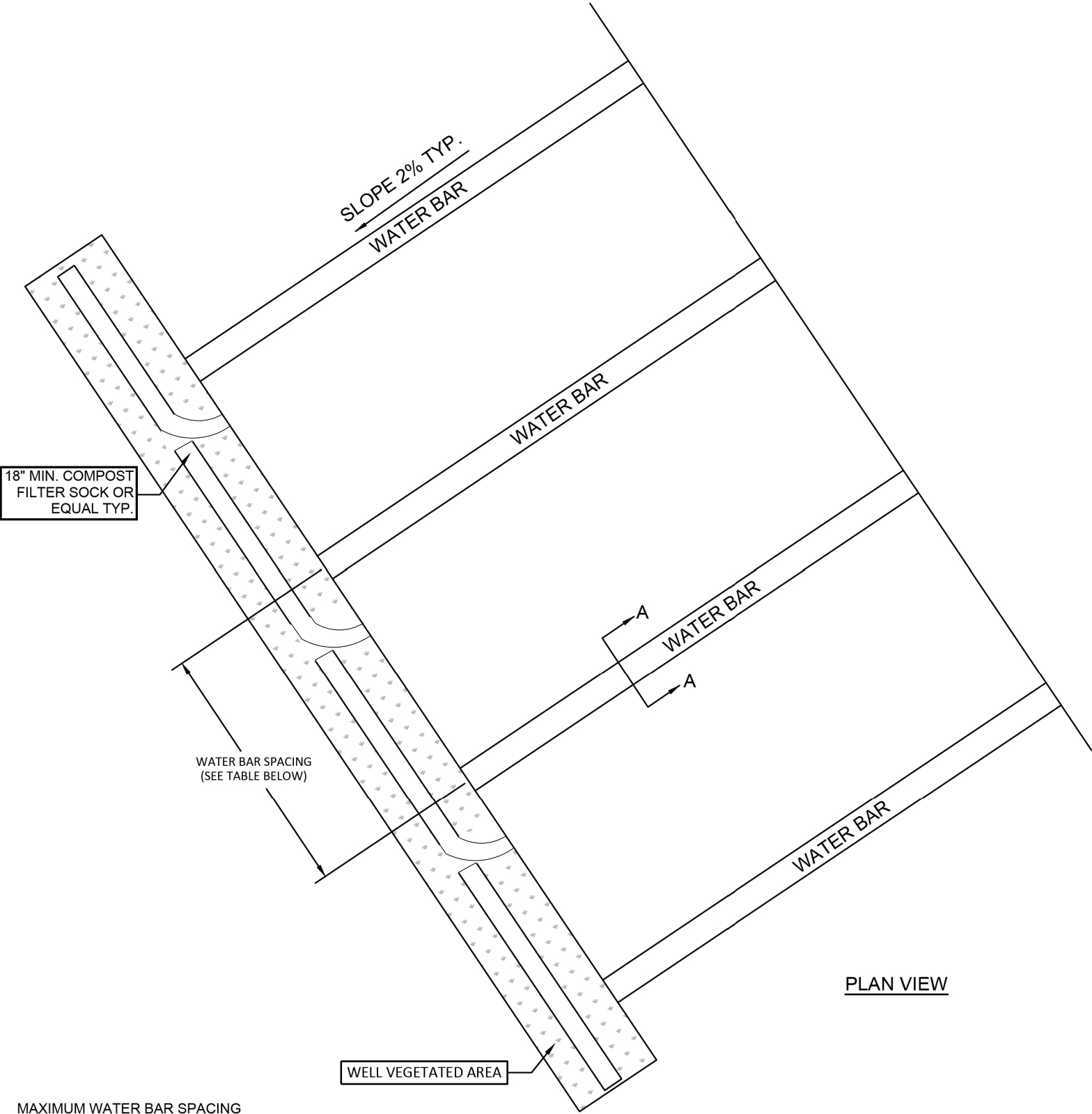
## COMPOST FILTER SOCKS

NOTES:

1. ALL MATERIAL TO MEET MANUFACTURER'S SPECIFICATIONS.
2. FILTER MEDIA FILL TO MEET APPLICATION/MANUFACTURER'S REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

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DESIGN BY: ADB DATE: 3/2023	CHECK BY: ASC DATE: 3/2023	DRAWN BY: ADB DATE: 3/2023	CHECK BY: ASC DATE: 3/2023	REVISION NUMBER	SHEET NUMBER		REVISION		DATE	BY	



- NOTES:
1. WATER BARS SHALL BE CONSTRUCTED TO INTERCEPT AND DIVERT WATER OFF THE ACCESS ROADS BUT SHOULD NEVER DAM THE WATER.
  2. WATER BARS SHALL BE CONSTRUCTED AT A 30 TO 45 DEGREE ANGLE ACROSS THE ENTIRE ACCESS ROAD ON A 2% DOWNHILL SLOPE IN THE LOCATIONS SHOWN ON THE PLANS.
  3. WATER BARS SHALL BE SPACED AT INCREMENTS SHOWN ON THE PLANS AND IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE WEST VIRGINIA DIVISION OF FORESTRY, WEST VIRGINIA SILVICULTURAL BEST MANAGEMENT PRACTICES FOR CONTROLLING SOIL EROSION AND SEDIMENTATION FROM LOGGING OPERATIONS.
  4. WATER BARS SHOULD DISCHARGE TO FULLY OPEN, WELL-VEGETATED AREAS.

MAXIMUM WATER BAR SPACING	
PERCENT SLOPE	SPACING(FT)
<5	100
5-20	50
>20	40

SCALE:  
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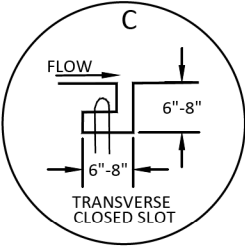
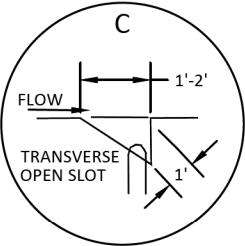
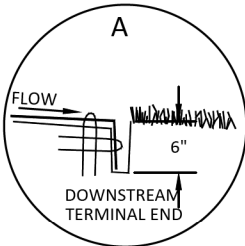
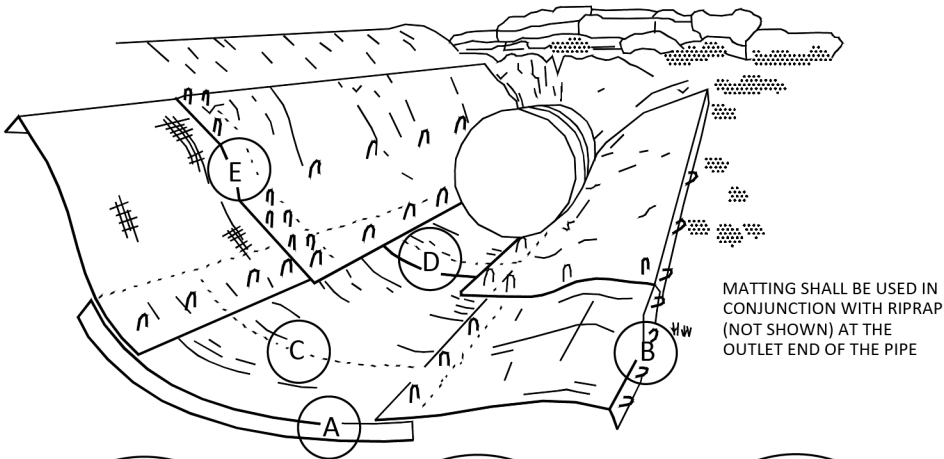
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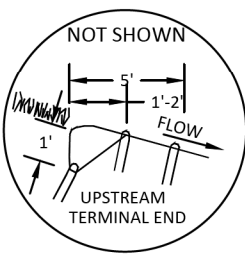
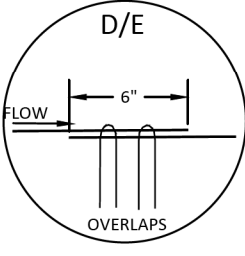
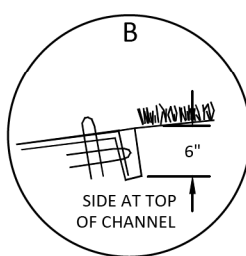
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## ROLLED EROSION CONTROL PRODUCTS (RECP)

GENERAL PROCEDURE, PREPARE A STABLE AND FIRM SOIL SURFACE FREE OF ROCKS AND OTHER OBSTRUCTIONS. APPLY SOIL AMENDMENTS AS NECESSARY TO PREPARE SEEDBED. APPLY SEED AND FERTILIZER IN ACCORDANCE WITH THE PERMANENT SEEDING SPECIFICATION. TYPICALLY, RECPS ARE UNROLLED PARALLEL TO THE PRIMARY DIRECTION OF FLOW. ENSURE THE PRODUCT MAINTAINS INTIMATE CONTACT WITH THE SOIL SURFACE OVER THE ENTIRETY OF THE INSTALLATION. DO NOT STRETCH OR ALLOW MATERIAL TO BRIDGE OVER SURFACE INCONSISTENCIES. STAPLE/STAKE RECPS TO SOIL SUCH THAT EACH STAPLE/STAKE IS FLUSH WITH UNDERLYING SOIL. INSTALL ANCHOR TRENCHES, SEAMS AND TERMINAL ENDS AS SPECIFIED.



THESE CONFIGURATIONS ARE EXAMPLES ONLY.  
ALWAYS INSTALL PER MANUFACTURER'S RECOMMENDATIONS.



CHANNEL INSTALLATIONS: CONSTRUCT AN ANCHOR TRENCH AT THE BEGINNING OF THE CHANNEL ACROSS ITS ENTIRE WIDTH ACCORDING TO SECTION (A)(2) ABOVE. FOLLOW THE MANUFACTURER'S INSTALLATION GUIDELINES IN CONSTRUCTING ADDITIONAL ANCHOR TRENCHES OR STAKE/STAPLE CHECK SLOTS AT INTERVALS ALONG THE CHANNEL REACH AND AT THE TERMINAL END OF THE CHANNEL, ACCORDING TO PARAGRAPH (A) ABOVE RESPECTIVELY. UNROLL RECPS DOWN THE CENTER OF THE CHANNEL IN THE PRIMARY WATER FLOW DIRECTION. SECURELY FASTEN ALL RECPS TO THE SOIL BY INSTALLING STAKES/STAPLES AT A MINIMUM RATE OF 2/YD<sup>2</sup>. SIGNIFICANTLY HIGHER ANCHOR RATES AND LONGER STAKES/STAPLES MAY BE NECESSARY IN SANDY, LOOSE, OR WET SOILS AND IN SEVERE APPLICATIONS. FOR ADJACENT AND CONSECUTIVE ROLLS OF RECPS FOLLOW SEAMING INSTRUCTIONS DETAILED IN SECTION (B) ABOVE. ALL TERMINAL ENDS OF THE RECPS MUST BE ANCHORED USING ONE OF THE METHODS DETAILED IN SECTION (C) ABOVE.

## RECP DITCH LINING

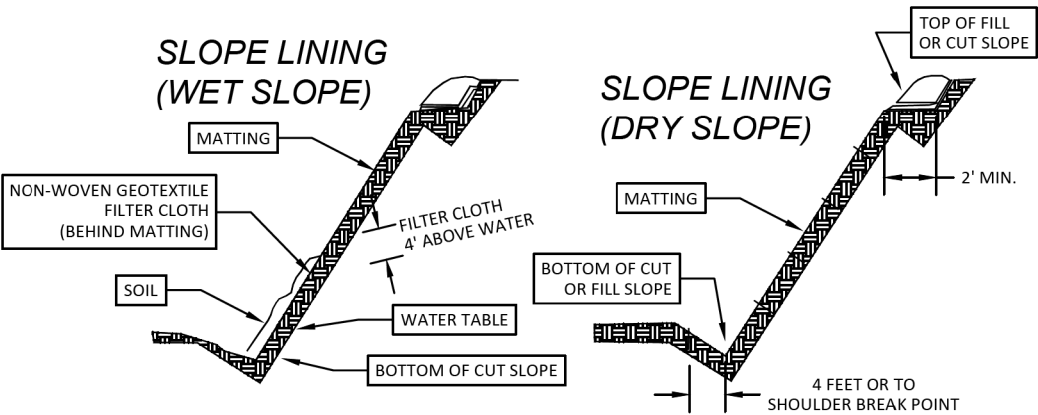
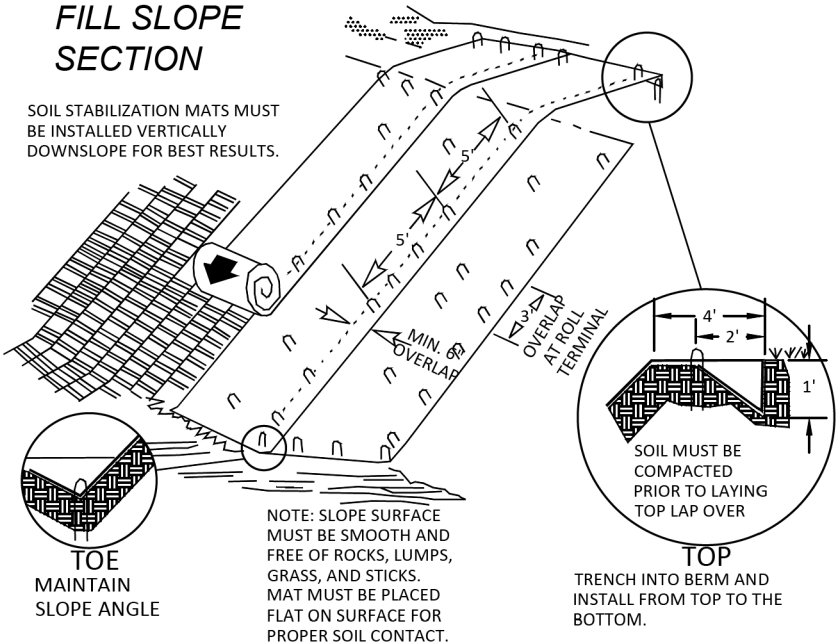
INSTALL RECPS AFTER APPLICATION OF SEED, FERTILIZER, MULCHES (IF NECESSARY) AND OTHER NECESSARY SOIL AMENDMENTS, UNLESS SOIL IN-FILLING OF THE TRM IS REQUIRED. FOR TRMS OF SOIL IN-FILLING, INSTALL TRM, APPLY SEED AND OTHER SOIL AMENDMENTS, AND LIGHTLY BRUSH OR RAKE 0.3 TO 0.7 IN. OF TOPSOIL INTO TRM MATRIX TO FILL THE PRODUCT THICKNESS. IF IN-FILLING WITH A HYDRAULICALLY-APPLIED MATRIX OR MEDIUM IS REQUIRED; INSTALL TRM, THEN INSTALL HYDRAULICALLY-APPLIED MATRIX OR MEDIUM AT THE MANUFACTURER'S SUGGESTED APPLICATION RATE.

APPLY MULCH CONTROL NETTINGS (MCNs) (MATERIALS TYPE 1.A., 2.A., 3.A.) IMMEDIATELY AFTER DRY MULCH APPLICATION.

WITH ANY RECP INSTALLATION, ENSURE SUFFICIENT STAPLES TO RESIST UPLIFT FROM HYDRAULICS, WIND, MOWERS, AND FOOT TRAFFIC. FOR THE MOST EFFECTIVE INSTALLATION OF RECPs, IT IS RECOMMENDED TO USE STAKE/STAPLE PATTERNS AND DENSITIES AS RECOMMENDED BY THE MANUFACTURER.

## FILL SLOPE SECTION


SOIL STABILIZATION MATS MUST  
BE INSTALLED VERTICALLY  
DOWNSLOPE FOR BEST RESULTS.



SLOPE INSTALLATIONS: AT THE TOP OF SLOPE, ANCHOR THE RECPS ACCORDING TO ONE OF THE METHODS DETAILED IN SECTIONS (A) ABOVE. SECURELY FASTEN ALL RECPS TO THE SOIL BY INSTALLING STAKES/STAPLES AT A MINIMUM RATE OF 1.5/YD<sup>2</sup>. FOR THE MOST EFFECTIVE RECIP INSTALLATION, USE STAKE/STAPLE PATTERNS AND DENSITIES AS RECOMMEND BY THE MANUFACTURER. FOR ADJACENT AND CONSECUTIVE ROLLS OF RECPS, FOLLOW SEAMING INSTRUCTIONS DETAILED IN SECTION (B) ABOVE. THE TERMINAL END OF THE RECPS INSTALLATION MUST BE ANCHORED USING ONE OF THE METHODS DETAILED IN SECTIONS (C) ABOVE.

### RECP SLOPE LINING (ECB)

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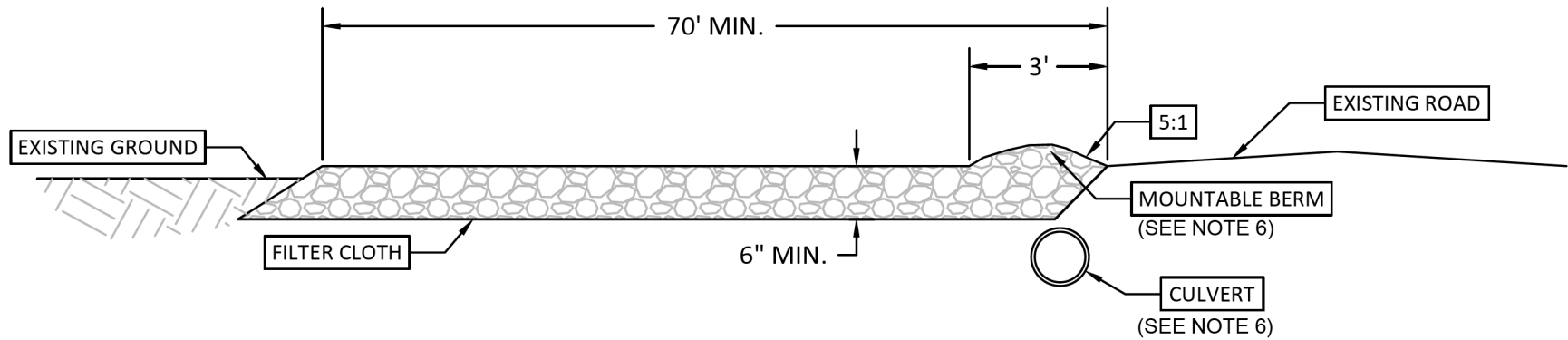
THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
**ROLLED EROSION CONTROL  
PRODUCT (RECP) TYPICAL**

Table 3.13.1 ECTC STANDARD SPECIFICATION FOR TEMPORARY ROLLED EROSION CONTROL PRODUCTS						
For use where natural vegetation alone will provide permanent erosion protection						
ULTRA SHORT TERM - Typically 3 month functional longevity.			SLOPE APPLICATION*		CHANNEL APPLICATION*	MINIMUM
TYPE	PRODUCT DESCRIPTION	MATERIAL COMPOSITION	MAX. GRADIENT	C FACTOR <sup>2,5</sup>	MAX. SHEAR STRESS <sup>3,4,6</sup>	TENSILE STRENGTH <sup>1</sup>
1.A	Mulch Control Net	A photo degradable synthetic mesh or woven biodegradable natural fiber netting	5:1 (H:V)	≤ 0.10 @ 5:1	0.25 lbs/ft <sup>2</sup> (12 Pa)	5 lbs/ft (0.073 kN/m)
1.B	Netless Rolled Erosion Control Blanket	Natural and/or polymer fibers mechanically interlocked and/or chemically adhered together to form a RECP.	4:1 (H:V)	≤ 0.10 @ 4:1	0.5 lbs/ft <sup>2</sup> (24 Pa)	5 lbs/ft (0.073 kN/m)
1.C	Single-net Erosion Control Blankets & Open Weave Textiles	Processed degradable natural and/or polymer fibers mechanically bound together by a single rapidly degrading, synthetic or natural fiber netting or an open weave textile of processed rapidly degrading natural polymer yarns or twines woven into a continuous matrix.	3:1 (H:V)	≤ 0.15 @ 3:1	1.5 lbs/ft <sup>2</sup> (72 Pa)	50 lbs/ft (0.73 kN/m)
1.D	Double-net Erosion Control Blankets	Processed degradable synthetic mesh or woven biodegradable natural fiber nettings.	2:1 (H:V)	≤ 0.20 @ 2:1	1.75 lbs/ft <sup>2</sup> (84 Pa)	75 lbs/ft (1.09 kN/m)
SHORT TERM - Typical 12 month functional longevity.						
2.A	Mulch Control Nets	A photodegradable synthetic mesh or woven biodegradable natural fiber netting.	5:1 (H:V)	≤ 0.10 @ 5:1	0.25 lbs/ft <sup>2</sup> (12 Pa)	5 lbs/ft (0.073 kN/m)
2.B	Netless Rolled Erosion Control Blanket	Natural and/or polymer fibers mechanically interlocked and/or chemically adhered together to fom a RECP.	4:1 (H:V)	≤ 0.10 @ 4:1	0.5 lbs/ft <sup>2</sup> (24 Pa)	5 lbs/ft (0.073 kN/m)
2.C	Single-net Erosion Control Blankets & Open Weave Textiles	An erosion control blanket composed of processed degradable natural or polymer fibers mechanically bound together by a single degradable synthetic or natural fiber netting to form a continuous matrix or an open weave textile composed of processed degradable natural or polymer yarns or twines woven into a continuous matrix.	3:1 (H:V)	≤ 0.15 @ 3:1	1.5 lbs/ft <sup>2</sup> (72 Pa)	50 lbs/ft (0.73 kN/m)
2.D	Double-net Erosion Control Blankets	Processed degradable natural and/or polymer fibers mechanically bound together between two degradable, synthetic or natural fiber nettings.	2:1 (H:V)	≤ 0.20 @ 2:1	1.75 lbs/ft <sup>2</sup> (84 Pa)	75 lbs/ft (1.09 kN/m)
EXTENDED TERM - Typical 24 month functional longevity						
3.A	Mulch Control Nets	A slow degrading synthetic mesh or woven natural fiber netting.	5:1 (H:V)	≤ 0.10 @ 5:1	0.25 lbs/ft <sup>2</sup> (12 Pa)	25 lbs/ft (0.36 kN/m)
3.B	Erosion Control Blankets & Open Weave Textiles	An erosion control blanket composed of processed slow degrading natural or polymer fibers mechanically bound together between two slow degrading synthetic or natural fiber nettings to form a continuous matrix or an open weave textile composed of processed slow degrading natural or polymer yarns or twines woven into a continuous matrix.	1.5:1 (H:V)	≤ 0.25 @ 1.5:1	2.00 lbs/ft <sup>2</sup> (96 Pa)	100 lbs/ft (1.45 kN/m)
LONG TERM - Typical 36 month functional longevity						
4	Erosion Control Blankets & Open Weave Textiles	An erosion control blanket composed of processed slow degrading natural or polymer fibers mechanically bound together between two slow degrading synthetic or natural fiber nettings to form a continuous matrix or an open weave textile composed of processed slow degrading natural or polymer yarns or twines woven into a continuous matrix.	1:1 (H:V)	≤ 0.25 @ 1:1	2.25 lbs/ft <sup>2</sup> (108 Pa)	125 lbs/ft (1.82 kN/m)
* "C" factor and shear stress for Types 1.A., 2.A. and 3.A mulch control nettings must be obtained with netting used in conjunction with pre-applied mulch material.						
<sup>1</sup> Minimum Average Roll Values, Machine direction using ECTC Mod. ASTM D 5035.						
<sup>2</sup> "C" Factor calculated as ratio of soil loss from RECP protected slope (texted at specified or greater gradient, h:v) to ratio of soil loss from unprotected (control) plot in large-scale testing. These performance text values should be supported by periodic bench scale testing under similar test conditions using Erosion Control Technology Council (ECTC) Test Method # 2.						
<sup>3</sup> Required minimum shear stress RECP (unvegetated) can sustain without physical damage or excess erosion (>12.7 mmm(0.5 in) soil loss) during a 30-minute flow event in large-scale testing. These performance test values should be supported by bench scale testing under similar test conditions using Erosion Contrl Technology Council (ECTC) Test Method # 3.						
<sup>4</sup> The permissible shear stress levels established for each performance category are based on historical experience with products characterized by Manning's roughness coeffericients in the range of 0.01 - 0.05.						
<sup>5</sup> Acceptable large-scale test methods may include ASTM D6459, Erosion Control Technology Council (ECTC) Test Method #2, or other independent testing deemed acceptable by the engineer.						
<sup>6</sup> Per the engineers discretion. Recommended acceptable large-scale testing protocol may include ASTM D6460, Erosion Control Technology Council (ECTC) Test Method #3 or other independent testing deemed acceptable by the engineer.						

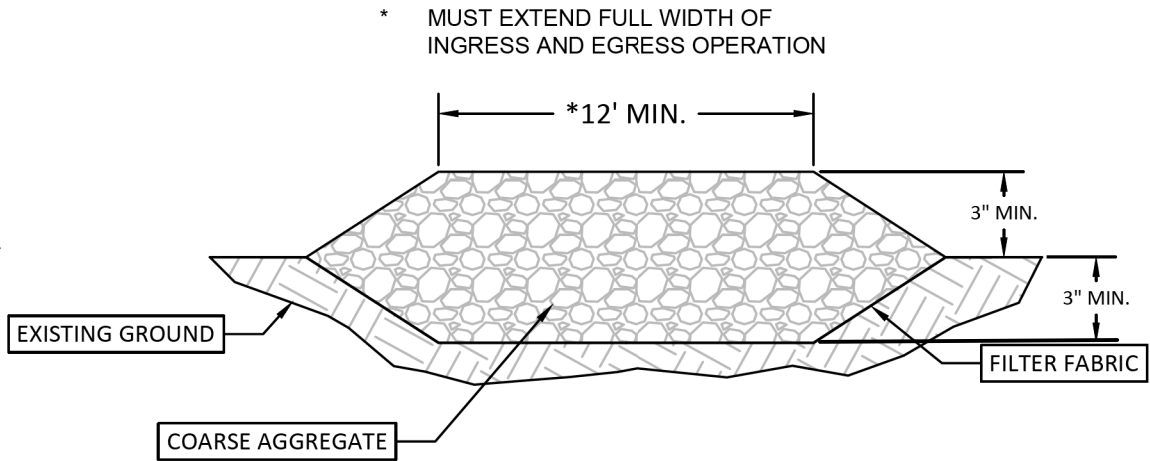




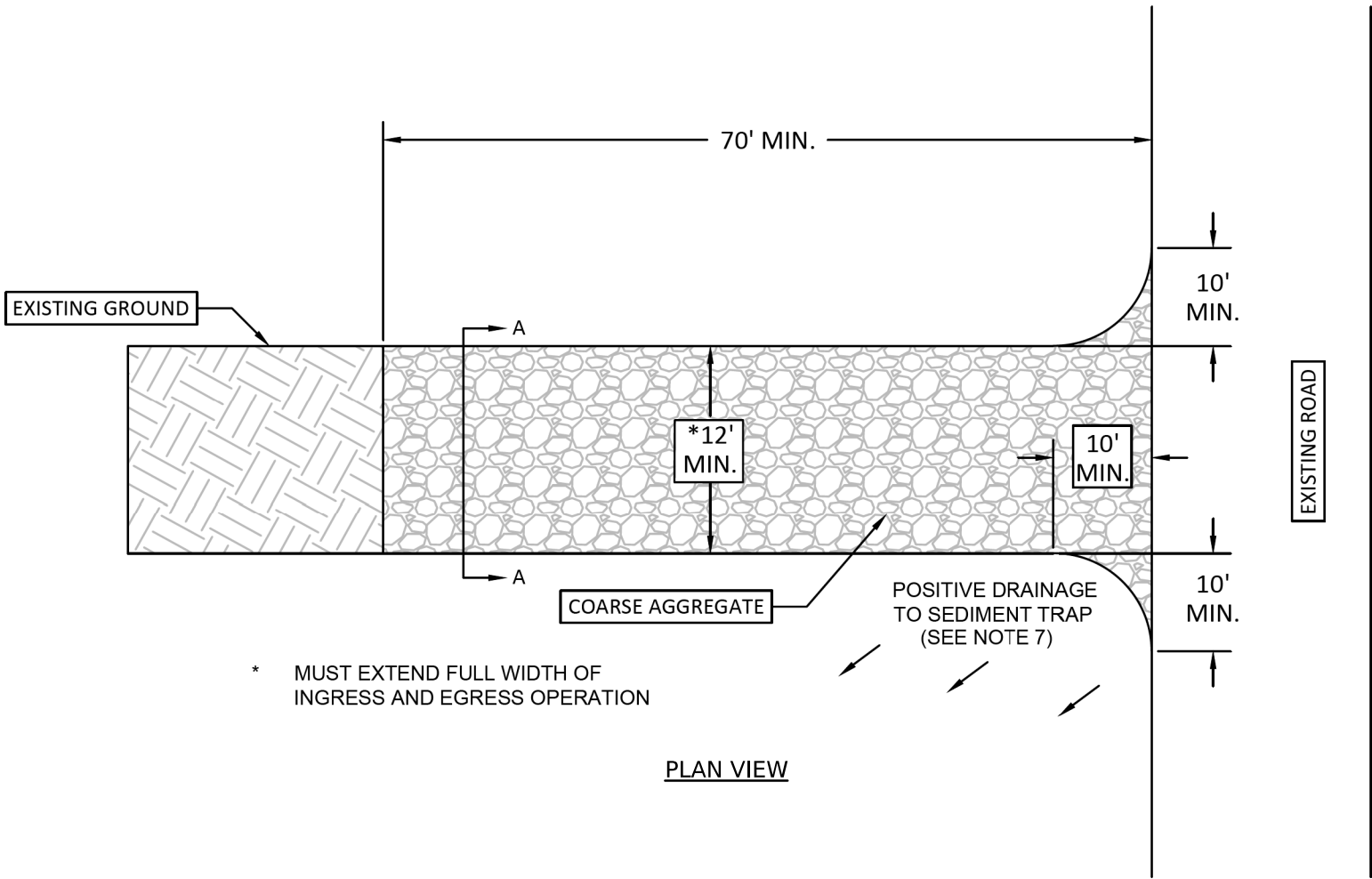
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SIDE ELEVATION



SECTION  
A-A



PLAN VIEW

NOTES:

1. USE 2-4 INCH STONE FOR LOW VOLUME ENTRANCES, LARGER STONE (4-8 INCH) FOR HEAVY USE OR MATERIAL DELIVERY ENTRANCES. A LAYER OF SMALL STONE MAY BE LAID ON TOP FOR FOOT TRAVEL.
2. LENGTH IS AS REQUIRED, BUT NOT LESS THAN 70 FEET (EXCEPT ON A SINGLE RESIDENCE LOT (WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY)).
3. THICKNESS SHOULD BE NOT LESS THAN 6 INCHES.
4. THE WIDTH SHALL BE A MINIMUM OF 12 FEET, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. GEOTEXTILE FABRIC SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO THE PLACING OF STONE.
6. ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF A CULVERT IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES SHALL BE USED.
7. IF NECESSARY, DIVERT ANY WATER RUNNING DOWN ACCESS ROAD TO A SEDIMENT TRAP LOCATED ON EITHER SIDE OF THE STABILIZED CONSTRUCTION ENTRANCE.

STONE CONSTRUCTION ENTRANCE

SCALE:  
N.T.S.

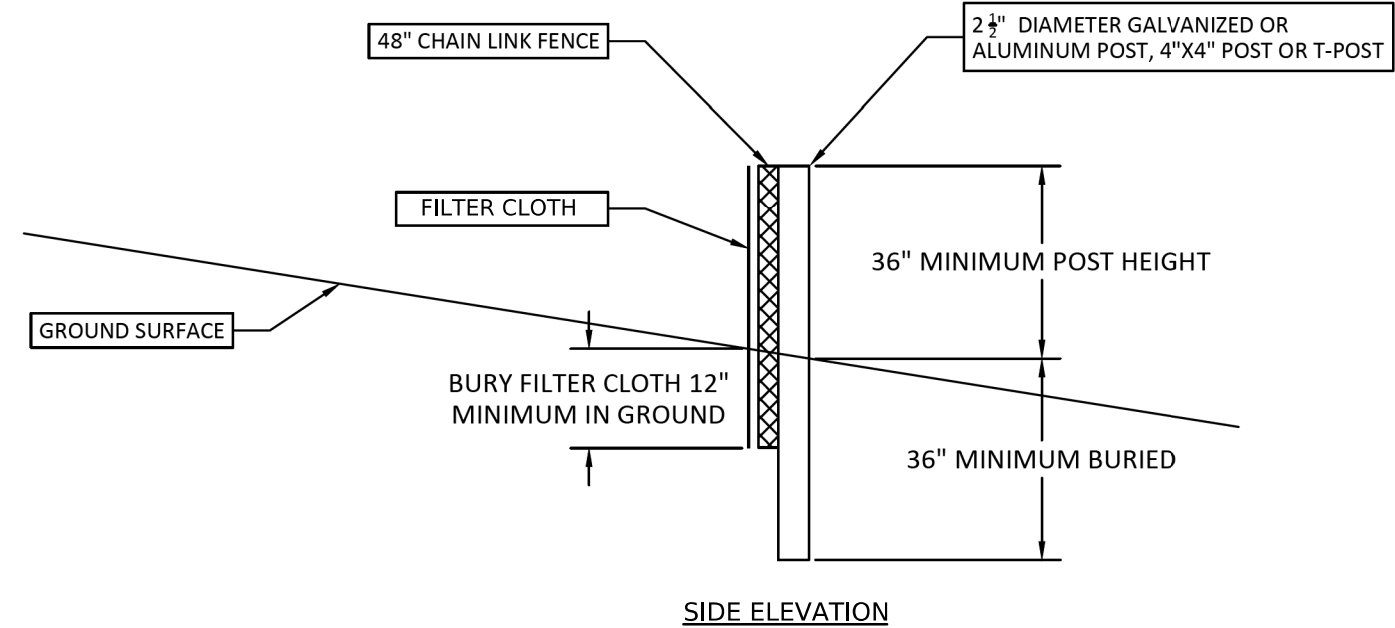
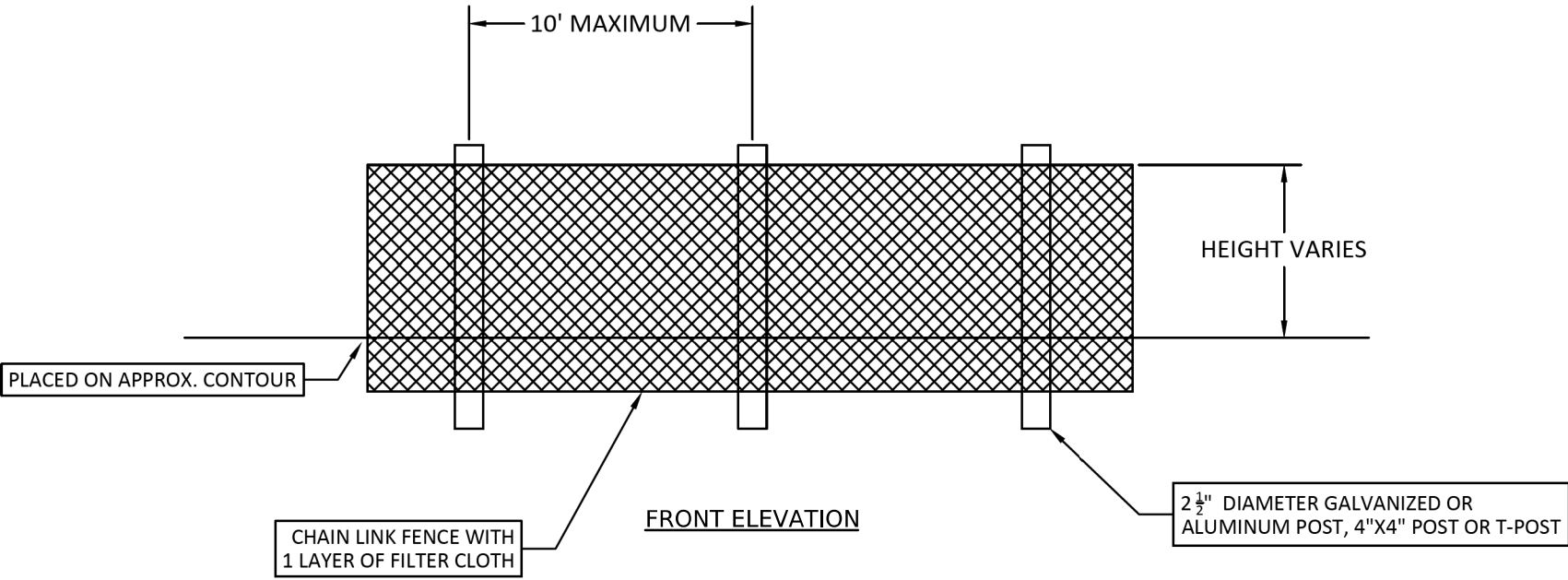
<b>GPI</b>		Engineering Design Planning Construction Management		Greenman-Pedersen, Inc. 58 Mission Way, Suite 201 Scott Depot, WV 25560 Certificate of Authorization #C01145-00	
DESIGN BY:	ADB	CHECK BY:	ASC	DRAWN BY:	ADB
DATE:	3/2023	DATE:	3/2023	DATE:	3/2023

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
**STONE CONSTRUCTION  
ENTRANCE**



Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
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FENCING SHALL BE 48 INCHES IN HEIGHT AND CONSTRUCTED IN ACCORDANCE WITH THE WV DOT, DIVISION OF HIGHWAYS SPECIFICATION FOR CHAIN LINK FENCING. THE DOT SPECIFICATION FOR AN 8-FOOT FENCE SHALL BE USED, SUBSTITUTING 48-INCH FABRIC AND 6-FOOT LENGTH POSTS. THE FILTER FABRIC SHALL MEET THE REQUIREMENTS OF 715.11.5/AASHTO M 228, SECTION 7, CLASS 1.

1. THE POLES DO NOT NEED TO SET IN CONCRETE.
2. CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES.
3. GEOTEXTILE FABRIC SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24" AT THE TOP AND MID SECTION.
4. GEOTEXTILE FABRIC SHALL BE EMBEDDED A MINIMUM OF 12" INTO THE GROUND.
5. WHEN TWO SECTIONS OF GEOTEXTILE FABRIC ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
6. METAL POSTS AS SPECIFIED BY DOH CAN BE REPLACED BY PRESSURE-TREATED 4" x 4" POSTS OR T-POST.
7. SPLICE LOCATION WITH SSF TO BE PER DEP MANUAL SECTION 3.28.2

SUPER SILT FENCE

SCALE:  
N.T.S.

**GPI**

Engineering  
Design  
Planning  
Construction Management

Greenman-Pedersen, Inc.

58 Mission Way, Suite 201  
Scott Depot, WV 25560

Certificate of Authorization #C01145-00

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DATE: 3/2023	DATE: 3/2023	DATE: 3/2023	DATE: 3/2023					

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUPER SILT FENCE

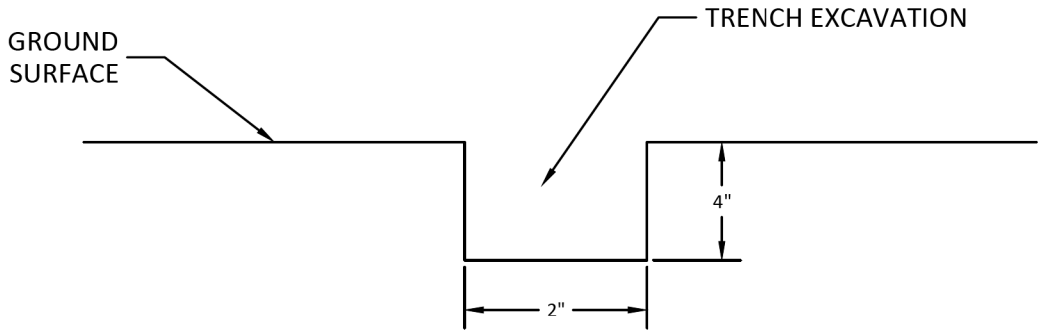
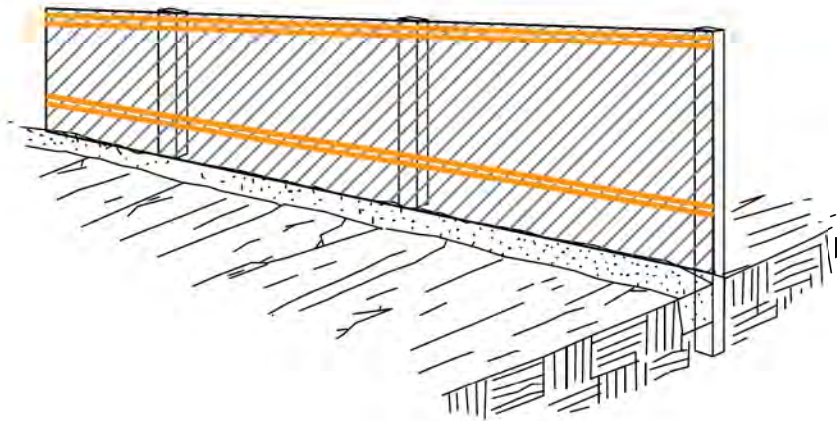
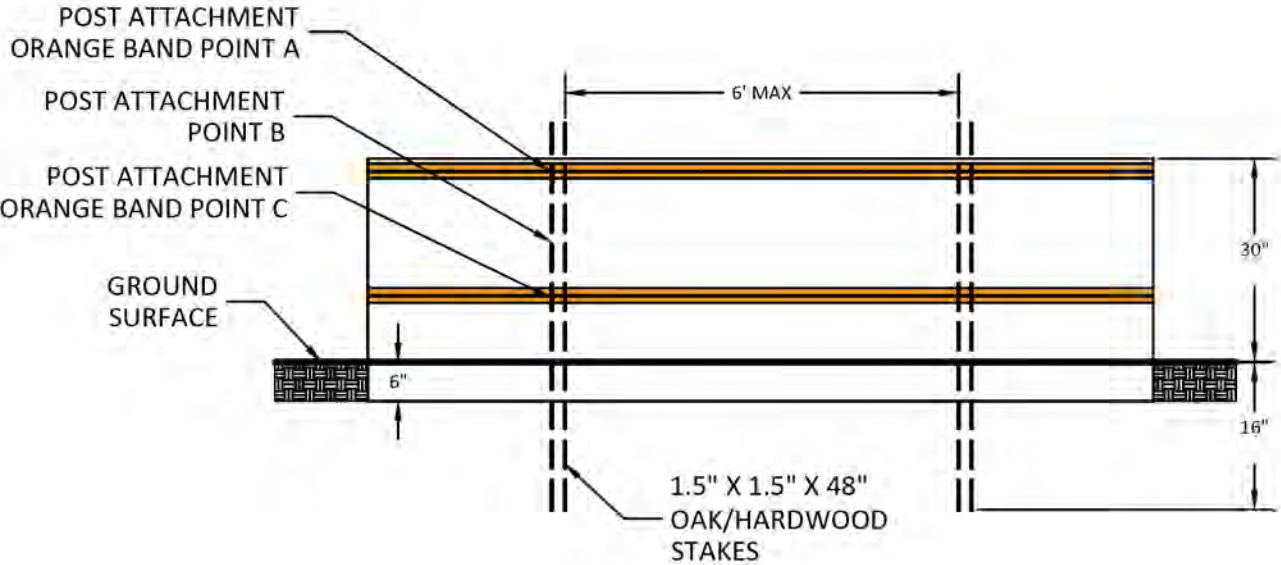
INSTALLATION SPECIFICATIONS FOR 36"

- EXCAVATE TRENCH A MAXIMUM OF 2" WIDE AND 4" DEEP. THE TRENCH SHALL BE HAND-CLEANED FOLLOWING EXCAVATION TO REMOVE BULKY DEBRIS SUCH AS ROCKS, STICKS, AND SOIL CLOUDS FROM THE TRENCH.
- LAYOUT SMARTFENCE 36 ON THE GROUND ALONG PROPOSED FENCE LINE AND NEXT TO ANCHOR TRENCH. REFERENCE NOTE ONE PRIOR TO BEGINNING.
- FOR THE INITIAL POST, PLACE THE END OF SMARTFENC 36 ALONG THE POST HEIGHT AND ROTATE THE POST 360 DEGREES, MAINTAINING TENSION ON THE FABRIC. SECURE THE FENCE TO THE POST USING HEAVY-DUTY WIRE STAPLES AT THE TWO (2) ORANGE-COLORED BAND LOCATIONS AND AT A LOCATION HALFWAY BETWEEN THE TWO ORANGE BANDS (MINIMUM 3 ATTACHMENT LOCATIONS) AS PER NOTE 2.
- DRIVE THE INITIAL HARDWOOD POST (1.5" X 1.5" X 48") WITH THE ATTACHED FENCE INTO THE GROUND TO A 16" DEPTH BELOW THE SURFACE.
- USING A SPACING NO GREATER THAT 6' ON CENTER, DRIVE THE INTERIOR POSTS TO 16" DEPTH BELOW THE SURFACE AND ATTACH THE FENCING AS YOU GO (SEE NOTE ONE AND SMARTFENCE DETAIL). TO ATTACH FENCING, POSITION THE SMARTFENCE 36 IN FRONT OF THE ADJACENT POST, PULLING THE FENCING TIGHT AND FASTEN IT TO THE POST AT THE TWO (2) ORANGE-COLORED BAND LOCATIONS AND AT A LOCATION HALFWAY BETWEEN THE TWO ORANGE BANDS (MINIMUM 3 ATTACHMENT LOCATIONS) PER NOTE TWO. IT IS CRITICAL THAT SMARTFENCE 36 IS PULLED TIGHT PRIOR TO ATTACHING IT TO EACH INTERIOR POST.
- AFTER THE INTERIOR POSTS HAVE BEEN FASTENED TO THE SMARTFENCE 36, SECURE THE FENCE TO THE FINAL POST BY PULLING THE FINAL SECTION OF FENCING TIGHT AND THEN ROTATING THE POST 360 DEGREES WHILE MAINTAINING TENSION ON THE FENCE SYSTEM. SECURE THE FENCE TO THE POST AT THE TWO (2) ORANGE-COLORED BAND LOCATIONS AND AT A LOCATION HALFWAY BETWEEN THE TWO ORANGE BANDS (MINIMUM 3 ATTACHMENT LOCATIONS) PER NOTE TWO. DRIVE THE FINAL POST INTO THE GROUND TO 16" DEPTH BELOW THE SURFACE.
- ENSURE BOTTOM 6 INCHES OF FABRIC HAS BEEN PLACED IN THE TRENCH. BACKFILL TRENCH (OVERFILL) WITH SOIL PLACED AROUND FABRIC. COMPACT SOIL BACKFILL MANUALLY OR VIA MECHANICAL EQUIPMENT SUCH AS THE FRONT WHEEL OF A TRACTOR, SKID STEER, ROLLER, OR OTHER DEVICE (PER NOTE 5 OF ASTM D 6462 STANDARD PRACTICE FOR SILT FENCE INSTALLATION).

\*\*BE CAREFUL NOT TO DAMAGE THE FABRIC DURING COMPACTION (DAMAGED FABRIC SHALL BE REPLACED).

NOTE ONE – INSTALL SPECIFICATIONS:  
SMARTFENCE 36 SHALL BE INSTALLED USING 1.5" X 1.5" X 48" HARDWOOD POSTS EMBEDDED 16" DEEP ON NO MORE THAN 6' (72") CENTERS.

NOTE TWO – SUPPLIES FOR ATTACHING FENCING:  
TO FASTEN SMARTFENCE 36 TO HARDWOOD POSTS USE HEAVY-DUTY STAPLES HAVING ½ INCH LENGTH AND 1" WIDTH. ALTERNATE STAPLES MAY BE USED OF A SIZE AND TYPE AS APPROVED BY THE STATE DOT.



36" SMART FENCE

SCALE:  
N.T.S.

<b>GPI</b> Engineering Design Planning Construction Management				Greenman-Pedersen, Inc. 58 Mission Way, Suite 201 Scott Depot, WV 25560 Certificate of Authorization #C01145-00				THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS <b>SMART FENCE 36 INCH DETAIL</b>			
DESIGN BY: ADB	CHECK BY: ASC	DRAWN BY: ADB	CHECK BY: ASC	REVISION NUMBER	SHEET NUMBER	REVISION		DATE	BY		
DATE: 3/2023	DATE: 3/2023	DATE: 3/2023	DATE: 3/2023								







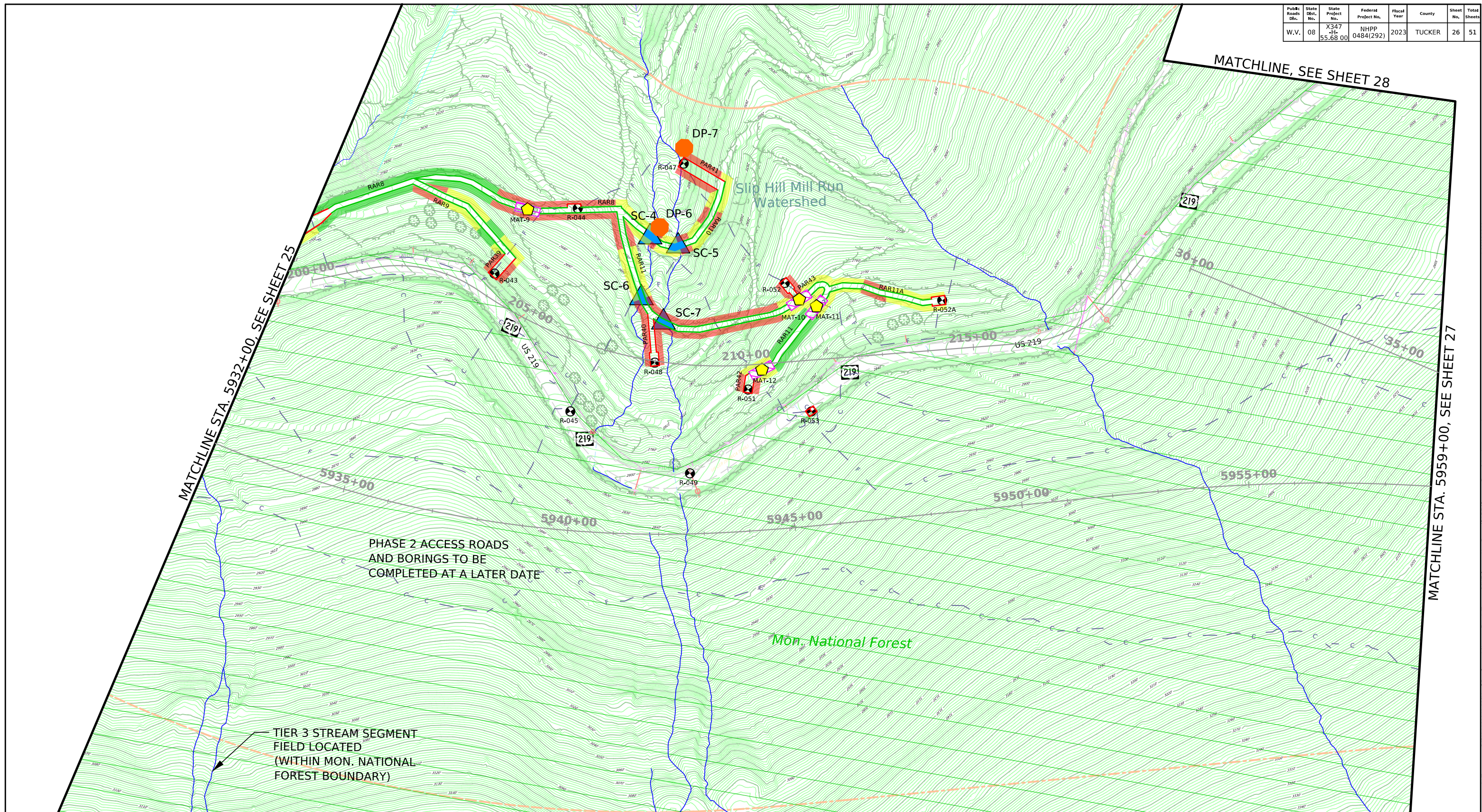








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- LEGEND**

	EX. ROAD		AREA NOT TO BE DISTURBED		DRILL RIG PAD 20'x30' (TYP.) (LOD)		PROP. STREAM CROSSING		PROP. DISCHARGE POINT		PROP. WATER TANK LOCATION
	RECONSTRUCTED ACCESS ROAD (LOD)		WETLAND AREA		LAY DOWN AREAS (LOD)		WATERBAR SLOPE: <5%		WATERBAR SLOPE: >20%		
	NEW ACCESS ROAD (LOD)		MONONGAHELA NATIONAL FOREST		PROP. ACCESS POINT		WATERBAR SLOPE: 5% - 20%		UNDERGROUND MINING AREAS (PREVIOUSLY MINED)		
	BOTANICAL STUDY AREA BOUNDARY		TIMBER MATTING (16' W TYP) (LOD)								
	STREAM		PROP. ROADWAY CORE BORING								
	WATERSHED BOUNDARY		PROP. STRUCTURE CORE BORING								
	BIG BOG RUN WATERSHED BOUNDARY										
	ARR STUDY AREA BOUNDARY										
	DRILL ACCESS ROAD ID										

NOTE: CUT ROADWAY WIDTHS VARY 12' TO 24'

The map displays the project location relative to the Big Bog Run Watershed boundary and the Monongahela National Forest. It includes the proposed access road, reconstructed access road, and drill rig pad. The map also shows existing roads, streams, and wetland areas.

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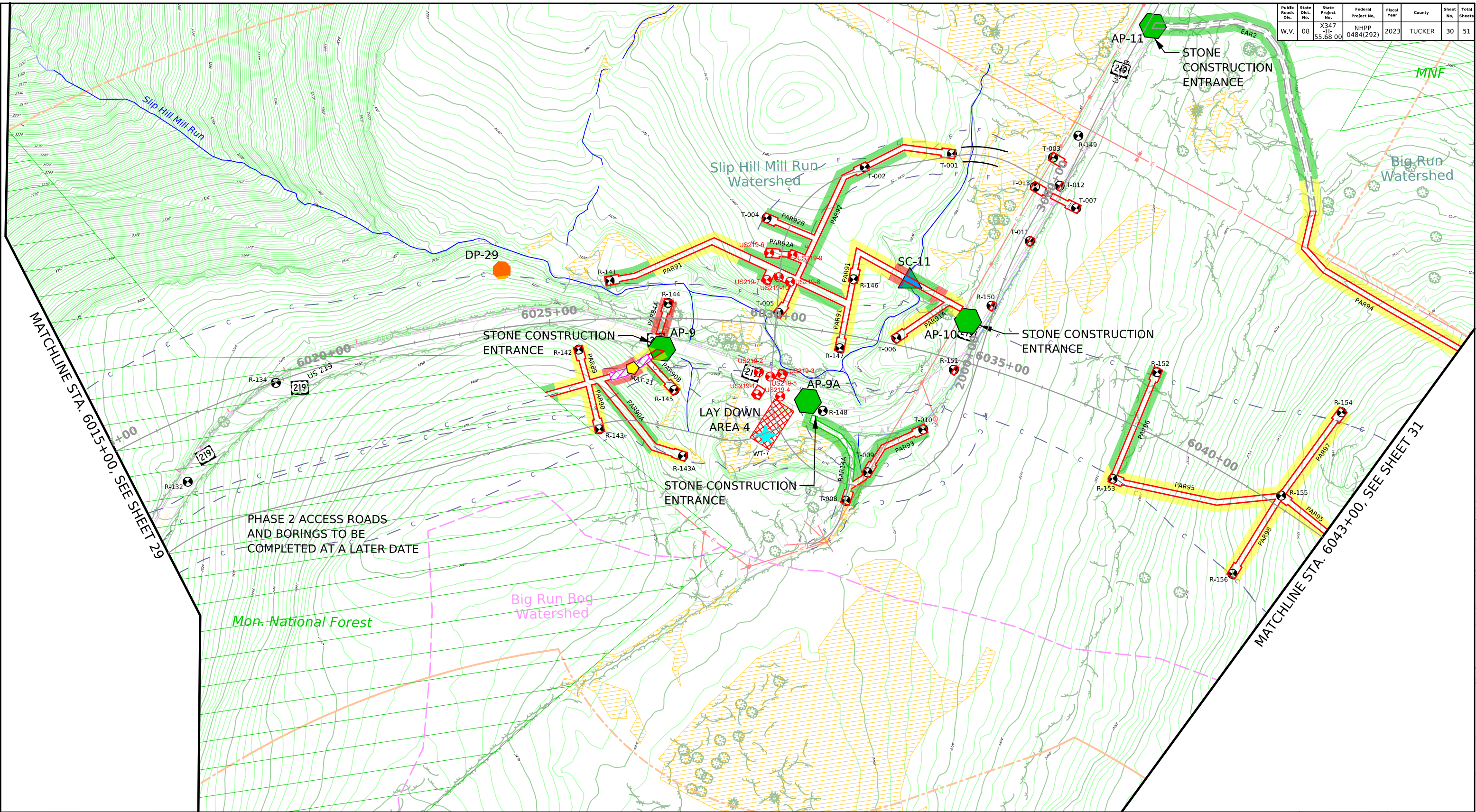








Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
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EX. ROAD

RECONSTRUCTED ACCESS ROAD (LOD)

NEW ACCESS ROAD (LOD)

BOTANICAL STUDY AREA BOUNDARY

STREAM

WATERSHED BOUNDARY

BIG BOG RUN WATERSHED BOUNDARY

ARR STUDY AREA BOUNDARY

DRILL ACCESS ROAD ID

AREA NOT TO BE DISTURBED

WETLAND AREA

MONONGAHELA NATIONAL FOREST

TIMBER MATTING (16' W TYP) (LOD)

PROP. ROADWAY CORE BORING

PROP. STRUCTURE CORE BORING

DRILL RIG PAD 20'x30' (TYP.) (LOD)

LAY DOWN AREAS (LOD)

PROP. ACCESS POINT

PROP. STREAM CROSSING

WATERBAR SLOPE: <5%

WATERBAR SLOPE: 5% - 20%

PROP. DISCHARGE POINT

WATERBAR SLOPE: >20%

UNDERGROUND MINING AREAS (PREVIOUSLY MINED)

PROP. WATER TANK LOCATION

SCALE:  
0 100 ft.

NOTE: CUT ROADWAY WIDTHS VARY 12' TO 24'

<b>GPI</b> Engineering Design Planning Construction Management 304.507.8101 GPINET.COM		Greenman-Pedersen, Inc. 58 Mission Way, Suite 201 Scott Depot, WV 25560 Certificate of Authorization #C01145-00	
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DATE: 12/2022	DATE: 12/2022	DATE: 12/2022	DATE: 12/2022

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

E&S PLAN (BORINGS)





















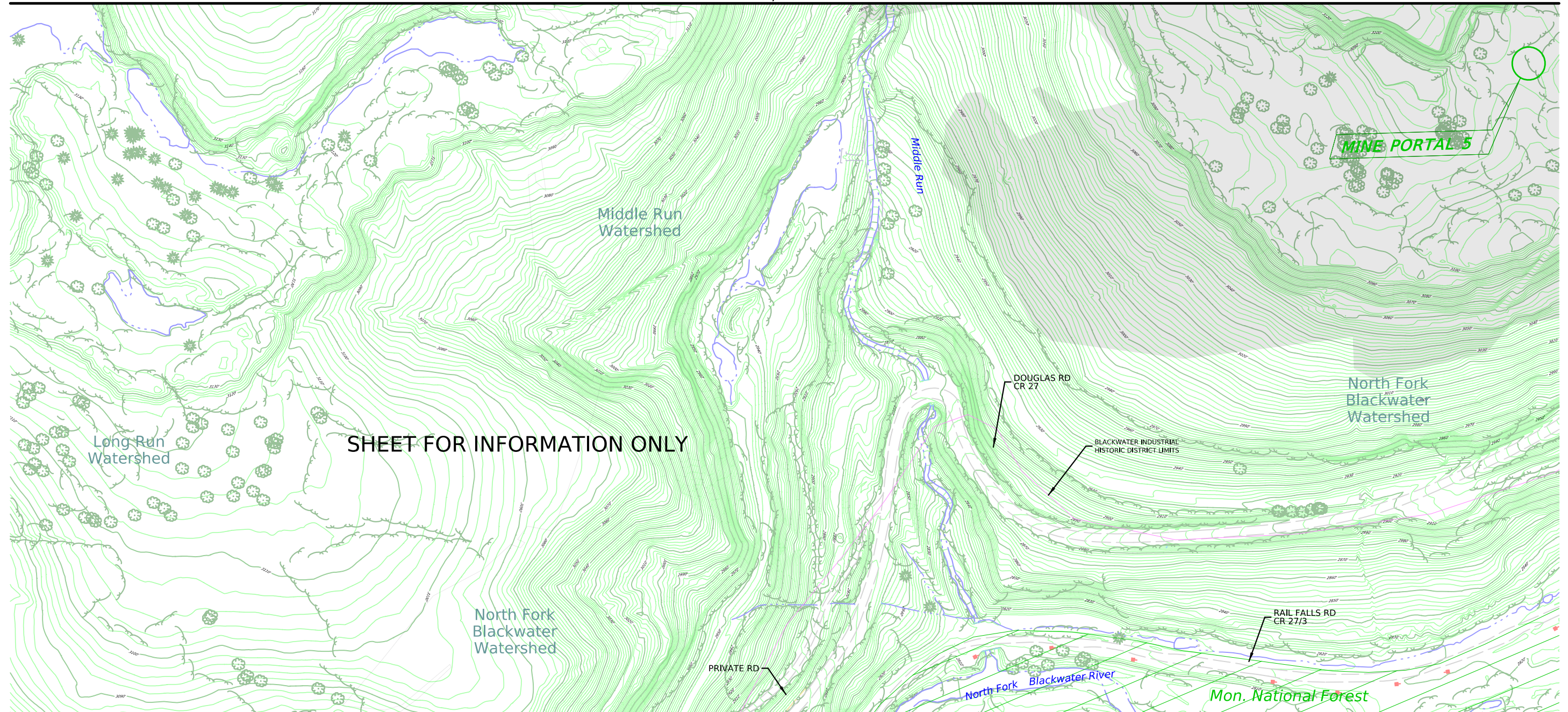






Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
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MATCHLINE, SEE SHEET 36



	EX. ROAD		AREA NOT TO BE DISTURBED		DRILL RIG PAD 20'x30' (TYP.) (LOD)		PROP. STREAM CROSSING		PROP. DISCHARGE POINT		PROP. WATER TANK LOCATION
	RECONSTRUCTED ACCESS ROAD (LOD)				LAY DOWN AREAS (LOD)		WATERBAR SLOPE: <5%		WATERBAR SLOPE: >20%		
	NEW ACCESS ROAD (LOD)		WETLAND AREA		PROP. ACCESS POINT		WATERBAR SLOPE: 5% - 20%		UNDERGROUND MINING AREAS (PREVIOUSLY MINED)		
	BOTANICAL STUDY AREA BOUNDARY		MONONGAHELA NATIONAL FOREST								
	STREAM		TIMBER MATTING (16' W TYP) (LOD)								
	WATERSHED BOUNDARY		PROP. ROADWAY CORE BORING								
	BIG BOG RUN WATERSHED BOUNDARY		PROP. STRUCTURE CORE BORING								
	ARR STUDY AREA BOUNDARY										
	DRILL ACCESS ROAD ID										

NOTE: CUT ROADWAY WIDTHS VARY 12' TO 24'

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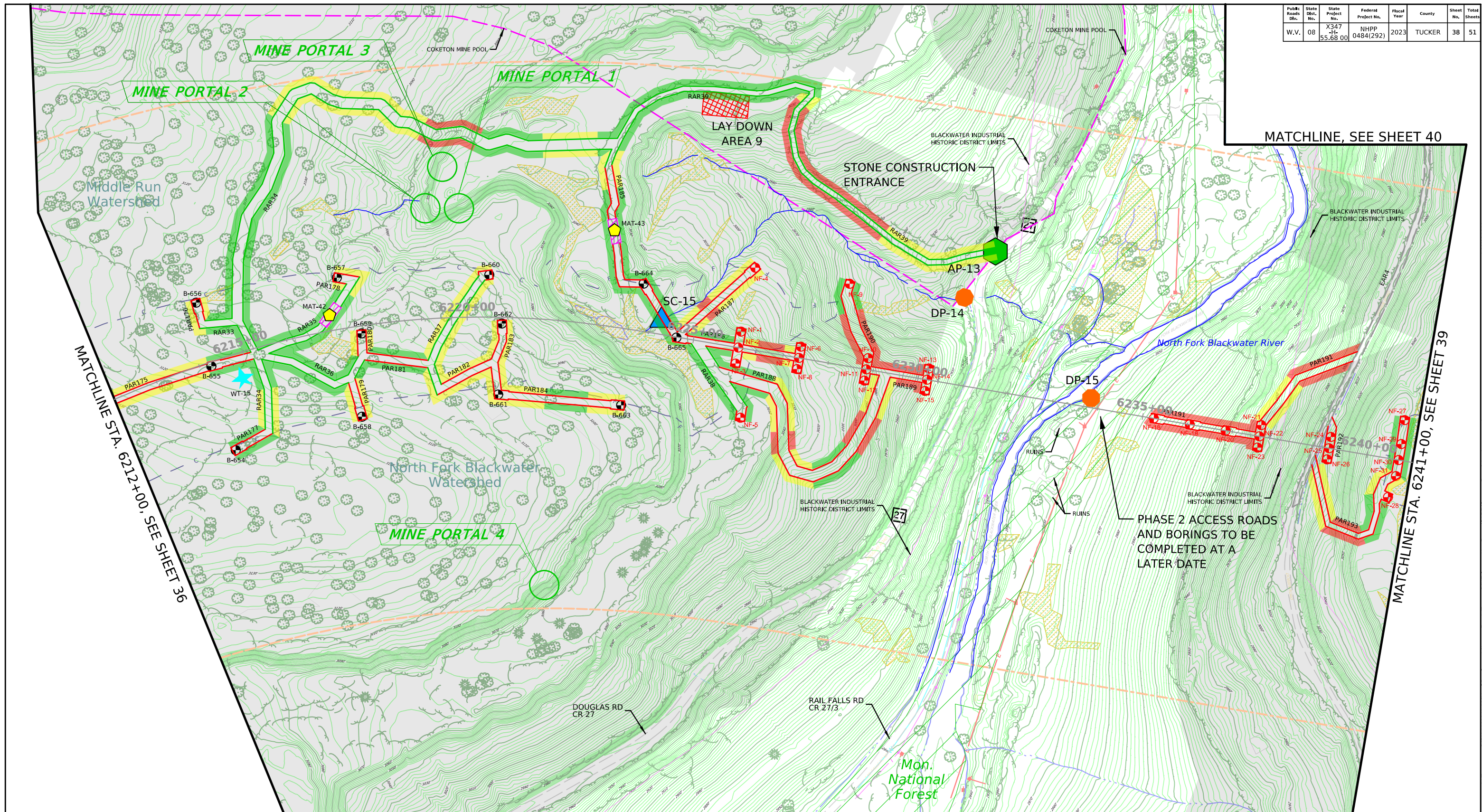
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[http://gpl-pw.bentley.com:gw-01/Documents/MDX-2200012.00/08a GPI - Geotech/Access Roads/Permits/MNF Special Use Permit/CADD/Contract Plans/rdy\\_sht\\_permlts.dgn](http://gpl-pw.bentley.com:gw-01/Documents/MDX-2200012.00/08a GPI - Geotech/Access Roads/Permits/MNF Special Use Permit/CADD/Contract Plans/rdy_sht_permlts.dgn)

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Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
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EX. ROAD

RECONSTRUCTED ACCESS ROAD (LOD)

NEW ACCESS ROAD (LOD)

BOTANICAL STUDY AREA BOUNDARY

STREAM

WATERSHED BOUNDARY

BIG BOG RUN WATERSHED BOUNDARY

ARR STUDY AREA BOUNDARY

DRILL ACCESS ROAD ID

AREA NOT TO BE DISTURBED

WETLAND AREA

MONONGAHELA NATIONAL FOREST

TIMBER MATTING (16' W TYP) (LOD)

PROP. ROADWAY CORE BORING

PROP. STRUCTURE CORE BORING

DRILL RIG PAD 20'x30' (TYP.) (LOD)

LAY DOWN AREAS (LOD)

PROP. ACCESS POINT

PROP. STREAM CROSSING

WATERBAR SLOPE: <5%

WATERBAR SLOPE: 5% - 20%

PROP. DISCHARGE POINT

WATERBAR SLOPE: >20%

UNDERGROUND MINING AREAS (PREVIOUSLY MINED)

PROP. WATER TANK LOCATION

NOTE: CUT ROADWAY WIDTHS VARY 12' TO 24'

THE WEST VIRGINIA

E&S

DESIGN BY: LAM

CHECK BY: JDS

DRAWN BY: KVM

CHECK BY: JDS

REVISION

SHEET NUMBER

REVISION

DATE

BY

304.507.8101

GPINET.COM

Greenman-Pedersen, Inc.

58 Mission Way, Suite 201

Scott Depot, WV 25560

Certificate of Authorization #C01145-00

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

## E&S PLAN (BORINGS)

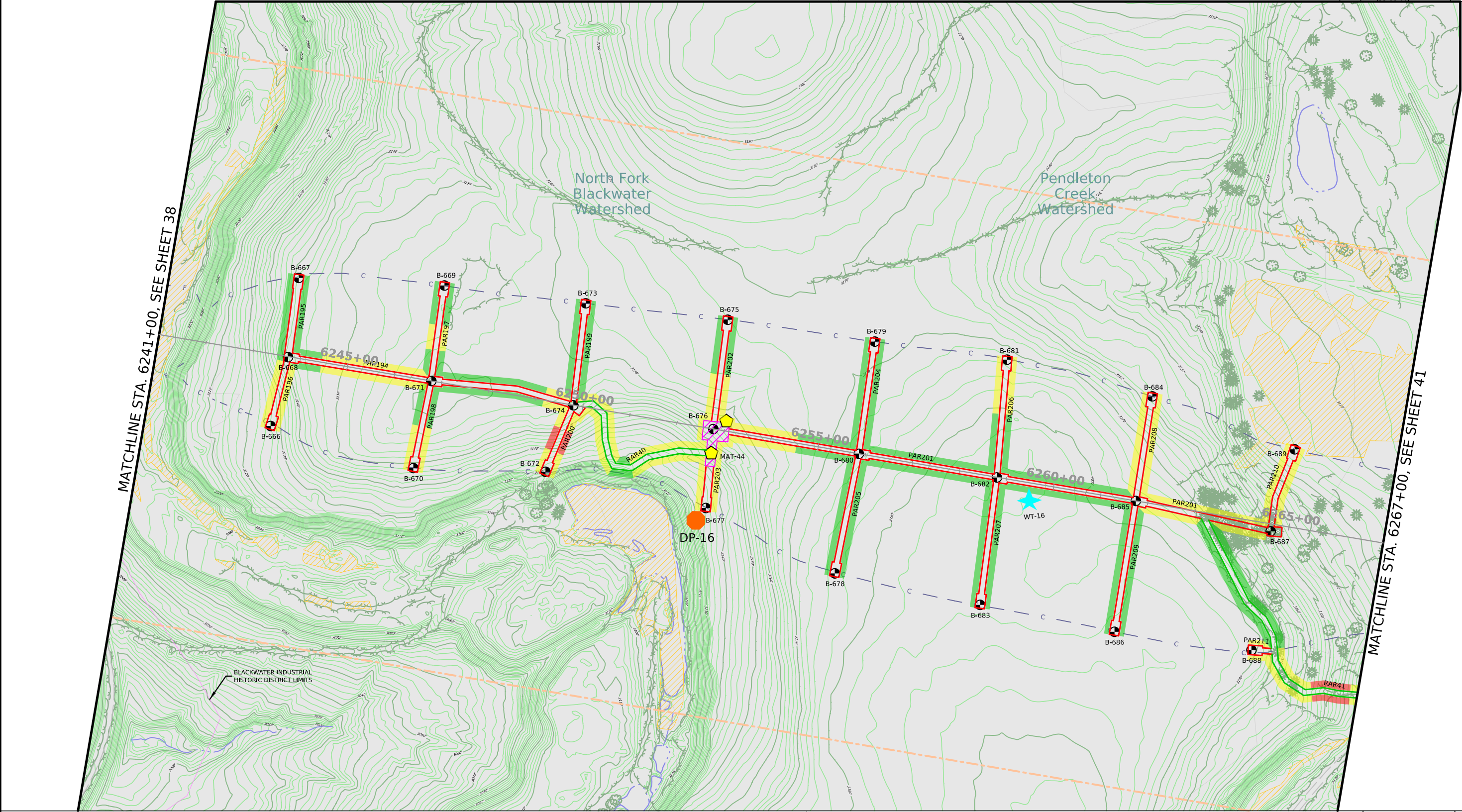


Public Roads Dist. W.V.	State Dist. No. 08	State Project No. X347 H- 55.68.00	Federal Project No. NHPP 0484(292)	Fiscal Year 2023	County TUCKER	Sheet No. 39	Total Sheets 51
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MATCHLINE, SEE SHEET 40

MATCHLINE STA. 6241+00, SEE SHEET 38

MATCHLINE STA. 6267+00, SEE SHEET 41



EX. ROAD

RECONSTRUCTED ACCESS ROAD (LOD)

NEW ACCESS ROAD (LOD)

BOTANICAL STUDY AREA BOUNDARY

STREAM

WATERSHED BOUNDARY

BIG BOG RUN WATERSHED BOUNDARY

ARR STUDY AREA BOUNDARY

DRILL ACCESS ROAD ID

AREA NOT TO BE DISTURBED

WETLAND AREA

MONONGAHELA NATIONAL FOREST

TIMBER MATTING (16' W TYP) (LOD)

PROP. ROADWAY CORE BORING

PROP. STRUCTURE CORE BORING

DRILL RIG PAD 20'x30' (TYP.) (LOD)

LAY DOWN AREAS (LOD)

PROP. ACCESS POINT

PROP. STREAM CROSSING

WATERBAR SLOPE: <5%

WATERBAR SLOPE: 5% - 20%

PROP. DISCHARGE POINT

WATERBAR SLOPE: >20%

UNDERGROUND MINING AREAS (PREVIOUSLY MINED)

PROP. WATER TANK LOCATION

NOTE: CUT ROADWAY WIDTHS VARY 12' TO 24'

**GPI**

Engineering  
Design  
Planning  
Construction Management

304.507.8101

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Greenman-Pedersen, Inc.  
58 Mission Way, Suite 201  
Scott Depot, WV 25560  
Certificate of Authorization #C01145-00

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DATE: 12/2022	DATE: 12/2022	DATE: 12/2022	DATE: 12/2022					

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**E&S PLAN (BORINGS)**

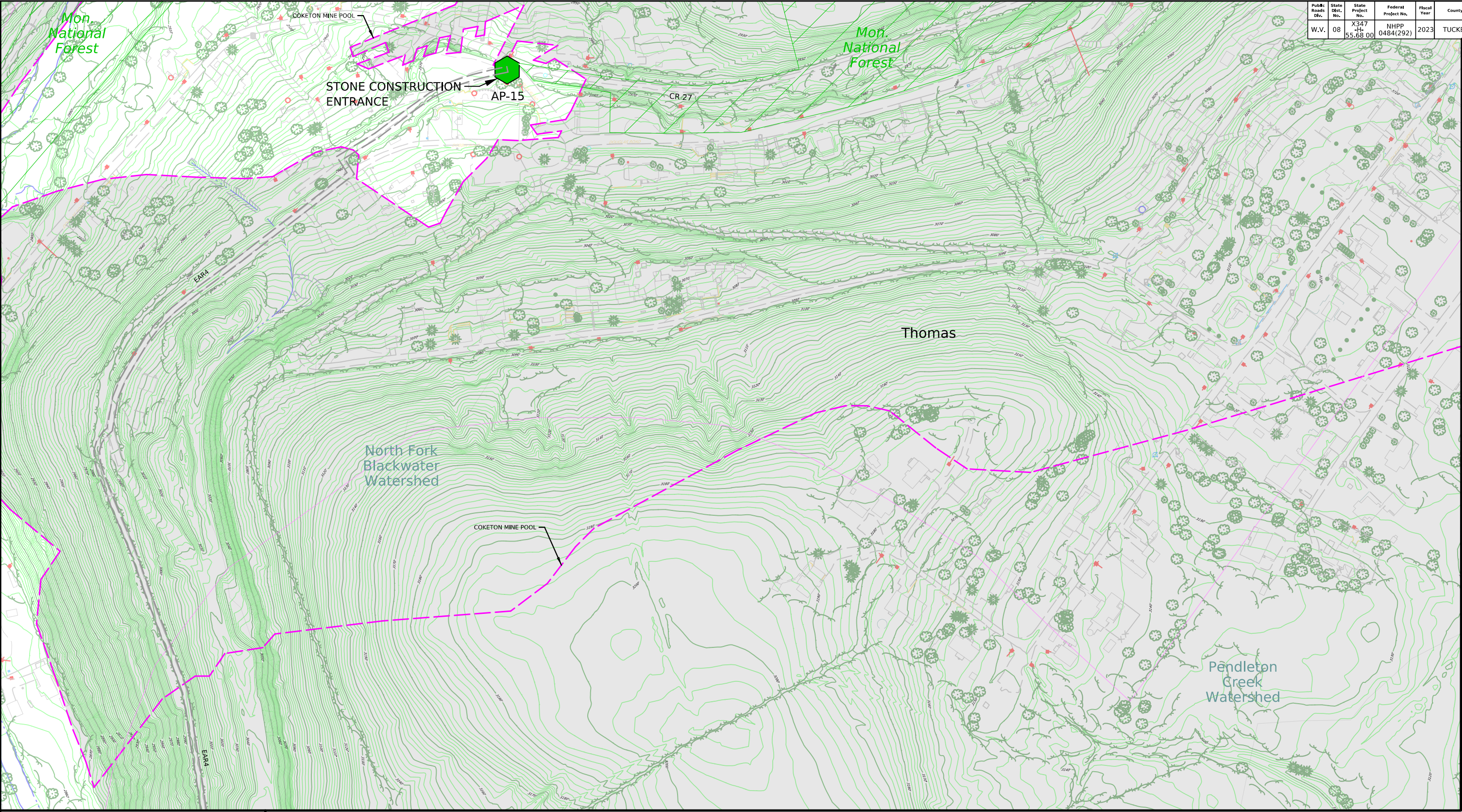
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MATCHLINE, SEE SHEET 38

MATCHLINE, SEE SHEET 39

- |                                 |                                  |                                    |
|---------------------------------|----------------------------------|------------------------------------|
| EX. ROAD                        | AREA NOT TO BE DISTURBED         | DRILL RIG PAD 20'x30' (TYP.) (LOD) |
| RECONSTRUCTED ACCESS ROAD (LOD) | WETLAND AREA                     | LAY DOWN AREAS (LOD)               |
| NEW ACCESS ROAD (LOD)           | MONONGAHELA NATIONAL FOREST      | PROP. ACCESS POINT                 |
| BOTANICAL STUDY AREA BOUNDARY   | TIMBER MATTING (16' W TYP) (LOD) |                                    |
| STREAM                          | PROP. ROADWAY CORE BORING        |                                    |
| WATERSHED BOUNDARY              | PROP. STRUCTURE CORE BORING      |                                    |
| BIG BOG RUN WATERSHED BOUNDARY  |                                  |                                    |
| ARR STUDY AREA BOUNDARY         |                                  |                                    |
| DRILL ACCESS ROAD ID            |                                  |                                    |
- NOTE: CUT ROADWAY WIDTHS VARY 12' TO 24'

- |                             |   |                           |
|-----------------------------|---|---------------------------|
| PROP. STREAM CROSSING (LOD) | PROP. DISCHARGE POINT                       | PROP. WATER TANK LOCATION |
| WATERBAR SLOPE: <5%         | WATERBAR SLOPE: >20%                        |                           |
| WATERBAR SLOPE: 5% - 20%    | UNDERGROUND MINING AREAS (PREVIOUSLY MINED) |                           |

SCALE:  
0 100 ft.



<b>GPI</b>	Engineering Design Planning Construction Management	Greenman-Pedersen, Inc. 58 Mission Way, Suite 201 Scott Depot, WV 25560 Certificate of Authorization #C01145-00
304.507.8101	GPI.NET.COM	
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DATE: 12/2022	DATE: 12/2022	DATE: 12/2022

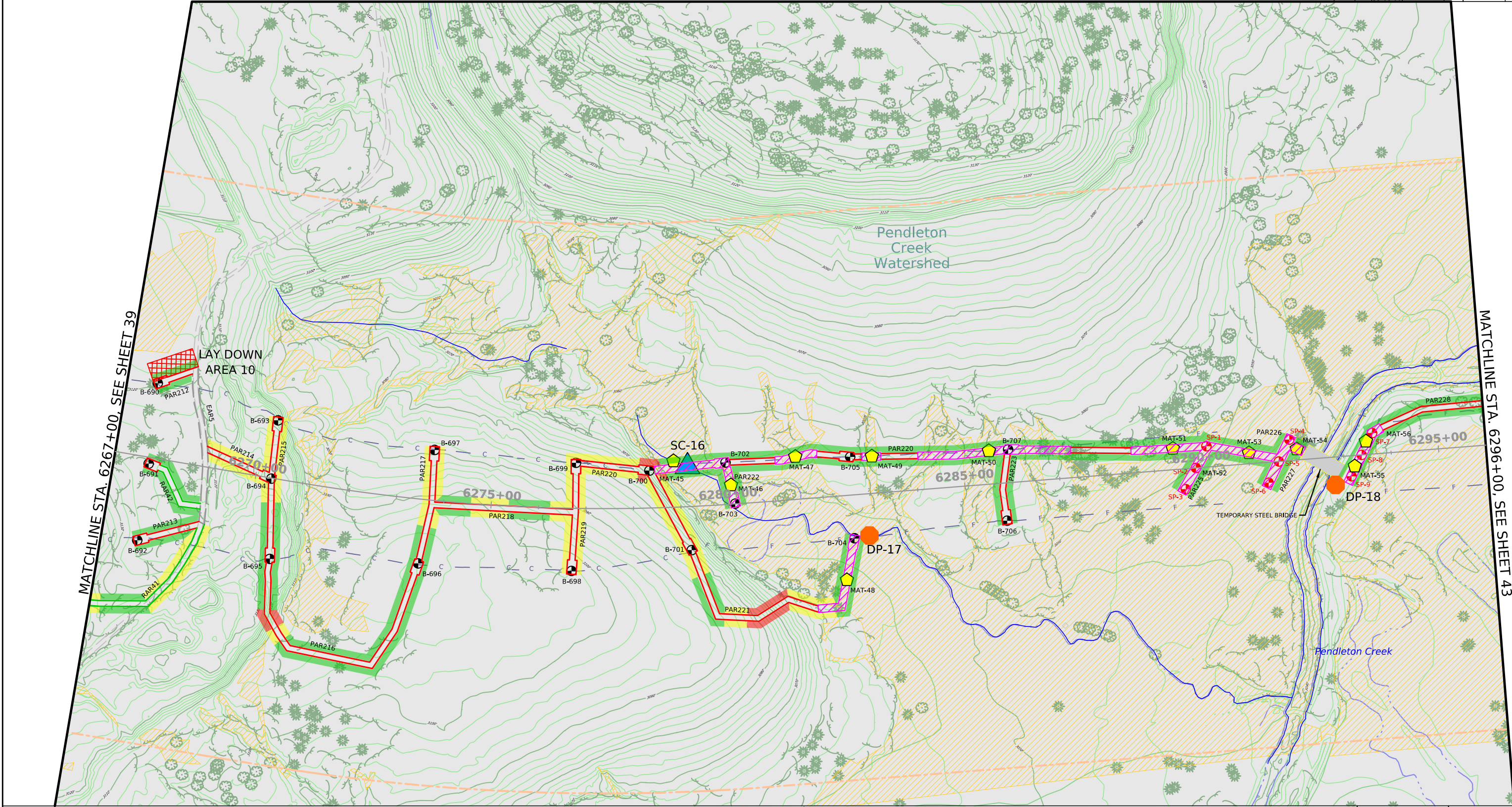
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THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**E&S PLAN (BORINGS)**



Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
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EX. ROAD

RECONSTRUCTED ACCESS ROAD (LOD)

NEW ACCESS ROAD (LOD)

BOTANICAL STUDY AREA BOUNDARY

STREAM

WATERSHED BOUNDARY

BIG BOG RUN WATERSHED BOUNDARY

ARR STUDY AREA BOUNDARY

DRILL ACCESS ROAD ID

AREA NOT TO BE DISTURBED

WETLAND AREA

MONONGAHELA NATIONAL FOREST

TIMBER MATTING (16' W TYP) (LOD)

PROP. ROADWAY CORE BORING

PROP. STRUCTURE CORE BORING

DRILL RIG PAD 20'x30' (TYP.) (LOD)

LAY DOWN AREAS (LOD)

PROP. ACCESS POINT

PROP. STREAM CROSSING

WATERBAR SLOPE: <5%

WATERBAR SLOPE: 5% - 20%

PROP. DISCHARGE POINT

WATERBAR SLOPE: >20%

UNDERGROUND MINING AREAS (PREVIOUSLY MINED)

PROP. WATER TANK LOCATION

NOTE: CUT ROADWAY WIDTHS VARY 12' TO 24'

**GPI**

Engineering  
Design  
Planning  
Construction Management

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Greenman-Pedersen, Inc.  
58 Mission Way, Suite 201  
Scott Depot, WV 25560  
Certificate of Authorization #C01145-00

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DATE: 12/2022	DATE: 12/2022	DATE: 12/2022	DATE: 12/2022					

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**E&S PLAN (BORINGS)**

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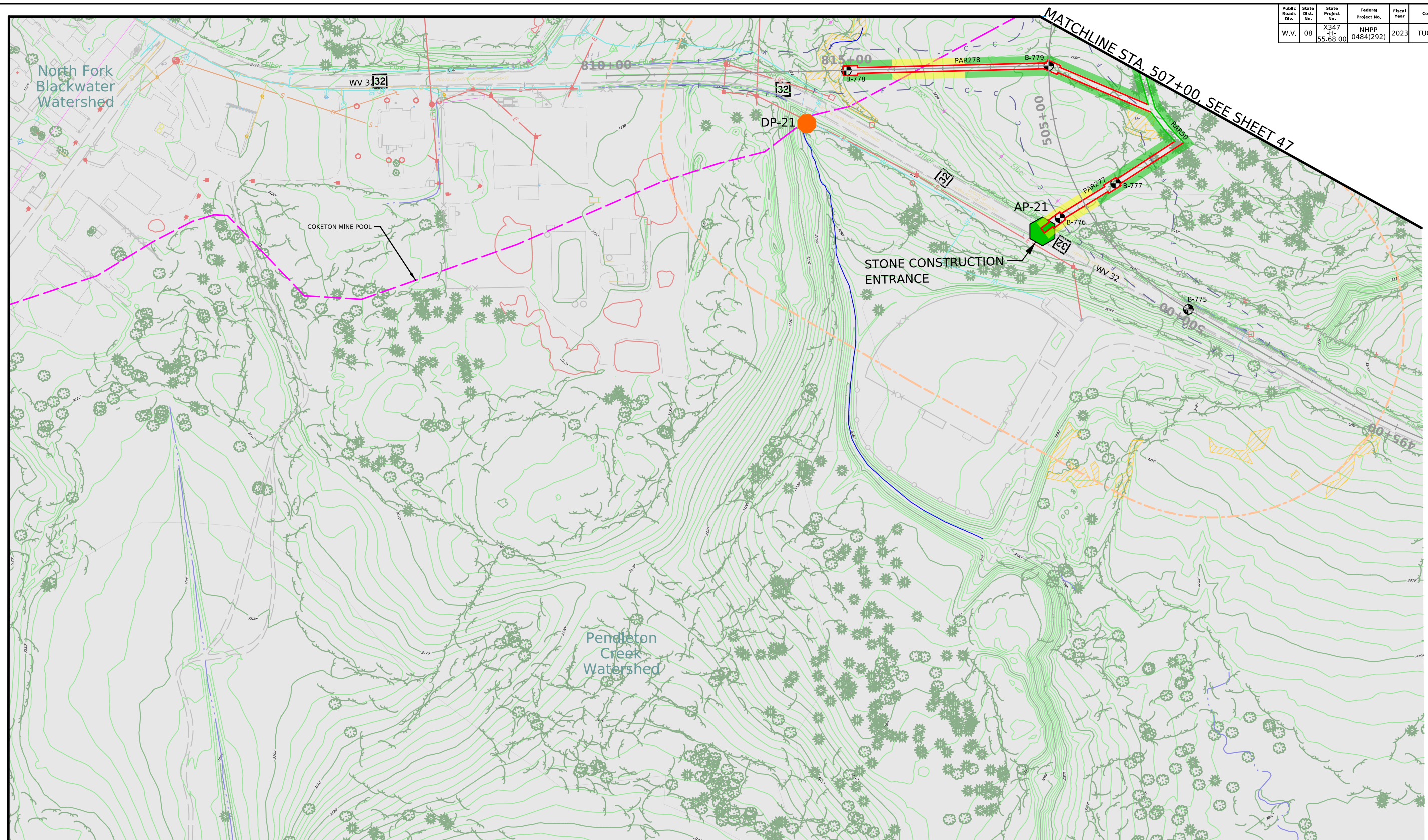
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Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W.V.	08	X347 -H- 55.68 00	NHPP 0484(292)	2023	TUCKER	42	51



- |  |                                 |  |                                  |  |                                    |  |                          |  |   |  |                           |
|--|---------------------------------|--|----------------------------------|--|------------------------------------|--|--------------------------|--|---|--|---------------------------|
|  | EX. ROAD                        |  | AREA NOT TO BE DISTURBED         |  | DRILL RIG PAD 20'x30' (TYP.) (LOD) |  | PROP. STREAM CROSSING    |  | PROP. DISCHARGE POINT                       |  | PROP. WATER TANK LOCATION |
|  | RECONSTRUCTED ACCESS ROAD (LOD) |  |                                  |  | LAY DOWN AREAS (LOD)               |  | WATERBAR SLOPE: <5%      |  | WATERBAR SLOPE: >20%                        |  |                           |
|  | NEW ACCESS ROAD (LOD)           |  | WETLAND AREA                     |  | PROP. ACCESS POINT                 |  | WATERBAR SLOPE: 5% - 20% |  | UNDERGROUND MINING AREAS (PREVIOUSLY MINED) |  |                           |
|  | BOTANICAL STUDY AREA BOUNDARY   |  | MONONGAHELA NATIONAL FOREST      |  |                                    |  |                          |  |   |  |                           |
|  | STREAM                          |  | TIMBER MATTING (16' W TYP) (LOD) |  |                                    |  |                          |  |   |  |                           |
|  | WATERSHED BOUNDARY              |  | PROP. ROADWAY CORE BORING        |  |                                    |  |                          |  |   |  |                           |
|  | BIG BOG RUN WATERSHED BOUNDARY  |  | PROP. STRUCTURE CORE BORING      |  |                                    |  |                          |  |   |  |                           |
|  | ARR STUDY AREA BOUNDARY         |  |                                  |  |                                    |  |                          |  |   |  |                           |
|  | DRILL ACCESS ROAD ID            |  |                                  |  |                                    |  |                          |  |   |  |                           |

NOTE: CUT ROADWAY WIDTHS VARY 12' TO 24'

	Engineering	Greenman-Pedersen, Inc.								THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS
	Design	56 Mission Way, Suite 201								
	Planning	Scott Depot, WV 25560								
	Construction Management	Certificate of Authorization #C01145-00								
	304.507.8101	GPNET.COM								
DESIGN BY: LAM	CHECK BY: JDS	DRAWN BY: KVM	CHECK BY: JDS	REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY	E&S PLAN (BORINGS)	



























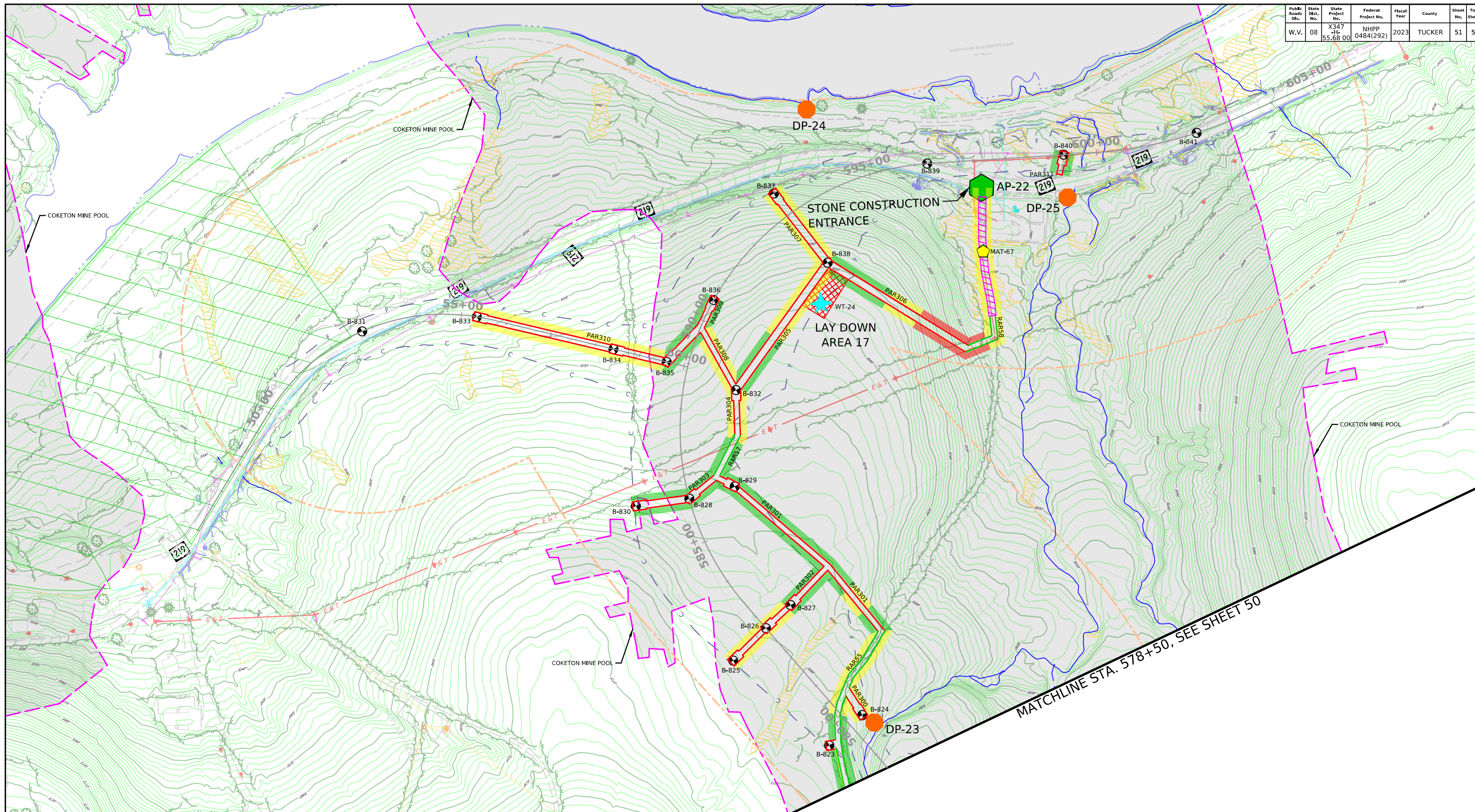








Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W.V.	08	X347-H-55-68 00	NHPP 0484(292)	2023	TUCKER	51	5



- EX. ROAD  
RECONSTRUCTED ACCESS ROAD (LOD)  
NEW ACCESS ROAD (LOD)  
BOTANICAL STUDY AREA BOUNDARY  
STREAM  
WATERSHED BOUNDARY  
BIG BOG RUN WATERSHED BOUNDARY  
ARR STUDY AREA BOUNDARY  
DRILL ACCESS ROAD ID

NOTE: CUT ROADWAY WIDTHS VARY 12' TO 24'

AREA NOT TO BE DISTURBED  
WETLAND AREA  
MONONGAHELA NATIONAL FOREST  
TIMBER MATTING (16' W TYP) (LOD)  
PROP. ROADWAY CORE BORING  
PROP. STRUCTURE CORE BORING

DRILL RIG PAD 20'x30' (TYP.) (LOD)  
LAY DOWN AREAS (LOD)  
PROP. ACCESS POINT

PROP. STREAM CROSSING  
WATERBAR SLOPE: <5%  
WATERBAR SLOPE: 5% - 20%

PROP. DISCHARGE POINT  
WATERBAR SLOPE: >20%  
UNDERGROUND MINING AREAS (PREVIOUSLY MINED)

PROP. WATER TANK LOCATION

<div style="display: flex; justify-content: space-between; font-size: 0.8em;"> <div>Engineering Design Planning Construction Management</div> <div>Greenman-Pedersen, Inc. 58 Mission Way, Suite 201 Scott Depot, WV 25560 Certificate of Authorization #C01145-00</div> </div>											
DESIGN BY: LAM	CHECK BY: JDS	DRAWN BY: KVM	CHECK BY: JDS	REVISION	SHEET	REVISION			DATE	BY	<div style="font-weight: bold; font-size: 1.2em;">THE WEST VIRGINIA</div> <div style="font-weight: bold; font-size: 2em; margin-top: 10px;">E&amp;S</div>

J04C23C03-BLANK

pw://qpl-pw.bentley.com:qpl-pw-01/Documents/MDX-2200012.00/08a.GPJ - Geotech/Access Roasts/Permits/MNF Special Use Permit/CADD/Contract Plans/rdv sht permits.dgn



**APPENDIX C**  
**Soil Report and Soil Map**





United States  
Department of  
Agriculture

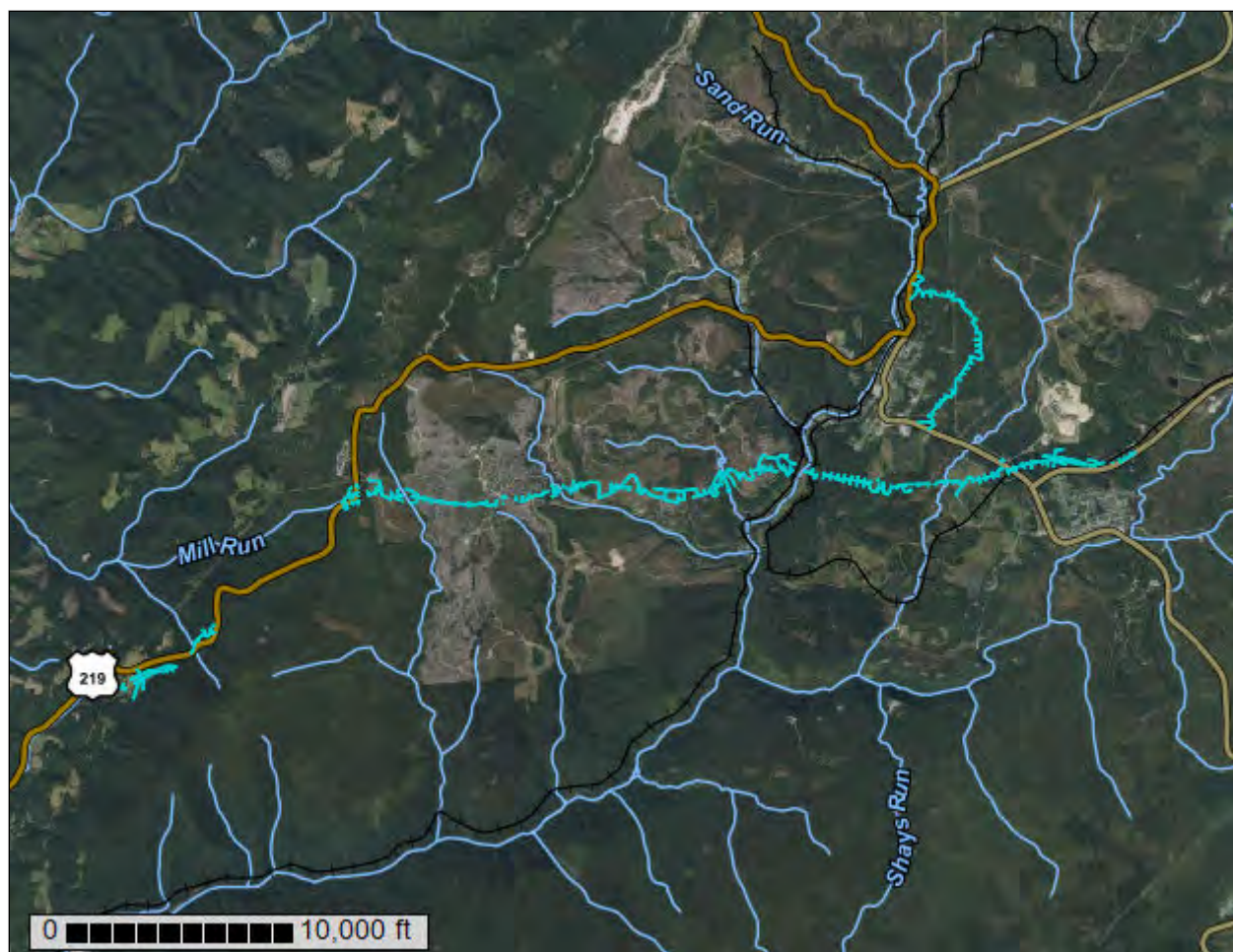
**NRCS**

Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for Tucker County and Northern Randolph County, West Virginia

**Parsons - Davis Core Borings  
Phase 1**



May 3, 2023

# Preface

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Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

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Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil



scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

## Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

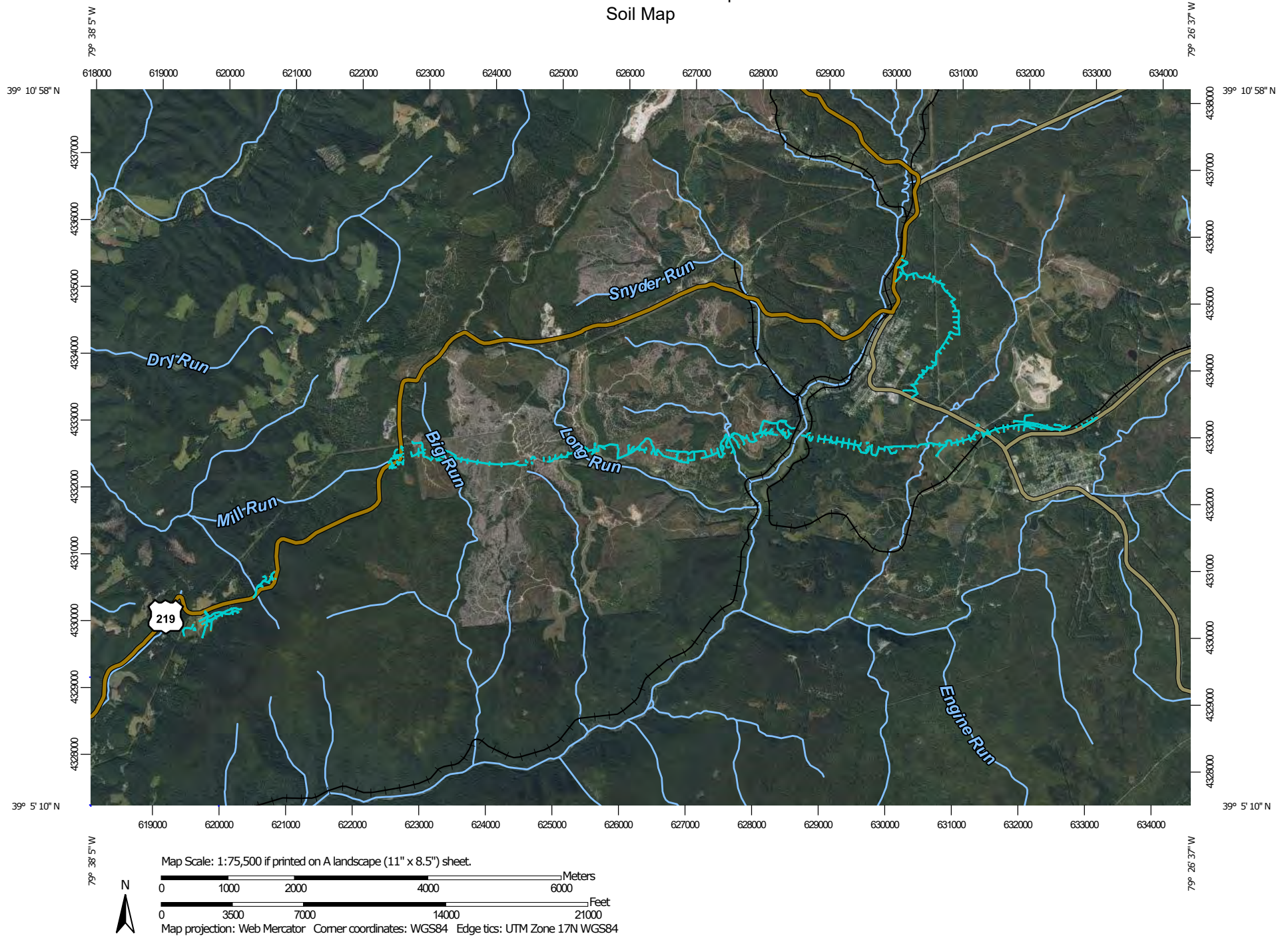


# Soil Map

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The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report Soil Map





## Custom Soil Resource Report

### MAP LEGEND

#### Area of Interest (AOI)

 Area of Interest (AOI)

#### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

#### Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other


 Special Line Features

#### Water Features

 Streams and Canals


#### Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

#### Background

 Aerial Photography

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Tucker County and Northern Randolph County, West Virginia

Survey Area Data: Version 15, Sep 9, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 20, 2020—Sep 23, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BnD	Belmont channery silt loam, 15 to 25 percent slopes, very stony	0.6	1.5%
BnE	Belmont channery silt loam, 25 to 35 percent slopes, very stony	0.1	0.3%
BrB	Brinkerton mucky silt loam, moist, 3 to 8 percent slopes	0.9	2.2%
BXC	Brinkerton-Lickdale association, 0 to 15 percent slopes, very rubbly	0.7	1.8%
ByC	Brinkerton-Nolo complex, 3 to 15 percent slopes, rubbly	7.2	19.0%
ChD	Cateache channery silt loam, 15 to 25 percent slopes	0.2	0.4%
CnE	Cateache channery silt loam, 15 to 35 percent slopes, rubbly	0.4	1.0%
CrD	Cedarcreek extremely channery loam, moderately steep	6.7	17.7%
CxB	Cookport silt loam, moist, 3 to 8 percent slopes	0.9	2.4%
CzB	Cookport cobbly silt loam, moist, 3 to 8 percent slopes, extremely stony	0.1	0.2%
DaB	Dekalb channery loam, 3 to 8 percent slopes	2.8	7.4%
DaC	Dekalb channery loam, 8 to 15 percent slopes	1.5	3.9%
DaD	Dekalb channery loam, 15 to 25 percent slopes	1.2	3.3%
DaE	Dekalb channery loam, 25 to 35 percent slopes	0.8	2.1%
DaF	Dekalb channery loam, 35 to 65 percent slopes	0.0	0.1%
DkB	Dekalb loam, 3 to 8 percent slopes	0.4	0.9%
DmC	Dekalb very cobbly loam, 3 to 15 percent slopes rubbly	1.6	4.1%
DmE	Dekalb very cobbly loam, 15 to 35 percent slopes, rubbly	0.5	1.4%
DmF	Dekalb very cobbly loam, 35 to 70 percent slopes, rubbly	0.2	0.6%
DrE	Dekalb very cobbly loam, 15 to 35 percent slopes, very rubbly	0.7	1.8%



## Custom Soil Resource Report

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
EnC	Ernest silt loam, moist, 8 to 15 percent slopes	0.8	2.2%
ErC	Ernest cobbly silt loam, moist, 3 to 15 percent slopes, rubbly	1.8	4.8%
ErE	Ernest cobbly silt loam, moist, 15 to 35 percent slopes, rubbly	0.1	0.4%
ExC	Ernest cobbly silt loam, moist, 3 to 15 percent slopes, very rubbly	0.3	0.9%
ExE	Ernest cobbly silt loam, moist, 15 to 35 percent slopes, very rubbly	0.5	1.3%
GcC	Gilpin channery silt loam, moist, 8 to 15 percent slopes	0.3	0.9%
LkC	Leetonia very cobbly loamy sand, 3 to 15 percent slopes, very rubbly	1.6	4.2%
LmA	Lickdale silt loam, 0 to 5 percent slopes	0.7	1.8%
McB	Meckesville silt loam, 3 to 8 percent slopes	0.2	0.5%
McC	Meckesville silt loam, 8 to 15 percent slopes	0.5	1.4%
MkD	Meckesville silt loam, 15 to 25 percent slopes, very stony	1.8	4.7%
NoA	Nolo silt loam, 0 to 3 percent slopes	0.7	2.0%
NoB	Nolo silt loam, 3 to 8 percent slopes	1.2	3.0%
Ud	Udorthents, smoothed	0.0	0.0%
<b>Totals for Area of Interest</b>		<b>38.1</b>	<b>100.0%</b>

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made

up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.



## Custom Soil Resource Report

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

## Tucker County and Northern Randolph County, West Virginia

### BnD—Belmont channery silt loam, 15 to 25 percent slopes, very stony

#### Map Unit Setting

*National map unit symbol:* k7tn  
*Elevation:* 2,000 to 3,740 feet  
*Mean annual precipitation:* 46 to 58 inches  
*Mean annual air temperature:* 48 to 52 degrees F  
*Frost-free period:* 140 to 170 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Belmont and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Belmont

##### Setting

*Landform:* Structural benches  
*Landform position (two-dimensional):* Footslope  
*Landform position (three-dimensional):* Mountainflank  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Parent material:* Calcareous fine-loamy residuum weathered from limestone and siltstone

##### Typical profile

*H1 - 0 to 9 inches:* channery silt loam  
*H2 - 9 to 18 inches:* channery silty clay loam  
*H3 - 18 to 42 inches:* channery clay loam  
*H4 - 42 to 51 inches:* very channery silty clay loam  
*R - 51 to 55 inches:* bedrock

##### Properties and qualities

*Slope:* 15 to 25 percent  
*Surface area covered with cobbles, stones or boulders:* 2.0 percent  
*Depth to restrictive feature:* 40 to 60 inches to lithic bedrock  
*Drainage class:* Well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.07 to 0.16 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Moderate (about 8.2 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6s  
*Hydrologic Soil Group:* B  
*Ecological site:* F127XY013WV - Divergent Uplands  
*Other vegetative classification:* Moist Loams (ML4)  
*Hydric soil rating:* No



**Minor Components**

**Other soils**

*Percent of map unit:* 15 percent

*Hydric soil rating:* No

**BnE—Belmont channery silt loam, 25 to 35 percent slopes, very stony**

**Map Unit Setting**

*National map unit symbol:* k7tp

*Elevation:* 1,950 to 3,480 feet

*Mean annual precipitation:* 46 to 58 inches

*Mean annual air temperature:* 48 to 52 degrees F

*Frost-free period:* 140 to 170 days

*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Belmont and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Belmont**

**Setting**

*Landform:* Structural benches

*Landform position (two-dimensional):* Footslope

*Landform position (three-dimensional):* Mountainflank

*Down-slope shape:* Linear

*Across-slope shape:* Convex

*Parent material:* Calcareous fine-loamy residuum weathered from limestone and siltstone

**Typical profile**

*H1 - 0 to 9 inches:* channery silt loam

*H2 - 9 to 18 inches:* channery silty clay loam

*H3 - 18 to 42 inches:* channery silty clay loam

*H4 - 42 to 51 inches:* very channery silty clay loam

*R - 51 to 55 inches:* bedrock

**Properties and qualities**

*Slope:* 25 to 35 percent

*Surface area covered with cobbles, stones or boulders:* 1.6 percent

*Depth to restrictive feature:* 40 to 60 inches to lithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.07 to 0.16 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Moderate (about 8.2 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7s  
*Hydrologic Soil Group:* B  
*Ecological site:* F127XY013WV - Divergent Uplands  
*Other vegetative classification:* Very Rocky, Limy Soils (RL4)  
*Hydric soil rating:* No

**Minor Components**

**Other soils**

*Percent of map unit:* 15 percent  
*Hydric soil rating:* No

**BrB—Brinkerton mucky silt loam, moist, 3 to 8 percent slopes**

**Map Unit Setting**

*National map unit symbol:* 2sgqt  
*Elevation:* 2,200 to 4,160 feet  
*Mean annual precipitation:* 46 to 67 inches  
*Mean annual air temperature:* 46 to 50 degrees F  
*Frost-free period:* 123 to 162 days  
*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Brinkerton, moist, wooded, and similar soils:* 77 percent  
*Minor components:* 23 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Brinkerton, Moist, Wooded**

**Setting**

*Landform:* Hillslopes  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Concave, linear  
*Across-slope shape:* Concave  
*Parent material:* Acid fine-silty colluvium derived from shale and siltstone

**Typical profile**

*Oi - 0 to 1 inches:* slightly decomposed plant material  
*A - 1 to 3 inches:* mucky silt loam  
*Eg - 3 to 8 inches:* silt loam  
*Btg - 8 to 21 inches:* silty clay loam  
*Btxg - 21 to 42 inches:* silt loam  
*BC - 42 to 65 inches:* channery silt loam

**Properties and qualities**

*Slope:* 3 to 8 percent  
*Depth to restrictive feature:* 17 to 30 inches to fragipan



## Custom Soil Resource Report

*Drainage class:* Poorly drained  
*Runoff class:* Very high  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* About 0 to 2 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Low (about 3.4 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 4w  
*Hydrologic Soil Group:* D  
*Ecological site:* F127XY007WV - Wet Uplands  
*Hydric soil rating:* Yes

### Minor Components

#### Brinkerton, moist, nonwooded

*Percent of map unit:* 8 percent  
*Landform:* Hillslopes  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Concave, linear  
*Across-slope shape:* Concave  
*Hydric soil rating:* Yes

#### Portville, moist

*Percent of map unit:* 5 percent  
*Landform:* Hills  
*Landform position (two-dimensional):* Footslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Concave  
*Across-slope shape:* Linear  
*Hydric soil rating:* No

#### Atkins, moist

*Percent of map unit:* 5 percent  
*Landform:* Flood plains  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave  
*Hydric soil rating:* Yes

#### Ernest, moist

*Percent of map unit:* 5 percent  
*Landform:* Hillslopes  
*Landform position (two-dimensional):* Footslope  
*Landform position (three-dimensional):* Head slope, base slope  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave, linear  
*Hydric soil rating:* No

**BXC—Brinkerton-Lickdale association, 0 to 15 percent slopes, very rubbly**

**Map Unit Setting**

*National map unit symbol:* k7x3  
*Elevation:* 2,540 to 4,210 feet  
*Mean annual precipitation:* 46 to 57 inches  
*Mean annual air temperature:* 44 to 50 degrees F  
*Frost-free period:* 80 to 120 days  
*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Brinkerton and similar soils:* 60 percent  
*Lickdale and similar soils:* 40 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Brinkerton**

**Setting**

*Landform:* Drainhead complexes, drainageways  
*Landform position (two-dimensional):* Footslope, toeslope  
*Landform position (three-dimensional):* Mountaintop, head slope, base slope  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Concave  
*Parent material:* Fine-silty colluvium derived from acid shale

**Typical profile**

*H1 - 0 to 5 inches:* silt loam  
*H2 - 5 to 26 inches:* silty clay loam  
*H3 - 26 to 53 inches:* channery silty clay loam  
*H4 - 53 to 88 inches:* very channery silty clay loam

**Properties and qualities**

*Slope:* 0 to 15 percent  
*Surface area covered with cobbles, stones or boulders:* 52.0 percent  
*Depth to restrictive feature:* 13 to 26 inches to fragipan  
*Drainage class:* Poorly drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* About 0 to 6 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Low (about 4.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7s  
*Hydrologic Soil Group:* C/D  
*Ecological site:* F127XY007WV - Wet Uplands  
*Other vegetative classification:* Not Suited (NS)



*Hydric soil rating:* Yes

### **Description of Lickdale**

#### **Setting**

*Landform:* Drainhead complexes

*Landform position (two-dimensional):* Foothills

*Landform position (three-dimensional):* Mountaintop, head slope

*Down-slope shape:* Linear

*Across-slope shape:* Concave

*Parent material:* Loamy slope alluvium derived from sandstone and shale

#### **Typical profile**

*H1 - 0 to 20 inches:* silt loam

*H2 - 20 to 24 inches:* silty clay loam

*H3 - 24 to 46 inches:* sandy loam

*R - 46 to 50 inches:* bedrock

#### **Properties and qualities**

*Slope:* 0 to 5 percent

*Surface area covered with cobbles, stones or boulders:* 52.0 percent

*Depth to restrictive feature:* 40 to 72 inches to lithic bedrock

*Drainage class:* Very poorly drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)

*Depth to water table:* About 0 to 6 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Moderate (about 6.5 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 7s

*Hydrologic Soil Group:* C/D

*Ecological site:* F127XY006WV - Terraces

*Other vegetative classification:* Not Suited (NS)

*Hydric soil rating:* Yes

### **ByC—Brinkerton-Nolo complex, 3 to 15 percent slopes, rubbly**

#### **Map Unit Setting**

*National map unit symbol:* k7tx

*Elevation:* 2,180 to 4,310 feet

*Mean annual precipitation:* 46 to 57 inches

*Mean annual air temperature:* 44 to 50 degrees F

*Frost-free period:* 80 to 120 days

*Farmland classification:* Not prime farmland

#### **Map Unit Composition**

*Brinkerton and similar soils:* 80 percent

*Nolo and similar soils:* 20 percent

## Custom Soil Resource Report

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Brinkerton

#### Setting

*Landform:* Drainageways, drainhead complexes  
*Landform position (two-dimensional):* Toeslope, footslope  
*Landform position (three-dimensional):* Mountaintop, base slope, head slope  
*Down-slope shape:* Concave, linear  
*Across-slope shape:* Concave  
*Parent material:* Fine-silty colluvium derived from acid shale

#### Typical profile

*H1 - 0 to 5 inches:* silt loam  
*H2 - 5 to 26 inches:* silty clay loam  
*H3 - 26 to 53 inches:* channery silty clay loam  
*H4 - 53 to 88 inches:* very channery silty clay loam

#### Properties and qualities

*Slope:* 3 to 15 percent  
*Surface area covered with cobbles, stones or boulders:* 32.0 percent  
*Depth to restrictive feature:* 13 to 26 inches to fragipan  
*Drainage class:* Poorly drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* About 0 to 6 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Low (about 4.4 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7s  
*Hydrologic Soil Group:* C/D  
*Ecological site:* F127XY007WV - Wet Uplands  
*Other vegetative classification:* Not Suited (NS)  
*Hydric soil rating:* Yes

### Description of Nolo

#### Setting

*Landform:* Drainhead complexes, drainageways  
*Landform position (two-dimensional):* Footslope, toeslope  
*Landform position (three-dimensional):* Mountaintop, head slope, base slope  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Concave  
*Parent material:* Fine-loamy residuum weathered from shale and siltstone

#### Typical profile

*H1 - 0 to 9 inches:* cobbly silt loam  
*H2 - 9 to 21 inches:* channery sandy clay loam  
*H3 - 21 to 23 inches:* channery sandy clay loam  
*R - 23 to 27 inches:* bedrock

#### Properties and qualities

*Slope:* 3 to 15 percent  
*Surface area covered with cobbles, stones or boulders:* 9.0 percent  
*Depth to restrictive feature:* More than 80 inches; 13 to 23 inches to fragipan



## Custom Soil Resource Report

*Drainage class:* Poorly drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)

*Depth to water table:* About 0 to 6 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Low (about 3.2 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 7s

*Hydrologic Soil Group:* D

*Ecological site:* F127XY007WV - Wet Uplands

*Other vegetative classification:* Not Suited (NS)

*Hydric soil rating:* Yes

## ChD—Cateache channery silt loam, 15 to 25 percent slopes

### Map Unit Setting

*National map unit symbol:* k7v8

*Elevation:* 2,440 to 3,890 feet

*Mean annual precipitation:* 46 to 57 inches

*Mean annual air temperature:* 44 to 50 degrees F

*Frost-free period:* 80 to 120 days

*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Cateache and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Cateache

#### Setting

*Landform:* Structural benches, mountain slopes

*Landform position (two-dimensional):* Shoulder, summit

*Landform position (three-dimensional):* Upper third of mountainflank

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Reddish brown loamy residuum weathered from calcareous siltstone

#### Typical profile

*Oi - 0 to 1 inches:* slightly decomposed plant material

*A - 1 to 3 inches:* channery silt loam

*B - 3 to 29 inches:* very channery silty clay loam

*C - 29 to 33 inches:* extremely channery silty clay loam

*Cr - 33 to 37 inches:* bedrock

#### Properties and qualities

*Slope:* 15 to 25 percent

## Custom Soil Resource Report

*Depth to restrictive feature:* 20 to 40 inches to paralithic bedrock  
*Drainage class:* Well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately high (0.00 to 0.20 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Low (about 5.1 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 4e  
*Hydrologic Soil Group:* C  
*Ecological site:* F127XY013WV - Divergent Uplands  
*Other vegetative classification:* Limy Hills (LH4)  
*Hydric soil rating:* No

### Minor Components

#### Other soils

*Percent of map unit:* 15 percent  
*Hydric soil rating:* No

## CnE—Cateache channery silt loam, 15 to 35 percent slopes, rubbly

### Map Unit Setting

*National map unit symbol:* k7vd  
*Elevation:* 120 to 460 feet  
*Mean annual precipitation:* 46 to 57 inches  
*Mean annual air temperature:* 44 to 50 degrees F  
*Frost-free period:* 80 to 120 days  
*Farmland classification:* Not prime farmland

### Map Unit Composition

*Cateache and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Cateache

#### Setting

*Landform:* Mountain slopes  
*Landform position (two-dimensional):* Shoulder, backslope  
*Landform position (three-dimensional):* Mountainflank  
*Down-slope shape:* Concave  
*Across-slope shape:* Convex  
*Parent material:* Reddish brown loamy residuum weathered from calcareous siltstone

#### Typical profile

*Oi - 0 to 1 inches:* slightly decomposed plant material



## Custom Soil Resource Report

*A - 1 to 3 inches: channery silt loam*  
*B - 3 to 29 inches: very channery silty clay loam*  
*C - 29 to 33 inches: extremely channery silty clay loam*  
*Cr - 33 to 37 inches: bedrock*

### Properties and qualities

*Slope: 15 to 35 percent*  
*Surface area covered with cobbles, stones or boulders: 32.0 percent*  
*Depth to restrictive feature: 20 to 40 inches to paralithic bedrock*  
*Drainage class: Well drained*  
*Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)*  
*Depth to water table: More than 80 inches*  
*Frequency of flooding: None*  
*Frequency of ponding: None*  
*Available water supply, 0 to 60 inches: Low (about 5.1 inches)*

### Interpretive groups

*Land capability classification (irrigated): None specified*  
*Land capability classification (nonirrigated): 7s*  
*Hydrologic Soil Group: C*  
*Ecological site: F127XY013WV - Divergent Uplands*  
*Other vegetative classification: Not Suited (NS)*  
*Hydric soil rating: No*

### Minor Components

#### Other soils

*Percent of map unit: 15 percent*  
*Hydric soil rating: No*

## CrD—Cedarcreek extremely channery loam, moderately steep

### Map Unit Setting

*National map unit symbol: k7wz*  
*Elevation: 2,510 to 3,820 feet*  
*Mean annual precipitation: 46 to 57 inches*  
*Mean annual air temperature: 44 to 50 degrees F*  
*Frost-free period: 115 to 165 days*  
*Farmland classification: Not prime farmland*

### Map Unit Composition

*Cedarcreek, unstable fill, and similar soils: 75 percent*  
*Minor components: 25 percent*  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Cedarcreek, Unstable Fill

#### Setting

*Landform: Mountain slopes*  
*Landform position (two-dimensional): Backslope*

## Custom Soil Resource Report

*Landform position (three-dimensional):* Mountainflank

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Fine-loamy mine spoil or earthy fill derived from sandstone and shale

### Typical profile

*H1 - 0 to 4 inches:* extremely channery loam

*H2 - 4 to 70 inches:* extremely channery loam

### Properties and qualities

*Slope:* 10 to 30 percent

*Surface area covered with cobbles, stones or boulders:* 1.6 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.60 to 6.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Moderate (about 7.2 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 6s

*Hydrologic Soil Group:* A

*Ecological site:* F127XY100WV - Mine Spoil

*Hydric soil rating:* No

### Minor Components

#### Other soils

*Percent of map unit:* 25 percent

## CxB—Cookport silt loam, moist, 3 to 8 percent slopes

### Map Unit Setting

*National map unit symbol:* 2wsj2

*Elevation:* 2,390 to 4,210 feet

*Mean annual precipitation:* 46 to 67 inches

*Mean annual air temperature:* 46 to 50 degrees F

*Frost-free period:* 123 to 162 days

*Farmland classification:* All areas are prime farmland

### Map Unit Composition

*Cookport and similar soils:* 80 percent

*Minor components:* 20 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*



## Description of Cookport

### Setting

*Landform:* Ridges

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Concave, linear

*Across-slope shape:* Linear

*Parent material:* Acid fine-loamy residuum weathered from sandstone

### Typical profile

*Oi - 0 to 2 inches:* slightly decomposed plant material

*Oa - 2 to 3 inches:* highly decomposed plant material

*A - 3 to 6 inches:* silt loam

*E - 6 to 10 inches:* silt loam

*Bt - 10 to 24 inches:* loam

*Btx - 24 to 40 inches:* channery loam

*C - 40 to 60 inches:* very channery loam

*R - 60 to 70 inches:* bedrock

### Properties and qualities

*Slope:* 3 to 8 percent

*Depth to restrictive feature:* 16 to 29 inches to fragipan; 40 to 78 inches to lithic bedrock

*Drainage class:* Moderately well drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.01 to 0.20 in/hr)

*Depth to water table:* About 15 to 21 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Low (about 3.6 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 2e

*Hydrologic Soil Group:* C/D

*Ecological site:* F127XY013WV - Divergent Uplands

*Hydric soil rating:* No

## Minor Components

### Fenwick

*Percent of map unit:* 8 percent

*Landform:* Ridges

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Concave, linear

*Across-slope shape:* Linear

*Other vegetative classification:* Acid Loams (AL3)

*Hydric soil rating:* No

### Clymer

*Percent of map unit:* 8 percent

*Landform:* Ridges

*Landform position (two-dimensional):* Summit

## Custom Soil Resource Report

*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Convex, linear  
*Across-slope shape:* Convex, linear  
*Hydric soil rating:* No

### **Nolo**

*Percent of map unit:* 2 percent  
*Landform:* Depressions  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave  
*Hydric soil rating:* Yes

### **Cookport, very stony**

*Percent of map unit:* 2 percent  
*Landform:* Ridges  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Concave, linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* No

## **CzB—Cookport cobbly silt loam, moist, 3 to 8 percent slopes, extremely stony**

### **Map Unit Setting**

*National map unit symbol:* 2wshs  
*Elevation:* 2,700 to 4,370 feet  
*Mean annual precipitation:* 46 to 67 inches  
*Mean annual air temperature:* 43 to 45 degrees F  
*Frost-free period:* 90 to 148 days  
*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Cookport and similar soils:* 80 percent  
*Minor components:* 20 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Cookport**

#### **Setting**

*Landform:* Ridges  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Concave, linear  
*Across-slope shape:* Linear  
*Parent material:* Acid fine-loamy residuum weathered from sandstone

#### **Typical profile**

*Oi - 0 to 2 inches:* slightly decomposed plant material



## Custom Soil Resource Report

*Oa - 2 to 3 inches:* highly decomposed plant material  
*A - 3 to 6 inches:* cobbly silt loam  
*E - 6 to 10 inches:* silt loam  
*Bt - 10 to 24 inches:* loam  
*Btx - 24 to 40 inches:* channery loam  
*C - 40 to 60 inches:* very channery loam  
*R - 60 to 70 inches:* bedrock

### Properties and qualities

*Slope:* 3 to 8 percent  
*Surface area covered with cobbles, stones or boulders:* 9.0 percent  
*Depth to restrictive feature:* 16 to 29 inches to fragipan; 40 to 78 inches to lithic bedrock  
*Drainage class:* Moderately well drained  
*Runoff class:* Medium  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.01 to 0.20 in/hr)  
*Depth to water table:* About 15 to 21 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Low (about 3.6 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7s  
*Hydrologic Soil Group:* C/D  
*Ecological site:* F127XY011WV - Frigid High Elevation Uplands  
*Hydric soil rating:* No

### Minor Components

#### Fenwick

*Percent of map unit:* 8 percent  
*Landform:* Ridges  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Concave, linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* No

#### Dekalb

*Percent of map unit:* 7 percent  
*Landform:* Ridges  
*Landform position (two-dimensional):* Summit, shoulder  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Hydric soil rating:* No

#### Nolo

*Percent of map unit:* 5 percent  
*Landform:* Depressions  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave  
*Hydric soil rating:* Yes

## **DaB—Dekalb channery loam, 3 to 8 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* k7vj  
*Elevation:* 2,070 to 4,210 feet  
*Mean annual precipitation:* 46 to 57 inches  
*Mean annual air temperature:* 44 to 50 degrees F  
*Frost-free period:* 80 to 120 days  
*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Dekalb and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Dekalb**

#### **Setting**

*Landform:* Ridges  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Mountaintop  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Parent material:* Coarse-loamy residuum weathered from sandstone and siltstone

#### **Typical profile**

*H1 - 0 to 8 inches:* channery loam  
*H2 - 8 to 14 inches:* very channery loam  
*H3 - 14 to 34 inches:* very channery loam  
*R - 34 to 38 inches:* bedrock

#### **Properties and qualities**

*Slope:* 3 to 8 percent  
*Depth to restrictive feature:* 20 to 40 inches to lithic bedrock  
*Drainage class:* Well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* High (3.54 to 10.63 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Very low (about 2.9 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 2e  
*Hydrologic Soil Group:* A  
*Ecological site:* F127XY003WV - Acidic Shale Upland Oak/Heath  
*Other vegetative classification:* Dry Uplands (DU4)  
*Hydric soil rating:* No



**Minor Components**

**Other soils**

*Percent of map unit:* 15 percent

*Hydric soil rating:* No

**DaC—Dekalb channery loam, 8 to 15 percent slopes**

**Map Unit Setting**

*National map unit symbol:* k7vk

*Elevation:* 1,740 to 4,350 feet

*Mean annual precipitation:* 46 to 57 inches

*Mean annual air temperature:* 44 to 50 degrees F

*Frost-free period:* 80 to 120 days

*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Dekalb and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Dekalb**

**Setting**

*Landform:* Ridges

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Mountaintop

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Coarse-loamy residuum weathered from sandstone and siltstone

**Typical profile**

*H1 - 0 to 8 inches:* channery loam

*H2 - 8 to 14 inches:* very channery loam

*H3 - 14 to 34 inches:* very channery loam

*R - 34 to 38 inches:* bedrock

**Properties and qualities**

*Slope:* 8 to 15 percent

*Depth to restrictive feature:* 20 to 40 inches to lithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* High (3.54 to 10.63 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Very low (about 2.9 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified

## Custom Soil Resource Report

*Land capability classification (nonirrigated): 3e*  
*Hydrologic Soil Group: A*  
*Ecological site: F127XY003WV - Acidic Shale Upland Oak/Heath*  
*Other vegetative classification: Dry Uplands (DU4)*  
*Hydric soil rating: No*

### Minor Components

#### Other soils

*Percent of map unit: 15 percent*  
*Hydric soil rating: No*

## DaD—Dekalb channery loam, 15 to 25 percent slopes

### Map Unit Setting

*National map unit symbol: k7vl*  
*Elevation: 1,510 to 4,130 feet*  
*Mean annual precipitation: 46 to 57 inches*  
*Mean annual air temperature: 44 to 50 degrees F*  
*Frost-free period: 80 to 120 days*  
*Farmland classification: Not prime farmland*

### Map Unit Composition

*Dekalb and similar soils: 85 percent*  
*Minor components: 15 percent*  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Dekalb

#### Setting

*Landform: Mountain slopes*  
*Landform position (two-dimensional): Shoulder*  
*Landform position (three-dimensional): Upper third of mountainflank*  
*Down-slope shape: Convex*  
*Across-slope shape: Linear*  
*Parent material: Coarse-loamy residuum weathered from sandstone and siltstone*

#### Typical profile

*H1 - 0 to 8 inches: channery loam*  
*H2 - 8 to 14 inches: very channery loam*  
*H3 - 14 to 34 inches: very channery loam*  
*R - 34 to 38 inches: bedrock*

#### Properties and qualities

*Slope: 15 to 25 percent*  
*Depth to restrictive feature: 20 to 40 inches to lithic bedrock*  
*Drainage class: Well drained*  
*Capacity of the most limiting layer to transmit water (Ksat): High (3.54 to 10.63 in/hr)*  
*Depth to water table: More than 80 inches*  
*Frequency of flooding: None*



## Custom Soil Resource Report

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Very low (about 2.9 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 4e

*Hydrologic Soil Group:* A

*Ecological site:* F127XY003WV - Acidic Shale Upland Oak/Heath

*Other vegetative classification:* Dry Hills (DH4)

*Hydric soil rating:* No

### Minor Components

#### Other soils

*Percent of map unit:* 15 percent

*Hydric soil rating:* No

## DaE—Dekalb channery loam, 25 to 35 percent slopes

### Map Unit Setting

*National map unit symbol:* k7vm

*Elevation:* 1,480 to 3,970 feet

*Mean annual precipitation:* 46 to 57 inches

*Mean annual air temperature:* 44 to 50 degrees F

*Frost-free period:* 80 to 120 days

*Farmland classification:* Not prime farmland

### Map Unit Composition

*Dekalb and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Dekalb

#### Setting

*Landform:* Mountain slopes

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Mountainflank

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Parent material:* Coarse-loamy residuum weathered from sandstone and siltstone

#### Typical profile

*H1 - 0 to 8 inches:* channery loam

*H2 - 8 to 14 inches:* very channery loam

*H3 - 14 to 34 inches:* very channery loam

*R - 34 to 38 inches:* bedrock

#### Properties and qualities

*Slope:* 25 to 35 percent

*Depth to restrictive feature:* 20 to 40 inches to lithic bedrock

## Custom Soil Resource Report

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* High (3.54 to 10.63 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Very low (about 2.9 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 7e

*Hydrologic Soil Group:* A

*Ecological site:* F127XY003WV - Acidic Shale Upland Oak/Heath

*Other vegetative classification:* Dry Hills (DH4)

*Hydric soil rating:* No

### Minor Components

#### Other soils

*Percent of map unit:* 15 percent

*Hydric soil rating:* No

## DaF—Dekalb channery loam, 35 to 65 percent slopes

### Map Unit Setting

*National map unit symbol:* k7vn

*Elevation:* 1,460 to 3,970 feet

*Mean annual precipitation:* 46 to 57 inches

*Mean annual air temperature:* 44 to 50 degrees F

*Frost-free period:* 80 to 120 days

*Farmland classification:* Not prime farmland

### Map Unit Composition

*Dekalb and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Dekalb

#### Setting

*Landform:* Mountain slopes

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Mountainflank

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Parent material:* Coarse-loamy residuum weathered from sandstone and siltstone

#### Typical profile

*H1 - 0 to 8 inches:* channery loam

*H2 - 8 to 14 inches:* very channery loam

*H3 - 14 to 34 inches:* very channery loam



## Custom Soil Resource Report

*R - 34 to 38 inches: bedrock*

### Properties and qualities

*Slope: 35 to 65 percent*

*Depth to restrictive feature: 20 to 40 inches to lithic bedrock*

*Drainage class: Well drained*

*Capacity of the most limiting layer to transmit water (Ksat): High (3.54 to 10.63 in/hr)*

*Depth to water table: More than 80 inches*

*Frequency of flooding: None*

*Frequency of ponding: None*

*Available water supply, 0 to 60 inches: Very low (about 2.9 inches)*

### Interpretive groups

*Land capability classification (irrigated): None specified*

*Land capability classification (nonirrigated): 7e*

*Hydrologic Soil Group: A*

*Ecological site: F127XY003WV - Acidic Shale Upland Oak/Heath*

*Other vegetative classification: Dry Hills (DH4)*

*Hydric soil rating: No*

### Minor Components

#### Other soils

*Percent of map unit: 15 percent*

*Hydric soil rating: No*

## DkB—Dekalb loam, 3 to 8 percent slopes

### Map Unit Setting

*National map unit symbol: k7vp*

*Elevation: 1,950 to 4,100 feet*

*Mean annual precipitation: 46 to 57 inches*

*Mean annual air temperature: 44 to 50 degrees F*

*Frost-free period: 80 to 120 days*

*Farmland classification: Not prime farmland*

### Map Unit Composition

*Dekalb and similar soils: 85 percent*

*Minor components: 15 percent*

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Dekalb

#### Setting

*Landform: Ridges*

*Landform position (two-dimensional): Summit*

*Landform position (three-dimensional): Mountaintop*

*Down-slope shape: Convex*

*Across-slope shape: Convex*

*Parent material: Coarse-loamy residuum weathered from sandstone and siltstone*

**Typical profile**

*H1 - 0 to 8 inches: loam*  
*H2 - 8 to 14 inches: very channery loam*  
*H3 - 14 to 34 inches: very channery loam*  
*R - 34 to 38 inches: bedrock*

**Properties and qualities**

*Slope: 3 to 8 percent*  
*Depth to restrictive feature: 20 to 40 inches to lithic bedrock*  
*Drainage class: Well drained*  
*Capacity of the most limiting layer to transmit water (Ksat): High (3.54 to 10.63 in/hr)*  
*Depth to water table: More than 80 inches*  
*Frequency of flooding: None*  
*Frequency of ponding: None*  
*Available water supply, 0 to 60 inches: Very low (about 2.9 inches)*

**Interpretive groups**

*Land capability classification (irrigated): None specified*  
*Land capability classification (nonirrigated): 2e*  
*Hydrologic Soil Group: A*  
*Ecological site: F127XY003WV - Acidic Shale Upland Oak/Heath*  
*Other vegetative classification: Dry Uplands (DU4)*  
*Hydric soil rating: No*

**Minor Components**

**Other soils**

*Percent of map unit: 15 percent*  
*Hydric soil rating: No*

**DmC—Dekalb very cobbly loam, 3 to 15 percent slopes rubbly**

**Map Unit Setting**

*National map unit symbol: k7vr*  
*Elevation: 1,560 to 4,350 feet*  
*Mean annual precipitation: 46 to 57 inches*  
*Mean annual air temperature: 44 to 50 degrees F*  
*Frost-free period: 80 to 120 days*  
*Farmland classification: Not prime farmland*

**Map Unit Composition**

*Dekalb and similar soils: 85 percent*  
*Minor components: 15 percent*  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Dekalb**

**Setting**

*Landform: Ridges*



## Custom Soil Resource Report

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Mountaintop

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Coarse-loamy residuum weathered from sandstone and siltstone

### Typical profile

*H1 - 0 to 8 inches:* very cobbly loam

*H2 - 8 to 14 inches:* very channery loam

*H3 - 14 to 34 inches:* very channery loam

*R - 34 to 38 inches:* bedrock

### Properties and qualities

*Slope:* 3 to 15 percent

*Surface area covered with cobbles, stones or boulders:* 32.0 percent

*Depth to restrictive feature:* 20 to 40 inches to lithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* High (3.54 to 10.63 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Very low (about 2.9 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 7s

*Hydrologic Soil Group:* A

*Ecological site:* F127XY003WV - Acidic Shale Upland Oak/Heath

*Other vegetative classification:* Not Suited (NS)

*Hydric soil rating:* No

### Minor Components

#### Other soils

*Percent of map unit:* 15 percent

*Hydric soil rating:* No

## DmE—DeKalb very cobbly loam, 15 to 35 percent slopes, rubbly

### Map Unit Setting

*National map unit symbol:* k7vs

*Elevation:* 1,510 to 4,460 feet

*Mean annual precipitation:* 46 to 57 inches

*Mean annual air temperature:* 44 to 50 degrees F

*Frost-free period:* 80 to 120 days

*Farmland classification:* Not prime farmland

### Map Unit Composition

*DeKalb and similar soils:* 85 percent

*Minor components:* 15 percent

## Custom Soil Resource Report

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Dekalb

#### Setting

*Landform:* Mountain slopes  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Mountainflank  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Coarse-loamy residuum weathered from sandstone and siltstone

#### Typical profile

*H1 - 0 to 8 inches:* very cobbly loam  
*H2 - 8 to 14 inches:* very channery loam  
*H3 - 14 to 34 inches:* very channery loam  
*R - 34 to 38 inches:* bedrock

#### Properties and qualities

*Slope:* 15 to 35 percent  
*Surface area covered with cobbles, stones or boulders:* 32.0 percent  
*Depth to restrictive feature:* 20 to 40 inches to lithic bedrock  
*Drainage class:* Well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* High (3.54 to 10.63 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Very low (about 2.9 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7s  
*Hydrologic Soil Group:* A  
*Ecological site:* F127XY003WV - Acidic Shale Upland Oak/Heath  
*Other vegetative classification:* Not Suited (NS)  
*Hydric soil rating:* No

### Minor Components

#### Other soils

*Percent of map unit:* 15 percent  
*Hydric soil rating:* No

### DmF—Dekalb very cobbly loam, 35 to 70 percent slopes, rubbly

#### Map Unit Setting

*National map unit symbol:* k7vt  
*Elevation:* 1,510 to 4,260 feet  
*Mean annual precipitation:* 46 to 57 inches  
*Mean annual air temperature:* 44 to 50 degrees F



## Custom Soil Resource Report

*Frost-free period:* 80 to 120 days

*Farmland classification:* Not prime farmland

### Map Unit Composition

*Dekalb and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Dekalb

#### Setting

*Landform:* Mountain slopes

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Mountainflank

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Parent material:* Coarse-loamy residuum weathered from sandstone and siltstone

#### Typical profile

*H1 - 0 to 8 inches:* very cobbly loam

*H2 - 8 to 14 inches:* very channery loam

*H3 - 14 to 34 inches:* very channery loam

*R - 34 to 38 inches:* bedrock

#### Properties and qualities

*Slope:* 35 to 70 percent

*Surface area covered with cobbles, stones or boulders:* 32.0 percent

*Depth to restrictive feature:* 20 to 40 inches to lithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* High (3.54 to 10.63 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Very low (about 2.9 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 7s

*Hydrologic Soil Group:* A

*Ecological site:* F127XY003WV - Acidic Shale Upland Oak/Heath

*Other vegetative classification:* Not Suited (NS)

*Hydric soil rating:* No

### Minor Components

#### Other soils

*Percent of map unit:* 15 percent

*Hydric soil rating:* No

**DrE—Dekalb very cobbly loam, 15 to 35 percent slopes, very rubbly**

**Map Unit Setting**

*National map unit symbol:* k7x5  
*Elevation:* 1,840 to 4,330 feet  
*Mean annual precipitation:* 46 to 57 inches  
*Mean annual air temperature:* 44 to 50 degrees F  
*Frost-free period:* 80 to 120 days  
*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Dekalb and similar soils:* 100 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Dekalb**

**Setting**

*Landform:* Mountain slopes  
*Landform position (two-dimensional):* Shoulder, backslope  
*Landform position (three-dimensional):* Upper third of mountainflank  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Coarse-loamy residuum weathered from sandstone and siltstone

**Typical profile**

*H1 - 0 to 8 inches:* very cobbly loam  
*H2 - 8 to 14 inches:* very channery loam  
*H3 - 14 to 34 inches:* very channery sandy loam  
*R - 34 to 38 inches:* bedrock

**Properties and qualities**

*Slope:* 25 to 35 percent  
*Surface area covered with cobbles, stones or boulders:* 65.0 percent  
*Depth to restrictive feature:* 20 to 40 inches to lithic bedrock  
*Drainage class:* Well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* High (3.54 to 10.63 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Very low (about 2.9 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7s  
*Hydrologic Soil Group:* A  
*Ecological site:* F127XY003WV - Acidic Shale Upland Oak/Heath  
*Other vegetative classification:* Dry Uplands (DU4)  
*Hydric soil rating:* No



## **EnC—Ernest silt loam, moist, 8 to 15 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2sgqz  
*Elevation:* 1,460 to 4,200 feet  
*Mean annual precipitation:* 46 to 67 inches  
*Mean annual air temperature:* 46 to 50 degrees F  
*Frost-free period:* 123 to 162 days  
*Farmland classification:* Farmland of statewide importance

### **Map Unit Composition**

*Ernest, moist, and similar soils:* 80 percent  
*Minor components:* 20 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Ernest, Moist**

#### **Setting**

*Landform:* Hillslopes  
*Landform position (two-dimensional):* Footslope  
*Landform position (three-dimensional):* Head slope, base slope  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave, linear  
*Parent material:* Acid fine-loamy colluvium derived from shale and siltstone

#### **Typical profile**

*Oe - 0 to 1 inches:* moderately decomposed plant material  
*A - 1 to 4 inches:* silt loam  
*E - 4 to 7 inches:* silt loam  
*BE - 7 to 11 inches:* silt loam  
*Bt - 11 to 23 inches:* silty clay loam  
*Btx - 23 to 56 inches:* channery loam  
*C - 56 to 65 inches:* channery silt loam

#### **Properties and qualities**

*Slope:* 8 to 15 percent  
*Depth to restrictive feature:* 17 to 30 inches to fragipan  
*Drainage class:* Moderately well drained  
*Runoff class:* Medium  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* About 15 to 20 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Low (about 3.4 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 3e  
*Hydrologic Soil Group:* D  
*Ecological site:* F127XY012WV - Convergent Uplands

## Custom Soil Resource Report

*Hydric soil rating:* No

### Minor Components

#### **Gilpin, moist**

*Percent of map unit:* 8 percent

*Landform:* Hillslopes

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Convex, linear

*Across-slope shape:* Convex

*Hydric soil rating:* No

#### **Brinkerton, moist, wooded**

*Percent of map unit:* 5 percent

*Landform:* Hillslopes

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Base slope

*Down-slope shape:* Concave, linear

*Across-slope shape:* Concave

*Hydric soil rating:* Yes

#### **Albrights, moist**

*Percent of map unit:* 3 percent

*Landform:* Hillslopes

*Landform position (two-dimensional):* Footslope

*Landform position (three-dimensional):* Base slope

*Down-slope shape:* Concave, linear

*Across-slope shape:* Concave

*Hydric soil rating:* No

#### **Dekalb, moist**

*Percent of map unit:* 2 percent

*Landform:* Hillslopes

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Convex, linear

*Across-slope shape:* Convex

*Other vegetative classification:* Dry Uplands (DU4)

*Hydric soil rating:* No

#### **Philo, moist**

*Percent of map unit:* 2 percent

*Landform:* Flood plains

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Base slope

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Hydric soil rating:* No



## **ErC—Ernest cobbly silt loam, moist, 3 to 15 percent slopes, rubbly**

### **Map Unit Setting**

*National map unit symbol:* 2sgrm  
*Elevation:* 1,460 to 4,240 feet  
*Mean annual precipitation:* 46 to 67 inches  
*Mean annual air temperature:* 46 to 50 degrees F  
*Frost-free period:* 123 to 162 days  
*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Ernest, moist, and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Ernest, Moist**

#### **Setting**

*Landform:* Mountain slopes, hillslopes  
*Landform position (two-dimensional):* Backslope, footslope  
*Landform position (three-dimensional):* Mountainflank, mountainbase, head slope, base slope  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave, linear  
*Parent material:* Acid fine-loamy colluvium derived from shale and siltstone

#### **Typical profile**

*Oe - 0 to 1 inches:* stony moderately decomposed plant material  
*A - 1 to 4 inches:* cobbly silt loam  
*E - 4 to 7 inches:* cobbly silt loam  
*BE - 7 to 11 inches:* silt loam  
*Bt - 11 to 23 inches:* silty clay loam  
*Btx - 23 to 56 inches:* channery loam  
*C - 56 to 80 inches:* channery silt loam

#### **Properties and qualities**

*Slope:* 3 to 15 percent  
*Surface area covered with cobbles, stones or boulders:* 20.0 percent  
*Depth to restrictive feature:* 17 to 30 inches to fragipan  
*Drainage class:* Moderately well drained  
*Runoff class:* Medium  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* About 15 to 20 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Low (about 3.4 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified

## Custom Soil Resource Report

*Land capability classification (nonirrigated): 7s*

*Hydrologic Soil Group: D*

*Ecological site: F127XY012WV - Convergent Uplands*

*Hydric soil rating: No*

### Minor Components

#### **Dekalb, moist**

*Percent of map unit: 5 percent*

*Landform: Mountain slopes, hillslopes*

*Landform position (two-dimensional): Backslope, footslope*

*Landform position (three-dimensional): Mountainflank, mountainbase, side slope*

*Down-slope shape: Concave, convex, linear*

*Across-slope shape: Concave, linear, convex*

*Other vegetative classification: Dry Uplands (DU4)*

*Hydric soil rating: No*

#### **Gilpin, moist**

*Percent of map unit: 3 percent*

*Landform: Mountain slopes, hillslopes*

*Landform position (two-dimensional): Backslope, footslope*

*Landform position (three-dimensional): Mountainbase, mountainflank, side slope*

*Down-slope shape: Concave, convex, linear*

*Across-slope shape: Concave, linear, convex*

*Hydric soil rating: No*

#### **Brinkerton, moist, wooded**

*Percent of map unit: 3 percent*

*Landform: Mountain slopes, hillslopes*

*Landform position (two-dimensional): Backslope, footslope, toeslope*

*Landform position (three-dimensional): Mountainflank, mountainbase, base slope*

*Down-slope shape: Concave, linear*

*Across-slope shape: Concave, linear*

*Hydric soil rating: Yes*

#### **Albrights, moist**

*Percent of map unit: 2 percent*

*Landform: Mountain slopes, hillslopes*

*Landform position (two-dimensional): Backslope, footslope*

*Landform position (three-dimensional): Mountainflank, mountainbase, base slope*

*Down-slope shape: Concave, linear*

*Across-slope shape: Concave, linear*

*Hydric soil rating: No*

#### **Leetonia, moist**

*Percent of map unit: 2 percent*

*Landform: Hillslopes, mountain slopes*

*Landform position (two-dimensional): Footslope, summit*

*Landform position (three-dimensional): Mountaintop, head slope, base slope*

*Down-slope shape: Concave, linear*

*Across-slope shape: Concave, linear*

*Other vegetative classification: Not Suited (NS)*

*Hydric soil rating: No*



**ErE—Ernest cobbly silt loam, moist, 15 to 35 percent slopes, rubbly**

**Map Unit Setting**

*National map unit symbol:* 2stxv  
*Elevation:* 1,490 to 4,040 feet  
*Mean annual precipitation:* 46 to 67 inches  
*Mean annual air temperature:* 46 to 50 degrees F  
*Frost-free period:* 123 to 162 days  
*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Ernest, moist, and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Ernest, Moist**

**Setting**

*Landform:* Mountain slopes, hillslopes  
*Landform position (two-dimensional):* Backslope, footslope  
*Landform position (three-dimensional):* Mountainflank, mountainbase, head slope, base slope  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave, linear  
*Parent material:* Acid fine-loamy colluvium derived from shale and siltstone

**Typical profile**

*Oe - 0 to 1 inches:* stony moderately decomposed plant material  
*A - 1 to 4 inches:* cobbly silt loam  
*E - 4 to 7 inches:* cobbly silt loam  
*BE - 7 to 11 inches:* silt loam  
*Bt - 11 to 23 inches:* silty clay loam  
*Btx - 23 to 56 inches:* channery loam  
*C - 56 to 80 inches:* channery silt loam

**Properties and qualities**

*Slope:* 15 to 35 percent  
*Surface area covered with cobbles, stones or boulders:* 20.0 percent  
*Depth to restrictive feature:* 17 to 30 inches to fragipan  
*Drainage class:* Moderately well drained  
*Runoff class:* Medium  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* About 15 to 20 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Low (about 3.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified

## Custom Soil Resource Report

*Land capability classification (nonirrigated): 7s*

*Hydrologic Soil Group: D*

*Ecological site: F127XY012WV - Convergent Uplands*

*Hydric soil rating: No*

### Minor Components

#### **Gilpin, moist**

*Percent of map unit: 5 percent*

*Landform: Mountain slopes, hillslopes*

*Landform position (two-dimensional): Backslope, footslope*

*Landform position (three-dimensional): Mountainflank, mountainbase, head slope, base slope*

*Down-slope shape: Concave*

*Across-slope shape: Concave, linear*

*Hydric soil rating: No*

#### **Dekalb, moist**

*Percent of map unit: 5 percent*

*Landform: Mountain slopes, hillslopes*

*Landform position (two-dimensional): Backslope, footslope*

*Landform position (three-dimensional): Mountainflank, mountainbase, head slope, base slope*

*Down-slope shape: Concave*

*Across-slope shape: Concave, linear*

*Other vegetative classification: Dry Uplands (DU4)*

*Hydric soil rating: No*

#### **Albrights, moist**

*Percent of map unit: 2 percent*

*Landform: Mountain slopes, hillslopes*

*Landform position (two-dimensional): Backslope, footslope*

*Landform position (three-dimensional): Mountainbase, mountainflank, head slope, base slope*

*Down-slope shape: Concave*

*Across-slope shape: Concave, linear*

*Hydric soil rating: No*

#### **Leetonia, moist**

*Percent of map unit: 2 percent*

*Landform: Mountain slopes, hillslopes*

*Landform position (two-dimensional): Backslope, footslope*

*Landform position (three-dimensional): Mountainbase, mountainflank, head slope, base slope*

*Down-slope shape: Concave*

*Across-slope shape: Concave, linear*

*Other vegetative classification: Not Suited (NS)*

*Hydric soil rating: No*

#### **Brinkerton, moist, wooded**

*Percent of map unit: 1 percent*

*Landform: Mountain slopes, hillslopes*

*Landform position (two-dimensional): Backslope, footslope*

*Landform position (three-dimensional): Mountainflank, mountainbase, head slope, base slope*

*Down-slope shape: Concave*

*Across-slope shape: Concave, linear*



*Hydric soil rating:* Yes

**ExC—Ernest cobbly silt loam, moist, 3 to 15 percent slopes, very rubbly**

**Map Unit Setting**

*National map unit symbol:* 2sgrn  
*Elevation:* 1,800 to 4,700 feet  
*Mean annual precipitation:* 46 to 67 inches  
*Mean annual air temperature:* 46 to 50 degrees F  
*Frost-free period:* 123 to 162 days  
*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Ernest, moist, and similar soils:* 80 percent  
*Minor components:* 20 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Ernest, Moist**

**Setting**

*Landform:* Mountain slopes, hillslopes  
*Landform position (two-dimensional):* Backslope, footslope  
*Landform position (three-dimensional):* Mountainflank, mountainbase, head slope, base slope  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave, linear  
*Parent material:* Acid fine-loamy colluvium derived from shale and siltstone

**Typical profile**

*Oe - 0 to 1 inches:* very stony moderately decomposed plant material  
*A - 1 to 4 inches:* cobbly silt loam  
*E - 4 to 7 inches:* cobbly silt loam  
*BE - 7 to 11 inches:* silt loam  
*Bt - 11 to 23 inches:* silty clay loam  
*Btx - 23 to 56 inches:* channery loam  
*C - 56 to 80 inches:* channery silt loam

**Properties and qualities**

*Slope:* 3 to 15 percent  
*Surface area covered with cobbles, stones or boulders:* 67.0 percent  
*Depth to restrictive feature:* 17 to 30 inches to fragipan  
*Drainage class:* Moderately well drained  
*Runoff class:* Medium  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* About 15 to 20 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Low (about 3.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 7s

*Hydrologic Soil Group:* D

*Ecological site:* F127XY012WV - Convergent Uplands

*Hydric soil rating:* No

**Minor Components**

**Dekalb, moist**

*Percent of map unit:* 8 percent

*Landform:* Mountain slopes, hillslopes

*Landform position (two-dimensional):* Backslope, footslope

*Landform position (three-dimensional):* Mountainflank, mountainbase, side slope

*Down-slope shape:* Concave, convex, linear

*Across-slope shape:* Concave, linear, convex

*Other vegetative classification:* Dry Uplands (DU4)

*Hydric soil rating:* No

**Brinkerton, moist, wooded**

*Percent of map unit:* 7 percent

*Landform:* Mountain slopes, hillslopes

*Landform position (two-dimensional):* Backslope, footslope, toeslope

*Landform position (three-dimensional):* Mountainflank, mountainbase, base slope

*Down-slope shape:* Concave, linear

*Across-slope shape:* Concave, linear

*Hydric soil rating:* Yes

**Medihemists, moist**

*Percent of map unit:* 3 percent

*Landform:* Depressions, depressions on broad interstream divides

*Landform position (two-dimensional):* Footslope, summit

*Landform position (three-dimensional):* Mountaintop, head slope, base slope

*Down-slope shape:* Concave

*Across-slope shape:* Concave, linear

*Hydric soil rating:* Yes

**Leetonia, moist**

*Percent of map unit:* 2 percent

*Landform:* Hillslopes, mountain slopes

*Landform position (two-dimensional):* Footslope, summit

*Landform position (three-dimensional):* Mountaintop, head slope, base slope

*Down-slope shape:* Concave, linear

*Across-slope shape:* Concave, linear

*Other vegetative classification:* Not Suited (NS)

*Hydric soil rating:* No



**ExE—Ernest cobbly silt loam, moist, 15 to 35 percent slopes, very rubbly**

**Map Unit Setting**

*National map unit symbol:* 2sgrp  
*Elevation:* 1,720 to 4,590 feet  
*Mean annual precipitation:* 46 to 67 inches  
*Mean annual air temperature:* 46 to 50 degrees F  
*Frost-free period:* 123 to 162 days  
*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Ernest, moist, and similar soils:* 80 percent  
*Minor components:* 20 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Ernest, Moist**

**Setting**

*Landform:* Mountain slopes, hillslopes  
*Landform position (two-dimensional):* Backslope, footslope  
*Landform position (three-dimensional):* Mountainflank, mountainbase, head slope, base slope  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave, linear  
*Parent material:* Acid fine-loamy colluvium derived from shale and siltstone

**Typical profile**

*Oe - 0 to 1 inches:* very stony moderately decomposed plant material  
*A - 1 to 4 inches:* cobbly silt loam  
*E - 4 to 7 inches:* cobbly silt loam  
*BE - 7 to 11 inches:* silt loam  
*Bt - 11 to 23 inches:* silty clay loam  
*Btx - 23 to 56 inches:* channery loam  
*C - 56 to 80 inches:* channery silt loam

**Properties and qualities**

*Slope:* 15 to 35 percent  
*Surface area covered with cobbles, stones or boulders:* 67.0 percent  
*Depth to restrictive feature:* 17 to 30 inches to fragipan  
*Drainage class:* Moderately well drained  
*Runoff class:* Medium  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* About 15 to 20 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Low (about 3.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 7s

*Hydrologic Soil Group:* D

*Ecological site:* F127XY012WV - Convergent Uplands

*Hydric soil rating:* No

**Minor Components**

**Dekalb, moist**

*Percent of map unit:* 8 percent

*Landform:* Mountain slopes, hillslopes

*Landform position (two-dimensional):* Backslope, footslope

*Landform position (three-dimensional):* Mountainflank, mountainbase, side slope

*Down-slope shape:* Concave, convex, linear

*Across-slope shape:* Concave, linear, convex

*Other vegetative classification:* Dry Uplands (DU4)

*Hydric soil rating:* No

**Brinkerton, moist, wooded**

*Percent of map unit:* 7 percent

*Landform:* Mountain slopes, hillslopes

*Landform position (two-dimensional):* Backslope, footslope, toeslope

*Landform position (three-dimensional):* Mountainflank, mountainbase, base slope

*Down-slope shape:* Concave, linear

*Across-slope shape:* Concave, linear

*Hydric soil rating:* Yes

**Medihemists, moist**

*Percent of map unit:* 3 percent

*Landform:* Depressions, depressions

*Landform position (two-dimensional):* Footslope, backslope

*Landform position (three-dimensional):* Mountainflank, mountainbase, head slope, base slope

*Down-slope shape:* Concave

*Across-slope shape:* Concave, linear

*Hydric soil rating:* Yes

**Leetonia, moist**

*Percent of map unit:* 2 percent

*Landform:* Mountain slopes, hillslopes

*Landform position (two-dimensional):* Backslope, footslope

*Landform position (three-dimensional):* Mountainflank, mountainbase, head slope, base slope

*Down-slope shape:* Concave

*Across-slope shape:* Concave, linear

*Other vegetative classification:* Not Suited (NS)

*Hydric soil rating:* No



## **GcC—Gilpin channery silt loam, moist, 8 to 15 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2snf8

*Elevation:* 1,320 to 4,360 feet

*Mean annual precipitation:* 46 to 67 inches

*Mean annual air temperature:* 46 to 50 degrees F

*Frost-free period:* 123 to 162 days

*Farmland classification:* Farmland of statewide importance

### **Map Unit Composition**

*Gilpin, moist, and similar soils:* 80 percent

*Minor components:* 20 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Gilpin, Moist**

#### **Setting**

*Landform:* Hillslopes

*Landform position (two-dimensional):* Summit, shoulder

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Convex, linear

*Across-slope shape:* Convex

*Parent material:* Acid fine-loamy residuum weathered from shale and siltstone  
and/or fine-grained sandstone

#### **Typical profile**

*Oi - 0 to 2 inches:* slightly decomposed plant material

*A - 2 to 3 inches:* channery silt loam

*E - 3 to 7 inches:* silt loam

*Bt - 7 to 24 inches:* channery silt loam

*C - 24 to 31 inches:* extremely channery silt loam

*R - 31 to 41 inches:* bedrock

#### **Properties and qualities**

*Slope:* 8 to 15 percent

*Depth to restrictive feature:* 25 to 40 inches to lithic bedrock

*Drainage class:* Well drained

*Runoff class:* Medium

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to high  
(0.06 to 2.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Low (about 4.3 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3e

*Hydrologic Soil Group:* C

## Custom Soil Resource Report

*Ecological site:* F127XY013WV - Divergent Uplands

*Hydric soil rating:* No

### Minor Components

#### **Dekalb, moist**

*Percent of map unit:* 8 percent

*Landform:* Hillslopes

*Landform position (two-dimensional):* Summit, shoulder

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Other vegetative classification:* Very Rocky, Acid Soils (RA3)

*Hydric soil rating:* No

#### **Lily, moist**

*Percent of map unit:* 5 percent

*Landform:* Hillslopes

*Landform position (two-dimensional):* Summit, shoulder

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Other vegetative classification:* Acid Loams (AL3)

*Hydric soil rating:* No

#### **Wharton, moist**

*Percent of map unit:* 4 percent

*Landform:* Hillslopes

*Landform position (two-dimensional):* Summit, shoulder

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Linear

*Across-slope shape:* Concave

*Hydric soil rating:* No

#### **Rayne, moist**

*Percent of map unit:* 3 percent

*Landform:* Hillslopes

*Landform position (two-dimensional):* Summit, shoulder

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Convex, linear

*Across-slope shape:* Convex

*Hydric soil rating:* No

### **LkC—Leetonia very cobbly loamy sand, 3 to 15 percent slopes, very rubbly**

#### **Map Unit Setting**

*National map unit symbol:* k7x9

*Elevation:* 1,530 to 4,440 feet

*Mean annual precipitation:* 46 to 57 inches

*Mean annual air temperature:* 44 to 50 degrees F



## Custom Soil Resource Report

*Frost-free period:* 80 to 120 days

*Farmland classification:* Not prime farmland

### Map Unit Composition

*Leetonia and similar soils:* 100 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Leetonia

#### Setting

*Landform:* Plateaus

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Mountaintop

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Loamy residuum weathered from sandstone

#### Typical profile

*H1 - 0 to 20 inches:* very cobbly loamy sand

*H2 - 20 to 27 inches:* very gravelly loamy sand

*R - 27 to 31 inches:* bedrock

#### Properties and qualities

*Slope:* 8 to 15 percent

*Surface area covered with cobbles, stones or boulders:* 65.0 percent

*Depth to restrictive feature:* 23 to 31 inches to lithic bedrock

*Drainage class:* Somewhat excessively drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.85 to 1.70 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Very low (about 1.0 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 7s

*Hydrologic Soil Group:* B

*Ecological site:* F127XY016WV - Rubbly Upland Conifer Forest

*Other vegetative classification:* Not Suited (NS)

*Hydric soil rating:* No

## LmA—Lickdale silt loam, 0 to 5 percent slopes

### Map Unit Setting

*National map unit symbol:* k7wc

*Elevation:* 2,510 to 3,970 feet

*Mean annual precipitation:* 46 to 57 inches

*Mean annual air temperature:* 44 to 50 degrees F

*Frost-free period:* 80 to 120 days

*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Lickdale and similar soils: 85 percent*

*Minor components: 15 percent*

*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Lickdale**

**Setting**

*Landform: Drainhead complexes*

*Landform position (two-dimensional): Footslope*

*Landform position (three-dimensional): Mountaintop, head slope*

*Down-slope shape: Linear*

*Across-slope shape: Concave*

*Parent material: Loamy slope alluvium derived from sandstone and shale*

**Typical profile**

*H1 - 0 to 20 inches: silt loam*

*H2 - 20 to 24 inches: silty clay loam*

*H3 - 24 to 46 inches: sandy loam*

*R - 46 to 50 inches: bedrock*

**Properties and qualities**

*Slope: 0 to 5 percent*

*Depth to restrictive feature: 40 to 72 inches to lithic bedrock*

*Drainage class: Very poorly drained*

*Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)*

*Depth to water table: About 0 to 6 inches*

*Frequency of flooding: None*

*Frequency of ponding: Frequent*

*Available water supply, 0 to 60 inches: Moderate (about 6.5 inches)*

**Interpretive groups**

*Land capability classification (irrigated): None specified*

*Land capability classification (nonirrigated): 4w*

*Hydrologic Soil Group: C/D*

*Ecological site: F127XY006WV - Terraces*

*Other vegetative classification: Wetlands (W4)*

*Hydric soil rating: Yes*

**Minor Components**

**Other soils**

*Percent of map unit: 15 percent*

*Hydric soil rating: No*

**McB—Meckesville silt loam, 3 to 8 percent slopes**

**Map Unit Setting**

*National map unit symbol: k7wg*



## Custom Soil Resource Report

*Elevation:* 180 to 850 feet  
*Mean annual precipitation:* 46 to 58 inches  
*Mean annual air temperature:* 48 to 52 degrees F  
*Frost-free period:* 140 to 170 days  
*Farmland classification:* All areas are prime farmland

### Map Unit Composition

*Meckesville and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Meckesville

#### Setting

*Landform:* Mountain slopes  
*Landform position (two-dimensional):* Footslope  
*Landform position (three-dimensional):* Mountainbase  
*Down-slope shape:* Concave  
*Across-slope shape:* Linear  
*Parent material:* Reddish loamy colluvium derived from interbedded sedimentary rock

#### Typical profile

*H1 - 0 to 7 inches:* silt loam  
*H2 - 7 to 44 inches:* channery loam  
*H3 - 44 to 48 inches:* very channery clay loam

#### Properties and qualities

*Slope:* 3 to 8 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.57 in/hr)  
*Depth to water table:* About 30 to 48 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Moderate (about 6.3 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 2e  
*Hydrologic Soil Group:* C  
*Ecological site:* F127XY012WV - Convergent Uplands  
*Other vegetative classification:* Acid Loams (AL4)  
*Hydric soil rating:* No

### Minor Components

#### Other soils

*Percent of map unit:* 15 percent  
*Hydric soil rating:* No

## **McC—Meckesville silt loam, 8 to 15 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* k7wh

*Elevation:* 180 to 850 feet

*Mean annual precipitation:* 46 to 58 inches

*Mean annual air temperature:* 48 to 52 degrees F

*Frost-free period:* 140 to 170 days

*Farmland classification:* Farmland of statewide importance

### **Map Unit Composition**

*Meckesville and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Meckesville**

#### **Setting**

*Landform:* Mountain slopes

*Landform position (two-dimensional):* Footslope

*Landform position (three-dimensional):* Mountainbase

*Down-slope shape:* Concave

*Across-slope shape:* Linear

*Parent material:* Reddish loamy colluvium derived from interbedded sedimentary rock

#### **Typical profile**

*H1 - 0 to 7 inches:* silt loam

*H2 - 7 to 44 inches:* channery loam

*H3 - 44 to 48 inches:* very channery clay loam

#### **Properties and qualities**

*Slope:* 8 to 15 percent

*Depth to restrictive feature:* 36 to 48 inches to fragipan

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.57 in/hr)

*Depth to water table:* About 30 to 48 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Moderate (about 6.3 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3e

*Hydrologic Soil Group:* C

*Ecological site:* F127XY012WV - Convergent Uplands

*Other vegetative classification:* Acid Loams (AL4)

*Hydric soil rating:* No



## Minor Components

### Other soils

*Percent of map unit:* 15 percent

*Hydric soil rating:* No

## MkD—Meckesville silt loam, 15 to 25 percent slopes, very stony

### Map Unit Setting

*National map unit symbol:* k7wk

*Elevation:* 180 to 850 feet

*Mean annual precipitation:* 46 to 58 inches

*Mean annual air temperature:* 48 to 52 degrees F

*Frost-free period:* 140 to 170 days

*Farmland classification:* Not prime farmland

### Map Unit Composition

*Meckesville and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

## Description of Meckesville

### Setting

*Landform:* Mountain slopes

*Landform position (two-dimensional):* Footslope

*Landform position (three-dimensional):* Mountainbase

*Down-slope shape:* Concave

*Across-slope shape:* Linear

*Parent material:* Reddish loamy colluvium derived from interbedded sedimentary rock

### Typical profile

*H1 - 0 to 7 inches:* silt loam

*H2 - 7 to 44 inches:* channery loam

*H3 - 44 to 48 inches:* very channery clay loam

### Properties and qualities

*Slope:* 15 to 25 percent

*Surface area covered with cobbles, stones or boulders:* 1.6 percent

*Depth to restrictive feature:* 36 to 48 inches to fragipan

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.57 in/hr)

*Depth to water table:* About 30 to 48 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Moderate (about 6.3 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6s  
*Hydrologic Soil Group:* C  
*Ecological site:* F127XY012WV - Convergent Uplands  
*Other vegetative classification:* Very Rocky, Acid Soils (RA4)  
*Hydric soil rating:* No

**Minor Components**

**Other soils**

*Percent of map unit:* 15 percent  
*Hydric soil rating:* No

**NoA—Nolo silt loam, 0 to 3 percent slopes**

**Map Unit Setting**

*National map unit symbol:* k7wr  
*Elevation:* 3,070 to 4,210 feet  
*Mean annual precipitation:* 46 to 57 inches  
*Mean annual air temperature:* 44 to 50 degrees F  
*Frost-free period:* 80 to 120 days  
*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Nolo and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Nolo**

**Setting**

*Landform:* Drainhead complexes, drainageways  
*Landform position (two-dimensional):* Footslope, toeslope  
*Landform position (three-dimensional):* Mountaintop, head slope, base slope  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Concave  
*Parent material:* Fine-loamy residuum weathered from shale and siltstone

**Typical profile**

*H1 - 0 to 9 inches:* silt loam  
*H2 - 9 to 21 inches:* channery clay loam  
*H3 - 21 to 23 inches:* channery sandy clay loam  
*R - 23 to 27 inches:* bedrock

**Properties and qualities**

*Slope:* 0 to 3 percent  
*Depth to restrictive feature:* More than 80 inches; 13 to 23 inches to fragipan  
*Drainage class:* Poorly drained



## Custom Soil Resource Report

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)

*Depth to water table:* About 0 to 6 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Low (about 3.3 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 4w

*Hydrologic Soil Group:* D

*Ecological site:* F127XY007WV - Wet Uplands

*Other vegetative classification:* Wetlands (W4)

*Hydric soil rating:* Yes

### Minor Components

#### Other soils

*Percent of map unit:* 15 percent

*Hydric soil rating:* No

## NoB—Nolo silt loam, 3 to 8 percent slopes

### Map Unit Setting

*National map unit symbol:* k7ws

*Elevation:* 2,430 to 4,020 feet

*Mean annual precipitation:* 46 to 57 inches

*Mean annual air temperature:* 44 to 50 degrees F

*Frost-free period:* 80 to 120 days

*Farmland classification:* Not prime farmland

### Map Unit Composition

*Nolo and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Nolo

#### Setting

*Landform:* Drainhead complexes, drainageways

*Landform position (two-dimensional):* Footslope, toeslope

*Landform position (three-dimensional):* Mountaintop, head slope, base slope

*Down-slope shape:* Linear, concave

*Across-slope shape:* Concave

*Parent material:* Fine-loamy residuum weathered from shale and siltstone

#### Typical profile

*H1 - 0 to 9 inches:* silt loam

*H2 - 9 to 21 inches:* channery clay loam

*H3 - 21 to 23 inches:* channery sandy clay loam

*R - 23 to 27 inches:* bedrock

**Properties and qualities**

*Slope:* 3 to 8 percent  
*Depth to restrictive feature:* More than 80 inches; 13 to 23 inches to fragipan  
*Drainage class:* Poorly drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* About 0 to 6 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Low (about 3.3 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 4w  
*Hydrologic Soil Group:* D  
*Ecological site:* F127XY007WV - Wet Uplands  
*Other vegetative classification:* Wetlands (W4)  
*Hydric soil rating:* Yes

**Minor Components**

**Other soils**

*Percent of map unit:* 15 percent  
*Hydric soil rating:* No

**Ud—Udorthents, smoothed**

**Map Unit Setting**

*National map unit symbol:* k7wf  
*Elevation:* 1,620 to 3,640 feet  
*Mean annual precipitation:* 46 to 58 inches  
*Mean annual air temperature:* 48 to 52 degrees F  
*Frost-free period:* 140 to 170 days  
*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Udorthents, smoothed, and similar soils:* 100 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Udorthents, Smoothed**

**Setting**

*Down-slope shape:* Linear  
*Across-slope shape:* Linear

**Properties and qualities**

*Depth to restrictive feature:* More than 80 inches  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None



## Custom Soil Resource Report

### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 7s

*Other vegetative classification:* Not Suited (NS)

*Hydric soil rating:* No

# References

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**APPENDIX D**  
**WVDEP Storm Water Construction General Permit**





**STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF WATER AND WASTE MANAGEMENT  
601 57th STREET SE  
CHARLESTON, WV 25304-2345**

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM  
WATER POLLUTION CONTROL PERMIT**

**Permit** No. WV0115924

Issue Date: January 10, 2019

Effective Date: February 9, 2019

Expiration Date: February 9, 2024

**Subject:** Stormwater Associated with  
Construction Activities

To Whom It May Concern:

This is to certify that any establishment with discharges composed entirely of stormwater associated with construction activities disturbing one acre or greater of land area which may be regulated under the terms and conditions of this general permit, has satisfied the registration requirements, and which has not been required by the Director of the Division of Water and Waste Management to apply for an individual permit, is hereby eligible to allow stormwater discharges into the surface waters of the State under this General WV/NPDES Water Pollution Control Permit. Authorization to discharge under this permit must be provided by the Director.

Construction activities are land disturbing operations such as clearing, grubbing, grading, filling and excavation operations during site development for residential, commercial or industrial purposes. The following are not eligible for coverage under this NPDES General Permit:

1. Operations that result in the disturbance of less than one acre of total land area, which are not part of a larger common plan of development or sale.
2. Stormwater discharges associated with land disturbing activities that may reasonably be expected to be causing or contributing to a violation of a water quality standard as determined by the Director.

3. Land disturbance activities already governed by other Department of Environmental Protection NPDES permits. This includes Division of Mining and Reclamation permits for coal mining and non-metallic quarries.
4. Landfills, except in the preparation of a new landfill and/or clay borrow areas.
5. Other activities exempt from NPDES permitting requirements as set forth in 40 C.F.R. 122.3 and 47 C.S.R. 10-3.2.b.4 (NPDES Program).
6. Land disturbing activities related to oil and gas activities as required by the Energy Policy Act of 2005. These activities include but are not limited to construction of drilling sites, waste management pits, and access roads, as well as construction of the transportation and treatment infrastructure such as pipelines, natural gas treatment plants, natural gas pipeline compressor stations, and crude oil pumping stations.
7. Construction activities that result in a discharge of a reportable quantity release or that contribute pollutants (other than non-contaminated sediments) to a violation of a water quality standard are still subject to permit coverage.

This General WV/NPDES Water Pollution Control Permit is to allow stormwater discharges into the surface waters of the State while protecting water quality and is subject to the following terms and conditions:

The information submitted on and with the application form will hereby be made terms and conditions of the General Permit with like effect as if all such information were set forth herein, and other pertinent conditions set forth in Parts I, II, III, and IV and appendices A, B, and C.

Site Registration Applications approved from February 9, 2018 through February 9, 2019 must file the Notice of Termination for completed projects where all disturbed lands have been permanently stabilized, or, a signed certification of agreement to abide by the terms and conditions of this reissued General Permit within 90 days of the effective date. Additional application fees do not apply to the certification; however, annual fees still apply. Where any incomplete projects have disturbed lands that have not been permanently stabilized, status maps are required with the certification. The map may be in PDF format and is not required to conform to the specifications of II.H.1.a. The status map shall show disturbed areas and the Limits of Disturbance (LOD), which is the area approved under the registration for land disturbance. Projects that have not disturbed any lands are not required to provide the status map. Additionally, the certification will contain an updated timeline for major activities as required by Part II.H.1.

Existing registrations under the Notice of Intent approved from February 9, 2018 through February 9, 2019 shall submit the Notice of Termination if all disturbed lands are permanently stabilized. If construction is not complete and all disturbed lands are not permanently stabilized, such projects may retain permit coverage through the expiration date of this General Permit by submittal of the certification described above within 90 days of the effective date of this reissued General Permit.



Projects discharging to Waters of the State with an approved sediment-related Total Maximum Daily Load (TMDL) with registrations that were approved for one year only with approval dates from February 9, 2018 through February 9, 2019 that have not completed construction and stabilized disturbed areas at the effective date of this permit are required to submit the above described certification. Such projects shall agree to implement Enhanced best management practices (BMP's). Submittal of the certification will remove the 1-year time constraint and the registration will be valid until the expiration of this reissued General Permit unless site stabilization and termination of the registration occur first. Projects required to submit Discharge Monitoring Reports under the 2012 permit with approval dates from February 9, 2018 through February 9, 2019 must submit the above described certification agreeing to implement Enhanced BMPs within 90 days of the effective date of this General Permit, which has eliminated monitoring.

All projects approved under the 2012 permit's Site Registration Application or Notice of Intent with an approval date prior to February 9, 2018 must submit the Notice of Termination if all disturbed areas are permanently stabilized. All other projects that have not been stabilized shall submit an application for continuing coverage within 90 days of the effective date of this General Permit.

#### **Compliance with other laws and statutes**

Nothing in this General Permit shall be construed as relieving the permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

#### **Continuation of this general permit**

If this general permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with 47 C.S.R. 10 and remain in force and effect. If you were authorized to discharge under this general permit prior to the expiration date, any discharges authorized under this permit will automatically remain covered by this general permit until the earliest of:

- Your authorization for coverage under a reissued general permit or a replacement of this general permit following your timely and appropriate submittal of a complete application requesting authorization to discharge under the new general permit and compliance with the requirements of the new permit; or
- Your submittal of notification of termination that the facility has ceased operations; or
- Issuance or denial of an individual permit for the facility's discharge; or
- A formal permit decision by DWWWM not to reissue this general permit, at which time DWWWM will identify a reasonable time period of covered dischargers to seek coverage under an alternative general permit or individual permit. Coverage under this permit will cease at the end of this time period.

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## **PART I. INTRODUCTION**

### **I.A. TERMS OF PERMIT**

Discharges from sites covered under this General Permit shall not cause or contribute to a violation of 47 C.S.R. 2 (Requirements Governing Water Quality Standards) or 47 C.S.R. 12, (Requirements Governing Groundwater Standards) of the West Virginia Legislative Rules pursuant to Chapter 22, Article 11 and Article 12. Discharges that are not in compliance with these standards are not authorized.

### **I.B. COMPLIANCE REQUIREMENT**

Compliance with this General Permit, the approved Stormwater Pollution Prevention Plan and the Groundwater Protection Plan is required upon the beginning of the construction project.

### **I.C. WATER QUALITY**

Subject to 47 WV C.S.R. 10.3.4.a and 47 C.S.R. 2.4, the discharges covered by this permit are to be of such quality so as not to cause a violation of applicable water quality standards. The permittee must protect the water quality and the existing uses and designations of receiving waters by implementing BMPs. Enhanced BMPs must be used for projects discharging to any waters other than Tier 1 or where standard BMPs are found to be inadequate to protect water quality based on inspections by a Qualified Person, or representatives of the Director of DWWM or the Environmental Protection Agency.

Receiving waters for the exclusive purpose required by the paragraph above and in accordance with 47 C.S.R. 2.4 shall be protected from degradation as explained below:

**Tier 1 Protection-** Maintains and protects existing uses of a water body and the water quality conditions necessary to support such uses. A waterbody that is listed as impaired on the state's 303(d) list is considered a Tier 1 water as it pertains to the specific pollutant listed.

**Tier 2 Protection-** Maintains and protects "high quality" waters - water bodies where the level of water quality exceeds levels necessary to support recreation and wildlife and the propagation and maintenance of fish and other aquatic life. Tier 2 is the default assignment for a waterbody not listed as impaired on the state's 303(d) list.

**Tier 3 Protection-** Maintains and protects water quality in outstanding national resource waters.

**Protection of Trout Streams** - Waters which sustain year-round trout populations. Excluded are those waters which receive annual stockings of trout, but which do not support year-round trout populations. Waters which meet the definition of 47 C. S.R. 2-2.19 (Requirements Governing Water Quality Standards).

**Impaired Streams** — Sediment-related impaired waters are those that do not meet applicable water quality standards and are listed on the state's 303(d) list.

**Sediment-Related Pollutant of Concern Total Maximum Daily Loads (TMDL)** - A TMDL establishes the maximum amount of a pollutant allowed in a waterbody and serves as the starting point or planning tool for restoring water quality.

LC.1. This permit does not authorize new sources or new discharges of constituents of concern to impaired waters unless consistent with the approved sediment-related TMDL and applicable state law (WV 47CSR10 and WV Code 22-11).

Enhanced BMPs shall be used on projects discharging to all waters of the state except for those classified as Tier 1 streams (other than 303(d) listed). For discharges to sediment-related TMDL waters, the permittee shall use enhanced BMPs as defined in Appendix C of this General Permit.

The Director reserves the right to require Enhanced BMPs for any stormwater discharges associated with land disturbing activities authorized by this permit, upon a finding that water quality impacts have been observed and that standard BMPs cannot adequately protect water quality. However, this finding is not required for discharges already subject to Enhanced BMPs.

#### I.D. REQUIRED REPORTING

##### I.D.1. Reporting Spill and Accidental Discharges

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to 47 C.S.R. 11-2. (Special Rules) of the West Virginia Legislative Rules promulgated pursuant to Chapter 22, Article 11.

##### I.D.2. Immediate Reporting

The permittee shall report any noncompliance which may endanger human health or the environment immediately after becoming aware of the circumstances by using the Department's designated spill alert telephone number ((800) 642-3074) or by calling the Director or his representative. A written submission shall be provided within five calendar days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and time, and if, the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.



I.D.3. Reportable Quantities

This permit does not relieve the permittee of the reporting requirements of 40 C.F.R. Part 117 and 40 C.F.R. Part 302. The discharge of hazardous substances in the stormwater discharge(s) from a project is not authorized by this General Permit, and in no case, shall the discharge(s) contain a hazardous substance.

I.E. DIRECTOR'S AUTHORITY TO REQUIRE OTHER PERMITS

In accordance with WV 47CSR10 §13.6.b.2.A, the Director may require any person authorized by this permit to apply for and obtain either an individual NPDES permit or an alternative NPDES General Permit. Any interested person may petition the Director to take action under this paragraph. The Director may require any owner or operator authorized by this permit to apply for an individual NPDES permit only if the owner or operator has been notified in writing that such a permit application is required.

I.F. ALLOWABLE DISCHARGES

All discharges authorized by this permit shall be composed entirely of stormwater.

I.G. PROHIBITED DISCHARGES

The following discharges are not authorized by this permit.

- Sediment laden stormwater that has not gone through an appropriate best management control;
- Directing pavement wash-waters directly into any surface water, storm drain inlet, or stormwater conveyance, unless the conveyance is connected to a sediment basin, sediment trap, or similarly effective control;
- Wastewater from washout of concrete unless managed by an appropriate control;
- Wastewater from washout and cleanout of stucco, paint, bituminous asphalt, form release oils, curing compounds and other construction materials;
- Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and soaps, solvents, or detergents used in vehicle and equipment washing, or external building washdown.
- Toxic or hazardous substances from a spill or other release.

This permit does not authorize the conveyance, diversion, channeling, directing or otherwise allowing the discharge of stormwater into a sinkhole without an Underground Injection Control Permit.

## **PART II. PRE-CONSTRUCTION REQUIREMENTS**

PRIOR TO CONSTRUCTION, the following are required:

- A complete application, prepared by a Qualified Person, for authorization to discharge stormwater from construction related land disturbance shall include:
  - Installation of a sign at the entrance to the project or posting of a notice in a public place in close proximity to the construction site as indication the application has been submitted;
  - Timely corrections or submission of additional information to provide clarity about the proposed construction project, as requested by the Director;
  - Cooperation with the public notice process, when appropriate, by making prompt payment to the local newspaper that will publish the Class I legal advertisement, effectively notifying the public that the application is pending;
  - Making timely changes to the application, as necessary, based on public input; and

After receiving Director's approval and before beginning construction activities:

- Install sediment and erosion controls;
- Qualified Person inspects the newly installed sediment and erosion controls.
  - Impounding structures not built as approved shall be inspected and documented as meeting the trapping capacities and efficiencies of the structures approved in the registration.

### **II.A. APPLICATIONS**

#### **II.A.1. Application Requirements**

Submittal of the application shall be made using the online Electronic Submission System, unless otherwise approved by the Director. All documents must be signed in accordance with the signatory requirements described in Appendix A.7.

##### **II.A.1.a. Application Fee**

The application fee shall be paid in full prior to the Director reviewing the application. Fee amounts listed in and subject to changes in the NPDES Fee Schedule C.S.R. 47-26.

##### **II.A.1.b. Public Notice Advertisement**

The following applications are subject to Public Notice in a local newspaper therefore, the Notarized Statement for Billing form is required with the application:



- Land disturbance of 100 or more acres;
- Projects of 3 acres or more with a grading phase lasting one year or longer which will not meet final stabilization, as defined in Appendix C of this General Permit, by the end of the year; and
- Projects discharging to Tier 3 streams.

The Director reserves the right to require advertisement for any other application type.

#### II.A.1.c. Large Construction Projects

Projects disturbing 3 or more acres of land shall submit an application containing:

- Application Form, to include template for the sign
- Stormwater Pollution Prevention Plan;
- Groundwater Protection Plan;
- Pre-Construction Drainage Map
- During Construction Drainage Map showing the proposed location of all drainage structures and associated access routes;
- Post Construction Drainage Map;
- Annual Progress Map if permitted for longer than one year;
- Detailed Site Plan (Maps) showing Limits of Disturbance and Receiving Waters; and
- Design Details for:
  - Sediment basins, road, cut and fill cross sections, and other engineered structural design calculations; and
  - Other controls to include post-development stormwater management plans required by local governments
- Applications for Large Construction Projects shall be submitted 60 days before the anticipated date construction is to begin.
  - Applications for Large Construction Projects requiring Public Notice per II.A.1.b. shall be submitted 100 days before the anticipated date construction is to begin.

#### II.A.1.d. Minor Construction Projects

Projects disturbing 1 to < 3 acres of land, other than single-family homes as explained in Part II.A.1.e. below, shall submit an application containing the following:

- Application form, to include template for the sign
- Stormwater Pollution Prevention Plan;
- Groundwater Protection Plan;
- Pre-Construction Drainage Map;
- During Construction Drainage Map showing the proposed location of all drainage structures and associated access routes;
- Post Construction Drainage Map;
- Annual Progress Map if permitted for longer than one year;

- Detailed Site Plan (Map) showing Limits of Disturbance and Receiving Waters
- Typical Design Details.
- Applications for Minor Construction Projects shall be submitted 30 days before the anticipated date construction is to begin.
  - Applications for Projects requiring Public Notice per II.A.1.b shall be submitted 100 days before the anticipated date construction is to begin.

#### II.A.1.e. Construction of Single-Family Homes: 1 to < 3 Acres

Projects for construction of Single-Family Homes of 1 to <3 acres including offsite borrow and waste sites, by the homeowner or homeowner's contractor are subject to this permit and shall submit:

- Application Form; and
- Agreement to use DWWM Individual House Sample Sediment and Erosion Control Plan found in the West Virginia Erosion and Sediment Control BMP Manual (BMP Manual), or other BMPs that are equally protective of water quality.
- Applications for construction of Single-Family Homes of 1 to < 3 acres shall be submitted 30 days before the anticipated date construction is to begin.

#### II.A.1.f. Offsite Waste and Borrow Areas

Offsite waste and borrow areas one acre or greater must be included in applications and approved before material may be removed from or accepted at the site. Such areas must be included in the application when associated with single-family homes, linear projects, or any other construction project. Offsite waste or borrow sites less than one acre in size that are not contiguous to the construction site must provide sediment and erosion controls and may be included with the application, however, there is no requirement to do so unless otherwise required by the Director.

If a waste/borrow area is not known during the initial application, the registration can still be issued. Once the location of a waste/borrow area is identified it is the responsibility of the applicant to modify their registration to include contiguous area(s) or non-contiguous areas of one acre or more. When the permittee does not have "legally ability to control" non-contiguous areas of one acre or more, the permittee may contact the DEP to inquire if the non-contiguous acre or more has been properly permitted and therefore, a site suitable for waste or borrow. The permittee may also make an inquiry of the party that does have the "legal ability to control" the non-contiguous site if it is properly permitted before accepting material from or sending material to the site.

When contaminated soils are identified, a soil handling plan shall be provided. Contaminated soil is not suitable material for borrow or fill unless approved by the Director.



### II.A.2. Emergency Procedures

When conducting earth-disturbing activities in response to a public emergency e.g., natural disaster, widespread disruption in essential public services), and the related work requires immediate authorization to avoid imminent endangerment to human health, public safety, or the environment, or to reestablish essential public services, authorization to discharge is conditioned that a complete and accurate application is submitted within 30 calendar days after commencing earth-disturbing activities establishing eligibility under this permit.

Documentation to substantiate the occurrence of the public emergency must be included in the application.

### II.B. POSTING SIGN OR NOTICE

Within 72 hours of filing an application, the applicant shall display a sign for the duration of the construction project near the entrance of the project or, for linear projects, at a location near an active part of the project that is accessible by the public; containing the following information:

- The applicant's name and emergency telephone number;
- Project Reference ID;
- For info on this stormwater permit  
Call: 800-654-5227 or [DEP.Comments@wv.gov](mailto:DEP.Comments@wv.gov).
- Permit Number (See II.B.4.)

II.B.1. The sign shall be a minimum of two feet by two feet and be at least three feet above ground level; clearly visible and legible from a public roadway or right-of-way.

II.B.2. If it is not feasible to display a sign at or near the project, the applicant may post, within 72 hours of filing the application a notice containing the foregoing information at a local public building, including, but not limited to, a town hall or public library.

II.B.3. The application shall provide the location where the sign or notice is to be posted.

II.B.4. Within 7 business days of assignment of the permit registration number, the applicant shall affix such number to the sign or to the posted notice.

### II.C. INCOMPLETE OR INCORRECT APPLICATIONS

As the application is evaluated by the Director, notice may be sent to the applicant during the review period that the plan does not meet one or more of the specific minimum requirements of this permit. After such notification, the applicant shall have 30 days to resubmit the application.

II.C.1. An applicant needing additional time to respond to requests for changes or additional information must request an extension prior to the end of the 30 days, or:

- The Director may terminate the application, after making a reasonable attempt at, and being unsuccessful in, contacting the applicant to provide notice of the pending termination
  - The Director may cause a pending termination message to be sent from his official mailbox which has an email address of [DEPNPDESEP@wv.gov](mailto:DEPNPDESEP@wv.gov) to the applicant's email address as listed on the registration application.
  - It is the responsibility of the applicant to keep the Director informed of accurate contact information, and in lieu of a successful notice from his official mailbox, the Director may attempt to contact the applicant by phone to provide notice of the pending termination.
- Upon successful contact with the applicant, the Director has the option of terminating or extending the due date for resubmission of the application.

#### II.D. PUBLIC NOTICING OF APPLICATIONS

The Applicant shall cooperate with the public notice of applications required by Part II.A.1.b:

- Making payment for a Class I Legal Advertisement concerning the application to the local newspaper with the largest readership in the vicinity of the proposed project.
- Obtaining from the newspaper, and submitting to the Director, an affidavit of the publication of the Class I Legal Advertisement.

#### II.E. AUTHORIZATION TO DISCHARGE

The applicant is prohibited from disturbing land prior to obtaining approval from the Director for activities covered by this permit. The Director shall send an approval or denial of the application via his official mailbox, [DEPNPDESEP@wv.gov](mailto:DEPNPDESEP@wv.gov) and,

- The Director has no further obligation to attempt to verify the applicant received the approval or denial, as
- It is the responsibility of the applicant to keep the Director informed of up-to-date and accurate contact information.

The Applicant shall maintain a copy of the approval from the Director onsite and make it available to DWWM Personnel or the public upon request.

#### II.F. INSTALLATION OF EROSION AND SEDIMENT CONTROLS

After receiving approval from the Director and before beginning construction activities, the permittee shall install erosion and sediment control BMPs in accordance with the approved registration. BMPs shall be in place and functional prior to land disturbance. For registrations proposed to be completed in multiple phases, the BMPs for each phase must be constructed and functional prior to land disturbance beginning in that phase. Erosion



and sediment control BMPs shall be implemented in accordance with standard procedures set forth in the BMP Manual, however, other BMPs may be used if equally protective of water quality.

#### II.G. QUALIFIED PERSON TO INSPECT EROSION AND SEDIMENT CONTROLS

The permittee shall ensure that all newly installed erosion and sediment control BMPs are inspected by a Qualified Person. Any defective controls identified during the inspection must be repaired and/or installed correctly within 24 hours and corrections verified upon re-inspection by the Qualified Person.

Construction activities may begin after the Qualified Person inspects and finds that all erosion and sediment control BMPs are installed properly in the areas where earth disturbing activities are planned to commence.

Sediment control BMPs shall be constructed in accordance with the approved registration (Part II A.1.c. and A.1.d.). All basins and traps not constructed in accordance with the approved registration shall be inspected and documented by a Qualified Person as affording the same trapping capacity and efficiency as the approved structures. Thereafter, routine inspections of the structures by a Qualified Person shall be conducted in accordance with III.B. until structure removal. All documentation of inspections shall be kept on site during construction on a form, prescribed by the Director for the length of the construction project.

#### II.FL STORMWATER POLLUTION PREVENTION PLAN (SWPPP) COMPONENTS

SWPPPs shall be prepared in accordance with good engineering practices and retained per II.H.5. The plan shall identify potential sources of pollution that may reasonably be expected to affect the quality of stormwater discharges associated with construction activity. The plan shall describe and ensure the implementation of practices that are to be used to reduce the pollutants in stormwater discharges associated with construction activity and to assure compliance with the terms and conditions of this permit. The SWPPP shall be prepared by a Qualified Person.

##### II.H.1. Nature of the Activity

The SWPPP shall contain a description of the nature of the construction activity, including a proposed timetable for major activities such as: cut and fill plans, proposed road construction or upgrades, grading plans, and a narrative of the pollution prevention techniques proposed to be implemented before, during and after construction. A schedule for major grading activities and stabilization measures to be initiated shall be included in the description

##### II.H.1.a. Maps

Site maps shall contain a North arrow with sites oriented to the North, with a minimum of five-foot topographical contours. The maps shall include:

- Nearest receiving streams, springs, surface waters to the site;
- Limits of all areas to be disturbed (LOD); Existing roads including public roads from which access to the site will be constructed;
- Access roads;
- Drainage patterns during and after construction with the outlet markers depicting the stormwater discharge points;
- Slopes prior to construction and anticipated conditions after grading activities;
- Location of topsoil stockpiles;
- Waste areas of 1 acre or greater within or contiguous to the construction site;
- Borrow sites of 1 acre or greater within or contiguous to the construction site;
- Locations and identification of sediment control structures;
- Total acreage and location of impervious areas after construction is complete;
- Location of rain gauge provided by the applicant
- o Or a statement the applicant will obtain the precipitation event information from a National Oceanic Atmospheric Administration (NOAA) weather station that is representative of the location and provide the Station ID Number.
- Post-development stormwater management structures required by local governments
- Final stormwater conveyances, including all ditches and pipe systems;
- Property boundaries and easements; and
- A legend, complete with any other information necessary to describe the project in detail.

The project shall be illustrated in an ArcGIS Shapefile (.shp) or in an AutoCAD Drawing (.dwg).

II.H.1.b. The map shall be accompanied by a description of an estimate of the total area of the site, the part of the site that is expected to undergo excavation or grading, and the total amount of excavation by cut and fill as well as an explanation of where excavated material will be moved from, and to, on the site.

Cross sections that accurately depict the surface configuration at any project area proposing a fill with a contributing drainage area of one acre or more shall be included with the mapping information. A description of measures to be taken to reduce the potential for subgrade saturation and ensure stability of fill areas shall be submitted. The cross-section shall be developed from sufficient slope measurements to adequately represent the existing land configuration of the proposed project area. Fill slope lines, original ground line, proposed keyway cut or rock toe key, drainage provisions and/or alternates shall also be identified.

II.H.1.c. For each Large Construction Project an evaluation point shall be selected. The pre-construction peak discharge from a 1-year, 24-hour storm in cubic feet per second and the post-development peak discharge from a 1-year, 24-hour storm in cubic feet per second shall be calculated at the evaluation point.

If post-construction peak discharge is 10% (or more) greater than the pre-construction peak discharges of 5 cubic foot per second or more for the 1-year, 24-hour storm, at the evaluation point, post-construction stormwater management BMPs must be implemented to



reduce potential erosion at the discharge point location. Calculations and justification must be submitted if post-construction stormwater management features are deemed unnecessary. The evaluation point will be the location for discharge, therefore, controls must be put in place to prevent erosion from stormwater released from the construction site.

The design procedures shall follow professionally accepted engineering and hydrologic methodologies.

II.H. 1 .d. Each road or access road shall be classified as either permanent or temporary and categorized as Construction Activity — New or Improved; Incidental Construction Activity; or Maintenance Only.

- Temporary roads shall be reclaimed as soon as practical after they are no longer needed for operations.
- New or Improved roads shall be designed with the complete specifications along the entire road.
- Incidental Construction Activity necessary to address tills and gullies and other drainage issues, shall be designed with the complete specifications on that specific segment.
- Maintenance only means to be graveled only.

The SWPPP shall contain plans and specifications for each road or access road requiring construction activities within the LOD area. The plans and specifications shall include a map, stationed baseline, appropriate profile and cross sections, gradients, flow patterns, surfacing materials, cuts, fill, embankments, drainage ditches, culverts/water bars, and erosion and sediment structures.

Each road or access road shall be designed with the following specifications:

- Stone access entrance and exit drives.
- Parking areas to reduce the tracking of sediment onto public or private roads.
- All unpaved roads on the site shall be graveled or have other durable surface unless the application contains a statement that the affected landowner disagrees with this requirement. The applicant shall provide the land use, such as agriculture and shall describe the BMPs chosen to effectively control sediment and erosion. Unpaved roads shall be stabilized in accordance with II.H.1 .d.1 . the road bed shall be seeded and mulched.
- The maximum pitch grade shall not exceed 15%.
- The surface shall pitch toward the ditch line at a minimum slope of 2% to 4%. A road located in an area that doesn't have hillside runoff may be crowned with a minimum slope of 2% to 4% from the center line.
- A ditch shall be provided on the inside of any road having hillside runoff, with ditch relief culverts and/or water bars spaced according to grade and installed wherever necessary to insure proper drainage of runoff water beneath or through the access road.

- Ditch lines shall be capable of passing the peak discharge of a 10-year, 24-hour precipitation event.
- Ditch relief culverts shall be capable of passing the peak discharge of a 2-year, 24-hour precipitation event and placed at a spacing using the formula:  $4001\% \text{ grade} + 75' = \text{culvert spacing}$ .
- Sediment control shall be provided at the inlet by sumps, rock checks, or equal structure and the slope at the outlet end shall be protected with an apron of rock riprap, a water energy dissipater, or other similar structure.
- Alternative design criteria for access road drainage may be used, but only when approved by the Director.

II.H. 1.d. 1. A road not to be retained as a permanent road shall be reclaimed as soon as practical after it is no longer needed for operations. The reclamation shall include:

- Removing and disposing of road surfacing materials that are incompatible with prior land use and revegetation requirements; and
- Reshaping cut and fill slopes as necessary to be compatible with the land use and complement the natural drainage pattern of the surrounding terrain.
- Prior to abandonment of access roads, efforts shall be made to prevent erosion by the use of culverts, water bars, or earth berms. Water bars or earth berms shall be installed according to the following formula for spacing:  $400/\% \text{ grade} + 75' = \text{water bar or earth berm spacing}$ .
- Upon abandonment, the road bed shall be scarified or ripped and all areas associated with access roads shall be immediately seeded and mulched.

II.H. 1.d.2. The application for registration shall identify existing All-Terrain Vehicle (ATV) trails to be retained by the landowner upon termination of the permit registration. ATV trails that are not shown with the original application may be identified through a minor modification to the registration. ATV trails shall be maintained by the applicant and stabilized upon conclusion of construction when not identified in the registration as a landowner accepted trail. Stabilization shall include the vehicle travel lanes for all trails not accepted by the landowner. During construction, the applicant shall maintain the trails and include trail areas during inspections to prevent sediment laden stormwater runoff from entering the waters of the state.

#### II.H. 1.e. Impact Reduction

Site maps shall also include the location and type of stabilization methods for all disturbed areas. Plans shall ensure that existing vegetation is preserved where attainable. Efforts shall also be made to limit disturbance on steep slopes, minimize soil compaction, and preserve topsoil where feasible. A description of interim and final stabilization practices, including site specific implementation schedules of the practices shall be provided and may include: temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures.



II.11.1.e. 1. The SWPPP shall contain stabilization practices to ensure that disturbed portions of the site are stabilized as rapidly as possible. Satisfactory stabilization means all disturbed areas shall be covered by permanent protection such as pavement, pervious pavement, compacted gravel, buildings, waterways (riprap, concrete, grass, or pipe), a healthy, vigorous stand of grass or native vegetation that uniformly covers more than 70% of the ground, stable outlet channels with velocity dissipation which directs site runoff to a natural watercourse, and any other structure or material approved by the Director.

II.H.1 .e.2. Vegetative practices shall describe seedbed preparation requirements and the type and amount of soil amendments necessary to establish a healthy stand of vegetation. Soil maps shall be submitted.

For projects with unknown sources of potential borrow material or when excavation is necessary before adequate soil amendments may be determined, the Qualified Person shall, as soon as materials are located or excavated, prepare the soil amendment plan. The plan shall become a part of the records retained in accordance with Part II.H.5.

II.H.2. The SWPPP shall be signed in accordance with Appendix A.7. and retained onsite throughout the course of the project.

### II.H.3. Potential Pollutants

The SWPPP shall include a complete list and description of potential pollutants at the project site such as products used in the operation and maintenance of vehicles and equipment as well as construction of buildings, parking lots, and other structures. The erosivity of soils must be considered when selecting erosion and sediment control BMPs.

#### II.H.3.a. Potential pollutants can be identified by including:

- A report showing the soil mapping units associated with the proposed area and a table with a description of each map unit, acres in the permit area, and percent of permit area;
- Identification of soils and a soil handling plan;
- A statement whether cement will be mixed onsite or delivered by truck;
- A description of the types of equipment to be used, serviced, repaired, or cleaned onsite;
- A description of the products to be used in construction of buildings and parking lots;
- A statement whether fertilizers, herbicides, and pesticides will be used on the site including a schedule of application; and
- A description of the post-development use of the site.
  - o Certain post-development discharges might require further approval for discharges from the Director, under an individual permit or other general permit.

II.H.3.b. Include a description of the controls and procedures for preventing potential pollutants from entering stormwater runoff, based on II.H.3.a.

II.H.3.b. 1. Design, select, and identify erosion and sediment control BMPs. The BMPs should be selected from the BMP Manual. Alternative BMPs may be used if determined by the Director to be equally protective of water quality.

II.H.3.b.2. Projects discharging to any waters other than Tier 1 require the use of enhanced BMPs, such as:

- Inspection of all erosion and sediment control BMPs within disturbed areas at least once every four calendar days and within 24 hours after any precipitation event greater than 0.25 inches per 24 hours period.
- Repairs or maintenance to BMPs shall be performed within 24 hours, however, permittees must implement alternate BMPs prior to storm events while awaiting repair of the primary enhanced BMP.
- Temporary seeding and mulching within 4 days when areas will not be re-disturbed for more than 14 days.
- Permanent seeding and mulching within 4 days of reaching final grade.
- Final stabilization within 4 days after construction has been complete.

If the time frame associated with enhanced BMP's are unobtainable due to weather conditions, a narrative justification shall be made and maintained onsite for review by the Director.

Additional filtration BMPs should be selected from the BMP Manual, however filtration BMPs from other manuals may be approved, if equally protective of water quality.

Within six months of notification from the Director of a new sediment-related TMDL approval applicable to construction activities, permittees must incorporate any implement enhanced BMPs for discharges to the receiving waters subject to the TMDL.

II.H.3.b.3. Hay or straw bales shall not be used as primary or secondary filtering devices; Polymers, flocculants, or other treatment chemicals may be used only in accordance with good engineering practices and specifications for use by the chemical provider/supplier. The use of cationic treatment chemicals is prohibited;

II.H.3.b.4. Identify a specific location and procedure for rinsing mobile mixing drums or truck drums. The procedure must name an appropriate control for the wastewater created by such rinsing and fully explain how the permittee will prevent wastewater from entering stormwater runoff;

II.H.3.b.5. Describe procedures to prevent spillage, leakage, and improper disposal of fuel, oil, grease, solvent, soap, and cleaning plans. The procedures must explain how these products will be handled to prevent any pollutants from entering stormwater.

II.H.3.b.6. Describe how washout and cleanout of stucco, paint, form release oils, curing compounds, bituminous asphalt, and other construction materials will be managed to prevent pollutants from entering stormwater runoff;

II.H.3.b.7. Describe an employee training program for all on-site personnel directly involved with construction activities at all levels of responsibility that reiterates the components and goal of the SWPPP.

- Training should address topics such as spill and leak response and internal reporting, good housekeeping, and routine inspection and maintenance.
- Training shall be on a quarterly basis while construction activities are occurring.
- A list of attendees and topics covered at each training session shall be documented and maintained in the SWPPP.

II.H.3.b.8. A natural vegetative buffer shall be provided adjacent to receiving streams or other waters on or near the project site. Vegetative buffers shall be a minimum of 50 feet, however;

- A natural vegetated buffer may not be used as a stand-alone erosion and sediment control practice but must be used in conjunction with other BMPs.
- Vegetative buffer strips are not required if:
  - A natural vegetative buffer does not exist in pre-construction conditions, such as when the buffer has already been removed by existing developmental or agricultural activities; or
  - The receiving water is a man-made stormwater conveyance or storage structure, such as a ditch or storm water pond; or
  - Project activities occur within waters approved under a Clean Water Act (CWA) Section 404 permit and Section 401 water quality certification; or
  - The projects located where the vegetative buffer must be encroached to construct necessary infrastructure, such as a utility line or an access road. Justification for any encroachment may be subject to approval by the Director; or
  - Linear projects where right-of-way acquisition or area is limited.

II.H.3.b.9. All diversions constructed to final grade, including clean water diversions shall be stabilized prior to becoming functional. Internal construction diversions must be stabilized upon reaching final grade.

- Divert flows around exposed soils and limit runoff from exposed areas with BMPs such as:
  - Silt fences, earthen dikes and berms, land grading, diversions, drainage swales, check dams, subsurface drains, pipe slope drains, storm drain inlet protection, rock outlet protection, reinforced soil retention systems and geotextiles, gabions and riprap, and permanent and temporary sediment traps/basins.



- Fill slopes must be protected by measures used to divert runoff away from fill slopes to conveyance measures such as pipe slope drains or stable channels.
  - BMPs should be selected from the BMP Manual, however, other BMPs may be approved if equally protective of water quality.
- If necessary, diversions will be used to direct runoff to the trapping structure.
  - Diversions to trapping structures must be stabilized as they are brought to final grade to prevent sediment laden water from leaving the site.
  - Diversions shall have the capacity to pass safely the peak discharge from a 10-year, 24- hour precipitation event.

II.H.3.b.10. For locations on a site that have a drainage area of five acres or less, a sediment trap which provides a storage volume equal to 3,600 cubic feet per acre of drainage area shall be installed. Half of the volume of the trap shall be in a permanent pool and half will be dry storage. A sediment trap must be able to pass through the spillway(s) a 10-year, 24-hour precipitation event, and still maintain at least one foot of freeboard.

II.H.3.b.11. For drainage areas of greater than five acres, a sediment basin providing 3,600 cubic feet per drainage acre shall be installed. Half of the volume of the basin shall be in a permanent pool and half shall be dry storage. Sediment basins must be able to dewater the dry storage volume in 48 to 72 hours. However, this requirement may be waived at the discretion of the Director when skimmer devices are used. Dewatering structures must withdraw from the surface, unless infeasible. A sediment basin must be able to pass through the spillway(s) a 25-year, 24-hour precipitation event, and still maintain at least one foot of freeboard.

II.H.3.b.12. For locations served by a common drainage where a sediment basin providing 3,600 cubic feet of storage is not attainable or dewatering structures that withdraw from the surface are not feasible, enhanced BMPs within the project area are required in lieu of the required sized sediment basin. Justification and a narrative description of the additional measures proposed must be provided for use of any practice(s) other than sediment basins or traps.

11.11.3.b.13. Protection must be provided for the inlet(s) and outlet(s) of a sediment trapping structure to protect against erosion by an appropriate material such as riprap or other similar media.

#### II.H.4. Preventative Maintenance

The SWPPP shall include a description of procedures to maintain in good and effective condition and promptly repair or restore all grade surfaces, walls, dams and structures, vegetation, erosion and sediment control measures and to identify and address conditions that could cause breakdowns or failures resulting in discharges of sediment to surface waters including:

- Good housekeeping protocols to ensure a clean and orderly project. This includes minimizing the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to stormwater;
- All solid waste and construction/demolition material must be disposed of in accordance with the Code of West Virginia and Legislative Rule Title 33 Series 1, (Solid Waste Management Rule);
- At a frequency, sufficient to keep roads and streets clean, all public and private roads and streets adjacent to a construction site must be cleaned of debris, mud, and dirt tracked or originating from the project site;
- Provisions must be made to control fugitive dust on and originating from the construction site.;
- Spill prevention and response procedures - Areas where potential spills may occur, and their accompanying drainage points, shall be identified clearly in the SWPPP. Also, where appropriate, specify material handling procedures and storage requirements. Procedures for cleaning up spills shall be identified in the plan and made readily available to the appropriate personnel. The necessary equipment to implement a cleanup shall be available to personnel, including spill kits.

#### II.H.5. Record Keeping

The permittee shall retain all records required by this permit for a period of 3 years from the date permit coverage is terminated. This includes, but is not limited to:

- Personnel training records;
- Incident reports of spills, leaks and improper dumping;
- Field modifications;
- Inspection and maintenance records;
- Corrective action reports.

All SWPPPs required under this permit are considered reports that shall be available for review to the public under Section 308(b) of the CWA and WV Code 29B-1-1. The permittee may claim any portion of a SWPPP as confidential to the extent permissible by 47 C.S.R. 10-12.7. (NPDES Program).

All GPPs are considered reports and shall be made available as required by WV Code 29B1-1.

#### GROUNDWATER PROTECTION PLAN (GPP)

GPPs shall be prepared in accordance with the requirements of 47 C.S.R. 58-4.11. et seq. (Groundwater Protection Regulations). GPPs shall be submitted as required by 47 C.S.R. §4.12.e.1.

The GPP shall identify all operations that may reasonably be expected to contaminate groundwater resources with an indication of the potential for soil and groundwater

contamination from those operations. In addition, the GPP shall provide a thorough and detailed description of procedures designed to protect groundwater from the identified potential contamination sources. Guidance in the completion of a GPP is available from the DWWWM.

. The GPP shall be a stand-alone document and shall be submitted with the registration as such, rather than as a component of the SWPPP,

#### 11.1.2. GPP Elements

The GPP shall include the following elements:

11.1.2.a. A description of the operations, processes and materials present at the facility that may affect or contaminate groundwater.

11.1.2.b. Procedures and containment facilities to protect groundwater resources from the potential contaminants listed above. These processes and facilities shall be identified on a facility map.

11.1.2.c. A GPP containing a Karst Mitigation Plan shall be submitted with applications for registration under this NPDES General Permit for all areas with Karst topography.

Procedures for protecting groundwater when designing and adding new equipment and operations. Adequate design of these operations should be considered in the GPP when making changes in areas of karst, wetlands, faults, subsidence, areas determined by the Bureau for Public Health to be delineated wellhead protection areas, or other areas determined by the Director to be vulnerable based upon geologic or hydrogeologic information.

- The permittee must revise the GPP within 30 calendar days to address any newly delineated areas or other vulnerable areas upon notification by the Director or the Bureau for Public Health.

11.1.2.d. A summary of activities presently regulated for groundwater protection. These may include: registration of above ground and underground storage tanks, required groundwater monitoring or the construction and use of a landfill and list any other permits, required spill prevention and response plans, registrations, certifications or approvals from agencies that regulate groundwater protection measures at the facility. These may include but are not limited to:

- Stormwater
- Solid Waste Facility
- Resource Conservation and Recovery Act (Hazardous Waste Treatment, Storage and Disposal or Transporter)
- UST — Underground Storage Tank
- AST — Above Ground Storage Tank
- CERCLA — Superfund
- WV Voluntary Remediation — Brownsfields
- FIFRA — Federal Insecticide, Fungicide and Rodenticide Act



- Well Head Protection Program
- Underground Injection Control
- Toxic Substances Control Act
- Best Management Plans
- Management of used oil

II.1.2.e. All available groundwater quality data for the facility as well as well locations or other sampling points.

II.1.2.f. A statement documenting that waste materials will not be used for deicing, fill, or any other use, unless that use is allowed by regulation or permit.

II.1.2.g. A training component wherein the applicant states that employees with the potential to pollute groundwater will be trained in prevention procedures.

II.1.2.h. Documentation of quarterly inspections of the GPP elements by facility personnel are required. Documentation of this section must include a description of groundwater protection procedures and how control structures and devices are managed. Create and attach a copy of the facility's inspection form to the GPP.

II.1.2.i. Safety data sheets for all chemicals, or substances, used or stored on site.

11.1.3. The GPP shall be signed in accordance with Appendix A.7 and a copy retained onsite.

#### II.J. CONSISTENCY WITH OTHER PLANS

SWPPPs may reflect requirements for Spill Prevention Control and Countermeasure plans under section 311 of the CWA or any BMPs and GPPs pursuant to 47 C.S.R. 58 (Groundwater Protection Rule) or otherwise required by an NPDES permit. Incorporate any part of such plans into the SWPPP by reference.

### **PART III. REQUIREMENTS DURING CONSTRUCTION**

During construction, the permittee is required to:

- Follow all approved plans, follow good housekeeping protocol, respond to and report spills and leaks;
- Ensure a Qualified Person conducts inspections to verify that the approved BMPs effectively protect water quality;
- Implement additional controls as needed to protect water quality;
- Update the SWPPP/GPP with the additional controls;
- Submit modifications to the approved plans to reflect the additional controls, and
- Stabilize disturbed areas.

#### III.A. COMPLY WITH APPROVED REGISTRATION

III.A.1. The permittee shall construct the project as described in the approved registration.

III.A.2. The permittee shall practice good housekeeping measures to maintain a clean and orderly project. This includes minimizing the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to stormwater.

III.A.2.a. The permittee shall implement spill and leak prevention practices in accordance with the approved plan and respond promptly when incidents occur. The necessary equipment to implement a cleanup shall be available on-site to personnel, including spill kits.

III.A.3. Except as noted below, stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity in that portion of the site has permanently ceased or 4 days for sites required to use enhanced BMP's.

- Where the initiation of stabilization measures by the 4<sup>th</sup> day, as applicable after construction activity temporarily or permanently ceases is precluded by natural causes, such as a drought or flood, stabilization measures shall be initiated as soon as conditions allow.
- Where construction activity will resume on a portion of the site within 14 days from when activities ceased, (i.e., the total time period that construction activity is temporarily halted is less than 14 days) then stabilization measures do not have to be initiated on that portion of the site by the seventh day after construction activities have temporarily ceased.
- Areas where the seed has failed to germinate adequately (uniform perennial vegetative cover with a density of 70%) within 30 days after seeding and mulching must be reseeded immediately, or as soon as weather conditions allow.

### III.B. INSPECTIONS BY QUALIFIED PERSON

The permittee shall ensure site inspections are conducted by a Qualified Person in accordance with this section. The purpose of the inspections is to ensure compliance with the approved plan, and when the approved plan is not effective at protecting water quality, the inspection is to document that plan improvements are needed.

III.B.1. The person(s) inspecting the site may be a staff person or a third party hired to conduct such inspections as long as they meet the definition of a Qualified Person.

III.B.2. The site must be inspected as listed below, unless the site discharges to sensitive waters or the site qualifies for a reduction in the inspection frequency pursuant to III.B.2.b below:

- At least once every seven (7) calendar days and

- Within 24 hours of the occurrence of a precipitation event of 0.25 inches or greater, or the occurrence of runoff from snowmelt sufficient to cause a discharge.

III.B.2.a. An increase in inspection frequency is required for sites discharging to all waters except Tier 1.

For any portion of the site that discharges to a water that is classified as Tier 2 or Tier 3, or listed on the 303(d) list, inspections must be conducted in accordance with the following inspection frequencies:

- Once every four (4) calendar days, and
- Within 24 hours of the occurrence of a precipitation event of 0.25 inches or greater, or the occurrence of runoff from snowmelt sufficient to cause a discharge.

III.B.2.b. Reductions **in** inspection frequency may occur in accordance with the following: Stabilized areas:

The permittee may reduce the frequency of inspections to twice per month, no more than 14 calendar days apart, in any area of the site where final stabilization has been completed. If construction activity resumes in this portion of the site at a later date, the inspection frequency immediately increases to that required previous to the reduced frequency. The beginning and ending dates of this period must be recorded in the inspection report.

Exceptions:

For "linear projects", where disturbed portions have undergone final stabilization at the same time active construction continues elsewhere, the permittee may reduce the frequency of inspections to twice per month no more than 14 calendar days apart, in any area of the site where the final stabilization has been completed. Inspect once more within 24 hours of the occurrence of a precipitation event of 0.25 inches or greater. If there are no issues or evidence of stabilization problems, further inspections may be suspended. If "wash-out" of stabilization materials and/or sediment is observed, following re-stabilization, the reduced inspection frequency is suspended.

Frozen conditions:

If the permittee suspends construction activities due to frozen conditions, inspections on the site may be temporarily suspended until thawing conditions begin to occur if:

- Runoff is unlikely due to continuous frozen conditions that are likely to continue at the site for at least three (3) months based on historic seasonal averages. If unexpected weather conditions (such as above freezing temperatures or rain events) make discharges likely, the permittee must immediately resume the regular inspection frequency as applicable;



- Land disturbances have been suspended and all disturbed areas of the site have been stabilized.

If still conducting construction activities during frozen conditions, the permittee may reduce the inspection frequency to once per month if:

- Runoff is unlikely due to continuous frozen conditions that are likely to continue at the site for at least three (3) months based on historic seasonal averages. If unexpected weather conditions (such as above freezing temperatures or rain events) make discharges likely, the permittee must immediately resume the regular inspection frequency; and
- Except for areas undergoing construction activities, disturbed areas of the site have been stabilized, the beginning and ending dates of this period must be documented in the inspection report.

III.B.2.c. For any day of rainfall during normal business hours that measures 0.25 inches or greater, the total rainfall measure for that day must be recorded.

To determine if a precipitation event of 0.25 inches or greater has occurred on the site, the permittee must either:

- Keep a properly maintained rain gauge on-site, or
- Obtain the precipitation event information from a NOAA weather station that is representative of the location.

III.B.2.d. Areas That Must Be Inspected

During the site inspection, the following *areas* of the site must be inspected:

- All areas that have been cleared, graded, or excavated and that have not yet completed stabilization;
- All stormwater controls (including pollution prevention controls) installed and procedures initiated must be listed in the inspection record;
- Material, waste, borrow, and equipment storage and maintenance areas that are covered by this permit;
- All areas where stormwater typically flows within the site, including drainageways designed to divert, convey, and/or filter stormwater;
- All points of discharge from the site;
- All receiving waters to look for sediment laden stormwater entering the waterbody; and
- All locations where stabilization measures have been implemented.

Areas that, at the time of the inspection, are considered unsafe to inspection personnel do not have to be inspected.

### III.B.2.e. Requirements for Self-inspections

During the site inspection, the Qualified Person shall:

- Check whether all stormwater controls (i.e., erosion and sediment controls and pollution prevention controls) are properly installed, appear to be operational, and are working as intended to minimize pollutant discharges;
  - This includes the requirement to inspect for sediment that has been tracked out from the site onto paved roads, sidewalks, or other paved areas.
- Check for the presence of conditions that could lead to spills, leaks, or other accumulations of pollutants on the site;
- Identify any locations where new or modified stormwater controls are necessary to protect waters of the state or meet other requirements of this NPDES General Permit;
- Check for signs of visible erosion and sedimentation (i.e., sediment deposits) that have occurred and are attributable to the discharge at points of discharge and, if applicable, the banks of any waters of the State flowing within or immediately adjacent to the site;
- Identify any incidents of noncompliance observed;
- If a discharge is occurring during the inspection:
  - Identify all discharge points at the site; and
  - Observe and document the visual quality of the discharge and take note of the characteristics of the stormwater discharge, including color; odor; floating, settled, or suspended solids; foam; oil sheen; and other indicators of stormwater pollutants.

### III.B.2.f. Self-inspection Report

An inspection report must be completed by the inspector within 24 hours of completing any site inspection. Each inspection report must include the following:

- The inspection date;
- Names and titles of personnel making the inspection;
- A summary of inspection findings, including the observations made during the inspections, and any necessary maintenance or corrective actions;
- A record of rainfall measuring 0.25 inches or greater and the source of the measurement (the applicable rain gauge or weather station readings); and
- If it was determined unsafe to inspect a portion of the site, describe the reason it was found it to be unsafe and specify the locations to which this condition applies.

Each inspection report must be signed in accordance with Appendix A.7 of this permit.

Each inspection report must be maintained at the site or at an easily accessible location, so that it can be made available at the time of an on-site inspection or upon request by the Director.

All inspection reports must be maintained for at least three (3) years from the date that permit coverage is terminated.

- The Qualified Person must re-inspect within 48 hours to verify repairs or replacements to the defective BMPs or pollution controls noted in the previous inspection.

#### III.B.2.g. Requirement to Correct Deficiencies

Based on the results of the inspection, the permittee must complete any necessary maintenance and corrective action within 24 hours.

The permittee shall have 24 hours after such notification to make changes relating to sediment and erosion controls to prevent loss of sediment from an active construction site, unless additional time is provided by the Director or an authorized representative in writing.

#### III.C.1. IMPLEMENT ADDITIONAL BMPS TO PROTECT WATER QUALITY

When an inspection indicates the BMPs are ineffective at protecting waters of the state, the permittee shall immediately implement additional controls and,

- Update the SWPPP and GPP to reflect the new BMPs, and
- Either obtain approval of the additional BMPs during a site visit conducted by the Director, or
- Submit a modification application in accordance with this permit.
- Permittees who find that the approved BMPs are ineffective at protecting receiving waters and who are unable to identify or employ BMPs capable of preventing sediment laden runoff from leaving the project site shall immediately cease further land disturbance until such time that the unauthorized discharge ceases.

No sediment-laden water shall be allowed to leave the site without going through an appropriate BMP.

III.C.2. The permittee shall modify the SWPPP, using forms provided by DWWM, whenever there is a change in design, construction, scope of operation, or maintenance of BMPs, which has the potential to adversely impact the surface waters of the State, or if the SWPPP proves to be ineffective in achieving the general objectives of controlling pollutants in stormwater discharges associated with construction activities. Should conditions warrant, the Director may request changes to the SWPPP during a field inspection. The Director may request, review and approve or require the permittee to apply for a modification to the approved application.

The permittee shall amend the GPP whenever there is a change in design, construction, operation, or maintenance of BMPs which could reasonably be expected to have an impact on the potential contamination of groundwater.



### III.D. FEES

Permittees are required to pay annual permit fees within 30 days of receiving the invoice.

III.D.1. It is the responsibility of the permittee to keep the Director informed of accurate, up-to-date billing addresses and electronic addresses (email addresses) so that invoices may be delivered promptly and to the correct address.

III.D.2. Discharging stormwater from construction sites covered by this permit while failing to pay fees is considered operating without a permit.

III.D.3. Permittees must pay assessed fees until such time that the Director approves the Notice of Termination required by Part IV.

### PART IV. REQUIREMENTS AFTER CONSTRUCTION

After construction is complete, the permittee is required to:

- Verify all disturbed areas are stabilized and permanent stormwater conveyances and management structures are properly constructed by having a Qualified Person confirm the site is ready for the Director to conduct the final inspection.
- Confirm all records required by this permit are available for retention for 3 years after permit coverage is terminated and make available when requested by the Director,
- Verify all fees are paid in full,
- Prepare and submit the Notice of Termination (N.O.T.)
  - The permittee has the option of including a Stabilization Certification with the N.O.T.
- Continue to maintain permit coverage until notification from the Director that coverage is terminated.

### IV.A. VERIFY ALL DISTURBED AREAS ARE STABILIZED

Sediment trapping structures shall be eliminated, and the area properly reclaimed and stabilized when the contributing drainage area is stabilized, and the structures are no longer needed, unless the structure is converted into a permanent stormwater control structure. This must be accomplished before the Notice of Termination is submitted.

- All trapped sediments shall be disposed on an upland area where there is no chance of entering nearby streams.
- Breaching the embankment to dewater the structure is not permitted. Dewatering and structure removal shall not cause a violation of water quality standards. Dewatering may not be done by pumping from a sump, trap, or basin directly into a stream. The dewatering description shall clearly show that only clarified water is

to be discharged to waters of the state and shall include the method to be employed to ensure sediment is not pumped or otherwise discharged.

#### IV.B. RECORDS INSPECTIONS

In accordance with II.H.5. verify records required by this permit are assembled and ready for retention.

#### IV.C. PREPARE FOR TERMINATION

##### IV.C.1.

From the date final stabilization is achieved, the permittee has 30 days to ready the site for submittal of N.O.T and by the 30th day must submit the N.O.T. via electronic notice of termination to the Director.

IV.C.1.a. An inspection by a Qualified Person shall be conducted wherein all areas of the project and all off-site areas impacted by the project are inspected for compliance with this permit. The Qualified Person shall conduct a review of the available records to verify compliance with the retention requirements of this permit.

IV.C.1.b. The Qualified Person shall issue a report to the permittee outlining any deficiencies to be corrected. The permittee shall correct deficiencies within 24 hours and request a re-inspection by the Qualified Person. Once an inspection identifies no deficiencies, the site may be considered ready for the submittal of the N.O.T.

IV.C.1.c. The permittee shall review the fee payment history and pay any unpaid fees during this 30-day period.

#### IV.D. TERMINATION OF COVERAGE

After meeting the requirements of Part IV.C., the permittee shall apply for termination of permit coverage by submitting an N.O.T., which will serve as a request for final inspection. Upon receipt of the N.O.T., the Director shall inspect the site to determine the appropriateness of ending permit coverage.

IV.D.1. Final stabilization inspections for 1 to < 3 acres sites shall be conducted within 30 days of receipt of the N.O.T. and for sites 3 acres and larger the final stabilization inspection shall be conducted within 60 days.

IV.D.2. The permittee has the option of submitting a certification by a registered professional engineer or professional surveyor that the site meets stabilization requirements. Should the Director not inspect within the time frames established in this section, the Stabilization Certificate shall be accepted in lieu of the final inspection by the Director's staff.

IV.D.3. ATV trails accepted by the landowner and identified in the registration, do not require a healthy, vigorous stand of grass or native vegetation that uniformly covers more than 70 percent of the ground in the vehicle lanes of the trail to be considered for termination. No eroded areas of trails that are the source of sediment in stormwater runoff may be deemed stable or eligible for release. A registration modification must be approved by the Director prior to submittal of the Notice of Termination and prior to registration expiration for ATV trails not previously identified by the permittee to be turned over to the landowner.

IV.D.4. Permit coverage for construction activities encompassed by this permit expires upon verification of satisfactory stabilization of the site and payment of all outstanding fees. Satisfactory stabilization means ALL disturbed areas shall be covered by some permanent protection. Stabilize includes pavement, compacted gravel, permeable pavements/pavers, buildings, waterways (riprap, concrete, grass, or pipe), a healthy, vigorous stand of grass or native vegetation that uniformly covers more than 70 percent of the ground, stable outlet channels with velocity dissipation which directs site runoff to a natural watercourse, and any other approved structure or material.



The herein-described activity is to be constructed or installed and operated, used and maintained strictly in accordance with the terms and conditions of this General Permit with any plans, specifications, and information submitted with the individual application form, with any plan of maintenance and method of operation thereof submitted and with any applicable rules and regulations promulgated by the Environmental Quality Board and the Secretary of the Department of Environmental Protection.

Failure to comply with the terms and conditions of this General Permit, with any plans, specifications and information submitted, and with any plan of maintenance and method of operation thereof submitted shall constitute grounds for the revocation or suspension of this permit to any individual establishment or other person and for the invocation of all the enforcement procedures set forth in Chapter 22, Articles 11 and 12 of the Code of West Virginia.

This permit is issued in accordance with the provisions of Chapter 22, Article 11 of the Code of West Virginia.

BY: \_\_\_\_\_  
Director

## Appendix A

### I. STANDARD CONDITIONS

#### 1. Duty to Comply

- (a) The permittee must comply with all conditions of this permit. Permit noncompliance constitutes a violation of the CWA and State Act (Chapter 22, Article 11 or Article 12) and is grounds for enforcement action; for permit modification, revocation and reissuance, suspension or revocation; or denial of a permit renewal application.
- (b) The permittee shall comply with all applicable standards or prohibitions established under 40 C.F.R. 503 and Title 33 Series 2 within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

#### 2. When to Apply

State NPDES rules require permit applications to be filed at least 180 days prior to the commencement of the activity. The DWWWM is attempting, through this general permit process, to streamline the permitting of this activity. Therefore, projects which may potentially obtain coverage under this general permit and which submit complete application forms, shall make submission in accordance with ILA. prior to the anticipated date of discharge.

#### 3. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for a new permit by submitting a General Permit registration as detailed in permit reissuance.

#### 4. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit, which has a reasonable likelihood of adversely affecting human health or the environment.

#### 5. Permit Actions

This permit may be modified, revoked and reissued, suspended, or revoked for cause. The filing of a request by the permittee for permit modification, revocation and reissuance, or revocation, or a notification of planned changes or anticipated noncompliance, does not stay any permit conditions.

## 6. Property Rights

This permit does not convey any property rights of any sort or any exclusive privilege.

## 7. Signatory Requirements

All application, reports, or information submitted to the Director shall be signed and certified as required in 47 C.S.R. 10.4.6. (NPDES Program). If an authorization becomes inaccurate because a different individual or position has responsibility for the overall operation of the project, a new authorization must be submitted to the Director prior to, or together with any reports, information, or applications to be signed by an authorized representative.

## 8. Transfers

This permit is not transferable to any person, except after written notice to and written approval by the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary. Notice must contain the new owner's name and address.

## 9. Duty to Provide Information

The permittee shall furnish to the Director, within a reasonable specified time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, suspending, or revoking this permit, or to determine compliance with this permit. The permittees shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

## 0. Other Information

The permittee shall furnish to the Director any additional, practicable, site-specific information that is determined necessary to protect water quality or has the potential to protect water quality. Where the permittee becomes aware that he/she has failed to submit any relevant facts in a facility registration application form or submitted incorrect information in a facility registration application form or in any report to the Director, he/she shall promptly submit omitted/corrected facts or information.

## 10. Endangered and Threatened Species and State Historic Preservation Officer

If a site discharges to a stream where a federally endangered or threatened species or its critical habitats are present, the applicant must contact the U.S. Fish and Wildlife Service to ensure that requirements of the federal Endangered Species Act, 16 U.S.C. 1531 et. seq. is met



For those projects that may impact historic preservation sites, the permittee shall coordinate the project with the State Historic Preservation Officer.

#### **12. Inspection and Entry**

The permittee shall allow the EPA, Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- a) Enter upon the permittee's premises in which any storage, treatment or activity is located, or where records must be kept under the conditions of this permit;
- b) Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit;
- c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- d) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by 47CSR10, any substances or parameters at any locations.

#### **13. Permit Modification**

This permit may be modified, suspended, or revoked in whole or in part during its term in accordance with the provisions of Chapter 22, Article 11 of the Code of West Virginia.

Any permittee wishing to modify his coverage for a Large Construction Activity shall submit such request at least 60 days prior to the commencement of the proposed action for modification if no public notice period is required. A modification that requires a public notice period must be submitted at least 100 days prior to construction to allow for the public notice procedure.

Any permittee wishing to modify his coverage for a Minor Construction Activity shall submit such request at least 30 days prior to the commencement of the proposed action for modification if no public notice period is required. A modification that requires a public notice period must be submitted at least 60 days prior to construction to allow for the public notice procedure.

#### **14. Oil and Hazardous Substance Liability**

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the CWA.

### 15. Outlet Markers

In accordance with Title 47, Series 11, Section 9 (Special Rules) of the West Virginia Legislative Rules, an outlet marker shall be posted on the stream bank for each outlet covered by this permit

### 16. Water Withdrawal

If water for hydroseeding, dust control, or hydrostatic testing is to be derived from waters of the state, withdrawals shall only be made during times when stream flow is sufficient to support both aquatic life and the withdrawal. During periods of active withdrawal, the permittee and/or operator shall consult DWWM's Water Withdrawal Guidance Tool daily and document the recommendations. This documentation shall be maintained by the permittee and made available for inspection. Withdrawals shall only be taken when the tool indicates that it is safe by the statement "it should be safe to withdraw from any stream in the area". Use of the tool in itself does not guarantee protection of aquatic life and best professional judgment must still be used when making withdrawals, as the tool cannot account for all localized conditions and may not react to the withdrawal dependent on its proximity to the stream gage. The tool provides useful information on general stream flow adequacy to assist the permittee with withdrawal decisions. The tool may be found at the following link: <http://www.dep.wv.gov/WWE/wateruse/Pages/WaterWithdrawal.aspx>.

### 17. Liabilities

17.a. Any person who violates a permit condition is subject to a civil penalty not to exceed \$25,000 per day of such violation as provided in W. Va. Code § 22-11-22. Any person who willfully or negligently violates permit conditions is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both, as provided in W. Va. Code §22-11-24.

17.b. Any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both, in accordance with W. Va. Code § 22-11-24.

17.c. Nothing in 17.a. and 17.b. shall be construed to limit or prohibit any other authority the Director may have under the State Water Pollution Control Act, Chapter 22, Article 11 and State Groundwater Protection Act, Chapter 22, Article 12.

### 18. Reopener Clause

If there is evidence indicating potential or realized impacts on water quality due to any stormwater discharge authorized by this General Permit, the owner or operator of such discharge may be required to obtain an individual permit or alternative General Permit in

accordance with Section I.E. of this General Permit or the General Permit may be modified to include different limitations and/or requirements.

The conditions, standards, and limitations of this General Permit shall be reviewed at the time of reissuance for possible revisions that may lead to more or less stringent conditions, standards, and limitations.



Appendix B

I. OPERATION AND MAINTENANCE

1. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all activities and BMPs which are installed or used by the permittee to achieve compliance with the terms and conditions of the permit.

2. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit.

3. Bypass

3.a. Definitions

3.a.1. "Bypass" means the intentional diversion of waste streams from any portion of a BMP; and

3.a.2. "Severe property damage" means substantial physical damage to property, damage to BMPs which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

3.b. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Appendix B 3.c. and 3.d. of this permit.

3.c. Notification of bypass

3.c.1. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible, at least 10 days before the date of the bypass.

3.c.2. If the permittee does not know in advance of the need for bypass, notice shall be submitted as required in E.2. of Part I of this permit.

3.d. Prohibition of bypass

3.d. 1 . Bypass is permitted only under the following conditions. The Director may take enforcement action against a permittee for bypass, unless;

3.d.1.A. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

3.d.1 .B. There were no feasible alternatives to the bypass, such as the use of auxiliary BMPs, retention of untreated sediment, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance. This condition is not satisfied if the sediment and erosion control structures were not installed in the proper sequence; and

3.d. 1.C. The permittee submitted notices as required under Appendix B 3.c. of this permit.

3.d.2. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed in Appendix B 3.d.1. of this permit.

#### 4. Upset

4.a. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with the technology-based permit effluent limits or failure of a BMP that occurs because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

4.b. Effect of an upset. An upset constitutes an affirmative defense to an action brought for temporary noncompliance with the terms and conditions of the penult and the SWPPP if the requirements of Appendix B 4.c. are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

4.c. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

4.c.1. An upset occurred, and that the permittee can identify the cause(s) of the upset.

4.c.2. The permitted project was at the time being properly operated.

4.c.3. The permittee submitted notice of the upset in accordance with Part I.D.2.; and

4.c.4. The permittee complied with any remedial measures required under Appendix A 4 of this permit.

4.d. Burden of proof. In any enforcement proceedings, the permittee seeking to establish the occurrence of an upset has the burden of proof.

#### 5. Removed Substances

From time to time incidents occur on construction sites that cause materials to be removed. Soils or stormwater affected by fuel spills or other substances may require special handling and disposal. Such shall be disposed of only in a manner and at a site subject to the approval by the Director.

Sediment removed from a trapping device or from a stream, lake or river after deposition by stormwater runoff from a construction related activity shall be removed in a manner consistent with local, state and federal guidelines and placed behind sediment trapping BMPs in a manner that prevents erosion.



## **Appendix C**

### **I. Definitions:**

1. "Access Road" means surface right-of-way for purposes of travel by land vehicles and/or equipment used in Construction activities. A road consists of the entire area within the right-of-way, including the roadbed, shoulders, parking and side areas, approaches, ditches, and other related structures. The term includes access roads constructed, used, reconstructed, improved, or maintained for use in all construction operations.

2. "Application" is the form to be submitted to register a construction project that discharges to sensitive waters.

3. "Best management practices" (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, other management practices and various structural practices such as but not limited to silt fence, sediment traps, seeding and mulching, and rip-rap used to prevent or reduce erosion and sediment runoff and the pollution of surface waters of the State. BMPs also include treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

4. "Clearing" means the stage of development in which vegetation is cleared from land. Clearing includes cutting and removing vegetation with chain saws, brush axes, brush hogs and other mechanical means where no soil is disturbed.

5. "Clean Water Act" (CWA) (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Public Law 92-500, as amended by Public Law 95-217, Public Law 97-117 and Public Law 95-576; 33 U.S.C. 1251 et seq.

6. "Common Plan of Development" is a contiguous construction project where multiple separate and distinct construction activities may be taking place at different times on different schedules but under one plan. The "plan" is broadly defined as any announcement or piece of documentation or physical demarcation indicating construction activities may occur on a specific plot; included in this definition are most subdivisions.

7. "Control" is a best management practice such as erosion control or sediment control that will reduce sedimentation on a construction project.

8. "Construction Activity" means land disturbance operations such as clearing, and grubbing, grading, filling, and excavating during site development for residential, commercial or industrial purposes. This includes, but is not limited to, access roads, borrow and spoil areas.

9. "Detailed Site Plan" is a design plan drawing of sufficient scale to depict proposed construction activity, surface drainage patterns, erosion and sediment control best management practices, limits of disturbance boundary, north arrow with drawing oriented north, and containing surface contours on minimum 5-foot contours.

10. "Director" means the Director of the Division of Water and Waste Management, Department of Environmental Protection, or his or her designated representative.

11. "Disturbed Area" is the total area of land disturbing activity that will take place during all phases of a construction project, including, but not limited to, all waste and borrow sites, utility installation, road building, mass grading, and site development.

12. "Diversion" means a stabilized berm or stabilized excavated channel or combination berm and channel constructed across sloping land on a predetermined grade. This includes but is not limited to protecting work areas from upslope runoff and reducing the size of the drainage going to sediment trapping structures (clean water diversion), transporting runoff across a project to minimize erosion and diverting sediment-laden water to an appropriate sediment-trapping structure.

13. "Electronic Submission System (ESS)" refers to the online interactive application registration submittal, review and approval system authorized by the Director.

14. "Enhanced BMPs" means activity schedules or sediment and erosion controls that are more protective of the environment than those routinely employed to qualify for coverage under this permit. Use of such practices apply when disturbed areas discharge to Tier 2 and Tier 3 Waters, or to state waters for which a sediment related TMDL has been approved.

15. "Erosion" means the displacement of solids (soil, mud, rock, and other particles) by the agents of wind, water, and ice in response to gravity.

16. "Establishment" means an industrial establishment, mill, factory, tannery, paper and pulp mill, mine, colliery, breaker or mineral processing operation, quarry, refinery, well and each and every industry or plant or works in the operation or process of which industrial wastes, sewage or other wastes are produced.

17. "Estimate" means to be based on a technical evaluation of the sources contributing to the discharge.

18. "Evaluation Point" means the point where the majority of the surface storm water leaves a permitted site.

19. "Excavating" means to engage in digging, hollowing out, or removing, accomplished usually with heavy machinery.

20."Final stabilization" means long-term stability of soil and rock against slides, slips, erosion and mudflows by covering disturbed areas with permanent protection such as pavement, compacted gravel, permeable pavements/pavers, buildings, stable waterways (riprap, concrete, grass or pipe), a healthy, vigorous stand of grass or natural vegetation that uniformly covers at least 70 percent of the ground, stable outlet channels with velocity dissipation that directs site runoff to a natural watercourse, and any other approved structure or material.

21."Grading" means disturbing the surface of the land, including land clearing and grubbing, excavations, creating embankments, land development, road upgrade, cut and/or fill operations, and the moving, depositing, stockpiling or storing of soil, rock, or earth materials.

22."Groundwater" means the water occurring in the zone of saturation beneath the seasonal high-water table or any perched water zones.

23."Groundwater Protection Plan" (GPP) means groundwater protection practices developed and implemented in accordance with WV Legislative Rules, 47 C.S.R. 58 (Groundwater Protection Rule), submitted as part of the Application.

24."Grubbing" means physically removing vegetative stumps and roots from the ground and disturbing the earth, usually by heavy machinery.

25."Inlet Protection" means a sediment filter or an impounding area around or upstream of a storm sewer, drop inlet, or curb inlet which allows sediment to settle out prior to stormwater entering the inlet.

26. "Impaired Streams" means waters that do not meet applicable water quality standards and are listed on the Clean Water Act Section 303(d) list.

27."Large Construction Activity" mean an activity which disturbs 3 or more acres of land.

28. "Landowner requested trails" refers to a trail the landowner deems desirable as a post-construction accessway to portions of the released site, hereinafter called ATV (All-Terrain Vehicle) Trails.

29. "Limits of Disturbance" is a polygon shown on a map or site drawing depicting the boundary of the construction site to be disturbed.

30."Minor Construction Activity" means an activity which disturbs one to less than three acres of land and does not discharge to sensitive waters.

31.' National Pollutant Discharge Elimination System" (NPDES) means the national program for issuing, denying, modifying, revoking and reissuing, suspending, revoking,



monitoring and enforcing permits, and imposing and enforcing pretreatment requirements under Section 307, 318, 402, and 405 of CWA, including any approved state program.

32. "Natural Vegetative Buffer" is an area of undisturbed vegetation that occurs spontaneously without regular maintenance or management and is adjacent to or surrounds streams or other waters.

33. "Notice of Termination" (NOT) is the form to be submitted by the permittee to terminate coverage under the Construction General Stormwater Permit, after final stabilization has been completed. See Final Stabilization.

34. "Point Source" is any discernible, confined and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, and container from which pollutants are or may be discharged to surface waters of the state.

35. "Pollutant" means industrial waste, sewage or other wastes.

36. "Pre-development" means the condition of the land, the amount and health of the ground cover and vegetation prior to development.

37. "Qualified Person" means a person who is knowledgeable in the principles and practices of sediment and erosion controls, pollution prevention, and possesses the education and abilities to assess conditions at the proposed site that could impact stormwater quality and to assess the effectiveness of proposed stormwater controls to meet the requirements of this permit.

38. "Satisfactory Stabilization": means a condition where exposed soils or disturbed areas are provided temporary vegetative and/or non-vegetative protective cover to prevent erosion and sediment loss. Satisfactory stabilization may include temporary seeding, geotextiles, mulches, and other techniques to reduce or eliminate erosion until either final stabilization can be achieved or until further construction activities take place to re-disturb this area.

39. "Sediment" means any particulate matter that can be transported by fluid flow and which eventually is deposited as a layer of solid particles on the bed or bottom of a body of water or other liquid.

40. "Sedimentation" means the deposition by settling of a suspended material.

41. "Sediment trap" means a temporary ponding area formed by constructing an embankment or excavation and embankment that will trap the flow of sediment-laden runoff. Sediment traps have a properly stabilized outlet/weir or riser and pipe to detain sediment laden runoff from disturbed areas of five acres or less. Outlets must be designed to extend the detention time and allow the majority of the sediment to settle out.

42."Sediment basin" means a temporary structure consisting of an earthen embankment, or embankment and excavated area, located in a suitable area to capture sediment-laden runoff from a construction site. A sediment basin reduces the energy of the water through extended detention (48 to 72 hours) to settle out the majority of the suspended solids and sediment and prevent sedimentation in waterways, culverts, streams and rivers. Sediment basins have both wet and dry storage space to enhance the trapping efficiency and are appropriate in drainage areas of five acres and greater.

43."Sensitive waters" means Tier 2 and Tier 3 Streams, trout streams, or water bodies with an established sediment related TMDL.

44."Sinkhole" means a depression in the land surface formed by solution or collapse that directs surface runoff into subsurface or to an underground drainage flow.

45."Stormwater" means stormwater runoff, snowmelt runoff, and surface runoff and drainage.

46."Stormwater Pollution Prevention Plan" (SWPPP) means a site-specific, written document that, among other things: (1) identifies potential sources of stormwater pollution at the construction site; (2) describes stormwater controls to reduce or eliminate pollutants in stormwater discharges from the construction site; and (3) identifies procedures the operator will implement to comply with the terms and conditions of this general permit.

47. "Tier 1 Waters" means waters that maintains and protects existing uses of a water body and the water quality conditions necessary to support such uses. A waterbody that is listed as impaired on the states 303(d) list is considered a Tier 1 water as it pertains to the specific pollutant listed.

48. "Tier 2 Waters" means waters that maintains and protects "high quality" waters - water bodies where the level of water quality exceeds levels necessary to support recreation and wildlife and the propagation and maintenance of fish and other aquatic life. Tier 2 is the default assignment for a waterbody not listed as impaired on the states 303(d) list.

49."Tier 3 Waters" means waters as otherwise identified in 47 C.S.R. 2-4.1. c. (Requirements Governing Water Quality Standards).

50."Total Maximum Daily Load (or TMDL)" is a term in the Clean Water Act that establishes the maximum amount of a pollutant allowed in a waterbody and serves as the starting point or planning tool for restoring water quality.

51. Trout Streams - Waters which sustain year-round trout populations. Excluded are those waters which receive annual stockings of trout, but which do not support year-round trout

**populations. Waters which meet the definition of 47 C.S.R. 2-2.19 (Requirements Governing Water Quality Standards).**

**52. "Water Quality Standards" are the foundation of the water quality-based control program mandated by the Clean Water Act.**

**53. "1-year, 24-hour precipitation event" means the maximum 24-hour precipitation event with a probable recurrence interval of once in one year.**

**54. "2-year, 24-hour precipitation event" means the maximum 24-hour precipitation event with a probable recurrence interval of once in two years.**

**55. "10-year, 24-hour precipitation event" means the maximum 24-hour precipitation event with a probable recurrence interval of once in 10 years.**

**56. "25-year, 24-hour precipitation" means the maximum 24-hour precipitation event with a probable recurrence interval of once in 25 years.**



## **APPENDIX E**

### **Record Keeping Forms**

## Incident Report Log

All incidents such as spills, leaks, improper dumping, sediment-laden discharges, problems with installed controls, or any other information describing both the quality and quantity of storm water discharges from installed structures should be recorded here.

[illegible]

# SWPPP Inspection Report

Site/Address: \_\_\_\_\_

Date: \_\_\_\_\_

Inspector: \_\_\_\_\_

Erosion and Sediment Control Measure	Satisfactory		Actions Taken
	YES	NO	
	YES	NO	
	YES	NO	
	YES	NO	
	YES	NO	
	YES	NO	
	YES	NO	
	YES	NO	
	YES	NO	

<b>Entrances: Clear of mud, dirt, debris, or tracking?</b>	<b>YES</b>	<b>NO</b>
Corrective Action:		
<b>Outfall locations: BMPs are in place and working?</b>	<b>YES</b>	<b>NO</b>
Corrective Action:		
<b>Disturbed areas: BMPs are in place and working?</b>	<b>YES</b>	<b>NO</b>
Corrective Action:		



## EMPLOYEE TRAINING LOG

[illegible]

# INSPECTION LOG

[illegible]

**APPENDIX F**  
**Public Notice Sign and Outlet Marker Sign**



**For Info on NPDES  
Stormwater Permit**

To comment on Sediment Control Plan:

**Call: 800-654-5227**

or

[DEP@Plan@wv.gov](mailto:DEP@Plan@wv.gov)

DEP 601 57<sup>th</sup> Street, SE Charleston WV 25304

**GREENMAN-PEDERSEN, INC**

**Corridor H Parsons-Davis**

**Core Boring**

**Ph: 304.406.8373**

**WVDEP Permit No WVRXXXXXX**

Sign shall be a minimum of 24" x 24" posted 36" above ground with a white background and black lettering. Letter size shall be 1.6 inches and 0.8 inch based upon the template layout shown.

**GREENMAN-PEDERSEN, INC**

**WVRXXXXXX**

**OUTLET XX**

Sign shall be a minimum of 24" x 24" posted 36" above ground with a white background and black lettering. Letter size shall be 2.5 inches.

# **Groundwater Protection Plan (GPP)**

**Parsons – Davis  
Core Boring Project  
Tucker County**

**State Project No. X347-H-55.68 00  
Federal Project No. NHPP-0484(292)**

---

## **Submitted to:**

West Virginia Department of Environmental Protection  
601 57<sup>th</sup> Street SE  
Charleston, West Virginia 25304

## **Prepared by:**

**GPI**

Greenman Pedersen, Inc.  
58 Mission Way, Suite 201  
Scott Depot, WV 25560

March 2023



## CERTIFICATIONS

### To Be Completed by Permittee (Plans and Specifications Operational Control)

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for attesting to false information, including the possibility of fine and imprisonment for knowing violations."

Douglass Robb, Executive V.P.  
Name and Title

(410) 880-3055  
Telephone Number

  
Signature

4/5/2023  
Date

### To Be Completed by Construction Site Operator/Co-Permittee (Day-to-Day Operational Control)

"I certify that I have reviewed this document and all attachments that were prepared under professional supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for attesting to false information, including the possibility of fine and imprisonment for knowing violations."

\_\_\_\_\_  
Name and Title

\_\_\_\_\_  
Telephone Number

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

## GPP Revision Documentation Form

This groundwater protection plan (GPP) should be revised and updated to address changes in site conditions, new or revised government regulations, and additional on-site storm water pollution controls. The signature of this representative attests that the GPP revision information is true and accurate. Previous authors and facility representatives are not responsible for the revisions.

[illegible]

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- 2.0 OVERVIEW**
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- 4.0 PROCEDURES TO PROTECT GROUNDWATER RESOURCES**
  - 4.1 FUEL DISPENSING AND EQUIPMENT MAINTENANCE OPERATIONS**
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    - 4.2.3 SPILL RESPONSE SUPERVISION, TRAINING, AND REPORTING**
    - 4.2.4 REPORTABLE SPILLS AND SPILL REPORTING REQUIREMENTS**
    - 4.2.5 SPILL CONTAINMENT CONTRACTORS AND MATERIALS SUPPLIERS**
- 5.0 EXISTING GROUNDWATER QUALITY DATA**
- 6.0 ON-SITE WASTE DISPOSAL**
- 7.0 MATERIAL SAFETY DATA SHEETS**
- 8.0 FACILITY INSPECTIONS**

## **APPENDICES**

- APPENDIX A, EMPLOYEE TRAINING AND INSPECTION LOGS**
- APPENDIX B, INSPECTION SHEET**
- APPENDIX C, LAY DOWN AREA LOCATIONS**



## 1.0. CONTACT INFORMATION

<i>PERMITTEE</i>	<i>PHONE/FAX/MOBILE</i>	<i>ADDRESS</i>
<i>Greenman-Pedersen, Inc. (GPI) Attention: Douglass Robb</i>	<i>(410) 880-3505</i>	<i>11000 Broken Land Parkway Suite 500 Columbia, MD 21044</i>
<i>PROJECT CONTRACTOR</i>		
<i>TBD</i>		
<i>QUALIFIED PERSON/ 24-HOUR CONTACT</i>		
<i>Keith Loar</i>	<i>(304) 406-8373</i>	<i>58 Mission Way Suite 201 Scott Depot, WV 25560</i>
<i>OTHER</i>		

## 2.0 OVERVIEW

This Groundwater Protection Plan (GPP) was prepared in accordance with the requirements of the West Virginia State Code of Regulations 47 CSR 58, Section 4.11. The purpose of the GPP is to identify site operations that may reasonably be expected to contaminate the groundwater resources and the operating practices and physical installations that will be employed to prevent groundwater contamination. This GPP must always be available on site.

## 3.0 OPERATIONS THAT COULD IMPACT GROUNDWATER RESOURCES

Operations that may reasonably be expected to contaminate groundwater are listed below.

- Fuel dispensing operations
- Equipment maintenance operations

Potential contaminants that could impact groundwater resources include:

- Gasoline/diesel fuel
- Hydraulic fluid
- Oil
- Antifreeze/windshield wiper fluid

#### **4.0 PROCEDURES TO PROTECT GROUNDWATER RESOURCES**

##### **4.1 FUEL DISPENSING AND EQUIPMENT MAINTENANCE OPERATIONS**

Fueling and maintenance of equipment will be conducted in a manner that affords the maximum protection against spills. Drip pans or absorbent pads will be used when fueling equipment. All on-site vehicles and equipment will be monitored for leaks and will receive regular preventive maintenance to reduce the potential for leaks.

Fueling personnel will be trained in proper procedures for fueling and lubricating equipment and proper use of containment equipment and spill cleanup equipment. Spill kits will be maintained on all construction equipment and drill rigs and at utilized laydown areas. Materials spilled during fueling and maintenance operations will be cleaned up immediately and disposed of properly. Disposal of waste materials will be in accordance with manufacturer's instructions and applicable local, state, and federal regulations.

Fuel tanks and equipment maintenance fluids are not anticipated to be stored permanently at laydown areas. Laydown areas will be used to store equipment, supplies, and support vehicles including UTVs and pick-up trucks. Construction equipment and drill rigs will be fueled and maintained daily by trucks servicing the project site. Should fuel or equipment maintenance fluids be required to be stored on-site, the fuel storage tank will be double-walled or located within secondary containment dikes and fuel maintenance fluids will be stored in drums or other liquid storage containers located within secondary containment dikes. Secondary containment dikes shall have a capacity of at least 110 percent of the maximum capacity of the largest single vessel within the diked area.

Equipment will not be parked or left idling for extended time periods (more than 12 hours), fueled except by hand-carried cans (5-gallon maximum capacity), or serviced within 100 feet of any karst feature. Equipment will be inspected daily for leaks prior to beginning work in karst areas. If any leaks are observed, or damaged or defective equipment is discovered, drip pans and other containment will be implemented immediately, and the equipment will be removed from the karst area or repaired as soon as practical. Fuels, lubricating oils, and petroleum products will not be stored within 100 feet of any karst feature.

## **4.2 SPILL CONTROL PLAN**

The primary objective of the spill control plan is to quickly contain spills and prevent or minimize impacts to surface water and/or groundwater. The following information is presented below.

- Spill containment and cleanup.
- Spill kits and equipment.
- Individuals responsible for implementing spill containment, cleanup, and training.
- Spill reporting requirements.
- Spill response contractors and equipment suppliers.

### **4.2.1 SPILL CONTAINMENT AND CLEANUP**

The site supervisor will be notified immediately when a spill or the threat of a spill is observed. The supervisor will assess the situation and determine appropriate response.

The following steps should be taken by anyone discovering a spill:

1. Stop or contain the flow immediately. Shut off product flow immediately and use absorbent materials or pads from a spill kit. Observe all precautions and instructions on the material safety data sheets for the spilled material.
2. Call the spill to the attention of the site supervisor and other employees and obtain their assistance in stopping and containing the spill.
3. Notify the GPI Spill Contact listed in Section 4.2.3.
4. Check drainage systems for spilled products to ensure no migration has occurred and take steps to minimize potential for migration.
5. Close off the area of the spill from possible ignition sources.
6. If anyone is injured, immediately call 911.
7. In the event of a fire, attempt to extinguish it with the correct type of extinguisher if safe to do so. Fire extinguishers labeled "A-B-C" are appropriate for fighting the three classes of fire, which are:
  - a. Class A: Ordinary combustibles
  - b. Class B: Flammable liquids
  - c. Class C: Electrically energized equipment
8. If the fire cannot be extinguished:
  - a. Evacuate all persons;
  - b. Call 911;
  - c. Verify that all personnel are present and away from the fire;
  - d. Maintain safe distance; and
  - e. Await fire fighting forces.



9. Properly dispose of all waste products generated from cleanup of the spill. Place all used absorbent pads, booms, oil dry, sand, etc. in an appropriate closed container or trash bag for disposal. Store all contaminated materials outside in a safe area away from any combustible sources.
10. In the event the spill cannot be contained, the site supervisor or his designated representative will make appropriate contacts of local, state, and federal agencies as presented in Section 4.2.4 of this plan.

#### **4.2.2 SPILL KITS AND EQUIPMENT**

Spill kits containing materials and equipment for spill response and cleanup will be maintained at the site. Each kit should contain the following equipment.

- Oil absorbent pads
- Oil absorbent booms
- 55-gallon drums
- Plastic bags
- Personal protective equipment including gloves and goggles.

Spill response equipment will be inspected and maintained. Materials used in spill response activities will be replaced. Rubber-tired backhoes, track excavators, dozers and other earth-moving equipment on-site may be used to construct earthen dikes or dams as needed. Equipment decontamination will occur as deemed necessary by the spill supervisor.

#### **4.2.3 SPILL RESPONSE SUPERVISION, TRAINING AND REPORTING**

The site supervisor or his designee will be responsible for completing the spill reporting form and for reporting the spill to the appropriate state and local agencies.

Facility personnel with primary responsibility for spill response and cleanup will receive training from the site supervisor. The training will include identifying the location of spill kits and other spill response equipment and the use of spill response materials.

The GPI Spill Contact is listed below. The site supervisor or his representative shall contact this individual in the event of a spill.

**Keith Loar, Construction Supervisor**  
**Email: [kloar@gpinet.com](mailto:kloar@gpinet.com)**  
**Mobile: (304) 406-8373**

#### **4.2.4 REPORTABLE SPILLS AND SPILL REPORTING REQUIREMENTS**

A spill is defined as any accidental or uncontrolled release of oil including all types of oil from the lightest fractions to the heaviest crudes including but not limited to gasoline, diesel fuel, fuel oil, motor oil, liquid asphalt, waste oil, and oil mixed with other wastes.

The “Reportable Quantity (RQ)” for oil is defined as

1. 25 gallons or more of oil released to the environment (excluding discharges to surface water): or
2. Any amount that causes a visible film or “sheen” upon or discoloration of the water surface.

Oil spills that exceed the reportable quantity (RQ) and leave the project limits must be reported immediately after becoming aware of the spill to:

- Parsons Fire Department (304) 478-4949
- Davis Fire Department (304) 259-5232
- Thomas Fire Department (304) 463-4260
- West Virginia DEP: (800) 642-3074
- National Response Center: (800) 424-8802

Verbal notification should include the following:

1. Contact information of the person to be contacted for additional information,
2. Location and source of the release,
3. Identification of the substance released,
4. Estimation of the quantity (gallons or pounds) released into the environment,
5. Time and duration of the release,
6. Environmental medium into which the release occurred,
7. Potential health effects associated with the released substance,
8. Response actions taken.

A written notification of the reportable spill must be submitted to the West Virginia Department of Environmental Protection (WVDEP) within five (5) calendar days after becoming aware of the spill. The written notification should include the following:

1. Facility information including location/address, contact person’s name and phone, and permit number,
2. Time and date release was discovered,
3. Response actions taken to contain the release,
4. Spill Number assigned by the WVDEP,

5. Substance released and CAS number,
6. Environmental impact of release,
7. Monitoring and detection data,
8. Mitigation and containment actions taken,
9. Prevention measures taken following release,
10. Health risks associated with the release,
11. Timetable documenting release discovery and response actions taken,
12. Cause of release,
13. Economic impact of release.

#### **4.2.5 SPILL CONTAINMENT CONTRACTORS AND MATERIAL SUPPLIERS**

Listed below are spill containment contractors and materials suppliers.

##### Spill Response Contractors

- Miller Environmental, Inc. (Morgantown, WV): (888) 988-8655
- Applied Construction Solutions (Bridgeport, WV): (304) 423-8760
- Clean Harbors Environmental (Nitro, WV): (800) 645-8265
- Weavertown Environmental Group (Charleston, WV): (304) 346-0160
- Evergreen AES (Winfield, WV): (888) 625-5434
- KEMRON Environmental Services, Inc. (Poca, WV): (304) 755-0999

##### Materials Suppliers

- Weavertown Environmental Group: (304) 346-0160
- Applied Construction Solutions: (304) 423-8760
- Allied Industrial Services: (304) 927-4462
- Online vendors
- Lowes or Home Depot

#### **5.0 EXISTING GROUNDWATER QUALITY DATA**

Existing groundwater data for the project site is not known.

#### **6.0 ON-SITE WASTE DISPOSAL**

No wastes will be used for deicing, fill, or any other use unless that use is allowed by a regulation or permit.

#### **7.0 MATERIAL SAFETY DATA SHEETS**

Material Safety Data Sheets or Safety Data Sheets shall be provided for all chemicals, or substances, used or stored on site.



## **8.0 FACILITY INSPECTIONS**

Facility inspections will be performed every three months by the site supervisor or his designated representative to ensure the elements of the GPP are in place, functioning, and being appropriately managed. The inspections will include an assessment of the equipment maintenance areas for any signs of spills or leakage. The inspections would also include an assessment of any above ground storage tanks or drums storage areas that may have been necessary.

**APPENDIX A**  
**EMPLOYEE TRAINING AND INSPECTION LOGS**

## EMPLOYEE TRAINING LOG

[illegible]



# INSPECTION LOG

[illegible]

# **APPENDIX B**

## **INSPECTION SHEET**

**GROUNDWATER PROTECTION PLAN  
INSPECTION SHEET**

**EQUIPMENT MAINTENANCE/LAYDOWN AREAS**

INSPECTOR:	DATE:		
INSPECTION ITEM	YES	NO	N/A
SPIILLS OR LEAKS ARE PRESENT			
SPIILLS OR LEAKS IDENTIFIED IN PREVIOUS INSPECTION HAVE BEEN PROPERLY CLEANED-UP			
AREA IS LITTER FREE			
WASTE PRODUCTS ARE NOT STORED ON-SITE			
TANKS/STORAGE DRUMS ARE IN GOOD CONDITION			
SECONDARY CONTAINMENT IS IN PLACE AND IN GOOD CONDITION			

Provide an explanation for any “NO” answers:

Provide a description of planned actions to be taken to address any deficiencies:



# **APPENDIX C**

## **LAY DOWN AREA LOCATIONS**

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
ENGINEERING DIVISION

**GPI** Engineering  
Design  
Planning  
Construction Management  
Greenman-Pedersen, Inc.  
58 Mission Way, Suite 201  
Scott Depot, WV 25560  
Certificate of Authorization #C01145-00

PARSONS-DAVIS  
LAYDOWN AREAS 1 AND 2

SHEET  
1 OF 16

PROJECT NUMBERS	
STATE	FEDERAL
X347-H-55.68 00	NHPP-0484(292)

DISTRICT  
08

COUNTY  
TUCKER





WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
ENGINEERING DIVISION

**GPI** Engineering  
Design  
Planning  
Construction Management  
Greenman-Pedersen, Inc.  
58 Mission Way, Suite 201  
Scott Depot, WV 25560  
Certificate of Authorization #C01145-00

PARSONS-DAVIS  
LAY DOWN AREA 3

SHEET

2 OF 16

PROJECT NUMBERS

STATE

FEDERAL

DISTRICT

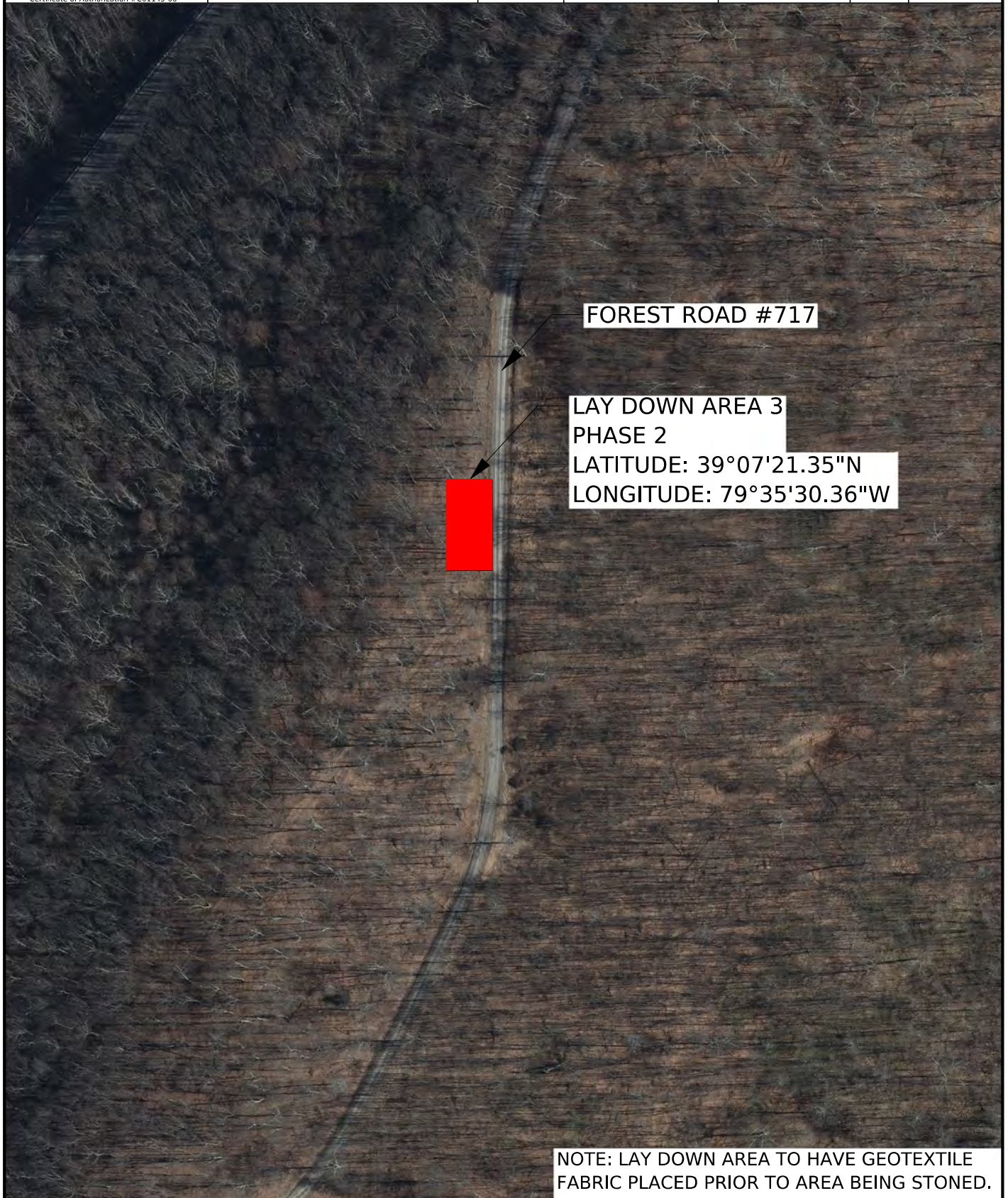
COUNTY

X347-H-55.68 00

NHPP-0484(292)

08

TUCKER



NOTE: LAY DOWN AREA TO HAVE GEOTEXTILE  
FABRIC PLACED PRIOR TO AREA BEING STONED.



# WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

## DIVISION OF HIGHWAYS

### ENGINEERING DIVISION

**GPI** Engineering  
Design  
Planning  
Construction Management  
  
Greenman-Pedersen, Inc.  
58 Mission Way, Suite 201  
Scott Depot, WV 25560  
Certificate of Authorization #C01145-00

PARSONS-DAVIS  
  
LAY DOWN AREA 4

SHEET

3 OF 16

PROJECT NUMBERS

STATE

FEDERAL

DISTRICT

COUNTY

X347-H-55.68 00

NHPP-0484(292)

08

TUCKER





WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
ENGINEERING DIVISION

**GPI** Engineering  
Design  
Planning  
Construction Management  
Greenman-Pedersen, Inc.  
58 Mission Way, Suite 201  
Scott Depot, WV 25560  
Certificate of Authorization #C01145-00

PARSONS-DAVIS  
LAY DOWN AREA 5

SHEET  
4 OF 16

PROJECT NUMBERS	
STATE	FEDERAL
X347-H-55.68 00	NHPP-0484(292)

DISTRICT  
08

COUNTY  
TUCKER





# WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

## DIVISION OF HIGHWAYS

### ENGINEERING DIVISION

**GPI** Engineering  
Design  
Planning  
Construction Management  
  
Greenman-Pedersen, Inc.  
58 Mission Way, Suite 201  
Scott Depot, WV 25560  
Certificate of Authorization #C01145-00

PARSONS-DAVIS  
  
LAY DOWN AREA 6

SHEET  
5 OF 16

PROJECT NUMBERS

STATE

FEDERAL

DISTRICT

COUNTY

X347-H-55.68 00

NHPP-0484(292)

08

TUCKER



NOTE: LAY DOWN AREA TO HAVE GEOTEXTILE  
FABRIC PLACED PRIOR TO AREA BEING STONED.



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
ENGINEERING DIVISION

**GPI** Engineering  
Design  
Planning  
Construction Management  
Greenman-Pedersen, Inc.  
58 Mission Way, Suite 201  
Scott Depot, WV 25560  
Certificate of Authorization #C01145-00

PARSONS-DAVIS  
LAY DOWN AREA 7

SHEET

6 OF 16

PROJECT NUMBERS

STATE

FEDERAL

DISTRICT

COUNTY

X347-H-55.68 00

NHPP-0484(292)

08

TUCKER

LAY DOWN AREA 7  
PHASE 1

LATITUDE: 39°08'05.48"N

LONGITUDE: 79°32'49.64"W

NOTE: LAY DOWN AREA TO HAVE GEOTEXTILE  
FABRIC PLACED PRIOR TO AREA BEING STONED.



# WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

## DIVISION OF HIGHWAYS

### ENGINEERING DIVISION

**GPI** Engineering  
Design  
Planning  
Construction Management  
  
Greenman-Pedersen, Inc.  
58 Mission Way, Suite 201  
Scott Depot, WV 25560  
Certificate of Authorization #C01145-00

PARSONS-DAVIS  
  
LAY DOWN AREA 8

SHEET

7 OF 16

PROJECT NUMBERS

STATE

FEDERAL

DISTRICT

COUNTY

X347-H-55.68 00

NHPP-0484(292)

08

TUCKER



**NOTE: LAY DOWN AREA TO HAVE GEOTEXTILE  
FABRIC PLACED PRIOR TO AREA BEING STONED.**



# WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

## DIVISION OF HIGHWAYS

### ENGINEERING DIVISION

**GPI** Engineering  
Design  
Planning  
Construction Management  
  
Greenman-Pedersen, Inc.  
58 Mission Way, Suite 201  
Scott Depot, WV 25560  
Certificate of Authorization #C01145-00

PARSONS-DAVIS  
  
LAY DOWN AREA 9

SHEET

8 OF 16

PROJECT NUMBERS

STATE

FEDERAL

DISTRICT

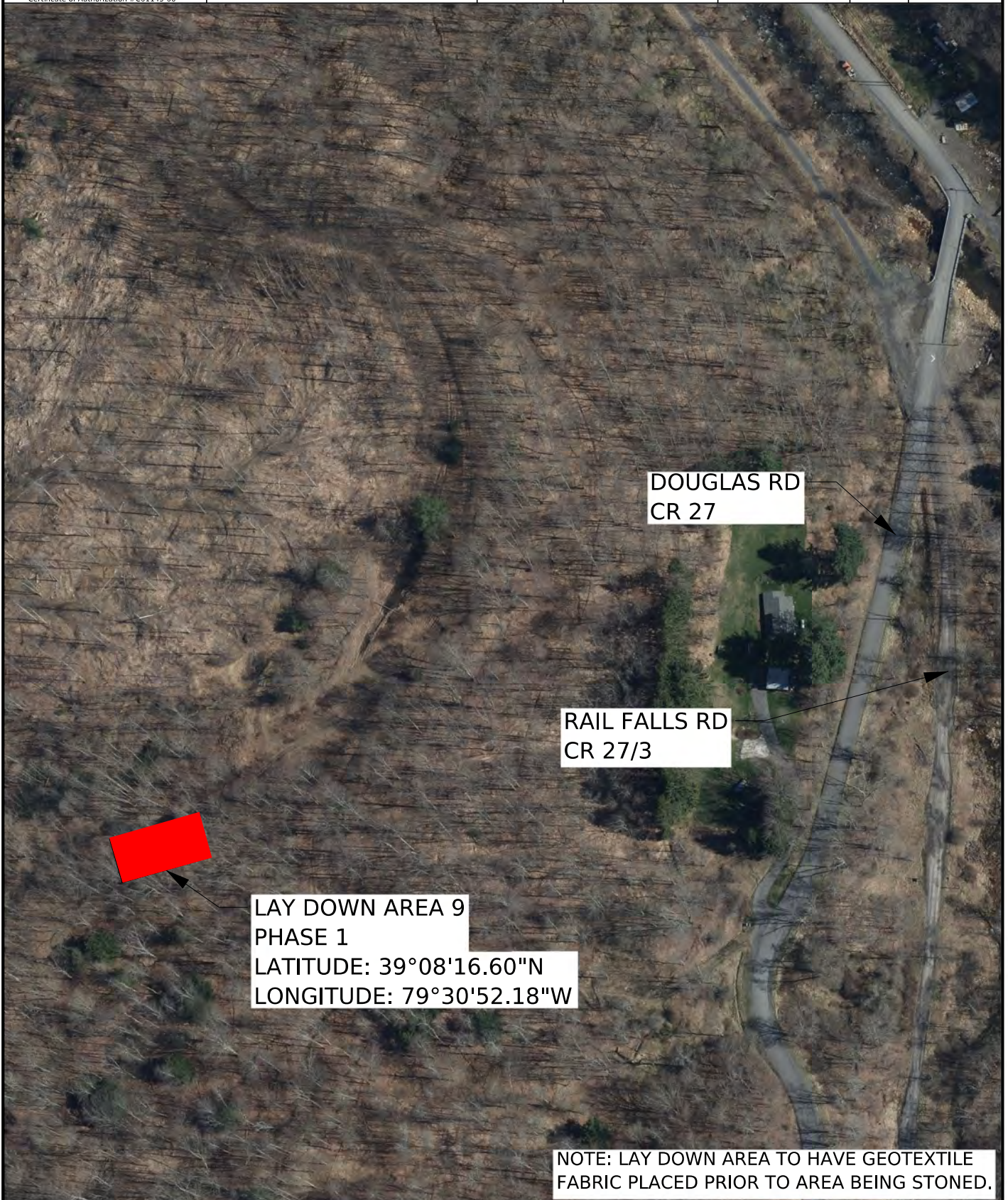
COUNTY

X347-H-55.68 00

NHPP-0484(292)

08

TUCKER





# WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

## DIVISION OF HIGHWAYS

### ENGINEERING DIVISION



Greenman-Pedersen, Inc.  
58 Mission Way, Suite 201  
Scott Depot, WV 25560  
Certificate of Authorization #C01145-00

PARSONS-DAVIS  
LAY DOWN AREA 10

SHEET  
9 OF 16

PROJECT NUMBERS

STATE

FEDERAL

DISTRICT

COUNTY

X347-H-55.68 00

NHPP-0484(292)

08

TUCKER

LAY DOWN AREA 10  
PHASE 1  
LATITUDE: 39°08'06.34"N  
LONGITUDE: 79°29'58.99"W

NOTE: LAY DOWN AREA TO HAVE GEOTEXTILE  
FABRIC PLACED PRIOR TO AREA BEING STONED.



# WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

## DIVISION OF HIGHWAYS

### ENGINEERING DIVISION

**GPI** Engineering  
Design  
Planning  
Construction Management  
  
Greenman-Pedersen, Inc.  
58 Mission Way, Suite 201  
Scott Depot, WV 25560  
Certificate of Authorization #C01145-00

PARSONS-DAVIS  
  
LAY DOWN AREA 11

SHEET  
10 OF 16

PROJECT NUMBERS

STATE

FEDERAL

DISTRICT

COUNTY

X347-H-55.68 00

NHPP-0484(292)

08

TUCKER



LAY DOWN AREA 11  
PHASE 1  
LATITUDE: 39°08'00.35"N  
LONGITUDE: 79°29'15.55"W

NOTE: LAY DOWN AREA TO HAVE  
GEOTEXTILE FABRIC PLACED PRIOR  
TO AREA BEING STONED.



# WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

## DIVISION OF HIGHWAYS

### ENGINEERING DIVISION

**GPI** Engineering  
Design  
Planning  
Construction Management  
  
Greenman-Pedersen, Inc.  
58 Mission Way, Suite 201  
Scott Depot, WV 25560  
Certificate of Authorization #C01145-00

PARSONS-DAVIS  
  
LAY DOWN AREA 12

SHEET  
11 OF 16

PROJECT NUMBERS

STATE

FEDERAL

DISTRICT

COUNTY

X347-H-55.68 00

NHPP-0484(292)

08

TUCKER



**NOTE: LAY DOWN AREA TO HAVE GEOTEXTILE  
FABRIC PLACED PRIOR TO AREA BEING STONED.**



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
ENGINEERING DIVISION

**GPI** Engineering  
Design  
Planning  
Construction Management  
Greenman-Pedersen, Inc.  
58 Mission Way, Suite 201  
Scott Depot, WV 25560  
Certificate of Authorization #C01145-00

PARSONS-DAVIS  
LAY DOWN AREA 13

SHEET  
12 OF 16

PROJECT NUMBERS

STATE

FEDERAL

DISTRICT

COUNTY

X347-H-55.68 00

NHPP-0484(292)

08

TUCKER





WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
ENGINEERING DIVISION



Greenman-Pedersen, Inc.  
58 Mission Way, Suite 201  
Scott Depot, WV 25560  
Certificate of Authorization #C01145-00

PARSONS-DAVIS  
LAY DOWN AREA 14

SHEET  
13 OF 16

PROJECT NUMBERS

STATE

FEDERAL

DISTRICT

COUNTY

X347-H-55.68 00

NHPP-0484(292)

08

TUCKER





# WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

## DIVISION OF HIGHWAYS

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Design  
Planning  
Construction Management  
  
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58 Mission Way, Suite 201  
Scott Depot, WV 25560  
Certificate of Authorization #C01145-00

PARSONS-DAVIS  
LAY DOWN AREA 15

SHEET  
14 OF 16

PROJECT NUMBERS

STATE

FEDERAL

DISTRICT

COUNTY

X347-H-55.68 00

NHPP-0484(292)

08

TUCKER





# WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

## DIVISION OF HIGHWAYS

### ENGINEERING DIVISION

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Design  
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58 Mission Way, Suite 201  
Scott Depot, WV 25560  
Certificate of Authorization #C01145-00

PARSONS-DAVIS  
LAY DOWN AREA 16

SHEET

15 OF 16

PROJECT NUMBERS

STATE

FEDERAL

DISTRICT

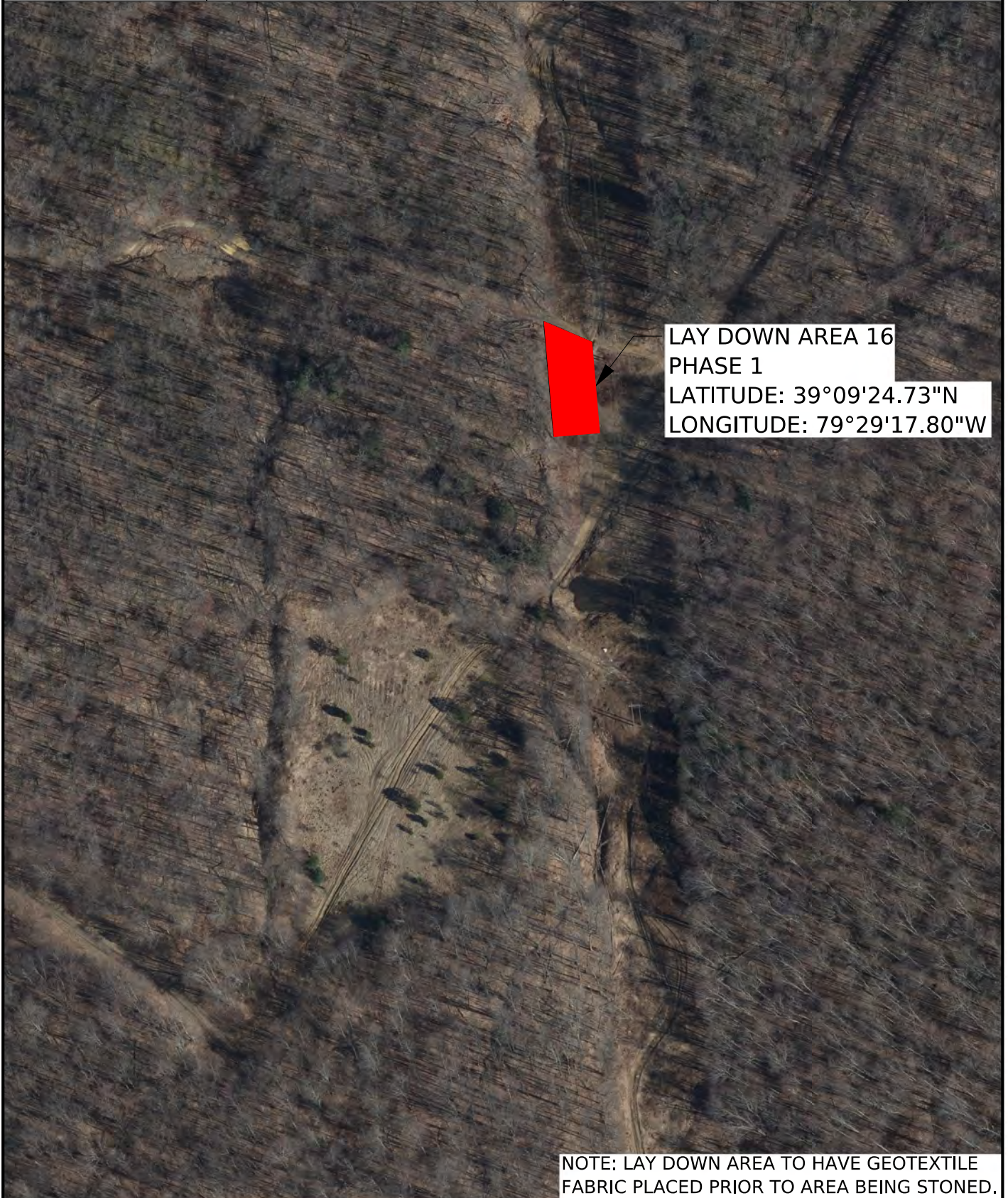
COUNTY

X347-H-55.68 00

NHPP-0484(292)

08

TUCKER



**NOTE: LAY DOWN AREA TO HAVE GEOTEXTILE  
FABRIC PLACED PRIOR TO AREA BEING STONED.**



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
ENGINEERING DIVISION

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Design  
Planning  
Construction Management  
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Scott Depot, WV 25560  
Certificate of Authorization #C01145-00

PARSONS-DAVIS  
LAY DOWN AREA 17

SHEET

16 OF 16

PROJECT NUMBERS

STATE

FEDERAL

DISTRICT

COUNTY

X347-H-55.68 00

NHPP-0484(292)

08

TUCKER



## ATTACHMENT #4 – BORING TABLE WITH PRIORITIZATION



## S&ME BORINGS

ROADWAY CORE BORINGS COORDINATES - PHASE 1				
BORING NAME	NORTHING	EASTING	LATITUDE	LATITUDE
R-001	222205.4530	1934860.1690	N39°06'36.03947"	W79°37'06.78000"
R-002	222057.6530	1934783.8620	N39°06'34.57761"	W79°37'07.74561"
R-003	221855.3580	1934840.5590	N39°06'32.57886"	W79°37'07.02292"
R-004	222390.6620	1935282.9050	N39°06'37.87556"	W79°37'01.41993"
R-005	222226.8930	1935350.1070	N39°06'36.25773"	W79°37'00.56464"
R-006	221982.3870	1935502.5310	N39°06'33.84297"	W79°36'58.62686"
R-007	221969.2640	1935842.8150	N39°06'33.71760"	W79°36'54.30960"
R-008	222566.4460	1935603.3750	N39°06'39.61713"	W79°36'57.35706"
R-009	222391.2210	1935697.1970	N39°06'37.88639"	W79°36'56.16388"
R-010	222229.0540	1935868.9790	N39°06'36.28570"	W79°36'53.98188"
R-011	222689.4750	1935834.7950	N39°06'40.83609"	W79°36'54.42305"
R-012	222332.1530	1935986.3370	N39°06'37.30622"	W79°36'52.49466"
R-013	222092.3100	1936167.4670	N39°06'34.93788"	W79°36'50.19284"
R-014	222778.1470	1936062.5560	N39°06'41.71540"	W79°36'51.53489"
R-015	221755.9550	1935744.6420	N39°06'31.60800"	W79°36'55.55160"
R-016	222512.3610	1936201.8420	N39°06'39.09011"	W79°36'49.76349"
R-017	222865.3840	1936349.4570	N39°06'42.58125"	W79°36'47.89636"
R-018	222752.6450	1936408.2860	N39°06'41.46766"	W79°36'47.14820"
R-019	222687.5370	1936445.1230	N39°06'40.82459"	W79°36'46.67981"
R-020	222988.5990	1936645.7500	N39°06'43.80279"	W79°36'44.13923"
R-021	222888.8900	1936685.4010	N39°06'42.81775"	W79°36'43.63459"
R-022	222778.0550	1936739.3350	N39°06'41.72292"	W79°36'42.94858"
R-023	223108.8190	1936923.4400	N39°06'44.99446"	W79°36'40.61803"
R-024	223183.2510	1937169.7170	N39°06'45.73315"	W79°36'37.49463"
R-025	223063.4950	1937196.9930	N39°06'44.54981"	W79°36'37.14671"
R-026	222906.0940	1937240.9380	N39°06'42.99459"	W79°36'36.58672"
R-027	222971.1620	1937476.7360	N39°06'43.64057"	W79°36'33.59614"
R-043	224241.0950	1938707.7910	N39°06'56.20715"	W79°36'17.99643"
R-044	224472.9560	1938694.4570	N39°06'58.49872"	W79°36'18.16905"
R-045	224205.3700	1939051.1540	N39°06'55.85799"	W79°36'13.63940"
R-047	224719.9750	1938746.5570	N39°07'00.94087"	W79°36'17.51167"
R-048	224418.4270	1939068.9370	N39°06'57.96405"	W79°36'13.41690"
R-049	224343.3970	1939312.5720	N39°06'57.22522"	W79°36'10.32461"
R-051	224552.8550	1939234.2630	N39°06'59.29463"	W79°36'11.32123"
R-052	224752.5940	1939088.1280	N39°07'01.26719"	W79°36'13.17830"
R-052A	225014.5870	1939316.5370	N39°07'03.85934"	W79°36'10.28405"
R-053	224639.7070	1939352.9780	N39°07'00.15442"	W79°36'09.81624"
R-070	226333.4830	1940677.5180	N39°07'16.91040"	W79°35'53.03400"
R-075	226472.6840	1940975.7580	N39°07'18.28947"	W79°35'49.25161"
R-080	226718.2010	1941289.7860	N39°07'20.71950"	W79°35'45.27027"
R-095	227532.2130	1942730.6650	N39°07'28.78003"	W79°35'26.99742"
R-100	227648.9100	1942999.7960	N39°07'29.93614"	W79°35'23.58380"
R-129	229151.6820	1944499.5060	N39°07'44.80400"	W79°35'04.57126"
R-132	229434.5430	1944465.8850	N39°07'47.59949"	W79°35'05.00130"
R-134	229724.1920	1944492.9270	N39°07'50.46265"	W79°35'04.66159"
R-141	230339.3390	1944950.1100	N39°07'56.54700"	W79°34'58.86693"
R-142	230177.3840	1944985.0720	N39°07'54.94655"	W79°34'58.42134"
R-143	230063.4140	1945125.5320	N39°07'53.82134"	W79°34'56.63740"
R-143A	230125.3070	1945308.3580	N39°07'54.43475"	W79°34'54.31801"
R-144	230376.4530	1945082.4600	N39°07'56.91504"	W79°34'57.18774"
R-145	230230.3830	1945206.9820	N39°07'55.47241"	W79°34'55.60576"
R-146	230659.7440	1945379.5430	N39°07'59.71778"	W79°34'53.42077"
R-147	230519.7540	1945444.9150	N39°07'58.33470"	W79°34'52.58953"
R-148	230387.0170	1945496.4410	N39°07'57.02318"	W79°34'51.93410"
R-149	231206.6220	1945589.9000	N39°08'05.12502"	W79°34'50.75738"
R-150	230792.8830	1945657.8360	N39°08'01.03621"	W79°34'49.89048"
T-001	231009.6540	1945390.1500	N39°08'03.17640"	W79°34'53.29019"
T-002	230872.5760	1945253.2560	N39°08'01.82029"	W79°34'55.02594"
T-003	231135.1750	1945573.6770	N39°08'04.41869"	W79°34'50.96246"
T-004	230654.7270	1945146.0980	N39°07'59.66609"	W79°34'56.38335"
T-005	230502.6440	1945290.7290	N39°07'58.16420"	W79°34'54.54609"
T-006	230611.5100	1945531.8260	N39°07'59.24240"	W79°34'51.48761"
T-007	231075.7020	1945680.6030	N39°08'03.83181"	W79°34'49.60476"
T-008	230258.0780	1945654.6150	N39°07'55.75015"	W79°34'49.92528"
T-009	230336.6000	1945655.6920	N39°07'56.52628"	W79°34'49.91250"

[illegible]









## ECS BORINGS

		ROADWAY CORE BORINGS COORDINATES - PHASE 1				
		BORING NAME	NORTHING	EASTING	LATITUDE	LATITUDE
	1	B-600	231172.5680	1957074.4630	N39°08'04.86490"	W79°32'25.00397"
	2	B-601	230992.0380	1957057.6480	N39°08'03.08046"	W79°32'25.21634"
	3	B-602	231094.8880	1957365.7280	N39°08'04.09839"	W79°32'21.30703"
	4	B-603	230897.1140	1957326.5380	N39°08'02.14341"	W79°32'21.80330"
	5	B-604	231069.0090	1957657.4290	N39°08'03.84384"	W79°32'17.60486"
	6	B-605	230795.6500	1957615.9930	N39°08'01.14177"	W79°32'18.12925"
	7	B-606	231005.0820	1957954.4830	N39°08'03.21322"	W79°32'13.83457"
	8	B-607	230761.4360	1957928.6520	N39°08'00.80490"	W79°32'14.16111"
	9	B-608	230951.6830	1958255.9220	N39°08'02.68663"	W79°32'10.00869"
	10	B-609	230718.3370	1958239.3000	N39°08'00.38017"	W79°32'10.21845"
	11	B-610	230665.9440	1958483.7650	N39°07'59.86327"	W79°32'07.11569"
	12	B-611	230954.1750	1958628.6510	N39°08'02.71272"	W79°32'05.27836"
	13	B-612	230915.9020	1958853.6420	N39°08'02.33528"	W79°32'02.42279"
	14	B-613	230583.1550	1958796.7570	N39°07'59.04618"	W79°32'03.14312"
	15	B-614	230884.1760	1959139.3510	N39°08'02.02275"	W79°31'58.79669"
	16	B-615	230728.5770	1959126.5160	N39°08'00.48476"	W79°31'58.95885"
	17	B-616	230505.7810	1959091.3570	N39°07'58.28250"	W79°31'59.40401"
	18	B-617	230870.8820	1959416.4240	N39°08'01.89234"	W79°31'55.28027"
	19	B-618	230490.7390	1959413.7610	N39°07'58.13498"	W79°31'55.31235"
	20	B-619	230861.0180	1959708.7090	N39°08'01.79586"	W79°31'51.57082"
	21	B-620	230451.7060	1959719.7140	N39°07'57.75024"	W79°31'51.42937"
	22	B-621	230626.0730	1959720.5000	N39°07'59.47369"	W79°31'51.42015"
	23	B-622	230869.9110	1960005.5860	N39°08'01.88475"	W79°31'47.80317"
	24	B-623	230469.1680	1960055.6800	N39°07'57.92396"	W79°31'47.16574"
	25	B-624	230889.9780	1960278.6970	N39°08'02.08398"	W79°31'44.33719"
	26	B-625	230546.5530	1960369.2650	N39°07'58.68984"	W79°31'43.18639"
	27	B-626	230918.6300	1960549.0560	N39°08'02.36803"	W79°31'40.90615"
	28	B-627	230610.5710	1960651.4740	N39°07'59.32347"	W79°31'39.60515"
	29	B-628	230713.0800	1960959.5670	N39°08'00.33760"	W79°31'35.69555"
	30	B-629	230981.7380	1960851.3220	N39°08'02.99270"	W79°31'37.07031"
	31	B-630	230768.6950	1961237.5360	N39°08'00.88809"	W79°31'32.16805"
	32	B-631	230858.2600	1961224.4470	N39°08'01.77332"	W79°31'32.33449"
	33	B-632	231061.2230	1961149.8260	N39°08'03.77921"	W79°31'33.28225"
	34	B-633	230962.7440	1961472.7980	N39°08'02.80674"	W79°31'29.18302"
	35	B-634	230784.8660	1961570.1600	N39°08'01.04885"	W79°31'27.94677"
	36	B-635	231191.1040	1961398.4320	N39°08'05.06365"	W79°31'30.12761"
	37	B-636	230796.3800	1961845.8000	N39°08'01.16338"	W79°31'24.44865"
	38	B-637	231090.9860	1961772.3050	N39°08'04.07508"	W79°31'25.38237"
	39	B-638	231312.6130	1961686.0630	N39°08'06.26543"	W79°31'26.47763"
	40	B-639	230748.6110	1962057.3950	N39°08'00.69176"	W79°31'21.76314"
	41	B-640	230987.8920	1961994.8290	N39°08'03.05667"	W79°31'22.55794"
	42	B-641	231398.9710	1961806.2160	N39°08'07.11931"	W79°31'24.95302"
	43	B-641A	231216.0340	1961879.7160	N39°08'05.31134"	W79°31'24.01961"
	44	B-642	231443.2640	1962071.1120	N39°08'07.55778"	W79°31'21.59128"
	45	B-643	231047.9530	1962273.2560	N39°08'03.65100"	W79°31'19.02458"
	46	B-644	231344.9370	1962180.9760	N39°08'06.58618"	W79°31'20.19665"
	47	B-645	231217.2570	1962473.2960	N39°08'05.32489"	W79°31'16.48635"
	48	B-646	231534.3480	1962356.0040	N39°08'08.45875"	W79°31'17.97590"
	49	B-647	231445.7040	1962418.3170	N39°08'07.58274"	W79°31'17.18479"
	50	B-648	231554.2260	1962675.9640	N39°08'08.65597"	W79°31'13.91522"
	51	B-649	231714.5500	1962608.9880	N39°08'10.24046"	W79°31'14.76571"
	52	B-650	231388.3920	1962747.4920	N39°08'07.01702"	W79°31'13.00695"
	53	B-651	231491.8920	1963029.4700	N39°08'08.04063"	W79°31'09.42856"
	54	B-652	231672.4760	1962955.0650	N39°08'09.82537"	W79°31'10.37336"
	55	B-653	231832.8670	1962899.1500	N39°08'11.41056"	W79°31'11.08345"
	56	B-654	231600.3560	1963313.6800	N39°08'09.11328"	W79°31'05.82182"
	57	B-655	231784.5910	1963260.1240	N39°08'10.93416"	W79°31'06.50200"
	58	B-656	231924.0440	1963226.8450	N39°08'12.31245"	W79°31'06.92473"
	59	B-657	231978.7710	1963535.6370	N39°08'12.85399"	W79°31'03.00581"
	60	B-658	231673.6770	1963590.7020	N39°08'09.83853"	W79°31'02.30620"
	61	B-659	231856.5750	1963589.8080	N39°08'11.64630"	W79°31'02.31799"
	62	B-660	231985.0650	1963870.1760	N39°08'12.91682"	W79°30'58.75998"
	63	B-661	231722.4630	1963889.4580	N39°08'10.32128"	W79°30'58.51466"
	64	B-662	231878.4010	1963897.8480	N39°08'11.86260"	W79°30'58.40853"
	65	B-663	231698.8630	1964159.3390	N39°08'10.08849"	W79°30'55.08941"

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## NGE BORINGS

		STRUCTURE CORE BORINGS COORDINATES - PHASE 1				
		BORING NAME	NORTHING	EASTING	LATITUDE	LATITUDE
	1	DS-1	232203.6560	1976846.8330	N39°08'15.06803"	W79°28'14.06424"
	2	DS-2	232212.7980	1976814.6400	N39°08'15.15849"	W79°28'14.47279"
	3	DS-3	232206.4960	1976781.7700	N39°08'15.09631"	W79°28'14.88999"
	4	DS-4	232009.2990	1976838.3470	N39°08'13.14702"	W79°28'14.17275"
	5	DS-5	232002.9980	1976805.4800	N39°08'13.08485"	W79°28'14.58991"
	6	DS-6	232012.1400	1976773.2900	N39°08'13.17531"	W79°28'14.99842"
	7	DS-7	232251.8240	1976848.9420	N39°08'15.54411"	W79°28'14.03727"
	8	DS-8	232254.6640	1976783.8790	N39°08'15.57239"	W79°28'14.86303"
	9	DS-9	231970.2070	1976836.6460	N39°08'12.76064"	W79°28'14.19450"
	10	DS-10	231969.0520	1976771.4090	N39°08'12.74943"	W79°28'15.02247"
	11	LR-1	230879.7190	1954298.2610	N39°08'01.95658"	W79°33'00.23527"
	12	LR-2	230837.3660	1954305.7270	N39°08'01.53800"	W79°33'00.14022"
	13	LR-3	230795.0260	1954313.1940	N39°08'01.11955"	W79°33'00.04516"
	14	LR-4	231045.2240	1954447.8230	N39°08'03.59325"	W79°32'58.33833"
	15	LR-5	230684.5560	1954487.0480	N39°08'00.02861"	W79°32'57.83800"
	16	LR-6	230903.3830	1954507.3280	N39°08'02.19161"	W79°32'57.58216"
	17	LR-7	230873.8440	1954512.5370	N39°08'01.89968"	W79°32'57.51584"
	18	LR-8	230844.2940	1954517.7460	N39°08'01.60763"	W79°32'57.44953"
	19	LR-9	230948.8790	1954765.3470	N39°08'02.64269"	W79°32'54.30793"
	20	LR-10	230919.3400	1954770.5570	N39°08'02.35075"	W79°32'54.24160"
	21	LR-11	230889.7960	1954775.7660	N39°08'02.05876"	W79°32'54.17530"
	22	LR-12	230994.3860	1955023.3670	N39°08'03.09384"	W79°32'51.03367"
	23	LR-13	230964.8420	1955028.5760	N39°08'02.80185"	W79°32'50.96737"
	24	LR-14	230935.2920	1955033.7860	N39°08'02.50981"	W79°32'50.90105"
	25	LR-15	230979.4570	1955111.5270	N39°08'02.94674"	W79°32'49.91473"
	26	LR-16	231083.5370	1955114.2950	N39°08'03.97549"	W79°32'49.88029"
	27	LR-17	230874.6440	1955138.9440	N39°08'01.91091"	W79°32'49.56608"
	28	LR-18	231043.6550	1955227.9190	N39°08'03.58188"	W79°32'48.43800"
	29	LR-19	231001.3080	1955235.3860	N39°08'03.16336"	W79°32'48.34296"
	30	LR-20	230958.9670	1955242.8530	N39°08'02.74490"	W79°32'48.24792"
	31	MK-1	222501.1680	1935793.7480	N39°06'38.97434"	W79°36'54.94075"
	32	MK-2	222452.1170	1935818.6290	N39°06'38.48983"	W79°36'54.62429"
	33	MK-3	222403.0670	1935843.5100	N39°06'38.00533"	W79°36'54.30783"
	34	MK-4	222551.8990	1935904.8120	N39°06'39.47717"	W79°36'53.53252"
	35	MK-5	222507.3080	1935927.4310	N39°06'39.03672"	W79°36'53.24483"
	36	MK-6	222462.7170	1935950.0500	N39°06'38.59626"	W79°36'52.95714"
	37	MK-7	222623.8280	1936046.6120	N39°06'40.18991"	W79°36'51.73467"
	38	MK-8	222579.2370	1936069.2310	N39°06'39.74945"	W79°36'51.44699"
	39	MK-9	222534.6460	1936091.8500	N39°06'39.30900"	W79°36'51.15930"
	40	MK-10	222683.4780	1936153.1530	N39°06'40.78083"	W79°36'50.38396"
	41	MK-11	222634.4280	1936178.0340	N39°06'40.29633"	W79°36'50.06750"
	42	MK-12	222585.3770	1936202.9150	N39°06'39.81182"	W79°36'49.75105"
	43	NF-1	231860.5890	1964422.3590	N39°08'11.68743"	W79°30'51.75163"
	44	NF-2	231825.4660	1964416.3760	N39°08'11.34026"	W79°30'51.82749"
	45	NF-3	231790.3430	1964410.3940	N39°08'10.99309"	W79°30'51.90334"
	46	NF-4	232000.6860	1964453.6960	N39°08'13.07220"	W79°30'51.35419"
	47	NF-5	231671.4590	1964421.1640	N39°08'09.81805"	W79°30'51.76641"
	48	NF-6	231827.4430	1964553.6570	N39°08'11.36001"	W79°30'50.08519"
	49	NF-7	231802.7980	1964549.4590	N39°08'11.11641"	W79°30'50.13842"
	50	NF-8	231778.1530	1964545.2620	N39°08'10.87282"	W79°30'50.19163"
	51	NF-9	231965.4190	1964660.7390	N39°08'12.72394"	W79°30'48.72641"
	52	NF-10	231802.2550	1964701.5280	N39°08'11.11128"	W79°30'48.20843"
	53	NF-11	231777.6100	1964697.3300	N39°08'10.86768"	W79°30'48.26166"
	54	NF-12	231752.9650	1964693.1320	N39°08'10.62408"	W79°30'48.31489"
	55	NF-13	231779.5870	1964834.6110	N39°08'10.88742"	W79°30'46.51936"
	56	NF-14	231754.9420	1964830.4130	N39°08'10.64382"	W79°30'46.57259"
	57	NF-15	231730.2970	1964826.2150	N39°08'10.40022"	W79°30'46.62583"
	58	NF-18	231670.1440	1965328.2420	N39°08'09.80633"	W79°30'40.25426"
	59	NF-19	231656.7110	1965407.1070	N39°08'09.67366"	W79°30'39.25332"
	60	NF-20	231643.2780	1965485.9710	N39°08'09.54098"	W79°30'38.25241"
	61	NF-21	231655.3290	1965564.1040	N39°08'09.66018"	W79°30'37.26080"
	62	NF-22	231630.6840	1965559.9060	N39°08'09.41658"	W79°30'37.31404"
	63	NF-23	231606.0390	1965555.7080	N39°08'09.17299"	W79°30'37.36729"
	64	NF-24	231629.3020	1965716.8770	N39°08'09.40310"	W79°30'35.32185"
	65	NF-25	231604.6570	1965712.6790	N39°08'09.15950"	W79°30'35.37510"

[illegible]



66	NF-26	231580.0120	1965708.4820	N39°08'08.91590"	W79°30'35.42833"	1	High
67	NF-27	231666.2990	1965878.7050	N39°08'09.76895"	W79°30'33.26807"	1	High
68	NF-28	231497.1440	1965842.0210	N39°08'08.09697"	W79°30'33.73342"	1	High
69	NF-29	231613.7580	1965871.4610	N39°08'09.24962"	W79°30'33.35994"	1	High
70	NF-30	231578.6340	1965865.4780	N39°08'08.90245"	W79°30'33.43583"	1	High
71	NF-31	231543.5110	1965859.4950	N39°08'08.55529"	W79°30'33.51171"	1	High
72	SP-1	231148.2940	1970756.3100	N39°08'04.64931"	W79°29'31.36471"	3	Medium
73	SP-2	231102.3360	1970734.3760	N39°08'04.19508"	W79°29'31.64313"	3	Medium
74	SP-3	231057.5210	1970713.0130	N39°08'03.75214"	W79°29'31.91430"	3	Medium
75	SP-4	231162.1850	1970930.8470	N39°08'04.78645"	W79°29'29.14960"	3	Medium
76	SP-5	231116.0660	1970908.8500	N39°08'04.33063"	W79°29'29.42883"	3	Medium
77	SP-6	231071.2510	1970887.4740	N39°08'03.88769"	W79°29'29.70017"	3	Medium
78	SP-7	231175.9150	1971105.3070	N39°08'04.92199"	W79°29'26.93548"	3	Medium
79	SP-8	231129.7970	1971083.2970	N39°08'04.46618"	W79°29'27.21487"	3	Medium
80	SP-9	231084.9820	1971061.9340	N39°08'04.02324"	W79°29'27.48605"	3	Medium
81	US219-1	230330.2390	1945358.8240	N39°07'56.46076"	W79°34'53.67992"	6	Low
82	US219-2	230372.5300	1945332.9410	N39°07'56.87853"	W79°34'54.00888"	6	Low
83	US219-3	230399.3260	1945376.7260	N39°07'57.14377"	W79°34'53.45352"	6	Low
84	US219-4	230357.0350	1945402.6080	N39°07'56.72600"	W79°34'53.12457"	6	Low
85	US219-5	230379.1750	1945358.9670	N39°07'56.94444"	W79°34'53.67867"	6	Low
86	US219-6	230596.6400	1945195.7860	N39°07'59.09240"	W79°34'55.75209"	6	Low
87	US219-7	230545.8190	1945226.8880	N39°07'58.59037"	W79°34'55.35679"	6	Low
88	US219-8	230572.6150	1945270.6730	N39°07'58.85562"	W79°34'54.80143"	6	Low
89	US219-9	230623.4360	1945239.5700	N39°07'59.35765"	W79°34'55.19674"	6	Low
90	US219-10	230565.9710	1945244.6470	N39°07'58.78971"	W79°34'55.13165"	6	Low
91	WV32-1	231883.8300	1974518.9400	N39°08'11.91334"	W79°28'43.61019"	4	Medium
92	WV32-2	231854.0630	1974427.3260	N39°08'11.61933"	W79°28'44.77300"	4	Medium
93	WV32-3	231823.6750	1974333.8010	N39°08'11.31919"	W79°28'45.96007"	4	Medium
94	WV32-4	231793.9050	1974242.1790	N39°08'11.02515"	W79°28'47.12298"	4	Medium
95	WV32-5	231819.0790	1974539.9790	N39°08'11.27329"	W79°28'43.34337"	4	Medium
96	WV32-6	231789.3120	1974448.3650	N39°08'10.97928"	W79°28'44.50618"	4	Medium
97	WV32-7	231758.9240	1974354.8400	N39°08'10.67914"	W79°28'45.69324"	4	Medium
98	WV32-8	231729.1540	1974263.2180	N39°08'10.38510"	W79°28'46.85615"	4	Medium
99	WV32-9	231754.3340	1974561.0160	N39°08'10.63330"	W79°28'43.07657"	4	Medium
100	WV32-10	231724.5670	1974469.4020	N39°08'10.33929"	W79°28'44.23938"	4	Medium
101	WV32-11	231694.1790	1974375.8770	N39°08'10.03915"	W79°28'45.42644"	4	Medium
102	WV32-12	231664.4030	1974284.2570	N39°08'09.74505"	W79°28'46.58932"	4	Medium
103	WV32-13	231936.6100	1974503.1240	N39°08'12.43506"	W79°28'43.81076"	4	Medium
104	WV32-14	231828.6820	1974169.1080	N39°08'11.36905"	W79°28'48.05026"	4	Medium
105	WV32-15	231723.6360	1974626.0410	N39°08'10.32972"	W79°28'42.25140"	4	Medium
106	WV32-16	231612.5730	1974299.7610	N39°08'09.23273"	W79°28'46.39270"	4	Medium

STRUCTURE CORE BORINGS COORDINATES - PHASE 2					
	BORING NAME	NORTHING	EASTING	LATITUDE	LATITUDE
107	NF-16	231716.3280	1965057.1060	N39°08'10.26247"	W79°30'43.69545"
108	NF-17	231690.2940	1965209.9460	N39°08'10.00535"	W79°30'41.75564"

Priority	
Order	Level (High, Med, Low)
8	High
8	High

**Attachment 7:**  
**U.S. Fish and Wildlife Service**  
**Tricolored Bat Concurrence**

----- Forwarded message -----

From: **Burke, Theresa (FHWA)** <[theresa.burke@dot.gov](mailto:theresa.burke@dot.gov)>

Date: Tue, May 30, 2023 at 3:51 PM

Subject: FW: [EXTERNAL] Cor H P2D tricolored bat

To: Lovell R Facemire <[lovell.r.facemire@wv.gov](mailto:lovell.r.facemire@wv.gov)>, Mullins, Sondra L <[sondra.l.mullins@wv.gov](mailto:sondra.l.mullins@wv.gov)>

Cc: Workman, Jason (FHWA) <[Jason.Workman@dot.gov](mailto:Jason.Workman@dot.gov)>

Please make sure this gets inserted into the CE for Cor H, P2D core borings. I am reviewing the CE now, but we just need to make sure this is in the final document.

**Theresa (Sydney) Burke**

*Environmental Protection Specialist*

Federal Highway Administration

300 Virginia Street East, Suite 7400

Charleston, WV 25301

Phone: 304.347.5436

---

**From:** Stout, Elizabeth <[Elizabeth\\_Stout@fws.gov](mailto:Elizabeth_Stout@fws.gov)>

**Sent:** Tuesday, May 30, 2023 3:48 PM

**To:** Burke, Theresa (FHWA) <[theresa.burke@dot.gov](mailto:theresa.burke@dot.gov)>

**Cc:** Workman, Jason (FHWA) <[Jason.Workman@dot.gov](mailto:Jason.Workman@dot.gov)>

**Subject:** Re: [EXTERNAL] Cor H P2D tricolored bat

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



Sydney,

Yes, the WVFO concurs with this determination.

**Liz Stout** (she/her)

Fish and Wildlife Biologist

U.S. Fish and Wildlife Service | West Virginia Field Office

6263 Appalachian Highway | Davis, West Virginia 26260

304-866-3858 (Office)

<https://www.fws.gov/office/west-virginia-ecological-services>

---

**From:** Burke, Theresa (FHWA) <[theresa.burke@dot.gov](mailto:theresa.burke@dot.gov)>

**Sent:** Tuesday, May 23, 2023 10:53 AM

**To:** Stout, Elizabeth <[Elizabeth\\_Stout@fws.gov](mailto:Elizabeth_Stout@fws.gov)>

**Cc:** Workman, Jason (FHWA) <[Jason.Workman@dot.gov](mailto:Jason.Workman@dot.gov)>

**Subject:** [EXTERNAL] Cor H P2D tricolored bat

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Liz,

The tricolored bat (*Perimyotis subflavus*) was not addressed in the BO for Corridor H, Parsons to Davis core boring activities. However, Section 7(a)(4) of the ESA requires Federal agencies to consider if any action is likely to jeopardize the continued existence of proposed species or result in the destruction or adverse modification of proposed critical habitat. Under the ESA, the USFWS proposed listing of the tricolored bat as endangered on September 14, 2022. The species does have the potential to occur in the Action Area associated with geotechnical studies based on USFWS IPaC review. Two individuals have been captured within the project area: one individual in 2016 (no morphometric data was collected), and one adult male in 2019. No tricolored bats were captured during compliance mist netting for the project in 2021 or 2022. No hibernacula for the species are located within the Action Area, and no critical habitat has been proposed at this time.

The proposed rule for listing the tricolored bat as endangered was published in the Federal Register on September 14, 2022. The expected decision from USFWS to list the tricolored bat as an endangered species is one year from this date, September 14, 2023. The core boring action for the Corridor H Parsons to Davis project will take approximately 9 months to complete, however the main impact to the species with this project is tree removal, which will be completed by September 14, 2023. Based on the scope and size of the project, as well as time of year the tree removal will be completed, FHWA has determined that the Corridor H Parsons to Davis geotechnical project is not likely to jeopardize the continued existence of the tricolored bat, nor will it cause an adverse modification of designated critical habitat of this species.

Do you concur with this determination?

Please let me know if you have any questions.

Thanks,

Sydney

**Theresa (Sydney) Burke**

*Environmental Protection Specialist*

Federal Highway Administration

300 Virginia Street East, Suite 7400

Charleston, WV 25301

Phone: 304.347.5436

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**Lovell R Facemire PE PS**

Engineer

Technical Support Division

WV Division of Highways

1334 Smith Street

Charleston WV, 25301

☎304-414-6441



**Attachment 8:**  
**USFWS Biological Opinion**

# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

West Virginia Field Office  
6263 Appalachian Highway  
Davis, West Virginia 26260



May 12, 2023

Mr. Jeffrey Blanton  
Federal Highways Administration  
154 Court Street  
Charleston, West Virginia 25301

Re: West Virginia Division of Highways, Appalachian Corridor H Parsons to Davis Section  
Core Borings Project, Tucker County, West Virginia (FWS File Number: 2023-0048894)

Dear Jeffrey:

Thank you for the opportunity to review the biological assessment (BA) provided by the Federal Highway Administration (FHWA) for the proposed West Virginia Division of Highways (WVDOH) Appalachian Corridor H Parsons to Davis section core borings project in Tucker County, West Virginia. This document transmits the U.S. Fish and Wildlife Service's (Service) West Virginia Field Office (WVFO) biological opinion (Opinion) based on our review of the biological assessment (BA) and initiation of formal consultation on April 24, 2023. This project has been assigned the Service File number 2023-0048894; all future correspondence should reference this file number.

In accordance with Section 7 of the Endangered Species Act (ESA; 16 U.S.C. 1531-1544, 87 Stat. 884), as amended, the FHWA requested the Service's concurrence with a "likely to adversely affect" determination for the federally endangered rusty patched bumble bee (*Bombus affinis*), Virginia big-eared bat (*Corynorhinus townsendii virginianus*), Indiana bat (*Myotis sodalis*), and northern long-eared bat (*Myotis septentrionalis*). Additionally, the FHWA requested the Service's concurrence with a "not likely to adversely affect" determination for the threatened Cheat Mountain salamander (*Plethodon nettingi*) and small whorled pogonia (*Isotria medeoloides*). The Service does not anticipate that this project is likely to adversely affect the Cheat Mountain salamander because activities will avoid all potentially suitable habitat for this species; furthermore, project impacts to habitats adjacent to potentially suitable salamander habitat are not expected to rise to a level that would alter the suitability of habitat for the salamander. The Service does not anticipate that this project is likely to adversely affect small whorled pogonia because the species was not encountered during survey efforts within the action area. Therefore, this Opinion only addresses the potential effects of the project on the federally endangered rusty patched bumble bee, Virginia big-eared bat, Indiana bat, and northern long-

eared bat. Species that are not likely to be adversely affected will not be discussed further within this Opinion. Additionally, those components of the proposed action determined to result in “no effect” or “not likely to adversely affect” to listed species will not be further discussed in this Opinion.

#### Consultation History

FHWA provided a request for formal consultation, dated April 24, 2023, which was received by the Service on the same day. This Opinion is based on information provided in the BA dated April 14, 2023, telephone conversations, email communication, and other sources of information. The consultation history is located in Appendix A. Additionally, a complete administrative record of this consultation is on file in this office.

### **BIOLOGICAL OPINION**

#### DESCRIPTION OF PROPOSED ACTION

As defined in the ESA Section 7 regulations (50 CFR 402.02), “action” means “all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by federal agencies in the United States or upon the high seas.”

The following is a summary of the proposed action. A detailed description of the project can be found in the BA (pages 19-23) and Figures with project details in Appendix A of the BA. The FHWA and the WVDOH propose core boring geotechnical studies for Appalachian Corridor H on the Parsons to Davis Section and Section 5 of Kerens to Parsons. These studies will facilitate engineering plans, final siting, and road construction designs by identifying soil and substrate compositions by drilling through substrates at pre-determined bore sites. These activities will take place at 485 sites within the proposed road study area in Tucker County. Access roads, pads, and associated laydown yards will also be constructed to support the boring activities. At the conclusion of the geotechnical studies, all disturbed areas will be reclaimed and restored to original contours, seeded, fertilized, and mulched. All activities associated with the project will impact a maximum of approximately 60.1 acres. The activities are proposed to take approximately nine months to complete and will begin during summer of 2023.

The geotechnical studies for the Parsons to Davis section will begin approximately 0.3 miles southwest of the intersection of Tucker County Route 219/4 and US-219 and will extend to State Route 32. Studies will also occur for the road connector to Tucker County High School and for the truck route around Thomas. A total of 458 boring sites are proposed for this section.

Studies for Kerens to Parsons Section 5 will take place approximately 0.1 miles west of County Route 219/4 near US Route 48 and continue to approximately 0.3 miles east of County Route 219/4. A total of 27 boring sites are proposed for this section.

The proposed action will include clearing and grading, access road construction, construction of laydown yards and boring pads, and geotechnical boring activities. Vegetation clearing and earth grading will occur to prepare access roads, laydown yards, and bore pads. Access roads varying from 12 to 16 feet in width will be constructed throughout the project. Access road construction will include 28.1 acres of new roads and 13 acres of reconstructed access roads to total 41.1



acres of access road impacts. Approximately 2.2 acres of laydown yards will be constructed adjacent to access roads. These laydown yards will be utilized for parking, field offices, and equipment storage. Access roads will traverse or terminate at boring pads. Boring pads are installed to facilitate geotechnical activities. Boring pads will measure approximately 20 by 30 feet to accommodate boring equipment, work crews, and sumps for retaining water spent during boring. Sumps will be constructed at the lowest point of every boring pad and measure a minimum of 3 feet by 5 feet and will be surrounded by erosion control best management practices. Approximately 485 boring pads totaling approximately 7 acres of disturbance will be constructed across the project area. At each bore site, a bore hole measure 3 inches in diameter will be drilled between 10 and 3,000 feet deep. Depth and substrate material will determine the amount of time needed to complete boring at a site. Bore holes will be backfilled once boring is completed. No bore holes are proposed within streams.

#### Conservation Measures

Conservation measures are those actions taken to benefit or promote the recovery of the species and are included as an integral portion of the proposed action. These actions will be taken by the Federal agency or the project proponent and serve to minimize or compensate for project effects on the species under review. The FHWA and WVDOT have committed to completing the conservation measures listed below, which are more fully detailed in the BA (pages 23-26).

1. Focus project design to utilize existing infrastructure as much as possible to reduce the need for new disturbance/construction.
2. Minimize the width of new and reconstructed roads.
3. Minimize stream and wetland crossings.
4. Reclaim and restore bore pads and access roads to original conditions following boring activities using native seed mixes and straw.
5. Straw instead of hay will be used during mulching and seeding to reduce the spread of invasive species.
6. Cover abandoned mine portal openings of 3A, 3B, and 3C with one inch mesh prior to the beginning of any construction activities to exclude bats from using the portals, with the goal of reducing the likelihood of adverse effects to bats inside the portals during boring activities.
7. Reseal the bore holes following drilling activities.
8. Plug bore holes immediately following drilling if an open void in the mine seam is encountered proximate to known Virginia big-eared bat roosting habitat at the Coketon portals.
9. Implement best management practices for erosion and sedimentation control which follow requirements in the National Pollutant Discharge Elimination System General Construction Stormwater Permit issued by the U.S. Environmental Protection Agency. These include compost filter socks, water bars, super silt fences, timber matting, rolled erosion control devices, and stabilized construction entrances.
10. Check, repair, and maintain erosion and sedimentation controls within 24 hours of any precipitation event resulting in a ¼-inch of rain that occurs within a 24-hour period.
11. Apply temporary seeding and mulching within four days of disturbance where ground disturbance occurs but is left alone for more than 14 days.
12. Seed and mulch disturbed areas within four days of final grading.

13. Stabilize disturbed areas of earth disturbance within four days of construction completion.
14. Maintain fire suppression equipment for all construction and boring machinery, as well as spill kits in the event of equipment leaking or fuel spills. In the event of a spill, it will be reported upon discovery to the agencies.

## **ACTION AREA**

The Action Area is defined (50 CFR 402.02) as “all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action.” The BA provides a thorough description of the Action Area (pages 19-23, 26 and Appendix A). The Service has determined that the Action Area for this project is all lands within ¼-mile of geotechnical activities. The geotechnical activities include all access roads, laydown yards, boring pads, and boring locations proximate the Parsons to Davis centerline and Section 5 of Kerens to Parsons. The geotechnical studies for the Parsons to Davis section will begin approximately 0.3 miles southwest of the intersection of Tucker County Route 219/4 and US-219 and will extend to West Virginia State Route 32. Studies will also occur for the road connector to Tucker County High School and for the truck route around Thomas. Studies for Kerens to Parsons Section 5 will take place approximately 0.1 miles west of County Route 219/4 near US Route 48 and continue to approximately 0.3 miles east of County Route 219/4.

## **STATUS OF THE SPECIES**

Per ESA Section 7 regulations (50 CFR 402.14(g)(2)), it is the Service’s responsibility to “evaluate the current status of the listed species or critical habitat.”

### Rusty patched bumble bee

The Service listed the rusty patched bumble bee as endangered on March 21, 2017 (82 FR 3186) and found that the designation of critical habitat for this species was not prudent on September 1, 2020 (85 FR 54281 54285). The primary factors influencing the listing decision include risks posed by pathogens, pesticides, habitat loss and degradation, small population dynamics, and climate change (82 FR 3186-3209).

The following is a summary of rusty patched bumble bee life history drawn from 82 FR 3186-3209. For a more detailed account of the species description, life history, population dynamics, threats, and conservation needs, refer to <https://ecos.fws.gov/ecp/species/9383>.

### *Species Description and Life History*

The rusty patched bumble bee is a eusocial (highly social) organism forming colonies consisting of a single queen, female workers, and males. Colony sizes of rusty patched bumble bee are considered large compared to other bumble bees, and healthy colonies may consist of up to 1000 individual workers in a season (Macfarlane et al. 1994). Queens and workers differ slightly in size and coloration; queens are larger than workers (Plath 1922, Mitchell 1962). All rusty patched bumble bees have entirely black heads, but only workers and males have a rusty reddish patch centrally located on the abdomen.

The rusty patched bumble bee annual cycle begins in early spring with colony initiation by solitary queens and progresses with the production of workers throughout the summer and ending with the production of reproductive individuals, males and new queens, in mid to late summer and early fall (Plath 1922, Macfarlane et al. 1994, Colla and Dumesch 2010). The males and new queens disperse to mate and the original founding queen and all males and workers die. The new queens go into diapause (a form of hibernation) over winter. The following spring, the queen, or foundress, searches for suitable nest sites and collects nectar and pollen from flowers to support the production of her eggs, which are fertilized by sperm she has stored since mating the previous fall. She is solely responsible for establishing the colony. As the workers hatch and the colony grows, they assume the responsibility of food collection, colony defense, and care of the young, while the foundress remains within the nest and continues to lay eggs.

### *General Habitat Requirements*

The rusty patched bumble bee has been observed and collected in a variety of habitats, including prairies, woodlands, marshes, agricultural landscapes, and residential parks and gardens (Colla and Packer 2008, Colla and Dumesch 2010). Rusty patched bumble bees require areas that support enough food (nectar and pollen from diverse and abundant flowers), undisturbed nesting sites in proximity to floral resources, and overwintering sites for hibernating queens (Goulson et al. 2015, Potts et al. 2010).

Bumble bees are generalist foragers, meaning they gather pollen and nectar from a wide variety of flowering plants (Xerces 2013). The species is one of the first bumble bees to emerge early in the spring and the last to go into hibernation. Thus, to meet nutritional needs, rusty patched bumble bees require a constant and diverse supply of flowers that bloom throughout the colony's long life cycle, from April through September (MacFarlane et al. 1994). The nectar from flowers provides carbohydrates and the pollen provides rusty patched bumble bees with protein. The number of queens that a colony can produce is directly related to the amount of pollen that is available. It has been suggested that the rusty patched bumble bee needs floral resources in close proximity to its nest sites, because studies of other *Bombus* species typically exhibit foraging distances of less than 1 km from their nesting sites (Dramstad 1996, Osborne et al. 1999, Knight et al. 2005, Wolf and Moritz 2008, Rao and Strange 2012).

The rusty patched bumble bee may also be dependent on woodland spring ephemeral flowers because of the species' early emergence in the spring and is often associated with woodland habitats (Colla and Dumesch 2010). Rusty patched bumble bee nests are typically in abandoned rodent burrows or other similar cavities, one to four feet below ground (Plath 1922, Macfarlane et al. 1994). Rusty patched bumble bee nests have also been occasionally observed above ground (Plath 1922). Little is known about the overwintering habitats of rusty patched bumble bee foundress queens, but other species of *Bombus* typically form a chamber in soft soil, a few centimeters deep and sometimes use compost or mole hills to overwinter (Goulson 2010).

In West Virginia, the rusty patched bumble bee has been observed in a variety of habitats, including meadows, fields, woodlands, marshes, agricultural landscapes, and parks and gardens. It has the potential to occur throughout the entire state; however, it has been observed most often at high elevations (ridges, slopes, and valleys, usually above 2,000 feet in elevation) of the Allegheny Mountains and Shenandoah Mountain. The mountains and numerous streams and



rivers create a region of topographic complexity that provides habitat for a diversity of flowering plant communities to occur near each other. West Virginia's native flowering trees, shrubs, and herbs are likely a major part of rusty patched bumble bee diet, although they have been documented using non-native invasive species in West Virginia. The rusty patched bumble bee in West Virginia uses these different native flowering plant communities to fulfill dietary needs by foraging at the optimal flowering location and then changes location as the flowering resources decline and another flowering species starts blooming in a different part of the landscape. The rusty patched bumble bee population in the central Appalachian Mountains of West Virginia, Virginia, and Maryland habitat is different from that of the Midwest population in that the habitat is dominated by rural mountains and forests instead of urban parks and prairies. Initial data reveals the Appalachian Mountain population is isolated and unique genetically from the Midwest and elsewhere (pers. comm. M. Hepner, March 24, 2023).

#### *Range-wide Distribution and Abundance*

Historically, the rusty patched bumble bee was an abundant and wide-spread species, with populations across an expansive range encompassing 31 states: Connecticut, Delaware, District of Columbia, Georgia, Illinois, Indiana, Iowa, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Ontario, Pennsylvania, Quebec, Rhode Island, South Carolina, South Dakota, Tennessee, Vermont, Virginia, West Virginia, and Wisconsin. Since 2000, the rusty patched bumble bee has been reported from 15 States/Provinces: Illinois, Indiana, Iowa, Maine, Maryland, Massachusetts, Minnesota, North Carolina, Ontario, Ohio, Pennsylvania, Tennessee, Virginia, Wisconsin, and West Virginia.

Since the late 1990s, rusty patched bumble bee distribution and abundance has declined (Service 2016). Five percent of the historical locations are currently occupied by the rusty patched bumble bee, and the relative abundance of rusty patched bumble bee declined from eight percent historically to one percent currently (Service 2016). Along with the loss of populations, a marked decrease in the spatial extent has occurred in recent times; the spatial extent is currently eight percent of its historical extent (Service 2016). This expansive reduction has likely led to loss of spatial heterogeneity and adaptive diversity (Service 2016). Furthermore, many of the existing populations continue to face the effects of past on ongoing stressors, including pathogens, pesticides, habitat loss and degradation, climate change, and small population dynamics (Service 2016). It is likely that several of these risk factors are acting synergistically on the species, and the combination of multiple stressors is likely more harmful than a single stressor acting alone (Service 2016).

In West Virginia, 217 rusty patched bumble bees have been encountered during survey efforts since the species was listed under the ESA. During the most recent field season in 2022, 64 individuals of all castes were encountered in the state. All detections of the species are from the eastern portion of the state. Most observations of the rusty patched bumble bee are of a single individual or small numbers of bees at each location; therefore, there are no density or abundance estimates for rusty patched bumble bees in West Virginia.

#### Virginia big eared bat

The following is a summary of Virginia big-eared bat life history drawn from the species' listing

decision, recovery plan, and Five-year review. For a more detailed account of the species description, life history, population dynamics, threats, and conservation needs, refer to <https://ecos.fws.gov/ecp/species/8369>.

#### *Species Description and Life History*

Virginia big-eared bats are one of two subspecies of Townsend's big-eared bat that were jointly listed as endangered on December 13, 1979. Critical habitat was designated concurrent with the listing decision and consists of five caves, all in West Virginia. They are Cave Mountain, Hellhole, Hoffman School, Sinnett/Thorn Mountain, and Cave Hollow/Arbogast.

Virginia big-eared bats are medium-sized bats that are distinguishable by hanging long ears (over 2.5 centimeters) and facial glands on either side of the snout. They closely resemble the Ozark big-eared bat (*Corynorhinus townsendii ingens*), but the two species do not have overlapping ranges.

Reproduction occurs in the fall and winter and the females store the sperm until ovulation in late winter or spring. Gestation takes about three months, and a single pup is born in May or June. In the early spring, females congregate in maternity colonies in the warm parts of certain caves, while male bats form bachelor colonies. Females give birth to a single pup that is approximately 25 percent of the female's weight. Pups are capable of flight in about three weeks and are fully weaned at six weeks (Barbour and Davis 1969, Schmidly 1991, Kunz and Martin 1982). Before the young can fly, the females leave them in the cave while they forage, returning periodically to nurse. Virginia big-eared bats hibernate in the cooler, well-ventilated portions of caves during the winter and may lose half their annual body weight before emerging in the spring.

Virginia big-eared bats principally feed on moths but eat other insects, as well. Lacki and Dodd (2011) summarized foraging strategies and prey selection for *Corynorhinus* species, including the Virginia big-eared bat. These species are foraging specialists with lepidopterans (moths) comprising greater than 80 percent of the prey (Lacki and Dodd 2011). *Corynorhinus* species use both aerial hawking and gleaning foraging strategies (meaning they capture prey in air or from the surface of objects) (Lacki and Dodd 2011). This genus of bats has several morphological features making them well-adapted to gleaning, which in turn can provide ecological advantages because gleaning bats are not dependent on actively flying insects during foraging efforts (Lacki and Dodd 2011). They can therefore feed later at night, at cooler temperatures, and for a longer season, than bats that rely solely on aerial hawking (Lacki and Dodd 2011). Foraging tends to occur near forest/edge interfaces and along forested and riparian corridors in areas that have abrupt changes in vertical structure as well as both vertical and horizontal surface area for gleaning (Lacki and Dodd 2011). Lacki and Dodd (2011) also note that the majority of moth species that make up the primary prey base for *Corynorhinus* bats are dependent on woody plant hosts for larval development. They therefore recommend managing for landscapes with "sufficient acreage in forest while providing for corridors and other forest/edge interfaces," although what constitutes "sufficient" has not yet been defined. These bats appear resilient to moderate levels of timber harvest but do require a diversity and abundance of local plant species, which suggests that managing for woody plant diversity is required to provide an adequate prey base (Lacki and Dodd 2011). Summerville and Crist (2002) found that moth species richness was significantly lower in clear-cut stands but did not differ between selectively logged and unlogged

stands. This is consistent with Stihler (1994) who found Virginia big-eared bats did not use clearcuts during foraging. Thus, selective logging appears to be a better strategy for timber harvests to maintain *Lepidoptera* species richness.

Based on telemetry studies of this species conducted in North Carolina, Kentucky, and West Virginia (Weber et al. 2016, Copperhead 2012 and 2014, WVDON 2017), data indicate that Virginia big-eared bat foraging areas are generally located within a few miles (less than 7 miles) of cave/mine roost sites and consist of a mix of primarily forested habitats interspersed with open fields/hay fields, cliff lines, rock shelters or outcrops, riparian areas, and water sources such as streams, ponds, and wetlands. Foraging areas should have a diversity of native woody plant species suitable to produce an ample number of moths and other prey and should be connected to the cave/mine site by suitable travel corridors. Foraging areas may also include small-scale/limited residential or rural development, and Virginia big-eared bats may use man-made structures for short-term day or night roosts. Substantial differences have been documented between foraging area and home range sizes at various known use sites. This could indicate that there are differences in habitat quality between sites, as well as differences between areas used during maternity versus fall periods. However, care must be taken when interpreting these results, as different criteria and methods may have been used between studies.

#### *General Habitat Requirements*

Virginia big-eared bats use caves and mine portals year-round for shelter and reproduction; thus, they occur in caves during both winter and summer. They have also been documented using exposed rock cliffs, boulder piles, and buildings as day roosts during the summer months. While not truly migratory, Virginia big-eared bats move relatively short distances of up to 20 miles between their winter hibernacula and maternity colonies (Stihler 1994, 1995). The caves they occupy are typically located in karst regions, a landscape characterized by limestone caves and sinkholes and dominated by oak-hickory or beech-maple-hemlock forest.

Virginia big-eared bats require a narrow range of microclimatic conditions (e.g., temperatures, humidity; Service 1984). This makes protecting and maintaining suitable sites highly important to the recovery of the species. The species is acutely sensitive to disturbance within sites, and can have increased mortality, have reduced reproductive success, or abandon sites completely as a result of disturbance or alteration of its habitats (Service 1984). This sensitivity and the species' concentration in a limited number of sites make it highly vulnerable to threats. The species is also threatened by the degradation and fragmentation of foraging areas, activities that could damage or degrade surface or subsurface areas of caves, barriers to migration and activities that reduce connectivity between roosting and foraging areas, as well as sources of direct mortality such as predation, roads, wind farms, and oil and brine pits (Service 2019). The effects of small population size and low genetic variability may also be threats (Service 2019).

#### *Range-wide Distribution and Abundance*

Virginia big-eared bats are distributed in isolated populations in the Appalachian Mountains in Kentucky, Tennessee, North Carolina, Virginia, West Virginia, and Maryland. Archeological records suggest that the historical range of the species once also included Pennsylvania (Guilday 1961). In 2022, the total population estimate for the species was approximately 19,019 bats in hibernacula and 12,195 within the known maternity sites. Most of these bats are currently



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concentrated in 10 hibernacula and 18 maternity sites distributed among four genetically distinct populations located in geographically distinct regions (Piaggio et al. 2009, Service 2019). Six of the hibernacula (60 percent) and nine of the maternity colony sites (50 percent) have long-term protection. These protected caves support 5,190 (27.3 percent) of the hibernating population and 5,531 (45.4 percent) of the maternity population.

The protected major hibernacula sites are owned by State resource agencies, the U. S. Forest Service, and The Nature Conservancy. However, the previously used definition of long-term protection does not explicitly address the fact that access violations can occur even if a site is gated. Three of the six “protected” hibernacula caves have been subject to vandalism of the cave gates or had illegal entries in the last 10 years; therefore, even these protected caves are still subject to continued threats from disturbance. In addition, 13,829 of the hibernating Virginia big-eared bats (72.7 percent) use unprotected caves, therefore only 27.3 percent of the population is currently hibernating in caves that meet the previously used definition of protected. Approximately 68.4 percent of the total range wide population hibernates in a single cave, Hellhole, which does not have long-term protection.

#### Indiana bat

The following is a summary of Indiana bat life history drawn from the species’ listing decision, recovery plan, and Five-year reviews. For a more detailed account of the species description, life history, population dynamics, threats, and conservation needs, refer to <https://ecos.fws.gov/ecp/species/5949>

#### *Species Description and Life History*

The Service listed the Indiana bat as endangered on March 11, 1967 (32 FR 4001). The Indiana bat was one of 78 species first listed as being in danger of extinction under the Endangered Species Preservation Act of 1966 (32 FR 4001, March 11, 1967). The ESA extended full protection to the species. The Service prepared a recovery plan for the species in 1983 (Service 1983) and drafted a revised recovery plan that was made available for public comment in 2007 (Service 2007). It was not officially adopted because white-nose syndrome [WNS] impacts were discovered during that time period and resources were shifted towards addressing this new threat. The draft revised recovery plan, however, embodies the best available scientific information, and it outlines recovery actions that are relevant to the majority of stressors for the species. In addition, Five-year reviews (Service 2009; 2019a) provide updated summaries of the status of the species range-wide, including updates on threats, status of hibernacula counts, and recommended priority actions. Priority actions include: incorporating WNS into the recovery plan; monitoring status of hibernacula; monitoring status of maternity colonies; implementing the North American Bat Monitoring Program; providing for continual recruitment of high quality roosting habitat; securing permanent/long-term protection of Priority 1 and Priority 2 hibernacula; conducting additional research to understand the causes and potential spread of WNS; researching management actions aimed at minimizing the spread of WNS (i.e., an adaptive management approach); continuing public education/outreach efforts about WNS; and continuing to refine survey protocols.

The Indiana bat is a temperate, insectivorous, migratory bat that hibernates in mines and caves in the winter and spends summers in wooded areas. The key stages in the Indiana bat annual cycle

are: hibernation, spring staging and migration, pregnancy, lactation, volancy/weaning, fall migration, and swarming. All periods outside of the hibernation period constitute the “active season” for the Indiana bat. While varying with weather and latitude, these species generally hibernate between mid-fall through mid-spring each year.

Indiana bats show strong philopatry (site fidelity) to their summer maternity areas, and even interannual fidelity to specific roost trees for as long as the roost trees remain suitable and standing (Kurta 2005). Because Indiana bats rely on a previously established network of roosts (fidelity), roost tree loss, regardless of whether it occurs during the active or inactive (winter) seasons, may affect the fission-fusion dynamics of their maternity colonies through colony fragmentation. When a colony becomes fragmented, we would expect a reduction in the thermoregulatory benefits provided to individuals in the colony and either increased energy expenditures or increased use of torpor resulting in 1) reduced recruitment and/or 2) reduced adult survival.

#### *General Habitat Requirements*

The basic resource needs for the Indiana bat across their entire range are safe winter hibernation sites; forested spring staging/fall swarming habitat; connected forested summer habitat for roosting, foraging, and commuting; forested migratory stopover habitat; safe migration passage; insects; and clean drinking water (e.g., streams, riparian areas, and wetlands).

The Indiana bat has strong site fidelity, which contributes to the importance of forest where the species occurs. In other words, the impacts are associated with the losses of forest within the home range of Indiana bat colonies. Where Indiana bat colonies remain after WNS has been present on the landscape for over 10 years, the importance of that occupied habitat for the remaining survivors of WNS is magnified. Thus, identification and protection of maternity sites is imperative for even the short-term survival and eventual recovery of the species.

#### *Range-wide Distribution and Abundance*

To assess the current status of the species, it is helpful to understand the species’ conservation needs which are generally described in terms of reproduction, numbers, and distribution. The Indiana bat recovery plan (Service 2007) delineates the following recovery units based on population discreteness, differences in population trends, and broad level differences in land use and macrohabitats: Ozark-Central, Midwest, Appalachian Mountains, and Northeast. To help maintain adaptive capacity for the species (representation), multiple (redundant) healthy (resilient) populations should occur in all four recovery units. The proposed action is located within the Appalachian Mountains recovery unit, which includes all of West Virginia.

Conservation and recovery of the Indiana bat will require conserving the species’ ecological, behavioral, and genetic representation. This will include providing redundancy and resiliency at the species level by conserving healthy bat populations across the species’ current range and managing threats acting upon the species. Redundancy describes the ability of a species to withstand catastrophic events, which is related to the number, distribution, and resilience of populations. Resiliency describes the ability of the species to withstand stochastic disturbance events, which is associated with population size, growth rate, and habitat quality. To provide a focus for providing redundancy and resiliency for the Indiana bat, the Service’s Northeast region

tiered off the recovery plan to describe our current focus of addressing the following conservation needs (Service 2018):

- Managing the effects of WNS;
- Conserving and managing winter colonies, hibernacula, and surrounding swarming habitat;
- Conserving and managing maternity colonies; and
- Conserving migrating bats.

Declines are associated with the onset of WNS (described below) which has spread from New York south and west across the range. Impacts to Indiana bats to date are most severe in areas with the longest exposure to WNS (e.g., 75-99 percent declines in New York, West Virginia, and Pennsylvania), but declines have been observed in all recovery units. Based on counts of bats in hibernacula, the Appalachian Mountain recovery unit declined from 32,465 Indiana bats in 2011 to 1,464 Indiana bats in 2022. However, the most recent count of Indiana bats across the species range show that the species is increasing; this increase in population numbers is primarily concentrated in Missouri and Indiana, however, Alabama, Arkansas, and Virginia also saw increases (Service 2023, unpublished data).

Redundancy of the population range-wide has been significantly reduced with several hibernacula now believed to have no Indiana bats, while the remaining Indiana bats are concentrated into fewer overwintering sites. For example, as of February 2019, 93% (12,570 of 13,510 of Indiana bats) occur at one location in the Northeast recovery unit and 72% (1,435 of 1,996 of Indiana bats) occur at three locations in the Appalachian Mountain recovery unit (Service 2019b). This concentration of individuals in a few locations puts the species at risk should adverse impacts occur at these locations. Based on winter counts range-wide, the resiliency of populations varies, with some winter populations believed to be extirpated and others with virtually no decline. We do not understand the causes of this variation in mortality by site or why some sites appear to have greater survival rates. We also lack a good understanding of the changes to associated maternity colonies, but we expect the variation to be the same as that observed in winter.

### *Summary*

At present, few healthy winter populations (and likely associated maternity colonies) remain in the Appalachian Mountain recovery unit. WNS impacts are expected to continue across the range for the foreseeable future, as are other ongoing threats (e.g., climate change, wind turbines) to the bats and their habitats. Given the species' limited reproductive potential, populations are not likely to rebound in the near term. In short, over the past decade, WNS has increased the species' risk of extinction as the resiliency, redundancy, and representation of its remaining populations have declined. The majority of the Indiana bats' population-based and protection-based recovery criteria have not yet been achieved, identified threats have not yet been sufficiently reduced, and stable population growth at the most important hibernacula has not been sustained. In summary, as a whole, the range-wide status of the species appears to be declining (with some winter populations stabilized or improving and most declining). Improving sites may be a result of movement of Indiana bats from other winter sites along with reduced impacts of WNS; however, there are very few sites that have had this kind of response. The Service recommended



maintaining the current classification as an endangered species in its last Five-year review (Service 2019a). For a more detailed account of the species description, life history, population dynamics, threats, and conservation needs, refer to:

<https://www.fws.gov/midwest/endangered/mammals/inba/index.html>, the Service's 2018 Northeast Region Indiana Bat Conservation Strategy at

[https://www.fws.gov/northeast/nyfo/es/Indiana batConsStrategy\\_20180102.pdf](https://www.fws.gov/northeast/nyfo/es/Indiana%20batConsStrategy_20180102.pdf), and the Service's 2018 Revised Programmatic Biological Opinion for Transportation Projects in the Range of the Indiana Bat and Northern Long-Eared Bat at

<https://www.fws.gov/midwest/endangered/section7/fhwa/index.html>

#### Northern long-eared bat

The following is a summary of northern long-eared bat life history drawn from the species' listing decision, recovery plan, and Five-year reviews. For a more detailed account of the species description, life history, population dynamics, threats, and conservation needs, refer to

<https://ecos.fws.gov/ecp/species/9045>.

#### *Species Description, Life History, and Habitat Requirements*

The Service listed the northern long-eared bat as a threatened species on April 2, 2015 (80 FR 17974). The Service issued a final 4(d) rule for the northern long-eared bat on January 14, 2016 (81 FR 1900). On March 23, 2022 (87 FR 16442), the Service proposed reclassification of the northern long-eared bat as an endangered species. On November 30, 2022, the Service published a final rule reclassifying the northern long-eared bat from threatened to endangered and removing the species-specific 4(d) rule (87 FR 73488); this rule was made effective on March 31, 2023 (88 FR 4908). The following is a summary of northern long-eared bat general life history drawn from the northern long-eared bat Species Assessment Report (USFWS 2022).

The northern long-eared bat is a wide-ranging bat species, found in 37 states and 8 provinces in North America. It typically overwinters in caves or mines and spends the remainder of the year in forested habitats.

*Winter Hibernation* – Northern long-eared bats are thought to predominantly overwinter in hibernacula that include caves and abandoned mines. Northern long-eared bats are typically found roosting singly or in small numbers in cave or mine walls or ceilings, often in small crevices or cracks, sometimes with only the nose and ears visible and thus are easily overlooked during surveys (Griffin 1940a, Barbour and Davis 1969, Caire et al. 1979, van Zyll de Jong 1985, Caceres and Pybus 1997, Whitaker and Mumford 2009). Northern long-eared bats have also been observed overwintering in other types of habitat that have similar conditions (e.g., temperature, humidity levels, air flow) to cave or mine hibernacula. The species may use these alternate hibernacula in areas where caves or mines are not present (Griffin 1945). Further, Girder et al. (2016) found northern long-eared bats to be present and active year-round on the coastal plain of North Carolina, where there are no known cavernicolous (cave-like) hibernacula; therefore, it is possible this coastal population may not be hibernating, in the traditional sense.

*Summer Roosting* – During the summer, northern long-eared bats typically roost singly or in maternity colonies, consisting of females and young. They can be found roosting underneath bark, or more often, in cavities or crevices of both live trees and snags (Sasse and Pekins 1996, Foster and Kurta 1999, Owen et al. 2002, Carter and Feldhamer 2005, Perry and Thill 2007,

Timpone et al. 2010). Adult females give birth to a single pup annually (Barbour and Davis 1969). Parturition (birth) may occur as early as late May or early June (Easterla 1968, Caire et al. 1979, Whitaker and Mumford 2009) and may occur as late as mid-July (Whitaker and Mumford 2009). Juvenile volancy (flight) often occurs by 21 days after birth (Kunz 1971, Krochmal and Sparks 2007) and has been documented as early as 18 days after birth (Krochmal and Sparks 2007). Males' and non-reproductive females' summer roost sites may also include cooler locations, including caves and mines (Barbour and Davis 1969, Amelon and Burhans 2006). Northern long-eared bats are flexible in tree species selection and while they may select for certain tree species regionally, they likely are not dependent on certain species of trees for roosts throughout their range; rather, many tree species that form suitable cavities or retain bark will be used by the bats opportunistically (Foster and Kurta 1999, Silvis et al. 2016, Hyzy et al. 2020). Northern long-eared bats are nocturnal, insectivorous foragers and use hawking (catching insects in flight) and gleaning (picking insects from surfaces) behaviors in conjunction with passive acoustic cues (Nagorsen and Brigham 1993, Ratcliffe and Dawson 2003). Northern long-eared bats seem to prefer intact mixed-type forests with small gaps (i.e., forest trails, small roads, or forest-covered creeks) in forest with sparse or medium vegetation for forage and travel rather than fragmented habitat or areas that have been clear cut (USFWS 2015).

*Spring staging and fall swarming* – Spring staging for the northern long-eared bat is the time period between winter hibernation and spring migration to summer habitat (Whitaker and Hamilton 1998). During this time, bats begin to gradually emerge from hibernation, exit the hibernacula to feed, but re-enter the same or alternative hibernacula to resume daily bouts of torpor (state of mental or physical inactivity) (Whitaker and Hamilton 1998).

The swarming season occurs between the summer and winter seasons (Lowe 2012) and the purpose(s) of swarming behavior may include: introduction of juveniles to potential hibernacula, copulation, and stop-over sites on migratory pathways between summer and winter regions (Kurta et al. 1997, Parsons et al. 2003, Lowe 2012, Randall and Broders 2014).

Overall, for survival and reproduction at the individual level, the northern long-eared bat requires access to food and water resources when not hibernating, along with suitable habitat throughout its annual life cycle. During the spring, summer and fall seasons, northern long-eared bats require suitable foraging, roosting, migrating (between summer and winter habitat) and swarming habitat with appropriate conditions for maternity colony members; during the winter, northern long-eared bats require habitat with suitable conditions for prolonged bouts of torpor. For northern long-eared bat populations to be healthy, they require a population size and growth rate sufficient to withstand natural environmental fluctuations, habitat of sufficient quantity and quality to support all life stages, gene flow among populations, and a matrix of interconnected habitats that support spring migration, summer maternity colony formation, fall swarming, and winter hibernation (USFWS 2022).

#### *Range-wide Distribution and Abundance*

In the northern long-eared bat SSA report, the Service evaluated current condition (abundance, health, and distribution of populations in 2020) of the northern long-eared bat, using the best available data. Winter hibernacula counts provide the most consistent, long-term, reliable trend data, and provide the most direct measure of WNS impacts, even for species such as the northern

long-eared bat that may be undercounted (due to their proclivity to roost in crevices). Although the availability and quality of summer data vary temporally and spatially, this data offered additional support (to winter data results) in evaluating population trends. The SSA relied upon the data derived from North American Bat Monitoring Program (NABat) analyses for all available winter (NABat 2021) and summer data (NABat 2020, USFWS 2022).

There are many stressors influencing the status of the northern long-eared bat, such as habitat loss, wind energy projects, and climate change, but the primary factor influencing the viability of the northern long-eared bat is WNS, a disease of bats caused by a fungal pathogen. WNS has been the foremost stressor on the northern long-eared bat for more than a decade. The fungus that causes the disease, *P. destructans*, invades the skin of bats and infection leads to increases in the frequency and duration of arousals during hibernation, which eventually depletes fat reserves needed to survive winter, and often results in mortality. WNS has caused northern long-eared bat population declines estimated at 97–100% across the majority of the species' range.

Wind energy-related mortality of the northern long-eared bat is also proving to be a stressor at local and regional levels, especially in combination with impacts from WNS. Most bat mortality at wind energy projects is caused by direct collisions with moving turbine blades. Wind energy mortality may occur over 49% of the northern long-eared bat range. Habitat loss is another stressor and may include loss of or modification of suitable roosting, foraging, and overwintering habitat. Habitat loss may result in longer flights between suitable roosting and foraging habitats due to habitat fragmentation, fragmentation of maternity colony networks, and direct injury or mortality. Loss of or modification of winter roosts (i.e., making hibernaculum no longer suitable) can result in impacts to individuals or at the population level (USFWS 2022).

Another emerging stressor on northern long-eared bats is climate change. Climate change is occurring globally. Researchers have identified several climate change factors that may impact bats, including changes in hibernation; mortality from extreme drought, cold, or excessive rainfall; cyclones; loss of roosts from sea-level rise; and impacts from human responses to climate change (e.g., wind turbines). Climate change is also likely to influence disease dynamics as temperature, humidity, phenology, and other factors affect the interactions between WNS and hibernating bats (USFWS 2022). In addition, climate change could result in phenological mismatch (e.g., timing of various insect hatches not aligning with key life-history periods of spring emergence, pregnancy, lactation, or fall swarming) and cause shifts in distribution of forest communities, invasive plants, invasive forest pest species, or insect prey. Changes in temperature and precipitation likely will influence northern long-eared bat resource needs, such as suitable roosting habitat for all seasons, foraging habitat, and prey availability (USFWS 2022), overall negative impacts are anticipated, especially at local levels. Although any climate change effects to the northern long-eared bat to date are currently considered “low” (Service 2022), there is growing concern about impacts to bat populations in response to climate change, as described below

The northern long-eared bat's risk of exposure to climate change is range-wide (USFWS 2022). However, the magnitude, direction, and seasonality of climate variable changes are not consistent range-wide. In addition, the resiliency of populations and inherent differences among populations (e.g., genetics, summer roost microclimates) may result in differing ability for the



species to respond to the same types of changes across the range. While researchers have not observed these impacts in northern long-eared bats to date, based on studies of other insectivorous bat species, the Service has identified the following potential future risks: reduced reproduction due to drought conditions leading to decreased availability of drinking water and reduced adult survival during dry years; decreased insect availability and reduced echolocation ability resulting in decreased foraging success during heavy precipitation events; and reduced reproduction during cooler, wetter springs (USFWS 2022). As a result, the Service predicts “medium impact” to the northern long-eared bat from climate change in the future (USFWS 2022).

Available evidence, including both winter and summer data, indicates northern long-eared bat abundance has declined substantially from historical conditions. Winter abundance (from known hibernacula) has declined range-wide (49 percent) and across most RPUs (0–90 percent). In addition, the number of extant winter colonies declined range-wide (81 percent) and across all RPUs (40–88 percent). There has also been a noticeable shift towards smaller colony sizes, with a 96–100 percent decline in the number of large hibernacula ( $\geq 100$  individuals). Declining trends in abundance and occurrence are also evident across much of the northern long-eared bat’s summer range. Range-wide summer occupancy declined by 80 percent from 2010–2019. Data collected from mobile acoustic transects found a 79 percent decline in range-wide relative abundance from 2009–2019 and summer mist-net captures declined by 43–77 percent compared to pre-WNS capture rates (USFWS 2022).

### *Summary*

In summary, the range-wide status of the northern long-eared bat is declining. After a review of the best available scientific and commercial information, the Service found that the northern long-eared bat meets the ESA’s definition of an endangered species. On November 30, 2022, the Service published a final rule reclassifying the northern long-eared bat from threatened to endangered (87 FR 73488), which became effective on March 31, 2023 (88 FR 4908).

The SSA report (USFWS 2022) provided the scientific basis that informed the uplisting for the species. The SSA concluded, using multiple data types and analyses, downward trends in northern long-eared bat population abundance and distribution over the last 14 years and consequently, found no evidence to suggest that this downward trend will change in the future. Northern long-eared bat abundance (winter and summer), number of occupied hibernacula, spatial extent, probability of persistence, and summer habitat occupancy across the range and within all RPUs are decreasing. Since the arrival of WNS, northern long-eared bat abundance steeply declined. At these low population sizes, maternity colonies are vulnerable to extirpation from stochastic events. Furthermore, the northern long-eared bat’s ability to recover from these low abundances is limited given their low reproduction output (1 pup per year). Therefore, the northern long-eared bat’s resiliency is greatly compromised in its current condition (and is projected to decline under modeled future scenarios). Additionally, because the northern long-eared bat’s abundance and spatial extent are projected to decline dramatically, northern long-eared bats will also become more vulnerable to catastrophic events. The northern long-eared bat’s representation has also been reduced. The steep and continued declines in abundance have likely led to reductions in genetic diversity, and thereby reduced northern long-eared bat adaptive capacity. Further, the projected widespread reduction in the distribution of hibernacula will lead

to losses in the diversity of occupied environments and climatic conditions, which will impede natural selection and further limit the northern long-eared bat's ability to adapt. Moreover, at its current low abundance, loss of genetic diversity via genetic drift will likely accelerate. Consequently, limiting natural selection process and decreasing genetic diversity will further lessen the northern long-eared bat's ability to adapt to novel changes (currently ongoing as well as future changes) and exacerbate declines due to continued exposure to WNS, mortality from wind turbines, and impacts associated with habitat loss and climate change. Thus, even without further WNS spread and additional wind energy development, the northern long-eared bat's viability is likely to rapidly decline over the next ten years (USFWS 2022).

More information on the northern long-eared bat (e.g., SSA report, previous consultations, proposed and final uplisting rule) can be found by visiting the Service's northern long-eared bat website: <https://www.fws.gov/species/northern-long-eared-bat-myotis-septentrionalis>

## **STATUS OF CRITICAL HABITAT**

### Rusty patched bumble bee

No critical habitat has been designated for the rusty patched bumble bee (85 FR 54281).

### Virginia big-eared bat

Critical habitat for the Virginia big-eared bat has been designated in five caves in West Virginia (44 FR 51144 51145); however, this action does not affect any of these areas.

### Indiana bat

Critical habitat for Indiana bat has been designated in 13 winter hibernacula (11 caves and two mines) in six states (including Hellhole Cave in Pendleton County, West Virginia; 41 FR 41914); however, this action does not affect any of these areas.

### Northern long-eared bat

No critical habitat has been designated for the northern long-eared bat (81 FR 24707).

## **ENVIRONMENTAL BASELINE**

Regulations implementing the ESA (50 CFR 402.02) define the environmental baseline as the past and present effects of all federal, state, or private actions and other human activities in the Action Area. Also included in the environmental baseline are the anticipated and/or ongoing effects of all proposed federal projects in the Action Area that have undergone Section 7 consultation, and the effects of state and private actions which are contemporaneous with the consultation in progress.

### *Status of the Species within the Action Area*

### Rusty patched bumble bee

During survey efforts for an environmental DNA study and a pathogen/pesticide study, three rusty patched bumblebees were encountered within proximity of the proposed project along Forest Road 717 in August 2022. On August 8, a worker was observed on joe-pye weed

(*Eutrochium purpureum*), on August 9 a male was observed on joe-pye weed, and on August 25, a male was observed on grass-leaved goldenrod (*Euthamia graminifolia*).

The Service has adapted a habitat connectivity model that considers the likelihood of rusty patched bumble bee movement based on the most recent National Land Cover Database maps and extant rusty patched bumble bee locations (i.e., sites where the species has been documented from 2007 to present). This model allows us to predict where the species may be found based on empirical information and scientific inferences, as opposed to using a buffer of an arbitrary radius. This model also allows us to assess the likelihood of bumble bee movement away from the locations of known records based on the way various land uses and conditions may affect those movements. The polygons generated from the rusty patched bumble bee habitat connectivity model suggest areas with the highest potential for the species to be present based on typical bumble bee foraging distances and suitable habitat. High Potential Zones (HPZs) are modeled by evaluating the likelihood of rusty patched bumblebee movement across the surrounding vegetation cover classes as predicted by species experts and literature of bumble bee movement through various habitat types. The HPZ includes the areas within which the rusty patched bumble bees would move from the point of observation to forage and where queens may be most likely to disperse and overwinter. Surrounding the HPZ is a low potential zone (LPZ), which is the area where dispersal of the species to establish new home ranges is likely to occur.

Based on the August 2022 locations of rusty patched bumble bees, approximately 4.25 miles of the western extent of project activities occur within an HPZ. The activities in the HPZ amount to 23.9 acres. The remainder of activities fall within an LPZ and amount to 29.8 acres.

#### Virginia big-eared bat

Virginia big-eared bats were first documented in the action area in autumn of 2014 when 11 individuals (six males, four females, one escape) were captured during studies by the West Virginia Department of Environmental Protection at a complex of portals near Coketon. In the summer of 2015, additional portal searches were conducted to find portals outside the known Coketon complex, but no other features were found. Additionally, the portals were assessed with infrared cameras for summer use in 2015; however, no bat activity was observed. Additional harp trapping by the WVDOH was completed at these portals in autumn 2015, at which time four individuals (one male, three females) were captured. Of the portals surveyed in the action area in 2014 and 2015, Virginia big-eared bats were captured at four portals.

From December 2015 to December 2016, acoustic loggers were placed at the six Coketon portals to assess year-round usage. Three of 81 call files collected from December to February were attributable to bats, as opposed to other noise, indicating little to no use of the portals during winter. Of bat calls gathered during the remainder of the study period, 11 percent occurred during spring staging and 57 percent occurred during fall swarming. These calls were not identified to species.

Additional acoustic studies were conducted by the WVDOH proximate to the Coketon portals in autumn of 2016. Visual vetting of the results confirmed 26 Virginia big-eared bat calls in September and early October. Trapping was conducted concurrently with this acoustic study to pursue a telemetry study of how the species used the area. An attempt at trapping had been made



in the spring to begin the telemetry study, however, no bats were captured. In the autumn, four males and one female were captured, radio-tagged, and tracked for ten nights in September and October. Core foraging activities were centered on Middle Run within the action area, and individuals were found to use known mine portals as swarming areas and day roosts. Two females were also observed using a rock fissure area north of Middle Run as a day roost, and a few local manmade structures were used as night roosts.

During surveys for the Indiana bat in summer of 2019, one Virginia big-eared bat was captured. This capture demonstrated species use of the area during summer and prompted additional surveys to better understand the species' use of the area during 2020 and 2021. During 2020, habitat features that could potentially serve as roosting habitat for Virginia big-eared bats were assessed for potential suitability. Ten sites were selected for acoustic detector placement; from May 20 to June 22, 2020, 63 Virginia big-eared bat calls were detected at eight of ten sites. In the summer of 2021, these eight sites were mist netted and harp trapped. A total of 246 complete and 56 partial mist net nights were conducted along with two complete harp trap nights. These efforts yielded capture of thirteen Virginia big-eared bats, including 11 adult males, one lactating female, and one pregnant female. Eleven of these bats (excluding one male and the pregnant female) were radio-tagged and tracked with telemetry for 18 nights from June 4 through 18 and August 2 through 5, 2021. During this time, other reproductive females and non-reproductive males were documented within the action area. Bats foraged over both open and forested areas, including areas that had been timbered by private landowners in 2021 and during prior years, and were affiliated with wetland features. They were also documented foraging along terraced benches and using multiple anthropogenic and natural roosts. Statistical modeling conducted from these data suggest individuals favored wetlands and recently timbered areas within the action area and the surrounding area proximate to Canaan Valley.

The radio-tagged female bat from the 2021 study was tracked to the Cave Hollow/Arbogast cave system as a day roost. This cave complex is approximately 8.1 miles south of the project area and serves as a winter hibernaculum and summer maternity site for Virginia big-eared bats. This site had approximately 690 Virginia big-eared bats for the 2022 hibernation period and 1,269 for the 2022 maternity period.

#### Indiana bat

While Indiana bats have never been documented in the action area during summer or fall survey efforts, the action area is within five miles of a known Indiana bat priority 4 hibernaculum. As such, Indiana bats are likely to occur in the project area for spring staging (mid-March to mid-May) and fall swarming (mid-August to mid-October). Coal Run Cave is 4.6 miles from the action area and approximately 4.97 acres of suitable spring staging and fall swarming habitat for this hibernaculum will be impacted by the proposed action.

Coal Run was surveyed in 1993 and 1995 and each survey documented one Indiana bat. There is no information about the current status of this hibernaculum because no surveys have been completed since 1995. However, Big Springs and the Cave Hollow/Arbogast cave systems have been surveyed more recently (2019); 20 Indiana bats were observed in Big Springs and 83 were observed in Cave Hollow/Arbogast. Big Springs is 2.7 miles west of Coal Run and Cave Hollow/Arbogast is 2.78 miles southeast of Coal Run. Big Springs is 5.02 miles from the project

limits of disturbance and Cave Hollow/Arbogast is 6.8 miles from the project limits of disturbance. With this in mind, and due to the lack of recent surveys in Coal Run Cave, for the purposes of this analysis we assume that Indiana bats may still use Coal Run as a hibernaculum in low numbers. Additionally, known summer maternity areas for the Indiana bat occur approximately 14 miles north of the action area, approximately 18 miles from Big Springs, 18.8 miles from Coal Run, and 21 miles from Cave Hollow/Arbogast. Therefore, it is reasonable to assume that bats migrating from this summer use area to winter hibernacula may utilize any or all of these cave systems.

#### Northern long-eared bat

Prior to the species being listed under the ESA, 25 northern long-eared bats were captured at 13 sites in the Parsons to Davis project area during Indiana bat compliance netting efforts conducted in 2001. Summer mist net surveys in the proposed action area did not detect the species again until 2019 when four individuals were captured during compliance netting efforts. These four individuals included a juvenile male, nonreproductive adult male, and two post-lactating females. Approximately 21.68 acres of known-use summer habitat for the northern long-eared bat will be impacted by the proposed action.

Northern long-eared bats were also documented near the action area in fall during 2014 portal surveys at the Chaffey Run Strip, which is less than 1.5 miles from the northeastern edge of the project limits of disturbance. The species was not detected during studies conducted for the Virginia big-eared bat during fall 2015 and 2016 at the Coketon portals. Approximately 37.62 acres of documented spring staging and fall swarming habitat will be impacted by the proposed action.

Bob White, Coal Run, and Confluence caves are known hibernacula for the northern long-eared bat. These hibernacula occur approximately, 3 miles, 4.75 miles, and 4.76 miles, respectively, from the project limits of disturbance. Due to their proximity, there is the potential for northern long-eared bats using these hibernacula to be impacted by the proposed action.

### **EFFECTS OF THE ACTION**

In accordance with 50 CFR 402.02, effects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action (see § 402.17).

Prior to analyzing the effects of the action on listed species, we must determine whether there are activities that are not part of the proposed action itself but are nevertheless consequences of the proposed action (i.e., activities that would not occur but for the proposed action and are reasonably certain to occur) (50 CFR 402.02, 402.17).

#### Rusty patched bumble bee

We assume for the purposes of this consultation that rusty patched bumble bees are present

throughout the construction limits of the action area where suitable habitat occurs. Both suitable foraging and overwintering habitat for the species is present within the construction limits. Effects to the rusty patched bumble bee and/or its habitat are expected in locations where vegetation removal and ground disturbing activities are proposed. These activities will impact soils where overwintering and nesting habitat occurs and where floral resources exist. Adverse effects expected include crushing, displacement, exposure to noise/vibration, and additional energy expenditure to find new floral resources, nesting habitat, and overwintering habitat. Removal of vegetation and trees and ground disturbance necessary to build access roads, bore pads, and laydown yards may crush overwintering rusty patched bumble bees in the inactive season (October 1 through March 14), crush colonies present during the active season, disturb foraging bees in the active season, and render overwintering and foraging habitat temporarily and permanently unsuitable.

#### *Overwintering queens*

Overwintering queens present within the construction limits could be crushed during tree clearing activities conducted during the inactive season. Loss of any overwintering queens would represent the loss of a future colony and loss of reproductive capacity of the HPZ population. Additionally, soil compaction during construction of access roads, laydown yards, and bore pads may affect the ability of queens to excavate an overwintering chamber and may reduce the ability of rodents to excavate burrows, which reduces the ability of colonies to find appropriate nest locations, resulting in reduced reproduction if other suitable rodent burrows are not available.

Using the 2016 National Land Cover Dataset, overwintering rusty patched bumble bee habitat was identified by extracting cells representing forest habitat within the limits of disturbance and converting the number of forest raster cells to acres. This is calculated to be a total of 39.5 acres of overwintering habitat within the limits of disturbance, which constitutes 0.31% of the overwintering habitat in the action area. The overwintering habitat within the construction limits will be permanently lost due to soil compaction from activities. While weather and time may result in conditions that uncompact some of these soils, we do not anticipate a full return to current functionality.

#### *Foraging bees*

Tree clearing and ground disturbance activities conducted during the active season (March 15 through October 10) may disturb foraging rusty patched bumble bees, although lethal effects are not anticipated as foraging bees are mobile and should be able to avoid heavy machinery and forage in other areas. However, avoiding construction activities may cause individual rusty patched bumble bees to expend additional energy to seek alternate foraging sites which may reduce survival, reproduction, or both. Significant reductions in foraging bees may negatively impact the amount of available resources for the colony, possibly resulting in reduced reproductive capacity of the queen.

Approximately 53.6 acres of potential foraging habitat are expected to be impacted during the active season; this constitutes 0.28 percent of available foraging habitat in the action area. Removal of trees and vegetation as a part of project activities will result in a temporary loss of floral resources in the areas of project construction. The loss of floral resources may result in



reduced fitness of some males and workers and may impact the reproduction of the queen. New queens may also experience reduced fitness in the fall as they disperse from the nest to feed and mate. Herbaceous floral resources are expected to re-establish within one growing season within the areas impacted by the proposed action, although the plant species composition may change, at least in the short-term. Flowering shrubs are likely to take 8-10 years to reestablish. Tree clearing as a part of the proposed action will open the canopy and may encourage the growth of a different suite of nectar plants and foraging habitat in areas that will be restored following completion of construction activities. As floral resources are re-established post-construction, introduction and spread of nonnative invasive plant species may occur and reduce the diversity of native floral resources, limiting the suitability of restored habitat for rusty patched bumble bees throughout the entire active (growing) season. The spread of nonnative invasive plant species will be reduced by the prompt use of native seed mixes across the project area following construction and use of straw instead of hay.

#### *Nesting queens*

Queens build a nest one to four feet underground, typically in old rodent burrows in areas with uncompacted soils along upland shrublands and forest edges. Based on known occurrence data of rusty patched bumble bees in West Virginia, forested habitats are most likely used as nesting habitat along with grassland and shrubland habitats. Heavy machinery used for tree and vegetation clearing is expected to crush any colonies present in suitable nesting habitat within the construction limits – at least where tracks, tires, or other parts of the machinery compact or close burrow openings to prevent ingress or egress of colony members, or actually crush colony members present in the nest. These impacts would result in the loss of most or all individuals in each affected colony. This may include new foundress queens that would have established new colonies the following year, resulting in lower reproductive success of the population. An estimated 7.9 acres of nesting habitat occurs within the project limits of disturbance. Some portion of this is expected to be compacted during project activities to the extent that rusty patched bumble bee nests and/or the burrow systems that they use will be complete or partially destroyed; 7.9 acres constitutes 0.35 percent of available nesting habitat within the action area. This loss of habitat is expected to be permanent as soil compaction by heavy equipment will render the habitat unsuitable and reduce the ability for rodents to create burrows; while weather and time may result in conditions that uncompact some of these soils, we do not anticipate a full return to current functionality. Suitable overwintering, foraging, and nesting habitat will continue to exist in the forested areas alongside the access roads.

#### Noise/Vibration

In addition to habitat effects from the proposed action, construction activities and restoration and maintenance activities may expose rusty patched bumble bees to noise/vibration. This could result in individuals expending additional energy to seek out alternate foraging and nesting areas, which may reduce survival and reproduction. However, these effects will be temporary in nature as the activities are not expected to last longer than nine months.

#### *Summary*

In summary, the action is likely to disturb foraging rusty patched bumble bees in summer and crush colonies in the summer and overwintering queens in winter due to tree clearing and ground disturbance activities. Foraging rusty patched bumble bees are mobile and should be able to

avoid heavy machinery. While foraging bees may expend additional energy avoiding heavy machinery and looking for alternate nectaring sites, alternate foraging habitat should be close by given the relatively narrow footprint of the construction limits and the availability of suitable habitat within the action area. Nesting and overwintering habitat is present within the construction limits and will be compacted during construction. A total of 39.5 acres of overwintering habitat and 7.9 acres of nesting habitat will be permanently lost as a result of the proposed action, which constitutes 0.31 percent of the total amount of overwintering and 0.35 percent of the total amount of nesting habitat within the entire action area. With respect to direct impacts to habitat, a total of 53.6 acres of foraging, overwintering, and nesting habitats will be impacted by the project. This represents 0.28 percent of suitable rusty patched bumble bee habitat within the action area. Of the habitat impacted, loss of foraging habitat is expected to be temporary in nature as floral resources will re-establish by restoration (seeding, etc.) following construction activities. Overwintering and nesting habitats whose soils are compacted by heavy equipment are expected to be permanently lost.

#### Virginia Big-eared Bat

Adverse effects to the Virginia big-eared bat are expected to be limited to bats roosting near the action area and via effects to roosting habitat in the Coketon portals, in particular portals 3A, 3B, and 3C. Activities within proximity to these sites will be short-term in nature, occurring over a period of four weeks during the summer months. Avoidance and minimization measures have been incorporated to limit adverse effects to bats and are detailed further below.

Virginia big-eared bats are particularly sensitive to noise disturbance. Disturbance due to noise and vibration from the associated core boring activities and access road construction are expected to cause roosting bats to be aroused. This arousal will result in reduced fitness from increased energy expenditure and increased risk of predation (e.g., by raptors) if they flee their roost to search for alternate roosts. Arousal of reproductive females may lead to maternal abandonment of non-volant young and may result in associated pup or juvenile mortality. Additional roosting habitat with documented use by Virginia big-eared bats is present within the vicinity of the action area and includes portals, various anthropogenic features, and naturally occurring rock fissures.

The portals and surrounding areas are composed of shale and sandstone which are brittle and unstable. Proposed core borings proximate to the portal complex (3A, 3B, and 3C) are proposed to be 25 to 65 feet in depth and will come within approximately five feet of the existing mine seam. While the exact passages of the portals are unknown due to lack of existing data, there is the potential that the core borings may breach the portal void. If a breach occurs, it could alter or degrade the portal environment by altering airflow, introduce water to the portal if ground water exists between the surface and the breach, and cause loose substrate to dislodge and rearrange within the portal system. Additionally, vibration due to the borings has the potential to dislodge loose substrate in the portals. These effects could alter the suitability of passages for Virginia big-eared bats and result in bats seeking alternative roosting habitat in the area. Effects from a breach will be reduced by sealing any breaches with a Central Mine Equipment flex-hole plug and grout. This seal will prevent any changes in airflow or water that may be encountered from continuing to influence the portal environment. Due to the size of the bore holes (three inches in diameter), any dislodged materials are not expected to be at such a magnitude that the portal

complex would become completely blocked.

To reduce the potential for direct impacts to Virginia big-eared bats that use portals 3A, 3B, and 3C, the WVDOH is proposing to exclude bats from the portals prior to construction activities. This exclusion will follow existing portal closure protocols implemented in West Virginia by the Department of Environmental Protection. Exclusion will be completed by using one-inch mesh placed securely over the openings to deter bats from entering following the emergence period (approximately two hours following dusk). This exclusion will prevent bats from roosting in the portals for the duration of construction, which reduces the likelihood of individuals being aroused from vibrations or a breach or becoming trapped if substrates are dislodged in a way that blocks passages. Exclusion from these portals may cause bats using the area to expend excess energy to seek alternate roosts in the area. However, this exclusion will be temporary in nature as construction activities in the area are not expected to last longer than four weeks. Upon completion of construction activities, the mesh will be removed and bats will be able to resume using the portals.

#### *Summary*

The Service expects adverse effects to the Virginia big-eared bat during the summer active season and fall swarming season as a result of the proposed action. Potential effects to bats range in intensity and severity from high to low depending on proximity to roosting bats and the duration of exposure to the stressor. Effects to individuals are expected from disturbance due to noise and vibration, dislodged substrate that may alter the portal environment, and from core borings breaching the portal complex. These effects are reasonably certain to harm Virginia big-eared bats by causing arousal during roosting resulting in increased energy expenditure and increased risk of predation. The Service expects some Virginia big-eared bats to experience injury, mortality, or reduced fitness due to untimely arousal during roosting. Disturbance during the summer may lead to maternal abandonment of non-volant young as associated pup or juvenile mortality.

#### Indiana bat

Adverse effects to the Indiana bat are anticipated from 4.97 acres of tree removal within documented spring staging and fall swarming habitat during the active season when bats may be present on the landscape (not in hibernation).

Indiana bats use the area around hibernacula in the fall to forage in order to build fat reserves prior to hibernation, as well as to socialize and mate. In the spring, individual Indiana bats may spend a few hours to a few days around hibernacula, or they may migrate immediately to summer habitat. Tree removal within the known-use spring staging and fall swarming habitat around Coal Run cave during the active season may result in the loss of roosting and foraging habitat and result in interruptions to spring staging and fall swarming behaviors by bats (i.e., a reduction in time spent on social interactions). This may lead to reduced breeding success if the interruption is significant enough to impede mating activity. Additionally, alteration of these habitats may require bats to spend more time searching for food, which could result in bats entering hibernation with less fat reserves and the potential for individuals to have decreased overwinter survival or poorer spring body condition.



Bats could be killed, injured, or forced to flee if an occupied roost tree is cut. It is assumed that exposure or risk of bats being harmed from loss of this habitat type is greater the closer the tree removal is to a hibernaculum, but this has not been well established. We have no precise way to estimate how many individuals will be injured or killed by tree removal. If no Indiana bats are using the roosts at the time they are felled, then no individuals will be injured or killed. If some Indiana bats are using the roosts at the time they are felled, then a portion of those bats may be injured or killed. If an occupied roost tree is cut down, bats are known to either stay in the tree and be injured or killed upon felling or fly out during felling (e.g., Belwood 2002). Daytime flights may make bats more susceptible to predation (e.g., by raptors). The risk of injury or death is greater during cooler weather when bats periodically enter torpor and will be unable to arouse quickly enough to respond if the tree they are roosting in is felled.

There is an increased risk to Indiana bats during cooler late fall and early spring temperatures, as Indiana bats periodically enter torpor during periods of low temperatures and are less able to arouse quickly enough to respond, should an occupied tree fall. It is expected that this risk would be greatest to bats toward the end of the fall swarming season and to individuals emerging in the spring. The spring emergence period (April through May) is also a sensitive time period for bats in general, but increasingly so for WNS-affected bats that are likely to be weakened by the effects of the disease. WNS-affected bats may have reduced fat reserves and damage to wing membranes, making it more difficult to fly. These individuals may be less likely to survive long-distance migrations to summer areas as well. They may also emerge from hibernation sites earlier and may be more likely to stay closer to the hibernation site for a longer period following spring emergence, increasing the risk of individuals being killed or harmed if an occupied tree is downed during the active season. However, during spring staging/fall swarming, bats often roost individually rather than in groups, typically have numerous suitable day-roosts available, and frequently roost-switch. Therefore, there is less potential to affect a tree being used by multiple bats or a large bat colony, and effects are likely restricted to smaller groups of bats or individual bats.

In summary, it is possible that individual Indiana bats will be harmed or killed from active season tree clearing on 4.97 acres of known-use spring staging/fall swarming habitat around one hibernaculum within the action area. The effects of active season tree removal in known use spring staging/fall swarming habitat will vary, and individuals may be injured, killed, or experience reduced breeding success. We have no precise way to estimate how many individuals will be affected; if no Indiana bats are using the roosts at the time they are cleared, then none will be affected. If some Indiana bats are using the roosts at the time they are cleared, then a portion of those bats may experience adverse effects.

#### Northern long-eared bat

Adverse effects to the northern long-eared bat are anticipated from 37.62 acres of tree removal within documented spring staging and fall swarming habitat and 21.68 acres of tree removal within known summer habitat during the active season when bats may be present on the landscape (not in hibernation).

#### *Impacts to Known Spring Staging/Fall Swarming Habitat*

Bats use the area around hibernacula to forage in order to build fat reserves prior to hibernation,

as well as to socialize and mate in the fall. In the spring, individual northern long-eared bats may spend a few hours to a few days around hibernacula, or they may migrate immediately to summer habitat. Tree removal within the known use spring staging and fall swarming habitat around Bob White, Coal Run, and Confluence caves during the active season may result in the loss of an occupied roost tree and the disruption of bats engaging in fall swarming and spring staging behavior.

Clearing trees around hibernacula may decrease foraging and roosting habitat. Depending on the amount and location of removal, this may require bats to spend more time searching for food, which could result in bats entering hibernation with less fat reserves and the potential for individuals to have decreased overwinter survival or poorer spring body condition. Interruption of fall-swarming behavior (i.e., a reduction in time spent on social interactions) may lead to reduced breeding success if the interruption is significant enough to impede mating activity. Northern long-eared bats could be killed, injured, or forced to flee if an occupied roost tree is cut. There is an increased risk to bats during cooler late fall and early spring temperatures, as bats periodically enter torpor during periods of low temperatures and are less able to arouse quickly enough to respond, should an occupied tree fall. It is expected that this risk would be greatest to northern long-eared bats toward the end of the fall swarming season and to individuals emerging in the spring. The spring emergence period (April through May) is also a sensitive time period for bats in general, but increasingly so for WNS-affected bats that are likely to be weakened by the effects of the disease. WNS-affected bats may have reduced fat reserves and damage to wing membranes, making it more difficult to fly. These individuals may be less likely to survive long-distance migrations to summer areas as well. They may also emerge from hibernation sites earlier and may be more likely to stay closer to the hibernation site for a longer period of time following spring emergence, increasing the risk of individuals being killed or harmed if an occupied tree is downed during the active season. However, during spring staging/fall swarming, bats often roost individually rather than in groups, typically have numerous suitable day-roosts available, and frequently roost-switch. Therefore, there is less potential to affect a tree being used by multiple bats or a large bat colony, and effects are likely restricted to smaller groups of bats or individual bats.

#### *Impacts to Known Summer Roosting Habitat*

Individual northern long-eared bats may be injured or killed from active season tree removal. Additionally, there may be loss of unknown maternity roosts, foraging habitat, and travel corridors that may harm individual bats.

Based on previous mist-net survey results (capture of an adult male, juvenile male, and two adult females in 2019), we anticipate that there are undocumented roosting and foraging areas present within the action area that may be affected by tree removal during the proposed project. We have no precise way to estimate how many individuals will be injured or killed by tree removal. If no northern long-eared bats are using the roosts at the time they are felled, then no individuals will be injured or killed. If some northern long-eared bats are using the roosts at the time they are felled, then a portion of those bats, including adults and juveniles, may be injured or killed. If an occupied roost tree is cut down, bats are known to either stay in the tree and be injured or killed (non-volant pups) upon felling or will fly out (adults or volant pups) during felling (e.g., Belwood 2002). Daytime flights may make bats more susceptible to predation (e.g., by raptors).

The risk of injury or death is greater for adults during cooler weather when bats periodically enter torpor and will be unable to arouse quickly enough to respond if the tree they are roosting in is felled. The likelihood of potential roost trees containing large number of tree roosting bats is greatest during pregnancy and lactation (April-August).

Northern long-eared bat maternity colonies vary in size, though 30 to 60 individuals are typical (Whitaker and Mumford 2009). This species uses a wide variety of roost types including cavities, underneath bark, crevices, and within hollows of both live and dead trees and/or snags that are generally greater than three inches diameter at breast height. While the size of foraging and roosting areas likely varies depending on habitat quality, average northern long-eared bat home range sizes for individual females have been minimally estimated at 60.2-72.3 hectares (148.8-173.7 acres) (Owen et al. 2002, Lacki et al. 2009). Carter and Feldhamer (2005) estimated roosting area size for northern long-eared bats at 186.3 hectares (460.4 acres). The home range for colonies are likely much larger with some overlapping home ranges of individuals. The proposed action will remove 21.68 acres of suitable summer habitat. This represents up to 14.6 percent of the home range of an individual northern long-eared bat associated with the colony.

Because northern long-eared bats rely on previously established roosts (fidelity), roost tree loss may affect the fission-fusion dynamics of their maternity colonies through colony fragmentation. Tree removal in known-use summer habitat may alter roosting, foraging, and commuting habitat. Northern long-eared bats form social groups among networks of roost trees that are often centered around a central-node roost. Central-node roost trees may be similar to Indiana bat primary roost trees (locations for information exchange, thermal buffering) but are identified by the degree of connectivity with other roost trees rather than by the number of individuals using the tree (Johnson et al. 2012). Northern long-eared bats form smaller social groups within a maternity colony and exhibit nonrandom roosting behaviors, with some female northern long-eared bats roosting more frequently together than with others (Garroway and Broders 2007, Patriquin et al. 2010, Johnson et al. 2012).

Similar to Indiana bats, northern long-eared bats exhibit fidelity to the general summer maternity area (Foster and Kurta 1999, Jackson 2004, Johnson et al. 2009, Patriquin et al. 2010, Perry 2011, Broders et al. 2013). Roost trees, although ephemeral in nature, may be used by a colony for several years until they are no longer available (i.e., the roost has naturally fallen to the ground) or suitable (i.e., the bark has completely fallen off a snag). Some tree species have shorter life expectancy as a roost than others (e.g., living shagbark hickories (*Carya ovata*) can provide suitable roosts for bats for decades while elm (*Ulmus spp.*) snags may lose their bark within a few years). Although loss of a roost (e.g., blow down, bark loss) is a natural phenomenon that northern long-eared bats must deal with regularly, the loss of multiple roosts, which could comprise most or all of a home range, likely stresses individual bats, affects reproductive success, and impacts the social structure of a colony. However, because northern long-eared bats are flexible in tree species used, and roost trees are an ephemeral resource, they would be expected to tolerate some loss of roosts, provided suitable alternative roosts are available. Silvis et al. (2014) modeled the effects of roost-loss on northern long-eared bats and then Silvis et al. (2015) removed known roosts during the winter to investigate the effects. Northern long-eared bat colonies in the study did not substantially alter their roosting behavior or abandon previously used roosting areas when up to 24 percent of their secondary roosts were



removed. However, when documented roost tree loss exceeded this, one of the maternity colonies started showing patterns of break-up. Sociality is believed to increase reproductive success (Silvis et al. 2014) and smaller colonies that are affected by roost tree loss would be expected to have reduced reproductive success. Smaller colonies would be expected to provide less thermoregulatory benefits for adults in cool spring temperatures and for non-volant pups. Female bats have tight energy budgets, and in the spring need to have sufficient energy to keep warm, forage, and sustain pregnancies. Increased flight distances or smaller colonies are expected to result in a portion of bats present within the colony having reduced breeding success. We expect that northern long-eared bats will avoid the permanently cleared areas and start exploring undisturbed areas for future roost sites. We expect that 99.7 percent of the forested area within the action area to remain following tree removal activities for the proposed action.

In addition to potential disruption of colony networks (Silvis et al. 2015), removal of roosting and/or foraging habitat can result in longer flights for northern long-eared bats to find alternative suitable habitat. Northern long-eared bats emerge from hibernation, having expended their fat reserves, to return to their summer home ranges, which contain familiar roosting and foraging areas. Because northern long-eared bats have summer home range fidelity (Foster and Kurta 1999, Patriquin et al. 2010, Broders et al. 2013), loss or alteration of forest habitat, depending upon the extent and proximity to roosting trees, can put additional stress on females when returning to summer roost or foraging areas after hibernation if females were forced to find new roosting or foraging areas (expend additional energy). Hibernation and reproduction are the most energy-demanding periods for temperate-zone bats like the northern long-eared bat (Broders et al. 2013). Further, flight is an energy-demanding mode of transportation (particularly for pregnant females). Bats may reduce costs of searching for food by concentrating their foraging in areas of known high profitability, a benefit that could result from local knowledge and site fidelity (Broders et al. 2013). Cool spring temperatures provide an additional energetic demand as bats need to stay sufficiently warm or enter torpor. Entering torpor comes at a cost with delayed parturition; bats born earlier have a greater chance of surviving their first winter and breeding their first year (Frick et al. 2009). Delayed parturition may be costly because young of the year and adult females would have less time to prepare for hibernation (Broders et al. 2013). Northern long-eared bat females roost colonially with their largest counts in spring (Foster and Kurta 1999); presumably this is one way to reduce thermal costs for individual bats (Foster and Kurta 1999). In summary, northern long-eared bats have multiple energetic demands (particularly in spring) and must have sufficient suitable roosting and foraging habitat available in close enough proximity to allow for successful reproduction.

In areas with WNS, there are additional energy demands for northern long-eared bats. For example, WNS-affected bats have less fat reserves than non-WNS-affected bats when they emerge from hibernation (Reeder et al. 2012, Warnecke et al. 2012) and have wing damage (Reichard and Kunz 2009, Meteyer et al. 2009). That makes migration and foraging more challenging. Females that survive the migration to their summer habitat must partition energy resources between foraging, keeping warm, successful pregnancy and pup-rearing, and healing.

### *Summary*

In summary, individual northern long-eared bats may be harmed or killed from active season tree

clearing on 37.62 acres of known use spring staging/fall swarming habitat and 21.68 acres of known summer habitat within the action area. Tree removal and construction activities within occupied habitat may result in removal of occupied roosts and could cause injury or death to individual adult, pups, and juvenile bats. This may also cause reduced reproduction for the colony for that year. These effects are anticipated to be relatively short-lived, as northern long-eared bats are anticipated to acclimate to the altered landscape and use other available habitat that will remain within the action area. The effects of active season tree removal in known use spring staging/fall swarming and summer habitats will vary. We have no way to precisely estimate how many individuals will be injured, killed, or experience reduced breeding success. If no northern long-eared bats are using the roosts at the time they are cleared, then none will be affected. If some northern long-eared bats are using the roosts at the time they are cleared, then a portion of those bats may be injured, killed, or experience a reduction in breeding success.

## CUMULATIVE EFFECTS

Cumulative effects are those “effects of future State or private activities, not involving federal activities, that are reasonably certain to occur within the action area” considered in this Opinion (50 CFR 402.02).

Rusty patched bumble bee – The Service is aware of private timbering activities that have occurred and continue to occur in the action area, but we are unaware of the timing or exact location of future activities. These activities have the potential to alter suitable foraging, nesting, and overwintering habitat for the rusty patched bumble bee with the potential for adverse effects to workers, males, and queens. Timbering activities have the potential to occur in approximately 56.5 percent of the action area where rusty patched bumble bee suitable habitat exists. Timber management is likely to increase the diversity of foraging resources for the rusty patched bumble bee in a manner that could facilitate colony establishment and productivity, reproduction, and dispersal within the action area. Where closed-canopy deciduous forests dominate landscapes, evidence from the scientific literature seems to consistently indicate that bee abundance is likely to increase in proportion to the amount of early successional habitat (Mola et al. 2021a; Richardson et al. 2019; Roberts et al. 2017). These inferences are drawn from studies that do not specifically include the rusty patched bumble bee, but we know that the species does use newly restored grassland habitats. Due to these factors, we anticipate that adequate habitat to maintain rusty patched bumble bee numbers, reproduction, and viability should remain in the action area.

Virginia big-eared bat – The Service is aware of private timbering activities that have occurred and continue to occur in the action area, however, we are unaware of the timing or exact location of future activities. These activities have the potential to alter suitable foraging and roosting habitat for the Virginia big-eared bat, resulting in adverse effects to individuals in the area.

We have no information on the harvest methods that are favored or what tree species may be targeted for management in this area by the landowner. However, West Virginia is the third most forested state in the United States and continues to be one of the nation’s top wood-producing states, putting out more than 780 million board feet of lumber annually (Public Sector Consultants et al. 2020). According to the most recent (2022) forest product pricing data report for the state, the most profitable timber products coming from the state are oak (*Quercus*) species

and black walnut (*Juglans nigra*; West Virginia Division of Forestry 2022) and a variety of timber harvest practices, ranging from clear-cut harvests to moderate or selective thinning, are used in West Virginia (Milauskas and Wang 2006). Because the forest cover of the action area is mostly mixed deciduous hardwood, we're reasonably certain that the action area could be harvested in the future. The most common harvesting method used by private logging operations within the state includes partial harvests, such as thinning or diameter-limit cuts; clear-cut methods are used less often (approximately 9-percent of annual harvests; (Milauskas and Wang 2006). Thus, while we cannot rule out the possibility of a clear-cut being implemented on all or part of the land in the action area, harvests are more likely to be some type of partial harvest or thinning.

Data gathered on Virginia big-eared bats in the action area during 2021 found that individuals used recently timbered areas to forage in addition to forested areas. Additionally, Virginia big-eared bat roosting features documented within the action area (portals, rock fissures, and anthropogenic structures) are unlikely to be destroyed by timbering activities. Further, it is likely that equipment would avoid areas around rock fissures and portals due to the rugged terrain associated with them. Due to these factors, and the unlikelihood of clear cutting of the entire action area, we anticipate that adequate habitat to maintain Virginia big-eared bat numbers, reproduction, and viability should remain in the action area.

Indiana bat – These private timbering activities have the potential to alter suitable foraging and roosting habitat for the Indiana bat, resulting in adverse effects to individuals in the area. We have no information on the harvest methods that are favored or what tree species may be targeted for management in this area by the landowner. However, due to the amount of forest in West Virginia, the likelihood for a harvest method that retains existing habitat, and the action area being 66 percent forested, it is unlikely that the entirety of this area would be impacted by future activities. Thus, we anticipate that adequate habitat to maintain Indiana bat numbers, reproduction, and viability should remain in the action area.

In addition, while activities that increase noise levels above the baseline environment in the action area might affect the Indiana bat, the species is exposed to this stressor from a variety of sources, and it not possible to differentiate between additional inputs attributed to existing sources, federal actions, and non-federal activities based on the available information.

Northern long-eared bat – The Service is aware of private timbering activities that have occurred and continue to occur in the action area, however, we are unaware of the timing or exact location of future activities. These activities have the potential to alter suitable foraging and roosting habitat for the northern long-eared bat, resulting in adverse effects to individuals in the area. We have no information on the harvest methods that are favored or what tree species may be targeted for management in this area by the landowner. However, due to the amount of forest in West Virginia, the likelihood for a harvest method that retains existing habitat, and the action area being 66 percent forested, it is unlikely that the entirety of this area would be impacted by future activities. Thus, we anticipate that adequate habitat to maintain northern long-eared bat numbers, reproduction, and viability should remain in the action area.

In addition, while activities that increase noise levels above the baseline environment in the



action area might affect the northern long-eared bat, the species is exposed to this stressor from a variety of sources, and it not possible to differentiate between additional inputs attributed to existing sources, federal actions, and non-federal activities based on the available information.

## **JEOPARDY ANALYSIS**

Section 7(a)(2) of the ESA requires that federal agencies ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat.

### *Jeopardy Analysis Framework*

“Jeopardize the continued existence of” means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species (50 CFR 402.02). The following analysis relies on 4 components: (1) Status of the Species, (2) Environmental Baseline, (3) Effects of the Action, and (4) Cumulative Effects. The jeopardy analysis in this Opinion emphasizes the range-wide survival and recovery needs of the listed species and the role of the Action Area in providing for those needs. It is within this context that we evaluate the significance of the proposed federal action, taken together with cumulative effects, for purposes of making the jeopardy determination.

### **Analysis for Jeopardy**

#### Rusty patched bumble bee

*Impacts to Individuals* – As discussed in the Effects of the Action Section of this Opinion, anticipated effects of the action include effects to individual rusty patched bumble bees present within the action area year-round. Effects may include reduced reproductive success of queens present in the action area as a result of removal of floral resources, as well as increased energy expenditure of workers and males that are affected by the removal of floral resources and noise and vibrations. Additionally, injury or death of individual workers (active season) or queens (active and overwintering seasons) may occur as a result of crushing by machinery during vegetation removal and ground disturbing activities to construct the access roads, boring pads, and laydown yards.

In response to the removal of floral resources, rusty patched bumble bees are likely to expend additional energy to forage elsewhere in the foraging range of their nests. As a result, individual rusty patched bumble bee workers may experience reduced fitness associated with the loss or reduction of floral resources previously available. Individual worker bees are responsible for supporting the reproductive success of the colony by providing food resources to the queen. The health of the colony is dependent on the number of workers foraging and providing resources and on the abundance of foraging habitat. Reduced health of rusty patched bumble bee workers may reduce the reproductive success of some queens (i.e., not as many males and foundress queens produced) as a result of loss of foraging resources provided by workers. Furthermore, the loss of reproductive individuals may reduce the success of future matings and future colonies, leading to a reduction in the number of colonies on the landscape. Should this occur, fewer rusty

patched bumble bee males and foundress queens will be available for reproduction, increasing the likelihood of related individuals mating.

Effects on rusty patched bumble bees from alterations of foraging habitat will be temporary in nature as the project will not last longer than nine months and disturbed areas will be restored and reseeded with native species upon completion of construction activities. Additionally, impacts to foraging habitat constitute only 0.28 percent of available foraging habitat in the action area. Overwintering and nesting habitats will be permanently lost due to soil compaction from project activities; however, these habitats represent 0.31 percent and 0.35 percent, respectively, of available overwintering and nesting habitat in the action area. However, suitable overwintering habitat will continue to exist in areas alongside the impacted areas. Furthermore, cumulative effects within the action area from timber management activities are likely to increase the diversity of foraging resources for the rusty patched bumble bee in a manner that may facilitate colony establishment, productivity, reproduction, and dispersal.

In summary, we anticipate the proposed actions will have impacts to both survival and reproductive success of individual rusty patched bumble bees.

*Impacts to Populations* – As we have concluded that some individual rusty patched bumble bees are likely to be killed or experience some reductions in health, and colonies may experience some reductions in their reproductive success, we need to assess the aggregated consequences of the anticipated losses and reductions in fitness (i.e., reproductive success and long-term viability) of the exposed individuals and colonies on the population to which these belong. While we cannot predict precise numbers of individuals affected, it is reasonable to assume that there will be at least some individuals present in the action area and affected by project activities because the project includes vegetation and ground disturbing activities in suitable and occupied habitat. However, while the loss of foraging resources and the loss of potential nesting and overwintering habitat is anticipated to have at least some negative impact on some individual rusty patched bumble bees, it is not reasonable to assume that the project will have a large impact on all or most of the bees in the population using the project area. This relative quantification of impacts is essential to determining the magnitude of the importance of the take on the population and to the species.

Impacts to populations may result from loss of colonies or reduced colony formation when nests or overwintering foundress queens are crushed; when the health or survival of colony members is reduced or when colonies produce fewer reproductive individuals due to reductions in foraging resources. A population of rusty patched bumble bees is represented by the number of successful nests or colonies in a given geographical area, rather than a number of individuals, because a colony is founded by a single queen and represents one reproductive unit (Chapman and Burke 2001, Zayed 2009, Service 2016). As a result of their genetic structure, a rusty patched bumble bee population can only persist on the landscape in a metapopulation structure (a group of spatially separated populations, colonies in this case, of the same species that interact at some level). A healthy population of bumble bees typically contains tens to hundreds of colonies (Macfarlane et al. 1994, 82 FR 3186-3209). Loss of a colony or overwintering queen could reduce the health of a metapopulation due to lost opportunities to interbreed. In addition, as population size decreases, population growth rate also tends to decrease and the risk of local

extirpation increases. The proposed action will remove 0.31 percent of suitable overwintering habitat and 0.35 percent of suitable nesting habitat within the action area. The remaining 99.69 percent of suitable overwintering habitat and 99.65 percent of suitable nesting habitat will remain unaffected. Habitat removed as a result of constructing access roads, laydown yards, and bore pads is likely to be permanently lost due to soil compaction, however, we expect bees in the area to make use of suitable habitat that will continue to exist in areas alongside the impacted areas

Reduced foraging of workers may decrease the reproductive success of colonies as a result of loss of foraging resources provided by workers to the queen (i.e., not as many foundress queens produced to start new colonies). This may reduce colony (nest) fitness by resulting in fewer reproductive males and females. The proposed action will remove 0.28 percent of suitable foraging habitat within the action area. The remaining 99.72 percent of suitable foraging habitat in the action area will remain unaffected. Habitat removed as a result of constructing access roads, laydown yards, and bore pads is likely to be temporarily lost and following completion of construction, these areas will be restored and planted with native seed mixes. A shift in the canopy opening from tree removal will result in a parallel shift in the type of floral resources for rusty patched bees, which is likely to increase local diversity of foraging resources for the species. Additionally, cumulative effects from timber management activities within the action are also likely to increase the diversity of foraging resources for bees which will benefit the population.

Due to the metapopulation dynamics of the rusty patched bumble bee, limited impacts to the ability of queens within the affected areas to produce workers and foundress queens are not likely to negatively impact the fitness or survival of the population.

*Impacts to Species* – As we have concluded that populations of the rusty patched bumble bee are unlikely to experience reductions in their fitness, there is unlikely to be harmful effects (i.e., there will be no reduction in reproduction, numbers, or distribution) on the species as a whole.

#### Virginia big-eared bat

*Impacts to Individuals* – As discussed in the Effects of the Action individual Virginia big-eared bats present within the action area during the summer may be adversely affected by the project. Effects of the action will result from noise and vibration, potential modifications of roosting habitat, and exclusion from roosting habitat. Bats that are disturbed during roosting or that are forced to seek out alternate roosting habitat will experience increased energy expenditure and exposure to predators, which can reduce fitness and result in reduced survival or reproductive success. Roosting habitat may be temporarily altered if a cave breach occurs, but potential effects due to introduction of airflow or water will be resolved by sealing the bore hole. Roosting habitat may also be impacted if brittle substrates are dislodged; however, due to the size of the bore hole (three inches in diameter), it is not expected that dislodged substrates would be of a size to permanently block portal passages. Furthermore, effects on bats from changes in roosting habitat will be avoided and minimized by exclusion of the bats from the affected portals during construction. Bats may experience increased energy expenditure seeking alternate roosts as a result of exclusion; however, this will be temporary in nature as the portals will be reopened to bats following the completion of construction. In summary, we anticipate impacts to individual Virginia big-eared bats in their survival and fitness.



*Impacts to Populations* – As we have concluded that individual Virginia big-eared bats are likely to experience some reductions in survival and fitness, we need to assess the aggregated consequences of the anticipated impacts on the population(s) to which these individuals belong.

We do not expect a long-term or measurable decrease in fitness, in terms of reproductive success and likelihood of survival, for the Virginia big-eared bat population using the action area as a result of the proposed action. A small number of bats in the population is expected to be affected, and most effects are expected to be non-lethal and short-term. Individuals that use the action area for roosting will be affected by the action and the effects are expected to decrease the fitness of these individuals and potentially result in mortality via predation; however, effects will be minimized for several reasons. Habitat used for roosting will be excluded which will avoid the likelihood of trapping, crushing, or killing adults or juveniles. Multiple documented roosts will remain available during the active season over the life of the project, and bats are expected to seek out alternate roosting habitat available nearby. Impacts from noise and vibration may disturb individual bats or change roosting behavior, but the majority of these impacts are expected to be non-lethal and all impacts are anticipated to be short-term in nature (i.e., last only 4 weeks). Thus, while some individuals may experience temporary declines in fitness, the long-term reproductive success, survival, and numbers for the population are not expected to decline, given the limited impacts and abundance of suitable habitat remaining within and adjacent to the project area that will be available.

*Impacts to Species* – As we have concluded that the population of Virginia big-eared bats using the action area is unlikely to experience reductions in its fitness, harmful effects (i.e., there will be no reduction in reproduction, numbers, or distribution) on the species as a whole are unlikely.

#### Indiana bat

*Impacts to Individuals* – The proposed action includes removal of a total of 4.97 acres of known-use Indiana bat spring staging/fall swarming habitat. As discussed in the Effects of the Action, individual Indiana bats present within the action area may experience adverse effects. Individual bats could be killed, injured, or forced to flee if an occupied roost tree is cut, or if they experience reduced breeding success. Bats that are disturbed during roosting or that are forced to seek out alternate roosting habitat will experience increased energy expenditure and exposure to predators, which can reduce fitness and result in reduced survival or reproductive success. The potential for effects caused by the removal of suitable foraging and roosting habitat is expected to be greatest during the spring when bats emerge from hibernation and in the fall when bats are preparing to enter hibernation.

Impacts to bats from the loss of spring staging/fall swarming habitat are expected to be minor as bats are expected to use other available roosting habitat in the action area that is not impacted by the proposed action. However, as discussed above, bats impacted by WNS have additional energetic demands and reduced flight ability. This compounds the stress of having to find new roosting and/or foraging habitat. Some individuals may have to expend additional energy finding prey, experience higher predation risk and may experience reduced reproductive potential.

In summary, we anticipate impacts to individual Indiana bats in either their annual survival or

reproductive rates.

*Impacts to Populations* – As we have concluded that individual Indiana bats are likely to experience some reductions in their annual survival or reproductive rates, we need to assess the aggregated consequences of the anticipated impacts on the population(s) to which these individuals belong.

Individuals of one Indiana bat hibernaculum will be affected. We do not expect a long-term or measurable decrease in fitness, in terms of reproductive success and likelihood of survival, for the Indiana bat population using the action area as a result of the proposed action. A small number of bats in the population is expected to be affected, and most effects are expected to be non-lethal and short-term. Individuals that use the action area for foraging and roosting will be affected by the action and the effects are expected to decrease the fitness of these individuals and potentially result in mortality via predation. We do not anticipate a long-term reduction in fitness to the population because individual Indiana bats are expected to acclimate to the changes in the landscape from the proposed action. The affected habitat is less than one percent of available suitable habitat in the action area and surrounding areas; ample suitable habitat will remain for future spring staging/fall swarming.

*Impacts to Species* – As we have concluded that the population of Indiana bats using the action area is unlikely to experience reductions in its fitness, there are unlikely to be harmful effects (i.e., there will be no reduction in reproduction, numbers, or distribution) on the species as a whole.

#### Northern long-eared bat

*Impacts to Individuals* – The proposed action includes removal of a total of 37.62 acres of known-use northern long-eared bat spring staging/fall swarming habitat and 21.68 acres of known-use northern long-eared bat summer habitat. As discussed in the Effects of the Action, individual northern long-eared bats present within the action area could be killed, injured, or forced to flee if an occupied roost tree is cut, or experience reduced breeding success. Additionally, bats that are disturbed during roosting or that are forced to seek out alternate roosting habitat will experience increased energy expenditure and exposure to predators, which can reduce fitness and result in reduced survival or reproductive success. The potential for effects caused by the removal of suitable foraging and roosting habitat is expected to be greatest during the active season when bats are present on the landscape and not in hibernation.

Impacts to bats from the loss of spring staging/fall swarming habitat are expected to be minor as bats are expected to use other available roosting habitat in the action area that is not impacted by the proposed action. However, as discussed above, bats impacted by WNS have additional energetic demands and reduction in flight ability. This compounds the stress of having to find new roosting and/or foraging habitat. Some individuals may have to expend additional energy finding prey, experience higher predation risk, and may experience reduced reproductive potential.

In summary, we anticipate impacts to individual northern long-eared bats in either their annual survival or reproductive rates.

*Impacts to Populations* – Individuals northern long-eared bats using the action area for spring staging/fall swarming and summer roosting are likely to be affected. We do not expect a long-term or measurable decrease in fitness, in terms of reproductive success and likelihood of survival, for the northern long-eared population using the action area as a result of the proposed action. A small number of bats in the population is expected to be affected, and most effects are expected to be non-lethal and short-term. Individuals that use the action area for foraging and roosting will be affected by the action and the effects are expected to decrease the fitness of these individuals and potentially result in mortality via predation. We do not anticipate a long-term reduction in fitness of the population because northern long-eared bats are expected to acclimate to the changes in the landscape from the proposed action. The affected habitat represents less than one percent of available suitable habitat in the action area and surrounding areas and ample suitable habitat will remain for future spring staging/fall swarming and summer use.

*Impacts to Species* – As we have concluded that the population of northern long-eared bats using the action area is unlikely to experience reductions in its fitness, there are unlikely to be harmful effects (i.e., there will be no reduction in reproduction, numbers, or distribution) on the species as a whole.

## CONCLUSION

### Rusty patched bumble bee

We considered the current overall declining status of the rusty patched bumble bee and the inferred condition of the species within the action area (environmental baseline). We then assessed the effects of the proposed action and the potential for cumulative effects in the action area on individuals, the affected population, and the species as a whole. As stated in the Jeopardy Analysis, we do not anticipate any reductions in the overall reproduction, numbers, or distribution of the rusty patched bumble bee. It is the Service's Opinion that authorization to construct and implement the core borings, as proposed, is not likely to jeopardize the continued existence of the rusty patched bumble bee.

### Virginia big-eared bat

We considered the current overall increasing status of the Virginia big-eared bat and the condition of the species within the action area (environmental baseline). We then assessed the effects of the proposed action and the potential for cumulative effects in the action area on individuals, the affected population, and the species as a whole. As stated in the Jeopardy Analysis, we do not anticipate any reductions in the overall reproduction, numbers, or distribution of the Virginia big-eared bat. It is the Service's Opinion that authorization to construct and implement the core borings, as proposed, is not likely to jeopardize the continued existence of the Virginia big-eared bat.

### Indiana bat

We considered the current overall increasing status of the Indiana bat and the condition of the species within the action area (environmental baseline). We then assessed the effects of the proposed action and the potential for cumulative effects in the action area on individuals, the affected population, and the species as a whole. As stated in the Jeopardy Analysis, we do not



anticipate any reductions in the overall reproduction, numbers, or distribution of the Indiana bat. It is the Service's Opinion that authorization to construct and implement the core borings, as proposed, is not likely to jeopardize the continued existence of the Indiana bat.

#### Northern long-eared bat

We considered the current overall declining status of the northern long-eared bat and the condition of the species within the action area (environmental baseline). We then assessed the effects of the proposed action and the potential for cumulative effects in the action area on individuals, the affected population, and the species as a whole. As stated in the Jeopardy Analysis, we do not anticipate any reductions in the overall reproduction, numbers, or distribution of the northern long-eared bat. It is the Service's Opinion that authorization to construct and implement the core borings, as proposed, is not likely to jeopardize the continued existence of the northern long-eared bat.

### **INCIDENTAL TAKE STATEMENT**

Section 9 of the ESA and federal regulation pursuant to Section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without a special exemption. Take is defined in Section 3 of the ESA as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns including breeding, feeding, or sheltering (50 CFR § 17.3). Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of Section 7(b)(4) and Section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the ESA provided that such taking is in compliance with the terms and conditions of this incidental take statement (ITS).

The measures described below are nondiscretionary and must be undertaken by the FHWA and WVDOH so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, for the exemption in Section 7(o)(2) to apply. The FHWA and WVDOH have a continuing duty to regulate the activity covered by this incidental take statement. If the FHWA and WVDOH: (1) fails to assume and implement the terms and conditions or (2) fails to require the applicant to adhere to the terms and conditions of the ITS through enforceable terms that are added to the permit or grant document, the protective coverage of Section 7(o)(2) may lapse. To monitor the impact of incidental take, the applicant must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR 402.14(i)(3)].

### **AMOUNT OR EXTENT OF TAKE ANTICIPATED**

The anticipated take from the proposed action is described in the Tables below.

50 CFR 402.14(i)(1)(i) states that surrogates may be used to express the amount or extent of anticipated take provided the Opinion or incidental take statement (ITS): (1) describes the causal link between the surrogate and take of the listed species; (2) describes why it is not practical to

express the amount of anticipated take or to monitor take-related effects in terms of individuals of the listed species; and (3) sets a clear standard for determining when the amount or extent of the taking has been exceeded.

#### Rusty patched bumble bee

It is not practical to estimate or monitor the total number of rusty patched bumble bees that may be killed or harmed as a result of the proposed action. The Service (2018) has developed protocols and best practices for conducting rusty patched bumble bee surveys, which are not intended to provide a precise estimate of the number of rusty patched bumble bees in a specific area. Instead, they are designed to: 1) find and document new rusty patched bumble bee locations; 2) determine if the species is still extant at previously documented locations; and 3) monitor rusty patched bumble bee populations to determine long-term population trends, relative abundance (e.g., number observed per hour compared to other *Bombus* species), and bumble bee species richness....” The survey protocols provide information that can be used to infer the presence of one or more colonies. The Service can use records, obtained with the use of its survey protocols (Service 2018a), of live individual rusty patched bumble bees to help understand long-term population trends at landscape, regional, or continental scales, but not at a project-level because the quantity of bumble bees changes throughout the active season as worker populations increase or decrease and bumble bee habitat suitability changes over time as floral landscapes change composition. Because suitable habitat may change locations from one year to the next and bumble bee numbers fluctuate throughout the season, quantifying populations precisely in terms of individual bees is not feasible. As a result, using surveys to predict the precise number of individuals that will be taken by the project is not practical, and likely not possible.

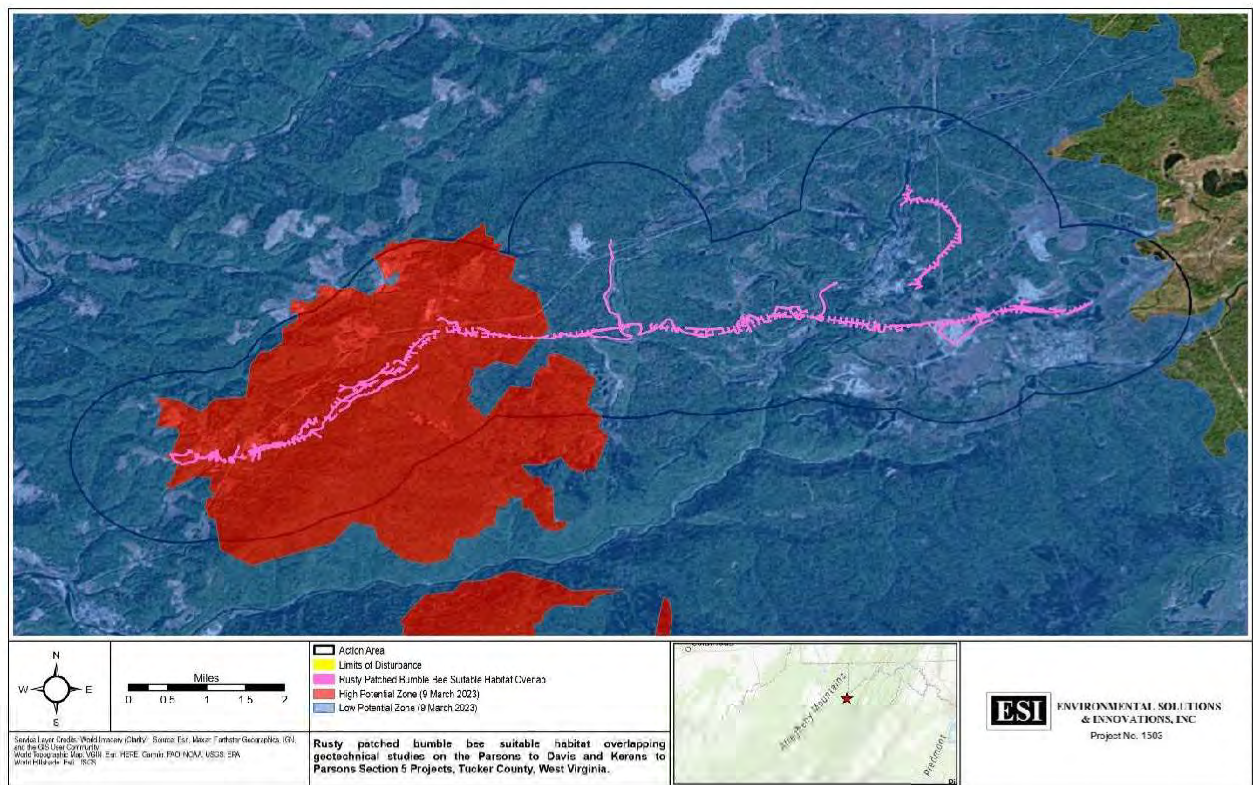
It is also not practical to monitor take-related impacts in terms of individual rusty patched bumble bees for the following reasons: the rusty patched bumble bee has a small body size (queen 0.86 to 0.87 inches in length, worker 0.43 to 0.63 inches in length, male 0.51 to 0.69 inches in length; Michell 1960) making it difficult to locate, which makes encountering dead or injured individuals unlikely. In addition, rusty patched bumble bee losses may be masked by annual fluctuations in numbers. Moreover, the rusty patched bumble bee spends half its life cycle in habitat (i.e., underground) that makes detection difficult and take may occur offsite (e.g., a rusty patched bumble bee may die outside of the action area) and would not be detected. Some of the anticipated incidental take including non-lethal injury, reduced survival of workers, and reduced reproductive capacity of the queen is not directly observable and cannot be directly monitored. As stated above, while some live rusty patched bumble bees may be detected or counted during surveys, this does not mean that survey methods exist to accurately measure the rusty patched bumble bees that would be taken by this project.

This ITS uses acres of rusty patched bumble bee habitat as a surrogate to express the extent of authorized take for the rusty patched bumble bee because it is not practical to monitor take related impacts in terms of individuals of the species. Since it will be difficult to measure the effects of habitat loss on individuals, take will be expressed in terms of the area of habitat removed. Specifically, we anticipate that 53.6 acres of rusty patched bumble bee habitat will be temporarily or permanently removed as a result of the proposed action (Table 1, Figure 1). The 53.6 acres encompasses the area where ground disturbance, including vegetation and tree

clearing, will occur to construct access roads, laydown yards, and bore pads. As described in the Opinion above, ground disturbance and effects to vegetation will directly and indirectly cause the anticipated incidental take within the bounds of the identified acres. Therefore, because the 53.6 acres of rusty patched bumble bee habitat disturbance can be readily identified and monitored, this surrogate serves as a practical means for detecting when the amount or extent of take may have been exceeded. The 53.6 acres of habitat disturbance sets a clear, enforceable standard and ground disturbance in rusty patched bumble bee habitat outside of that specific acreage would require FHWA to reinitiate consultation.

**Table 1. RPBB amount and type of anticipated incidental take.**

<i>Nature and amount of surrogate effects anticipated</i>	<i>Life stage when take is anticipated</i>	<i>Type of take</i>	<i>Take is anticipated as a result of</i>
53.6 acres of habitat removal	Adult workers, males, or queens	Harm or kill	Reduced reproduction associated with loss or alteration of overwintering, nesting, and foraging habitat. Mortality through crushing due to construction of access roads, laydown yards, bore pads, and vegetation/tree removal.



**Figure 1. Map of areas where incidental take of the rusty patched bumble bee is anticipated.**

### Virginia big-eared bat

It is not practical to monitor take-related impacts in terms of individual Virginia big-eared bats for the following reasons: (1) the Virginia big-eared bat has a small body size, is drab in color,

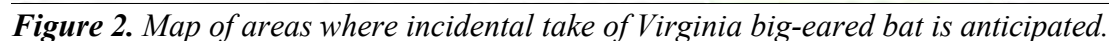


which makes encountering dead or injured individuals unlikely; (2) any dead or injured Virginia big-eared bats may be eaten or scavenged; (3) Virginia big-eared bats occupy summer habitats where they are difficult to locate (multiple roosts located within and outside of the action area); (4) take may occur offsite (e.g., the bat dies outside of the action area); and (5) excess energy expenditure, starvation, or failure to reproduce cannot be detected. Even when tree clearing occurs in the active season, available survey techniques are effective only for determining bat presence/probable absence in a particular area; they cannot be used to track in real time the number of bats that may experience lethal or sublethal take from ongoing activities. For all of these reasons, it is not practicable to monitor take-related impacts in terms of individuals of the species, justifying the use of a surrogate.

Because disturbance to known roosting habitat is the cause of all forms of take of the Virginia big-eared bat that are reasonably certain to result from the project, there is a clear causal link between the acres of habitat impacted and take of Virginia big-eared bats. In addition, because the location, timing, and acreage of habitat impacts can be readily identified, measured, and monitored, this surrogate is the most reasonable means for monitoring the anticipated take, and for detecting when the anticipated level of take may be exceeded, thereby providing a clear trigger for reinitiating consultation. The Service therefore will use the acreage of affected habitat as a surrogate for monitoring the amount and extent of anticipated take (Table 2, Figure 2).

***Table 2. Virginia big-eared bat amount and type of anticipated incidental take.***

Habitat Type	Acreage Impacted	Life Stage when Take is Anticipated	Type of Take	Types of Effects Anticipated
Known-use summer and fall	53.6	Adults, Juveniles	Harm or Kill	Reduced survivorship, decreased breeding success, or direct mortality from predation of individuals associated with disturbance at known roosting sites



It is not practical to monitor take-related impacts in terms of individual Indiana bats for the following reasons: (1) the Indiana bat has a small body size, is drab in color, which makes encountering dead or injured individuals unlikely; (2) any dead or injured Indiana bats may be eaten or scavenged; (3) Indiana bats occupy summer habitats (heavily forested) where they are difficult to locate (multiple roosts located within and outside of the action area); (4) take may occur offsite (e.g., the bat dies outside of the action area); (5) excess energy expenditure, starvation, or failure to reproduce cannot be detected; and (6) losses may be masked by fluctuations in numbers associated with WNS. Even when tree clearing occurs in the active season, available survey techniques are effective only for determining bat presence/probable absence in a particular area; they cannot be used to track in real time the number of bats that may experience lethal or sublethal take from ongoing activities. For all of these reasons, it is not practicable to monitor take-related impacts in terms of individuals of the species, requiring the use of a surrogate.

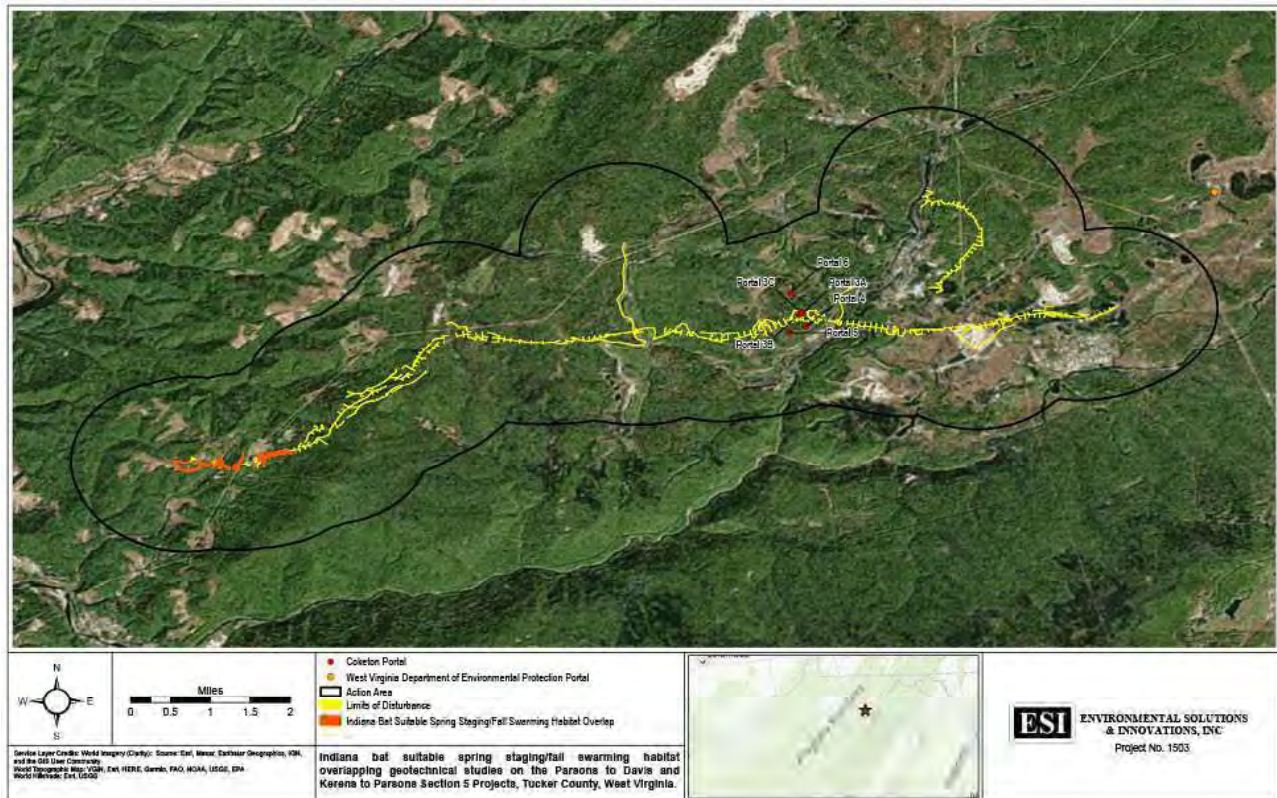
Because tree removal is the cause of all forms of take of the Indiana bat that are reasonably certain to result from the project, there is a clear causal link between the acres of habitat impacted and take of Indiana bats. In addition, because the location, timing, and acreage of habitat impacts can be readily identified, measured, and monitored, this surrogate is the most reasonable means for monitoring the anticipated take, and for detecting when the anticipated level of take may be exceeded, thereby providing a clear trigger for reinitiating consultation. The Service therefore will use the acreage of affected habitat as a surrogate for monitoring the



amount and extent of anticipated take (Table 3, Figure 3.

**Table 3.** *Indiana bat amount and type of anticipated incidental take.*

Habitat Type	Acreage Impacted by Tree Removal	Life Stage when Take is Anticipated	Type of Take	Types of Effects Anticipated
Known use spring staging/fall swarming	4.97	Adults	Harm or Kill	Reduced survivorship or direct mortality of individuals associated with occupied roost tree removal and decreased breeding success.



**Figure 3.** *Map of areas where incidental take of the Indiana bat is anticipated.*

### Northern long-eared bat

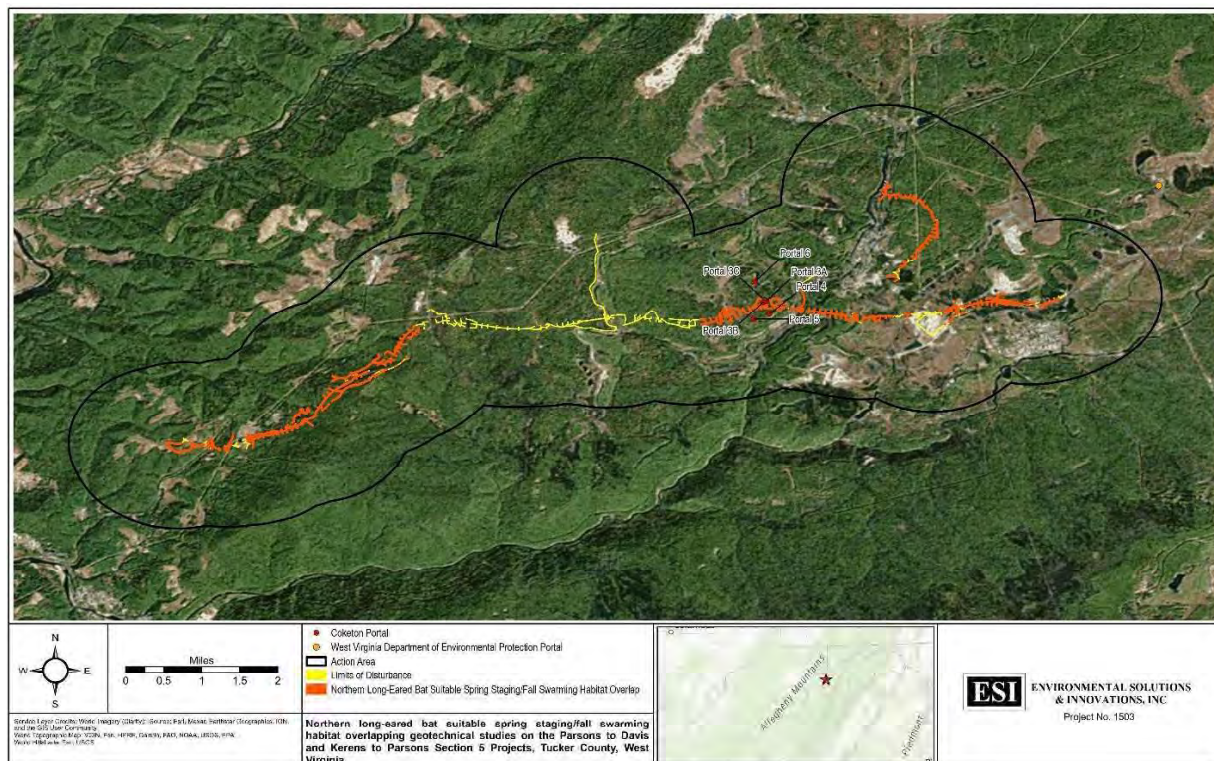
It is not practical to monitor take-related impacts in terms of individual northern long-eared bats for the following reasons: (1) the northern long-eared bat has a small body size, is drab in color, which makes encountering dead or injured individuals unlikely; (2) any dead or injured northern long-eared bats may be eaten or scavenged; (3) northern long-eared bats occupy summer habitats (heavily forested) where they are difficult to locate (multiple roosts located within and outside of the action area); (4) take may occur offsite (e.g., the bat dies outside of the action area); (5) excess energy expenditure, starvation, or failure to reproduce cannot be detected; and (6) losses may be masked by fluctuations in numbers associated with WNS. Even when tree clearing occurs in the active season, available survey techniques are effective only for determining bat presence/probable absence in a particular area; they cannot be used to track in real time the number of bats that may experience lethal or sublethal take from ongoing activities. For all of these reasons, it is not practicable to monitor take-related impacts in terms of individuals of the species, requiring the use of a surrogate.



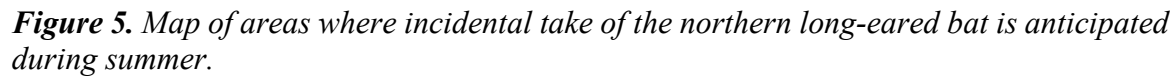
Because tree removal is the cause of all forms of take of the northern long-eared bat that are reasonably certain to result from the project, there is a clear causal link between the acres of habitat impacted and take of northern long-eared bats. In addition, because the location, timing, and acreage of habitat impacts can be readily identified, measured, and monitored, this surrogate is the most reasonable means for monitoring the anticipated take, and for detecting when the anticipated level of take may be exceeded, thereby providing a clear trigger for reinitiating consultation. The Service therefore will use the acreage of affected habitat as a surrogate for monitoring the amount and extent of anticipated take (Table 4, Figures 4 and 5).

**Table 4.** Northern long-eared bat amount and type of anticipated incidental take.

Habitat Type	Acreage Impacted by Tree Removal	Life Stage when Take is Anticipated	Type of Take	Types of Effects Anticipated
Known use spring staging/fall swarming	37.62	Adults	Harm or Kill	Reduced survivorship or direct mortality of individuals associated with occupied roost tree removal and decreased breeding success.
Known use summer	21.68	Adults and juveniles	Harm or Kill	Reduced survivorship or direct mortality of individuals (adults and juveniles) associated with occupied roost tree removal.



**Figure 4.** Map of areas where incidental take of the northern long-eared bat is anticipated during spring staging/fall swarming.



The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize take of candy darters:

- The FHWA, WVDOH, and its contractors shall implement all conservation measures as described above to avoid or minimize to the greatest extent possible effects to the rusty patched bumble bee and Virginia big-eared bat within the action area.
- The FHWA and WVDOT shall provide information to individuals involved in project construction on how to avoid and minimize potential effects to rusty patched bumble bees, Virginia big-eared bats, Indiana bats, and northern long-eared bats.
- The FHWA, WVDOH, and its contractors shall install and maintain all erosion and sedimentation controls throughout the project area as specified in the BA and its Appendices, Description of the Proposed Action, Conservation Measures, and all associated project addendums.
- The FHWA, WVDOH, and its contractors shall restore all construction work areas through mulching and seeding with native species, as specified in the BA, BA Appendices, and all associated project addendums throughout the project duration and upon project completion.
- The FHWA, WVDOH, and its contractors must ensure that the proposed action will occur as designed, planned, and documented in the BA and this Opinion.



## **TERMS AND CONDITIONS**

In order to be exempt from the prohibitions of Section 9 of the ESA, the FHWA and the WVDOH and its contractors must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline required reporting/monitoring requirements. These terms and conditions are nondiscretionary in order for the exemption to apply.

1. The WVDOH will have a special condition in the construction plans stating that the project will occur as designed, planned, and documented in the BA and this Opinion.
2. The FHWA, WVDOH, and its contractors shall implement all required measures as described in the BA and its Appendices, including sediment erosion and sedimentation control best management practices.
3. The FHWA, WVDOH, and its contractors will include the following conditions (language) in all construction and demolition contracts awarded for project implementation:
  - 3.1. Federally endangered species are present in the Action Area and there is a risk of unauthorized take (ESA Section 9 violation) if the attached Terms and Conditions of U.S. Fish and Wildlife Service's Opinion are not closely followed.
  - 3.2. Best management practices for erosion and sedimentation control shall be in place before, during, and after any work is conducted and until revegetation of disturbed soil has achieved 70 percent coverage.
  - 3.3. Contractors shall monitor the project areas daily when the sites are active and not stabilized, and as soon as possible following storms or snow melt, when the sites are inactive and/or otherwise stabilized, to ensure the erosion and sedimentation control and spill avoidance practices are implemented and effective. Action shall be taken as soon possible to correct malfunctioning erosion and sedimentation control practices.
4. If voids are detected during boring activities proximate the Coketon portals that require bore plugs to be installed, WVDOH shall notify the Service and FHWA within 24 hours.
5. If collapse (partial or complete) to the entrances of any of the Coketon portals occurs during construction, WVDOH shall notify the Service and FHWA within 24 hours.
6. Environmental monitors from WVDOH staff shall make occasional site visits to active work areas (minimum of two to three times a month) to observe and confirm that all Conservation Measures are being met. The WVDOH shall notify the Service and FHWA of any failures to meet these Measures within 24 hours of observation.

## **MONITORING AND REPORTING REQUIREMENTS**

1. The FHWA and WVDOH will notify the Service, in writing (digital format), regarding the projected and actual start dates, progress, and completion of the project throughout the life of the project.
2. The FHWA and WVDOH will notify the Service, in writing (digital format) to confirm whether all conservation measures were followed during the project in a report by December 31 of each year until the project is completed. The report shall describe in detail any failure to follow any conservation measures.
3. The WVDOH shall notify the Service and FHWA of any unauthorized activities (regardless of who conducted said activities) or emergencies resulting in any adverse effects not



described in the BA and addressed in this Opinion. This notification shall be made within 48 hours or sooner, if possible.

4. The FHWA shall make all reasonable efforts to educate personnel to report any sick, injured, and/or dead rusty patched bumble bees, Virginia big-eared bats, Indiana bats, and northern long-eared bats located during project-related activities. Care must be taken in handling any dead specimens of proposed or listed species to preserve biological material in the best possible state. In conjunction with the preservation of any dead specimens, the finder has the responsibility to ensure that evidence intrinsic to determining the cause of death of the specimen is not unnecessarily disturbed. The finding of dead specimens does not imply enforcement proceedings pursuant to the ESA. The reporting of dead specimens is required to enable the Service to determine if take is reached or exceeded and to ensure that the terms and conditions are appropriate and effective. Upon locating a dead specimen, notify immediately the Service's West Virginia Field Office at the phone number listed below.
5. Any spills of motor oil, hydraulic fluid, coolant, or similar fluids, not contained before entry into the Action Area, must be reported to the Service at the contact number/email provided below and National Response Center (800-424-8802) immediately.

The contact for these reporting requirements is as follows:

Jennifer L. Norris  
Field Supervisor West Virginia Field Office  
U.S. Fish and Wildlife Service 6263 Appalachian Highway  
Davis, West Virginia 26260  
Attn: FW5\_WVFO@fws.gov or 304-866-3858

## CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the ESA directs federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

The Service recommends that the FHWA and WVDOH consider implementing the following conservation actions:

- Use native species seed mixes and straw instead of hay when restoring project areas.
- Encourage private landowners implementing land management activities within the action area to utilize native seed mixes and straw instead of hay when restoring disturbed areas.
- Conduct activities to reduce erosion sedimentation by utilizing enhanced best management practices.
- Improve habitat within the Action Area for rusty patched bumble bees by using

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machinery to uncompact soils that were compacted during construction of access roads, laydown yards, and bore pads.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

## **REINITIATION NOTICE**

This concludes formal consultation on the actions outlined in the request. As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this Opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species not considered in this Opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

If you have any questions regarding this Opinion, or our shared responsibilities under the ESA, please contact my office at FW5\_WVFO@fws.gov or at 304-866-3858.

Sincerely,

A handwritten signature in cursive script that reads "Jennifer L. Norris".

Jennifer L. Norris  
Field Supervisor

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## **Appendix A.**

### **CONSULTATION HISTORY**

February 21, 2023 – Initial request for initiation of formal consultation from FHWA

March 15, 2023 – Meeting with FHWA, WVDOH, and USFWS to discuss adding Virginia big-eared bat to the BA/BO

March 21, 2023 – Information about potential effects to Virginia big-eared bats to be included in the draft BA provided by WVDOH to FHWA and USFWS for review and discussion during meeting; FHWA decision made to formally consult on Virginia big-eared bat

April 3, 2023 – Edits to draft BA provided by WVDOH to USFWS for review and comment

April 4, 2023 – USFWS provided comments on WVDOH on draft BA

April 10, 2023 – Second round of draft BA edits provided by WVDOH to USFWS for review and comment

April 11, 2023 – USFWS provided comments on WVDOH on draft BA edits

April 12, 2023 – Additional telephone conversations between WVDOH, FHWA, and USFWS to discuss addition of portal exclusion measures as an avoidance and minimization measure for Virginia big-eared bats

April 19, 2023 – WVDOH provided final BA to FHWA and USFWS

April 24, 2023 – FHWA requested initiation of formal consultation

April 28, 2023 – USFWS acceptance of BA and initiation of formal consultation in letter to FHWA

**Attachment 9:**  
**WV Division of Natural Resources**  
**Coordination**





Governor Jim Justice

Director Brett W. McMillion

June 2, 2023

Ms. Sondra Mullins  
Division of Highways  
Technical Support Division  
1334 Smith Street  
Charleston, WV 25301

Dear Ms. Mullins:

We have reviewed Natural Heritage Program files for information on rare, threatened, and endangered (RTE) species and natural trout streams for the area of the proposed highway projects:

State Projects: X347-H-55.68 and X342-H-40.21  
Federal Projects: ACNH-0484(290) and NHPP 0484(316)  
Appalachian Highway Corridor H  
Parsons to Davis and Kerens to Parsons Core Boring Activities  
Tucker County

For ease of reference the data is divided into 3 sections with 3 tables one for each section.

#### Thomas Connector Table

Species (Latin Name) or Habitat feature	Common name	Location Description	Year/ Number	Status
<i>Corynorhinus townsendii virginianus</i>	Virginia big eared bat	6 mile cave buffer all points	34 caves	federal: endangered
<i>Perimyotis subflavus</i>	tricolored bat	5 mile cave buffer all points	1 cave	federal: proposed to be listed
<i>Bombus affinis</i>	rusty patched bumblebee	low potential zone all points	1993	federal endangered
<i>Abies balsamea</i>	balsam fir	SE 4475 + 00	2020	state: rare
<i>Juncus nodosus</i> var. <i>nodosus</i>	knotted rush	NW 20+00	1995	state: rare
Exemplary wetland		NW 4480 +00	1 exe	state: sensitive habitat
PSS wetland	Palustrine scrub shrub	NE station 4475+00, N 4470 +00, and NW 90+00	3 PSS	state: sensitive habitat
PEM wetland	Palustrine emergent	S 4475 +00 and S 10+00	2 PEM	state: sensitive habitat

### Parsons to Davis Table

Species (Latin name) or Habitat feature	Common Name	Location Description	Year/ Number	Status
<i>Myotis septentrionalis</i>	northern long eared bat	capture buffer stations 4000+00 thru 4345+00	2016, 2019 7 captures	federal: endangered
<i>Corynorhinus townsendii virginianus</i>	Virginia big eared bat	6 mile cave buffer all points	40 caves	federal: endangered
<i>Myotis sodalis</i>	Indiana bat	5 mile cave buffer stations 4040+00 thru 4100+00	2 caves	federal; endangered
<i>Perimyotis subflavus</i>	tricolored bat	5 mile cave buffer all points	9 caves	federal: proposed to be listed
<i>Plethodon nettingi</i>	Cheat Mountain salamander	30+00 thru 65+ 00 and 4170+00 thru 4415+00		federal: threatened
<i>Bombus affinis</i>	rusty patched bumblebee	4000+00 thru 4535+00 low potential 4020+00 thru 4265+00 high potential		federal: endangered
<i>Isotrea meleoloides</i>	small whorled Pogonia	SE 265+00	2021	federal; threatened
<i>Bombus terricola</i>	yellow banded bumblebee	SW 4410+00	2022	state: rare
<i>Crotalus horridus</i>	timber rattlesnake	SW 270+00	2017	state: rare
<i>Eriophorus virginicum</i>	Cotton grass fen	SE 30+00	2012	state: rare plant complex
<i>Picea rubens</i> <i>Rhododendron</i>	Red Spruce heath	SE 30+00	2012	state: rare plant complex
<i>Picea rubens</i> <i>Tsuga canadensis</i>	Red spruce hemlock	SE 30+00	2012	state: rare plant complex
Mill Run, Wolf Run, Roaring Run				reproducing trout
PSS wetland	Palustrine scrub shrub	SE 30+00, NE 65+00 NW 70+00, NW 90+00 NE 4470 +00, 4475+00	6 PSS	state: sensitive habitat
PEM wetland	Palustrine emergent	SE 10+00 , NW 80+00 N 4230+00, SE 4460+00 SE 4470+00, SE 4475+00	6 PEM	state: sensitive habitat

**Parsons to Kerens (Moore)**

<b>Species (Latin Name ) or Habitat Feature</b>	<b>Common Name</b>	<b>Location Description</b>	<b>Year</b>	<b>Status</b>
<i>Myotis septentrionalis</i>	Northern long eared bat	3 mile capture buffer all station points 1.5 mile roost buffer 3700+00 thru 3855+00	2014, 2016, 2019 (10)	federal: endangered
<i>Corynorhinus townsendii virginianus</i>	Virginia big eared bat	6 mile cave buffer 6 caves all station points		federal: endangered
<i>Myotis sodalis</i>	Indiana bat	5 mile cave buffer 3725+00 thru 3880+00		federal: endangered
<i>Perimyotis subflavus</i>	tricolored bat	5 mile cave buffer 3710+00 thru 3995+00		federal: proposed to be listed
<i>Bombus affinis</i>	rusty patched bumblebee	all points are within the low potential zone		federal; endangered
<i>Isotrea meleoloides</i>	small whorled Pogonia	NW 3695+00	2018	federal: threatened
<i>Trifolium stoloniferum</i>	Running buffalo clover	NE 3965+00	2016	state: rare plant
<i>Glyphalinia sp</i>	West Virginia Glyph	3855 +00 thru 3860+00	2008	state: rare
Wolf Run , Goodwin Run, Sugarcamp Run				state: reproducing trout

In 2022 the USFWS determined that the northern long-eared bat warranted up-listing from federally threatened to federally endangered. This listing change went into effect on March 31st, 2023 and will remove the prior 4(d) rule for the species. The WVDNR anticipates that this listing status change will result in an increase in the known occurrence buffers for the northern long-eared bat, with distances of 1.5 miles for known roosts, 3 miles for capture and acoustic records, and 5 miles for hibernacula. Inquiries for this species now use these projected buffer distances to assist in project planning. The USFWS also proposed listing the tricolored bat as federally endangered in 2022. In anticipation of that potentiality, the WVDNR developed occurrence buffers of 1.5 miles for known roosts, 3 miles for capture and acoustic records, and 5 miles for hibernacula. Please note that both the northern long-eared bat and tricolored bat buffer distances are for advance planning purposes only and may change as additional information from the USFWS becomes available.



The information provided above is the product of a database search and retrieval. This information does not satisfy other consultation or permitting requirements for disturbances to the natural resources of the state, and further consultation may be required. Additionally, any concurrence requirements for federally listed species must come from the USFWS.

The shape file for the Parsons to Kerens section is attached.

Thank you for your inquiry, and should you have any questions please feel free to contact me at the number below, or [Anne.M.Wakeford@wv.gov](mailto:Anne.M.Wakeford@wv.gov).

Sincerely,



Anne M. Wakeford  
Wildlife Biologist  
Environmental Coordination  
Operations Unit

**Attachment 10:**  
**Public Comments from the**  
**2019 and 2022 Public**  
**Comment Periods for the**  
**Parsons to Davis Project**

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**Table 1: 2019 Parsons to Davis Project Public Comment Details**

Last Name	First Name	Organization	City	State	Number*
Anderson	Mark		Thomas	WV	1
Anderson	Clare		Thomas	WV	2
Armstrong-Wright	Kristen		Davis	WV	3
Ausema	John		Greenbelt	WV	4
Baczuk	Jim		Thomas	WV	5
Baczuk	Jessica		Thomas	WV	6
Baker	Stephen		Winchester	VA	7
Barwinczak	Zachary		Davis	WV	8
Behrens	Kristen		Dryfork	WV	9
Bonner	Tina			WV	10
Brown	Erica		Silver Spring	MD	11
Brown	David		Silver Spring	MD	12
Browning	Jane	Ranger Jane's	Thomas	WV	13
Cantrell	Rebecca		Davis	WV	14
Casson	William		Potomac	MD	15
Chase	Cory	Tucker County Development Authority Board Member	Dryfork	WV	16
Cluverius	Michael			VA	17
Cobb	John W., Jr.	Corridor H Authority (Lewis County Representative)	Ireland	WV	18
Colafella	Doug		Hudson	OH	19
Coleman	Robert S		Dryfork	WV	20
Collins	Ryan		Winchester	VA	21
Combs	Mallie J. (President)	WV Hardwood Alliance Zone	Elkins	WV	22
Cooper	Dave		Lexington	KY	23
Cooper	Melissa		Durham	NC	24



Last Name	First Name	Organization	City	State	Number*
Cronauer	Judith		Davis	WV	25
Cunningham	Dan		Morgantown	WV	26
Cvechko	Steve		Charleston	WV	27
Davis	Rachelle		Thomas	WV	28
Day	Janette	Flying Pigs Breakfast & Lunchery	Thomas	WV	29
Deacon	Sarah		Davis	WV	30
Desetti	Matthew	MacroGenics	Knoxville	MD	31
Doak	Justin	Supply & Labor, LLC	Thomas	WV	32
Dumire	Joseph W.		Thomas	WV	33
Easton	Brent		Davis	WV	34
Easton	Megan		Davis	WV	35
Edwards	Gene H., Jr.		Weston	WV	36
Farmer	Anne		Thomas	WV	37
Farnack	Jacob		White Sulphur Springs	WV	38
Faunce	Nora		Day	WV	39
Fischer	William		Midlothian	VA	40
Fleischman	Alice (President)	East-West Printing, Inc.	Davis	WV	41
Ford	Hamilton		Thomas	WV	42
Forrester	Nikki	Highland Outdoors	Davis	WV	43
Frank	Sandra		Davis	WV	44
Friends of Blackwater		Friends of Blackwater	Thomas	WV	45
Gaujot	Ryan C. and Joceclyn S.		Thomas	WV	46
Gaujot	Ryan		Thomas	WV	47
Gaviria	Diana			WV	48
George	Elaine		Davis	WV	49
Hammack	Thomas				50
Hammack	Sarah		Bethesda	MD	51
Harper	Roy P. (Chairman)	Hardy County Rural Development Authority	Moorefield	WV	52
Harris	Jacqueline		Dryfork	WV	53
Harrison	Kim (Mayor)	City of Weston, Mayor's Office	Weston	WV	54
Hauger	Matt		Davis	WV	55

Last Name	First Name	Organization	City	State	Number*
Haywood	Susan				56
Hazzard	Rusty		Davis	WV	57
Hengemihle	Mark	Knapps Creek Trout Lodge, LLC	Marlinton	WV	58
Hild	Steven		Thomas	WV	59
Hubbard	Sarah		Parsons	WV	60
Hunt	Sarah		Thomas	WV	61
Joltes	Vivian		Glen Dale	WV	62
Jones	JW		Elkins	WV	63
Jones	Dylan	Highland Outdoors	Davis	WV	64
Kitzmiller	Tammy	Grant County Development Authority	Petersburg	WV	65
Knight	Laird		Morgantown	WV	66
Kotarsky	Thomas		Hendricks	WV	67
Lampo	Susan		Frewsburg	NY	68
Lesser	Hunter		Elkins	WV	69
Levitsky	Anne		Davis	WV	70
Litzau	Kurt		Davis	WV	71
Litzau	Neil			WV	72
Lutz	John		Davis	WV	73
Lutz	Pamela		Davis	WV	74
Lutz	Maggie			WV	75
Marcus	Matthew	Blackwater Bicycle Association	Davis	WV	76
Marcus	Matthew		Davis	WV	77
Margolies	Amy		Davis	WV	78
Marshall	Walter		Davis	WV	79
Martin	Aaron			WV	80
McCann	Patrick		Thomas	WV	81
McCann	Shannon			WV	82
McClintock	Robin and Michael		Hendricks	WV	83
McClintock	Robin	Tucker County Planning Commission	Parsons	WV	84
McKeown	Bonni (Transport Director)	Stewards of the Potomac Highlands	Shepherdstown	WV	85
Melnick	Ruth		Parsons	WV	86
Micoli	Jane		Fairmont	WV	87

Last Name	First Name	Organization	City	State	Number*
Moe	Pamela	(Corridor H Alternatives)	Kerens	WV	88
moore	stephen			WV	89
Moore	William		Sanford	NC	90
Moore	Campb		Davis	WV	91
Moore	Cristal		Davis	WV	92
Moore	Lowell	Tucker County Commission	Parsons	WV	93
Morris	Robert Jr. (Chairman)	Corridor H Highway Authority	Elkins	WV	94
Nelson	Phillip and Karin		Bethesda	MD	95
Odom	Jeanne		Davis	WV	96
Olsson	Wendy		Baltimore	MD	97
Pavlovic	Dwight		Morgantown	WV	98
Peterson	Karen		Davis	WV	99
Phillips	Trudy		Lynchburg	VA	100
Pompa	Victor			WV	101
Powell	Brian		Morgantown	WV	102
Price	Stephen		Shorewood	WI	103
Rader	Diane		Davis	WV	104
Reese	Denice		Hendricks	WV	105
Richard	John		Davis	WV	106
Rodd	Judith (Exec. Dir.)	Friends of Blackwater, Inc.	Thomas	WV	107
Rogers	Hugh (President, CHA)	West Virginia Highlands Conservancy (and Corridor H Alternatives)	Kerens	WV	108
Rosenthal	Barbara		Davis	WV	109
Rosenthal	Barbara		Davis	WV	110
Ruediger	Pamela		Parsons	WV	111
Russell	Katie		Red Creek	WV	112
Saville	Joshua		Davis	WV	113
Sawyer-Litzau	Susan		Crownsville	MD	114
SCHneble	Patrick		Harpers Ferry	WV	115
Schneble	Aimee		Dryfork	WV	116
Sherald	Matthew	<i>[Note: Is a Thomas Council member]</i>	Thomas	WV	117
Shipley	Bryan		Washington	DC	118
Sisler	Karie		Thomas	WV	119



Last Name	First Name	Organization	City	State	Number*
Smith	Wayne (President)	Tucker County Development Authority	Thomas	WV	120
Snyder	Scott L.		Hambleton	WV	121
Snyder	Hannah		Davis	WV	122
Sottile	Kelly			WV	123
Stokes Suppes	Lesley		Davis	WV	124
Thompson	Eric (Executive Director/Chair)	Access On The Go (WV On The Go Inc.)	Davis	WV	125
Thornton	Brenda		Richmond	VA	126
Tomson	Mary Anne		Davis	WV	127
Tomson	Mary Anne (President)	New Davis Renaissance Group	Davis	WV	128
Tucker	Edward & Carol		Huntington	WV	129
Wagener	Jean		Northfield	MA	130
Warner	John	Otter Creek Photography	Hendricks	WV	131
Warner	Katherine		Hendricks	WV	132
Warner	Lucas		Hendricks	WV	133
Watson	Traci			WV	134
Weaner	Barbara and Scott		Montrose	WV	135
Wertz	Joan		Williamsport	PA	136
Worden	Paula	Chip Shots FootGolf	Dryfork	WV	137
Worden	Tim	Chip Shots FootGolf	Dryfork	WV	138
Wright	Ed		Davis	WV	139
Zurbuch	Samantha		Harpers Ferry	WV	140

\* Corresponds to Comment Number in Table 2.

**Table 2: 2019 Parsons to Davis Project Submitted Comments**

2019 Comment Number	Comment
1	<p>"I write as a long-time property owner in Thomas, WV (at 214 Buxton St. since 2004) to urge WVDOH to route Corridor H around Thomas and Davis using the East Option.</p> <p>"These two towns, only two miles apart, share a cohesive history in Tucker County as lumber and mining towns that developed during the Industrial Revolution. As in the past, the vibrancy of both towns today depends to an extent on the other. The future of both towns, now part of a large tourism center in West Virginia, are intertwined. The placement of a four-lane highway between them will shatter that vibrancy, splitting a community in half with the roar of a highway. Revitalization efforts in both towns would suffer, and Tucker County as a whole would be negatively affected by a decision to unnecessarily split the towns.</p> <p>"The solution has long been obvious, yet it has remained an alternative rather than plan A. The East Option</p>

2019 Comment Number	Comment
	<p>preserves the connections between the towns, eliminates unnecessary truck traffic from Thomas and avoids sensitive natural areas that are already protected or deserve greater protection. This includes natural gems of West Virginia such as Blackwater Canyon and Falls, national forest north of the Canyon at Olson Tower and Canyon Rim, Douglas Falls and other areas used for outdoor recreation that includes hunting, mountain biking, cross-country skiing, fishing and hiking.</p> <p>"Pasted below are a few citations, both academic and journalistic, that chronicle the negative impact a major highway can have when it splits a community. Both rural and urban settings have been affected by major highway projects—and Thomas and Davis would not be immune to a negative impact from a Corridor H route that runs between the two. I urge WVDOH to choose the East Option as a solution that will allow the towns of Thomas and Davis to continue to prosper.</p> <p>"Citations:  <a href="https://escholarship.org/uc/item/21c261vg">https://escholarship.org/uc/item/21c261vg</a>  <a href="https://www.nashville.gov/Portals/0/SiteContent/Planning/docs/trans/EveryPlaceCounts/1_Highway%20to%20Inequity.pdf">https://www.nashville.gov/Portals/0/SiteContent/Planning/docs/trans/EveryPlaceCounts/1_Highway%20to%20Inequity.pdf</a>  <a href="https://naldc.nal.usda.gov/download/IND89018515/PDF">https://naldc.nal.usda.gov/download/IND89018515/PDF</a>  <a href="http://www.uvm.edu/landscape/learn/impact_of_interstate_system.html">http://www.uvm.edu/landscape/learn/impact_of_interstate_system.html</a>  <a href="https://dianerehm.org/2016/05/24/how-highway-construction-has-affected-listeners-lives">https://dianerehm.org/2016/05/24/how-highway-construction-has-affected-listeners-lives</a>  <a href="https://www.theatlantic.com/business/archive/2016/03/role-of-highways-in-american-poverty/474282/">https://www.theatlantic.com/business/archive/2016/03/role-of-highways-in-american-poverty/474282/</a>  <a href="https://www.theguardian.com/cities/2018/feb/21/roads-nowhere-infrastructure-american-inequality">https://www.theguardian.com/cities/2018/feb/21/roads-nowhere-infrastructure-american-inequality</a>  <a href="https://www.npr.org/2016/04/28/475985489/secretary-foxx-pushes-to-make-transportation-projects-more-inclusive">https://www.npr.org/2016/04/28/475985489/secretary-foxx-pushes-to-make-transportation-projects-more-inclusive</a> "</p>
2	<p>"Use the EAST OPTION!!!"</p> <p>"It is imperative to maintain the historical and contemporary relationships between Thomas and Davis, as well as not further eroding the fragile infrastructure of Thomas by routing trucks into or near the town as is currently the corrosive and intrusive practice. The EAST OPTION provides an elegant solution to multiple problems and is better suited for long term sustainability of Thomas and Davis."</p>
3	<p>"I am a home owner and part-time resident in Canaan Valley. The proposed route that cuts between Davis and Thomas would be terrible for the area. It will split the two towns and damage our tourism and wilderness views. I am strongly in favor of using the Blackwater Avoidance route, east option instead."</p>
4	<p>"I would like to support the Alternative ID, the route going north of Thomas. This route will avoid impacts on Blackwater canyon. As a frequent visitor of Davis, Thomas, and the Canaan valley region I appreciated the quicker travel provided by upgraded roads, but I also value the scenery, ecological services, and cultural history of the region and the route north of Thomas seems to preserve these things more effectively without compromising improved transportation access."</p>
5	<p>"While living in Lewis County for 25 years I spent the majority of my weekends in Tucker County skiing, mountain biking, hiking, backpacking &amp; camping. In 2007 I considered myself very fortunate to relocate to Thomas. After that I felt like I was always on vacation. I have spent countless hours in the Blackwater Canyon and really enjoy this area. I never thought that Corridor H would cross this area. During my early days in Lewis County I always believed it would follow Route 33 through Randolph County. Now that the DOH has declared the preferred route to be south of Thomas and crossing the North Fork of the Blackwater River I feel I must make my feelings known. The Allegheny Highlands trail from Thomas to Elkins is a special place indeed. Quiet, beautiful and full of wildlife. I cannot believe it will stay the same with a 4 LANE HIGHWAY crossing the canyon. Not only will the solitude be interrupted by truck engine brakes coming down into the valley and pouring on the diesel fuel to climb out of it, the viewshed will be changed forever. I cannot believe the DOH is even considering this route. Thomas dearly needs a bypass as the truck traffic is shaking the historic district apart. Why not go north of Thomas and cross the North fork above the canyon? Since Thomas badly needs a bypass connecting 219 North to the Corridor anyway, taking the northern route would provide this truck route around town at the same time. Please consider my comments and don't build this highway in the Blackwater Canyon!!"</p>

2019 Comment Number	Comment
6	"I feel that DOT should consider using the alternative route north of Thomas. This would limit the amount of impact to the historic Douglas coke ovens, and would also not divide the towns of Davis and Thomas."
7	"My mother was a Thomas native. My wife is also from Thomas and my mother-in-law still lives there. I am from Moorefield. I have known and loved the area all my life. The resurgence of both Thomas and Davis has been wonderful. Do not ruin these towns by routing H between them. The east alternative is far and away the superior route. Please save the spirit of the communities by routing the road to the east."
8	"I believe the proposed route is the best route. There is some talk around town that the East option would be best. I do not believe that because the East route would have a major curve in it at the current end of corridor h and also it would go right through the Thomas park and trails."
9	"Please choose Blackwater Avoidance alternative and use the East Option for Corridor H. Tucker County is my home, and my eleven year old daughter's home too. What helped this community prosper for many years was the natural resources of coal and lumber. Now our community depends greatly on tourism and recreation. Many people come to this place to enjoy the natural beauty that is here. Please help our community continue to thrive from the attraction of our natural surroundings, including the Blackwater Canyon. Please choose the East Option and go around our historic towns."
10	"I work in Davis and my children attend Davis Tomas Elementary and Tucker County High School. I believe we need to preserve the history of our small towns. I ask that you choose the East Option when designing the section between Parsons and Davis. Please do not split up our small towns."
11	"As a second-home owner in the town of Davis, and a long-time lover of the entire area, I would like ask that you choose the EAST option for Corridor H from Parsons to to Davis."
12	"I have a second home in Davis, WV. Corridor H is helping both Davis and Thomas by bringing new visitors, jobs, and businesses. This new development has great potential to reap new tax revenues for Tucker County and the State of WV, however the preferred option can undue all of this by harming the growth and prosperity of the historic towns. Go with the East Option and you save both towns, expand Corridor H and maximize the economic benefits to Tucker County and WV. CHOOSE THE EAST OPTION."
13	<p>"My name is Jane Browning and I own a business in Thomas, WV. If the proposed highway is "to promote economic development and preserve or improve the quality of life in the region," then it must go north of Thomas. To divide the towns cuts the county in half in a way that negatively impacts businesses. Why go to Thomas when the highway is right here? The bulk of our visitors, upon whom we all depend, are here for the scenic, peaceful beauty and recreational opportunities. To send 4 lanes of concrete along the rail trail and over the coke ovens (an attraction) impacts us all in a negative way.</p> <p>"It has been brought to my attention that the current plans to take the highway north of Thomas would impact the Thomas water supply. Surely if the highway can span a canyon it can avoid a reservoir."</p>
14	"I am a Davis, WV resident, and I do not want to see the towns of Davis/Thomas split by Corridor H. I support the East option. The East option would make a truck route around Thomas unnecessary, and save developable land for appropriate use. The East option wouldn't cross the Blackwater Canyon where our historic coke ovens are located, and wouldn't damage the town landscape our tourists and residents love. Please consider the East Option for Corridor H as opposed to the putting the route through Davis/Thomas."
15	"As a long-time landowner and taxpayer in Canaan Valley (Davis), I would like to express my strong opinion that the alternative route (1D & East option) for Corridor H that locates the highway north of Tucker County High School and north and east of the town of Thomas provides the best protection for the Blackwater Canyon and the towns of Thomas and Davis. That also would eliminate the damaging effects of highway overpasses in the the historical industrial area near Douglas which was placed on the National Register of Historic Places as of important historical significance. The quality of life in the Davis and Thomas areas is important and must not be damaged by a bi-secting 4 lane highway. The northern alternative is a much better way to achieve transportation goals and avoid adversely impacting our communities."
16	"I attended the meeting at Blackwater Falls State Park on August 20 and was disappointed at the lack of transparency and actual presentation. My multiple phone calls requesting information have not been returned. I also find it extremely callous to end a public comment period years and years before even the



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	<p>planning phase. It seems clear that WVDOH doesn't want to have public awareness or input, which will only further the resolve of our communities to fight for having a say in how this corridor is routed. We are organized and we will respond in kind.</p> <p>"I am writing you today to express concerns for the proposed alternative route for Corridor H between Parsons and Davis. I am a lifelong member of the Tucker County community and a small business owner. I have watched this region grow and develop a strong tourism industry and I cannot express enough how the proposed route will impede that progress. You state plainly that the highway is designed to enhance communities...yet your preferred alternative slices right between our two mountain towns, crosses an up and coming rail trail and goes over top of the historic coke ovens and another section of rail trail connecting Thomas with nearby Hendricks. I fail to see how having a loud and unsightly bridge over the Blackwater River in Coketon is going to help our communities.</p> <p>"I'm aware of the alternatives that were studied and I am asking that you consider taking the East Option and going north of Thomas and their city park. The alternate truck route can then be avoided and will not cause a traffic congestion nightmare on Rt. 32.</p> <p>"Nobody I know is fighting the construction of this highway, but plenty of concerned community members and longtime and new visitors who enjoy the area are concerned about the massive implications of the route that is going to be planned and constructed. We will keep a close eye on the next steps moving forward and we would appreciate a more open and transparent engagement with the people who will be living with the highway everyday."</p>
17	<p>"Please save the charm and appeal of Davis and Thomas by selecting the East option for Corridor H around Davis, Thomas, and Blackwater Canyon. Both towns have received accolades from several outdoor oriented magazines celebrating the towns on a national level. Do not destroy the positive steps each town has taken and allow them to build even stronger."</p>
18*	<p><i>Commenter supports Corridor H in general and shares letter written to Sec. Byrd White and Hwy Commissioner Jimmy Wriston after the Corridor H Authority annual meeting in July 2019 in which he expresses concerns and suggestions for "more effective signage to help connect travelers, for safer travel, and to let West Virginians know that the highway is being finished." Specifically, commenter says there should be a sign at the intersection of Routes 32 and 93 to direct travelers to the Davis-to-Bismarck section of Corridor H to travel east toward Moorefield.</i></p>
19	<p>"As a regular visitor to Canaan Valley and the Davis, WV, area, I strongly believe that the East Option will provide access to the area while minimizing impacts on the recreational and environmental assets in the region. Please do not site the highway between Davis and Thomas."</p>
20	<p>"It's obvious by all who live and visit this area that the East Option for Corridor H is by far the best option. Please let the residents who have to live with this project have input into its location."</p>
21	<p>"Please do not put Corridor H through Davis this is a very precious environment and would ruin the overall experience of Davis."</p>
22	<p>"The West Virginia Hardwood Alliance Zone (WVHAZ) is delighted the West Virginia Division of Highways (DOH) and the Federal Highway Administration (FHWA) have decided to re-start the Parsons-to-Davis project on Corridor H, US Route 48.</p> <p>"As the DOH is aware, Corridor H is a key route within the Appalachian Development Highway System (ADHS). When completed, Corridor H will link West Virginia's Potomac Highlands directly to Interstates 81 and 66 near Front Royal, Virginia, and to the Virginia Inland Port. The positive economic impact a fully completed Corridor H will have on West Virginia's forest products and hardwood manufacturing industries cannot be overstated. West Virginia hardwood producers are responsible for over \$2 billion dollars [in] sales for the West Virginia economy. Infrastructure, such as Corridor H, is vital to help our WV companies get their products to market in a safe, efficient, and cost-effective manner.</p> <p>"Accordingly, WVHAZ which is a private non-profit with the goal of sustaining and growing the hardwood economies of twelve counties throughout the Allegheny and Potomac Highlands of West Virginia-supports</p>

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	<p>the re-start of the Parsons-to-Davis project with great enthusiasm. In addition to championing the project, the WVHAZ offers the following specific comments:</p> <p>"1. <i>Choice of Route</i>. WVHAZ hopes to see Corridor H completed in the immediate future, but it expresses no preference on the route the highway should take with respect to the Parsons-to-[Davis] section. The leaders, residents, and businesses of Tucker County-those who live and work in the area-are best positioned to collaborate with the DOH and FHWA in routing the project. Indeed, WVHAZ endorses community consensus and respects the expertise of the DOH and FHWA regarding the project's ideal route.</p> <p>"2. <i>Environmental, Historical, and Cultural Sensitivities</i>. The Parsons-to-Davis section of Corridor H is one of West Virginia's most beautiful and unique geological and ecological environments, it is of great historical and cultural significance, particularly with respect to early settlers in West Virginia and the history of the logging industry. All planning and construction activities must be sensitive environmental including wildlife, plants, waters, etc.</p> <p>"In closing, WVHAZ supports this project. If the WVHAZ can be of any assistance to the DOH and the FHWA to help guarantee the project's success, please do not hesitate to contact me. The WVHAZ, like the DOH and FHWA, will do all it can to assist in ensuring that the concept of a completed Corridor H, US 48 becomes a reality."</p>
23	<p>"I support the WVHC [WV Highlands Conservancy] analysis of the extension of Corridor H to protect Blackwater Canyon." <i>[Commenter highlights "Blackwater Avoidance Alternative" in a copy of the WVHC newsletter and writes "I support."]</i></p>
24	<p>"Please save the charm and appeal of Davis and Thomas by selecting the East option for Corridor H. I frequently visit Davis and Thomas to vacation from North Carolina, in large part due to the accolades this area receives for its outdoor recreation opportunities and small town vibes. Please do not detract from the small mountain town appeal of these two towns by routing Corridor H such that it splits the towns. Please select the East option to route Corridor H north of Thomas."</p>
25	<p>"Thank you for the opportunity to comment on the preferred alternative alignment of Corridor H from Parsons to Davis. I have three concerns to of which are particular to the alternative represented. This alternative will separate the community of Thomas/Davis with a major highway and this alignment will bisect an area that is relatively untouched currently (Olsen Tower area, Big Run Bog Drainage and most importantly the Blackwater Canyon. An alignment further north (north of Thomas and along Route 219 would not have as great an environmental impact. This area is next to major logging and would allow the majority of the area on the south side of 219 to remain undisturbed, including the Blackwater Canyon. A general comment that would affect any alignment is that it would be safer to provide the Tucker County Landfill independent ingress and egress to Corridor H so that large trucks would not have to go on the local roads (Route 32 and 93) to reach the landfill."</p>
26	<p>"Would like to see the road go north of Thomas/Davis and avoid the BlackWater Canyon"</p>
27	<p>"Please choose the East route . Davis and Thomas are having a revitalization as an outdoor and artist community and a four lane would stop this process ."</p>
28	<p>"Thank you for this opportunity to express my concern regarding the "preferred alternative" route to connect Parsons with Davis. I'm finding it hard to comprehend that the suggested route would cross the scenic Blackwater Canyon and also divide the towns of Thomas and Davis. Since a truck route has been proposed to the north of Thomas, please consider a northern route for the entire connector. This will help preserve one of the crown jewels of West Virginia and allow our communities to continue expanding toward one another. A northern route would benefit the people of Tucker County and all those who enjoy visiting our beautiful county."</p>
29	<p>"I am a small business owner in Thomas. I would much prefer the East Option. Davis &amp; Thomas are, in essence, one town with close business, family and spiritual ties. Running an interstate highway between the two towns would destroy the unity of the two towns. We are presently one community. Please don't make us two."</p>
30	<p>"Choose the East option! Don't split our towns, don't mess with our mountain views, no overpass!"</p>

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31	<p>"I would hate to see the highway extended between Thomas and Davis WV.</p> <p>"The towns are scenic and iconic to the region. It is a destination for tourism. It is a destination because of the people, remoteness, way of life, and beauty. If a highway was built through and near and between these two towns the tourist appeal and money would decrease significantly. The quaintness and relaxing atmosphere would go up in concrete dust.</p> <p>"As a avid tourist and advocate of this beautiful region, the extension of the highway in corridor H gets my strong disapproval."</p>
32	<p>"I own a building on East Ave (Front Street) in Thomas. The thru traffic of commercial rigs with enormous payloads wrecks havoc on our buildings foundations and way of life. It's time to get the thru-traffic out of our town and let it be a destination for locals and visitors. Unfortunately, the trade off is that we then lose our serene parks and gain traffic noise with Alternative 1D. I want to see our towns connected, not separated by a highway. That said, despite the loss of our parks, I opt for the East Option to Alternative 1D."</p>
33	<p>"I fully support the completion of the Corridor H project from Parsons to Davis. The quicker this road is completed, the better for all concerned. I have heard completions dates that extend out to 20 years and as much as 30 years. This mentioned timeline is unacceptable. This road must be completed quickly.</p> <p>"Completion of the Corridor H project would mean a much improved transportation system that would result in an economic stimulus that would bring in new business and industries; better paying jobs that would be both skilled and unskilled which would allow local residents to remain in the area and realistically support their households; and, would bring in businesses such as nice clothing stores, a decent supermarket, dependable food service such as Outback Steakhouse and Wendy's that would be open seven days a week, and decent hotels; and it would bring in more tourism that supports the lodges, other rooming accommodations, and restaurants.</p> <p>"Please, I beg you, get on the fast track to complete Corridor H."</p>
34	<p>"Please note my objection to the preferred alternative route for corridor H connecting Davis and Parsons. It is my opinion that a route which follows the Thomas truck route and proceeds along Backbone Mountain by way of Tucker County High School is a more appropriate solution. Division of Davis and Thomas, which have become a destination area for vacationers makes very little sense. Furthermore, the preferred alternative route would require significant bridgework, presumably at high expense. Maintaining the Thomas/Davis communities as a destination is good for the Tucker County economy. Division of the area with the highway would diminish the character and charm the two towns possess. Please consider routing the highway north of Thomas."</p>
35	<p>"The East option seems like a less expensive alternative that would preserve the unique quality of our towns. I do not want a highway to divide Thomas and Davis and think that a bridge over the Blackwater Canyon is unnecessary."</p>
36	<p>"Corridor H completion is important to all communities along its path. It needs to be completed as soon as possible."</p>
37	<p>"I am writing to voice my concern and my objection to the proposed Corridor H route splitting the two towns of Davis and Thomas. My husband and I chose to live here, raise a family here and open two businesses here because we enjoy the quality of life, the scenic and natural beauty, and the communities: Thomas, Davis and Canaan Valley. I see this highway between the two towns as impacting those very things we love. I do not see how this proposed route separating the towns could possibly be seen as an opportunity to "preserve or improve our quality of life" as your mission statement suggests. As someone, who is active in promoting wellness and well-being in our community, the thought of a highway between the two towns, crushes hopes of ever connecting the two towns with walking trails or bike trails to promote wellness for our children and residents. With this proposal, children and families would have to cross a major highway which would be dangerous. The sight and sound of a highway is not conducive to the natural beauty this area is known for and which brings thousands of visitors every year. The towns of Thomas and Davis depend on these visitors. If Corridor H is to help bring economic development, this proposed route, could seemingly hurt just that, our economic development. The town of Thomas with help from New Historic Thomas and other organizations</p>



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	<p>has done a fantastic job restoring the Allegheny Highland Trail outside of Thomas which leads to Parsons. Many hikers, bike riders, etc use this trail which the proposed highway would cross.</p> <p>"I attended the meeting at Blackwater Falls State Park recently and was disappointed to learn that there were alternative options/routes that were not available for viewing. I have looked at the alternative "East" route option and I believe this to be the better option. Yes, it would be a bit longer, but long- lasting impact would be not be as great. Land would be saved and the towns would not be separated. I understand and support the need for the Corridor to connect to Parsons, but the Alternative East option—which does not bisect between Thomas and Davis would preserve and help continue the economic development in both towns, preserve the natural beauty that residents and tourists enjoy, and keep the quality of life as is for these communities."</p>
38	<p>"I'm submitting my preference for the locals' desire to move the route northward. Our state's motto is 'Wild and Wonderful', so what's with the destruction? 20 years from now there's a solid 80% chance we're going to look back and realize that just maybe our survival on Earth as a species is more important than road infrastructure, economics, politics, and business. Here we are in the midst of what's about to become a severe drought and still we don't wonder how or where our drinkable water will come from? Humans still need the basics.. food/water/shelter, not a 4 lane slab of concrete straight thru Blackwater. This project was pure ignorance as an idea to begin with but now it's pretty clear 'business' or more important than ethics or caring for the 1 thing that keeps us alive (Earth).. if we took care of it we wouldn't need a paycheck. If I lived in Davis I'd be so irritated and sad I'd be one of the many who will move away just because of sadness and disgust in our states' apparent need to do what?.. welcome in those from D.C. to trash the forests? God forbid the common people catch a passion for a voice and override the upper hands. 20 years of climate change and these comment sections won't be needed."</p>
39	<p>"I have lived here in this beautiful little town we call home. I oppose the direction of Corridor H thru Davis. It would ruin our area and the pristine Mountains that surrounds us. That is why we live here. Take the other direction that is better"</p>
40	<p>"Please save the charm and appeal of Davis and Thomas for visitors by selecting the East option. Both towns have received accolades from several outdoor oriented magazines celebrating the towns on a national level. Do not destroy the positive steps each town has taken and allow them to build even stronger."</p>
41	<p>"We are very concerned about any route that would split Davis and Thomas. Main issues would be safety of walkers and bikers travelling from one town to the other. We strongly prefer a route that would go North of the City of Thomas Park + also North of TUcker Co. High School. It would also pass East of the Tucker Co. Landfill."</p>
42	<p>"It would seem this may be one of the most important projects for our state. With this road, the value of our communities and land will go up or down. I think the Northern Route, is without a doubt, the better choice. The value of West Virginia, lies in her natural resources.</p> <p>"This sensitive area is considered by many to be the heart of the state. We dnt need this road. We need our mountains for our future generations. The southern route with a bridge over The Blackwater River, will forever be scar that is unnecessary. The noise, pollution, and lighting. Will be constant reminders to locals and those visiting, of our disrespect to the Almighty's creation. Urban sprawl may be our worst vice in this country. Listen to the people please. Take the northern route. And keep the towns of Thomas and Davis thriving. If you split them, I believe a majority of the people will suffer forever. As we have to listen and watch the taillights through the nights. Future generations will take pride in knowing you chose the right path or you will decimate our property values because of the governments greed."</p>
43	<p>"As a resident of Davis, I'm writing today to strongly discourage you from building Corridor H right through the beautiful towns of Davis and Thomas. These historic towns and their awe-inspiring landscapes attract thousands of visitors to the region each year. These visitors are essential for the economic growth and stability of our towns. Building a massive highway through Davis and Thomas would destroy the phenomenal Blackwater Canyon and other natural landscapes that are critical for residents and tourists alike. In addition, the proposed route threatens historical landmarks, such as the coke ovens. In addition to negatively</p>

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	affecting these towns, the proposed route for Corridor H would negatively affect my personal business. My husband and I publish an outdoor recreation magazine for West Virginia called Highland Outdoors, which relies on promoting tourism and the vibrant, natural landscapes of West Virginia. There are alternative routes for Corridor H that would be far less destructive to the region, economy, and our communities. Choosing an alternative route would also expedite the construction process, as the proposed route would not be held up in courts. Please consider an alternative route for Corridor H – our towns, landscapes, and communities depend on it."
44	"Please use the east option for this section!! Our little mountain towns of Davis and Thomas can only thrive together and any visual/physical split between them affects their ability to grow economically and thrive. Please don't split the towns and ruin the character of our precious home."
45	<p>"Friends of Blackwater is writing in response to the proposed re-examination of Corridor H alignment from Parsons to Davis in Tucker County, West Virginia. Friends of Blackwater is a nonprofit located in Tucker County, West Virginia with 4,000 activist members dedicated to protecting the Blackwater Canyon and Allegheny Highlands and promoting the sustainable human and community interests in the region. Comments have been grouped by topic and address environmental, economic, tourism development and safety concerns.</p> <p><u>"Virginia Big Eared Bat Habitat Damage</u></p> <p>"The Virginia Big Eared Bat is an endangered species with habitat ranging throughout West Virginia. The Corridor H Supplemental Final Environmental Impact Statement states that the proposed Corridor H expansion would have "no adverse effect" on the species based on a Biological Evaluation from 2001. This was concluded based on "no essential habitats or satellite caves occurring within the Study Area." However, more recent findings show that this species of bat reside along the current preferred alignment near the Blackwater Industrial complex. This bat species continues to inhabit old mine tunnels here. The 2016 Appalachian Corridor H Parsons to Davis Section Bat Acoustic Survey found evidence of the bat species in the proposed Corridor H pathway. As such, it is our opinion that a new Biological Evaluation needs to be completed to further investigate the issue. The construction of Corridor H between Parsons and Davis could both damage their habitat and create road hazard affecting the bats' flight, hunting, mating and other life patterns. Failure to do so may have adverse effects on the species population and may violate with the Endangered Species Act.</p> <p><u>"Impact on the Blackwater Industrial Complex</u></p> <p>"The current preferred alignment for the Corridor H Parsons to Davis segment runs straight across the Blackwater Industrial Complex approximately half a mile southwest of Thomas, WV. Our concern is that the construction in this region could damage the artifacts of regional historical significance including coal industry equipment such as coke ovens and railroads. These artifacts are important the region's cultural and economic history. Additionally, should Corridor H be constructed across this location, access to these artifacts may be further hindered by the highway. Access trails and paths may be cut off or left unusable by construction. As such, the Blackwater Industrial Complex may lose part of its historical significance. Much of the Blackwater Industrial Complex is owned by the Monongahela National Forest (MON) and consultation with this federal agency is necessary. Any proposed re-evaluation studies and approval for new studies should be subject to NEPA processes including public comment on studies and work plans on any portion of the MON.</p> <p><u>"Additional Acid Mine Drainage in the Area of the Blackwater River</u></p> <p>"The proposed preferred alignment for the Corridor H Thomas to Davis crosses the North Fork of the Blackwater River approximately half a mile southwest of Thomas, WV. Based on historical maps and more recent surveys, the earth on either side of the river is a maze of old coal mines. These tunnels are filled with acid mine drainage pollution which form the Coketon Mine Pool. The low point in this system of connected tunnels is Mine Tunnel 29 which produces major flows of untreated polluted water just east of the preferred alignment. As such, our concern is that any major construction of a roadway here could cause increased acid mine drainage from these old mines to escape and make its way into the Blackwater River. This would have</p>

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	<p>a large negative impact on the ecology of the river and could affect drinking water, outdoor sport and tourism such as fishing and kayaking. The current proposal does not, in our opinion, go into detail about this issue, offer mitigation options, etc.</p> <p><u>"Creating an Artificial Barrier between Davis and Thomas and negative economic impacts</u></p> <p>"The towns of Thomas and Davis are currently connected via the Appalachian Highway, Co. Route 32. The currently proposed location for the Corridor H route would cross the Appalachian Highway between the two towns, which in our opinion, would create a visual barrier between the two towns. The current plan shows Corridor H having an overpass over the Route 32 with on and off ramps on either side. Further there is the possibility of typical off ramp stores such as gas stations and fast food stores popping up. Together, this would create a visual barrier that breaks up the two towns and interrupts the cultural connection. This modern concrete structure undermines the heritage tourism appeal of both Thomas and Davis. The barrier could reduce tourist travel between the two towns and deter tourists visiting natural heritage attractions in the region, including Blackwater Falls and Canaan Valley, from also visiting Thomas. This in turn could have an adverse effect on the local art and business community which relies largely on tourist traffic.</p> <p><u>"Safety Impact on Tucker County High School</u></p> <p>"The proposed preferred alignment of Corridor H would in our opinion create potentially unsafe conditions with the Tucker County High School Connector. The additional traffic near the school could create hazards for persons entering and leaving the school. In addition, Tucker County High School is located on Backbone Mountain which is known to be shrouded in fog in the early mornings and covered with snow in winter when students and teachers would be driving to the school. Further, high school students are new drivers and may not be the best at driving in foggy or high traffic conditions. These factors combine to create a higher likelihood of car accidents and other issues at the proposed Tucker County High School Connector.</p> <p><u>"Eastern Route around Thomas</u></p> <p>"It is our belief that a better alternative route for Corridor H would be one that looped north of Thomas, WV going on the east side of the town. This route would avoid or mitigate many of the concerns outlined above while also achieving the objectives of the Corridor H completion in the Davis to Thomas area. It would maintain the close connection between Thomas and Davis without a large highway intersecting the towns. Access to Tucker County High School would be via US 219 as is the current situation, limiting traffic and a potential unsafe situation near the school. This route would avoid the historical area of the Blackwater Industrial Complex and the area where the Virginia Big Eared Bat has been documented. Further, it would succeed in lowering the amount of truck and other commercial traffic going through Thomas and Davis without the explicit need for an additional truck route.</p> <p><u>"High School to Mackeyville Road</u></p> <p>"Friends of Blackwater believes that the section from before the high school to the Mackeyville Road should be constructed as a scenic two lane road with numerous pull offs to avoid damage to the Monongahela National Forest land, to native brook trout streams, the West Virginia northern flying squirrel protected on the MON, to cultural resources and other resources not yet identified.</p> <p><u>"Bibliography</u></p> <p>"Inglis-Smith, Chandra L, WV. 2003. Phase 1 Cultural Resources Management Report Tucker County.</p> <p>"Johnson, J.B.; Edwards, J.W.; Wood P.B., 2005. Virginia big-eared bats (Corynorhinus townsendii virginianus) roosting in abandoned coal mines in West Virginia. Northeastern Naturalist Journal; Volume 12, Issue 2, ISSN 1092-6194. 01-07-2005.</p> <p>"Mountain State Biosurveys, LLC, Glenwood, WV. 2016. Appalachian Corridor H Parsons to Davis Section Bat Acoustic Survey Tucker County, West Virginia.</p> <p>"State of West Virginia Department of Transportation, 2007. Appalachian Corridor H Parsons-to-Davis SFEIS."</p>
46	<p>"This letter references comments of the WVDOH Corridor H 'Preferred Alternative' for the Highway alignment from Davis to Parsons. As a homeowner in Douglas WV for over 15 years, the 'preferred' alternative does not work for me, my family, or my businesses. Don't get me wrong, I do support Corridor H and use it often to travel east of Tucker County towards the Panhandle. I do not however support a bad</p>



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	<p>alignment through Thomas and Davis. We support and prefer Alternative East that goes North and East of Thomas and around the cultural, historical, and ecological sights of the area. I started a family here in Tucker County, founded 2 successful businesses, and volunteer at the locally founded Montessori School here in Thomas and Davis area. As a result, there are many reasons why I express my negative comments to the WVDOH 'preferred' alternative to the Corridor H section from Davis to Parsons. These comments are addressed here:</p> <p>"First, the 'preferred' alignment fractures the 'togetherness' of the Thomas-Davis area and will take away from its pristine natural beauty, a major reason why I live here, my friends live here, and why tourists come to visit the area. Over this time, we have seen our area grow mostly in terms of recreation on the rail trail, taking sights of the North Fork of the Blackwater River and the old coke ovens along the way. The cultural, historical, and ecological significance of this area will draw visitors for generations to come if the corridor doesn't separate and permanently impact these areas of interest. If the Corridor alignment takes the 'preferred' alternative, then these long-term benefits will be drastically reduced to highway barriers, road noise, and litter when people want peace and quiet when viewing the sights.</p> <p>"The 'preferred alternative' will not only separate the towns of Thomas and Davis, splitting the geographical 'togetherness' of the area, but also splits the towns of Douglas and Thomas! The Highway structures will separate the towns with barriers and limit opportunities for long-term economic growth of the areas. Our bike commute to Davis will be altered by the highway barriers. My kids will have to cross that barrier to get to Davis, and this will be extremely dangerous for any bikers and pedestrians. Any short-term dollars saved on a shorter highway alignment will not be offset by the long-term economic downturn of a fractured transportation system. Specifically, the town of Thomas will drastically see different access to economic opportunities from headed to the Davis and Canaan Valley side of the county. The preferred route only has an exit for the city of Davis, thereby only facilitating access to Davis and its opportunities for increased business growth and tourism. Davis already has the geographical benefit to take advantage of the tourism, as it is both home to Blackwater Falls State Park and the gateway to the Canaan Valley and its vast array of recreational opportunities. Thomas has several economic and recreational opportunities with the Thomas City shopping and night life, Thomas Trails System, North Fork Reservoir &amp; Whitewater, and the Rail Trail. Thomas' opportunities for economic growth and development will only be obstructed because the preferred alignment doesn't facilitate easy access to this community.</p> <p>"Finally, and I would like to emphasize, the areas on both sides of the crossing of the North Fork of the Blackwater have significant 'old' surface and deep mines. These areas would be uncovered and new acid mine drainage (AMD) will be released into the Blackwater Watershed. Analysis and assessments will need to determine what the impacts to AMD will be in the watershed and what mitigation measures will be taken when impacts occur. Unlike most highway projects with 'temporary' impacts during construction, AMD would be 'long-term' impacts, both ecological and economical.</p> <p>"So, in conclusion, I believe the 'Alternative East' option is the best and preferred option for My Family &amp; Businesses.</p> <p>"Now a few questions that I would like answered from the WVDOH:</p> <p>"1. Why did WVDOH not provide the other alternatives at the meeting when there is another route that has been included in the studies, in particular Alternative East? My family prefers Alternative East.</p> <p>"2. Has WVDOH had meetings and input from the different local recreation and business groups in the area: Tucker Chamber of Commerce, Tucker County Trails, Blackwater Bicycle Association, New Historic Thomas, etc.?</p> <p>"3. Why hasn't WVDOH considered the land between Thomas and Davis as possible residential development instead of highway development. This area has fantastic long-term economic potential to the area.</p> <p>"4. Wouldn't the proposed truck route in Thomas be an unnecessary cost if the Alternative East alignment was considered, thus decreasing the construction cost of the route?</p> <p>"5. Does the WVDOH plan to move forward with more condemnation proceedings court cases that drive up the costs of the property between Davis and Parsons?</p>

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48	<p>"We are frequent visitors to Davis and Thomas and are concerned about the proposed Corridor H route between the towns. The East route seems much less disruptive."</p>
49	<p>"I am concerned that the meeting at BWFSP only showed the one alternative that goes between Davis and Thomas and did not show the alternative that swings north of Thomas.</p> <p>"I'm concerned about the crossing of the Blackwater River but especially about building a huge interchange to separate our two small, vibrant towns. I'm also concerned about building the extra "truck route" to bypass the crumbling route 32 north in Thomas; from the map provided, it looks like trucks will barrel off of the new four-lane Corridor H, onto two-lane route 32 and make two right-angle turns to swing around Thomas. It seems like this is asking for accidents to happen."</p>
50	<p>"I do not believe that Corridor H should go over the Blackwater and destroy its character in the Thomas area. A bridge would mean tractor trailers going up the highway and down the highway. Noisy brakes and noisy exhausts 24/7. That would be a change and would not be of any help to Coketon. It should take the longer route around Davis where the land is more flat. Corridor H is a great idea, but it should not have to go over the Blackwater and right by Thomas."</p>
51	<p>"As a property owner in Douglas, West Virginia, I urge you not to pursue the plan to continue Corridor H in such a way that it crosses the Blackwater Canyon over Thomas. This route would seriously mar the beauty of the canyon, which attracts so many visitors to the area, including my family. There are alternatives that have already been studied, which would bypass the Blackwater, entailing much less damage and preserving the wildness of the canyon.</p> <p>My family have been property owners in Douglas for almost 20 years now, and we love it dearly. Every time we are here, we see hikers and cyclists enjoying the wild natural beauty of the Blackwater area. We are all drawn to this place (and spend a lot of money here) not because it is easy to access but because the wildness enchants us. The idea of the changes that would be made by the currently preferred alternative are truly distressing. I strongly urge you to choose an alternative route that would avoid the Blackwater; otherwise, the damage you may do could be terrible."</p>
52	<p>"The Hardy County Rural Development Authority (HCRDA) voted at a regular meeting on Tuesday, August 20, 2019 to support the completion of Corridor H. It was also approved to request that the section from Wardensville, West Virginia to the Virginia line be the next section of Corridor H to be constructed.</p> <p>"Hardy County is the West Virginia leader in agriculture and this includes the poultry industry. The agriculture industry is combined with value added wood industry and other industries/businesses. These business operations need to have safe and timely transportation to and from markets.</p> <p>"Thank you for promoting a good highway transportation system in West Virginia that includes Corridor H/US 48."</p>
53	<p>"I am writing to ask the engineering group and committee in charge of the Parsons to Davis addition to the Corridor H and ask that you all choose a Blackwater Avoidance Alternative, and utilize the east option.</p> <p>"This will keep all of the interchange away from our historic towns of Davis and Thomas and from our natural parks and forest. This area is known for its pristine beauty and we don't need a huge interchange in the middle of our towns.</p> <p>"Use the alternative east option and avoid having to do the truck route as well. It seems like a win, win.</p> <p>"Please consider our natural areas to protect and our tourism interests to protect. People don't come out to Tucker County to get off the highway or use it as a through road. They come to see the beauty of our area</p>



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	and experience hometown WV. "Please choose the east option of the Blackwater Avoidance Alternative."
54	"Completion of Corridor H is crucial to the economic prosperity of Weston and Lewis County."
55	<p>"While I support the completion of Corridor H, I was disappointed to find out that the DOH map at the recent public information meeting showed only a single proposed route, dividing Davis and Thomas and crossing the Blackwater in a location that would compromise the canyon's aesthetic and historic appeal. This contradicts the DOH's stated goals for the project: "to promote economic development and preserve or improve the quality of life in the region."</p> <p>DOH has already studied several alternative (and in my view, less problematic) routes that avoid Blackwater Canyon. In particular, I'm an advocate for the "East option", which turns away from the old 93 highway and turns north to pass the landfill on its eastern side and to cross the river north of Thomas. The advantages are clear:</p> <ul style="list-style-type: none"> <li>"- Does not threaten to the environmental, aesthetic, and historic treasure that is the Blackwater's North Fork valley/canyon. A bridge over the canyon would undermine the area's appeal as a visitor destination and could permanently disturb the historic artifacts in that area.</li> <li>"- Eliminates the need for a truck bypass route, keeping trucks off of WV-32. This would provide a quieter, calmer environment for Davis/Thomas residents and visitors—an experience that would help buoy the nascent tourist economy.</li> <li>"- Avoids dividing the towns of Davis and Thomas with a highway overpass, which would undermine the region's aesthetic appeal and eliminate acreage that could be used for more productive economic development (e.g. retail).</li> </ul> <p>"While this East route option may cost a bit more than the DOH-preferred route, that one-time cost is easily offset by the (permanent) economic benefits the East route would ensure. If we're going to build the road (and, again, I'd like to see it completed), let's do it the right way! Why undermine our local economy and quality of life, when we already have viable alternatives that would mitigate any negative impacts?"</p>
56	<p>"I am opposed to the current route that DOH has chosen for Corridor H between Thomas and Davis. The current route presented at the meeting at Blackwater Falls State Park is totally inappropriate for the towns. It has come to light that this proposed route by DOH would be worse than expected. It is likely that there would NOT be an overpass over Rt. 32 between Davis and Thomas (near the Tucker County Landfill). This would mean an "on-grade intersection" that would essentially split up the two towns with stop signs on either side of the interstate that you'll have to cross to get between the two towns. Any biking/walking trail connecting the two towns would also have to cross that on-grade highway. Likely it will be terribly dangerous for vehicles, bikers and hikers alike. There's a similar situation already playing out in Clarksburg and there have been a handful of deaths already this year due to the poor design and lack of consideration for the community. I vehemently opposed this route for the benefit of our community. If DOH wants to truly enhance the safety of drivers, pedestrians and bicyclists and increase economic development of Tucker County, then the route needs to go NORTH of Thomas. Our towns are too precious and successful to have this go between them. Please strongly consider a rectification to these dire issues."</p>
57	<p>"Please reconsider the east option for the Corridor H extension between Davis and Parsons. The preferred route splits Davis and Thomas apart. Both towns have been making good progress re-developing their main street areas which will suffer if businesses move to the highway intersections. The historic character of the towns is important. I prefer the east option to be selected."</p>
58	<p>"Please choose a Blackwater Avoidance Alternative and use the EAST OPTION. dont screw it up."</p>
59	<p>"I am writing in regards to the Davis to Parsons stretch of Corridor H. Having reviewed WV DOT's alternatives, I strongly urge you to chose the 'East Option.' My wife are homeowners in Thomas, WV and have been visiting the area for the past 30 years. What drew us to the area and so many others are the historic towns of Davis and Thomas, including their quiet character. The East Option is the only alternative for Corridor H that would maintain the key aspects of Davis and Thomas that have made them popular destinations and places to live. A highway overpass and exit ramps between the towns would un-necessarily</p>

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	compromise the unique qualities of this area. In addition, the East Option allows for preservation of Blackwater Canyon, one of the most unique natural landmarks in the state and the whole of Appalachia, as well as the historic coke ovens along the rail trail. Using the East Option would also not require a new truck route around Thomas and would preserve land in the Davis area for appropriate development and use in the future. Corridor H is important for Tucker County, but it is critically important that it be done right for the people who live and visit Thomas and Davis. Preserving the towns' unique and historic character should be a top priority for WV DOT. There is a chance to do the project in a way that protects the two towns and eases traffic in the region and that is the East Option. The 'preferred' option would cause irreparable damage to Thomas and Davis. I urge you utilize an option that does not cut between the two towns and avoids Blackwater Canyon."
60	"I would prefer corridor H route through tucker co would go north of Thomas. The need for a truck route would then be eliminated and there would be less disruption to our delicate ecosystem. route would the"
61	<p>"Already we have seen such an increase in traffic in the Thomas and Davis area due to the completion of Corridor H to Davis. As a mother and an avid bicyclist, I would like to be able to ride my bike with my seven year old son to Davis from Thomas safely. When routing the section from Davis to Parsons, please make sure that alternative nonmotorized transportation options are considered. They need to be more than a "share the road" sign and a set of rumble strips. We need safe nonmotorized transportation options between Thomas and Davis.</p> <p>"Additionally, when Corridor H comes close to our communities, non-vehicular traffic needs to be considered. This should include options for pedestrians and bicycles to go safely over or under the highway if necessary. Finally, please remember that one of the primary reasons why this highway is in place is to serve as a conduit to allow people who want to visit the great state of West Virginia. People come here because the land is special and beautiful... and no one, visitor or resident, wants to see a highway running close to the Blackwater Canyon and the historically significant structures that surround this area. Please choose a Blackwater Avoidance Alternative and respectfully skirt the Thomas City Park."</p>
62	<p>"I do not think that Corridor H should continue through Blackwater Canyon. We need to maintain the area as a recreational area. A better option has been studied and proposed. From the exit onto Route 93 at Davis, that route turns northwest and crosses US 219 north of Thomas, then heads west, meets 219 again near Benbush, and continues parallel to it beyond Tucker County High School.</p> <p>"With this alternative, an extra truck route around Thomas is unnecessary. The towns are not separated by a concrete barrier. And Blackwater Canyon is spared."</p>
63	"As a business owner in WV and a resident I'm happy to see the forward progress on the completion of Cord H. This road is long over due on completion and I completely understand the investment it takes to build this highway. WV and the Federal Gov has already invested a great deal in this project which even more of a reason why we need this highway completed. It will greatly help not only my business and travel it will make a lot of WV business and tourism more accessible and beneficial to our State. I hope everyone can work together for the good of everyone involved. Let's get this project completed sooner than later!!!"
64	"As a business owner and resident of Davis, I'm writing today to strongly discourage you from building Corridor H between the thriving towns of Davis and Thomas. These historic towns and their awe-inspiring landscapes attract thousands of visitors to the region each year. These visitors are essential for the economic growth and stability of our towns. Building a massive highway through Davis and Thomas would destroy the phenomenal Blackwater Canyon and other natural landscapes that are critical for residents and tourists alike. In addition, the proposed route threatens historical landmarks, such as the coke ovens. In addition to negatively affecting these towns, the proposed route for Corridor H would negatively affect my personal business. My wife and I publish an outdoor recreation magazine for West Virginia called Highland Outdoors, which relies on promoting tourism and the vibrant, natural landscapes of West Virginia. There are alternative routes for Corridor H that would be far less destructive to the region, economy, and our communities. Choosing an alternative route would also expedite the construction process, as this preferable

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	route would not be held up in courts. Please consider an alternative route for Corridor H – our towns, landscapes, and communities depend on it."
65	<p>"I fully support and encourage the Parsons to Davis project on Corridor H.</p> <p>"Corridor H is a key route which will provide the Potomac Highlands region with a link to I81 and 66 near Front Royal, and to the Virginia Inland Port, promoting significant and positive economic impact on our entire region. I support collaboration between residents, businesses, and leaders of Tucker County in determining the most viable route for this project, with particular emphasis on safety in the area of Tucker County High School, both during and after construction. Planning and construction must be sensitive to the unique geological environment in this vicinity, as well as the ecological environment, to ensure environmental protection, historical preservation, and the region's rich heritage.</p> <p>"In closing, I fully support a completed Corridor H and the positive economic impact it will provide."</p>
66	<p>"I am so pleased to see the economic benefits that are already happening for the Davis, Thomas, and Canaan Valley areas, as a result of the progress so far on Corridor-H. As a 35-year resident of Tucker County I brought tens-of-millions of dollars in revenue into the area, working for 10 years as a sales representative for East-West Printing, as the original owner of Blackwater Bikes and, as an event promoter for 22 years with my company, Granny Gear Productions. In acknowledgement for my success in building a global brand-name for mountain biking in West Virginia, I was awarded Tourism Person-of-the-Year in 2000 and was inducted into the Mountain Bike Hall of Fame in 2002. I find it very exciting to see the area starting to get some real traction, with the help of Corridor-H.</p> <p>"I love Tucker County and though I moved to Morgantown 14 years ago, building my real-estate career here, I still own several properties in Davis and Thomas (four residential rentals and a commercial office space) and, I plan to retire back to the area in the next four or five years. Suffice to say, I still have a big stake and a big heart-on-my-sleeve towards the on-going success of Tucker County.</p> <p>"I have followed the planning and progress of Corridor-H from its inception, attending the earliest public meetings in Davis, and many more since then. I studied engineering, urban geography and planning as an undergraduate and I have a keen interest in the various positive and negative impacts of planning decisions regarding Corridor-H in its routing through or around the Davis/Thomas area.</p> <p>"I implore you to take into serious consideration the various alternative routes that comprise the Blackwater Avoidance Alternatives. The long-term, positive impacts of these alternatives are compelling and will result in producing all of the benefits of the current routing (and then some!) without the negative economic and environmental impacts of the current preferred routing.</p> <p>"Please consider these points:</p> <p>"1. The East Option, and other variants of this, will avoid the construction-costs and on-going maintenance of a truck route. It will also make access to Corridor-H much easier and faster for the truck traffic coming from Rt. 219 and SR90.</p> <p>"2. The East Option will avoid the construction-cost and long-term maintenance-cost and noise pollution of an elevated highway over the North Fork of the Blackwater Canyon, the noise from which will most certainly carry up and down that canyon negatively impacting the serene setting that makes Blackwater Canyon and Blackwaterfalls State Park such a valuable attraction to the area. It will likely be heard up the Canyon into Thomas itself. Anyone who has attended the 4th of July fireworks in Thomas can attest to how sound carries in that canyon.</p> <p>"3. The East Option will avoid construction delays around legal challenges posed by opposition to the construction of an elevated 4-lane bridge over the Blackwater Canyon.</p> <p>"4. The East Option preserves the rare and valuable areas of flat land that lay between BWFSP, Davis and Thomas. These lands would more wisely be used for additional recreation opportunities as part of BWFSP, (think golf-course, water-park, etc) and/or new housing developments, as the communities grow.</p> <p>"5. The East Option preserves the community connection between Thomas and Davis. The current 'preferred' routing literally splits the towns with a four-lane, high-speed highway, negatively impacting numerous routes used by local people to go back and forth between the towns. The current routing will</p>



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	<p>detroy the very character of our community.</p> <p>"6. From a tourism standpoint, the City of Thomas will gain sugnificantly from the East Option as any and all tourism traffic using Corridor-H will go through Thomas, prior to continuing on to, or returning from Davis and/or Canaan Valley.</p> <p>"For the long-term benefit of Tucker County and our beautiful state, I ask that the WVDOH look closely at the benefits of the Blackwater Avoidance Alternatives and choose a routing that maximizes the economic gain while minimizing the costs and negative economic and social impacts.</p> <p>"I am confident, and you should be too, that such a routing will be a credit to the WVDOH's efforts and a real asset to our state.</p> <p>"Thank you in advance for your careful consideration of these alternatives and your wise planning choices in these regards."</p>
67	"East option keep Thomas and Davis undivided by a highway!"
68	<p>"We've been coming to Tucker County for vacations and visits with family and friends for more than 15 years. We have supported businesses and stayed in both wonderful and unique communities. The two towns are Luke siblings, closely related yet different personalities. I believe I saw one option for the connection to be made to the east and north of Thomas, perhaps connecting to Rt 219. This would seem to be the best option for traffic flow, esp trucks travelling south from Oakland area and beyond."</p>
69	<p>"I urge WVDOH to choose a Blackwater Canyon avoidance alternative, one that does not place the corridor between the towns of Davis &amp; Thomas. This northern alternative (already existing) would eliminate the need for a truck route around Thomas &amp; offer other benefits."</p>
70	<p>"The interstate should not go between Davis and Thomas. It doesn't preserve the historical nature of this area. People come to Davis/Thomas specially to get away from the interstate noise. This area relies HEAVILY on the tourism this small town atmosphere attracts. Please don't destroy the good thing that is growing and thriving there. Please preserve the charm of the area and the tourism. No highway there- ever."</p>
71	<p>"Blackwater Falls State Park was one of the attractions that brought me to Tucker Co. After 20 years of Tucker County residency I am a multiple property owner, and business owner. In my opinion the highway should not be routed so closely to our prized treasure Blackwater Falls SP. The close proximity of the proposed route will have negative effects to the park and Davis property values with road noise, eyesores, and environmental impacts. At a time when our county is gaining momentum with the tourism industry additional steps should be made to protect our most cherished resources around the Blackwater Canyon. Also, it seems counter productive to follow a route that would require a secondary truck route around Thomas when the Corridor could be routed there in the first place, and one road investment. Why route the corridor where a secondary truck route is needed. Wouldn't the money be better spent once, and isn't the corridor the truck route. The land north of Thomas is reclaimed mine land that has already been compromised, and less homes would be effected. I strongly encourage and vote for the highway to follow the eastern route around the towns to the north. Routing the corridor in between both towns will have a negative impact on property values, and scar our most prized WV assets that include nature and recreation near and around the Blackwater Canyon. Anything that negatively effects property values hurts this county where so little in tax revenue is generated with so much of Tucker Co being public land. We should ensure that we don't hurt land value so that we can generate the highest property value for tax revenue."</p>
72	<p>"Dividing Davis and Thomas will adversely affect tourism. A costly bridge over Blackwater canyon seems an unnecessary evil. Why not combine corridor H with the proposed truck bypass"</p>
73	<p>"I have worked in the tourist industry in Tucker County for 50 years, and I am concerned about your preferred Corridor H. I feel that that location between Davis and Thomas will greatly affect the beauty of the area and negatively impact both Davis and Thomas. Davis and Thomas are currently experiencing a revival which has been many years in the making. The East location north of Thomas would ensure that the two towns continue to be a tourist attraction as if found in their current state. Any consideration of Corridor H being moved to the north and east would be greatly appreciated."</p>

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74	<p>"I would like to comment on the preferred route for Corridor H. As I understand it would go between Davis and Thomas and then over the Blackwater River. This route would be a serious blow to the tourist industry in this area. This industry drives the local economy and has seen alot of growth in the last few years. One of the attractions for tourists in the quaintness of the towns and beautiful scenery. An interstate right through this will ruin these elements. I understand there are other options...such as north of Thomas. This would be much better for our towns; it will preserve the peacefulness of village life, which in turn will preserve our fledgling but booming tourist economy."</p>
75	<p>"It's obvious by all who live and visit this area that the East Option for Corridor H is by far the best option."</p>
76	<p>"Blackwater Bicycle Association (BBA) is a non-profit organization whose mission is to promote the growth of mountain biking in the greater Canaan Valley, WV area through education, sustainable trail construction, maintenance and safety.</p> <p>"BBA has reviewed the preferred alternative for Corridor H Parsons to Davis route and has determined that this route is detrimental to the growth and sustainability of mountain biking, local mountain and cycling culture and economic development of Tucker County and the greater Canaan Valley area.</p> <p>"BBA would support the routing of Corridor H north of the Thomas City Park. We would support the East Option (1D) if it does not negatively affect the trails in the City Park."</p>
77	<p>"I am a resident of Tucker County having moved to the area in 1988. Since that time, I have been closely following the progress of Corridor H planning and construction. I spoke before the Tucker County Commission in 1989 and voiced my opinion then about the practicality of the more direct route of Corridor H north of Thomas, avoiding numerous watersheds and the need for a high bridge. This structure will negatively affect the North Fork of the Blackwater River, the Blackwater Canyon Rail Trail and the residential areas of Coketon, Douglas and Thomas.</p> <p>"I have several questions regarding the planning and construction of Corridor H.</p> <p>"When is the completion of the rail trail from Davis to Bismark going to occur? Is this section of Corridor H complete? My Corridor H maps show this trail as part of that project section, but the trail ends five miles from Davis.</p> <p>"My maps show a continuation of the Davis to Bismark rail trail to Thomas via the Francis rail grade. None of your informational maps from the latest meeting have any indication of these trails. What are the plans for this route?</p> <p>"How are the intersections of the proposed corridor and truck bypass going to intersect the proposed Thomas to Davis pedestrian trail? What safety measures are being taken to account for the frequent pedestrian and bicycle traffic between the towns?</p> <p>"The high ridge of Backbone Mountain is a common location for a thick bank of fog, particularly early in the morning. How safe is having an on-grade intersection of a high-speed highway and the entrance/ exit for the Tucker County High School?</p> <p>"The preferred route is traveling across pristine National Forest used by hunters, fishermen and other outdoor enthusiasts, which is an economic benefit to Tucker County. Why isn't the preferred route traveling along existing U.S. 219 to avoid this resource, similar to the way it paralleled Route 93?</p> <p>"The promotion of the State Parks, National Forest, Wildlife Refuge and DNR lands has created a huge demand for trail development in our area. The addition of Corridor H has greatly increased traffic and demand for these resources. I view the planning of the Corridor as crucial to either the enhancement or the degradation of this resource.</p> <p>"Please carefully assess the impact of the Corridor route on these resources. I am in favor of the East alternative, going North of the Thomas City Park."</p>
78	<p>"As a resident of the area I am extremely concerned about the proposed route for Corridor H. The current route would split the two towns and disrupt tourism, recreation and movement between Thomas and Davis, when it could be better routed north of Thomas on the EAST OPTION (north of the dump etc). Also having corridor H cross at that location would be unsightly and affect the positive image and character of the small towns that rely on the economic driver of tourism. The noise, overpass and pollution generated by heavy</p>

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	truck passage would be a further detriment to the residents of Davis and to the community resources such as the ball field and the boulder park that are located nearby. Please consider an alternate route (the East Option) that would allow for the Corridor H construction to continue unimpeded but also allow for the community to maintain its character and continue to grow its own resources and develop the tourism economy for overall economic sustainability in a area where this is an important part of the future."
79	"I am not in favor of a route that will take Corridor H over the North Fork of the Blackwater River. The route should avoid this area as it will be an eyesore and noise source. The North Fork is being rehabilitated and will become a future trout fishery which will add to its popularity. The large bridge proposal will degrade this historic area and negatively impact the towns of Douglas, Coalton and users of the North Fork. For these reasons the alternative route, to the North of Thomas, would be better."
80	"Please consider the East route option. It appears to have the least impact on the blackwater canyon watershed and will maintain the small town unique character of the greater Davis/Thomas community."
81	<p>"I am writing this letter to express my opinion on the "preferred route" for Corridor H from Davis/Thomas to Parsons. I support the building of Corridor H. I do however feel that the "preferred route" which cuts between the town of Davis and the city of Thomas is a mistake. Both of these two communities are thriving as tourist destinations and the prospect of noise pollution and highway separation could be detrimental to the success that these two communities are recently experiencing. It seems that if individuals could exit somewhere near where the corridor presently ends (on route 93) and take what is now the proposed "truck route" to continue on towards Parsons we would gain the benefits of Corridor H without separating these two communities.</p> <p>"I am currently raising a family in Thomas, WV and we have recently purchased and are restoring a house on the Allegheny Highlands Rail Trail in Douglas. I also own and operate a small canoe and kayak livery/whitewater rafting outfitter outside of Parsons in the small town of St. George. I am concerned that the "preferred route" will have a negative effect on the rail trail which offers access to the Blackwater Canyon and historical landmarks and is a great asset for the community and tourists. It seems to me that following the 'truck route' to Parsons would keep Corridor H from bisecting popular local, tourist, and historic destinations. I have a vested interested in the success of Corridor H but wish to see the Corridor built with consideration towards the continued growth and success that both Davis and Thomas are currently experiencing."</p>
82	"Please select the east option to avoid increased traffic between Davis and Thomas. These are small towns and folks are raising families here. We do not want to see an increase in traffic which could result in more speeding vehicles and accidents."
83	<p>"We are residents, and business owners in Tucker County. After attending the WVDOH open comment meeting at Blackwater Falls and reviewing the maps and informational handouts we believe that the WVDOH needs to reexamine the route through the Blackwater protected area.</p> <p>"Thomas and Davis have changed substantially since the original EIS and routes were drawn. We believe a bridge between these communities is detrimental to the people of Tucker County.</p> <p>Thomas and Davis are now destinations with more sustainable economic growth then any other area in the county and region. A northern route around Thomas would provide better access to Cortland Acres, Oakland Maryland, and the Opera House in Thomas when renovations are completed as a 365-seat state of the art theater and would keep truck traffic away from residential areas in Thomas. The area is already experiencing more truck traffic since the completion of RT 48 near Davis.</p> <p>"This community appreciates access to safer roads. It is important that the next section from Davis to Parsons also include every fog light and reflector possible. It is truly in a dangerous impetuous weather area and modern safety concerns would limit straining our local EMS services that are already stretched to the limit."</p>
84	"Since the last EIS study in the early 2000's the communities of Thomas and Davis have been revitalized and the economic sustainability of the area has become greatly diversified. The recent Planning Commission meeting (September 9) had many community members in attendance vocal about their concerns about the



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	<p>intersection between RT 48 and RT 32 between these communities. Thomas and Davis have been working very hard for over a decade to make the connection between these mountain towns friendly to walkers, bicycles and families traveling between community recreation field areas, Davis Thomas Elementary School, Mt. Top Library and shops and restaurants. Thomas and Davis are now destinations based on the beauty of the local natural and historic resources and the creative character of these communities.</p> <p>"There has been an increase in truck traffic since Rt 48 has opened and the community is concerned about the safety of residents and visitors. We want the corridor completed and we want safe roads. We want this community to retain its' identity and want safe vehicular travel for residents, visitors and the commercial freight industry.</p> <p>"We hope you consider using state of the art fog lighting that has been employed in other parts of the country. The route between Davis and Parsons can be hazardous all year round and the Planning Commission listened to the concerns of the residents and county commissioners traveling this route in fog. It is dangerous at best for those familiar with the route and very dangerous for those that don't.</p> <p>"We respect the WVDOH mission 'preserve and improve the quality of life in these communities' and want to help make sure that will be the case."</p>
85	<p>"Stewards of the Potomac Highlands is a nonprofit 501 (c)(4) citizens group aiming to preserve open spaces, forests, farmland, rural communities and towns and foster stewardship of the Potomac Highlands of West Virginia, Virginia and Maryland. We promote ways to make a living in our area without destroying our air, soil, water, wildlife, and scenery. We encourage community and transportation planning for sustainable economic development which will protect the environment, discourage sprawl, and support family. and community cohesion, local business, local history and culture. Historically, Stewards has opposed the building of Corridor H and supported road improvements specifically targeted to safety and the economic benefit of existing rural communities.</p> <p>"We understand the segment of Corridor H between Parsons and Davis is again under consideration for design, but only one alternative was shown in the maps presented Aug. 20. This route would bring adverse impacts to the Blackwater Canyon, one of our area's most significant and visited natural treasures. The long delay since the last EIS has changed the situation, allowing a closer look at the impacts of the built part of Corridor H. There is plenty of time to study other options; final design won't begin until 2025. If DOH goes forward with their current route, we would support a lawsuit as a better alternative is available.</p> <p>"If it's really necessary to spend any more public money on Corridor H, we want to see a plan which helps accessibility to Davis and Thomas and eases traffic through the area. Something that avoids unnecessary damage to town landscapes and historic attractions. Knowing more about the effects of existing construction, you have a chance to do the project right-to benefit Thomas, Davis, and Canaan Valley and preserve an important part of our State's history."</p>
86	<p>"I am concerned about the 'original preferred' proposed route that would run between the 'sister' towns of Davis and Thomas. We are actively attempting to establish a safe walking/biking trail between these two small towns.</p> <p>"I'm afraid that the proposed route (mainly on and off ramps) would cause a dangerous situation for walkers and bikers.</p> <p>"Also, it seems unnecessary to span the Blackwater Canyon when an alternate route is available that would not require spanning our beautiful canyon.</p> <p>That said, please consider my preference for the 'East Option' route which would pass north of Thomas. Using this route would also allow trucks to bypass Thomas without needing to build a separate 'Truck Route'."</p>
87	<p>"It's obvious by all who live and visit this area that the East Option for Corridor H is by far the best option."</p>
88	<p>"Please accept my comments on the West Virginia Department of Highways Preferred Alternative for the Parsons-to-Davis section of Corridor H.</p> <p>"As per previous comments submitted to WVDOH, I would like to reiterate our objections to your Preferred Alternative for the Parsons-to-Davis section of Corridor H.</p>

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	<p>"Crossing Blackwater Canyon would adversely affect the Blackwater Industrial Complex Historic District. The Advisory Council on Historic Preservation has previously noted these adverse affects. As CHA President Hugh Rogers has pointed out in his comments to you, to insist that Section 4(f) of the federal transportation law prohibits only direct physical impacts to contributing resources is an illogical interpretation of the law and is simply untrue. Every visitor's experience would be profoundly affected by the presence of a four-lane bridge. "I understand that numerous residents of the Davis-Thomas area object to the Preferred Alternative. It is being perceived, appropriately so, as a barrier between these thriving and closely connected communities. I also understand that at an August 20th public meeting, you assured those gathered that WVDOH would assess "changes in the project area." I ask that you do this with an eye to an alternative that would better serve these two communities, avoid the Blackwater Industrial Complex Historic District, and would be an alternative with far fewer environmental impacts. Perhaps more economical as well. A win-win-win-and potential win.</p> <p>"Please revive the Blackwater Avoidance Alternatives.</p> <p>"The alternatives that were carried forward in the SDEIS have less borrow and waste, use fewer acres of wetlands, impact half as much stream length and disturbs no floodplains, as compared with the Preferred Alternative. The latter may be cheaper, but it would cause irreparable harm and is the more destructive choice.</p> <p>"Choosing a Blackwater Avoidance Alternative, preferably 1D with the East Option around the landfill, would spare the historic district, save developable land along WV 32 and 93, preserve the character of the mountaintop communities, and render an extra truck route unnecessary.</p> <p>"Additionally, I ask that all previous extensive comments we have submitted to you over the years regarding the Blackwater Industrial Complex, Big Run Bog, and other related and well grounded economic and environmental concerns re: the Corridor H project, be included in the record as you access 'changes in the project area and environmental concerns.' Many of these comments remain valid and pertinent to the Parsons-to-Davis section and the Blackwater Avoidance Alternatives that are currently under your review."</p>
89	<p>"Having reviewed the options for Corridor H. I prefer the eastern route running north of Thomas rather than between Davis and Thomas. It is very important to keep it as far away from the Blackwater Canyon as possible."</p>
90	<p>"Born and raised and educated and educating the public in Wv for 24 years plus 3 years fulltime in Tucker county where this highway passes. The fact is no additional wildland is being created. Some small amount has been set aside as a memorial to what once was. The communities that are nestled in the wilderness of the Mountain State have vitality from those tourists and new residents and lifelong sons and daughters of these green rolling hills and precious ecological resources. Spare the communities disruption. Spare the remaining unfrgmented wildlands."</p> <p>"Stay away from the easy most direct path. Find a way around using routes established long ago. If you must continue to upgrade to interstate status then go around."</p>
91	<p>"The proposed route for Corridor H will harm Tucker county's economy and our community. The DOH should choose the Blackwater Avoidance Alternative and the East Option which would send the highway north of Thomas. The current proposed route will send a dangerous highway, with no overpass between two small towns where people are used to walking and biking back and forth. Moreso, it will be extremely damaging to our economy which is nearly entirely dependent on tourism. Sending a loud highway right through the middle of what is becoming one of West Virginia's premier tourism destinations is unacceptable. The charm of the small towns will be destroyed as will the views from our state parks and the many sites that vacationers come to enjoy. The top 7 employers in the county all rely on tourism. The East option would avoid this damage."</p>
92	<p>"I am sorry I missed the event and opportunity to ask questions. A friend told me that the intersection with Rt. 32 between Davis and Thomas will not be an overpass with ramps but a straight intersection and that concerns me for a few reasons. First, school buses will have to cross there every day in good weather and bad, and we get some pretty bad weather here. Fog/low lying clouds can obscure visibility, snow and ice</p>

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	interfere with traction, and drivers on divided 4-lane highways are not always attentive. This area is a tourist destination as well, and tourists will need to cross there to access businesses that serve the tourist industry in Thomas and Davis, particularly at night and in the aforementioned bad weather. And of course the residents who will cross there regularly."
93	"As a 32 yr former employee of the DOH - D:8, 9 1/2 yrs Tucker Co. Supervisor, 20 yrs Dist. Office, I strongly support preferred alternative route proposed. It serves both towns (Thomas and Davis) equally, does not interfere with WV Rt. 32, and does not disturb Blackwater Archeological areas. After leaving Davis, the elevation drops to get traffic out of the fog area and below the frost line quickly, which is a safety factor. Safety and cost are 2 major issues--THIS HAS BOTH."
94	<p>"The Robert C. Byrd Corridor H Highway Authority (the "Authority") is delighted the West Virginia Division of Highways ("DOH") and the Federal Highway Administration ("FHWA") have decided to re-start the "Parsons-to-Davis" project on Corridor H.</p> <p>"As the DOH is aware, Corridor H is a key route within the Appalachian Development Highway System (the "ADHS"). When completed, Corridor H will link West Virginia's Potomac Highlands directly to Interstates 81 and 66 near Front Royal, Virginia, and to the Virginia Inland Port. The positive economic impact a fully completed Corridor H will have on West Virginia's timbering, tourism, manufacturing, and other industries cannot be overstated.</p> <p>"Accordingly, the Authority—which was established by act of the West Virginia Legislature in 1997 to promote the completion and use of Corridor H—supports the re-start of the "Parsons-to-Davis" project with great enthusiasm. In addition to championing the project, the Authority offers the following specific comments:</p> <p>"1. Choice of Route. The Authority hopes to see Corridor H completed in the immediate future, but it expresses no preference on the route the highway should take with respect to the "Parsons-to-Davis" section. The leaders, residents, and businesses of Tucker County—those who live and work in the area—are best positioned to collaborate with the DOH and FHWA in routing the project. Indeed, the Authority endorses community consensus and respects the expertise of the DOH and FHWA regarding the project's ideal route.</p> <p>"2. Environmental, Historical, and Cultural Sensitivities. The "Parsons-to-Davis" section of Corridor H not only is one of West Virginia's most beautiful and unique geological and ecological environments, it is of great historical and cultural significance, particularly with respect to early settlers in West Virginia and the history of the logging industry. All planning and construction activities must be sensitive to these issues and to the wildlife, plants, and waters that make this section unique. Such planning and construction activities must adhere to environmental protection and historic preservation laws and regulations, and must otherwise strive to protect cultural heritage and leave as small of an environmental mark as possible.</p> <p>"3. Tucker County High School. Student, faculty, and visitor safety is of utmost importance to the Authority. To the extent the chosen route for the "Parsons to Davis" section is in the immediate vicinity of Tucker County High School, the Authority requests that particular attention be given to planning and construction activities near the school's entrance and exit areas.</p> <p>In closing, the Authority supports this project wholeheartedly. If the Authority can be of any assistance to the DOH and the FHWA to help guarantee the project's success, please do not hesitate to contact me. The Authority, like the DOH and FHWA, will do all it can to assist in ensuring that the concept of a completed Corridor H becomes a reality."</p>
95	"For heaven's sakes do NOT mess up Blackwater Canyon. The Canon is a natural splendor. It presents an economic opportunity as a tourist attraction!"
96	"I believe the East Option, which would go north of Thomas, not right between our mountain towns of Thomas and Davis is the option that should be completed. From the current termination just outside of Davis, the East Option goes north of Thomas and crosses 219, meets 219 again at Benbush and continues parallel to it beyond Tucker County High School. With the East Option, a proposed truck route around Thomas is unnecessary. With the East Option, developable land near Davis is saved—for appropriate use. With the East Option, there will still be an exit between the towns, but not an overpass. I am opposed to the



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	<p>current option because a) there will be unnecessary damage to our town landscapes and historic attractions b) if you go forward with the current route, it will be tied up in court c) the final design won't begin until 2025. There would be no delay to the project if you choose the better alternative.</p> <p>"DOH is re-starting the project and points out the purpose of Corridor H is 'to promote economic development and preserve or improve the quality of life in the region.' Please listen to our community and do what is right to maintain the integrity of our community by keeping Thomas and Davis united as one, not divided in two."</p> <p>"Secondly, when compensations from any damage to the area are awarded when the highway is built I would like to see funding go to the two state parks in the area-Blackwater Falls and Canaan Valley State Parks-both in dire need of funding. In addition, I would like to see funding to go the Tucker Community Foundation which supports numerous charities in 7 WV counties."</p>
97	<p>"The East option would by far be the best option for Corridor H. Please do not split up the area between Davis and Thomas. Please preserve the rural beauty of the area."</p>
98	<p>"Please for the love of God keep these roads as far from Thomas and Blackwater as possible. It would be INSANE to do otherwise."</p>
99	<p>"Please consider: Concurrent with Montrose to Mackeyville. The truck route around Thomas could be finished much earlier than the entire Route. That truck route would be a major Safety improvement. The large trucks going through the heavily tourist laden streets of Thomas are a Catastrophe waiting to happen."</p>
100	<p>"Though trucks are not appropriate on the road between Thomas and Davis. The East Option is the only one that keeps through trucks off this road."</p>
101	<p>"Please save the charm and appeal of Davis and Thomas by selecting the East option. Both towns have received accolades from several outdoor oriented magazines celebrating the towns on a national level. Do not destroy the positive steps each town has taken and allow them to build even stronger."</p>
102	<p>"I generally support this project, but I would like to see reevaluation of the alignment near the North Fork Blackwater River. From what I've seen, it seems that the previously studied Blackwater Avoidance Alternative that loops north of Thomas would be preferable in avoiding impacts to the historic industrial area and coke ovens along the former Western Maryland rail line near Douglas. Relocating Corridor H to the north would also provide better access to US 219 north towards Oakland and Morgantown and eliminate the Thomas truck bypass.</p> <p>"If the original alignment is retained, I would suggest either redesigning the proposed Thomas truck bypass so it is the through route for mainline US 219 traffic (assuming US 219 will break off from Corridor H at the WV 32 interchange) or eliminating it. If you're going to build a bypass, it should be the default for all through traffic to eliminate congestion issues in Thomas."</p>
103	<p>"I have been privileged to visit West Virginia for recreation many times over the past 25 years, at least annually. I have visited Blackwater Falls State Park, as well as Thomas and Davis. What wonderful places. I observe from the maps for the proposed extension of Corridor H that the alignment preferred by the Division of Highways is the one that crosses the Blackwater Canyon. I believe this is unnecessarily destructive of a spectacular natural treasure in that region. A freeway crossing this Canyon is extreme degradation and unnecessary, given the possibility of utilizing the previously-studied alternative routes that travel north and closer to Benbush. As someone who probably represents many tourists to West Virginia--and the numbers of these will most certainly multiply drastically in coming years with the expansion west from the DC region and south from Pittsburgh--I implore you to choose the more northerly alternative route for Corridor H. Supplemental Environmental Impact studies have already been done on this matter, years ago, that could form a basis for this choice. Surely the preservation of the Canyon is worth a relatively minor adjustment in the route, which is a one-time, permanent decision, for good or ill. Such a choice of the northern route would also effectively safeguard the many historic sites of the Blackwater Industrial Complex. I have used Corridor H westbound many times as far west as Moorefield. In my opinion, this highway, while impressive and grand, has had a deleterious effect on the extremely rare landscape and resources of this part of the State. All one has to do is stand underneath its massive piers to see this. Surrounding States</p>

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	don't have what WV has in its "wild and wonderful" areas, which are uniquely valuable exactly because they are not cut through with freeways. I urge you to choose the alternative that AVOIDS crossing the Blackwater Canyon--the more northerly route, north of Tucker County High School and north of Thomas. it is a matter of choosing for the future good of West Virginia and its wonderful and precious landscape, as well as the economic benefits of avoiding degradation of that resource."
104	"It's obvious by all who live and visit this area that the East Option for Corridor H is by far the best option."
105	<p>"I am writing regarding Corridor H and, in particular, the Parsons to Davis section of the 'Preferred Alternatives'.</p> <p>"1. 1. A four-lane bridge over The North Fork of the Blackwater River Canyon as proposed would have a negative and enduring impact on the precious beauty of the Blackwater Canyon. In addition, the coke ovens and the potential for their being a tourist attraction could be negatively impacted. Furthermore, the canyon as a pristine, exquisite location for hiking, viewing nature and biking would be negatively impacted. There has been consideration of the Blackwater Canyon for National Park status. I fear that this would have a negative impact on that National Park consideration and consequently on tourism economic development for both Tucker County and the state of West Virginia.</p> <p>"2. Both Thomas and Davis are currently undergoing unprecedented boom times. This is because of investment in building infrastructure and in individual businesses, smart marketing, and the growing reputation of these towns. Combine with nearby sites and activities and our beautiful parks, wilderness areas and forests, this area is drawing more tourists yearly. A four-lane highway and its interchange between the two historic towns of Thomas and Davis, as proposed by your "Preferred Alternative", would not only disrupt the integrity and unique relationship of these communities, but would result in the disruption of what might be a fragile upswing in the economic development of these tourist centers.</p> <p>"Other alternatives have been proposed. As a long-time resident of and deeply committed community member in Tucker County, I support any of the Blackwater Avoidance Alternatives proposed by the organization Corridor H Alternatives."</p>
106	"Choose a Blackwater Avoidance alternative"
107	<p>"Friends of Blackwater is writing in response to the proposed re-examination of Corridor H alignment from Parsons to Davis in Tucker County, West Virginia. Friends of Blackwater is a nonprofit located in Tucker County, West Virginia with 4,000 activist members dedicated to protecting the Blackwater Canyon and Allegheny Highlands and promoting the sustainable human and community interests in the region. Comments have been grouped by topic and address environmental, economic, tourism development and safety concerns.</p> <p>"Virginia Big Eared Bat Habitat Damage</p> <p>"The Virginia Big Eared Bat is an endangered species with habitat ranging throughout West Virginia. The Corridor H Supplemental Final Environmental Impact Statement states that the proposed Corridor H expansion would have "no adverse effect" on the species based on a Biological Evaluation from 2001. This was concluded based on "no essential habitats or satellite caves occurring within the Study Area." However, more recent findings show that this species of bat reside along the current preferred alignment near the Blackwater Industrial complex. This bat species continues to inhabit old mine tunnels here. The 2016 Appalachian Corridor H Parsons to Davis Section Bat Acoustic Survey found evidence of the bat species in the proposed Corridor H pathway. As such, it is our opinion that a new Biological Evaluation needs to be completed to further investigate the issue. The construction of Corridor H between Parsons and Davis could both damage their habitat and create road hazard affecting the bats' flight, hunting, mating and other life patterns. Failure to do so may have adverse effects on the species population and may violate with the Endangered Species Act.</p> <p>"Impact on the Blackwater Industrial Complex</p> <p>"The current preferred alignment for the Corridor H Parsons to Davis segment runs straight across the Blackwater Industrial Complex approximately half a mile southwest of Thomas, WV. Our concern is that the construction in this region could damage the artifacts of regional historical significance including coal</p>

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	<p>industry equipment such as coke ovens and railroads. These artifacts are important the region's cultural and economic history. Additionally, should Corridor H be constructed across this location, access to these artifacts may be further hindered by the highway. Access trails and paths may be cut off or left unusable by construction. As such, the Blackwater Industrial Complex may lose part of its historical significance. Much of the Blackwater Industrial Complex is owned by the Monongahela National Forest (MON) and consultation with this federal agency is necessary. Any proposed re-evaluation studies and approval for new studies should be subject to NEPA processes including public comment on studies and work plans on any portion of the MON.</p> <p>"Additional Acid Mine Drainage in the Area of the Blackwater River  "The proposed preferred alignment for the Corridor H Thomas to Davis crosses the North Fork of the Blackwater River approximately half a mile southwest of Thomas, WV. Based on historical maps and more recent surveys, the earth on either side of the river is a maze of old coal mines. These tunnels are filled with acid mine drainage pollution which form the Coketon Mine Pool. The low point in this system of connected tunnels is Mine Tunnel 29 which produces major flows of untreated polluted water just east of the preferred alignment. As such, our concern is that any major construction of a roadway here could cause increased acid mine drainage from these old mines to escape and make its way into the Blackwater River. This would have a large negative impact on the ecology of the river and could affect drinking water, outdoor sport and tourism such as fishing and kayaking. The current proposal does not, in our opinion, go into detail about this issue, offer mitigation options, etc.</p> <p>"Creating an Artificial Barrier between Davis and Thomas and negative economic impacts  "The towns of Thomas and Davis are currently connected via the Appalachian Highway, Co. Route 32. The currently proposed location for the Corridor H route would cross the Appalachian Highway between the two towns, which in our opinion, would create a visual barrier between the two towns. The current plan shows Corridor H having an overpass over the Route 32 with on and off ramps on either side. Further there is the possibility of typical off ramp stores such as gas stations and fast food stores pupping up. Together, this would create a visual barrier that breaks up the two towns and interrupts the cultural connection. This modern concrete structure undermines the heritage tourism appeal of both Thomas and Davis. The barrier could reduce tourist travel between the two towns and deter tourists visiting natural heritage attractions in the region, including Blackwater Falls and Canaan Valley, from also visiting Thomas. This in turn could have an adverse effect on the local art and business community which relies largely on tourist traffic.</p> <p>"Safety Impact on Tucker County High School  "The proposed preferred alignment of Corridor H would in our opinion create potentially unsafe conditions with the Tucker County High School Connector. The additional traffic near the school could create hazards for persons entering and leaving the school. In addition, Tucker County High School is located on Backbone Mountain which is known to be shrouded in fog in the early mornings and covered with snow in winter when students and teachers would be driving to the school. Further, high school students are new drivers and may not be the best at driving in foggy or high traffic conditions. These factors combine to create a higher likelihood of car accidents and other issues at the proposed Tucker County High School Connector.</p> <p>"Eastern Route around Thomas  "It is our belief that a better alternative route for Corridor H would be one that looped north of Thomas, WV going on the east side of the town. This route would avoid or mitigate many of the concerns outlined above while also achieving the objectives of the Corridor H completion in the Davis to Thomas area. It would maintain the close connection between Thomas and Davis without a large highway intersecting the towns. Access to Tucker County High School would be via US 219 as is the current situation, limiting traffic and a potential unsafe situation near the school. This route would avoid the historical area of the Blackwater Industrial Complex and the area where the Virginia Big Eared Bat has been documented. Further, it would succeed in lowering the amount of truck and other commercial traffic going through Thomas and Davis without the explicit need for an additional truck route.</p>



2019 Comment Number	Comment
	<p>"High School to Mackeyville Road</p> <p>"Friends of Blackwater believes that the section from before the high school to the Mackeyville Road should be constructed as a scenic two lane road with numerous pull offs to avoid damage to the Monongahela National Forest land, to native brook trout streams, the West Virginia northern flying squirrel protected on the MON, to cultural resources and other resources not yet identified.</p> <p>"Bibliography</p> <p>"Inglis-Smith, Chandra L, WV. 2003. Phase 1 Cultural Resources Management Report Tucker County.</p> <p>"Johnson, J.B.; Edwards, J.W.; Wood P.B., 2005. Virginia big-eared bats (<i>Corynorhinus townsendii virginianus</i>) roosting in abandoned coal mines in West Virginia. <i>Northeastern Naturalist Journal</i>; Volume 12, Issue 2, ISSN 1092-6194. 01-07-2005.</p> <p>"Mountain State Biosurveys, LLC, Glenwood, WV. 2016. Appalachian Corridor H Parsons to Davis Section Bat Acoustic Survey Tucker County, West Virginia.</p> <p>"State of West Virginia Department of Transportation, 2007. Appalachian Corridor H Parsons-to-Davis SFEIS."</p>
108	<p>"We welcome this opportunity to remind you of our objections to WVDOH's Preferred Alternative for the Parsons-to-Davis section of Corridor H.</p> <p>(1) We disagree with your position that crossing Blackwater Canyon would not adversely affect the Blackwater Historic District. The Advisory Council on Historic Preservation found otherwise. To insist that Section 4(f) of the federal transportation law prohibits only direct physical impacts to contributing resources is an absurdly narrow reading. Every visitor's experience would be profoundly affected by the presence of a four-lane bridge.</p> <p>(2) We join with many residents of the Davis-Thomas area who object to the Preferred Alternative as an unwelcome barrier between their communities--which are rapidly becoming a single community. In your invitation to the public meeting on August 20, you promised to assess "changes in the project area." You should recognize that these towns are growing, partly due to the influence of the completed portion of the Corridor. Now it is not enough to deliver traffic to them, it is important to direct traffic in a way that will not overwhelm or separate them. The logic that led to the Thomas truck bypass should lead to steering through traffic around the towns, but with convenient exits for both. One huge interchange between them, with highway-related sprawl around it, would be devastating to the charming character that visitors come for. Please revive the Blackwater Avoidance Alternatives.</p> <p>(3) Those alternatives that were carried forward in the SDEIS have less borrow and waste, use fewer acres of wetlands, impact half as much stream length and no floodplains at all, compared with the Preferred Alternative. The latter may be cheaper, but it is the more destructive choice. At this point in the Corridor's history, after so much money has been spent, it is too late to try to complete it on the cheap. The purposes of "promoting economic development and preserving or improving the quality of life in the region" should go hand in hand. You can't achieve one at the expense of the other.</p> <p>"To conclude: Choosing a Blackwater Avoidance Alternative, such as 1D with the East Option around the landfill, would spare the historic district, save developable land along WV 32 and 93, preserve the character of the mountaintop communities, and render an extra truck route unnecessary."</p> <p><i>[submitted separately:]</i> "Please add to my previous comments on behalf of CHA and WVHC: we wish to incorporate by reference our previous comments, filed in response to the SDEIS and SFEIS, concerning the Blackwater Industrial Complex Historic District, Big Run Bog, and other sites that would be affected by the Preferred Alignment on the Parsons-to-Davis section."</p>
109	"Please consider the EAST OPTION, which would benefit the residents and visitors to Thomas & Davis"
110	"Please consider the EAST OPTION"
111	"The East Route, which would ho North of Thomas AND avoid sensative areas of ecological and historical significance, is the ONLY logical choice!!!"

2019 Comment Number	Comment
112	"I live and work in Thomas. It's obvious to me that the east option would be the best for the communities of Davis and Thomas."
113	"I prefer the east option, which does not divide the two towns. In an area with already limited private property available, condoning this section with an interstate, squeezes progress and expansion even more. This would also avoid crossing the Blackwater canyon, reducing the environmental and economical impact of disturbing this famous attraction. The Blackwater state park is one of the most popular parks in the state and region, a highway running that close to it would negatively alter the experience. Again, the route north of Thomas would be a better option."
114	"Corridor H should not separate Davis and Thomas it would destroy Blackwater Canyon and the area around it"
115	The ONLY option should be the east option. I own property in Tucker County. The two towns of Thomas and Davis are one of the few things WV has going well and in the right direction. DO NOT run the road between them. That is crazy. I would be happy to talk at length on this issue."
116	"The Eastern Route is the ONLY good choice DO not destroy the best thing going in WV right now dividing the two towns with a 4 lane highway."
117	"I'm writing to ask WVDOH to choose a Blackwater Avoidance alternative. The route should not impact the water supply for the City of Thomas, the City of Thomas Park or the Blackwater Canyon/Blackwater Industrial Complex below Coketon. The route would best serve the communities of Thomas and Davis if it avoided bisecting Rt 32 and thus dividing the two towns."
118	"The new extension should not split Thomas and Davis. As a long time visitor of the Canaan Valley area, all alternatives that protect the integrity and linkage between these charming towns should be used instead. We visitors from the DC region travel to these towns because they are quaint and beautiful. An overpass would be unsightly and ruin the viewscapes of these towns. Utilize the alternative East Option north of Thomas which doesn't bisect these towns. We tourists from DC, MD, VA bring a lot of money into the area and the proposed option showcased in August 20th would cause tourists to not travel to the area due to the beauty destroyed by such a large highway."
119	"I'm not agreeing with the Highway going through historic landmarks! I don't think that's right there needs to be another way around it! Coke ovens are the scenery here in Thomas and the railroad grade gives up history to talk about it, it has been here my whole life and many years before me and I will not let that change for some highway! I approve of the highway just not destroying our history through the towns! There other ways to go without destroying special landmarks!"
120	"On behalf of the Tucker County Development Authority (TCDA), I am writing to express our support for the completion of Route 48 Corridor H highway project, more specifically we encourage you to do everything in your power to build the 10-mile section from Parsons to Davis. "The completion of Route 48 Corridor H will vastly improve east-west transportation through Tucker County and West Virginia as a whole. The highway is critical to the continued success of economic development in our region. The Tucker Development Authority is an extension of county government, with the County mission promote economic prosperity while supporting our cultural heritage. The Development Authority is fully supportive of your efforts to complete Route 48 Corridor H."
121	"I would like to have an appraisal of our property before they start negotiating. I feel like we should know the value of our neighbors land will be equal to the value of ours. I realize that timber will count into the value. When are they going to come and talk to us about our property[?] What will happen when they come 100 ft from our spring that is our main supply of water[?] We also need a full disclosure of all money is paid for the land in this section."
122	"Please choose the East Option route for this project. Sticking with the East Option would keep the charm of the historical towns, Davis and Thomas. The route should most definitely go around both towns."
123	"It's obvious by all who live and visit this area that the East Option for Corridor H is by far the best option."

2019 Comment Number	Comment
124	"With so many tourism dollars coming from this region, it's obvious by any who live or visit the area for Corridor H to pursue the East Option transit around Thomas, and negligent to run it between the two of the state's most profitable tourist towns."
125	<p>"Re: Corridor H Parsons-to-Davis Public Comments - Necessary ADA Accessibility / Public Safety for People with Disabilities affected by Corridor H improvement request</p> <p>"'Access On The Go' (WV On The Go Inc.) is a Tucker County based 501(c)3 'Promoting Community (ADA) Accessibility Improvements, Accessible Recreation, Business Profitability, and Advocating for the Rights of People With Disabilities throughout the West Virginia Region and Beyond...'</p> <p>"As Corridor H extends into Tucker County and grows closer to completion, the volume of traffic within the surrounding areas has, and will continue to, rapidly grow. As traffic volumes have increased it has much more dangerous and difficult for individuals with disabilities to safely move across and adjacent to public roads.</p> <p>"We request that the WVDOT assign a team specifically tasked with identifying and implementing necessary ADA improvements (such as curb cuts, well marked/signed accessible crosswalks, tactile paving, continued gravel/dirt debris removal, sidewalk improvements, etc. to help establish and maintain (disabled) pedestrian safety especially within higher populated / higher pedestrian traffic areas along:</p> <p>"Appalachian Hwy-32, Seneca Trail-219, and Henry Dobbin Hwy-90</p> <p>"...including thoroughfares through Thomas, Davis, Canaan Valley, Henery, Dobbin, Bayard, Parsons, Hendricks, Hambleton, near Cortland Acres Campus/Thomas Trails etc.</p> <p>"Our organization would be happy to volunteer to collaborate, contribute, and assist any efforts working to maintain and improve ADA accessibility, public safety, and quality of life long Corridor H and throughout the region."</p>
126	"I have a home in Davis, WV - 158 Henry Ave. Davis Please choose the Blackwater Falls AVOIDANCE alternative and use the EAST option for Corridor H."
127	"It's obvious to all who live and visit this area that the East Option for Corridor H is by far the best option."
128	<p>"Our organization, New Davis Renaissance Group, was formed to help maintain the character of and beautify the town of Davis, WV. Our group is very concerned with the proposed route of the corridor. We would prefer that the route use the East Option and go north of Davis and Thomas. Residents of Davis already have noise pollution from the corridor and that will only increase with your preferred alternative. Our neighboring town of Thomas has a goal of connecting the two towns with a family-friendly trail. The highway would lessen the ability to do that and would also create an eyesore and increased traffic and danger to bikers and hikers.</p> <p>"Please consider the impact that your preferred alternative will have on our towns. Again, we would prefer that you take the East Option and go around our towns."</p>
129	<p>"As a Tucker County property owner, my wife and I are very concerned with the routing proposed at the public meeting at Blackwater State Park on August 20, 2019 ("2007 Preferred Alternative"), for the Parsons to Davis routing of Corridor H. A routing that comes so close to and divides these two towns will have a negative impact on the historic character and ambiance that attracts tourists and residents alike. At one time, it may have been thought that such a close relationship would be beneficial, however times have changed, with people seeking a genuine small town feel that would be disrupted with the type of development that typically occurs at limited access highway exits.</p> <p>"A second reason we are opposed to this routing is the negative impact the highway would have on the scenic Blackwater River canyon. Again, since the time that Corridor H was originally conceived, the Allegheny Highlands Trail (rail trail) system has been developed in the Blackwater Canyon for recreational use. A major highway across the canyon portion of the trail will negatively impact its scenic beauty and remote setting.</p> <p>"For these reasons, we support the Blackwater Avoidance option, or East Option, that would route the highway around the towns of Davis and Thomas as well as the Blackwater canyon. It is our understanding that this option would also negate the need for the additional truck route around Thomas."</p>



2019 Comment Number	Comment
130	"Very strongly support a BLACKWATER AVOIDANCE ALTERNATIVE. I am a visitor to the area several times each year, over many decades. Preserve the beauty and the history of the area, please, please!!"
131	<p>"I am writing regarding Parsons to Davis section of your 'Preferred Alternatives' for Corridor H.</p> <p>"1. It should be clear that a four-lane bridge over The North Fork of the Blackwater River Canyon as you propose would have a devastating impact on the natural beauty of the Canyon - and the historic significance of the coke ovens - and so seriously adversely affect the possibility of future consideration of the Canyon for National Park status. This would not only destroy the unique beauty of the Canyon, it would also result in irreparable harm to the economic prosperity of Tucker County and the State of West Virginia.</p> <p>"2. A four-lane highway - with any kind of interchange - between the two historic towns of Thomas and Davis, as proposed by your "Preferred Alternative", would seriously disrupt the integrity and unique relationship of these communities, and so do them great harm.</p> <p>"Other Alternatives have been proposed. As a long-time resident of and teacher in Tucker County, I would support any of the Blackwater Avoidance Alternatives proposed by the organization Corridor H Alternatives."</p>
132	<p>"I am writing to you to voice my objections to WVDOH's "Preferred Alternative" for the Parsonsto-Davis section of Corridor H.</p> <p>"I'm sure that many people before me have outlined the objections to your "Preferred Alternative." I'm sure that many people before me with better writing skills have written to you describing how the "Blackwater Avoidance Alternatives" as proposed by the group Corridor H Alternatives (CHA) have fewer negative impacts on our community. So here is my short letter with my perspective:</p> <p>"As a Registered Nurse, I travel these mountain roads in all weather and conditions and I appreciate the value of improving the highway infrastructure in this rural area. I currently drive the Corridor H section between Kerens and Buckhannon every day I go to work and I am grateful for the efficiency and added safety of driving on a divided highway. I moved to Tucker County four years ago to live with my husband where he grew up and to hopefully raise a family in these beautiful mountains. I moved here for my husband, and I fell in love with the community and the natural beauty of the landscape.</p> <p>"With all the money spent so far on this project, it would be a pity to botch the crown jewel section of this highway by cutting corners and ignoring the negative impacts that a poorly routed and designed interchange or overpass could have on the surrounding communities and landscape. This highway has the potential to improve our local and state economy and improve the quality of life in the region! Regardless of the route, it passes within a couple miles of Blackwater Falls State Park, the most visited state park in the state. The design and route of this section can either be a source of pride and growth or it can be a sloppy divider of communities and diminish the integrity of the region. Please revive the "Blackwater Avoidance Alternatives" proposed by CHA. Thank you."</p>
133	<p>"I would like to take this opportunity to voice my objections to WVDOH's Preferred Alternative for the Parsons-to-Davis section of Corridor H.</p> <p>"I grew up in Tucker County surrounded by a broad range of opinions and perspectives concerning development, economic growth, and land use issues. The construction of Corridor H has been a hotbutton issue among my friends and family my entire life. As a small business owner, it has been undeniable that Corridor H (especially the sections connecting Davis with northern Virginia) has brought in a substantial increase in tourist dollars. <b>I am even willing to admit that completing Corridor H through from Kerens to Davis would further benefit our communities. However, this MUST be done in such a way as to preserve the historic and scenic integrity of the communities and landmarks through which the highway passes. The area through which this section passes is not only my home, but is in fact one of the primary destinations of the Corridor for folks traveling from both directions. Every effort should be made to route and design this section in such a way that it can be a source of pride for everyone from the administrators and engineers who design it, to the construction workers who build it, to the residents and motorists who will live with it and use it every single day.</b></p> <p>"I join with the many residents of the Davis-Thomas community who object to your Preferred Alternative both as an unwelcome barrier between the towns as well as an eyesore harming the charming character of</p>

2019 Comment Number	Comment
	<p>this destination. Please revive the Blackwater Avoidance Alternatives as proposed by Corridor H Alternatives (CHA). The purposes of, '... promoting economic development and preserving or improving the quality of live in the region,' cannot be achieved with your Preferred Alternative plan.</p> <p>"On a similar note, the bridge spanning the Blackwater River (near Douglas, as I understand it) as part of your Preferred Alternative would have a large impact on the experience that so many people enjoy of visiting the historic coke ovens as well as hiking, biking and skiing up and down the Blackwater Canyon rail-trail. It would similarly affect the experience of visitors to Blackwater Falls State Park as your Preferred Alternative routes the highway near the park boundary. Again, please revive the Blackwater Avoidance Alternatives proposed by CHA."</p>
134	<p>"I travel 5 hours &amp; use the corridor H to go to this area for vacation skiing hiking etc. love the revitalization happening but please choose the East option and go around the historic towns to keep it authentic, wild and wonderful!"</p>
135	<p>"Please accept our public comments on WVDOH's Preferred Alternative for the Parsons-to-Davis section of Corridor H. We attended the public meeting at Blackwater Falls State Park and were horrified that only the Preferred Alternative was marked on the maps presented to the public.</p> <p>"The preferred alternative intersects Route 32 between Thomas and Davis, the two thriving towns in Tucker County without regard to the historic connection between the two communities, the growing young population there, public safety issues with four lane highway crossing 32 at grade, and threatening the new bike and walking trail.</p> <p>We believe that crossing Blackwater Canyon would adversely affect the Blackwater Historic District, specifically all of the work that has been done to honor the historic Douglas coke ovens trail. A four-lane highway bridge overhead will cause tremendous noise pollution for visitors below and completely alter the experience of the historic area.</p> <p>"We believe that the best alternative for the highway would be to go near Benbush, and then north and east of Thomas, linking to the end of Corridor H somewhere near the Honey Rubenstein Center, but avoiding crossing the new Thomas City Park and avoiding the Thomas water supply. This route might use the footprint of the proposed Thomas truck bypass, steering through traffic around the towns, with convenient exits for both. We know that there are Blackwater Avoidance Alternatives, and believe that an eastern/northern alternative would preserve the Blackwater Canyon, be more beneficial to Blackwater State Park, provide adequate access to Thomas, Davis and Canaan Valley and be safer.</p> <p>"According to the last SDEIS, Alternative ID has less borrow and waste, fewer acres of wetlands disturbed, impacts half as much stream length, and disturbs no floodplains, compared with the DOH Preferred Alternative. The preferred alternative might be one mile shorter, but it is more destructive to the environment and the culture of our communities. Blackwater Avoidance Alternative ID with the East Option around the landfill, would protect the Douglas Coke oven historic district, preserve the quality of developable land along WV 32 and 93 and keep the character of Thomas and Davis and surrounding community. We strongly advocate for you to reopen the alternatives you studied so extensively.</p> <p>"Thank you for inviting public comment."</p>
136	<p>"Pleas take time to consider a route for Corridor H that does not impact the historical section of Black Water Canyon. As an Elkins, WV native and a frequent visitor to my beloved state, I believe that we were only given one earth and must take as many steps as necessary to preserve its naturl beauty. I understand that a better alternative route has already been studied. Please give it consideration!"</p>
137	<p>"As a resident and business owner in Tucker County, I strongly support the East Option route from Parson to Davis. It is important that Cooridor H does not split Davis and Thomas. The East Option will be far more economical and environmentally friendly in the long run."</p>
138	<p>"As a resident and business owner in Tucker County, I strongly support the East Option route from Parson to Davis. It is important that Cooridor H does not split Davis and Thomas. The East Option will be far more economical and environmentally friendly in the long run."</p>

2019 Comment Number	Comment
139	"Please consider the 'east option' to route corridor h traffic past Thomas without dividing the Davis and Thomas communities or ruining the scenic and historic sites"
140	"It's obvious to me and the entire outdoor recreation community and WV residents & tourists that the East option is the best alternative."

\* This comment comes from a letter that was delivered at the public meeting, but it was written prior to the comment period as a follow-up to Corridor H Authority meeting the previous month. It was long and is summarized instead of copied verbatim.

**Table 3: 2022 Parsons to Davis Project Public Comment Details**

Last Name	First Name	Organization	City	State	Number*
Abrams	Nancy		Morgantown	WV	1
Agee	Stephanie		Washington	WV	2
Alba	Kelly		Montrose	WV	3
Allison	Jasmine		Morgantown	WV	4
Allman	David		Bridgeport	WV	5
Alston	Marian		Charleston	WV	6
Anderson	Clare		Thomas	WV	7
Archer	Tim		Vienna	WV	8
Baczuk	Jim		Thomas	WV	9
Barreda	Mia			WV	10
Bayes	Jennifer			WV	11
Bean	Suan	Davis Volunteer Fire Dept.	Davis	WV	12
Beckwith	Margaret		Elkins	WV	13
Beecham	Lynne		Belleville	OH	14
Beecher	Christine		Davis	WV	15
Behrens	Kristen		Davis	WV	16
belles	chris		Alexandria	VA	17
Belling	Ella		Morgantown	WV	18
Berry	Ann		Morgantown	WV	19
Best	Wesley		Roanoke	VA	20
Blood	Jeannie		Reston	VA	21
Bolyard	Carl		Elkins	WV	22
Bostian	Jennifer	Upshur County Development Authority	Buckhannon	WV	23
Bostian	Jennifer	Upshur County Economic	Buckhannon	WV	24



Last Name	First Name	Organization	City	State	Number*
		Development, Executive Director			
Botsford	Marie		Shepherdstown	WV	25
Bounoell	Annlee and Rob		Davis	WV	26
Boury	Jeanne		Thomas	WV	27
Bowyer	Kelly		Buckhannon	WV	28
Boyd	Jennifer		Edmond	WV	29
Bridy	Joy				30
Briere	Chantal		Davis	WV	31
Bright	John	Purple Fiddle LLC	Thomas	WV	32
Broadwell	Lawrence		Chevy Chase	MD	33
Brous	Erik		Davis	WV	34
brown	barbara		Potomac	MD	35
Brown	Sandy				36
Browning	Jane	Ranger Jane	Thomas	WV	37
Browning	Jane	Ranger Jane's	Thomas	WV	38
Brumbaugh	Kendall		Elkins	WV	39
Bruning	Margaret		Elkins	WV	40
Bryzek	Jessica		Fairmont	WV	41
Bumgardner	Jeff			WV	42
Burns	John		Charles Town/Davis	WV	43
Cahal	Sherman		Raceland	KY	44
Caldwell	Stewart		Roanoke	VA	45
Campbell	Kacy		Shepherdstown	WV	46
Campbell	Kelly		Shepherdstown	WV	47
Campe-Price	Christine		Grantsville	MD	48
Cantrell	Rebecca		Davis	WV	49
Cantrell	Linda		Clermont	FL	50
Caplinger	Kenneth		Scott Depot	WV	51
Caplinger Rubenstein	Sue	Tucker County Homeowner	Davis	WV	52
Carr	Norman	Has home in Douglas (92 Locomotive Lane)	Delmar	DE	53
Carts	Anna		Alexandria	VA	54
Casson	William		Potomac	MD	55
Chase	Chip	White Grass	Davis	WV	56
Chase	Cory		Dryfork	WV	57
Cimarolli	Amy		Davis	WV	58

Last Name	First Name	Organization	City	State	Number*
Clements	Kimberly		Davis	WV	59
Cohen	Robert		Morgantown	WV	60
Coleman	Kennith		Morgantown	WV	61
cook	tim		mount orab	OH	62
Cooper	Thorton		South Charleston	WV	63
Cornell	Emmie		Franklin	NC	64
Costanzo	Daniel	The Washington Academy Of Sciences			65
Cox	Therese		South Charleston	WV	66
Crew	Darin		Baltimore	MD	67
Cronaller	Judith	Davis Town Council	Davis	WV	68
Cronin	Rob		Elizabethtown	PA	69
Crow	Darin		Dunbar	WV	70
Cunningham	Casey		Morgantown	WV	71
Cuonzo	Marilynn		Elkins	WV	72
Curfman	Aileen		Shepherdstown	WV	73
Czajkowski	Bart		Harrisonburg	VA	74
Dalton	Bruce and Andrea		Davis	WV	75
Dalton	Ryan		Morgantown	WV	76
Daryabeygi	Michael		Red Creek	WV	77
Davis	Rachelle		Thomas	WV	78
Davis	Stephanie		Arthurdale	WV	79
DeBarr	Chris		Elkins	WV	80
DeBoer	Natalie	Sierra Club Member & Concerned Citizen	Henrico	VA	81
DeBolt	Margaret		Davis	WV	82
Degen	Tom				83
Delligatti	Anthony		Martinsburg	WV	84
Denney	Carol	Solid Frog Productions	Elkins	WV	85
DeVilder	Shelia		Hambleton	WV	86
DeVilder	Jacob		Hambleton	WV	87
Dilly	Dan		Davis	WV	88
DiLorenzo	Kelly		Clarksburg	WV	89
DiLorenzo	Michael		Clarksburg	WV	90
Disclosed	Not				91
Dodson	Jenna	West Virginia Rivers Coalition			92

Last Name	First Name	Organization	City	State	Number*
Douglas	Stratford	West Virginia University	Columbus	NC	93
Douglas	Barbara		Montrose	WV	94
Dumire	Joseph		Thomas	WV	95
Dunbar	Domenico		Fayetteville	WV	96
Dunson	Allen		Terra Alta	WV	97
E Miller	Evid		Buckhannon	WV	98
Easton	Brent		Davis	WV	99
Egan	Sally		Bridgeport	WV	100
Elkins	Kathi		Charleston	WV	101
Ellis	Cynthia		Red House	WV	102
Esch	David	Alpine Heritage Preservation, Inc.	Thomas	WV	103
Esch	David		Davis	WV	104
Fabbricatore	Jessica				105
Farmer	Anne		Thomas	WV	106
Fernatt	Robert	WVEAA	Falling Waters	WV	107
Fico	Frank		Reston	VA	108
Fierst-Walsh	Pamela		Davis	WV	109
Finch	Laura		Hillsboro	WV	110
Fitzpatrick	Frank		New Creek	WV	111
Fleischman	Alice	East West Printing	Davis	WV	112
Forrester	Nicole	Highland Outdoors	Davis	WV	113
Frank	Sandra		Davis	WV	114
Fremaux	Charlotte		Harpers Ferry	WV	115
Fridley	Linda		Thomas	WV	116
Frost Yocum	Lizz		Davis	WV	117
Frost Yocum	Lizz	Growing Interests LLC	Davis	WV	118
Gabel	Christopher		Arlington	VA	119
Gain	Theresa		Bridgeport	WV	120
Gainer	Taira		Davis	WV	121
Gebhard	Frank	Friends of Blackwater			122
GHIARDI	KAREN		Morgantown	WV	123
Giuliani	Louis	123 pleasant st.	Davis	WV	124
Goddard	Alex		Davis	WV	125
Godfrey	Robin		Charleston	WV	126



Last Name	First Name	Organization	City	State	Number*
Good	Greg		Morgantown	WV	127
Gordeuk	Ruth		Davis	WV	128
Gordon	Leslie		Red Creek	WV	129
Gormley	Neil				130
Gould	JC		Indore	WV	131
Gould	John		Davis	WV	132
Grace	Cory		Harpers Ferry	WV	133
Grayson	William		Harpers ferry	WV	134
Greene	Mitch		Silver Spring	MD	135
Grey	Mary				136
Gullett	John		Hamilton	OH	137
Gundrum	Patricia		Pittsburgh	PA	138
Hacker	Siena		Washington	MD	139
Haddix	Mark		Elkins	WV	140
Hamilton	Judy		Charleston	WV	141
Hamilton	Meg		Augusta	WV	142
Hammack	Sarah				143
Hammack	Thomas				144
HARMAN	JEROD		Buckhannon	WV	145
Harris	Richard		Bridgewater	VA	146
Harrison	Justin		Putnam County	WV	147
Harshbarger	Dave		Morgantown	WV	148
Haupt	Ryan	National Youth Science Foundation	Davis	WV	149
Haywood	Susan	Blackwater Bicycle Association	Davis	WV	150
Haywood	Beth	Blackwater Bicycle Association	Smithfield	VA	151
Hedges	Christine		Pickens	WV	152
Hedrick	Jack		Dryfork	WV	153
Heeter	Kyle		Lansi g	WV	154
Henning	Robert		Pittsburgh	PA	155
Henrickson	Eric		Morgantown	WV	156
Herrick	Ben & LE		Davis	WV	157
Herron	David		Bruceton Mills	WV	158
Higgins	Stephen		Barrackville	WV	159
Hild	Steven		Thomas	WV	160
Hines	Travis		Martinsburg	WV	161
Hogan	Gail		Bridgeport	WV	162

Last Name	First Name	Organization	City	State	Number*
Holewski	Elizabeth		Davis	WV	163
Hollot, PE	Blaise		McMurray	PA	164
Hoppe	Ross				165
Hopson	Patricia		Alexandria	VA	166
Horne	Diana		Lovettsville	VA	167
Hoskins	Shannon		Davis	WV	168
Howe	Barb		Morgantown	WV	169
Howell	Lenore		Davis	WV	170
Hurst	Jackson		Kennesaw	GA	171
Iskow	Jen		Thomas	WV	172
Jacobs	Jamie		Morgantown	WV	173
Johns	Evan Dimond	Appalachian Mountain Advocates	Lewisburg	WV	174
Johnson	Pete	Davis Riverwalk	Bethesda	MD	175
Johnson	Suzanne		Catonsville	MD	176
Johnson	Pete	Davis Riverwalk (subdivision)	Davis	WV	177
Johnson	Michael		Davis	WV	178
Johnson	Deborah		Thomas	WV	179
Joltes	Vivian		Glen Dale	WV	180
Jones	JW		Elkins	WV	181
Jordan	Kristine		Davis	WV	182
Jordan	Jerry		Davis	WV	183
Joseck	Jeff		Charleston	WV	184
KAHLER	KATHRYN		Davis	WV	185
Kaufmann	Steve		Bend	OR	186
Kearns	/Diane	The Seneca Rocks Climbing School	Seneca Rocks	WV	187
Kelsch	Tom		Arlington	VA	188
Kendall	Sandra		Thomas	WV	189
Kerns	Phyllis		Parsons	WV	190
kiel	david	Dept. Of the Navy	washington		191
Kilmer	Mary Beth		Shepherdstown	WV	192
Klein	Robert		Parsons	WV	193
Knight	Laird				194
Kogeler	Willem		Columbus	OH	195
Krips	Robert		Silver Spring	MD	196
Krylov	Dmitry		Davis		197

<b>Last Name</b>	<b>First Name</b>	<b>Organization</b>	<b>City</b>	<b>State</b>	<b>Number*</b>
Lambert	Judy		Thomas	WV	198
Lampo	Albert		Frewsburg	NY	199
Lampo	Susan			NY	200
Landenberger	Cedric ('Rick')		Morgantown	WV	201
Larkin	Elaine		Rockville	MD	202
Laudrille	Catherine		Fairmont	WV	203
Lawson	Betsy		Morgantown	WV	204
Lawson	Stephen		Morgantown	WV	205
Lee	Spencer		Davis	WV	206
Lemieux	Michael		Mableton		207
Leonard	Jonathan	The Sludge Hub & Company	Baltimore	MD	208
Leshner	David		Davis	WV	209
Lindsey-Lynch	Regina		Wellsburg	WV	210
Littlejohn	J.		Weston	CT	211
Litzau	Sara		Davis	WV	212
Litzau	Kurt	Owner The Davis Depot LLC., WNT Properties and WV Adventure Company	Davis	WV	213
Litzau	Kurt and Sara	The Davis Depot	Davis	WV	214
Long	David		Elkins	WV	215
Luce	Brian		Davis	WV	216
Luecke	Sonja		Thomas	WV	217
Luscombe	Nancy		Davis	WV	218
Lutz	Pamela		Davis	WV	219
Lutz	John		Davis	WV	220
Lutz	Athey		Davis	WV	221
m williams	sheena		Davis	WV	222
MacGregor	Melissa		Davis	WV	223
Malafy	Steve		French Creek	WV	224
Martin	Crystal		Morgantown	WV	225
Martin	Joseph		Aurora	WV	226
Matson	Linnea		Lisle	IL	227
McCann	Shannon		Davis	WV	228
McCann	John	Blackwater Outdoor Adventures	Thomas	WV	229



<b>Last Name</b>	<b>First Name</b>	<b>Organization</b>	<b>City</b>	<b>State</b>	<b>Number*</b>
McClintock	Robin	Mozark Mountain Works Inc	Hendricks	WV	230
McCoy	Jeff	The Missions Tribune Newspaper	Martinsburg	WV	231
McDowell	Liz		Grantsville	MD	232
McFarlan	Don		Davis	WV	233
McGowan	Tim		Davis	WV	234
McHenry	Deborah		Davis	WV	235
McKeown	Bonni	Stewards of the Potomac Highlands	Huntington	WV	236
McKeown	Bonni	Stewards of the Potomac Highlands	Huntington	WV	237
McLean	Paula		Davis	WV	238
McLean	Tim	Tucker County Planning Commission President	Davis	WV	239
McPeak	Amelia		Parkersburg	WV	240
Meck	Malinda	Jen Transport LLC		WV	241
Meeker	John		Shepherdstown	WV	242
Milam	Carol		Red Creek	WV	243
Miller	Emily		Valley Bend	WV	244
Miskowiec	Michael		Charleston	WV	245
Moe	Pamela		Elkins	WV	246
Moe	Pamela				247
moore	stephen		thomas	WV	248
Moore	William		Sanford	NC	249
Moore	Joseph and Laura		Coronado	CA	250
Moore	Elaine		Davis	WV	251
Moore	Susan		Davis	WV	252
Moore	Brian				253
Moreno	Daniel				254
Morris	Carol		Elkins	WV	255
Morris Jr	Robert	Randolph County Development Authority	Elkins	WV	256
Morris, Jr.	Robert		Elkins	WV	257
Murphy	Cindy			WV	258
Murphy	Ellen		Harpers Ferry	WV	259
Muse	Mark	WVHC	Shepherdstown	WV	260

Last Name	First Name	Organization	City	State	Number*
Myers	Sarah		Oakland	MD	261
Nellhaus	Danita		Charleston	WV	262
Nelson	Karin		Washington		263
Nelson	Dave		Falls Church	VA	264
Nelson	Kathleen		Davis	WV	265
Nelson	James			WV	266
Nichols	Duane	Cheat Lake Environment & Recreation Association			267
Nickerson	Hannah		Frederick	MD	268
Nicoli	Jane		Fairmont	WV	269
Nielson	Tyler		Sterling	VA	270
Nix	Carol		Independence	WV	271
Northeimer	John		Davis	WV	272
Northeimer	John	(and Marjorie Keatley)	Davis	WV	273
Norton	Patrick		Charlottesville	VA	274
O'Connor	Craig	Business Owner in Davis Airbnb	Davis	WV	275
ODell	Carol				276
O'Farrell	Mary Ellen		Charleston	WV	277
Olsson	Wendy		Baltimore	MD	278
Ortt	Kathryn		Marietta		279
Parcell	Teresa		Elkview	WV	280
Parker	Dannette		Pineville	WV	281
Parker	Elizabeth		Huntington	WV	282
Parker	Elizabeth		Thomas	WV	283
Parker	Eric		Thomas	WV	284
Parks	Dan		Davis	WV	285
Parks	Dan				286
Pase	Dana		Clinton	MD	287
Pelesor	Karen		Davis	WV	288
Perkins	J		Thomas	WV	289
Peterson	William		Davis	WV	290
Phares	Susan		Elkins	WV	291
Phillips	Michael		Cuyahoga Falls	OH	292
Pitzer	Amanda	Friends of the Cheat, Inc	Kingwood	WV	293

<b>Last Name</b>	<b>First Name</b>	<b>Organization</b>	<b>City</b>	<b>State</b>	<b>Number*</b>
Poffenbarger	John	Davis and Elkins College	Wheeling	WV	294
Poore	Laurinda		Elkins	WV	295
Powell	Brian		Morgantown	WV	296
Pratt	Julie		Charleston	WV	297
Prince	Thomas		Davis	WV	298
Proudfoot	David	Proudfoot Mountain Farm	Belington	WV	299
R	Lou		High View	WV	300
Raesly	Richard		Frostburg	MD	301
Ranalli	Walter		Davis	WV	302
Ranalli	Walt		Thomas	WV	303
Ray	Rolando				304
Reeves	Linda	The Studio Gallery	Thomas	WV	305
Reynolds	Brandon		Bedford	VA	306
Richter	G. Paul				307
Ritchea	Brittany		Charleston	WV	308
Rockwell	Elizabeth		Shepherdstown	WV	309
Rodd	Judith	Friends of Blackwater, Inc.	Thomas	WV	310
Rodman	Elizabeth		Oakmont	PA	311
Rogers	Gabriel		Kerens	WV	312
Rogers	Hugh	President, Corridor H Alternatives	Kerens	WV	313
Rogus	Caroline				314
Rosenau	Michael		Parsons	WV	315
Rosey	Bret		Davis	WV	316
Rosier	Tristan		Fairmont	WV	317
Rosser	Angie	WV Rivers Coalition	Charleston	WV	318
Roth	Gay		Thomas	WV	319
Rowley	David		Durham	NC	320
Rush	T		Shenandoah Junction	WV	321
Russell	Robert		Baltimore	MD	322
Sabo	Terri		Cambridge	OH	323
Sabo	Rhonda	HARCOBOE	Bridgeport	WV	324
Sadolf	Barbara		Charleston	WV	325
Sailer	Susan		Morgantown	WV	326
Sanders	Lisa		Buckhannon	WV	327
Savidge	Robert		Annapolis	MD	328



Last Name	First Name	Organization	City	State	Number*
Saville	Joshua		Davis	WV	329
saville	joshua		Davis	WV	330
Sayres	James		Elkins	WV	331
Schafer	Timothy		Moorefield	WV	332
Schermerhorn	Lillian		Davis	WV	333
Schneble	Patrick	Remax 1st Realty	Davis	WV	334
scholtz	keith		phoenixville	PA	335
Schugamjmschugam	Jennifer		Westminster	MD	336
Seligman	ENanette	Resident serving on Tucker County COC	Davis	WV	337
Serafin	Juliana		Charleston	WV	338
Sheppard	G. Christopher		Charleston	WV	339
Sherald	Matthew		Thomas	WV	340
Sherlin	Lee		Davis	WV	341
Sherrill	Adrienne		Elkins	WV	342
Shikher	Serge		Thomas	WV	343
Sincavage	Rhonda		Washington		344
Skubis	Beth		Arlington	VA	345
Slavensky	Elizabeth		Independence	WV	346
Slider	Francis		Davis	WV	347
smith	matthew		Parkersburg	WV	348
Smith	Sharon C	Friends of Blackwater	Lost Creek	WV	349
Smith	Robert		Clarksburg	WV	350
Smithline	Lee		davis	WV	351
Smucker	Anna	West Virginia Writers	Bridgeport	WV	352
Snow	Patty		Davis	WV	353
Solarz	Justin		Fairfax	VA	354
Southworth	Stephen		Fraziers Bottom	WV	355
Spears	Lisa	Owner of condo - Black Bear Inn	Williamstown	WV	356
Spencer	Robert		Shepherdstown	WV	357
Spencer	Donald		Morgantown	WV	358
Squire	Sandra		South Charleston	WV	359
Stephens	Heather		Morgantown	WV	360
Stevens	Deborah	STEVENS' REALTY & MGMT	Parsons	WV	361
Stone	Terry		Thomas	WV	362

Last Name	First Name	Organization	City	State	Number*
Stoner	Jason		Vienna	VA	363
Stout	Thomas		Morgantown	WV	364
Strathearn	Bruce		Harpers Ferry	WV	365
Stuart	Donna	Parks and recreation	Stonewood	WV	366
Sullivan	Amanda		Elkins	WV	367
Tadlock	Jeffrey		Grove City	OH	368
Taylor	Michael		Elkins	WV	369
Tenney	Kristie	Upshur County Commission President	Buckhannon	WV	370
Thomas	Larry	WV Highlands Conservancy, President	Charleston	WV	371
Thompson	Andrew	ALLSTATE PROPERTY AND CASUALTY INSURANCE COMPANY	Beverly	WV	372
Thompson	Barbara		Bloomery	WV	373
Tierney	Sean		Thomas	WV	374
Tompkins	Leskie		Kerens	WV	375
tomson	alan	Town of Davis - Mayor	Davis	WV	376
torraca	david		Leesburg	VA	377
Tripp	Rachel		Bruceton Mills	WV	378
Trister	Benjamin				379
Troastle	Greta		Kerens	WV	380
Troastle	Pat		Kerens	WV	381
Tucker	Jess		Davis	WV	382
Ujcic-Snyder	Robin		Glenville	PA	383
Underwood	Judith		Parkersburg	WV	384
Van Hilst	Annette		Kearneysville	WV	385
VanDenLangenberg	Erin		Masontown	WV	386
VanDenLangenberg	Chad		Masontown	WV	387
Varner	Chelsey		Elkins	WV	388
Veldran	Nancey		Charles Town	WV	389
Vera	Diana		Elkins	WV	390
Vicino	Jacqueline		Arlington	VA	391
Wade	Keith		Fairmont	WV	392

Last Name	First Name	Organization	City	State	Number*
Wagener	Jefferson		Morristown	NJ	393
Waggy	Melissa	WV Chapter of Sierra Club	Lewisburg	WV	394
Ward	Tracy		Royal Oak	MD	395
Ward	Nancy		Charleston	WV	396
Warren	Lydia			WV	397
Weaner	Scott		Montrose	WV	398
Weaner	Barbara		Montrose	WV	399
Wenzler	Mark		Davis	WV	400
Wenzler	Dare		Davis	WV	401
Wheeler	Daniel		Independence	WV	402
Whitehair	Shane	Region VII Planning and Development Council	Buckhannon	WV	403
Whiteley	Sharon		Parsons	WV	404
Wilfong	Eileen		Davis	WV	405
Williams	Amanda		Martinsburg	WV	406
Williams	Robert		Moorefield	WV	407
Williams	Bj			WV	408
Williams	William		Martinsburg	WV	409
Williamson	Meghan				410
Wilt	Matk		Old Fields	WV	411
Wimmer	Mary		Morgantown	WV	412
Winholtz	Betty		Morro Bay	CA	413
witten	jb		Elkins	WV	414
Witten	JB		Elkins		415
Wolfe	Lonnie		Myrtle Beach	SC	416
Wood	Doug		Hurricane	WV	417
Wright	Andrew		Alexandria	VA	418
Yates	Tim			WV	419
Yocum	Thomas		Davis	WV	420
Yost	Alexis		Morgantown	WV	421
Young	David		Davis	WV	422
Zak	Margie		Davis	WV	423
Zak	Ted		Davis	WV	424
Zannino	Mabel		Clarksburg	WV	425
Zickefoose	Rocky		West union	WV	426
Ziman	Matthew		Nutter Fort	WV	427
					428



Last Name	First Name	Organization	City	State	Number*
					429

\* Corresponds to Comment Number in Table 4.

**Table 4: 2022 Parsons to Davis Project Submitted Comments**

2022 Comment Number	Comments
1	Please, please, please choose the Northern Route. We must do all we can to preserve the communities of Thomas and Davis and the quality of life in Canaan Valley.
2	Thomas and Davis are my absolute favorite part of the state to visit. My family has been going to that area for years for family vacation. I love the fact that it is secluded but has sooo many things to do. I support the go North route to protect this gem that we have in West Virginia. In the last few years it has got busier and busier here without the corridor H going right through it.
3	As someone who resides within the Monongahela National Forest, near current Corridor H construction, I am already familiar with the impact it has. The loss of forest, vegetation, and natural topography near our property are the most obvious effects. The sediment basins that were created are also inadequate - runoff from the construction can clearly be observed in Haddix Run, our local watershed. The sounds of construction have been audible from my home. The loss of habitat for many native species of flora and fauna, plus noise from a closer highway, are drawbacks that are already here; whatever benefits might be gained from having a highway exit closer to my house cannot outweigh these losses. I urge you to reconsider the proposed Corridor H route. The negative impacts to Blackwater Falls State Park and the surrounding areas, for both land and water, for local animals, plants, and people, are basically guaranteed with this plan. Noise and light pollution would be additional disturbance near residential communities. Travel between Thomas and Davis - important for both locals and visitors - would be disturbed. Alternate routes can provide access to the area without these detrimental outcomes. I have heard the current proposed route referred to as the "preferred route." As a Tucker County resident, I want to make clear that this is not my preference at all.
4	Please consider the alternate route for proposed corridor. My friends, family, and I love visiting this part of wild & wonderful WV regularly and we would love if it remained that way. We bike, hike, camp, and love to explore the vistas and historical areas. The current proposed corridor will take away from the magic of this area for us, the locals, and many other tourists. The preservation of this area is so important to us personally and to the wildlife, the community of Douglas, Thomas, and beyond. Thank you.
5	I am against the proposed route for Corridor H which will take it over the Blackwater Canyon in Tucker County. The noise and pollution during construction will destroy tourism in that area. Then the noise and unsightliness of the road will be a deterrent to tourism in the area. All that is to say nothing of the threat to the areas wildlife. Tourism is a very large part of the economy in Tucker County, and I believe that route will drastically hurt it. Move the route north of the proposed route, which will have less of an impact on all the above mentioned potential problems.
6	The Corridor H route near Davis and Thomas should be the Northern Route. Please do NOT split the residents and businesses of the two towns. Please take Corridor H between Davis and Thomas by the Northern Route.
7	Please do not place Corridor H in between Thomas and Davis. Implement instead the far northern route that averts dividing the towns and does not adversely affect Thomas.
8	I strongly urge the WVDOH choose the northern route of Corridor H in the Thomas/Davis/Blackwater area. The option of dividing Thomas and Davis is detrimental to the culture and history of the area.
9	I am Native West Virginian, who has lived in the Tucker County since 2007. Although I have only been in Thomas for 15 years, my first trip to Blackwater Falls was as a child in the late 1950s. Before Thomas, I lived in Lewis County since 1979. From that time until I moved here, I would spend countless hours in

2022 Comment Number	Comments
	<p>Tucker County skiing, hiking and mountain biking. I have a fond place in my heart for all of the Blackwater canyon, including the rail trail between Thomas and Hendricks. since the first hearing of the proposed Corridor H route across the North fork of the Blackwater River, I've thought the highway shouldn't be built in this location. This is such a special place and I feel the highway and bridge should not be constructed here. The peace and solitude is what brought me here in the first place, and this highway would be a severe detriment to that. We have seen a huge increase in visitors to this area over the last dozen years. More and more folks are using the old rail grade, either traveling through or visiting Douglas Falls. Both the United States Forest Service and Blackwater Falls State Park are planning expansion and improvements of this area to greatly benefit the tourism industry in this area. A relocation of this road around the north side of Thomas would spare this beautiful place from all the visual and noise pollution that this highway will bring. Please consider studying a northern route for Corridor H so that this much-needed highway will not be a detriment to what is bringing tourism to our beautiful area. thank you for your consideration!</p>
10	<p>This is a precious section of our state that should not be harmed with the destruction that comes with both the short and long term effects of this project. The potential harms to the environment and local community far outweigh any proposed benefits. What makes this place so special is the untouched small town feel and vast wilderness that will be forever changed and lost with the construction of this highway. Either reroute or cancel these plans because this expansion is not wanted here.</p>
11	<p>Get it done! Finish it ASAP I would like to see it finished before I die. I'm 61! Anyway you go is going to make someone mad.</p>
12	<p>I am happy with the route presented here. The other way they're pushing for would cut through more forest. The route (your preferred route) would be going through an area that has already been mined. Also, the other route they're petitioning for will cost lives. Access for emergency vehicles would cause delays in arriving on scene, plus its a big curve through a frost line. Please stick with your route!!</p>
13	<p>I can't understand why you extended the comment period! We have waited for over a half century to have Corridor-H a reality! Enough! Finish Corridor-H NOW!</p>
14	<p>I am Lynne Baczuk Beecham, born in Fairmont, WV and living in Bellville, OH. I have already signed an online petition but feel the need to write to you as well.</p> <p>Randy, my husband of 46 years was killed by a drunk driver last year. My brother, sister-in-law, niece and many friends live in the Thomas/Davis area. My husband and I have visited all over that area during the past decades and in all four seasons. We have skied, hiked, camped and ridden our BMW motorcycles there more times than I can remember.</p> <p>I know Randy would echo my plea - 'Go North Corridor H'!</p> <p>Please don't divide the two towns. Please stay out of the Canyon. Please do what the majority feels is best for the towns and the scenic area</p> <p>Additional submittal: Website 11/23/22 Please do not ignore the majority of residents and business owners who are begging for the alternate route. Please do not divide the towns of Thomas and Davis. Please stay out of the Canyon.</p>
15	<p>1) Alt. Northern route may not require and alt. truck route.</p> <p>2) If it must travel between Davis and Thomas PLEASE include a lovely path directly between Davis and Thomas. Cost of living will increase and foot/bike transportation will ease the pain.</p> <p>3) How can a study completed 20+ years ago still be effective?</p>

2022 Comment Number	Comments
	<p>4) EIS Studies are still going on for the ROPA but why not an alt. route. What comparison can there be if one has been thoroughly studied and the other minimally studied?</p> <p>If both routes cross water and wetlands, invading the habitats of bees, squirrels, bats, salamanders and endangered plants, why not choose the route less invasive to the communities and historical areas?</p> <p>Has there been an SEIS for this area? Have the results been reported to the community?</p> <p>What is the rationale of coming in between Thomas and Davis? And having an off ramp right outside Davis when a N. route would impact the community so much less. Re: Noise</p> <p>Why not one route if there will be separate truck routes? Has the truck route been studied? Is there a chance the truck route might not happen? Will a truck route be completed 1st so we don't have to deal with the trucks in the process?</p> <p>Attachment to Comment Form: Has the Northern Route Option for Corridor H been fully studied? RE: environmental impact, and impact on the quality of life of those who live and own businesses in Thomas and Davis?</p> <p>I understand that these are totally different considerations but that each may have changed significantly over the past 30 years at the inception of Corridor H.</p> <p>I believe that, due to a lawsuit, WVDOH and FHWA are required to complete supplemental environmental impact studies (SEIS) for the section from Parsons to Davis. Each route option should be equally studied so as to compare them on the same level, across all aspects of impact. Each alternative needs to be compared in the document. A rationale of why one route is selected as preferred is required, must be presented to and approved by all agencies whose resources are impacted. The SEIS requires a public view of plans and possibly even a formal presentation.</p> <p>Has the above been completed? Are documents available for public viewing? Was a Northern route effectively surveyed as completely as the currently supported southern route? If so, are citizen comments part of the record?</p> <p>Alternative should have been studied with the same level of detail in order to determine a preferred alternative. It appears that while a Northern route was considered, it was not studied in the same detail, possibly only even considered for appearances. (5.0 1502.15 Affected Environment. EIS/SEIS code)</p> <p>Is there a detailed study of the Northern route?</p> <p>It appears that a detailed study of alternatives has not been carried out. It seems that the previously preferred route is being pushed through without a detailed comparison with any alternative. If other alternatives were not going to meet the highway and environmental needs and thus were not studied with the same level of effort, then does NEPA know this? The locale of both the northern and the southern routes cross over water, through wetlands; passing through habitats for bees, bats, salamanders, squirrels and endangered plants, even the milkweed which is necessary for the monarch butterfly which is becoming endangered!</p> <p>Both WVDOH and FHWA are required to comply with NEPA (National Environmental Protection Act). Are</p>



2022 Comment Number	Comments
	<p>they in compliance?</p> <p>Final design activities should not be funded until the SEIS has been approved but it sounds like WVDOH has already contracted the job. Has it been approved with both routes given equal assessment, completed reports and a review that allows for true comparisons?</p> <p>1502.1 Purpose of environmental impact statement. Key Points: "shall provide full and fair discussion of significant environmental impacts shall inform decision makers and the public of reasonable alternatives that will avoid or minimize adverse impacts or enhance the quality of the human environment."</p> <p>1502.2 Implementation. Key Points:  (e) The range of alternatives discussed in environmental impact statements shall encompass those to be considered by the decision maker.  (f) Agencies shall not commit resources prejudicing selection of alternative before making a final decision (see also 1506.1)  (g) Environmental impact statements shall serve as the means of assessing the environmental impact of proposed agency actions rather than justifying decisions already made.</p> <p>1506.1 Limitations on actions during NEPA process  (a) ...until an agency issues a finding of no significant impact as provided in 1501.6 of this chapter, or a record of decision as provided in 1505.2 of this chapter, no action concerning the proposal may be taken that would:  1.have and adverse environmental impact or  2.Limit the choice of reasonable alternatives.</p> <p>Seems that starting a final design would be "resource prejudicing" by limiting the choice of reasonable alternatives. Any agency aware of the above taking place is required to notify NEPA!</p> <p>In addition...Supplemental environmental studies may be necessary if there are new circumstances such as changes in the proposed action or new environmental concerns such as new or declining species, cultural finds, etc.</p>
16	<p>I have lived in this community now for almost 20 years and am raising my family here. I love this place for the natural beauty that these mountains &amp; rivers hold. They provide so much to this community and to all that inhabit this place. The Blackwater is a very special place along with the history of Coketon &amp; Douglas too. For a highway to be built over it, would be detrimental to this environment, especially when there are alternatives.</p> <p>I firmly DISAGREE with the "preferred" Blackwater Canyon Route for Corridor H Parsons to Davis. This route will definitely have a negative impact to the area. Choosing the alternative northern route is a choice of preserving the natural beauty and history of this place that is so dear to so many people.</p> <p>Thank you for your consideration.  Sincerely, Kristen Behrens</p>
17	<p>I support the Corridor H project. I say this because it is a good quick way for me to get to bike trails in WV from my home in the DC area. Also -- I hope that the Corridor H project from Parsons to Davis can include an upgrade of the Blackwater Canyon Trail with a nice crushed-stone surface. I rode the AHT a couple years ago but could not continue up Blackwater Canyon with my hybrid bike because the trail surface was too rocky. Thank You and Take Care. West Virginia is truly blessed to have so many awesome bike trails and potential bike trails!!!! It is a great escape from the congestion and stress of the DC area.</p>

2022 Comment Number	Comments
18	Corridor H should be designed with the communities in mind! Please choose an alternative Northern Route that avoids dividing the towns of Davis and Thomas. Choose a route that does not route trucks through the Town of Thomas. I care deeply about and often visit Blackwater Falls State Park and the Blackwater Canyon Trails. Please do not degrade the scenic views and the charming towns. Please route around the protected historic area. The current proposed route of Corridor H will undermine the atmosphere of the towns of Davis and Thomas with visual, noise, and light pollution. You can make a decision to respect the wishes of the business owners, residents, and visitors who care about those communities by choosing a Northern Route.
19	Please reroute the Corridor AWAY from Blackwater Falls, Thomas and Davis.
20	<p>As someone who travels to this area to recreate (and spend money) I can tell you that the idea of a highway splitting the area will do immeasurable damage to the appeal of the star and therefore the economy.</p> <p>Please consider options that don't separate Davis and Thomas and that don't adversely impact the Blackwater Canyon. These are not only amazing natural assets but important economic ones as well.</p>
21	Please move your proposed road alignment north. As a home owner in the area, we bought here because of the solitude and beauty of the area. Thomas and Davis are thriving. Blackwater Falls is awesome. Please do not destroy this area by putting in Corridor H close to these areas.
22	<p>The building of Corridor H between the towns of Thomas and Davis, continuing to Douglas over the Blackwater Canyon Historic area is and always has been, a bad idea. Defiling the tourism "breadbasket" of Tucker County and the state is simply our government not considering all of the fallout this would bring to the area. This road is simply too expensive and destructive to build at all - but if it is too be done then a northern alternative already studied - should be the lesser of two evils for this wasteful project. The surrounding counties have thrived in the past 20 years without this road, its key components are already complete, and West Virginia has better things to do with our Natural resources.</p> <p>This plan would undermine the connection between the local communities and make it dangerous to travel between the towns on foot or bicycle which is what tourists and many locals most like to do in this area. An elevated 4-lane highway through the beautiful Blackwater area is not in the interest of the local economy and ruins an existing hiking area and foot race route that brings tourism to the area. When we value our natural resources and public lands this adds to our quality of life and draws people to the state. High speed roads in this area only lead to truck stops and bypasses of local communities which destroys jobs in Thomas, Davis, and Canaan Valley.</p> <p>Thomas and Davis have become destinations in the last 20 years without a high speed highway and enjoy a thriving diversified economy. Directing commercial traffic traveling to locations outside the county through the center of these towns would have a detrimental impact on local businesses and is a loud and unsightly thing in communities that are seeking to be more visually desirable and offer quiet beauty to travelers.</p> <p>This highway project as a whole has moved trillion of pounds of earth, created runoff and flooding issues across the region and has numerous water quality violations on record. Allowing the road to continue in this way through some of the best regional scenery and trout water is not only irresponsible but short sighted for local citizens, tourists and the tax coffers of our state. Douglas has historic resources that should not be disturbed, and the risk of mine drainage to the Blackwater and Shavers Fork basin is a highly likely possibility that would be difficult or impossible to remediate. We simply cannot take this risk.</p> <p>If this road must be built I side with the 80% of commenters and the vast majority of local residents in saying that WV must pursue the already studied alternative northern route going north and east of Thomas. This is an area that I recreate in and have loved since 1991, and I have never wished for a "better</p>

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	road" to get there. Further, I supplement my income with vacation rental properties and my guests all enjoy the scenic drive as it is now. Lets strive to keep the best tourism areas of our state intact. Thank you for the opportunity to comment.
23	I am thoroughly in support of the current Revised Original Preferred Alignment for Corridor H through Parsons to Davis as it will positively impact economic development (throughout central WV, safety, protection of natural resources, and tourism. I cannot understate the importance of finishing Corridor H for the good of the state as a whole and the regions that Corridor H impact directly. We must finish it! I very much appreciate the WVDOH's process for allowing comment. Those parts of central WV where Corridor H has been completed can not realize the full vision or benefit of this important transportation corridor if it does not get finished and I am very concerned any further changes will very negatively impact our ability to get it finished. The WVDOH has done so much work to ensure a good impact and I feel confident that the safety of the whole region will be improved in addition to the specific area around Davis/Thomas.
24	<p>On behalf of the Upshur County Development Authority, this letter is to express our full support for the completion of Corridor H (U.S. Route 48). As you know, Corridor H is an economic development game changer for North Central West Virginia. The positive economic impact created by Corridor H has already been seen in many communities including Weston, Belington, Elkins, Davis, Petersburg, and Moorefield. Buckhannon has benefitted greatly from Corridor H with major development activity and the future looks bright as it is completed. The completion will create even more opportunities for West Virginia's communities and industries.</p> <p>In Upshur County, Corridor H has brought about increased economic activity for a variety of industries including the hardwood industry, tourism, distribution/logistics, and healthcare. This growth will only continue with the project fully constructed. Our area is primed for business and population growth and a completed Corridor H will assist us in capitalizing on those opportunities but we need the section between Parson to Davis to be completed. The DOH's current Revised Original Preferred Alignment (ROPA) is excellent as it is more efficient and less invasive than other suggested routes. The current ROPA is shorter, has few bridges and has less environmental impact. Completion of this section brings to fruition all the plans and will mean improved safety throughout the region.</p> <p>We strongly support your efforts to complete Corridor as quickly as possible. We appreciate you setting aside as many state resources as possible to finish this important piece of infrastructure.</p> <p>Thank you for making Corridor H a priority in West Virginia. Your efforts will go a long way to making this long-sought dream a reality. If I can be of any assistance, please do not hesitate to contact me.</p>
25	My husband and I have driven from Shepherdstown, WV to spend time camping, skiing, sledding, hiking, walking, bird watching, picnicking at Blackwater Falls on average of 2 to 3 times a year since 1972. While we appreciate the time-savings the current corridor H provides for the trip to and fro, it feels sterile and distant from the state we're traveling in and we still lament the loss of the scenic approach to BWF—especially in the last few miles to the T stop to turn toward Davis or Thomas. Please do NOT extend corridor H through any part of BWF state park. Driving on a dual highway is NOT how anyone should experience any of this West Virginia treasure. Please follow the option north of Thomas with easy on/off access for both Davis and Thomas as both of these small towns could really use the increased trade from those passing-through and a quicker connection to Parsons—without inflicting any damage on the main attraction that draws people to the area.
26	In November of 2015, my husband and I moved part-time to Tucker County (Davis) for the beauty and serenity; knowing that this area is where we wanted to retire. My husband is a retired history teacher and loves the rich history of the towns of Davis and Thomas. We both love the outdoors and the arts, both of which are abundant here! We decided to move here full-time 5/21/21. Our friends and family visit



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	<p>frequently. One of the most beautiful places, we believe, is the Blackwater Falls Canyon. We always take "first timers" to this area and they too are awed by it's beauty.</p> <p>To think that an exit ramp will flaw it's beauty is beyond comprehension. Please consider the Northern Route for the highway. We don't want the area to be deprived of its uniqueness by a highway cutting through the towns of Davis and Thomas.</p>
27	I strongly believe the Northern route is the best option. The selected route should be the one that is best for the people who live in Tucker County.
28	GO NORTH!!!!
29	<p>I oppose the Corridor H route that goes through Blackwater Falls State Park. I support the northern route.</p> <p>The Canaan Valley area is one of our state treasures. My family comes from out of state to enjoy the natural beauty there. Corridor H makes their trip from DC easy and the wonders of WV accessible. However, if the highway is continuing along the current proposed route, that unique ecosystem will be horribly compromised.</p> <p>I myself love Canaan Valley and particularly Blackwater Falls. It is my go to WV getaway.</p> <p>I think the planners should listen to the voices of the people who live in that community and route the highway north of Thomas, preserving the current charm and natural beauty that so many of us value. This is not only good for the environment but good for the economy of that region and the state.</p>
30	Please do not put a highway through these two towns. Please use the alternative option that runs North of the towns.
31	I oppose the current plan for the Corridor H extension as it would destroy historic and natural sites
32	<p>By and large, the businesses of Thomas and Davis do NOT want the highway to continue on the preferred route, NOR do we think there is a hurry to complete the highway. Business is already booming and increasing faster than we can find the staff to service the visitors. This can be seen in the shortening of ALL the businesses' open hours.</p> <p>We also want to protect the historic and scenic nature of our two towns and this means getting the highway away from our towns and taking any and all exits way north of town and away from historic areas and the National Forest. It is also VERY IMPORTANT to get all truck traffic out of Thomas and the northern route does this best. We can be patient for the right solution. Can you?</p> <p>We understand that you feel a crunch to use money allotted now. You are probably being pressured by out-of-touch lawmakers that want to just Get IT Done. But we implore you to do what the local community AND visitors to the area actually want AND to take your time doing it, because this will have an impact for 150 years or more.</p> <p>We are not anti-highway. We are pro-intentionality, and caution. There will be more money, in due time. Patience please. (otherwise as you know, all your money might be depleted by lawsuits - Judy Rodd has promised you that)</p>
33	Keep the highway away from Blackwater Canyon, Dolly Sods, and other wild areas. We need to protect West Virginia's beautiful wilds for generations.
34	Thank you for taking the time to engage the community. This is an exciting prospect that will bring tremendous change, economically and ecologically. Lets make sure to take the time to do it right while also being expeditious enough to take advantage of federal funding opportunities under IIJA, ARPA, etc.
35	Please stop Corridor H through an established scenic and recreational area.

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36	<p>Despite reassurance by WVDOH that the current preferred route will not negatively impact Blackwater State Park or Blackwater Canyon, where many people come to experience quiet and wilderness and dark skies, I am skeptical. This proposed section of 4-lane highway will be a mere mile away from these sensitive areas and will irrevocably fracture unique cultural, historical, ecological, and geologic areas. Most of the the local people are against this alternative as well. Please avoid these high mountain gems. Go north.</p>
37	<p>Seems to me that putting four lanes of concrete through the middle of the county goes a long way towards ruining what people come here for: get away from it all; peace and quiet; connecting with the natural world. I have yet to be offered a good reason why the proposed highway can't be rerouted around Davis and Thomas.</p> <p>I've been told the proposed route will bring more people to the county. We have plenty of visitors now. I'm told it will increase busines opportunities. They don't need to go between Davis and Thomas to accomplish that.</p> <p>As a business owner and a resident I strongly support Going North.</p> <p>Additional submittals: Website 12/10/22</p> <p>Four lanes of concrete running through the middle of a county known as the place to go for outdoor recreation: hiking, biking, skiing, paddling, etc. Feels like a mixed message from the state advertising tourism.</p> <p>Website 12/10/22</p> <p>I hate the idea of splitting Davis and Thomas. Yes it is two towns but it is one community. These towns share a grocery store and an elementary/middle school, a senior center and a nursing home. Right now it's no big deal running from town to town but add a major highway to cross and the deal gets much bigger.</p>
38	<p>I believe the proposed route of Corridor H, by bypassing Thomas, will negatively impact my small business.</p>
39	<p>I don't understand how West Virginia can tout itself as such a wonderful tourist destinations and then turn around a want to build a highway right through one of the most iconic tourist areas in the state. Please reconsider your options that would best suit travel and the economic impacts to the communities of Davis and Thomas which are supported by LOCAL business.</p> <p>Thank you.</p>
40	<p>I was going to write and say please don't put the highway near Big Run Bog. I live in Randolph County and run a business here. Our customers shop and visit and spend money here and in Tucker County. We all value Blackwater Falls and the watersheds in the area.</p> <p>But then I learned that two credible environmental organizations—WV Highlands Conservancy and Friends of Blackwater--object to the proposed ROPA route and have written you detailed letters outlining the problems. These groups are concerned not just about the environment, but they also care about the connections with public safety and clean water, tourism and our cultural identify of the area. I trust their assessment of the problem and I object to the proposed Parsons to Davis route. The problem is bigger than the place where I like to pick cranberries.</p> <p>They talk about environmental, economic, tourism, and safety concerns with the route. These are major red flags to me, since I want the land to be accessible and healthy for generations to come. I've seen where the highway drains right into Leading Creek every time it rains. Based on the comments I see from Friends of Blackwater and WV Highlands Conservancy, the highway design standards have not gotten better.</p>

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	<p>When I see Friends of Blackwater and WV Highlands Conservancy talking about serious concerns for water quality, acid mine drainage and truck routes in our designated National Forest and National Natural Landmarks, it makes me think you haven't done right by our lands, our people, and our assets that enable our economy to prosper in the long term. Blasting out the side of Backbone Mountain so you can build a highway is not responsible. People don't spend money to come here so they can stare at a highway from our state parks. And it seems totally wrong to drive a major highway up Backbone Mountain, our most scenic roadway. We already have Mountain Storm on the other side all junked up by a giant highway, quarry, and wind turbines. Moreover, long term, the region's stability depends on the stability of its natural resources. Don't mess this up by ignoring our objections.</p> <p>Please respond to our concerns and choose another route.</p>
41	<p>I support the Alternative Northern Route and object the "preferred" Canyon Route. The Blackwater Canyon and Backwater Falls State Park are unique ecosystems that need protection, not highway development. In addition to natural resource assets, the northern route would be more beneficial for the community and the local economy. Construction of a 4-lane highway between Davis and Thomas would be unsafe and negatively impact local businesses and the community. All in all, the northern route seems like the only feasible option if the DOH cares about the local community.</p>
42	<p>FINISH THE DAMN ROAD SO WEST VIRGINIA CONTINUES ITS DEVELOPMENT AND PROGRESS!!!! SO SICK AND TIRED OF THE ENVIRONAZIS BLOCKING THIS ROAD FOR OVER 60 YEARS AIDED BY THE DEMOCRATIC PARTY. WV DEMOCRATS ARE HISTORY AS ARE THEIR ENVIROMENTAL NUTS AND THEIR LAW FIRMS. FINISH THIS!!! AND DON'T NAME IT FOR ROBERT C BYRD!</p>
43	<p>As a lifelong resident of this state, a West Virginia University graduate, and currently COO of one of the few technology companies in this state, I implore you to consider the northern alternative previously proposed by WVDOT in 2000 for the Davis to Parsons segment. My family has been coming to Canaan Valley since I was young, and I have purchased land and we are in the process of building a second home in the Valley because of the unique characteristics and businesses that have made it a "mountain town" east of the Rockies. Thomas and Davis will both be changed forever more if bisected by Rt 48 as currently proposed. The Northern alternative route is marginally longer (est. 1mile?) and therefore marginally more expensive. However as I have witnessed throughout my life and currently, WV seems to always and consistently "step over a dollar to pick up a dime". As someone who has traveled the Unites States extensively over the past 2 decades for work, flying into urban areas and then driving to rural areas, I always compare and contrast the civil engineering among states. WV, in my opinion and observations, consistently makes decisions based solely on short term factors that lead to longer term issues, as evidenced by almost every roadway built and lack of economic development and opportunities. Bisecting Thomas and Davis, and putting this highway just around the bend and over the Blackwater, is yet another stark example of lack of foresight and deliberate thought about the long term consequences of selecting this route. WV natural resources, and its ability to be "different" than the DMV region that surrounds it, is among its most valuable assets. Protecting and developing these unique characteristics will lead to far more economic benefits, opportunities and prosperity for Tucker County than placing this highway between Thomas and Davis WV. Thank you for consideration of the above.</p>
44	<p>Having been a long-time tourist of the Thomas-Davis area, Corridor H has made access much easier and generally, I agree with the routings of Corridor H over the decades. For the Parsons-Davis segment, I am not seeing a big benefit of the proposed routing through the former Coal &amp; Coke property at Coketon (which isn't all that scenic as it's mostly reclaimed strip mine lands) versus routing it to the north of Thomas. The added benefit of routing it north of Thomas is eliminating the WV 32 truck bypass.</p> <p>Additionally, with the Corridor H project, are pedestrian improvements being planned for both communities? Sidewalks and bike paths along WV 32 are needed.</p>



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45	As a lifelong visitor to Tucker County, WV, I am not in favor of any additional four lane highways being built into the area. These type of projects greatly detract from the charm of these outdoor meccas. If corridor H must be completed, then please consider going as far north of the town of Thomas as possible. The existing route planned between Davis and Thomas would destroy many of my favorite areas and make me not want to visit Tucker County anymore.
46	Go North!
47	<p>I feel strongly that the current route through Davis-Thomas is detrimental to the town's and the environment.</p> <p>The construction of bridges and the highway through the projected area is ill planned and outdated. A northern route would benefit not only the towns, and more importantly preserve the area's natural beauty, biking-hiking trails, wildlife, and habitat conservation.</p> <p>The "push" to complete this 56 year old plan for the highway has damaged many areas that were not protected. The unique and spectacular beauty and natural habitat is far too precious to be subjected to any plan that is designed simply to "Get it built".</p> <p>I strongly urge those who are not interested to visit old routes such as Route 55 between Wardensville and Moorefield and witness the environmental nightmare corridor H construction impacted on what was a wonderful and beautiful area that is unrecognizable and permanently destroyed.</p> <p>Please choose wisely and support the northern route.</p> <p>Kelly Campbell</p>
48	Please DO NOT route this through Thomas and Blackwater Falls State Park. The northern route is a MUCH BETTER alternative. I am a frequent visitor to that area and routing the highway through Thomas would ruin Thomas, Davis and everything in between.
49	Please support the Northern route! The "preferred" route between Davis and Thomas will distract from the quaint and unique nature of the two towns. It would visually ruin the area making it look like any exit ramp town, the very thing many visitors to the area are looking to get away from. The northern route would still allow for completion of the road while preserving the uniqueness of the Davis/Thomas area. Thanks.
50	I support the northern route. My family visits Davis/Thomas 2 or 3 times a year. We love the small town feel-no box stores, no chain restaurants, and not major roadways. A Highway between Davis/Thomas would greatly affect the present small town feel. Please consider routing the road on the northern route. Thank you.
51	<p>I am an individual who considers the Thomas/Davis area as home due to having grown up in that area. I also spent 35 years working in WV State Parks both as a field superintendent and in its central office.</p> <p>Based upon my knowledge of that area and its tourism appeal, I must state my steadfast opposition to the current proposed route. It would have a very detrimental impact on the inherent appeal of the Thomas/ Davis area and would be aesthetically and environmentally unfriendly. I have long thought that the alternate route north of Thomas would fulfill all the goals of the corridor project while avoiding the above-mentioned negative impacts.</p> <p>Thank you for offering the chance to comment and for any consideration you can give my opinion.</p>
52	I would prefer the northern route for Corridor H through Tucker County instead of between Thomas and Davis to help preserve the environment, historical significance, culture/atmosphere of a truly unique area of West Virginia.
53	The highway is going to happen!! I would like to see some saving of the Coke Ovens on both sides of the rail trail. Also block traffic between Douglas Falls and the coke ovens so that people would have to walk to the Douglas Falls from the coke ovens. The coke ovens are a historic site as is the Coketon Colored school. I would like to see funds set aside for the perpetual maintenance of the coke ovens as a historical site. Light pollution from the bridge? Will there be lights on the bridge?

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54	I oppose the current proposed route of Corridor H from Parsons to Davis. I am a former landowner in Canaan Valley and still a frequent visitor. I ask you to consider a northern route to avoid destruction of the Blackwater Falls area. We've waited this long for the highway. We can wait longer to get it right.
55	As a landowner in Canaan Valley near Davis, I find the Revised Original Preferred Route (ROPA) for Corridor H from Parsons to Davis will certainly irreparably damage the environment in the Blackwater Canyon, Blackwater Historic Industrial Area and the towns of Davis and Thomas. An alternative route to the north of Thomas and staying well north of US 219 from Thomas to Parsons is a better approach and deserves much more serious consideration than the DOH has given it. Routing Corridor H between Davis and Thomas and across the Blackwater Historic area is a terrible idea that will degrade the viewshed, create a physical separation between these historically-close towns and damage the surroundings that attract tourists. The serious environmental risks (disturbing areas already suffering from acid mine drainage and difficult geotechnical situations throughout the ROPA) comes at a cost that is much higher than the DOH seems to have been willing to acknowledge. Do the right thing and route Corridor H to the north of Thomas and stay out of the Blackwater (Douglas) area.
56	Divert the highway north of Thomas in order to reduce traffic, noise, and destruction of historical sights close to Davis and Thomas. A new study must be done as the impacts now are far different from when the last ones were completed. These two towns are growing with travelers, locals, and tourism that prefer quiet, mellow, easy to get to know lifestyles that a super highway will weaken, destroy, and take away these benefits. Please study the alternative routes that need to be considered in 2023, not the past. Appreciate any consideration that is given with the highway routing. Chip Chase/Owner of White Grass Cafe and Ski Touring Center in Canaan Valley WV
57	<p>As a lifelong resident of Tucker County and someone that considers Davis my hometown, I strongly encourage WVDOH to route Corridor H north of Thomas. Davis and Thomas are roaring success stories for how a former coal economy can recover by highlighting and protecting its natural, cultural, historic and recreational resources. The ROPA is a direct threat to many of these resources. While DOH touts the highway as a tourism boost, they seem to neglect what is already thriving and the work that so many people have put in to make it what it is today. Hint hint: it is not big box stores and over-development that make the towns unique and sought after. It is precisely the small town appeal that is the charm of the place. A four lane highway slicing between Davis and Thomas will diminish that charm. This is not a plea for no growth; it is a plea for smart growth that considers what is already working and building upon that.</p> <p>I also find it extremely insensitive and frankly unfit for a public servant in leadership to blatantly dismiss the concerns of local residents, businesses, and visitors like Secretary Wriston has. In the news and in front of Congress, Secretary Wriston has begrudged the people who live here and are wanting to preserve what we have, while he also feigns concern for Tucker County. The majority of small businesses in Davis and Thomas oppose ROPA and so do multiple thousands of residents and visitors alike. I truly hope that WVDOH will consider the long term impacts to this region because once the road is built, you can't take it back.</p> <p>In short, there is so much more potential latent in Tucker County for providing high quality experiences around our cultural, environmental, historical, and recreational resources. ROPA does not help enhance those experiences that have drawn people here for decades already.</p>
58	<p>Travis Long  Director Technical Support Division  West Virginia Division of Highways  1334 Smith Street  Charleston, WV 25301</p>

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	<p>December 11, 2022</p> <p>Amy Cimarolli PO Box 216 Davis, WV 26260</p> <p>Re: Corridor H Parsons to Davis section comments supporting alternative route to 'Go North' (and west) of Thomas, rather than between Davis and Thomas</p> <p>Dear Mr. Long:</p> <p>I write as a Tucker County resident, landowner, and business owner in support of the idea that WVDOH planners design and build an alternative 'north and west of Thomas' route for Corridor H to avoid the negative consequences of a highway project built on the current "Preferred" Route that divides DAVIS AND THOMAS. Below are my arguments for why I think WVDOH should choose to design and build this alternative.</p> <p>What informs my comments is my professional my work and over 30 years-experience as a professional forester and land management and use planner. I am forest manager and farm operator too, with aspirations to advance aspects of those businesses in the County.</p> <p>I have come to appreciate the value and long-term benefits of taking the time to listen to stakeholders in a land use project that will have long-term, longer than our lifetimes, impacts to a landscape and community. It is worth taking the time to get the answers right—or at least as best we can—by listening to people with a stake in the project, brainstorming alternatives, networking to get the answers to new questions, and working through a thorough planning process. The result will be a project that protects the conservation values of the landscape for the local communities.</p> <p>My arguments in support of further planning and consideration of a northern route include the following:</p> <ol style="list-style-type: none"> <li>1. We can do better in West Virginia to care about local, stakeholder input from communities impacted by infrastructure projects. This highway will be a game-changer for this County bringing significant change in developed structures, impervious surfaces, visible built features, traffic noise and other non-natural sounds, artificial lights-some on constantly, land use and development adjacent to the highway, lost opportunities to best uses of the land in and around the highway for community uses, and shifts in the ways local residents move around and between their homes and businesses, friends, schools, leisure and recreation trails, and workplaces. THE LOCATION OF A HIGHWAY NEAR A COMMUNITY SHOULD NOT BE DETERMINED BY A PERSON AT A FAR-AWAY COMPUTER DRAWING A LINE WITHOUT LOCAL KNOWLEDGE ABOUT THESE CONSIDERATIONS.</li> <li>2. Blackwater Falls State Park is a place where the sound of the river in the canyon dominates the soundscape and the skies are dark, high conservation values unique and notable attraction to the local community as well as visitors. It is one big reason the Park can be considered a place for retreat, rejuvenation, nature-bathing, restoration, and celebration, and this natural soundscape is enjoyed by locals and visitors alike attending weddings, yoga classes, professional meetings, family vacations, hiking, paddling, fishing, bike-riding, birdwatching and more. Light pollution is tied to to bad impacts on human health and wildlife cycles—see <a href="https://www.nytimes.com/2022/07/15/realestate/light-pollution-effects.html">https://www.nytimes.com/2022/07/15/realestate/light-pollution-effects.html</a>. Quietness and darkness is lost near highways, forever, and impacts to it should be studied and understood when locating routes. PLACES THAT STILL ARE DOMINATED BY A NATURAL SOUNDSCAPE MATTER, ARE RARE IN THE EAST, AND THIS VALUE SHOULD BE COUNTED AS HIGH PRIORITY FOR</li> </ol>



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	<p>PROTECTION WHEN DESIGNING AND LOCATING HIGHWAYS NEAR THEM. The alternative northern route for Corridor H, north and west of Thomas, would help buffer the quiet and darkness of Blackwater Falls State Park by keeping the highway noise and light out of the North Fork canyon and farther from residential centers.</p> <p>3. We need to learn from history and avoid dividing communities and building over neighborhoods with highways. The long-term impacts are real and addressed in the infrastructure bill signed by President Biden on November 14, 2022, which earmarks \$250 million in planning grants and another \$750 million in capital construction grants to reconnect neighborhoods bisected by highways. <a href="https://www.nytimes.com/2021/11/20/us/claiborne-expressway-new-orleans-infrastructure.html">https://www.nytimes.com/2021/11/20/us/claiborne-expressway-new-orleans-infrastructure.html</a>. In my experience, highways ‘divide’ communities because they introduce visual barriers across viewsheds, psychically separating places, and interrupt flows of how people travel between the communities, regardless of whether the existing public travel ways are bridged or tunneled under by the new highway. Another important consideration is that a highway constructed north and west of Thomas will avoid constructing highway bridges near the neighborhood in an area known as Douglas, which would impose highway pollution (noise, light, surface run-off, air) upon residences and the natural attraction of Douglas Falls, Blackwater Falls State Park land, as well as across historical features along the North Fork. THE COMMUNITIES OF DAVIS AND THOMAS, THE FAMILIES IN THIS NEIGHBORHOOD OF DOUGLAS, THE SPECIAL FEATURE OF DOUGLAS FALLS AND ADJACENT BLACKWATER FALLS STATE PARK, AND THE HISTORICAL FEATURES ALONG THE NORTH FORK ON THE MONONGAHELA NATIONAL FOREST, ALL DESERVE RESPECT AND CONSIDERATION DURING HIGHWAY PLANNING. The alternative northern route for Corridor H, north and west of Thomas, will travel instead beside the Tucker County Solid Waste Authority, over abandoned minelands and working forestland, across energy company lands rather than public forestland and private properties and near the State Park.</p> <p>4. We need to protect the integrity of the large block of unfragmented, climate resilient, connected, intact forestland centered in and around the Blackwater Canyon-Blackwater Falls State Park-Monongahela National Forest, extending from Canaan Valley to Backbone Mountain area, for the ecological services (natural infrastructure) and other recreational, economic, and natural benefits it provides. The Blackwater Canyon, Blackwater River and North Fork, and wetlands and forests along the east flank of Backbone Mountain below Olson Fire Tower, are part of a large forest block that is relatively unfragmented. LARGE UNFRAGMENTED BLOCKS OF FOREST ARE VALUABLE FOR WILDLIFE HABITAT CONNECTIVITY, WIDE-RANGING WILDLIFE SPECIES, PROTECTION OF WETLANDS AND HEADWATER STREAMS THAT PROVIDE CLEAN SOURCEWATER FOR PUBLIC DRINKING WATER SUPPLIES, AND OPEN RECREATIONAL SPACES FOR PEOPLE. The alternative northern route for Corridor H, would cross land already fragmented by power line rights-of-ways, quarries, state highways, abandoned minelands, and commercial timbering operations.</p> <p>Thank you for receiving my comments and considering these ideas.</p> <p>With appreciation,</p> <p>Amy Cimarolli</p> <p>CC: Senator Joe Manchin  Senator Shelley Moore Capito  Representative David McKinley  State Senator Randy Smith</p>

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	State Senator David Sypolt State Representative Roland Jennings
59	Please reconsider the current route through the natural lands of Tucker county and accept the more recently proposed Northern route. The current route was decided decades before the substantial growth that has been seen in Tucker county. This development, as planned currently, could have serious negative effects on our community and its economy. Tucker county has rose in population and popularity because of its natural beauty. If the northern route is not accepted as a proper alternative, much of this beauty will be damaged.
60	<p>I am writing to urge the Department of Highways to reject the "preferred" canyon route for Corridor H between Parsons and Davis. Instead, DOH should build this section of Corridor H using the proposed Northern route.</p> <p>The "preferred" canyon route would in effect split the towns of Davis and Thomas. These communities have done great things to create a new economy of heritage tourism, including hiking and biking trails, which would be adversely impacted if Corridor H is routed between the two towns.</p> <p>The Blackwater Canyon has a unique ecology, including rare and endangered species such as the Big Eared Bat. If Corridor H is built using the canyon route, it will have a negative effect on this unique ecology.</p> <p>DOH should choose the northern alternative route for Corridor H and avoid all of these negative effects.</p>
61	This is a highway that will serve the area for decades to come and should be constructed with that in mind. Splitting the towns of Thomas and Davis and altering blackwater falls state park should be avoided. Taking the extra time and money to limit the impact on these towns and the state park should be of the utmost importance.
62	Northern route please, preserve thomas and davis , ecology and economy , people come from all over for what is here, not a highway view
63	<p>By this letter, I am submitting comments on the proposed Corridor H highway project from Parsons to Davis in Tucker County, West Virginia. Thank you for extending the comment period through this afternoon. I would like to offer comments in SUPPORT of the Revised Original Preferred Alternative (ROPA) for the Parsons-to-Davis route. I am an attorney and retired state employee who lives in South Charleston. I am offering comments in this matter for a number of reasons: (1) I have strong ties to Tucker County. (2) I worked as an employee for what is now the West Virginia Division of Highways in two different capacities. (3) I have experienced what happens when to a community when a 4-lane highway is routed through it. (4) I have had the opportunity to see the changes that the construction and extension of interstates and highway corridors have had on West Virginia.</p> <p>My ties to Tucker County.</p> <p>My connections with Tucker County began when my great-grandparents, James David Smith (1848-1899), his wife, born Florence Lee Wilson (1857-1950), and their daughter, Zorah B. Smith (1877-1942), moved from Flintstone, Maryland, to "Stumptown" (what is now Davis) in 1886, several years before Davis (named for Henry Gassaway Davis) was incorporated. The Smiths lived next door to a house occupied by the Digman</p> <p>family. One member of the Digman family, Pearle G. Mott, grew up to become an author who described her friendship with the Smith family on pages 61-63 of the History of Davis and Canaan Valley (1972).</p> <p>Zorah Smith married twice and had eight children. The fourth of those children, Thomas R. Cooper, Sr. (1907-1993), moved to Charleston over 85 years ago and, about a decade later, to South Charleston. Born</p>

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	<p>in 1950, I am the youngest child of Thomas R. Cooper, Sr., the youngest surviving grandchild of Zorah Smith Cooper, and the youngest surviving great-grandchild of James and Florence Smith.</p> <p>Let me now address Fairfax Avenue in Davis. For most of the 20th Century, Zorah and/or one or more of her children lived in the same house on the north side of Fairfax Avenue. As I understand pages 8, 9, and 62 of Ms. Mott's history, that house appears to have been moved through the streets from its original location, which, according to Ms. Mott, was next to a mansion that had been occupied by Fairfax Stuart Landstreet (1861-1931), whose wife was a niece of Henry Gassaway Davis.</p> <p>In April 2022, the United States Bureau of the Census released the forms from the 1950 Census. I have reviewed the forms as they pertain to my family members who lived on Fairfax Avenue. In April 1950, the Cooper house on Fairfax Avenue was occupied by my uncle, W. Conley Cooper (a cook or chef), my aunt, V. Virginia Cooper (a teacher), and my great-grandmother, Florence Smith. Several houses on that street were visited by the same Census enumerator, Francis G. Geroski. According to Mr. Geroski, the 25th house that he visited was occupied by Dorsey James and 3 other people. The 26th house that Mr. Geroski visited was a house occupied by Nellie Turek and 6 other people. The 27th house that he visited was one occupied by Francis G. Geroski himself and 4 other members of his family. The 28th house that he visited was one occupied by Ida Geroski and her son. The Cooper house was the 29th house that he visited.</p> <p>I am supplying this information because there are references to some of these same residences in the May 2022 Updated Historic Resources Survey Report (UHRSR), prepared for this project by Michael Baker International, Inc. The 25th house, occupied by Dorsey James, is listed as the Gravelle House on 360 Fairfax Avenue and is discussed in detail on pages 502-522 of the UHRSR. I think that the 26th house, occupied by Nellie Turek in 1950, is the one listed as the Turek/Magness-Appleton House on 376 Fairfax Avenue and discussed on pages 464-481 of the UHRSR. I also believe that the 27th house, occupied by Francis Geroski in 1950, is listed as the Geroski House on 382 Fairfax Avenue and discussed on pages 444-463 of the UHRSR.</p> <p>If the Gravelle House, the Turek/Magness-Appleton House, and the Geroski House are candidates for condemnation under the ROPA alternative, it is likely that the house occupied by the Cooper family for most of the 20th Century is also on the chopping block. In that same old house once lived two future mayors. Zorah Cooper's second child, James C. (Jim) Cooper, Jr. (1902-1994), was elected in 1938 to the West Virginia House of Delegates for one term to represent Tucker County. Uncle Jim spent most of his life as a businessman in Thomas and served on its town council and once as its mayor. Zorah Cooper's fifth child, Martin Luther "Red" Cooper (1910-1986), lived in Canaan Valley, raised cattle, and operated several businesses in Davis, including a restaurant along W. Va. Route 32. Uncle Red served as the mayor of that town for several years. While my aunts and uncles were alive, my family in Kanawha County made a number of road trips to visit them in Thomas and Davis. Back in 1958, a trip from South Charleston to Davis took 7 long hours. As I recall the Cooper house on Fairfax Avenue, there were evergreens at the front of the yard along the street. The house was set back from the street a substantial distance. I also remember cows grazing in the lot to the east of the house. (I have been informed that one of my father's chores when he was a boy was to milk the family cow.) Let me add that, from the time that James and Florence Smith arrived in "Stumptown" in 1886 up to the present, some of their direct descendants have been living in Tucker County.</p> <p>I also own property in Tucker County. I am the co-owner of a strip of land in Davis along W. Va. Route 32 between the Grant County Bank and the entrance to Blackwater Falls State Park Road. The Western Maryland railroad and its predecessors used to run trains along this strip. Adjacent to that is a much larger parcel, about 50 acres. I co-own that parcel. A tannery used to be located there. My great-grandfather,</p>



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	<p>James David Smith, worked at that facility. My father purchased most of that parcel in 1942. In summary, my family and I have many connections with Tucker County.</p> <p>My employment with the Department of Highways.</p> <p>I worked for what was then called the West Virginia Department of Highways in two different capacities at different times. In 1972 and 1973, I worked for about a year as an inspector for District 1 on the segment of 1-64 that runs from Valley Drive in South Charleston to Danner Road in Charleston. The 1-64 project that I worked on was opened to traffic in 1975.</p> <p>Between 1978 and 1981, I worked as an attorney in the DOH Legal Division in Building 5 in Charleston. I drove to and from many parts of the state to attend hearings in cases involving unemployment compensation and workers compensation. I also worked on reviewing and drafting contracts, including the agreements for the first set of the blue signs that appear on West Virginia interstates near exits. The first blue signs, which informed motorists about food, fuel, and lodging, were located near the exits along 1-81 in the Eastern Panhandle. During my tenure in the DOH Legal Division, I had meetings and telephone conversations. One of those conversations was with the aforementioned Francis Geroski, by then a DOH employee, who informed me that he knew my family in Davis and that he had been one of my Aunt Virginia's students at Davis High School. During my two stints with the DOH, I learned a lot about road construction and about laws involving state highways.</p> <p>My experience with the effects of highway construction on a community.</p> <p>I grew up on Montrose Drive in South Charleston. In the mid-1960's, the people of my neighborhood learned that they might lose their homes because 1-64 was going to run through my city. My house was once visited by representatives of the DOH as they gathered data as to whether my block would become part of the highway right-of-way. Indeed, much of my old neighborhood was razed to make way for 1-64. My grade school closed in 1968 and was demolished. Many friends had to relocate. My parents' house was spared. Building 1-64 and the Montrose exit off 1-64 required dozens of people to move from my street. The 1-64 right-of-way missed our house by about 1.5 blocks. In an amazing coincidence, I applied for, and got, a job with the DOH after I graduated from college in 1972. What I did not know was that I would be assigned to a position in which I would be helping to build an interstate on vacant land in my own community where hundreds of houses and stores had been standing only a few years earlier. I have continued to live in South Charleston since I graduated from law school and, every day, experience the positive effects of having an interstate run through my community. No matter how I may have viewed the issue as a teenager, I am glad that Charleston and South Charleston took a completely different path than that followed by Huntington. In Huntington, the anti-interstate sentiment prevailed. And the people of Huntington continue to suffer in 2022 because of decisions made over 50 years ago.</p> <p>How the Interstates and Corridors Have Changed West Virginia.</p> <p>From the time that I graduated from high school to the present, I have watched the construction of 4-lane highways transform West Virginia for the better. When I was 18, one of my high-school classmates drove me to his orientation at V"NU. Back then, the quickest route from South Charleston to Morgantown was to travel up a completed section of 1-77 from Kanawha County to Wood County, then to proceed eastward along U. S. Route 50 through Harrison County, and then to drive to Monongalia County. Much of 1-79 was built during the years that I was in law school at V"NU (1975-1978). From 1978 until 2005, when I retired, I drove to and from numerous hearings and meetings across West Virginia, first for the DOH and then (from 1981 through 2005) for the Public Service Commission of West Virginia. Forty years ago, a trip from Charleston to Logan involved driving up and down a lot of 2-lane roads. And a trip from Charleston</p>

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	<p>to Williamson was a lot worse. For years, I watched as Corridor G inched to completion. Finally, the construction was completed and my trips took a lot less time. People and goods moved more quickly as well and many businesses relocated to sites along Corridor G. Trips to and from schools, hospitals, doctors' offices, and athletic events took much less time. After 1-79 was completed, I also watched Corridor H inch eastward from Exit 99 off 1-79. Every time that a segment was completed, I was elated. When, I repeatedly asked myself, would I be able to take 4-lane highways directly from the Montrose exit to a Corridor H exit near Davis? If the ROPA is approved, the answer may be 2030, when I turn 80, if I am still alive.</p> <p>Why I favor the ROPA.</p> <p>From my foregoing discussion, it should be clear why I support the Revised Original Preferred Alternative for the Parsons-to-Davis project.</p> <p>Let me add a few other comments:</p> <p>First, the Parsons-to-Davis route should not be moved even further to the north. No matter where you propose constructing a 4-lane highway, you will encounter another (or possibly the same) set of opponents. If the ROPA is too close to a set of old coke ovens, a more northern route will be too close to the Fairfax Stone. I can remember when a 4-lane segment of proposed Corridor H was built to the east of Elkins. It is now part of the route along U. S. Route 33 that I travel to get to Harman before visiting my brother in Canaan Valley. Opponents of a southern route said that they wanted a northern route. Some wanted to protect Greenland Gap, and I agreed with that protection. Preservationists succeeded in protecting a battlefield that involved a relatively minor skirmish near Parsons. I then thought and still think that spending a huge amount of money to protect such a minor Civil War site was and is wasteful. Those legal battles have been fought and resolved. As a result, the costs of completing Corridor H have increased. Many of the opponents do not want any 4-lane highway at all. They offer alternatives only for the purpose of delay until funding deadlines have expired.</p> <p>The Parsons-to-Davis route will benefit more than the people who reside in Tucker County. Federal funding is justified because the completion of Corridor H will generally benefit members of the American public if they choose to travel or to move goods or passengers from east to west or from west to east through West Virginia. The ROPA is, in my opinion, the best alternative to accomplish that objective. But let me focus on West Virginians. As I consider the thousands of people in Kanawha County and points west who wish to visit Blackwater Falls State Park, Canaan Valley State Park, and/or Timberline Mountain, I would submit that the ROPA is a better alternative than one that would be further to the north. Why do you want to force people who travel east along Corridor H to drive south through Thomas to get to those three destinations when these same folks could take an exit that is between Thomas and Davis? The practical effect of a route further north is that many of these motorists will continue to take Corridor H eastward only to the Elkins exit and then to travel a more dangerous route along U. S. Route 33 through Harman to those destinations.</p> <p>Approving the ROPA will encourage young motorists to take Corridor H all the way to the exit in Davis, thereby reducing the likelihood of accidents on 2-lane highways.</p> <p>Furthermore, any route to the north of the ROPA would be a net detriment to students who are transported to and from Tucker County High School and to patients who are being transported by Tucker County's financially strapped ambulance service. Second, let me address the issue of noise. I own a 2017 Toyota Prius Prime plug-in hybrid. While I am driving on the electric current from the lithium-ion battery, my car is very quiet. When the charge runs out, the internal combustion engine (ICE) is activated and my</p>

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	<p>car gets noisier. Because of the leadership of the Biden Administration, the nation is converting to all-electric cars and trucks. By 2030, much of the noise from highway traffic will be reduced as the nation is de-ICEd.</p> <p>Finally, let me mention the issue of economic stagnation. The populations of Davis, Thomas, and Tucker County peaked in 1910, when my father was still a toddler. From 1910 to 2020, the population of Davis had dropped from 2,615 to 595, the population of Thomas had dropped from 2,354 to 623, and the population of Tucker County had dropped from 18,675 to 6,762. It is time to create an environment for more prosperity in those towns and in that county. Continuing to isolate Tucker County from the rest of the world will doom that county to protracted stagnation. I would like to thank Senator Manchin, Senator Capito, Governor Justice, and Transportation Secretary Wriston for their support of Corridor H and of the ROPA.</p> <p>Thank you for your attention to this matter.</p>
64	<p>Don't divide the sister towns of Thomas &amp; Davis and undermine their unique economy.</p> <p>Don't degrade the Blackwater Industrial Complex and its historical resources.</p> <p>Don't degrade the viewshed from Blackwater Falls State Park.</p> <p>Construction and blasting will increase Acid Mine Drainage which kills off aquatic life.</p> <p>Don't undermine the unique ecology of the Blackwater Canyon, especially its rare and endangered species.</p>
65	<p>I have conducted public night sky appreciation programs at West Virginia's Blackwater Falls State Park for almost three decades.</p> <p>I have conducted these programs under the auspices of the Park's staff, and via the Smithsonian Institution.</p> <p>These programs have taken advantage of West Virginia's natural resource of relatively dark skies over the Park that the Park's nocturnal viewshed offers.</p> <p>I have also worked with Tucker County's tourism office to publicize my programs at the Park as a way of drawing visitors to the Park, to Tucker County, and to the part of West Virginia that the Park resides in. In this way, the Park's relatively dark skies serve as an economic engine drawing money into this part of West Virginia via astro-tourism.</p> <p>Corridor H, as currently configured, would result in the generation of light pollution trespassing into the Park's nocturnal viewshed, thus adversely impacting its relatively dark skies.</p> <p>This adverse impact from light pollution would take three forms. First, there is the waste light of vehicular traffic's headlights so close to the Park. Second, there is the waste light of stationary roadway lighting, and other lighting, along Corridor H itself. And finally, there is the waste light from what likely will be poorly regulated sprawl that Corridor H's completion would facilitate spreading over the area surrounding the Park.</p> <p>What makes all this waste light polluting the Park's viewshed even worse is that it is entirely useless to those generating it. For it contributes nothing to facilitate their safety, security, or utility. All it does is waste their money while polluting the Park.</p>



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	<p>Thus, Corridor H, as currently configured, would result in the deterioration of the very natural resource (i.e., the Park's relatively dark skies) that has drawn visitors to the Park in the first place.</p> <p>However, it doesn't have to be this way. For, if Corridor H is to be built, then it can be designed and implemented to minimize its adverse light pollution impact using the lighting engineering practices and procedures advocated by the International Dark Sky Association (IDA). And, since the light pollution being minimized is waste lighting, its minimization can be accomplished while saving money in the process.</p> <p>Likewise, West Virginia's state, county, and local governments also need to recognize that the sky (i.e., the night sky) is part of the Park, and then take the steps that IDA recommends to protect this valuable, renewable natural resource in the Park (it renews itself every night) for current and future generations.</p> <p>* Daniel Costanzo Past President The Washington Academy Of Sciences' Astronomy Affiliate</p>
66	<p>I would like to register my opposition to building the Corridor H link from east of Parsons to north of Davis in Tucker County. I worry that acid mine drainage in that area could poison some of the state's pristine fishing streams. Also, the link located there would threaten the now-excellent Blackwater Falls State Park experience. Please consider locating the Corridor H link of the Appalachian Development Highway System elsewhere. Thank you.</p>
67	<p>Hello- I have been coming to Davis and Thomas from MD for the past 21 years to ski, hike and fish in the Canaan Valley Region. I have hiked in the Dolly Sods Wilderness, skied many times at White Grass and Canaan Valley. I have fished Red Run and aspire to fish the Blackwater Canyon once the timing is right. I support the Northern Alternative Route for Corridor H to not Bisect Thomas and Davis for the following reasons: 1) Dividing the towns of Davis and Thomas spoils their mountain charm, this area is not Gatlinburg, nor does it have the infrastructure to be that. 2)The viewshed from Blackwater Falls SP does not need a highway within the canyon, and 3) The ecology of Blackwater Canyon and its inhabitants will be impacted. We applaud WV DOH for moving this project forward and urge them to adopt the Northern Alternative Route as the smart and right decision for Thomas, Davis and WV!</p>
68	<p>The traffic for the landfill includes large trucks with heavy loads. I believe this is an opportunity to separate the landfill traffic (large trucks heavy loads) from local traffic on Rt 32 (small cars, tourists that are unfamiliar with traffic flow). Separating these two different types of traffic may minimize severe traffic collisions. Thank you for the opportunity to comment.</p>
69	<p>We have been coming to the area since 1996. My parents own a house there and that is now the gathering place for our extended families. The route should be to the north and not bi-sect the towns of Davis and Thomas. Putting a highway between the two towns and across the canyon would ruin a large part of what makes the area so special. Specifically the way the two towns seamlessly integrate into the surrounding nature.</p>
70	<p>While I am not a resident of Tucker Co., I am a regular visitor. My family and I make multiple trips to the area each year to bike, ski, and enjoy the scenic beauty that the area has to offer. While I am excited for Corridor H to be completed, as it will shorten my travel time, I am not in favor of the originally proposed route connecting Parsons to Thomas/Davis. In my opinion, the proposed Northern Route is the obvious route that should be chosen. It will still provide the area with the needed highway infrastructure, which will allow visitors and tourists easier travel to and from, and increase the local economy even more. But it will also preserve the natural beauty, historic value, and peaceful nature that is found in Thomas and</p>

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	Davis. Please consider what makes this area so special for residents and visitors alike when planning to provide easier access. Because if the original route is chosen, much of what is a large draw for so many will be lost just for the sake of progress and simplicity, which I believe is simply not worth it.
71	Run this road north and don't ruin historic items and beloved rail trails!
72	When planning a major highway, one would think planning would include the path of less destruction. The highway itself is a major issue environmentally as well as communally. Everyone knows that Blackwater State Park is an important tourist destination. Seeing a huge highway cut through it or even on its edge is devastating. The canyon being proposed should be considered to be included in the State Park, not a major highway. Plans are made to be changed, take a moment to revisit the route. Most who were against the highway to begin with realize the road is happening. It's up to the commission to be respectful of the path with the least destruction to the environment, community as well as the State Park. Thank you for taking the time to consider. Marilyn Cuonzo
73	<p>I am requesting the WV DOH to use the proposed "Northern Route" when completing the stretch of Corridor H from Parsons to Davis. As a frequent visitor to Davis and Thomas, I see that Thomas would be devastated by a highway dividing it. I observed that devastation in Osage, WV, after I-79 divided that community. The highway destroyed the downtown. Families who used to walk up the street to check on elderly relatives now had to drive half an hour. Osage never recovered.</p> <p>I've seen news broadcasts that describe similar issues in neighborhoods all over America after large highways bisected them. These neighborhoods had strong social networks and thriving economies, with mom-and-pop businesses that supported the residents. Construction broke the ties that held the community together. Often, these neighborhoods became slums.</p> <p>Thomas is a thriving small town. It has shops and dining venues that are popular with cyclists who come to visit the bike trails, and it attracts a wider range of tourists who visit Canaan Valley and take a side trip to Thomas because it's such a lovely little place.</p> <p>West Virginia is full of broken places. Thomas isn't one of them. Instead, it's an example for other communities that are trying to pull themselves up by their own bootstraps. A highway through town would break Thomas in two. I implore you to use the "Northern Route" when constructing Corridor H.</p>
74	Find a better route for Corridor H
75	You have received many letters in support of a northern route. My wife and I strongly support a northern route, bypassing any impact to the towns of Davis and Thomas as well as the Coke Ovens.. We have lived full-time in Canaan Valley for 18 years. Our reason for moving here is because of its wildness and beauty. The notion that another route will be built faster is like burying ones head in the sand. The law suits brought about will drag out for many years by doing otherwise.
76	I would like to make my comment in favor of the northern route. Please keep WV the way it was meant to be rather than further needlessly developing what little land/water we have left.
77	Damaging the natural wonder of black water falls is short sighted foolishness that will hurt our essential tourism business. Go North!
78	The DOH preferred route would negatively impact the Blackwater Industrial Complex, the Blackwater Canyon Rail Trail and the Douglas Falls area, where WV DNR plans to expand Blackwater Falls State Park. Noise and light pollution are a big concern for BWFS, and the ROPA will surely have an adverse impact. I, along with many others, are concerned about the highway dividing the towns of Davis and Thomas. Increased acid mine drainage is a concern as well, if the road crosses the North Fork of the Blackwater Canyon. To date, 3,121 individuals have signed an online petition asking for a northern route for Corridor H. Hundreds of individuals and local business owners have signed paper petitions, too. As you may recall, over 80% of those who commented following your 2019 workshop favored a northern route. Please consider our input and what is best for our communities. We do not want to stop the road but simply

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	want the best possible route that will avoid the cultural, recreational, environmental, and historic resources that make our area so unique and popular. I hope you will consider alternate routes for the section of Corridor H between Mackeyville and Davis. Thank you for this opportunity to comment.
79	Five decades plus loving this part of the world. Community has worked to grow and preserve the area with love. Please guide this project and heavy flow traffic away to the north. I treasure the unique space that exists as is.
80	My family and I spend a lot of time in the area. We enjoy visiting Douglas Falls, and hanging out in Blackwater. The currently proposed route will ruin the area. Noise and light pollution will affect the Douglas area, as well as the state park. I can imagine it now; relaxing at Pendleton Lake, listening to nature, and enjoying a warm summer night, only to hear a big rig jaking down off in the distance. The alternative route still allows accessibility to the area without destroying the very nature and experience that make people want to visit.
81	<p>I and my Family have always considered West Virginia to be our home away from home. Its spectacular beauty has kept us enthralled , returning for more than 40 years to hike , camp, and endlessly explore for the sheer enjoyment of the natural world.</p> <p>Many favorite areas come to mind , among them : Seneca Rocks , Cranberry Backcountry, Dolly Sods Wilderness, and , not least by any means , Blackwater Canyon and Blackwater Falls State Park.</p> <p>In consideration of the Blackwater's unique geological, biological , and ecological (human and environmental) features , spanning eons of time and still evident today in its breathtaking beauty, please do not place the northward connecting highway anywhere near this area.</p> <p>To do that would utterly destroy Blackwater Canyon and the two old yet vital communities of Thomas and Davis. Dividing these two communities would forever alter their unique heritage and economy. Don't do it. The costs , risks , adverse consequences far outweigh any benefits.</p> <p>All the construction &amp; blasting will result in irreparable widespread environmental degradation . It will undermine the unique ecology of Blackwater Canyon , especially its rare and endangered species. So many more reasons not to place that highway here - especially when there is a good, feasible alternate route available.</p> <p>Please , do not destroy that which can never be restored or replaced.</p> <p>Help keep West Virginia Wild and Wonderful .</p> <p>Sincerely, Natalie and Jon DeBoer and Family December 12, 2022 natdebo53@gmail.com Henrico , Virginia</p>
82	<p>I strongly support depressing Rt 48 under Rt 32 so that 32 can go flat from Davis to Thomas. I do not like the way the "trumpet" directs all traffic in 7th Street Davis - encouraging cut through traffic</p> <p>Additional submittals:</p> <p>Letter 1/6/2023</p> <p>I am writing this letter to submit during the comment period that the DOH has had open for the segment of Corridor H that is to be built between Parsons and Thomas/ Davis WV. The DOH has a preferred alignment (ROPA) that was presented to the community on September 12th at Blackwater State Park. I appreciate the time and effort spent by the DOH in preparing the visuals for that workshop, the expertise of the people available to answer questions, and the fly-through video.</p> <p>In particular, the fly-through video showed that the DOH had modified the ROPA by depressing the highway in a "trench" which would reduce the noise impact on Davis as well as maintain the feel of</p>



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	<p>connectivity between Thomas and Davis, since our road would pass over the highway. However the video also highlighted for me some serious concerns regarding the truck bypass.</p> <p>Given the ROPA alignment, a truck bypass is required to reroute heavy trucks that pass through the town of Thomas. Thomas has experienced a phenomenal "rebirth" in the time since Corridor H construction has been on hold awaiting funding. But in that time, much more has changed. Below is a paragraph from the Parsons Route re-evaluation document that I believe is pertinent to the Thomas/Davis situation:</p> <p>1.0 Re-evaluation Background .&amp;Approach 1.1 Introduction</p> <p>This document has been prepared pursuant to Title 23 Code of Federal Regulations (CFR) Part 771 and related Federal Highway Administration (FHWA) procedures which require a written re-evaluation prior to the request for FHWA action (e.g., final design or construction) when a time lag or changes related to the project have occurred between the previous National Environmental Policy Act (NEPA) approval and the request for action. The purpose of a re-evaluation is to assess whether any changes that may have occurred in project design, Scope, affected environment or proposed mitigation will require supplemental environmental documentation.</p> <p>The West Virginia Department of Transportation, Division of Highways (WVDOH) circulated the Supplemental Final Environmental Impact Statement (SFEIS) for the Kerens to Parsons Project in the fall of 2002, and FHWA approved the Amended Record of Decision (AROD) for the project on May 12, 2003. Since that time, the Selected Alternative has undergone adjustments, and the alignment carried forward is now called the "Refined Selected Alternative."</p> <p>A written re-evaluation of the findings of the 2002 SFEIS and 2003 AROD was completed for the Refined Selected Alternative in 2015, and construction began on approximately half of the project (or "Section 1,n as defined below). For the remaining half of the project (or Sections 2 and 3, as defined below), another written re evaluation is now required because alignment shifts not previously assessed have been developed. This revaluation document assesses whether changes to the design in the remaining half of the project, or other changes in project scope; affected environment or proposed mitigation, will require supplemental environmental documentation. The 2015, Revaluation document is incorporated into this document by reference (WVDOH, 2015).</p> <p>Just as in the case with Parsons, the conditions around Thomas/Davis have dramatically changed since the ROPA was designed. The DOH revisited the Parsons alignment to address local concerns and to avoid the battlefield - this is a precedent for the Thomas/ Davis Route. There has never been a ROD (Record of Decision) and there are substantive new concerns and impacts that were not considered back in 2000. The DOH should revisit the design, assess the concerns and impacts and suggest mitigations in compliance with NEPA.</p> <p>Unbelievable as it may seem, the Charleston Gazette-Mail reported that the WV Department of Transportation Secretary Jimmy Wriston in September "brushed aside calls for consideration of an alternative route to his agency's preferred route for the Parsons-to-Davis section. If we're serious about minimizing impacts and meeting schedules, we can't re-think these things" he told the Legislature's Department of Transportation Accountability Oversight Commission in a September interim legislative session meeting. Ignoring community input is an egregious non-compliance with the federal NEPA act.</p> <p>The re-evaluation of the ROPA must address the changes that have occurred in the interim. These changes include the emergence of Thomas/Davis as a major tourist destination with an emphasis on the Arts, the COVID-related increase in housing values and pressures on the Davis sanitary system as</p>

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	<p>remote home-owners have become longer term or permanent residents of their vacation properties, and the building and planning of biking and pedestrian connections around and between the towns of Thomas and Davis.</p> <p>The ROPA alignment requires a truck bypass in order to work, and to make safe pedestrians and diagonal parking on the lower street in Thomas. The DOH included a truck-route in the September worksession presentations, resulting in 3 intersections.</p> <p>The three intersections result in a number of potentially dangerous traffic conditions.</p> <ol style="list-style-type: none"> <li>1. Traffic leaving Thomas driving toward Oakland will be facing tractor trailer trucks that are turning left in front of them onto the truck bypass, at intersection "C".</li> <li>2. Traffic leaving Davis and heading to Thomas will encounter tractor trailer trucks that are turning left to get onto Route 32 at intersection "B".</li> <li>3. Traffic heading out of Davis will encounter tractor trailer trucks turning left across their path to get onto the on-ramp down to Corridor H at intersection "N".</li> </ol> <p>All of these intersections are packed into a short distance and unfortunately bad weather is often a factor, especially in the winter. These three intersections can be avoided by the alternate route that the DOH originally considered: 1D East. As shown on the next map, this has two intersections, one at the north for traffic wanting to go into Thomas as a destination (C), and one for traffic exiting Corridor H to go to Davis or Canaan Valley (A). This option also has a distinct advantage that the highway construction disturbance and noise is further away from the two towns. Removing an entire intersection in and of itself will reduce the noise impacts of braking tractor trailer trucks.</p> <p>I hope that the DOH will see that their alternate 10 East is the best for the future of the towns of Thomas/Davis and not feel pressured to rush to build the ROPA when a better alternate is available.</p>
83	<p>We the undersigned object to the building of Corridor H between the towns of Thomas and Davis, continuing to Douglas over the Blackwater Canyon Historic area.</p> <p>This plan would undermine the connection between the local communities and make it dangerous to travel between the towns on foot or bicycle. An elevated 4-lane highway through the beautiful Blackwater area is not in the interest of the local economy.</p> <p>Valuing our natural resources and public lands adds to our quality of life and draws people to our communities. These visitors create jobs in Thomas, Davis, and Canaan Valley.</p> <p>Thomas and Davis have become destinations in the last 20 years with a thriving diversified economy. Directing commercial traffic traveling to locations outside the county through the center of our towns would have a detrimental impact on our businesses.</p> <p>We support the already studied alternative northern route going north and east of Thomas.</p>
84	This section cannot be built soon enough. I support it 100%
85	I have concerns that these massive construction projects could cause negative impacts on water resources. Particularly as the segment of Corridor H currently under construction is not abiding by permit conditions leading to muddy water and sedimentation of high-quality trout streams.

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	<p>Based on an analysis of the Kerens to Parsons segment of Corridor H that has been under construction since 2017, there have been 51 violations documenting 336 instances of non-compliance. The most common non-compliance issues are:</p> <ul style="list-style-type: none"> <li>• Failing to properly implement and maintain sediment control measures, 47 times.</li> <li>• Failing to prevent muddy water from leaving construction sites, 32 times.</li> <li>• Causing sediment plumes in nearby streams, 29 times.</li> <li>• Causing the deposition of sediment on the bottom of nearby streams, 21 times.</li> </ul> <p>Introducing large amounts of sediment into streams can clog fish gills, smother the streambed habitat, increase the temperature and lower the amount of oxygen in the water necessary for aquatic life. High quality trout streams, such as the ones that will be crossed by the proposed projects, are particularly sensitive to these impacts.</p> <p>Thank you for your consideration,</p> <p>Carol Denney Solid Frog Productions 139 Guy Street Elkins, WV 26241</p>
86	<p>I am a resident of aTucker County and was born here. To my knowledge there is no northern route and if there was, I would ask that your plans be to continue on the current proposed route for the betterment of Tucker County. It is safer, shorter, more cost effective and does less environmental damage. Please listen to the residents that travel everyday, not tourists or special interests.</p>
87	<p>I'm a life long resident of Tucker County and I'm asking that you build using the current proposed route—do not change it.</p>
88	<p>The highway needs to be finished now.</p>
89	<p>First, I believe Corridor H will be beneficial to our state, and I am looking forward to its completion. However, I am asking the DOH to not disturb what makes the Davis and Thomas areas so beautiful and attractive to the citizens and the tourists that come to the area for camping, hiking, fishing, skiing, mountain biking, or simply just to relax.</p> <p>Second, I feel the citizens of Thomas and Davis that own businesses or work in locally owned businesses will be harmed financially if the highway is allowed to follow its current path. Many people depend on the tourism in these areas to receive a paycheck. I strongly believe we need to preserve the Thomas and Davis areas, not only for ourselves, but for the next generation of adventurers.</p> <p>Finally, while I am in favor of the highway's completion and understanding of the benefits the highway will have for the state of WV, I am opposed to having Corridor H take the current path. I am respectfully asking the DOH to listen to the citizens and build Corridor H using an alternate path away from Thomas and Davis areas.</p> <p>Thank you.</p>
90	<p>First of all, I am all for Corridor H to be completed and feel it will be very beneficial to our state. With this being said, I am asking the DOH to please, let's not disturb what makes the Davis and Thomas area so beautiful and so attractive to the citizens and the vacationers that come to the area for camping, hiking, fishing, skiing, mountain biking, or simply just to relax.</p> <p>Secondly, I feel the citizens of Thomas and Davis that work and own businesses and depend on the tourism so they can receive a paycheck will be harmed financially if the highway is allowed to follow it's</p>



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	<p>current path. I feel we need to preserve the Thomas and Davis area not only for ourselves, but for the next generation of adventurers.</p> <p>In closing, I am opposed to having Corridor H take the current path and respectfully ask the DOH to listen to the citizens and build Corridor H using the alternate path away from Thomas and Davis area.</p>
91	<p>I am in complete support of the completion of Corridor H. However, DOH needs to listen and take seriously those citizens of Thomas and Davis who want the route to go north around the towns. A highway and exit between the 2 towns could completely change the vision of who and what these small mountain towns want to be. Thanks to everyone working on this vitally important project.</p>
92	<p>West Virginia Rivers Coalition respectfully submits the following comments on the proposed Parsons to Davis Section of the Appalachian Highway Corridor H Project.</p> <p>History of Non-Compliance</p> <p>The Appalachian Highway Corridor H Project has a history of non-compliance with water pollution control permits that have caused severe impacts to water resources. The current Corridor H section under construction is a 15.3-mile four-lane divided highway between Kerens and Parsons, the Kerens to Parsons Project. The most recent water pollution control permit issued for this section is WV/NPDES General Water Pollution Control Permit No. WV0115924, Registration No. WVR108594. This permit was issued to Kokosing Construction Company, Inc. on August 3rd, 2017 to permit the discharge of stormwater from 475 acres of earth disturbance for the construction of 7.5 miles of the four-lane highway in Randolph and Tucker County, as well as the US 219 Connector and several other small access roads.</p> <p>As of September 3rd, 2022 there have been 52 violations of Permit No. WV0115924, documenting 336 instances of non-compliance from November 2017 to May 2022. Instances of non-compliance were compiled, grouped, and are listed below. Each bullet point includes a narrative description of the non-compliance, followed by the Code of West Virginia or permit section violated in parentheses, and finally, the number of times the non-compliance occurred. Multiple permit sections are referenced within the same non-compliance point as the WV Department of Environmental Protection (DEP) released a new version of the construction stormwater general permit in 2019.</p> <ul style="list-style-type: none"> <li>• Failed to implement, operate and maintain all erosion control devices, in accordance with standard procedures and approved Stormwater Pollution Prevention Plan (permit sections D.1; G.4.e.2; II.F) – 47</li> <li>• Failed to prevent sediment-laden water from leaving the site without going through an appropriate device (permit sections G.4.e.2.A.ii.j and I.G) - 32</li> <li>• Failed to comply with compliance orders – (§22 CSR11 Section 16) – 29</li> <li>• Caused conditions not allowable in waters of the state by allowing distinctly visible settleable solids in waters of the state (§47 CSR2 Section 3.2.a) – 29</li> <li>• Failed to comply with the General Permit and approved Stormwater Pollution Prevention Plan (permit sections B and I.B) – 28</li> <li>• Failed to modify the Stormwater Pollution Prevention Plan when there was a change in design, construction, scope of operation, or maintenance of Best Management Practices (permit sections G.4.c and III.C.2) – 27</li> <li>• Caused conditions not allowable in waters of the state by sediment deposits on the bottom of waters of the state (§47 CSR2 Section 3.2.b) – 21</li> <li>• Failed to protect fill slopes (permit sections G.4.e.2.A.ii.f and II.H.3.b.9) – 21</li> <li>• Failed to properly operate and maintain all activities and installed Best Management Practices (permit sections Appendix B.I.1 and B.I.1) – 18</li> <li>• Failed to properly operate sediment basin (permit sections G.4.e.2.A.ii.b and II.H.3.b.11) – 13</li> <li>• Failed to reseed areas that failed to germinate within 30 days after seeding (permit sections G.4.e.2.A.i.c</li> </ul>

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	<p>and III.A.3) – 12</p> <ul style="list-style-type: none"> <li>• Failed to provide interim stabilization on areas where construction activities have temporarily ceased for more than 14 days (permit sections G.4.e.2.A.i; G.4.e.2.A.i.b; III.A.3) – 10</li> <li>• Failed to gravel unpaved roads to reduce the tracking of sediment onto the public or private roads or inspect and clean all adjacent public and private roads of debris originating from the construction site (permit sections G.4.e.1.E; G.4.e.2.D.i; II.H.1.d; II.H.4) – 13</li> <li>• Failed to provide inlet protection for sediment control structure (permit sections G.4.e.2.A.ii.c and II.H.3.b.13) – 9</li> <li>• Failed to prohibit discharges of material other than stormwater (permit sections G.2 and I.G) – 6</li> <li>• Failed to dispose of all solid waste/demolition material in accordance with the Code of West Virginia and Legislative Rule Title 33 Series 1, Solid Waste Management Rule (permit section III.A.2) – 5</li> <li>• Failed to protect groundwater in accordance with the Code of West Virginia and Legislative Rule Title 47 Series 58, Groundwater Protection Rule (permit sections G.4.e.2.C.iii and II.I) – 4</li> <li>• Facility exceeded effluent discharge limitations outlined in the Special Condition of the approval letter from the Director (permit section G.5) – 2</li> <li>• Used straw bales on site which are not an acceptable Best Management Practice (permit section G.4.e.2.A.ii.k) – 2</li> <li>• Failed to stabilize clean water diversions prior to becoming functional (permit section G.4.e.2.A.i.d) – 2</li> <li>• Discharged pollutants from a land disturbance into Panther Run without an authorized State NPDES permit (§22 CSR11 Section 8.b.(1)) - 1</li> <li>• Failed to take any and all measures necessary to clean up, remove and otherwise render such spill or discharge harmless to the waters of the state (§47 CSR11 Section 2.5.a) – 1</li> <li>• Failed to apply for permit coverage while continuing an activity regulated by this permit after the expiration date (§47 CSR10 Section 5.2) – 1</li> <li>• Failed to submit a Discharge Monitoring Report through the mandatory eDMR system within 20 days following the end of the reporting period (Special conditions for iron limits and monitoring requirements) – 1</li> <li>• Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall immediately submit such facts or information (permit section C.9) – 1</li> <li>• Failed to report noncompliance using designated spill alert telephone number (permit section I.D.2) - 1</li> </ul> <p>Notable non-compliances include: failing to submit discharge monitoring reports, exceeding effluent discharge limitations, disturbing land outside the permitted limits of disturbance, filling in ephemeral tributaries outside of the permitted area, lacking secondary containment for above ground storage tanks of Ammonium Nitrate and petrochemicals, discharging concrete washout directly into streams, discharging sediment laden water from filter bags directly into streams, discharging turbid water from full sediment basins directly into streams, and violating a cease and desist order.</p> <p>In the past five years, the Kerens to Parsons Project has caused 50 water quality violations, in the form of sediment pollution, in 16 streams, including 1 Tier 3 stream:</p> <ul style="list-style-type: none"> <li>• Haddix Run - Tier 3 stream</li> <li>• Baldlick Fork</li> <li>• Panther Run</li> <li>• Wilmoth Run</li> <li>• Fools Run</li> <li>• Laurel Run</li> <li>• Tributary of Haddix Run</li> <li>• Tributary of South Haddix Run</li> </ul>

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	<ul style="list-style-type: none"> <li>• Tributary of South Branch of Haddix Run</li> <li>• Tributary of Panther Run</li> <li>• Tributary of Wilmoth Run</li> <li>• Tributary of Fools Run</li> <li>• Tributary of Laurel Run</li> <li>• Tributary of Laurel Fork</li> <li>• Tributary of Leading Creek</li> <li>• Tributary of Lazy Run</li> </ul> <p>Construction of the Kerens to Parsons section of Corridor H has also caused iron pollution. For example, between June 2018 and August 2018, permit limits for total recoverable iron were exceeded eight times. The highest exceedance was 867% over the permit limit, 14.5 mg/L compared to the permit limit and water quality standard of 1.5 mg/L.</p> <p>Due to repeated Legislative Rule and permit violations, the permittee has been assessed civil administrative penalties over \$640,000. The permittee was also issued multiple orders of compliance, including two that instructed the permittee to cease and desist until in compliance with the permit and pertinent laws and rules.</p> <p>Given this history of non-compliance, water quality impacts, and cease and desist orders, we are seriously concerned about potential impacts to water resources from the construction of the Parsons to Davis section of Corridor H.</p> <p><b>Protection of Trout and High-Quality Tier 3 Streams</b>  The route proposed crosses several high-quality streams and wetlands. The section from Parsons heading up Backbone Mountain crosses the headwaters of Mill Run and its tributary Slip Hill Mill Run. These are both trout streams. Mill Run is also a designated Tier 3 or Outstanding National Resource Water (ONRW). It was included as a Tier 3 stream due to the presence of reproducing trout and high-quality aquatic life scores. From WV's Antidegradation Rule (§60 CSR 5), Section 6.1 "Tier 3 waters. ... are to be maintained, protected and improved where necessary. Any proposed new or expanded regulated activity that would degrade (result in a lowering of water quality) a water body that has been designated an ONRW, other than temporary lowering of water quality, is prohibited." In order to evaluate new or expanded regulated activities, DEP must determine that the activity is short term and would result in temporary water quality impacts. The construction of a large highway such as the proposed - crossing the steep slopes of its headwaters will permanently degrade the water quality in this Tier 3 stream. The conversion of intact forest to a wide paved highway, with significant cutting and filling will permanently reduce water quality in many ways; including increased temperature and altered hydrology. It is not clear to us how this permanent degradation can be allowed under current antidegradation rules.</p> <p><b>Acid Mine Drainage / Abandoned Mine Lands / Water Treatment Plans</b>  The proposed route crosses several areas that were previously mined that now produce acidic metal laden water. DEP's Abandoned Mine Lands (AML) has identified several problem areas that the route will cross. Tub Run, Long Run, Middle Run, North Fork Blackwater, and Pendleton Creek all have identified AML areas. DEP's Watershed Assessment Section has measured pH below 4.0 in Big Run, Tub Run, Long Run, and the North Fork of Blackwater. The pH in Long Run has been measured as low as 2.77.</p> <p>WVDEP has developed TMDLs for several of the streams crossed by the proposed route. Big Run, Tub Run, Long Run, and the North Fork of Blackwater all have pH TMDLs with reductions described in terms of net acidity loading. Long Run and North Fork Blackwater also have TMDLs calling for reductions in</p>



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	<p>aluminum and iron, and Tub Run has a TMDL for aluminum.</p> <p>The AML Program is currently working with the Friends of Blackwater on the design for an advanced water treatment facility that is intended to treat water from some of the areas that the proposed route will cross. The facility will treat water from Long Run, Albert Highwall, and other areas in the path of the highway. We encourage WV Department of Highways (DOH) to work closely with AML staff so that the highway construction does not cause additional water quality problems by disturbing areas that have demonstrated acid bearing potential. The groups should cooperate towards a mutual benefit, potentially addressing AML highwalls that are just offsite in cases where there may be excess fill material.</p> <p>Public Land Concerns</p> <p>The current proposal Parsons to Davis route may impact iconic public lands. This area includes a major state park (Blackwater Falls) and other areas of historic, cultural, and scenic importance. "Avoiding" these iconic and irreplaceable sites is relatively easy – the route is either in or not in the special area. However, the impacts to public land extend beyond the actual footprint of Corridor H. Blackwater Falls State Park has Lindy Point, one of the most photographed views in West Virginia. At the public informational meeting held at Blackwater Falls, project representatives stated that visual and sound tests were conducted to assure that there were no impacts from either construction or use of Corridor H when standing at Lindy Point. We request that the report and actual data be made public, and part of the Supplemental Environmental Impact Statement (SEIS). Also, the time of year could well influence visual and sound impacts especially from late Fall to early Spring. The project proposes to bridge over the Allegheny Trail, historical coke ovens, and other historical sites. Placing a bridge immediately over or in close proximity to such sights may avoid breaking a trail, but dramatically impacts the use and enjoyment of these important sites. The historic nature of these sites could be impacted by cars whizzing by overhead and the historic and scenic impacts must be analyzed in the SEIS.</p> <p>Navigable waterways and the land underneath are owned in trust as public lands for the People of West Virginia. A total of 56 stream segments in West Virginia are listed on the Nationwide River Inventory (NRI) (<a href="https://www.nps.gov/subjects/rivers/nationwide-rivers-inventory.htm">https://www.nps.gov/subjects/rivers/nationwide-rivers-inventory.htm</a>) as free flowing rivers and streams with outstanding remarkable features. The West Virginia waterways are listed here: <a href="https://www.nps.gov/subjects/rivers/west-virginia.htm">https://www.nps.gov/subjects/rivers/west-virginia.htm</a>. The USFS has long protected 12 of those NRI waterways in the Monongahela National Forest (USDA Forest Service. 1995. Wild and Scenic Rivers Study Report and Environmental Impact Statement on Twelve Rivers in the Monongahela National Forest.) Care must be used to assure that the free-flowing nature and outstandingly remarkable features are not impacted. The SEIS should identify all NRI rivers impacted by, or downstream from, the Parsons to Davis Corridor H project; and specify in detail exactly what safeguards, monitoring, and controls will be used during construction, maintenance, and use of Corridor H to protect these waterways and their unique features.</p> <p>Conclusion</p> <p>We are concerned about potential impacts to water quality and public lands from the construction of the Parsons to Davis section of Corridor H. In order to increase public transparency, we request a full public hearing and additional public comment period after the release of the draft SEIS and before the final EIS. A public hearing will allow community members to bring concerns to WVDOH personnel in a format in which all attendees will hear all questions and concerns, and be afforded the opportunity to hear all responses from WV DOH and project personnel.</p>
93	<p>As a 30-year (1990-2020) resident of Northern WV who spent a lot of time in Davis, Thomas, and Blackwater Falls SP, and who returns several times a year for boating and skiing and hiking, I care a great deal about the future of Davis and Thomas and Blackwater Canyon. I have reviewed materials explaining</p>

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	<p>and showing the proposed route for this segment of US 48 and the main alternatives.</p> <p>I urge you to keep the route away from the canyon of the Blackwater and its North Fork, and not to divide the towns of Davis and Thomas with a major highway. The viewshed of Blackwater Falls SP, and the historical and ecological value of the canyon below Thomas are important draws for tourism as well as intrinsically important on their own. Thomas and Davis have evolved a unique and attractive character that would be diminished or destroyed by the intrusion of a four-lane highway between them. I believe that completion of the road as proposed over the North Fork Canyon below Thomas would significantly reduce the attractiveness of the area for tourists. I think you'll find that the people who live in the area would much prefer a less disruptive alternative that passes north of Thomas.</p> <p>Choosing an alternative route that passes north of Thomas would avoid the negative effects of the proposed route over the North Fork Canyon, while retaining Corridor H's benefits. I urge you to adopt either Alternative 1D or, preferably, the proposed Northern Route for the highway.</p>
94	<p>Thank you for the opportunity to comment as you develop the next draft of the Environmental Impact Statement (EIS) for the Parsons to Davis section of Corridor H. Significant time has passed since the last draft of the EIS, substantial changes in economic and recreational conditions in the area have occurred, and significant new information regarding environmental conditions has become available. As a result, a fully revised and updated EIS should be developed and provided to the public, federal and state agencies, and local town governments for review and comment before selecting a new preferred alternative or making a final record of decision.</p> <p>Comments on Federally Threatened and Endangered Species</p> <p>The new draft EIS should quantify and compare the effects of all alternatives to federally listed threatened and endangered species, and then for each alternative, measures that can be used to avoid and minimize those effects should be developed and discussed. This should include modifications to each route that would avoid areas of high use by listed species.</p> <p>The current ROPA would damage and/or daylight portions of a portal known to be used by the federally endangered Virginia big-eared bat (VBEB). This alternative would also bisect documented foraging areas for these bats and increase the risk of taking bats due to vehicle strikes as they travel between the portal/foraging areas near the highway ROW and caves used during other seasons. This is new information about the VBEB that has been discovered since the previous draft of the EIS. The action agencies should develop project modifications, and evaluate other alternative routes and designs that would avoid damaging the portal, minimize the amount of foraging area affected, and reduce the fragmentation of foraging areas and associated portals. Project modifications should at a minimum including shifting the ROW to avoid the portal, and could also including developing options such as elevating the ROW so that bats can pass across the ROW unobstructed. Some of the previously developed alternatives that are located to the north of the current ROPA would not affect the portal and would minimize effects to known foraging areas. These alternatives should be seriously considered for selection as the new preferred alternative.</p> <p>The two most recent status reviews for the VBEB (dated 2008 and 2019; available here: <a href="https://ecos.fws.gov/ecp/species/A080">https://ecos.fws.gov/ecp/species/A080</a>) mention that VBEB are susceptible to vehicle strikes. In addition, the latest draft revision to the recovery plan for VBEB (dated 2019; also available at the link above) recognizes the threat that highways pose to the species, and includes recovery criteria and actions that are relevant to this section of Corridor H. These include:</p> <p>Downlisting Criteria 4: Long-term management agreements are in place to protect features essential to all identified key foraging areas. Long-term management agreements must meet criteria 3a and 3b.</p> <p>Delisting Criteria 5: Within each MU (management unit), all sites needed to support the minimum</p>

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	<p>population numbers and distribution as specified in table 1 are connected by habitats that support travel between sites.</p> <p>Recovery Actions: Barriers to Movement and Sources of Direct Mortality</p> <p>9.0 Within each MU, avoid and/or minimize barriers to movement and sources of direct mortality to VBEB (e.g., roads, wind turbines, brine pits).</p> <p>9.2 Implement measures to reduce effects from existing and proposed barriers to movement and sources of direct mortality to VBEB. Avoid and/or minimize placement of new barriers to movement and sources of direct mortality within foraging areas, or within commuting and migration distances from VBEB sites.</p> <p>The draft EIS should specifically and quantifiably compare how the different alternatives address each of these criteria and recovery actions, and the EIS should include modifications that would be incorporated into each alternative to better meet these criteria and actions. Once avoidance and minimization measures have been incorporated, the action agencies should develop measures to mitigate for unavoidable effects, this should include permanently protecting areas in and around the highway ROW that are used by the VBEB.</p> <p>This analysis of effects to listed species and development of project alternatives, modifications, and mitigation measures under NEPA is separate and distinct from the consultation requirements under section 7 of the Endangered Species Act (ESA). This analysis should be completed in the draft EIS and provided to State and Federal wildlife management agencies and the public for review and comment prior to making a final decision on the preferred alternative, and prior to completing formal section 7 consultation.</p> <p>Other listed species that may be adversely affected by this section of Corridor H include the northern long-eared bat, and the rusty patched bumble bee. Neither of these species were listed at the time the previous EIS was drafted. The new draft EIS should also provide specific information quantifying the potential effects of each of the alternatives on these species, and discuss potential project modifications that would avoid, minimize, and mitigate effects. This information should be provided to the public and wildlife management agencies so that they can review and compare these effects and provide comments that should be considered by the action agencies prior to selecting a new preferred alternative.</p> <p>The little brown bat, and tri-colored bat are both being considered for listing under the ESA and may be listed before construction of this section of Corridor H is completed. The action agencies should be proactive in evaluating effects to these species in the draft EIS in the manner described above so that the project is not needlessly delayed when and if these additional listings may occur.</p> <p>Comments on the Full Development of Alternatives in the Draft EIS</p> <p>There is significant concern from many local businesses and citizens about the effects that the previously identified ROPA would have on the community. These effects include a loss of community cohesion through fragmentation of the towns of Thomas and Davis, and negative effects to watersheds such as Blackwater Canyon that are a major economic and recreational resources for the region. These concerns could be addressed by selecting an alternative other than the previously identified ROPA.</p> <p>The action agencies should seriously and fully develop alternatives that do not bisect the towns of Thomas and Davis and instead travel north of the Town of Thomas. The development and evaluation of these alternatives in the draft EIS should include a discussion of modifications that could be made to the routes or designs of previously developed alternatives (or how elements of the alternative routes could be combined in a manner) that would avoid or minimize effects to the Thomas Trails area and the water supply for the Town of Thomas, and so that these alternatives could improve their access to the Tucker County High School.</p> <p>Providing a more thorough evaluation and serious consideration of “northern” alternatives would be more responsive to the legitimate concerns of the local community and would be consistent with the true purpose and intent of NEPA. It is possible that modifications to existing alternatives could be made that</p>



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	<p>would better serve the needs of the local community and allow for the development and completion of Corridor H in a manner that would protect important natural, recreational and economic resources in the area while still meeting the purpose and need for the project.</p> <p>Thank you for the opportunity to provide input on the development of this section of Corridor H. Please feel free to contact me if you have questions or would like to discuss these comments further at barbdouglas@daviswv.net.</p>
95	<p>It would be better served to take the Northern Route from Parsons to Davis and totally protect the view shed for both Thomas &amp; Davis and Blackwater Park, as well as to not interfere with the Blackwater Canyon as well as the Thomas to Douglas historical industrial complex. Also, it would be nice to stain the stone appearance of the bridges to give the appearance of real stone. Thank you. Joseph W. Dumire</p> <p>Additional Submittal:</p> <p>Website 11/30/2022</p> <p>Corridor H needs to go the northern route in order to avoid the Thomas to Douglas historical industrial complex, and avoid cutting through the Thomas-Davis corridor. If the road goes "under" Rt. 32 what will prevent the underpass from flooding? Also, the industrial complex must be protected from overwhelming obstructions. The money saved on the planned truck route could be applied to the cost of the longer northern route.</p> <p>Thank you, Joe Dumire</p>
96	<p>I oppose Corridor H as the area cannot handle more traffic on its already crowded resources. Easier access for out of state traffic will also lead to more gentrification for area residents.</p>
97	<p>Hello. Please use the "Alternative Northern Route". Please do everything you can to minimize the impact of the new highway construction to this area. Please Don't divide the sister towns of Thomas &amp; Davis and undermine their unique economy. Please Don't degrade the Blackwater area and its historical resources. Please Don't degrade the views from Blackwater Falls State Park. I have been going to this park since I was a child and took my children there many times when they were living at home. Please Don't undermine the unique ecology of the Blackwater Canyon, especially its rare and endangered species. For all these reasons and more, please use the "Alternative Northern Route."</p> <p>Respectfully, A. Dunson</p>
98	<p>I beg the planning authorities to revisit routing options and to impose much stringer environmental controls on the proposed section of Corridor H. This area of our state is known for its exceptional natural beauty and it's unique environmental importance to not only our state but the watersheds for half the country. The route taken to the north of Thomas and Davis would help to minimize the impact on these towns unique character as well as to route through less ecological fragile areas.</p>
99	<p>WVDOH:</p> <p>Please utilize the "northern route" for completion of Corridor H. I have been a WV resident since 1995 and a resident of Canaan Valley specifically since 1999. In that time I have witnessed the local economy transform from one dependent on tourist visits on holiday weekends and fall foliage weekends to one where nearly every day year round is profitable due to tourist traffic. While much of this progression has been due to the hard work of the local residents, the obvious draw is the natural beauty of the area and its quaint towns. Dissecting Davis and Thomas would unquestionably degrade if not destroy the character of the area and its draw. WV depends on the tourism dollar. Damaging one of its main attractions would be absolutely idiotic. Please think this over and look toward the future rather than simply ramming this highway through Davis/Thomas/Blackwater Canyon.</p>

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	Brent Easton
100	I've been a long-time visitor to the Davis/Thomas area for the past 30 years. I am very concerned that the cohesion that exists between those two communities will be lost if the highway cuts between them. I always make it a point to visit both places when visiting, but will be reluctant to do that if I have to deal with a super highway going between them. I also like to walk the trail by the coke ovens in the Douglas area. I enjoy the wildflowers and the serenity along that trail and am worried that I will be hearing the sound of trucks and traffic if the highway is built close to Thomas. Please consider the most northern route around Thomas so that future generations will still be able to enjoy the peacefulness and beauty of that wonderful area. Thank you!
101	I urge you to plan the Corridor H project through the northern route and NOT through the Davis-Thomas communities. These well-established rural communities will be negatively impacted if the project goes in that area. Thanks.
102	Choose the northern route. As a West Virginian who has visited the area countless times, I support the alternate that will preserve the wetlands, the greenway concept, the local water sources, and the dark skies. To do otherwise will be to ignore the reasons for having access to that part of our state.
103	<p>WV DOH's Thomas Truck Bypass design presented at the September 12, 2022 Blackwater Falls open house seriously threatens the economic viability of Thomas businesses while introducing dangerous traffic onto our local roads</p> <p>Mitigating the ever-increasing truck traffic through Thomas is a critical goal for the Corridor H Project. This truck traffic currently adversely impacts downtown Thomas businesses with excessive noise and safety hazards presented by the frequent through-town movement of heavy trucks. The purpose of WV DOH having studied a "Truck Bypass" is to intercept truck traffic heading south from Rt 219/Rt 90 to get onto west- or east-bound Rt 48/Corridor H, allowing them to bypass downtown Thomas / East Avenue and Spruce Street.</p> <p>While the "Truck Bypass" shown in WV DOH's presentation at Blackwater Falls on September 12th, 2022 would serve this purpose, it proposes that ALL Rt 32 traffic bypasses Thomas, in effect becoming Rt 32 and leaving the road through Thomas as a town road, or at best: "Rt 32 business". As a result downtown Thomas will become invisible to those traveling on Rt 32. The effect of this will be to eliminate perhaps 95% of traffic coming through Thomas along with the economic boost those visitors provide to Thomas, while also introducing significant safety risks at the two new intersections.</p> <p>Few factors have more negatively impacted small towns in America than new highways that have bypassed their downtowns, diverting economic activity to new businesses located on the outskirts of those towns. Across the country such diversions of traffic have directly caused deserted downtowns and empty storefronts. In most cases there were no alternatives that could have addressed increased through traffic while continuing to support the visibility and access for downtown businesses. In Thomas's case this need not happen because there are excellent alternatives available, which take the truck traffic off of local roads while still maintaining the local traffic that supports and energizes downtown retail streets. Any of the northern alignments previously studied by WV DOH keep Rt 219 and 32 traffic flowing through Thomas and Davis while allowing Rt 219 / Rt 90 truck traffic to get onto Rt 48 without using local roads. Other not-yet-studied alternatives also exist.</p> <p>Retail experts along with residents of those devastated small towns are unanimous in their advice that thriving downtown traditional commercial districts are strongly dependent on good visibility, good access, and ease of a visitor's casual discovery. With the possible exception of The Purple Fiddle none of Thomas's small businesses are destination businesses. Currently they are all strongly supported by visitors to the region discovering them while driving through Davis, providing a continuous stream of possible new patrons every single day of the year. With the removal of this traffic all of Thomas's small businesses will struggle and many will likely fail.</p> <p>The re-routing of Rt 32 around Thomas also introduces serious traffic-safety issues and multiple</p>

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	<p>potentially deadly traffic interactions. Those turning off of Rt 32 into downtown Thomas will need to make 90-degree cross-traffic left-hand turns across tightly-curved roadways. Winter traffic, at 3:30 or 4 PM, in the dark, with adverse weather, dramatically increases the RISK presented by this road design to ALL local traffic, with residents, visitors, and school buses needing to turn onto and off of a sharply curved Rt 32 carrying traffic including heavy trucks running at speed. Further South on Rt 32, WV DOH's current option also maintains heavy truck traffic on our local road connecting Thomas and Davis.</p> <p>Given the above facts this alternative could never be reasonably described as a "Preferred" route, it seriously threatens the long-term economic viability of businesses in Thomas and diminishes the roadway safety of local residents. Highway engineers are very creative, with the final design not yet drawn and shovels not yet in the ground there are certainly alternates that can be drawn that will not devastate Thomas's small businesses and introduce potentially deadly safety hazards onto our local roads.</p>
104	<p>Comments below were provided as an attachment:</p> <p><b>The Corridor H ROPA alignment is not the right alignment for this community</b></p> <p>The current preferred Corridor H route (ROPA) past Thomas and Davis causes impacts that are totally avoided through the use of other alternates that have already been studied. The ROPA alternate was apparently chosen primarily due to its cost advantage as shown in Table S2 in the 2007 SDEIS. But this costing did not take into account very significant costs incurred by the ROPA alignment including:</p> <ul style="list-style-type: none"> <li>• The construction cost of building an architecturally significant bridge over the Blackwater Canyon as opposed to an unattractive run-of-the-mill highway overpass as seen on all current Rt 48 high bridges between Wardensville and Davis.</li> <li>• The currently-planned truck bypass</li> <li>• Extensive reworking of Rt 32 to add intersections for the truck bypass</li> <li>• Realignment of the gas pipeline at the intersection of Rt 32/Rt48</li> <li>• Realignment of the gas pipeline along the truck bypass alignment</li> </ul> <p>The selection of the ROPA alignment also did not take into account substantial negative impacts caused by the ROPA alignment on the local community:</p> <ul style="list-style-type: none"> <li>• Dividing the Thomas/Davis community, forever</li> <li>• Introduction of significant construction and forever highway noise into the residential areas of Davis</li> <li>• Maintaining ever-increasing truck traffic on local roads</li> <li>• An intersection that highlights the Solid Waste Facility at the Highway entrance to the Allegheny Highlands region</li> <li>• Significantly increased stream and wetlands disturbance</li> </ul> <p>Map of current WVDOH ROPA is shown and compared to Alt 1D east.</p> <p>Current ROPA: Three intersections - all close to towns  -A and B between Davis and Thomas  -C trucks head around but near Thomas</p> <p>Alt 1D east: Safe access at High School via 219. All construction is farther away from towns. A and C move slightly East and North respectively. Two intersections, not 3. No truck by-pass required.</p> <ul style="list-style-type: none"> <li>• This route completely avoids the uncounted costs noted above. While a bridge is still required over the Blackwater River, it can be a simple highway overpass not the significant Arch bridge shown in DOH images.</li> <li>• This route completely avoids all of the impacts noted above</li> </ul>



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	<p>It appears the original cost model for the 1D east route was also unduly burdened with an interchange added at Benbush, an intersection that is not needed given Benbush's good proximity to two other interchanges; at Thomas and at the High School.</p> <p>Some have noted problems with a route such as this there are possible additional possible impacts; to the Thomas water supply, to the Thomas City Park, and to underground mine pools. With only minor adjustments, in fact fewer adjustments than are currently being considered for the WV DOH ROPA alignment, the 1D east route can be slightly altered to address these possible problems while still avoiding all of the above outlined impacts and additional costs.</p> <p>Some have noted the availability of funding as a reason to move forward even if with a flawed alignment choice. I am convinced that Corridor H will remain at the very top of WV DOH's State-wide Highway priorities, whether this year or next. Given that, the expediency of funding should not outweigh the importance of finding the right design; this highway is going to be built in any case.</p> <p>Corridor H, as it passed by other towns in the region, has been located so as to not introduce the adverse impacts the ROPA alignment imposes on the residents of Davis and Thomas. At Wardensville, Moorefield, Parsons, and other locations the highway was located so that it did not split those communities in half, their residents do not hear highway traffic at night, and truck traffic is not routed onto local roads. The costs of revising the Parsons portion were fully funded. Davis and Thomas are two civic entities but form a single community. They are growing, and highways are forever investments that must address and respond to this community's future.</p> <p>Corridor H should be designed to respect and support the Davis/Thomas community 50 and 100 years into the future, not divide a community as so many of our nation's highway projects have regrettably done in the past.</p> <p><b>Additional submittal:</b></p> <p><b>Email w/attachment 12/21/22</b>  WVDOH's Thomas Truck Bypass design presented at the September 12, 2022 Blackwater Falls open house threatens economic viability of Thomas businesses and increases dangerous traffic on our local roads. There are alternatives.</p> <p>Mitigating the ever-increasing truck traffic through Thomas is a critical goal for the Corridor H Project. While the "Truck Bypass" shown in WVDOH's presentation at Blackwater Falls on September 12th, 2022 appears at first glance to accomplish this, upon close inspection their design creates myriad issues. Their design proposes current Rt 32 traffic will be re-routed—the bypass in effect becoming a new Rt 32. The road that passes through Thomas will become a local or "town road," or perhaps "Rt 32 business".</p> <p>Everyone is in favor of getting trucks out of Thomas, but this WVDOH approach is fraught with issues. The proposed route is this: connecting just north of Thomas, the proposed bypass moves all Rt 32 traffic to the east of the cemetery and connects south of Thomas across from the Kiwanis ballfield. To access Rt. 48, trucks then travel south on Rt. 32 for about a mile before making another turn, east, onto an access road connecting to the ROPA-proposed interchange. Depending on the direction of travel vehicles are required to make multiple left turns across multiple traffic lane(s).</p> <p>Picture this: a car driving from Davis toward Oakland will curve to the right at the ballfield onto the new Rt. 32, pass by Thomas and turn right north of Thomas onto Rt. 219. If the driver wishes to visit Thomas</p>

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	<p>they must stop at the ballfield, then make a left turn across the southbound lane(s) of traffic onto "Rt. 32 Business" thence travel down into Thomas.</p> <p>Similarly, a vehicle travelling south toward Davis from Oakland must choose to follow the new Rt 32 past Thomas, or slow and turn right through Thomas, rejoining Rt 32 South of Thomas at the intersection at the ballfield. Two intersections will now be required, north and south of Thomas. Traffic controls may be found to be needed to allow safe movements on and off Rt 32 from Thomas, considering the Rt 32 highway speeds and often-encountered snow, ice, rain, and fog.</p> <p>There is no assurance of when in the Corridor H construction project this bypass might be constructed. WVDOH has stated they can request this road segment be completed first, but they cannot guarantee this. Suppose this bypass is constructed first. Now we have an added issue with the current Parsons eastbound truck traffic. Trucks crossing the Thomas bridge will be expected to make a counter-intuitive left turn to reach the bypass intersection north of town where they will turn right onto the new Rt. 32. Or they will do as they currently do and make the shorter drive through Thomas connecting with what is the current Rt. 32 at the ballfield. Signage will attempt to direct non-local trucks to take the new route, albeit GPS and drivers' experience will certainly still influence them to turn right thereby taking the shorter route through Thomas. Early construction of the bypass is a chimera, at best it might only provide limited reduction of truck traffic, at the cost of introducing serious forever problems. The real solution is the construction of an appropriate Corridor H.</p> <p>It is broadly understood by Planners that few factors have more negatively impacted small towns in America than new highways that have bypassed downtowns: Across the country such diversions of traffic have led to deserted downtowns and empty storefronts.</p> <p>"Main Street's neighborhood shopping destinations are largely supported by driveby traffic and local residents." - Town of Rolesville NC - Main Street Vision Plan, 2018</p> <p>"Small communities (less than 2,000 population) have the greatest potential to see adverse economic impacts from a bypass. Small communities have experienced the highest traffic reductions on the old route, with the bypass carrying significantly more traffic than the original route. These communities are less likely to have regional retail or service markets. Smaller communities should carefully plan to address potential negative impacts of a bypass. - "The Economic Impacts of Highway Bypasses on Communities," Wisconsin DOT, 1998</p> <p>The continual discovery of small businesses by new potential customers is foundational to small businesses' long-term economic viability and the current flow of thru-town traffic strongly supports Thomas's businesses and the local economy.</p> <p>"The recent completion of the Rolesville Bypass, however, has had a profound impact on Main Street. Portions of Main Street have experienced a 75% decrease in daily traffic." "In addition to population and income, the volume of automobile traffic is an important factor for the success of retail. The 2017 annual average daily traffic volume collected by NCDOT indicates that the traffic volumes to support retail have diminished substantially since the completion of the US Highway 401 Bypass. Therefore, strategies to improve this dynamic are critical to the success of retail along the corridor." - Town of Rolesville NC - Main Street Vision Plan, 2018</p> <p>There are logical alternatives to this bypass. Any of the northern alignments previously studied by WVDOH</p>

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	<p>keep economically beneficial Rt 219 and 32 traffic flowing through Thomas and Davis while allowing Rt 219/80 north truck traffic to access Rt 48 without using local roads.</p> <p>Re-routing Rt 32 around Thomas introduces serious traffic-safety issues creating potentially deadly traffic interactions; it is well-established that traffic accidents happen primarily at intersections. Every day many of our Elementary through High School students ride school buses over this road. the RISK presented by this road design will dramatically increase with winter traffic, operating at speed at 3:30 or 4 PM, in the dark, with adverse weather. In addition, a Thomas “bypass” will, by design, route all Rt. 48 “pass-thru” vehicles onto Rt. 32 for a mile between Davis and Thomas—traffic being additionally slowed by an intersection. It is difficult to predict the extent to which local traffic will be affected. There are alternatives to a bypass.</p> <p>“By its very nature, infrastructure is a long-term proposition. Its impacts and benefits are measured not in years, or even decades, but over the course of generations.” - Urban Land Institute “Infrastructure 2009 Pivotpoint”</p> <p>It is important to consider this truck bypass in terms of 5-year as well as 30-year traffic projections. This highway project will be built and when completed will carry significantly more traffic to and through Davis and Thomas as both towns continue to grow. Getting truck traffic completely off local roads, as the northern alignments do, should be considered a very important long-term goal for this project.</p> <p>WVDOH has alternatives to the ROPA route splitting Davis and Thomas and their recently proposed Thomas bypass. One alternative is depicted on drawings as alignment 1-D east. This alignment, often referred to as the “northern route” continues from near the current western terminus of the 4-lane and, instead of it continuing straight bisecting Davis and Thomas, it routes northward, in the process effectively becoming the Thomas bypass without the need to rebuild any local roads.</p>
105	<p>Tourism is the future of West Virginia. Building huge highways that pass through all the beautiful places is bad for business. Furthermore, water matters more than cutting some time off of a road trip. Construction companies have a history of violating codes to keep water clean and wildlife safe and thriving.</p>
106	<p>I am against the highway being constructed over the blackwater canyon and between the two towns of Davis and Thomas. 1. It will pollute Blackwater Falls State Park and nearby neighborhoods with its noise and lights. Create barriers of travel and connection between Davis and Thomas. Please respect the communities impacted by their proposed 'preferred' route and consider the alternative northern route-steering traffic around our two towns.</p> <p>Thank you</p>
107	<p>The Davis area of Corridor H would be a good location for a DC fast charging station for EVs using the NEVI funding.</p>
108	<p>As an owner of a vacation home in Canaan Valley and frequent visitor to Thomas and Davis, I would like to state my opposition to the proposed alignment of Corridor H bisecting the two towns. Thomas and Davis have developed unique, authentic small businesses over the past several years that are attracting a growing number of visitors, greatly enhancing the local economy. Placing a major highway interchange between the towns will introduce generic national chain businesses right up against the town limits, greatly diminishing the appeal of these special small towns. Siting the highway along the northern alternative route will keep travel-related development far enough away to preserve Thomas and Davis, as well as protecting Blackwater Canyon from the visual and noise pollution of a four-lane highway. An inconvenience of just a few extra miles of highway to the north will make a world of difference to these special places.</p>



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109	This is an exciting project but should be coordinated closely with local business owners in Davis and Thomas to ensure that the planned highway route does not dissect the two towns. If disconnected, the resulting lack of continued economic growth and community connection will severely impact residents and businesses alike.
110	The Allegheny Trail (only long distance backpacking trail) is not the same as the Allegheny Highlands trail (biking trail). For more info, including google map, wvscenictrails.org or google Allegheny Highlands Trail to find their web info.
111	I am in favor of the northern route for many reasons. It would be a shame to divide Davis and Thomas by a highway and spoil the view shed, create more noise and complicate efforts to make bike trails. The northern route is best.
112	<p>I am more concerned about increased traffic and the pressure on existing small businesses. We are already experiencing a large influx of new visitors and folks looking to live here. Unfortunately, many businesses cannot find housing for current employees. We need affordable housing improvements before increased traffic.</p> <p>Additional submittal:</p> <p>Letter 9/13/22</p> <p>As an outdoor enthusiast and business owner in Davis for nearly 40 years, it has become very clear to me that the strength of our unique destination lies in its unbroken rural charm. At East West Printing we serve the outdoor recreation industry throughout the US and West Virginia with printed garments and embroidery. Over the years we have witnessed a number of delicate wilderness destinations spoiled economically, through lack of forethought and planning, resulting in unattractive development and highway bisections. A behemoth four lane cutting between our tiny towns is the last thing we would want to see.</p> <p>Davis and Thomas have always functioned as a combined business ecosystem of services, housing, entertainment and outdoor experiences for our residents and guests. Travel between the two towns is flanked with important forests that protect the watershed creeks and rivers. My understanding is that the northern route would not only leave our view shed intact, but would minimize noise and light pollution, and also avoid impacting protected historical sites near the Blackwater Canyon.</p> <p>The possible additional costs of making a prudent decision now to protect what is precious about our towns will be repaid many times over by retaining the assets that have made this area the jewel in the crown of West Virginia.</p>
113	Hi. I'm a business owner and resident of Davis. I'd like to express my strong encouragement to route Corridor H north of Davis and Thomas, instead of dividing the two towns. I'm extremely worried about the impact the proposed route would have on the character and charm of our two communities. I, along with numerous other business owners here, rely on tourism to keep our businesses afloat. Bisecting the towns with a highway would significantly take away from all the reasons tourists come here - the peace, quiet, and scenic views of the mountains. Thanks for your time and consideration.
114	Please put the road on the northern route. Davis, Thomas , & Canaan Valley need to function as one destination to have any sort of scale. Do not bisect the towns. There are so many historical cases where highways cut in between places that operate together changes the dynamics for the worse.
115	Your Corridor H "Preferred Route" ignores historical and environmental preservation, the overwhelming criticism by the local community, and the fact that building the intended route will divide towns, negatively impact local communities, ruin the view-shed from the North Fork of the Blackwater River, and change the character of the area. West Virginia has been sold down the river too many times for profit, mostly for out-of-state concerns that use and abuse our natural beauty and resources. You have been

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	<p>provided a reasonable alternative route, the "Northern Route," that would avoid all of the objectionable aspects of your plan. Your plan, is in fact not "preferred" at all. Expediency and "just get it done" are all well and good, but WVDOT needs to be responsible to the communities and the natural areas it will threaten with its plan. Make this project a benefit rather than a detriment to all concerned by adopting the Northern Route. P.S. environmental protection protects ALL of us. There are no insignificant issues when it comes to making sure infrastructure does not negatively impact the very earth we rely upon for our survival.</p>
116	<p>I think the route between Davis-Parsons should be left as proposed. I am against the Northern route as it would be years longer and there may not be funding, it could affect the town of Thomas's water reservoir and tear up more land, cut more trees , etc. Proceed with building the road, get it started.</p> <p>Additional submittal:</p> <p>Website 12/9/22 I am against the proposed Northern Route for Corridor H between Davis/Thomas and Parsons. We have waited many years for this road, and this change will either prevent the road from being built or extend the time for many years. It could possibly affect the Thomas Reservoir and other homes and properties. Please stay with the approved route through the Coketon/Douglas area.</p>
117	<p>Dear Mr Long, I attended the Public Informational Workshop on September 12, 2022, about the Corridor H route proposed in the Davis-Thomas area. I am writing now to express my deep concerns about the risks and limitations of the route currently being presented. My conclusion from the workshop is that WVDOT plans are based on incomplete and/or outdated information. They do not take into account the current local road usage, key local facilities, nor the local economy. Things have changed a lot in Davis and Thomas since 2000 and 2007 that this so-called "Preferred Alternative" seems to be overlooking or ignoring. The maps shared at the Public Informational Workshop show that there were other "alignments" that would not pose such problems. Notably the "Landfill East" and "IG option". These would still provide an exit for Davis and Thomas, and connect the road to Parsons and onward. These options need to be reconsidered. This so-called "Preferred Alternative" is a 15+ year old bad idea. It seems to be preferred only by people in offices far from this area who would not be using the roads on a daily basis and whose safety and livelihoods will not be affected by them. Best wishes, Lizz Frost Yocum, Davis WV</p> <p><b>Additional submittals:</b></p> <p><b>Website 10/12/22</b> Road Safety Risks – The truck by-pass proposed will divert heavy truck traffic around Thomas then back on onto Rt 32, a local two-lane road. This road is used by local residents, visiting tourists, school buses and ambulances. Trucks coming south towards the highway would cross on-coming traffic at least three times. This would be off a steep grade, according to the DOH official. The DOH officials I spoke to said that they did "not yet know" about rights of way, and "had not yet" developed plans for signage or signals. The official also did not seem to be aware of the amount of truck traffic that currently travels on Rt 219</p>

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	<p>south from Oakland, crossing the bridge before Thomas to get to Parsons. It is highly likely these trucks would also be using the new by-pass to get to the highway.</p> <p>All he referred to were trucks the currently come through Thomas, not the substantial heavy truck traffic on Rt 219 – transport for logging, quarrying, and wind generator parts. So clearly, this increase in traffic along Rt 32 between Thomas and Davis has not been factored into this planning.</p> <p>No Improvements to Access to high school and health services –</p> <p>The proposed route does not go near the Tucker County High School nor Cortland Acres. Why not? Tucker County High School’s 300+ students, faculty and their families would benefit from a closer, more direct route to and from school, sports and career development</p> <p>Cortland Acres has a 94-bed nursing home, outpatient rehabilitation services, medical offices and housing for elderly on the campus. The proposed route does nothing to offer a more direct route to residents and their families, nor the staff and medical providers who care for them.</p> <p>The maps shared at the Public Informational Workshop show that there were other “alignments” that would not pose such problems. Notably the “Landfill East” and “IG option”. These would still provide an exit for Davis and Thomas, and connect the road to Parsons and onward. These options need to be reconsidered.</p> <p><b>Letter 10/17/22</b></p> <p>Road Safety Risks -</p> <p>The truck by-pass proposed will divert heavy truck traffic around Thomas then back on onto Rt 32, a local two-lane road. This road is used by local residents, visiting tourists, school buses and ambulances. Trucks coming south towards the highway would cross on-coming traffic at least three times. This would be off a steep grade, according to the DOH official.</p> <p>The DOH officials I spoke to said that they did "not yet know" about rights of way, and "had not yet" developed plans for signage or signals.</p> <p>The official also did not seem to be aware of the substantial amount of truck traffic that currently travels on Rt 219 south from Oakland, crossing the bridge before Thomas to get to Parsons. It is highly likely these trucks would in the future use the new by-pass to get to the highway. All he referred to were trucks the currently come through Thomas, not the additional heavy truck traffic on Rt 219 - transport for logging, quarrying, and wind generator parts. So this likely increase in traffic along Rt 32 between Thomas and Davis has not been factored into this planning.</p> <p>No Improvements to Access to high school and health services-</p> <p>The proposed route does not go near the Tucker County High School nor Cortland Acres. Why not? These are two key facilities and services for the county and surrounding area. Tucker County High School's 300+ students, faculty and their families would benefit from a closer, more direct route to and from the school and its sports and career development resources.</p> <p>Cortland Acres has a 94-bed nursing home, outpatient rehabilitation services, medical offices and housing for senior citizens and disabled people on the campus. The proposed route does nothing to offer a more direct route to residents and their families, community-based rehab patients, nor the staff and medical providers who care for them.</p> <p>Damage to the State and Local Economy-</p> <p>Anything that detracts from the tourist appeal of the area will be bad for the local economy and my</p>



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	<p>business, as well as the state. The state parks in Davis and Canaan Valley, and local businesses and tourism taxes are sources of revenue for the state.</p> <p>The proposed Corridor H route brings a 4-lane highway very close to an iconic state park which is known for its views, quiet, and natural attractions, including star-gazing. The highway's 24/7 light and noise, which do not need to be so close to Blackwater Falls State park, will to mar this beauty and spoil the visitors' experience.</p> <p>Route 32 is also part of regional scenic route that guides tourists through the area's mountain towns. Heavy truck traffic compounded by lack of road safety planning will make this a dangerous and ugly road that people will want to avoid, rather than seek.</p> <p>Davis and Thomas have a number of independent local businesses that serve the visitors to the area, including accommodation that generates additional tax revenues.</p> <p>I have a lot at stake in Corridor H, which I want, being built well.</p> <p>This so-called "Preferred Alternative" is a 15+ year old bad idea. It seems to be preferred by people in offices far from this area who would not be using the roads on a daily basis and whose safety and livelihoods will not be affected by them.</p> <p>The maps shared at the Public Informational Workshop show that there were other "alignments" that would not pose such problems. Notably the "Landfill East" and "IG option". These would still provide a highway exit and access for Davis and Thomas, and connect the road to Parsons and beyond. These options need to be reconsidered.</p>
118	<p>Damage to the State and Local Economy –</p> <p>The proposed Corridor H route brings a 4-lane highway very close to an iconic state park which is known for its views, quiet, and natural attractions, including star-gazing. The highway's 24/7 light and noise, which do not need to be so close to the park, will to mar this beauty and spoil the experience.</p> <p>Route 32 is also part of regional scenic route that is guides tourists through the area's mountain towns. Heavy truck traffic compounded by lack of road safety planning will make this a dangerous and ugly road.</p> <p>Davis and Thomas have a number of independent local businesses that serve the visitors to the area, including accommodation that generates additional tax revenues.</p> <p>The maps shared at the Public Informational Workshop show that there were other "alignments" that would not pose such problems. Notably the "Landfill East" and "IG option". These would still provide an exit for Davis and Thomas, and connect the road to Parsons and onward. These options need to be reconsidered.</p> <p>This so-called "Preferred Alternative" is a 15+ year old bad idea that seems to be preferred by people in offices far from this area who would not be using the roads on a daily basis and whose safety and livelihoods will not be affected by them.</p>
119	I strongly urge selection of the north route around Thomas as opposed to bisecting Thomas and Davis.
120	Please do not put a 4 lane highway thri Blackwater Flls. TY
121	In support of the Northern Route. I believe the Northern Route could be better for the connectivity of the towns - Davis and Thomas, peace and quiet, and historical preservation of the area
122	Use the alternative Northern Route!
123	<p>To save the beauty and charm of small town West Virginia, I support selection of the northern route for Corridor H 10 of the Parsons to Davis Project. This area of WV is a treasure to the state and all folks that are able to include it in their travel adventures. Impacting the trail system, Blackwater State Park and the area historic districts will not bring positive impact to the area only remove the "Almost Heaven" moto of WV. Keep the traffic on the north side, while provide the completion of this this never ending highway project...since 1960s almost 70 years after it was first proposed in 1964. PLEASE DO NOT GO INTO THE CITY...GO NORTH!</p>

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124	<p>Don't divide the sister towns of Thomas &amp; Davis and undermine their unique economy.</p> <p>Don't degrade the Blackwater Industrial Complex and its historical resources.</p> <p>Don't degrade the viewshed from Blackwater Falls State Park.</p> <p>Construction and blasting will increase Acid Mine Drainage which kills off aquatic life.</p> <p>Don't undermine the unique ecology of the Blackwater Canyon, especially its rare and endangered species</p>
125	<p>Don't divide the sister towns of Thomas &amp; Davis and undermine their unique economy.</p> <p>Don't degrade the Blackwater Industrial Complex and its historical resources.</p> <p>Don't degrade the viewshed from Blackwater Falls State Park.</p> <p>Construction and blasting will increase Acid Mine Drainage which kills off aquatic life.</p> <p>Don't undermine the unique ecology of the Blackwater Canyon, especially its rare and endangered species.</p>
126	<p>Thank you for considering my comments here. I write in opposition to routing Corridor H between Thomas and Davis, and request that the "northern route" be used.</p> <p>I'm very familiar with this area: I taught third and fourth grade in a 3-room school in Bayard 50 years ago. My wife and I also pass this way (on Corridor H) to Washington at least twice a year, and our family has vacationed at Blackwater Falls, most recently two years ago when we rode the Blackwater Canyon trail.</p> <p>I've seen the economic and tourist transformation of Thomas and Davis since my teaching days. Putting Corridor H between these two towns would be putting a bull in a china shop. It would be very harmful for the 'reason' these towns exist: people come here because it's not developed. The environment---natural and economic---is delicate, and a major highway right through the middle would be most undesirable. The location of the highway on the north route avoids these unnecessary disturbances, while putting Thomas and Davis within easy reach for those who are coming to visit, and allows easy egress for residents as well.</p> <p>Candidly, this type of 'planning'---routing Corridor H between these two towns---is right out of the 1950's. Other parts of our country are rethinking the negative impacts of bad highway planning, and especially highways that bisect existing communities. See e.g. <a href="https://www.nytimes.com/2021/11/20/us/claiborne-expressway-new-orleans-infrastructure.html?searchResultPosition=2">https://www.nytimes.com/2021/11/20/us/claiborne-expressway-new-orleans-infrastructure.html?searchResultPosition=2</a></p> <p>We in West Virginia have a chance to get this one right. Please DO NOT route Corridor H between Davis and Thomas. Thank you for your consideration.</p>
127	<p>I reluctantly accept that Corridor H will be built connecting Parsons to the Mt. Storm area. Given that this section is going to be built, it is imperative that the route that causes the least social damage and the least environmental damage is chosen. The route that causes the least damage would be located north of Thomas, WV. If the route were placed between Thomas and Davis, it would erect a permanent barrier to the safe passage of bicyclists and pedestrians between the two towns. The railtrails will be great, but they are not direct and they do not eliminate the need for more connectivity for pedestrians and bicyclists and for access to businesses and services along the WV 32. It would be best to plan WV 32 on purpose to be a better designed multi-modal corridor. That can be done best by locating Corridor H routing north of Thomas.</p>

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128	I strongly support the southern route as it is more environmentally sound, is less disruptive to the flow between Davis and Thomas, provides an exclusive route for trucks that avoids local traffic and commercial areas. It just makes sense to avoid any impact to the Blackwater State park and the surrounding natural wildlife lands. Please be responsible and make the right decision.
129	Please choose the Northern Route. Our Counties are thriving due to Tourism. A compromise to the Natural Beauty and delicate ecosystem of the Blackwater River will also compromise our tourism based economy. Surely, a smaller bridge will cost less? Isn't that good ?
130	The preferred highway route would ruin something precious in West Virginia --- the thriving small town economies and character of Davis and Thomas, WV. The state should fully evaluate and choose an alternative route that avoids the Blackwater canyon area.
131	I fully support selecting the "Northern Route" for Corridor H. There is no good reason to send a four-lane highway through the middle of the most visited state park in West Virginia. The "Northern Route" insures the integrity of the Blackwater Falls State Park and the towns of Davis and Thomas. There is no downside to choosing this route.
132	Please route the highway north of Thomas. Davis and Thomas have developed into beautiful twinned communities that would be disrupted were a highway placed between them. The natural beauty of this area draws in tourists and a highway running through it would drive them away. A northern route for the highway would both improve access and preserve the economic growth of this area.
133	Do not run corridor H through the historic, environmentally rich, and beautiful landscape of Davis and Thomas.
134	Don't build a highway anywhere near downtown Davis and Thomas! Based on what I've read about the project I would urge the WVDOT to pursue a northern route for this highway, if it has to be built at all.
135	Please keep West Virginia wild and wonderful. I understand the good intentions of adding infrastructure, but it precisely the lack of certain kinds of infrastructure that keep people like me going back to places like Black Water. Please don't build the road. There are better ways to improve lives. Fewer trees, more wildlife deaths, more sprawl is not the way. Be better. WV has amazing natural resources that can be a boon for everyone if they're left intact.
136	Go North!
137	I am in support of a route NORTH of Thomas. Dividing the communities of Thomas and Davis would forever alter the unique character of this destination that I have visited and left MONEY in the community at LOCALLY OWNED restaurants, groceries, shops, and lodging. The proposed route very near the Blackwater Canyon could very easily damage its appeal as a destination wild in character. Even if not visible from scenic overlooks in the state park, the NOISE that is introduced would significantly alter the appealing wild and scenic experience that makes this area worth visiting and spending money in. Dividing the two communities would make traveling between the two less fluid. The interchange would lead to further traffic and congestion, introduce light pollution and potentially make the area like any generic interchange in "Anytown, USA"--exactly the opposite of the experience that I am seeking when visiting Tucker County. The state of West Virginia DOH, local official, and state legislators need to realize this. "Progress" on paper is not always progress. The uniqueness of Tucker County, Thomas, and Davis are readily apparent to me--so much so that I have recommended to others at every chance I get, including colleagues of mine. I am a physician in the Cincinnati area with plenty of disposable income which I spend freely in Tucker County--as do my colleagues whom I'm suggesting visit (I have given one a copy of my Tucker Co Pocket Guide). Furthermore, hurting this area in Tucker County from this standpoint would affect other communities I travel through on the way there buying food and fuel such as Clarksburg and Grafton. Obviously a route NORTH of Thomas would be worth the added expense and complexity. It will pay dividends in the long run. Please realize how special these communities are in their current state without a MAJOR highway splitting them apart.
138	Until last year I was a long time resident of WV. Having lived in Morgantown, graduated from WVU and worked for the US Dept of Agriculture in both Morgantown and Kearneysville for 20 years, I became quite



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	<p>familiar with the many special places in the state. I love the highlands as many others do. The towns of Davis and Thomas have developed over the years as quaint and comfortable destinations for those who enjoy the wilds of West Virginia. Dividing these two very small towns up by a highway will destroy their unique and special qualities. This alternate route designated in 2007 is hardly optimal. The highway was originally designated as a more expedient route from outlying areas around the District of Columbia. This route will essentially ruin what people are traveling to experience! Please consider what has been proposed as the Northern Route. Although more expensive, will ultimately be preferable to a highway bisecting two small iconic towns in Tucker County.</p> <p>Thank you for your consideration of this request, Patricia Gundrum</p>
139	<p>This area is an ecologically important and beautiful resource. I'm against the roadway, as there are existing alternatives and the damage to the nature &amp; the experience of those enjoying it would be immense.</p>
140	<p>I strongly support the proposed route between Thomas and Davis. I do not support the north of Thomas route.</p>
141	<p>Please do not route Corridor H between Davis and Thomas---take it by the Northern Route. My family regularly vacations and hikes in the Davis, Thomas, and Blackwater Falls area. We do not want the unique communities of Davis and Thomas to be disturbed. I have been visiting this area since I was a small child. Our family prefers to preserve what we have in West Virginia, the feeling of reduced development with a focus on the quiet beautiful scenery, wildlife, and birds. Thomas and Davis residents and businesses are doing fine without a major highway splitting their common community. For a change, let's not do what is cheapest. Let's do what is best for our State and its citizens - take Corridor H by the Northern Route.</p>
142	<p>WV has outgrown the original plans for the Corridor H expansion proposal. In the ensuing years since first developed, the areas of Thomas and Davis and the Canaan valley have BLOSSOMED into a mecca for people who now travel from all over the country to partake of the magic in that area. The arts, the music, the stunning natural beauty would be permanently and horribly disfigured should the plan stay in place.</p> <p>PLEASE PLEASE reconsider this potentially destructive decision to remain with the original plan. It will destroy the very thing that people travel to be near.</p>
143	<p>The proposed Corridor H route from Parsons to Davis over the Blackwater Canyon is a catastrophically misguided idea. The way in which the Department of Highways has been pushing this idea, more or less ignoring the concerns addressed by the proposed Northern Route, is troubling. The concerns are real and very serious. At stake is the character of this special area, which already brings in more than enough visitors, traffic, etc. The "Preferred Route" would destroy what attracts these very visitors, endangering a fragile canyon ecosystem, bringing light and noise pollution to a currently unspoiled area, and disturbing cultural artifacts. Davis and Thomas do not need a massive cloverleaf between them. The arguments that proponents of the cross-canyon alternative make are less than honest. It is falsely claimed, for example, that funds from the Infrastructure Act need to be used at once or they will disappear. We need to seriously consider the merits of the Northern Route alternative, which may mitigate or even eliminate these problems.</p> <p>Thank you for your consideration</p>
144	<p>I am objecting to the "preferred route" of Corridor H, because it will go over the North Fork of the Blackwater near Coketon with the interchange of Routes 48 and 32 between the cities of Thomas and Davis, WV. This will cause light pollution at Blackwater State Park, do little to nothing about the truck traffic going through Thomas that is destabilizing the buildings, and it will spoil the natural/historic beauty of the coke ovens/surrounding area. This area is recovering its natural beauty after indiscriminate logging and coal mining. A 200 ft bridge will mar an area that has become one of West Virginia's premier tourist attractions. I would like to see Corridor H follow the Northern Route. The Northern Route would not divide Thomas and Davis, it would not cause light pollution in Blackwater State park, and it would keep trucks off of Thomas' Front Street so that they would not further destabilize Thomas' historic buildings. I</p>

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	believe that the Northern Route would provide the least negative impact on one of West Virginia's premier tourist attractions. Corridor H will provide much needed positive impact on the area's economic development. Corridor H is a good and necessary thing, but it should be built in a way that preserves the natural beauty of the area for future generations.
145	West Virginia needs Corridor H! Please keep the environmental impacts in mind as construction is completed. Additionally, it is important to hire local companies as they could be more cognizant of being sure a job is completed that we will make us proud. Thank you for allowing me to comment.
146	I am a frequent visitor to Canaan Valley. The current plan to route Corridor H in sight of Davis would ruin the character of the area attracts me to visit. I urge you to instead use the alternative northern route out of the Davis view shed.
147	<p>I oppose any alignment of the route that would impact Blackwater Canyon and/or split between Thomas and Davis.</p> <p><b>Additional submittal:</b></p> <p><b>Website 12/10/22</b></p> <p>I am writing to express my opinion and opposition to any routing of Corridor H that interferes or impacts the Blackwater Canyon, or otherwise splits the towns of Thomas or Davis. My family and I have been visiting Tucker County for more than 25 years to enjoy its unique geography and environment. In the past 10 years or so, the towns of Thomas and Davis have witnessed a renaissance in tourism and local businesses. Both towns offer unique, local character, which has been a net positive for both communities and Tucker County as a whole. Moreover, the Blackwater Canyon is the crown jewel of the state. Running a four-lane interstate through it is short-sighted. The tourism in this area thrives on the fact it's a unique place with abundant outdoor recreation. A four-lane highway will negatively impact this.</p>
148	Please consider saving the economy of the Blackwater area by moving Corridor H north of Thomas. Thank you for consideration, Dave Harshbarger
149	Our facility is already on the 4-lane portion of Corridor H outside Davis, but having the line completed all the way to Elkins/Parsons will help students access our programming more easily so we support finishing the corridor as quickly as possible while minimizing the environmental impact and supporting affected communities.
150	I am a resident of Tucker County and make my living here. I support fully investigating the Northern Route to spare the impact of the highway running between Thomas and Davis and avoiding more of the crown jewel of our state, The Blackwater Canyon. Current due diligence is needed because times have changed significantly since the route was planned. These towns are special because of their smallness, their natural beauty and heritage. The Northern Route preserves more of that specialness.
151	Northern Route, please!!
152	Please do NOT route Corridor H between Davis and Thomas---take it by the NORTHERN ROUTE.
153	I am in support of the preferred alternative route.
154	I am writing in response to the corridor H proposal. The route between Davis and Thomas will destroy much of what us West Virginians hold dear..... The biodiversity and unique beauty of our beautiful state. The increased costs and time are well worth the effort to to save this special, beautiful, unique and tender bit of WV. Thank you.
155	Please do not build a highway anywhere near Thomas, Davis, Blackwater Falls State Park, Canaan Valley, or Dolly Sods wilderness. I have been coming to that area for nearly 40 years. The very thing that makes it appealing to visit is the fact that it is somewhat remote and harder to get to. A four lane highway will ruin this character, and bring excessive development. The work that energetic creative people have done to revive Thomas and Davis in recent years is impressive, and these towns are increasingly appealing to visitors (who spend money in the local economies) attractive because of these efforts, because they are

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	<p>remote, and because there are unique--they are NOT like everywhere else in America. Nobody wants to see a Walmart or giant hideous Sheetz store anywhere near these beautiful places! These things--which highway development inevitably bring--have ruined too many rural areas in this country. The other thing that highway development will cause is sky rocketing real estate prices as people from DC, Pittsburgh, Baltimore, etc. find the area easier to get to and start to speculate on real estate. there are countless formerly reputed mountain towns across the U.S. where this has happened. The inevitable result is that it drives local people out of the real estate market and makes places unaffordable to them. Further, the area, with Blackwater Canyon, Canaan Valley, Dolly Sods, and many more spectacular natural features is incredibly unique and irreplaceable. These areas must be protected and unspoiled. Nobody wants to visit Blackwater Canyon and be subjected to views of a four lane highway, and the resulting increased noise and air pollution. Corridor H will dramatically degrade the Thomas-Davis area if it is built. And, if it is built between the two towns, it will destroy EVERYTHING that is special about these places. If you insist on building the ethnic, please at least go north, and move it as far away from Davis and Thomas as possible. My heart aches at the thought of your highway construction destroying this place that is so special to me. Please value what is unique about this part of our country. The burgeoning tourism and outdoors recreation industries in the area are testament to exactly why it is unique. These growing industries would also be negatively impacted by bringing a highway through. Who wants to mountain bike within sight and earshot of an ugly roaring highway and the hideous gash across the land that it creates? This highway will serve no useful purpose, it is the very definition of waste.</p>
156	<p>I believe that routing Corridor H through or between the towns of Thomas and Davis would be a short-sighted mistake. This is a unique area of West Virginia which relies on tourism as its primary source of income. Routing the highway through or between them would greatly detract from their appeal.</p>
157	<p>I write to express my opinion in favor of the original DOT route for the corridor H section of road running between Parsons and Davis. (The original route is called <i>Current Route</i> on the attached sketch). The reasoning behind my preference for the original route concerns human life and safety.</p> <p>The proposed northern bypass route shown in the attached sketch will locate the proposed highway along the ridgetop that runs between Thomas and Parsons. This ridge top suffers some of the worst weather in the county. The ridge top is subject to the prevailing westerly winds and collects fog at the high elevations. By looking at the data from the WV-DOT weather station located adjacent to Centennial Park, one can see weather data that supports my description.</p> <p>Many existing residents have a strong dislike for driving the existing route 219 between Thomas and Parsons. The existing route 219 suffers from rain, ice, and extremely thick fog. Fortunately, the road is narrow and contains curves. The winding nature of the road and forces traffic to drive at a reduced speed. If people drove the route at highway speeds during inclement weather, many more accidents would occur.</p> <p>The original route design will relocate the road to a location that is sheltered by the ridge top. A road following the original design will be protected from the weather and will sit below the ridge top fog banks. The original road design will provide for fewer accidents and will save lives.</p> <p>With that in mind, I strongly urge you to follow the original design for the referenced section of Corridor H.</p> <p>If feasible, please acknowledge receipt of this letter. I thank you very much for your consideration.</p>
158	<p>I write to support the Alternative Northern Route for Corridor H. I am especially opposed to the Canyon Route. My wife and I travel to this area often to hike, camp, ski, kayak, and enjoy the natural beauty of Blackwater canyon and the Canaan valley areas.</p>

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	<p>Any chosen route should certainly not divide Thomas and Davis; these towns have become destinations for many tourists and support a diversified local economy. West Virginia already has to deal with acid mine drainage; any chose route should not increase this problem. The forests and steep mountains in this area should not be further damaged.</p> <p>The alternative northern route, going north and east of Thomas, has been extensively studied and avoids these problems.</p>
159	<p>As an outdoor enthusiast (&amp; WV native), the environs around Blackwater Falls are one of my favorite destinations. I have hiked, fished &amp; biked the area since the days of my youth and now in middle age, I've had the opportunity to introduce my children to this unique location. Alpine scenery, industrial history &amp; eclectic charm all converge in the communities &amp; state park of this highland region. In an effort to maintain the aesthetic uniqueness of the area, I strongly encourage the WV Department of Highways to reconsider the proposed route of US 48 in relation to the communities of Thomas &amp; Davis. Bisecting the communities with a multi-lane highway (with accompanying on/off-ramps) will only diminish the visual appeal of the area. A more northern route, preserving the aesthetic appeal of the communities, is advised.</p>
160	<p>I support the "northern route" for Corridor H and opposed the proposed "canyon route." The Thomas-Davis area is unique and special, with thriving independent businesses. These towns would be forever harmed and divided if the Corridor H Canyon Route is chosen. The northern route would maintain the special nature of the sister towns, not interfere with either the ecology or the beauty of the Blackwater Canyon, and would keep heavy truck traffic off of local roads. As a homeowner in Tucker County, I strongly support the northern route for Corridor H and believe it is in the best interests of the residents and visitors to Thomas and Davis. Please maintain the character of this special place that people travel from all over the East Coast and Midwest to visit and approve the northern route.</p>
161	<p>I genuinely think that Davis and Thomas are far too important to the future of that part of West Virginia to decrease its value by bisecting it with a major highway. To the north of the towns will preserve this, but also protect the outdoor economy of the area. Please reevaluate the route and move it north of the area because, as a landowner and future homeowner in the area, Corridor H is a fantastic asset, if only done correctly.</p>
162	<p>I am totally opposed to Corridor H running between Davis and Thomas. I strongly urge to choose one of the northern routes. That area is a one of a kind area and should not be desecrated by concrete and steel. Destruction of our natural resources and beauty is not the way to go. I strongly oppose the route between Davis and Thomas.</p>
163	<p>I am concerned about the current plan for the highway because of the impact it could have on water resources, particularly as the segment of Corridor H currently under construction is not abiding by permit conditions leading to muddy water and sedimentation of high-quality trout streams. Please consider the northern route.</p>
164	<p>Dear DOH,</p> <p>Please abandon plans for the "preferred route" in favor of the "Northern Route" to prevent the bisection of the towns of Thomas &amp; Davis.</p> <p>Growing up in Clarksburg, I relished the visits to the "mountain" towns of Elkins, Parsons, Thomas, Davis and the like. Though employment has required me leaving the state, I have been able to enjoy our great state by owning a cabin along Shavers Fork for the pst 30 years. Over time, i have entertained hundreds of visitors - many being out of staters - who marvel at the beauty and bemoan the infrastructure.</p> <p>For instance, just 2 weeks ago, I entertained 3 brothers from the Chicago area at the cabin. We spent on day near St. George canoeing the Cheat, the next day in Canaan Valley, Blackwater Falls, and traveled thru</p>



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	<p>Thomas and Davis. We even journeyed to Bickles Knob on the way back to the Bowden area. In short, these “flatlanders” got a great tour!</p> <p>As we drove Rt 219 N into Parsons, of course they marveled at the large and high concrete piers for the 4 lane. Questions abounded as I pontificated on the road project to improve road infrastructure. Once we arrived at Davis/Thomas, more questions came up. And the general consensus- By me and these visitors was - WHY IN THE WORLD WOULD THE DOH BUILD A HIGHWAY TO BISECT TWO TOWNS IN A TOURIST AREA WHEN ALTERNATIVES ARE POSSIBLE?</p> <p>40 years ago, such thinking might have been good for the region as coal was king and the towns were content with being isolated. But that is not the case today! These towns are bouncing back and awakened to the present and future economy based on the beauty/wilderness/nature activities which are evolving. Bisecting such close communities can only isolate and retard their development - not grow the local economy. Just look at any city to see the blight that follows such division which a limited access four lane creates.</p> <p>I implore you to reconsider plans to build the Northern Alternative of this vital roadway to the future and not bisecting the towns of Thomas and Davis.</p> <p>Thank you</p>
165	<p>I believe that running Corridor H between Davis and Thomas harms the local communities by focusing on construction that aims to get people through rather to the city and town. The current terminus would be a sufficient spur for people who wish to access Davis or Canaan Valley. Using a northern route for Corridor H would eliminate the need for a truck bypass around Thomas and provide less disruption in the established communities. Highways are physical barriers and we should learn from our mistakes in the past instead of continuing them.</p>
166	<p>In my younger years I hiked and backpacked extensively in Dolly Sods, Canaan Valley, Blackwater Falls, Otter Creek, etc. This area is a jewel for outdoor lovers. Please choose the northern alternate route for a highway, and don't degrade the view and soundscape from Blackwater Canyon.</p>
167	<p>As an owner of two properties in Davis, I highly protest the Corridor H “preferred route” splitting the towns of Davis and Thomas. It will, regardless of the projected proposals, mar the area to include the Coketon and Douglas historic districts. The natural beauty that attracts so many tourists each year and is beloved by residents will forever be destroyed. The northern route seems the most sensible as will preserve the valuable natural resources through this area. Davis and Thomas are booming, an eyesore of Corridor H would detract and impact businesses in the area. The harm to the towns and Tucker County as a whole would be irreparable. Go North!</p>
168	<p>This alternative route will help bring economic bomb into West Virginia without putting obstructions on a beautiful falls.</p>
169	<p>Please choose the northern route to protect Blackwater Falls and the towns of Davis and Thomas. It is important that, during the environmental review process, you consider the impact on the historic buildings of Thomas and Davis. Thank you.</p>
170	<p>Please carefully work on the design of the intersection with the access road to the high school - it has to be SAFE for young drivers, buses and everyone in bad weather.</p> <p>I'm very supportive of the current ROPA design and timeline. By putting the highway below Rt 32 between Thomas and Davis you keep the towns connected. Most importantly to me is the time that I will save driving to Parsons - and that an ambulance will save if one has to come from Parsons to Davis (assuming Davis ambulance is on call). Thats an important bit of information you should publish!</p>

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	<p><b>Additional submittals:</b></p> <p><b>Website 10/11/22</b> Mr. Long, this is the only way I could figure out how to ask you this question. I am a supporter of the Davis/Parson ROPA route, and I am hearing statements from folks who support the Northern Route that challenge your statement that the Infrastructure bill funding will expire in 2026. Can you provide any details to back up your statement? Thanks!!</p> <p>PS: I have already left two favorable comments.</p> <p><b>Website 12/08/22</b> I've commented before, but want to weigh in one more time since I feel so strongly about this. I strongly support the ROPA for the following reasons: 1. it'll happen sooner and make it SO MUCH easier and safer to travel to Parsons from Thomas ASAP. At night especially in weather, that's not a fun drive. 2. From an EMS perspective, the travel time between Thomas and Parsons will be about 10 minutes shorter than the current route on US219. If we go with a northern route, there will be years when the travel time will stay as it is now. 3. There's no certainty that the funding will still be available when an alternative northern route would be designed and researched and approved. 4. The WVDOH has been sensitive to the suggestions and questions that citizens have had to this point. As long as that continues, the ROPA design will minimize impact on the citizens and visitors to Tucker County. 5. ROPA takes the trucks out of Thomas.</p>
171	I approve and support WVDOH's Corridor H - Parsons to Davis Project. The aspect that I love about WVDOH's Corridor H - Parsons to Davis Project is that Corridor H will provide increased economic opportunity, improve safety, reduce congestion, and improve freight mobility in eastern West Virginia.
172	Hello, Please consider an alternate route for the construction of Corridor H between Parsons and Davis. As a resident of Douglas, our lives will be negatively impacted by the currently proposed southern route. The highway would go right over our homes and between us and Thomas. Douglas is home to many native species and plants and is a popular tourism destination for the scenic waterfalls and hiking/biking trails. The highway construction would put all of that in jeopardy. If tourism and native ecosystems are important to West Virginians, I would implore you to propose a Northern route in the already developed areas of our county.
173	While the planned route of corridor H probably seemed like a good idea many years ago, times have changed and so has the economic base of the area. Access is not the only consideration. Preservation of the historic and unspoiled character of the region and its natural resources have become paramount. I read a news story where a local elected official said we need national chain hotels and fast food restaurants in the area. This is the last thing we need, and national chains would crowd out WV businesses and send corporate profits out of state. Have we learned nothing from the history of extractive natural resource economics, and will recreate those same dynamics with an extractive service economy? Plowing an interstate between Davis and Thomas will be an eyesore, create noise pollution, and destroy enjoyment of historic areas such as Coketon and Douglas, potentially encroaching on the peace and quiet of the state park and waterfall. For those of us who have homes and families in this area, the natural beauty is the draw. The planned route of corridor H is a relic of a time when people could not conceive of the dynamic draw of Thomas and Davis. Don't kill the goose that lays the golden egg by turning our beautiful area into a noisy concrete wasteland of chain restaurants and motels, because no one has the courage to admit that what seemed, in the last century, like a way to modernize has now been passed by as a relic. Please go north. Thank you.
174	I am writing you on behalf of Corridor H Alternatives (CHA), a non-profit citizens' organization formed over thirty years ago to promote transportation systems that preserve and enhance the quality of life, natural environment, local economies, and cultural heritage of the Potomac Highlands and Shenandoah Valley of

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	<p>West Virginia and Virginia.</p> <p>On September 12, 2022, the West Virginia Division of Highways held a public meeting regarding the Parsons-to-Davis segment of the Corridor H Project. According to the Division's public notice, that meeting was held in compliance with the National Environmental Policy Act<sup>1</sup> (NEPA) and Section 1062 of the National Historic Preservation Act.<sup>3</sup> Consistent with the public participation provisions in those two enactments,<sup>4</sup> the Division also invited the public to submit written comments on the project. The current deadline for those comments is Monday, December 12.</p> <p>In an effort to provide thorough comments on the proposal and its relationship with the Monongahela National Forest, CHA requested several categories of public records from the U.S. Forest Service in May 2022. The Service did not answer that request until December 1, 2022, when it provided CHA with over 7000 pages of responsive documents. As it stands, CHA has little opportunity to review these documents and incorporate its findings into written comments. Moreover, CHA understands that other interested organizations have faced similar delay and difficulty in requesting relevant information, including records of the Division itself. Still other organizations have noted that, until just a few days ago, the Division's website still reflected the original October deadline—leading those organizations to believe it was too late to prepare comments.</p> <p>Accordingly, CHA requests that the Division extend the deadline for written comments by forty-five days to January 26, 2023. That extension would allow CHA and others the opportunity to review the recently disclosed material, craft informed comments, and ensure the Division's decision making is enhanced by the input of the very "individuals, organizations and entities likely to be interested" in the project.<sup>5</sup></p> <p>Thank you for your attention to this matter. I look forward to hearing from you.</p>
175	<p>It is undeniable that Davis and Thomas have the opportunity to use their status as tourism destination towns to build and diversify their regional economy. It is also clear that Corr H to the west is primarily for through traffic, as there is relatively scant population within the golden 3-hour drive to points west required to build on a tourism economy. Thus, any re-routing that can be done to not impact the entire reason this area is such a destination -- it's natural environment -- is desirable.</p>
176	<p>A northern route makes most sense to me. I want to see the towns of Thomas and Davis continue to thrive and to see them both connected through safe bike and pedestrian corridors</p>
177	<p>It's clear that Davis and Thomas form the gateway to Canaan Valley from the major population centers to the east. These two towns and the beautiful protected lands they serve form the economic triumvirate of Tucker County. The Corridor H route to Parsons should not bisect the towns nor cross the scenic Blackwater Canyon as older plans suggest. We know more now about the bright future of the area and should reflect that in route decisions. Find a route north of Thomas and preserve the economic engine of the region.</p>
178	<p>Take the highway north! Don't split the towns of Davis and a Thomas.</p>
179	<p>Please, the less forest destroyed, the better. Following roads already existing makes more sense. Seeing the highway from a rock doesn't matter because the area will be full of houses before long anyway. While this is being done; I live at Pineview beside Cortland Nursing Home. I would like the pedestrians considered. Wide safe berms please.</p>
180	<p>West Virginia promotes tourism. Placing Corridor H between Davis and Thomas will not help the area. I believe it will destroy the quiet and beautiful Blackwater area. I think there is potential for runoff or wrecks that could pollute the watershed. I have been going to that area to hike, bike and enjoy the peaceful serenity that is unique to the area for over 60 years. My father began taking me there when I was just a baby and I have continued to visit several times a year most of my life. The towns of Davis and Thomas have remodeled themselves to thrive without a major highway. WV has a long history of allowing</p>

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	outside sources to profit without helping an area. I believe change is good and would like to see Corridor H completed but using the northern route makes more sense for nature and the towns. Thank you.
181	I strongly support the current route of the project proposed by WVDOH. I also own property and home in the Mt. Storm area and have traveled this route for 44yrs. The current routes from Elkins, Parsons, etc put the traffic along with truck traffic through the middle of both small towns and has for decades. The proposed route currently directs traffic in between both towns allowing less noise and traffic. Allowing the current route would give travelers easy access to exit and travel to either town not bypass them completely. This Highway system needs completed not additional cost and delays!!
182	<p>I am not against the completion of Corridor H, but I strongly believe that another route, which does not go between Thomas and Davis should be considered for the Davis-Parsons section. I have the following specific concerns:</p> <p>1. Impact on tourism, the local economy, and the quality of life for local residents</p> <p>The economic situation in Davis and Thomas has changed significantly since initial studies of this area were completed in 2007. The twin towns have become tourist destinations, with articles in the Washington Post, New York Times, Backpacker magazine, publications of the West Virginia department of tourism, and others all singing the praises of these small mountain gems. Descriptions of “charming,” “quaint,” “artistic,” “thriving,” “historic,” and “unique” fill the pages of the articles, which also describe in tantalizing detail all of the many, many outdoor scenic and recreational opportunities for which these two towns serve as gateways.</p> <p>A large portion of the charm the towns offer is the rural feeling that many visitors crave and experience while driving between the towns. Route 32 between Davis and Thomas is a roughly two-mile winding, hilly, beautiful country road with the quaintness of vendors selling honey, vegetables, and homemade birdhouses on the very corner under which the Department of Transportation is proposing to pass a four-lane highway. This can only serve to create noise and light pollution, while completely and irrevocably altering the feeling that these two little towns are two joined parts of a whole. I believe the result will be a permanent very negative impact to the visitor experience to Davis and Thomas and the surrounding natural wonders.</p> <p>The State of West Virginia has adopted the motto “Almost Heaven” for its tourism marketing. The home page for the West Virginia tourism site (wvtourism.com) advertises “Country roads will take you to a well-deserved escape. They take you to less traveled trails leading to unspoiled wilderness,” and “The Mountain State is home to spirited small towns, undiscovered hidden gems, and world-class outdoor adventures. In West Virginia, let country roads lead you far away from everything.”</p> <p>The marketing is spot on. People come in droves to Davis and Thomas, Canaan Valley, Blackwater and Canaan Valley Resort State Parks, Dolly Sods, the Canaan Valley Wildlife Refuge, and so much more, to escape the traffic noise, and congestion, and so many more undesirable things that come with living in a city. I cannot fathom how the State of West Virginia thinks that damaging the beauty, charm, and uniqueness that the two little town of Davis and Thomas offer TOGETHER fits in with what the Department of Tourism is successfully marketing. It’s the reason that my husband and I relocated to Tucker County from Detroit, and it’s the reason so many people come here, and so many of us have chosen to stay.</p> <p>Local citizens circulated a petition to the businesses in Davis and Thomas advocating a Corridor H route that went north and east of Thomas. The vast majority of businesses signed the petition. They do not want a four-lane between Davis and Thomas. They believe that it will negatively and irrevocably impact</p>



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	<p>their livelihoods and quality of life. The Tucker County Chamber of Commerce also circulated a petition to their members. The result was the same, with voting members overwhelming indicating they don't want the route to bisect Davis and Thomas. Why won't the state listen to the voices of the people who have made this such a thriving area?</p> <p>2. Potential impact to Blackwater Canyon</p> <p>I attended the September 12th public meeting at Blackwater Falls State Park, and was assured by several highway representative that the highway will not be visible from any point in the park. I have to take that at face value and assume that the proper studies have been done to ensure that is true. However, representatives with whom I spoke were much vaguer about the impact of noise pollution on the park. I was given lots of caveats about the effect of temperature, humidity, and so forth, on how far sound can travel. I have to interpret that to mean that there is a real possibility that visitors will be able to hear the din of the four-lane, as well as air-braking trucks and emergency vehicles, from at least some points within the park. Light pollution is also a concern, as the park seeks Dark Sky status.</p> <p>Going back to the tourism department's advertisement of experiences with "unspoiled wilderness," how does a four-lane in such close proximity to what has been aptly called the "Crown Jewel" in West Virginia's state park system mesh with why people are coming to this area?</p> <p>Further, I am a big fan and regular user of the rail trail that runs from Thomas to Parsons. A huge bridge with a four-lane road atop it, right over this trail, will render it undesirable for use from my perspective. I suspect I'm not alone in that.</p> <p>3. Safety issues with proposed truck bypass route</p> <p>I am very concerned that the proximity of the proposed truck bypass route to the elementary school will create hazardous situations for school buses and parents taking their children to and from school. I was told at the meeting by one representative that the state doesn't yet know if there will be traffic control devices along the truck route. Another representative told me definitely that there are no traffic control devices expected along the route. Likewise, with where the route intersects Route 32 – I received two different answers at the meeting about whether traffic control devices are planned.</p> <p>Regardless of whether there are or aren't traffic control devices, I have safety concerns. Trucks often do not do the speed limit, and often run red lights. I think buses loaded with school children and cars with individuals driving their children to school turning left onto the road to the school are at unwarranted risk of collision due to having to turn left across truck traffic onto that road.</p>
183	<p>While I am not against the completion of Corridor H, I do strongly believe that another route, which does not go between Thomas and Davis is a better choice for the Davis-Parsons section. The state has already lost a lawsuit trying to go ahead with construction in this delicate and valued area. The people have repeated and for years made their opinion known that a highway between Davis and Thomas is unacceptable. Also, the state government has invested a great deal of money improving and promoting the Blackwater area as a beautiful wilderness and unspoiled attraction. Now you want to put a highway though it!? And last but not least, if the proposed route between Thomas and Davis is built, a truck bypass will be needed. The proposed attendant truck bypass will pass within an unsafe distance of the local elementary school putting parents and children at risk.</p> <p>Why is the state pushing a solution that is so obviously opposed by the people it supposedly represents?</p>

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184	It is incredible to me that our state leadership would let the DOT destroy the elements that make this area uniquely precious. It is the natural beauty of this area ... the mountains, the dark skies, the silence, the undisturbed forest and streams that we should be striving to protect. The small town quaintness of Davis and Thomas are just starting to blossom and become a destination, close at hand for West Virginians and the welcome tourists. The proposed location will dramatically detract from these towns' appeal and completely ruin the connecting opportunity. This shortsightedness reminds me of the '60s when tearing down historical, but structurally viable, buildings were torn down to build "modern" architecture that only had a fad appeal and now looks like a blight. Please, please don't be so short-sighted and destroy this area, it can't be undone. There is a perfectly good alternative.
185	I very strongly support the completion of this section of Corridor H. As fast as possible. No change in route. And it goes right by my house! Many of my friends are opposed so please don't announce my name publicly. But my husband and I are in full support of proceeding ASAP.
186	Please route the Parsons to Davis section of Corridor H on a northern route around the towns of Thomas and Davis. A northern route will protect not only a special natural landscape, but also a economy and culture those in the two towns have worked years to build. As a long time visitor to Tucker County, I can remember a time when the highway improvements ended west of Elkins and weren't even close to Davis from on the east side. Now the road is almost complete, but the proposed Parsons to Davis section will harm to the area that the corridor was supposed to help. Please consider routing the highway north of these towns to protect the land, people, and economy of this part of Tucker County.
187	Do not build Corridor H in between Davis and Thomas. Tourism is very important to our state and the Davis/Thomas area tourism is growing rapidly. The road built there will undermine that, as well as degrade the viewshed from Blackwater Falls State Park and harm endangered species located in the Blackwater Canyon. The slightly increased cost of the northern route will be made up by increasing tourism revenues which cannot be counted on if the road goes there. Use the northern route!
188	I strongly support the northern route for the Parsons to Davis stretch of Corridor H. This alternative will preserve critical recreational and ecological resources that make this part of West Virginia such an important location for those wishing to enjoy the beauty of the State. In particular, Blackwater Canyon is a truly unique treasure and impacting its viewshed with the proposed alternative would greatly diminish its value. Please make the right decision and support the northern route. Thank you for your consideration.
189	There are some who have the idea that the roadway should not go between the towns of Thomas and Davis. some of them have weight. the idea is to send the roadway around Thomas on the North side , I do not agree. My idea is in place on Route 200 in Maryland , between Rt 270 and Rt 95. where for a short stretch, less than a 1/2 mile the roadway is dug under the local roadway, Route 200 is comparable to Rt 48 in scope and use. The local road probably is much busier than any of the local roads here, There is additional cost in both options but much less destruction of the property in the area. . I believe access on on off the major Road could be handled in a much more compact way. Please consider this option. this is an area of small towns that people like to visit because they are small towns. and the local population likes it as well
190	Please keep the original route. It is shorter, less money, and we just need it built. It has been delayed for too long.
191	I am very concerned the Canyon Route of US 48 will put Thomas, Davis, and Blackwater Canyon at long term economic and environmental risk. The Canyon Route will divide and destroy the synergy of these two towns as well as degrade the beauty, historic and ecologic wonders of the Blackwater River and Canyon. The original north route reduces these risks while offering greater long-term opportunity for economic growth. It is best to do the project right, even if at a higher cost, to preserve the draw of the area that brings people like me to the area.

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	<p>My family and I have been coming to Davis and Thomas from Washington DC for over two decades. Ever since I was a young Navy Commander new to Washington DC, and needed an escape from the city, we have been coming to Davis, Thomas, Canaan Valley, and Dolly Sods. It is our favorite area. It has become part of our family traditions, that now includes my grandkids. We visit for hiking, skiing, camping, enjoying the natural wonders of the area, and learning about the history of the industrialization of the nation that is visible throughout the area. Now you want to divide towns, put a major four lane highway through and over major hiking and bike routes, and significant historic industrial sites.</p> <p>Both with and without US 48, we have seen visitation grow in the area. We watched downtown Thomas go from just the Purple Fiddle to numerous shops, breweries, and restaurants. Don't destroy these opportunities for growth by risking what supports it- the wonders of the area. Preserve them. Preserve the views from the amazingly popular Lindy Point. Preserve the unique ecosystem of the Blackwater Canyon. Preserve the synergy of the two towns. Preserve the Blackwater River for the fishing. Do this so the growth continues. Slow down and build the highway correctly via the Northern route. Even if it takes a bit longer and costs a bit more, the community, state and future generations will thank WVDOH for taking a conservative approach with a long-term vision. Don't create another boom-and-bust cycle. Let the area grow by preserving its wonders.</p>
192	<p>I think the northern route around Thomas would make much more sense. There is no way Thomas streets can handle truck traffic. Plz consider the northern route for Corridor H</p> <p><b>Additional submittal:</b></p> <p><b>Website 12/10/22</b> I've been coming to Tucker County since the 1970's. I come there because its pristine. Plz don't ruin this special place for me</p>
193	<p>It only makes the best sense to go north around Thomas as going so close to The Blackwater Canyon is a serious mistake for an area that now depends primarily on Tourism</p>
194	<p><b>Letter dated 4/8/98 to Randy Epperly:</b></p> <p>I enjoyed meeting you at the rail trail meeting in Charleston, last week. The prospect of having the Elkins to Mt. Storm Rail Trail on-line so soon (and to such a high quality standard) is very exciting. It will be nothing short of an economic boon to Tucker County and quite a feather in West Virginia's cap. Here is the document regarding the alternate routing of Corridor-H that I mentioned to you at the end of the meeting.</p> <p>I have met with the County Commission, the Davis/Thomas committee of The Tucker County Chamber of Commerce and many business people to discuss this improved routing proposal. Also, I will be meeting with the Tucker County Development Authority in the near future. Everyone that I have met with sees the obvious benefits of this alternate routing. The biggest concern that has been expressed is that by pursuing this change that we will be "rocking-the-boat" and preventing the highway from being built. I have tried to impress upon those who have expressed this concern the determination with-in the State to complete the highway and the interest that the State has in making this highway as successful as possible.</p> <p>I have asked the Chamber of Commerce to request a letter from you stating that the consideration of this alternate routing would not inhibit the construction of Corridor-H and that the State is willing to seriously consider this option if the local community can show broad support for it.</p> <p>As a highway engineer, I'm sure that the practical benefits of this routing will become immediately obvious. I would like to hear your ideas about this after you've had a chance to look this over. Thanks for your consideration of this proposal. Please feel free to call me if you have any questions. I can be reached</p>

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	<p>at 304-259-5533. Best Regards</p> <p><b>Letter dated 9/9/98 to Senator Byrd</b></p> <p>Enclosed are documents outlining a proposal for modifying the alignment of Corridor-H in regards to its passage through the Davis, Thomas, and Blackwater Falls area. I have forwarded this material to your office for your meeting with West Virginia State Senator Jon Blair Hunter.</p> <p>This plan is based on good, common sense. It will save money in the construction of the highway, it will save money in long-term maintenance of the highway. It will provide a more logical connection with the future development of Rt. 219 as a major North-South corridor. It will preserve and enhance the local community, and it will bring greater economic benefits to the community by insuring Thomas' future as a tourist destination. And it will preserve relatively scarce, level, developable lands in and around Davis and Blackwater Falls State Park. Having reviewed these important considerations in detail, I think you will see that the re-alignment of Corridor-H with respect to these communities will have a long-lasting positive impact on their economic health and growth. I know that some planning and preparation have been made based on the current alignment but I believe that the long term benefits of this proposed re-alignment would more than pay for the short term costs of the re-engineering. Thank you for your thoughtful consideration of this proposal.</p>
195	<p>We own property in Timberline and would prefer the most northern route option for corridor H. It would be detrimental to the both Thomas and Davis commerce (the ambiance of the towns would change dramatically) if the corridor H was between the two towns. The rustic and rural scenery that we cherish about this area should be preserved.</p>
196	<p>I have been a local property owner and season pass holder at Timberline Mountain for 25 years and believe there is a special uniqueness regarding the geographical proximity of the two towns as it relates to the tourism and access to the areas natural resources Please Don't divide them and undermine the uniqueness of the culture and economy.</p>
197	<p>West Virginia is a beautiful state with the abundance of wildlife and wonderful parks, but Blackwater Falls and Canaan Valley area stands out as one of the most visited natural wonders, loved by both locals and visitors. It is unimaginable that it will be changed forever by dissecting it with a speed highway. The decision to complete this project in the current version will permanently harm the area. It is not always easy to find a compromise but a solution exists that would bring the highway to the Elkins area without destroying the beauty of Blackwater/Canaan. Please reconsider the plans - your decision will affect the future generations as well</p>
198	<p>I, nor anyone in my family favor the northern route of the Parsons to Davis corridor H.</p>
199	<p>As a frequent visitor to the racist Thomas area, I cannot, for the life of me, comprehend what logic could be employed to WANT TO DIVIDE THESE TOWNS AND FAMILIES by constructing a major 4 lane highway in between them!</p> <p>Why would you do that? The proposed routing past Thomas to north would be a much better option.</p>
200	<p>Please listen to the locals and to the visitors. There cannot be many, if any who would want this highway severing the natural bond between Davis and Thomas. The natural bond of these 'sister-cities' is crucial for the integrity of the area. The bond is what keeps each unique town viable. They are one! They compliment one another and 'feed' off one another. A highway running between them would forever change not only the landscape, but the camaraderie, the psyche, the vital togetherness. Such a division would be especially detrimental to Thomas because many visitors and employees head for the two State Parks plus the ski areas. People would be much less inclined to travel through additional intersections and traffic to support Thomas. Please GO NORTH!!</p>



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201	<p>I strongly support the northern route and strongly oppose the route between Davis and Thomas, for cultural, socioeconomic, scenic/visual, sonic, ecological, hydrological, and public safety reasons. The northern route is relatively benign, at least as benign as one could expect from a massive four-lane highway through the mountains. The economic argument for the route between Davis and Thomas has no basis in reality when the comprehensive socio-environmental setting is considered and in light of all the wasted federal funding. A northern route will do less harm to the two towns, less harm to the environment, and have a significantly lower true economic cost if sustainable tourism were considered. The state needs to have more informed / better trained people involved in economic and environmental analysis if West Virginia is going to compete with the surrounding states for sustainable development possibilities.</p>
202	<p>As an owner of a house in Thomas that is affected daily by the traffic coming thru Thomas to the bridge across the Blackwater heading to Parsons, I can say that the old, established houses which have stood over 100 years suffer greatly from the trucks running thru town.</p> <p>And it affects the charm of the town which tourists find so pleasing.</p> <p>As my mother was born in Thomas, I've spent a lot of time there, over the last 70 years. Over the last 15 years the towns have seen a revival which at one point never seemed possible. And the link with Davis &amp; Canaan would be destroyed by using the original route of Corridor H. I feel the proposed northern route would be the best choice, to help ensure the continued success &amp; growth of these two towns.</p>
203	<p>I believe that the northern route would make more sense both for the economy and the tourism aspect of our state. Trying to divert heavy traffic thru our beautiful towns would ruin the tourism aspect of the area. I believe by using the northern route we could not only save our tourism but add to it by pulling people off the highway to visit all the wonderful places that were saved by diverting the road</p>
204	<p>The Thomas - Davis area is my favorite part of WV and we go there often from Morgantown for its natural and cultural charm. Running a 4-lane highway between the two towns would destroy everything we love about the place and turn it into another 'fly-over' area. So many parts of WV have been destroyed by mineral extraction. It is essential to protect the areas remaining that make WV a travel destination. Too much is at stake to lose this area that is a gateway to Blackwater Falls, Dolly Sods and Canaan Valley. Please route Corridor H to the north.</p>
205	<p>WV Dept of Highways,</p> <p>I believe your choice of route to connect Parsons to Davis is very poorly considered, and against the interests of West Virginia on the whole in the long term..</p> <p>As someone who has known Thomas for perhaps 40 years, have an international reputation, and shown recently in one of the better galleries in Thomas, I find it strange that you would cut it off from Davis, both being reemergent cultural centers as well as now tourist destinations. This will ruin the 'ambiance', open the economies to 'big money' with its destructive and fake homogenising effect (do we really need outsiders ideas of "Hillybilly culture") - and raise things beyond the level of the smaller entrepreneurs who have over the years built the unique appeal of the towns.</p> <p>This would also very seriously degrade the appeal of Blackwater Falls State Park, with highway noise pollution (think long downhill 'jakes' in the still of the night, when the big trucks run) and night/twilight traffic headlights - not what people come to experience in "Wild &amp; Wonderful West Virginia" rather, more of the same where they come from. All to save but a few minutes on a 4-lane.</p> <p>Having participated in trying to protect Blackwater Canyon from destructive logging, I am surprised that you seem to think people come here merely to spend money. They do not, because this area and mountains are a unique 'lung' on the Eastern Seaboard. I notice you did not run the Corridor through Canaan Valley..... And the construction would increase runoff, acid and otherwise, including sediment</p>

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	<p>into the Blackwater - I had the impression we were collectively trying to build a better world, but this is regressive - the Canyon contains both rare and endangered flora and fauna. There is a lot of West Virginia history and culture, both 'good' and 'bad' in the Canyon, of great interest to those who walk its length, and understand both industrial and labor history.</p> <p>To allow a few eager-money administrative people living elsewhere to decide what is really a local matter, since there is a perfectly viable (and partly Federal IRA funded) route to the north, I would urge you to reconsider, and do the long-term sensible thing, instead of being in such a rush to be remembered for a hurried and willfully destructive decision.</p> <p>Sincerely, Stephen Lawson.</p>
206	Go North!
207	<p>The canyon and park still have a pristine appearance when looking at the sights from all the vistas. The beauty of the area would be greatly diminished by constructing a large elevated bridge over the area. A more northern route would still suffice the transportation needs without impacting the park vistas and attractive wilderness it now demonstrates</p>
208	<p>Please don't wreck the two nicest towns and one of the best watershed protection groups in the region. There is no industrial growth poised to take place; just the destruction of rustic charm, extinction of species, and further AMD issues.</p> <p>Additional submittal:</p> <p>Website 12/10/22</p> <p>The motivation for this highway's construction is 50+ years out of date, reaching back to an era before the decline of coal had begun or even been predicted.</p> <p>The towns of Thomas &amp; Davis are some of the most charming, healthy, and economically robust towns in the region. That's in part because of their beauty and serenity. Please don't destroy the economic viability of these towns for the sake of a highway that no longer has any economic purpose.</p>
209	I fully support the preferred alternative.
210	<p>The roadway of Corridor H through Davis and Thomas sounds like another project that West Virginia does best: ruining the natural beauty of the state. And helping others bypass the state more quickly.</p> <p>I have been visiting faithfully Blackwater Falls State Park for over 60 years. The thought of an interstate scarring the view at Lindy Point is devastating. The thought of Davis and Thomas being physically separated by an interstate is appalling, especially since these 2 towns have worked so hard to reinvent themselves as remote getaways, which we all need to be able to escape to.</p> <p>There is concern that blasting to build this road will increase the acid mine drainage in the area, and disrupt the unique flora and fauna found in the Blackwater Canyon.</p> <p>Please reconsider the location of Corridor H, and take the Alternative Northern Route. Protect the rural treasure of the Blackwater Canyon and Blackwater State Park.</p> <p>Sincerely, Regina Lindsey-Lynch</p>
211	<p>Please opt for the northern route!! Listen to the folks in Davis &amp; Thomas who understand the importance of securing the beauty &amp; serenity that the "preferred" option would threaten. I visit the area at least twice a year to hike and savor the natural areas as well as the local special small town qualities the area offers.</p>

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	<p>Noise &amp; visual pollution would threaten these treasures, not to mention impact on species of special concern nearby. Please think long view, not expedient view!! Please.</p>
212	<p>I do not support the DOH's "preferred route" for this project. We prefer that the addition of Corridor H GO NORTH of Thomas.</p> <p>As a long time resident, it is very clear how intertwined the towns of Davis and Thomas are. We do not support a permanent division of a 4 lane highway between the 2 towns.</p> <p>There is nothing more safe about the "preferred route."</p> <p>Your "preferred route" is not preferred by the people who live here. It would most definitely reduce our quality of life.</p> <p>It would permanently damage the character of the most visited State Park in the state of WV, Blackwater Falls. We rely on tourism for many of our jobs and most certainly our business in Davis.</p> <p>This would have a largely detrimental effect on our business in Davis.</p> <p>A northern route would alleviate truck traffic in Thomas.</p> <p>A survey of Davis homeowners found the majority of residents support a Northern Route, north of Thomas. I believe an updated survey of residents would be in order (at the Informational Workshop in September, you all were quoting info from 2007 (15 years ago).</p> <p>Who is opposed to your "preferred route" dividing our community? People who live, work and recreate in Tucker County.</p> <p>We do not want visual, noise and light pollution here. It'll degrade our quality of life and the tourism industry.</p> <p>The Director of the project, Mr. Travis Long said at the public workshop that he handed out 2500 brochures about this preferred route a week before the workshop. We never received a visit from Mr. Long or anyone from DOH regarding this route. Not at our business in Davis, nor at our home. Nor has anyone else we know here in the community. I have not spoken with one person (besides DOH staff) who prefers that Corridor H divide our community.</p> <p>Please perform a current and thorough updated survey of the people who live in Thomas and Davis and Canaan Valley. It's not too late to make the right decision.</p> <p>Thank you, Sara Litzau, Tucker County Resident</p>
213	<p>After reviewing the information presented I feel strongly that the Northern Route will be less impactful. The preferred route divides the two towns and is too close to Blackwater Falls State Park. The preferred route will negatively impact recreational opportunities in close proximity to the route, and dividing the towns will further negatively impact both.</p> <p><b>Additional submittal:</b></p> <p><b>Website 10/4/22</b></p>

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	<p>We do not support the DOH's "preferred route" for this project. We prefer that the addition of Corridor H GO NORTH of Thomas.</p> <p>As a long time resident, it is very clear how intertwined the towns of Davis and Thomas are. We do not support a permanent division of a 4 lane highway between the 2 towns.</p> <p>There is nothing more safe about the "preferred route."</p> <p>Your "preferred route" is not preferred by the people who live here. It would most definitely reduce our quality of life.</p> <p>It would permanently damage the character of the most visited State Park in the state of WV, Blackwater Falls. We rely on tourism for many of our jobs and most certainly our business in Davis.</p> <p>This would have a largely detrimental effect on our business in Davis and tourism in Tucker County.</p> <p>A northern route would alleviate truck traffic in Thomas.</p> <p>A survey of Davis homeowners found the majority of residents support a Northern Route, north of Thomas. I believe an updated survey of residents would be in order (at the Informational Workshop in September, you all were quoting info from 2007 (15 years ago).</p> <p>Who is opposed to your "preferred route" dividing our community? People who live, work and recreate in Tucker County.</p> <p>We do not want visual, noise and light pollution here. It'll degrade our quality of life and the tourism industry.</p> <p>The Director of the project, Mr. Travis Long said at the public workshop that he handed out 2500 brochures about this preferred route a week before the workshop. We never received a visit from Mr. Long or anyone from DOH regarding this route. Not at our business in Davis, nor at our home. Nor has anyone else we know here in the community. I have not spoken with one person (besides DOH staff) who prefers that Corridor H divide our community.</p> <p>Please perform a current and thorough updated survey of the people who live in Thomas and Davis and Canaan Valley. It's not too late to make the right decision.</p> <p>Thank you, The Davis Depot, LLC 466 William Ave. Davis, WV 26260</p>
214	<p>We DO NOT support the "preferred route" of this project. We prefer the route GO NORTH of Thomas. Why? The "preferred route" would permanently divide the "twin cities" or sister towns of Davis and Thomas. We are a tight, intertwined community involving both towns. It would damage the character of the most visited State Park in the State, Blackwater Falls.</p> <ul style="list-style-type: none"> <li>* A northern route would alleviate truck traffic in the towns, especially Thomas.</li> <li>* A survey of Davis homeowners found the majority of residents supporting a Northern Route, North of Thomas.</li> <li>* As a business in Davis, we do not support the DOH's "preferred route".</li> </ul>



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	<p>* We request an updated survey of the people/residents of Thomas and Davis. Thank you for considering.</p>
215	<p>I object to the proposed Corridor H ROPA route near Big Run Bog. I value Blackwater Falls and the watersheds in the area. This is an invaluable landscape that could not be improved with a highway in sight of the bog.</p> <p>WV Highlands Conservancy and Friends of Blackwater--object to the proposed ROPA route and have written you detailed letters outlining the problems which I will only encourage you to read and add my name to their report as I trust their assessment of the problem and I object to the proposed Parsons to Davis route.</p> <p>Serious concerns about water quality, acid mine drainage and truck routes in our designated National Forest and National Natural Landmarks makes me think you haven't thoroughly considered the impact to these precious lands, the local people, and enable our economy to prosper in the long term.</p> <p>People don't to travel to West Virginia so they can stare at a highway from our state parks. Further destroying the natural scenic value of Backbone Mountain with a highway will discourage visitors from making the trek to one of our great vistas</p> <p>Moreover, long term, the region's stability depends on the stability of its natural resources. Don't mess this up by ignoring our objections.</p> <p>We all know there are other options, though they may not be easy, they will preserve West Virginia's most precious resource, it's mountains and people.</p>
216	<p>I am against both routes. I believe we should not build four-lane roads anywhere in the Monongahela Forest. When our ancestors declared Monongahela a national forest, they implied they did not want four-lane highways built through it. But now their descendents turn their back on the ancestors and slither into a viewpoint that rationalizes total mobilization. I do not mean to call anyone a snake, but that some powerful people have had some snake-like moments, so lost in machinations that they can't keep their eye on the simple truth: we would betray our conservationist ancestors if we continue to let a monstrous, concrete serpent wend its way down the steep cliffs and crags between Davis &amp; Elkins, O Senators. "May someone hear the forest's cry."</p> <p>Davis to Moorefield is a sublime drive now. Thank you. It is fitting. But a four-lane road between Davis to Elkins would not be fitting. You say, "But traffic will keep increasing." You do not know that. Perhaps a gasoline crisis is around bend, or some unforeseeable series of events that will decrease Tucker traffic...and make us feel stupid and greedy for thinking we needed bigger roads.</p>
217	<p>We bought a house in Thomas because we love the community. It is a special place, a mix of locals and artists. We love cross country skiing to Douglas Falls. We love going to Davis. We love hiking the area. We love walking through town, by the Coke ovens. Building the highway to divide Thomas and Davis, and to destroy the trail to Douglas Falls is a big mistake. It would destroy what is special about this place. The quiet, the quaint community that locals and tourists love. Please lead the new highway around Thomas and Davis, not through them, to preserve these unique towns. They are a haven for Tucker County. They are a major tourist draw. There are rentals all over here. People come here because it is a special place. They are people like us who fall in love with the community. Please do not destroy this by building a highway here. I used to live in Memphis, Tennessee. The city wanted to build a highway through the historic Midtown area, the old growth forest and city park, and the zoo. The citizens of Memphis said no. As a result, the highway stops in town and resumes by the Mississippi River. The only place on the whole country where this major Highway that leads from one coast to the other is interrupted. And it allowed</p>

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	<p>the city to thrive. Today, the areas where the highway was supposed to go through are some of the most special areas of the city, and Memphis has one of the top zoos in the nation. I understand building a highway is never ideal. But looking for the least destructive option is an investment in the community, in the tourism industry, which is so important for Tucker County, and in preserving the beautiful nature and history of this unique place. I am sure there are other examples of how other communities thrived thanks to the decision not to build a highway. So either lead the highway around, or stop it, build a road, and resume the Highway three miles down. There are other examples around the country where this is working. Take a look at Memphis. Or please build around this special community. Thank you!</p>
218	<p>December 6, 2022</p> <p>Mr. Travis Long, Director Technical Support Division West Virginia Division of Highways 1334 Smith Street Charleston, WV 25301</p> <p>As a resident of Davis WV who uses Route 32 every single day, I am very concerned about the Truck Route and the hazards of sharing a 2 lane local road with fully loaded trucks weighing 80,000 pounds. This is a disaster waiting to happen.</p> <p>I attended the information meeting at Blackwater Falls State Park and expressed my concerns to the DOH about the Truck Route pouring trucks back onto our local road. Several DOH employees replied: "But you already share that road with trucks." Yes, we do ... but DOH Travis Long has assured us over and over again that truck traffic is going to increase here on the mountaintop as soon as the highway is completed in Parsons. And research backs up his claim.</p> <p>Between 2016 and 2046, TRIP predicts a 44% increase in annual freight moved in the U.S., with trucks carrying 41% of that increase. As the demand for resources increases over the next few decades, the lionshare of truck loading will fall to rural areas, further increasing already deteriorating roads. (Big Industry's Effect on Small Town Roads. Alison McGee)</p> <p>According to the U.S. Department of Transportation, 47% of vehicle miles traveled by trucks occur in rural areas. As the demand for resources increases over the next few decades, the lionshare of truck loading will fall to rural areas, further increasing already deteriorating roads.</p> <p>Significant safety risks exist with the DOH designed Truck Route. Tractor trailers would be forced to slow down and make turns at 3 busy intersections shared by school buses and local traffic: 219 South, 219 North and Truck Route/Rte 32. At a 4th intersection where Rte. 48 meets Rte 32, trucks will have to make a 90 degree turn to get onto the highway.</p> <p><b>**Why would the DOH consider an alignment that forces trucks to slow down, enter a 2-lane road filled with local traffic, and make a 90 degree turn to get back onto a highway?</b></p> <p>Our mountaintop will become congested with trucks moving super heavy loads of resources and equipment, meeting passenger cars over and over again, in all kinds of weather, day and night.</p> <p>Route 32 is the connecting artery between our towns and it is used every single day by all of us who live, work and visit the mountaintop.</p> <p>We drive our children back and forth to school each day We drive to work</p>

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	<p>We go the the doctor and dentist  We visit friends and relatives in Corland Acres  We go back and forth to the grocery store  A million visitors use 32 to get to Blackwater Falls State Park (the only access to the park)  We use 32 to access surrounding hiking/biking trails</p> <p>*And school buses travel this road each morning and afternoon - full of children*</p> <p>Would the DOH kindly answer these questions:</p> <p>Will the truck route be constructed before, after or at the same time as the ROPA?  What will the detours be for local traffic on Rte. 32 and Rte 219 during construction?  How will children getting to school be accommodated?  What type of intersections will there be for trucks to get on and off the truck route at and back onto Corridor H?  What safety studies have been done regarding the specific intersections and where can the public find them?  Will Rte. 32 need to be widened?</p> <p>What the SEIS must do is comply with the Settlement Agreement and focus on the Thomas-Davis Section. The DOT must go back to previous alternative routes and complete a design for a 4-lane highway that goes north around the town of Thomas, around their park and their water supply, and then connects with the already-completed Corridor H to the east of Davis.</p> <p>For the safety of the trucks and their drivers, for the safety of our local families, I support the Northern Alignment of Corridor H which is the Truck Route.</p> <p>Sincerely,  Nancy Luscombe, Resident. PO Box 631. 455 Thomas Avenue. Davis WV 26260  nancyluscombe@gmail.com</p> <p>Cc:  Governor Jim Justice  Jimmy Wriston, Secretary, West Virginia Department of Highways  Chelsea Ruby, Tourism Secretary  The Honorable Joe Manchin</p> <p><b>Additional submittals:</b></p> <p><b>Website 12/11/22</b>  December 9, 2022</p> <p>Mr. Travis Long, Director Technical Support Division  West Virginia Division of Highways  1334 Smith Street  Charleston, WV 25301</p> <p>I am a full-time resident of Davis WV. The ROPA alignment and proposed Truck Route will greatly impact the quality of life for my community and our mountaintop. The "Northern Route" is equally feasible and</p>

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	<p>less damaging than the DOH “preferred” ROPA route and should be considered. The Northern Route is the truck route.</p> <p>Here in eastern Tucker County, the mountaintop is our community. This little stretch of land is home to our homes, our businesses and our livelihoods. Separated by only 2.8 miles, our two small towns are linked by Rte 32, our only connection to our schools, our jobs, our grocery store, our medical clinics, our friends and family and our churches. As Governor Justice said, it’s our “pond” and we want to protect it. We don’t want a highway crossing it, and we don’t want a truck route dumping trucks into it. Our schools are located in Thomas, but our grocery store is located in Davis. So you can see ... we travel back and forth on Rte 32 a lot!</p> <p>The Comprehensive Plan of Davis states its priorities:  *Preserve the unique character and integrity of Davis throughout any growth and development that may occur.  *Protect its existing assets: The natural landscape and rural beauty, dark skies, the small town atmosphere.</p> <p>In a recent survey, a majority of Davis residents voted for the Northern Route and they said:</p> <p>“I chose Davis because it’s a small, quiet town. I think it would be awful if things would come in to destroy the quaintness and simplicity of Davis.”</p> <p>“One of the best things for me about Davis is its small town feel.”</p> <p>“One of the nicest things about Davis is feeling that one is escaping clutter, noise, commercial areas, arriving at a place where one can breathe and relax.”</p> <p>“Preserve the connection between the two towns.”</p> <p>“A highway between the towns would ruin forever the look and character of these two small towns with lights, noise, and commercial business.”</p> <p>And a recent guest, after leaving Davis for home, wrote:</p> <p>“We’re home now, stuck in 4 lanes of traffic going nowhere, and missing your small quiet street ...”</p> <p>A homeowner who experienced living in a small mountain town that a highway went through wrote:</p> <p>“Highway towns do not do well. Anyone who lives near a highway knows how loud the traffic noise is. Trucks run 24 hours a day everyday, and the noise is incredible. In the summer we can’t sleep with our windows open at night anymore because of the noise. Once Corridor H opens it will be a direct route west from The Virginia Marine terminal. You might not think it is a big deal now, but once it is open it will be a major truck route. Like most towns that are by a highway the residents that live close to the highway will sell their property because of the noise, then near the exit will become gas stations and fast food restaurants.”</p> <p>The impact of 3 major truck related projects on our mountaintop is unthinkable:</p> <ol style="list-style-type: none"> <li>1. A 4-lane highway crossing over or under Rte 32 less than a mile from the center of Davis.</li> <li>2. An interchange seconds from the doorsteps of Davis residents.</li> </ol>



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	<p>3. A truck route dumping trucks back onto our only connecting road, Rte. 32.</p> <p><b>**It just doesn't make any sense, especially when there is a prudent and feasible option for a continuous 4-lane highway that goes north around the town of Thomas, around their park and water supply, and then connects with the already-completed Corridor H to the east of Davis.</b></p> <p>Noise. Lights. Heavy equipment. Pollution. Years of confusion in a construction zone. The ROPA alignment, along with the proposed truck route and the interchange will change forever the look and feel of our mountaintop, our small town. Where will local traffic go during these years of Construction? Visitors will put off trips to the mountaintop and find other places to go during construction - and perhaps never return.</p> <p>For the sake of the integrity of our small town, for the sake of our children, and their children, I ask the DOH to take the trucks off our local streets and off our mountaintop. Choose the Northern Route now.</p> <p>Thank you for your consideration of this very important matter.</p> <p>Nancy Luscombe, full-time resident of Davis WV</p> <p>Cc: Governor Jim Justice Jimmy Wriston, Secretary, West Virginia Department of Highways Chelsea Ruby, Tourism Secretary The Honorable Joe Manchin The Honorable Pete Buttigieg, Secretary, US Department of Transportation</p> <p><b>Website 12/11/22</b> December 10, 2022</p> <p>Mr. Travis Long, Director Technical Support Division West Virginia Division of Highways 1334 Smith Street Charleston, WV 25301</p> <p>The completion of the Parsons to Davis section of Corridor H should reflect current economic conditions of the area rather than conflict with them. My comments address the enormous economic changes that have occurred in the project area of the ROPA alignment and the proposed Truck Route.</p> <p>After decades of economic decline, things have dramatically changed; now it's a different story. Our three "gateway communities," Thomas, Davis and Canaan Valley, capture the majority of Tucker County's economic activity (65 million in direct sales annually) from outdoor recreation and tourism.</p> <p>With a 5-year growth rate of 101.82% in Tucker County and with 392 new businesses (only Berkeley and Summers Counties are ahead of us), I'd say, in the words of Governor Justice, "We know how good our pond is and we're proud!"</p> <p>Don't kill the goose that laid the golden egg.</p> <p>The ROPA alignment goes through the very thing that drives our economy and sustains us: our treasured</p>

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	<p>surrounding beauty and the unique character of our two small towns that make this place so special.</p> <p>Don't put a highway in our pond!</p> <p>We have to protect what we've got - what our economy is based upon: gateway to outdoor recreation, respite from big city life, small town charm, historic resources, and a state park that attracts over a million visitors a year.</p> <p>Thomas and Davis have gained notice among the Most Desirable Small Towns in America. They are destinations in their own right, home to locally owned restaurants, art galleries, breweries, coffee shops and unparalleled access to the outdoors. Davis is best known for its world-class outdoor recreation opportunities and outstanding access to pristine and wild public lands, with direct access from downtown to several trail networks.</p> <p>Constructing a four-lane highway between the towns and into the Blackwater area, along with a Truck Route that pours trucks back onto our only connecting local road, would spoil these attractions and devastate our local economy.</p> <p>We want a "good version" of this highway - one that will stand the test of time! We want a well-designed highway that goes north of Thomas, around their water supply and their park, and then connects with the already completed Corridor H east of Davis. We want a Better Route, one that does not degrade our towns.</p> <p>The Northern Route leaves one of the most popular and attractive destinations in WV intact.</p> <p>*The majority of businesses in Thomas and Davis prefer the Northern Route.          *65% of the respondents to a Chamber of commerce survey voted for the Northern Route.          *The majority of Davis residents voted for the Northern Route on a recent town survey.          *2,000 + concerned citizens have signed a petition for the Northern Route.</p> <p>The current ROPA alignment bisects our collective mountaintop community and causes economic impacts that can never be mitigated. Another choice exists that quite simply avoids all of these impacts. Incorrectly located highways have devastated too many communities in America; please help Davis, Thomas and Canaan Valley avoid another tragic highway mistake.</p> <p>Thank you very much for your time and consideration in this matter.</p> <p>Sincerely,          Nancy Luscombe, Davis WV Resident</p>
219	<p>I am writing to support the northern route for Corridor H. Taking the road between Davis and Thomas (as proposed) will have a negative impact on these communities. They are both popular tourist destinations...mostly because they are small towns with much old world charm. Having a four-lane come through between the two towns as proposed, with the accompanying development/sprawl will detract greatly from this charm.. Visitors here come because this area feels different than other parts of the country and its fast paced roads and busy shopping strips. To encourage that very same sort of sprawl and busyness will not help preserve our unique identity. Such development will also change the quality of life for those who live here full time. There are many other places to be with that sprawl...bur few without. Let's not ruin this one. Please take the road north and around Thomas.</p>

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220	I, along with many others, have wished for 50 years to bring economic development to Tucker County. Davis and Thomas are becoming vibrant communities once again. Corridor H between the two towns would ruin their integrity and the efforts so many of us have put into Davis and Thomas. Please use the Northern Route around Thomas, leaving these two towns to be the special feeling area that they have become.
221	The propose Corridor H route to go between Thomas and Davis and cross the North Fork of Blackwater above Douglas is a terrible idea. I am born and raised in Tucker County and I am a local business owner. Going North of Thomas with the route is a much better way. It eliminates splitting the towns with a high speed divided highway, it get the noise, light and visual disturbance away from Blackwater Falls State Park and further from the towns, and it eliminates truck traffic in Thomas. Please listen to the people of Davis and Thomas and move the route north. Thank you for your time. Sincerely, Athey Lutz
222	<p>Please listen to the residents of Tucker County. We are in favor of the Go North route. We do not want an exit ramp dividing the towns, or big box stores. We prosper over our historical heritage and culture, wild spaces, and quaint mom and pop small businesses. These will all be greatly impacted by the proposed route.</p> <p>Thank you for your time.</p>
223	Please do not route Corridor H through Blackwater Park. It will ruin its peaceful aesthetic and negatively impact the wildlife there. Thank you.
224	In order for corridor H to be completed better safe guards for water run off must be implemented to protect trout streams from sediment and the water quality. Silt fences are worth less when it comes to water run off. There are better ways to keep muddy water from polluting our trout streams such as channeling water to large sediment bags or sediment ponds or tanks. Do your job and protect our trout streams.
225	Go north! Keep our rivers clean
226	Keep H out of the canyon, please.
227	We have mountain biked and hiked in summer and fall, cross country skied and snowshoed in winter, this is a unique and beautiful area, PLEASE DON'T PUT A ROAD THROUGH IT!!
228	Please support the northern route. I strongly oppose a highway between Davis and Thomas.
229	We believe the northern route would be better for tourism since it would not divide the two towns, Thomas and Davis. We also believe it will have negative affect on the historical sites in Douglas as well as the beauty of the Blackwater Canyon and the State Park. We also worry that the infrastructure from the old Douglas mine could be compromised.
230	<p>Mr. Travis Long, Director Technical Support Division West Virginia Division of Highways 1334 Smith Street Charleston, West Virginia 25301</p> <p style="text-align: right;">Dec 8, 2022</p> <p>Dear Mr. Long,</p> <p>The current WVDOH preferred route Davis to Parsons is outdated and ill-conceived. Thomas and Davis are now destinations and are a prime example of sustainable economic diversity that should be examined. The statistics for visitors to Blackwater State Park (1,000,000+ annually) are based on what and where it is. Otherwise the state of West Virginia would not have just invested millions of dollars upgrading it to meet the demand of current visitors to the state.</p> <p>Large scale trucking companies, in order to stay competitive, pay truckers a low wage. Why should transportation of goods sacrifice our landscape and rural communities?</p>

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	<p>Reviewing your own DOH statistics does not lend credibility to the need for a roadway. Most accidents in Tucker County are single car in daylight, clear conditions 66.5%, 2016-2020. Your current 2022 road count in the area may be 5,000 cars at peak times. Your ROPA does not deal with weather related safety issues, 4% accidents over 4 years. Where is the plan for fog navigation, roadway deicing, respect for wildlife with dark skies lighting and getting trucks off our narrow roads?</p> <p>The 1965 vision of transportation and understanding of moving goods and services does not match current conditions and means. The mission of the corridor according to the Appalachian Corridor H SFEIS 2007 is to promote economic development, preserve or improve quality of life in the region, reduce truck traffic through the City of Thomas and improve emergency response times and access to emergency facilities. The current plan does not meet any of these criteria.</p> <p>The 2007 SFEIS is out of date and be redone not updated. The study area should be widened to meet current development and future development within the area. The areas for possible development within this part of the county is obvious by reviewing private landholding tax maps.</p> <p>The Ascend Program, the state and private parties promoted, neglected to understand that a 4-lane highway through the Blackwater Historic Industrial Complex would compromise the quality of rural life for those looking to bring businesses here as opposed to anywhere else. When Virgin Hyperloop selected Davis they stated that proximity to natural resources and the rural environment played a huge part in their decision, it was not just government incentives.</p> <p>The best use of taxpayer money and to promote safety for the community is to improve Route 219 into a 3-lane roadway with sophisticated fog lighting and deicing systems and to create a commercial traffic loop around Thomas. That would save the community from unwanted commercial traffic and noise; save the upper road (Spruce St) in Thomas built by the Conservation Corps on the National Register for Historic Places; create an exit for Cortland Acres and the northern side of Thomas and leave the current Rt93/32 intersection.</p> <p>The WVDOH has spent the last 6 months spewing untruths to this community. Disseminating misinformation is not only disrespectful to this community it damages your credibility. I have been in meetings with Mike Moran from the Elkins DOH when he promised there would be strict oversight of the Kerens to Parsons contract, especially in the Moore Station area. We can see how that turned out. A tier 3 stream was destroyed, piers are slipping, and abundant violations levied on the construction company.</p> <p>As a business owner in Davis, I believe having a major 4-lane road go through the Historic Blackwater Industrial Complex will have long term detrimental economic effects on the area. As a 20+ year member of the Tucker County Planning Commission, focusing on the impending growth in Tucker County has been our priority. We educated ourselves about "smart growth" methods and policies, studied other similar rural communities experiencing uncontrolled growth, and reviewed sustainable economic development policies. We all agree we need safe roads year-round. The cost benefit ratio for bringing a \$ 50M per mile road that divides Thomas and Davis and compromises our natural environment is not a good business decision.</p> <p>We know you can make adjustments, you did it around New Germany Valley, and Corrick's Ford Battlefield in Parsons.</p>



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	<p>Sincerely,</p> <p>Robin McClintock 6821 Dry Fork Rd Hendricks, WV 26271</p>
231	<p>I oppose any road going through this section. I once lived there and Cord. H running through that area will forever destroy a place where history is dying by the day. It is a shame that we keep paving over our treasures.</p>
232	<p>Though my husband and I don't live in WV we visit frequently. Blackwater Falls State Park is one of our go-to places to take family who are visiting. Without a doubt it's a year-round destination for us. Such a wondrous natural area. Please select an alternate northern route which avoids impacts to this incredible natural resource.</p>
233	<p>Build it on the preferred route.</p>
234	<p>Hi,</p> <p>It's me again. I'm also glad to hear the Parsons to Davis section is finally going to get built. Great economic impact for WV. Please see to it that the construction doesn't damage or destroy our beautiful, and fish full waters.</p> <p>I do wish you would take the northern route though.</p> <p>Thank you,</p> <p>Tim McGowan</p>
235	<p>This "informational" session is highly deceptive and misleading. For instance, the interchange detail has no legend whatsoever - one doesn't and cannot know that these are wetlands at issue or that as the fellow stated "it will be one giant excavation." This is a sales job - what about our unique culturaleal heritage and natural resources - just tromp all over us and our precious land - environmental justice - hah! Answer FOIA's! Excavation with area of mine portals etc.</p> <p>Comments were provided as an attachment:</p> <p>It is plain that DOH is bent upon its preferred route crossing the Blackwater Canyon. The detrimental Impact of the DOH preferred route is multi-faceted. The route bisects Thomas and Davis and will harm their unique charming qualities and growing economies. There are a myriad of concerns regarding area water resources. The proposed construction runs through a virtual maze of old coal mine workings. Additional acid mine drainage could be released allowing polluted water to make its way to the Blackwater River thereby negatively impacting the ecology of the area and local tourism. Blackwater River thereby negatively impacting the ecology of the area and local tourism. It may also result in increased pollution to downstream drinking water sources such as local wells. Gorgeous view sheds from Blackwater Falls State Park and other areas will be destroyed. The Blackwater Industrial Complex including the coke ovens and railroad structures vital to the coal and timber industries in the 1900's has major historical value that will be undermined. Blackwater State Parle alone brings in more than \$1 million from visitors to the area-more economic value that any other State Park. It is Indeed State's crown jewel. It is shortsighted to design a route with negative impacts to the Park. We must try to protect it. It is discouraging that while the DOH website indicates that Supplemental EIS for their preferred route is "in progress," the DOH has failed to respond to Freedom of Information Act requests seeking relevant information regarding the purported studies. This certainly indicates that DOH is advancing along its preferred route. The DOH preferred route with its extremely elevated roadways and large piers will cross</p>

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	<p>rivers and creeks, be built on unstable reclaimed mine soil, may impact old mine workings, disturb some eleven acres of wetland, and detrimentally affect local historical and cultural resources. But, it does not have to be that way. We do not have to simply accept the Charleston and Washington approach to the route. There are better and less destructive ways to complete the Parsons to Davis section of Corridor H. We need to get educated, invested, explore and influence the various other design options that avoid the Blackwater Canyon, avoid cannibalizing the communities of Davis and Thomas, and protect our natural resources. There are other options that take a northern route. We must make every effort to have DOH and the powers that be select an alternative route that preserves our local community resources. We have the right and the ability to influence reasonable design change and accomplish the completion of this significant section of Corridor H while also protecting our environment, communities and cultural heritage.</p> <p>Questions Regarding Corridor H</p> <p>What environmental studies have been conducted in the last 5 years?  Who conducted them?  Were the studies the subject of bidding?  What studies are ongoing?  What studies have been completed?  What studies are planned?  Where are the results of any completed studies?  Why is information regarding studies not on the website?</p>
236	It looks like the proposed Northern Route will avoid many impacts to the Mon Forest and Blackwater Canyon and could better serve the businesses of Thomas and Davis. Please choose the Northern Route if Corridor H is built at all.
237	WVDOH needs to seriously consider the northern route, above Thomas and Davis for Corridor H in Tucker County, with a minimal truck bypass of Thomas. It is supposed to be an economic development highway, and this way is best for Thomas and Davis, while avoiding major impacts to the Blackwater Canyon area.
238	This project is a progressive, wonderful idea for travelers on this new road. It would overpass any problem, curved areas and give drivers a wonderful view of the area and scenery. This will only add visitors, some rural progress and a safe road for all travelers wanting to appreciate the glory of our area. Thank you for progressing on this! I will be so glad to get to my doctors faster!!
239	Please build the highway with the "Preferred Route." Build it ASAP with the Federal Funds. It is a safer highway than current conditions. We deserve the road and all the positive synergy that goes with the new road and also after the new road is finished. Obviously it is not unanimous decision but it is the most popular decision. Thank you!
240	<p>I object to the building of Corridor H between the towns of Thomas and Davis, continuing to Douglas over the Blackwater Canyon Historic area.</p> <p>This plan would undermine the connection between the local communities and make it dangerous to travel between the towns on foot or bicycle. An elevated 4-lane highway through the beautiful Blackwater area is not in the interest of the local economy.</p> <p><b>Additional submittal:</b></p> <p><b>Website 12/16/22</b></p> <p>I support the northern route in order to have most positive impact on Thomas and Davis and to insure protection of all of the natural beauty of area surrounding the parks that attracts so many tourists and incredible wildlife.</p>
241	We NEED this section of road completed.

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242	Go North! Save our small towns!
243	Although Corridor H is a needed addition to the transportation network of people, goods and services in the High Alleghenies, please ensure that contractors are held responsible for accurate, safe, and legal building practices. We sell beauty in WV and pollution from construction sites does not help the financial growth of my community. All of us have certain parameters and standards to meet when we do our jobs, and highway building should be held to the same.
244	I support the Northern Route for Corridor H from Davis to Parsons. The current planned route would damage the local economy by impacting the natural beauty of Blackwater Falls State Park, Blackwater Canyon, the rail trail, the historic coke ovens and more. The Northern Route is a much better option to preserve the actively recovering economy of this area.
245	Please route Corridor H north of Thomas and Davis. Do not use the route through these two towns.
246	<p><b>Email dated 9/15/22 to Jason Workman:</b></p> <p>Thank you for your time regarding our phone conversation about Corridor H on September 1st. I appreciate the discussion we had on several related issues and that you are willing to help me get back on the WV DOH mailing list after my several attempts to do so which have not been successful. Unfortunately, my slow follow- up to you, and my inability to attend the public workshop on September 12th at Blackwater Falls State Park (BFSP), was due to illness.</p> <p>As mentioned during our conversation, according to both the Programmatic Agreement and the Settlement Agreement, I should have been receiving any updates and studies related to Corridor H. Despite several contacts with WV DOH to update my address, this has not happened. I am hopeful that this will now be resolved. I would also like to request that a hard copy of the packet of information provided to the public at the workshop on September 12th be mailed to me as well.</p> <p>Additionally, I would like to request a 60-day extension of time for the comment period for the Parsons-to- Davis public information meeting that occurred on September 12th, with comments due on October 12, 2022.</p> <p>I sent an extensive FOIA to the Monongahela National Forest on June 21, 2022, which was received by their office two days later on June 23rd. I should have copied the FOIA to you as well but did not. The FOIA is attached. I have included the only response I have received from the MNF below. I have made several attempts to contact the MNF about my FOIA, and finally was able to talk with Karen Stevens yesterday. Stevens informed me that they were working on it and were trying to get it out as quickly as possible. It has been 57 working days since they received the FOIA. I anticipated a detailed response long before this, as law requires.</p> <p>Hence, my request for an extension of time. I had hoped to go over the information from the MNF in detail in order to provide substantive comments, and potentially new information, for any Parsons-to- Davis public comment periods. As yet, I am unable to do so. And I fear the comment period will be over before I receive the detailed information. I am hopeful that we will have more time to provide specific comments. Thank you for your time and attention to these matters.</p>
247	A belated thank you for extending the comment deadline and providing an increased opportunity for folks to comment on the information you provided at the public workshop at Blackwater Falls State Park last September. This added time allowed interested parties who thought the comment period had ended, the ability to consider and relate their concerns and issues regarding the Parsons-to-Davis section of proposed Corridor H and your upcoming Supplemental Draft Environmental Impact Statement (SDEIS).

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248	As a resident of Thomas I support a northern route around Thomas for the following reasons . A northern route would be the quickest way to get truck traffic out of Thomas, it would not divide the towns of Thomas and Davis and it would not adversely affect the Blackwater Canyon in any way.
249	Finish this highway with NORTHERN ROUTE. The Davis Thomas community has come together and made a special place for natives to WV and millions of guests in just the last decade. Please leave them be together without this mega highway dividing them.
250	As property owners in Davis and as Joseph grew up in Davis, we object to the alignment of the state original preferred alternative (OPA) and believe the northern route (1D) is a far better alternative. In addition to the objections already noted by SaveBlackwater.org and WVHighlands.org, we are also concerned about the proposed truck route around Thomas in the OPA. This truck route would be another significant divider between Thomas and Davis and would come close to the Mount Calvary Cemetery, from where the bypass would likely be seen and heard. The OPA route would significantly and irreversibly change the character of the Davis-Thomas area and the relationship of the two towns to each other as well as to Coketon and Douglas.
251	I grew up in Parkersburg. My very first trip "out of town" in a car that wouldn't break down was to Blackwater Falls. I felt a connection to Tucker County that I still can't explain. I am now a resident in Davis. It is hard for me to believe that you think the beauty of this place is disposable. With the infrastructure money, you could move away from the Canyon. You choose not to listen and give a handout FAQ that is double speak and below your office and below the citizens who live here. Think bigger. Do better.
252	<p>In a perfect world the road would avoid all beautiful places, all residential spaces. But I understand there are many constraints and this is the real world. I am ok with where the road crosses and the plan to submerge the road at 32. But I urge you to rethink the interchange, and locate it further out of town. I shudder to think of the congestion and noise that will occur with the planned concept. I mean a mile or two out of town. Please. We have waited so long for this, lets do this right.</p> <p><b>Additional submittal:</b></p> <p><b>Website 1/5/23</b>          "You don't miss your water til your well runs dry"</p> <p>As our community decides about the best route for Corridor H, I have decided the GoNorth route, or something similar, is the best. Here's why.          I have always believed that the Appalachian corridor system benefits West Virginia and the country, helping move goods in and out, and making transportation easier for all of us. The shortened trip to Dulles airport is a godsend to anyone here who travels or has family far away.          As soon as the road was finished to Davis it brought a new wave of tourism from the east. Both towns experienced an explosion of new businesses and new construction. Property values have risen and dead seasons have gotten shorter. You can feel the new energy in the towns, and it can be wonderful.          But it has also brought more congestion, more pressure on public services and a greater awareness of how vulnerable we are without adequate police and emergency presence on the mountaintop. Our tiny communities can barely keep up, and for many locals the changes are not welcome.          Connecting the road will bring a similar wave from Ohio and points west.          Ultimately that will mean more trucks barreling cross country, and more visitors. It will also mean more noise, more traffic, more crime and possibly more drugs. Interstate highways are notorious conduits for crime, as folks along I-81 learned when hydrocodone flooded towns along the Shenandoah Valley. They were not prepared for it, and neither are we.          The planned route between the towns will place a sprawling interchange on the very edge of Davis. It will bring noise to Douglas and Coketon. It will bring light and sound like we have not experienced here.          Anyone who wakes early and looks up at the stars and hears an owl or maybe a coyote will be affected. It</p>



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	<p>will never be the same. We will miss our peace and quiet whether we know it or not. There is a reason why tourists come here now, and it's not just because of shops or restaurants. It's because our air is fresh, our skies are dark and we are surrounded by extraordinary natural beauty. We have peace and quiet that is very precious, and visitors know it even if we don't. If the road must be built, if it is truly essential, then put it where it will have the least impact on the people who live here now. If it takes years to figure it out, then so be it. We've got plenty of tourists right now, and we've got time to wait.</p> <p>Susan Moore Formerly of Davis, WV Now residing in Thomas, WV</p>
253	Adding my name in support of a northern route for corridor H. Thank you.
254	This area of WV is one of the most unique and beautiful areas of our great nation. We cannot bastardize it with a four lane highway that ruins the unique charm that it currently holds. Stewards of land must put the health of our communities before unnecessary greed. Please do don't build this portion of the corridor. This would make WV less appealing. Do not Marylandize WV
255	I support the ROPA alignment of Corridor H proposed by WVDOH.
256	<p>The Randolph County Development Authority strongly supports the ROPA/Preferred Alternative for Corridor H. This route represents the safest, most efficient, and most effective route for the highway. This route provides access needed to Tucker County High School, cuts down time for emergency responders, and is the most cost effective for taxpayer dollars. In addition, the route allows for the quickest completion of Corridor H. The benefits of a completed Corridor H can already be seen throughout the communities in which it runs, but the full potential will not be realized until it is fully completed from I-79 to I-81. Completing this critical section in the middle is of the utmost importance. The preferred route allows it to be completed as quickly as possible. The time delay caused by abandoning the preferred route would put an enormous strain on the roads through Thomas. The CCC walls constructed to "hold up" Thomas were not designed to see the level of traffic that will be created by a completed Weston to Parsons and Davis to Wardensville sections of Corridor H. The areas involved with the Parsons to Davis section and the areas involved with Corridor L (US 19) and the New River Gorge in Fayette County are very similar. Corridor L has created one of the most iconic symbols of West Virginia with the New River Gorge Bridge and it allowed for the creation of the newest National Park in the United State. It is hard to argue that Corridor L was bad for the New River Gorge, just like it is hard to argue that Corridor H will be bad for the Blackwater area. We believe the WVDOH has gone above and beyond with their evaluation of the preferred route and trust in their determination that the Preferred Alternative is the best choice. The "Northern Route" would cause delay for completion of the project by a decade at least, increase response times by emergency responders, disturb more land, cultural resources, and sensitive environmental areas, not to mention put at risk the watershed supplying the Town of Thomas. For all of these reasons and more we strongly urge all regulatory and permitting agencies to move forward with the preferred route.</p>
257	I fully support the ROPA alignment proposed by WVDOH. This route has less impacts to sensitive areas, provides the most safety features for all travelers, can be completed the quickest so to minimize the impacts to Thomas, and will provide the most economic developemtn for all involved. Please approve and complete the ROPA alignment.
258	One of our families favorite places to go. Our son has a camp in Lead mine , WVA and this would make travel so much easier
259	One of the places I most love to visit in WV is Tucker County. The rural nature of the area, especially Blackwater Falls State Park, and even the quirkiness of Thomas, make the area so special. Having Corridor H spit this area is a huge mistake. Please use the "Northern Route" so that this area can remain as it is.
260	You MUST reroute corridor H to be completely clear of Davis, Thomas, and the spectacular Blackwater Canyon! Even noise pollution is real and devastating to the natural landscape and the refuge it provides.

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261	<p>This project is one of those that has been on a sort of peripheral radar of mine. Living just about 45 minutes away in Garrett County, I ask for reconsideration of the proposed corridor H route. In recent memory, I can note the locations where, “oh, that’s for corridor h” has been mentioned but I suppose I didn’t think it would happen in my lifetime. I regularly ride the trails that this road would cross. And, Thomas and Davis are thriving on their own and are funky, all-are-welcome communities not like other towns. Often, the Town of Oakland (in Garrett County, MD) is questioned: “why can’t we be more like Thomas / Davis”. I would hate to see that vibe lost by a major highway between the two towns. Others have said that a highway has helped locations, such as Moorefield, or Bismarck but those towns aren’t Thomas and Davis...already thriving on their own. Also, take a look at the proposed 219 bypass.. there has been an outcry against a higher-speed, multi-lane truck route here in Maryland because of many factors that could come into play here: noise, truck traffic, crime, traffic that is routed out of town and light pollution. This area is doing a great job leveraging its natural resources and I would hate to see these towns — and nearby camping, waterfalls, canyon views and connection to the truly wild and wonderful — be changed by the new route.</p>
262	<p>I am opposed to the Parsons to Davis project. We have a family cabin in Timberline which we have enjoyed for over 30 years . The valley is such a unique place to all of us. I feel the area does not need nor can it withstand a surge in people without sacrificing what makes it special- The draw of the area is to get away from the hustle and bustle of traffic and people and this will cause an even greater influx Thank you for your time .</p>
263	<p>ALL of the number of environmental groups support the Northern route. That should be a very strong endorsement! Karin Nelson</p>
264	<p>I believe the Northern route preserves the area community and it’s best asset, natural beauty. Corridor H has done an amazing job of allowing for out of state and local visitors to easily get to the area and explore everything that it has to offer including local business and outdoor recreation. It would be a shame to negatively impact the positive strides that have taken place due to Corridor H by dividing the communities and even risking negative impact to wildlife and recreational activities.</p>
265	<p>Do not put Corridor H over Thomas. The Northern route should be built. The disruption the construction would entail would deter tourism and adversely impact both towns of Davis and Thomas. The state has spent millions of dollars upgrading both state parks. The impact of building the road through the towns would be detrimental to both parks as tourists would go elsewhere. The Northern Route, despite the additional cost, would ensure the investments made by the state in these parks results in much needed tourists and their dollars continuing to flow into the area.</p>
266	<p>Need to build the road. I live in Tucker County - own a business - we need to build southern route. No need to change rte. The road has been completed, no need to spend anymore of our tax dollars.</p>
267	<p>We live in the Blackwater Canyon watershed, and we hike there from time to time. Let’s protect this area and preserve it. The scenic beauty and the natural asset value far exceed almost anywhere else. The environmental damages would be unavoidable and irreversible.</p> <p>Tourism is one major factor that must be given priority. This is where West Virginia excels.</p> <p>Consider the longterm significance of the Blackwater Canyon. My wife and I have been involved with this area for over 30 years, and its importance only grows, has only grown.</p> <p>Duane Nichols and Carol Sue Miles</p>
268	<p>When is enough enough? Super highways not only divide the land, they divide the people, and natural animal habitats. And in this case especially, there are extremely unique and worthy-of-protection examples in the Thomas/Davis and Blackwater falls area. Not only would preserving this area DIRECTLY</p>

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	<p>contribute to our own state's motto "Wild And Wonderful," but it would also be a major win for responsible management of our limited and fragile environmental resources. I support alternative northern routes.</p> <p>DON'T divide the sister towns of Thomas &amp; Davis and undermine their unique economy.</p> <p>DON'T degrade the Blackwater Industrial Complex and its historical resources.</p> <p>DON'T degrade the viewshed from Blackwater Falls State Park.</p> <p>Construction and blasting will increase ACID MINE DRAINAGE which kills off aquatic life.</p> <p>Don't undermine the unique ecology of the Blackwater Canyon, especially its RARE and ENDANGERED species.</p>
269	<p>Take this proposed route North, away from Thomas/Davis towns.</p> <p><b>Additional submittal:</b></p> <p><b>Website 12/10/22</b></p> <p>Please reconsider putting this roadway through the towns of Davis and Thomas. The increased traffic will totally remove what is the very best part of these two towns, their quaint mountain town feel, which is what brings people in, and let's them enjoy the adventure of Wild Wonderful West Virginia. Move this road to an area it is less disruptive.</p>
270	<p>Please don't divide the communities of Davis and Thomas with a 4-lane highway. The default plan does not account for adequate provisions for an adequate truck route through Thomas, and creating one without destroying historic downtown would be cost prohibitive. Furthermore, it would interrupt the natural thoroughfare between Davis &amp; Thomas and disrupt the local economies of both, likely forcing out many small businesses with local charm and replacing them over time with cookie-cutter fast food restaurants. Last but not least, the environmental impact of constructing a roadbed through the sensitive Blackwater ecosystem, home to many unique endangered species found nowhere else in North America, cannot be overstated. Please do the right thing and extend the route North of Thomas to avoid this incalculable loss of culture, local establishments, and sensitive wetland environments. It would be better to have no road at all than a road that disrupts the Blackwater ecosystem and divides the sister communities of Davis &amp; Thomas.</p>
271	<p>I am a frequent visitor to the area of your 'preferred route', and I am appalled at your lack of judgment in siting this highway between Thomas and Davis. The noise and traffic will completely destroy the charm and character that so many of us enjoy. I love to take visitors to Blackwater Falls and they really enjoy the vibe these two small towns exude. The State Park also won't benefit from the noise and light pollution of a major highway. Please use one of the other alternative paths for this project. A huge mistake like you propose cannot be easily undone.</p>
272	<p>October 8, 2022</p> <p>Mr. Travis Long, Director Technical Support Division, WVDOH 1334 Smith Street Charleston, WV 25301</p>

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	<p>Dear Mr. Long:</p> <p>The Davis-Thomas-Canaan Valley area is a unique place like no other in the state. Already, large areas have been cleared of the vegetation and “look” that draw people here. The proposed Corridor H route will disrupt the aesthetics of the small towns and natural spaces. Further, there is the risk of displacement of small businesses with chain restaurants and lodging.</p> <p>The current route does not include a sufficient buffer between towns and residential neighborhoods. As residents of Davis for 38 years, one of the nicest things about living here is that at night, it is quiet and dark and feels safe. Even in the day, the sound of traffic is at a minimum. Adding an interchange so close to Davis (or Thomas) would remove the sense of small-town seclusion, and add constant noise and lights.</p> <p>The road already mars the landscape for those who live here and come here. This area is similar to the Adirondacks, where there are no 4-lane super highways cutting through small towns. Interchanges in close proximity to Blackwater Falls State Park, a designated Dark Sky area, and to the towns would greatly increase light pollution.</p> <p>Using the existing section of Rt. 93 for access to Davis, Thomas, and Canaan Valley and diverting the main highway to the north out of sight and sound from Davis would provide for completion of the road with the least disruption to all the things that draw people here in the first place.</p> <p>The road can be built and better satisfy proponents and opponents with a swing away from the towns. A big interchange isn’t needed to reach either town. It has worked just fine for people to exit using the current section of Rt. 93 and Rt. 32 to access Davis and Thomas. Clearing wide swaths of land for large rights-of-way near the towns and adding an unnecessary spur near Thomas could be eliminated and preserve the beauty and serenity of this area. There is still time to do both—build the road and preserve the area as it is.</p> <p>Sincerely,</p> <p>John Northeimer and Marjorie Keatley 546 Doe Alley P.O. Box 818 Davis, WV 26260</p>
273	<p>The Davis-Thomas-Canaan Valley area is a unique place like no other in the state. Already, large areas have been cleared of the vegetation and "look" that draw people here. The proposed Corridor H route will disrupt the aesthetics of the small towns and natural spaces. Further, there is the risk of displacement of small businesses with chain restaurants and lodging.</p> <p>The current route does not include a sufficient buffer between towns and residential neighborhoods. As residents of Davis for 38 years, one of the nicest things about living here is that at night, it is quiet and dark and feels safe. Even in the day, the sound of traffic is at a minimum. Adding an interchange so close to Davis (or Thomas) would remove the sense of small-town seclusion, and add constant noise and lights.</p> <p>The road already mars the landscape for those who live here and come here. This area is similar to the Adirondacks, where there are no 4-lane super highways cutting through small towns. Interchanges in close proximity to Blackwater Falls State Park, a designated Dark Sky area, and to the towns would greatly increase light pollution.</p> <p>Using the existing section of Rt. 93 for access to Davis, Thomas, and Canaan Valley</p>



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274	I am in favor of a northern route for Corridor H highway north of Thomas rather than the proposed route between two towns. This will protect the beautiful scenery in and around Blackwater Canyon. This would preserve the small community attractiveness of these towns, which would dramatically change if a large highway ran between them.
275	<p>Corridors H between Davis and Parson's must be completed as soon as possible on the current planned route for several reasons:</p> <ol style="list-style-type: none"> <li>1. Safety: the truck traffic increases daily and it is mostly thru traffic to or from the West and North. The number of people and cars on the Main Street of Thomas and Davis creates a very dangerous situation when large trucks try to navigate the narrow streets. Only local truck deliveries should come into town. Corridor H completion will keep this excessive and dangerous traffic out of the town, especially with the approved Truck Bypass around Thomas.</li> <li>2. Business: Tourism is about the only business supporting West Virginia. A thru Highway will increase the visitors from the Western part of WV as well as from neighboring states to the West (Ohio, Kentucky &amp; Tennessee). Right now only guests from the East benefit from Corridor H.</li> <li>3. Until Virginia commits to the link between Wardensville and highway 81 in Virginia no road funds should be wasted building to the WV/VA boarder. That section will most likely sit unused for a decade! Divert those funds to the Parson section.</li> <li>4. Build a bridge that will in itself be a tourist attraction (perhaps with a pedestrian walk and bike trail across)!</li> <li>5. Groups that are proposing a Northern Route around Thomas are using that as a tactic to delay the completion of Corridor H indefinitely.</li> </ol> <p>I know some of these people and they really want it to not be finished at all and will probably make a frivolous law suit to try and stop it once again.</p>
276	I would prefer to see the Corridor H route be moved to northern route in order to maintain the wonderful atmosphere of the Thomas and Davis area which draws in visitors from all different locations. Most of them are looking to escape the rat race and traffic problems found in other areas. I live adjacent to another corridor route and the noise and traffic problems that comes with that is something I would try to find an escape from. Please reconsider the route and preserve the unique character of the Davis - Thomas area!
277	<p>I am writing to you to express my concerns about the currently proposed route for completion of Corridor H. For several reasons important to me, I am in favor of sending this road north of Thomas and Davis, rather than between the two towns. To build this road between these two beautiful and now busy little towns would do irreparable damage to the area, and also work against the reasons why most people want to come visit there. No one comes to Tucker County to shop at Walmart or to stay in a Marriott hotel. People come to our state to see and do something different, in a different kind of place. To route Corridor H through the heart of this area would not support the health or enhance the attractions of a place which is currently gaining an ever growing number of visitors from large cities.</p> <p>My husband and I have taken our children to these beautiful places many times, and these are treasured family memories. Please don't harm these beautiful and peaceful places for the sake of yet another Walmart in our state.</p>

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	Thank you for your attention to my concerns.
278	I am opposed to any highway going between Thomas and Davis. The highway should "Go North". I also hope that any highway would use dark-skies friendly lighting since we go to Tucker County (and spend money in its businesses) to see the stars.
279	<p>I have been visiting the Canaan Valley area since the early 1970's. My mother, a botanist, was amazed at the biodiversity and beauty of the region and she wanted to pass it along to her children. For the next 50 years, we camped two weeks each summer at Dolly Sods and visited the towns of Davis and Thomas and the area surrounding. In 2008, I built a home in Old Black Bear to be able to spend more time. I write this letter from the perspective of a visitor and then resident of this wonderful area.</p> <p>I am wholly against Corridor H bisecting the communities of Davis and Thomas. I have seen what 4 lanes in the wrong locations have done to communities. There are inherent impacts that are hard to mitigate no matter what efforts are taken from ambiance, light pollution, noise pollution to the types of adjacent development that are, frankly, not why I came to this area to see. I understand that development will take place in the Valley it is inevitable but it needs to be done in a way that protects the communities themselves so that they maintain the very reason we all have come to love them.</p> <p>Not only that, you are crossing the Blackwater Canyon in a location that will still impact cultural and sight viewing experiences. The coke ovens have always been a little gem of local history along the way to Douglas Falls. It is a historically significant area for community members and the public. I understand the route will not impact key viewing areas in Blackwater Falls State Park but it will impact the experience of walking and taking in these other locations. Yes, I know this is an area that has been impacted by acid mine drainage and reclamation and does not hold as much value or seem as impactful from that perspective but, ultimately, that location will still change the experience of taking in the area. If anything, the history of coal mining including the reclamation should be a part of the story. Let's not make this decision on routing be another lesson learned for future generations.</p> <p>Davis and Thomas are communities that are the gems of the Valley. Looping to the north of Thomas will mitigate the impact of a 4 lane between these communities and the cultural areas surrounding instead of bifurcating them and changing the mountain communities that they are now. Yes, there is an additional monetary cost involved in going the northern alternate but somehow that can always be funded. There is, however, a cost that can never be recovered no matter the money by keeping the current route in the form of forever changing the dynamics of these communities as well as the cultural impacts. I don't want to walk to Douglas Falls or to see the coke ovens with a 4 lane divided highway whooshing over my head. I encourage you to reconsider the current proposed routing for Corridor H. We only get a chance to make it right once. This is your chance and the northern route is the way.</p>
280	<p>Corridor H needs to be rerouted to the north of the towns of Davis and Thomas. If not the endangered bumble bee found there will go extinct. Our world is dying, we can't afford anymore loss of biodiversity. The web of life needs protecting. Forests will also be fragmented leading to even more loss of biodiversity. They are natural carbon sinks and need to stay intact in this warming world. We can't keep destroying Nature! Not to mention the severe impact on the towns of Davis and Thomas, all the sublime small town character will be erased. People will no longer want to visit these quaint towns as they will lose their character. They want uniqueness and bountiful nature, not sterilization.</p>
281	<p>Please, please consider changing this last section of the road to protect the beauty and history of wonderful Tucker County. We need this road but we need to protect the reason people will travel to come here. They go hand in hand.</p> <p><b>Additional submittal:</b></p> <p><b>Website 1/2/23</b></p> <p>As a native of Tucker County I honestly hate to see the four lane come but I know the residents need</p>

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	better roads as much as those of us in Southern WV where I live now. But the land we choose to spoil in Tucker County is some of the prettiest country in the eastern United States. Please choose wisely, we will live with your decisions for generations. Please choose the route around Thomas and stay away from the Blackwater Falls area. Please don't divide these two communities with a four lane.
282	The economic future of West Virginia lies in the recreation sector. Corridor H should not infringe upon Blackwater Falls State Park land. Please consider the northern route around the park for the highway, even if it is not the most direct route.
283	This 10 miles of Corridor H will environmentally impact this area where I have a home. We have heard over and over about climate change but continue to do things we think is an improvement but, as time passes, we find we have made a huge mistake. I do not want this highway over or near my home. I want to keep this environment as is; calm, clean, peaceful, rural, and, absolutely, a valuable, wonderful and unbelievably beautiful part of West Virginia.
284	This highway will disrupt the natural development of private homes in the Thomas to Douglas area. The property values will stagnate and the serenity of the greater area will cease to exist. Costing both the state and the locality it's true prize possession, open space. A highway in the proposed location will directly effect my property value and I will seek increasing compensation for the unwanted change and inflicted inconveniences. Another point is how absurd it seems to build a highway between to town less than 3 miles apart. You will disrupt both towns natural growth. Most likely damaging the unique townships spirits. Go north through the hunting lands and avoid splitting the crown jewels at the heart of the tourist destination.
285	PLEASE don't divide Davis and Thomas. We are brothers. The current proposed route will damage ecologically sensitive areas and erode the qualities that make these communities special. The region will thrive if you don't divide us.
286	I strongly oppose the current Parsons-to-Davis route for corridor H, and prefer a northern route.
287	The proposed northern route, circumnavigating Thomas and meeting up with Rt 219 for a portion of the route to Parsons makes sense economically, geographically, and from a standpoint of safety.
288	The cultural impacts of the preferred route that separates the 2 towns will be devastating. The proposed truck route will dump large trucks crossing into the road between the 2 towns (32). If the northern route is consider, both of those "issues" will be alleviated. Too much disinformation has been forthcoming with the representatives of DOH giving different answers to the same question.
289	Great presentation. Great information. Excellent feedback from DOH personnel and engineers.
290	<p><b>Overview:</b></p> <p>It is interesting to note the recent rhetoric from WVDOH (DOH) regarding this project. There seems to be some amazement that concerns with the OPA, now ROPA are just now "11th-hour" surfacing. No doubt these same concerns would have been brought forth whenever the highway received funding to initiate construction. Prior to construction funding no one had any reason to pay attention to this project—beyond DOH's solicitation of approval by the local towns of Davis and Thomas 20+ years ago the validity of which I question in the next section.</p> <p>Agreement with DOH by Davis: Initial approval for what has become known as the ROPA came via a request for approval made to the towns of Davis and Thomas over twenty years ago. In this request, DOH suggested to both communities that the alignment they proposed, close to the Blackwater Canyon and running between Davis and Thomas was, in their words, the fastest and cheapest route. Thomas responded saying they needed more information: Davis submitted a letter in agreement that the DOH proposed route was (in DOH's opinion) the fastest and cheapest route. These letters came from the respective Town Councils of both towns, the approval of at least one of which was said to be required for DOH to proceed.</p>

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	<p>This is absurd: Approval from a local town council indicates absolutely nothing...it carries no weight at all. It may not represent the business community or the local citizens' feelings or opinions. As Thomas did not agree to rubber-stamp the DOH request for approval, let's consider the Davis response. Davis has variously 7± council members who are subject to election every two years. The council seats are elected, except in the case of a vacancy during the term where any willing Davis resident can serve out the term. Recently in Davis, there have been three vacancies, two of which have been filled, with a third still vacant. There will be yet a fourth council member leaving in February leaving another vacancy to be filled—or not—by someone who was not elected.</p> <p>My points are twofold: A Town Council document may be offered by individuals who have not even been elected as representatives of the townspeople...further may not at all represent the feelings of the town's businesspeople who share most significantly in the effects of something as major as a 4-lane highway running through their town.</p> <p>My second point: The Town Council changes every two years; one Town Council's opinion in May could be totally opposite after the election in June. A Town Council document could hardly be offered as an overarching, community-wide, long-term representation of the opinions of local citizens and businesses. Of note: when local ordinances are enacted that affect the citizenry there are provisions for these ordinances to be changed or even revoked! As DOH has somehow accepted Davis' document as some sort of mandate to proceed with the original alignment, I hope that DOH will respect if Davis should choose to revoke or change their original DOH letter of agreement.</p> <p>In summary, the original "approval" for the current ROPA should never have been considered a legally legitimate approval at all and was at most a checkbox in some DOH document.</p> <p>Initial Objections: Following Davis' "approval," when an Environmental Impact study was conducted and when questions were raised it was agreed as part of the settlement agreement that alternative road alignments would be studied. From those studies we have been shown an alignment known as 1-D east that promises to offer solutions to several concerns that have been raised. Concerns raised then and since include: highway visibility; including lights and sound from Blackwater Falls State Park; possible impact to the designated Historic Blackwater Industrial Complex; truck traffic around Thomas; visible separation of the two towns; road safety between Davis and Thomas—to include bicycle and school buses; sound and light pollution in Davis; construction impacts in Davis close to residences; likely GPS traffic routing through Davis streets with the current interchange design; and many Davis residents' concerns regarding the "Thomas bypass" with its potentially negative economic impacts on our local small business community.</p> <p>The alternative, 1-D east, alignment is often referenced as the "northern alignment" for its route is on the north side of Thomas, not between Davis and Thomas. For certain, challenging issues with this alignment will become known when this alignment is fully fleshed-out. But potential benefits include: no possibly visible bridge or road from Blackwater Falls State Park; no passage above the Blackwater Industrial Complex, eliminating any potential environmental/historic lawsuits; no truck bypass needed around Thomas as east-west traffic stays north of Thomas and east of Davis; continuity of road traffic between Davis and Thomas to include planned bicycle routes; road safety is maximized by removing road re-routing and bypass-necessitated left-turns between Davis and Thomas; the highway stays well east of Davis limiting road noise and lighting impacts; construction remains east of Davis and north of Thomas in undeveloped, non-residential areas minimizing construction impacts and alleviating disruption of current Davis to Thomas traffic.</p>



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	<p>Unanswered questions: There are many. I write this as a local resident and Davis business owner, but I am also a member of a committee established by the current Davis Town Council to study and advise Davis as to actions they might take going forward. As mandated, this Corridor H committee has developed and presented many questions to the DOH. We have also attended many</p> <p>presentations by DOH and meetings in support of the two alignments. And we have met and discussed the Corridor H alignment many times. At this date we have essentially zero definitive answers to our questions as include: can DOH be required to study an alternative, northern alignment and if so, will this study for certain delay the overall project, given many other delays the road project has and is currently experiencing; if some funds expire in 2026, we have been told, will other funds be found to complete the Davis to Parsons link? These are just a few of our, and others' many questions.</p> <p>Public and private conversations from and with DOH personnel have provided seemingly conflicting information. I and others have been told Corridor H is a major highway project and absolutely will be completed to include not only Davis to Parsons, but Wardensville to the WV line, then on to Rt. 66 or Rt. 81. Time frames for completion have varied but the absolute nature of the road's completion has been assured due to this segment of Corridor H being listed as one of DOH's highest priorities. Some of us have been told that money comes from many "pots" and will be available, if not from one source that may expire, then from some other source or sources as will become available.</p> <p>Conclusion: This is a print from a July 8, 2003 letter to then Thomas Mayor Debbie Snyder wherein Epperly states, regarding the ROPA:</p> <p><b>Additional Submittals:</b></p> <p><b>Letter 12/12/22</b></p> <p>Overview: It is interesting to note the recent rhetoric from WVDOH regarding this project. There seems to be some amazement that concerns with the OPA, now ROPA are just now "11th-hour" surfacing. No doubt these same concerns would have been brought forth whenever the highway received funding to initiate construction. Prior to construction funding no one had any reason to pay attention to this project-beyond WVDOH's solicitation of approval by the local towns of Davis and Thomas 20+ years ago the validity of which I question in the next section.</p> <p>Agreement with WVDOH by Davis: Initial approval for what has become known as the ROPA came via a request for approval made to the towns of Davis and Thomas over twenty years ago. In this request, WVDOH suggested to both communities that the alignment they proposed, close to the Blackwater Canyon and running between Davis and Thomas was, in their words, the fastest and cheapest route. Thomas responded saying they needed more information: Davis submitted a letter in agreement that the WVDOH proposed route was (in WVDOH's opinion) the fastest and cheapest route. These letters came from the respective Town Councils of both towns, the approval of at least one of which was supposedly required for WVDOH to proceed. This is absurd: Approval from a local town council indicates absolutely nothing...it carries no weight at all. It does not represent the business community or the local citizens' feelings or opinions. As Thomas did not agree to rubber-stamp the WVDOH request for approval, let's consider the Davis response. Davis has variously 7± council members who are subject to election every two years. The council seats are elected, except in the case of a vacancy during the term where any willing</p>

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	<p>Davis resident can serve out the term. Recently in Davis, there have been three vacancies, two of which have been filled, with a third still vacant. My points are twofold: A Town Council document may be offered by individuals who have not been elected as representatives of the townspeople...further may not at all represent the feelings of the town's businesspeople who share most significantly in the effects of something as major as a 4-lane highway running through their town. My second point: The Town Council changes every two years; one Town Council's opinion in May could be totally opposite after the election in June. A Town Council document could hardly be offered as an overarching, community-wide, long-term representation of the opinions of local citizens and businesses. Further, when local ordinances are enacted that affect the citizenry there are provisions for these ordinances to be changed or even revoked! As WVDOH has somehow accepted Davis' document as some sort of mandate to proceed with the original alignment, I hope that WVDOH will respect if Davis should choose to revoke their original WVDOH letter of agreement. In summary, the original "approval" for the current ROPA should never have been considered a legally legitimate approval at all and was at most a checkbox in some WVDOH document.</p> <p>Initial Objections: Following Davis' "approval," when an Environmental Impact study was conducted and when questions were raised it was agreed as part of the settlement agreement that alternative road alignments would be studied. From those studies we have been shown an alignment known as 1-D east that seems to offer solutions to several concerns that have been raised. Concerns raised then and since include: highway visibility, including lights and sound from Blackwater Falls State Park; possible impact to the designated Historic District Blackwater Industrial Complex; truck traffic around Thomas; visible separation of the two towns; road safety between Davis and Thomas-to include bicycle and school busses; sound and light pollution in Davis; construction impacts in Davis close to residences; likely GPS traffic routing through Davis streets with the current interchange design. The alternative alignment is often referenced as the Northern Alignment for its route is on the other, north, side of Thomas, not between Davis and Thomas. For certain, challenging issues with this alignment, too, will surface when this alignment is fully fleshed-out. But potential benefits include: no possibly visible bridge or road from Blackwater Falls State Park; no passage above the Blackwater Industrial Complex, eliminating any potential environmental/historic lawsuits; no truck bypass needed around Thomas as east-west traffic stays north of Thomas and east of Davis; continuity of road traffic between Davis and Thomas to include planned bicycle routes; road safety is maximized by removing road re-routing and bypass-necessitated left turns between Davis and Thomas; the highway stays well east of Davis limiting road noise and lighting impacts; construction remains east of Davis and north of Thomas minimizing construction impacts and alleviating disruption of current Davis to Thomas traffic.</p> <p>Unanswered questions: There are many. I write this as a local resident and Davis business owner but I am also a member of a committee established by the current Davis Town Council to study and advise Davis as to actions they might take going forward. As mandated, this Corridor H committee has developed and presented many questions to the WVDOH. We have also attended many presentations by WVDOH and meetings in support of the two alignments. And we have met and discussed the Corridor H alignment many times. At this date we have essentially zero definitive answers to our questions as include: can WVDOH be required to study an alternative, northern alignment and if so, will this study for certain delay the overall project, given many other delays the road project has and is currently experiencing; if some funds expire in 2026, we have been told, will other funds be found to complete the Davis to Parsons link? These are just a few of our, and others' many questions. Public and private conversations from and with WVDOH personnel have provided seemingly conflicting information. I and others have been told Corridor H is a major highway project and absolutely will be completed to include not only Davis to Parsons, but Wardensville to the WV line, then on to Rt. 66 or Rt. 81. Time frames for completion have varied but the absolute nature of the</p>

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	<p>road's completion has been assured. Some of us have been told that money comes from many "pots" and will be available, if not from one source that may expire, then from some other source or sources as will become available.</p> <p>Conclusion: This is a print from a July 8, 2003 letter to then Thomas Mayor Debbie Snyder wherein Epperly states, regarding the ROPA</p> <p>This alternative is the only alternative that can feasibly provide a connection to Tucker County High School from Corrido H, an important safety issue raised during the public involvement process by the Citizens Advisory Group, individual citizens at public meetings, and Tucker County officials. Thank you for your attention to this matter Should you require additional information, please call me at {304}558-6266. This statement is not true! And it is unfortunately representative of many statements made by WVDOH regarding the ROPA. WVDOH's alignment 1-D east, a viable northern alignment, readily provides an interchange for Tucker County High School.</p> <p>As can be seen from the copied texts below if a Blackwater Avoidance Alignment exists that is prudent and feasible it may be approved. Alignment 1-D east meets those requirements.</p> <p>Text from the Settlement Agreement: Wording from the February 7, 2000 Settlement agreement:</p> <p>"WHEREAS, the parties recognize that any settlement involving potential alignment shifts for Corridor H must take into account the interests and concerns of those potentially affected by such alignment shifts, and must not pre-determine or prejudice the outcome of any future studies regarding such alignment shifts;</p> <p>Later in the same document regarding the settlement agreement:</p> <p>Section 3. Alignment Selection If the Blackwater Avoidance Alignments have not been eliminated from consideration based on the actions of the city council(s) of Davis and/or Thomas, pursuant to this Agreement, FHWA and WVDOT will proceed with preparation of a Final SEIS for the Thomas-Davis Section. In the Final SEIS, FHWA and WVDOT will select the alignment/or the Thomas-Davis Section in accordance with the following provisions:</p> <p><b>Email with Attachment 1/4/23</b></p> <p>There are so many facets to this project that must be recognized, considered and decided- upon. One can easily tend to focus on one or two issues without considering others. A few years ago, my wife and I specifically requested and were rewarded with a wonderful room and a sunny ocean view. Only after we went to bed and all got quiet, did we become aware of the incessant dinging of the elevators across the hall. We got the "good" as we had requested, and the "bad" we had not considered; a good reminder as we talk about Corridor H.</p> <p>Many individuals and groups are focused on issues they consider important--and rightly so. But it is also important to weigh a particular issue in balance with the many other issues and strive for a result that is best for all. In doing so, certain compromises will be required and most important, respect must be shown</p>

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	<p>to each concerned party.</p> <p>Davis must not focus only on what is “best” for Davis and the same applies to Thomas. This is a community of two towns with barely a mile separating them: one cannot choose an action good for one and bad for the other: bad for either is bad for both! Let us strive for what is good, not necessarily perfect, for both towns.</p> <p>Many individuals and groups have shared their issues with the WVDOH (DOH) planned Corridor H, Revised Original Preferred Alignment (ROPA) segment between Parsons and Davis-Thomas. Many of these issues and concerns are listed below with short explanations. Attached are two documents from an architect and engineer who have extensive experience dealing with various Departments of Highways. They shed pertinent, more in-depth light on several of these issues. The referenced “northern alignment” is a proposed Corridor H alignment that has an interchange near the end of the current 4-lane, east of Davis, with the road connection to an interchange with Rt. 219 just north of Thomas. Both these interchanges are proposed in areas with little or no residential development.</p> <p>Links, listed at the end, connect with other groups with their own concerns regarding this proposed ROPA alignment. Concerned citizens should become informed, study each group’s concerns, form their own opinions, and draw their own conclusions. Present these to DOH through their mandated public-comment solicitation at their website or email at the end of this document. Deadlines for submission have been extended several times, currently through January 6, 2023.</p> <p>With better understanding of the issues and further information from DOH, perhaps an agreement will evolve that more completely addresses and/or effectively mitigates the concerns of Thomas’ and Davis’ citizens and businesses, and Tucker County residents.</p> <p>The following issues and concerns are listed in no special order.</p> <p>Truck traffic through Thomas Thru-truck traffic should be eliminated from East and Spruce streets</p> <p>Truck traffic between Thomas and Davis Trucks diverted from Thomas should not be directed onto the Davis-Thomas roadway</p> <p>Blackwater Falls viewshed There is concern the current ROPA alignment will be seen from Blackwater Falls State Park</p> <p>Blackwater Industrial Complex The ROPA and bridge will cross and negatively impact the Industrial/Historic coke ovens and attendant properties of the B.I.C.</p> <p>Interchange between Rt. 48 and Rt. 32 The ROPA has multiple possible interchange locations and designs near Davis, each with different concerns for GPS traffic, safe travel, and property effects</p> <p>Splitting the Two Towns The ROPA alignment places the highway between Davis and Thomas, dividing the towns with the highway passing over or under Rt. 32 near the current Rt. 48/Rt. 32 intersection</p>



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	<p>Effects on Tourism/Visitors to the area Some have expressed concerns the ROPA will affect tourism and Davis businesses</p> <p>Short-term Road Traffic disruption The ROPA alignment construction will, for years, disrupt traffic movement to/from Canaan Valley and between Davis and Thomas</p> <p>Short-term noise With the ROPA alignment within the town limits, Davis' residents will be subjected to years of truck and heavy equipment construction noise</p> <p>Long-term noise and lights The proposed ROPA will pass less than a quarter mile from the northern and eastern Davis homes where the lights and sounds of 65+ mph traffic will be quite audible</p> <p>Impacts on watershed and streams In the 2007 SFEIS Table S-2 the current ROPA alignment is shown to have a much greater impact on wetlands and streams than the other alignment alternatives</p> <p>Alternative Road Alignments DOH has presented an alignment designated "1-D east" that takes Corridor H north of Thomas, maintaining the current Davis-Thomas roadway, and eliminating the need for a Thomas truck bypass</p> <p>Thomas Truck Bypass DOH has offered a design that takes thru-trucks, in fact all traffic, around Thomas via a new Rt. 32. Traffic is then re-routed onto the current road between the two towns requiring multiple intersections and a complete Davis-Thomas roadway redesign</p> <p>Endangered Species Concerns have been raised about the ROPA's effect on certain endangered species</p> <p>Mine wastewater Concerns have been raised regarding the road's potential release of old-shaft, mine water beneath the ROPA alignment</p> <p>Thomas Water Plant Will a northern alignment negatively affect Thomas' water plant?</p> <p>Thru-Truck Traffic Will the proposed Thomas truck bypass eliminate/reduce truck traffic when GPS will show, and drivers' experience shows, the shortest route is thru Thomas</p> <p>Thomas Bypass Intersections The proposed DOH Thomas truck bypass design requires three intersections—two new intersections between Davis and Thomas, perhaps requiring stoplights</p> <p>Thomas bypass safety The current bypass design routes all large trucks onto Rt. 32 between Davis and Thomas with weather-related safety concerns, especially for school buses that use that route</p>

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	<p>Time to construct If DOH is mandated to consider a northern route by NEPA process findings the project's completion could be delayed</p> <p>New SEIS The present Supplemental Environment Impact Study is 20-years old and must be revised; will this take appreciably less time than an EIS for a new northern route</p> <p>Funding to Disappear If the ROPA is not built and a northern alignment must be considered, due to the delay there will be no money to build the road. Information has been shared that other funding will be made available as needed</p> <p>High School exit only with the ROPA The 1-D east, northern alignment includes an exit for the high school</p> <p>The ROPA is shorter and safer for traffic Travel between Davis-Thomas and Parsons currently presents winter weather challenges with a winding, two-lane road. The new 4-lane road with berms for pull-offs should enhance safety with added room for vehicles to maneuver and clear travel lanes</p> <p>Potential Lawsuits Environmentalists and historians preferring a northern route propose filing lawsuits that may delay the ROPA's construction</p> <p>Costs will be much higher for a northern alignment Road costs are best estimates and cannot be known until a road is complete; witness significant cost-raising issues in road segments currently under construction. ROPA cost projections do not include the proposed bypass and potential Blackwater bridge costs. One cannot definitively claim one alignment will be cheaper than another</p> <p>Dark-Sky initiative The ROPA with attendant lighting for safety will affect light pollution in Davis and Blackwater Falls State Park</p> <p>Thomas truck bypass will affect local businesses Concerns are raised that with the ROPA and required bypass, all traffic—not just trucks— will push would-be visitors away from downtown Thomas' small businesses, with small businesses outside the downtown proper likewise seeing less traffic</p> <p>Bicycle trails connecting through Davis and Thomas Many existing and planned bicycle trails affecting visitors and locals alike pass between Davis and Thomas and the ROPA stands to jeopardize these trails</p> <p>Lack of concrete answers and conflicting statements from DOH DOH personnel have offered numerous conflicting statements and have failed to provide written, concrete answers to numerous inquiries regarding this highway</p>

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	<p>DOH will build this road any way they choose: efforts to change current plans are fruitless The 1970 National Environmental Policy Act–NEPA: “...requires the federal government to use all practicable means to create and maintain conditions under which man and nature can exist in productive harmony.” Per this a</p> <p>a. If Any Blackwater Avoidance Alignment is Prudent and Feasible and Avoids All Section 4(/) Resources: If FHWA determines that there is a Blackwater Avoidance Alignment that is "prudent" and "feasible" and does not "use" any Section 4(!) resources, FHWA will include this determination together with the supporting rationale in the Final SEIS. WVDOH may then select as its preferred alternative any Blackwater Avoidance Alignment that is "prudent" and "feasible" and does not "use" any Section 4(!) resources and FHWA may approve the selection of that alternative in an Amended ROD for the Parsons-to-Davis Project.</p>
291	<p>It is essential to the entire region that this highway has the least impact on our beautiful flora and fauna. The northern route seems to cause the least harm.</p>
292	<p>Please use the north route for the corridor H project. Splitting the towns of Davis and Thomas will have a severe impact on what draws people to the historic area. It’s the equivalent of running a highway through the middle of Central Park NYC.</p>
293	<p>December 10, 2022</p> <p>To: Mr. Travis Long, Director Technical Support Division West Virginia Division of Highways 1334 Smith Street Charleston, West Virginia 25301</p> <p>Subject: Corridor H – Parsons to Davis Comments</p> <p>Mr. Long,</p> <p>Thank you for providing the opportunity to submit comments in regards to the Corridor H – Parsons to Davis WVDOH project.</p> <p>Friends of the Cheat (FOC) is a non-profit organization formed in 1994 whose mission is to “restore, preserve, and promote the outstanding natural qualities of the Cheat River watershed.” Based in Kingwood, West Virginia, our organization has worked for 28 years with state, federal, and private partners to vastly improve the water quality conditions of the Cheat River, namely from the harmful effects of acid mine drainage. This effort includes millions of dollars of investments to create and manage acid mine drainage treatment systems in the watershed. Part of this success is attributed to the quality of water we receive from the Cheat’s major tributaries – the Shavers Fork, Dry Fork and Blackwater River. Any negative impacts to the water quality in these tributaries have real and tangible effects to the health of the Cheat River main stem. The Cheat River also provides clean drinking water supply to tens of thousands of West Virginians, as well as safe water for recreation.</p> <p>As such, our organization is concerned about the development of Corridor H from Parsons to Davis, in particular for the potential for the Revised Original Preferred Alternative (ROPA) to create additional acid drainage. The ROPA would travel extensively through the Upper Freeport Coal seam, which is the same coal seam that, when exposed to air and water, creates acid mine drainage pollution. Mining of this coal seam has created serious impacts to the tributaries of the lower Cheat that our organization and state</p>

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	<p>agencies have worked to restore for decades.</p> <p>Within the 2007 Supplemental Final Environmental Impact Statement (SFEIS), the SFEIS states the following:  “Specific avoidance, minimization, and mitigation measures regarding subsidence are detailed in the 1996 Corridor H FEIS (p.III-237)” and “the potential for acid mine drainage as a result of project construction and appropriate avoidance, minimization, and mitigation measures are detailed in the 1996 Corridor H FEIS, Volume III Mitigation Document (pp. 22-25).”</p> <p>Additionally, within the 1996 Final Environmental Impact Statement (FEIS), the document states:  “Mitigation measures taken during construction through active or reclaimed-non-reclaimed strip mined areas would include the proper treatment or removal of waste deposits and/or any acidic materials that would contribute to the formation of acid mine drainage...Measures to avoid exposure of coal seams would be considered in final design. The exact depth to the coal seam would be determined through the use of exploration borings into underlying rock stratum. Adjustments to the finished grade of the proposed highway to an elevation above that of the coal seam could then be made. When avoidance is not possible, exploration borings would be used to determine the exact depth, thickness, and slope of the coal seam in relation to the local groundwater table...If the coal seam is located below the local groundwater table and drainage is visible from the seam, then a chemical analysis of the groundwater would be performed to determine whether the groundwater exhibits the typical chemical characteristics of acid mine drainage. If found to contain acid mine drainage, then the proper diversion and treatment of the acid mine drainage would be executed so as not to degrade the quality of surface waters down gradient of the proposed highway cut.”</p> <p>FOC believes that these considerations (exploration borings) should be considered in earlier phases of design, and not just final design. Waiting until final design to consider exposure of coal seams could jeopardize WVDOH’s ability to avoid these impacts as considerable time and funds would have been invested to move design forward to completion up to that point. Taking into consideration exposure to coal seams and exploration borings early on in the design phase would lead to a more informed final design and potentially less impacts to water quality. FOC has decades in experience in acid mine drainage treatment and can confirm that it is a costly endeavor. Factoring in this information early on will prove cost effective for WVDOH.</p> <p>Additionally, in regards to the above statements from the SFEIS and FEIS, FOC presents the following questions:</p> <ol style="list-style-type: none"> <li>1. If acid drainage is produced during or after construction and subsequently treated, to what water quality standards will treatment be held to? What entity will monitor to ensure that WVDOH is within compliance and at what frequency? Across the state, NPDES mining permits must treat acid mine drainage so that the effluent leaving the site meets 47CSR2 – Requirements Governing Water Quality Standards for West Virginia, in particular for pH, aluminum, and iron. FOC advocates that WVDOH, its agents, and contractors, be held to the same standards for this project.</li> <li>2. Adequately treating acid drainage to water quality standards requires substantial physical space, up to multiple acres, to treat sites that may produce acid drainage flows as small as 50 gallons per minute of highly acidic water. How will WVDOH ensure that adequate treatment of acid mine drainage takes place given the limitations and constraints of the surrounding topography?</li> <li>3. Once acid drainage is exposed, it must be treated for years, if not decades, in order to avoid serious impacts to water quality down-gradient. If WVDOH exposes sources of acid drainage through construction, what entity will pay for treatment, including site maintenance, through and after</li> </ol>



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	<p>construction of Corridor H? What entity will ensure treatment continues into perpetuity? What sources of funding would be used to fund acid drainage treatment after construction of Corridor H is complete?</p> <p>4. Will the WVDOH include measures to avoid exposure of coal seams and exploration borings in earlier phases of design, so as to avoid exposure of acid drainage as much as feasibly possible?</p> <p>FOC also reviewed the guidance in the 1996 Corridor H FEIS, Volume III Mitigation Document for acid drainage. The Mitigation Document states:  “A routine component of the final engineering phase is to conduct geotechnical borings to determine the geological characteristics along the alignment. In areas of high acid drainage probability, these borings will be analyzed to more accurately determine the geological formations’ potential for acid formation.”</p> <p>As stated above, FOC urges the WVDOH to conduct geotechnical borings in early design phases to avoid exposing acid drainage during construction, rather than the final phase of design. From our 20+ years of experience in constructing acid mine drainage treatment sites, performing important geotechnical work at the final phase of design that will inform the severity of acid drainage can significantly increase the cost of the project, result in the re-design of major facets of the proposed work, or most significantly: result in release of untreated acid drainage to the environment.</p> <p>The Mitigation Document also stated the following:  “In order to predict the possible levels of acidity and chemical characteristics of drainage that may result from construction of Corridor H, additional investigations of acid drainage were conducted. A field survey of acid drainage areas along corridor H from Buckhannon WV to Elkins, WV was carried out on March 23, 1995...The drainage from the natural formations had limited acidity and iron concentrations. This type of drainage is what will be expected from the formations along the proposed alignment for the remainder of Corridor H.”</p> <p>FOC disagrees with the statement that the route from Buckhannon WV to Elkins, WV is comparable to the route proposed from Parsons, WV to Davis, WV in regard to anticipated drainage types and acid load severity. FOC has reviewed abandoned mine land discharge data from the WVDEP Final Cheat Metal pH TMDL excel sheet (found at <a href="https://dep.wv.gov/WWE/watershed/TMDL/grpa/Pages/default.aspx">https://dep.wv.gov/WWE/watershed/TMDL/grpa/Pages/default.aspx</a>).</p> <p>When plotting the ROPA in context to the 25 existing identified abandoned mine land discharges (Figure 1), the route intersects many abandoned mine lands, may impact, and/or exacerbate the identified discharges, and has the potential to unearth additional sources of acid drainage as excavation work is implemented. This comment form does not allow for attachments, but FOC can provide this map at any time. FOC will mail a hard copy to the WVDOH contact information listed.</p> <p>When comparing the limited data collected from the 1995 study from Buckhannon WV to Elkins, WV to the data in the WVDEP Final Cheat Metal pH TMDL excel sheet for the area directly adjacent to the Parsons – Davis ROPA, the flows associated with the known AML discharges in the Parsons - Davis area are significantly higher, with the largest flow associated contributing over 4,400 gallons per minute of acidic water. Flows associated with abandoned mine discharges in the Parsons – Davis section average 238 gallons per minute, while the flows listed in the 1995 study from Buckhannon – Elkins average 25 gallons per minute. Of the 25 identified abandoned mine discharges in the Thomas area, 14 have pH levels below 4.0, contributing acidity levels <math>\geq 1,000</math> times greater than pH 7 (neutral) water. It is likely WVDOH will encounter sources of acid drainage during construction if the ROPA for Corridor H is constructed.</p> <p>Upon a cursory review of existing abandoned mine discharge data and Abandoned Mine Land PADs, the “Northern route” - Alternative 1D, may be less impactful and less likely to result in additional formation of</p>

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	<p>acid drainage through the construction of Corridor H. However, Alternative 1D also traverses through the Upper Freeport Coal Seam. Geotechnical borings should be collected and analyzed for both routes.</p> <p>In regard to the above, FOC proposes the following for consideration:</p> <ol style="list-style-type: none"> <li>1. WVDOH, with guidance from Acid Mine Drainage specialists from WVDEP and/or private consultants, conducts geotechnical borings along the ROPA from Parsons – Davis at several locations to more accurately determine the severity of acid drainage anticipated from construction. FOC also proposes WVDOH conduct an identical study along the “Northern route” 1D and compare results.</li> <li>2. After collecting and analyzing the results from the geotechnical study, WVDOH works with acid drainage specialists and WVDEP to determine an anticipated cost associated with long term treatment (greater than the lifespan of construction of Corridor H, into perpetuity) of any acid drainage produced from the ROPA and from “Northern route” 1D.</li> <li>3. WVDOH uses the information described above to make an informed decision in regards to which route to develop to final design and uses specific techniques to avoid acid drainage wherever possible.</li> <li>4. If the route chosen still will result in the creation of acid drainage, adequate funding is secured for the acid drainage treatment into perpetuity prior to construction of Corridor H.</li> </ol> <p>In summary, FOC is very concerned about the potential for this project, as it stands, to unearth new sources of acid drainage and exacerbate existing sources of acid drainage in the Blackwater River watershed, which will ultimately have negative impacts to the Cheat River watershed. If the water quality of the Blackwater River becomes further degraded through acidification, it will reduce the buffering capacity of the Shavers Fork and Dry Fork Rivers and thus reduce the quality of the Cheat River. Tens of millions of dollars have been spent in the Cheat River to restore water quality, and our organization is concerned the creation of additional sources of acid drainage would undue our decades of work.</p> <p>Additionally, the mitigation measures listed for management are limited, with only one page of actions described in the 1996 Corridor H FEIS, Volume III Mitigation Document. There is no contingency plan or efforts listed or described if acid drainage is encountered on a large scale, which FOC has witnessed firsthand in Muddy Creek in Preston County. FOC urges WVDOH to consult with WVDEP and acid mine drainage specialists to determine which route is least impactful to develop to final design and to create detailed contingency plans for if/when acid drainage is encountered at a variety of magnitudes.</p> <p>Sincerely, Amanda Pitzer Executive Director Friends of the Cheat 304-329-3621 x1</p> <p><b>Additional submittal: Letter 12/14/22 (Duplicate of email)</b></p>
294	Where can we see a map of possible routes?
295	<p>The proposed road will be going through a delicate part of the forest ecosystem, which is not necessary. For example, the land on Backbone Mt is already cherished by many and visited by local and out of state hikers and tourists. I have visited the cranberry bogs for a number of years with friends and have been awed by the beauty. I have shared those cranberries with friends and family, and my class and colleagues. The experience of the bog, cranberries, pitcher plants, and more are irreplaceable. You say that you are doing this for tourism, but from my experience tourists already come to see WV land that may now be at risk. We need to be willing to conserve the land, the memories, and our future with our WV hills and its</p>

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	<p>beauty. I have seen the removal of farms, and acres of trees. It's already a vast change. Please leave the route as planned, and leave the forest for those of us who visit already.</p>
296	<p>While I appreciate WVDOH's attempts to minimize impacts of the proposed highway along the WV 32 corridor, I believe an alignment that would provide a northern bypass of Thomas for the mainline of Corridor H would be preferable. Whether it is an arch bridge or not, the new highway is going to be disruptive to the North Fork Blackwater River corridor and the Coketon historic district. It would also provide better connectivity from the new Corridor H to US 219 north towards Oakland, MD and I-68.</p> <p>It is unclear from the maps if the existing two-lane US 219 will continue to be a passable route between Tucker County High School and Mackeyville once this construction is done. Some redundancy in the road network through here would be desirable.</p> <p>I am confused about DOH's plans for US 219's routing assuming its proposed September 2022 Preferred Alternative is built. The new Thomas bypass is labeled as WV 32. Is that to mean that US 219 will remain on its existing alignment heading west from Thomas past Tucker County High School? It seems like the goal should be to have it join Corridor H closer to Thomas than that, by existing it over WV 32 south if needed.</p> <p>I appreciate the change in the Preferred Alternative to place Corridor H in a cut below WV 32 to minimize viewshed impacts. I do not like the proposed trumpet interchange being located on a side road, however. I'd keep the trumpet to minimize impacts but provide it with a direct connection to WV 32 to simplify the routing. The additional turns required by the current proposal, and mile-long conversion of existing WV 93 eastbound to a ramp, are going to be confusing.</p> <p>If the existing trumpet location is retained, at least align its intersection with existing WV 93 with 7th Street instead of creating an offset intersection. In this scenario, I would also like to see the missing block of 7th Street completed to make it a continuous route to downtown Davis.</p> <p>Finally, I am curious if any exploration has been done how the proposed highway will affect the viewshed from Olson Fire Tower. I would hope any impact on this spectacular scene can be minimized.</p> <p><b>Additional submittal:</b> <b>Website 12/16/22</b> The roll sheet appears to show an at-grade intersection with DOH's preferred alternative routing for Corridor H and existing US 219 near Tucker County High School. Building this connection as an at-grade intersection is a mistake, especially if the existing US 219 roadbed is going to be retained as a second way down the mountain.</p> <p>The high school is going to have a lot of school bus traffic, which does not readily fit in the median crossing a divided highway. This will inevitably lead to this intersection becoming signalized. Build things right from the start by putting in an overpass and either full-scale interchange or at least right-in/right-out set of ramps.</p>
297	<p>As one of the many West Virginians who visit Tucker County often, I support the safer, saner northern route for the proposed Corridor H highway between the Towns of Parsons and Davis in order to respect and preserve the area's economy and ecology.</p>
298	<p>I found this event very helpful. As a business operator in the community, the transparency of this project is reassuring. Access to affordable housing for our existing employees and access to future employees is front of mind for our business. I believe the completion of this road will go a long way in addressing this challenge.</p>

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299	<p>I am opposed to the current plan to run the Corridor H up Backbone Mountain and near Big Run Bog. These are important wilderness areas and beautiful. Many people utilize the trails and dirt roads in this area to hike, birdwatch and enjoy the out of doors. Putting a major highway here will ruin the recreation and beauty of the area.</p> <p>It will also damage the water shed. I hike in the Big Run Bog area and visit the beaver dams and the creek that runs in this watershed.</p> <p>I pay taxes that support this pristine wilderness.</p> <p>Please take the longer route and save the mountain above Parsons for people who love the nature.</p>
300	Please consider another route.
301	I STRONGLY OPPOSE the currently proposed route of Corridor H between Parsons and Davis, WV. As a professional biologist suggest that alternative routes to the north of the proposed path offer options with less environmental impact.
302	<p>I want to ask you to once again rethink the Northern Route of Corridor H around the Thomas/Davis area. I do not want to divide the two communities with this highway and cross over the North Fork of the Blackwater, or as I refer the Blackwater Canyon Area.</p> <p>This area has experienced a wonderful economic up sizing over the past twenty years with our tourism industry. Many of visitors come herej for its uniqueness and surrounding outdoor recreation and Davis and Thomas are enjoying the value that this has created.</p> <p>As a business owner (Sirianni's) in Davis, we have seen the increase and are in our thirty-fifth year doing well and providing many jobs over the years. Families have bought homes and sent their children to college by working with us. Unfortunately they are now retired or moved on and the new workforce is a bit different, but that's another story.</p> <p>I'm not against the building of the highway and where I travel Rt 48 its absolutely stunning in its design and views it has created to enhance beauty of our wonderful state. Matter of fact it has increased our business since the opening of the Rt to Davis, 25% percent in the first four years of it opening, but I don't think of this area as a exit town, will help with the aesthetics that we have created in these two communities that has built the economy around why these people (tourist) want to continue to come here. We see second and third, now, generations of folks returning to theis area and our business. They love this area and I know many regions of our state and county would just kill to have such a return tourism business to their areas and spend millions in advertising to attract visitors. Its just really difficult to explain the feeling and aesthetics that keep attracting these visitors, but I know I enjoy living in this region of WV. Ive been involved with this Corridor H building since the 80s when I was a very young mayor of Thomas. At this time, Thomas was in dire straits and the former bank president ask why I was here, he would say their area is done. Coal is gone and theres nothing here. Its kind of ironic that his building was one of the first to get renovated and now is home to the popular "Purple Fiddle"that has helped bring that community back to life. Ive usually made comments in the 90s and then again 2003, 2007, 2019 and matter of fact looking at the Supplemental EIS from 2007 while I write. Ive always wanted the Northern Route around Thomas to be a primary study when considering the route. Im not an engineer, but think the Northern Rt looks more at grade, well as as grade that we can get in this area and get the opportunity for both and exit at lease two miles or more from Davis and an exit for Thomas over 219N to pick up the truck traffic then on to the Tucker County High School for much needed exit too. This highway is important to the area but lets work to make it the best for all involved and not destroy an already vibrant economy. You know, as a born and raised WV we always seem to screw up a good thing when it comes to developing our state. Not always. This is a great opportunity for us all and lets develop it just as unique as the area it crosses. We deserve the best design that benefits and not harm this regions economy.</p>



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	<p>Thank you for your response from my letter to Senator Manchin and letting me write my response. I plan on being at the September 12 meeting and will give them a copy of this letter. Again, as I always will mention, please avoid the area of the Blackwater Canyon or the North Fork of the Blackwater as you mentioned south of Thomas. Its just too unique of an area to place this highway and has and is a special place for many residents and visitors alike.</p> <p>So in closing, I know this seems a bit long winded, but thank you in advance for your consideration and time.</p> <p>PS. Lets make this the most beautiful highway in the East, its already on its way.</p>
303	<p>Please again I ask that you review the northern route around Thomas when considering this final design of Corridor H in Tucker County. Also, the exit needs to be moved outside of Davis. Past the Forestry Camp. We have worked hard to create the tourism industry here and want to maintain this sustainable economy while addressing more growth to help to sustain this and the highways is a big contributing factor in helping us with this growth. Please also consider some wildlife crossings along this route between Thomas and Parsons. This is just too beautiful an area to forget about our wildlife population. Thanks.</p>
304	<p>Build the northern route around the north of Thomas, WV.</p>
305	<p>The WV DOH needs to understand and research why people love coming to the mountain communities of Thomas and Davis and the surrounding area. The many attributes of our area which draw people near and far have helped to spawn a vital, thriving downtown in both Thomas and Davis. Coffee shops, restaurants, art galleries, breweries ,outdoor adventure shops and music venues such as the iconic Purple Fiddle are flourishing. These are all local small businesses proudly owned by people who live here and love and care deeply about our region. The majority of these businesses in both Thomas and Davis have signed a petition against the DOH's Preferred Route.</p> <p>Jimmy Wriston is out of touch with the times and does not have a clear vision of what this area truly holds. Thomas and Davis are towns with cultural and historical authenticity and combined with the area's wild beauty is a tremendous place for locals and visitors alike to experience the "Almost Heaven" of West Virginia. Something that is not understood is that places like Thomas and Davis are becoming rarer to find and that these places are commodities in and of themselves. We need wild and authentic places in our world and it is tragic that this is overlooked, until the damage is done and these areas become just like the places people are trying to get a reprieve from.</p> <p>Building a massive 4 lane highway between Thomas and Davis not far from the beloved Blackwater Falls area is not going to enhance this area. Building a massive 4 lane bridge across the Blackwater Historical Industrial Complex, a mile from Thomas and destroying the peaceful hamlet of Doulas is not going to complement this area. It will only dilute why people love living and visiting here and undermine the call of this place. The intrusion of massive concrete structures and piers ripping through the middle of our two mountain towns, not to mention the intrusion of lights and noise from cars and semi trucks, is not going to help the economy of the area, it will do the opposite. Let's face it, the DOH's Preferred Route is just not in the best interest for the well being, economically or otherwise, for our area and towns. It needs to be re-evaluated and the DOH's less intrusive, already mapped Northern Route should be considered instead. Let's do Corridor H right or not at all.</p> <p>Note...if the DOH's Preferred Highway is pushed through, the below statement about "peaceful small town living" on the Davis WV Parks and Recreation website will no longer be true...</p> <p>From Davis Parks and Recreation.....</p>

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	<p>Davis has become home to a thriving scene of local businesses, artisans, eateries and breweries. It is a hub for skiers, hikers, bikers, hunters, art lovers and beer lovers. Davis has recently been popping up at the top of tourism and outdoor recreation “best of lists, proving to be a town to watch as Appalachian tourism continues to grow.. as the steady revival continues, Davis is quickly becoming known as a hip place to visit or even relocate for those passionate about the outdoors or peaceful small town living.</p> <p>Thank you for your consideration of this matter.</p> <p>Regards, Linda Reeves The Studio Gallery Box 85 Thomas, WV 26292</p> <p><b>Additional submittal:</b></p> <p><b>Website 1/6/23</b></p> <p>The WVDOH “Preferred Route” with their ... afterthought, not well mapped, tacked on Alternative Truck Route ... will harm not only my business but the other businesses along the front street in Thomas. I engage in conversation with my customers and I find much of my business in my gallery comes from people who serendipitously happen to be driving through Thomas. So many tell me the same thing....they feel the vibrancy and charm of the town and see people walking the promenade going in and out of shops which draws them to stop and investigate our little town. They always are awestruck by Thomas and what the shop owners have created here. The Preferred Route and its truck bypass will cut drastically these people driving through and discovering this place and spending money here. The ill conceived “Preferred Route” and its Truck Route will only be a detriment to my business, The Studio Gallery, along with the other businesses in this small town of Thomas. It will only turn it back to what it was before.. a semi ghost town. Please take a break and seriously consider what you are doing to this area by pushing the “Preferred Route” Corridor H doesn’t have to be built this way, when there are other less impactful options such as the Northern Route.</p>
306	The Blackwater canyon is the crown jewel of WVA. Why undermine the beauty of Blackwater falls and the diversity of animal and plant life in the canyon with a highway? The towns of Davis and Thomas would be cut off from each other and pedestrian travel would be dangerous
307	The northern route is clearly better, less environmentally and less culturally damaging than WVDOT’s planned route. There is no drawback to using the northern route compared with WVDOT’s route!
308	I'd like to request that the roadway be built along a more northern route, bypassing the Blackwater Falls State Park and Thomas, WV. This is by far the most beautiful area within West Virginia, in my opinion, and one of the areas that stays true to making our great state "wild and wonderful". I visit the area multiple times a year and would prefer to see the park remain untouched by construction.
309	Please use the alternative route going north and east of Thomas in order to protect the integrity of these lovely artistic villages.
310	<p>571 Douglas Road • PO Box 247 Thomas, WV 26292 • 304-345-7663 • info@saveblackwater.org December 12, 2022</p> <p>Mr. Travis Long, Director Technical Support Division West Virginia Division of Highways</p>

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	<p>1334 Smith Street Charleston, West Virginia 25301</p> <p>STATE PROJECT: X347-H-55.68.00 FEDERAL PROJECT: ACNH-0484(290) Responder: Friends of Blackwater Address: 571 Douglas Road/PO Box 247, Thomas, WV 26292 Email: info@saveblackwater.org Phone: 304-345-7663</p> <p>Friends of Blackwater is writing to comment on the issue of Corridor H alignment from Parsons to Davis in Tucker County, West Virginia. Friends of Blackwater is a nonprofit located in Tucker County, West Virginia with 5,000 active members dedicated to protecting the Blackwater Canyon and Allegheny Highlands and promoting the sustainable human and community interests in the region. Comments have been grouped by topic and address environmental, economic, tourism development and safety concerns.</p> <p><b>Virginia Big Eared Bat</b> The Virginia Big Eared Bat is an endangered species with habitat in West Virginia. The Corridor H Supplemental Final Environmental Impact Statement states that the proposed Corridor H expansion would have “no adverse effect” on the species based on a Biological Evaluation from 2001. This was concluded based on “no essential habitats or satellite caves occurring within the Study Area.” However, more recent findings show that this species of bat reside along the current “preferred” alignment, near the Blackwater Industrial Complex. This bat species continues to inhabit old mine tunnels here. The 2016 Appalachian Corridor H Parsons to Davis Section Bat Acoustic Survey found evidence of the bat species in the proposed Corridor H pathway. As such, it is our opinion that a new Biological Evaluation needs to be completed to further investigate the issue. The construction of Corridor H between Parsons and Davis could both damage their habitat and create road hazard affecting the bats’ flight, hunting, mating and other life patterns. Failure to do so may have adverse effects on the species population and violate with the Endangered Species Act. Consultation will need to be done with the Fish and Wildlife Service.</p> <p><b>Northern Long Eared Bat</b> The Northern Long Eared Bat (NLEB) was listed as endangered on November 29, 2022. New protocols will be developed for this listed bat and it is expected that the West Virginia Division of Transportation will have to resurvey the land they plan to impact on their “preferred” route. This especially applies to any tree cutting done for the route as these bats forage under the canopy of large trees. We know that the Monongahela National Forest found a number of these rare bats on their Upper Cheat timber project which overlaps with the Corridor H alignment near the high school so more work will have to be done in this area.</p> <p><b>Rusty Patched Bumblebee</b> This newly listed pollinator was found on the Monongahela National Forest near the Corridor H alignment. Any core drilling or other land disturbance, no matter how small must be held off until there is consultation with the Fish and Wildlife Service. This bee has almost been driven to extinction by the use of herbicides so no herbicides should be used in this area. The queen bee overwinters underground and can be killed by land disturbance. Additional surveys should be done and areas with these bees avoided.</p> <p><b>Cheat Mountain Salamander</b> The Cheat Mountain salamander is a federally listed species found at high elevations particularly associated with conifers. These facts indicate that this salamander could be found along the current “preferred” alignment in the area of Big Run Bog the high school and down toward Mackeyville road. We understand that surveys for this salamander have not been completed. Until the survey have been completed next summer no land disturbance including tree cutting on this alignment should take place.</p>

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	<p>West Virginia Northern Flying Squirrel (WVNFS)</p> <p>While the WVNFS is not a federally listed species it is protected on the Monongahela National Forest. Consultation with the US Forest Service should be done regarding the WVNFS and the Forest Service should do surveys for the squirrel before allowing any change to the MON in WVNFS habitat which is similar to that described for the Cheat salamander.</p> <p>Blackwater Industrial Complex</p> <p>The current “preferred alignment” for the Corridor H Parsons to Davis segment runs straight across the 11 mile long Blackwater Industrial Complex in an area approximately half a mile southwest of Thomas, WV. Our concern is that the construction in this region could directly and indirectly damage and degrade the artifacts of regional historical significance, including coal industry equipment such as coke ovens and railroads. These artifacts are important to the region’s cultural and economic history. Additionally, should Corridor H be constructed across this location, access to these artifacts may be further hindered by the highway. Access trails and paths may be cut off or left unusable by construction. As such, the Blackwater Industrial Complex may lose part of its historical significance. Much of the Blackwater Industrial Complex is owned by the Monongahela National Forest (MON). The WVSHPO and the Advisory Council on Historic Preservation are consulting agencies as well. Consultation with these federal and state agencies is necessary under the 106 process for highway construction. Any proposed re-evaluation studies and approval for new studies should be subject to NEPA processes including public comment on studies and work plans. Recent research on the African American community of Coketon has identified a historically unique and significant African American school (foundation still in place) and church at Coketon near the footprint of the “preferred” alignment of Corridor H west of Davis. These sites directly implicate environmental and racial justice concerns that have not been considered by WVDOT. Additional concerns related to environmental justice are construction that will degrade an area of extreme poverty in the Davis section at Coketon.</p> <p>Loop Trail</p> <p>Friends of Blackwater has major funding from the state and federal government to complete the Blackwater Loop Trail that goes through the Blackwater Industrial Complex at Coketon and uses interpretive signs to tell the story of the railroad as well as the coal and coke industry, the timber industry and the workers who built these industries and these towns. The massive bridge of the “preferred route” over this trail will undermine its economic development potential and set back its construction for many years.</p> <p>Acid Mine Drainage</p> <p>Mining problems in the Thomas area are well known by the WVDEP and stem from strip mines, deep mines, coal mine subsidence, and acid mine drainage (AMD) polluted water. The proposed “preferred alignment” bridge for the Corridor H between Thomas and Davis crosses the North Fork of the Blackwater River approximately half a mile southwest of Thomas, WV. Based on historical maps and more recent surveys, the hillsides on either side of the river are a maze of old coal mine tunnels. These tunnels are filled with acid mine drainage pollution which is at the southern end of the Coketon Mine Pool. One low point in this system of connected tunnels is Mine Portal 29 which produces major flows of untreated polluted water just east of the preferred alignment. As such, our concern is that any major construction including blasting of a roadway/bridge here could cause increased acid mine drainage from these old mines to escape and make its way into the Blackwater River. Additional acid mine drainage comes from the Long Run tributary entering the North Fork at Douglas. This pollution also comes from old mine tunnels that the Corridor H “preferred route” will cross over further west. The North Fork is also polluted by Burns Blow-Out across the river from Mine Portal 29. This bad water seems to originate from the Buffalo Coal Bond Forfeiture site which has old coal mine tunnels topped by a strip mine. This is the location of the “preferred route” as it approaches the bridge over the North Fork. Part of Pendleton Creek may be adding to this bad water as it disappears down a large hole just off the Buffalo Coal site, reappearing at Burns Blow-Out. None of these sites of acid mine drainage pollution are currently treated.</p>



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	<p>Adding to this an increase in AMD through construction and blasting disturbance would have a large negative impact on the ecology of the river downstream and could affect drinking water, outdoor sport and tourism such as fishing and kayaking. The preferred route proposal does not go into any significant detail about this issue, offer mitigation options, etc.</p> <p>Pendleton Creek has unreclaimed mining sites on the east side of route 32 where WVDOT has recently planned a truck route for Thomas. Mine tunnels in this area create AMD which flows underground to Thomas where it enters the North Fork adding to the pollution in the North Fork. Construction and blasting here could increase acid mine drainage to the North Fork of the Blackwater.</p> <p><b>AMD Treatment at Coketon</b></p> <p>Friends of Blackwater have been working for several year planning an active treatment system for the North Fork which is near completion. We hope to begin construction in the coming year. The system is calibrated to deal with the current level of AMD pollution from the three main sources on the North Fork. This treatment system can bring back a trout fishery to the North Fork and allow a reproducing fishery in the main stem of the Blackwater. These outcomes are put at risk by the WVDOT's "preferred route" in this area.</p> <p><b>Route 32 Intersection</b></p> <p>The towns of Thomas and Davis are currently connected via County Route 32. The preferred route would intersect this two-lane route between the two towns. This intersection and the related section of Corridor H would be a major visual barrier and interrupting eyesore in the middle of Rte 32, and a source of substantial noise and air pollution. The intersection, however configured, would insert a large and ever-increasing zone of 24/7 fast-moving traffic, noisy trucks, roadway lighting, etc. into and across this relatively quiet rural two-lane road. The Route 32 intersection would inescapably become a hub of stereotypical cookie-cutter highway interchange development, polluting both Towns' key entranceways. It would completely change the area's current rural, nature-based, visual and cultural connection and heritage tourism appeal -- that currently characterizes and links Thomas and Davis -- and degrade it for drivers, cyclists, and pedestrians, for local citizens and for visitors. Such an eyesore, and the attendant (and ever-increasing) traffic and noise barrier, would burden and degrade the experience of travel both to and between the two towns. It would detract from the experience of tourists visiting natural and heritage attractions in the region, including Blackwater Falls and Canaan Valley. Creating a "takeoff and landing point" for Corridor H - based traffic between Thomas and Davis would damage the local tourism-based art and business community. We believe that studies of the economies of these two towns will show that increased economic development here has been caused by unique small business development catering to a population looking for small scale, historic landscapes -- not modern "super slabs," franchise and chain outlets, and box stores. A major highway interchange inserted into the middle of the Route 32 zone will undermine the local sustainable economy, not grow it.</p> <p><b>Damage to Blackwater Falls State Park and the Monongahela National Forest.</b></p> <p>The remarkable collection of public land along the "preferred alignment" will be negatively affected by the construction of Corridor H in the Parsons to Davis segment. Blackwater Falls State Park is famous for its peace and quiet and its exquisite view of the night sky. The preferred highway route and its 24/7 four-lane high-speed traffic will be viewable from multiple locations in Blackwater Falls State Park, the most visited state park in West Virginia. Lights, noise and air pollution will degrade the Park experience and undermine its attempt to get night sky certification. The State Park is a key source of revenue and jobs for Tucker County, with one million visitors a year. These visitors also shop, eat, and lodge at local tourism businesses increasing revenue to locally owned private enterprises.</p> <p>The Monongahela National Forest would also be negatively impacted by the "preferred alignment," which will damage the Blackwater Industrial Complex, for which the Mon is responsible. Many Mon Forest acres would be taken near Big Run Bog, along historic Forest Road 18 and 717 to the Olson Fire Tower, and down the mountain to Mackeyville Road. Converting this section to a three-lane road would be much less destructive.</p>

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	<p>Safety Impact on Tucker County High School</p> <p>The proposed preferred alignment of Corridor H would in our opinion create potentially unsafe conditions with the Tucker County High School Connector. The additional traffic near the school could create hazards for persons entering and leaving the school. In addition, Tucker County High School is located on Backbone Mountain which is known to be shrouded in fog in the early mornings and covered with snow in winter when students and teachers would be driving to the school. Further, high school students are new drivers and may not be the best at driving in foggy or high traffic conditions. These factors combine to create a higher likelihood of car accidents and other issues at the proposed Tucker County High School Connector. This portion needs to be redesigned</p> <p>“Go North” Eastern Route around Thomas</p> <p>A much better route for Corridor H would be one that looped north of Thomas, WV going east of the landfill and cross above the Town Park and lake and below route 90 and the Thomas water source with a truck exit onto Route 90 leading to Route 219 north to Maryland. This route would avoid many of the concerns outlined above while also achieving the objectives of the Corridor H completion in the Davis to Thomas area. It would maintain the close connection between Thomas and Davis without a large highway intersecting the towns. Access to Tucker County High School would be via US 219 as is the current situation, limiting traffic and a potential unsafe situation near the school. This route would avoid the historical area of the Blackwater Industrial Complex and the area where the Virginia Big Eared Bat has been documented. Further, it would succeed in lowering the amount of truck and other commercial traffic going through Thomas and Davis without the need for an additional truck route.</p> <p>High School to Mackeyville Road</p> <p>Friends of Blackwater believes that the section from before the high school to the Mackeyville Road should be constructed as a scenic two lane road with numerous pull offs to avoid damage to the Monongahela National Forest land, to native brook trout streams, the West Virginia northern flying squirrel protected on the MON, to cultural resources and other resources not yet identified.</p> <p>Friends of Blackwater, Inc. requests that the WVDOT prepare alternative routes for the public to review when they announce their Draft Supplemental EIS in the coming years and include a route that goes north of Thomas to avoid the Blackwater Industrial Complex, the towns and Blackwater Falls State Park and Canyon. Once beyond this area and beyond Benbush and Pierce the route could follow and enlarge Route 219 all the way past the high school. This alternate route could be built as a three lane to reduce impacts to private property owners and to avoid environmental damage.</p> <p>Thank you for considering these issues. Judith Rodd for Friends of Blackwater</p> <p>Bibliography</p> <p>Ingles-Smith, Chandra L, WV. 2003. Phase 1 Cultural Resources Management Report Tucker County. Johnson, J.B.; Edwards, J.W.; Wood P.B., 2005. Virginia big-eared bats (<i>Corynorhinus townsendii virginianus</i>) roosting in abandoned coal mines in West Virginia. <i>Northeastern Naturalist Journal</i>; Volume 12, Issue 2, ISSN 1092-6194. 01-07-2005. Mountain State Biosurveys, LLC, Glenwood, WV. 2016. Appalachian Corridor H Parsons to Davis Section Bat Acoustic Survey Tucker County, West Virginia. State of West Virginia Department of Transportation, 2007. Appalachian Corridor H Parsons-to-Davis SFEIS. Determination of Eligibility Notification for the Blackwater Industrial Complex from the Keeper of the National Register 2001.</p>

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	Additional documents available upon request.
311	I don't know if 1 more voice will tip the scales, but here is 1 more voice in favor of the Northern Route. If the people of Thomas and Davis don't want the highway to blast thru their towns, they shouldn't have to have it do so. Especially when there is a perfectly reasonable alternative. Especially when that alternative has the added bonus of lesser environmental impact. Especially when that alternative will preserve unique and irreplaceable historical areas that the currently proposed route will destroy. This shouldn't be such a difficult decision. Build the road that the people who live there want, not the one that appears more convenient.
312	I really can't believe the DOH is persisting with the alignment that crosses the Blackwater downstream of Thomas and runs between Thomas and Davis. The northern alternative is clearly so much superior by so many metrics. Please, make the decision that you can look back on in 20 years and know you did the right thing: switch alignments and draw up the plans for the northern route! Thank you.
313	<p>I am writing on behalf of Corridor H Alternatives (CHA), a non-profit citizens' organization formed over 30 years ago to promote transportation systems which preserve and enhance the quality of life, the natural environment, local business and community cohesion, and, local history and culture in the Potomac Highlands and Shenandoah Valley of West Virginia and Virginia.</p> <p>CHA was the lead plaintiff in a lawsuit filed in 1996, alleging that FHWA's Record of Decision (ROD) approving the location of Corridor H violated Section 4(f) of the Department of Transportation Act, among other statutes. On appeal, the U.S. Court of Appeals for the District of Columbia Circuit agreed that the defendants had not complied with Section 4(f). Subsequently, the case was referred to the court's mediation program.</p> <p>As you know, the 2000 settlement agreement executed by CHA and the highway agencies specifically preserves our right to challenge an amended ROD based on an alternative that does not comply with Section 4(f) or any other statute.</p> <p>It appears that your agencies are again proceeding in a direction that would bring you squarely in conflict with Section 4(f) should you fail to consider prudent and feasible alternatives that would avoid harm to the historic Blackwater Industrial Complex. Rather than proceed on a course that will inevitably lead to more litigation and delays, we urge you instead in the upcoming SEIS to examine prudent and feasible alternative alignments, including the northern "by-pass" alignment supported by the Town of Thomas, that avoid this and other irreplaceable historic resources.</p>
314	<p>My family owns a cabin in Davis. My husband and I have been coming to Davis since 2003; we are avid cross country skiers and White Grass is one of our very favorite places on earth. Over the years, we have also discovered all the natural beauty that Davis and Thomas have to offer: the mountain biking, hiking and walking in the Dolly Sods and Blackwater State Park and various wildlife refuges, and the dark skies over Canaan Valley.</p> <p>We are also big fans of the towns of Davis and Thomas. Not only do some of our favorite people associated with White Grass live there, but we love the restaurants and shops on offer. We have spent countless dollars at Wild Ginger and Hellbender's as well as the bike shop, Driftland, the Emerald Door, and Caravan. (We spend a lot of money over in Thomas too!).</p> <p>We are very concerned about the decision to put a highway smack dab in the middle of these two beloved towns. Your biggest asset is the natural beauty that surrounds these towns. To introduce not only a highway but the pollution, traffic, and ugly big box stores that will inevitably follow is terribly shortsighted.</p>

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	<p>in my opinion. I understand that many local shopowners believe the towns will not benefit from the increased road traffic and indeed that the small towns will be overwhelmed by it.</p> <p>Please do not put the highway here. I understand that my views should not matter as much as the locals' views do. But I do pay taxes on my home and I do have a deep love for Canaan Valley that spans two decades. I write to ask you to consider the longtime out-of-towners, like us, who drive 3+ hours for precisely what the towns and area offer now: peace and quiet, dark skies, outdoor-based activities like skiing and biking, and excellent places to have a beer, a meal, and mingle with the locals who share our love of the outdoors. Those tourist dollars are likely to be negatively impacted by a decision to mangle the beautiful ecosystem you have maintained thus far.</p> <p>Big box stores are available 45 minutes away. Let's keep them 45 minutes away.</p> <p>Your community deserves better than what this corridor will bring.</p>
315	As a life-long Tucker County resident, build it in the proposed current "Southern" route. Safety with the lowest elevation is the safest route to keep tourists and locals out of fog and bad weather.
316	An massively expensive road that is not even close to justifiable from a traffic aspect should not be allowed to jeopardize the only thing on earth we all need and it can't be re created: clean water!! Stop wasting money on boondoggles and prioritize clean water!! Our local economy is doing just fine without an asphalt scar through our pristine Highlands!
317	I support the alternative Northern Route change between Davis and Thomas. I believe it will cause less of a disruption during and after construction, alleviate truck traffic in both towns, and keep the small town "feel" alive while also bringing the benefit of the four lane to the area.
318	<p>West Virginia Rivers Coalition respectfully submits the following comments on the proposed Parsons to Davis Section of the Appalachian Highway Corridor H Project.</p> <p>History of Non-Compliance The Appalachian Highway Corridor H Project has a history of non-compliance with water pollution control permits that have caused severe impacts to water resources. The current Corridor H section under construction is a 15.3-mile four-lane divided highway between Kerens and Parsons, the Kerens to Parsons Project. The most recent water pollution control permit issued for this section is WV/NPDES General Water Pollution Control Permit No. WV0115924, Registration No. WVR108594. This permit was issued to Kokosing Construction Company, Inc. on August 3rd, 2017 to permit the discharge of stormwater from 475 acres of earth disturbance for the construction of 7.5 miles of the four-lane highway in Randolph and Tucker County, as well as the US 219 Connector and several other small access roads.</p> <p>As of September 3rd, 2022 there have been 52 violations of Permit No. WV0115924, documenting 336 instances of non-compliance from November 2017 to May 2022. Instances of non-compliance were compiled, grouped, and are listed below. Each bullet point includes a narrative description of the non-compliance, followed by the Code of West Virginia or permit section violated in parentheses, and finally, the number of times the non-compliance occurred. Multiple permit sections are referenced within the same non-compliance point as the WV Department of Environmental Protection (DEP) released a new version of the construction stormwater general permit in 2019.</p> <ul style="list-style-type: none"> <li>-Failed to implement, operate and maintain all erosion control devices, in accordance with standard procedures and approved Stormwater Pollution Prevention Plan (permit sections D.1; G.4.e.2; II.F) – 47</li> <li>-Failed to prevent sediment-laden water from leaving the site without going through an appropriate device (permit sections G.4.e.2.A.ii.j and I.G) - 32</li> <li>-Failed to comply with compliance orders – (§22 CSR11 Section 16) – 29</li> </ul>



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	<p>Caused conditions not allowable in waters of the state by allowing distinctly visible settleable solids in waters of the state (§47 CSR2 Section 3.2.a) – 29</p> <p>-Failed to comply with the General Permit and approved Stormwater Pollution Prevention Plan (permit sections B and I.B) – 28</p> <p>-Failed to modify the Stormwater Pollution Prevention Plan when there was a change in design, construction, scope of operation, or maintenance of Best Management Practices (permit sections G.4.c and III.C.2) – 27</p> <p>-Caused conditions not allowable in waters of the state by sediment deposits on the bottom of waters of the state (§47 CSR2 Section 3.2.b) – 21</p> <p>-Failed to protect fill slopes (permit sections G.4.e.2.A.ii.f and II.H.3.b.9) – 21</p> <p>-Failed to properly operate and maintain all activities and installed Best Management Practices (permit sections Appendix B.I.1 and B.I.1) – 18</p> <p>-Failed to properly operate sediment basin (permit sections G.4.e.2.A.ii.b and II.H.3.b.11) – 13</p> <p>-Failed to reseed areas that failed to germinate within 30 days after seeding (permit sections G.4.e.2.A.i.c and III.A.3) – 12</p> <p>-Failed to provide interim stabilization on areas where construction activities have temporarily ceased for more than 14 days (permit sections G.4.e.2.A.i; G.4.e.2.A.i.b; III.A.3) – 10</p> <p>-Failed to gravel unpaved roads to reduce the tracking of sediment onto the public or private roads or inspect and clean all adjacent public and private roads of debris originating from the construction site (permit sections G.4.e.1.E; G.4.e.2.D.i; II.H.1.d; II.H.4) – 13</p> <p>-Failed to provide inlet protection for sediment control structure (permit sections G.4.e.2.A.ii.c and II.H.3.b.13) – 9</p> <p>-Failed to prohibit discharges of material other than stormwater (permit sections G.2 and I.G) – 6</p> <p>-Failed to dispose of all solid waste/demolition material in accordance with the Code of West Virginia and Legislative Rule Title 33 Series 1, Solid Waste Management Rule (permit section III.A.2) – 5</p> <p>-Failed to protect groundwater in accordance with the Code of West Virginia and Legislative Rule Title 47 Series 58, Groundwater Protection Rule (permit sections G.4.e.2.C.iii and II.I) – 4</p> <p>-Facility exceeded effluent discharge limitations outlined in the Special Condition of the approval letter from the Director (permit section G.5) – 2</p> <p>-Used straw bales on site which are not an acceptable Best Management Practice (permit section G.4.e.2.A.ii.k) – 2</p> <p>-Failed to stabilize clean water diversions prior to becoming functional (permit section G.4.e.2.A.i.d) – 2</p> <p>-Discharged pollutants from a land disturbance into Panther Run without an authorized State NPDES permit (§22 CSR11 Section 8.b.(1)) - 1</p> <p>-Failed to take any and all measures necessary to clean up, remove and otherwise render such spill or discharge harmless to the waters of the state (§47 CSR11 Section 2.5.a) – 1</p> <p>-Failed to apply for permit coverage while continuing an activity regulated by this permit after the expiration date (§47 CSR10 Section 5.2) – 1</p> <p>-Failed to submit a Discharge Monitoring Report through the mandatory eDMR system within 20 days following the end of the reporting period (Special conditions for iron limits and monitoring requirements) – 1</p> <p>-Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall immediately submit such facts or information (permit section C.9) – 1</p> <p>-Failed to report noncompliance using designated spill alert telephone number (permit section I.D.2) - 1</p> <p>Notable non-compliances include: failing to submit discharge monitoring reports, exceeding effluent discharge limitations, disturbing land outside the permitted limits of disturbance, filling in ephemeral tributaries outside of the permitted area, lacking secondary containment for above ground storage tanks</p>

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	<p>of Ammonium Nitrate and petrochemicals, discharging concrete washout directly into streams, discharging sediment laden water from filter bags directly into streams, discharging turbid water from full sediment basins directly into streams, and violating a cease and desist order. In the past five years, the Kerens to Parsons Project has caused 50 water quality violations, in the form of sediment pollution, in 16 streams, including 1 Tier 3 stream:</p> <p>Haddix Run - Tier 3 stream  Baldlick Fork  Panther Run  Wilmoth Run  Fools Run  Laurel Run  Tributary of Haddix Run  Tributary of South Haddix Run  Tributary of South Branch of Haddix Run  Tributary of Panther Run  Tributary of Wilmoth Run  Tributary of Fools Run  Tributary of Laurel Run  Tributary of Laurel Fork  Tributary of Leading Creek  Tributary of Lazy Run</p> <p>Construction of the Kerens to Parsons section of Corridor H has also caused iron pollution. For example, between June 2018 and August 2018, permit limits for total recoverable iron were exceeded eight times. The highest exceedance was 867% over the permit limit, 14.5 mg/L compared to the permit limit and water quality standard of 1.5 mg/L.</p> <p>Due to repeated Legislative Rule and permit violations, the permittee has been assessed civil administrative penalties over \$640,000. The permittee was also issued multiple orders of compliance, including two that instructed the permittee to cease and desist until in compliance with the permit and pertinent laws and rules.</p> <p>Given this history of non-compliance, water quality impacts, and cease and desist orders, we are seriously concerned about potential impacts to water resources from the construction of the Parsons to Davis section of Corridor H.</p> <p>Protection of Trout and High-Quality Tier 3 Streams  The route proposed crosses several high-quality streams and wetlands. The section from Parsons heading up Backbone Mountain crosses the headwaters of Mill Run and its tributary Slip Hill Mill Run. These are both trout streams. Mill Run is also a designated Tier 3 or Outstanding National Resource Water (ONRW). It was included as a Tier 3 stream due to the presence of reproducing trout and high-quality aquatic life scores. From WV's Antidegradation Rule (§60 CSR 5), Section 6.1 "Tier 3 waters. ... are to be maintained, protected and improved where necessary. Any proposed new or expanded regulated activity that would degrade (result in a lowering of water quality) a water body that has been designated an ONRW, other than temporary lowering of water quality, is prohibited." In order to evaluate new or expanded regulated activities, DEP must determine that the activity is short term and would result in temporary water quality impacts. The construction of a large highway such as the proposed - crossing the steep slopes of its headwaters will permanently degrade the water quality in this Tier 3 stream. The conversion of intact</p>

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	<p>forest to a wide paved highway, with significant cutting and filling will permanently reduce water quality in many ways; including increased temperature and altered hydrology. It is not clear to us how this permanent degradation can be allowed under current antidegradation rules.</p> <p>Acid Mine Drainage / Abandoned Mine Lands / Water Treatment Plans The proposed route crosses several areas that were previously mined that now produce acidic metal laden water. DEP's Abandoned Mine Lands (AML) has identified several problem areas that the route will cross. Tub Run, Long Run, Middle Run, North Fork Blackwater, and Pendleton Creek all have identified AML areas. DEP's Watershed Assessment Section has measured pH below 4.0 in Big Run, Tub Run, Long Run, and the North Fork of Blackwater. The pH in Long Run has been measured as low as 2.77.</p> <p>WVDEP has developed TMDLs for several of the streams crossed by the proposed route. Big Run, Tub Run, Long Run, and the North Fork of Blackwater all have pH TMDLs with reductions described in terms of net acidity loading. Long Run and North Fork Blackwater also have TMDLs calling for reductions in aluminum and iron, and Tub Run has a TMDL for aluminum.</p> <p>The AML Program is currently working with the Friends of Blackwater on the design for an advanced water treatment facility that is intended to treat water from some of the areas that the proposed route will cross. The facility will treat water from Long Run, Albert Highwall, and other areas in the path of the highway. We encourage WV Department of Highways (DOH) to work closely with AML staff so that the highway construction does not cause additional water quality problems by disturbing areas that have demonstrated acid bearing potential. The groups should cooperate towards a mutual benefit, potentially addressing AML highwalls that are just offsite in cases where there may be excess fill material.</p> <p>Public Land Concerns The current proposal Parsons to Davis route may impact iconic public lands. This area includes a major state park (Blackwater Falls) and other areas of historic, cultural, and scenic importance. "Avoiding" these iconic and irreplaceable sites is relatively easy – the route is either in or not in the special area. However, the impacts to public land extend beyond the actual footprint of Corridor H. Blackwater Falls State Park has Lindy Point, one of the most photographed views in West Virginia. At the public informational meeting held at Blackwater Falls, project representatives stated that visual and sound tests were conducted to assure that there were no impacts from either construction or use of Corridor H when standing at Lindy Point. We request that the report and actual data be made public, and part of the Supplemental Environmental Impact Statement (SEIS). Also, the time of year could well influence visual and sound impacts especially from late Fall to early Spring. The project proposes to bridge over the Allegheny Trail, historical coke ovens, and other historical sites. Placing a bridge immediately over or in close proximity to such sights may avoid breaking a trail, but dramatically impacts the use and enjoyment of these important sites. The historic nature of these sites could be impacted by cars whizzing by overhead and the historic and scenic impacts must be analyzed in the SEIS.</p> <p>Navigable waterways and the land underneath are owned in trust as public lands for the People of West Virginia. A total of 56 stream segments in West Virginia are listed on the Nationwide River Inventory (NRI) (<a href="https://www.nps.gov/subjects/rivers/nationwide-rivers-inventory.htm">https://www.nps.gov/subjects/rivers/nationwide-rivers-inventory.htm</a>) as free flowing rivers and streams with outstanding remarkable features. The West Virginia waterways are listed here: <a href="https://www.nps.gov/subjects/rivers/west-virginia.htm">https://www.nps.gov/subjects/rivers/west-virginia.htm</a>. The USFS has long protected 12 of those NRI waterways in the Monongahela National Forest (USDA Forest Service. 1995. Wild and Scenic Rivers Study Report and Environmental Impact Statement on Twelve Rivers in the Monongahela National Forest.) Care must be used to assure that the free-flowing nature and outstandingly remarkable features are not</p>

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	<p>impacted. The SEIS should identify all NRI rivers impacted by, or downstream from, the Parsons to Davis Corridor H project; and specify in detail exactly what safeguards, monitoring, and controls will be used during construction, maintenance, and use of Corridor H to protect these waterways and their unique features.</p> <p>Conclusion We are concerned about potential impacts to water quality and public lands from the construction of the Parsons to Davis section of Corridor H. In order to increase public transparency, we request a full public hearing and additional public comment period after the release of the draft SEIS and before the final EIS. A public hearing will allow community members to bring concerns to WVDOH personnel in a format in which all attendees will hear all questions and concerns, and be afforded the opportunity to hear all responses from WV DOH and project personnel.</p>
319	We would like for the road to go the preferred alternative route. Lets get the road started in early 2024 instead of late 2024. The road has been under construction for 60 years, lets get it finished. Lets get it finished before you lose the money that has been appropriated if you lose it, im afraid you will never be finished.
320	Do not ruin the views in blackwater falls park with an interstate, or for that matter the area trails
321	I understand the need for this portion of Corridor H, but please take it around Blackwater Falls State park. The park is lovely and one we have visited. We need to protect our State Parks. Thank you.
322	My family vacations in the area of the proposed highway nearly every year, sometimes twice. The Northern Alternative would better preserve our vacation experience and all the wonders of West Virginia for posterity
323	Go North. To put a major highway between Thomas and Davis would be a travesty and very short sighted. We have been area since 1986 and enjoy it's uniqueness and natural beauty. There are so very few places left in the eastern US. Please don't make a decision that impacts my grandchildren and yours.
324	Go North.
325	Corridor H project. Please do not put Corridor H through Davis and Thomas. Move it further North away from Blackwater Falls area. That community is pristine and quaint. It attracts visitors now and will continue to do so with Corridor H moved further North. All you have to do is look at Corridor G. Investors are destroying habitats and making residential neighborhoods deal with pollution noise and bright lights! Don't do that to a pristine area! We love Davis, Thomas and Blackwater Falls. Let it be. Let future generations enjoy the pristine surroundings!!
326	Please choose the northerly route. Thomas is a strong tourist draw that would be adversely affected by heavy truck traffic. WV's future depends more on tourism for our pristine natural state parks and other such areas than it does on providing the quickest way out of our state.
327	<p>The effects of highway placement will live on long after we're gone, long after the money spent on the project has disappeared. You're taking something away from the people of our state as has been done all across this great nation, something we can never get back. So if the money is your greatest concern then let me offer my two cents. Leave something for those of us that truly enjoy it, that truly love it just as it is. It's our money you are spending and our towns you are changing forever. You have the capability to re-route, please look at this through the eyes of those that remember yesteryear and loved living there. What you term as progress may not be considered progress by everyone, but you do have options. I hope you are wise beyond your years and can see what this looks like 20 years down the road. Now, I guess, we just have to wait and see if you love WV or if the premise of your job has controlling interest in your heart of hearts. I'm hoping you are a true West Virginian!</p> <p>Sincerely, Lisa</p>
328	I am a tourist who was brought to Davis and Thomas to enjoy the outdoors in both winter and summer months. I am surprised that WV is proposing to construct a highway right between these two towns, when



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	there seems to be a much better northern route that people could get behind. Dividing these towns, impacting the environment, and creating more polluted runoff (I'm an environmental scientist who works in watershed restoration, by the way) will alter the outdoor tourism industry that I have grown to love so much. I urge you to take the more responsible northern route and respect the wishes of the Friends of Blackwater.
329	I support a route north of Thomas. The route between Davis and Thomas will literally divide the communities. Residents use both of these towns as if they are the same community. We share a single school in Thomas, a grocery store in Davis, shops and parks in both areas. We are basically one town with green space between. These towns are both growing, and a highway between the two will directly negatively alter any future plans in the area. Constructing a major highway between the two is dangerous, unsightly and poorly thought through. In addition, it's proximity to Blackwater Falls State Park will be a noise and light pollutant in one of WV's most popular parks.
330	The information conveyed at the September meeting was that WVDOH just wanted to get the project finished. Relying on plans and feedback from 10+ years ago to make routing decisions is pure fallacy of sunken costs. The town and city of Davis and Thomas have changed alot over these years, and the plan of constructing an intersate between them makes less sense than ever. This route not only divides the two spaces, but also puts the highway and associated noise, light and pollution very close to one of WV's favorite state parks. A northern route around Thomas would put the highway in an area surrounded by power company land which is already heavily logged and impacted, miles from Blackwater Falls state park.
331	I agree with the proposed Corridor H path from Parsons to Canaan Valley by WDOH.
332	Please use the most economical and shortest route to connect Davis to Parsons. My vote is for the southerly route and not the northern route. Tim Schafer
333	I moved to the area in June and have fallen in love with not only the people, but the flora and fauna of the Blackwater Canyon. I have traveled and explored the Appalachians, Rocky's, Blue Ridge, Smokey's, Bitterroot's and more and have never stumbled across such a unique diverse area such as this one. What makes this place unique is that it is off the beaten path which has allowed for diversity and individuality to thrive. The towns of Thomas and Davis will be changed by corridor H whether the highway goes north or not. But, if the highway remains on it's current proposed route the change will will negatively affect the current residents, the canyon, and the infrastructure will not be able to keep up with the large influx of traffic and the individuality of these towns will be compromised. I understand the increased cost and time to go north is the largest hold up, but good things come to those who wait. The impact of the proposed route far outweighs the impact of money and time. Please consider going north- it will have a positive impact for the future not just short term. Thank you for your time and consideration.
334	I have lived in West Virginia going on 20 years purchased my first property in Tucker County in 2006 after I saw a sticker that said save Blackwater Canyon sparked my curiosity and I traveled out shortly after bought my first property I now own four properties in Tucker County and truly believe that this region is the crown jewel of West Virginia. just last night I was watching the Kevin Costner special on the 150th anniversary of Yellowstone and I commented to my wife that the Potomac highlands of West Virginia are still one of the most beautiful places in North America. The gateway to the Potomac highlands via Corredor H is Thomas and Davis we should not sacrifice a single inch to build this road the northern route seems to be the only reasonable option regardless of cost the amount of pork and money spent on the road to begin with is ridiculous so any rerouting is just a drop in the bucket and I am a conservative not a liberal.
335	We have owned a home in canaan valley for 18 years. we were drawn to the area by the natural beauty. I believe splitting the communities of Thomas and Davis is a mistake that will detract from that beauty and have a negative affect on the Blackwater Canyon and the local economy. Go North!
336	Listen to the local communities & go north!

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337	<p>I am a longtime Tucker County resident who has taught in our public schools, worked in many tourism related jobs and in retirement currently serve on the Tucker County Chamber of Commerce Board. I have a house on Fairfax Ave in Davis. I have lived in Tucker County and observed the growth of the area since the early 1970's. I am NOT in support of completing Corridor H as proposed. I am in favor of exploring the Northern Route alternative.</p> <p>In the 1960's Lady Bird Johnson, wife of President Johnson lobbied Congress to improve our highways. President Johnson signed into law "about 50 laws on conservation and beautification to preserve our land and beautify our Nation."*</p> <p>Building corridor H as proposed is NOT preserving our land or its beauty. It is the destruction of our unique mountain area, our historic areas, and our neighborhoods. The highway as proposed might appear easier for the DOH but it does NOT improve our area for the better.</p> <p>According to "transportation expert Stephen C. Lockwood, a former FHWA Associate Administrator for Policy under Administrator Thomas D. Larson, described the situation in a May 2003 presentation to State department of transportation (DOT) leaders, "Most [States] have taken their environmental stewardship responsibilities seriously. - - - In many [States], departmental philosophies now reflect an ethic that goes beyond minimizing and mitigating to quality improvements toward 'sustainable' approaches."*</p> <p>The proposed route is NOT planning a highway responsibility. It is not responsible to build the next section of Corridor H as planned:</p> <ul style="list-style-type: none"> <li>• It is not responsible to build through Douglas unstable mining area will impact the environment negatively.</li> <li>• It is not responsible to build through Douglas/Coketon historic area in site of bridge pillars according to the US Historic Preservation ruins the impact/area.</li> </ul> <p>It is not responsible to build a bridge across the Blackwater River in sight of or within hearing of any part of Blackwater State Park. Performing a drone test during the few months of full foliage in the park does not represent the long three seasons we do not have foliage to dampen any highway noise or car light pollution.</p> <ul style="list-style-type: none"> <li>• It is not responsible to build across the Blackwater River and between the two towns of Davis and Thomas is a catastrophe to the small towns as they are.</li> <li>• It is not responsible to build position a highway exit at 7th Street in Davis adding additional traffic to the town of Davis residential neighborhoods.</li> <li>• It is not responsible to build Putting required night lighting for exits located next to and lighting the 7th Street neighborhood of Davis will lessen the property values and over time aid in its decay as has happened in many cities across the nation and in WV.</li> </ul> <p>I have traveled the world: Most of Europe, Australia, Japan, Australia, China, Canada, Mexico, and most of the US. Recently I have been enjoying visiting the US National Parks. Of all the places I have visited I am most embarrassed for West Virginia because of the uncontrolled commercial sprawl along WV Route 19 near the New River Gorge National Park. I know the commercial growth occurred before the park was assigned but if I was an out of state traveler, I would have continued to drive right pass the wilderness area because of the impact of the unsightly development. I would not live there, and I now drive past that WV National Park to visit Virginia and the Blue Ridge National Park that has not been spoiled.</p> <p>I am not against the completion of Corridor H but I am against the proposed route over Douglas/Coketon, over the Blackwater, between Davis and Thomas. I am against having a highway noise and lights less than a mile away from my front door. Please - please do not do this to our unique area, my home. I am in support of the Department of Highways listening to the group supporting the Northern Route Alternative</p>

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	<p>and considering their recommendations.</p> <p>*U.S. Department of Transportation, Federal Highway Administration The Environmental First Lady by Kathleen A. Bergeron Date: Mar/Apr 2008, Issue No: Vol. 71 No. 5, Publication Number: FHWA-HRT-08-003</p>
338	<p>I own a vacation house in Tucker County (43 Frostline Court, Davis, WV) and do not want the Corridor built over the Blackwater Canyon route. There is a reasonable Northern alternative that would not disrupt tourism in the Blackwater Canyon and Blackwater Falls State Park. The DOH-proposed route would ruin the towns of Davis and Thomas as well as the Canyon and the Coketon historical area. The economy of Tucker County is based on attracting tourists from all over the East Coast, and the DOH-proposed route is going to diminish the appeal of the area significantly.</p>
339	<p>I'm sure you have lots of comments about the problems the state's preferred route will cause, such as stream pollution, historical destruction, viewshed degradation, interference of the Allegheny Trail, and threatening a population of the endangered native pollinator rusty-patched bumble bee. All of those reasons to move Corridor H northward are true, but allow me to add one more thing: please.</p> <p>Please move Corridor H northward as far away as possible from the Thomas-Davis area. Blackwater Falls State Park is a very special place. Explorers as far back as Porte Crayon have recognized what a beautiful natural wonder the falls are, and in such a beautiful natural setting. Blackwater Falls is one of my very favorite places in the world. I've stayed there each year for over two decades, sometimes more than once a year. The towns of Thomas and Davis are part of the special Blackwater Falls State Park enjoyment. The whole area is a treasure. Please don't allow anything to take that treasure away.</p> <p><b>Additional submittal:</b></p> <p><b>Website 1/6/23</b></p> <p>I know you have received many comments objecting to the proposed Parsons/Davis Corridor H path. Water pollution, especially to trout streams and wetlands; air pollution from increased traffic; viewshed degradation; historical site damage; interfering with the Allegheny Trail; and threatening a population of the endangered rusty-patched bumblebee (why would anyone risk a native pollinator when honeybees are suffering colony collapse?).</p> <p>Let me add one more objection: please.</p> <p>Blackwater State Falls Park is one of my favorite places in the world. The beauty of this special place has been recognized since at least the time of David Hunter Strother "Porte Crayon" in 1853. My wife and I have gone yearly for over 20 years, sometimes more than once a year, and often taking grandchildren and other family members. I love Blackwater Falls, and part of my love for the park is the surrounding area. I so look forward shopping and dining in the local businesses, and just strolling through the towns is a pleasure. It's the one vacation for me, the highlight of my year. Please don't do anything to take that from me and the thousands of other people who treasure that wonderful place.</p>
340	<p>12/10/2022 RE: Corridor H Alignment Parsons - Davis</p> <p>To Whom it May Concern,</p> <p>The map "2007 SFEIS Alternative Alignments" produced by Michael Baker (published 9/2/22) grossly misrepresents the extent of The Thomas City Park. The park covers a much larger area than shown. It is much loved by the public and includes woodland trails, boat launch, fishing pier and picnic pavilion.</p> <p>All routes depicted in the aforementioned map that are represented north of The City of Thomas would destroy this public resource.</p>

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	<p>The failure of WVDOH and its contractor to provide accurate map data for the public to review brings into question the sincerity with which this public comment process is being conducted by those parties.</p> <p>As a resident of The City of Thomas, I find the “Alignment 2” (as illustrated on the aforementioned map) to pose a very real impediment to local residents who routinely travel between towns to transport children to school, buy groceries and for other day-to-day errands. This alignment would impose severe travel delays during its construction. Once constructed, the interchange would unnecessarily complicate what is, at present, a fairly quick and straight-forward passage between The City of Thomas and The Town of Davis.</p> <p>I would like WVDOH and its contractors to use current data and examine two new options as none of those thus far presented are acceptable. I would like a serious exploration of the use of a tunnel to convey Corridor-H traffic under State Route 32 and below the North Fork of the Blackwater. Putting the road underground has multiple benefits that should be fully explored.</p> <p>Secondly, an overland route similar to the “Landfill East Option” should be explored that would take Corridor H north of The City of Thomas and its park while passing between the communities of Benbush and Pierce. A truck bypass around The City of Thomas is overdue. This routing would provide the bypass for heavy commercial truck traffic, move the alignment away from Blackwater Falls State Park/Blackwater Industrial Complex and it would preserve the unhampered movement of residents between The City of Thomas and The Town of Davis.</p> <p>Matt Sherald 152 Brown St PO Box 334 Thomas, WV 26292</p>
341	I support the Northern route in order to preserve the environment in so many ways.
342	As a “local” who has lived and worked in both Tucker and Randolph Counties, I feel it’s imperative that this road is completed and also that it does not follow the current proposed path over Blackwater or between David and Thomas. It should, indeed, be routed to the north, so as not to impinge on the beauty of the area, thus impacting local tourism. So much work has been done to make the area the booming success it is, drawing millions annually into the local economy. It would be a travesty to risk that by choosing to separate these areas with a physical barrier Thank you for considering all of these comments and opinions.
343	As a homeowner in Thomas, I object to the new highway destroying the beautiful Douglas Falls trail by putting a bridge over it. I also object to the new highway dividing the towns of David and Thomas.
344	I’m writing to express concern of the WVDOH process regarding the proposed alignment of the Davis-Parsons section of Corridor H. This alignment was determined nearly 20 years ago though an EIS process. Significant time has passed that an updated analysis of environmental impacts should be conducted. I work in the field of historic preservation and believe the original road alignment will have adverse impacts to historic resources including the Blackwater Industrial Complex. When using federal funds, environmental reviews are required through NEPA, section 106 of the NHPA and section 4(f) of the department of transportation act. In particular, section 4(f) requires protection of historic resources unless there are no prudent and feasible alternatives. For this reason I believe additional alignment alternatives need to be analyzed before moving forward.
345	I bought property in Canaan, and invite guests there, specifically because of the qualities (for example, undisturbed hiking and river trails, historic towns in Davis and Thomas, Blackwater Falls ) that this route will destroy. American society now recognizes the heavy-handed development of Robert Moses and his ilk were undemocratic and terrible for the local communities and economies; why repeat those egregious



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	errors? Reroute this project north and preserve what makes Canaan and Blackwater worth visiting and investing in.
346	I'd like to encourage the DOH to utilize the northern route for Corridor H that avoids splitting the towns of Thomas and Davis and minimizes impacts to some of the most unique and iconic natural resources in WV.
347	I am a resident of Davis, WV, and appreciate the opportunity to comment on Corridor H. The current route for Corridor H crossing between Thomas, WV and Davis, WV is unacceptable. The proposed route will disrupt the small town character of our unique mountain communities. Also, crossing the North Fork of the Blackwater River near Douglas, WV, will severely impact the Coke Oven Historic Area. The Northern Route is a much more well reasoned and less impactful to our communities.
348	Do not destroy Canaan Valley with a stupid 4 lane that can go elsewhere.  Have some common sense.
349	We should protect our state from unnecessary destruction of our wonderful towns, people, and environment.
350	The preferred route provides a # of benefits over the other routes. (1) Fewer deep cuts and fills on the back of the mountain (shortest route). (2) Avoids high quality stream headwaters (3) Provides best access to TCHS, The Iconic Centennial Park view, Servarlands and close Mt. Roads. (4) Route is at a lower elevation helping with fog, snow and ice conditions. (5) Does not impact Cortland Acres or Place a physical barrier between Thomas and its water supply. (6) Does not impact any cultural resources. Actually could open area for future cultural expansion.  This road started when I was a teenager. I am now retired. It should not take an industrialized nation like the US this long to build a highway of this length. I have hoped to drive the entire length of this road. That hope is rapidly fading. Just build it!
351	People visit and live in the area for the peace and quiet. I believe that moving the road north of its present proposal will limit noise pollution as well as light pollution between Davis and Thomas.
352	The "sister" towns of Thomas and Davis have a unique economic and cultural relationship. The current proposed route for Corridor H would cause a split that would be extremely detrimental to the one-of-a-kind experience that tourists to WV return to again and again AND spread the word to their friends and relatives. It would also endanger the rare species living in the unique ecology of the Blackwater Canyon. Please locate the route of Corridor H to the north of Thomas!
353	Please consider the northern route. No one is opposed to the road, only the location. Splitting the towns of Thomas and Davis will result in unsightly commercial development such as gas stations and hotels between the towns. I have concerns around how blasting and construction would damage the old mine areas, people homes and many of the town business buildings and contribute more to the water pollution in the historic coke ovens area. A bridge over this area would be unsightly. We are for the Northern route.
354	Please route Appalachian Highway Corridor H (US 48) around Blackwater Falls State Park. As someone who has spent considerable time with family in West Virginia, I've toured the state extensively and I have visited Blackwater Falls many times. Also, as someone who frequently travels Corridor H between DC and Kentucky I am very excited for this highway to be completed! Please do so in a manner than preserves West Virginia's natural beauty. On a final personal note, I have plans to relocate to the Parsons/Davis area in retirement.
355	I urge the DOH to choose the northern route around Thomas and Davis (not splitting them). The small town feel and wild places around that area are the reason most people visit. In my opinion, splitting them up with a highway is a terrible idea and, personally, I would lose interest in going.
356	The placement of Corridor H north of Davis will preserve the charm and walkability of the small towns of Davis and Thomas. Tourists staying at our condo often comment they are attracted to the peacefulness of

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	<p>the surrounding communities. Highways tend to gut the neighborhood fabric and isolate the residents living on either side of the asphalt. This, in turn, drains the cities' tax bases. There are so few remaining pristine places in WV. Even the Tucker County tourism site proudly states that we are far removed from the hustle and bustle of the city. Numerous other travel sites laud the tiny, quaint towns of Davis and Thomas. Yes, it will cost more to move the highway north of town. But the State benefitted greatly from COVID funds and Build Back Better funds. This is not merely a matter of protecting the bee population, as was suggested. But, rather protecting what makes WV special - its sense of community. Noone wants to dine and stay next to a highway. Yes, Corridor H connects WV to other communities. It would be a shame to achieve interconnection but destroy the communities of Davis and Thomas that the highway intended to serve. Thanks for considering this comment in your planning.</p>
357	<p>I have visited Blackwater Canyon area throughout my life, as a resident of Morgantown, WV, later as a resident of the Washington, DC area, until I returned to live in WV again recently. I have a unique perspective of the Blackwater Canyon area as both a sacred place of natural beauty as a West Virginian, and as a tourist attraction from the outside. There is no doubt that this area is central to what makes our state unique. There's no doubt that preserving the surrounding natural area should be a high state priority. Not only because the natural ecosystem functions best when it is not divided, and some of its species may even require that it not be divided by a highway. Not only because construction inevitably disturbs the area and its water life as well. But the long-term future of WV's economy requires that the state preserves its ecosystems and what makes WV unique and this Blackwater Canyon is among the best of what the state has to offer. A highway through the canyon would also disrupt the viewshed. The Blackwater Canyon area is worth preserving and protecting and creating natural buffers around it, undivided by a highway.</p> <p>Future generations of West Virginians will be thankful and proud of the decision to route the corridor north to further protect the Blackwater Canyon, for both environmental and economic reasons. Not to mention that the current generation, which—if you talk to the people who live there—are resoundingly in favor of preserving the character and connection of Thomas and Davis communities as is, for both environmental and economic reasons as well. Local businesses that rely on tourism know that, what makes an area attractive to tourists is that it is unique, its character. The inevitable sprawl and congestion that a highway between Thomas and Davis will make Thomas and Davis more like every exit off of every highway in America and will lessen this uniqueness, at the same time create a wedge between the two towns. Rerouting the highway north will get tourists there, but will help to protect what attracts tourists, and residents, to these communities.</p>
358	<p>I fully support each of the five expressed concerns:</p> <ol style="list-style-type: none"> <li>1. Don't divide the sister towns of Thomas &amp; Davis and undermine their unique economy.</li> <li>2. Don't degrade the Blackwater Industrial Complex and its historical resources.</li> <li>3. Don't degrade the viewshed from Blackwater Falls State Park.</li> <li>4. Construction and blasting will increase Acid Mine Drainage which kills off aquatic life.</li> <li>5. Don't undermine the unique ecology of the Blackwater Canyon, especially its rare and endangered species.</li> </ol> <p>Don Spencer</p>
359	<p>Please spare the Blackwater Area and the historic districts in the towns of Davis and Thomas, WV. The Northern Route protect the landscape and goes around those two small towns.</p> <p>The DOH Original Preferred Alignment will destroy wildlife, wetlands, geology, and vegetation! The Park, the National Forest, and the Blackwater Industrial Complex on the rail-trail would be negatively affected. These are all historical sites and must be protected.</p>

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	<p>The Original Preferred Alignment would take traffic, including large trucks, Through the middle of Thomas. It would have negative impacts on the Davis-Thomas elementary school, middle school and the public library.</p> <p>PLEASE choose THE BETTER ROUTE = THE NORTHERN ROUTE.</p>
360	<p>As a West Virginia resident and dual homeowner who lives in Morgantown with a second home in Davis, I am writing to state my objections to the so-called preferred Blackwater Canyon route for Corridor H. The Canaan Valley area and Davis and Thomas are treasures full of natural beauty and close community. In recent years, the number of out of state visitors has increased as the "secret" of this lovely area has spread. This has generated significant revenues for the region and state. The so-called preferred Blackwater Canyon route for Corridor H would destroy this, dividing the sister towns of Thomas and Davis. It would also wreak havoc on the unique ecology of the Blackwater Canyon and degrade the views from Blackwater Falls State Park.</p> <p>This area in the mountains was once almost destroyed by logging but has finally rebounded and is doing well. The state of West Virginia should support the protection of such a special place, not destroy it. Please do not build through the Blackwater Canyon.</p> <p>Thank you.</p>
361	<p>Please consider moving forward with the original plan. This project started when I was a child and I am now 65 years old. The perceived route is ok for both towns. I live and make my living selling real estate all over this county. We have no hospitals in this rural area, often we are not able to get a life flight due to mountainous fog and other weather. We need the road. We need it to be finished. The opponents are hoping that yet ANOTHER delay will squelch this project. In Tucker Co. we have sacrificed one after another economic opportunities due to the protests of many people who don't live here or pay taxes to educate our rural children. Please listen to locals ---not people who have moved here to create chaos or get what they were denied in another region. Thank you Debbie Stevens Broker Stevens Realty &amp; Mgmt (1995) Land of Canaan Vacation Resort (2007) Black Bear Resort (2017) Roots!!!</p>
362	<p>Would be concerned about traffic exiting the corridor and "short cutting" through Davis neighborhoods to reach 32.</p> <p>Concerned about land adjacent to truck bypass being commercially developed rather than for affordable housing - we don't want Walmart or McDonalds.</p>
363	<p>The northern route has several major advantages.</p> <ol style="list-style-type: none"> <li>1. Keep multi-user access and connectivity between Davis and Thomas and not split with the highway.</li> <li>2. Reduce the truck traffic from 219 going through downtown Thomas which is a safety hazard and inefficient for the truckers</li> <li>3. Not destroy a major source of tourism and nature by going directly through Black Water Canyon, the rail trail, and historic areas</li> </ol>
364	<p>As a second home owner in Canaan we are very upset that it appears the DOH is ignoring the wishes of most people living and enjoying Tucker County's treasures.</p> <p>Please reconsider this highway route splitting Thomas and Davis while degrading the natural wonders that make this a unique place in the world</p> <p>The northern route seems better in many ways, including keeping large trucks out of those towns.</p> <p>I urge your consideration to ensure the lasting beauty and peace of this area</p>

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365	Please consider the desire of the folks living in the immediate area, what is best for the environment and the need to keep the scenic landscape unmarred by the scars of poorly planned road-building.
366	Please take the Northern route. Do not destroy the beautiful area of Davis. That great Nostalgic drive and beauty of hills in any season. Keep the nature natural!
367	We must give our WV communities abundant opportunities to thrive. Constructing a physical barrier between two flourishing towns is not in our best interest. Don't destroy or distract from the beauty, ecological diversity and magic these small towns provide. WV is an absolute gem. Davis and Thomas are two reasons why! Don't take that away. Move North.
368	<p>I am not in support Corridor H being built between Thomas and Davis. There is a viable northern route that is north and east of Thomas that accomplishes the goal of Corridor H without being disruptive to Blackwater River and Canyon areas of the region.</p> <p>The area the highway is proposed to pass through is already a very unique and quaint area in the region. Highway traffic through the proposed location would disrupt many of the outdoor activities that take place in this unique area.</p> <p>While I am from Ohio, I make several trips to the Davis and Thomas West Virginia area and spend many tourist dollars with the local businesses. The primary reason I visit is that this region of West Virginia has a variety of outdoor wilderness areas with a variety of sites to visit. Being off the beaten path is just one of the attractive features of the area.</p> <p>I understand there are other needs, but there appears to be a viable alternative that does not necessitate the disruption to the Blackwater Falls ecosystem.</p> <p>Best regards, Jeffrey Tadlock</p>
369	I support the alignment of Corridor H ROPA for the segment between Parsons and Davis.
370	<p>On behalf of the Upshur County Commission, this letter is to express our support for the completion of Corridor H (U.S. Route 48). The existence and future expansion of Corridor H is vital to the continued development of Upshur County and North Central West Virginia. Upshur County's one municipality, Buckhannon, has benefitted greatly from Corridor H with major economic development activity as well as generous growth in tourism for the entire County. Travelers along Corridor H are given the opportunity to eat in our restaurants, browse beautiful Buckhannon Main Street thriving with gift shops and boutiques, or take time visiting one of our local parks or trails. All of which help to place Upshur County on the map as a tourism destination.</p> <p>Furthermore, Upshur County has a commitment to develop the land parallel to Route 33 with the vision of capitalizing on Corridor H expansion. Upshur County was pleased to accept a recent property donation of 70 acres, along Route 33, with plans to build a Recreational Complex for Upshur County citizens, visitors, or travelers. The completion of Corridor H could serve as the bridge that entices organizations to come to Buckhannon to utilize the future complex for sports tournaments, games, etc.</p> <p>The completion will create even more opportunities for West Virginia's communities and industries. This growth will only continue with the project fully constructed using the DOH's current Revised Original Preferred Alignment (ROPA) as it is more efficient and less invasive than other suggested routes. We strongly support your efforts to complete Corridor H as quickly as possible.</p> <p>Thank you for making Corridor H a priority in West Virginia as it will continue to grow our thriving Upshur County community.</p>



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371	<p>The West Virginia Highlands Conservancy (WVHC) Highways Committee objects to the route chosen by the West Virginia Division of Highways (WVDOH) for the section of Corridor H between Parsons and Davis (ROPA) on the following grounds:</p> <p>(I) The EIS must take into account significant changes in the area's socio-economic environment in the past twenty years.</p> <p>Then, the area was losing population at an accelerating rate. From 1990 to 2000, it declined 21%. Now, the most recent census found population gains in Davis, from 624 to 782, and in Thomas, from 452 to 548. Then, coal mines had shut down, the railroad had been removed, and local businesses were closing their doors. Now, between 2012 and 2021 the number of businesses in the two towns doubled. According to the recent report by Downstream Strategies, "Bracing for Change," "Together these two communities have gained notice among the most desirable small towns in America." The completion of Corridor H from the east as far as Davis certainly contributed to these changes. Its current status has been ideal: it brings people to the doorstep and doesn't wreck the house.</p> <p>Expectations, strategies, and designs that might have been appropriate twenty years ago are not today. The highway should help east-west traffic to flow without changing the character and appeal of the area.</p> <p>WVDOH and FHWA say the need for the project has three elements: improving east-west transportation; promoting economic development; and preserving and improving the quality of life in the region. Any route will accomplish the transportation objective, but the wrong route would have a negative effect on the region's developing economy and special quality of life.</p> <p>A northern alignment will protect what has made this area an attractive destination for more visitors, residents, and businesses. It will preserve the Blackwater Industrial Complex, a National Register-eligible historic district. It will avoid the scenic trails already open and to come.</p> <p>The 2007 SFEIS acknowledged in Section III that the ROPA would have particular negative impacts on Thomas: it would reduce tourist traffic through town, and it would not spur development to the west, around Benbush. Going north will give Thomas better access and better separation from long-distance truck traffic. It will reduce the noise, light, and visual impacts on Davis.</p> <p>(2) Truck Route: WVDOH recognized that its ROPA failed to deal with the pressing issue of truck traffic through Thomas. It has tried to make up for it by rerouting Rt. 32 as a bypass. However, that fix would create new safety hazards at the additional intersections. It would also affect the Coketon mine pool and acid mine drainage in the vicinity of Pendleton Creek.</p> <p>Instead of preserving the "greenway" between Thomas and Davis that was envisioned in Thomas's city plan, the truck route would mix through trucks with local traffic beyond the bypass, a problem that will become worse over time according to WVDOH's traffic estimates.</p> <p>The obvious solution is to direct long-distance traffic coming from the north directly onto Corridor H. The northern route should be recognized as the real truck bypass.</p> <p>(3) Other issues: Noise, light, and visual effects must be analyzed, especially for Davis and the area surrounding the proposed bridge over the North Fork of Blackwater. How will the ROPA affect the State Park's application for Dark Sky status?</p>

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	<p>WVDOH says that the ROPA would not be seen from Lindy Point. But that's not the only iconic viewpoint. A spatial analysis by Prof. Strager of WVU's School of Natural Resources shows that the ROPA could be seen from State Park roads and overlooks. Throughout the Blackwater area, its sounds and lights would affect visitors' experience of the natural world.</p> <p>On the western end, where the ROPA would climb Backbone Mountain, geology is a serious concern. The Mauch Chunk formation is notoriously unstable. Building a four-lane highway where the two-lane US 219 barely fits would require enormous cutbacks.</p> <p>The West Virginia Highlands Conservancy Rivers Committee objects to the route chosen by the West Virginia Division of Highways for the section of Corridor H between Parsons and Davis (ROPA) on the following grounds:</p> <p>(1) The ROPA threatens the quality of trout streams and their wetlands and watersheds, including Tier 3 streams such as Mill Run and Slip Hill Mill Run. A stream designated as a Tier 3 stream is a high quality water or naturally reproducing trout stream. Pursuant to 60CSR5, "Antidegradation Implementation Procedures," this includes those waters whose unique character, ecological or recreational value, or pristine nature constitutes a valuable national or state resource. Of high concern to the Rivers Committee is the Big Run Bog watershed. Big Run Bog is located within the Monongahela National Forest and is a National Natural Landmark, a designation granted by the National Park Service due to its unique and undisturbed nature. The National Park Service describes it as a Pleistocene relict community containing a high-altitude northern sphagnum-red spruce bog that is far south of its normal range. It harbors large numbers of rare plants and animals, many at the extremes of their range. The diversity of the habitats makes the area valuable as a refuge for a large variety of biota. (US DOI, National Park Service Natural Landmark Brief, September 2009. Dr. Jesse F. Clovis, West Virginia University, January 1974.) It also qualifies as a Tier 3 water pursuant to 47CSR2A-4.2a, because its waters are located within the boundaries of a national forest and is bounded on both sides of the water by public land.</p> <p>Mill Run, Slip Hill Mill Run and Big Run Bog watersheds abut and the terrain where they abut is narrow and steep. The ROPA, a four lane highway, will cut through the Mill Run Watershed and the portion of the Slip Hill Mill Run watershed where it abuts with the Big Run Bog watershed. Due to the close proximity and steep terrain of these watersheds, it is more than likely that the waters in all of these watersheds will be degraded by the construction of the ROPA, an unacceptable violation of their protected status as Tier 3 waters and a National Natural Landmark. In addition, WVDOH has provided maps that indicate that a section of the ROPA will actually go through the top of the Big Run Bog watershed and have commented at the public meeting held at Blackwater Falls State Park on September 12, 2022 that they will be "bridging" Big Run Bog watershed-a clear violation of its protected status.</p> <p>(2) The WVHC Rivers Committee does not have confidence that pennit conditions that are intended to protect water quality will be followed during the construction of the ROPA. Since 2017, during the construction of the Kerens to Parsons section of Corridor H, there have been over 50 violations documenting over 300 instances of non-compliance including: failure to implement and maintain sediment controls; failure to prevent muddy water from leaving construction sites; causing sediment plumes; and causing deposition of sediment on the bottom of streams. All of these types of violations are major threats to the health of the Mill Run, Slip Hill Mill Run and Big Run Bog watersheds as well as the other waters that the ROPA would cross.</p> <p>(3) The ROPA will endanger the North Fork of the Blackwater River, the Blackwater River, the Cheat River and their watersheds with potential releases of acid mine drainage. These waters provide drinking water</p>

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	<p>to the public and numerous recreational activities-indeed, they are a large part of the natural environment that draws ever increasing tourism to the Thomas and Davis area. A degradation of these waters with acid mine drainage will threaten the health of local residents and the growing economies of Thomas and Davis. The ROPA cuts through land that was extensively mined and abandoned. State, federal and private groups have spent a great deal of time, energy and money to treat the acid mine drainage issues that these rivers have faced in the past and still currently face. Construction of a four lane highway in this area, particularly the bridge that is planned to cross the North Fork of the Blackwater River, creates a severe and unacceptable risk to the waters that are beginning to recover from acid mine drainage.</p> <p>In conclusion, we expect WVDOH to work to address these concerns while considering the overwhelming support from locals, small businesses and visitors alike to use a northern alternative to the ROPA.</p>
372	<p>Hello, Please take the alternate northern route and stay out of the black water canyon</p> <p>Don't divide the sister towns of Thomas &amp; Davis and undermine their unique economy.</p> <p>Don't degrade the Blackwater Industrial Complex and its historical resources.</p> <p>Don't degrade the viewshed from Blackwater Falls State Park.</p> <p>Construction and blasting will increase Acid Mine Drainage which kills off aquatic life.</p> <p>Don't undermine the unique ecology of the Blackwater Canyon, especially its rare and endangered species.</p> <p>Thank you Concerned WV citizen Andrew J. Thompson</p>
373	Don't damage the natural beauty of the Blackwater Fall area nor the Historic section of Thomas
374	I don't believe enough research has been don't towards the northern route. When listening to the last two presentations from DOH they seem set on the "preferred" route. When asked if any environmental impact study's were started on the northern route the answer was "no". A lot has changed over the last 10+ years in the beautiful towns of Thomas and Davis that connected them in a way that this highway would destroy. I don't trust they DOH will do the things they say they will to support and work with our communities. Things like the truck route around Thomas, or the multi use trail between the towns. To me it's just talk to get us to agree. Next thing we see is a highway that no one wanted built in a way we don't agree with and nothing for the community.
375	Please don't run the highway through the park, that's just stupid
376	<p>Please build the road as designed in the ROPA. The remainder of corridor H must be constructed as soon as possible. Currently, funding is available and we must not lose this opportunity to fund and build the road with infrastructure dollars.</p> <p>The finished corridor H will be a real enabler for economic growth. It will also increase safety for our residents as they travel up and down the mountain, as well as reduce ambulance time for travel in response to emergencies.</p> <p>My recommendation and desire are that you proceed expeditiously as planned in the ROPA.</p>
377	<p>Don't divide the sister towns of Thomas &amp; Davis and undermine their unique economy.</p> <p>Don't degrade the Blackwater Industrial Complex and its historical resources.</p>

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	<p>Don't degrade the viewshed from Blackwater Falls State Park.</p> <p>Construction and blasting will increase Acid Mine Drainage which kills off aquatic life.</p> <p>Don't undermine the unique ecology of the Blackwater Canyon, especially its rare and endangered species.</p>
378	<p>As a frequent visitor to the Thomas, Davis, and Canaan areas, I am opposed to the current plan for corridor H. It would be more environmentally, economically, and locally friendly to consider the "Northern" route around the area. Please listen to the local folks, the local businesses, and the one-county-away folks like me who visit weekly, we do NOT want corridor H going between the towns. Hardly anyone travels on corridor H as it is, why disrupt our environment more? (I say this as someone who commuted to work in Wardensville when I lived in Moorefield, and as someone who frequently drove from Moorefield to Davis.)</p>
379	<p>I think the plan for routing corridor H through this area is pretty short sighted. West Virginia's biggest asset for the future is its natural beauty and mountainous landscape. Any major infrastructure projects in the state should have the clear aim to preserve and enhance the amazing outdoor experience that WV offers.</p>
380	<p>I support the completion of Corridor H and believe that it is beneficial to the prosperity of West Virginia; a better life for all of its citizens.</p>
381	<p>I want to see Corridor finished because it will provide better transportation processes for when I travel to Virginia when visiting family or other recreation events. It will make life much better and help improve commercial travel commerce. It would also open an alley for people from out of state to come and see WV. All in all it will improve WV,so it should be completed soon.</p>
382	<p>I'm concerned about the intersection for the High School. With the white outs and fog on Backbone Mt. turning school buses will be hard to see at a normal intersection. Off and on ramps with an overpass seems a better option.</p>
383	<p>As a person with ties to the community since the early 1900s , I strongly object to the proposed route of the corridor H highway slated to split Thomas and Davis for several reasons. Splitting the towns of Thomas and Davis with a major highway threatens to negatively impact the economies they have built and disrupt the personalities of the area that locals and visitors cherish. The environmental impacts of this project additionally promise to be injurious to the unique ecology of the area including blackwater canyon and it's associated fauna, some of which are endangered . Acid mine drainage will be increased, watersheds possibly irreparably damaged, high quality trout streams threatened. Sediment control records of this project are frighteningly poor. Please consider rerouting to be more protective of this community and the fragile ecosystems unique to this area. The people of WV and those who treasure its precious resources should be assured that that these precious resources as well as the local economies will not be destroyed.</p>
384	<p>Please do not degrade the viewshed form Blackwater Falls State Park nor divide the unique towns of Davis and Thomas. I have been visiting these places for 60 years and would be devastated to know that these places would change. My children and grandchildren have grown up visiting these wonderful places. People would travel over and not stop to enjoy the beautiful places. Please save the viewshed from Blackwater Falls State Park because construction and blasting will increase Acid Mine Drainage which kills off aquatic life.</p>
385	<p>I am asking wv dot to strongly review the northern alternative to corridor h that is located north of Thomas wv. The alternative that is currently being considered will separate Thomas from Davis in a way that will create major disturbances to the entire area and also harm existing view sheds that attract many visitors to this scenic area. I strongly urge you to choose the northern alternative. I have been visiting the area for over 40 years on an annual basis and am thankful that corridor h has reduced my travel time. In locating the highway the wv dot routed it so that Greenland gap could be preserved. In locating wv9 in my home county , the highway was so designed as to preserve travelers rest, a historic home. Both Davis</p>



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	and Thomas are historic and unique towns, the area around them is some of the most beautiful in WV. Please choose the northern alternative which will have the least impact on this beautiful and historic area and yet provide better transportation choice for the area. Thank you for your consideration of my comments.
386	Go North. There is no reason to go into Blackwater Canyon and separate Thomas and Davis. You can go around them. Please keep our State Parks and natural beauty pristine. The noise and light pollution alone from this road is going to hurt our amazing Blackwater Falls State Park. I camp there often and the preferred route is going to damage that.
387	<p>I would like to see a map of where this is going thru and how it would effect the area. Can you please provide a map that shows this. Very Respectfully, Chad</p> <p><b>Additional submittal:</b></p> <p><b>Website 9/23/22</b></p> <p>In looking at the maps. I feel that going between the two towns would cause severe issues. It would be a bad eye sore and would add a lot of unwanted noise. I'm not sure that my voice really carries much weight. But I think it would be best to avoid the two towns the best you can.</p>
388	I support the ROPA alignment of Corridor H proposed by WVDOH.
389	Utilizing the alternate route for Corridor H, avoiding the towns of Thomas and Davis, preserves the natural beauty of this area. Go North and save at least this much of WV.
390	<p>Attention: DOH C/O Mr. Travis Long</p> <p>It is un-American to misrepresent and mislead the constituents of Tucker County. The proposed route you so aggressively impose upon our historic national treasures VIOLATES our sensitive ecosystems, our rivers, our sacred mountain -historically registered, federally protected on so many levels; and foremost VIOLATES our local folk and the quality of recreational tourism for our future generations.</p> <p>Please understand that we view your imposition an act of war upon the populations that birthed, suckled, and fed children, and generations on these Tucker County mountains.</p> <p>I understand that in order for you and what you represent, to save face, you need to do the will of that small minority that empower you to do so.</p> <p>I trust that you and those making money on this Corridor H project, or have something more grand to gain -don't live here, are not from here, don't work here, and you obviously don't respect the communities that actually DO live here -full time and throughout all seasons!</p> <p>We don't need more Walmart--minded folks up here. If that's what the mayor of Davis wants, then he should move closer to one!</p> <p>Mr. Travis Long, it is NOT your privilege to lambast your agenda through our mountains, and ruin and destroy all our hard work and successes in creating a jewel of communities; multifaceted and strong - committed to preserving our way of life!</p> <p>You see, this is not only about the bumblebee, the bat, the rivers -it's about PEOPLE, CULTURE, HUMANITY impacted by your highway. WE DON'T WANT IT HERE. TAKE IT NORTH OR TAKE IT DOWN!!!!</p>

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	<p>I believe you will find more resistance from our visitors, as well as honorable hard working folks; entrepreneurs who revived our regional area; and those who work three to four jobs, and those who are retired. Your highway will only bring more people to use up our resources, infiltrate our jobs and living spaces; crime, thugs and drugs are what you will leave at our exits. NO THANK YOU!</p> <p>I birthed two children in Davis, West Virginia, home births - one through a blizzard. Have you ever done that, Sir?...Then don't tell me what you think my quality of life will be like once you get that highway up our asses, along with the chain restaurants and box stores.</p> <p>WE ALREADY HAVE GALLERIES and RESTAURANTS. WE SHALL GROW, THRIVE and PROSPER EXPONENTIALLY -WITHOUT the PROPOSED ROUTE for YOUR HIGHWAY!</p> <p>WE DEMAND YOU CREATE THE NORTHERN ROUTE. Anything short of this will be considered a National Act of Eco Terrorism.</p> <p>Sincerely and Gratefully Submitted, Diana Vera</p>
391	<p>I am registering my comment in support of an alternative northern route to the one currently proposed for the Corridor H project.</p> <p>I first visited Canaan Valley and the towns of Davis and Thomas as a tourist earlier this year, in January 2022. I got an immediate sense of how special the region is and was immediately planning my next trip back. Since that trip, I have read about the long planned Corridor H project. I am in favor of better quality roads for West Virginia, but the proposed route is not best for the people or the environment in Davis and Thomas, and will negatively affect tourism in the area. I urge the State of West Virginia and all others involved in this project to adjust the route to utilize the alternative Northern route that keeps the towns of Davis and Thomas, and the Blackwater Falls State Park (with the river and canyon) unaltered.</p>
392	<p>While the new corridor is an important step forward to bring people into our beautiful state, please do it in a way that is respectful of the integrity of the land. Blackwater Falls State park including the entire canyon are an important part of of the landscape and it would be a tragedy to scar it. Please go north!</p>
393	<p>Please convert to the Northern route around Thomas to prevent the Bridging of the Blackwater Canyon below Thomas. This contains some of the nicest terrain on the east coast and has limited but beautiful access that should not be disturbed. As a regular user of the current Corridor H route, I recognize the benefits of the road. However, a good solution exists for the northern routing and will be beneficial to all if followed. Thank you.</p>
394	<p>West Virginia Division of Highways     January 6, 2023 Technical Support Division 1334 Smith Street Charleston, West Virginia 25301</p> <p>Attn: Travis Long, Director</p> <p>Re: Corridor H Parsons to Davis</p> <p>Dear Mr. Long,</p> <p>The WV Chapter of the Sierra Club has long been concerned about the proposed route for the completion of Corridor H between the towns of Parsons and Davis. We understand that many parties are eager to complete this section of road but several serious concerns still exist about the proposed route that has</p>

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	<p>been chosen and its subsequent impacts. It is our hope that when completed, this road will accomplish intended goals (i.e. enhance vehicle safety, increase economic development, increase tourism) while mitigating negative impacts to the environment, public lands, wildlife, cultural resources, and communities. We submit the following comments about the project on the behalf of our 2,000 plus members in West Virginia.</p> <p>Public Lands</p> <p>The “preferred alignment” will impact both state and federal lands in the area. The proposed route passes immediately north of Blackwater Falls State Park, one of the most popular state parks in WV. We are concerned about the impacts increased traffic, noise, air pollution, and lights will have on the park’s ecosystem, wildlife, and visitor experience. Please consider an alternate route that is further from the park.</p> <p>According to Friends of Blackwater this project will negatively impact the Monongahela National Forest (MNF). The current proposal runs straight across the 11 mile long Blackwater Industrial Complex — a historic site managed by the MNF—located approximately half a mile southwest of Thomas, WV. There is concern that construction in this region could directly or indirectly damage and degrade artifacts of historical significance. If not already completed, this site should be subject to NEPA process including a public comment period. What specific plans are there to protect this site from any damage related to construction or the completed road?</p> <p>Additionally, acres of the MNF will be impacted near Big Run Bog, along historic Forest Road 18 and 717 to the Olson Fire Tower, and down the mountain to Mackeyville Road. Please explore alternatives that would not impact public lands or at the very least, lessen negative impacts.</p> <p>Water Quality</p> <p>Historically, water quality degradation has been a problem in this area as a result of mining activities. The proposed “preferred alignment” bridge for Corridor H between Thomas and Davis crosses the North Fork of the Blackwater River. According to Friends of Blackwater (FOB), historical maps and more recent surveys indicate that the hillsides on either side of the river are a maze of old coal mine tunnels; tunnels filled with acid mine drainage pollution. Available information indicates that mine drainage in this area is not currently being addressed. We share FOB’s concern that major construction, specifically blasting, could rupture these sites and increase acid mine drainage into surrounding waterways, particularly the Blackwater River. Increased mine drainage, as a result of disturbance from construction, would likely exacerbate the current water quality problems that already exist. Drinking water quality, sport fishing, aquatic habitat, tourism and recreation could all be affected. Have there been any surveys done to assess the potential danger construction activities might have on these tunnels and associated wastewater? What plans are there to mitigate mine drainage and correct existing water quality problems before construction begins?</p> <p>Endangered Species</p> <p>A letter dated December 12, 2022, sent to you by the FOB, details many concerns about endangered species in the area. We share their concerns and support their comments regarding the following species.</p> <ul style="list-style-type: none"> <li>• Virginia Big Eared Bat</li> </ul>

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	<ul style="list-style-type: none"> <li>• Northern Long Eared Bat</li> <li>• Rusty Patched Bumblebee</li> <li>• Cheat Mountain Salamander</li> <li>• West Virginia Northern Flying Squirrel</li> </ul> <p>Please consider their comments and suggestion and make appropriate changes regarding additional surveys and mitigation.</p> <p>Alternative Routes</p> <p>In the same letter dated December 12, 2022, FOB suggested that moving the route further north might help to mitigate some of their concerns. Please carefully consider this idea, as well as other alternative routes that might help lessen the negative impacts of this project.</p> <p>The WV Chapter of the Sierra Club thanks you for the opportunity to comment on this project. We look forward to your response. Please keep us updated on further activities regarding this project.</p> <p>Sincerely,</p> <p>Melissa A. Waggy Public Lands Committee WV Chapter of the Sierra Club</p> <p>Contact Info: Email – melwaggy@gmail.com Address – PO Box 89, Lewisburg, WV 24901 Phone/Text – 304-646-5763</p> <p><b>Additional submittal:</b></p> <p><b>Email with Letter (Duplicate of website comment above) 1/19/23</b></p>
395	<p>My family has owned a farm along the Cheat River for well over 50 years (1300 acres in Tucker and Preston counties). It has been a great pleasure to watch the economies of Davis and Thomas reinvigorate throughout this time. WV should be proud of this major accomplishment. As healthy, outdoor recreational activities become more and more in favor with the public, these towns have found unique ways to celebrate the history and culture, ensuring that they are "must" visits in the mid-atlantic region. To divide these towns at this juncture would curtail, if not completely ruin this momentum. I was very disappointed to see that the Mayor of Davis does not agree. He does not understand the value of his town. It is not a one-off value. Its combination with the assets of Thomas are what makes Davis interesting. On its own, Davis will actually begin to decline. It is also troubling to see that the leaders of WV are inflexible in their thinking and willing to risk the loss of view shed, negatively impacting the unique ecology of the region, and even the potential for acid mind drainage into these beautiful, largely</p>



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	unpolluted protected rivers. It is even more disturbing that an alternative plan has been developed, one that does not negatively impact or provide development uncertainty to the cultural strongholds of this region. WV leaders would do well to listen to their constituents, particularly those that represent their future. Unfortunately, it is clear to me that they are not. I prevail upon them to share the vision of many, clean environment and the restoration and protection of unique towns.
396	I am opposed to the corridor H route through Thomas and Davis. I spend a lot of time in the area and it is clear that this would adversely impact the area. There are other routes available that are more suitable and would not spoil the beautiful Blackwater and surrounding area.
397	I agree with Friends of Blackwater, who said "A much better route for Corridor H would be one that looped north of Thomas, WV going east of the landfill and cross above the Town Park and lake and below route 90 and the Thomas water source with a truck exit onto Route 90 leading to Route 219 north to Maryland. This route would avoid many of the concerns outlined above while also achieving the objectives of the Corridor H completion in the Davis to Thomas area."
398	<p>Thank you for extending the deadline to comment on the new draft of the Environmental Impact Statement (EIS) for the Parsons to Davis section of Corridor H. I live along South Haddix Run in Tucker County and our Tier 3 watershed has been devastated by Corridor H construction here in the last 4 years.</p> <p>Tucker County has changed a lot in the last twenty years, and the old EIS is irrelevant and outdated. We have evidence of the difficulties of Corridor H construction in the last four years as it has entered more mountainous terrain and US Forest Service lands, with many violations and big problems with bridge abutment failures, landslides, bridge tower slippages and severe sedimentation problems along the route. We need to pay attention to these problems and take them seriously when planning the next segment which is steeper, higher and in more fragile proximity to severe acid mine drainage. We have been forewarned! We know more now! Let the planning reflect what has been learned.</p> <p>A fully revised and updated EIS needs to be developed, so that the public, federal and state agencies, and local town can review and comment before selecting a new preferred roadway alternative.</p> <p>I am concerned that the old ROPA brings the Corridor H route into the watershed of Big Run Bog, which is recognized as a National Natural Landmark. The bog would be negatively affected by a highway upstream in the watershed.</p> <p>We have lived here 45 years and have seen both Thomas and Davis grow and thrive. Parks have been created and trails developed. 80 new businesses have opened in the last three years alone. The previously identified ROPA threatens to divide the towns of Thomas and Davis and ruin much of the work that has been accomplished by local groups and volunteers.</p> <p>The old ROPA would negatively affect watersheds such as Blackwater Canyon, which is a major economic and recreational resource for the region, as well as the Tier 3 streams along the ROPA route. A truck route avoiding downtown Thomas is desperately needed to improve business conditions in the town and the safety and health of its residents. We need an alternative route that avoids the Thomas Trails area and the water supply for Thomas, and as well as improve access to the Tucker County High School.</p> <p>I use the trail system around Olson Tower and Big Run Bog, the Loop Trail, the rail trail from Thomas to Douglas, the historic coke oven industrial complex, all of which could be affected by the current ROPA. I am concerned about the bad acid mine drainage around Douglas and Coketon and the lakes of underground acid mine drainage that would be disturbed by nearby highway construction.</p> <p>I look forward to reviewing alternative plans that fit the 21st century and the needs of our citizens in the face of economic strains, environmental degradation, fiscal responsibility and climate change.</p>
399	Thank you for the extension of the deadline and the opportunity to comment on the issues surrounding the new draft of the Environmental Impact Statement (EIS) for the Parsons to Davis section of Corridor H. We have been following the construction of the Kerens to Parsons segment of the road, as it has severely impacted our watershed (South Haddix Run) and are concerned about the next sections.

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	<p>We have seen many changes in economic and recreational conditions in Tucker County in the last ten years, and we now have had the experience of Corridor H construction in the last four years as it has reached the mountains and US Forest Service lands, and crossed several Tier 3 streams with harmful effects. MANY violations have been cited and fines incurred, and this is a clear warning for what lies ahead.</p> <p>I believe it is imperative that a fully revised and updated EIS needs to be developed, providing to the public, federal and state agencies, and local town governments opportunity to review and comment before selecting a new preferred alternative. We need a new plan based on what we have observed in the last 4 years, including bridge abutment failures, landslides, bridge tower slippages and severe sedimentation problems along the route, on land that is much less fragile than the sections between Parsons and Davis.</p> <p>I am strongly opposed to bringing the Corridor H route anywhere in the watershed of Big Run Bog, which is recognized as a National Natural Landmark, and a beautiful resource for our county which would be adversely affected by a highway directly upstream.</p> <p>I am strongly opposed to the previously identified ROPA, which threatens to divide the towns of Thomas and Davis, and the trails that connect them. I fear negative effects to watersheds such as Blackwater Canyon, which is a major economic and recreational resource for the region. We need an alternative other than the previously identified ROPA that enhances rather than threatens our towns and environment. I have a business, Menla Mountain Health that rents office space in Thomas (Allegheny Holistic Health Care along 219). We had to move the business from downtown Thomas because of intolerable truck traffic sound that was disturbing to patients.. A Truck route avoiding downtown Thomas is desperately needed and imperative to improve business conditions in the town and safety and health for the residents. A well planned alternative route could avoid or minimize effects to the Thomas Trails area and the water supply for the Town of Thomas, and could improve their access to the Tucker County High School.</p> <p>We need a more thorough evaluation and serious consideration of a “northern” alternative, which is more responsive to the legitimate concerns of our communities, consistent with the true purpose and intent of NEPA.</p> <p>Our family uses and appreciates the trail system around Olson Tower and Big Run Bog, the Loop Trail, the rail trail from Thomas to Douglas, visits the historic coke oven industrial complex, all of which would be adversely affected by the current ROPA. We have seen the benefits from the reclamation projects that have dealt with the bad acid mine drainage around Douglas and Coketon, and we fear highway construction in these fragile areas would undo all of the good work that has been done and threatens to unleash lakes of acid mine drainage that exist underground still.</p> <p>I would like to see an improved roadway along the 219 roadway, similar to the plan that mitigated problems along Corridor K in Kentucky and Tennessee.</p>
400	<p>As a resident and property owner of Canaan Valley I am very much opposed to the proposed highway route between Davis and Thomas. One of the major benefits of Corridor H has been to bring tourism and economic development to the Canaan Valley area of WV. Most of what attracts tourists is the pristine environment for hiking, biking, skiing, nature watching, state parks, etc. People come to the area and spend significant amounts of money because it is an area devoid of major highways and industrial development. It would very much undermine one of the main benefits of Corridor H to route it right in the middle of a major tourist destination, destroying and diminishing the value of some outdoor recreation</p>

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	and sending tourists elsewhere. Routing Corridor H north of Thomas would avoid these impacts and help maintain one of the major economic benefits of building the highway in first place.
401	I agree with Blackwater Bikes and many others. I think the Northern Route would be better not only for business but our community too. The Northern Route has the better potential to connect our towns of Davis and Thomas via a great bike and pedestrian path. The Northern Route could reduce truck traffic in Thomas and preserve the view shed and serenity of our greatest asset, The Blackwater Canyon. Any trails that could potentially be lost in the Thomas City Park could be mitigated or replaced.
402	This section of highway is ABSOLUTELY not needed. There are no traffic concerns in this area that a 4 lane highway is needed. So many existing roads need improvements much more than a new, not needed roadway. It would be criminal to bring a highway thru this area that only leads to trash, environmental degradation, a plethora of fast food and convenience stores. The area already has a booming tourist industry and it does not need nor want this portion of road.
403	The Region VII Planning & Development Council wishes to express our strong support for the WVDOH Preferred Alternative Route for the Parsons to Davis Section of Corridor H. Corridor H has been a priority of the region for over 25 years. As the Planning & Development Council that represents five of the seven counties in which Corridor H runs, we fully understand the importance of this highway to the safety and growth of our region. Corridor H needs to be completed as soon as possible for a variety of reasons, the first of which is safety. The preferred alternative provides the safest access for Tucker County High School. The preferred alternative also allows for the shortest response time for Tucker County EMS. The elevation for the Preferred Alternative also helps with weather conditions. In addition to the safety benefits, the preferred alternative also allows for the quickest construction completion. Residents of West Virginia have waited far too long for the completion of Corridor H. Funding opportunities have never been more plentiful than they are right now for the completion of Corridor H. Traffic has already increased significantly through the City of Thomas, but when the Kerens to Parsons section is opened to traffic, the traffic counts will dramatically increase, especially truck traffic. The CCC walls that hold Thomas up were not made to handle that level of traffic. If the preferred alternative is not permitted to move forward, the time that Thomas will have to live with the increased traffic will dramatically increase. It is hard to argue that Corridor L, U.S. Rt. 19 in Fayette County, West Virginia has had a negative impact on the town of Fayetteville. The New River Gorge Bridge has become the main symbol of our state. It has created the first National Park in West Virginia. All really important economic drivers for the state both locally and statewide. This section of Corridor H will have a similar positive impact. We strongly urge the selection of the preferred alternative and for construction to begin as soon as possible.
404	I request you consider changing the proposed route to Corridor H concerning the Thomas/Davis/Blackwater Falls Canyon. The current proposed route, will split two traditional towns; cross our walking trails 3 times and most tragically have an extremely negative impact on the Blackwater Falls State Park through noise and light intervention by Corridor H. I highly recommend you visit Blackwater Falls, sit down and thoroughly enjoy the quiet. You don't hear traffic. You don't see lights. All you hear is the solitude of this spectacularly beautiful quiet of an area touched by GOD'S hands. Now you want to impact this solitude with Corridor H. People don't visit this area to hear what they have constantly at home. Also, you are severely impacting the National Forest. You have already reduced this National Forest by thousands of acres. Migratory birds depend upon old and new growth of trees. You are reducing the amount of food available for a multitude of wildlife. There are no plans to replace the trees, especially hardwood and those producing food for wildlife. PLEASE consider just a slight change to this much hated roadway to save and preserve our beloved areas here in Tucker County. I realize we are but a small rural area to you. Yet, where you are treading now is steeped in WV history. PLEASE, I implore you to consider this small change in the route of Corridor H. It may be a move to supposedly bring WV into the future. We are, at this juncture, more interested in preserving not only our history but the history of WV and this country. PLEASE SAVE BLACKWATER CANYON from the negative impact of noise and light. PLEASE don't split two historical towns. Don't destroy the beauty and solitude of an area you by GOD. PLEASE consider

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	the impact of reducing the National Forest and the negative impact on wildlife and habitats. May GOD bless.
405	Please go with what you have planned. And the studies you have completed. Please start on this section of the corridor as soon as possible. No more delays. Get it done. Quickly. For the benefit of those who live and work in Tucker County. Thank you.
406	As a citizen of Berkeley County and former Tucker County resident that travels home frequently, I would recommend leaving the projected highway the way it has been planned and get the job done now. We've been waiting for this project to be finished for years. Build the road.
407	I am a strong supporter of Corridor H. I do however strongly oppose placing Corridor H between the towns of Thomas and Davis. Please consider placing the new highway north of Thomas using one of the alternative routes. Even if this means delaying construction a year or two. At times it seems we don't have much in WV but we do have the historical, unique and very special towns of Davis and Thomas WV. Lets not spoil that. Thank you for your consideration. Robert R. Williams life long resident of Almost Heaven West Virginia and property owner in the town of Davis, WV.
408	Please continue with this route so the future of our county can move on. I travel this route frequently and would benefit from it being finished
409	I would prefer the proposed route
410	<p>Don't divide Davis and Thomas!</p> <p>Use the alternative northern route.</p> <p>I agree with many of the common, important objections to the Davis/Thomas route.</p> <ul style="list-style-type: none"> <li>— Don't divide the sister towns of Thomas &amp; Davis and undermine their unique economy.</li> <li>— Don't degrade the viewshed from Blackwater Falls State Park.</li> <li>— Construction and blasting will increase Acid Mine Drainage which kills off aquatic life.</li> <li>— Don't undermine the unique ecology of the Blackwater Canyon, especially its rare and endangered species.</li> </ul>
411	Just finish Corridor H in the fastest, cheapest fashion.
412	I concur with the comments of Friends of Blackwater concerning the issue of the Corridor H alignment from Parsons to Davis in Tucker County, West Virginia. I oppose the current "preferred" alternative, and encourage adoption of the (better) northern route for Corridor H. I have spent a great deal of time recreating in the Mon National Forest, esp. the northern half, and in Canaan and Blackwater Falls State Parks. I have also done much trail work on MNF trails through the WV Chapter of Sierra Club, esp. after the 1985 flood. Minimizing impacts to these wild areas is paramount for my interests, as well as the ecological integrity of the area.
413	<p>You don't have to live in a place to appreciate it. You can be a visitor, and a visitor who has experienced similar situations in other places.</p> <p>I support an alternative northern route for Corridor H between Parsons and Davis. I object to the "preferred" Blackwater Canyon Route.</p> <ol style="list-style-type: none"> <li>1. Don't undermine the unique ecology of the Blackwater Canyon, especially its rare and endangered species.</li> <li>2. Construction and blasting will increase Acid Mine Drainage which kills off aquatic life.</li> <li>3. Degrading the Blackwater Industrial Complex and its historical resources should not be an option.</li> <li>4. The sister towns of Thomas &amp; Davis should not be separated; they share a unique economy.</li> </ol>
414	Go North. Preserve Davis and Thomas.
415	don't ruin Davis/Thomas, go North
416	Support the route already planned. I support the ROPA alignment of Corridor H proposed by the WVDOH.
417	Thanks for the opportunity to comment: I consider the northern route north of Thomas and Davis to be a much better alternative to the one proposed to go south of Thomas. The northern route will keep the Blackwater River Canyon, North Fork of Blackwater River Valley, Monongahela National Forest, and



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	Blackwater Falls State Park more quiet and pleasing to vacationers and outdoor recreationists. The northern route will ensure the proposed Blackwater River Loop Trail and the Allegheny Trail, which will be relocated off of roadways onto the loop trail, provide a more pleasant wildland experience to recreationists. The towns of Thomas and Davis will remain attractive is vacation destinations if the northern route is chosen. The southern route would disrupt the towns' current pleasantly quiet and quaint attractiveness.
418	I reside in Virginia but own property in Canaan Valley, the property having been in my family since 1985. I routinely drive Appalachian Highway Corridor H (US 48) to visit Canaan and other times when traveling to Charleston. Yes, the 4 lane is convenient, but extending the 4 lane between Davis and Thomas would be terrible. It would divide the towns and destroy the small-town charm that people flock to. It would be an eyesore. This harm could never be undone. Take the northern route. Please !
419	Please push the route to the north. The impact from the proposed route would be detrimental to one of the most pristine and beautiful regions of our state. We must preserve our natural beauty and not repeat our past follies when it comes to preservation of historical sites within WV.
420	<p>Mr Long:</p> <p>Everyone one I know here in Tucker County wants Corridor H to be completed.</p> <p>No one I know here in Tucker County wants the route to go through Thomas and impact the Blackwater Canyon.</p> <p>Your current plan is outdated and needs to be revisited. This needs to be done even if it means that some portions might miss out on some of the current funding.</p> <p>The confected sense of urgency that your department is trying to use to pressure the community here to have this shoved down our throats is unseemly, unnecessary, and unprofessional. Everyone, including you, knows that it will be years before there are real interstate-level volumes on this roadway. There is plenty of time to get this right.</p> <p>The current plan is clearly flawed, a patchwork of back-engineering that tries to make sense of something that clearly makes no sense.</p> <p>You need to go back to the drawing board, come out of the last-century mindset your department seems to locked in, and listen to the overwhelming majority of people living here.</p> <p>The northern route is the only viable option. You need to start planning for that.</p> <p>Thomas Yocum</p>
421	As a landscape designer and a life long resident of the mountain state, I am fearful to no end of this proposed development. Any person traveling to Davis and Thomas does so because these are culturally rich small towns that are undisrupted by massive road systems- away from the chaos. In 2022, this is a rare asset for our state, and for the world. Sometimes, creating ample access ruins communities like Davis and Thomas. Not to mention this development will disturb what is now a flourishing habitat, inviting in invasive species and driving out the wildlife that people come from all over the world to see. This landscape is worth the detours through the hills that you must take to reach it. Not everything needs to be available at the snap of a finger. This development would reek havoc on local biodiversity, and steal the integrity from small business owners as they struggle with raised prices and gentrification. Corridor H would be a slap in the face to West Virginians/people who believe that Davis and Thomas is worth the extra miles. Do not proceed if you want to maintain this regions charm.

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422	C-H should go West and North of Thomas to avoid the Coketon area and dividing the towns of Thomas and Davis. There are no modifications to the planned route (between the towns) that will buffer the impacts to this community, the natural beauty of the area, and the tourist economy that the area depends on. The economy is based on tourists that come for the natural condition of the area. This highway will diminish the very natural assets our livelihoods are based on. The only good choice is to go north- or nothing at all!!!!!!!!!!!!!!!!!!!!
423	The northern route is critical to preserve the important black water canyon. It also is what is best for the important towns of Davis and Thomas
424	WV is a beautiful state, yet it is clear that continued invest in infrastructure is needed to continue growth and develop more jobs. Why do something detrimental to an area that is thriving to promote growth in other areas of the state? That's like robbing peter to pay Paul. The northern route will maintain the tourist money coming into the Davis and Thomas areas yet meet the desired objective of highway access to other parts of the state. I think the corridor H project is fantastic for the state, but let's not lose sight of why the project was designed in the first place, to expand the overall growth of WV jobs. Please consider the Northern route as the best option for everyone. Thank you.
425	I am a hiker enthusiasts. I go almost every weekend to one of WV beautiful, native areas to fond peace and solitude. I have visited e every state park and forest. In the past couple years I made it a point to pay attention to the "noise" on the trails. Unfortunately there are few areas that you don't hear traffic. So disappointing! When I visit these areas I spend money--I have meals and sometimes over night stays. All this helps the state economy. It will be so sad to loose the tranquility of the Blackwater area. PLEASE CHOOSE THE NORTHERN ROUTE!
426	I believe that the project will cause many traffic issues as it does in this little town trucks are very irresponsible anymore and the amount of garage and trash will increase as McDonald's and others follow. Thank You for your time
427	I fully support corridor H, and can't wait for the Pardons to Davis stretch to start construction. Been waiting for this road for about 20 years, and I can't wait to be able to get from Buckhannon to Wardensville in what should only take about 2 hours (or less). Go WV!
428	Yall are killing it in a good way
429	Keep Rt 32 - NO!!! By pass truck route avoiding existing 32 thru Thomas. This will save

**Attachment 11:**  
**Special Provision**  
**WVDOH Form SP 107.27**

**WEST VIRGINIA DEPARTMENT OF TRANSPORTATION**

**DIVISION OF HIGHWAYS**

**SPECIAL PROVISION**

**FOR**

**STATE PROJECT NUMBER:** \_\_\_\_\_

**FEDERAL PROJECT NUMBER:** \_\_\_\_\_

**SECTION 107**

**LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC**

**107.27-CONSTRUCTION ACCESS AND ENVIRONMENTAL PERMITS:**

ADD THE FOLLOWING SUBSECTION:

**107.27.3-Environmental Commitment and Mitigation:** The Contractor is advised that this project is located within an area for which the Division has made previous environmental commitments. These commitments were outcomes of the environmental process and are contained in the project's NEPA document, in which the Division has pledged and/or has an agreement to perform an activity at a future time, in effort to avoid, minimize or mitigate impacts.

The fulfillment of these commitments and the associated mitigation are essential requirements that must be incorporated into the construction of the project. The Division has translated the mitigation items so that they are clearly understandable to Contractors and inspectors. The project's Environmental Mitigation Requirements are listed below:



The NEPA documents are included in the contract documents for the project and the Contractor is responsible for adhering to commitments relating to construction activities.

The Contractor is responsible to ensure that the project is constructed in accordance with and incorporates all committed Environmental Mitigation Requirements. Any Contractor proposed changes to the project require additional appropriate agency coordination. Any modification to the Environmental Mitigation Requirements must have agency written approval prior to submitting to the Engineer for approval. No time extensions or additional payments will be made for the Contractor to obtain additional approvals or permits or for changes.

If any of the Environmental Mitigation Requirements are not satisfied or are adversely impacted, construction work shall be stopped until the situation is resolved in coordination with resource agencies.

Unless otherwise stated, all costs of Environmental Mitigation Requirements shall be included in the unit prices on the various pay items, and the Contractor will not be paid an additional amount for such work except as otherwise provide in 104.5.

Corridor H, Parsons to Davis  
Geotechnical Activities

**Environmental Commitments**

The contractor shall comply with all special conditions set forth in the United States Army Corps of Engineers (USACOE) Section 404/401 permits being prepared for this activity, as well as any special conditions identified by the United States Forest Service-Monongahela National Forest (USFW-MNF) within the Special Use Permit issued for this project.

The following measures have been provided in the 4/14/2023 Biological Assessment (BA), the 4/23/2023 USFWS Biological Opinion (BO), as well as coordination with the USFWS:

**Conservation Measures**

The FHWA and WVDOH have committed to completing the conservation measures listed below, which are more fully detailed in the BA/BO.

1. Focus project design to utilize existing infrastructure as much as possible to reduce the need for new disturbance/construction.
2. Minimize the width of new and reconstructed roads.
3. Minimize stream and wetland crossings.
4. Reclaim and restore bore pads and access roads to original conditions following boring activities using native seed mixes and straw.
5. Straw instead of hay will be used during mulching and seeding to reduce the spread of invasive species.
6. Cover abandoned mine portal openings of 3A, 3B, 3C, 4, 5, and 6 with one inch mesh prior to the beginning of any construction activities within ½-mile of these portals, to exclude bats from using the portals, with the goal of reducing the likelihood of adverse effects to bats inside the portals during boring activities. This wire mesh is to stay on the portals indefinitely.
7. Reseal the bore holes following drilling activities.
8. Plug bore holes immediately following drilling if an open void in the mine seam is encountered proximate to known Virginia big-eared bat roosting habitat at the Coketon portals.
9. Implement best management practices for erosion and sedimentation control which follow requirements in the National Pollutant Discharge Elimination System General Construction Stormwater Permit issued by the U.S. Environmental Protection Agency. These include compost filter socks, water bars, super silt fences, timber matting, rolled erosion control devices, and stabilized construction entrances.
10. Check, repair, and maintain erosion and sedimentation controls within 24 hours of any precipitation event resulting in a ¼-inch of rain that occurs within a 24-hour period.
11. Apply temporary seeding and mulching within four days of disturbance where ground disturbance occurs but is left alone for more than 14 days.
12. Seed and mulch disturbed areas within four days of final grading.
13. Stabilize disturbed areas of earth disturbance within four days of construction completion.
14. Maintain fire suppression equipment for all construction and boring machinery, as well as spill kits in the event of equipment leaking or fuel spills. In the event of a spill, it will be reported upon discovery to the agencies.
15. During the project's design stage, efforts were implemented to entirely avoid core boring and access road construction within identified and delineated cheat mountain salamander habitat patches. Delineated habitat patches are depicted on the attached figure and must be avoided.

### Reasonable and Prudent Measures

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize take of federally listed species:

- The FHWA, WVDOH, and its contractors shall implement all conservation measures as described above to avoid or minimize to the greatest extent possible effects to the rusty patched bumble bee and Virginia big-eared bat within the action area.
- The FHWA and WVDOH shall provide information to individuals involved in project construction on how to avoid and minimize potential effects to rusty patched bumble bees, Virginia big-eared bats, Indiana bats, tricolored bats, and northern long-eared bats.
- The FHWA, WVDOH, and its contractors shall install and maintain all erosion and sedimentation controls throughout the project area as specified in the BA and its Appendices, Description of the Proposed Action, Conservation Measures, and all associated project addendums.
- The FHWA, WVDOH, and its contractors shall restore all construction work areas through mulching and seeding with native species, as specified in the BA, BA Appendices, and all associated project addendums throughout the project duration and upon project completion.
- The FHWA, WVDOH, and its contractors must ensure that the proposed action will occur as designed, planned, and documented in the BA and this Opinion.

### Terms and Conditions

In order to be exempt from the prohibitions of Section 9 of the ESA, the FHWA and the WVDOH and its contractors must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline required reporting/monitoring requirements. These terms and conditions are nondiscretionary in order for the exemption to apply.

1. The WVDOH will have a special condition in the construction plans stating that the project will occur as designed, planned, and documented in the BA and this Opinion.
2. The FHWA, WVDOH, and its contractors shall implement all required measures as described in the BA and its Appendices, including sediment erosion and sedimentation control best management practices.
3. The FHWA, WVDOH, and its contractors will include the following conditions (language) in all construction and demolition contracts awarded for project implementation:
  - 3.1. Federally endangered species are present in the Action Area and there is a risk of unauthorized take (ESA Section 9 violation) if the attached Terms and Conditions of the U.S. Fish and Wildlife Service's Opinion are not closely followed.
  - 3.2. Best management practices for erosion and sedimentation control shall be in place before, during, and after any work is conducted and until revegetation of disturbed soil has achieved 70 percent coverage.
  - 3.3. Contractors shall monitor the project areas daily when the sites are active and not stabilized, and as soon as possible following storms or snow melt, when the sites are inactive and/or otherwise stabilized, to ensure the erosion and sedimentation control and spill avoidance practices are implemented and effective. Action shall be taken as soon possible to correct malfunctioning erosion and sedimentation control practices.
4. If voids are detected during boring activities proximate the Coketon portals that require bore plugs to be installed, WVDOH shall notify the Service and FHWA within 24 hours.
5. If collapse (partial or complete) to the entrances of any of the Coketon portals occurs during construction, WVDOH shall notify the Service and FHWA within 24 hours.

6. Environmental monitors from WVDOH staff shall make occasional site visits to active work areas (minimum of two to three times a month) to observe and confirm that all Conservation Measures are being met. The WVDOH shall notify the Service and FHWA of any failures to meet these Measures within 24 hours of observation.

#### Monitoring and Reporting Requirements

1. The FHWA and WVDOH will notify the Service, in writing (digital format), regarding the projected and actual start dates, progress, and completion of the project throughout the life of the project.
2. The WVDOH shall notify the Service and FHWA of any unauthorized activities (regardless of who conducted said activities) or emergencies resulting in any adverse effects not
3. described in the BA and addressed in this Opinion. This notification shall be made within 48 hours or sooner, if possible.
4. The FHWA shall make all reasonable efforts to educate personnel to report any sick, injured, and/or dead rusty patched bumble bees, Virginia big-eared bats, Indiana bats, and northern long-eared bats located during project-related activities. Care must be taken in handling any dead specimens of proposed or listed species to preserve biological material in the best possible state. In conjunction with the preservation of any dead specimens, the finder has the responsibility to ensure that evidence intrinsic to determining the cause of death of the specimen is not unnecessarily disturbed. The finding of dead specimens does not imply enforcement proceedings pursuant to the ESA. The reporting of dead specimens is required to enable the Service to determine if take is reached or exceeded and to ensure that the terms and conditions are appropriate and effective. Upon locating a dead specimen, notify immediately the Service's West Virginia Field Office at the phone number listed below.
5. Any spills of motor oil, hydraulic fluid, coolant, or similar fluids, not contained before entry into the Action Area, must be reported to the Service at the contact number/email provided below and National Response Center (800-424-8802) immediately.
  - a. The contact for these reporting requirements is as follows:

Jennifer L. Norris  
Field Supervisor West Virginia Field Office  
U.S. Fish and Wildlife Service 6263 Appalachian Highway Davis, West Virginia  
26260  
Attn: FW5\_WVFO@fws.gov or 304-866-3858



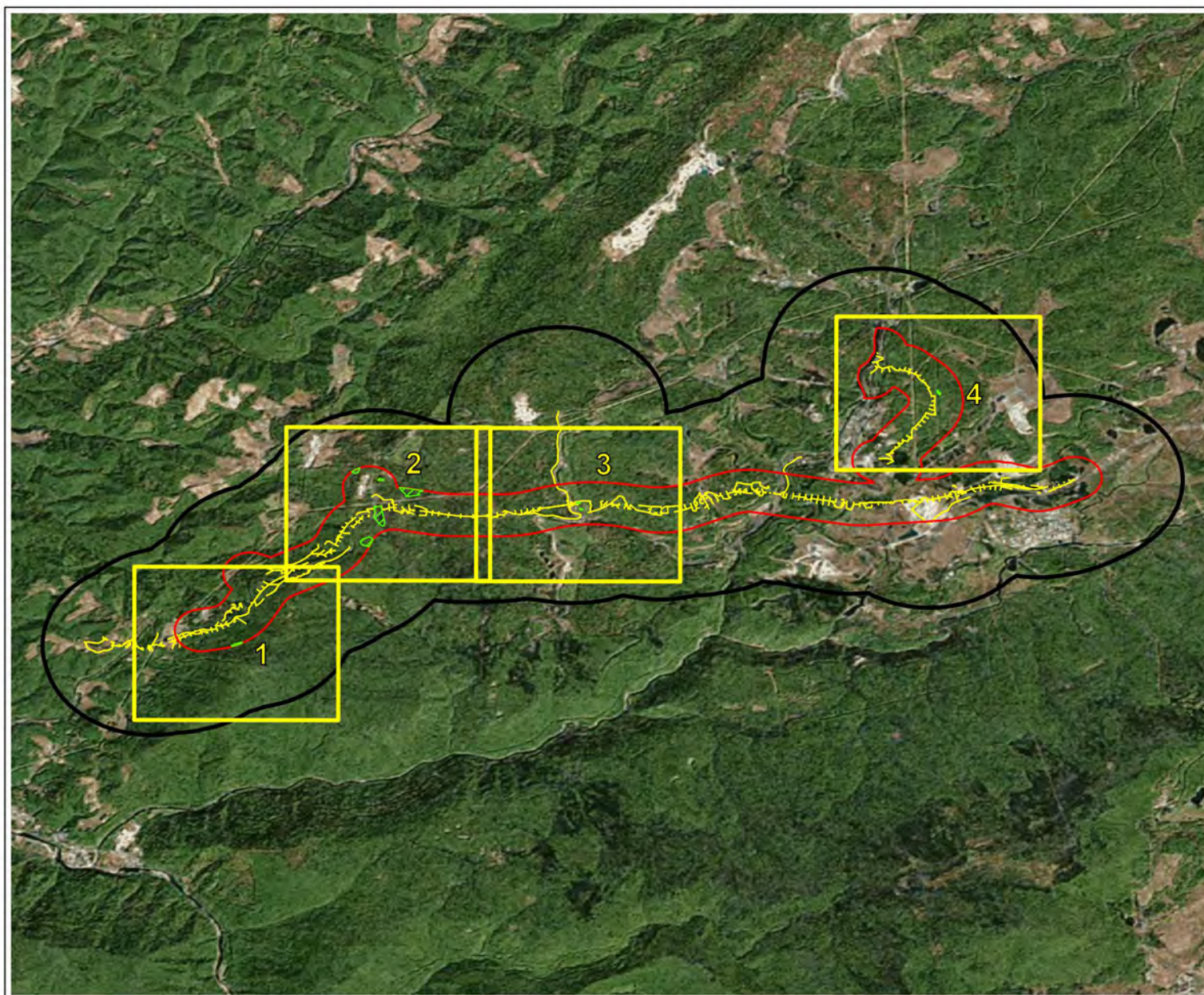




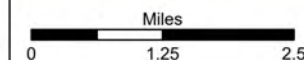
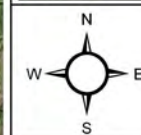
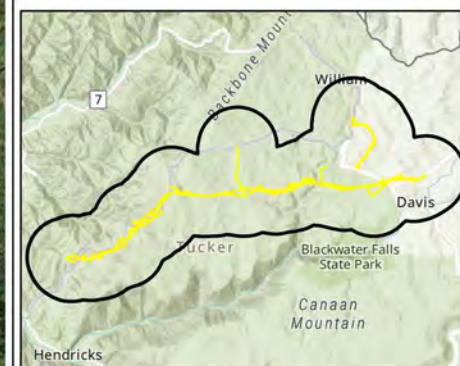


Figure 8. Suitable Cheat Mountain salamander habitat proximate Geotechnical Studies on the Parsons to Davis and Kerens to Parsons Section 5 Projects, Tucker County, West Virginia.

Map Key

Generated: 15 February 2023

-  Action Area
-  Limits of Disturbance
-  Cheat Mountain Salamander Study Area
-  Suitable Cheat Mountain Salamander Habitat



Service Layer Credits: World Imagery (Clarity): Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community  
World Topographic Map: VGIN, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA  
World Hillshade: Esri, NASA, NGA, USGS



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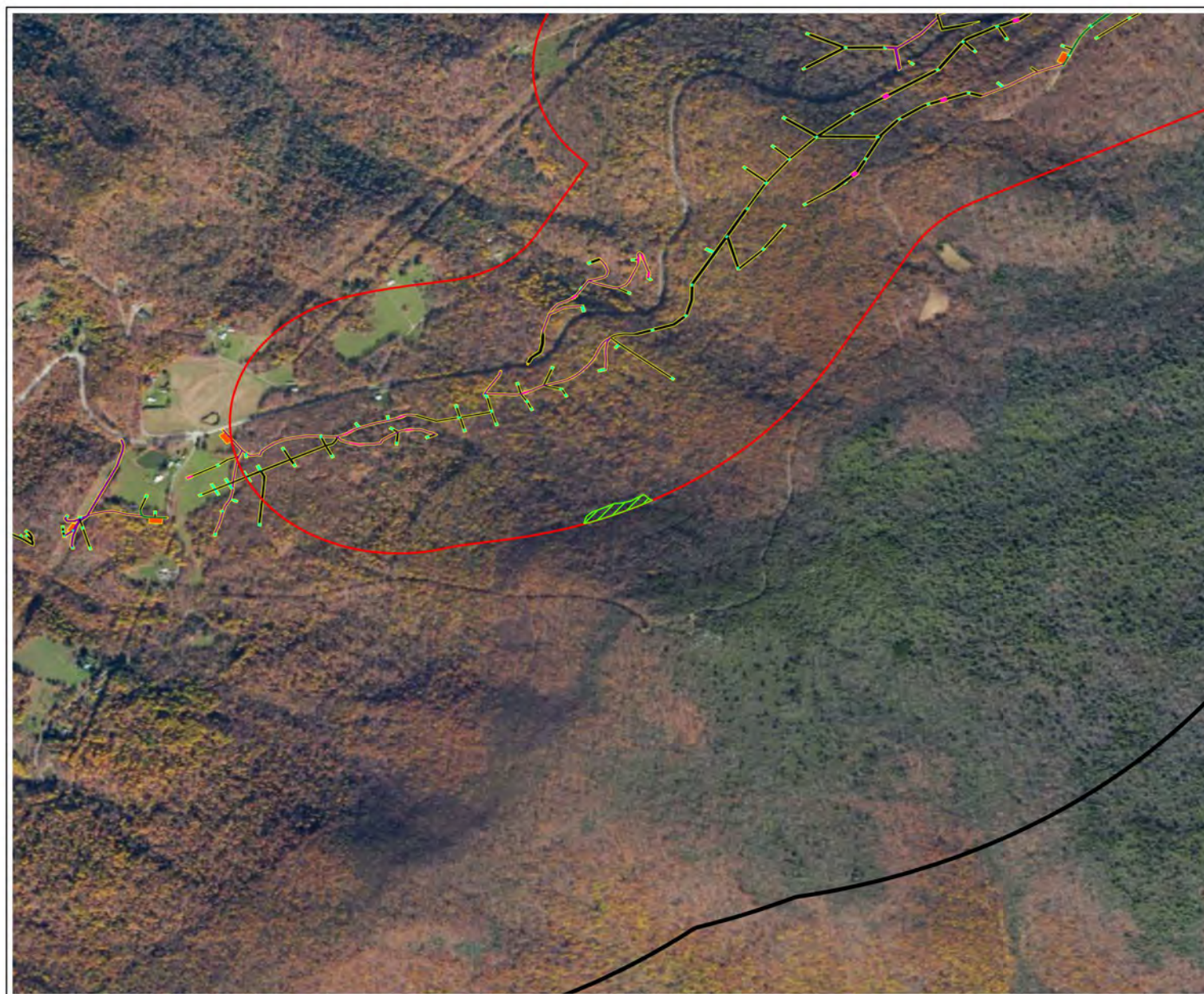
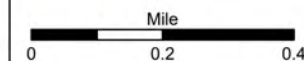
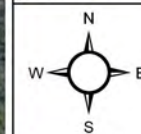
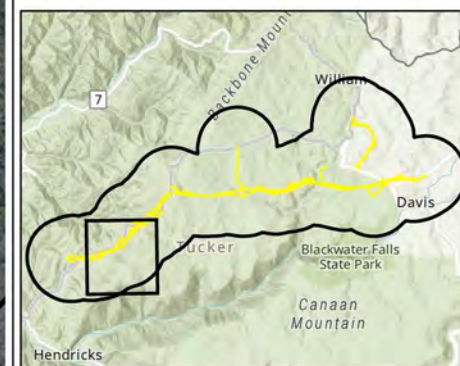


Figure 8. Suitable Cheat Mountain salamander habitat proximate Geotechnical Studies on the Parsons to Davis and Kerens to Parsons Section 5 Projects, Tucker County, West Virginia.

Map 1 of 4

Generated: 15 February 2023

-  Action Area  
 Timber Mat  
 Bore Pad  
 New Access Road  
 Laydown Yard  
 Reconstructed Access Road  
 Existing Access Road  
 Limits of Disturbance  
 Cheat Mountain Salamander Study Area  
 Suitable Cheat Mountain Salamander Habitat



Service Layer Credits: World Imagery (Clarity): Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community  
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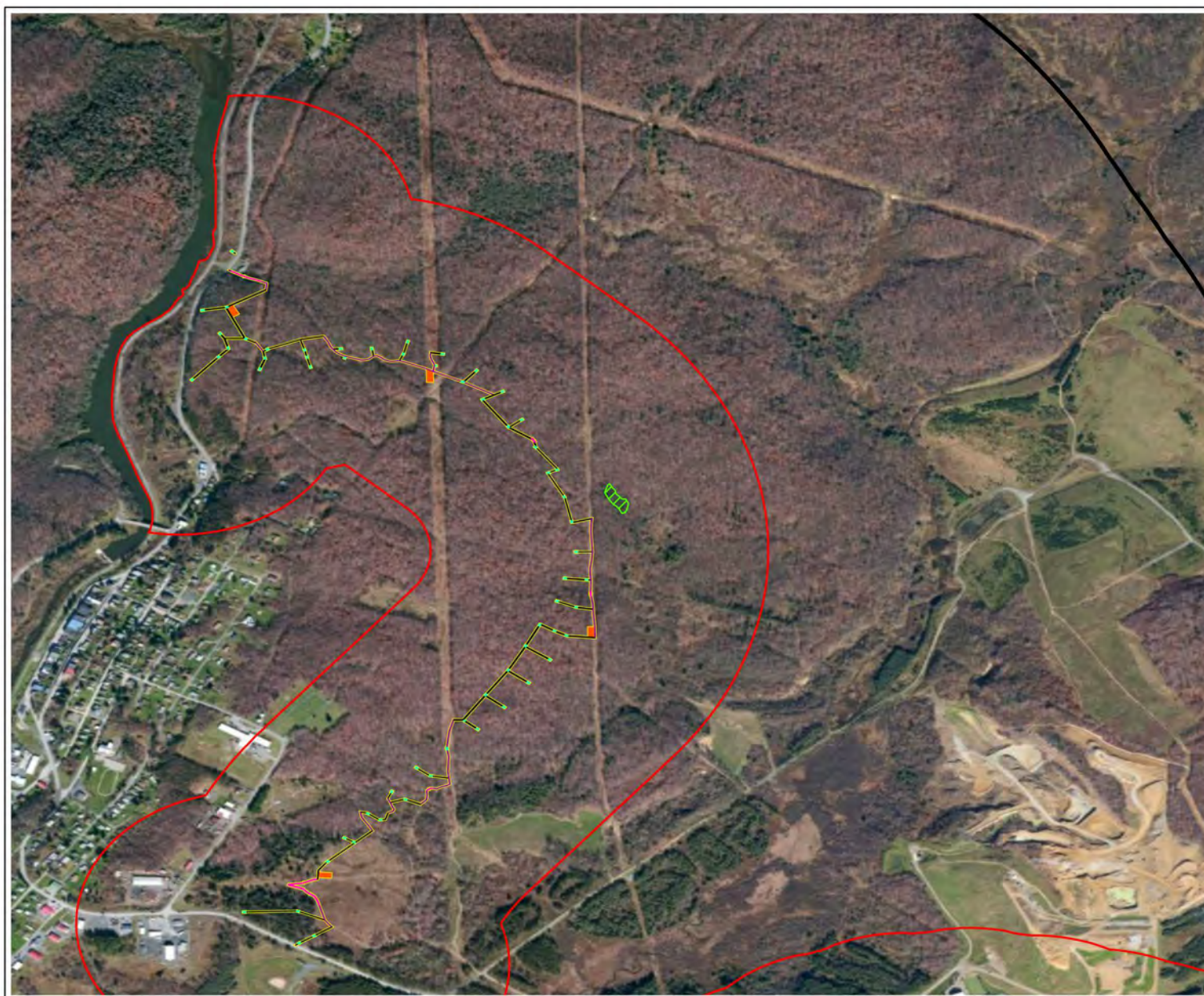
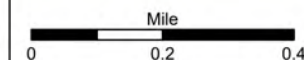
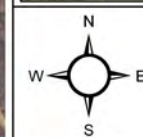
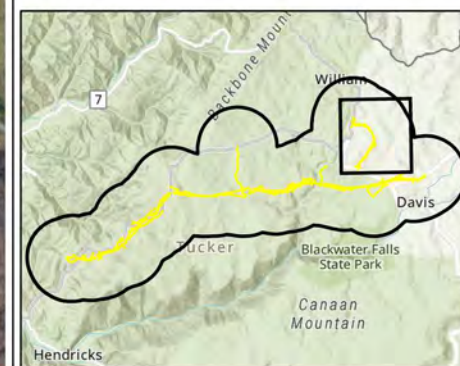


Figure 8. Suitable Cheat Mountain salamander habitat proximate Geotechnical Studies on the Parsons to Davis and Kerens to Parsons Section 5 Projects, Tucker County, West Virginia.

Map 4 of 4

Generated: 15 February 2023

-  Action Area  
 Timber Mat  
 Bore Pad  
 New Access Road  
 Laydown Yard  
 Reconstructed Access Road  
 Existing Access Road  
 Limits of Disturbance  
 Cheat Mountain Salamander Study Area  
 Suitable Cheat Mountain Salamander Habitat



Service Layer Credits: World Imagery (Clarity): Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community  
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