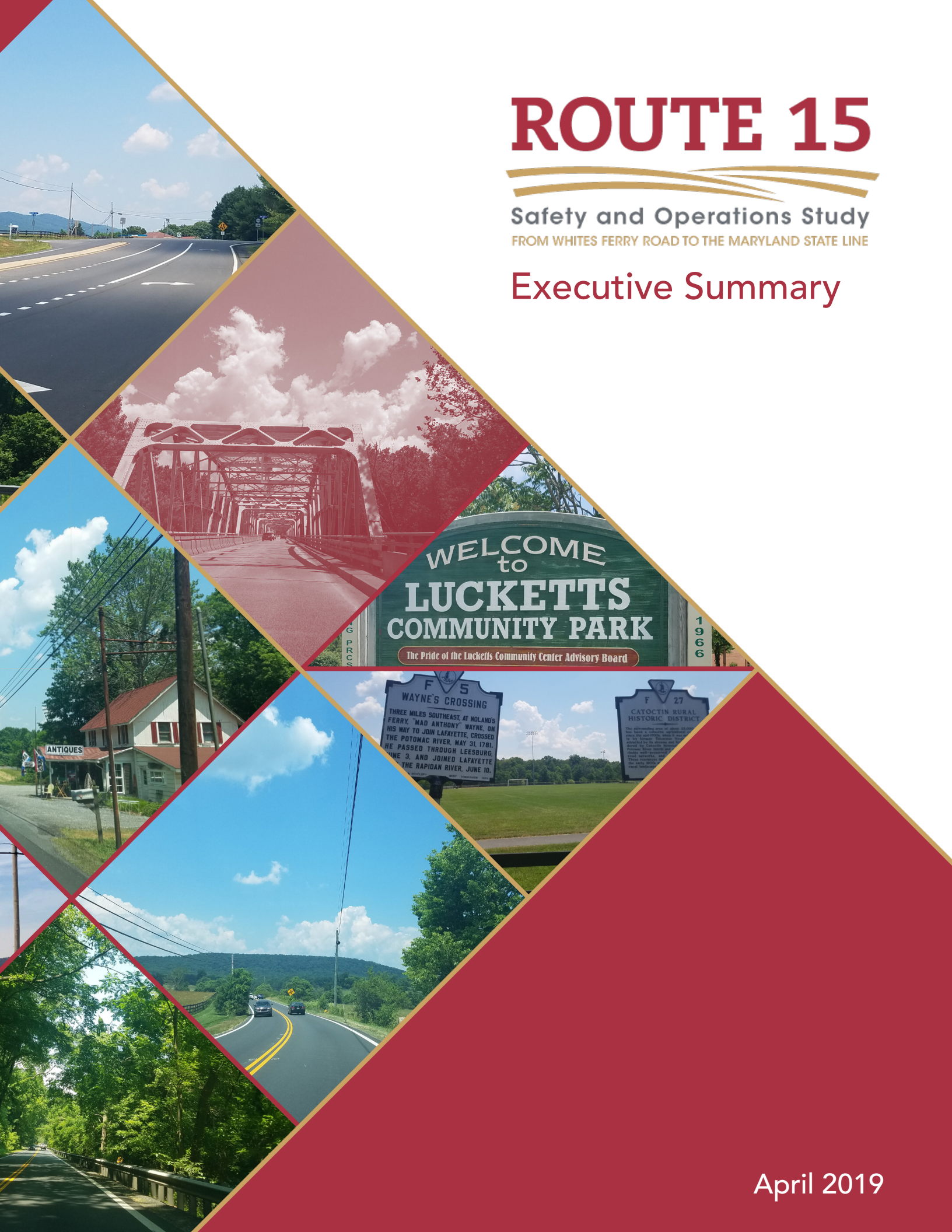


ROUTE 15

Safety and Operations Study

FROM WHITES FERRY ROAD TO THE MARYLAND STATE LINE

Executive Summary



April 2019



INTRODUCTION

On May 18, 2017, the Loudoun County Board of Supervisors directed County staff to conduct a study of the safety and operational issues on Route 15 from Whites Ferry Road to the Maryland State Line. The Loudoun County Board of Supervisors, alongside the Loudoun County Department of Transportation and Capital Infrastructure (DTCI), engaged Stakeholder Committee, partner agencies, and the public to study the US Route 15 corridor north of Leesburg. The study reviewed US Route 15 from Whites Ferry Road to the Maryland state line. Improved safety, preservation of historic and rural character, and congestion relief were the aspirations for the Route 15 Safety and Operations Study.

The study included robust public, stakeholder, and partner agency engagement throughout the process. Three rounds of public meetings and accompanying online surveys were performed at key stages of the process. A Stakeholder Committee was formed by the County Board to help advise County staff and provide a broader reach of public input. Fifteen partner agencies were consulted with to identify opportunities during the development of concepts. The feedback received from this engagement resulted in the development of two concepts; Concept A - which focused on safety improvements, and Concept B - which focused on safety improvements and congestion relief. Both concepts maintain the historic and rural character for a context-sensitive design.

The full report and other project information can be found at www.loudoun.gov/route15



STUDY PROCESS

The study involved a technical evaluation process that was closely integrated with the engagement of a Stakeholder Committee and public input.

Existing conditions were established through collection of traffic and safety data, which was analyzed to produce an existing conditions summary. This was supplemented by the public feedback received from the first round of engagement. The results of the existing conditions evaluation helped identify opportunities for

improvement and begin development of concepts. These initial concepts were presented at the second round of public engagement to help refine the many improvement projects into two succinct build concepts. Analyses were performed for both concepts, reviewed by the Stakeholder Committee, and presented to the public for the third round of engagement. The final findings are summarized in this report and will be presented to the Board of Supervisors in early 2019.

ROUND 1
June/July 2017
Public Input

**Stakeholder and
Partner Agencies
Refine Input**

ROUND 2
March 2018
**Open House
Public Input**

**Concepts and
Analysis;
Stakeholder and
Partner Agency Input**

ROUND 3
September 2018
Public Meeting

Early 2019
**Recommendations
and Final Report**

**Potential Corridor
Improvements**

BOARD OF SUPERVISORS DIRECTION

DTCI Staff presented the Route 15 Congestion Report to the Board at the May 18, 2017 Board of Supervisors Business Meeting. The Board directed the staff to expand the US Route 15 Congestion Report to include safety and operational issues along US Route 15 between Whites Ferry Road and the Maryland state line to identify progressive improvements that can be implemented. This was the genesis of the Route 15 Safety and Operations study.

THE BOARD DIRECTION INCLUDED:

- Additional public workshops to prepare a corridor study and evaluate concepts from Whites Ferry Road to the Maryland state line
- Coordination with District Supervisors to conduct a series of public input sessions and to establish a Stakeholders Committee to gain feedback

VISION

The vision of the Safety and Operations Study was developed by the Stakeholder Committee based on publicly-identified priorities during the summer 2017 public workshops. The input led to three themes; safety, congestion relief, and historic and rural character.

- The US Route 15 corridor improvements from Leesburg to Maryland will emphasize safety and congestion relief.
- The US Route 15 corridor improvements will provide local access and mobility for the community and through traffic.
- The US Route 15 corridor improvements design will highlight Loudoun's natural beauty and maintain the historic rural character.

SAFETY

HISTORIC AND RURAL CHARACTER

CONGESTION RELIEF

ENGAGEMENT OVERVIEW

ENGAGEMENT OVERVIEW

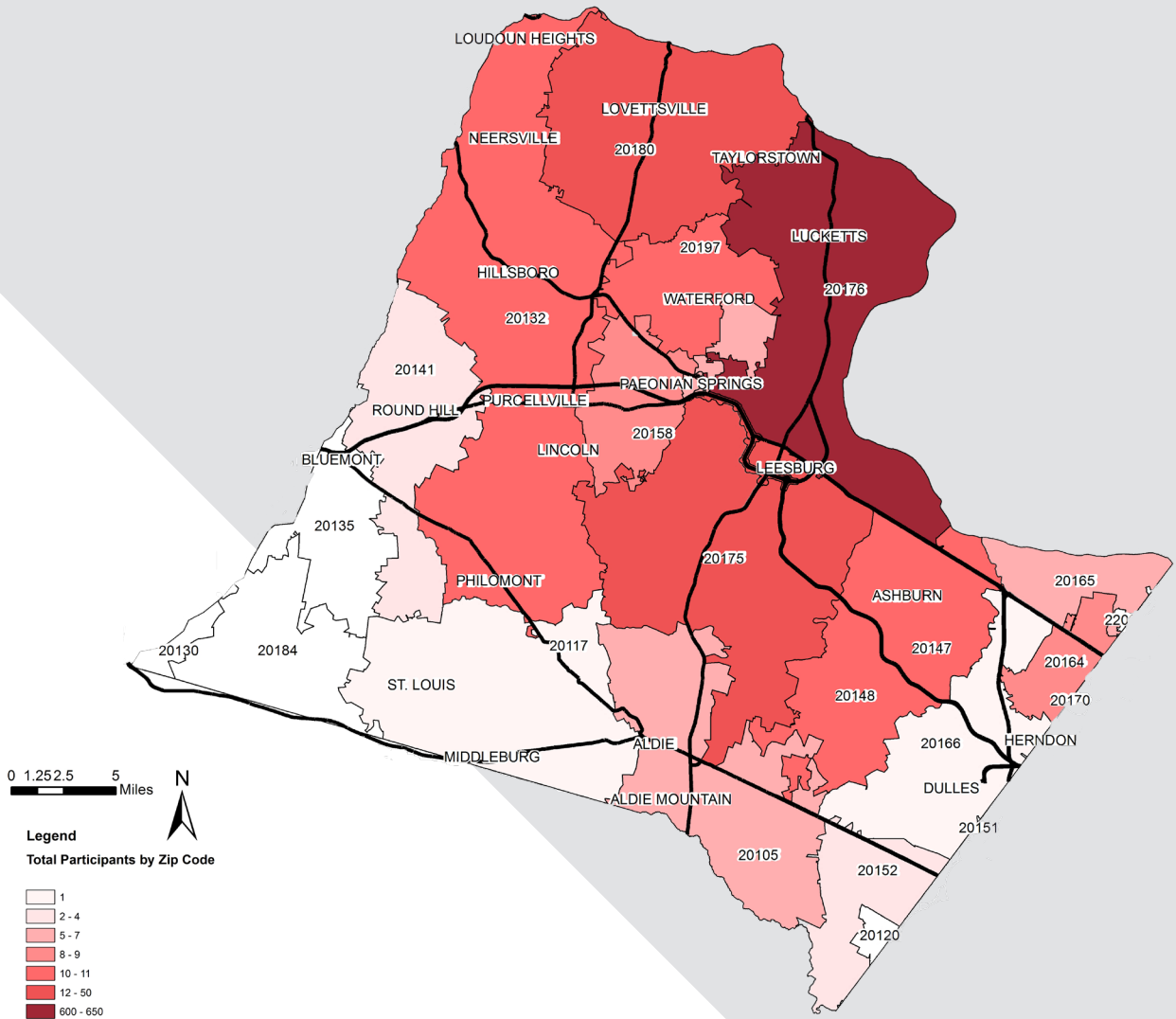
The Safety and Operations Study included a robust engagement strategy that was closely coordinated with the technical evaluation process. The following summarizes the public involvement , Stakeholder Committee, and partner agency engagement performed.

PUBLIC INVOLVEMENT

The purpose of the public involvement was to gain public input throughout the study process.

Three rounds of public meetings were held throughout the process to collect feedback as the study progressed. Key findings from each of the public input meetings are summarized as follows.

The following map shows the level of public participation by zip code from the series of public meetings. As shown by the darker shaded areas, the majority of public responses were collected from persons who reside along the corridor.



ROUND 1 PUBLIC MEETINGS

The first round of public meetings were led by a facilitator with participants seated at small tables. The meetings were very successful and citizens appreciated that they were heard.

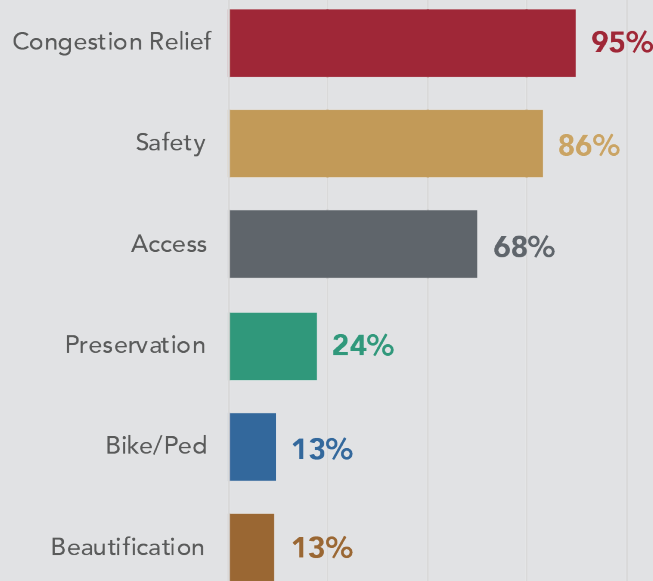
Safety and Operations Study Input:

- Corridor Issues, Opportunities and Defining Features: This activity collected input using color coded stickers on a map with accompanying notes describing observed issues. The activity also collected input on opportunities for improvements. The six categories were Access, Safety, Congestion, Beautification, Preservation, and Pedestrian/Bicycle.

- Visioning: This activity collected people's ideas and their vision on what they hope to achieve for US Route 15. A comment form was provided to list key words, phrases, or sentences for contribution to the US Route 15 vision.

A summary of survey results from the question asking the public to choose their top three priorities for the US Route 15 corridor from Leesburg to the Maryland State line is shown graphically on this page. The results show that congestion relief, safety, and access were the top three priorities for the public to be considered during the study and design process.

Public Input Corridor Priorities (Top 3 Selections)



The public meetings were held at the following dates and times:

- Meeting 1 – Monday June 26, 2017, 7:00-9:00 PM at the Ida Lee Recreation Center, Leesburg, VA
- Meeting 2 – Saturday, July 8, 2017, 9:00-11:00 AM at the Lucketts Community Center
- Meeting 3 – Saturday, July 15, 2017, 9:00-11:00 AM at the Lucketts Community Center
- Additionally, an online survey was conducted between July 5, 2017 and July 24, 2017

239 MEMBERS OF THE PUBLIC ATTENDED

2,006 UNIQUE SURVEY RESPONSES



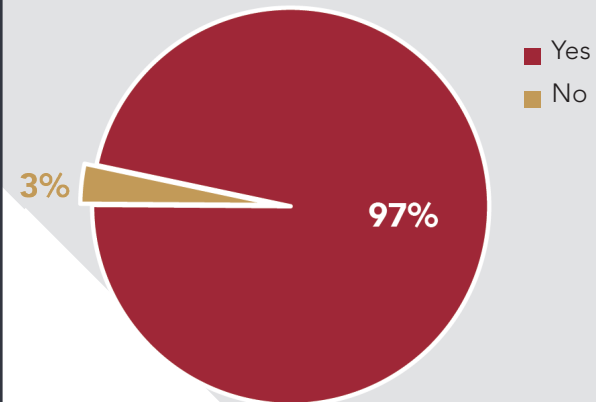
ROUND 2 PUBLIC MEETINGS

The second round of public meetings were held to collaborate with the public to identify context-sensitive improvements. Key focus topics were relieving congestion and addressing safety and operations issues along the US Route 15 corridor from Whites Ferry Road to the Maryland state line, and identifying rural design features to be implemented along the corridor.

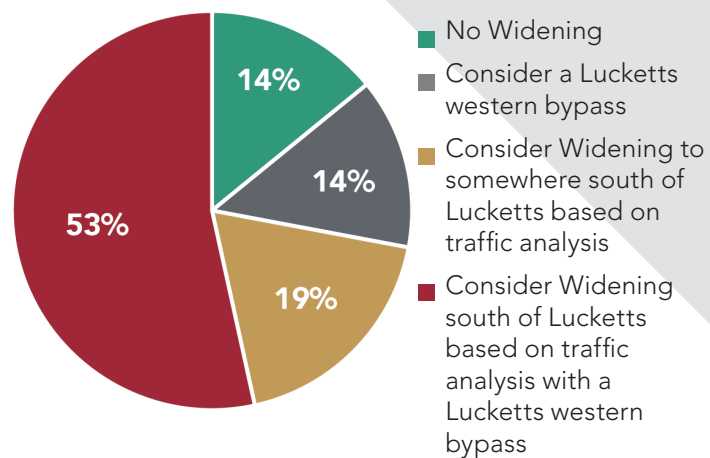
The following is a summary of the key findings from the meetings, comment forms, and the online and in-person surveys. The figures show the public's preference on corridor improvements including widening and a potential bypass of Lucketts.

The responses showed strong support (97%) for corridor improvements, the majority (72%) support Route 15 widening, and majority (67%) support a bypass of Lucketts.

Preference for action to improve the Route 15 corridor from its current condition?



Preference for widening: North of Montresor Road



The public meetings were held at the following dates and times:

- Meeting 1 - Friday, March 9, 2018, 2:00-9:00 pm in the Ida Lee Recreation Center, Leesburg, VA
- Meeting 2 - Saturday, March 10, 2018, 9:00 am-2:00 pm in the Lucketts Community Center
- Additionally, an online interactive survey was conducted between March 12, 2018 and March 26, 2018 which had similar questions as the in-person meetings.

247 MEMBERS OF THE PUBLIC ATTENDED

671 ONLINE SURVEY RESPONSES

875 UNIQUE SURVEY RESPONSES

ROUND 3 PUBLIC MEETING

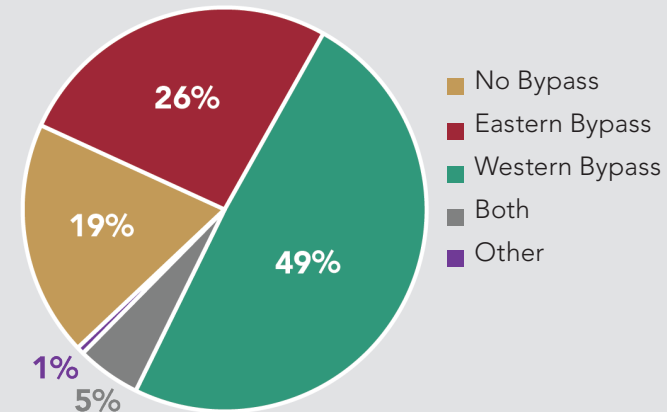
The third round of public engagement was held to review and provide preference on context-sensitive improvement concepts. The concepts were developed through an iterative process working with DTCL staff, performing technical analyses, and utilizing input from the first two rounds of public meetings and the Stakeholder Committee.

The two concepts presented were:

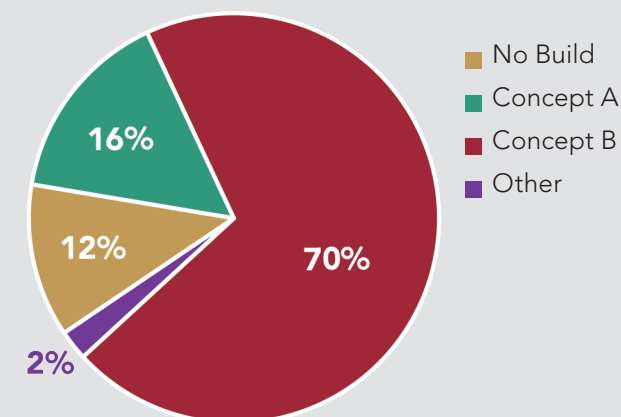
- Concept A - focus on safety improvements
- Concept B - focus on safety and congestion relief improvements

Attendees of the public meeting completed a paper survey. An online survey was also accessible for three weeks following the public meeting.

Preferred Bypass Location Results



Preferred Concept



The public meeting was held at the following date and time:

- Wednesday, September 26, 2018 from 7:00 pm-8:30 pm in the Lucketts Community Center
- Additionally, an online survey was conducted between September 26, 2018 and October 18, 2018

102 MEMBERS OF THE PUBLIC ATTENDED

1,022 ONLINE SURVEY RESPONSES

1,089 UNIQUE SURVEY RESPONSES

STAKEHOLDER COMMITTEE

On August 1, 2017, the Loudoun County Board of Supervisors established a US Route 15 Stakeholder Committee to provide community input on the US Route 15 Corridor Study from Whites Ferry Road to the Maryland State line. The Stakeholders, selected directly by the Board of Supervisors, represent resource groups along the corridor including: community and civic groups, homeowner associations (HOA), businesses, and environmental/historic groups.

The Stakeholder Committee comprised of the following groups:

1. Big Springs Farms Community Association
2. Big Springs Owners Association
3. Catoctin Coalition
4. Exeter
5. Glynn Tarra Estates
6. Journey Through Hallowed Ground
7. Lee's Crossing
8. Loudoun County Chamber
9. Loy Estates
10. Lucketts Business Collaborative
11. Lucketts Ruritans
12. Morven Park
13. Potomac Crossing
14. Raspberry Falls
15. Raspberry Falls Hunt & Golf Club
16. Saddlebrook
17. Selma Estates
18. Taylorstown Community Association
19. Village Green – Elysian Heights

The Stakeholder Committee signed a charter to fulfill the following responsibilities:

- ▮ Serve as an advisory group to professional project staff and partner agencies
- ▮ Attend each Stakeholder Committee meeting. In the case of absence, the committee member must designate an alternate to take their place in the meeting
- ▮ Encouraged to attend the Public Meetings
- ▮ Provide recommendations on US Route 15 improvements based on technical analysis and discussion of public input comments
- ▮ Seek feedback from the organization you are representing prior to each stakeholder meeting
- ▮ Advocate for project success

STAKEHOLDER MEETING 1

August 1, 2017

- ▮ Stakeholder Charter
- ▮ Congestion Report Recommendations and Public Input
- ▮ Vision and Objectives

STAKEHOLDER MEETING 2

September 14, 2017

- ▮ Finalize Congestion Report Recommendations
- ▮ Public Input Details
- ▮ Finalize Vision

STAKEHOLDER MEETING 3

November 16, 2017

- ▮ Existing Conditions Summary
- ▮ Concept Development

STAKEHOLDER MEETING 4

February 28, 2018

- ▮ Partner Agency Meeting Summary
- ▮ Preliminary Traffic Operations Analysis Summary
- ▮ Review Upcoming Public Meeting and Survey

STAKEHOLDER MEETING 5

May 7, 2018

- ▮ Summary of input received from March 2018 Public Meetings
- ▮ Recommended Concepts

STAKEHOLDER MEETING 6

July 16, 2018

- ▮ Review Concept Analysis

STAKEHOLDER MEETING 7

October 22, 2018

- ▮ Recap of Public Meeting 3
- ▮ Process moving forward

PARTNER AGENCIES

Throughout the process, 15 different partner agencies were included to coordinate and receive feedback on the existing road conditions and the potential improvement concepts. Eight meetings with partner agencies were held between November 2017 and August 2018.

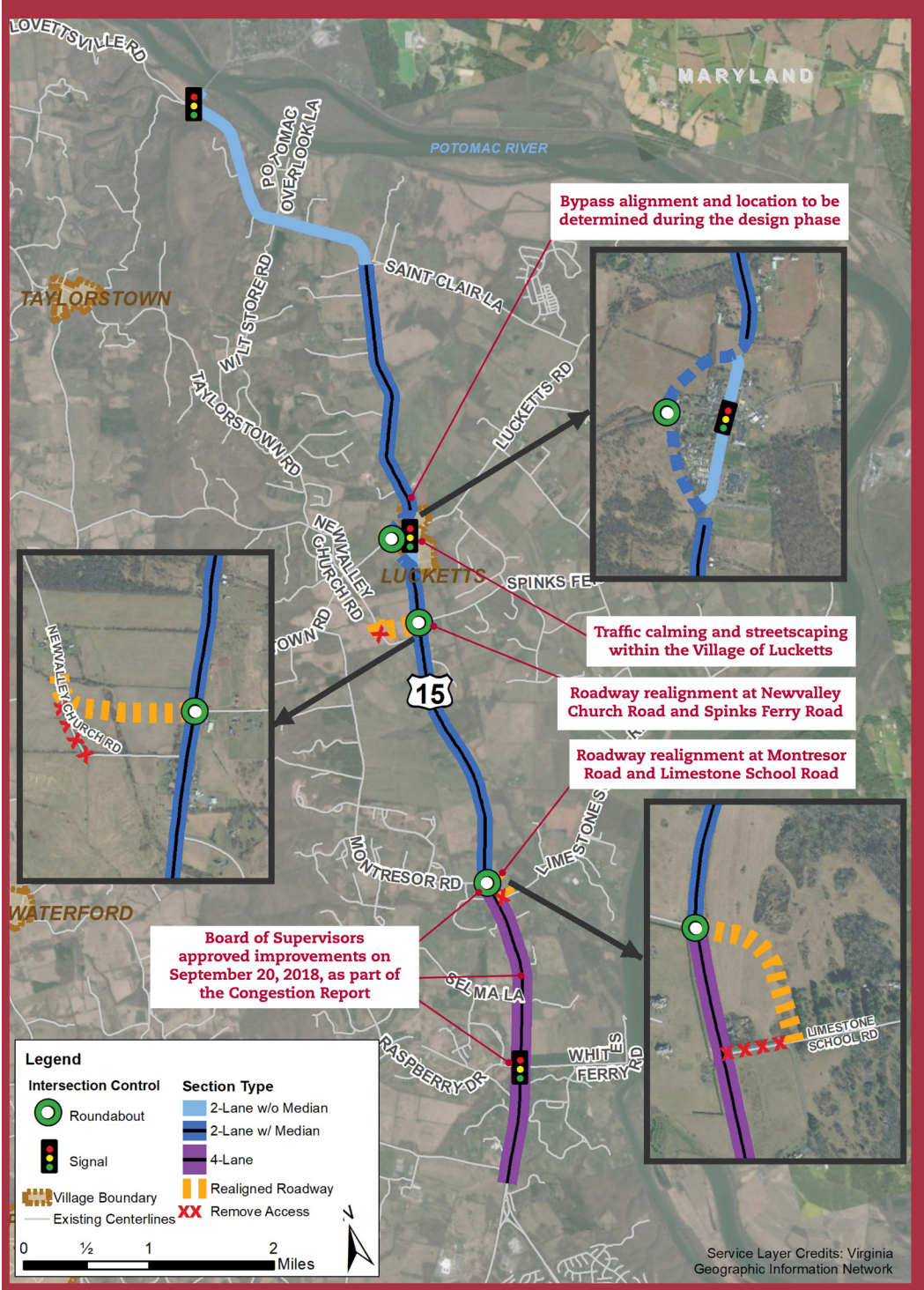
From these meetings, the agencies discussed key issues and concerns along the corridor that were incorporated into the concepts on US Route 15. Some of the key input from the partner agency conversations are listed below:

- ▮ Fire and Rescue and Emergency Services requested wider shoulders and/or turn lanes to safely move around traffic during emergency calls
- ▮ VDOT's highest priority is to improve the roadway for safety and will support capacity improvements deemed appropriate by the County
- ▮ Bike Loudoun supported bicycle and pedestrian facilities along US Route 15 and enhanced regional trail connections
- ▮ Interest was expressed by MDSHA and Bike Loudoun in bus transit options and commuter parking along the corridor to link MARC in Point of Rocks, MD, to Leesburg and Metrorail stations in Ashburn
- ▮ In Maryland, US Route 15 is planned as a four-lane roadway with interchanges (right-of-way is secured for widening); no funding or projects planned for US Route 15 widening or bridge replacement at Point of Rocks across the Potomac River
- ▮ LCSO and LCFR noted that the Lucketts bypass concept will move traffic away from the Lucketts Elementary School, which will improve safety
- ▮ NOVA Parks, PRCS, and Bike Loudoun saw this study as an opportunity to make Lucketts a bicycle destination
- ▮ Both LCSO and LCFR preferred full-paved shoulders to provide the greatest safety and maneuverability for vehicles
- ▮ LCSO preferred medians to discourage traffic from crossing over the center of the roadway to avoid head-on collisions



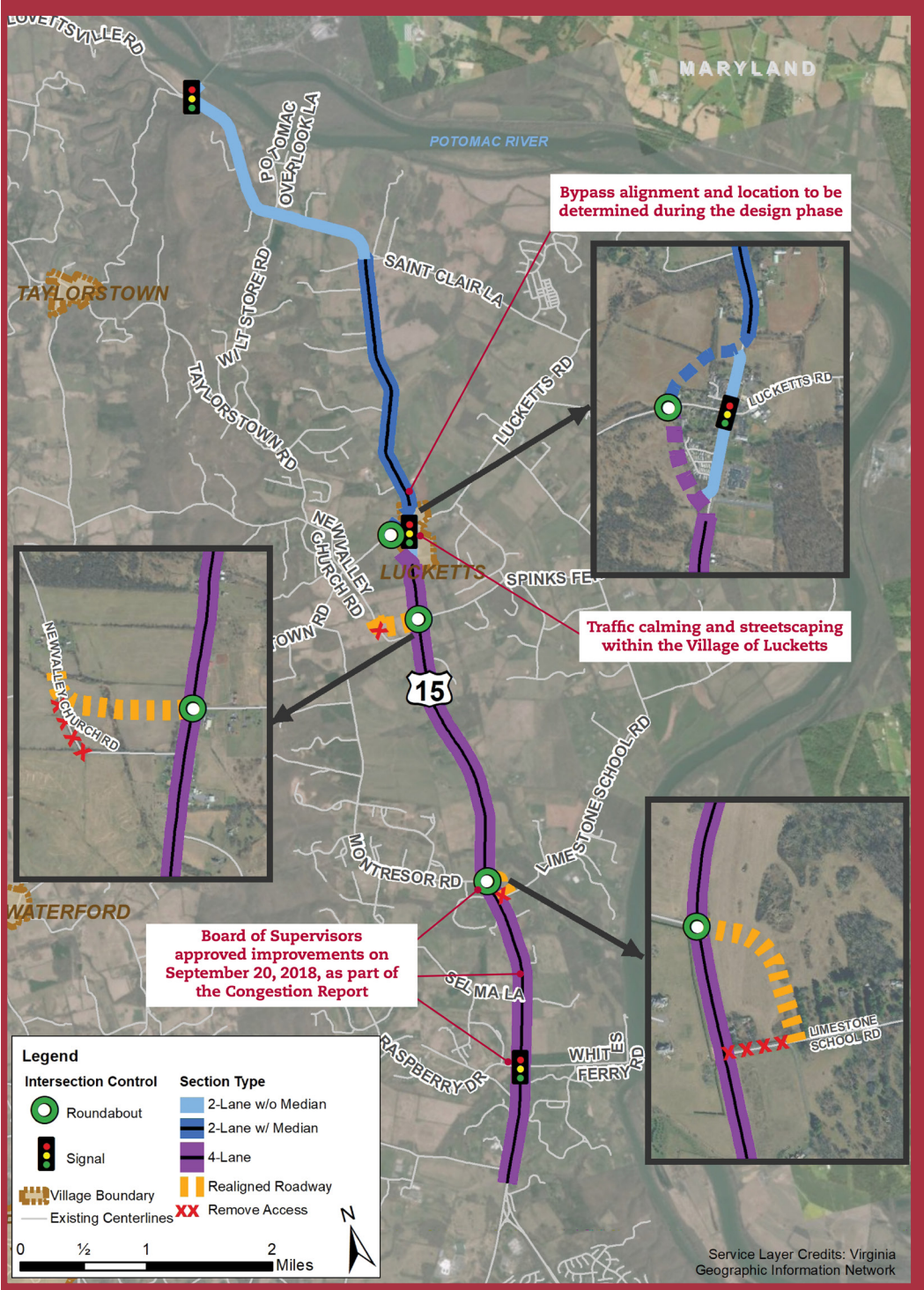
CONCEPTS

Context-sensitive improvement concepts were developed through an iterative process with DTCL staff, informed by public input received from the first two rounds of public meetings and technical analyses of various improvement alternatives. The resulting Concepts A and B address both safety improvements and congestion relief, in a manner that is sensitive to the rural and historic nature of the corridor.



CONCEPT A

Concept A incorporates safety improvements, including the option for a bypass around Lucketts.

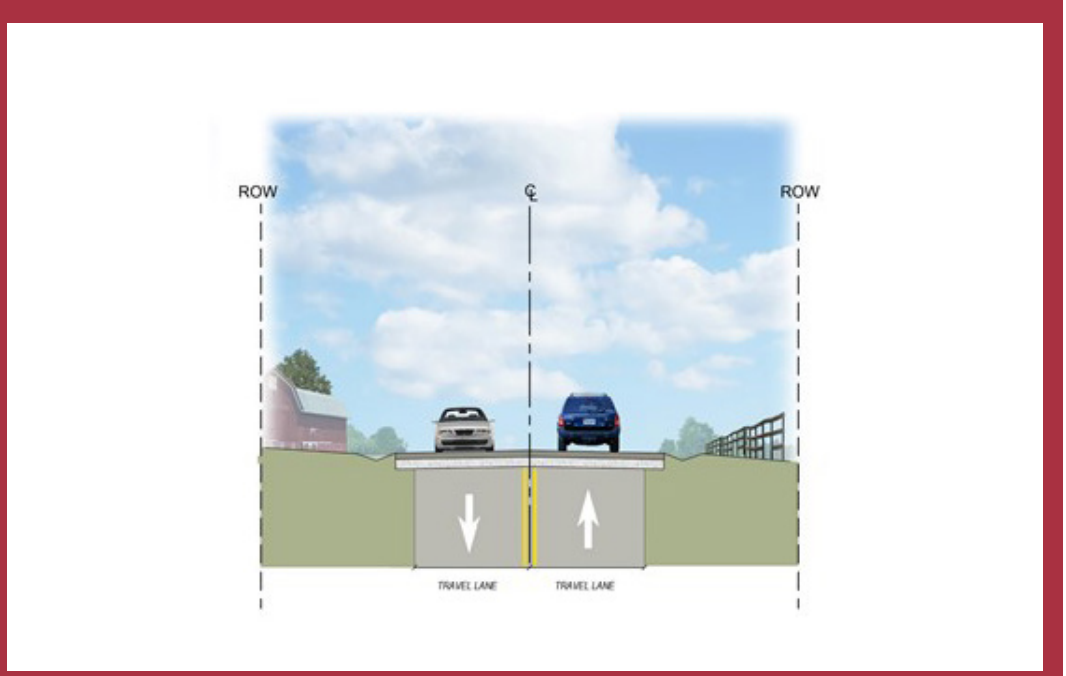


CONCEPT B

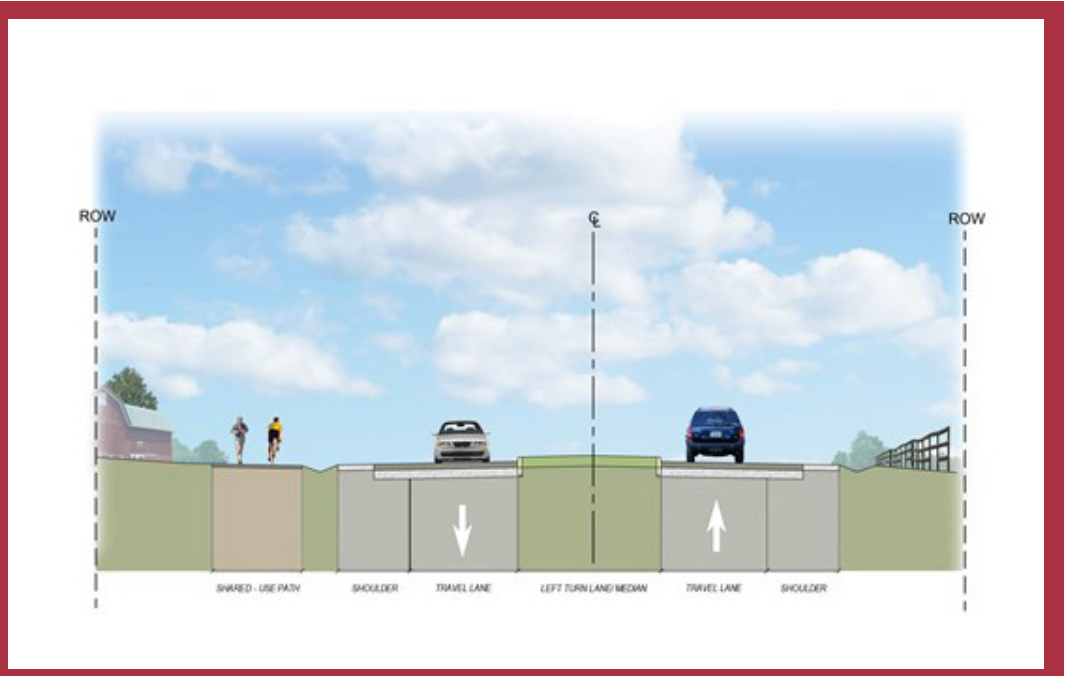
Concept B incorporates all of the safety improvements outlined for Concept A, along with widening of US Route 15 north to Lucketts.

CROSS-SECTIONS

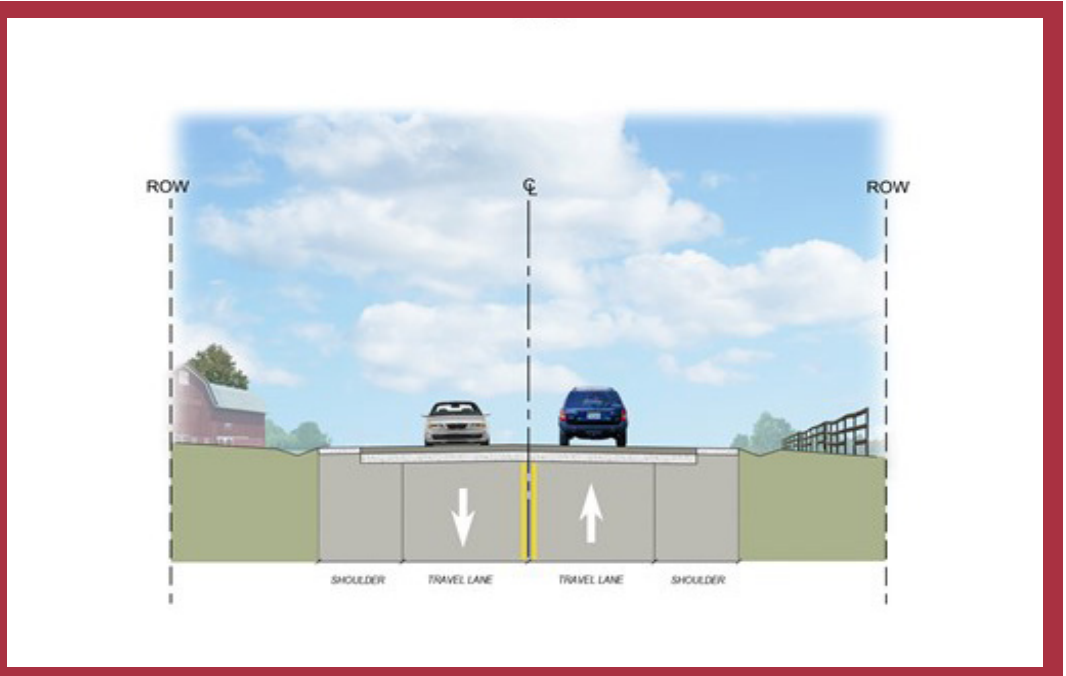
Representative typical sections were developed for the various cross-sections proposed within Concepts A and B. These sections vary by number of lanes, the presence of a median or turn lane, and shoulder treatments. The graphics show typical cross-sections for two-lane undivided, two-lane divided and four-lane divided segments, respectively. The proposed cross-sections for each concept will be fully vetted in the design stage of project development.



Two-lane, Undivided Typical Section (Existing Conditions)



Two-lane, Divided Typical Section with Shared-Use Path



Two-lane, Undivided Typical Section with Rural Shoulder

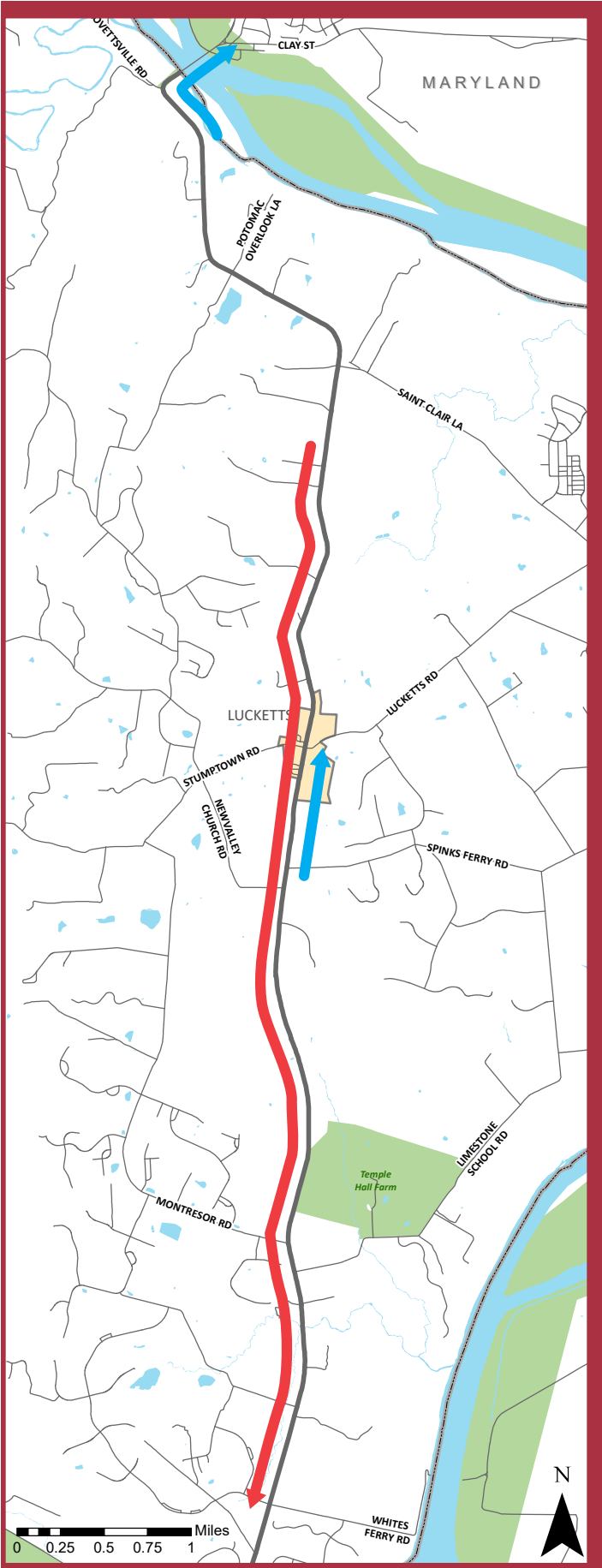


Four-lane, Divided Typical Section with Shared-Use Path

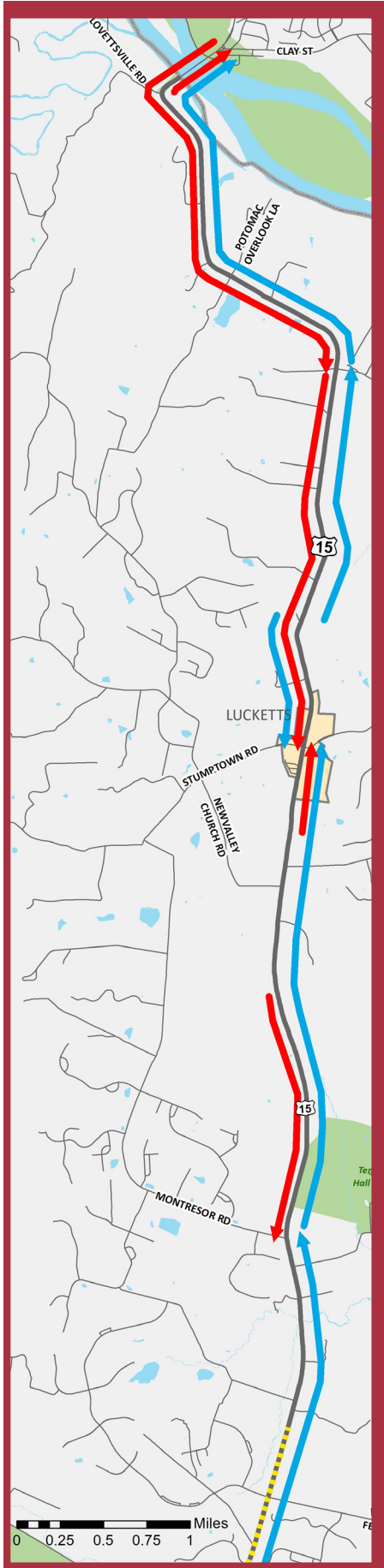
TRAFFIC ANALYSIS

The maps on the right represent No-Build conditions and Concepts A and B under consideration. Approximate projected peak period queue lengths are shown for forecasted year 2040 traffic volumes.

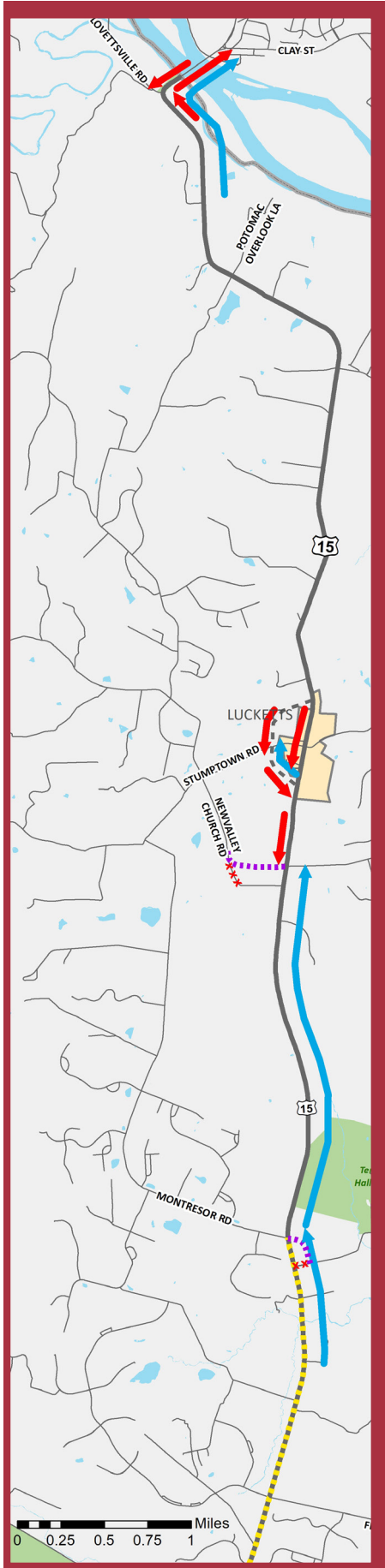
- Capacity Improvement Widening (4 lanes)
- Roadway Realignment
- Estimated AM Queue Length
- Estimated PM Queue Length



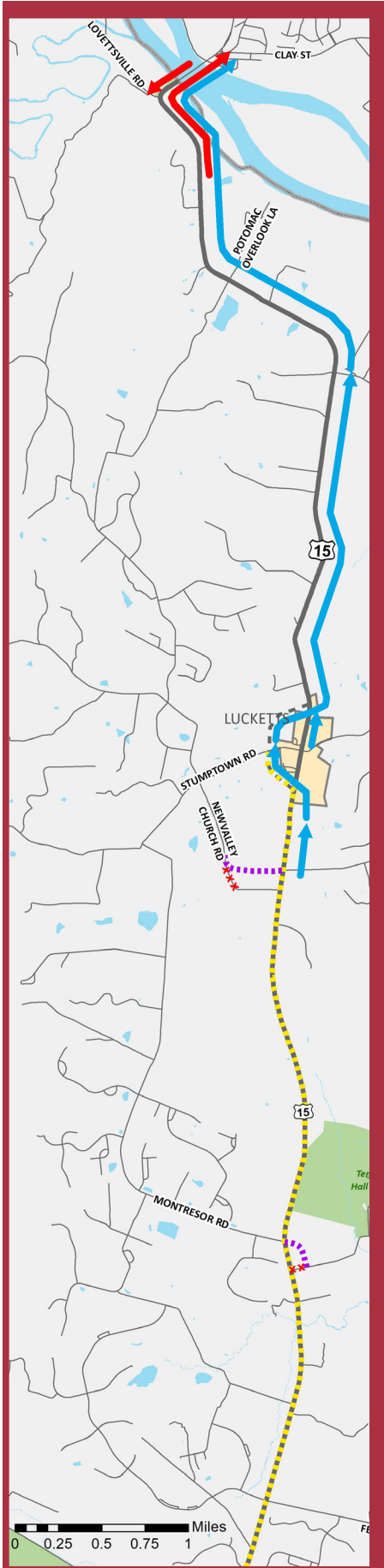
Existing Conditions 2017



No-Build Senario 2040



Concept A 2040



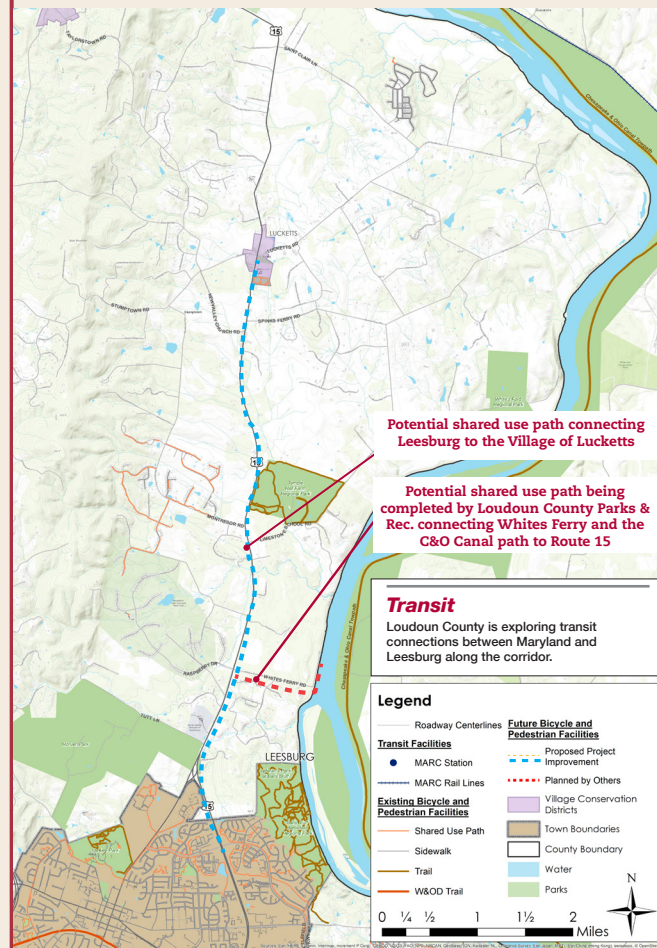
Concept B 2040

CONSIDERATIONS

The concept and design development process will also review other considerations such as multimodal facilities, right-of-way, access, and the long range plans for US Route 15 in Maryland.

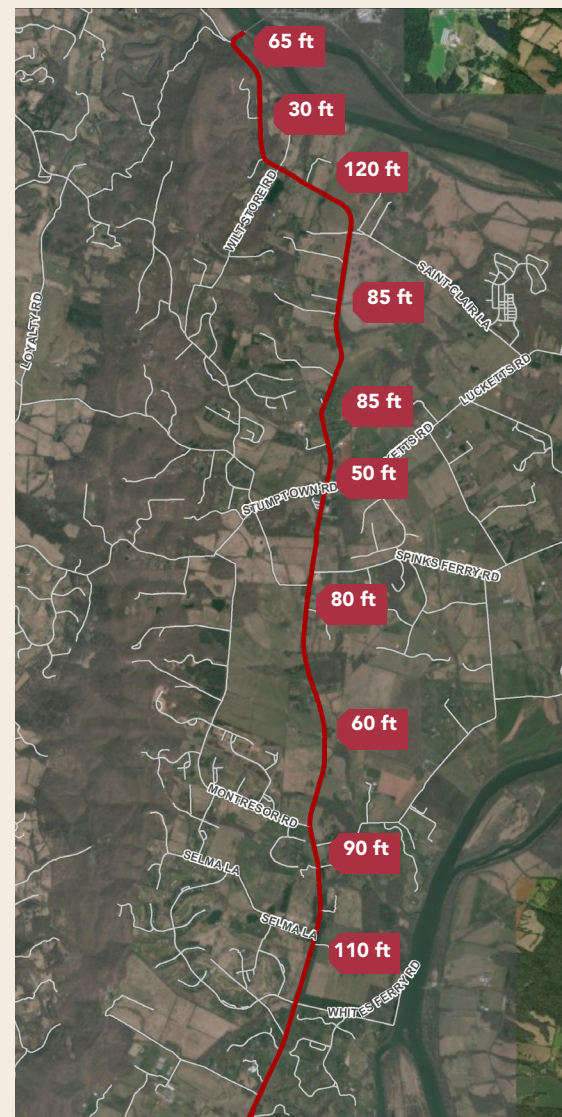
MULTIMODAL

- ▶ Loudoun County is exploring transit connections between Maryland and Leesburg along the corridor
- ▶ Potential shared use path connecting Leesburg to the Village of Lucketts
- ▶ Potential shared use path being explored by Loudoun County Parks & Rec. connecting Whites Ferry and the C&O Canal path to Route 15



RIGHT-OF-WAY

- Existing right of way widths vary from approximately 30 feet to 120 feet along the study corridor



ACCESS

Access to residences and rural business along the US Route 15 study corridor is important and will be reviewed in future design phases. Below are some considerations for modified access treatments.

ACCESS CONSIDERATIONS

Right-Turn in, Right-Turn out

- ▶ Driveways and minor uncontrolled roadways typically must turn right onto Route 15
- ▶ Entrance is typically only permitted from Route 15 by turning right (no direct left turn)
- ▶ Consolidates median breaks to minimize conflicts and increase traffic flow
- ▶ Removes crossover traffic, resulting in safer access

Median Left Turns

- ▶ Provides a median break wide enough for left turn bays and U-turns
- ▶ Creates a refuge for turning without interrupting the through movement
- ▶ Allows left-turn access into businesses and developments

U-Turns at Key Locations

- Provides a median break for U-turn movements at key locations along the corridor
- Designed to accommodate large trucks and horse trailers

MARYLAND'S LONG-TERM PLAN

As a part of the Partner Agency coordination, the study team met with members of Frederick County, Maryland Transportation Staff and the Maryland State Highway Administration (MDSHA) to discuss the long term plan for US Route 15 within the state of Maryland. Route 15 is planned for future widening from two to four lanes and conversion to limited access from Frederick to Point of Rocks. Frederick County Staff noted that there is currently no funding available for the Maryland Route 15 widening project.



SAFETY

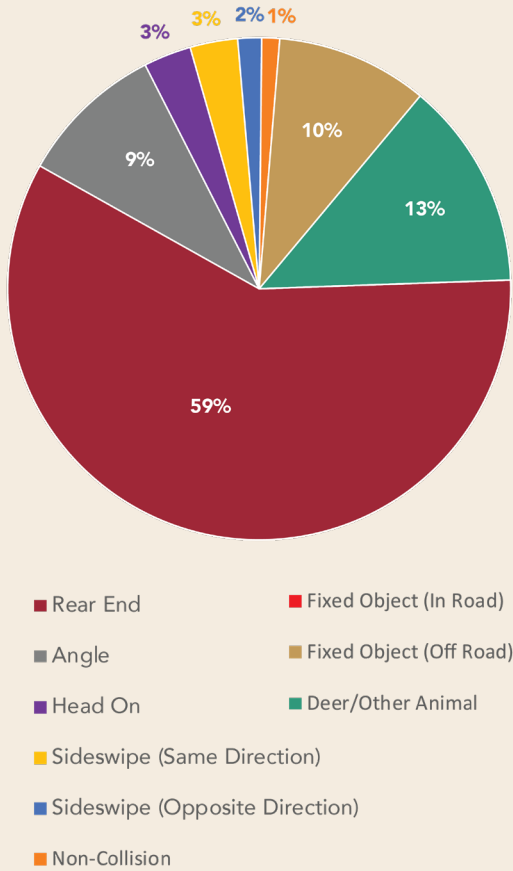
Crash data for US Route 15 was used to evaluate historical corridor safety and identify crash patterns. Crash data was obtained from the Virginia Department of Transportation (VDOT) for the latest available five years of crash data at the time of the analysis (January 1, 2012 to June 30, 2017).

US Route 15 Crash Severity Summary by Year

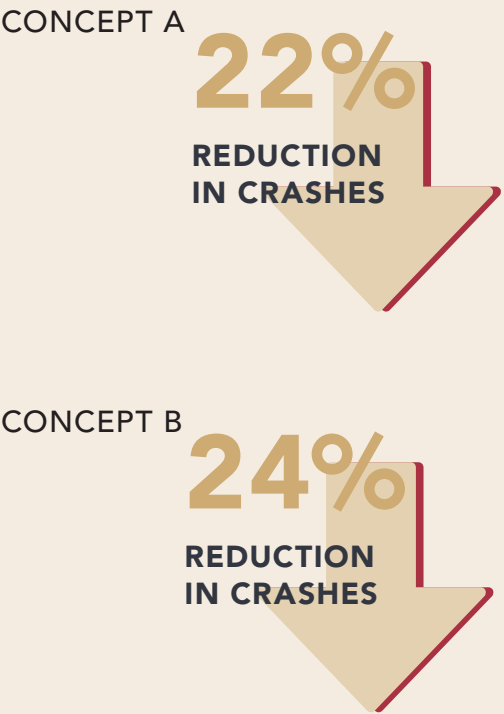
	Year						Total
	2012	2013	2014	2015	2016	2017	
Fatality	1	0	0	1	0	2	4
Injury	20	17	29	23	28	14	131
Property Damage Only (PDO)	51	69	66	83	90	37	396
Total	72	86	95	107	118	53	531

*Note: When the existing conditions were analyzed, 2017 crash data was only available through June 30, 2017. Additional fatal crashes have occurred after June 30, 2017.

Summary of Crash Types
(January 1, 2012- June 30, 2017)

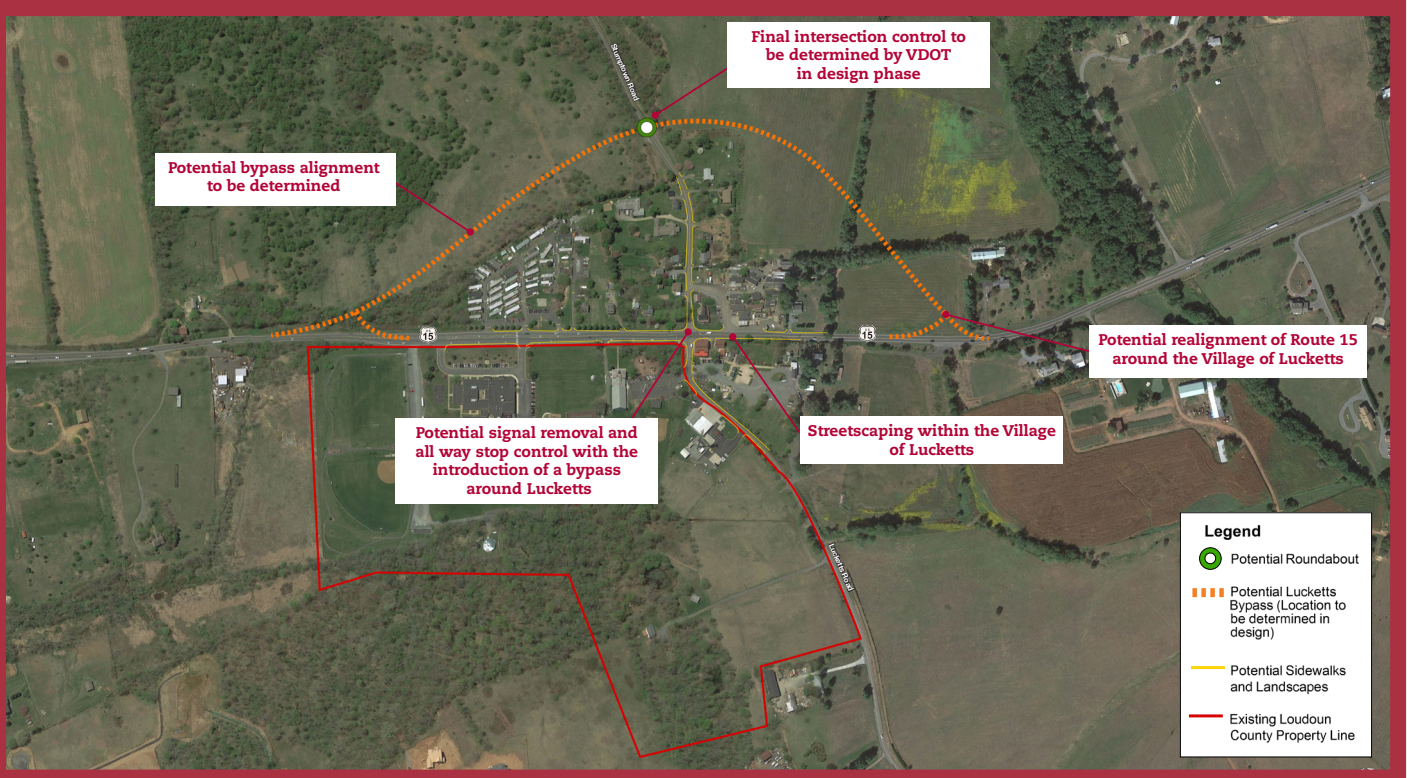


Crash modifications factors (CMFs) were used to evaluate the potential safety benefits of implementing the concept improvements and associated safety features.

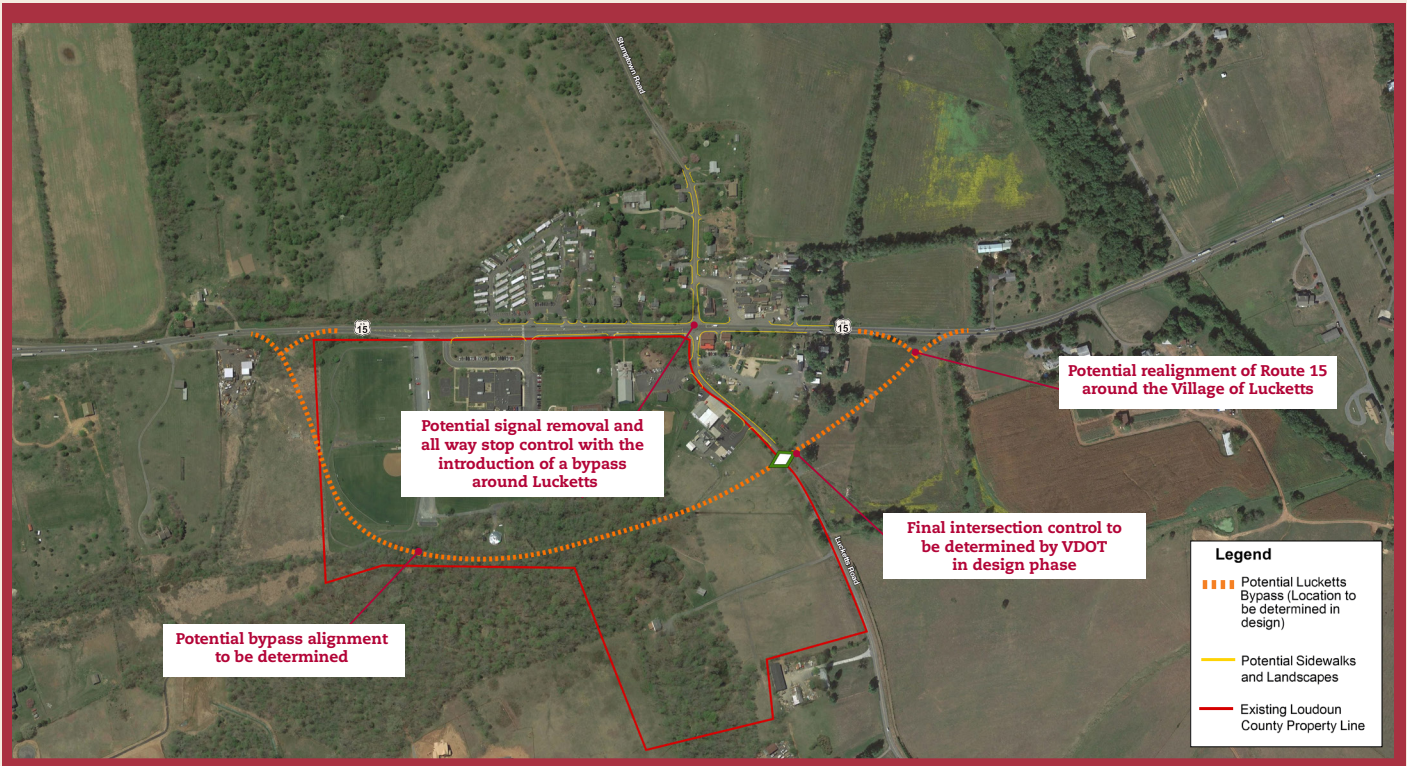


THE VILLAGE OF LUCKETTS

The public input suggested a desire to have a bypass around the Village of Lucketts to allow the vibrant community to be walkable. The alignments presented are conceptual and will need further vetting for feasibility.



Potential Western Bypass



Potential Eastern Bypass

HISTORIC AND RURAL CHARACTER

US Route 15 within the study area is known for its bucolic setting and historic value to the region. The following summarizes some of the key features which exist along US Route 15 including historic locations and regions, rural character, and land use.

US Route 15 is a part of the Journey Through Hallowed Ground corridor from Gettysburg, PA to Monticello in Charlottesville, VA. The corridor was designated as a National Scenic Byway in 2009 and is lined with presidential homes, civil war battlefields, and historic "Main Street" communities. The Journey Through Hallowed Ground Partnership formed to ensure that the roadway receives respect and intentional planning as well as promote the conservation and enhancement of the corridor's scenic, historic, archaeological, cultural, natural, and recreational resources. Considering the transportation element of the roadway, the Byway designation aims to promote transportation systems that employ context-sensitive design and protect efficient, safe, and enjoyable travel through the corridor for all modes of travel and types of users, all while maintaining character-defining features.

The study area for US Route 15 is also part of the Mosby Heritage Area which is an 1,800-square-mile region in the northern Piedmont region of Virginia that encompasses Loudoun, Clarke,

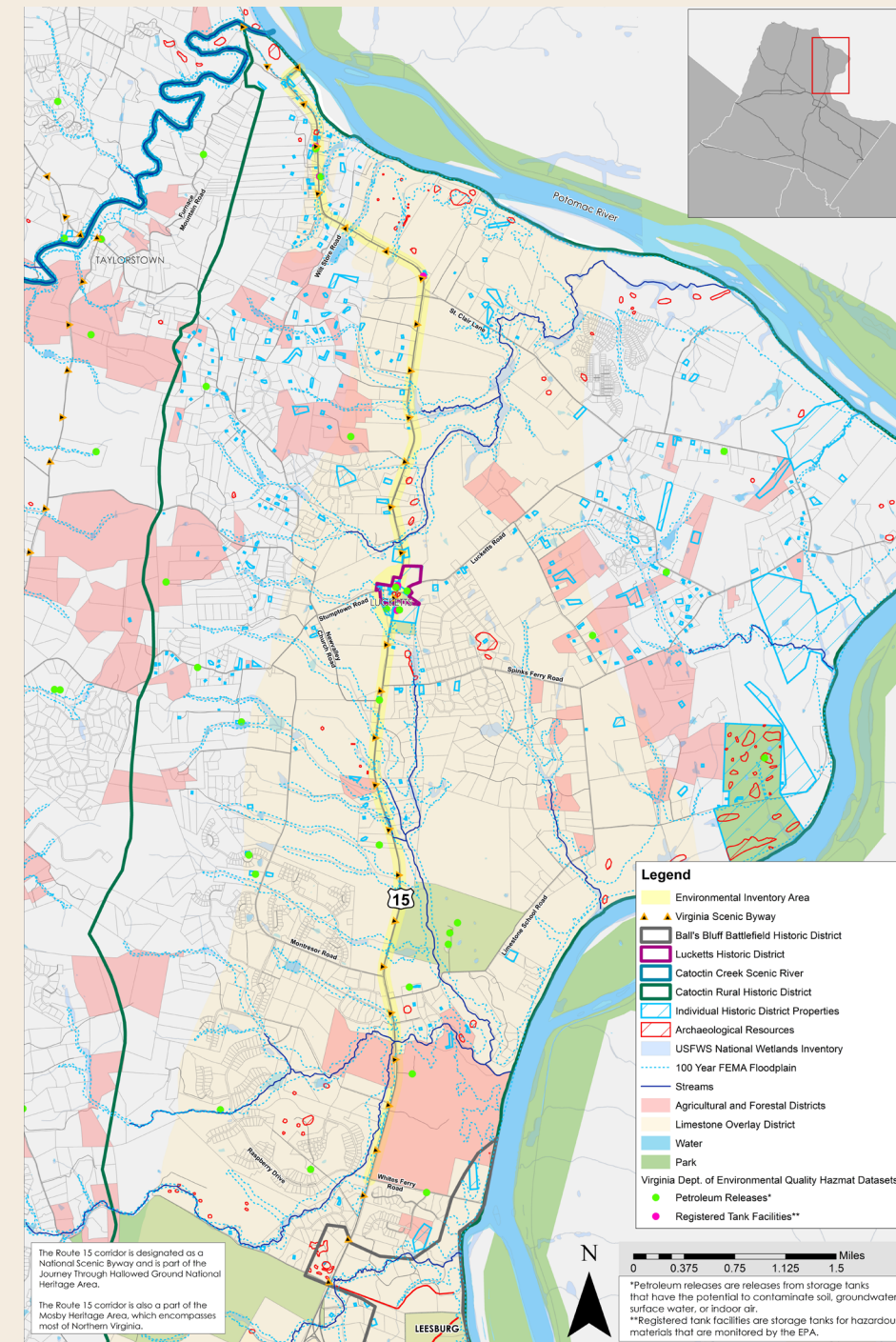
Fauquier, Warren, and western Prince William counties. The Mosby Heritage Area Association formed to preserve the unique cultural, historical, and geographical resources by increasing awareness and preserving the area for the future.

The US Route 15 alignment is between the base of the Catocin Mountains to the west and the Potomac River to the east and north. The entire corridor is within the Loudoun County Limestone Overlay District. This region features karst geology located roughly one mile on either side of US Route 15 and creates the rolling landscape and terrain along the corridor. The surrounding lane use along US Route 15 is primarily agricultural and rural properties with single family homes on large parcels. Throughout the corridor there are many rural businesses which rely on US Route 15 for access and the movement of goods. The agribusiness industry ranges from local farmers markets to antique stores, breweries, and wineries. US Route 15 is also home to many historic locations including the Balls Bluff Battlefield, the Rockland Estate, Whites Ferry, the Selma Estate, Morven Park, and the Village of Lucketts which features antique shops and the historic Lucketts Community Center. The corridor is rooted in deep tradition and history.



HISTORIC AND ENVIRONMENTAL RESOURCES

Identified environmental features and resources present within a 125-foot-wide corridor along the existing centerline of US Route 15, plus the Village of Lucketts.



- 170** ACRES OF FARMLAND
- 169** PARCELS
- 58** ACRES OF FOREST
- 29** STREAM CROSSINGS
- 10** ACRES OF 100-YEAR FLOODPLAIN
- 10** KNOWN WETLANDS
- 5** REGISTERED PETROLEUM FACILITIES
- 4** PETROLEUM RELEASE SITES
- 4** NRHP-LISTED OR ELIGIBLE HISTORIC DISTRICTS/SITES
- 3** THREATENED & ENDANGERED SPECIES OCCURENCES
- 2** AGRICULTURAL /FORESTAL DISTRICTS
- 2** PARKS (1 COUNTY PARK & 1 REGIONAL PARK)
- 1** SCHOOL (LUCKETTS ES)
- 1** KNOWN ARCHAEOLOGICAL SITE

The environmental review process will be determined after the Board of Supervisors makes a decision about the project and its funding sources are identified.

ACKNOWLEDGMENTS

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Susan Glass (Project Manager DTCI)
Jim Zeller (Deputy Director DTCI)
Kelly Griffin (Special Projects Manager DTCI)
Sunil Taori (VDOT Assistant Director Land Use)
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