WV 9 Planning & Environmental Linkage Study

PUBLIC WORKSHOP

May 11, 2021

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Introductions

WVDOH

Tim Sedosky
Project Manager

Karen Allen
Environmental Lead

Chris Kinsey
Statewide Planning

HEPMPO

Matt Mullenax
Local Coordination

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Lu Ann May
Project Manager

Max Heckman
Project Oversight

Dan Szekeres
Traffic & Safety Analysis Lead

Agenda

- Project History and Project Status
- Goals and Objectives
- Traffic and Safety Assessment
- Alternative Corridors
- Public Input
- Preliminary Screening
- Next Steps

We want your input

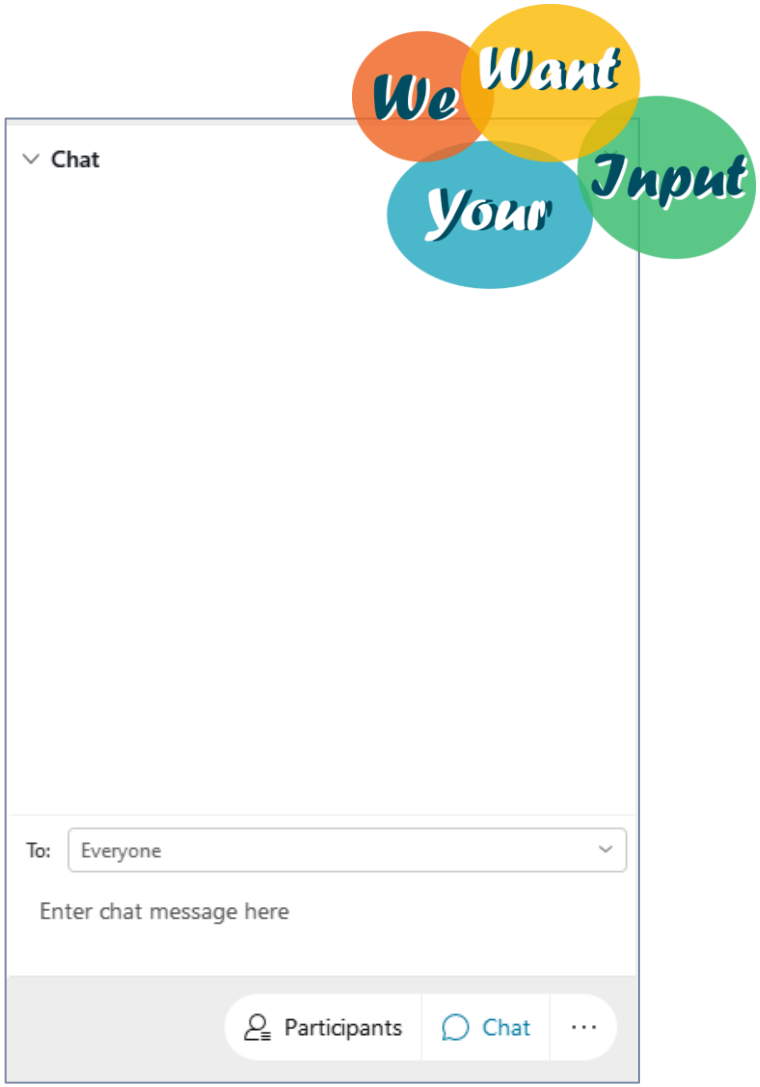
- **Chat your questions or comments**
- **After the meeting, email comments or questions to:**

Karen Allen

Karen.E.Allen@wv.gov

Lu Ann May

lmay@mbakerintl.com



Project History & Project Status

Project History

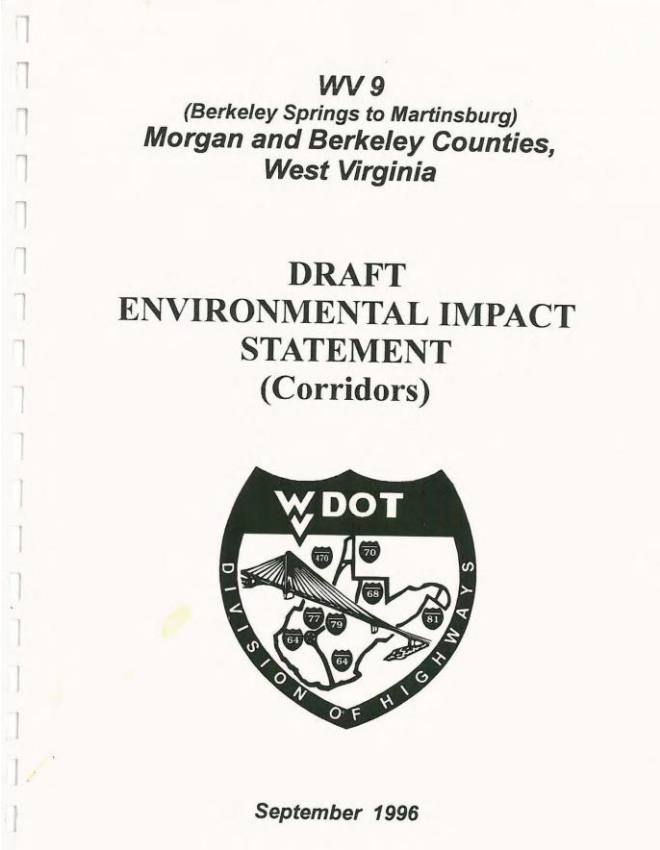
Corridor Alternatives

Project Development Process

Schedule

Project History

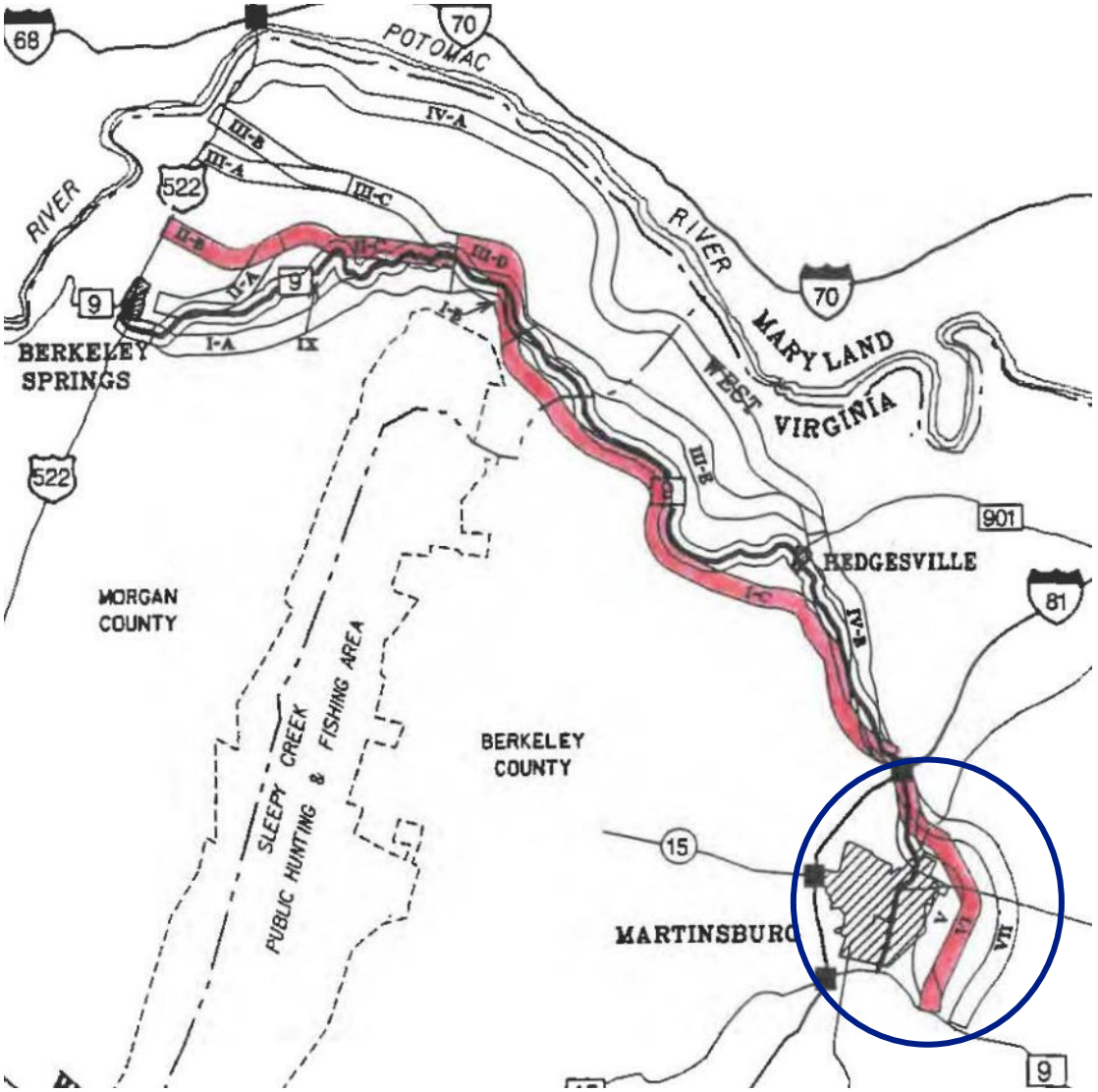
- Identified in a variety of regional and statewide studies between 1978 and 2018
- Detailed Corridor Studies were undertaken in Draft EIS approved in 1996 - 1997
- These corridors were starting point for current study



DEIS Corridors

1997 "Preferred Alternative"

Martinsburg Bypass is no longer an active project – funding was diverted to Raleigh Street Extension



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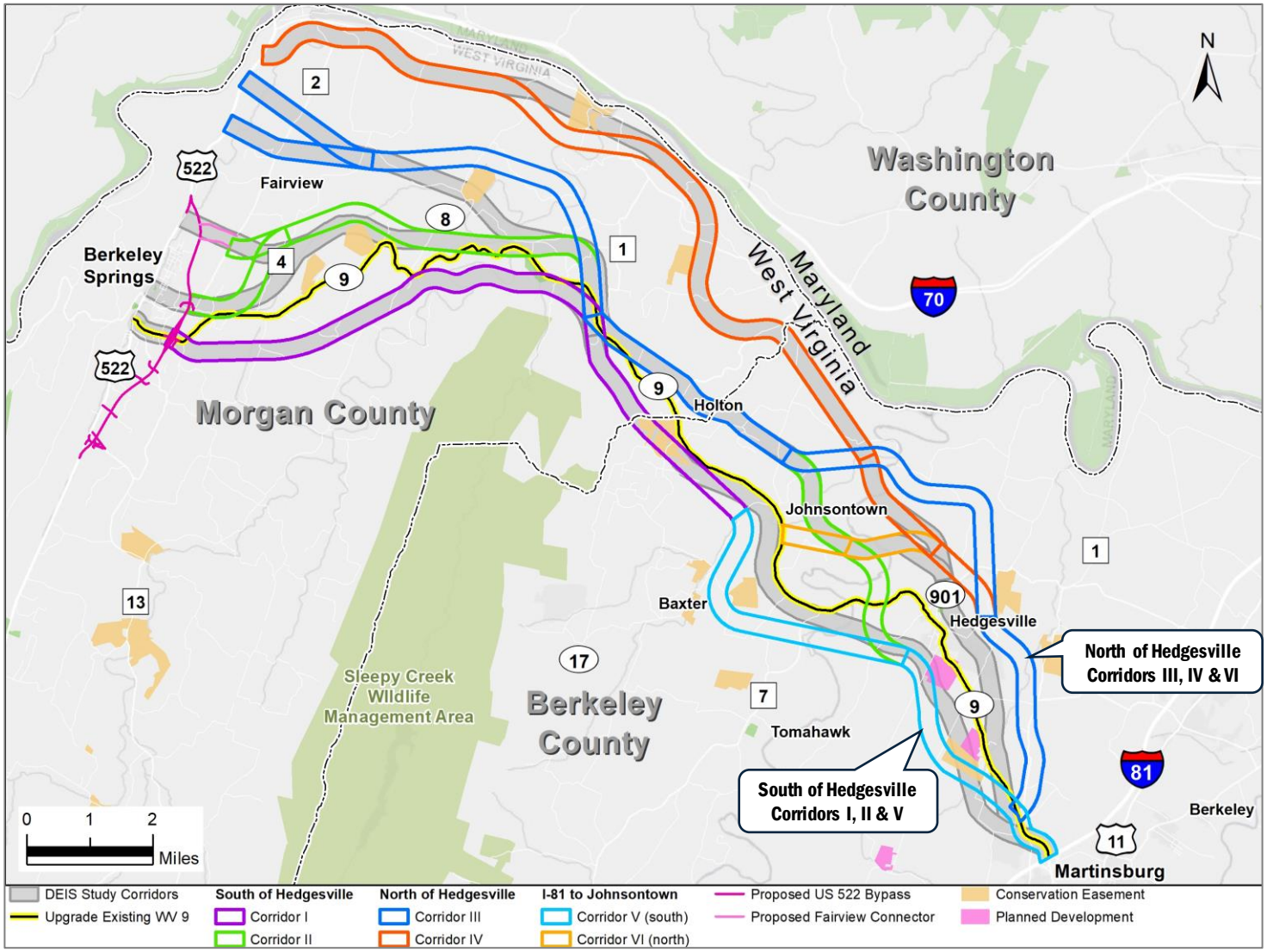
Corridor Alternatives



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Project Development Process

2020 - 2021

~ 10 Years

Planning & Environmental Linkage (PEL)

NEPA / Preliminary Design

Final Design

Right of Way Acquisition

Construction

We Are Here

Public Involvement

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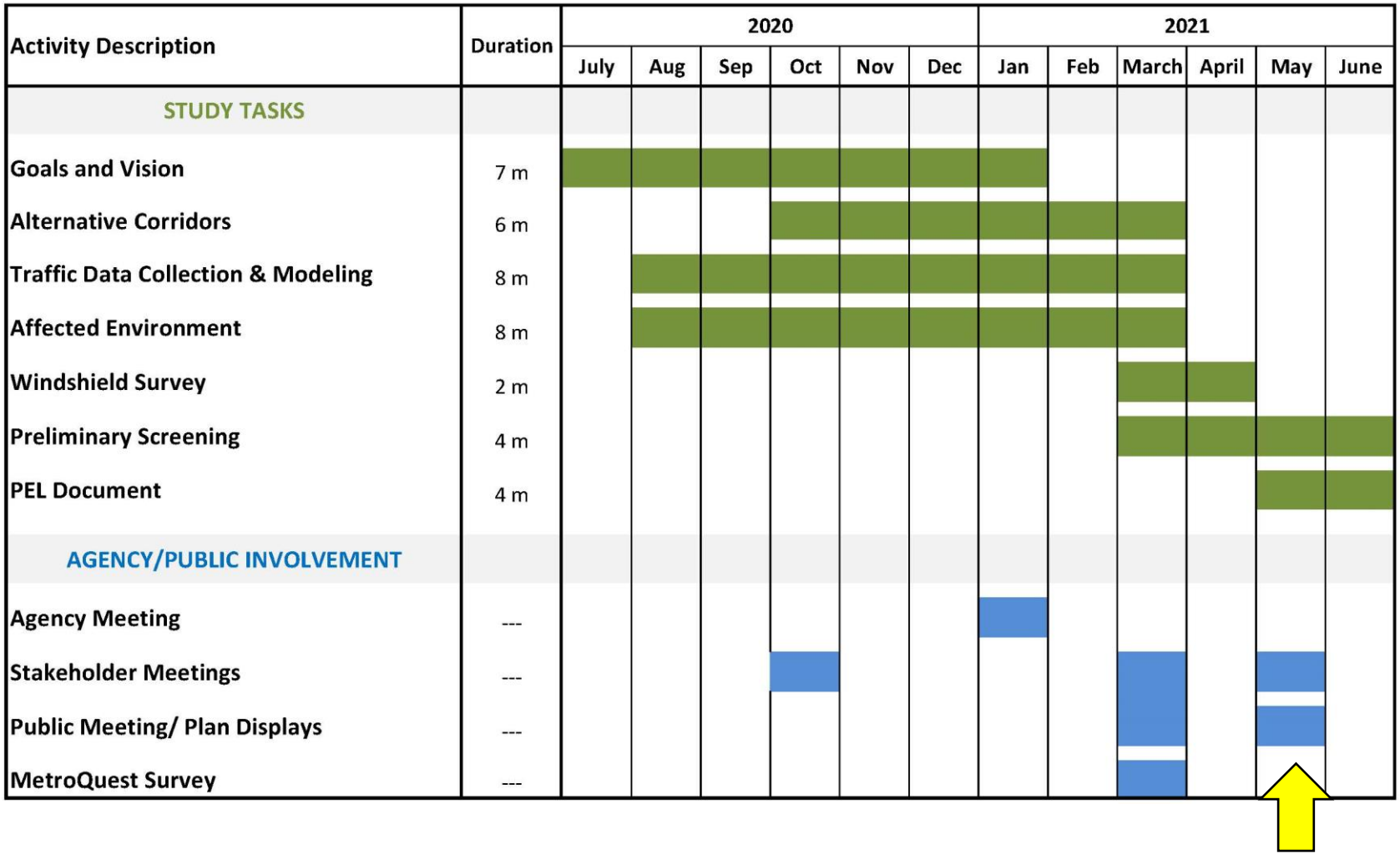
PEL Study Tasks and Schedule



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Goals & Objectives

Project Goals and Objectives

Transportation Needs

Project Goals and Objectives

Mobility Goal

- Improve mobility between Berkeley Springs and Martinsburg while alleviating congestion on area roadways

Safety Goal

- Improve the level of safety for motorists and pedestrians in the Study Area

Economic Development Goal

- Support planned development and promote future growth in the area

Project Goals and Objectives

Environmental Goal

- Protect and preserve the Region's Environment and Resources

Multimodal Goal

- Support and enhance all travel modes in the area

Corridor Land Use Goal

- Support Corridor Land Use Vision

Project Goals and Objectives

Example Objectives

Environmental Goal

- **Protect and preserve the Region's Environment and Resources.**

  Objectives include:

  - **Minimize impacts to the Sleepy Creek Watershed and other environmental and cultural resources**
  - **Evaluate stormwater runoff and related issues**
  - **Evaluate strategies to improve water quality and protect drinking water**

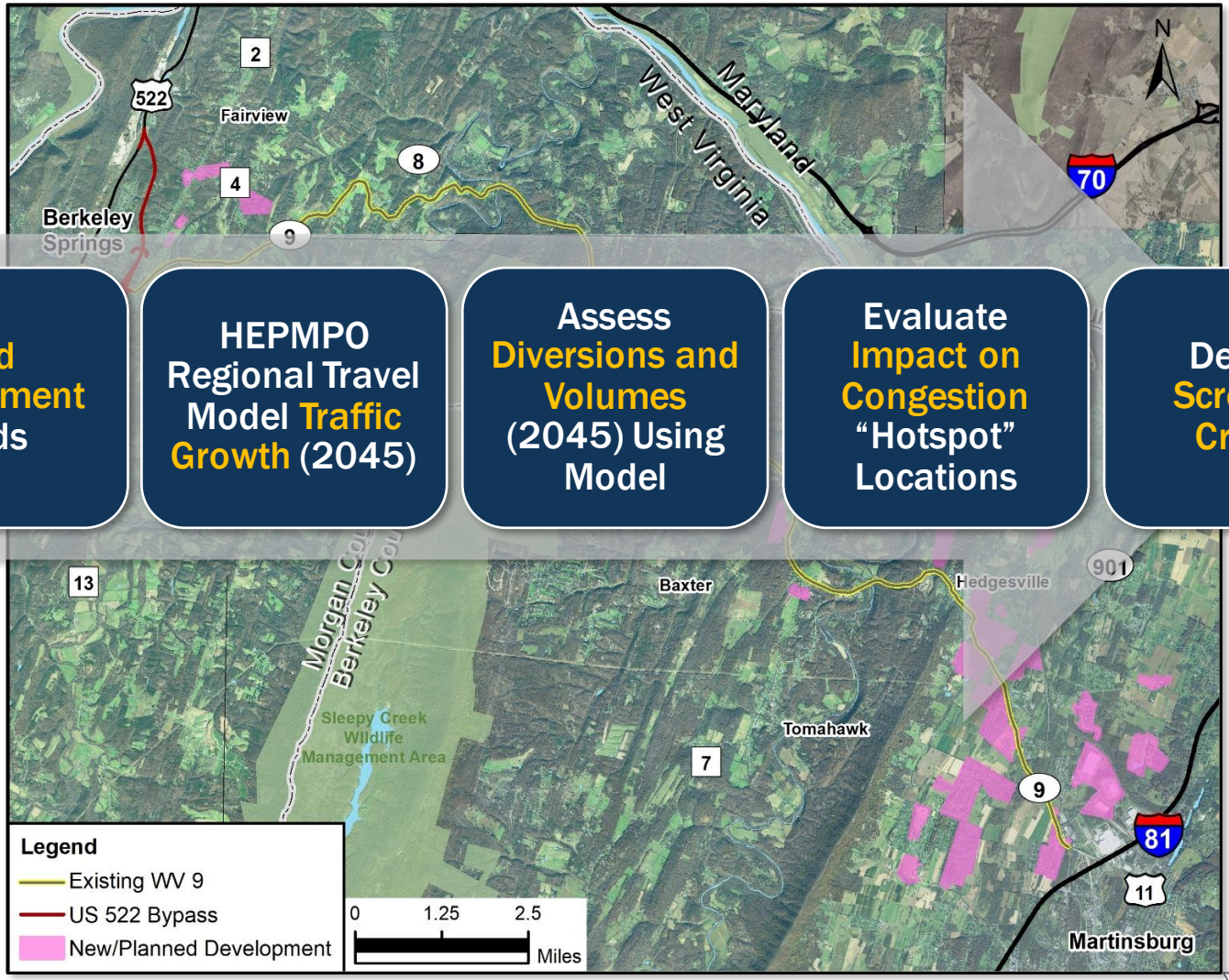
Project Transportation Needs

- **Improve the capability of WV 9 to meet its mandated objectives as a major east-west route in the Eastern Panhandle of West Virginia**
  - Connect US 522 to I-81 with a safe, efficient highway
  - Complete the region's long envisioned transportation network
- **Improve traffic flow along the WV 9 corridor in the Project Study Area**
  - Relieve existing congestion, especially though Hedgesville to I-81
  - Facilitate flow of people and freight throughout the corridor
- **Improve safety levels along WV 9 in the Project Study Area**
  - Address or bypass existing high crash locations
  - Address or bypass roadway geometric deficiencies

Traffic and Safety Assessment

- Projected Traffic Volume Growth
- Diversions Related to Corridor Alternatives
- Evaluation of Traffic Congestion at Key Intersections

Traffic Analysis Process



Land Development Trends

HEPMPO Regional Travel Model Traffic Growth (2045)

Assess Diversions and Volumes (2045) Using Model

Evaluate Impact on Congestion "Hotspot" Locations

Develop Screening Criteria

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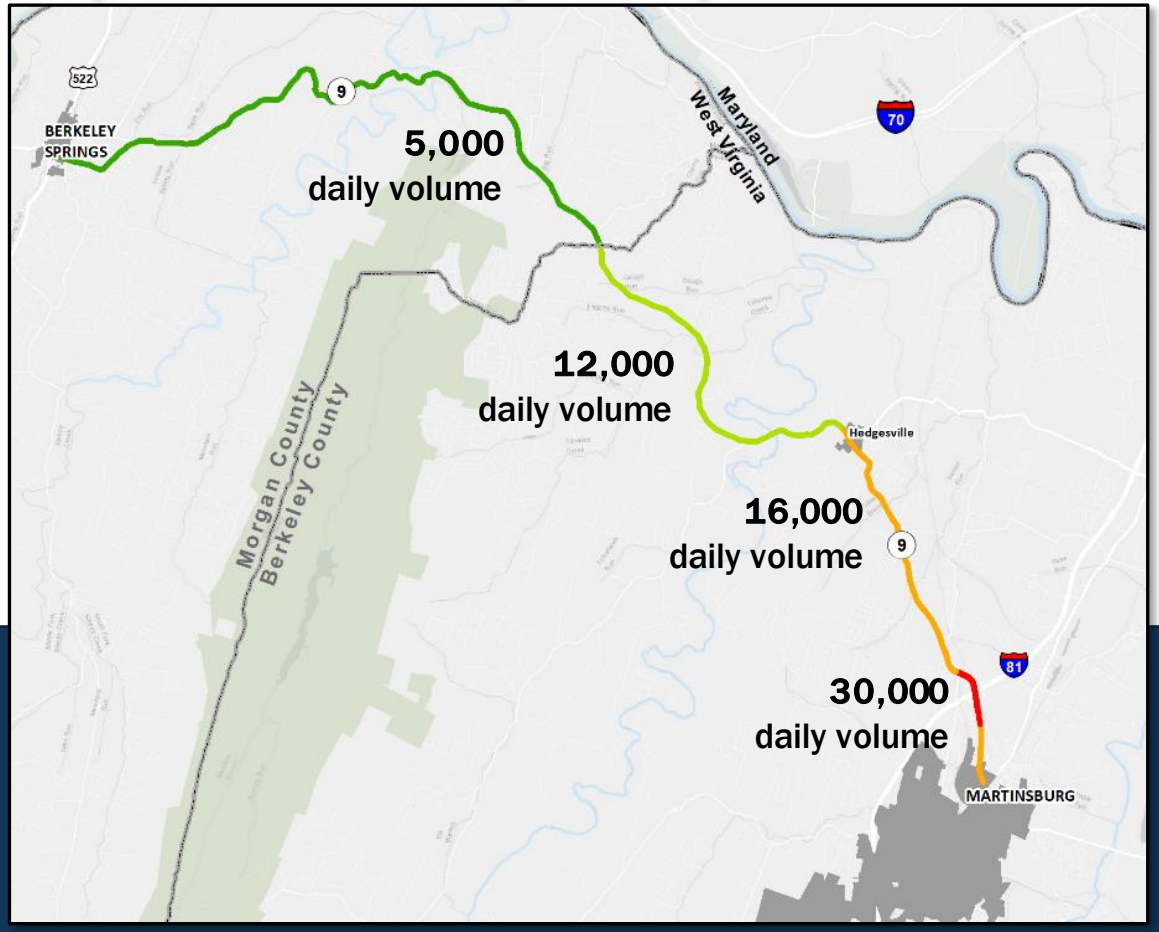
Forecasted Traffic Growth on WV 9

Projected Maximum 2045 Daily Volumes by Section



- Historic traffic count trends from 2002-2017 indicate no traffic volume growth
- The regional travel model does assume traffic growth on WV 9 due to regional land development
- Volume growth projected **+10%** over 25 years (by 2045) which is <0.5% per year

Impact of COVID and Teleworking on long-term trends?

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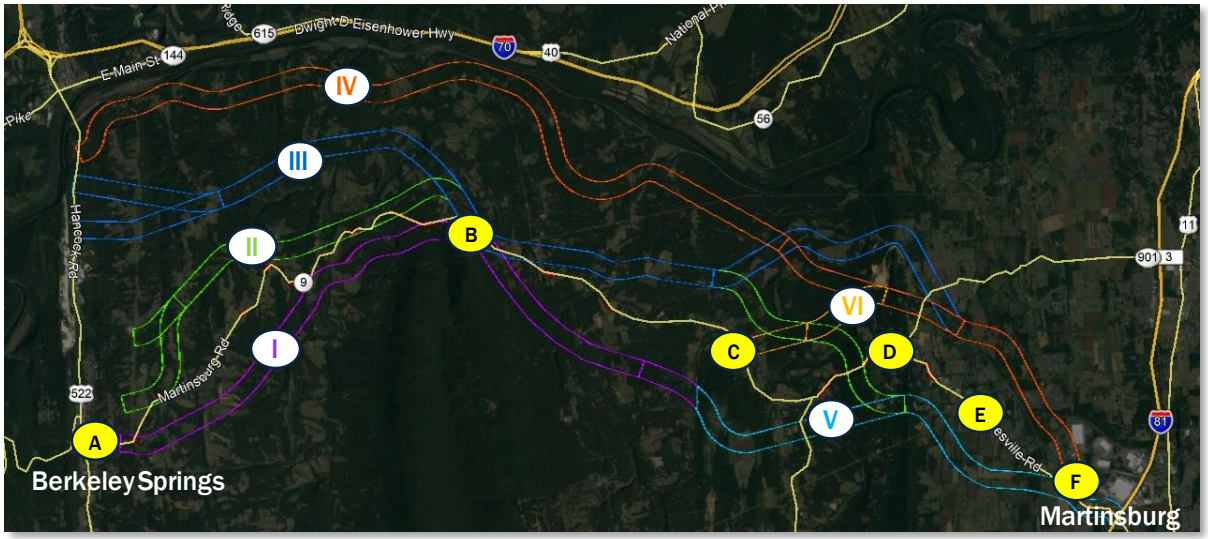
Modeling Insights on Bypass Alternatives

- A Bypass freeway significantly reduces traffic volume on the existing WV 9 roadway
-  Diversion percentages are impacted by the location of interchanges and the alignment of bypass
-  Bypass alternatives south of WV 9 may divert more volume than northern alternatives
-  Bypass alternatives north of WV 9 support regional truck travel including access to the land fill
- The full northern alternative diverts more vehicles from I-70 than southern alternatives. (<500 vehicles per day)

Model Projected Bypass Diversions from WV 9



Legend:

(V) Bypass Alternative #

Road Segment Locations:

- (A) Berkeley Springs (US522)
- (B) Meridian Road
- (C) Johnsontown
- (D) Hedgesville
- (E) Hedgesville High School
- (F) Harlan Springs Road

Percentage of Traffic Change on Existing WV 9 Under Each Bypass Alternative

Road Segment	Upgrade Existing WV 9	Corridor I	Corridor II	Corridor III	Corridor IV	Corridor V	Corridor VI
		South of Hedgesville		North of Hedgesville		Johnsontown to I-81	
A – B	Small Traffic Increases 0-5%	-96%	Similar to Corridor I		-56%	+ 7%	+ 12%
B – C		-43%			-31%	+ 15%	+ 16%
C – D		-73%			-28%	-78%	-71%
D – E		-63%			-43%	-63%	-57%
E – F		-53%			-18%	-50%	-41%

Will new bypass spur new "induced" land use not accounted for in modeling?

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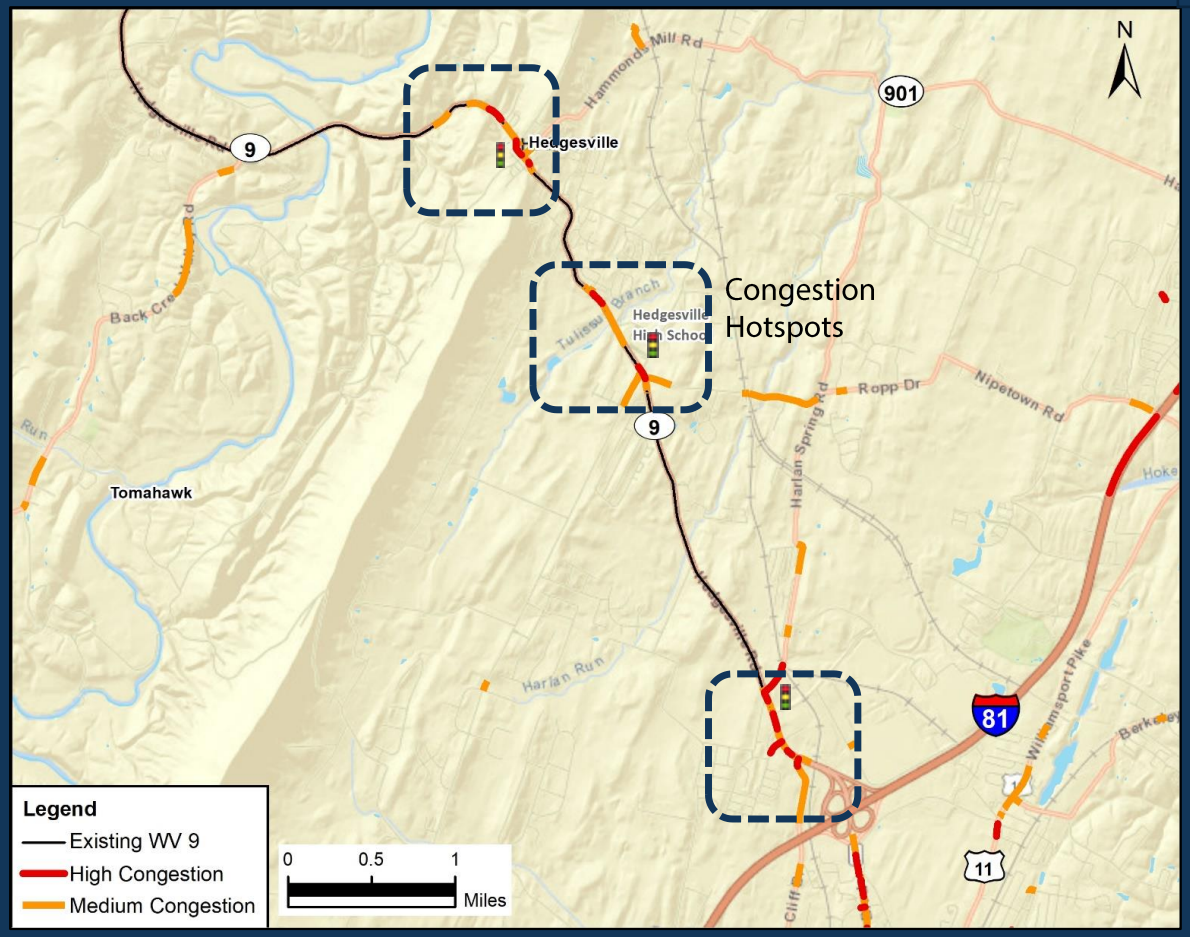
Would Bypass Solve Existing WV 9 Congestion?



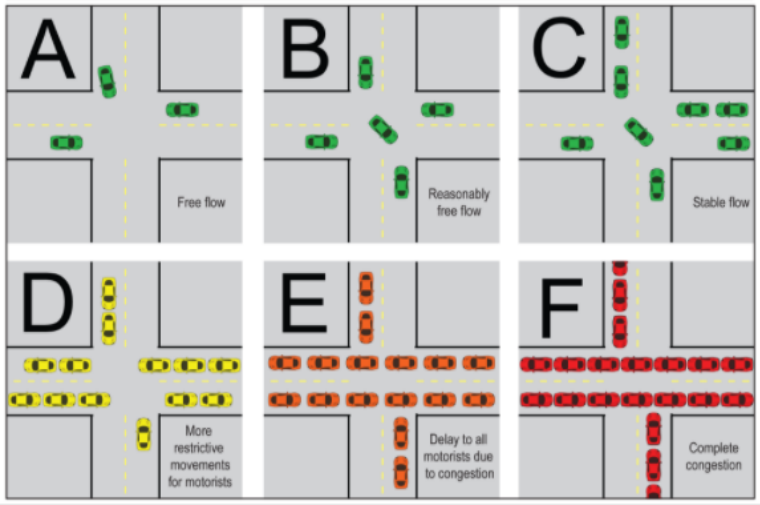
Source: 2016-2017 TomTom GPS Data HEPMPO LRTP Study (Berkeley County) – Not available for Morgan County

- ❑ Existing locations of congestion based on GPS data (2016-2017)
- ❑ 3 Locations analyzed:
  - WV 9 / WV 901
  - WV 9 / Ridge Road
  - WV 9 / GM Access
- ❑ Bypass alternatives remove volume from existing WV 9
- ❑ How does this affect intersection operations?

Intersections Analysis Overview

- Signal timing data and available intersection turning movement counts assembled from WVDOT
- Highway Capacity Analyses run using Synchro software to estimate Level of Service (LOS)
- Recent timing changes focused on improving WV 9 traffic flow – intersecting street LOS is deficient
- Analysis assumed “best-case” diversion percentage from modeling of bypass alternatives

Level of Service (LOS) Descriptions



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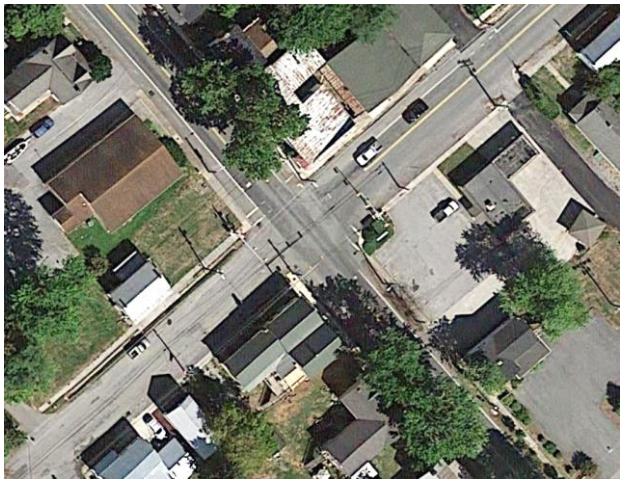
Intersections Analysis Results (WV 9 / WV 901)

WV 9 / WV 901 in Hedgesville



Approach	LOS without Bypass		LOS with Bypass	
	Current Timing	Synchro Optimized Timing	Current Timing	Synchro Optimized Timing
WV 9	B	F	A	B
WV 901	F	F	E	C

LOS is the worst-case intersection approach

- A bypass does provide some relief to intersection LOS in combination with signal timing changes
- Without bypass, further optimization of signal timing does <u>not</u> benefit signal operations *[providing more green time or turn phasing (e.g. thru+left turn) for WV 901 WB significantly degrades WV 9 operations]*

Intersections Analysis Results (WV 9 / Ridge Road)

WV 9 / Ridge Road South Of Hedgesville High School

Approach	LOS without Bypass		LOS with Bypass	
	Current Timing	Synchro Optimized Timing	Current Timing	Synchro Optimized Timing
WV 9	C	B	A	B
Ridge Rd	F	D	E	D

LOS is the worst-case intersection approach

- A bypass does provide some relief to intersection LOS. Additional strategies may be needed for Ridge Road approaches to intersection
- Intersection turn lanes and/or reconfiguration in combination with signal timing changes may provide intermediate congestion relief at intersection.

Intersections Analysis Results (WV 9 / GM Access Rd)

WV 9 / GM Access Road

Approach	LOS without Bypass		LOS with Bypass	
	Current Timing	Synchro Optimized Timing	Current Timing	Synchro Optimized Timing
WV 9	A	A	A	B
GM Rd	B	B	C	C

LOS is the worst-case intersection approach

- Analyses does <u>not</u> indicate significant congestion issues at GM Access Road – Further monitoring of truck conditions needed
- A new bypass will likely connect back into WV 9 northwest of this intersection. Volumes may increase with bypass creating a worsening of traffic congestion.

Measure Traffic and Safety Needs

- **Analytical criteria developed for each alternative based on travel model results:**
  - Travel time (in minutes) from US 522 to I-81
  - Miles of road segments with congestion

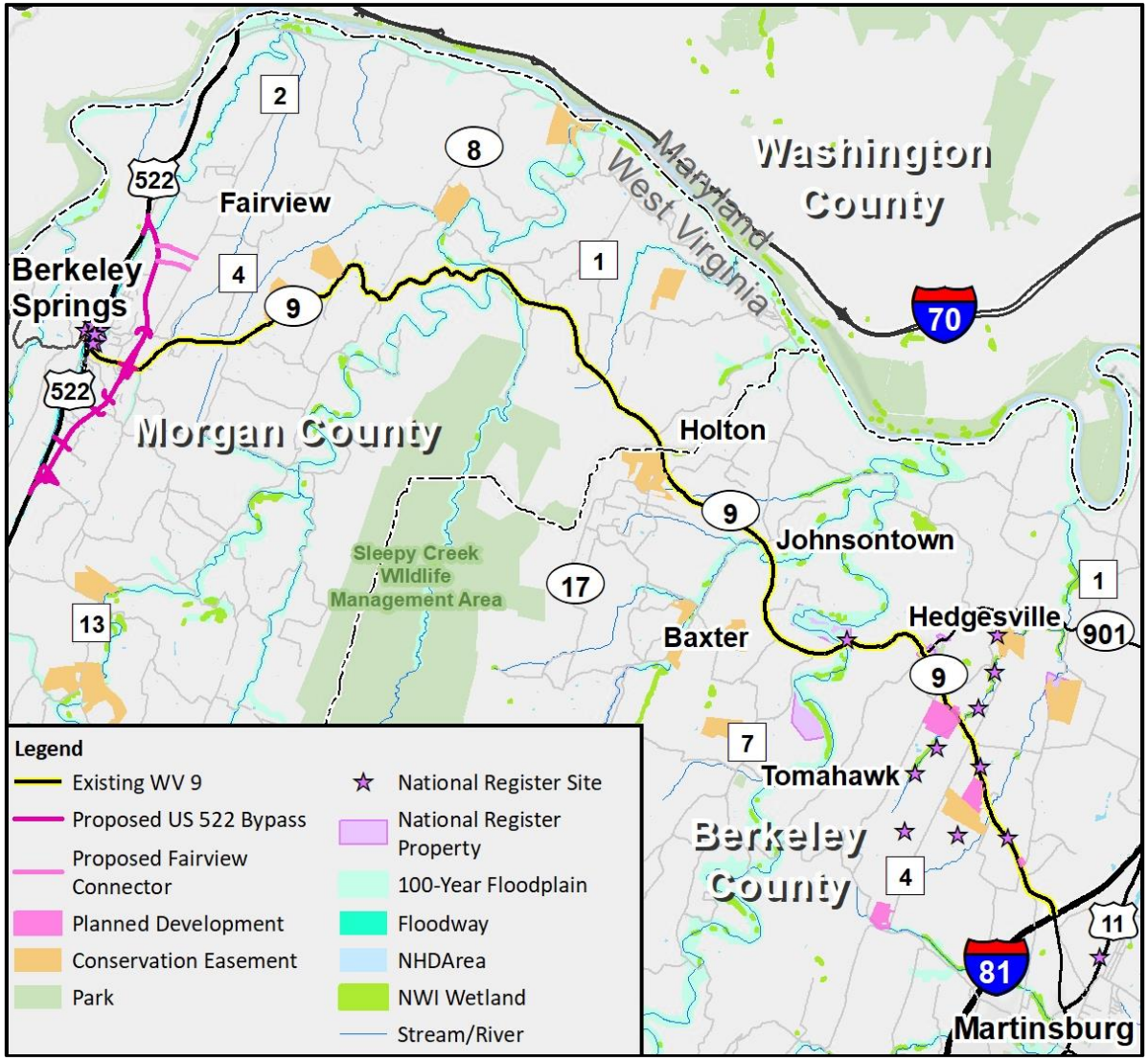
    (e.g. based on volume/capacity ratios > 0.80 in travel model)

- **Safety impacts based on expected benefits of strategies per "Crash Modification Factors" as assembled from** http://www.cmfclearinghouse.org/
  - Projected annual crashes in corridor (US 522 to I-81)

Alternative Corridors

No Build Alternative

- No new roadway would be constructed
- Maintenance projects to maintain current function
- Serves as a baseline to measure other alternatives



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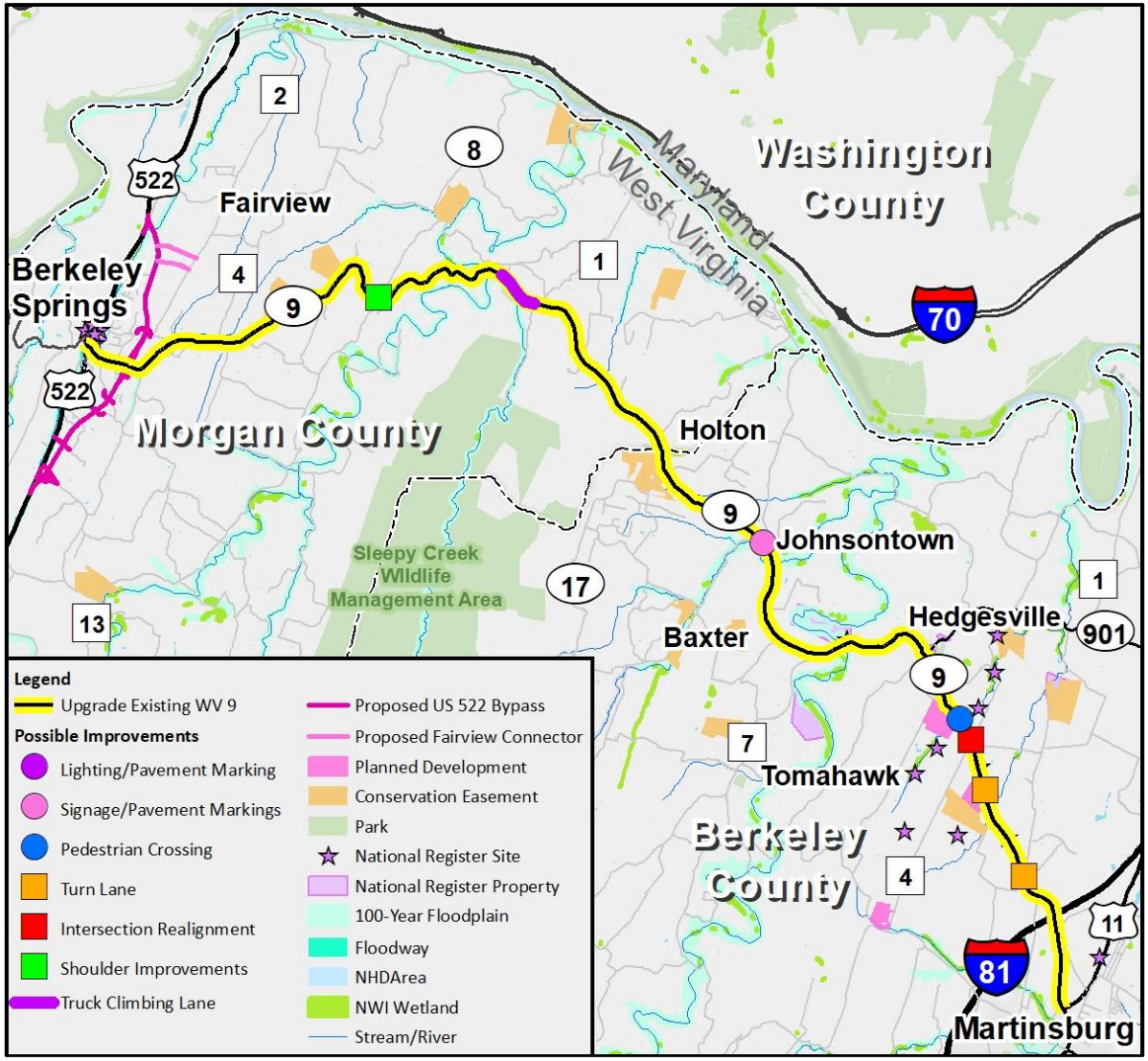
Upgrade Existing WV 9 Alternative

- Upgrade WV 9 on its current alignment
- Remain primarily two-lane
- Minor and Major Improvements to address congestion & safety issues



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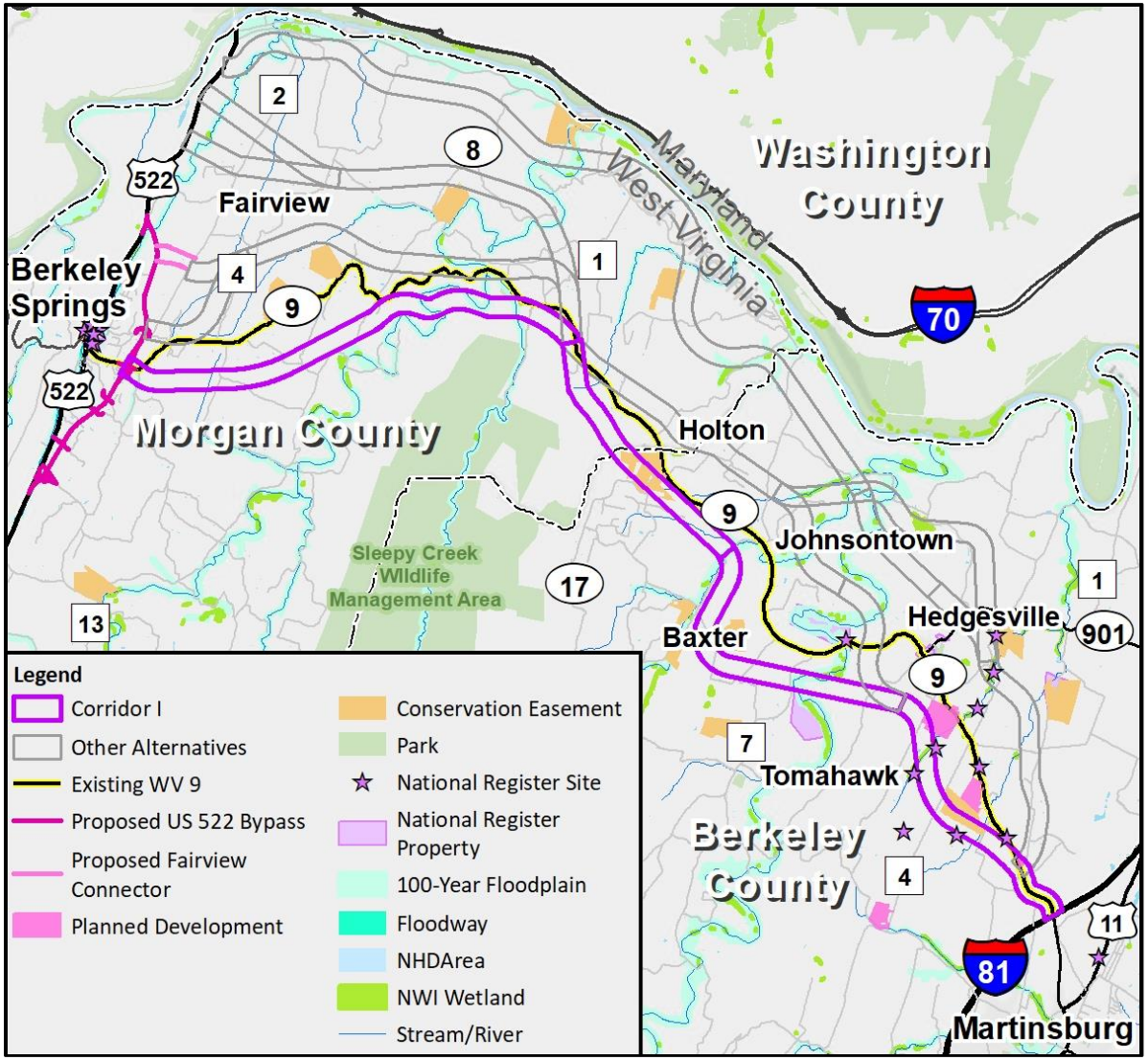
Corridor I Alternative

- New 4-lane roadway would be identified within the 1,500-foot-wide corridor
- Begins at the proposed US 522 Bypass interchange
- Generally, stays south of existing WV 9 and connects to existing WV 9 across from Harlan Springs Rd



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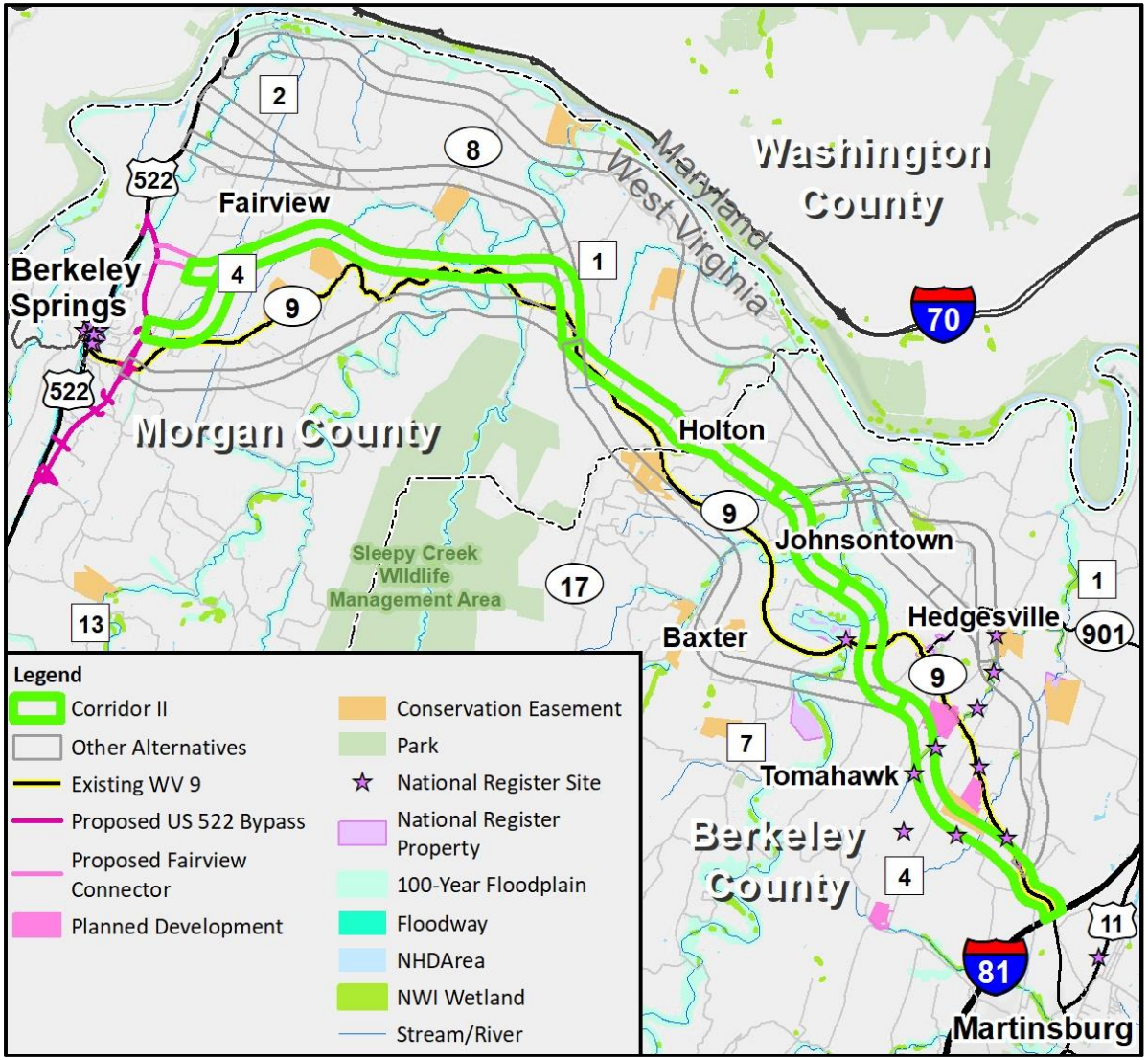
Corridor II Alternative

- New 4-lane roadway would be identified within the 1,500-foot-wide corridor
- Begins at either the proposed Fairview connector or US 522 bypass
- North of WV 9 to just west of Hedgesville then crosses south and connects to existing WV 9 across from Harlan Springs Rd



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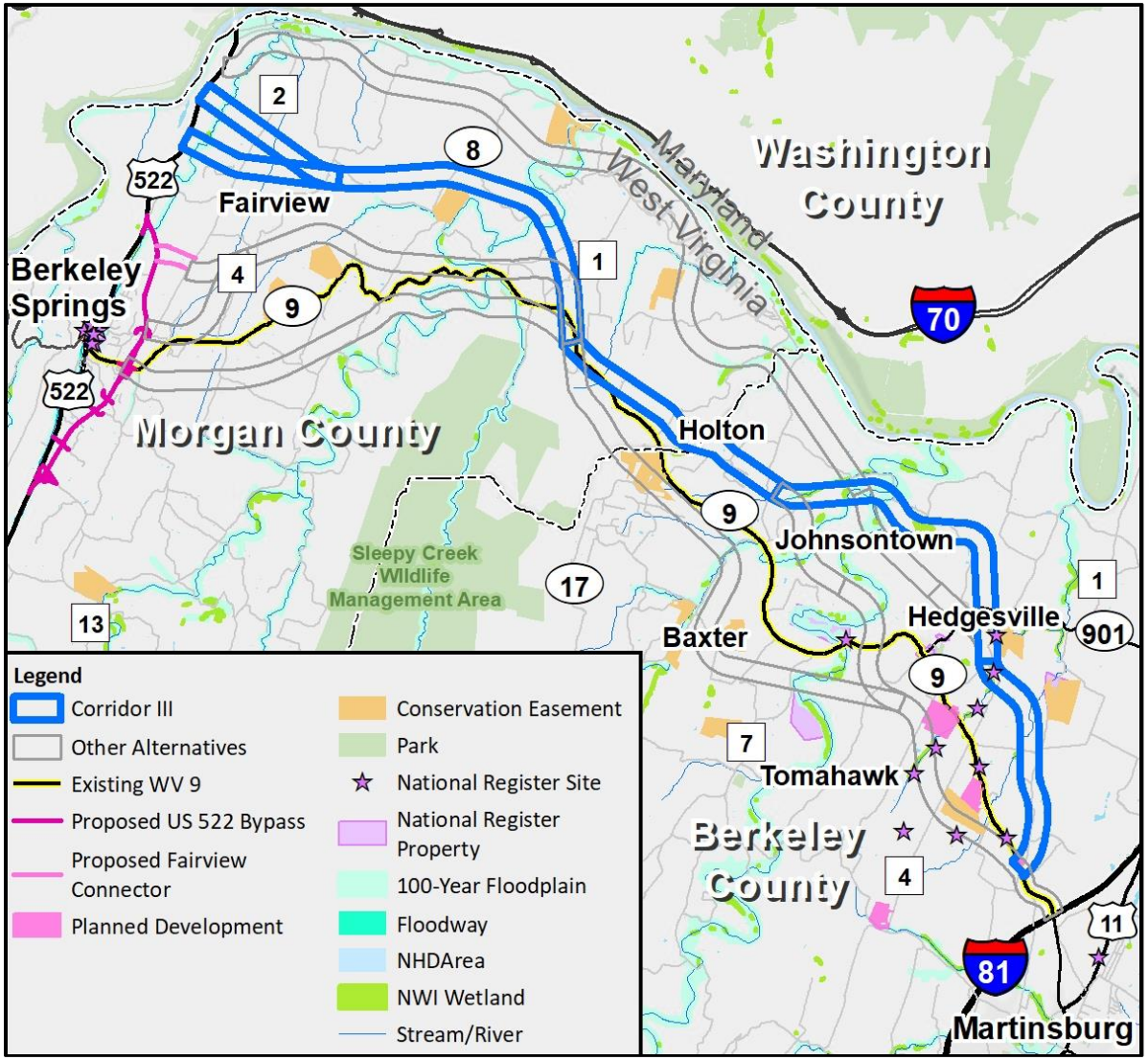
Corridor III Alternative

- New 4-lane roadway would be identified within the 1,500-foot-wide corridor
- Begins at one of two possible intersection locations on US 522
- North of WV 9 staying north of Johnsontown and Hedgesville to Harlan Springs Road



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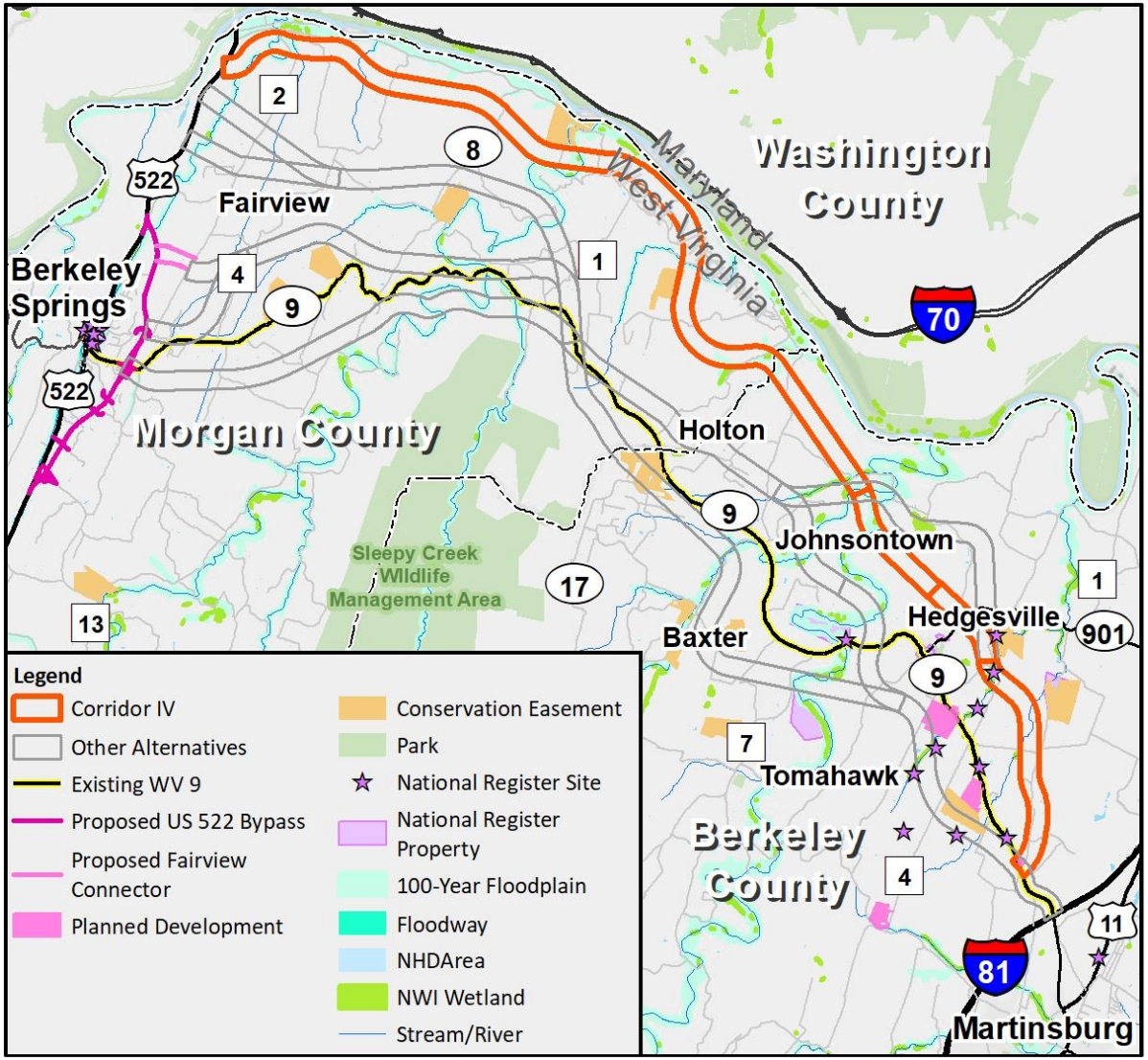
Corridor IV Alternative

- New 4-lane roadway would be identified within the 1,500-foot-wide corridor
- Begin at existing US 522 just south of the Potomac River Bridge
- Stays north along the state border rejoining WV 9 near Harlan Springs Road



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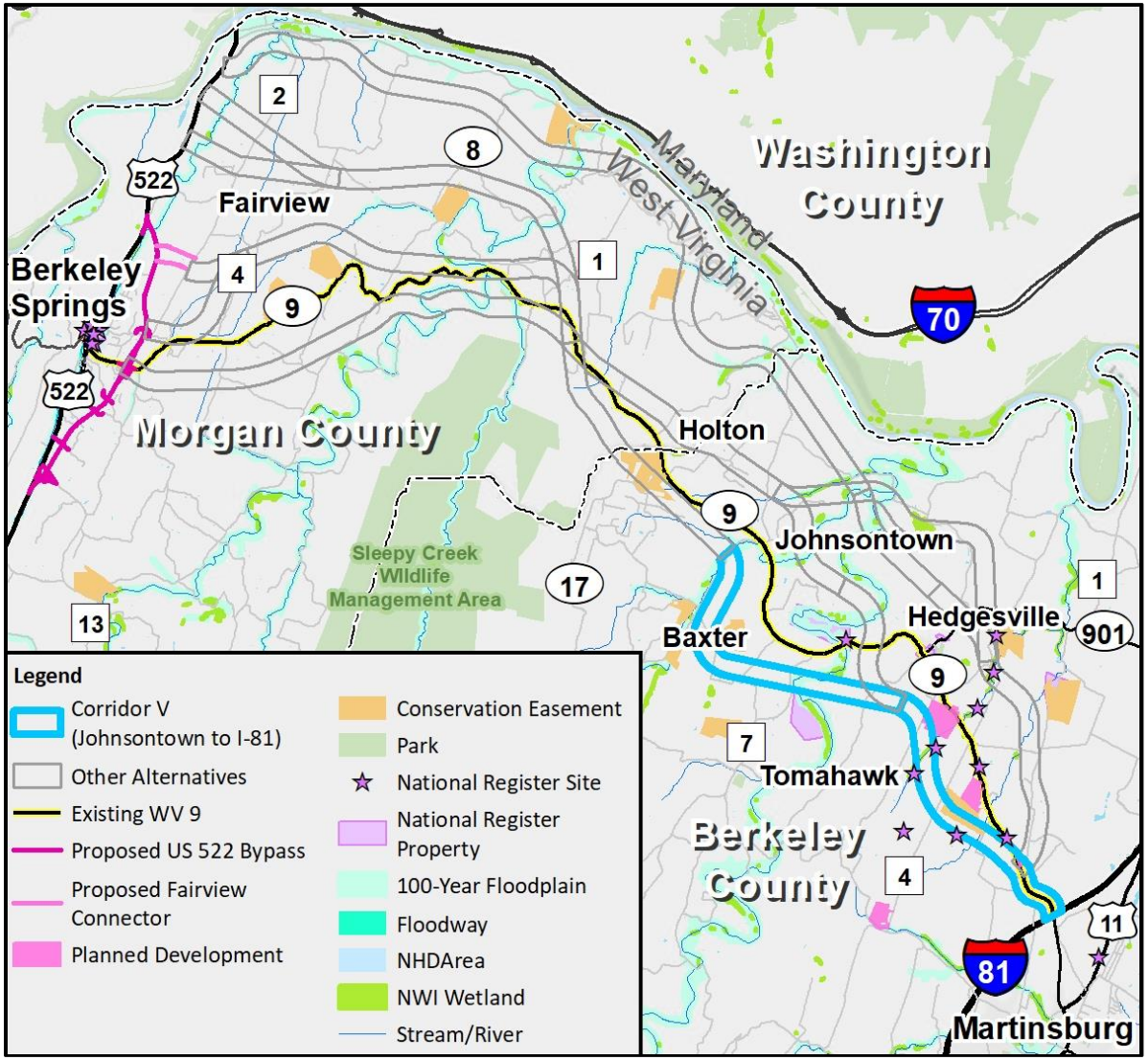
Corridor V Alternative

- New 4-lane roadway would be identified within the 1,500-foot-wide corridor
- New 4-lane roadway from Johnsontown to I-81 with upgrades to existing WV 9 from Berkeley Springs to Johnsontown
- Stays south of WV 9 following Corridor I



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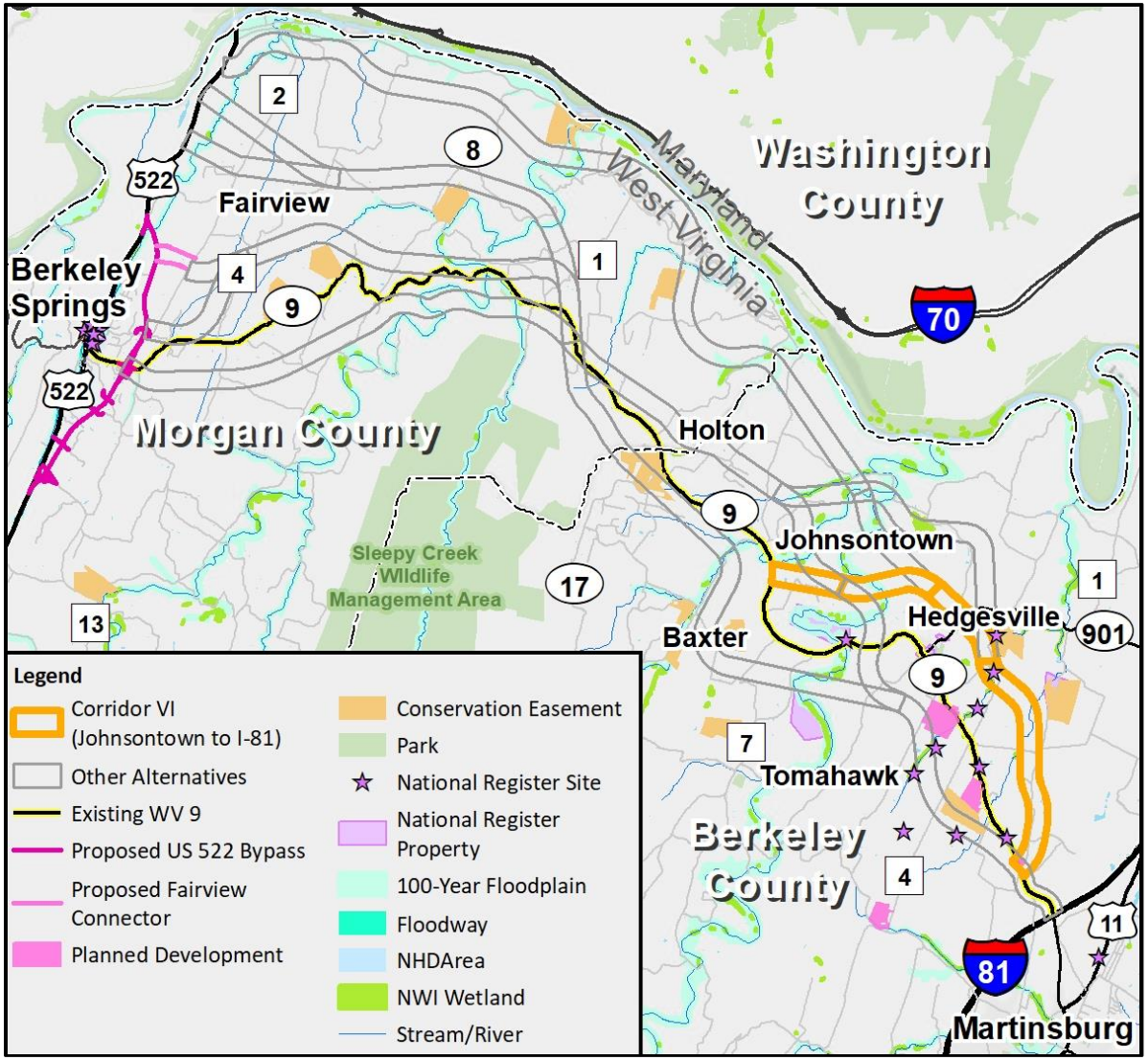
Corridor VI Alternative

- New 4-lane roadway would be identified within the 1,500-foot-wide corridor
- New 4-lane roadway from Johnsontown to I-81 with upgrades to existing WV 9 from Berkeley Springs to Johnsontown
- Stays north of WV 9 and Hedgesville joining WV 9 near Harlan Springs Road



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Public Input

Online Survey Summary

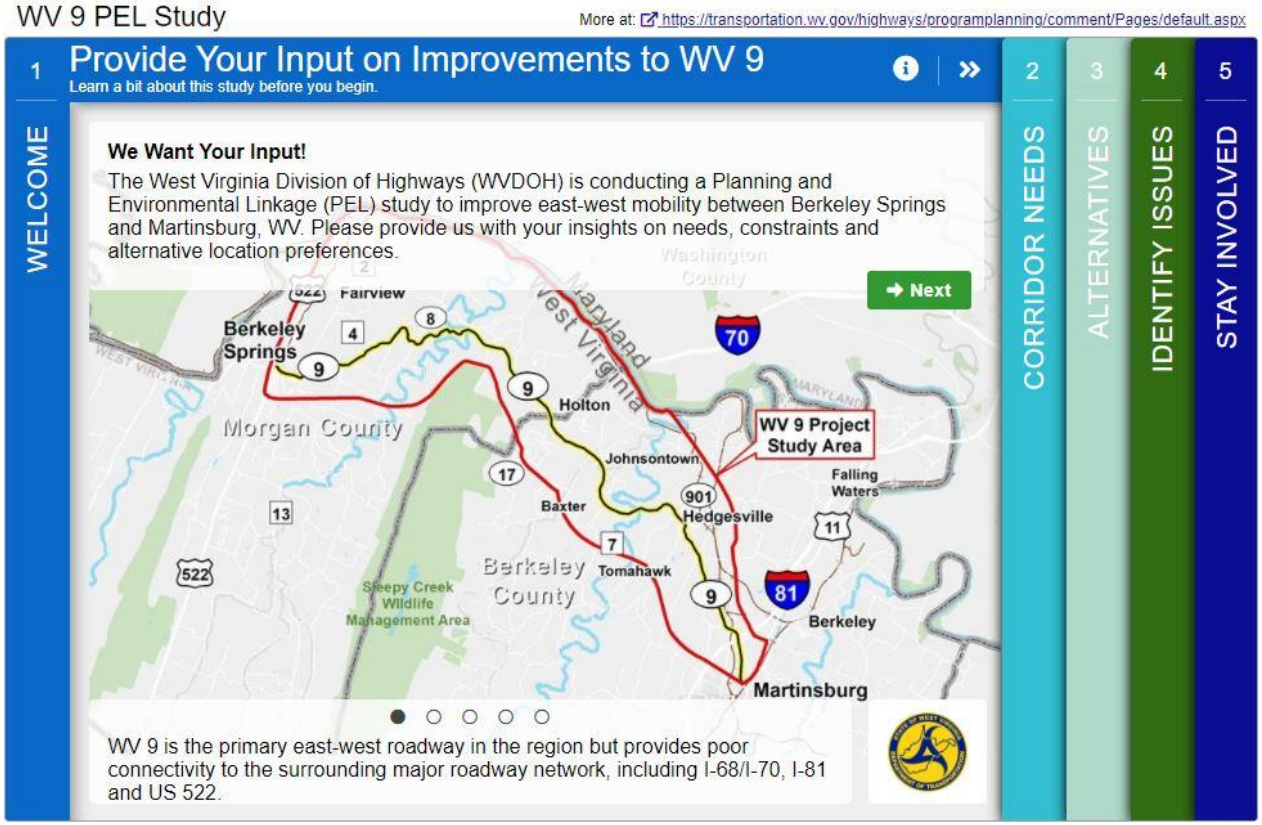
WVDOH Comment Forms

Public Input

- **Thank you for your input**

Online Survey

- Survey available March 5th – April 15th
- 3,330 participants



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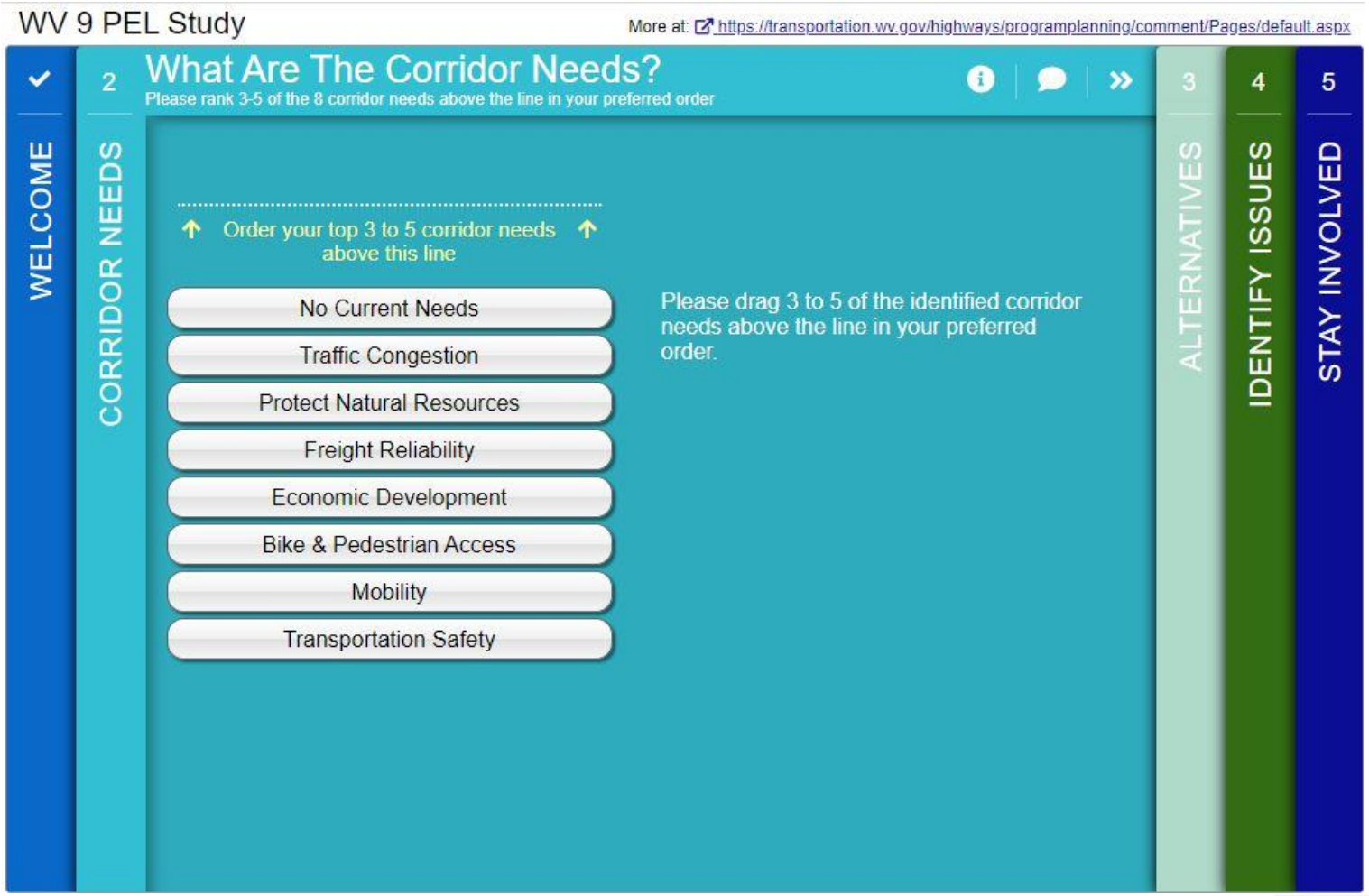
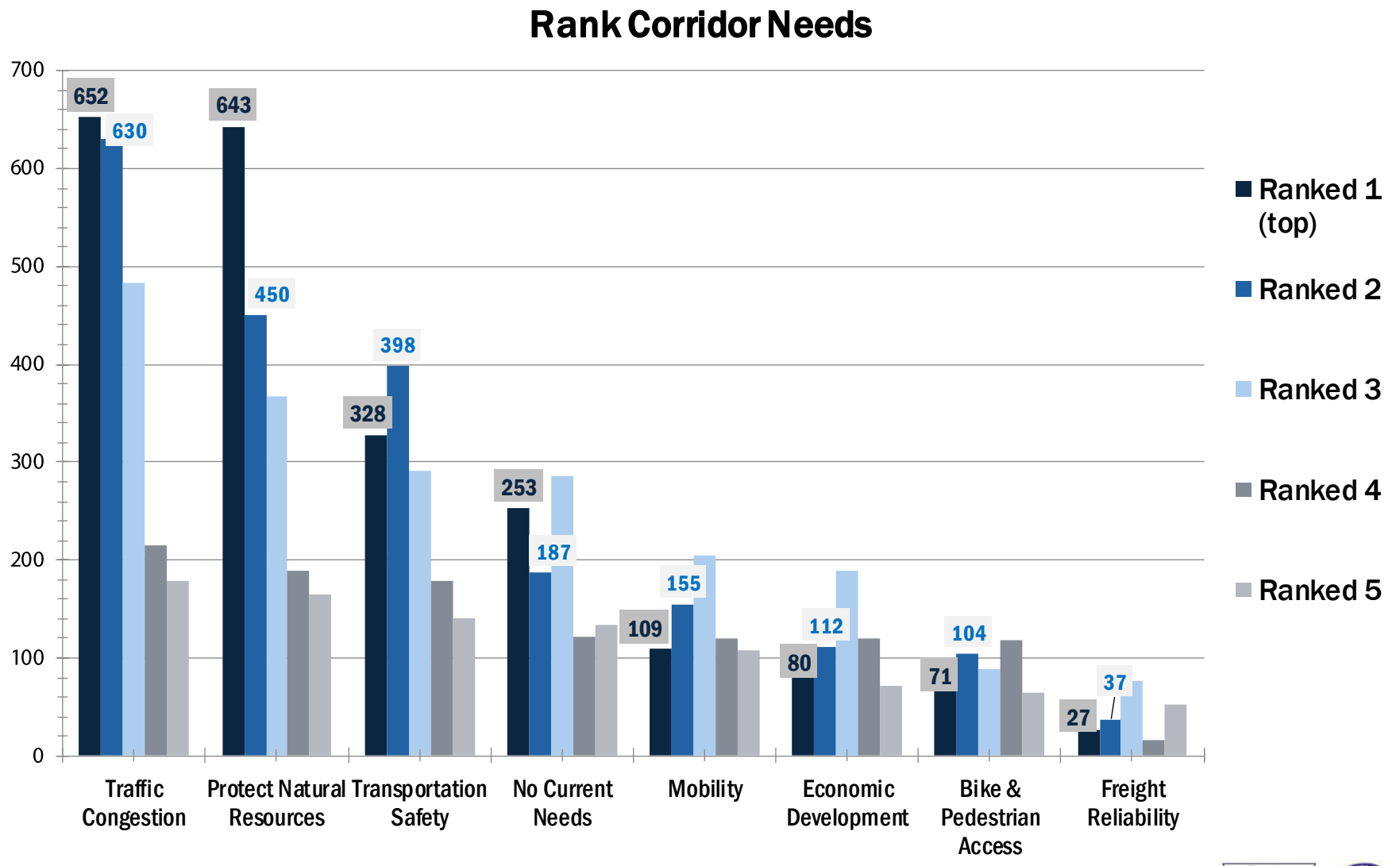
Online Survey

- **Rank Corridor Needs**



Online Survey



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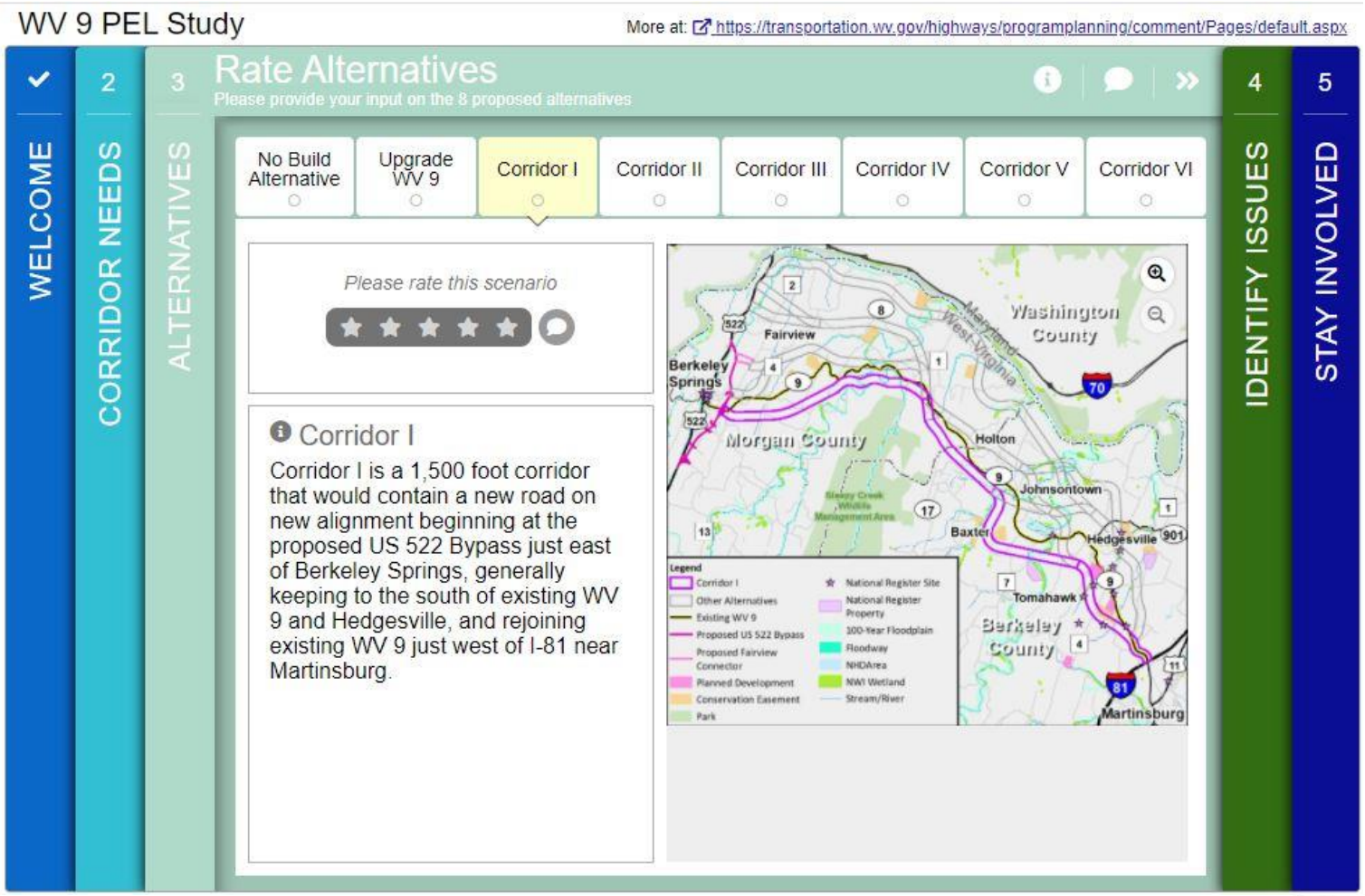
Online Survey

- **Rate the Alternatives**



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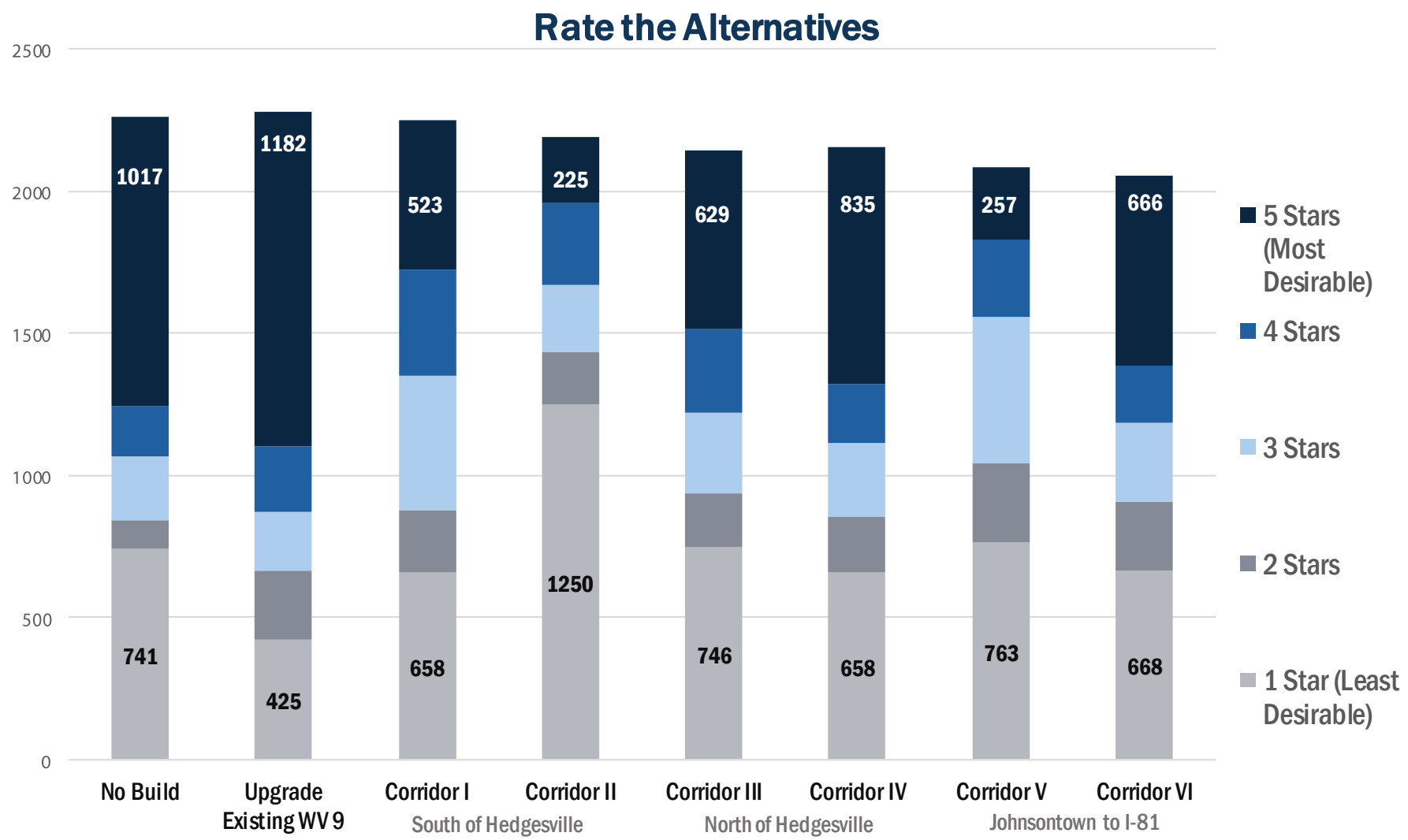
Online Survey



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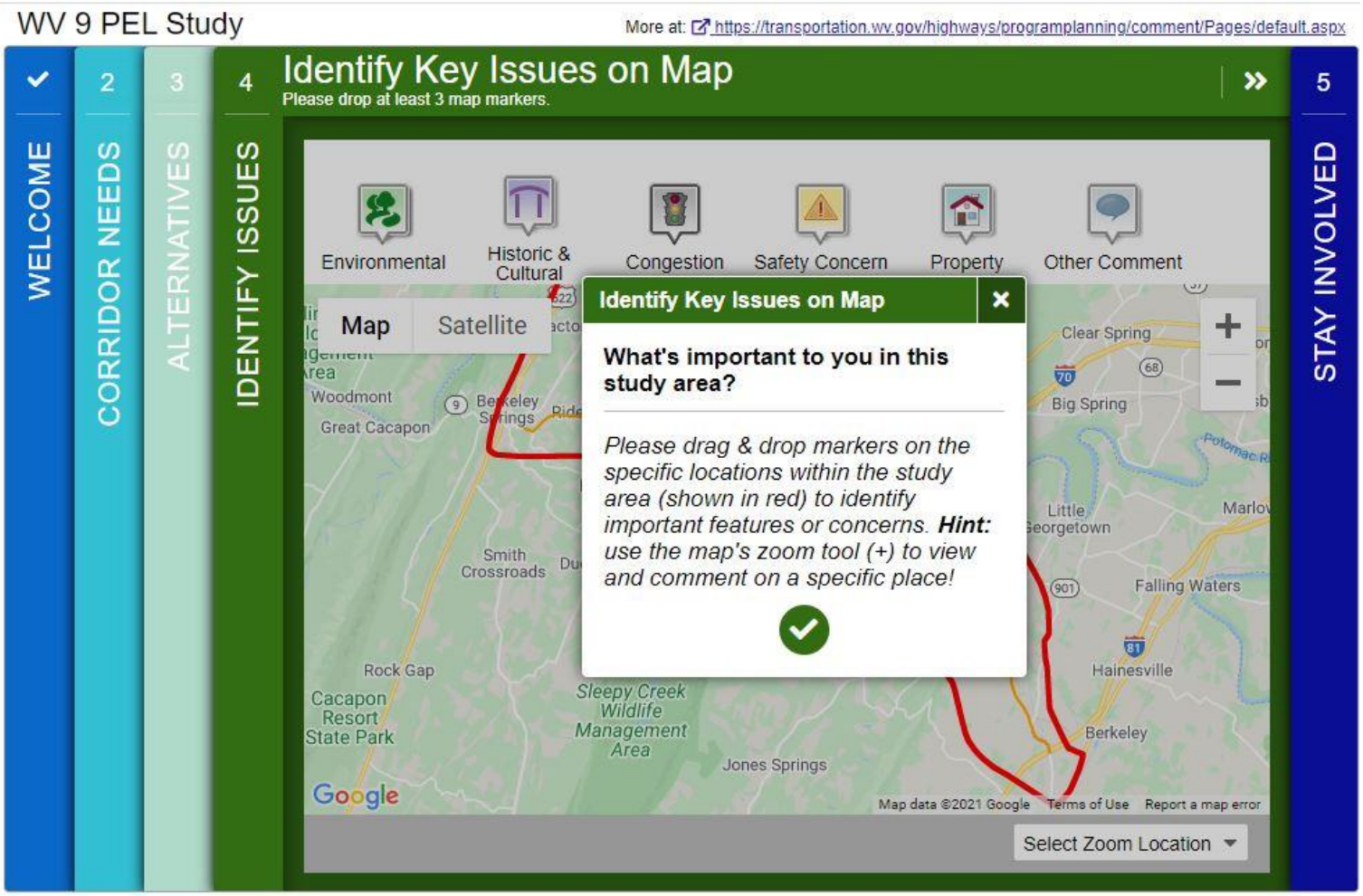
Online Survey

- **Identify Key Issues**



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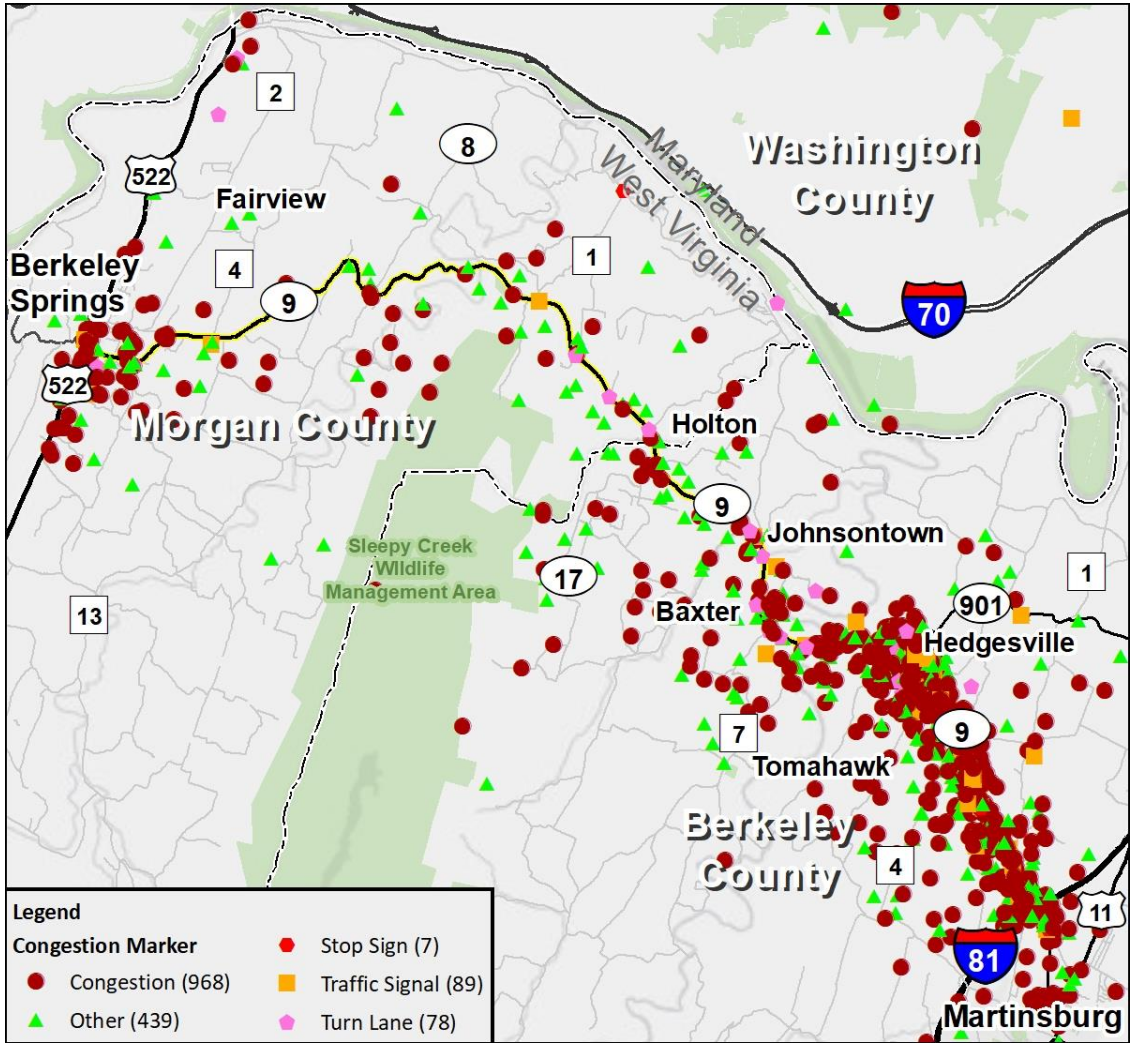
Online Survey

- Identify Key Issues

Type of Marker	# Identified
Congestion	1,581
Environmental	1,183
Property	1,093
Safety Concern	896
Historic & Cultural	701
Other Comment	163
TOTAL MARKERS	**5,817**



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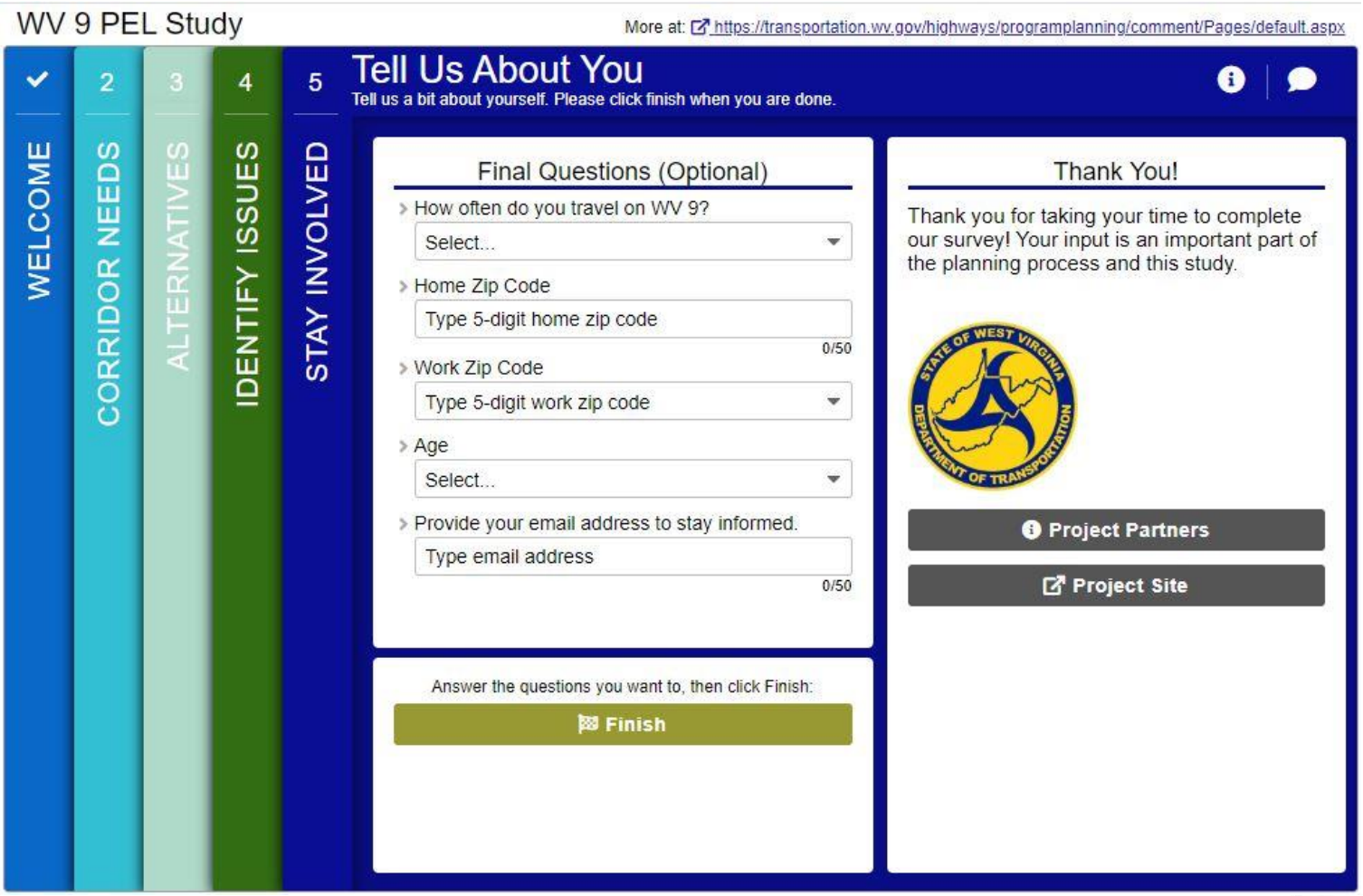
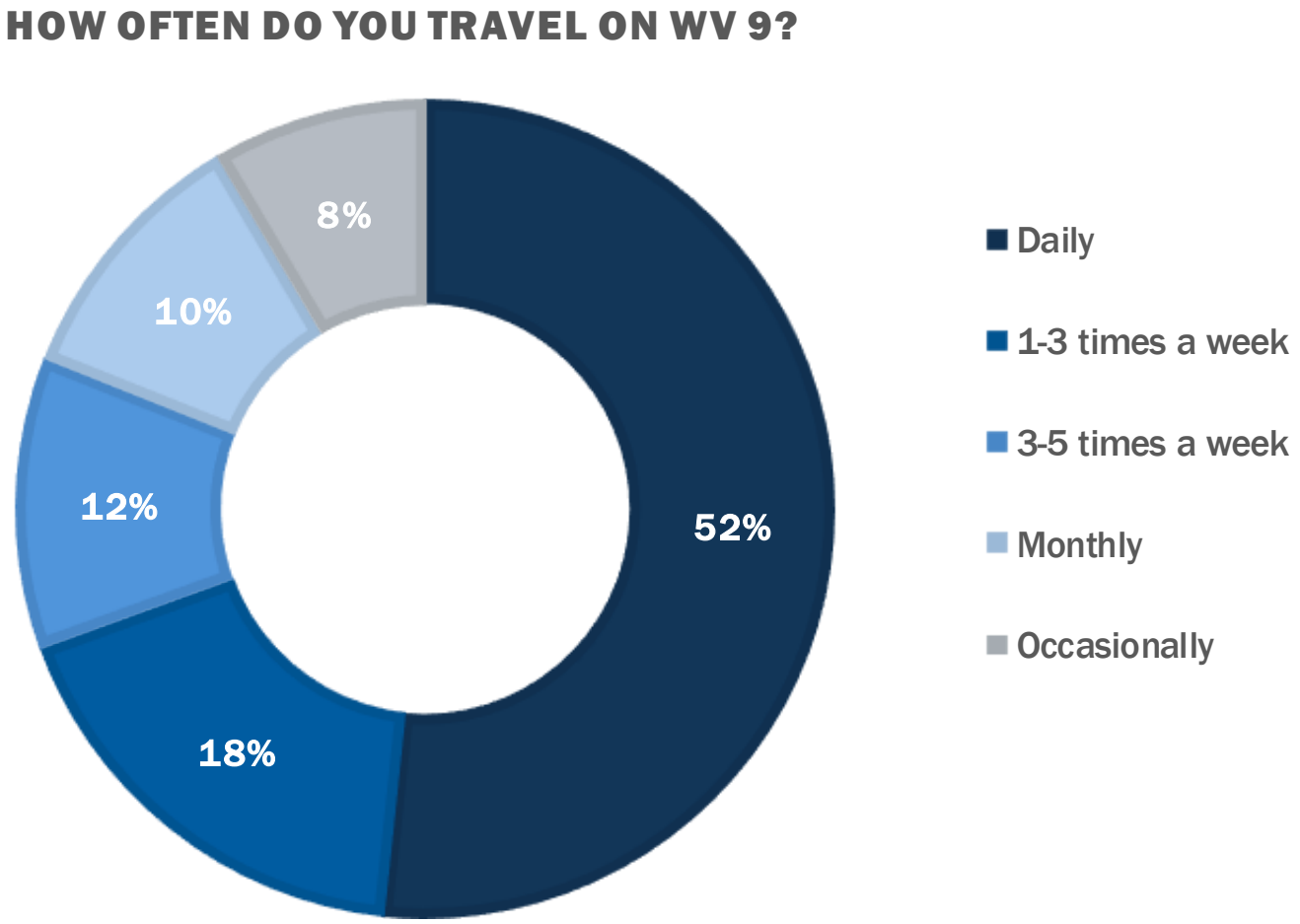
Online Survey

- **About You**



Online Survey

- About You



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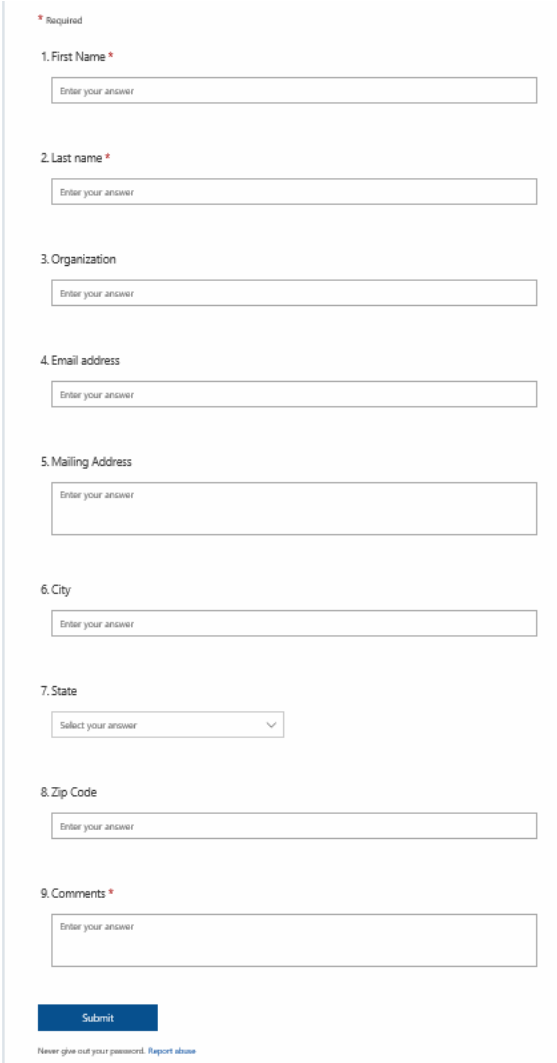
WVDOH Comments

- **853 comments**
- **Comment period March 4th to April 5th**
- **Extended to April 15th**



* Required

1. First Name *
Enter your answer

2. Last name *
Enter your answer

3. Organization
Enter your answer

4. Email address
Enter your answer

5. Mailing Address
Enter your answer

6. City
Enter your answer

7. State
Select your answer

8. Zip Code
Enter your answer

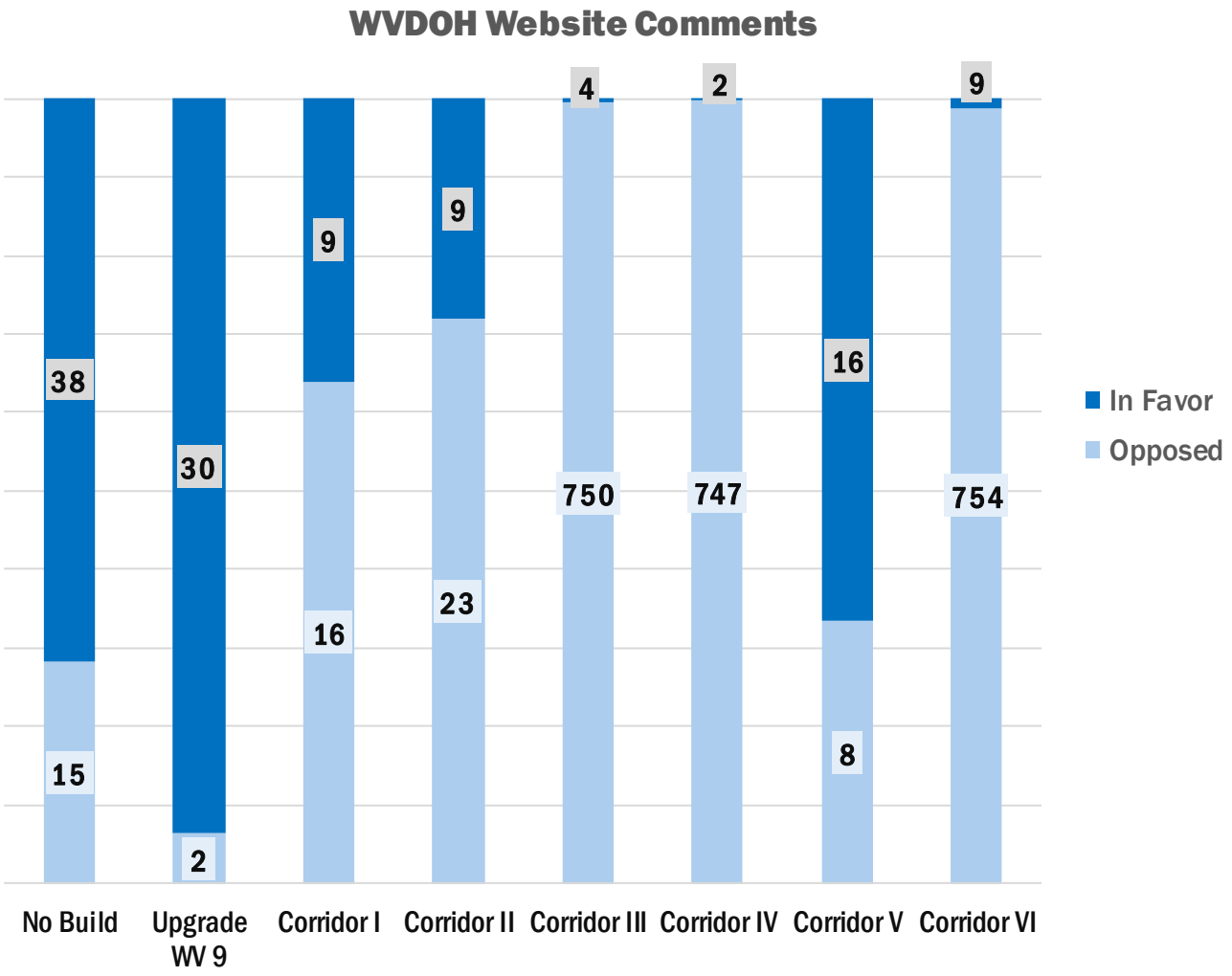
9. Comments *
Enter your answer

Submit

Never give out your password. Report abuse

Comment Summary

- **85% comments in regard to Speck Spring Farm**



Preliminary Screening

Goals and Objectives

Transportation Needs

Public Input

Project Cost and Implementation

Environmental Screening

Screening Summary

Preliminary Screening

- **Identify alternative(s) that are unreasonable / not feasible**
- **No alternative(s) are needlessly carried forward into the NEPA phase**
- **Screening Criteria**
  - Ability to meet PEL Goals and Objectives
  - Improves the identified Transportation Needs
  - Public Support
  - Estimated Project Cost and Implementability
  - Minimizes Environmental Impacts
- **Screening Measures**
  - Favorable /Meets Criteria
  - Moderately Meets Criteria
  - Not Favorable / Does not Satisfy Criteria

Goals Screening

Screening Measure	No Build	Upgrade Existing WV 9	Corridor I	Corridor II	Corridor III	Corridor IV	Corridor V	Corridor VI
			South of Hedgesville		North of Hedgesville		Johnsontown to I-81 south	Johnsontown to I-81 north
Mobility Goal								
Safety Goal								
Economic Goal								
Environmental Goal								
Corridor Land Use Goal								
Multimodal Goal								

Transportation Needs Screening

Screening Measure	No Build	Upgrade Existing WV 9	Corridor I	Corridor II	Corridor III	Corridor IV	Corridor V	Corridor VI
			South of Hedgesville		North of Hedgesville		Johnsontown to I-81 south	Johnsontown to I-81 north
Corridor Travel Time (min)	30	28 *(-7%)*	23 *(-23%)*	23 *(-23%)*	24 *(-20%)*	24 *(-20%)*	27 *(-10%)*	26 *(-13%)*
Segment Miles of High Congestion	1.9	1.5 *(-21%)*	0.3 *(-84%)*	0.3 *(-84%)*	0.8 *(-68%)*	1.2 *(-37%)*	0.3 *(-84%)*	0.3 *(-84%)*
Projected Crashes Per Year	116	111 *(-4%)*	94 *(-19%)*	94 *(-19%)*	105 *(-10%)*	105 *(-10%)*	103 *(-11%)*	111 *(-4%)*

Connections to WV9 limit some benefits in Hedgesville

Public Input

Screening Measure	No Build	Upgrade Existing WV 9	Corridor I	Corridor II	Corridor III	Corridor IV	Corridor V	Corridor VI
			South of Hedgesville		North of Hedgesville		Johnsontown to I-81 south	Johnsontown to I-81 north
WVDOH Comment Forms								
Supporting Comments	38	30	9	9	4	2	16	9
Opposed Comments	15	2	16	23	750	747	8	754
MetroQuest Online Survey								
Top Rated (4 and 5 stars)	1,193	1,409	899	452	924	1,057	530	1,334
Low Rating (1 star)	741	425	659	1,250	746	658	763	668

Project Cost and Implementation

Screening Measure	No Build	Upgrade Existing WV 9	Corridor I	Corridor II	Corridor III	Corridor IV	Corridor V	Corridor VI
			South of Hedgesville		North of Hedgesville		Johnsontown to I-81 south	Johnsontown to I-81 north
Length (Miles)	-	21.6	20.7	21.2	20.2	20.2	8.9	7.4
Total Cost ($ in Millions)	$0	$29	$1,200 - $1,490	$1,228 - $1,525	$1,170 - $1,452	$1,174 - $1,457	$534 - $659	$445 - $548
Project Implementability	-							

Preliminary Environmental Screening

Screening Measure	No Build	Upgrade Existing WV 9	Corridor I	Corridor II	Corridor III	Corridor IV	Corridor V	Corridor VI
			South of Hedgesville		North of Hedgesville		Johnsontown to I-81 south	Johnsontown to I-81 north
Farmland Conservation Easements								
Length of Streams Crossed								
Acres of Wetlands								
# of Known Archaeology Sites								
# of Listed or Potentially Eligible Historic Structures								
# of Parcels								

Preliminary Screening Summary

Screening Measure	No Build	Upgrade Existing WV 9	Corridor I	Corridor II	Corridor III	Corridor IV	Corridor V	Corridor VI
			South of Hedgesville		North of Hedgesville		Johnsontown to I-81 south	Johnsontown to I-81 north
Public Input								
Traffic Impacts								
Projected Crashes Per Year								
Goals and Objectives								
Environmental Impacts								

Recommendations

- Recommend carrying all alternative(s) into the NEPA Phase
- Recommend evaluating Corridor I shift to avoid impact to Farmland Conservation Easement
- Recommend evaluating Corridors III, IV and VI shift to avoid impact to Speck Spring Farm
- Recommend further evaluation of truck climbing lane and other improvements to existing WV 9
- Recommend evaluating combining the various corridor segments to minimize impacts and provide access to existing WV 9

Next Steps

Comment Period until May 25th

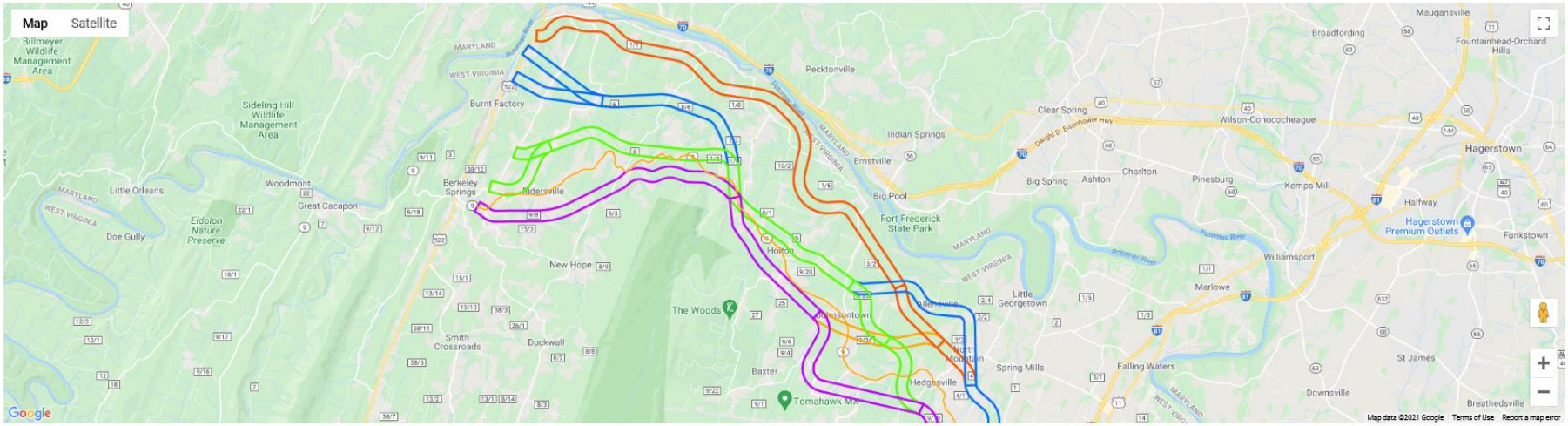
PEL Study Document

WVDOH Project Webpage

https://transportation.wv.gov/highways/programplanning/comment/WV-9-Planning-and-Environmental-Linkages-Study/Pages/default.aspx

Transportation > Highways > Planning Division > Public Comment > WV-9 Planning and Environmental Linkages Study

WV-9 Planning and Environmental Linkages Study



State Project: T233-9/-25.76
Federal Project: SPR-0009(254)D

The West Virginia Division of Highways (WVDOH) will hold an informational virtual public meeting May 11, 2021 for the WV 9 Planning and Environmental Linkages Study. The study seeks to improve the east-west transportation link between Martinsburg and Berkeley Springs, West Virginia and will identify transportation needs in the corridor and conduct a preliminary assessment of alternatives to upgrade and/or relocate WV 9. The concepts evaluated include new road construction as well as upgrades to existing WV 9. This is a planning level workshop through which the WVDOH and the consultant team will review the preliminary study findings and alternatives and request input to move forward to a future National Environmental Policy Act study. The formal presentations will begin at 4:30PM and 6:30PM. Please see below for meeting access information.

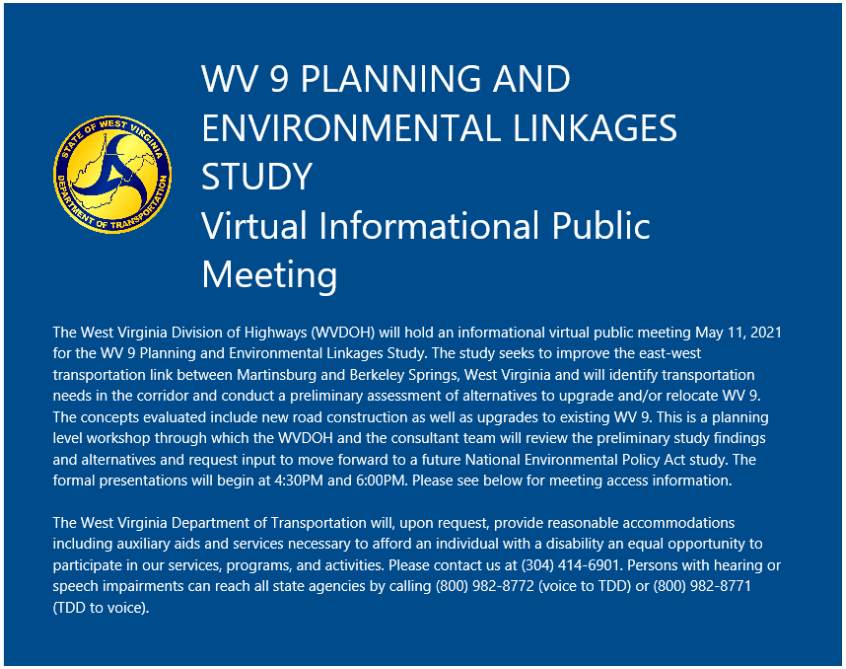
Michael Baker INTERNATIONAL

Comments

- **Comment online or in writing via WVDOH's website**
- **Due by May 25, 2021**
- **Send written comments to:**

  Mr. Elwood Penn
  Director, Planning Division
  West Virginia Division of Highways
  1900 Kanawha Boulevard
  Building 5, Room 740
  Charleston, West Virginia 25305

- **Request a printed comment form by emailing Karen.E.Allen@wv.gov**



WV 9 PLANNING AND ENVIRONMENTAL LINKAGES STUDY
Virtual Informational Public Meeting

The West Virginia Division of Highways (WVDOH) will hold an informational virtual public meeting May 11, 2021 for the WV 9 Planning and Environmental Linkages Study. The study seeks to improve the east-west transportation link between Martinsburg and Berkeley Springs, West Virginia and will identify transportation needs in the corridor and conduct a preliminary assessment of alternatives to upgrade and/or relocate WV 9. The concepts evaluated include new road construction as well as upgrades to existing WV 9. This is a planning level workshop through which the WVDOH and the consultant team will review the preliminary study findings and alternatives and request input to move forward to a future National Environmental Policy Act study. The formal presentations will begin at 4:30PM and 6:00PM. Please see below for meeting access information.

The West Virginia Department of Transportation will, upon request, provide reasonable accommodations including auxiliary aids and services necessary to afford an individual with a disability an equal opportunity to participate in our services, programs, and activities. Please contact us at (304) 414-6901. Persons with hearing or speech impairments can reach all state agencies by calling (800) 982-8772 (voice to TDD) or (800) 982-8771 (TDD to voice).

Questions