

ACTION NO. _____

ITEM NO. K.1

AT A REGULAR MEETING OF THE BOARD OF SUPERVISORS OF ROANOKE COUNTY, VIRGINIA HELD AT THE ROANOKE COUNTY ADMINISTRATION CENTER

MEETING DATE: March 28, 2023

AGENDA ITEM: Resolution adopting an amendment to the Comprehensive Plan for Roanoke County, Virginia, by incorporating the U.S. Route 460 Land Use and Connectivity Study

SUBMITTED BY: Philip Thompson
Director of Planning

APPROVED BY: Richard L. Caywood
County Administrator

ISSUE:

Agenda item for adoption of a resolution amending the Roanoke County Comprehensive Plan by incorporating the U.S. Route 460 Land Use and Connectivity Study.

BACKGROUND:

Route 460/Challenger Avenue handles the second highest traffic volume and has the second highest number of crashes in Roanoke County, behind Route 419 near Route 220 in the Tanglewood area.

To begin to address congestion and crashes along the corridor, the Virginia Department of Transportation (VDOT) initiated a Strategically Targeted Affordable Roadway Solutions (STARS) Study in 2019 to analyze opportunities for safety and operational improvements along Route 460 between Williamson Road in the City of Roanoke and Alternate Route 220/Cloverdale Road in Roanoke County near the Botetourt County line. The STARS Study included a Public Information Meeting with a survey, as well as a virtual public meeting with a second survey. Ultimately, seven (7) projects from the STARS Study were chosen for submission through the SMART SCALE program. Six (6) of these projects were funded in the City of Roanoke and in Roanoke County with combined cost estimates of over \$43 million. The Roanoke Valley Transportation Planning Organization (RVTPPO) provided leverage funding for five (5) of the six (6)

projects and no local funds are allocated to these projects. All projects are currently in the design phase and construction is anticipated to begin in 2026 and 2027.

While the STARS Study projects focus on safety and operational improvements for Route 460, Roanoke County had also identified a need to consider opportunities for connectivity off of Route 460 to reduce the necessity for area residents to travel the busy corridor. Roanoke County contracted with Timmons Group in September 2021 to conduct the U.S. Route 460 Land Use and Connectivity Study with three goals:

- 1) Recommend ways to travel around the Bonsack community that are alternatives to Route 460/Challenger Avenue;
- 2) Consider existing zoning classifications and future land use designations to determine potential changes to match desired development types; and
- 3) Examine existing at-grade railroad crossings for potential improvements that may create development opportunities between the railroad and the Blue Ridge Parkway.

Three (3) community meetings have been held throughout the study:

- 1) January 13, 2022: 44 attendees talked with County staff, VDOT staff and consultants about the funded VDOT intersection projects and what they would like to see in their community. 220 survey responses were completed.
- 2) May 18, 2022: 98 attendees talked with County staff, VDOT staff and consultants about existing road upgrades, new road connections, potential future land use changes, pedestrian, bicycle and greenway facilities. 140 survey responses were completed.
- 3) September 29, 2022: 107 attendees considered a presentation reviewing study progress and including changes made according to the public feedback provided in May. 35 survey responses were completed.

On October 19, 2022, the Planning Commission and Economic Development Authority held a joint meeting to review and discuss progress on the study.

On November 9, 2022, the Board of Supervisors held a work session to review progress on the study.

Planning staff worked with Timmons Group on the draft Study through November, December and January. The draft Study was posted on the project webpage in mid-February with a brief comment form. Over 2,600 postcards were mailed to property owners, renters and tenants in the study area in February to inform the community about the availability of the draft Study for review and comment, the Planning Commission public hearing and the Board of Supervisors public hearing.

DISCUSSION:

On March 7, 2023, the Planning Commission held a public hearing on the draft U.S. 460 Land Use and Connectivity Study. Approximately 20 people attended the meeting and six attendees spoke during the public hearing. The Planning Commission voted 3-0 to approve a resolution recommending adoption of an amendment to the Roanoke County Comprehensive Plan to incorporate the U.S. 460 Land Use and Connectivity Study into it.

A 29-day public comment period ended March 17, 2023. Ten (10) respondents provided comments through the online comment form, by email and by phone.

While there are comments about the proposed roadway projects included in the draft Study, many comments received pertain to concerns about the VDOT intersection projects on Route 460 that are funded and in design.

Two (2) changes have been made to the Potential Transportation Improvements exhibit dated March 2023:

- 1) An adjustment to alignment G to connect the proposed roadway with existing public right-of-way dedicated to Roanoke County in 1987, instead of to a private driveway; and
- 2) The legend descriptions have been expanded to better describe the intent of the proposed alignments, in response to concerns expressed during the Planning Commission Public Hearing and the public comment period.

The Board of Supervisors will hold a public hearing to consider additional public comments on the draft U.S. Route 460 Land Use and Connectivity Study on March 28, 2023.

FISCAL IMPACT:

None.

STAFF RECOMMENDATION:

Staff recommends that the Board of Supervisors hold a public hearing and consider approving a resolution to amend the Roanoke County Comprehensive Plan to incorporate the U.S. Route 460 Land Use and Connectivity Study.

U.S. Route 460 Land Use and Connectivity Study

Board of Supervisors Public Hearing

March 28, 2023

Overview of Presentation

- Previous Corridor Planning and Funded Projects
- Study Purpose
- Process of this Study to Date
- Recommended Improvements
- September Survey Results
- Fall/Winter Activities
- Draft Study Document
- March 2023 Engagement and Actions
- Implementation

VDOT Route 460 STARS Study

- **2019 and 2020:** VDOT, the City of Roanoke and Roanoke County studied potential safety and operational improvements along Route 460 from Williamson Road to Alt. Route 220
- **November 2019:** Public Information Meeting and Survey (over 1,000 responses)
- **June 2020:** Virtual Meeting and Survey
- **August 2020:** Seven projects chosen and submitted for SMART SCALE funding



WELCOME

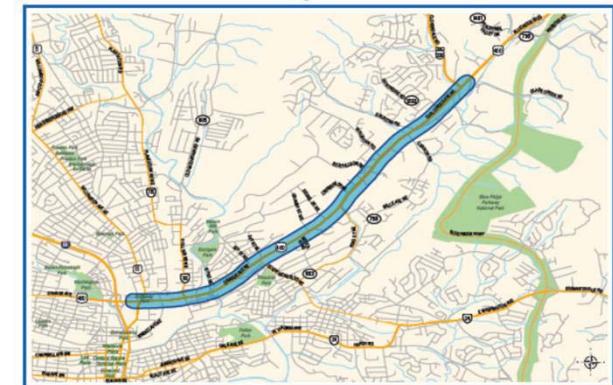
Purpose of the Route 460 (Orange/Challenger Avenue) Operational Improvements Study

- Evaluate operational and safety conditions along Route 460 (Orange/Challenger Avenue) between Williamson Road (Route 11) and Route 220 Alternate (Cloverdale Road)
- Consider and assess potential safety and operational improvements in the study area
- Develop cost estimates for the potential improvements

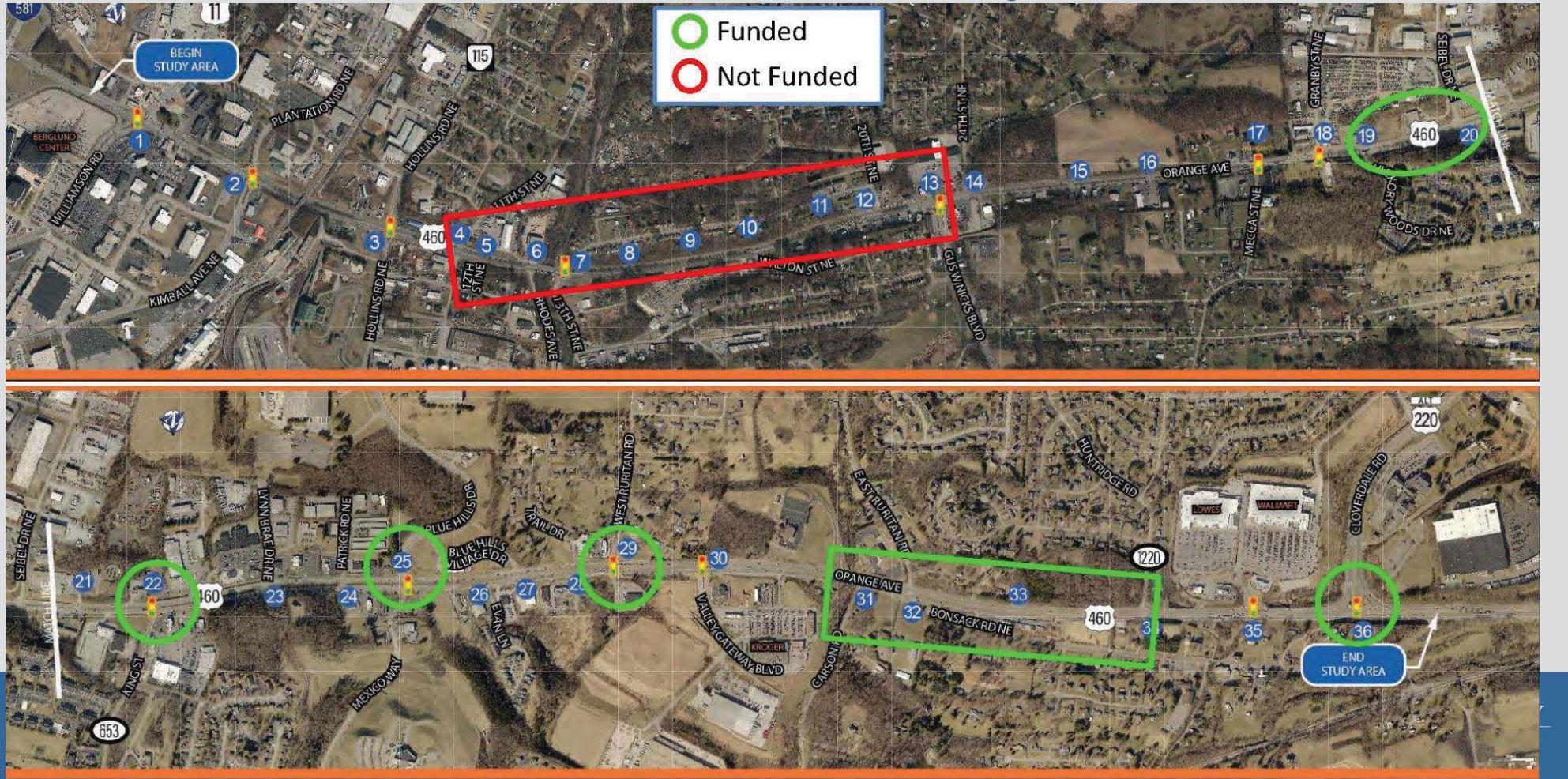
Objectives of the Public Information Meeting

- Inform the public about the study
- Present preliminary information on safety and traffic conditions within the study area
- Provide the public an opportunity to give comments and suggestions on existing safety and traffic operations and gather ideas to enhance safety and reduce congestion in the corridor

Study Area



Route 460 Funded SMART SCALE Projects



Route 460 Funded SMART SCALE Projects

Funded Transportation Projects	Status	Funding	
		Federal/State	Local
Route 460 and Alternate Route 220 Intersection Improvements		\$21,800,000	\$0
Route 460 Intersections from Carson Rd. to Huntridge Rd.		\$2,800,000	\$0
Route 460 at West Ruritan Intersection Improvements	Projects have been grouped and design is underway for all projects	\$7,500,000	\$0
Route 460 (Orange Avenue) Improvements near Blue Hills Drive		\$5,600,000	\$0
Route 460 (Orange Avenue) Improvements Seibel Dr/Hickory Woods		\$450,000	\$0
Route 460 (Orange Avenue) Improvements at King Street		\$5,000,000	\$0
Total Funding		\$43,150,000	\$0
<p><i>There are no local funds on these projects, though the Roanoke Valley Transportation Planning Organization provided leverage funding for five out of six projects.</i></p>			

Route 460 Land Use and Connectivity Study

While the VDOT STARS Study provided recommendations for improving intersections and traffic flow *on* Route 460, Roanoke County wants to focus on improving traffic flow *around* Route 460.

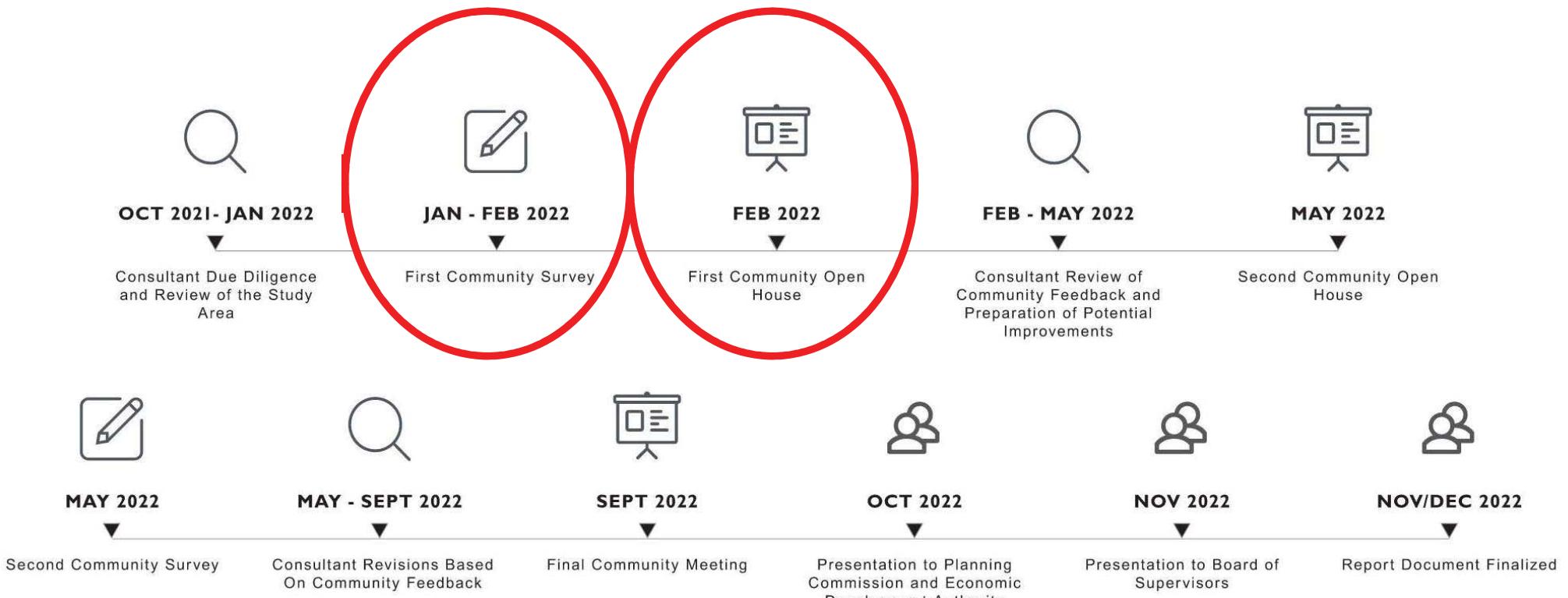
Particularly with demand for redevelopment of parcels fronting Route 460, adding new commercial entrances onto Route 460 will only make congestion worse.

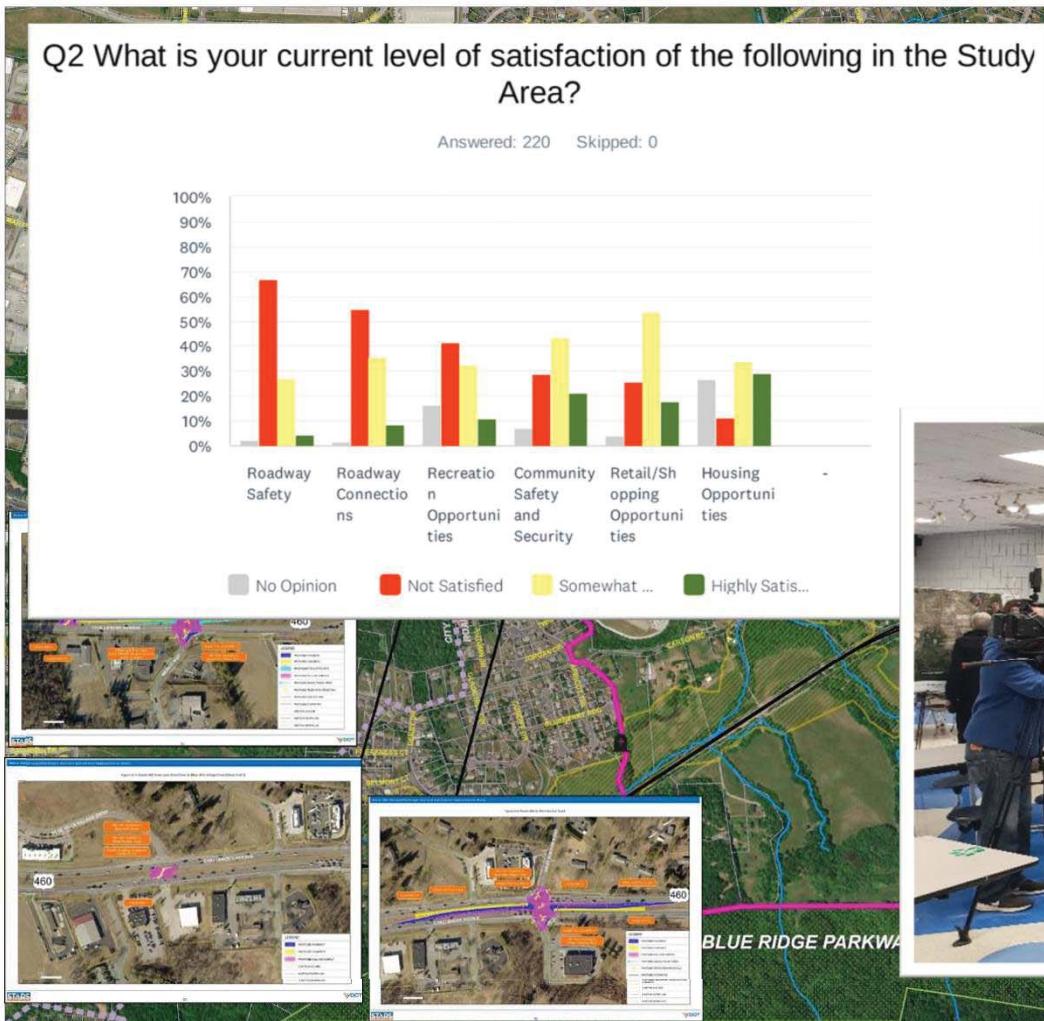
This study proposes new and improved ways for motorists, pedestrians and bicyclists to move around the Bonsack area without having to use Route 460. It will also establish recommended access routes for future development and redevelopment activities.

Study Purpose

- 1) Recommend ways to travel around the Bonsack community that are alternatives to Route 460/Challenger Avenue;
- 2) Consider existing zoning classifications and future land use designations to determine potential changes to match desired development types; and
- 3) Examine existing at-grade railroad crossings for potential improvements that may create development opportunities between the railroad and the Blue Ridge Parkway.









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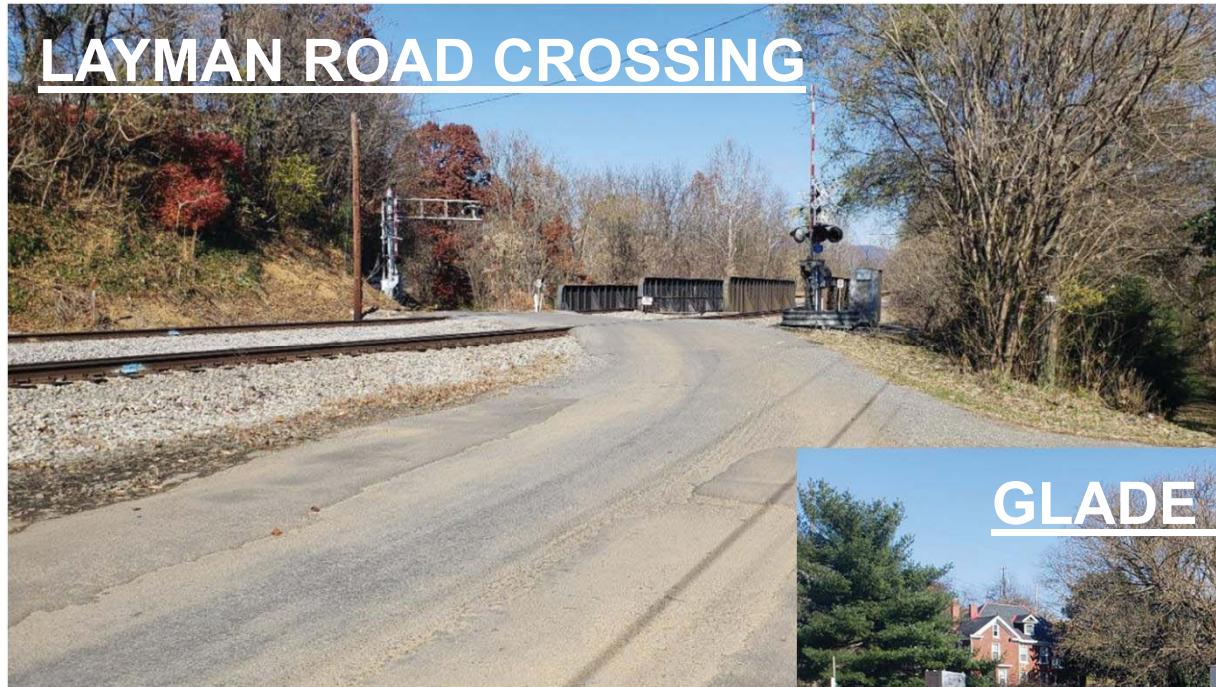
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LAYMAN ROAD CROSSING



GLADE CREEK ROAD CROSSING







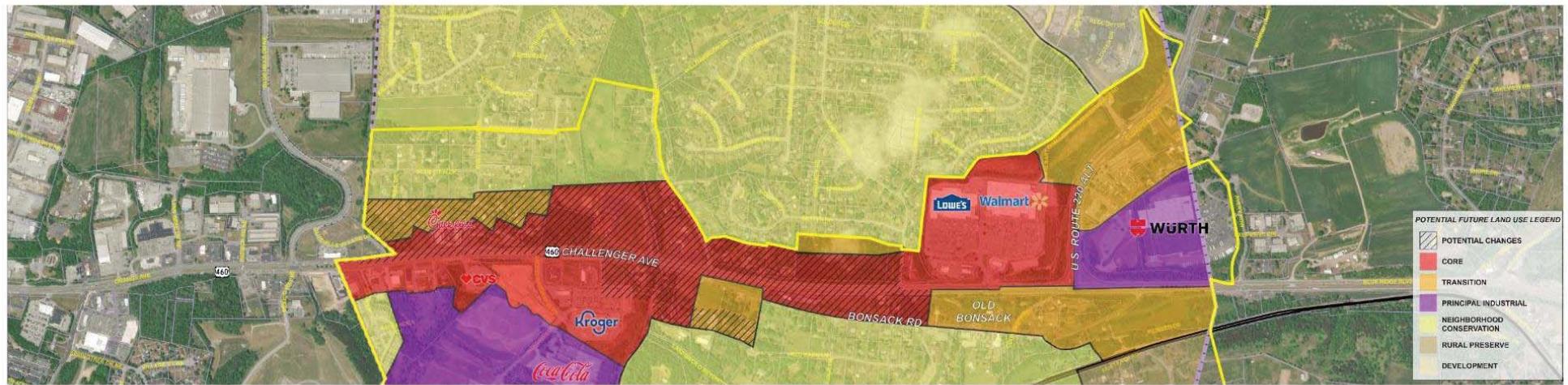
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TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.

CURRENT FUTURE LAND USE



POTENTIAL FUTURE LAND USE



U.S. ROUTE 460 LAND USE AND CONNECTIVITY STUDY
POTENTIAL FUTURE LAND USE
ROANOKE COUNTY, VA - MAY 2022



98 Meeting Attendees

140 Survey Responses



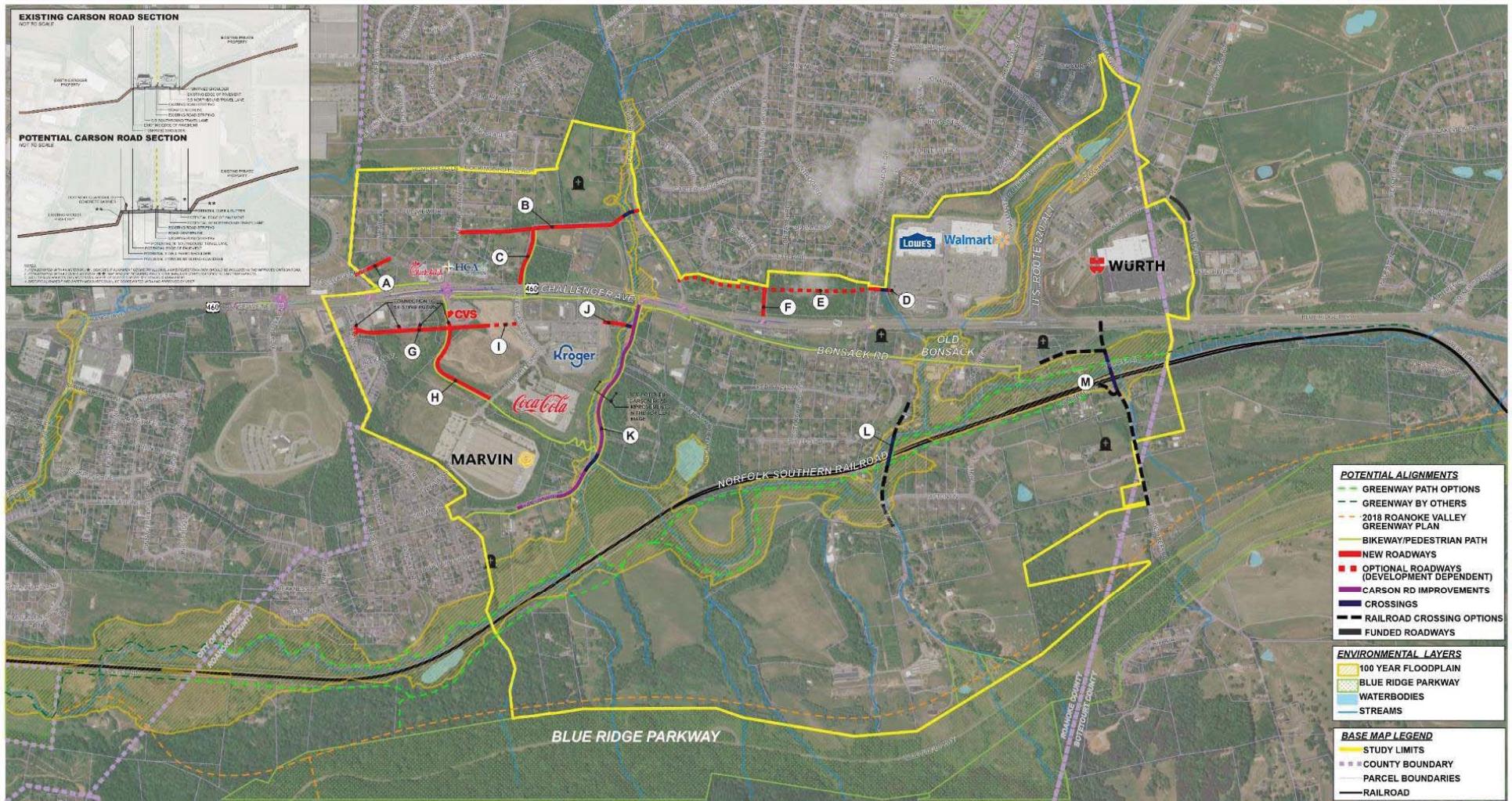
**U.S. ROUTE 460 LAND USE AND CONNECTIVITY STUDY
POTENTIAL TRANSPORTATION IMPROVEMENTS**

ROANOKE COUNTY, VA - MAY 2022

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 TIMMONS GROUP



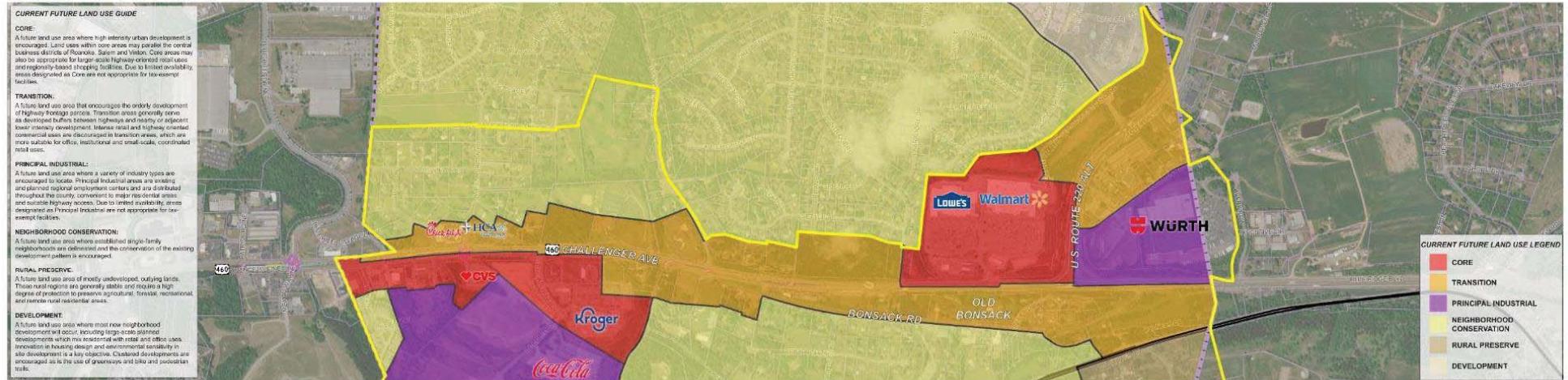


U.S. ROUTE 460 LAND USE AND CONNECTIVITY STUDY POTENTIAL TRANSPORTATION IMPROVEMENTS

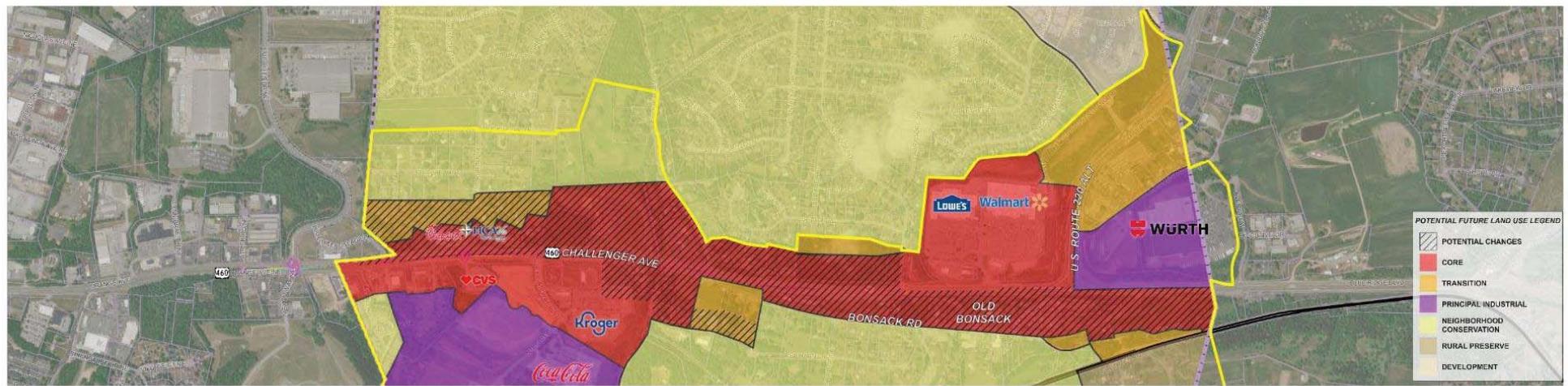
ROANOKE COUNTY, VA - SEPTEMBER 2022



CURRENT FUTURE LAND USE

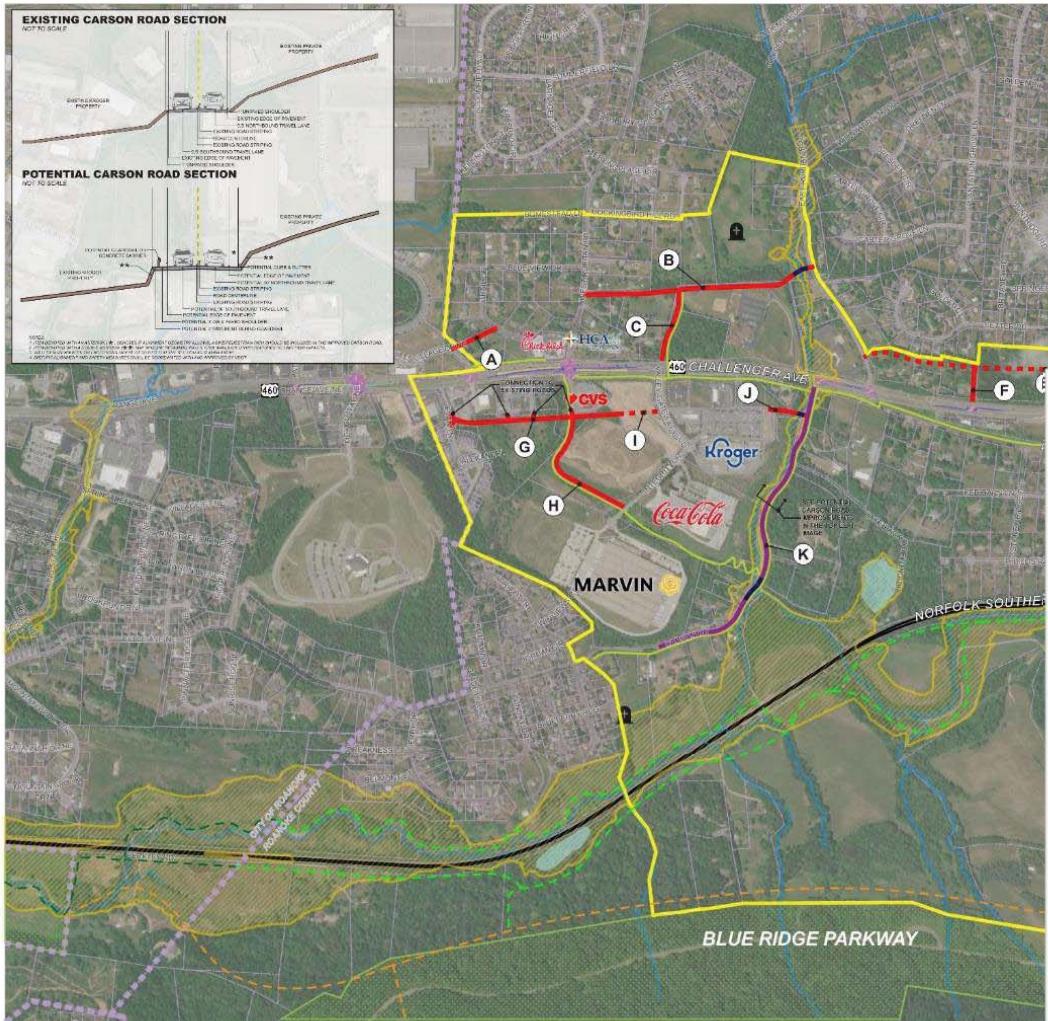
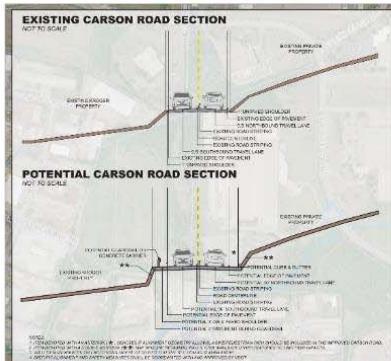


POTENTIAL FUTURE LAND USE



U.S. ROUTE 460 LAND USE AND CONNECTIVITY STUDY
POTENTIAL FUTURE LAND USE
 ROANOKE COUNTY, VA - SEPTEMBER 2022





**U.S. ROUTE 460 LAND USE AND CONNECTIVITY STUDY
POTENTIAL TRANSPORTATION IMPROVEMENTS**
ROANOKE COUNTY, VA - SEPTEMBER 2022

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TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.

September Survey Results Summary Overview

- 35 September Responses (far fewer than 140 responses in May and 220 responses in January)
- Open between September 21st and October 10th (about 2 ½ weeks)
- Survey requested opinions about proposed road segments, greenways, shared use paths and Future Land Use changes

September Survey Results Summary Road Segments

Highest Agree and Somewhat Agree Scores by Opportunity:

- C: 85% (17 responses)
- B: 84% (16 responses)
- J: 74% (14 responses)



September Survey Results Summary

Road Segments

Highest Disagree and Somewhat Disagree Scores by Opportunity:

- F: 42% (8 responses)
- E: 40% (8 responses)
- D: 33% (7 responses)
- A: 33% (7 responses)

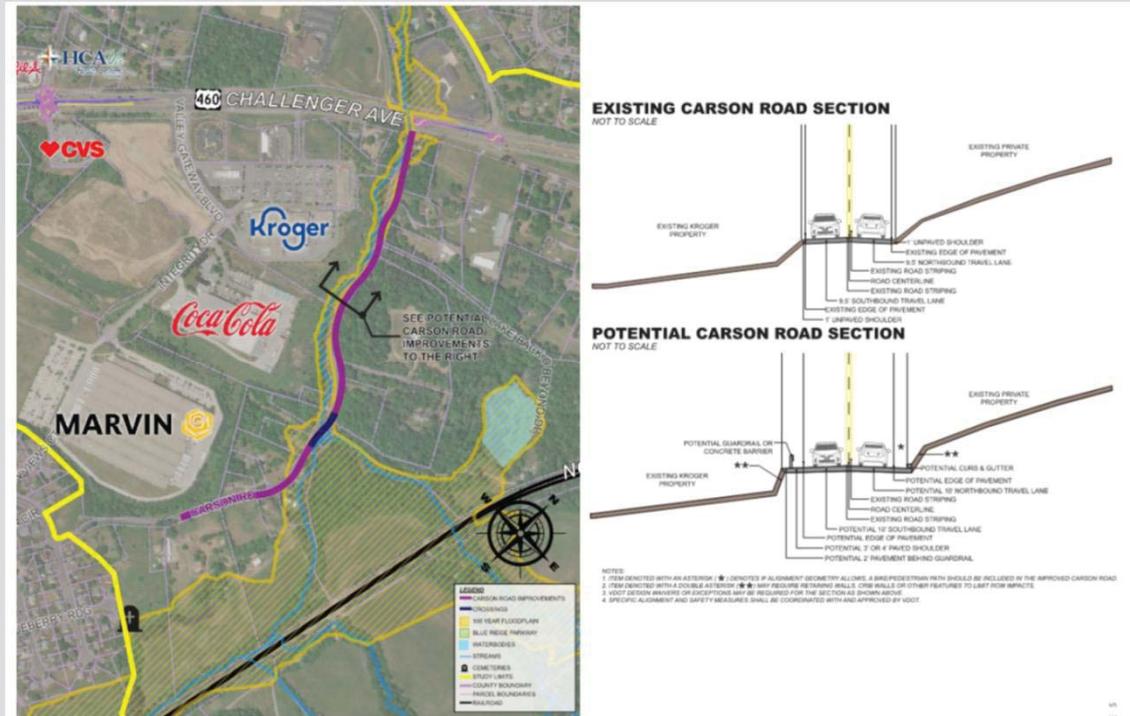


September Survey Results Summary Road Segments

Agree/Somewhat Agree:
88% (22 respondents)

No Opinion:
4% (1 respondent)

Disagree/Somewhat Disagree:
8% (2 respondents)



September Survey Results Summary Greenways and Shared Use Paths

Greenways (green)

Agree/Somewhat Agree:

82% (18 respondents)

No Opinion:

5% (1 respondent)

Disagree/Somewhat Disagree:

14% (3 respondents)



Shared Use Paths (magenta)

Agree/Somewhat Agree:

57% (12 respondents)

No Opinion:

10% (2 respondent)

Disagree/Somewhat Disagree:

33% (7 respondents)

September Survey Results Summary Future Land Use Changes

Area 1

Agree/Somewhat Agree: 50% (10 respondents)

No Opinion: 30% (6 respondents)

Disagree/Somewhat Disagree: 20% (4 respondents)

Area 2

Agree/Somewhat Agree: 63% (12 respondents)

No Opinion: 16% (3 respondents)

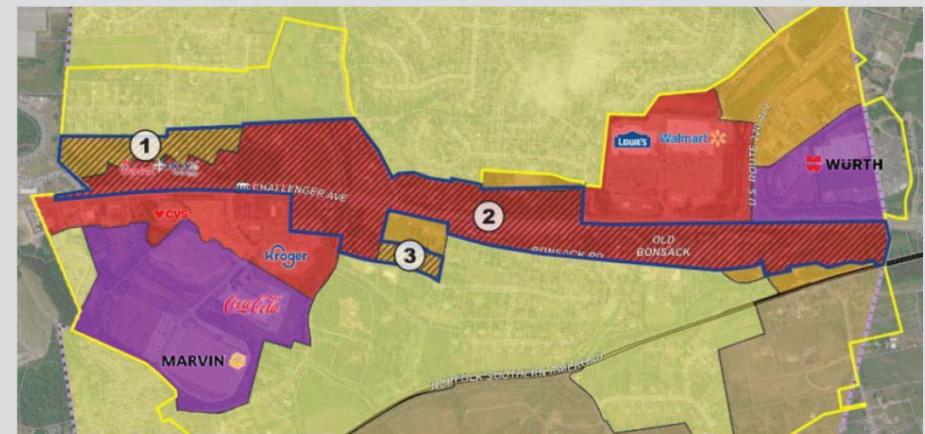
Disagree/Somewhat Disagree: 21% (4 respondents)

Area 3

Agree/Somewhat Agree: 47% (8 respondents)

No Opinion: 29% (5 respondents)

Disagree/Somewhat Disagree: 24% (4 respondents)



Fall/Winter Activities

- **October 19, 2022:** Planning Commission and Economic Development Authority held a joint meeting to review and discuss progress on the study
- **November 9, 2022:** Board of Supervisors reviewed progress on the study at a work session
- **December through February:** Staff reviewed and commented on draft Study
- **Mid-February 2023:**
 - Draft Study and comment form posted to the project webpage;
 - Over 2,600 postcards mailed to owners, tenants and renters in the study area; and
 - Email sent out to those subscribed to project updates about the availability of the draft Study and March public hearings.

Next Steps: The Roanoke County Planning Commission will hold a public hearing and will make a recommendation to the Board of Supervisors. The Board of Supervisors will then hold a public hearing and consider adopting the Route 460 Land Use and Connectivity Study as a component of the Roanoke County Comprehensive Plan. You may attend and speak at the public hearings:



Contact Us:
Megan Cronise, Assistant Director of Planning, (540) 772-2106, mcronise@RoanokeCountyVA.gov



**Route 460 (Challenger Avenue)
Land Use and Connectivity Study
Comment Period and Public Hearings**

Study Update: The draft Route 460 Land Use and Connectivity Study is now available for your review and comment. The draft Study relies heavily on 2022 public engagement efforts and includes:

- Recommended concepts to improve travel around the Bonsack area without using Route 460/Challenger Avenue;
- Proposed future land use changes along Route 460/Challenger Avenue; and
- Potential safety improvements for two existing railroad crossings.

Review and Comment:
Visit www.RoanokeCountyVA.gov/460Study to review the draft Study and comment via an online survey or drop-off comment by March 17, 2023.



Draft U.S. Route 460 Land Use and Connectivity Study Outline

- Introduction
- Project Overview
- Corridor Issues
- Current Conditions
- VDOT Improvements Underway
- Transportation Improvement Tools
- Community Engagement
- Transportation Improvement Options
- Future Land Use Analysis
- Railroad Crossings
- Recommended Priority of Improvement Options
- Appendices
 - A. Roanoke County Map
 - B. Study Area Map
 - C. Railroad Crossing Study
 - D. Public Engagement Results – Survey One
 - E. Public Engagement Results – Survey Two
 - F. Public Engagement Results – Survey Three

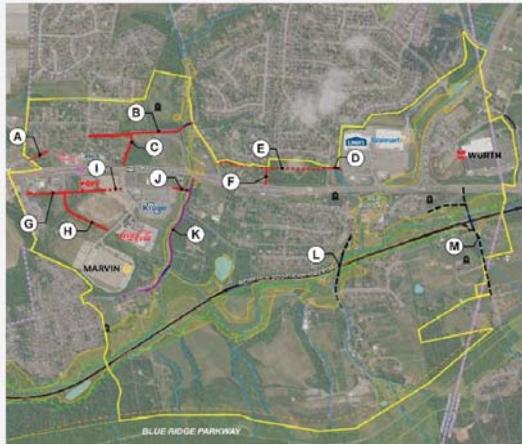


Draft U.S. Route 460 Land Use and Connectivity Study

XI. Recommended Priority of Improvement Options

Each of the potential improvement projects described in this report have different capacity to improve the quality of life in the Bonsack community. Each has the potential to improve safety and convenience, but each comes with different costs to implement. Recognizing the need to identify opportunities in a context that can be evaluated for prioritization by Roanoke County, the matrix to the right identifies some of the cost and benefit expectations of each of the improvements noted in this report.

Note, the cost, safety, and congestion/convenience scales are relative to one another, and do not reflect real dollars or expected level of service improvements, respectively.



Opportunity	Improvement	Description	Safety Impact	Congestion/Convenience Impact	Mitigate New Development	Pedestrian/Bicycle Accommodations	Level of Public Interest	Cost	Recommended Priority
Carson Road	K	Carson Road Safety Improvements	High	High	No	Yes, Where Feasible	High	High	High
Access to East of Railroad	L	Layman Road Grade-Separated Railroad Crossing and Roadway Realignment	High	High	Yes	Yes, Where Feasible	Medium	High	High
Access to East of Railroad	M	Glade Creek Road Grade-Separated Railroad Crossing and Connection to Route 460	High	High	Yes	Yes, Where Feasible	Medium	High	High
Greenway	N	Glade Creek Greenway Extension Generally along Glade Creek	High for Pedestrians and Bicyclists	Medium	No	N/A	High	High	High
Blue Hills to East Ruritan	A	Trail Drive to Blue Hills Village Drive connection	Medium	High	Yes	Yes, Where Feasible	Medium	Medium	High
Blue Hills to East Ruritan	B	West Ruritan Road to East Ruritan Road connection	Medium	High	Yes	Yes, Where Feasible	Medium	High	Medium
Valley Gateway	G	Evan Lane to CVS Private Driveway	Medium	High	Yes	Yes, Where Feasible	High	High	Medium
East Ruritan to Walmart	E	East Ruritan Road to Huntridge Drive (Optional)	Medium	High	Yes	Yes, Where Feasible	Low	High	Medium
Valley Gateway	H	Route 460/Trail Drive Intersection to Integrity Drive	Medium	High	Yes	Yes, Where Feasible	High	High	Medium
Valley Gateway	I	CVS Private Driveway to Valley Gateway Boulevard (Optional)	Medium	High	Yes	Yes, Where Feasible	Medium	Medium	Medium
Blue Hills to East Ruritan	C	Route 460/Valley Gateway Intersection to "B"	Medium	Medium	Yes	Yes, Where Feasible	High	Medium	Medium
East Ruritan to Walmart	F	Country Corner crossover to "E"	Medium	Medium	Yes	Yes, Where Feasible	Low	Medium	Medium
East Ruritan to Walmart	D	Huntridge Road to Lowe's/Walmart Parking Lot	Low	High	No	Yes, Where Feasible	Medium	High	Low
Valley Gateway	J	Kroger Parking Lot to Carson Road	Low	Medium	No	Yes, Where Feasible	High	High	Low

Draft U.S. Route 460 Land Use and Connectivity Study

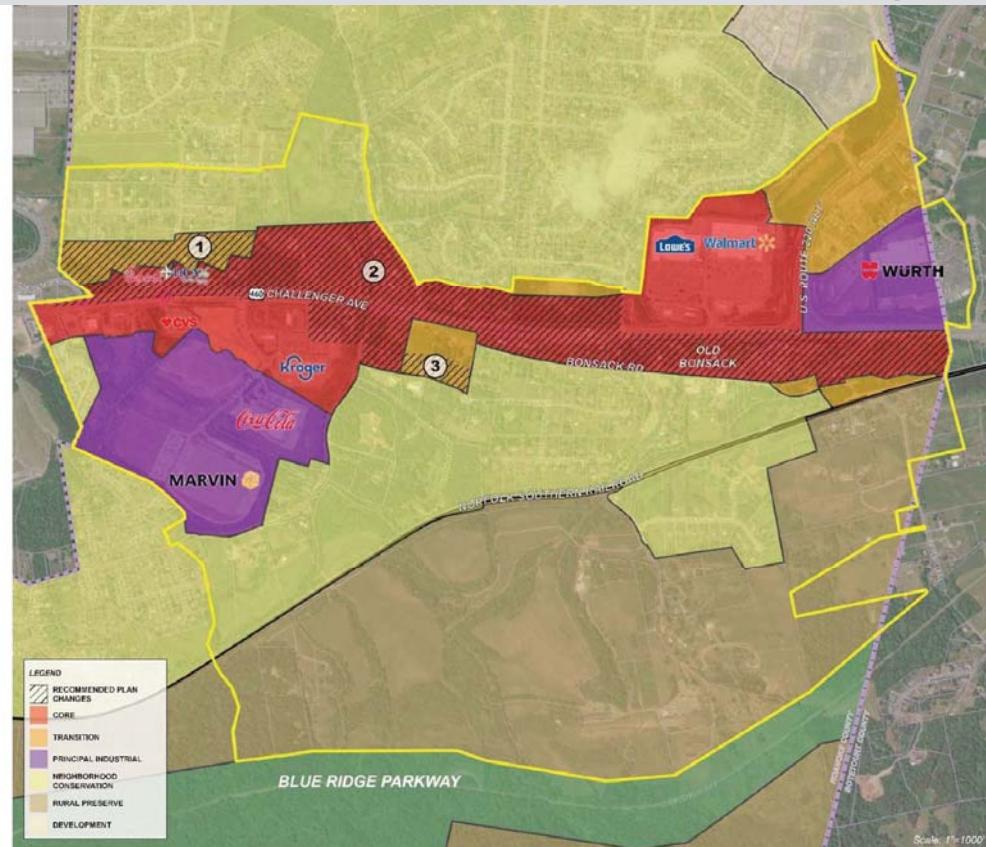
Future Land Use Map

The recommended opportunities for the County to update its Future Land Use Map are shown at the right with hatching to identify the extent of those changes.

Area 1: In the western portion of the corridor, an expansion of the Transition area to the parcels behind the Route 460 commercial Core properties is recommended. This will allow for transition uses that extend the commercial and higher density residential without disruption to the neighborhoods to the west and north of the area.

Area 2: With large parcels and frontage along the Route 460 right-of-way, this highly visible area is envisioned as an appropriate location for Core uses. This use type can take advantage of VDOT planned improvements and the improvements recommended in this study to expand the retail and commercial opportunities for the Bonsack community.

Area 3: Adjacent to an existing Transition Area, an expansion of the Transition area is recommended. This will create a buffer between the existing neighborhoods and any future commercial uses.



March 2023 Engagement and Actions

March 7, 2023: Planning Commission Public Hearing held and six speakers relayed the following comments:

Proposed Study Projects

- Concern about the alignment of proposed roadways **B and C**
- Concern about the alignment of the proposed **greenway**
- Concern about **Carson Road** safety issues, not wanting speeding to worsen, no room for bicycle accommodations
- Concerns over the **railroad study** recommendations and locations of possible improvements

VDOT Projects Underway

- Concerns about VDOT projects that will restrict turning movements
- Request that Route 460 be widened to six lanes instead of intersection projects

Other Comments

- Concerns about the use of eminent domain

March 2023 Engagement and Actions

March 17, 2023: 29-day public comment period closed and ten respondents commented through the survey, by email and by phone:

Proposed Study Projects

- Support for connecting residences to jobs and retail to minimize traffic on major highways
- Support a **greenway** along Glade Creek with connections for area residents to access it without cars
- Support **bicycle or pedestrian paths** in magenta and safe crossings of Route 460
- Concern about connection **A** sending more traffic to the Blue Hills Drive intersection
- Disagree with West Ruritan to East Ruritan connection **B** as it will make East Ruritan intersection at Route 460 more dangerous
- Disagree with connection **C** adding more traffic to the Valley Gateway intersection
- Disagree with the railroad crossing projects **L and M** ranking high
- Questions about residential impacts as a result of the potential Layman Road railroad crossing **L**
- Concern that the connecting roadways will not reduce traffic on Route 460 and will instead hinder development and redevelopment activities

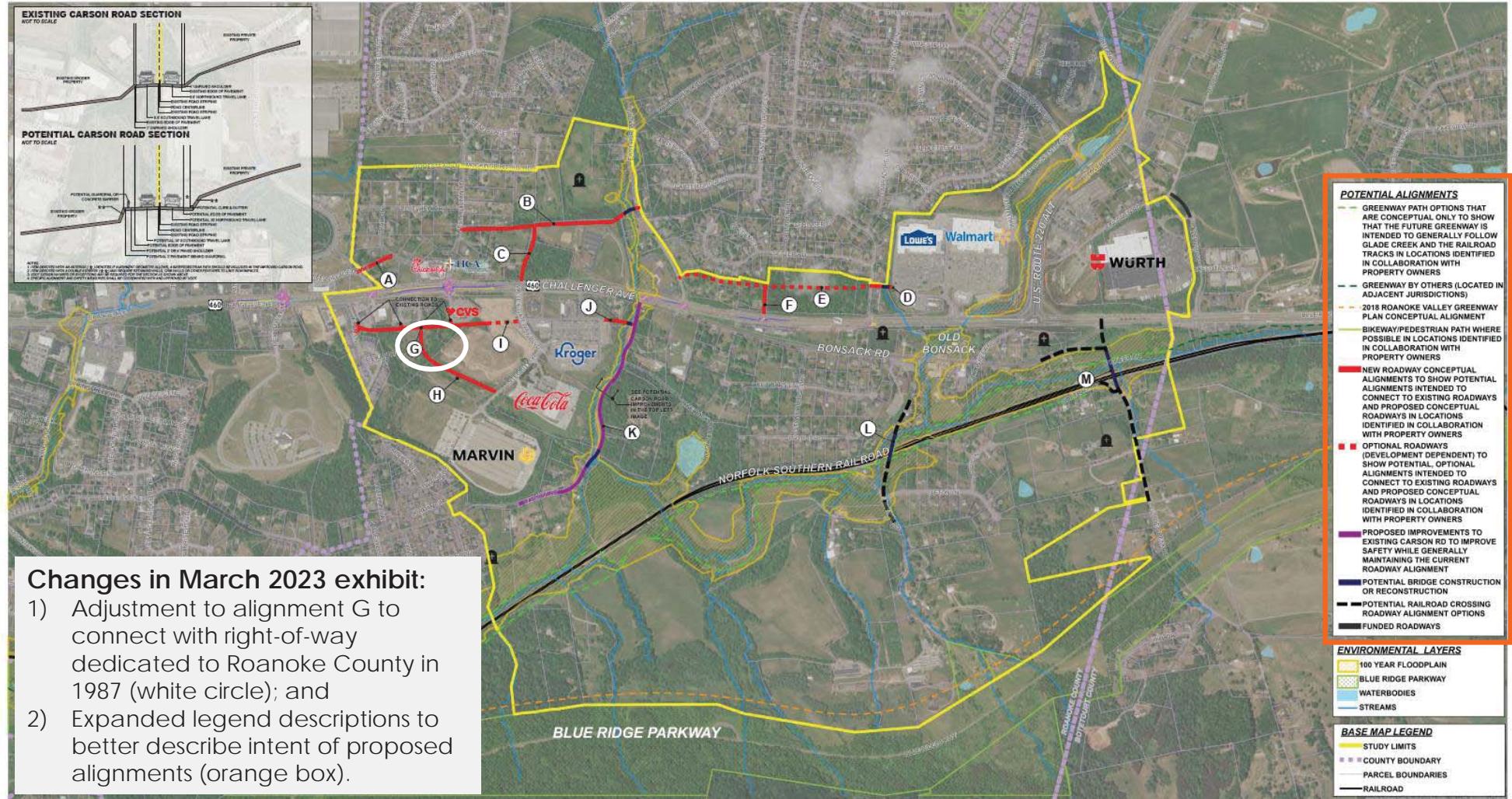
March 2023 Engagement and Actions

VDOT Projects Underway

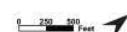
- Concern about the West Ruritan project resulting in more U-Turns at the Valley Gateway intersection
- Concern about West Ruritan intersection and disagree with pedestrian accommodations
- Route 460 pedestrian crossings are needed but concern about VDOT project at West Ruritan that incorporates pedestrian accommodations
- Concern about Country Corner crossover
- Concern about Bonsack Road (west) proposed changes (two respondents)
- Concern about Bonsack Road (west) intersection changes encouraging residents to use the Bonsack Road (east) intersection which is dangerous

Other Comments

- Concern about crashes at West Ruritan and Valley Gateway intersections
- Concern about speeding and crime on Route 460



**U.S. ROUTE 460 LAND USE AND CONNECTIVITY STUDY
POTENTIAL TRANSPORTATION IMPROVEMENTS**
ROANOKE COUNTY, VA - MARCH 2023



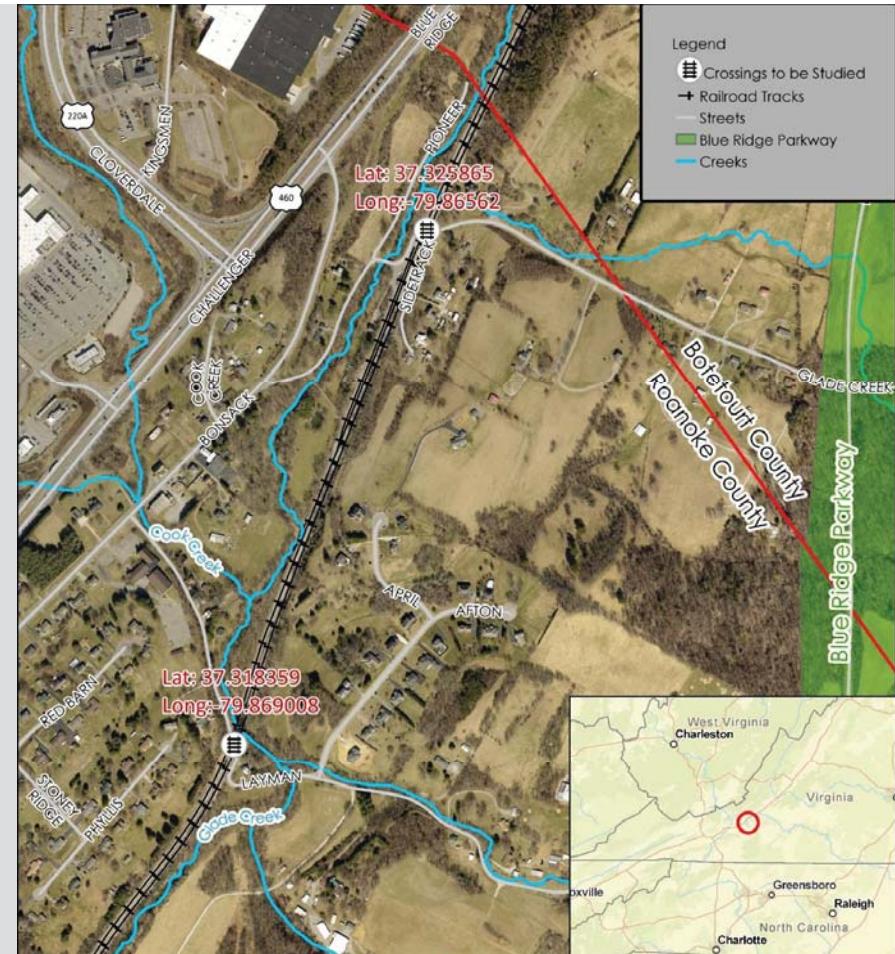
Implementation: Railroad Crossing Elimination Grant

Building off of the railroad crossing analysis performed as part of this study, Planning staff submitted a request for funding to conduct a Planning Study through the Federal Railroad Administration's Railroad Crossing Elimination Grant Program.

The area of focus includes the following at-grade railroad crossings:

- Layman Road
- Glade Creek Road

Awards are anticipated anytime.



Railroad Crossing Elimination Program:
Location Map

Virginia's 6th Congressional District
September 2022

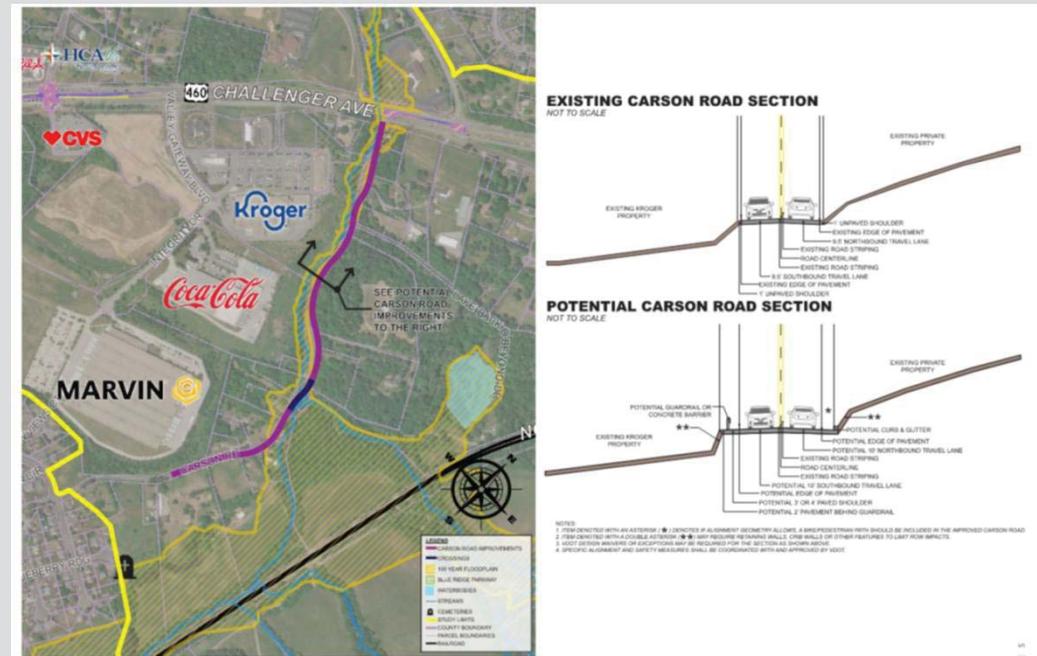
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Implementation: Carson Road Safety Improvements

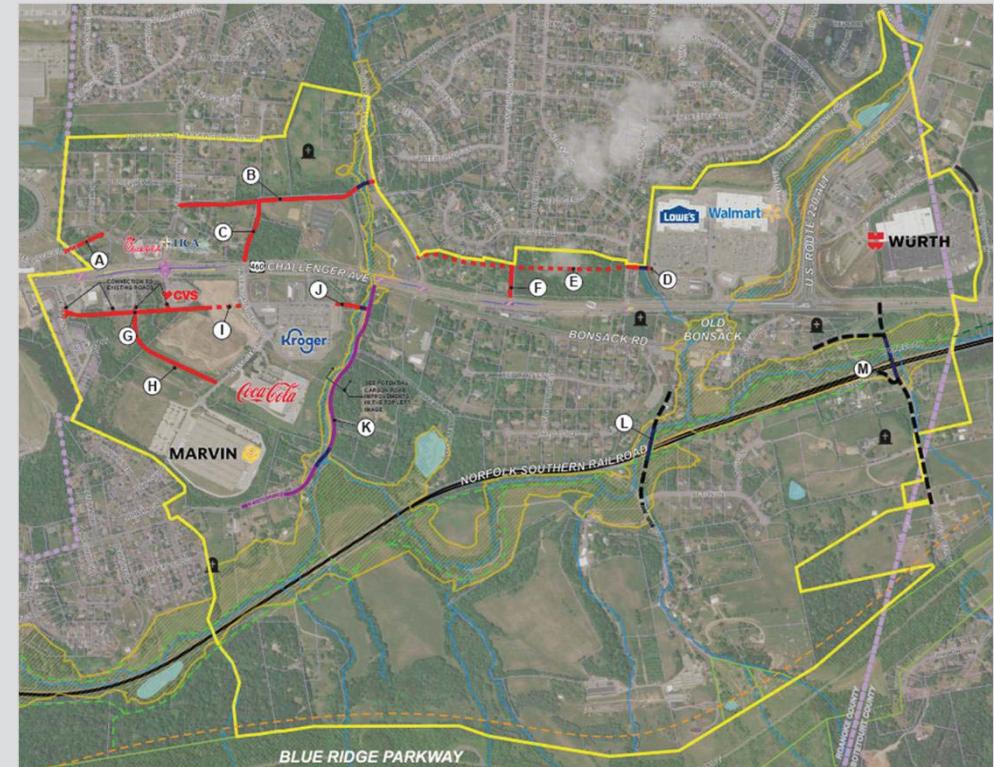
Due to overwhelming community feedback about the need for Carson Road improvements, Roanoke County is beginning survey activities and will initiate preliminary design activities for a SMART SCALE Round 6 application which could include:

- Glade Creek bridge widening/replacement;
- Sight distance improvements;
- Shoulder improvements;
- Feasibility of bicycle and/or pedestrian improvements; and
- Feasibility of a connection to the Kroger parking lot.



Implementation: Roadway Connections

Staff have used the proposed roadway improvements exhibit in several discussions with prospective developers over the past several months. The exhibit and the corresponding table are valuable tools.



Questions

U.S. ROUTE 460 LAND USE AND CONNECTIVITY STUDY

ROANOKE COUNTY, VA



U.S. Route 460 Land Use and Connectivity Study

Roanoke County, Virginia

February 2023

Prepared for:



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Prepared by:



U.S. ROUTE 460 LAND USE AND CONNECTIVITY STUDY



table of contents

I. Introduction	4
II. Project Overview	5
III. Corridor Issues	11
IV. Current Conditions	16
V. VDOT Improvements Underway	25
VI. Transportation Improvement Tools	32
VII. Community Engagement	35
VIII. Transportation Improvement Options	39
IX. Future Land Use Analysis	51
X. Railroad Crossings	54
XI. Recommended Priority of Improvement Options	57
XII. Appendices	58

I. Introduction

The U.S. Route 460 Land Use and Connectivity Study (Study) has been prepared for the County of Roanoke (County) to identify opportunities for mitigating the impacts of development and reducing high volumes of traffic in the Challenger Avenue Corridor. Efforts to mitigate safety challenges and increase convenience and quality of life are among the goals of the Study.

Timmons Group met with the County and other stakeholders, including surrounding governmental jurisdictions, Virginia Department of Transportation (VDOT), agencies, residents, and businesses in the Bonsack area, to understand the challenges the area faces.

Timmons Group identified potential transportation improvements based on feedback from these stakeholders and shared this information in several public meetings, where feedback was received and incorporated into the Study.

Three surveys were employed during this Study. The first survey sought to better understand the challenges and priorities of the community. The second survey accompanied the first draft of opportunities identified for potential traffic and future land use improvements, asking whether the opportunities were seen as a positive or negative impact on the Bonsack area. The third survey was a final check-in on the community after additional changes were made, to respond to clear direction given from the residents as to preferences of improvements to consider.

This report outlines the recommended opportunities for Roanoke County to consider in its Future Land Use Plan update, as well as transportation improvements, so that planning, funding, and other important steps can be taken to enable this.



II. Project Overview

Purpose of Study

Roanoke County desires to position itself for future economic growth. Safety, access, and availability of utilities and other infrastructure is imperative to that goal. The U.S. Route 460 (Route 460) corridor between the City of Roanoke and Botetourt County (also referred to in this report as the Challenger Avenue Corridor) is identified as one of the primary locations for future commercial development and redevelopment, along with infill opportunities.

Roanoke County's Route 460 Land Use and Connectivity Study focuses on recommending alternate ways to travel around the Bonsack community, consideration of whether existing zoning and future land use designations match the desired development of the area, and an examination of whether the two at-grade railroad crossings can and should be improved to create development opportunities between the railroad and the Blue Ridge Parkway.

This study identifies improvement opportunities in both traffic and land use for the Challenger Avenue Corridor. Traffic issues, including heavy daily traffic backups that lead to safety concerns, are central to addressing if the corridor is to successfully grow. Similarly, the correct decisions in land use for the properties that are yet to be developed or redeveloped, is critical to preserving the character of the area which so many residents and landowners currently enjoy.

This Study will guide Roanoke County in its future decisions and actions over the next 5 to 15 years in the Challenger Avenue Corridor and can be reviewed in the next two pages.

Limits of Study

The limits of this study include the Challenger Avenue Corridor from the City of Roanoke to Botetourt County and includes properties proximate to Route 460 most impacted by land use and transportation issues. The Study Area also includes lands east of the Norfolk Southern Railroad Tracks to the Blue Ridge Parkway.



Study Purpose

I. Recommend ways to travel around the Bonsack community that are alternatives to Route 460/Challenger Avenue

One characteristic of the Challenger Avenue Corridor impacts Bonsack traffic more than any other, and that is the presence of a single major arterial road serving high volumes of local and regional motorists. Central to this study is determining viable recommendations for potential ways to travel through the area using alternatives to Route 460, which can include existing and potential proposed routes.



2. Consider existing zoning classifications and future land use designations to determine potential changes to match desired development types

The area surrounding the Challenger Avenue Corridor is poised for commercial growth and economic development opportunities for Roanoke County. This Study examines, in combination with alternate routes of travel around the Bonsack community, whether the existing future land use types, and newly created areas of development, along the corridor meet the future land use goals and desires of Roanoke County and its residents.



Study Purpose

3. Examine existing at-grade railroad crossings for potential improvements that may create development opportunities between the railroad and the Blue Ridge Parkway

Because of the abundance of large parcel acreage to the east of the Norfolk Southern rail line, this Study evaluates the opportunities for economic development and expansion of land use options to that area. Expansion in that area will depend on safe access and other appropriate infrastructure to support such activities. As such, the Layman Road railroad crossing and Glade Creek Road railroad crossing were studied to evaluate what improvements could be made to either crossing to access the land east of the railroad.

4. Examine the potential for a greenway along Glade Creek as an expansion of the Roanoke Valley Greenway Plans

Following the first public response of this Study, many respondents expressed overwhelming support for the construction of a greenway along Glade Creek. Due to the public response, this Study seeks to determine opportunities for the Bonsack community to enhance and develop outdoor recreation opportunities in the form of greenways and trails. Greenways are envisioned as part of three Roanoke Valley Greenway Plans conducted since 1995. Inclusion of this corridor in advancing that vision and determining the viability of a greenway along Glade Creek is an important component of this Study. This Study also seeks to find ways to improve pedestrian and bicycle accommodations within the Bonsack community to reduce the auto dependence for all activities in the area.



Project Timeline

The process of this study was a combination of consultant and County evaluations as well as engagement with the public, particularly those stakeholders who live, work, or commute in the area. Consultant meetings also included coordination with outside agencies, including VDOT, Roanoke City, Botetourt County, and the Roanoke Valley Alleghany Regional Commission.



Public Engagement

Meetings with Public

Public engagement and feedback is critical for the successful implementation of the Plan. Many points of interaction were planned and executed in the Study to help guide the final recommendations. In all, three in-person community engagement sessions were held, along with companion surveys for each session to allow the public a variety of options to participate.

These meetings proved to be valuable to the final report. Many comments were based on issues of traffic congestion, existing road conditions, and safety concerns. In addition, issues were discussed with the public, including property rights, expectations of how the report would be used, and whether there were future processes that would take place where public input could be gathered.

Over the three meetings, 249 citizens attended in person and 399 more responded to surveys. These sessions are detailed in Section VII of this report and the surveys are included in the appendix.

The public engagement sessions were followed by staff and consultant meetings with the County Planning Commission (in a joint work session with the Economic Development Authority) and the Board of Supervisors. Each of these meetings is further detailed in Section VII of this report.



Public Engagement

Surveys of the Public

Three surveys were employed during this plan process. They are included, along with responses, in Appendix E and are further described below.

► Survey 1 – General Information & Opinion Request

This survey requested feedback from the public on their concerns and hopes for the future of the Challenger Avenue Corridor.

► Survey 2 – Feedback and Concerns Survey of Draft Improvements Recommendations

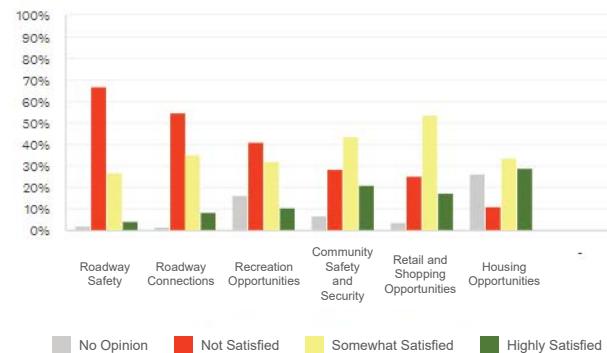
This survey asked for specific feedback on the various improvements offered by the consultants in both transportation and future land use.

► Survey 3 – Feedback on Final Draft

This brief survey sought additional feedback given the changes between public meetings prior to sharing the draft report with the Planning Commission, Economic Development Authority, and Board of Supervisors.

What is your current level of satisfaction of the following in the Study Area?

Answered: 220 Skipped: 0



Roanoke County Survey for the U.S. Route 460 Land Use and Connectivity Study Results

Please indicate your level of support for greenways and paths in the Study Area.



Roanoke 460 Land Use and Connectivity Study Feedback on Greenway Opportunities

III. Corridor Issues

This Study was produced to plan for the future of the Challenger Avenue Corridor, specifically as it relates to traffic issues existing and likely to increase in the future. Significant daily rush-hours in the corridor contribute to challenges to the quality of life and potential economic growth. Some of the problems encountered in the corridor are included below.

Route 460 Mainline Congestion – Heavy commuter traffic during rush hour between the City of Roanoke, Roanoke County, Botetourt County, and Bedford County produces the most common traffic concern, which is backups on Route 460.

Lack of Alternate Routes – The Challenger Avenue Corridor provides only one direct route from the City of Roanoke to points east. Alternative routes, where available, generally carry traffic through residential neighborhoods, creating safety concerns in those communities.

Recent Commercial Development – Several recent commercial developments along the corridor have increased congestion and intersection delays, which lead to commuter tendency to run red lights during signal changes. This safety concern will only increase as the commercial development along Route 460 increases.



Corridor Issues

Route 460 Capacity

Route 460 serves as the only primary arterial to points east and north of Roanoke, aside from Interstate 81 and Route 11 several miles to the north. Virtually all traffic in Roanoke riding east, including non-local commuters traveling to places like Lynchburg, Richmond, and the Atlantic coast, use one of these two routes.

Challenger Avenue is four lanes wide, with two lanes in each direction, along with associated turn lanes at several intersections through the Corridor.

There are four major signalized intersections that serve the corridor, including Alternate Route 220, West Ruritan Road, Valley Gateway Boulevard, and Walmart/ Lowes Shopping Center (Walmart). These are the most controlled points through the corridor. There are an additional 23 access points, both public roads and private entrances, along Route 460 that are less controlled and add to congestion and safety in the area.



Congestion on Route 460 at West Ruritan Intersection



Travelers on Route 460 in the City of Roanoke

Corridor Issues

Route 460 Access

One of the primary constraints along the corridor for businesses and residents are the limited access points. Due to the high volume and speed along the corridor and the lack of available alternative routes, VDOT classifies this roadway as a principal arterial. On principal arterials, minimizing access points for safety and through traffic progression is desirable. This is because any crashes or congestion impact proportionally larger numbers of roadway users when compared to less important highways.

VDOT's access management standards provide minimum spacing of various types of intersections to help preserve these characteristics, becoming more restrictive as roadway volumes and speeds increase. An excerpt of VDOT's standards is available in the table below.

Functional Classification	Design Speed	Minimum Distance (ft) Between Intersections			
		Signalized	Four Leg	Tee/ Directional Four Leg	Right-In Right-Out
Principal Arterial	35 to 45 mph	1,320	1,050	565	305
Collector	35 to 45 mph	660	440	335	250
See VDOT Road Design Manual, Appendix F, Table 2-2 for additional functional classifications and speeds					

Many intersections along the corridor were established prior to these standards and violate minimum spacing requirements. As such, VDOT's study recommends restricting certain turning movements for safety reasons and optimizing signals and their geometry to reduce delay along the corridor. Route 460 is also one of VDOT's Corridors of Statewide Significance and is part of its Arterial Preservation Program, which further restricts access. As a result, adding new signals to provide access for developments is more difficult.

Access management requirements also greatly restrict access to properties along roads connecting to Route 460, many of which are collectors with speed limits of 35 miles per hour (mph). This limits the ability to create accesses to parcels or parallel routes off of side streets.



Existing Retail Access Along Route 460



Topographic Challenges to New Access Points

Corridor Issues

Carson Road

During the study, Carson Road emerged as a significant component of the Challenger Avenue Corridor network. It serves as a primary relief valve for daily backup traffic and is a cut-through for many commuters, including (through public communications) students that travel to William Byrd High School.

Carson Road has many challenges that make it a priority for improvement consideration. It is two lanes of inconsistent alignment and width, and has a one-lane bridge where Glade Creek crosses the road. It is tightly fit between a tributary stream and rock-faced slopes, leaving little potential for major improvements.

Carson Road also is the focus of many concerns expressed in the public engagement sessions, primarily relating to safety concerns and worry about the extent of potential improvements by those who own property along it or in the vicinity.

While Carson Road will likely serve as a continued relief-valve road for peak hour traffic in the future, care should be taken in balancing improvements that help the current safety challenges without disrupting the nature of the current Carson Road and the neighborhoods that it serves.



Corridor Issues

West Ruritan Road Intersection

West Ruritan Road at its intersection with Route 460 has seen significant change in recent years with the arrival of a new Chick-fil-A restaurant on the northwest corner of the intersection. The successful chain, opened in 2015, has created backups and neighborhood challenges to those who use West Ruritan Road as the primary access.

Furthering the congestion is the recent opening of the Lewis Gale Blue Hills Emergency Room across the street from Chick-fil-A. These two commercial uses are generating steady traffic on West Ruritan Road.

VDOT has proposed and is scheduled to improve the intersection by converting it to a thru-cut. A thru-cut is an intersection design where side street through movements are prohibited. A thru-cut will reduce the number of points where vehicles cross paths, and it will eliminate the side street through movement, allowing for fewer and shorter traffic signal phases, which reduces delay and increases capacity. Fewer traffic signal phases means less time stopped at the intersection. Offset left turn lanes will also be included for improved sight distance, along with pedestrian facilities through the median. As the majority of movements on the side streets are left and right turns, this will not significantly impact the way that drivers currently use the intersection, except for trips between the residential uses to the north and the CVS which will require vehicles to U-turn at the next downstream intersection.

While this intersection brings economic benefit through its commercial activity, traffic challenges will continue in the future. Improvements made elsewhere in the corridor will be aimed at helping relieve visitors to this area without further disrupting neighborhoods.



IV. Current Conditions

In evaluating the best future for the Challenger Avenue Corridor, it is important to begin with the conditions that exist today. There are several factors that are considered in determining land use and transportation options. The primary factors include more than just road networks and geographic features. They also include the land uses that the existing infrastructure is serving. The following pages identify current conditions that are relevant to determining the best improvement strategies for the future of the corridor.



Existing Neighborhoods Near Route 460

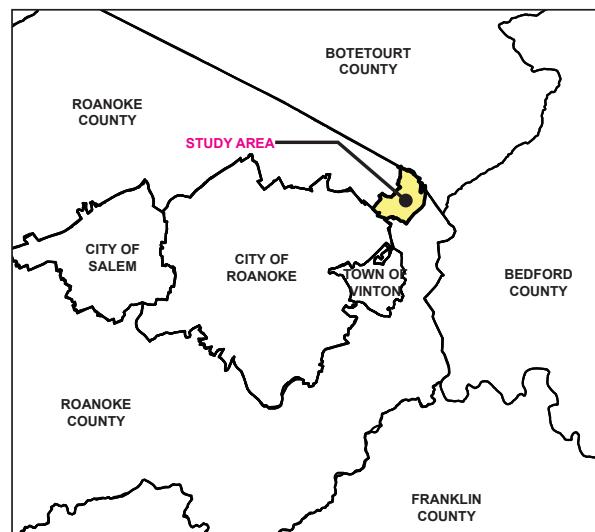


Existing Residential and Commercial Near Route 460

Current Conditions

Jurisdictional Boundaries

The study area is located at the northeastern edge of Roanoke County between the City of Roanoke and the County of Botetourt. It is a narrow but significant segment of Roanoke County, given the lack of regional roads other than Route 460.



Jurisdictional Boundaries Map



Current Conditions

Challenger Avenue Corridor

The existing Route 460 corridor is a 45 mph urban major arterial throughout most of the study area until after U.S. Route 220 Alternate(Alt.), which provides a connection to I-81. Traffic volumes are approximately 34,000 vehicles per day. Land uses along the corridor are a mix of low density residential, commercial, industrial, and institutional uses (churches and cemeteries). There are also undeveloped, forested parcels to the west of the road and a mix of forested parcels and graded pads present to the east, along with agricultural uses further east across the railroad.

The existing roadway section is a four lane divided highway with wide outside paved shoulder for most of its length and intermittent left and right turn lanes. Regional drainage patterns run west to east from a ridge to Glade Creek, which roughly parallels Route 460. Drainage along the roadway is primarily conveyed by ditches or sheet flow, with a number of crossing culverts with mapped floodplains crossing under the road. No pedestrian or bicycle facilities are present along the road.

Intermittent median openings are present in Roanoke County at Blue Hills Village Drive, Carson Road, East Ruritan Road, Country Corner Store, Huntridge Road, and Bonsack Road. Signals are present at West Ruritan Road, Valley Gateway Boulevard, the entrance to the Walmart and Lowe's shopping center, and at Route 220 Alt. Improvements are funded for several of these intersections, as discussed later in this document.



Current Conditions

Railroad

Norfolk Southern railroad has a strong history in the Roanoke Region, and its impact on the Bonsack community is significant.

The railroad serves as a primary coal carrying route from states to the west through Roanoke to Norfolk. Amtrak also uses the railroad track to access the Roanoke station.

It divides land in the Bonsack area between the residential areas and the agricultural lands adjacent to the Blue Ridge Parkway. The tracks generally sit in the lower elevations that follow the Glade Creek watershed through the County.

There are two at-grade railroad crossings in Bonsack impacted by the Norfolk Southern line. Those lines include the Layman Road crossing and the Glade Creek Road crossing. Both are further identified and studied in this report.



Current Conditions

Blue Ridge Parkway

The internationally recognized Blue Ridge Parkway is adjacent to the Bonsack community and provides a unique outdoor benefit to the residents of Roanoke as well as those visiting the area. There is no direct access to the Blue Ridge Parkway from the Bonsack community.

The Blue Ridge Parkway does present some issues that were evaluated in this Study, including visibility of proposed land uses.

Because of the location of, and access to, the Blue Ridge Parkway, its primary beneficial role in the Bonsack community is aesthetic. It provides a direct view of outdoor conservation and preservation, and the residents who currently see views of the Parkway and beyond can be confident that they will continue to enjoy this for generations to come.



Current Conditions

Neighborhoods

The most prevalent land use, in and around the Study Area, is residential single-family neighborhoods. These neighborhoods were built primarily in the 1980's and 1990's, while other parcels have long been residential homesites, making the Bonsack area a long-known and desired location for residential living in Roanoke County.

Larger scale residential neighborhoods are prevalent to the west of Challenger Avenue. These neighborhoods have their primary access limited to East and West Ruritan Roads and Huntridge Road, so traffic impacts to these roads directly impact these neighborhoods.

Neighborhoods east of Challenger Avenue are directly visible from Challenger Avenue and more familiar to commuters as a result. This community is primarily individually built parcels, though there are two small subdivisions that have been built through the years, including Little Tree Acres and more recently, Aprils Meadow east of the railroad.



Current Conditions

Commercial and Industrial Uses

Commercial use exists along the Challenger Avenue Corridor and is a reason for much of the traffic on Route 460. Commercial uses range from long-standing roadside garden centers to big-box retailers like Lowe's and Walmart. The corridor has a major grocer and also is home to several large-scale industrial users. More recently, commercial development has expanded to bring fast-food restaurants and emergency medical service centers to the area.

These commercial and industrial uses are recognized as important drivers of the local economy while at the same time adding to some of the traffic challenges in the area.



Current Conditions

Topography

Part of the beauty and attractiveness of the Challenger Avenue Corridor and Bonsack is its rolling hills and varied vertical landscapes. What is pleasing to the eye, however, is a challenge for infrastructure, most specifically roads with safe sight distances.

With the exception of the Glade Creek floodplain that parallels the rail line, well over 50% of the Bonsack area exceeds topographical grades of 10%. Route 460 itself was carved into some of the steepest topography through the corridor and the steepest slopes in the area are found near East Ruritan Road. Carson Road is also carved into a very steep granite hillside.

In areas east of the rail line, the lands steepen significantly from flat in the floodplain to 25% or more in some areas as the land moves east toward the Blue Ridge Parkway.



Current Conditions

Streams & Floodplains

Glade Creek carves a significant floodplain through the heart of the Bonsack area. This floodplain ranges from 60 to 1,460 feet wide in some areas and limits the opportunities for both access and development due to the constraints it creates.

Streams, both Glade Creek and its tributaries, braid through the area, with the most significant tributaries extending north along Carson Road and to East Ruritan Road. A second significant stream bed drains lands from the Route 220 Alt area and carries water south past the Walmart shopping center and through the heart of Bonsack before reaching Glade Creek.

These environmental features, including the wetlands and soil conditions that often accompany them, create development constraints that must be considered when identifying opportunities for future development.

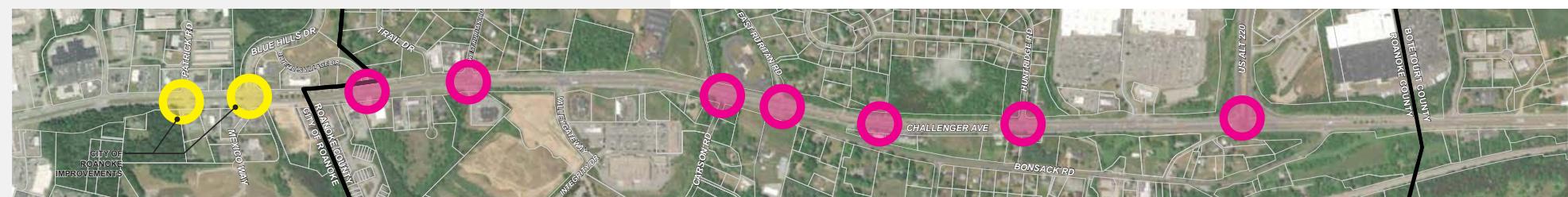
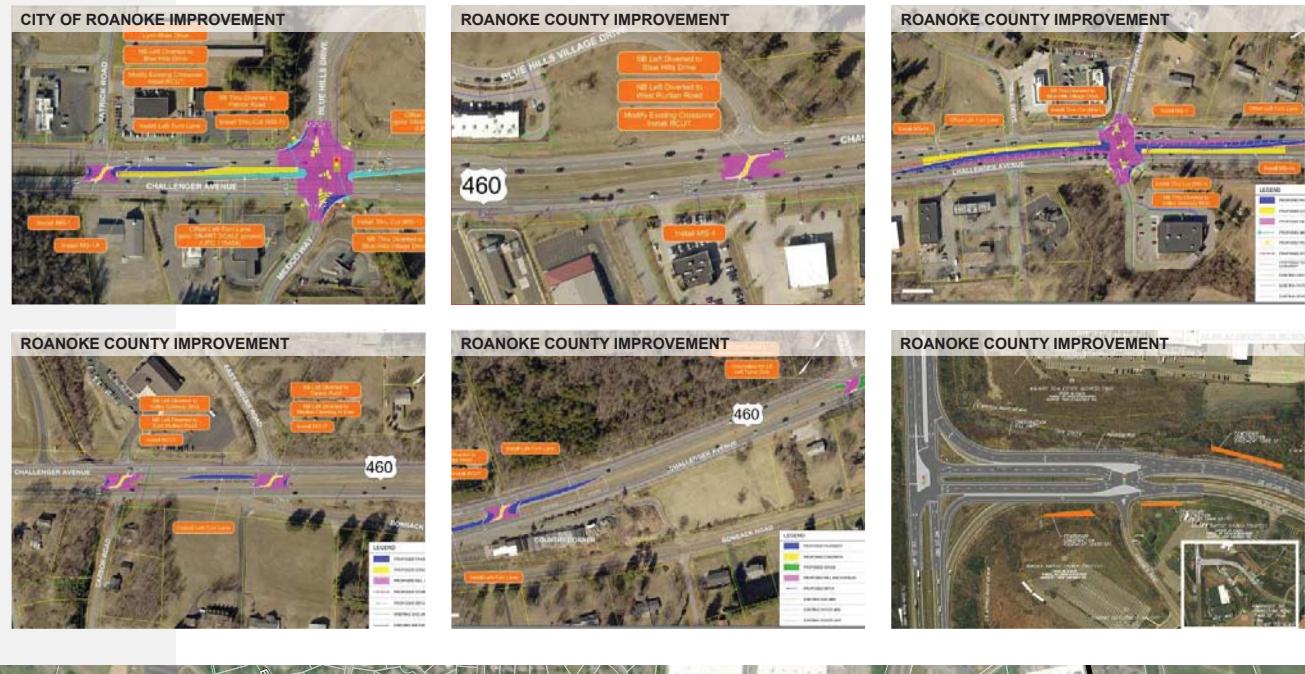


V. VDOT Improvements Underway

In 2019 and 2020, VDOT, the City of Roanoke, and Roanoke County studied potential safety and operational improvements along Route 460 from Williamson Road to Alternate Route 220. This is known as the VDOT Route 460 STARS Study. The purpose of the study was to evaluate operational and safety conditions along Route 460 within the study area, consider and assess potential safety and operational improvements in the study area, and develop cost estimates for potential improvements.

While this County study focuses on improving traffic flow around Route 460, the VDOT STARS Study provided recommendations for improving intersections and traffic flow on Route 460.

For this study to properly propose new and improved ways for motorists, pedestrians, and bicyclists to move around the Bonsack area without having to use Route 460, it must consider the Route 460 improvements planned as a result of the VDOT STARS Study. Two of the intersection improvements (Route 460 at Patrick Road and Blue Hills Drive/Mexico way and Route 460 at Blue Hills Village Drive) are located within City of Roanoke limits and therefore their outcomes are not directly impacted by Roanoke County. However, since the intersections are adjacent to the study limits, they are included for completeness.



VDOT Improvements Underway



Blue Hills Drive

Just south of the County of Roanoke line, the left out of Patrick Road will be removed to reduce delay and crashes caused by vehicles trying to take lefts out of Patrick Road during heavy traffic. A southbound left lane will be added to the existing median opening so that vehicles who want to turn left into Grace and Truth Baptist Church or take a U-turn to access other businesses can do so without blocking one of the southbound through lanes.

The signal at Blue Hills Drive and Mexico Way will be converted to a thru-cut. This will reduce the number of phases at the signal from four to three by allowing the side streets to operate simultaneously, reducing loss time at the signal, and optimizing performance. Offset left turn lanes will improve sight distance for left turn vehicles so that opposing lefts do not block sight distance. Removing the through movement will reduce the number of conflict points in the intersection. Pedestrian facilities will be installed to facilitate safe crossings of Route 460.

PROJECT FACTS:

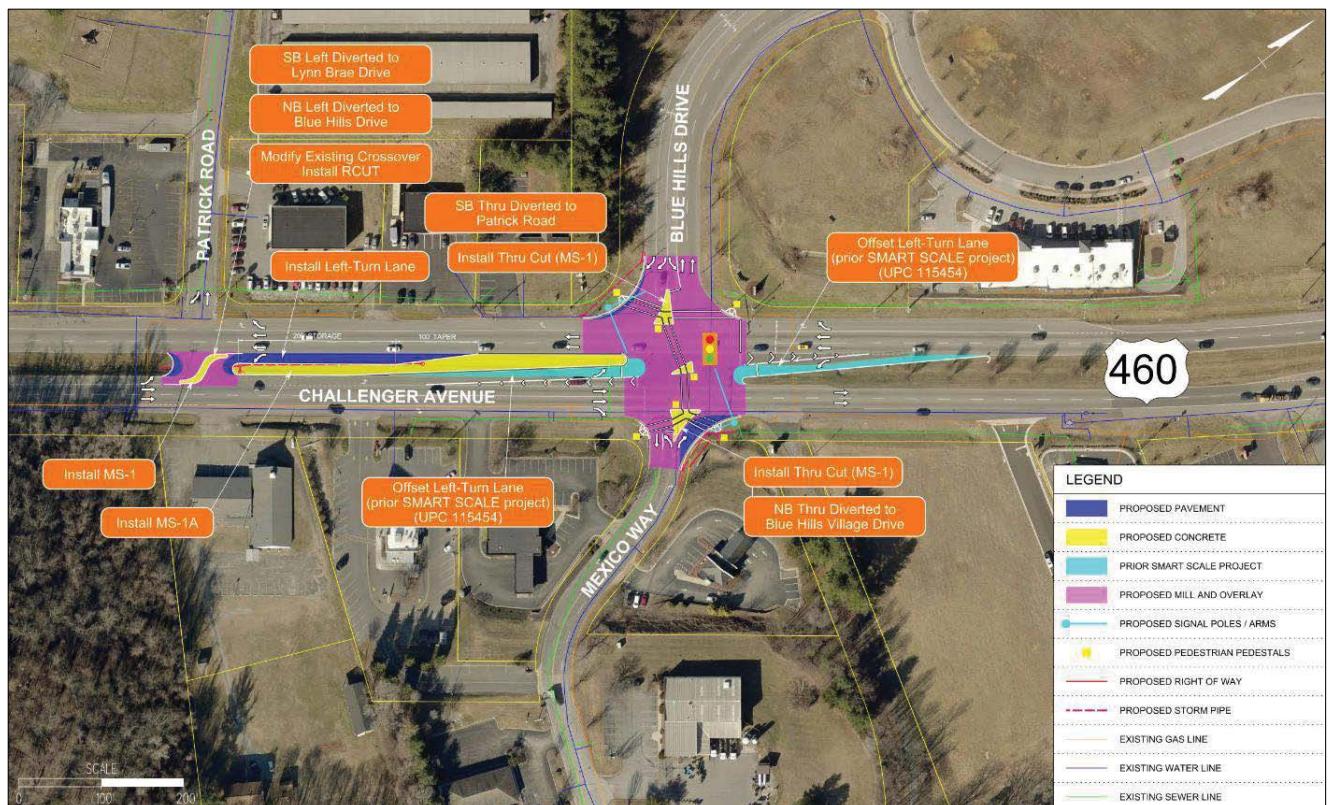
COST: \$5.6M

FUNDING SOURCE: FUNDED THROUGH SMART SCALE

ESTIMATED CONSTRUCTION ADVERTISEMENT DATE: 2026

Route 460 (Orange/Challenger Avenue) Operational Improvements Study

Figure 6-7: Route 460 from Lynn Brae Drive to Blue Hills Village Drive (Sheet 2 of 3)



VDOT Improvements Underway

Blue Hills Village Drive

At Blue Hills Village Drive, the existing median opening will have a concrete island installed. All maneuvers on Route 460 will be completed as they are today. Drivers who previously took lefts out of Blue Hills Village Drive or the Advance Auto Parts or crossed Route 460 will no longer be able to do so. This will improve safety by reducing the number of vehicles trying to cross multiple lanes of traffic, which is especially dangerous during periods of heavy traffic.

For businesses along Blue Hills Village Drive, vehicles can route out the other end to Blue Hills Drive, turn left, and then use the signal at Blue Hills Drive and Route 460 to have a signalized movement to head north. This moves the unprotected left turn movement off of Route 460 and onto Blue Hills Drive, which is lower volume and lower speed, and directs traffic to a signal with protected movements, which is safer than using the currently uncontrolled movement.

PROJECT FACTS:

COST: \$5.6M

FUNDING SOURCE: FUNDED THROUGH SMART SCALE

ESTIMATED CONSTRUCTION ADVERTISEMENT DATE: 2026



Route 460 (Orange/Challenger Avenue) Operational Improvements Study

Figure 6-7: Route 460 from Lynn Brae Drive to Blue Hills Village Drive (Sheet 3 of 3)



VDOT Improvements Underway

West Ruritan Road

Similar to the intersection at Blue Hills Drive, the intersection of Route 460 and West Ruritan Road will also be converted to a thru-cut to improve operations and reduce conflicts points, thus improving safety. Offset left turn lanes will also be included for improved sight distance, along with pedestrian facilities through the median. As the majority of movements on the side streets are left and right turns, this will not significantly impact the way that drivers currently use the intersection, except for trips between the residential uses to the north and the CVS which will require vehicles to U-turn at the next downstream intersection.

PROJECT FACTS:

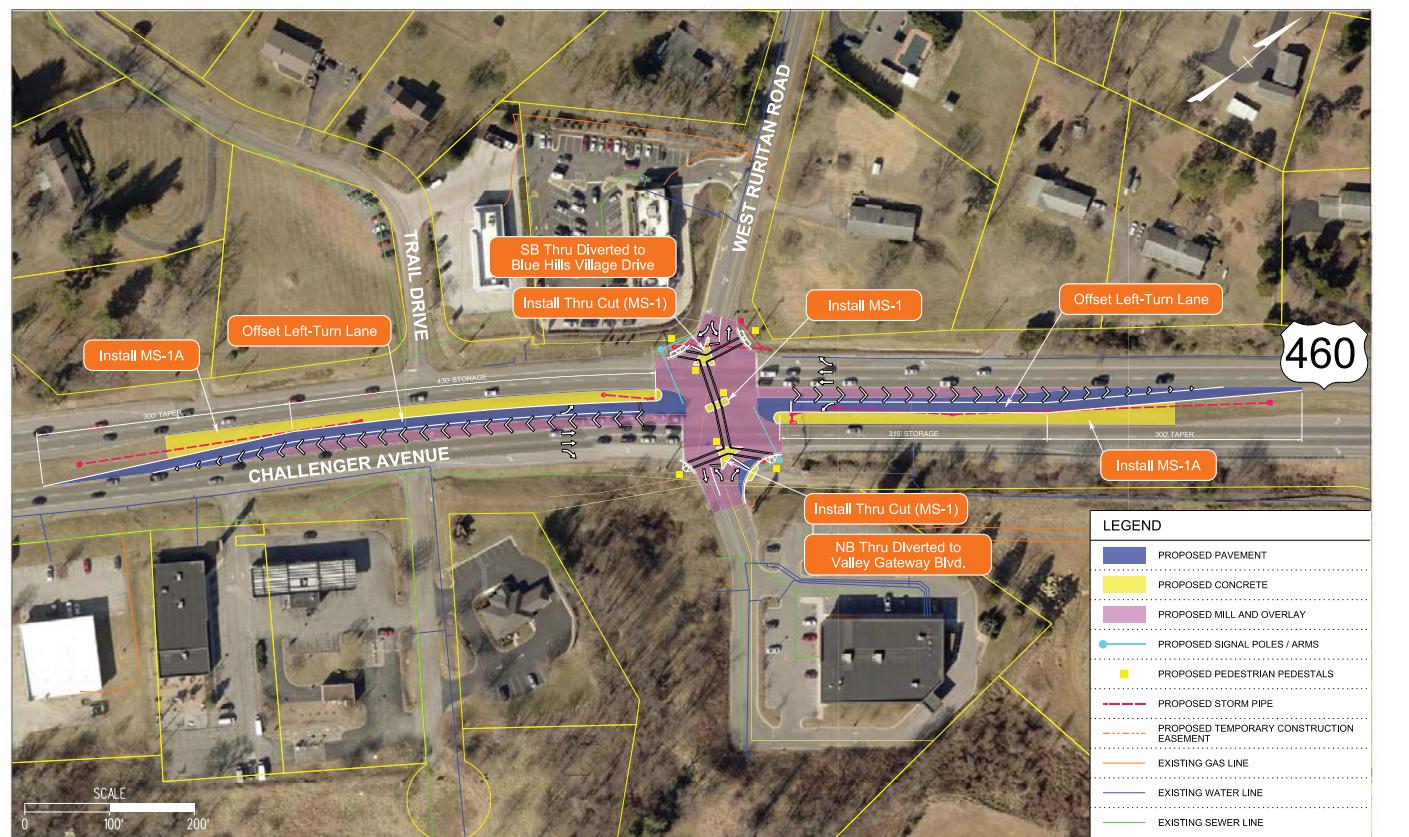
COST: \$7.5M

FUNDING SOURCE: FUNDED THROUGH SMART SCALE

ESTIMATED CONSTRUCTION ADVERTISEMENT DATE: 2026



ROUTE 460 AT WEST RURITAN ROAD



VDOT Improvements Underway

Carson Road to Huntridge Road

Carson Road and East Ruritan Road currently operate as four leg intersections in very close proximity to one another. The larger number of turns and crossing movements in a short distance is unsafe and violates access management standards.

By removing the ability to take lefts or make through movements from Carson Road, the Roanoke Seventh-Day Adventist Church entrance, East Ruritan Road, and Bonsack Road, the number of conflict points between vehicles making those movements and vehicles along the mainline is reduced. These are also some of the most dangerous maneuvers to make, especially when traffic is heavy and there are minimal gaps between vehicles.

Vehicles who previously turned left onto Challenger Avenue will have to turn right. For most of these movements, the next available movement will be an unprotected U-turn at the adjacent intersection.

PROJECT FACTS:

COST: \$2.8M

FUNDING SOURCE: FUNDED THROUGH SMART SCALE

ESTIMATED CONSTRUCTION ADVERTISEMENT DATE: 2026



ROUTE 460 FROM CARSON ROAD TO HUNTRIDGE ROAD (SHEET 1)



VDOT Improvements Underway

Carson Road to Huntridge Road (cont.)

The median opening outside of Country Corner currently has no left turn lanes. Vehicles trying to make left turns and U-turns can wait in the median, but if there are too many vehicles, they block one of the through lanes, leading to congestion and accidents. By adding left turn lanes in both directions, the safety of the intersection is greatly improved.

Similar to other intersections, vehicles turning left out of Country Corner have more lanes of traffic to cross, which can be difficult and unsafe during periods of high volume. By adding a concrete island, these vehicles are directed northbound to U-turn at Huntridge Road or to the signal at the commercial entrance north of Huntridge Road.

Limiting through movements from the west side of the intersection currently only affects one home. Due to topographic constraints, there are currently no downstream ingresses for over 1,000'. If the northwest parcel is redeveloped and desires full access to Route 460, vehicles can route to Huntridge Road, turn right, and then U-turn at this intersection.

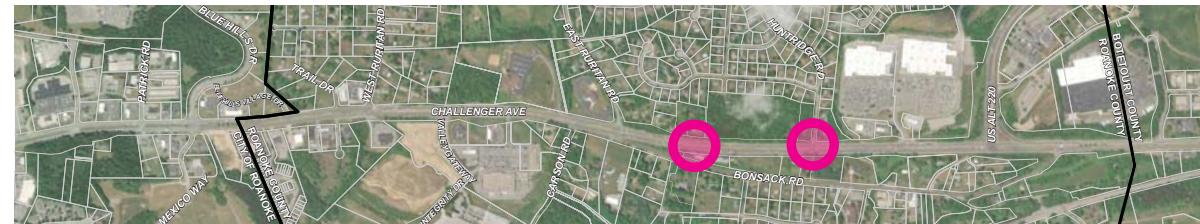
At Huntridge Road, full access is currently permitted, which presents similar safety concerns for outbound lefts during heavy traffic. By removing the outbound left and restricting the intersection to right turns and downstream U-turns, the crash rate at the intersection will decrease.

PROJECT FACTS:

COST: \$2.8M

FUNDING SOURCE: FUNDED THROUGH SMART SCALE

ESTIMATED CONSTRUCTION ADVERTISEMENT DATE: 2026



ROUTE 460 FROM CARSON ROAD TO HUNTRIDGE ROAD (SHEET 2)



VDOT Improvements Underway

Route 220 Alternate

The intersection of Route 460 and Route 220 Alternate (Cloverdale Road) is currently one of the main sources of congestion along the corridor since Cloverdale Road provides access across a mountain ridge to I-81, the only such crossing for almost 5 miles. Heavy turning movements occur at this intersection. Safety issues on the southbound approach caused by congestion are compounded by the reduction in speed limit from 60 mph to 45 mph to the north and the fact that there are no nearby traffic signals, so drivers are not expecting to stop.

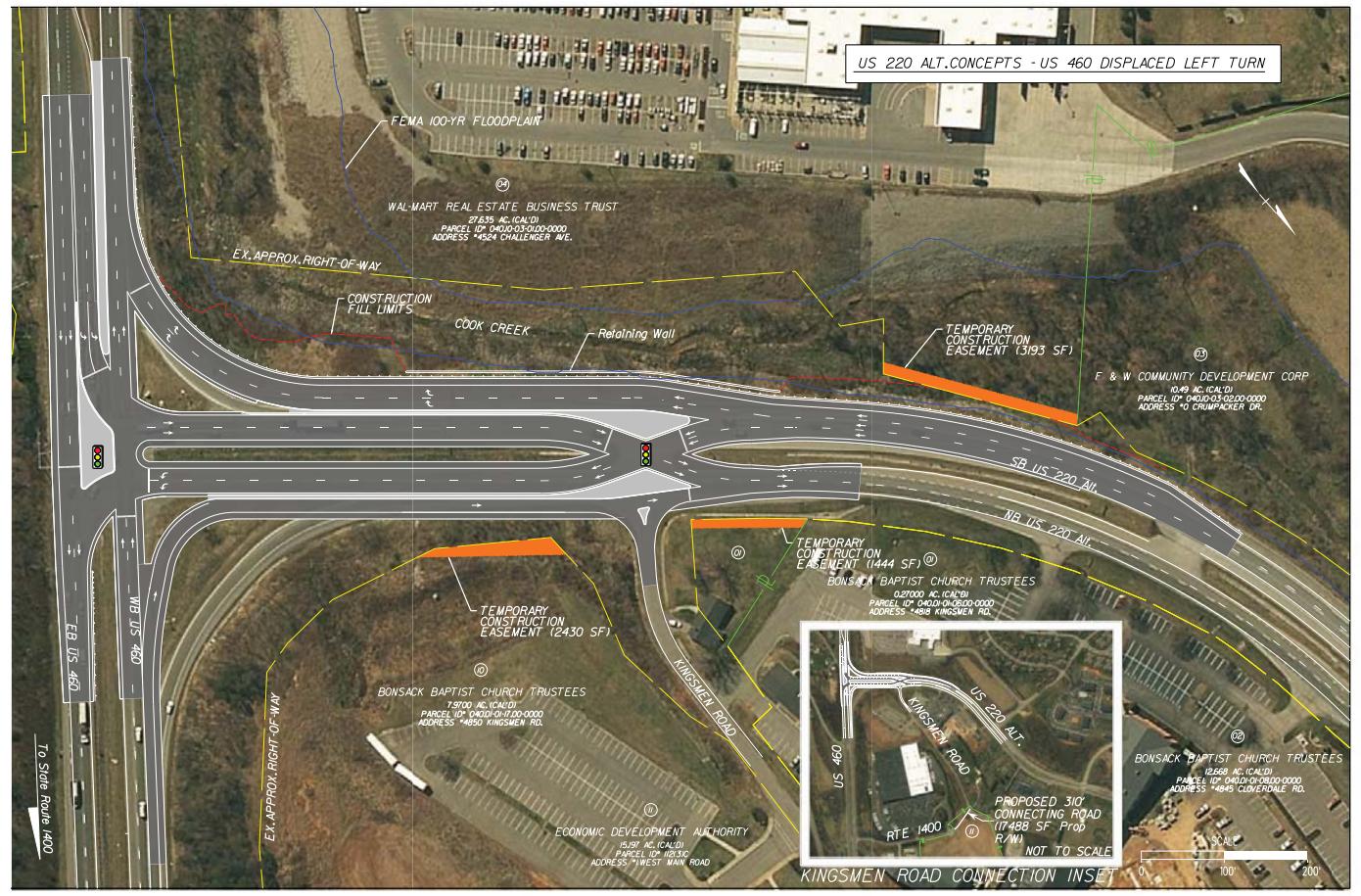
By converting the intersection to have a displaced left turn on Cloverdale Road, operations are improved by allowing the northbound left to operate simultaneously with turning movements from Cloverdale Road. This reduces the number of phases at the primary signal from three to two, optimizing operations. The two-phase signal along Cloverdale Road would be coordinated to optimizing progression of left turning movements. Adding a second right turn lane will reduce queues and maximize the benefits of providing an overlapping (or simultaneous) movement with the northbound left.

PROJECT FACTS:

COST: \$21.8M PROJECT

FUNDING SOURCE: FUNDED THROUGH SMART SCALE

ESTIMATED CONSTRUCTION ADVERTISEMENT DATE: 2027



VI. Transportation Improvement Tools

Central to this study is the goal of improving transportation options. Improvement options include physical road improvements as well as pedestrian, bicycle, and/or transit improvements. For the purpose of this study, no plans for transit are contemplated, including bus, rideshare, or other non-infrastructure based improvements.

Land use decisions also impact the expectation of additional traffic as the Bonsack area builds out. This study evaluates the impact of future land use changes and makes recommendations for potential amendments to the Future Land Use Map in the Roanoke County Comprehensive Plan.

Infrastructure improvements include several options, and those options are outlined on the next two pages. Each option carries different costs to implement, different challenges to acquire property needed, and different community concerns regarding the nature of change that the improvement will create.

This Study evaluates the benefit of each option weighed generally against the potential adverse impacts. It further includes feedback from the public engagement to include the opinions of the community most directly impacted in shaping the final recommendations.



New Tie-Ins & Connections

New connections, or points of connection for vehicles serve several beneficial goals. A new connection adds capacity to the system. More important, it adds directional options for traffic. This is particularly important for emergency vehicle access to citizens in need, but also provides peak time-of-day alternative options for residents to get to and from their destinations.

Road Widening

Road widening options in this category include building new lanes of traffic, widening existing lanes of traffic, adjusting paint markings, and widening shoulders and medians.

Road widenings can increase capacity where it is needed without diverting that traffic to other points on the route to destinations. Continued widening of roadways has a point of diminishing returns when the improvements are met with road networks nearby with lower capacity. Right-of-way acquisition costs increasingly make widening projects financially infeasible. Care should be taken in utilizing road widenings to areas where the traffic backlogs have a reasonable long-term benefit in traffic throughout.



Example of a New Road Connection



Example of a Road Widening Project

Road Realignment

Road realignments can improve roads that have evolved from old alignments. In Virginia, many roads are built along historic wagon and horse roads that are paved over as the need for additional roadways arise. These old alignments can be unsafe from both a visibility and curvature standpoint. Visibility of higher speed roads requires longer sight distances for safe stopping and maneuvering of vehicles, and curvatures of some of the old roadbeds do not consider such speeds.

Many of these roadways also don't consider wide shoulders which provides a factor of safety for motorists whose tires leave the driving surface for whatever reason. The lack of safe shoulders, when combined with limited visibility, can be major factors in crashes.

Road realignment uses more modern design criteria to reduce the risk of crashes due to unsafe stopping conditions. Road realignment can be considered a form of road widening, since in most realignments, the road is improved in both curvature and lane width.

One concern when choosing a road realignment is whether the alignment improvement will create a more attractive alternative for motorists to use. If too many new motorists use an improved alignment, it can burden the capacity of that road which then may create unsafe conditions.



Road Realignment Improves Visibility and Safety (Courtesy VDOT)



Example of a Traffic Calming Measure

VII. Community Engagement

Community Meeting #1

January 13, 2021

Purpose – Because the Challenger Avenue Corridor goals include improving the quality of life for the citizens who regularly use the roads, Community outreach was an important component of this study. The purpose of Meeting #1 was providing the community with clarity of purpose of the study, so that the public could understand their role in shaping the study and its recommendations.

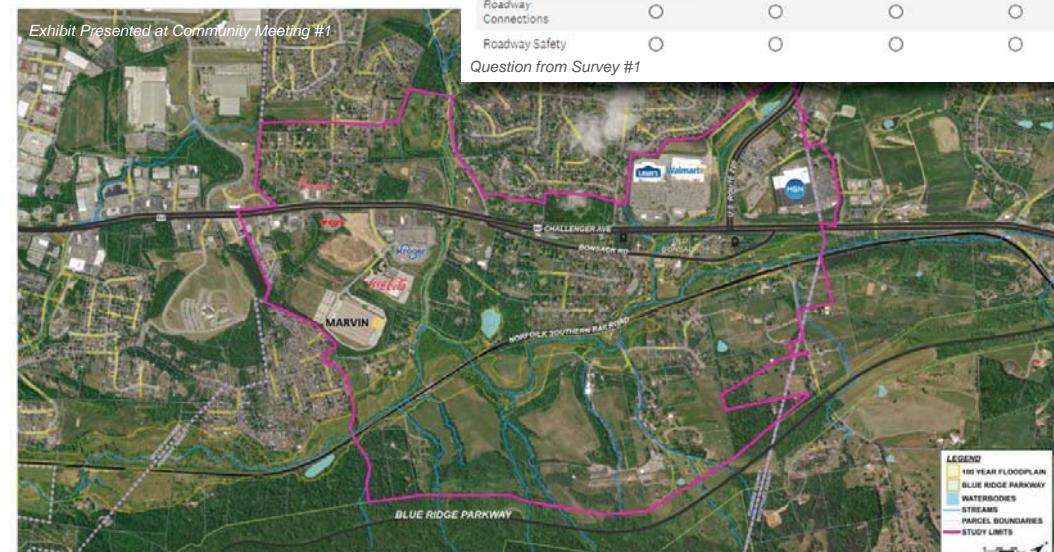
Survey – Prior to the first meeting, a community survey was offered for the community to share their thoughts on a variety of topics, including traffic, economic opportunities, quality of life, and the history of Bonsack. The survey received 220 responses which are provided in Appendix D. These responses helped the team in prioritizing elements of the study for the first draft of improvement suggestions.

Meeting Summary – The meeting, held at Bonsack Elementary School, on January 13, 2021, was attended by 44 citizens. Timmons Group provided maps and was present to share the study limits that define the scope of the study. The team listened to questions and comments from those in attendance. No recommended strategies were provided to the public, rather the event was entirely about collecting the thoughts of those most impacted by the area, those who live and work in the area. Virginia Department of Transportation (VDOT) staff attended to answer questions about the planned and funded SMART SCALE projects located at West Ruritan Road, at intersections between and including Carson Road and Huntridge Road, and at Route 220 Alternate.



 220 SURVEY RESPONDENTS

 44 MEETING ATTENDEES



Community Engagement

Community Meeting #2

May 18, 2022

Purpose – In Community Meeting #2, the study team shared initial opportunities for consideration and feedback. The opportunities included a variety of new roads, improvements to existing roads, pedestrian path options, and potential Future Land Use changes. The graphic locations and their relationship to properties was shown on large boards and displayed for the community to see.

Survey – Prior to Community Meeting #2, a detailed survey shared potential improvements and proposed Future Land Use changes throughout the Bonsack Community. 140 surveys were completed and included a wide range of ideas and comments. The survey responses are shown in Appendix E.

Meeting Summary – Community Meeting #2 was attended by 98 citizens interested in commenting and asking questions about the plan. This meeting included considerable feedback from those at the meeting. As expected in such meetings, many comments were focused around areas that were relevant to an individual's home or property. The team learned about historical elements and property details, and fielded questions about the purpose of the opportunities presented.

The substantive feedback, along with concerns about safety and property impacts, was valuable in adjustments for the team in consideration of priorities and the value that the community placed on the improvements. Resulting from the meeting, it was decided by the study team to add an additional engagement meeting to share new improvement opportunities that would be presented in the final document.



U.S. ROUTE 460 LAND USE AND CONNECTIVITY STUDY
POTENTIAL TRANSPORTATION IMPROVEMENTS
ROANOKE COUNTY, VA - MAY 2022



Website for Survey #2



Community Engagement

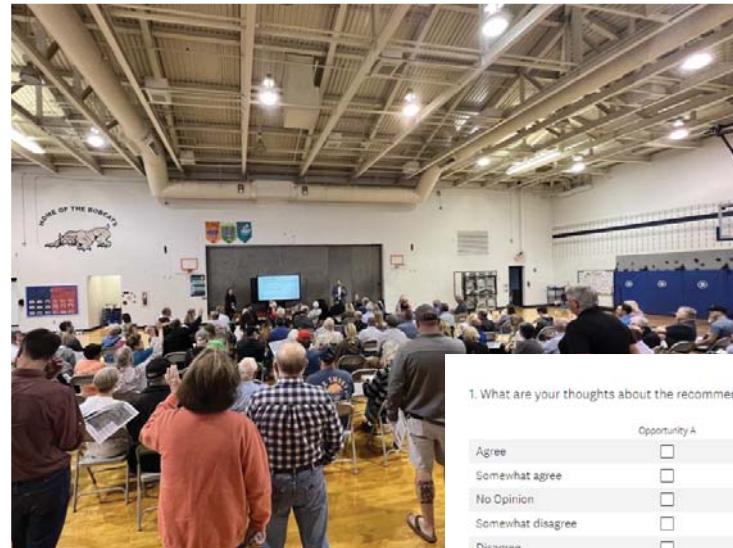
Community Meeting #3

September 29, 2022

Purpose – Community Meeting #3 intended to share the substantive changes that were made to the improvement opportunities after the study team heard feedback from both survey and in-person responses from the community in Community Meeting #2. Like each of the other meetings, central to the purpose of this meeting was clarity and opportunity for responding to the ideas presented.

Survey – Prior to Community Meeting #3, a final survey showed the recommended improvements prepared by the team and asked for responses of agreement or disagreement. In all, 39 surveys were completed and those surveys are shown in Appendix F.

Meeting Summary – Community Meeting #3 was held in the gymnasium of Bonsack Elementary School. There were 107 attendees, again providing an opportunity to ask questions and present feedback to the team. In addition to the recommendations for the Challenger Avenue Corridor, pipeline projects (those already underway) were shared to ensure that concerns of specific projects were not misconstrued as part of the study proposals for the corridor. In addition to general conversation and feedback, many in attendance shared their appreciation that the team had listened and incorporated public feedback substantively into the plan.



 39 SURVEY RESPONDENTS

 107 MEETING ATTENDEES



Community Engagement

Other County Meetings

Joint Meeting of the Planning Commission and Economic Development Authority

October 19, 2022

In this special meeting of the Planning Commission and the Economic Development Authority, Timmons Group and County Planning staff reviewed the project, the process, and the recommendations to the members, and received questions and feedback. Comments and questions included economic development issues east of the railroad tracks, Read Mountain Preserve (unrelated to this study), and County/City cooperation in the study.



Board of Supervisors Work Session

November 9, 2022

In this work session of the Board of Supervisors, Timmons Group and County Planning staff reviewed the project, process, and recommendations to the Board members present. Comments from the Board members were focused on the value and importance of moving forward on improvements, along with funding needs to ensure that the improvements can become reality. The Board received the report with enthusiasm, and was supportive of taking the next steps to finalize the study and work toward Comprehensive Plan changes to ensure guidance of this report into future land use decisions.

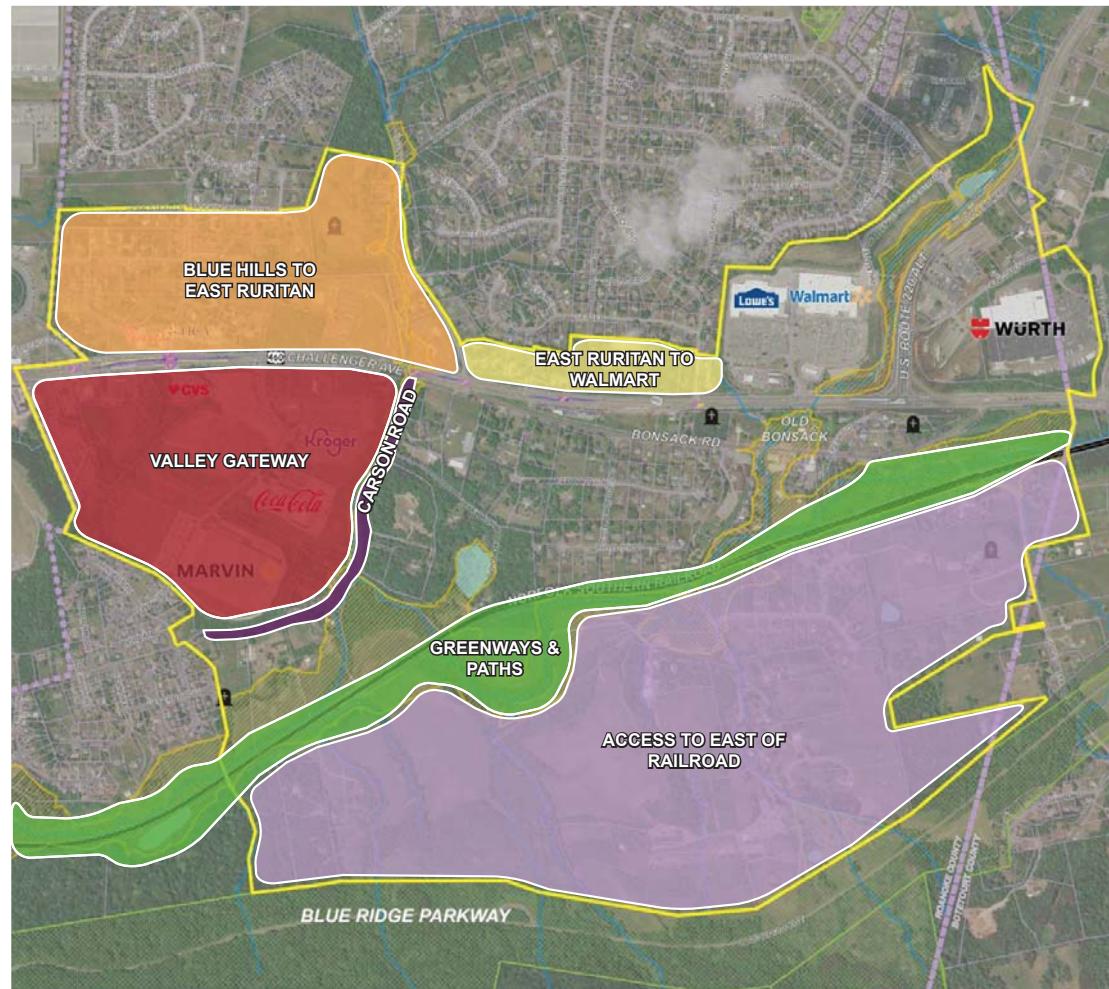
VIII. Transportation Improvement Options

After review of existing conditions, road improvement projects in the pipeline, and after hearing from the public through three community meetings and surveys, Timmons Group analyzed the potential tools that could be used to improve transportation options in the Bonsack community.

Those areas of study, and recommendations, are grouped into areas of impact. There are seven areas of potential transportation improvements. They are:

- ▶ Blue Hills to East Ruritan
- ▶ East Ruritan to Walmart
- ▶ Valley Gateway
- ▶ Carson Road
- ▶ Greenways & Paths
- ▶ Access to Points East of Railroad

These improvement opportunities are detailed on the next several pages.



Blue Hills Drive to East Ruritan Road

The improvements shown in this area are intended to increase directional driving options for residents and commercial travelers on the west side of Challenger Avenue between the Roanoke City line and East Ruritan Road. Central to these improvements are efforts to reduce impacts, both current and future, at the intersection of West Ruritan Road and Route 460.

Improvement recommendations include an extension of a publicly accessible road between Trail Drive and Blue Hills Village Drive. This road will give viable options to residents living west of Challenger Avenue in the vicinity of West Ruritan Road, to customers of Chick-Fil-A, and other nearby businesses with indirect but convenient access to a signalized intersection at Blue Hills Drive in Roanoke City. This improvement is depicted as Project A on the map.

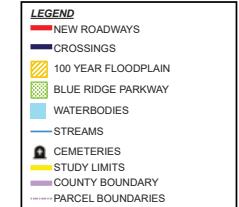
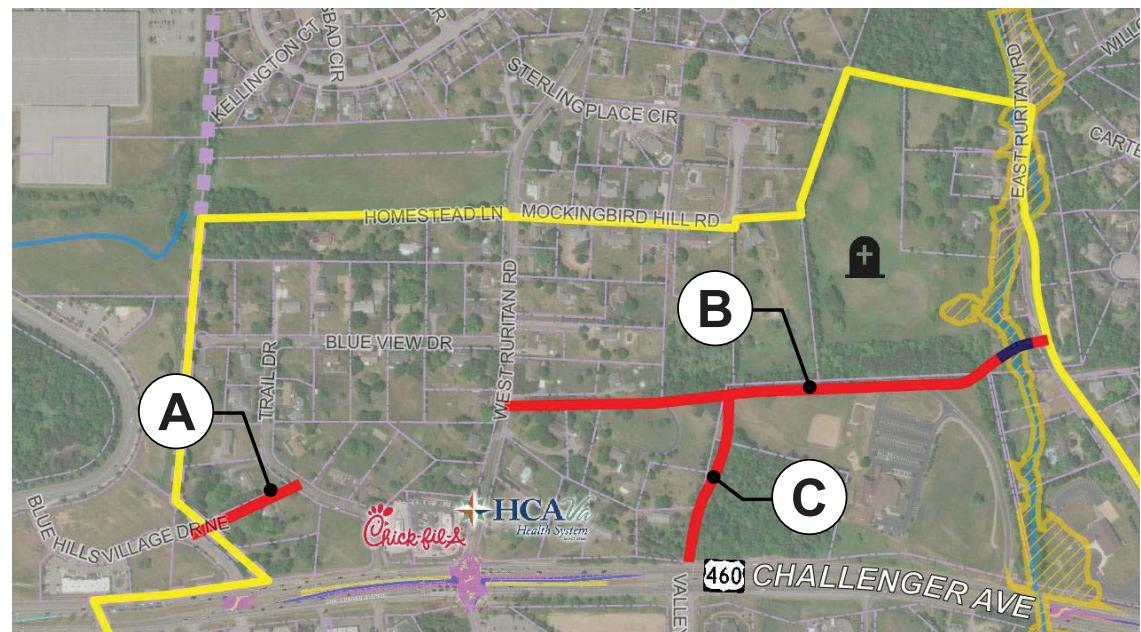
Project B shows an improvement opportunity for the neighborhoods west of Route 460 to have alternative paths to destinations without having to access Route 460 directly. This additional connection serves not only to benefit travel at rush hours, but throughout the day as well.

This road would likely be constructed as part of new development or redevelopment of the parcels over which the road is built. This might include commercial and/or residential development. Right-of-way acquisition would be an important element of this road, and the conceptual alignment has been shown to minimize the need for right-of-way from different property owners.

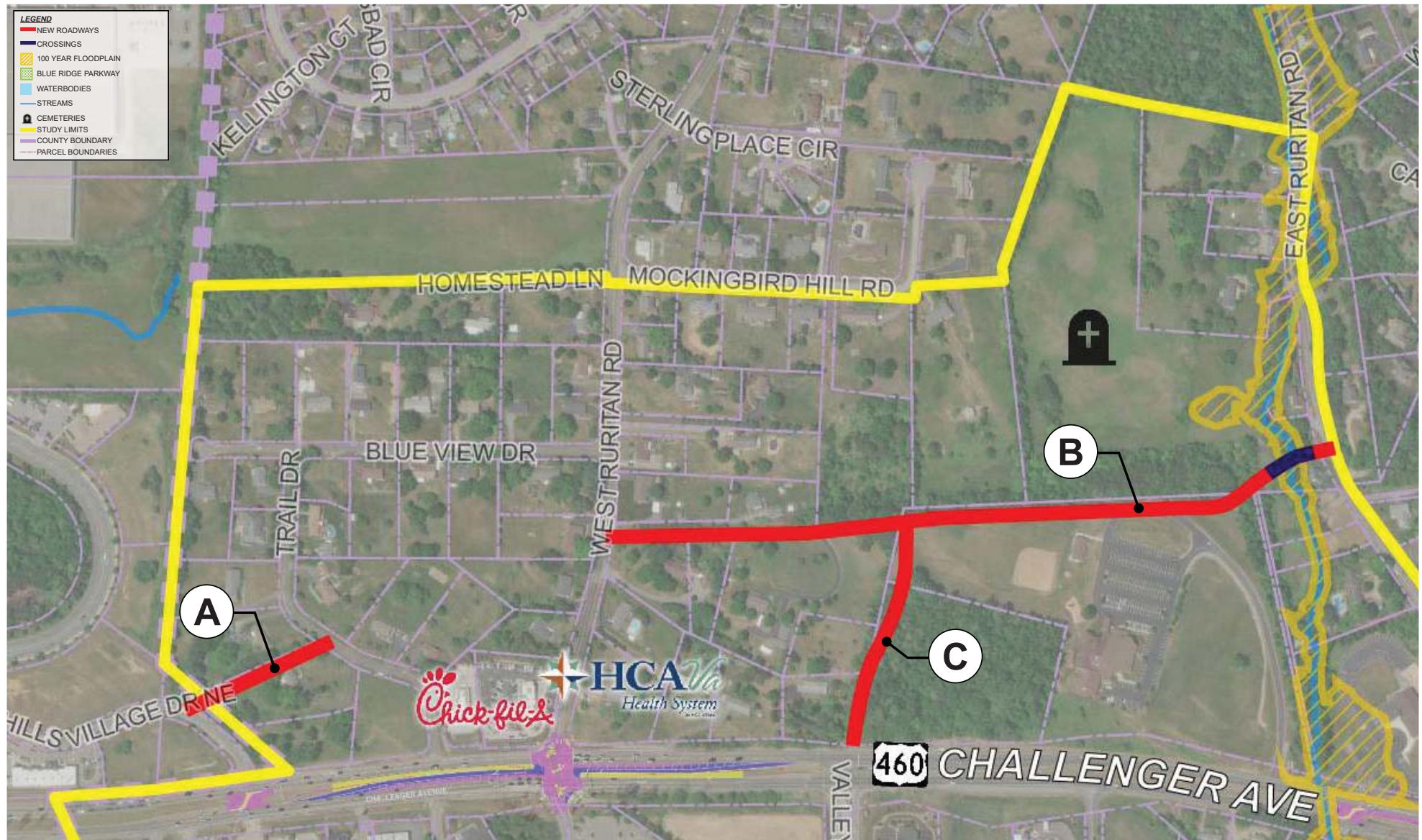
The addition of this road, if built, is not anticipated to increase traffic to the neighborhoods, but it will provide more convenient options for the residents of those neighborhoods, while reducing slightly the burden of traffic on Route 460.

Project C includes a proposed access road from the currently signalized intersection of Route 460 and Valley Gateway Boulevard. This access, if built, would be part of the development of parcels along the Challenger Avenue Corridor and is intended to connect with the road alignment depicted as Project B.

The primary purpose of this improvement is to reduce traffic on Route 460. It will have minimal impact on current traffic patterns and is thus not a short-term priority.



Blue Hills to East Ruritan



East Ruritan Road to Walmart

The improvements shown in this area are intended to increase driving options for residents and commercial travelers on the west side of Challenger Avenue between East Ruritan Road and Walmart. The improvements also allow an increased use of existing signalized intersections nearby for better mobility after the current VDOT projects are in place.

Project D represents an opportunity to provide a direct access from Huntridge Road to Walmart without having to access directly to Route 460 to do so. This directional option will be important particularly as the VDOT improvement at Huntridge Road and Route 460 closes off eastbound left turns for those on Huntridge Road heading to Walmart.

While topography is a consideration because of the grade differential from Huntridge Road to the Lowes side of the shopping center, there is a viable access that ties directly to the service road in the shopping center.

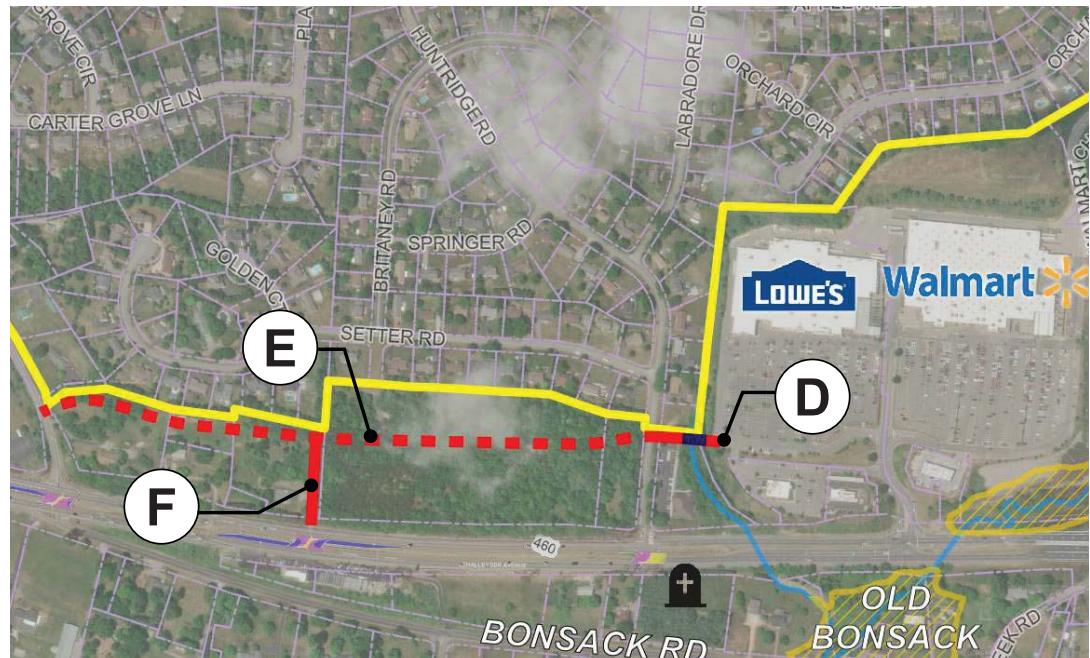
Project E, as shown on the map, represents a potential east/west parallel road to Route 460 between East Ruritan Road and Huntridge Road, without necessarily having to access Route 460 directly. This road serves a significantly similar role as Project B, described in the preceding pages.

This road, if built, is envisioned as a public or private road (with public access granted), and would likely be constructed as part of new development of the parcels over which the road is built. This might include commercial and/or residential development.

The road is shown as a dashed line to reference the importance of the connection, but not specifically the alignment. As development is planned in the area, this access can be woven into the design of road and parking elements of new development. The exact location of this access path would be determined at the time of concept planning for the development.

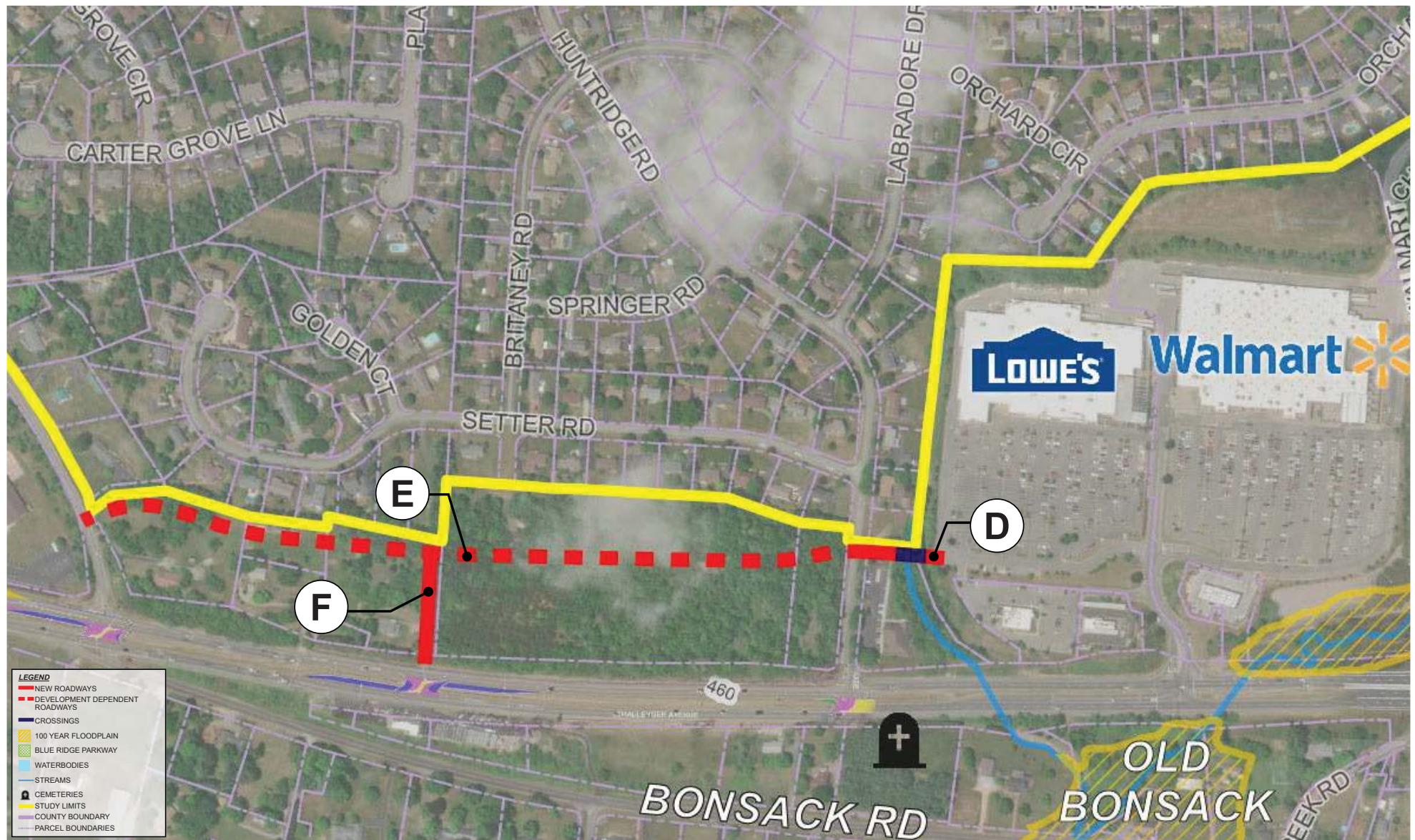
The addition of Project E, if built, is not anticipated to increase traffic to the neighborhoods, but it will provide more convenient options for the residents of those neighborhoods, especially those traveling to Walmart, while reducing slightly the burden of traffic on Route 460.

Project F represents an opportunity for primary access to new development along the Route 460 corridor without adding burden to East Ruritan Road or Huntridge Road to get there. This road is not anticipated to have any signalization in the future, so its primary benefit is to address eastbound traffic turning into the new development.



LEGEND
NEW ROADWAYS
DEVELOPMENT DEPENDENT ROADWAYS
CROSSINGS
100 YEAR FLOODPLAIN
BLUE RIDGE PARKWAY
WATERBODIES
STREAMS
CEMETERIES
STUDY LIMITS
COUNTY BOUNDARY
PARCEL BOUNDARIES

East Ruritan to Walmart



Valley Gateway

Valley Gateway is a significant traffic driver because it has both a major grocer and is the primary access for several major employers in the area. While improved with one of the few signalized intersections on the corridor, it faces unique challenges that are addressed in these recommendations.

Major employers like Marvin and Coca-Cola present “shift-change” peak trip challenges that generate significant backups during those times. Though signalized, the Valley Gateway intersection can only accommodate so many exits during a single traffic cycle, while keeping Route 460 traffic flow moving as the priority. Extending the signal cycle for exiting Valley Gateway is not seen as a viable and reliable improvement.

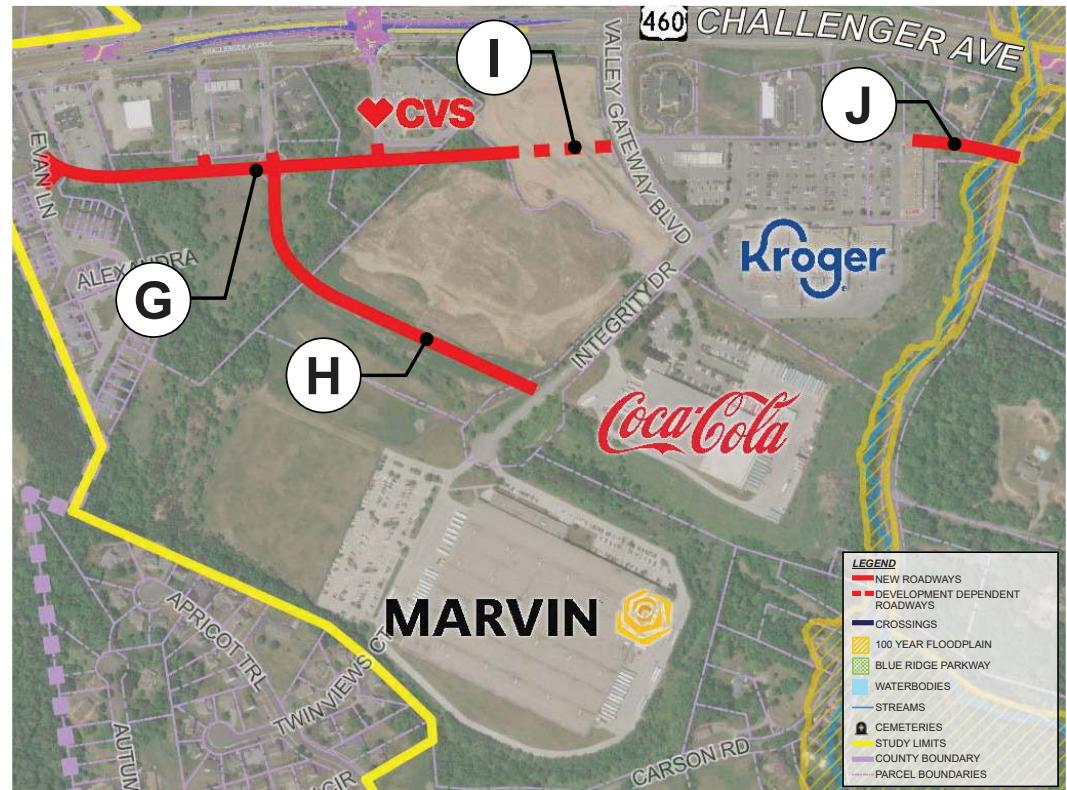
Additionally, the expectation of future potential employment centers will increase traffic on the already burdened “cul-de-sac” of Valley Gateway and Integrity Drive. For these new potential economic development opportunities to succeed, new paths for incoming and outgoing traffic should be considered.

Project G shows how several points of access to Route 460 can be tapped to allow for multiple options for drivers, including direct access to shopping at stores like CVS, Exxon, and Bank of Botetourt. More significantly, it gains a second signalized intersection by accessing the West Ruritan Road traffic signal through the CVS property. This Project, if built, provides a parallel road connector to Route 460 that gives options for arrival and departure that will have a positive impact on employment center-based traffic issues.

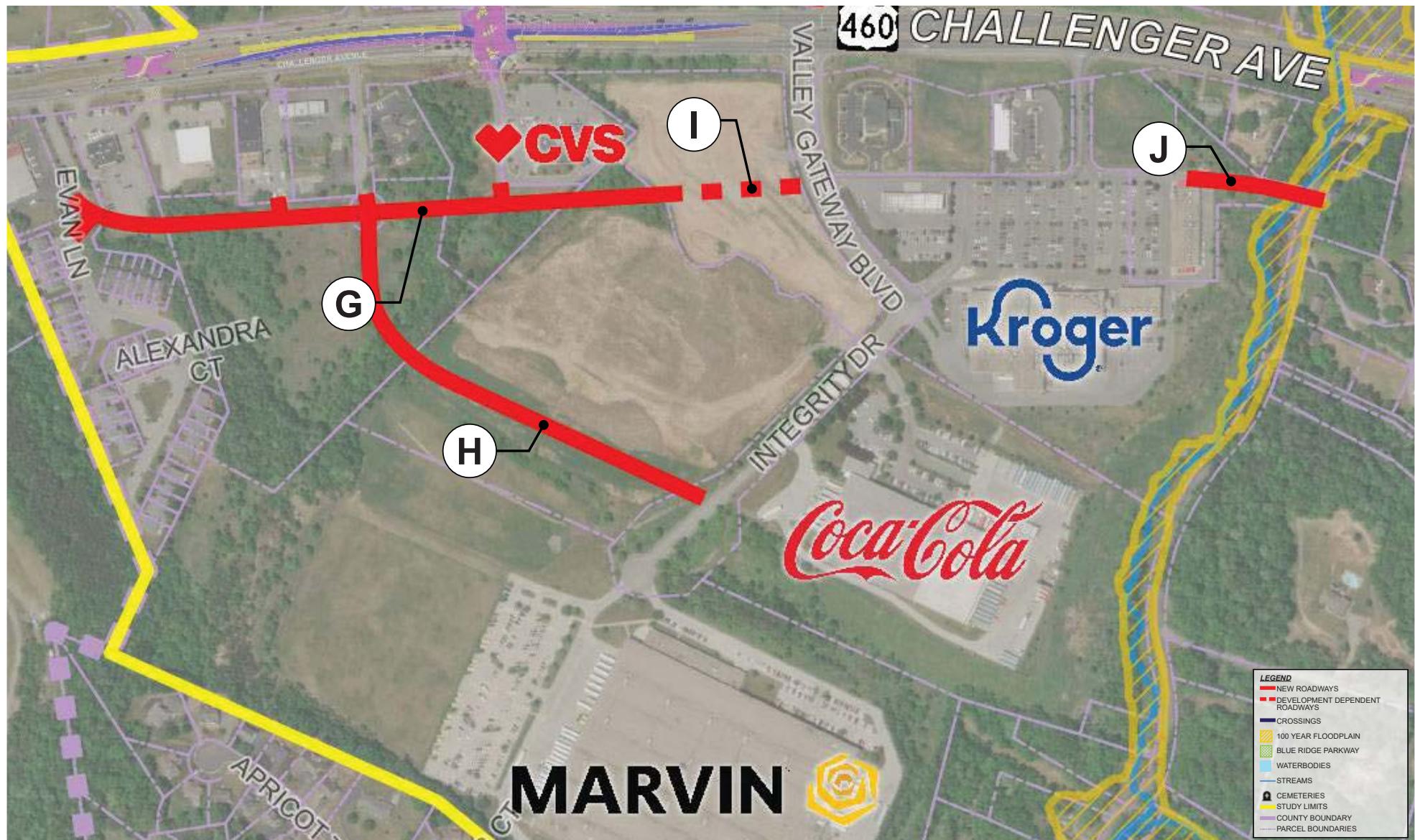
Project H is offered as a recommendation because Integrity Drive and Valley Gateway Boulevard cannot carry the burden of employment center traffic alone. The additional road connection from Integrity Drive aims to reduce the “one way in and one way out” current condition of the industrial center. Properly designed, this road could dramatically reduce the existing traffic to Valley Gateway Boulevard, and help with future economic development traffic. This project, if built, would be constructed as part of the expansion of the business park and serve as either a private or public road, depending on the end user.

Project I is shown as an extension through the parcel immediately adjacent to Valley Gateway Boulevard and is shown to indicate a goal of connecting Project G to Valley Gateway Boulevard. The exact location of the connection is not critical, and this location would be finalized during the site plan approval process for an end user. The intersection with Valley Gateway Boulevard is anticipated to be a right-in-right out access only, but this is enough to benefit arriving employees from Route 460 as well as those on Project G seeking to access the Kroger Shopping Center.

Project J is a short but important connector that allows the Shopping Center to have a direct connection to Carson Road without having to access Route 460. This project would likely tie to an improvement plan for Carson Road, detailed on the pages that follow. This access is close to Carson Road’s intersection with Route 460, so close coordination with VDOT will be needed to assure that this opportunity can become a reality.



Valley Gateway



Carson Road

The most significant feedback received in this Study related to the current condition of Carson Road, Project K. Due to the lack of other viable relief roads, Carson Road currently serves as the alternate route for commuters looking to get out of the Route 460 traffic backups that occur daily. In the public engagement meetings and surveys, speed, safety, and traffic volume on Carson Road were consistently mentioned as the biggest traffic concerns.

Because Carson Road is well known as a cut-through, the goal of recommendations for this road is to improve safety while not creating a more inviting cut-through alternative that will increase the total volume of traffic on Carson Road.

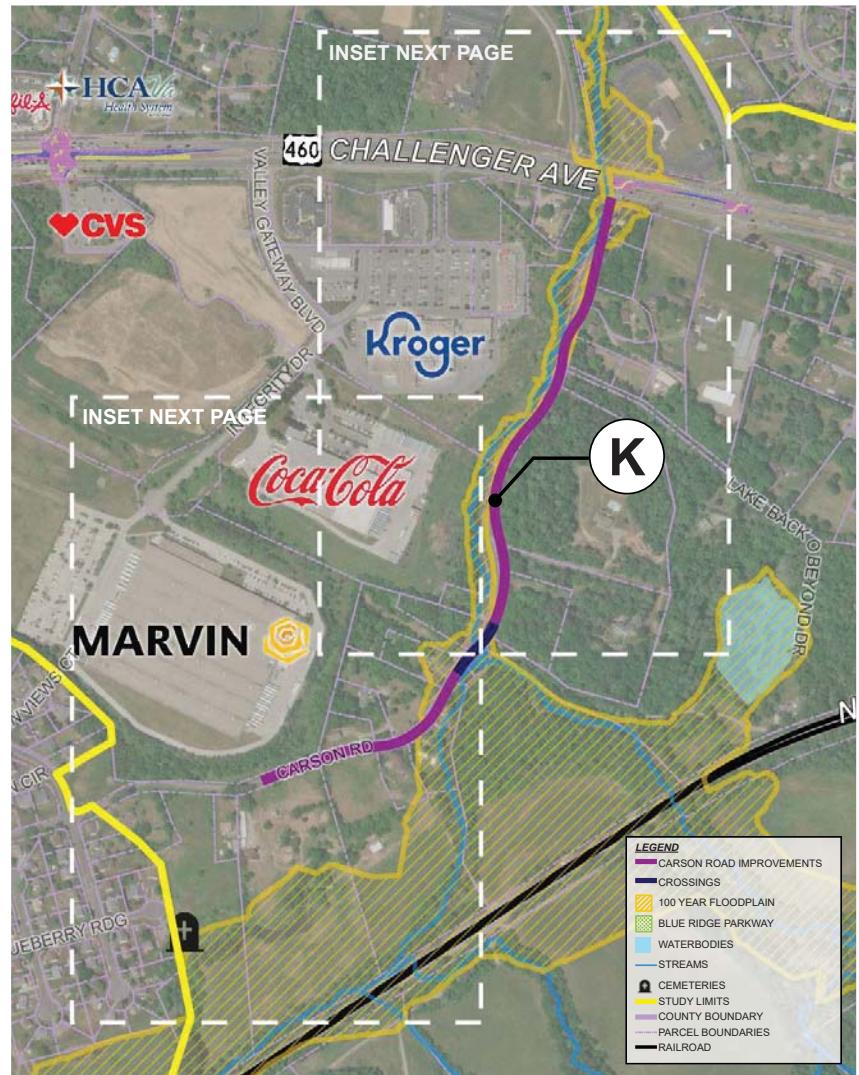
Carson Road is physically challenged with steep topography, a narrow (one lane) bridge, little to no shoulders in some segments, and existing homes and properties along the narrow right-of-way. All of these elements create design challenges for improvement options. While a typical public road realignment project is an easy tool to consider here, there is very little room for an actual realignment to happen without retaining walls, blasting rock, and property acquisition.

Regarding safety, several iterations of improvement options were investigated, including a potential roundabout to reduce speed and provide potential access to a greenway park envisioned for the Glade Creek area. The space needed for a roundabout required a significant amount of land. Numerous public comments were received that rejected the value of such a traffic calming method.

Ultimately, Carson Road modifications should include minor improvements to the road alignment, along with shoulder and road width improvements. The alignment would generally follow the current alignment with modest curvature improvements to increase sight distances. Improvements to the shoulder, including guardrails where warranted, would reduce the danger for motorists that might lose control on Carson Road. Widened roads, though maybe by only one or two feet for each lane, should be accompanied by narrow pavement markings that visually imply slower speeds. This gives the dual benefit of slower and steadier traffic, but with additional paved material (outside the paint) if needed for safety maneuvers.

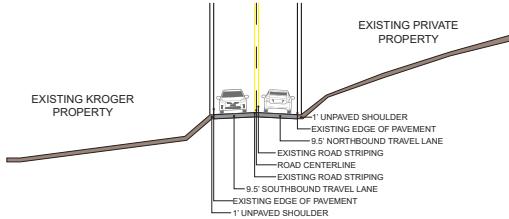
The significant improvement recommendation for Carson Road is the replacement of the Glade Creek tributary bridge, which should be improved to carry two lanes of traffic.

These improvements will likely include a high degree of environmental scrutiny and mitigation, as well as modest right-of-way acquisition to fit the needed improvements. If built, this improved Carson Road will dramatically increase safety for those traveling it, and modestly increase its capacity, while not becoming a primary route for motorists avoiding Route 460.

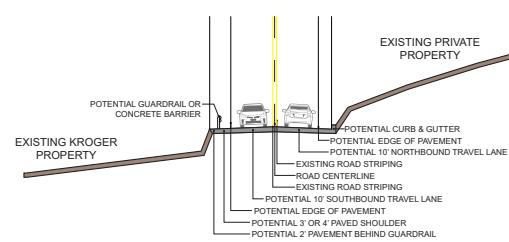


Carson Road

EXISTING CARSON ROAD SECTION
NOT TO SCALE



POTENTIAL CARSON ROAD SECTION
NOT TO SCALE



Greenways & Paths

The first survey asked the public its opinion of a publicly accessible greenway in the area along Glade Creek. The response to this topic was overwhelmingly positive. Residents thought there should be a greenway available, and if one was built, that they would likely use it themselves.

Because outdoor recreation is one of the high-priority influences on quality of life for this and upcoming generations, the study recommends that the Glade Creek Greenway be a priority for the County in the years ahead. The exact alignment of the greenway will be subject to separate discussions with stakeholders and landowners.

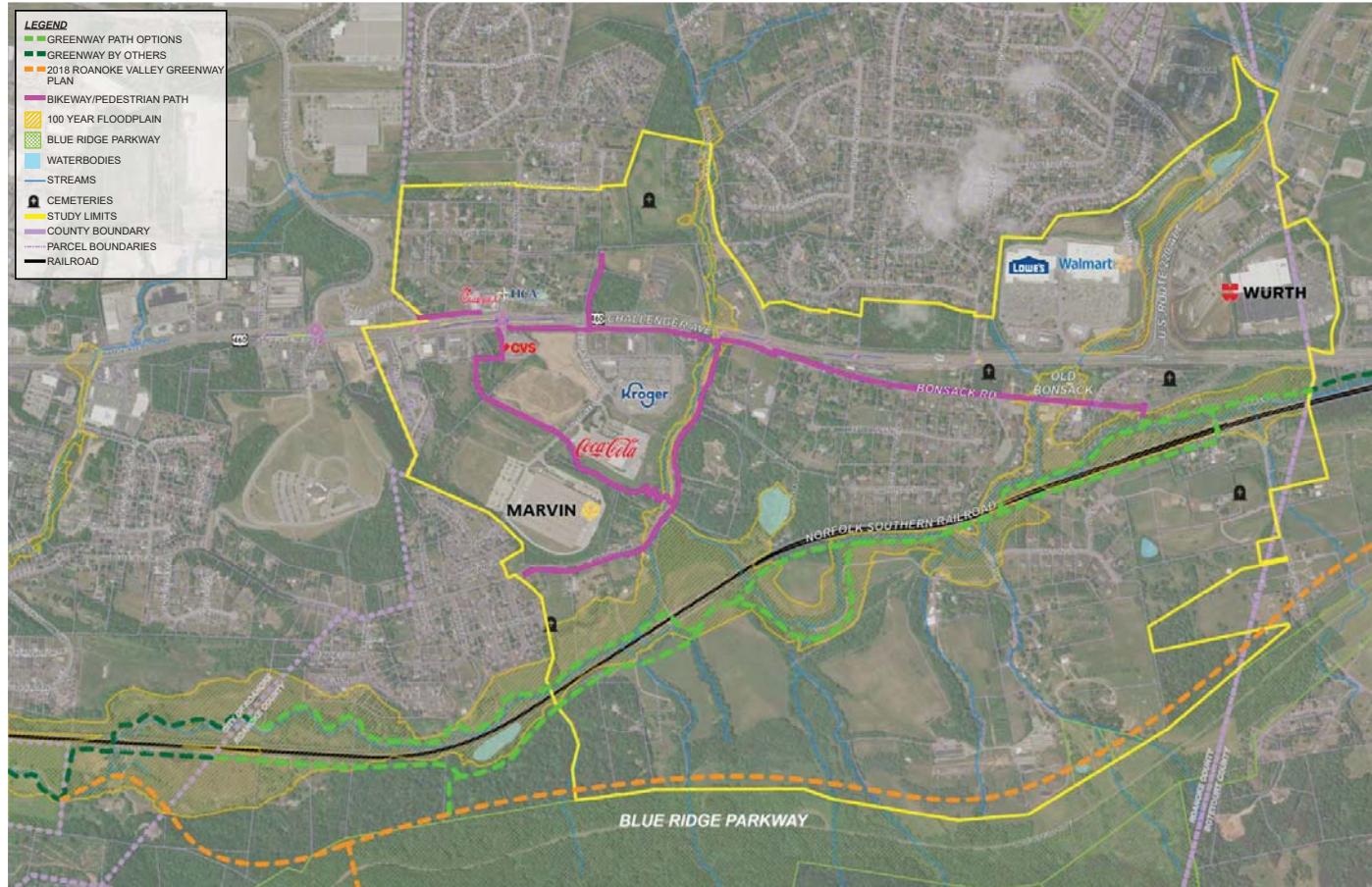
The Greenway can and should be designed to connect to points beyond the county, both toward the city and into Botetourt County, as indicated in the 2018 Roanoke Valley Greenway Plan.

Additional efforts may be considered to link non-motorized pathways to the Blue Ridge Parkway and its access to hikers and cyclists. Blue Ridge Parkway staff will be critical to these efforts.

This study also reveals locations that are suitable for improvements for bicycle and pedestrian activities. These modest improvements will allow more activities in the area to be accessed without a car, including access to the greenway itself.

Because of its volume and speed of traffic, the opportunity for pedestrian crossings on Route 460 are limited to the VDOT intersection improvements planned for West Ruritan Road. These proposed improvements envision a crosswalk-oriented design that allows pedestrians to cross with multiple refuge spots along the way.

Carson Road also envisions a shared use path for bicycles and pedestrians along this improved corridor.



Access to East of Railroad

Part of this Study focused on the potential long-term viability of the properties east of the Norfolk Southern Railway. Because several large tracts of land exist in close proximity, this study sought to determine whether industrial or other economic development opportunities exist.

Challenges to economic development east of the railroad include limits of access, at-grade railroad crossings, potential viewshed issues with Blue Ridge Parkway, and current land use expectations. Public engagement sessions furthered the expectation that a rural edge to the Bonsack community was an appreciated and expected future characteristic.

Two at-grade railroad crossings are a primary concern for potential economic development. For the area to attract prospects, grade-separated crossings would need to be constructed, for an easy means of access to the property.

Assuming that the grade-separated crossing issue was successfully addressed, the access to and through the community of Bonsack could show an increased percentage of tractor trailer traffic. This type of traffic would require more segregated access and road geometries than are currently available through the Bonsack community. Given the public position of expectations, including residents and landowners' views, this infrastructure requirement is not anticipated to be a viable possibility.

Finally, when evaluating the opportunities for economic development, a low-traffic, high-revenue option is a data center. When evaluating the viability of a data center site, most important are access to high voltage power transmission lines and water for cooling the high-temperature producing electrical systems. Delivery of both is not impossible in the Bonsack area. An AEP transmission line runs just north of the Roanoke County/Botetourt County line, and a water line network could be extended with an elevated storage tank for water redundancy needs.

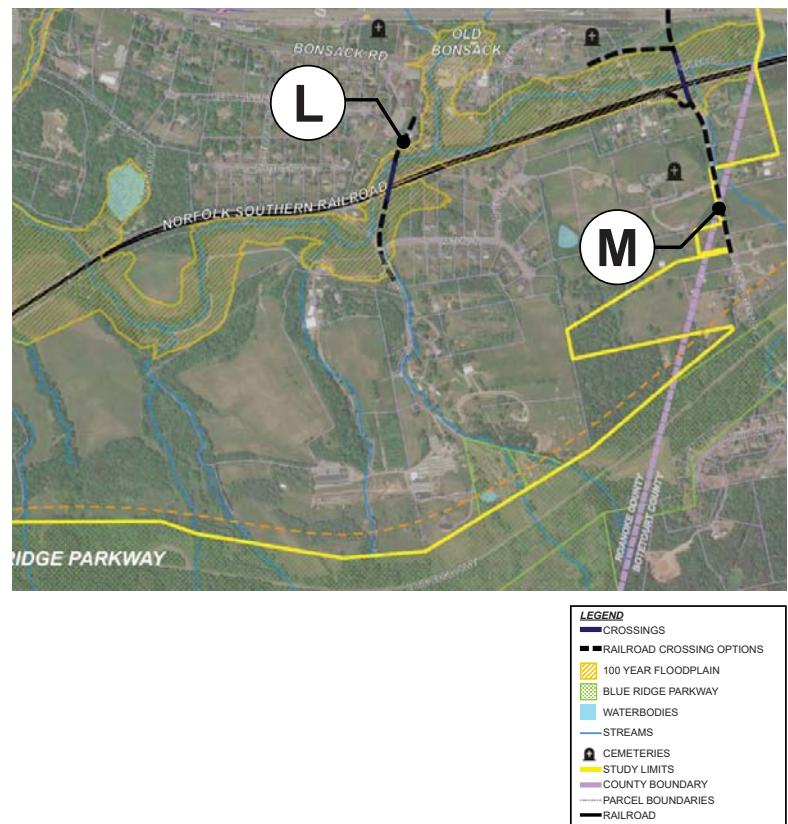
After thorough review of the space between the Norfolk Southern railroad and the Blue Ridge Parkway, the recommendation is to keep the properties in the agricultural and low-intensity residential use that it is currently in, reducing the need for future road network upgrade considerations.

An analysis of the existing at-grade railroad crossings at Layman Road and Glade Creek Road can be found in Appendix C. In October 2022, Roanoke County utilized the information compiled for both railroad crossings to submit the planning grant titled, "Planning Grant for a Bonsack Area Railroad Crossing Elimination Study". If funded, the study will set a foundation to apply for construction funding to build a bridge over the railroad tracks in the future.

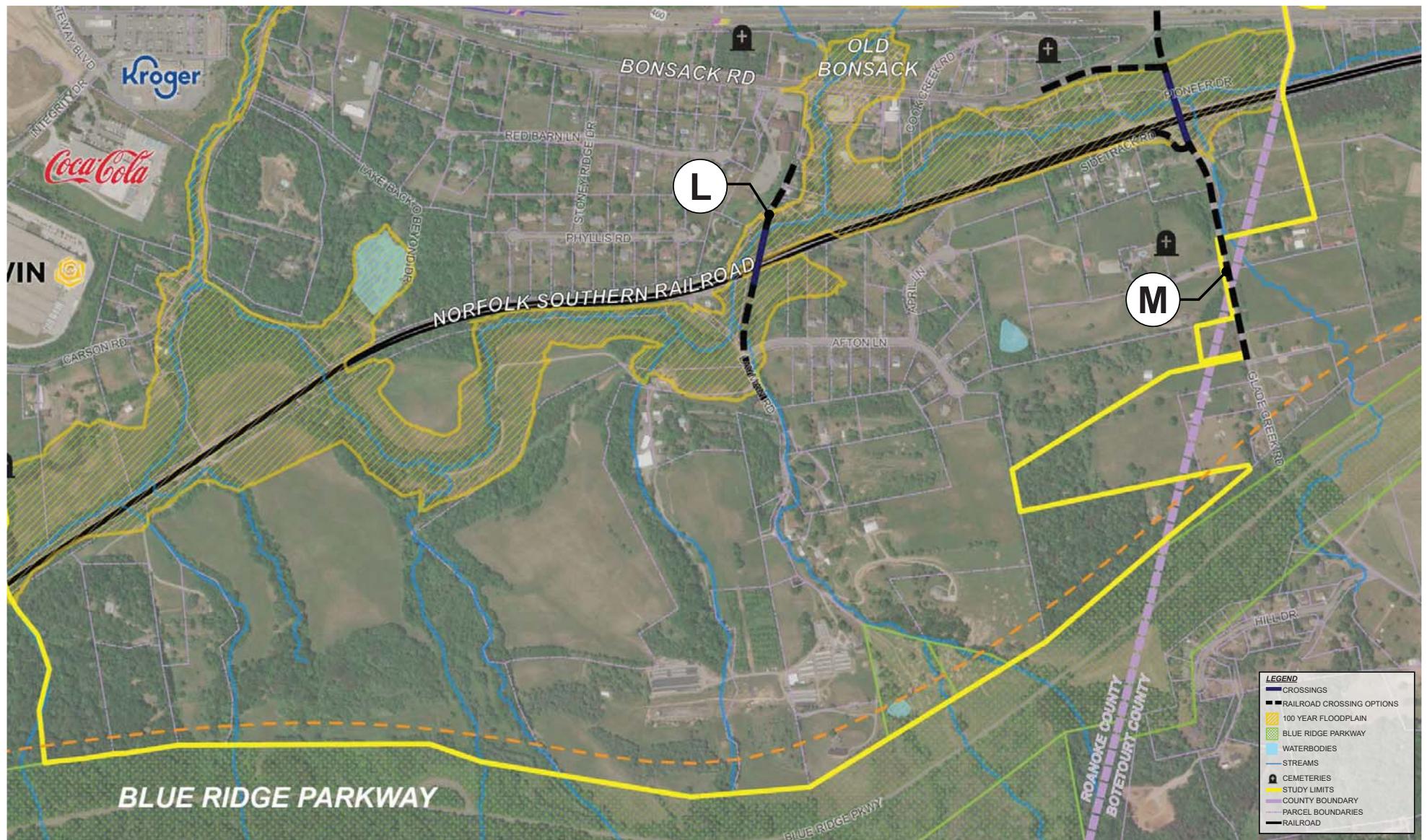
A grade-separated railroad crossing is supported by several comments received during the public comment period of this study. Comments indicate that trains block road access for residents on a frequent basis. In addition to inconvenience, trains blocking tracks has fire and rescue response implications.

Funding the railroad crossing should be a priority for the County. During the public engagement process, several stories emerged where citizens had at times been blocked by stalled trains on the rail line speak to the importance of improving the access to those who live east of the rail line. The potential lack of ingress or egress during an emergency should help Roanoke County to pursue grant opportunities to improve the safety and health of its citizens.

Providing funding for both grade separated crossings may prove challenging, and should there be only funding available for one project at a time, Timmons Group recommends that the Layman Road Crossing be prioritized, since it is the more frequently blocked crossing, and also accesses a greater acreage of land to the east.



Access to East of Railroad

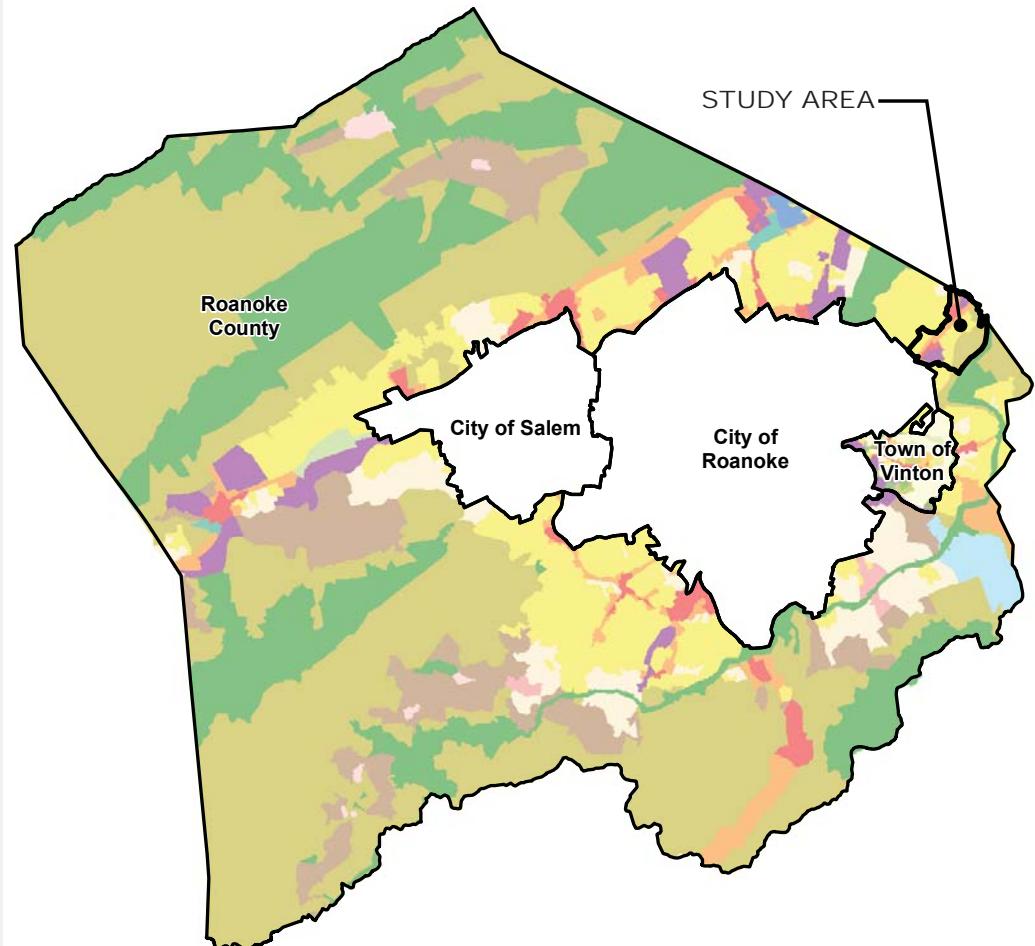


IX. Future Land Use Analysis

Beyond improvements for the current traffic concerns in the Challenger Avenue Corridor, it is important to evaluate the future land use recommendations in Roanoke County's Comprehensive Plan. The goal is to facilitate appropriate future growth, where the added business and residential activity mitigate traffic concerns.

Roanoke County's Comprehensive Plan can be found at Roanoke County's Planning Office or online. It outlines the expected land use patterns in the future and helps guide decisions of County leadership and staff when considering zoning cases and other land use requests from landowners.

This study reviewed the Future Land Use Map in the Challenger Avenue Corridor and identifies opportunities to modify the Future Land Use Map in ways that will balance positive growth in the future with the traffic challenges that can come with that growth.



Roanoke County Future Land Use Map

Current Future Land Use Map

The Future Land Use Map sets the course for future development in the County. Future Land Use designations are typically considered when Rezoning or Special Use Permit requests are evaluated by the Planning Commission and Board of Supervisors. [The map to the right shows the County's Future Land Uses as of the date of this study](#). See the Future Land Use designation descriptions below for additional information.

Core: A future land use area where high intensity urban development is encouraged. Land uses within core areas may parallel the central business districts of Roanoke, Salem and Vinton. Core areas may also be appropriate for larger-scale highway-oriented retail uses and regionally-based shopping facilities. Due to limited availability, areas designated as Core are not appropriate for tax-exempt facilities.

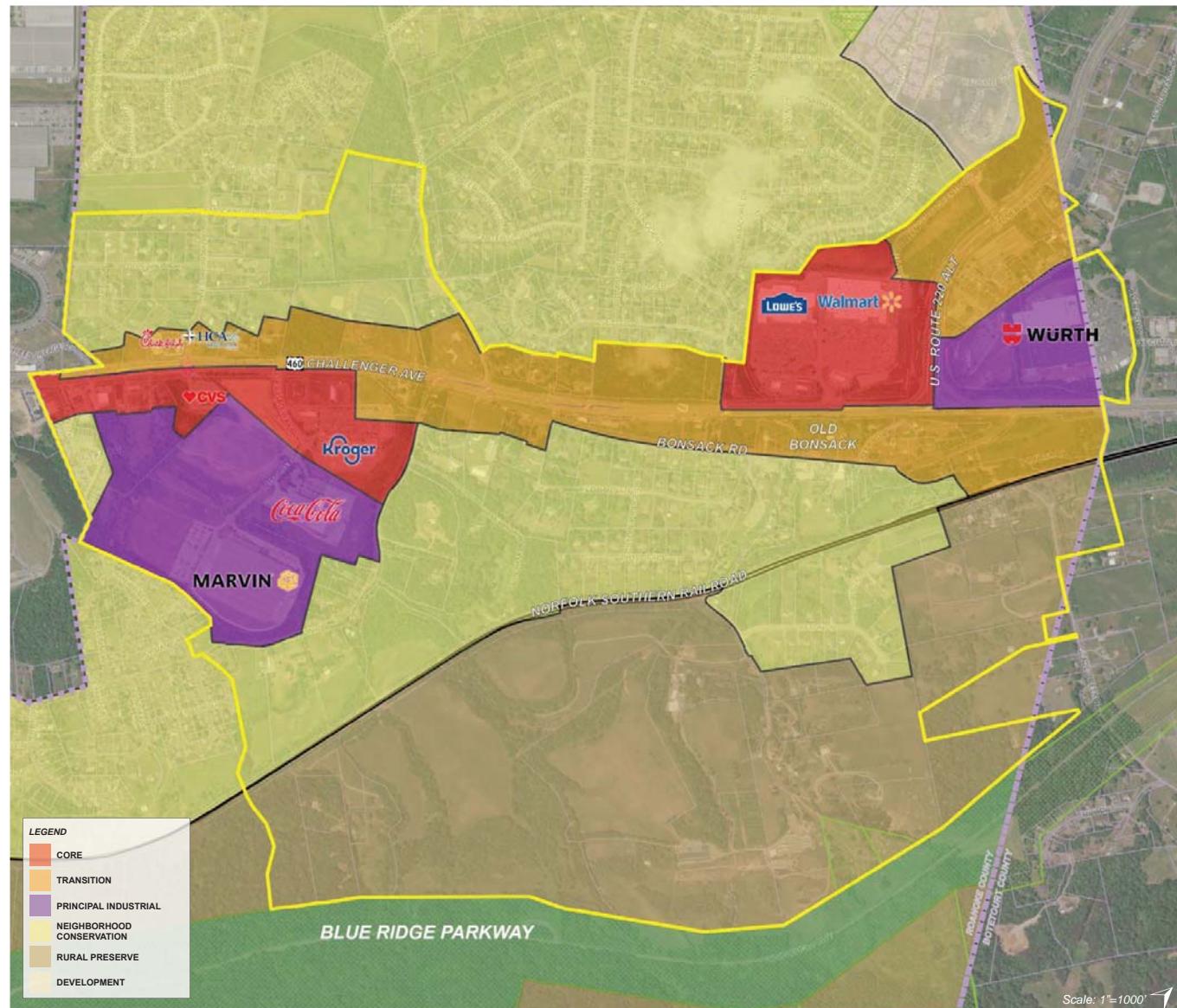
Transition: A future land use area that encourages the orderly development of highway frontage parcels. Transition areas generally serve as developed buffers between highways and nearby or adjacent lower intensity development. Intense retail and highway oriented commercial uses are discouraged in transition areas, which are more suitable for office, institutional and small-scale, coordinated retail uses.

Principal Industrial: A future land use area where a variety of industry types are encouraged to locate. Principal Industrial areas are existing and planned regional employment centers and are distributed throughout the county, convenient to major residential areas and suitable highway access. Due to limited availability, areas designated as Principal Industrial are not appropriate for tax-exempt facilities.

Neighborhood Conservation: A future land use area where established single-family neighborhoods are delineated and the conservation of the existing development pattern is encouraged.

Rural Preserve: A future land use area of mostly undeveloped, outlying lands. These rural regions are generally stable and require a high degree of protection to preserve agricultural, forestall, recreational, and remote rural residential areas.

Development: A future land use area where most new neighborhood development will occur, including large-scale planned developments which mix residential with retail and office uses. Innovation in housing design and environmental sensitivity in site development is a key objective. Clustered developments are encouraged as is the use of greenways and bike and



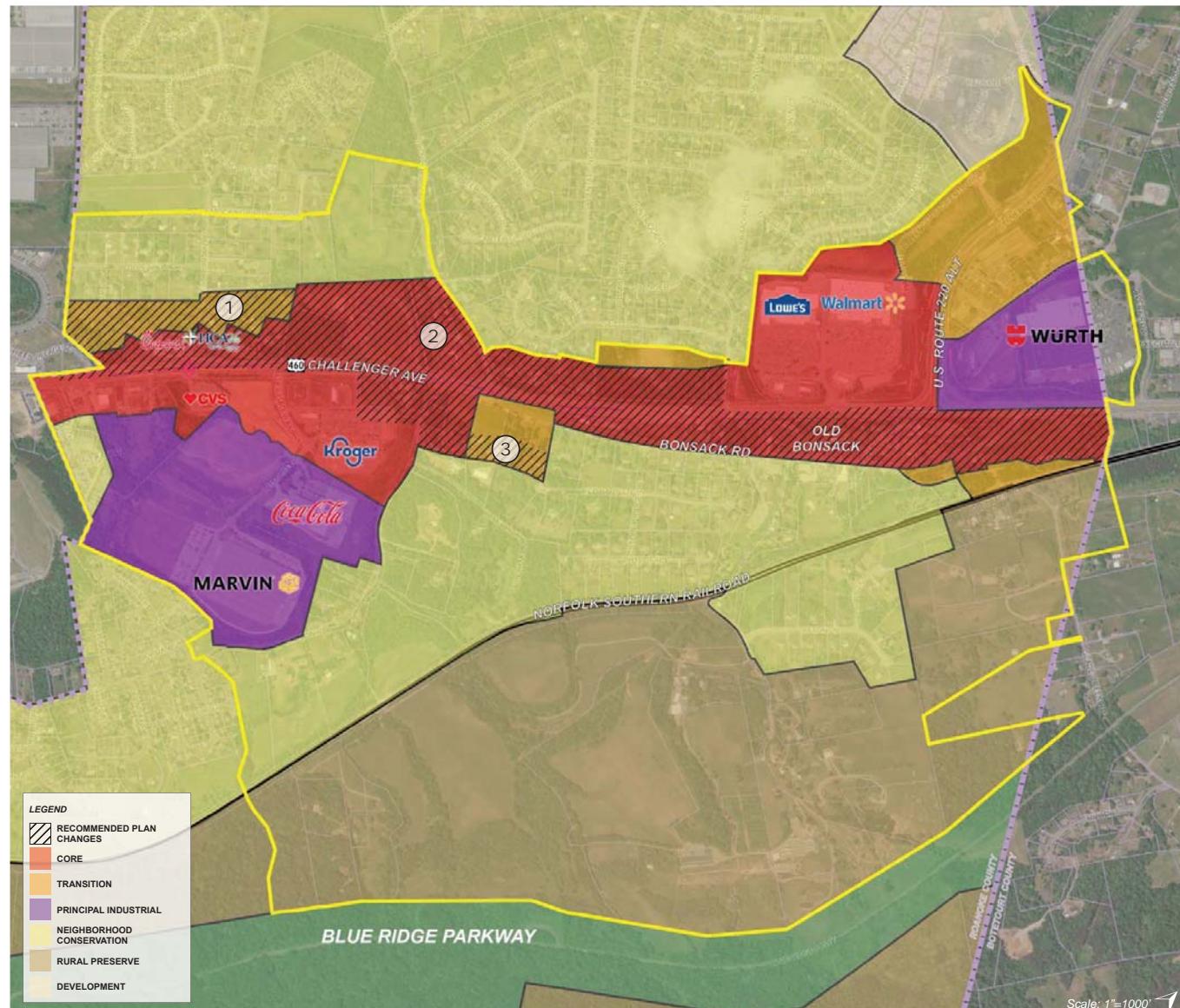
Future Land Use Map

The recommended opportunities for the County to update its Future Land Use Map are shown at the right with hatching to identify the extent of those changes.

Area 1: In the western portion of the corridor, an expansion of the Transition area to the parcels behind the Route 460 commercial Core properties is recommended. This will allow for transition uses that extend the commercial and higher density residential without disruption to the neighborhoods to the west and north of the area.

Area 2: With large parcels and frontage along the Route 460 right-of-way, this highly visible area is envisioned as an appropriate location for Core uses. This use type can take advantage of VDOT planned improvements and the improvements recommended in this study to expand the retail and commercial opportunities for the Bonsack community.

Area 3: Adjacent to an existing Transition Area, an expansion of the Transition area is recommended. This will create a buffer between the existing neighborhoods and any future commercial uses.



X. Railroad Crossings

Current Concerns & Conditions

In order to access large areas across the railroad that are currently undeveloped or underdeveloped, safe, reliable access needs to be provided. Currently, there are two at-grade railroad crossings in Roanoke County which provide access to these areas. Both are substandard in width and have many geometric deficiencies. In the short term, signing, striping, clearing, and pavement widening can help positively guide drivers across the existing crossings. These options, however, will not solve larger safety issues from poor crossing angles and other substandard geometry, conflicts with trains, and potential flooding of Glade Creek. For reliable long-term access for denser development, grade separation is recommended.

The Railroad Crossing Study completed was limited to existing railroad crossings, which constrains the alternatives as both have numerous residences nearby. A new crossing could avoid impacts to structures and optimize access and length of crossing and depending on the connecting road may need significant road improvements, such as if a crossing were added that connects to Carson Road.

A grade-separated railroad crossing is supported by several comments received during the public comment period of this study. Comments indicate that trains block road access for residents on a frequent basis. In addition to inconvenience, trains blocking tracks has fire and rescue response implications.

In October 2022, Roanoke County utilized the information compiled for both railroad crossings to submit a planning grant titled, "Planning Grant for a Bonsack Area Railroad Crossing Elimination Study". If funded, the study will set a foundation to apply for construction funding to build a bridge over the railroad tracks in the future.



Glade Creek Road Railroad Crossing



Layman Road Railroad Crossing

Glade Creek Road Crossing

The first crossing is along Glade Creek Road. The existing road is accessed from Bonsack Road and parallels Glade Creek Road and the railroad in the floodplain before crossing both with a series of sharp curves. Since most of the road is running parallel to and within the floodplain, an alternative alignment that provides the shortest crossing of the floodplain possible is preferred. This can be achieved and even furthered by realigning Bonsack Road to tie into the new alignment, giving the realigned Glade Creek Road a full access point to Route 460. This avoids routing development traffic through Old Bonsack and would likely have a shorter bridge than the Layman Road option but would be further from developable land and would require additional road work.



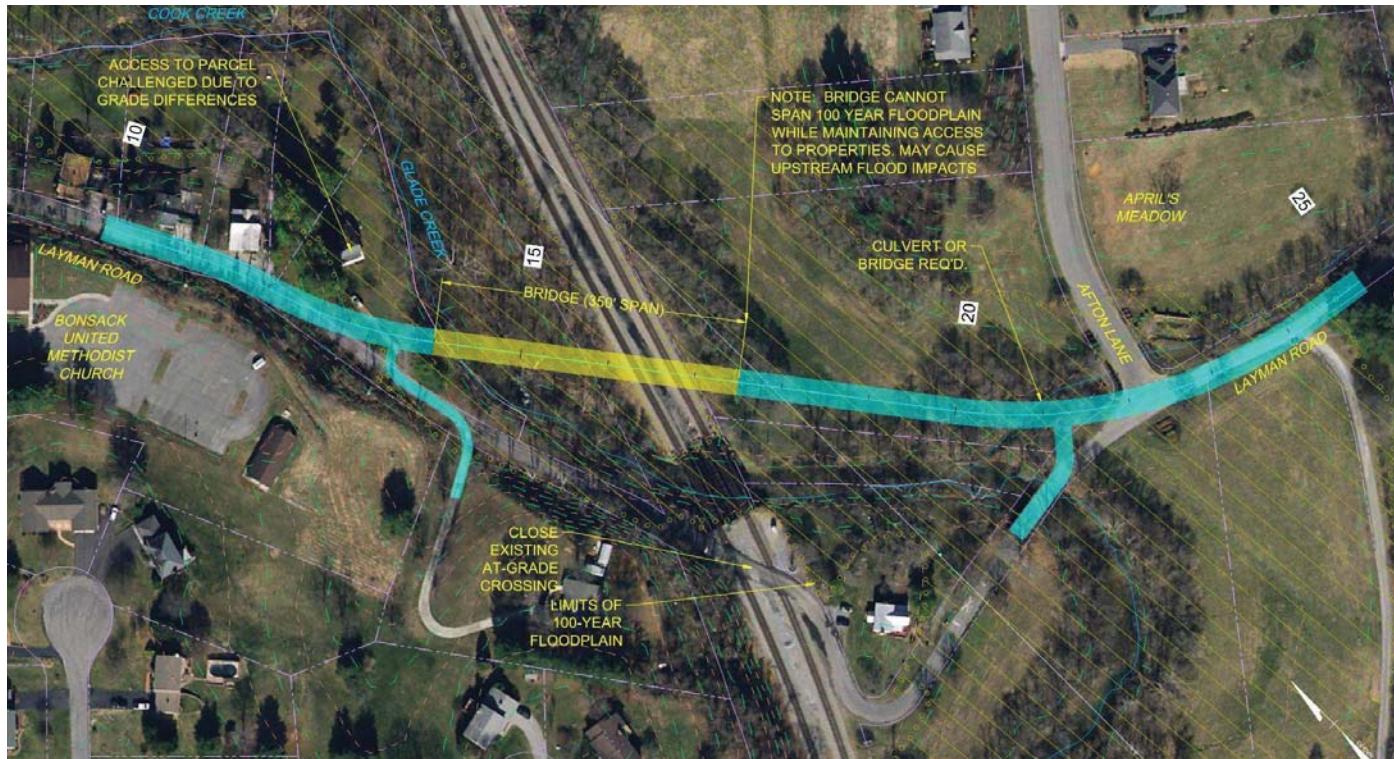
Layman Road Crossing

The second crossing studied along Layman Road provides the most direct access to the best available developable land. To access Layman Road, however, requires driving through historic Old Bonsack, where roads are substandard in width and many historic properties are directly adjacent to the road, limiting opportunities to support additional traffic. The existing road also crosses the floodplain and railroad track at an angle with multiple sharp turns. The road will need to be realigned to safely handle larger traffic volumes, but due to adjacent historic properties, there is no way to correct the angle. To prevent flooding to upstream properties, this will require a longer bridge, which limits the ability to connect existing driveways to the realigned road, further increasing cost.

Creating a grade-separated railroad crossing to eliminate the possibility of train and vehicle collisions is the most expensive traffic improvement considered in this study. It is recommended that only one grade-separated crossing be built because of the financial cost.

Layman Road provides access to more property than does Glade Creek Road. Agricultural activities, along with future potential land use options, are reasons that Layman Road is the preferred project to consider for a grade-separated crossing.

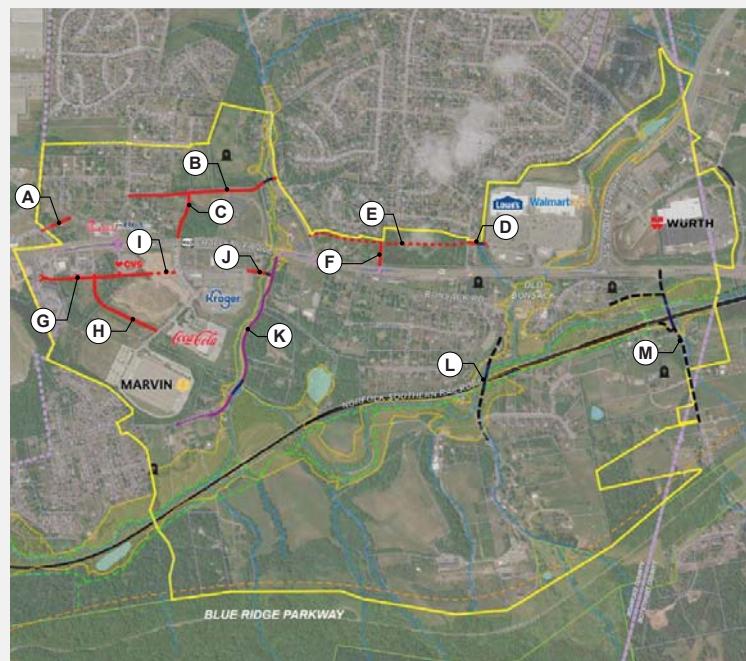
The Layman Road crossing also has a history of actual blockages due to train backups on the tracks. This is a dangerous scenario from an emergency services standpoint, furthering the benefit of a grade-separated crossing here.



XI. Recommended Priority of Improvement Options

Each of the potential improvement projects described in this report have different capacity to improve the quality of life in the Bonsack community. Each has the potential to improve safety and convenience, but each comes with different costs to implement. Recognizing the need to identify opportunities in a context that can be evaluated for prioritization by Roanoke County, the matrix to the right identifies some of the cost and benefit expectations of each of the improvements noted in this report.

Note, the cost, safety, and congestion/convenience scales are relative to one another, and do not reflect real dollars or expected level of service improvements, respectively.

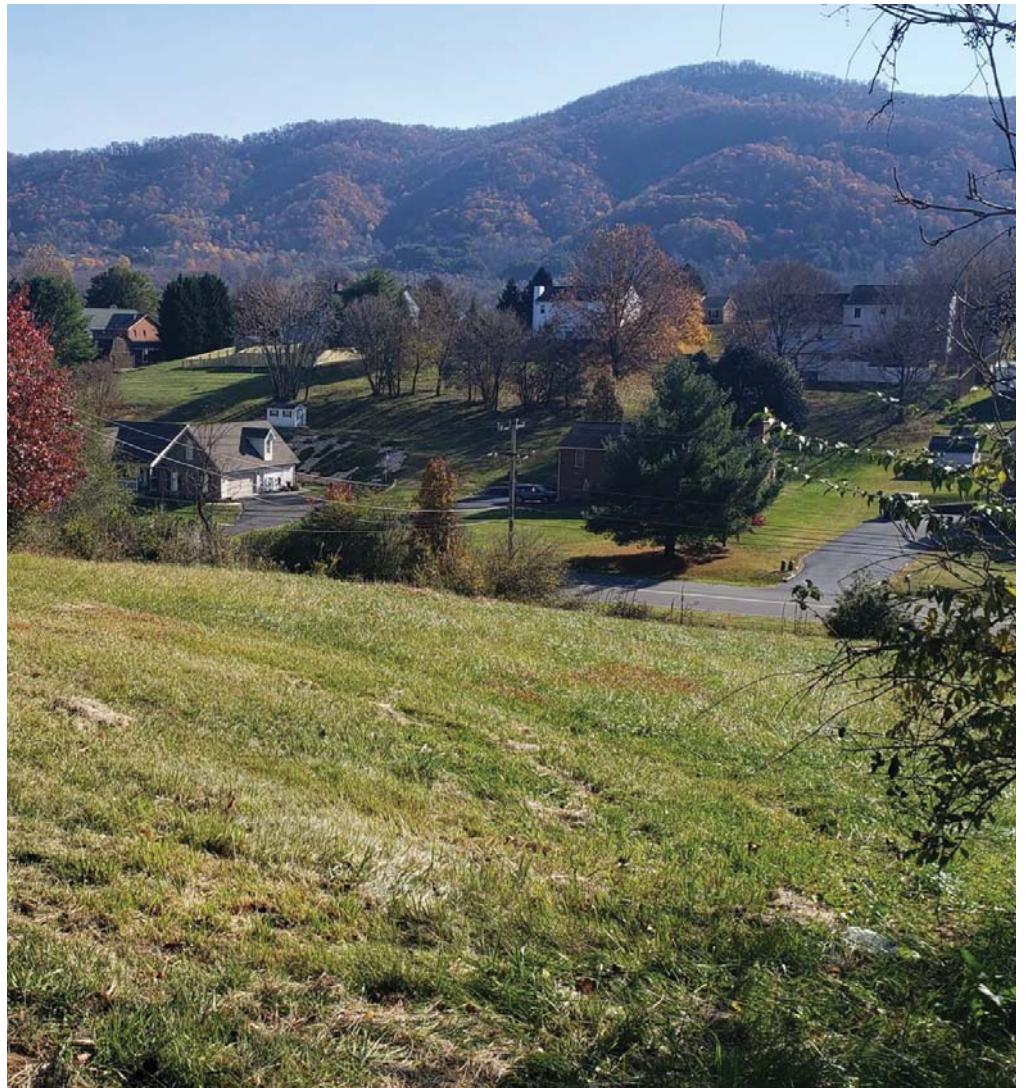


U.S. ROUTE 460 LAND USE AND CONNECTIVITY STUDY

Opportunity	Improvement	Description	Safety Impact	Congestion/Convenience Impact	Mitigate New Development	Pedestrian/ Bicycle Accommodations	Level of Public Interest	Cost	Recommended Priority
Carson Road	K	Carson Road Safety Improvements	High	High	No	Yes, Where Feasible	High	High	High
Access to East of Railroad	L	Layman Road Grade-Separated Railroad Crossing and Roadway Realignment	High	High	Yes	Yes, Where Feasible	Medium	High	High
Access to East of Railroad	M	Glade Creek Road Grade-Separated Railroad Crossing and Connection to Route 460	High	High	Yes	Yes, Where Feasible	Medium	High	High
Greenway	N	Glade Creek Greenway Extension Generally along Glade Creek	High for Pedestrians and Bicyclists	Medium	No	N/A	High	High	High
Blue Hills to East Ruritan	A	Trail Drive to Blue Hills Village Drive connection	Medium	High	Yes	Yes, Where Feasible	Medium	Medium	High
Blue Hills to East Ruritan	B	West Ruritan Road to East Ruritan Road connection	Medium	High	Yes	Yes, Where Feasible	Medium	High	Medium
Valley Gateway	G	Evan Lane to CVS Private Driveway	Medium	High	Yes	Yes, Where Feasible	High	High	Medium
East Ruritan to Walmart	E	East Ruritan Road to Huntridge Drive (Optional)	Medium	High	Yes	Yes, Where Feasible	Low	High	Medium
Valley Gateway	H	Route 460/Trail Drive Intersection to Integrity Drive	Medium	High	Yes	Yes, Where Feasible	High	High	Medium
Valley Gateway	I	CVS Private Driveway to Valley Gateway Boulevard (Optional)	Medium	High	Yes	Yes, Where Feasible	Medium	Medium	Medium
Blue Hills to East Ruritan	C	Route 460/Valley Gateway Intersection to "B"	Medium	Medium	Yes	Yes, Where Feasible	High	Medium	Medium
East Ruritan to Walmart	F	Country Corner crossover to "E"	Medium	Medium	Yes	Yes, Where Feasible	Low	Medium	Medium
East Ruritan to Walmart	D	Huntridge Road to Lowe's/Walmart Parking Lot	Low	High	No	Yes, Where Feasible	Medium	High	Low
Valley Gateway	J	Kroger Parking Lot to Carson Road	Low	Medium	No	Yes, Where Feasible	High	High	Low

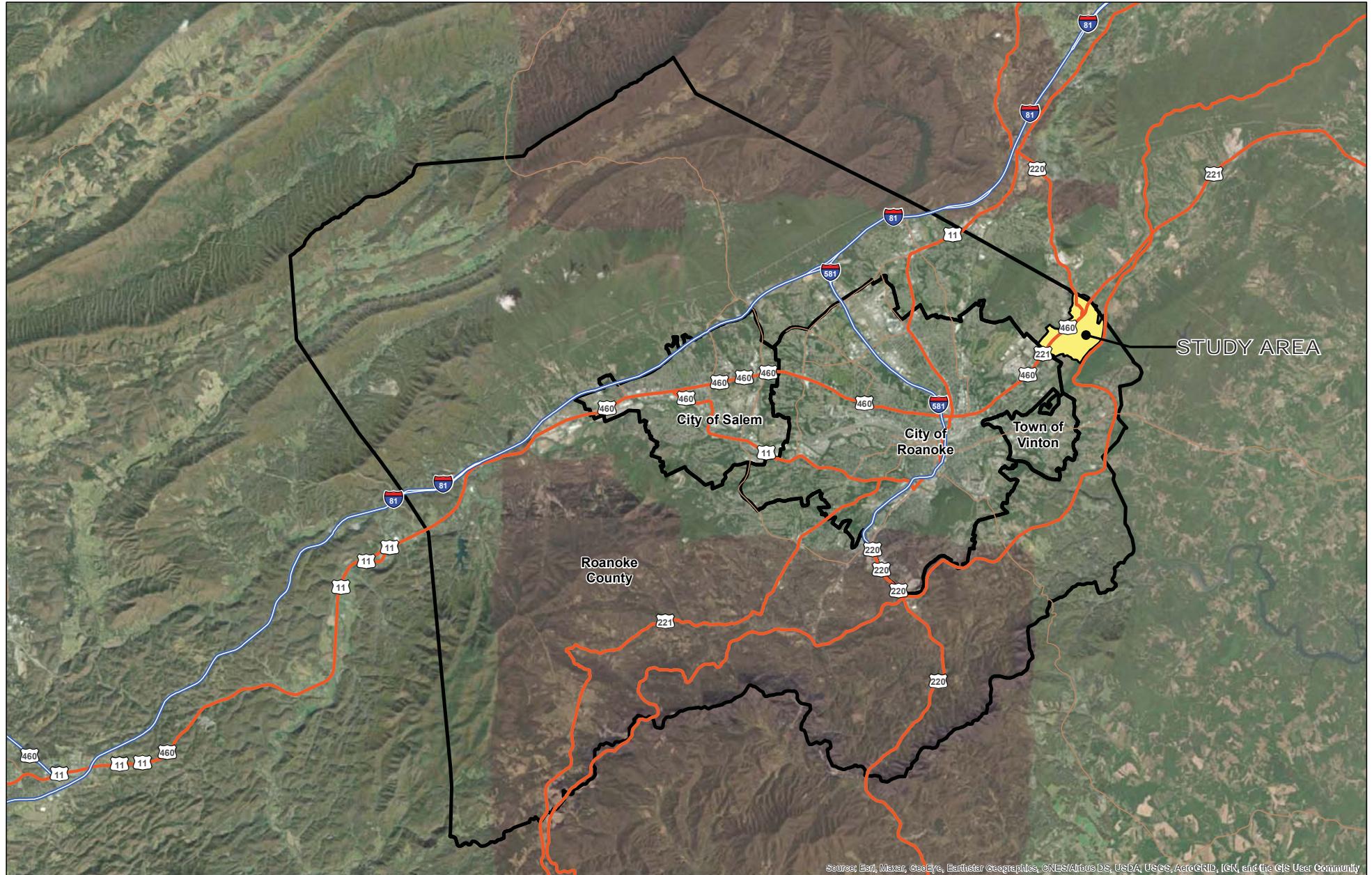
XI. Appendices

I.	Appendix A - Roanoke County Map	59
II.	Appendix B - Study Area Map	61
III.	Appendix C- Railroad Crossing Study	63
IV.	Appendix D - Public Engagement Results - Survey One	81
V.	Appendix E - Public Engagement Results - Survey Two	114
VI.	Appendix F - Public Engagement Results - Survey Three	139



Appendix A

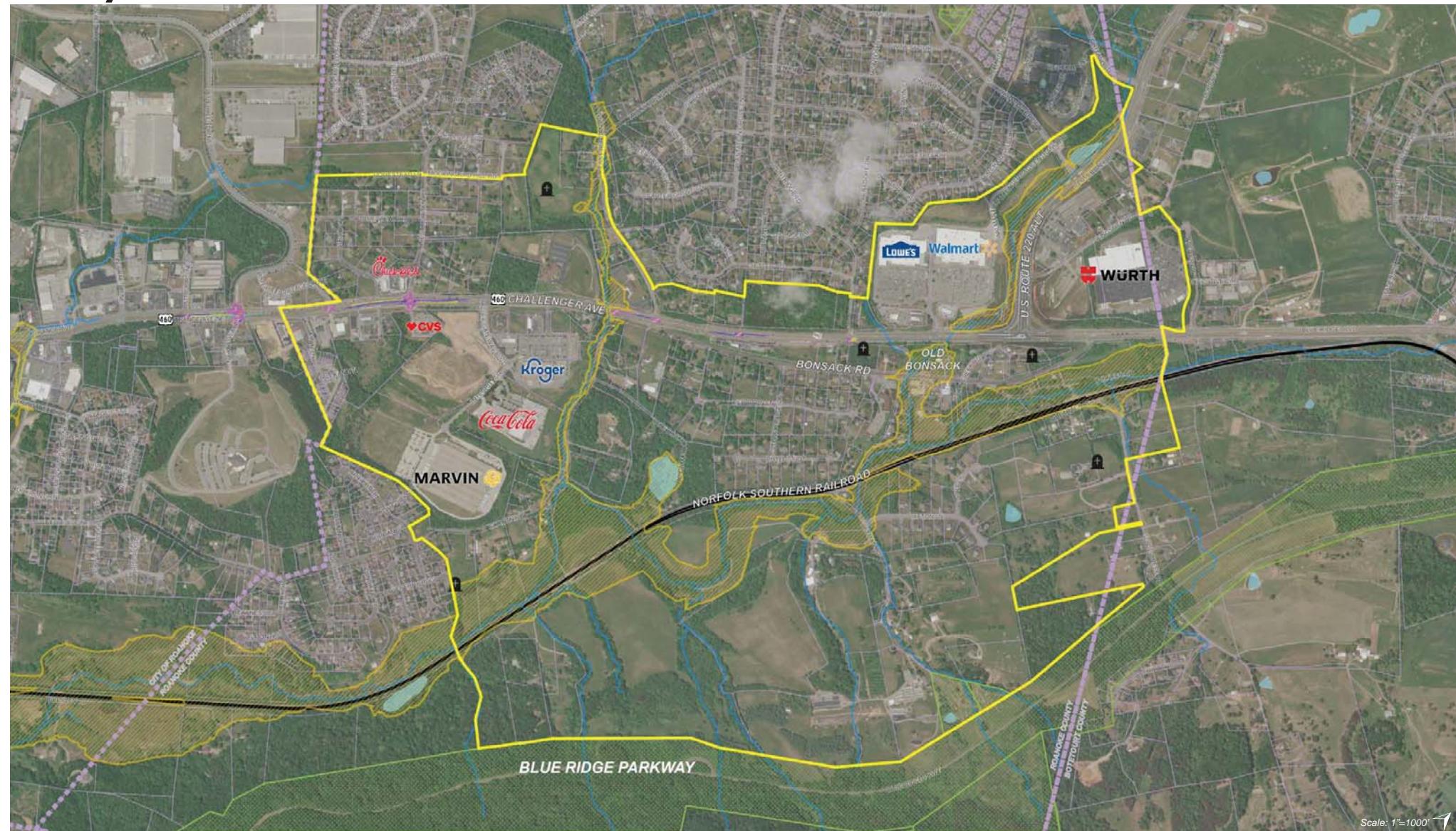
Roanoke County Map



Appendix B

Study Area Map

Study Area



Appendix C

Railroad Crossing Study

PRELIMINARY ENGINEERING REPORT FOR

**US ROUTE 460 ANALYSIS OF
AT-GRADE RAILROAD CROSSINGS**

ROANOKE COUNTY, VA

January 17, 2023

Prepared For:

ROANOKE COUNTY DEPARTMENT OF PLANNING

c/o Megan G. Cronise, AICP, Transportation Planning Administrator



U.S. ROUTE 460 LAND USE AND CONNECTIVITY STUDY

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ROANOKE COUNTY, VA

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January 17, 2023

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY.....	1
2. INTRODUCTION.....	1
3. RAILROAD CROSSING REQUIREMENTS.....	2
4. LAYMAN ROAD.....	5
4.1 EXISTING CONDITIONS.....	5
4.2 PROPOSED AT-GRADE IMPROVEMENTS.....	8
4.3 GRADE SEPARATION RECOMMENDATIONS.....	9
5. GLADE CREEK ROAD	10
5.1 EXISTING CONDITIONS.....	10
5.2 PROPOSED IMPROVEMENTS	12
5.3 GRADE SEPARATION RECOMMENDATIONS	13
6. APPENDIX A: PLAN VIEW EXHIBITS	15
7. APPENDIX B: U.S. DOT CROSSING INVENTORY FORMS	21

1. EXECUTIVE SUMMARY

This report examines ways to improve two at-grade crossings of a railroad parallel to US Route 460 (Challenger Avenue) in Roanoke County, Virginia, in accordance with state and federal guidelines. The first crossing at Layman Road has significant sight distance and geometric issues and is substandard in width. Signage, pavement widening, clearing of vegetation, and regrading are recommended to mitigate these issues. The second crossing at Glade Creek Road has horizontal deficiencies that can be supplemented with signage and striping. Both crossings have hazards within the clear zone that could benefit from improved warning signage and barriers.

Current traffic volumes do not justify grade separation, but development east of the railroad may prompt grade separation. Glade Creek Road is more viable to grade separate. If traffic volumes increase, connecting Layman Road to Glade Creek Road and diverting all traffic to Glade Creek Road is preferred. Should traffic volumes increase substantially due to development east of the railroad tracks, other intersections that can support higher traffic volumes should be examined.

2. INTRODUCTION

In Roanoke County, between the City of Roanoke and Botetourt County, lies a segment of US Route 460 which roughly parallels Glade Creek and a Norfolk Southern railroad. Currently, there are two public at-grade crossings of the railroad in Roanoke County at Layman Road and Glade Creek Road. As the railroad and Glade Creek are very close together, they lie at the bottom of a valley. This leaves a large developable area between the railroad and a series of mountain ridges to the east, roughly bounded by the Blue Ridge Parkway. This area is currently occupied by a few dozen homes and agricultural uses. Consequently, the existing traffic volumes at the railroad crossings is low. Desires to develop east of the railroad, however, have prompted an examination of both crossings.

At-grade railroad crossings provide several challenges to development, and development similarly causes issues with train operations. At-grade crossings, especially those with frequent train use, require temporary closures that can cause traffic delays. In emergency situations, these delays can lead to excess property damage and loss of life when compared to situations without at-grade crossings. If traffic is not properly controlled at crossings, conflicts between vehicles and trains can arise. While at grade crossings account for less than 0.1% of motor vehicle collisions, they account for 0.8% of fatalities. Almost 10% of crashes between cars and trains result in fatalities [Railroad-Highway Grade Crossing Handbook]. Incidents become more severe as speeds increase, and incident frequency increases with volume of vehicles and trains. Incidents can cause significant delay to freight and passenger rail networks and hundreds of thousands of dollars in economic losses per incident, depending on the injuries of those involved and the delay incurred to the train and to other vehicles that can no longer use the crossing. Per US DOT crossing inventory forms, along this stretch of the railroad, train speeds can exceed 50 miles per hour. As such, increased traffic volumes due to development must be balanced with safety and operations.

This report focuses on what changes can be made to the crossings to improve current conditions and support moderate development and increases in traffic. At-grade railroad crossings require specific signage, striping, visibility, and have ideal crossing conditions that can improve safety. The primary governing documents are the Railroad-Highway Grade Crossing Handbook (Second Edition), published by the Federal Highway Administration (FHWA), and the Manual on Uniform Traffic Control Devices (MUTCD), published by the American Association of State Highway Officials (AASHTO). In addition to the minimum requirements, improving roadway geometric deficiencies and other safety concerns is also explored. Requirements and other recommended improvement techniques are discussed in the next section. In addition, the feasibility of grade separation is examined at both crossings.

3. RAILROAD CROSSING REQUIREMENTS

Railroad crossings have different requirements depending on the type of crossing, rail volumes, traffic volumes, speeds, and a variety of other factors. This report is focused on at-grade vehicular crossings of railroads and what can be done to improve crossings to meet or exceed requirements. Grade separation is mentioned but is not fully explored. As discussed later in this document, many of the basic requirements are already met, and so supplemental additional signage are the primary changes, along with geometric improvements where feasible.

FHWA has specific requirements for highway-railway grade crossings. The Railroad-Highway Grade Crossing Handbook (Second Edition) is the primary document for crossings. VDOT generally references this document as well as a few supplemental requirements; for example, VDOT requires a 22' minimum clear zone between highways and railways. It includes a history of railroad crossing, methods to estimating collisions, and recommendations for improvements among other information. Removing at-grade rail crossings is always the first recommendation, followed by grade separation and highway and railroad relocation, but all are often not cost effective, especially for low volume existing crossings. As such, other improvements to the at-grade crossing should be explored.

The primary recommendation to improve safety for at-grade crossings in the Railroad-Highway Grade Crossing Handbook is through MUTCD signage, striping, and signals. As such, most of this section discusses MUTCD improvements. The crossings discussed later in this document are already compliant with most of the requirements. Additional signing and striping improvements beyond what is required, however, are recommended throughout this document to improve sight distance and other factors that impact safety of at-grade crossings.

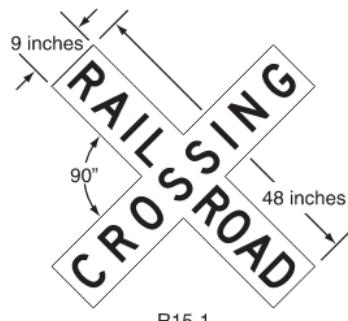


Figure 1 – MUTCD R15-1 Crossbuck Sign

Chapter 8 of the MUTCD discusses railroad crossings in depth. Minimum standards require crossbuck signs, with the number of tracks included if there are not automatic gates. Both crossings have gates but providing the number of tracks as a supplemental plaque is recommended. Where geometry is inadequate for proper sight distance, a supplemental crossbuck assembly shall be provided on the left-hand side of the highway.



Figure 2 – MUTCD R10-1 Advance Crossing Warning Sign

Grade crossing advance warning signs are required on all roads, except for on the minor road at T-intersections where the major road is less than 100' away, on low-volume, low-speed highways over minor spurs or infrequently used tracks, and where active grade crossing traffic control devices are in use. While these roads are low-volume, speeds are not posted and over 10 trains per day use each of these crossings, so advanced warning is required. Additional signage is required for various conditions, such as adjacent geometry, ground clearance, and information about trains. Advanced warning signs must be placed to give drivers time to read and react to the condition.

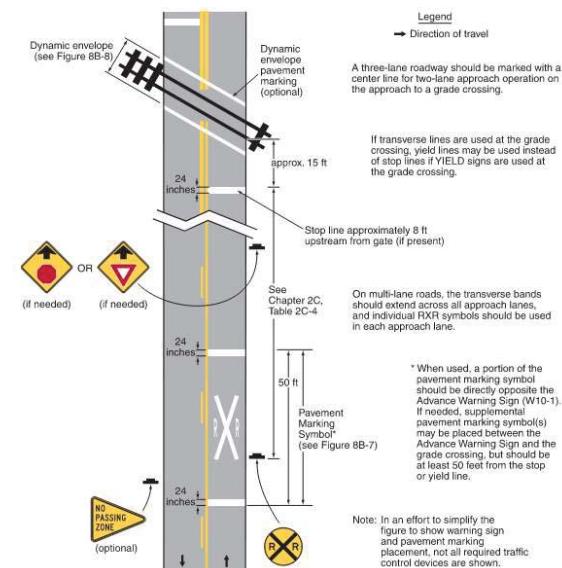


Figure 3 – Example Pavement Marking and Signing (per MUTCD)

In addition to signage, pavement markings are required except where speeds are less than 40 mph and in urban areas, when supported by an engineering study. Nonetheless, pavement markings provide another way to improve safety of at-grade crossings for minimal costs. The primary pavement markings are grade crossing pavement markings in advance of the crossing, a stop bar or yield lines at the crossing gate, and optionally centerline markings and dynamic envelope markings.

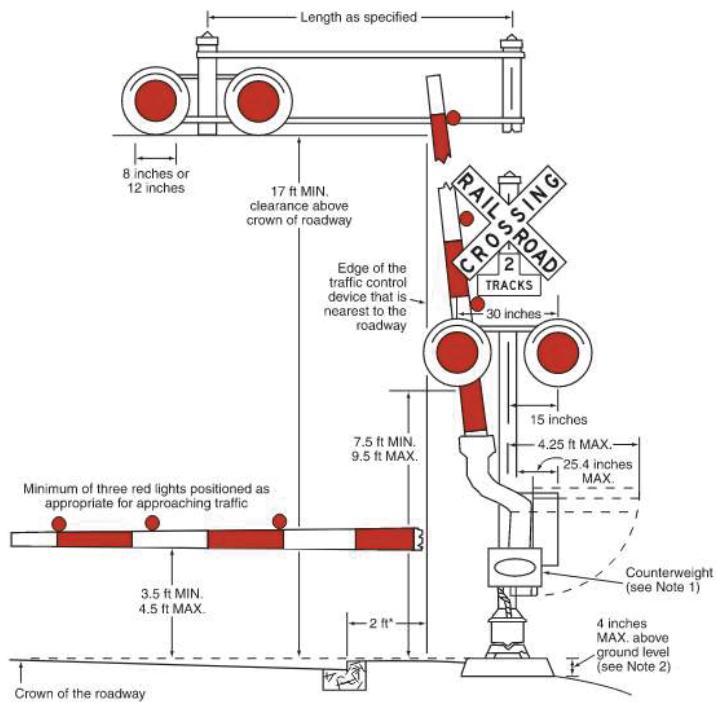


Figure 4 – Example Railroad Flashing-Light Signal

Flashing light signals are often used to improve traffic control and provide an automated warning to improve driver compliance and safety at railroad crossings. A crossbuck sign with a plaque specifying the number of tracks is required. Signals shall be oriented towards traffic, and where two-way traffic is present lights must be provided on both sides of the signal. Gate arms are used to prevent traffic from entering.

4. LAYMAN ROAD

Layman Road serves as one of two railroad crossings adjacent to Glade Creek north of the City of Roanoke and south of Botetourt County. Layman Road connects the community of Bonsack to a mix of agricultural and single-family residential uses to the east across both the railroad and Glade Creek. In the April's Meadow neighborhood across the tracks there are approximately twenty residences, with at least fifteen other structures consisting of residences, barns, and other uses related to agriculture. There are no other vehicular connections across the railroad that can be used by these properties.

4.1 EXISTING CONDITIONS

Currently, Layman Road begins to the west of the railroad crossing at Bonsack Road approximately 1,300 feet from the railroad crossing. Bonsack United Methodist Church abuts the road to the south at the intersection with Bonsack Road, while the banks of Cook Creek are within the clear zone of the road. The intersection and first 200' of the road fall within the 100-year floodplain of Cook Creek. No speed limit is posted. The road width is approximately 16' of asphalt with some spots of minor widening. The road currently handles less than 200 vehicles per day, but truck volumes are approximately 20%.



Figure 5 - Layman Road Looking Eastbound

Between Bonsack and the railroad crossing there are six residences. Half of these residences are listed as historical and four are within 10' of the road. The road elevation decreases throughout, with a large cut slope present to the south. As the road approaches the railroad crossing, Glade Creek is present to the north within the clear zone of the road, with the road entering the 100-year floodplain for a short distance. Striping warning of the railroad crossing is present with an advance railroad warning sign. A crossing arm with an overhead signal and railroad crossbuck is present but is partially obstructed by cut slope and vegetation due to a horizontal curve in the roadway. For more information on the railroad crossing, please see Appendix B: U.S. DOT Crossing Inventory Forms.



Figure 6 - Layman Road Looking Westbound

The crossing itself is outside of the 100-year floodplain and is skewed approximately 45 degrees. Pavement widths are inconsistent, and after crossing each railroad track the road bends sharply to the south to avoid a historic property, closely paralleling the railroad. The road then bends sharply back to the north around an embankment before crossing Glade Creek preceded by object markers where blunt-end guardrail is present. The road continues for approximately 2,000' adjacent to a small stream before terminating, although state maintenance ends 1,000' after the creek crossing. In the eastbound direction between the railroad crossing and the creek crossing, a railroad warning sign and pavement markings are present. At the crossing itself, an arm is present but does not have an overhead assembly and is obscured by vegetation and difficult to see due to the skew of the railroad.

In 2021, VDOT recommended clearing of vegetation, signing, and striping improvements, with a work order scheduled for Fall 2021. These improvements were not observed as of November 2021 but included installation of a 25 mph speed limit near the intersection with Bonsack Road, clearing of vegetation in front of the railroad mast arms, and installation of stop bars where they do not currently exist or are faded. Some of these improvements are echoed in the next section of this report.



Figure 7 – Sharp Bend in Layman Road



Figure 8 - Glade Creek Crossing Looking Westbound

4.2 PROPOSED AT-GRADE IMPROVEMENTS

Layman Road has numerous deficiencies in terms of width and roadside hazards such as buildings and waterways. Proposed improvements listed below are depicted in plan view in Appendix A. Providing a 20' minimum paved width to meet state fire code and guardrail to protect, however, is not feasible due to the right of way needed and potential environmental impacts to adjacent streams. East of the railroad tracks, improved signage is recommended. The railroad warning sign assembly and at-grade railroad crossing pavement markings should be relocated to be at least 300' from the crossing gate to provide space for additional warning signs. A reverse turn sign (W1-3) should be installed 100' from the crossing gate with an advisory speed plaque (W13-2) of 10 mph. A skewed crossing warning sign (W10-12) should be installed another 100' away. Vegetation on the slope preceding the crossing gate should be removed and rock netting or other methods of slope stabilization should be installed. If possible, the slope should be cut back, or a retaining wall should be installed. If possible, the curve halfway between Bonsack Road and the railroad crossing should be cleared of vegetation to improve sight distance around the horizontal curve.

Additional pavement should be installed across the tracks, especially in sharp bends, to ensure that vehicles that attempt to simultaneously cross or larger vehicles such as those with trailers do not leave the pavement and potentially get stuck on the tracks. A 4-inch white pavement marking should be installed parallel to the track at least six feet from the rail to indicate where the dynamic envelope of the train is. Concrete pads or colored pavement could also be installed to provide greater visual contrast to warn drivers, although the skew of the crossing will make installing concrete pads difficult.

Horizontal curves between the railroad crossing and the Glade Creek crossing have radii that are only adequate for 10 to 15 mph. Signs warning the driver of reverse turns (W1-3) and recommending a speed of 10 mph (W13-2) should be installed in both directions and supplemented with chevron warning signs (W1-8). Property impacts and environmental constraints appear less severe here, so pavement should be widened in the curves to allow simultaneous operation of at least passenger vehicles in opposite directions. A total width of 26' is recommended based on American Association of State Highway Transportation Officials Green Book Table 3-26a. The embankment where the road turns sharply north should be regraded to provide sight distance around the curve. Where the road closely parallels the railroad, an offset of at least 22' is required. The road should be relocated to the east onto private property if possible. If that is not feasible, delineators located outside of the dynamic envelope of the train tracks should be installed to discourage vehicles from getting too close to the railroad and potentially entering the dynamic envelope of the train.

While not directly related to the Glade Creek railroad crossing, steep slopes and vertical drops offs are present alongside the creek. Substandard guardrail is only present across the bridge and does not have crashworthy terminals. The guardrail should be extended to meet length of need and have proper terminals. While the height would ideally be adjusted to comply with MASH standards, it appears to be connected directly into the structure. As such, height transitions at the end of all guardrail terminals are also recommended to complement any installed terminals.

In the westbound direction, the skew of the approach makes it difficult for the arm of the crossing gate to fully cover the pavement, and visibility is limited. A skewed crossing (W10-12) warning sign should be installed. The vegetation obscuring the crossing gate should be cleared, and the arm should be extended, especially if additional pavement is added. The crossing gate could also be moved to the tangent section that runs parallel to the railroad tracks. Delineators should be added adjacent to Glade Creek west of the railroad crossings and at Cook Creek, and in front of the adjacent homes if possible.

While these recommendations improve the safety of these curves, the realized benefits in terms of safety and operation are reduced due to the low traffic volumes. Since the existing roadway width is inadequate, is within multiple floodplains, and is very close to private and historic properties, improving the road to make it adequate for larger traffic volumes may be cost prohibitive. If higher volumes are expected to use this crossing, the substandard horizontal geometry and the skew of the crossing will increase the risk of accidents. To provide the greatest safety benefit, realignment and grade separation would be recommended. A potential grade separation alternative is discussed in the next section.

4.3 GRADE SEPARATION RECOMMENDATIONS

Grade separation of the Layman Road crossing would remove the conflict entirely, provide an opportunity to elevate much of the road outside of the floodplain, and correct substandard geometric features. A plan and profile view of a potential grade separation alternative is available in Appendix A. The recommended alignment projects from a horizontal curve just outside of the floodplain, then crosses Glade Creek and approximately 200' later crosses the railroad. The realignment would reconnect to existing Layman Road near Afton Lane. Due to the skew of the crossing and the presence of a bend in Glade Creek at this location, any potential alignment would require crossing over 1,000' of the 100-year floodplain, unless the alignment instead tied into Afton Lane.

This alternative has some flaws. First, three properties currently access Layman Road within the 100-year floodplain. Elevating the road out of the floodplain as much as possible would make it difficult to maintain access to these three properties. As such, the proposed alternative does not introduce the bridge until right before Glade Creek. To meet stopping sight distance at 25 miles per hour for the vertical curves and maintain at least 23' of clearance over the railroad, however, the road still needs to be elevated significantly where the existing driveways currently tie in. Consequently, one of the two properties west of the railroad tracks will not be able to maintain access and will need to be a full acquisition.

The third property located between the railroad tracks and Glade Creek would require the road to rapidly descend so that a driveway across the existing Glade Creek bridge can tie into the proposed alignment. This would leave the final few hundred feet of the realignment within the 100-year floodplain elevation-wise and would also obstruct much of the existing floodplain and potential lead to upstream flooding.

Grade separation of this segment would not fix geometric deficiencies present to the east. As mentioned previously, the existing road is only 16' wide with houses within 10' of the road. To meet fire code and improve safety, the road should be shifted to the south and widened. This would require a retaining wall along much of the south side of the road and potential relocation of utility poles located on the hill above where the retaining wall would be installed. The road to the west should also be widened and may need similar treatment due to the presence of a stream to the north of the road.

While grade separation would fix many safety issues, the substandard geometry of the entire road beyond the proposed grade separation, impacts to access to adjacent properties, the width of floodplain crossing, and potential upstream flooding impacts makes this a poor candidate for grade separation. Should traffic volumes increase and there are no other alternatives, this option may be viable, but any expansion of development east of the railroad tracks should prioritize finding other crossings and diverting traffic to those other locations.

5. GLADE CREEK ROAD

Glade Creek Road serves as the other railroad crossing adjacent to Glade Creek in Roanoke County north of the City of Roanoke. It connects Bonsack to a large, primarily agricultural area before passing under the Blue Ridge Parkway, where more agricultural land and a small neighborhood are present. Near the railroad tracks is an existing community of numerous historic buildings.

5.1 EXISTING CONDITIONS

Glade Creek Road begins at a skewed intersection with Bonsack Road and parallels Glade Creek. A railroad crossing warning sign with a low ground clearance warning sign is present at the intersection. No posted speed limit is available, but the offset to the creek exceeds 30'. Power lines within a few feet of the edge of pavement are present. This segment continues for 1,000 feet before sharply turning east and crossing Glade Creek. Power lines end after the Glade Creek crossing. The road then sharply turns north for 150' before sharply turning east again to cross the railroad tracks, where it curves up a hill. Prior to the hill, most of the road is within the 100-year floodplain of Glade Creek. Pavement widths are generally greater than 20'. The road serves approximately 300 vehicles per day with 20% truck traffic.



Figure 9 - Glade Creek Road Prior to Sharp Curve and Creek Crossing

In the eastbound direction, a windy road warning sign with a recommended speed of 10 mph is present but sight distance is obstructed by vegetation. A railroad crossing warning sign and striping is present before the first sharp curve and the Glade Creek crossing. The Glade Creek crossing has a barrier across the structure with delineators but no barrier preceding the bridge approaches.



Figure 10 - Glade Creek Road Eastbound Prior to Railroad Crossing

After the road turns north, it parallels the railroad tracks with a gravel shoulder between the facilities. Glade Creek is much closer to this segment of road, with the top of the creek bank within ten feet of the road in some places. As the road curves back east, a railroad crossing gate is present with a crossbuck that does not have the number of tracks being crossed. The road then crosses the railroad almost perpendicularly and gates with crossing arms are present on both sides. The railroad track is a few feet above the road on either side, and due to the presence of the hill to the east a dip is present.

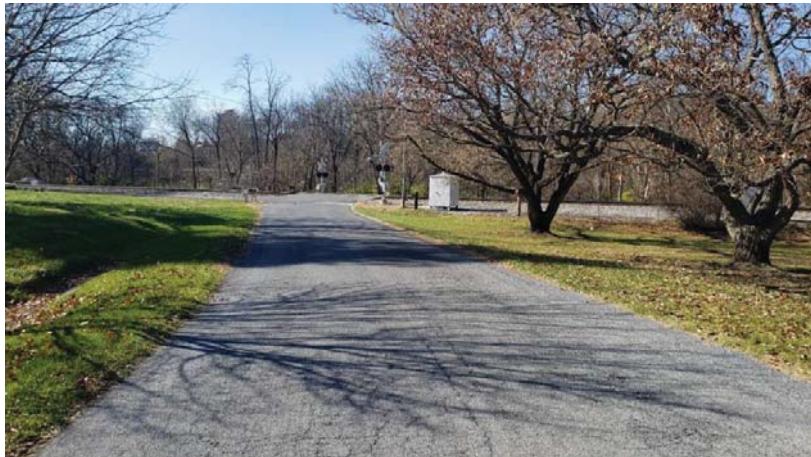


Figure 11 - Glade Creek Road Westbound Prior to Railroad Crossing

In the westbound direction, an advanced railroad crossing warning sign and pavement markings are present, with a windy road railroad crossing located further uphill. A crossing arm is also present at the railroad but does not specify the number of tracks crossed. Conditions east of the railroad tracks such as the bridge and adjacent power lines are as described previously.

5.2 PROPOSED IMPROVEMENTS

The conditions of the Glade Creek Road railroad crossing are significantly better than the Layman Road railroad crossing. Proposed improvements listed below are depicted in plan view in Appendix A. There are few obstructions that impact sight distance. Road widths are adequate to meet fire code, with few steep slopes and embankments adjacent to the road. Road widths are increased in sharp curves and across the railroad tracks to better accommodate simultaneous vehicular travel in both directions. The primary improvements are related to signage. Trees should be trimmed to improve visibility of the winding road warning sign. In both directions, directional arrows (W1-6) should be installed to better guide drivers around the sharp turns. The crossbucks on both railroad crossings need a supplemental plaque telling drivers how many tracks are crossing (R15-2p).

In terms of striping, while a double yellow centerline is not warranted by current traffic volumes, it may be helpful on this road to guide vehicles around curves and across the railroad tracks. Dynamic vehicle envelope striping should be considered as a low-cost alternative to further improve vehicle stopping characteristics. Edge striping delineating the edge of asphalt may also be helpful, especially near the railroad track, to improve visibility of road edges. Raising the pavement of approaches on either side is also recommended to reduce the risk of vehicles bottoming out or getting stuck on the tracks as they are currently elevated above the pavement on either side. Due to inconsistent pavement widths, spot widening may be required to provide consistent lanes in each direction, and additional width should be considered for sharp turns to better accommodate turning trucks.

To improve horizontal geometry, the creek and railroad crossing could be shifted to the north. To the east, the road could bend west out into a field where it first turns east, then cross Glade Creek with a new bridge. Shifting the railroad crossing north could remove some of the sharp horizontal curvature at the railroad crossing as well. This would require a new bridge, significant reconstruction, and property from two historic properties, but would fix many of the geometric deficiencies of the road. This option, however, would keep the road and the crossing within the 100-year floodplain of Glade Creek. Should traffic volumes increase along Layman Road, it may also be prudent to close the Layman Road crossing. Layman Road has substandard geometry, many adjacent properties and structures, and a poor crossing angle which would make it cost prohibitive to improve to standard. As such, diverting all traffic from Layman Road an improved Glade Creek Road crossing through a new road is recommended.

5.3 GRADE SEPARATION RECOMMENDATIONS

Grade separation could be used to reduce conflicts with trains and elevate the road out of the floodplain. A variety of connections could serve this purpose. The first alternative would be to move both the creek crossing and the railroad crossing to the north as mentioned previously and grade separate the crossing by beginning to elevate the realigned Glade Creek Road near where it currently turns to cross Glade Creek. This option is not ideal because it leaves most of the roadway prior to the crossing within the 100-year floodplain. The second alternative is to tee off of Bonsack Road at least 330' from the intersection with US Route 460 (to meet access management standards for 35 mile-per-hour collectors). This would provide initial elevation to keep access across the railroad entirely out of the floodplain but may limit future expansion if traffic volumes from development across the railroad exceed traffic volumes from Bonsack Road. It would also require a skewed crossing to avoid impacts to properties that increases the length of crossing within the floodplain by approximately 200'.

Another alternative could be to prioritize Glade Creek Road over Bonsack Road. A third alternative would tie Glade Creek Road into Challenger Avenue where Bonsack Road currently connects. Bonsack Road would then connect 330' along Glade Creek Road. This option would fix the skew of the current intersection with US Route 460. It would also provide an almost perpendicular crossing of the floodplain but would require the intersection of Glade Creek Road and Bonsack Road to be just within the floodplain. This option would provide a shorter bridge and better opportunities for development to the east of the railroad track.

Other alternatives would look at creating new roadways that would intersect with Challenger Avenue, crossing the floodplain and railroad, and then intersect with Glade Creek Road further to the east. These options are not necessitated today but could be prompted by the need for a signal with US Route 460. Currently, the Bonsack Road intersection is 780' from the signal with Cloverdale Road, while 1,320' would be needed for a signal. Providing full access to the north, however, would require removing full access at either Bonsack Road or Avery Row as 565' is required from each of these intersections and they are less than 1,100' apart today. Creating a four-way intersection at Cloverdale Road is not feasible due to the presence of a cemetery immediately east of the existing intersection.

The fourth alternative would close full access at Avery Row and realign Glade Creek Road from there. A historic structure is located near US Route 460 at this location that may be impacted. The road could then reconnect to Glade Creek Road near the current westbound railroad markings. This would provide a perpendicular crossing to the floodplain and provide access to the east of the railroad but limit access elsewhere along US Route 460.

A fifth alternative would be to create a four-way intersection at Avery Road with the potential to signalize, then cross the floodplain and railroad tracks, wrap around the back of the properties, and

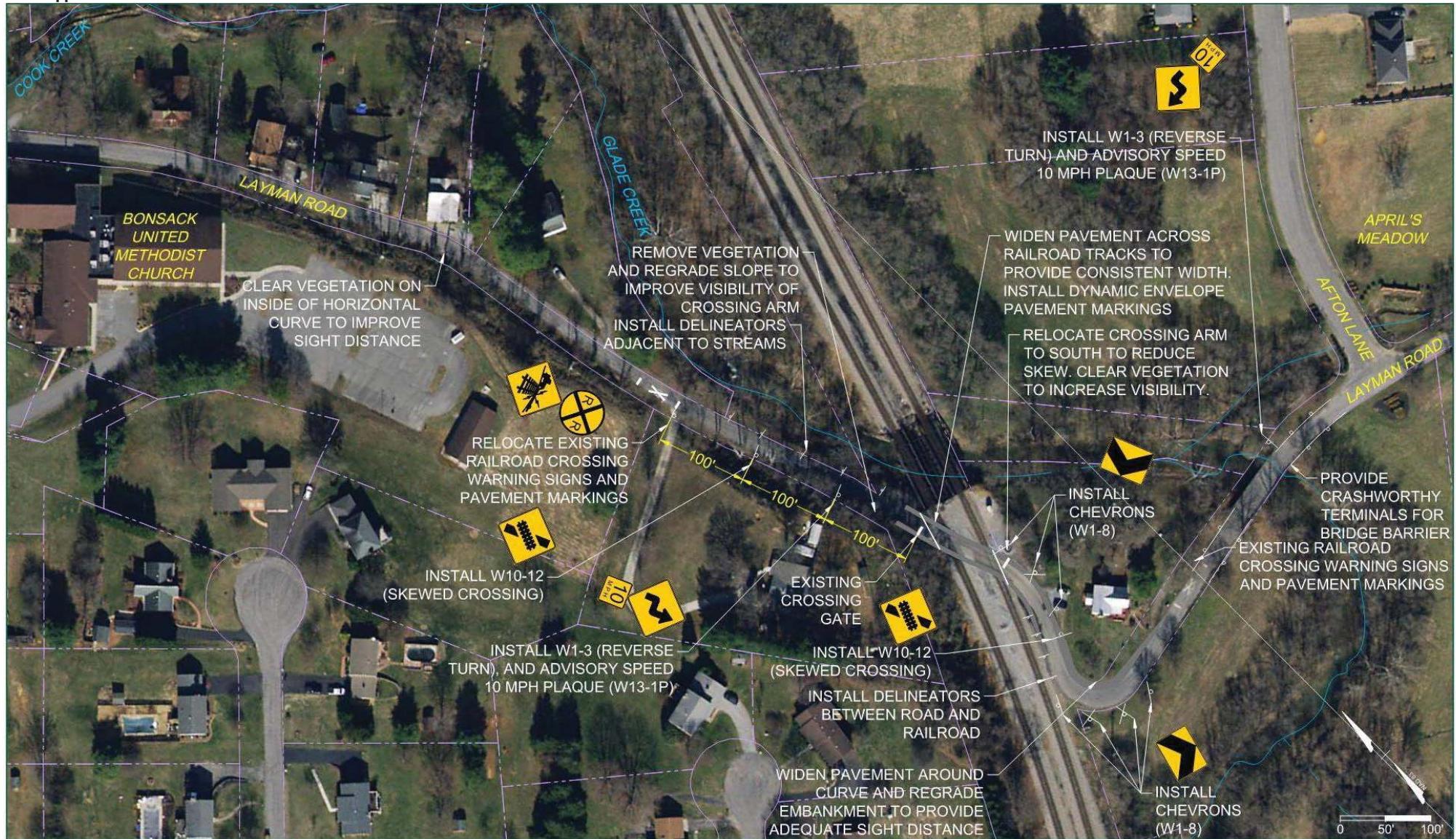
connect further east along Glade Creek Road. This option would have the shortest bridge crossing as the floodplain is very thin in this location, although it would require cutting into a large hill. While this option would require the most right of way, it opens the area east of the railroad track with excellent access, has few structural impacts, and provides the shortest bridge.

Based on the limitations listed above, the impacts, and the benefits, the third alternative should be prioritized if volumes are not expected to require a signal, while the fifth option would best serve larger redevelopment to the east. The fifth alternative is somewhat beyond the purview of this crossing, although it would allow the closure of the railroad crossing, and so this study will focus on the third option and short-term considerations with moderate development.

As mentioned previously, the third alternative is to have Glade Creek Road tie into US Route 460 at the Bonsack Road intersection. For a plan and profile view, please see Appendix A. Bonsack Road would be aligned to intersection 330' along Glade Creek Road, at the edge of the floodplain, to meet access management requirements. The road would then span the floodplain, Glade Creek, and the railroad. Sidetrack Road would require realignment to tie into the new alignment due to vertical differences. If Sidetrack Road could be aligned further north (albeit with greater property impacts), it would be feasible to span almost the entire floodplain with a bridge, minimizing upstream flooding impacts. The existing Glade Creek Road would need a hammerhead turnaround after the Glade Creek bridge to close the existing crossing. This alignment is more viable than Layman and could provide an alternative if a road to the east of the railroad tracks connects Glade Creek Road and Layman Road.

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6. Appendix A: Plan View Exhibits



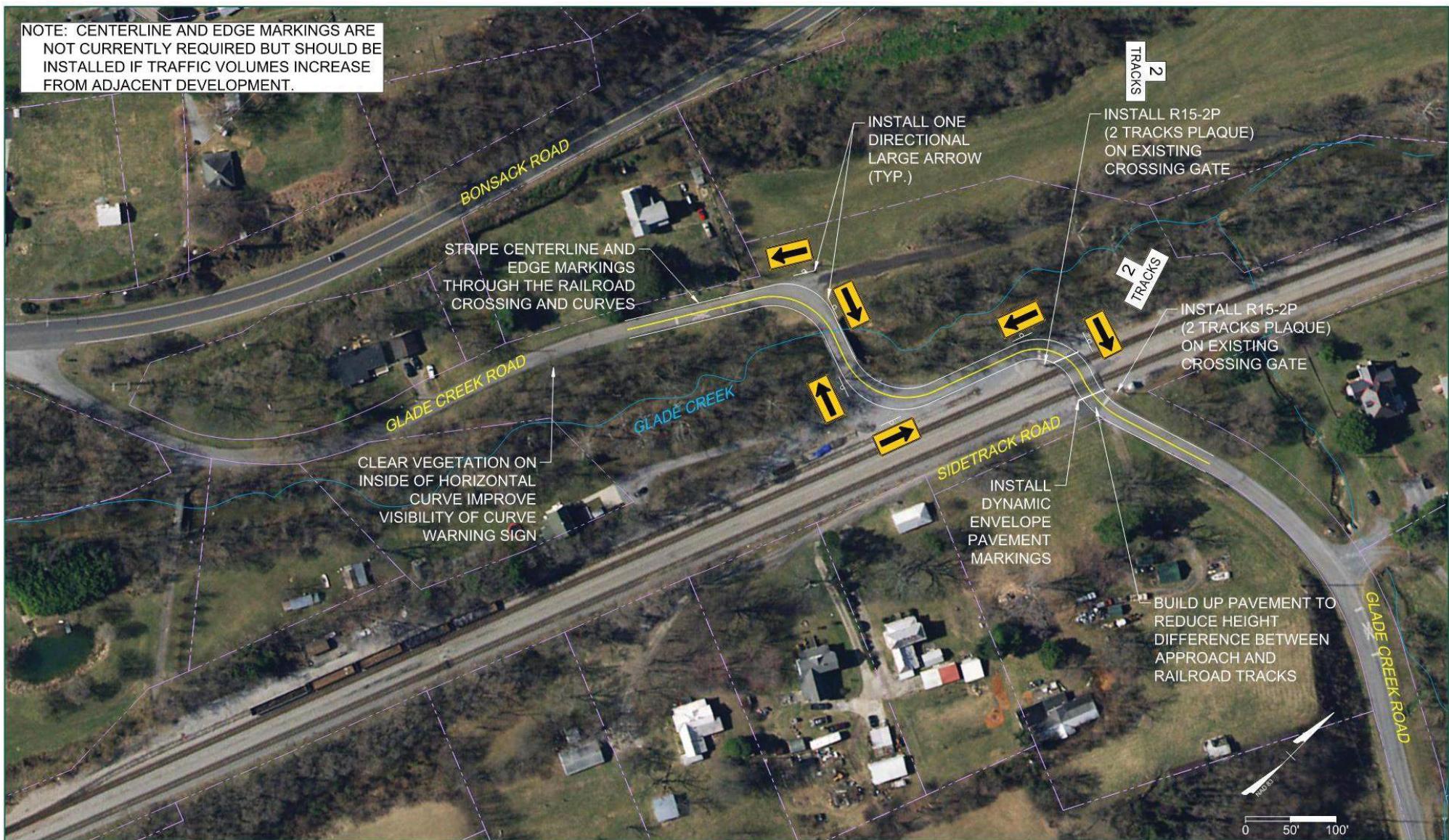
US ROUTE 460 ANALYSIS OF AT-GRADE RAILROAD CROSSINGS

LAYMAN ROAD RAILROAD CROSSING



U.S. ROUTE 460 LAND USE AND CONNECTIVITY STUDY





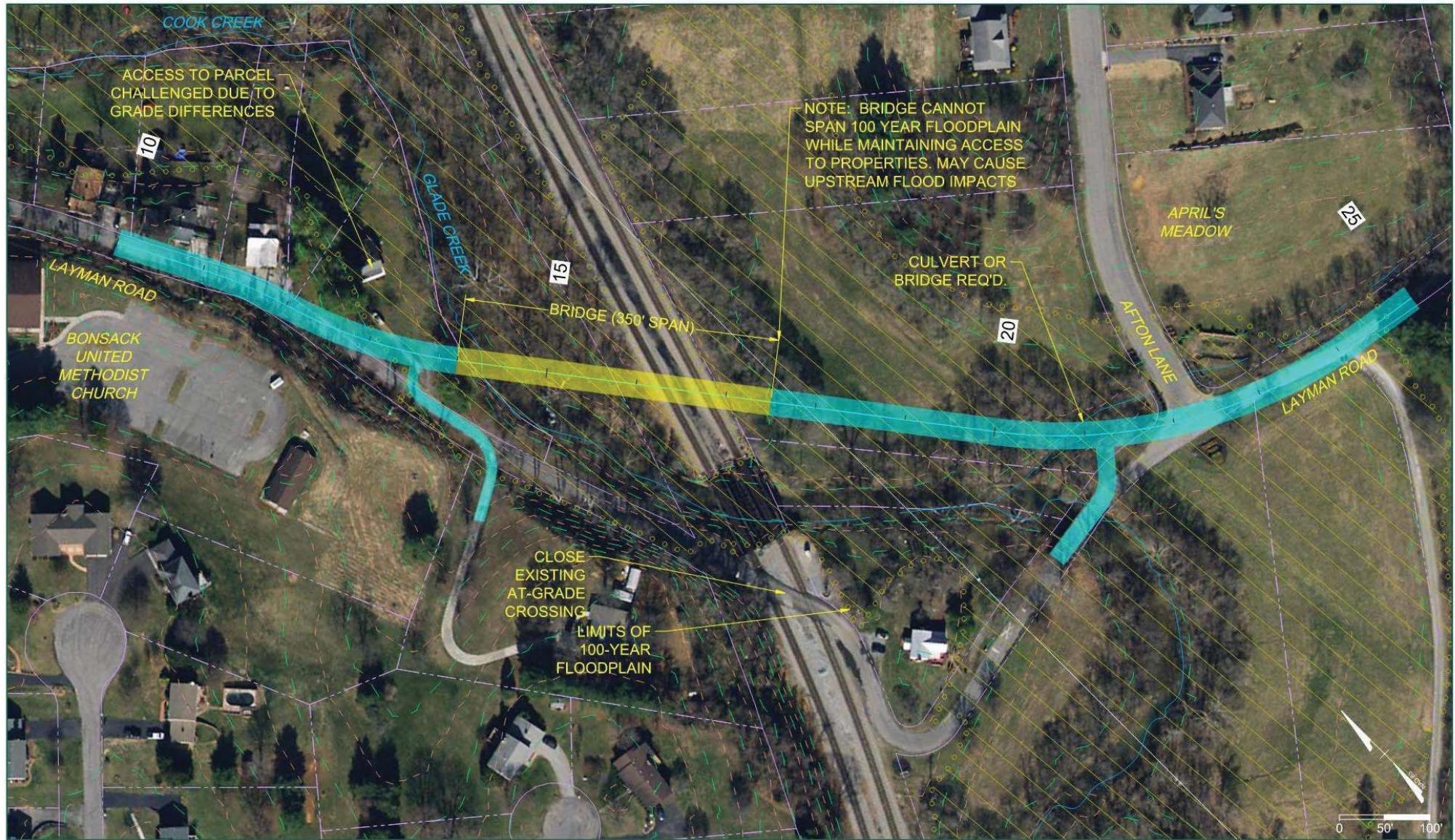
US ROUTE 460 ANALYSIS OF AT-GRADE RAILROAD CROSSINGS

GLADE CREEK ROAD RAILROAD CROSSING
ROANOKE COUNTY, VIRGINIA - MARCH 2022



U.S. ROUTE 460 LAND USE AND CONNECTIVITY STUDY

TIMMONS GROUP
TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS



US ROUTE 460 ANALYSIS OF GRADE SEPARATED RAILROAD CROSSINGS

LAYMAN ROAD RAILROAD CROSSING PLAN VIEW



LAYMAN ROAD

HIGH PT STA = 10+70.47
 HIGH POINT ELEV = 1011.29
 STOPPING SIGHT DISTANCE = 239

PVI STA = 11+00

PVI ELEV = 1012.34
 A.D. = -6.60%
 K = 22.74
 150' VC
 V = 25 MPH

LOW POINT STA = 13+30.87

LOW POINT ELEV = 1004.73

PVI STA = 13+50

PVI ELEV = 1000.84

A.D. = 10.54%
 K = 28.46

300' VC
 V = 25 MPH

HIGH PT STA = 16+32.31
 HIGH POINT ELEV = 1014.43
 STOPPING SIGHT DISTANCE = 197

PVI STA = 16+50

PVI ELEV = 1018.67

A.D. = -13.84%
 K = 18.06

250' VC
 V = 25 MPH

NOTE: BRIDGE CANNOT SPAN
 FLOODPLAIN AND MAINTAIN
 ACCESS TO EXISTING ADJACENT
 PROPERTIES

LOW POINT STA = 22+77.88

LOW POINT ELEV = 978.07

PVI STA = 22+00

PVI ELEV = 975.22

A.D. = 10.40%
 K = 28.85

300' VC
 V = 25 MPH

EVCS = 10+25.00
 BVCE = 1010.84

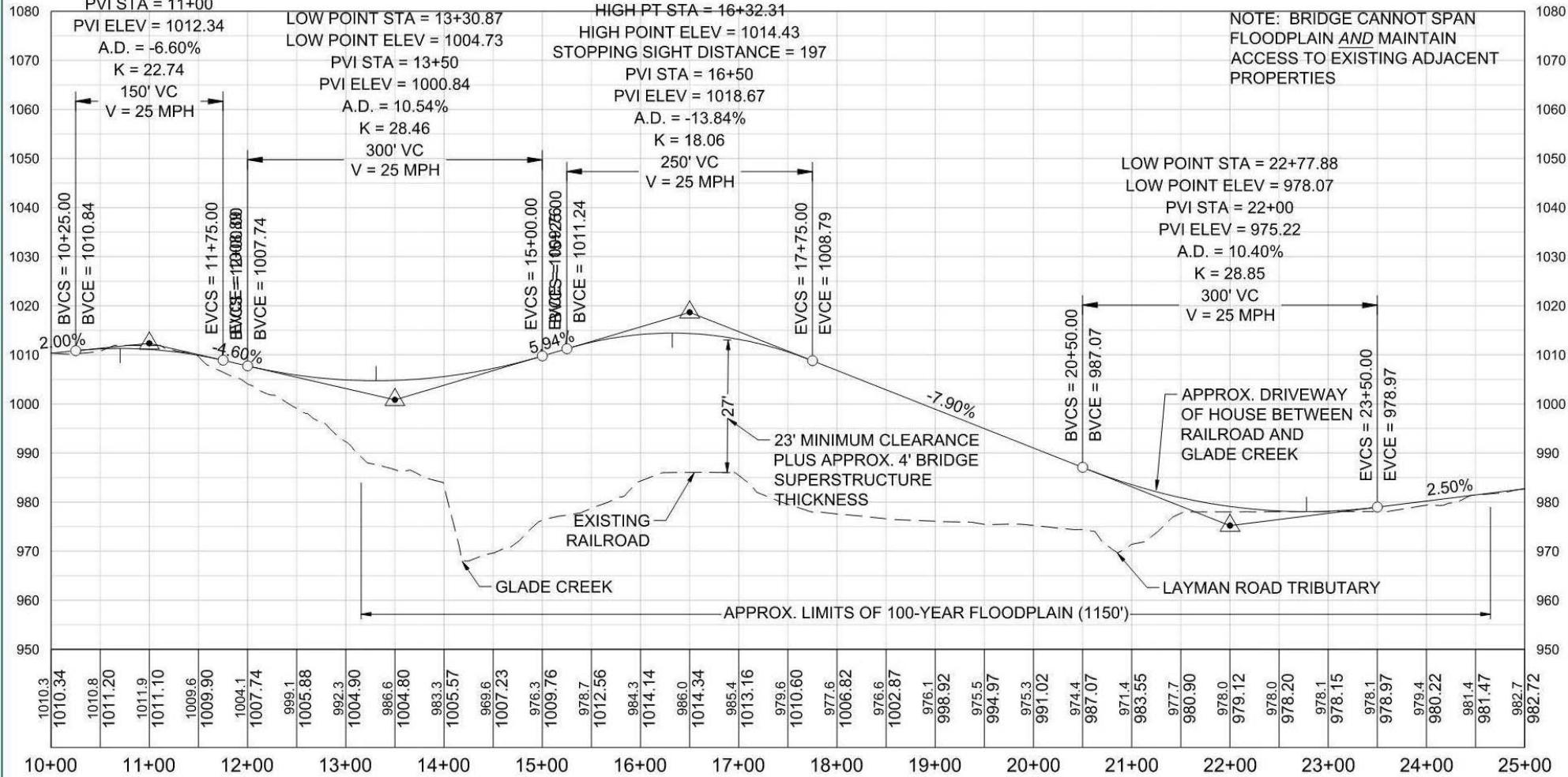
EVCS = 12+00.88
 BVCE = 1007.74

EVCS = 15+00.00
 BVCE = 1002.60

EVCS = 17+75.00
 BVCE = 1008.79

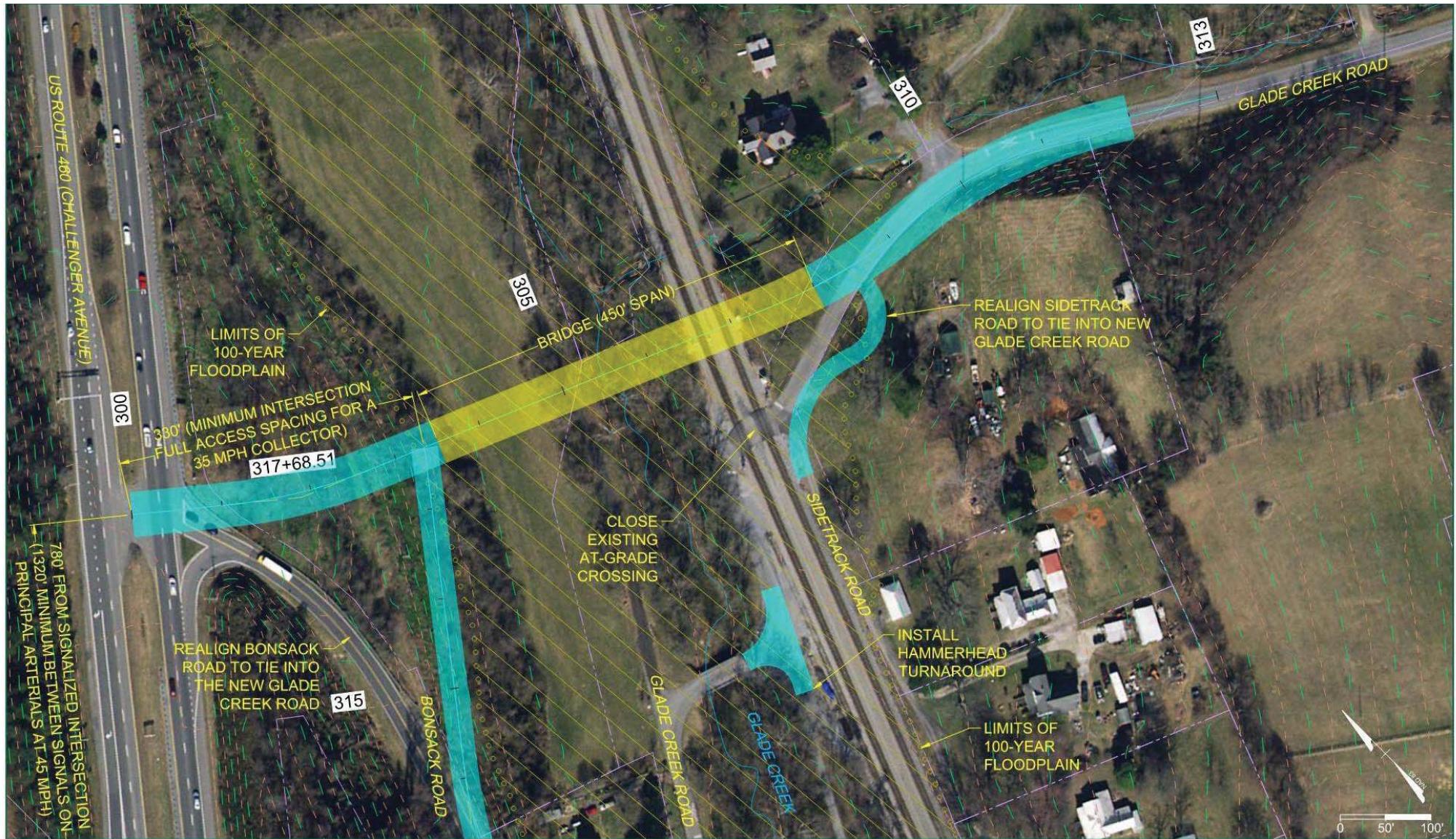
EVCS = 20+50.00
 BVCE = 987.07

EVCS = 23+50.00
 BVCE = 978.97



US ROUTE 460 ANALYSIS OF GRADE SEPARATED RAILROAD CROSSINGS

LAYMAN ROAD RAILROAD CROSSING PROFILE VIEW
 ROANOKE COUNTY, VIRGINIA - JANUARY 2022



US ROUTE 460 ANALYSIS OF GRADE SEPARATED RAILROAD CROSSINGS

GLADE CREEK ROAD RAILROAD CROSSING PLAN VIEW
ROANOKE COUNTY, VIRGINIA - JANUARY 2022

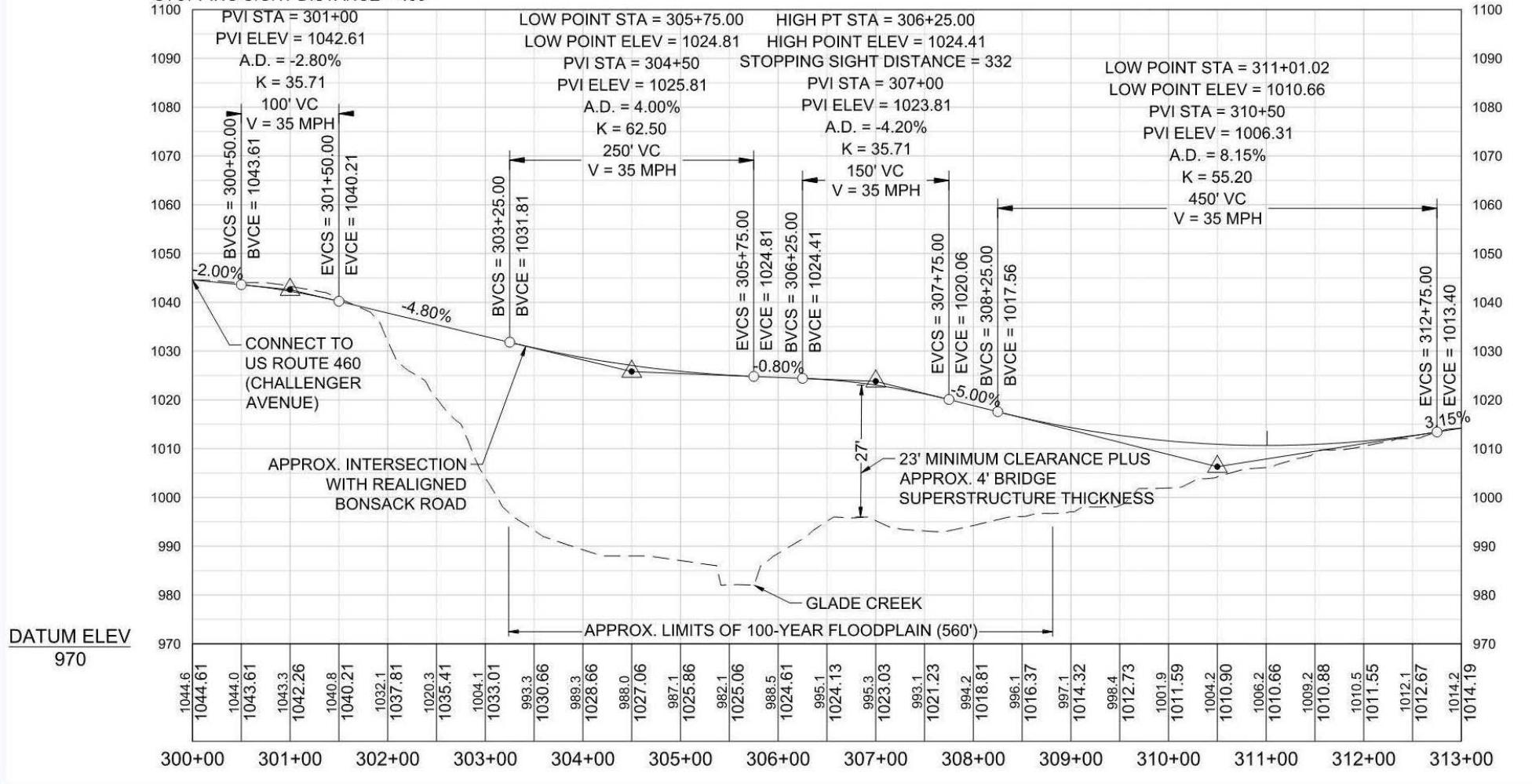
U.S. ROUTE 460 LAND USE AND CONNECTIVITY STUDY

GLADE CREEK ROAD

HIGH PT STA = 300+50.00

HIGH POINT ELEV = 1043.61

STOPPING SIGHT DISTANCE = 435



U.S. ROUTE 460 LAND USE AND CONNECTIVITY STUDY

US ROUTE 460 ANALYSIS OF GRADE SEPARATED RAILROAD CROSSINGS

GLADE CREEK ROAD RAILROAD CROSSING PROFILE VIEW

ROANOKE COUNTY, VIRGINIA - JANUARY 2022

U. S. DOT CROSSING INVENTORY FORM

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

OMB No. 2130-0017

Instructions for the initial reporting of the following types of new or previously unreported crossings: For public highway-rail grade crossings, complete the entire inventory Form. For private highway-rail grade crossings, complete the Header, Parts I and II, and the Submission Information section. For public pathway grade crossings (including pedestrian station grade crossings), complete the Header, Parts I and II, and the Submission Information section. For private pathway grade crossings, complete the Header, Parts I and II, and the Submission Information section. For grade-separated highway-rail or pathway crossings (including pedestrian station crossings), complete the Header, Part I, and the Submission Information section. For changes to existing data, complete the Header, Part I Items 1-3, and the Submission Information section, in addition to the updated data fields. Note: For private crossings only, Part I Item 20 and Part III Item 2.K. are required unless otherwise noted. An asterisk * denotes an optional field.

A. Revision Date (MM/DD/YYYY) 05 / 18 / 2021	B. Reporting Agency <input checked="" type="checkbox"/> Railroad <input type="checkbox"/> Transit	C. Reason for Update (Select only one) <input checked="" type="checkbox"/> Change in New Closed <input type="checkbox"/> No Train <input type="checkbox"/> Quiet Data Crossing Traffic Zone Update	D. DOT Crossing Inventory Number 468556M
<input type="checkbox"/> State	<input type="checkbox"/> Other	<input type="checkbox"/> Re-Open <input type="checkbox"/> Date <input type="checkbox"/> Change in Primary <input type="checkbox"/> Admin. Change Only <input type="checkbox"/> Operating RR Correction	

Part I: Location and Classification Information

1. Primary Operating Railroad Norfolk Southern Railway Company [NS]	2. State VIRGINIA	3. County ROANOKE			
4. City / Municipality <input type="checkbox"/> In <input checked="" type="checkbox"/> Near VINTON	5. Street/Road Name & Block Number LAYMAN ROAD (Street/Road Name)	6. Highway Type & No. SR 606			
7. Do Other Railroads Operate a Separate Track at Crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Specify RR	8. Do Other Railroads Operate Over Your Track at Crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Specify RR	ATK			
9. Railroad Division or Region <input type="checkbox"/> None BLUE RIDGE	10. Railroad Subdivision or District <input type="checkbox"/> None BLUE RIDGE	11. Branch or Line Name <input checked="" type="checkbox"/> None			
12. RR Milepost N 0251.940 (prefix) (nnnn.nnn) (suffix)					
13. Line Segment * N	14. Nearest RR Timetable Station BONSAK	15. Parent RR (if applicable) <input checked="" type="checkbox"/> N/A	16. Crossing Owner (if applicable) <input checked="" type="checkbox"/> N/A		
17. Crossing Type <input checked="" type="checkbox"/> Public <input type="checkbox"/> Highway <input type="checkbox"/> Pathway, Ped. <input type="checkbox"/> Station, Ped.	18. Crossing Purpose <input checked="" type="checkbox"/> At Grade <input type="checkbox"/> RR Under <input type="checkbox"/> RR Over	19. Crossing Position <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	20. Public Access (if Private Crossing) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	21. Type of Train <input type="checkbox"/> Freight <input type="checkbox"/> Transit <input checked="" type="checkbox"/> Intercity Passenger <input type="checkbox"/> Shared Use Transit <input type="checkbox"/> Commuter <input type="checkbox"/> Less Than One Per Day <input checked="" type="checkbox"/> Number Per Day 2	22. Average Passenger Train Count Per Day <input type="checkbox"/> 0.251.940
23. Type of Land Use <input type="checkbox"/> Open Space <input type="checkbox"/> Farm <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Institutional <input type="checkbox"/> Recreational <input type="checkbox"/> RR Yard	24. Is there an Adjacent Crossing with a Separate Number? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Provide Crossing Number	25. Quiet Zone (FRA provided) <input type="checkbox"/> No <input type="checkbox"/> 24 Hr <input type="checkbox"/> Partial <input type="checkbox"/> Chicago Excused	Date Established		
26. HSR Corridor ID <input type="checkbox"/> N/A	27. Latitude in decimal degrees (WGS84 std: nn.nnnnnn) 37.3183585	28. Longitude in decimal degrees (WGS84 std: -nn.nnnnnn) -79.8690081	29. Lat/Long Source <input checked="" type="checkbox"/> Actual <input type="checkbox"/> Estimated		
30.A. Railroad Use *	31.A. State Use * 0.27 MI E RT 603				
30.B. Railroad Use *	31.B. State Use *				
30.C. Railroad Use *	31.C. State Use *				
30.D. Railroad Use *	31.D. State Use *				
32.A. Narrative (Railroad Use) *	32.B. Narrative (State Use) *				
33. Emergency Notification Telephone No. (posted) 800-946-4744	34. Railroad Contact (Telephone No.) 800-946-4744	35. State Contact (Telephone No.) 804-786-2822			

Part II: Railroad Information

1. Estimated Number of Daily Train Movements					
1.A. Total Day Thru Trains (6 AM to 6 PM) 7	1.B. Total Night Thru Trains (6 PM to 6 AM) 5	1.C. Total Switching Trains 0	1.D. Total Transit Trains 0	1.E. Check if Less Than One Movement Per Day How many trains per week?	
2. Year of Train Count Data (YYYY) 2021					
3. Speed of Train at Crossing 3.A. Maximum Timetable Speed (mph) 70 3.B. Typical Speed Range Over Crossing (mph) From 40 to 55					
4. Type and Count of Tracks Main 2 Siding 0 Yard 0 Transit 0 Industry 0					
5. Train Detection (Main Track only) <input checked="" type="checkbox"/> Constant Warning Time <input type="checkbox"/> Motion Detection <input type="checkbox"/> AFO <input type="checkbox"/> PTC <input type="checkbox"/> DC <input type="checkbox"/> Other <input type="checkbox"/> None					
6. Is Track Signaled? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		7.A. Event Recorder <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		7.B. Remote Health Monitoring <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

U. S. ROUTE 460 LAND USE AND CONNECTIVITY STUDY

U. S. DOT CROSSING INVENTORY FORM

A. Revision Date (MM/DD/YYYY) 05/18/2021	PAGE 2	D. Crossing Inventory Number (7 char.) 468556M
Part III: Highway or Pathway Traffic Control Device Information		
1. Are there Signs or Signals? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2. Types of Passive Traffic Control Devices associated with the Crossing	
2.A. Crossbuck Assemblies (count) 2	2.B. STOP Signs (R1-1) (count) 0	2.C. YIELD Signs (R1-2) (count) 0
2.D. Advance Warning Signs (Check all that apply; include count) <input type="checkbox"/> W10-1 <input type="checkbox"/> W10-3 <input type="checkbox"/> W10-11 <input type="checkbox"/> W10-2 <input type="checkbox"/> W10-4 <input type="checkbox"/> W10-12	2.E. Low Ground Clearance Sign (W10-5) <input type="checkbox"/> Yes (count _____) <input checked="" type="checkbox"/> No	2.F. Pavement Markings <input checked="" type="checkbox"/> Stop Lines <input type="checkbox"/> Dynamic Envelope <input checked="" type="checkbox"/> RR Xing Symbols <input type="checkbox"/> None
2.G. Channelization Devices/Medians <input type="checkbox"/> All Approaches <input type="checkbox"/> Median <input type="checkbox"/> One Approach <input checked="" type="checkbox"/> None	2.H. EXEMPT Sign (R15-3) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2.I. ENS Sign (I-13) Displayed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2.J. Other MUTCD Signs Specify Type _____ Count _____ Specify Type _____ Count _____ Specify Type _____ Count _____	2.K. Private Crossing Signs (if private) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2.L. LED Enhanced Signs (List types) Specify Type _____
3. Types of Train Activated Warning Devices at the Grade Crossing (specify count of each device for all that apply)		
3.A. Gate Arms (count) <input type="checkbox"/> 2 Quad <input type="checkbox"/> 3 Quad <input type="checkbox"/> 4 Quad	3.B. Gate Configuration <input type="checkbox"/> Full (Barrier) <input type="checkbox"/> Resistance <input type="checkbox"/> Median Gates	3.C. Cantilevered (or Bridged) Flashing Light Structures (count) Over Traffic Lane 1 <input checked="" type="checkbox"/> Incandescent Not Over Traffic Lane 0 <input type="checkbox"/> LED
3.D. Mast Mounted Flashing Lights (count of masts) 2 <input checked="" type="checkbox"/> Incandescent <input type="checkbox"/> LED <input checked="" type="checkbox"/> Back Lights Included <input type="checkbox"/> Side Lights Included	3.E. Total Count of Flashing Light Pairs 6	
3.F. Installation Date of Current Active Warning Devices: (MM/YYYY) /	3.G. Wayside Horn <input type="checkbox"/> Yes Installed on (MM/YYYY) / <input checked="" type="checkbox"/> No	3.H. Highway Traffic Signals Controlling Crossing <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
3.I. Bells (count) 1		
3.J. Non-Train Active Warning <input type="checkbox"/> Flagging/Flagman <input type="checkbox"/> Manually Operated Signals <input type="checkbox"/> Watchman <input type="checkbox"/> Floodlighting <input checked="" type="checkbox"/> None	3.K. Other Flashing Lights or Warning Devices Count 0 Specify type _____	
4.A. Does nearby Hwy Intersection have Traffic Signals? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	4.B. Hwy Traffic Signal Interconnection <input checked="" type="checkbox"/> Not Interconnected <input type="checkbox"/> For Traffic Signals <input type="checkbox"/> For Warning Signs	4.C. Hwy Traffic Signal Preemption <input type="checkbox"/> Simultaneous <input type="checkbox"/> Advance
5. Highway Pre-Signals <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5. Highway Traffic Pre-Signals <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Highway Monitoring Devices (Check all that apply) <input type="checkbox"/> Yes - Photo/Video Recording <input type="checkbox"/> Yes - Vehicle Presence Detection <input checked="" type="checkbox"/> None
5. Crossing Surface (On Main Track, multiple types allowed) <input type="checkbox"/> 1 Timber <input type="checkbox"/> 2 Asphalt <input type="checkbox"/> 3 Asphalt and Timber <input type="checkbox"/> 4 Concrete <input type="checkbox"/> 5 Concrete and Rubber <input type="checkbox"/> 6 Rubber <input type="checkbox"/> 7 Metal <input type="checkbox"/> 8 Unconsolidated <input type="checkbox"/> 9 Composite <input type="checkbox"/> 10 Other (specify) _____	5. Crossing Surface (On Main Track, multiple types allowed) Installation Date: (MM/YYYY) / Width * Storage Distance * 0 Stop Line Distance * 0	6. Highway Monitoring Devices (Check all that apply) <input type="checkbox"/> Yes - Photo/Video Recording <input type="checkbox"/> Yes - Vehicle Presence Detection <input checked="" type="checkbox"/> None
6. Intersecting Roadway within 500 feet? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Approximate Distance (feet)	7. Smallest Crossing Angle 0° - 29° <input checked="" type="checkbox"/> 30° - 59° <input type="checkbox"/> 60° - 90°	8. Is Commercial Power Available? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Part IV: Physical Characteristics		
1. Traffic Lanes Crossing Railroad Number of Lanes 2	2. Is Roadway/Pathway Paved? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3. Does Track Run Down a Street? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
4. Is Crossing Illuminated? (Street lights within approx. 50 feet from nearest rail) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5. Highway Pre-Signals <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Highway Monitoring Devices (Check all that apply) <input type="checkbox"/> Yes - Photo/Video Recording <input type="checkbox"/> Yes - Vehicle Presence Detection <input checked="" type="checkbox"/> None
5. Crossing Surface (On Main Track, multiple types allowed) Installation Date: (MM/YYYY) / Width * Storage Distance * 0 Stop Line Distance * 0	6. Highway Monitoring Devices (Check all that apply) <input type="checkbox"/> Yes - Photo/Video Recording <input type="checkbox"/> Yes - Vehicle Presence Detection <input checked="" type="checkbox"/> None	7. Highway Pre-Signals <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
6. Intersecting Roadway within 500 feet? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Approximate Distance (feet)	7. Smallest Crossing Angle 0° - 29° <input checked="" type="checkbox"/> 30° - 59° <input type="checkbox"/> 60° - 90°	8. Is Commercial Power Available? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Part V: Public Highway Information		
1. Highway System <input type="checkbox"/> (01) Interstate Highway System <input type="checkbox"/> (02) Other Nat Hwy System (NHS) <input type="checkbox"/> (03) Federal AID, Not NHS <input checked="" type="checkbox"/> (08) Non-Federal Aid	2. Functional Classification of Road at Crossing <input type="checkbox"/> (0) Rural <input checked="" type="checkbox"/> (1) Urban <input type="checkbox"/> (1) Interstate <input type="checkbox"/> (5) Major Collector <input type="checkbox"/> (2) Other Freeways and Expressways <input type="checkbox"/> (3) Other Principal Arterial <input type="checkbox"/> (6) Minor Collector <input type="checkbox"/> (4) Minor Arterial <input checked="" type="checkbox"/> (7) Local	3. Is Crossing on State Highway System? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 4. Highway Speed Limit MPH 55 <input type="checkbox"/> Posted <input checked="" type="checkbox"/> Statutory
7. Annual Average Daily Traffic (AADT) Year 2011 AADT 000176	8. Estimated Percent Trucks 22 %	9. Regularly Used by School Buses? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 10. Average Number per Day 8 10. Emergency Services Route <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Submission Information - This information is used for administrative purposes and is not available on the public website.		
Submitted by _____	Organization _____	Phone _____ Date _____
Public reporting burden for this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for information collection is 2130-0017. Send comments regarding this burden estimate or any other aspect of this collection, including for reducing this burden to: Information Collection Officer, Federal Railroad Administration, 1200 New Jersey Ave. SE, MS-25 Washington, DC 20590.		

FORM FRA F 6180.71 (Rev. 08/03/2016)

OMB approval expires 11/30/2022

Page 2 OF 2

U. S. DOT CROSSING INVENTORY FORM

DEPARTMENT OF TRANSPORTATION FEDERAL RAILROAD ADMINISTRATION

OMB No. 2130-0017

Instructions for the initial reporting of the following types of new or previously unreported crossings: For public highway-rail grade crossings, complete the entire inventory Form. For private highway-rail grade crossings, complete the Header, Parts I and II, and the Submission Information section. For public pathway grade crossings (including pedestrian station grade crossings), complete the Header, Parts I and II, and the Submission Information section. For private pathway grade crossings, complete the Header, Parts I and II, and the Submission Information section. For grade-separated highway-rail or pathway crossings (including pedestrian station crossings), complete the Header, Part I, and the Submission Information section. For changes to existing data, complete the Header, Part I Items 1-3, and the Submission Information section, in addition to the updated data fields. Note: For private crossings only, Part I Item 2 and Part II Item 2.K. are required unless otherwise noted.

An asterisk * denotes an optional field.

A. Revision Date (MM/DD/YYYY) 06 / 01 / 2021	B. Reporting Agency <input checked="" type="checkbox"/> Railroad <input type="checkbox"/> Transit <input type="checkbox"/> State <input type="checkbox"/> Other	C. Reason for Update (Select only one) <input checked="" type="checkbox"/> Change in New <input type="checkbox"/> Closed <input type="checkbox"/> No Train <input type="checkbox"/> Quiet <input type="checkbox"/> Data Crossing <input type="checkbox"/> Traffic <input type="checkbox"/> Zone Update <input type="checkbox"/> Re-Open <input type="checkbox"/> Date <input type="checkbox"/> Change in Primary <input type="checkbox"/> Admin. <input type="checkbox"/> Change Only <input type="checkbox"/> Operating RR <input type="checkbox"/> Correction	D. DOT Crossing Inventory Number 468553S
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Part I: Location and Classification Information

1. Primary Operating Railroad Norfolk Southern Railway Company [NS]	2. State VIRGINIA	3. County ROANOKE			
4. City / Municipality <input type="checkbox"/> In ROANOKE	5. Street/Road Name & Block Number GLADE CREEK ROAD (Street/Road Name)	6. Highway Type & No. SR 636			
7. Do Other Railroads Operate a Separate Track at Crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Specify RR	8. Do Other Railroads Operate Over Your Track at Crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Specify RR	ATK			
9. Railroad Division or Region <input type="checkbox"/> None BLUE RIDGE	10. Railroad Subdivision or District <input type="checkbox"/> None BLUE RIDGE	11. Branch or Line Name <input type="checkbox"/> None	12. RR Milepost N 0251.390 (prefix) (nnnn.nnn) (suffix)		
13. Line Segment * N	14. Nearest RR Timetable Station BONSACK	15. Parent RR (if applicable) <input type="checkbox"/> N/A	16. Crossing Owner (if applicable) <input type="checkbox"/> N/A		
17. Crossing Type <input checked="" type="checkbox"/> Public Highway <input type="checkbox"/> Pathway, Ped. <input type="checkbox"/> Private Station, Ped.	18. Crossing Purpose <input checked="" type="checkbox"/> At Grade <input type="checkbox"/> RR Under <input type="checkbox"/> RR Over	19. Crossing Position <input type="checkbox"/> Public Access <input type="checkbox"/> RR Under <input type="checkbox"/> Yes <input type="checkbox"/> No	20. Public Access <input type="checkbox"/> RR Under <input type="checkbox"/> RR Over	21. Type of Train <input type="checkbox"/> Freight <input type="checkbox"/> Transit <input checked="" type="checkbox"/> Intercity Passenger <input type="checkbox"/> Shared Use Transit <input type="checkbox"/> Commuter <input type="checkbox"/> Tourist/Other	22. Average Passenger Train Count Per Day <input type="checkbox"/> Less Than One Per Day <input type="checkbox"/> Number Per Day 2
23. Type of Land Use <input type="checkbox"/> Open Space <input type="checkbox"/> Farm <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Institutional <input type="checkbox"/> Recreational <input type="checkbox"/> RR Yard	24. Is there an Adjacent Crossing with a Separate Number? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Provide Crossing Number <input type="checkbox"/> No <input type="checkbox"/> 24 Hr <input type="checkbox"/> Partial <input type="checkbox"/> Chicago Excused Date Established				
25. Quiet Zone (FRA provided) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Provide Crossing Number <input type="checkbox"/> No <input type="checkbox"/> 24 Hr <input type="checkbox"/> Partial <input type="checkbox"/> Chicago Excused Date Established	26. HSR Corridor ID <input type="checkbox"/> N/A	27. Latitude in decimal degrees (WGS84 std: nn.nnnnnn) 37.3258651	28. Longitude in decimal degrees (WGS84 std: -nnn.nnnnnn) -79.8656201	29. Lat/Long Source <input type="checkbox"/> Actual <input type="checkbox"/> Estimated	
30.A. Railroad Use * <input type="checkbox"/> N/A	31.A. State Use * 0.25 MI S RT 603	32. Non-Train Active Warning <input type="checkbox"/> Flagging/Flagman <input type="checkbox"/> Manually Operated Signals <input type="checkbox"/> Watchman <input type="checkbox"/> Floodlighting <input checked="" type="checkbox"/> None			
30.B. Railroad Use * <input type="checkbox"/> N/A	31.B. State Use * <input type="checkbox"/> N/A	33. Highway System <input type="checkbox"/> 1 Timber <input type="checkbox"/> 2 Asphalt <input checked="" type="checkbox"/> 3 Asphalt and Timber <input type="checkbox"/> 4 Concrete <input type="checkbox"/> 5 Concrete and Rubber <input type="checkbox"/> 6 Rubber <input type="checkbox"/> 7 Metal <input type="checkbox"/> 8 Unconsolidated <input type="checkbox"/> 9 Composite <input type="checkbox"/> 10 Other (specify) _____			
30.C. Railroad Use * <input type="checkbox"/> N/A	31.C. State Use * <input type="checkbox"/> N/A	34. Railroad Contact (Telephone No.) 800-946-4744			
30.D. Railroad Use * <input type="checkbox"/> N/A	31.D. State Use * <input type="checkbox"/> N/A	35. State Contact (Telephone No.) 804-786-2822			
36. Emergency Notification Telephone No. (posted) 800-946-4744					

Part II: Railroad Information

1. Estimated Number of Daily Train Movements					
1.A. Total Day Thru Trains (6 AM to 6 PM) 7	1.B. Total Night Thru Trains (6 PM to 6 AM) 5	1.C. Total Switching Trains 0	1.D. Total Transit Trains 0	1.E. Check if Less Than One Movement Per Day <input type="checkbox"/> How many trains per week?	
2. Year of Train Count Data (YYYY) 2021					
3. Speed of Train at Crossing 3.A. Maximum Timetable Speed (mph) 70 3.B. Typical Speed Range Over Crossing (mph) From 40 to 50					
4. Type and Count of Tracks Main 2 Siding 0 Yard 0 Transit 0 Industry 0					
5. Train Detection (Main Track only) <input type="checkbox"/> Constant Warning Time <input type="checkbox"/> Motion Detection <input type="checkbox"/> AFO <input type="checkbox"/> PTC <input type="checkbox"/> DC <input type="checkbox"/> Other <input checked="" type="checkbox"/> None					
6. Is Track Signaled? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		7.A. Event Recorder <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		7.B. Remote Health Monitoring <input type="checkbox"/> Yes <input type="checkbox"/> No	

FORM FRA F 6180.71 (Rev. 08/03/2016)

OMB approval expires 11/30/2022

Page 1 OF 2

U. S. DOT CROSSING INVENTORY FORM

PAGE 2

D. Crossing Inventory Number (7 char.)
468553S

Part III: Highway or Pathway Traffic Control Device Information

1. Are there Signs or Signals? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2. Types of Passive Traffic Control Devices associated with the Crossing 2.A. Crossbuck Assemblies (count) 0 2.B. STOP Signs (R1-1) (count) 0 2.C. YIELD Signs (R1-2) (count) 0 2.D. Advance Warning Signs (Check all that apply; include count) <input type="checkbox"/> W10-1 <input type="checkbox"/> W10-3 <input type="checkbox"/> W10-11 <input type="checkbox"/> W10-2 <input type="checkbox"/> W10-4 <input type="checkbox"/> W10-12			
2.E. Low Ground Clearance Sign (W10-5) <input checked="" type="checkbox"/> Yes (count) _____ <input type="checkbox"/> No	2.F. Pavement Markings <input checked="" type="checkbox"/> Stop Lines <input type="checkbox"/> Dynamic Envelope <input type="checkbox"/> RR Xing Symbols <input type="checkbox"/> None			
2.G. Channelization Devices/Medians <input type="checkbox"/> All Approaches <input type="checkbox"/> Median <input type="checkbox"/> One Approach <input checked="" type="checkbox"/> None	2.H. EXEMPT Sign (R15-3) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
2.J. Other MUTCD Signs <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2.K. Private Crossing Signs (if private) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
2.L. LED Enhanced Signs (List types)				
3. Types of Train Activated Warning Devices at the Grade Crossing (specify count of each device for all that apply)				
3.A. Gate Arms (count) 0 Roadway 2 Pedestrian 0	3.B. Gate Configuration <input type="checkbox"/> 2 Quad <input type="checkbox"/> Full (Barrier) Structures (count) 0 <input type="checkbox"/> 3 Quad Resistance <input type="checkbox"/> 4 Quad Median Gates	3.C. Cantilevered (or Bridged) Flashing Light Over Traffic Lane 0 Not Over Traffic Lane 0	3.D. Mast Mounted Flashing Lights (count of masts) 1 <input type="checkbox"/> Incandescent <input type="checkbox"/> LED <input type="checkbox"/> Back Lights Included <input type="checkbox"/> Side Lights Included	3.E. Total Count of Flashing Light Pairs 0
3.F. Installation Date of Current Active Warning Devices: (MM/YYYY) ____/____/____ <input type="checkbox"/> Not Required		3.G. Wayside Horn <input type="checkbox"/> Yes Installed on (MM/YYYY) / <input checked="" type="checkbox"/> No	3.H. Highway Traffic Signals Controlling Crossing <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3.I. Bells (count) 0
3.J. Non-Train Active Warning <input type="checkbox"/> Flagging/Flagman <input type="checkbox"/> Manually Operated Signals <input type="checkbox"/> Watchman <input type="checkbox"/> Floodlighting <input checked="" type="checkbox"/> None				
4.A. Does nearby Hwy Intersection have Traffic Signals? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	4.B. Hwy Traffic Signal Interconnection <input type="checkbox"/> Not Interconnected <input type="checkbox"/> For Traffic Signals <input type="checkbox"/> For Warning Signs	4.C. Hwy Traffic Signal Preemption <input type="checkbox"/> Simultaneous <input type="checkbox"/> Advance	5. Highway Traffic Pre-Signals <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Highway Monitoring Devices (Check all that apply) <input type="checkbox"/> Yes - Photo/Video Recording <input type="checkbox"/> Yes - Vehicle Presence Detection <input checked="" type="checkbox"/> None
Part IV: Physical Characteristics				
1. Traffic Lanes Crossing Railroad Number of Lanes 2	2. Is Roadway/Pathway Paved? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3. Does Track Run Down a Street? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	4. Is Crossing Illuminated? (Street lights within approx. 50 feet from nearest rail) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Crossing Surface (on Main Track, multiple types allowed) <input type="checkbox"/> 1 Timber <input type="checkbox"/> 2 Asphalt <input checked="" type="checkbox"/> 3 Asphalt and Timber <input type="checkbox"/> 4 Concrete <input type="checkbox"/> 5 Concrete and Rubber <input type="checkbox"/> 6 Rubber <input type="checkbox"/> 7 Metal <input type="checkbox"/> 8 Unconsolidated <input type="checkbox"/> 9 Composite <input type="checkbox"/> 10 Other (specify) _____	6. Intersecting Roadway within 500 feet? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Approximate Distance (feet) _____	7. Smallest Crossing Angle <input type="checkbox"/> 0° - 29° <input type="checkbox"/> 30° - 59° <input type="checkbox"/> 60° - 90°	8. Is Commercial Power Available? * <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Part V: Public Highway Information				
1. Highway System <input type="checkbox"/> (01) Interstate Highway System <input type="checkbox"/> (02) Other Nat Hwy System (NHS) <input type="checkbox"/> (03) Federal AID, Not NHS <input checked="" type="checkbox"/> (08) Non-Federal Aid	2. Functional Classification of Road at Crossing <input type="checkbox"/> (0) Rural <input checked="" type="checkbox"/> (1) Urban <input type="checkbox"/> (1) Interstate <input type="checkbox"/> (2) Other Freeways and Expressways <input type="checkbox"/> (3) Other Principal Arterial <input type="checkbox"/> (6) Minor Collector <input type="checkbox"/> (4) Minor Arterial <input type="checkbox"/> (7) Local	3. Is Crossing on State Highway System? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	4. Highway Speed Limit MPH 55 <input type="checkbox"/> Posted <input type="checkbox"/> Statutory	
7. Annual Average Daily Traffic (AADT) Year 2012 AADT 000290	8. Estimated Percent Trucks 22 %	9. Regularly Used by School Buses? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Average Number per Day 8	10. Emergency Services Route <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Submission Information - This information is used for administrative purposes and is not available on the public website.				
Submitted by _____	Organization _____	Phone _____	Date _____	
Public reporting burden for this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for information collection is 2130-0017. Send comments regarding this burden estimate or any other aspect of this collection, including for reducing this burden to: Information Collection Officer, Federal Railroad Administration, 1200 New Jersey Ave. SE, MS-25 Washington, DC 20590.				

FORM FRA F 6180.71 (Rev. 08/03/2016)

OMB approval expires 11/30/2022

Page 2 OF 2

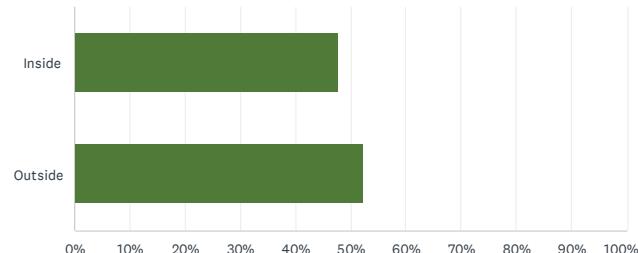
Appendix D

Public Engagement Results - Survey One

Prior to the first community meeting, a survey was released to the community to get initial feedback on transportation issues and concerns in the Study Area. There were 220 total survey respondents and their responses are shown in the following appendix.

Q1 Do you live inside or outside of the Bonsack Community (i.e. Study Area)?

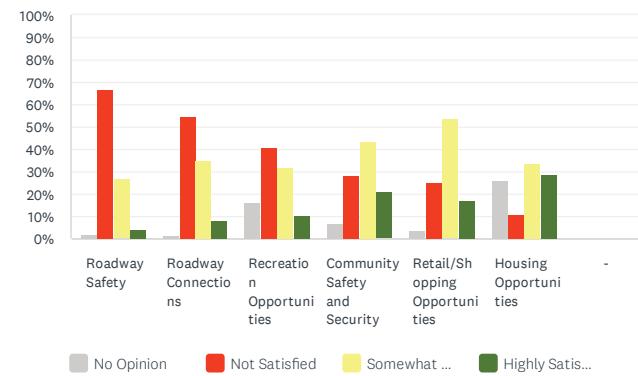
Answered: 220 Skipped: 0



ANSWER CHOICES	RESPONSES
Inside	47.73% 105
Outside	52.27% 115
TOTAL	220

Q2 What is your current level of satisfaction of the following in the Study Area?

Answered: 220 Skipped: 0

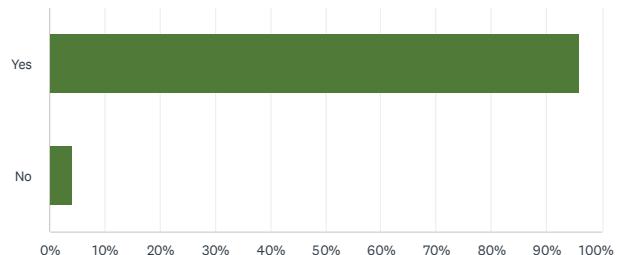


No Opinion Not Satisfied Somewhat Satisfied Highly Satisfied

	NO OPINION	NOT SATISFIED	SOMEWHAT SATISFIED	HIGHLY SATISFIED	TOTAL
Roadway Safety	2.27% 5	66.82% 147	26.82% 59	4.09% 9	220
Roadway Connections	1.82% 4	54.55% 120	35.45% 78	8.18% 18	220
Recreation Opportunities	16.36% 36	40.91% 90	32.27% 71	10.45% 23	220
Community Safety and Security	6.82% 15	28.64% 63	43.64% 96	20.91% 46	220
Retail/Shopping Opportunities	3.64% 8	25.45% 56	53.64% 118	17.27% 38	220
Housing Opportunities	26.36% 58	10.91% 24	33.64% 74	29.09% 64	220
-	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0

Q3 Do you commute or travel through the study area regularly?

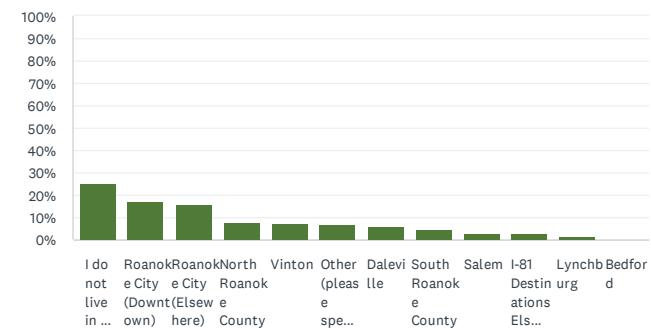
Answered: 220 Skipped: 0



ANSWER CHOICES	RESPONSES
Yes	95.91%
No	4.09%
TOTAL	220

Q4 If you live in the study area and commute, where do you most often commute to?

Answered: 216 Skipped: 4



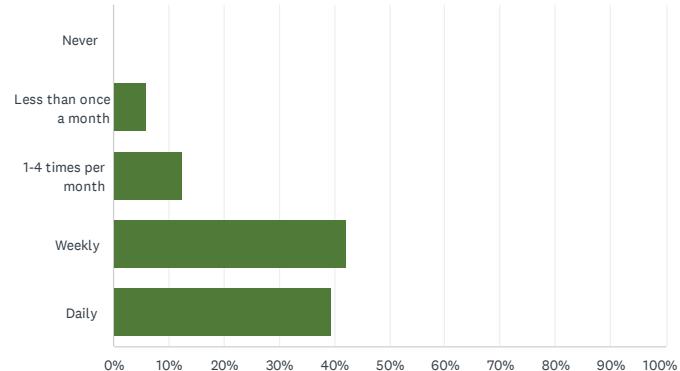
ANSWER CHOICES	RESPONSES
I do not live in the study area, but travel through it in my commute	25.46%
Roanoke City (Downtown)	17.59%
Roanoke City (Elsewhere)	15.74%
North Roanoke County	7.87%
Vinton	7.41%
Other (please specify)	6.94%
Daleville	6.48%
South Roanoke County	4.63%
Salem	3.24%
I-81 Destinations Elsewhere (Blacksburg, Lexington, etc.)	3.24%
Lynchburg	1.39%
Bedford	0.00%
TOTAL	216

#	OTHER (PLEASE SPECIFY)	DATE
1	I neither live in the study nor commute through although I am in the area regularly	1/15/2022 2:30 PM
2	Travel different times and days	1/14/2022 5:30 PM
3	Only go through when I need to	1/14/2022 11:57 AM
4	Blue Ridge	1/14/2022 7:47 AM

5	Troutville	1/14/2022 7:24 AM
6	Blue ridge to roanoke	1/14/2022 7:11 AM
7	Do not live i. The community but work there often. Job involves driving all through Bonsack	1/14/2022 1:50 AM
8	n/a	1/10/2022 12:57 PM
9	Troutville	1/7/2022 11:12 AM
10	I lived in the study area for 8 years and recently moved out of the area. Most of the traffic seems to be commuters moving from Challenger Drive Kroger area toward the Roanoke Civic Center and beyond in the morning and in the opposite direction at the "rush hour" / end of workday. Midday traffic is typically busy, but not as congested as the morning or afternoon commute times.	1/6/2022 9:11 PM
11	Do not commute through this area	1/5/2022 10:30 AM
12	I live adjacent to the study area and drive the area daily	1/4/2022 7:10 PM
13	I travel 460 everyday from Roanoke City to Bedford, Blue Ridge, Bonsack, Daleville, Troutville etc. and the 460 Orange Ave. should have been taken in consideration of the traffic years ago on planning three lanes both ways in and out of the city and to not build right on the road for a three lane project and the stop lights should be synced so the traffic would keep flowing through easy	1/4/2022 3:54 PM
14	I live in the Carson Rd neighborhood. My child goes to Bonsack ele and we use all the Bonsack services but we are "technically" not included here.	1/4/2022 2:31 PM
15	do not live in study area	1/4/2022 11:57 AM

Q5 How often do you use services or shops in the Study Area per month?

Answered: 220 Skipped: 0



ANSWER CHOICES	RESPONSES
Never	0.00%
Less than once a month	5.91%
1-4 times per month	12.27%
Weekly	42.27%
Daily	39.55%
TOTAL	220

Q6 What business do you most frequently visit in the Study Area?

Answered: 209 Skipped: 11

#	RESPONSES	DATE
1	Marvin	1/28/2022 8:39 AM
2	Kroger	1/27/2022 9:19 PM
3	Kroger	1/27/2022 8:30 PM
4	Kroger, lowes, Chick-fil-A	1/27/2022 7:49 PM
5	Walmart	1/27/2022 11:36 AM
6	Wal-Mart and The Country store	1/27/2022 8:37 AM
7	Kroger and Walmart	1/26/2022 8:19 PM
8	Kroger	1/26/2022 7:01 PM
9	Kroger	1/26/2022 6:17 PM
10	Restaurant	1/26/2022 11:08 AM
11	Kroger	1/26/2022 8:39 AM
12	Kroger, other gas stations	1/24/2022 1:22 PM
13	Kroger, Country Corner, Walmart, Lowe's CVS, Friends	1/24/2022 9:19 AM
14	Lowes	1/23/2022 1:44 PM
15	Kroger and Walmart	1/23/2022 10:34 AM
16	Murphys and food lion	1/22/2022 11:06 PM
17	Wal-Mart, Lowes, Kroger, Vinton Carilion, Vinton Restaurants, Vinton hair salon, To travel to Valley View Mall shopping and restaurants, also restaurants on orange ave and Challenger Ave.	1/22/2022 3:10 PM
18	WALMART AND LOWES	1/22/2022 12:32 PM
19	Kroger	1/17/2022 3:34 PM
20	Lowes	1/17/2022 12:00 PM
21	Kroger, Walmart and Lowes	1/17/2022 11:26 AM
22	Country store, Walmart	1/17/2022 10:53 AM
23	Kroger, Chick-fil-A, Starbucks	1/17/2022 9:19 AM
24	Grocery, food, post office, Walmart, Lowe's, banks, church	1/17/2022 9:01 AM
25	Walmart, Lowe's, Country Corner, Chick Fil A	1/16/2022 11:02 AM
26	Grocery, bank. Hardware, restaurant	1/16/2022 8:34 AM
27	Bonsack Baptist	1/16/2022 8:17 AM
28	Kroger	1/15/2022 11:12 PM
29	Lowes	1/15/2022 5:39 PM
30	Chick Fil A	1/15/2022 2:30 PM
31	Kroger	1/15/2022 2:18 PM

32	kroger	1/15/2022 1:32 PM
33	Kroger	1/15/2022 1:16 PM
34	Kroger, Walmart, famous Anthony's, chick a filet, Burger King, cvs, advance	1/15/2022 11:28 AM
35	Kroger	1/15/2022 10:40 AM
36	CVS, Kroger, Walmart, CFA, Country Corner	1/15/2022 10:14 AM
37	McDonalds	1/15/2022 10:00 AM
38	Wendy's and Chick-Fil-A	1/15/2022 9:43 AM
39	Chick Fila, Walmart, Kroger, Starbucks	1/15/2022 2:01 AM
40	Restaurants and grocery stores	1/14/2022 11:01 PM
41	Walmart, Lowes, Kroger	1/14/2022 10:42 PM
42	Grocery restaurants church retail	1/14/2022 10:42 PM
43	Chick filet, WM, Lowes, Applebees, Kroger, Oil Change, CVS, Advance auto, Country Corners	1/14/2022 9:59 PM
44	Kroger, Walmart, Starbucks, banks,	1/14/2022 9:30 PM
45	Kroger	1/14/2022 9:13 PM
46	Walmart, Kroger, Sals, Lowes, Applebees, CVS, Country Corners	1/14/2022 9:02 PM
47	Kroger	1/14/2022 7:46 PM
48	Walmart	1/14/2022 7:32 PM
49	Kroger, Chic-fil-a, Walmart	1/14/2022 6:11 PM
50	Lowe's and Walmart, I used to work at HSN	1/14/2022 5:30 PM
51	Krogers	1/14/2022 5:08 PM
52	Kroger	1/14/2022 4:55 PM
53	Kroger	1/14/2022 4:45 PM
54	Kroger, Chick-fil-a, Walmart and Lowes	1/14/2022 4:31 PM
55	Kroger and Lowes	1/14/2022 4:26 PM
56	Con stores , krogers, restaurants	1/14/2022 4:25 PM
57	Kroger, Cafe Asia, Chick Fil A, Walmart, Lowe's	1/14/2022 3:43 PM
58	Walmart Kroger	1/14/2022 3:31 PM
59	Kroger	1/14/2022 2:47 PM
60	Kroger, CVS, Member One, Chickfila	1/14/2022 2:36 PM
61	Chick Fil A , Walmart, Lowes	1/14/2022 12:28 PM
62	Kroger, Walmart, CVS, Lowes	1/14/2022 12:26 PM
63	Bonsack Kroger	1/14/2022 12:24 PM
64	Kroger	1/14/2022 12:22 PM
65	Walmart, Kroger	1/14/2022 12:18 PM
66	Walmart, Kroger	1/14/2022 12:14 PM
67	Chick Fil A and Kroger	1/14/2022 12:10 PM
68	kroger	1/14/2022 11:59 AM
69	Walmart, Jersey Lilly, visit family	1/14/2022 11:57 AM

70	Walmart	1/14/2022 11:47 AM
71	Kroger, chick fil A, dominos	1/14/2022 11:31 AM
72	Food and gas	1/14/2022 11:22 AM
73	Kroger, Walmart, cvs, country corner, chick fil a, Starbucks, nail salons, a lot more	1/14/2022 11:13 AM
74	Restaurant/ work	1/14/2022 11:09 AM
75	Chick-fil-a, Kroger, Sals, Cafe Asia, Lowes	1/14/2022 11:00 AM
76	Kroger	1/14/2022 10:59 AM
77	Kroger	1/14/2022 10:57 AM
78	Kroger, Lowes	1/14/2022 10:54 AM
79	Sal's Restaurant	1/14/2022 10:11 AM
80	Kroger	1/14/2022 10:10 AM
81	Kroger, Walmart, gas stations	1/14/2022 9:49 AM
82	Gas stations, Kroger, Sal's Restaurant, Bonsack Baptist Church	1/14/2022 9:43 AM
83	Lowes	1/14/2022 9:25 AM
84	Kroger /walmart	1/14/2022 9:24 AM
85	Walmart and Kroger	1/14/2022 8:46 AM
86	Kroger, Walmart & Lowes	1/14/2022 8:39 AM
87	Kroger, Walmart	1/14/2022 8:37 AM
88	Lowes, Walmart, Kroger, Chick fil A, Bank	1/14/2022 8:30 AM
89	Walmart and kroger	1/14/2022 8:22 AM
90	Kroger	1/14/2022 8:04 AM
91	Kroger Shopping Center	1/14/2022 8:01 AM
92	WalMart	1/14/2022 8:00 AM
93	Walmart, country corner, Lowe's, orchard hills church,	1/14/2022 7:47 AM
94	Kroger, Walmart and Lowes, famous Anthony's's	1/14/2022 7:38 AM
95	Walmart	1/14/2022 7:24 AM
96	Walmart and kroger and all the food places	1/14/2022 7:11 AM
97	Kroger	1/14/2022 7:10 AM
98	Walmart	1/14/2022 7:03 AM
99	Lowe's	1/14/2022 6:51 AM
100	Restaurants	1/14/2022 6:21 AM
101	Kroger chick felet Walmart lowes	1/14/2022 6:18 AM
102	Kroger, Lowe's, Walmart, CVS	1/14/2022 6:05 AM
103	Kroger	1/14/2022 5:10 AM
104	Kroger	1/14/2022 1:50 AM
105	Walmart, Lowes, country corner, chick-fila wendys	1/14/2022 1:16 AM
106	Kroger, Walmart, loves, domino's, nail salons, Starbucks, El rodeo, 1 store, McDonald's, chick fil a, cvs, county corner. Pretty much every where.	1/14/2022 12:30 AM
107	Kroger	1/14/2022 12:27 AM

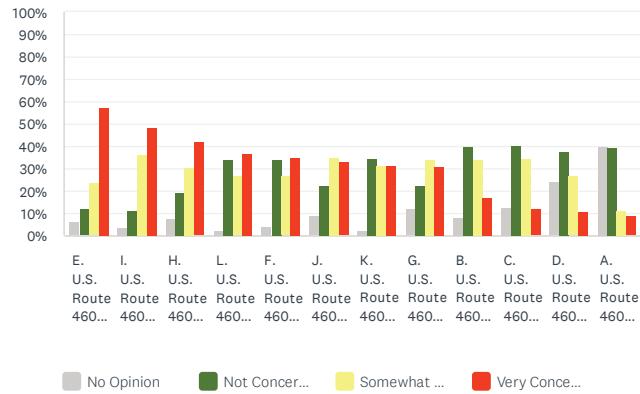
108	Kroger & Wal-mart	1/14/2022 12:04 AM
109	Kroger, Country Corner, Chick-a-Filet, the dry cleaners, Starbucks, CVS, gas stations, Cafe Asia	1/13/2022 11:56 PM
110	Walmart and Kroger	1/13/2022 11:50 PM
111	Kroger	1/13/2022 11:45 PM
112	Kroger	1/13/2022 11:41 PM
113	Walmart and kroger	1/13/2022 11:38 PM
114	Lowes	1/13/2022 11:23 PM
115	Kroger & Walmart	1/13/2022 11:23 PM
116	Kroger, Lowes	1/13/2022 11:21 PM
117	Kroger	1/13/2022 11:20 PM
118	Lowes, Walmart, Applebees, Country Corner, Sonic, Chicago Bobs, Kroger, Subways, Sal's Italian, Great Clips, Pinnacle Bank	1/13/2022 7:40 PM
119	Walmart, Kroger, CVS, Country Corner, and Lowes	1/13/2022 7:13 PM
120	CVS, Kroger, Walmart	1/13/2022 5:55 PM
121	Lowes & Walmart	1/13/2022 4:49 PM
122	Walmart	1/13/2022 4:35 PM
123	Villa Heights Baptist Church	1/13/2022 4:32 PM
124	Grocery stores... WM, Kroger, Lowes, Chick-fil-A	1/13/2022 4:32 PM
125	retail, food service,church	1/13/2022 3:31 PM
126	Kroger	1/13/2022 2:40 PM
127	Lowes, Walmart, Kroger, Chick filet	1/13/2022 2:23 PM
128	Lowe's	1/13/2022 9:21 AM
129	Kroger, Lowes, Wal-Mart, Chick-Fil-A, CVS	1/12/2022 10:43 AM
130	Kroger, Wal-Mart, Cleaner World, Chick-Fil-A, CarWash, LG Huntridge Medical Center, Lowes, Dominos, Subway.	1/12/2022 10:35 AM
131	Kroger	1/11/2022 9:41 PM
132	Bedrock Church-Roanoke, Kroger, Chick-Fil-A, Lowe's, Wal-Mart, Zips	1/11/2022 4:49 PM
133	Kroger	1/11/2022 1:25 PM
134	Kroger ChickFilA Walmart Lowes Starbucks	1/10/2022 10:26 PM
135	Kroger	1/10/2022 9:41 PM
136	Walmart, Lowes, Bratchers, Cleaner, recycle, Kroger, ABC, Sals, car wash	1/10/2022 8:42 PM
137	Kroger	1/10/2022 8:25 PM
138	Kroger	1/10/2022 7:58 PM
139	Kroger and Lowes	1/10/2022 6:31 PM
140	Food shopping	1/10/2022 3:51 PM
141	I work in the study area, and use the restaurants and shops during lunch and after hours.	1/10/2022 2:34 PM
142	Church, Pinnacle Bank, Kroger, Sals	1/10/2022 1:57 PM
143	Kroger	1/10/2022 1:43 PM

144	Chick fil a, Walmart	1/10/2022 12:57 PM
145	Krogers & Walmart	1/10/2022 12:53 PM
146	Kroger	1/10/2022 12:47 PM
147	Walmart	1/10/2022 12:44 PM
148	Kroger, Wal-Mart	1/10/2022 12:44 PM
149	Kroger Bonsack	1/10/2022 9:42 AM
150	Lowes and WalMart	1/10/2022 9:39 AM
151	Walmart, Lowes, Kroger	1/9/2022 11:59 PM
152	Kroger, Lowes	1/9/2022 7:08 PM
153	Wal Mart	1/9/2022 11:27 AM
154	Lowe's, Walmart	1/8/2022 6:47 PM
155	walmart and kroger	1/8/2022 2:07 PM
156	Kroger	1/8/2022 10:46 AM
157	Chick Filet	1/8/2022 9:32 AM
158	Kroger, Walmart, Lowes	1/7/2022 6:09 PM
159	Kroger Bonsack	1/7/2022 1:42 PM
160	Kroger, walmart, dry cleaners, Sal's	1/7/2022 12:35 PM
161	Walmart	1/7/2022 11:41 AM
162	Walmart	1/7/2022 11:12 AM
163	Walmart, Lowes, Kroger	1/7/2022 11:08 AM
164	Walmart	1/7/2022 10:06 AM
165	Kroger and Walmart	1/7/2022 9:03 AM
166	Kroger, Walmart, Lowe's	1/7/2022 7:38 AM
167	Walmart, Kroger, Lowes, Chick-fil-A	1/7/2022 5:16 AM
168	Kroger	1/6/2022 10:57 PM
169	Kroger	1/6/2022 9:30 PM
170	Lowes and Walmart and Kroger	1/6/2022 9:28 PM
171	Kroger and Chick-Fil-A	1/6/2022 9:11 PM
172	Kroger, Walmart, Lowes	1/6/2022 9:00 PM
173	Kroger	1/6/2022 8:42 PM
174	Kroger	1/6/2022 5:38 PM
175	Kroger	1/6/2022 4:44 PM
176	Kroger, Lowe's, Chik-fil-A	1/6/2022 9:07 AM
177	1. Kroger. 2.Walmart. 3.Chickfila. 4. Sals	1/5/2022 6:40 PM
178	Kroger and Walmart	1/5/2022 3:56 PM
179	Kroger	1/5/2022 3:22 PM
180	lowes, wal-mart	1/5/2022 12:41 PM
181	Kroger, Chick fil a, CVS, Lowes, Sonic	1/5/2022 11:28 AM

182	Kroger	1/5/2022 9:57 AM
183	Lowes Walmart Kroger	1/5/2022 9:09 AM
184	Kroger	1/5/2022 9:02 AM
185	Walmart Lowes Kroger gas stations	1/5/2022 7:45 AM
186	Kroger, Chick Fil A, Walmart, Lowes	1/5/2022 7:11 AM
187	Lowes,walmart,restaurants	1/5/2022 6:14 AM
188	Kroger and Walmart	1/5/2022 5:57 AM
189	Kroger and Walmart	1/5/2022 5:49 AM
190	Kroger, Walmart, Wendy's, Chick-Fil-A	1/5/2022 4:50 AM
191	Kroger, Walmart, Lowes, CFA, Great Clips	1/4/2022 7:10 PM
192	Walmart, Sonic, Kroger, chick fil a	1/4/2022 6:51 PM
193	Kroger	1/4/2022 6:31 PM
194	Kroger and ABC store and local restaurants	1/4/2022 5:03 PM
195	lowes	1/4/2022 4:56 PM
196	Kroger, Lowes, and most of the local shops before and after the study area	1/4/2022 3:54 PM
197	Chik fil a	1/4/2022 3:44 PM
198	Kroger	1/4/2022 3:25 PM
199	Kroger	1/4/2022 2:31 PM
200	Walmart and Kroger	1/4/2022 1:48 PM
201	Kroger	1/4/2022 1:05 PM
202	Kroger	1/4/2022 12:58 PM
203	Kroger, CVS, restaurants	1/4/2022 12:14 PM
204	Kroger	1/4/2022 12:03 PM
205	ChikFila	1/4/2022 11:57 AM
206	Kroger Starbucks	1/4/2022 11:48 AM
207	Walmart & Kroger	1/4/2022 7:36 AM
208	Walmart and Kroger	1/3/2022 8:08 PM
209	Walmart, Bonsack Kroger, Lowe's	1/3/2022 4:39 PM

Q7 Please rank the following intersections regarding level of congestion or other concerns.

Answered: 188 Skipped: 32



	NO OPINION	NOT CONCERNED	SOMEWHAT CONCERNED	VERY CONCERNED	TOTAL				
E. U.S. Route 460 / West Ruritan Road	6.38%	12	12.23%	23	23.94%	45	57.45%	108	188
I. U.S. Route 460 at Country Corner Nursery	3.72%	7	11.70%	22	36.17%	68	48.40%	91	188
H. U.S. Route 460 / East Ruritan Road / Bonsack Road	7.98%	15	19.68%	37	30.32%	57	42.02%	79	188
L. U.S. Route 460 / U.S. Route 220 Alt or Cloverdale Road	2.66%	5	34.04%	64	26.60%	50	36.70%	69	188
F. U.S. Route 460 / Valley Gateway Boulevard	4.26%	8	34.04%	64	26.60%	50	35.11%	66	188
J. U.S. Route 460 / Huntridge Road	9.04%	17	22.87%	43	35.11%	66	32.98%	62	188
K. U.S. Route 460 / Lowe's and Walmart Signal	2.66%	5	34.57%	65	31.38%	59	31.38%	59	188
G. U.S. Route 460 / Carson Road	12.23%	23	22.87%	43	34.04%	64	30.85%	58	188
B. U.S. Route 460 / Blue Hills Drive	8.51%	16	39.89%	75	34.04%	64	17.55%	33	188
C. U.S. Route 460 / Blue Hills Village Drive	12.77%	24	40.43%	76	34.57%	65	12.23%	23	188
D. U.S. Route 460 / Trail Drive	24.47%	46	37.77%	71	26.60%	50	11.17%	21	188
A. U.S. Route 460 / Patrick Rd	39.89%	75	39.36%	74	11.70%	22	9.04%	17	188

Q8 Are there any intersections not listed above that you have opinions or concerns about in the Study Area? If so, please list them below.

Answered: 86 Skipped: 134

#	RESPONSES	DATE
1	none	1/28/2022 8:44 AM
2	Na	1/27/2022 7:58 PM
3	No	1/27/2022 8:45 AM
4	No	1/26/2022 11:11 AM
5	Not at this moment, but should come back to the intersection on 460 & King St.	1/24/2022 9:31 AM
6	no	1/23/2022 1:52 PM
7	King St intersections in the city are still a problem.	1/23/2022 11:11 AM
8	No	1/22/2022 11:10 PM
9	none	1/22/2022 3:52 PM
10	NONE	1/22/2022 12:36 PM
11	Bonsack Rd and 460	1/17/2022 12:11 PM
12	King Street Intersection	1/16/2022 11:46 AM
13	Country Corner is a gem, but safety in and out is very much a concern. 45 mph in left lane going from walmart heading west on 460 and people have no deceleration lane to turn left into Country Corner. IT'S HAZARDOUS. They said that they would be charged 300K for a turn lane? Not sure that's true...but at what cost is a life? Very dangerous. People have been killed there. ALSO, Chick Fil A is a mess. The road turning into it either way on 460 is too small for the amount of business it gets. It needs to be widened so that CFA has its own turn lane on that street and people can get to their homes. The LGH ER just made it worse. When the Christmas lights covered CFA there was so much traffic and people could be stopped in the road waiting to get to the turn lane going West on 460. Dead stop. And my last rant is the Jeter Farm just outside of the study area. AGAIN, their seasonal agri-tourism is great for them, but dangerous for anyone in the left lane hitting 60mph going E on 460. No deceleration lane to turn left into their pumpkin patch or whatever they have going on...and stopped traffic. DEADLY. Traffic could be much smoother and safer with a few improvements.	1/16/2022 11:19 AM
14	No	1/16/2022 8:42 AM
15	na	1/15/2022 1:37 PM
16	N/a	1/15/2022 10:47 AM
17	Kings St, Gus Nicks, 13th Street are worse than any of the others listed.	1/15/2022 9:51 AM
18	No	1/15/2022 2:08 AM
19	These are NOT issues. What you are proposing looks TERRRIBLE to those who live here. It may help "commuters" but it is not good for the community.	1/14/2022 9:46 PM
20	None	1/14/2022 9:23 PM
21	No	1/14/2022 7:45 PM
22	Just about every intersection	1/14/2022 5:44 PM
23	Alt 220 at Bonsack Baptist Church	1/14/2022 4:43 PM
24	No	1/14/2022 3:38 PM

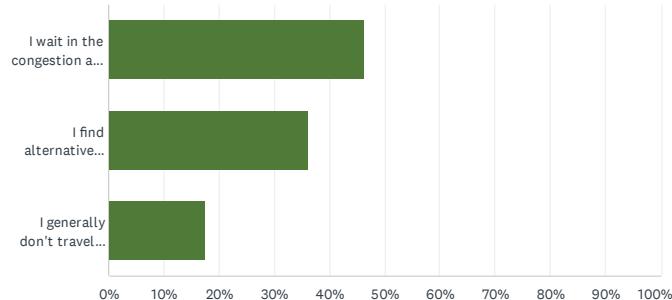
25	NO	1/14/2022 3:05 PM
26	There need to be actual turn lanes in some of these locations rather than just crossovers.	1/14/2022 2:59 PM
27	no	1/14/2022 2:41 PM
28	All areas listed are dangerous!	1/14/2022 12:30 PM
29	NA	1/14/2022 12:16 PM
30	No	1/14/2022 12:14 PM
31	no	1/14/2022 12:03 PM
32	Not really. The area is not that congested. Yet.	1/14/2022 11:43 AM
33	Crumpaker and 220	1/14/2022 11:05 AM
34	no	1/14/2022 11:01 AM
35	None	1/14/2022 10:21 AM
36	Crumpacker	1/14/2022 9:54 AM
37	Seems all was listed above question.	1/14/2022 9:52 AM
38	Read Mountain at 220. Wrecks there all the time	1/14/2022 9:33 AM
39	No	1/14/2022 8:54 AM
40	W Ruritan is very dangerous and too small	1/14/2022 8:45 AM
41	The intersection leading into the Blue Ridge Library, HSN	1/14/2022 8:36 AM
42	No	1/14/2022 8:08 AM
43	None	1/14/2022 7:44 AM
44	Traffic is bad at times at all intersections in the map. 460 is busy in the morning and the evening	1/14/2022 6:26 AM
45	None come to mind	1/14/2022 12:22 AM
46	None	1/13/2022 11:30 PM
47	No	1/13/2022 11:30 PM
48	No	1/13/2022 11:27 PM
49	The entire study area of Route 460 Needs one more lane in each direction	1/13/2022 7:29 PM
50	Rt 460 & Bonsack Rd	1/13/2022 5:00 PM
51	No	1/13/2022 4:42 PM
52	No. All appear to be identified	1/13/2022 2:49 PM
53	The other side of Bonsack Road intersection with 460 is not listed (After "L"), however any adjustments to the intersection "H" will impact that intersection usage. There are no safe left-hand turns (heading to Roanoke) from either end of Bonsack Road on to 460, both require crossing 4 lanes. Also, adjustments to the intersection a "L" to improve traffic flow will make it even more unsafe to turn left at the intersection of Bonsack Road and 460 not in the study. Why was this last intersection, which is still in Roanoke County, not included in the study? Is there a possibility to realign the intersection with "K" or "L" to provide safer traffic signal exits? Would it not be feasible to apply a round-a-bout strategy at the intersection of "H" to give both communities on either side of 460 safer access both ways?	1/13/2022 2:46 PM
54	Lots of near misses at many of these, several are high on your list of areas with more accidents, too. Also, at County intersections, people don't understand the meaning of the double-yellow lines when attempting to make left hand turns. This makes visibility poor and the crossing more dangerous.	1/12/2022 10:50 AM
55	no	1/12/2022 10:39 AM

56	220 and Crumpacker	1/11/2022 9:48 PM
57	n/a	1/11/2022 1:30 PM
58	Number of semis on the road	1/10/2022 8:53 PM
59	none	1/10/2022 2:41 PM
60	The Walmart road that intersects Crumpacker Drive needs a new stop bar and sign. Read Mtn Rd/Alt 220. Chick Fil A light and ER-dangerous at any time of day or night. Any intersection with a flashing yellow needs to be returned to a red light. Not sure who thought those things up when people can't drive and make any better decisions than they do.	1/10/2022 1:53 PM
61	N/A	1/10/2022 9:49 AM
62	Cloverdale Rd at Bonsack Baptist Church CLC entrance	1/10/2022 9:46 AM
63	N/A	1/9/2022 7:19 PM
64	No	1/8/2022 9:44 AM
65	Carson Rd. Intersection with challenger. No turn lane. Forced to pull off in shoulder lane or get hit in the rear.	1/7/2022 6:16 PM
66	Where east bonsack rd connects to 460	1/7/2022 12:59 PM
67	Crumpacker Drive leading up to Bonsack Elementary during school hours	1/7/2022 11:22 AM
68	NA	1/7/2022 10:20 AM
69	I am concerned about 220: if you turn left onto 220 at intersection L, then often there is traffic trying to merge onto 220 from the right 220 merge ramp. When the traffic are large trucks / tractor trailers or carrying large equipment, they are sometimes attempting to merge at too high a rate of speed. If cars that are in the right lane on 220 after having made the left turn off Challenger are in the right lane, they often try to move to the 220 left lane to avoid the trucks attempting to merge onto 220. The traffic flow is us all too heavy to provide room for a quick lane change. Many times this results in sudden braking by the truckers (who should have been driving slower) and frantic right lane drivers trying to keep from getting hit. A double flashing yellow light sign for those trying to merge onto 220 there, warning that they need to slow down and be cautious, might help.	1/6/2022 10:24 PM
70	no	1/6/2022 9:07 PM
71	Why spending so much for pedestrian crossing at WestRuritan, that's money wasted.	1/6/2022 5:48 PM
72	no	1/6/2022 1:39 PM
73	n/a	1/6/2022 9:13 AM
74	No	1/5/2022 7:04 PM
75	No	1/5/2022 3:27 PM
76	entry onto 460 leaving bonsack rd	1/5/2022 12:50 PM
77	None	1/5/2022 7:53 AM
78	No	1/5/2022 7:15 AM
79	No	1/5/2022 6:23 AM
80	No	1/4/2022 6:40 PM
81	No	1/4/2022 3:49 PM
82	No	1/4/2022 1:54 PM
83	Mountain Pass Road and Webster Road, depending on what happens with the others.	1/4/2022 12:29 PM
84	no	1/4/2022 12:11 PM
85	no	1/4/2022 7:42 AM
86	No, but I am extremely unhappy about the "no left turn" changes that will be coming to the	1/3/2022 4:48 PM

various intersections, along with the plan for a diamond-divergent interchange at 460 and Cloverdale. These will be horribly inconvenient and frustrating, and will not make me feel safer traveling through the corridor.

Q9 When traffic is congested, which most closely describes your driving habits?

Answered: 188 Skipped: 32



ANSWER CHOICES	RESPONSES
I wait in the congestion and am delayed in traffic.	46.28% 87
I find alternative routes on minor roads to try to get around the backup.	36.17% 68
I generally don't travel during peak hours when I know there will be congestion.	17.55% 33
TOTAL	188

Q10 If you find alternate routes during congestion periods, which ones do you tend to use most?

Answered: 126 Skipped: 94

#	RESPONSES	DATE
1	Carson. But a lot of my alternative routes are outside the study area, but still to avoid 460 traffic.	1/28/2022 8:44 AM
2	King st	1/27/2022 9:25 PM
3	Carson rd	1/27/2022 8:35 PM
4	Carson rd	1/27/2022 7:58 PM
5	Patrick	1/26/2022 11:11 AM
6	n/a	1/26/2022 8:42 AM
7	There really aren't any alternative routes, except that small narrow road that comes out before you hit 460 east before Country Corner. I see a lot of cars taking that road. Can't think of the name of it.	1/24/2022 9:31 AM
8	n/a	1/23/2022 1:52 PM
9	Carson Road	1/23/2022 11:11 AM
10	I dont	1/22/2022 11:10 PM
11	Thirteen street or Hollins Road, then Mason Mill Road to Mary Linda Ave to Garnby Street to 460. Also if traffic is bad or 3:30 to 5:30 rush hours. Travel onto 581 to 81 and get off on exit 151 and travel on 220 alt. to 460 at Bonsack.	1/22/2022 3:52 PM
12	I CUT THROUGH HILLVIEW/HUNTRIDGE ROAD FROM RT. 604 TO 460	1/22/2022 12:36 PM
13	Huntridge road, Granby street	1/17/2022 9:04 AM
14	Trail Drive East Ruritan King St(Denny's Road/Parking Lot)	1/16/2022 11:46 AM
15	Lived here 32 years, I know what to look for and all the drivers who don't know are going to be a problem too.	1/16/2022 11:19 AM
16	N/a	1/16/2022 8:42 AM
17	South East Roanoke	1/15/2022 11:16 PM
18	Taking the long way home from downtown, 581 to 81 to exit 150 to Crumpacker, then home. It's too much to sit in traffic. Your left turn lanes aren't long enough (Gus Niks) and it creates one lane. There's no flow control on the lights. Roanoke citizens do not understand a zipper merge or that you should not stop on a highway on-ramp. Please study basic California high-traffic roads. Such as yield right turns (no stop), and flow control, and longer or multiple left turns. Also please consider revamping Drivers ED so people here understand how to merge without stopping.	1/15/2022 5:48 PM
19	BRPW	1/15/2022 2:34 PM
20	There are no alternatives for me.	1/15/2022 2:26 PM
21	Carson	1/15/2022 1:37 PM
22	Bonsack rd, Carson rd	1/15/2022 11:51 AM
23	Cut through Binton via Carlson, Gus Nick's or Mecca	1/15/2022 10:47 AM
24	Trail because of congestion at CFA or East Ruritan	1/15/2022 10:21 AM

25	Carson Rd	1/15/2022 9:51 AM
26	Carson Rd	1/15/2022 2:08 AM
27	Carson Road	1/14/2022 11:23 PM
28	Its only bad when there is an accident. The traffic light between ChickFilet and Kroger is the problem. If the lights would conform with traffic speeds and patterns the problem would go away. Often only a few cars can make it through those 2 lights at a time. This is what backs up traffic.	1/14/2022 10:11 PM
29	The only issue is coming out of the city. The entire problem is the timing of the lights. If you work with the timing ... you don't need to spend this money, mess up our traffic and most importantly mess up our community. Its all about the light timing.	1/14/2022 9:46 PM
30	Carson road, Blue Ridge Parkway, 220	1/14/2022 9:23 PM
31	carson rd	1/14/2022 7:58 PM
32	Carson road	1/14/2022 7:45 PM
33	I never found a better route	1/14/2022 5:44 PM
34	King st	1/14/2022 5:11 PM
35	From Carson Rd over to King St. there are no good alternatives in getting to Walmart and Lowes from Carson.	1/14/2022 4:43 PM
36	604 to Read Mountain	1/14/2022 3:49 PM
37	Carson Road	1/14/2022 3:38 PM
38	Carson Rd/Belle Ave	1/14/2022 2:59 PM
39	Carson Rd	1/14/2022 2:41 PM
40	I live off of west ruritan which means when chick fil a is busy I have to use east ruritan road to get home	1/14/2022 12:35 PM
41	Carson Road	1/14/2022 12:35 PM
42	Carson	1/14/2022 12:16 PM
43	There are limited east-west routes for US460 to use as alternate routes. Some of the north-south connections do not have connections to other neighborhoods to make them useful as alternates.	1/14/2022 12:14 PM
44	Have used Carson Road before, but it's not great.	1/14/2022 11:43 AM
45	460 to 220 to read Mt road or 81, or take the parkway to vinton.	1/14/2022 11:25 AM
46	Belle Ave / Carson Rd	1/14/2022 11:06 AM
47	220 to Read Mtn Rd to route 11	1/14/2022 11:05 AM
48	Carson Road to King Street	1/14/2022 11:03 AM
49	I don't really have an alternate route to get home.	1/14/2022 11:01 AM
50	None	1/14/2022 10:21 AM
51	Carson Rd	1/14/2022 10:11 AM
52	Huntridge	1/14/2022 9:54 AM
53	Back over Mountain Pass to avoid 460.	1/14/2022 9:52 AM
54	Blue Ridge Parkway	1/14/2022 9:29 AM
55	I cut over to the Mason Mill area.	1/14/2022 8:54 AM
56	Old Hollins to Shadwell to Read Mountain to 604	1/14/2022 8:50 AM
57	E ruritan	1/14/2022 8:45 AM

58	Belle Ave	1/14/2022 8:27 AM
59	Carson, Sanderson/Read Mtn	1/14/2022 8:08 AM
60	Carson rd	1/14/2022 7:44 AM
61	King St, gus nick	1/14/2022 7:27 AM
62	There ARE NO effective alternate routes.	1/14/2022 6:16 AM
63	in order to work around 460/220, you must leave the study area and venture into the surrounding neighborhoods, which isn't the worse, but	1/14/2022 1:24 AM
64	220 to read mountain to valley view or parkway to vinton	1/14/2022 12:42 AM
65	Sometimes I will take a route from downtown via which I will end up on Williamson Rd to Read Mtn Rd to 220.	1/14/2022 12:22 AM
66	Carson or king streets	1/14/2022 12:08 AM
67	Names of roads unknown	1/14/2022 12:06 AM
68	Go to Read Mountain road	1/13/2022 11:51 PM
69	Neighborhood areas	1/13/2022 11:30 PM
70	I come from Roanoke city off old mountain road. I will come down and cut behind East Gate park to granby to avoid 460 headed toward bonsack	1/13/2022 11:30 PM
71	No	1/13/2022 11:27 PM
72	I-81 to Exit 150, Peter's Creek Rd, Williamson Rd.	1/13/2022 7:52 PM
73	Mecca St, King St., Belle Ave/Carson Road	1/13/2022 7:29 PM
74	Carson road	1/13/2022 4:42 PM
75	Carson Road	1/13/2022 2:49 PM
76	Alternative routes don't exist. You have to use 460 to get to and from my home to go nearly anywhere in the corridor, Roanoke City, Vinton, etc.	1/12/2022 10:50 AM
77	I wait	1/12/2022 10:39 AM
78	Carson rd	1/11/2022 9:48 PM
79	Cloverdale Rd, I81, 581	1/11/2022 4:56 PM
80	cut through to Vinton King St	1/10/2022 8:53 PM
81	West Ruritan ilo East Ruritan so I can use the traffic light	1/10/2022 8:35 PM
82	depends on where the accident/congestion is, from Blue Hills Drive if I know there is backup I will go opposite way. example if west 460, I go east to get onto I81, if opposite I go west to get onto 581 or go backroads to plantation to 81	1/10/2022 2:41 PM
83	If heading West, turn around to 460 East, then 220 N, then Read Mountain Rd to Cloverdale to North County	1/10/2022 2:04 PM
84	King St and Carson Rd	1/10/2022 1:06 PM
85	go through Vinton to avoid 460	1/10/2022 12:56 PM
86	Trail drive	1/10/2022 12:52 PM
87	N/A	1/10/2022 9:49 AM
88	Google Maps or Waze	1/10/2022 9:46 AM
89	depends on time of day. instead of waiting to cross at huntridge, go behind walmart.	1/10/2022 12:06 AM
90	D	1/9/2022 7:19 PM
91	460/Trail Drive	1/9/2022 6:53 PM

92	Carson Road	1/8/2022 11:08 AM
93	N/A	1/7/2022 6:16 PM
94	Carson Rd towards vinton	1/7/2022 12:59 PM
95	n/a	1/7/2022 11:22 AM
96	NA	1/7/2022 10:20 AM
97	Read Mountain Rd	1/7/2022 5:27 AM
98	Carson Road	1/6/2022 11:07 PM
99	If I have to use 460 during peak hours, I use Google maps, look at the congestion there (red/yellow on map) and estimated travel times and choose the best route that way. Google maps also alerts a user to accidents if the responders have been at the scene long enough.	1/6/2022 10:24 PM
100	Carson Road to King Street (headed towards downtown)	1/6/2022 9:46 PM
101	Carson rd	1/6/2022 9:35 PM
102	any	1/6/2022 9:07 PM
103	Carson Road	1/6/2022 8:51 PM
104	CaArson Road	1/6/2022 5:48 PM
105	vary	1/6/2022 1:39 PM
106	Carson Rd.	1/6/2022 9:13 AM
107	Carson Road if going to Vinton. Cloverdale to Read Mt Rd to Williamson to go to mall or N. Roanoke.	1/5/2022 7:04 PM
108	I 81 Going thru Vinton	1/5/2022 3:27 PM
109	carson road	1/5/2022 12:50 PM
110	I commute from Vinton to Daleville. In the morning I use Carson road to avoid stoplights from King Street onwards to that point. In the evening I use King Street as the Carson Road intersection with King Street is difficult to turn left onto King.	1/5/2022 9:19 AM
111	Carson Rd, E and W Ruritan Rd, Bonsack Rd, Huntridge Rd	1/5/2022 9:08 AM
112	I go all the way over to route 11 and come home that way.	1/5/2022 7:53 AM
113	I use the recommended path	1/5/2022 7:15 AM
114	Carson rd, huntridge rd	1/5/2022 6:23 AM
115	I live on Carson Rd, but MANY drivers use Carson as a cut through to avoid the congestion from KFC (King St) intersection and the CFA/CVS intersection at West Ruritan, and the Valley Gateway intersection. I know the plan is to prevent left turns onto 460 from Carson Rd In the future and residents in this area are NOT happy about that. We need a stop light at Carson/460 instead of that lousy option.	1/5/2022 5:02 AM
116	That's the problem with this area. A lack of back roads! Carson is the only one, but it's not great.	1/4/2022 7:18 PM
117	Carson road	1/4/2022 6:56 PM
118	Peters Creek to Route 11 around Read Mountain Rd	1/4/2022 6:40 PM
119	None	1/4/2022 3:49 PM
120	Not sure depends on where I am.	1/4/2022 3:30 PM
121	Sometimes I take Carson Road. Sometimes I take Huntridge home even though Cortland is closer to my home	1/4/2022 1:54 PM
122	East Ruritan to West Ruritan	1/4/2022 1:20 PM
123	Carson Rd	1/4/2022 12:29 PM

124	King, Belle, Carson	1/4/2022 12:11 PM
125	Carson Rd	1/4/2022 11:51 AM
126	None. I stay on the main road. If it is "rush hour" (which Roanoke really does not have, I expect there to be more traffic. It is not an issue.	1/3/2022 4:48 PM

Q11 Other than Route 460 intersections mentioned in questions 7 and 8, are there other roadways in the study area that need improvements?

Answered: 95 Skipped: 125

#	RESPONSES	DATE
1	A better route from 460 to Route 24 would be great! Possibly using Carson	1/28/2022 8:44 AM
2	Gus nicks and king street	1/27/2022 9:25 PM
3	Na	1/27/2022 7:58 PM
4	King and Belle	1/26/2022 7:11 PM
5	No	1/26/2022 11:11 AM
6	no	1/26/2022 8:42 AM
7	Definitely need to look at the left on 460 to King St. Not on your study but is backed up awful. Left turn lane isn't long enough, light isn't long enough. Traffic gets backed up awful. Also 460 onto Gus Nicks, again left turn lane isn't long enough, light isn't long enough and traffic gets backed up really bad. But again it isn't within your study, but something should be done!!!	1/24/2022 9:31 AM
8	One lane bridge on Carson Road needs to be widened to 2 way.	1/23/2022 11:11 AM
9	All of 460	1/22/2022 11:10 PM
10	NONE	1/22/2022 12:36 PM
11	All of Orange / Challenger is a nightmare. Roanoke City has an obligation to fix Orange also.	1/17/2022 12:11 PM
12	Carson Road (Curvy area) East Ruritan	1/16/2022 11:46 AM
13	West Ruritan road needs to be widened to accommodate a left turn into CFA. Right turn lane into ER and straight for homeowners. The hill is too steep and they fly over the hill and sometimes can't see traffic backed up at light waiting to get ONTO 460. Warning lights for them the light is RED would help.	1/16/2022 11:19 AM
14	No	1/16/2022 8:42 AM
15	All of 460 between downtown and Cloverdale. Add at least two more lanes. Widen it.	1/15/2022 5:48 PM
16	better signal coordination	1/15/2022 2:34 PM
17	no	1/15/2022 1:37 PM
18	New LG ER access pathways to 460	1/15/2022 11:51 AM
19	No	1/15/2022 10:47 AM
20	Carson road, not the intersection the entire road	1/15/2022 10:21 AM
21	King's St, Gus Nicks, 13th St.	1/15/2022 9:51 AM
22	No	1/15/2022 2:08 AM
23	Not that I can think of	1/14/2022 11:23 PM
24	No	1/14/2022 9:46 PM
25	Carson road, Trail Drive	1/14/2022 9:23 PM
26	Carson road	1/14/2022 7:45 PM
27	Vinton area	1/14/2022 5:44 PM
28	No	1/14/2022 4:43 PM

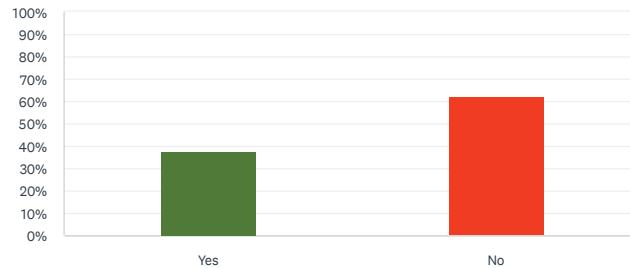
29	No	1/14/2022 3:38 PM
30	460 itself needs to be six lanes rather than four from the county line to Cloverdale road. The amount of traffic is too much for four lanes and you want to build more business.	1/14/2022 3:05 PM
31	Carson Rd needs to be widened to accommodate traffic. It is also incredibly dangerous to drive a fire truck across the low water bridge, and around the blind corner just past it.	1/14/2022 2:59 PM
32	no	1/14/2022 2:41 PM
33	Carson Road	1/14/2022 12:35 PM
34	King Street	1/14/2022 12:16 PM
35	Walmart Access Road needs night lighting to avoid pedestrians walking to/from Walmart from getting hit.	1/14/2022 12:14 PM
36	It's hard to go left out of huntridge at 460, but I just go around to 220 by way of crumpacker and go back up to 460 that way.	1/14/2022 11:43 AM
37	n/a	1/14/2022 11:01 AM
38	East Ruritan Rd	1/14/2022 10:21 AM
39	All stop lights	1/14/2022 9:54 AM
40	Cloverdale Rd, King St.	1/14/2022 9:52 AM
41	Read mountain at 220.	1/14/2022 9:33 AM
42	No	1/14/2022 8:54 AM
43	Connect W Ruritan to Blue Hills to provide relief for the disaster you allowed at Chickfila that will get worse with ER	1/14/2022 8:45 AM
44	No	1/14/2022 8:08 AM
45	No	1/14/2022 7:44 AM
46	No	1/14/2022 6:16 AM
47	No others come to mind	1/14/2022 12:22 AM
48	Intersection at king street and 460	1/14/2022 12:08 AM
49	None	1/13/2022 11:30 PM
50	No	1/13/2022 11:30 PM
51	No	1/13/2022 11:27 PM
52	Route 460 needs more lanes.	1/13/2022 7:29 PM
53	King Street	1/13/2022 4:53 PM
54	No opinion	1/13/2022 4:42 PM
55	No, all appear to be identified	1/13/2022 2:49 PM
56	The bridge on Glade Creek Road is in disrepair and in need of maintenance. Also, the rail road crossing just beyond the bridge narrows in such a way that two cars cannot travel across. It is deceptively narrow and windy.	1/13/2022 2:46 PM
57	none	1/12/2022 10:50 AM
58	none.	1/12/2022 10:39 AM
59	n/a	1/11/2022 1:30 PM
60	Railroad crossing at Bonsack when trains block the track leaving no access to the area.	1/10/2022 8:53 PM
61	not that i can think of	1/10/2022 2:41 PM
62	Carson Rd is NARROW!	1/10/2022 2:04 PM

63	Hillview Drive/Alt 220; Country Corner parking lot is a deathtrap. There should not be a left turn allowed at Huntridge/460.	1/10/2022 1:53 PM
64	No	1/10/2022 1:06 PM
65	No	1/10/2022 12:52 PM
66	N/A	1/10/2022 9:49 AM
67	N/A	1/9/2022 7:19 PM
68	No	1/9/2022 11:36 AM
69	Carson Rd. needs to be continually monitored for speed. People use this as a shortcut to Vinton at 45mph speeds. Spring tree is used the same way.	1/7/2022 6:16 PM
70	West Ruritan Road to better accommodate Chick FilA traffic during peak hours. Concern over how the new LewisGale ER will add even further to this congestion. At times traffic is backed up onto 460 by people trying to get into Chick-fil-A or other traffic, like us, who live in the vicinity and West Ruritan is the only option for residents exiting off of 460.	1/7/2022 1:51 PM
71	the Chik fil a intersection is a true nightmare. Cars back up going into the establishment which prevents flow of traffic and backs up into 460 and blocks people who live in that area. No they are adding the new Emergency Room which will make it worse.	1/7/2022 12:59 PM
72	I would like to see walking improvements like a sidewalk up Crumpacker Drive leading up to Bonsack Elementary. Also too possibly something to slow traffic coming down the hill from the school.	1/7/2022 11:22 AM
73	Not really	1/7/2022 10:20 AM
74	Hillview Dr and Cloverdale Rd (Alt 220)	1/7/2022 5:27 AM
75	Widening Carson Road	1/6/2022 11:07 PM
76	I came extremely close to being seriously injured or killed at intersection B. It was when the Blue Hills Car Wash was under construction. I was at the light, headed toward the Civic Center on 460 and stopped behind 4-5 other cars for the red light. In my rear view mirror I saw a pickup truck barreling down on me (about 40 mph). As it got closer, I saw that the driver was looking to the left, not at the road. (I think he was looking at the car wash construction site.) In a split second I considered 3 options. I decided to stay where I was, because I believe that if the driver looked back at the road, he might go to the left or right to avoid hitting my car, so I decided not to change lanes. Watching in my rear view mirror, I saw the driver finally look back at the road. A look of absolute horror and surprise came across his face. I thought I was about to die in an explosion of gasoline. I closed my eyes and prayed. Miraculously, there was no impact. The other driver had slammed on his brakes. I opened my eyes to see the driver behind me slumped over the steering wheel, head and arms on the wheel, looking down. He clearly understood the gravity of the situation. The light changed and I wondered if he'd had a heart attack in that moment or needed assistance. I mentally weighed getting out of my car to check on him, but felt that would not have been safe, as traffic was moving again. I drove forward slowly and kept looking back to see if his vehicle moved. He did not make the green light, but eventually he slowly moved up to the light, which was red. So I felt he must be ok and I drove on. But at least two of us were very shaken up that night. Please minimize distractions on 460, use as many stoplights as necessary even if it slows traffic and help keep drivers focused on the road.	1/6/2022 10:24 PM
77	No	1/6/2022 9:35 PM
78	Carson Road, and King St.	1/6/2022 8:51 PM
79	no	1/6/2022 1:39 PM
80	Carson Rd	1/6/2022 9:13 AM
81	More turn lanes at Chickfila intersection. Improved timing of Kroger stoplight. When turning left from 460 East, it often misses cycles.	1/5/2022 7:04 PM
82	All	1/5/2022 4:09 PM
83	No opinion	1/5/2022 3:27 PM

84	Unsure	1/5/2022 7:53 AM
85	No	1/5/2022 7:15 AM
86	Unsure	1/4/2022 7:18 PM
87	3 lanes to two near little Caesar's.. it's a madhouse and people shouldn't be able to stay in the left lane and force their way on to the drivers who got over when they were supposed to	1/4/2022 6:56 PM
88	Not that I'm aware of	1/4/2022 6:40 PM
89	yes from Williamson rd. all the way through to webster rd or futher out with three lanes	1/4/2022 4:01 PM
90	No	1/4/2022 3:49 PM
91	Hillview	1/4/2022 3:30 PM
92	Carson Road in general (not just the intersection) is very narrow and many people use it as a short cut to vinton- especially high school drivers in the mornings	1/4/2022 2:39 PM
93	No	1/4/2022 1:54 PM
94	Carson Road, Webster Road and Mountain Pass Road are likely candidates	1/4/2022 12:29 PM
95	460 & Laymantown Rd	1/4/2022 12:11 PM

Q12 Several projects in the City of Roanoke and Roanoke County received funding in 2021 to improve intersections along Route 460. These intersections include: Patrick Road, Blue Hills Drive, Blue Hills Village Drive, West Ruritan Road, Carson Road, Bonsack Road, Country Corner Nursery, Huntridge Road and Cloverdale Road/Alternate Route 220. Have you heard about funded improvements for one or more of these intersections?

Answered: 163 Skipped: 57



ANSWER CHOICES	RESPONSES	
Yes	38.04%	62
No	61.96%	101
TOTAL		163

Q13 Where could new road connections help traffic flow in the Study Area? Where would you recommend these connections?

Answered: 111 Skipped: 109

#	RESPONSES	DATE
1	connect 460 to 24 without entering the city of Roanoke.	1/28/2022 8:44 AM
2	Na	1/27/2022 7:58 PM
3	Larger left turn lane on 460 to Gus Nicks.	1/26/2022 7:11 PM
4	Just increase the flow better it is terrible	1/26/2022 11:11 AM
5	Already answered. But the area by CVS & Kroger is a major problem. And to add to that they put a Lewis Gayle in the mix which will only cause more of an issue.	1/24/2022 9:31 AM
6	Not sure	1/22/2022 11:10 PM
7	Road leading out of Hunt Ridge 609 or East Ruritan road then better enter section on 460 for the traffic.	1/22/2022 3:52 PM
8	N/A	1/22/2022 12:36 PM
9	I don't believe new roads could be made. Challenger needs to be widened and semi's need to be moved elsewhere. They are a problem using Challenger to get to Cloverdale.	1/17/2022 12:11 PM
10	Carson road bridge	1/17/2022 9:21 AM
11	Extend Rt 220 from Intersection L in direction of Vinton (along Parkway). Relocate entire Parkway further east and use current basic roadbed to provide connection from "L" through Vinton to Clearbrook.	1/16/2022 11:46 AM
12	synchronize the lights PLEASE	1/16/2022 11:19 AM
13	N/a	1/16/2022 8:42 AM
14	You can't make new connections through the neighborhoods. You just need to widen it and adopt basic best practices of cities.	1/15/2022 5:48 PM
15	better connectivity	1/15/2022 2:34 PM
16	idk	1/15/2022 1:37 PM
17	E Ruritan - valley gateway - Carson; Also improve combined flows around Trail, W Ruritan, and new LG ER.	1/15/2022 11:51 AM
18	From King to Alt 220	1/15/2022 10:47 AM
19	Carson road being widened and improved would help with some traffic going to Vinton.	1/15/2022 10:21 AM
20	Better intersection at Chick Fil to prevent visibility problems and backup. Rather than new road connections just improve issues like that	1/15/2022 2:08 AM
21	I don't know	1/14/2022 11:23 PM
22	avoiding the 460/W ruritan intersection especially during the times when Chick-fil-a is busiest. Will be worse when the ER opens.	1/14/2022 10:53 PM
23	Valley Gateway (Kroger) exiting onto 460 going to Chick-fil-a is a problem. Likewise the heavy traffic going into Chick-fil-a is a problem. That intersection with the new ER is a problem. It should have been widened to allow more traffic, a left and right turn at the same time. Its now too late with the ER in position and the road not widened first. Bad choice by the civil engineers. Those are the 2 problem areas. The rest of the intersections are fine as they are.	1/14/2022 10:11 PM
24	Fix the outbound timing of the lights leaving the city eastbound. From Blue Hills through Kroger	1/14/2022 9:46 PM

	... its all a timing issue. It doesn't have anything to do with traffic patterns.	
25	Connection from Carson Road or Bonsack road area to Blue Ridge Parkway. Connect Ruritan neighborhoods to Huntridge neighborhoods and Old Mountain Road/Monterey neighborhoods.	1/14/2022 9:23 PM
26	Around west ruritan to alleviate the back ups headed to chick fil a	1/14/2022 7:58 PM
27	Back side of Kroger on Carson road/2nd entrance to kroger area from other side	1/14/2022 7:45 PM
28	Add another lane on both sides allowing more ppl to go straight with out stopping for right turning	1/14/2022 5:44 PM
29	Entrance to Kroger from Carson Rd.	1/14/2022 4:43 PM
30	Carson road and king street	1/14/2022 4:35 PM
31	The bow tie plan will not help!!! The biggest issue is the right lane merge from alt 220 to right onto 460.	1/14/2022 3:38 PM
32	I don't think new connections are the answer as much as widening and improvement what is currently in place.	1/14/2022 2:59 PM
33	no	1/14/2022 2:41 PM
34	460 /220 alt	1/14/2022 12:30 PM
35	I'm not sure there are at new connections available	1/14/2022 12:16 PM
36	Connect W. Ruritan to Kroger S/C light to provide alternate neighborhood entry/exit point to homes behind Chick-fil-A.	1/14/2022 12:14 PM
37	I think a design like Christiansburg/Blacksburg Smart Road & overpasses would simplify traffic routes and allow travelers and commuters easier accesses to their destinations.	1/14/2022 12:10 PM
38	Can't really think of any	1/14/2022 11:43 AM
39	If bonsack road was extended to Carson road Then that could cut down on traffic at the bonsack road and west Ruritan road. People from bonsack could easily use Carson as a way around the 460 traffic with out crossing 460 2 times. Also allowing Bonsack road traffic not to have to cross at the same spot as west Ruritan. Also there could be a road put in beside the new med express building on the side that the house is for an alternative entry to east Ruritan around the chick fil a mess. Or make the chick fil a traffic use the trail road beside the dry cleaner.	1/14/2022 11:25 AM
40	I would recommend a bi-pass that connects 581 directly to 460 north of this study area, or at the 220 intersection so that these roads will be used primarily by local traffic rather than commuters.	1/14/2022 11:05 AM
41	don't know	1/14/2022 11:01 AM
42	West ruritan	1/14/2022 10:45 AM
43	There needs to be arrows at the 460/Carson Rd intersection!!! People don't know which side of the road to be on at the crossover!!! Also, Country Corner needs a turning lane going 460 West!!!! So many wrecks.	1/14/2022 10:11 AM
44	Need roundabouts	1/14/2022 9:54 AM
45	NA	1/14/2022 9:52 AM
46	Make the road behind the nursery a bypass around the 460/220 intersection	1/14/2022 9:33 AM
47	460 just need more Lanes to help the flow of traffic. The congestion is basically all day.	1/14/2022 8:54 AM
48	Definitely at L, K & E	1/14/2022 8:50 AM
49	W Ruritan to Blue Hills and E Ruritan to Huntridge	1/14/2022 8:45 AM
50	None needed	1/14/2022 8:08 AM
51	Maybe make a fourth entry, new road that comes out at across from bonsack walmart or at 604/460 light and make a 4 way intersection. Make the people that are yielding right toward the walmart light have a light too and they can go when the other traffic turning left gets a green	1/14/2022 7:27 AM

light . Also when traffic turning left to get on 604 . Not quite sure where this road could start but I think it would be a good idea. Maybe somehow connect from the road people usually take off of king st and come out right past kroger, where there is no light (Carson Rd). But instead there be another short cut road to get to that light possibly.

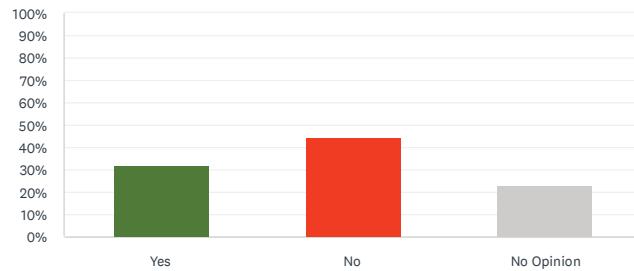
52	I would eliminate intersection G and have the existing businesses tie into intersection H.	1/14/2022 7:25 AM
53	An expressway-type road around the entire area would be helpful. Given the overabundance of stoplights and hills, an alternate route for trucks would be great.	1/14/2022 6:16 AM
54	Improve King Street	1/14/2022 5:15 AM
55	instead of new roads, or connections, expanding the existing roadways would accommodate the heavy traffic flows, furthermore dedicated turn lanes would help too (Where they do not already exist)...lastly, dedicated turn lanes should be added not occupy existing lanes.	1/14/2022 1:24 AM
56	West Ruritan and trail. At a traffic light at east ruritan and bonsack. Everywhere else is perfect.	1/14/2022 12:42 AM
57	A center "through lane" which bridges over intersections in order to move traffic might work here on Orange Ave/Challenger Rd. Seminole Drive in Charlottesville has that at the Rio Dr intersection and it seems to really help there.	1/14/2022 12:22 AM
58	A way for east Ruritan residents to safely bypass the chick fil a traffic. Slow traffic down on alt 220	1/14/2022 12:08 AM
59	I would leave the areas around the Walmart, Lowe's, library, , etc. alone. I think you will create more problems for us residents of the local neighborhoods.	1/14/2022 12:06 AM
60	Connections from inside the Ruritan over to bonsack elementary. With out having to go out on 460	1/13/2022 11:50 PM
61	Stop light (or other beneficial alternative) at East Ruritan.	1/13/2022 11:30 PM
62	If there was a connection from W/E Ruritan to Bonsack Elementary/Walmart.	1/13/2022 11:27 PM
63	Adding more lanes would help all connections.	1/13/2022 7:29 PM
64	Too many connections now impedes through movements	1/13/2022 4:53 PM
65	East Ruritan and Carson Road	1/13/2022 4:42 PM
66	Not sure	1/13/2022 2:49 PM
67	Connecting Bonsack Road to an existing traffic light at either "K" or "L" would alleviate vehicles darting across 4 lanes of traffic. I also notice no use of round-a-bouts, do they not work well for this level of traffic?	1/13/2022 2:46 PM
68	Not sure any can help. 460 is a major thoroughfare and is the hub of the study area. Too much residential on both sides of study area for me to see options other than improving flow and crossings.	1/12/2022 10:50 AM
69	none - leave it alone.	1/12/2022 10:39 AM
70	A connection starting before Intersection L to avert traffic flow for people heading to RMH or the Tanglewood side of Roanoke.	1/11/2022 4:56 PM
71	E, F, K, L	1/11/2022 1:30 PM
72	Bonsack and 460.	1/10/2022 8:53 PM
73	Need a connection from La Bellevue area to the Orchards area without using 460	1/10/2022 8:35 PM
74	Need a better way to get from I81 to US460 to head East towards Lynchburg / Bedford. US460 at US220A should have an interchange.	1/10/2022 3:30 PM
75	not sure	1/10/2022 2:41 PM
76	Bypass from Walmart area to Stewartsville Rd	1/10/2022 2:04 PM
77	No opinion	1/10/2022 1:06 PM
78	Need to stop U-turns at West Ruritan Rd. For some reason ALOT of people do u-turns there and almost cause accidents for traffic turning right onto 460 from West Ruritan all day long. It	1/10/2022 1:06 PM

	is very dangerous! We just need a no u-turn sign put up to stop that and make it safer.	
79	not qualified to express opinion	1/10/2022 12:56 PM
80	Connections to roads to make it possible to not have to access 460 at all times. Reduce number of traffic intersections. Connect E Ruritan to Blue Hills	1/10/2022 12:56 PM
81	n/a	1/10/2022 9:49 AM
82	I would not allow Left hand turns into Chick-fil-A from W. Ruritan. I would make them only be able to enter from Trail Drive.	1/9/2022 7:19 PM
83	Chick Filet and new Urgent care Facility at intersection of West Ruritan - need their own entry - Not Part of West Ruritan. West Ruritan should be used for residential only	1/9/2022 6:53 PM
84	None	1/9/2022 11:36 AM
85	Connect Crumpacker Drive in Samuel Gates community to Greggin Drive which connects to East Ruritan Road. This will help even out traffic flow.	1/8/2022 9:44 AM
86	No opinion	1/7/2022 6:16 PM
87	We need another road to access neighborhoods in old bonsack like Aprils Meadow. The RR track double crosses the only access and over the past year there have been multiple times that the train has blocked access for literally hours. We are a family neighborhood and this could be a HUGE potential safety issue. We have made multiple complaints to NS RR. Access needs to be re-established out to Carson Rd where there was once a crossing.	1/7/2022 12:59 PM
88	Behind Ruritan Road to connect East and West to an alternate way to get out.	1/7/2022 10:20 AM
89	Tie it into Alt 220, or possibly Carson Rd.	1/7/2022 5:27 AM
90	West Ruritan needs a dedicated right turn lane for ambulances to get into the new Lewis Gale Emergency Department. This is by far the area with the most backed up traffic, as people want to turn left off West Ruritan into Chick-Fil-A and the traffic is backed up to Route 460 at peak times. Also, cars traveling from West Ruritan towards 460 do not have a clear line of site due to the hill they encounter right before the Chick-Fil-A entrance. So the situation is those cars are coming up over a blind hill and encounter cars turning left (into Chick-Fil-A) directly in front of them. Soon ambulances will be added into this nightmare scenario as they try to get into the new Emergency Dept. on West Ruritan.	1/6/2022 10:24 PM
91	West Ruritan to Blue Hills Drive	1/6/2022 9:46 PM
92	Carson rd.	1/6/2022 9:35 PM
93	King St	1/6/2022 8:51 PM
94	Spend money on the Cloverdale Road460 intersection, that's the busiest	1/6/2022 5:48 PM
95	unsure	1/6/2022 9:13 AM
96	Maybe a way to cut thru to Cloverdale Road from 460 east besides Mt Pass. (I have to take this opportunity to also say these 2 suggestions that might help 460 closer to Roanoke City. It would be nice to have a wider, straighter road to travel to Valley View area that did not require lots of turns. And one thru Orange Ave thru town, which is crooked with lanes changes.	1/5/2022 7:04 PM
97	By chick-fil-a	1/5/2022 4:09 PM
98	West Ruritan Valley Blvd	1/5/2022 3:27 PM
99	carson rd	1/5/2022 12:50 PM
100	As much as I'd dislike another light, Carson road needs to be widened and a light added	1/5/2022 7:53 AM
101	Na	1/5/2022 7:15 AM
102	Unsure	1/4/2022 7:18 PM
103	I don't know enough about the area to suggest anything helpful	1/4/2022 6:40 PM
104	needs to be tree lanes through all of this	1/4/2022 4:01 PM
105	?	1/4/2022 3:49 PM

106	Not sure	1/4/2022 3:30 PM
107	IDK	1/4/2022 1:54 PM
108	Something needs to be done about the backup at west Ruritan	1/4/2022 1:08 PM
109	I would have to have more information to even visualize it. I will leave that to you.	1/4/2022 12:29 PM
110	460/W Ruritan Rd	1/4/2022 12:11 PM
111	Consider widening roads and actually timing the lights (something that have I have never seen done well in this valley).	1/3/2022 4:48 PM

Q14 Is it important for pedestrians to be able to cross U.S. Route 460 in the Study Area?

Answered: 188 Skipped: 32



ANSWER CHOICES	RESPONSES	
Yes	31.91%	60
No	44.68%	84
No Opinion	23.40%	44
TOTAL		188

Q15 If you answered "yes", where should crosswalks be located?

Answered: 76 Skipped: 144

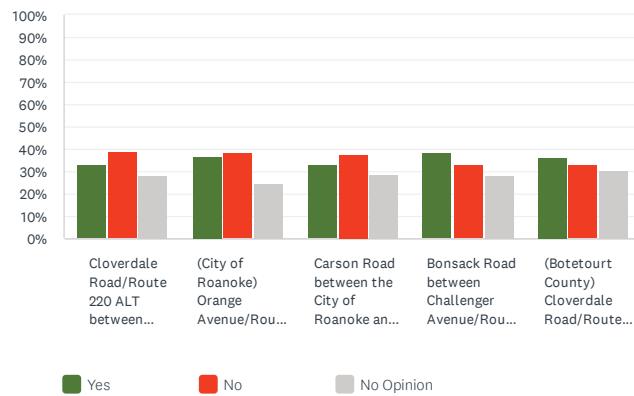
#	RESPONSES	DATE
1	the new huntridge luxury apartments. and Near Kroger.	1/28/2022 8:44 AM
2	A and E	1/27/2022 7:58 PM
3	No	1/26/2022 11:11 AM
4	At the lights	1/24/2022 9:31 AM
5	B and E if not there now.	1/23/2022 11:11 AM
6	I say no	1/22/2022 11:10 PM
7	Carson road, rt 460	1/17/2022 9:21 AM
8	B C E	1/16/2022 11:46 AM
9	Valley gateway, ruritan rd, by suntrust/bb&t bank	1/16/2022 8:42 AM
10	Build a pedestrian bridge if needed. Do NOT slow down traffic anymore than needed.	1/15/2022 5:48 PM
11	na	1/15/2022 1:37 PM
12	Mexico City Way	1/15/2022 10:47 AM
13	No	1/15/2022 2:08 AM
14	At road label B and maybe A	1/14/2022 11:23 PM
15	None	1/14/2022 9:23 PM
16	west ruritan	1/14/2022 7:58 PM
17	N/a	1/14/2022 7:45 PM
18	Any intersection that has majority of stores	1/14/2022 5:44 PM
19	Near Kroger and walmart	1/14/2022 5:11 PM
20	no	1/14/2022 2:41 PM
21	Only at perhaps Intersection E	1/14/2022 12:14 PM
22	In the common areas at intersections near the shopping areas and restaurants	1/14/2022 12:10 PM
23	Never see anybody walking out this way. Don't do that to us.	1/14/2022 11:43 AM
24	Blue Hills Dr, W Ruritan Rd	1/14/2022 11:06 AM
25	n/a	1/14/2022 11:01 AM
26	Blue Hills Dr.	1/14/2022 10:21 AM
27	At the new roundabouts	1/14/2022 9:54 AM
28	King St and Orange Ave	1/14/2022 9:52 AM
29	.	1/14/2022 8:45 AM
30	Crosswalks would make matters much worse.	1/14/2022 8:36 AM
31	Install Pedestrian/Bike Paths so people in the Orcahrd subdivisions can safely access Kroger Shopping Center, Chick-fil-A, etc.	1/14/2022 8:08 AM
32	People don't generally walk in this area	1/14/2022 7:44 AM

33	If crosswalks exist they should only be at select intersections with the highest visibility. Intersection E would be the ideal intersection for a crosswalk.	1/14/2022 7:25 AM
34	Every traffic signal	1/14/2022 7:05 AM
35	Crosswalks? Your kidding right? This is a BUSY four lane highway - you would need a pedestrian bridge for it to work safely.	1/14/2022 12:08 AM
36	NA	1/13/2022 11:30 PM
37	W Ruritan and 460	1/13/2022 11:27 PM
38	3814 challenger Ave 24012	1/13/2022 8:41 PM
39	CVS, Kroger, East Ruritan Road, Hunt Ridge Road, and Walmart	1/13/2022 7:29 PM
40	None unless elevated above road. Not the place for pedestrian travel.	1/13/2022 4:42 PM
41	N/A	1/13/2022 2:49 PM
42	At Blue Hills Drive.	1/12/2022 10:39 AM
43	Up to the studies.	1/10/2022 8:53 PM
44	West Ruritan intersection and Blue Hills intersection	1/10/2022 8:35 PM
45	West Ruritan / 460	1/10/2022 8:03 PM
46	gus nicks blvd /	1/10/2022 2:41 PM
47	From existing neighborhoods to shopping centers.	1/10/2022 1:06 PM
48	At King St light where there is a bus stop.	1/10/2022 1:06 PM
49	All roads that feed a subdivision and the Lowe's/WalMart main entrance.	1/10/2022 9:49 AM
50	E. West Ruritan	1/9/2022 7:19 PM
51	At traffic lights	1/8/2022 6:56 PM
52	N/A	1/7/2022 6:16 PM
53	West Ruritan, Mexico Way, King Street	1/7/2022 1:51 PM
54	Near Blue Hills Rd with sidewalks to walk to West Ruritan	1/7/2022 12:59 PM
55	I'm not sure. Leaving up to studies for best possible locations.	1/7/2022 11:22 AM
56	At the Ruritan exits. Near Kroger, near Walmart, near Chick Fil A. It would be excellent to have a bike lane and/or sidewalks added along 460. This would make the area feel more liveable and inviting.	1/7/2022 10:20 AM
57	The intersection by MacDonald's has the most pedestrians in my experience and they struggle to cross safely over all lanes of traffic (to the KFC side, for instance). Additionally, homeless people are often in that median which is very distracting to drivers trying to avoid all pedestrians who may be crossing.	1/6/2022 10:24 PM
58	Blue Hills, Carson Rd (G.H)	1/6/2022 9:07 PM
59	I never see pedestrians, wasteful spending to accommodate pedestrians at these intersections	1/6/2022 5:48 PM
60	No in this area. better crossing for Burgland center area.	1/6/2022 1:39 PM
61	That is ridiculous. We need some thru roads to keep traffic and commerce moving. This is not a hometown local small city area.	1/5/2022 7:04 PM
62	At traffic lights perhaps	1/5/2022 3:27 PM
63	At all traffic signals	1/5/2022 10:30 AM
64	Greenway somewhere along the road. Sidewalks connecting Kroger to neighborhoods.	1/5/2022 9:19 AM
65	None	1/5/2022 7:53 AM
66	No	1/5/2022 7:15 AM

67	As of now not much pedestrians are walking, but with sheets coming down the road it will increase foot traffic dramatically cross walks should be at ever intersection	1/5/2022 6:23 AM
68	We could use a bike lane on Carson road. Serious bike enthusiasts use this road and hold up traffic. Drivers can't pass because of the curvy nature of the road.	1/5/2022 5:02 AM
69	Everywhere. The lack of crosswalks in the county is a huge problem!	1/4/2022 7:18 PM
70	Walmart intersection	1/4/2022 6:56 PM
71	Not sure	1/4/2022 5:09 PM
72	N/a	1/4/2022 3:49 PM
73	Kroger	1/4/2022 3:30 PM
74	N/A	1/4/2022 1:54 PM
75	Between CVS and Chick-fil-A for sure. There are several apartment complexes in the area. I would think a crosswalk convenient to those locations would be a good place.	1/4/2022 12:29 PM
76	460/W Ruritan Rd	1/4/2022 12:11 PM

Q16 The Bikeway Plan for the Roanoke Valley Area Metropolitan Planning Organization (2012 Update) includes Priority and Vision alignments along roadways in the Study Area. Do you agree with the following locations for bicycle accommodations?

Answered: 188 Skipped: 32



			YES	NO	NO OPINION	TOTAL
Cloverdale Road/Route 220 ALT between Challenger Avenue/Route 460 and the Botetourt County line	32.98% 62	38.83% 73	28.19% 53	188		
(City of Roanoke) Orange Avenue/Route 460 from Gus Nicks Boulevard to the Roanoke County line	36.90% 69	38.50% 72	24.60% 46	187		
Carson Road between the City of Roanoke and Challenger Avenue/Route 460	33.16% 62	37.97% 71	28.88% 54	187		
Bonsack Road between Challenger Avenue/Route 460 (west entrance) and Challenger Avenue/Route 460 (east entrance)	38.50% 72	33.16% 62	28.34% 53	187		
(Botetourt County) Cloverdale Road/Route 220 ALT between the Roanoke County line and Lee Highway/Route 11	36.36% 68	33.16% 62	30.48% 57	187		

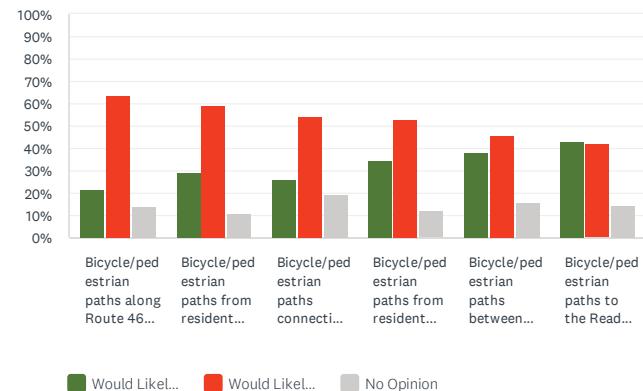
#	PLEASE INDICATE OTHER ON-ROAD LOCATIONS WHERE BICYCLE ACCOMMODATIONS SHOULD BE CONSIDERED:	DATE
1	People don't ride bikes on these roads	1/27/2022 9:25 PM
2	King st to Gus Nicks	1/26/2022 7:11 PM
3	I don't think it would be safe, to much speed to accomdate riders on bicycles.	1/24/2022 9:31 AM
4	Congestion and speed too much on 460 and 220 for bikes. Lower speed roads possibly if widened and sight distance.	1/23/2022 11:11 AM
5	none	1/22/2022 3:52 PM

6	West Ruritan/Coachman Dr	1/16/2022 11:46 AM
7	We have a greenway. Bicycles are too risky for people in this busy area	1/16/2022 11:19 AM
8	Not on 460	1/15/2022 11:16 PM
9	Alt 220 to BR parkway	1/15/2022 10:47 AM
10	Those are busy roads with high speed traffic and semi's. There are plenty of country roads for bikers that want to ride. I have ridden for years. This sounds cool and looks nice on paper, its just not how bikers should ride. Don't spend serious money to make an unnecessary solution when the biker can change where they ride for free.	1/14/2022 10:11 PM
11	West ruritan and East ruritan roads	1/14/2022 9:23 PM
12	Na	1/14/2022 7:45 PM
13	No I wouldn't ride my bike on these roads	1/14/2022 5:44 PM
14	Carson road	1/14/2022 5:11 PM
15	Tisbarea is way too congested for bike roads, that's an accident waiting to happen	1/14/2022 4:43 PM
16	You do not need to add bicycles to the extreme flow of traffic thru this area	1/14/2022 3:05 PM
17	I don't think it's safe for bicycle accommodations along 460	1/14/2022 12:16 PM
18	Bike Path from Read Mountain Preserve > Bonsack Ele. > The Orchards Apartments > Walmart Access Road	1/14/2022 12:14 PM
19	Some use bicycles as an only means of transportation- the consideration needs to keep in mind that they need a safe access to stores, restaurants, etc.	1/14/2022 12:10 PM
20	Anywhere it can feasibly be done	1/14/2022 11:06 AM
21	Cyclists will die. There are just some places they shouldn't go.	1/14/2022 9:29 AM
22	I feel 460 is too dangerous to allow bike traffic	1/14/2022 8:54 AM
23	There should be no bicycle path on any of these roads. Over 32,000 cars daily travel on the mentioned roads and therefore there is no room for bicycles to be on this highway.	1/14/2022 8:10 AM
24	I never see bikes on 460. Would people start riding them if they added bicycle paths?	1/14/2022 6:26 AM
25	Bicycle accommodations must absolutely include additional lane space. There have already been several accidents involving death or significant injury in the past few years.	1/14/2022 6:16 AM
26	Not on 4 lane highways	1/14/2022 12:08 AM
27		1/13/2022 8:41 PM
28	Honestly, I don't have the guts to ride these routes - too dangerous given driver behavior. But I know there are folks who would ride.	1/13/2022 7:52 PM
29	The volume of traffic in the area makes bicycling unsafe for both vehicle and pedestrian traffic. If cycling lanes were made so a vehicle could not cross the cyclist paths it would be ok	1/10/2022 2:41 PM
30	Nowhere. It's not safe.	1/10/2022 1:53 PM
31	No Opinion	1/10/2022 1:06 PM
32	I don't think it is safe for bicycles to ride in this corridor with these traffic speeds. Disaster waiting to happen	1/10/2022 12:56 PM
33	West Ruritan Road	1/9/2022 7:19 PM
34	Old mountain rd to sanderson and read mountain rd which could connect downtown to botetourt county	1/7/2022 12:59 PM
35	Crumpacker Drive	1/7/2022 11:22 AM
36	Bicycle accommodations should be considered wherever possible.	1/7/2022 10:20 AM
37	Bicycle accommodations on busy roads such as Rt 460 should not be made.	1/6/2022 11:07 PM

38	Too much traffic for a bike lane.	1/6/2022 8:51 PM
39	none	1/6/2022 9:13 AM
40	Could we more plan for some green space on the edge of these areas that could be used by bikes, walkers, runners??? I am opposed to having them in the flow of busy traffic! But understand there definitely is room for improvement in the area!	1/5/2022 7:04 PM
41	N/A	1/5/2022 3:27 PM
42	they need to stay off 460 , death trap.	1/5/2022 12:50 PM
43	No where near 460 travel speed is 45 miles and hour and 460 is not safe for bikes	1/5/2022 6:23 AM
44	Carson Road	1/5/2022 5:02 AM
45	ride your bike somewhere else not on a major road	1/4/2022 4:01 PM
46	Crazy to think about a bicycle on orange ave. I love riding my bike, but that's suicide.	1/4/2022 3:49 PM
47	NONE!	1/4/2022 1:20 PM
48	I would think bike paths on those location would be very dangerous because of all the car wrecks but I am not sure about what accommodations are proposed.	1/4/2022 12:29 PM
49	On road locations should be minimized. Unless there is sufficient room for cyclists, they pose a danger both for themselves and drivers when on the roadway.	1/3/2022 4:48 PM

Q17 Please rank your opinion on how you would use the following.

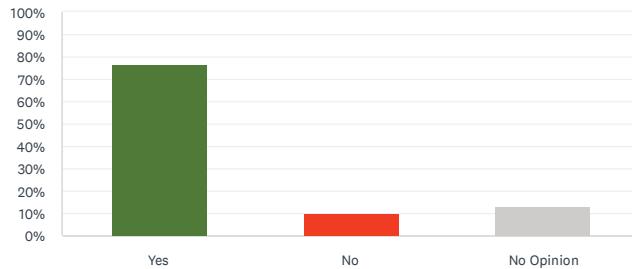
Answered: 188 Skipped: 32



	WOULD LIKELY USE	WOULD LIKELY NOT USE	NO OPINION	TOTAL
Bicycle/pedestrian paths along Route 460 to access neighborhoods and stores	21.81% 41	63.83% 120	14.36% 27	188
Bicycle/pedestrian paths from residential neighborhoods to stores	29.26% 55	59.57% 112	11.17% 21	188
Bicycle/pedestrian paths connecting to Old Bonsack	26.06% 49	54.26% 102	19.68% 37	188
Bicycle/pedestrian paths from residential neighborhoods to the Blue Ridge Parkway	34.57% 65	53.19% 100	12.23% 23	188
Bicycle/pedestrian paths between neighborhoods	38.30% 72	45.74% 86	15.96% 30	188
Bicycle/pedestrian paths to the Read Mountain Preserve	43.09% 81	42.02% 79	14.89% 28	188

Q18 The 2018 Roanoke Valley Greenway Plan includes a conceptual alignment for the Glade Creek Greenway to connect the Tinker Creek Greenway to the Blue Ridge Parkway. Do you support constructing a greenway for pedestrians and bicyclists along Glade Creek?

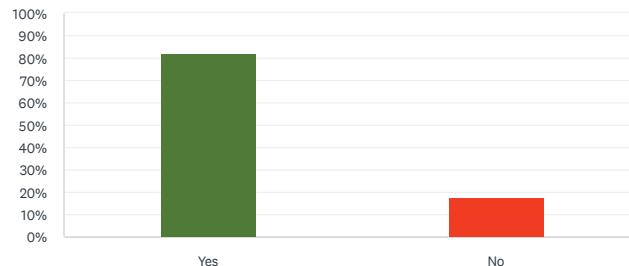
Answered: 188 Skipped: 32



ANSWER CHOICES	RESPONSES
Yes	76.60%
No	10.11%
No Opinion	13.30%
TOTAL	188

Q19 If you answered yes above, would you use this greenway?

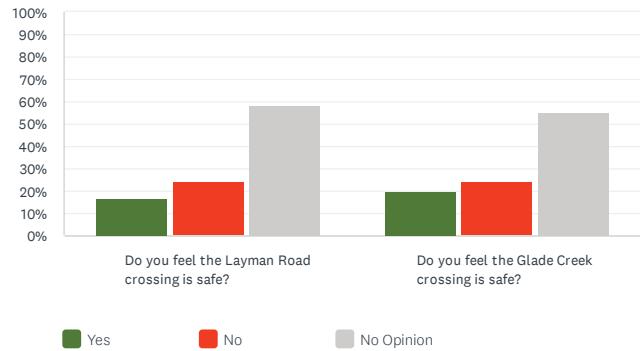
Answered: 162 Skipped: 58



ANSWER CHOICES	RESPONSES
Yes	82.10%
No	17.90%
TOTAL	162

Q20 The following questions relate to the Layman Road and Glade Creek Road railroad crossings.

Answered: 188 Skipped: 32



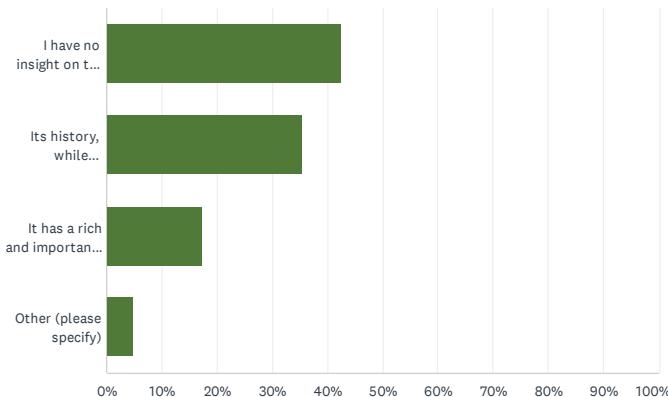
	YES	NO	NO OPINION	TOTAL
Do you feel the Layman Road crossing is safe?	17.02% 32	24.47% 46	58.51% 110	188
Do you feel the Glade Creek crossing is safe?	20.21% 38	24.47% 46	55.32% 104	188

#	DO YOU HAVE OTHER CONCERNs ABOUT THESE CROSSINGS? PLEASE COMMENT BELOW.	DATE
1	No	1/26/2022 11:11 AM
2	The Layman Road crossing needs the grades made more gradual. They currently have blind spots due to the steepness of the approach grades.	1/26/2022 8:42 AM
3	People just need to be aware and be safe everywhere.	1/24/2022 9:31 AM
4	Narrow and feels unsafe driving back over the layman crossing due to poor visibility	1/23/2022 1:52 PM
5	no	1/22/2022 3:52 PM
6	Layman road is falling apart everywhere and a giant sink hole is just as you approach the RR crossing.	1/17/2022 12:11 PM
7	Glade Creek and Layman could be improved but too costly for marginal benefit.	1/16/2022 11:46 AM
8	No	1/16/2022 8:42 AM
9	At Layman Road, the road around the big turn leaving Aprils meadow is too close to the tracks. The gate should be moved back to the turn so vehicles are not a few feet from the train. The house is in the way a normal approach.	1/14/2022 9:46 PM
10	Is this between the railroad and the county both?	1/14/2022 3:05 PM
11	They just need safety measures.	1/14/2022 12:10 PM
12	Train stop and block the crossing for long periods of time. Not safe	1/14/2022 11:25 AM

13	Yes I do	1/14/2022 8:50 AM
14	Trains often stop and block the tracks for a long time, even hours. That is a huge safety concern when emergency vehicles not being able to pass. School busses stranded and children not allowed to get home.	1/14/2022 12:42 AM
15	These crossings can be SOMEWHAT safe (though not entirely) IF people pay attention to them and make smart decisions.	1/14/2022 12:22 AM
16		1/13/2022 8:41 PM
17	No concerns. The railroad crossings can be a nuance, but there are not that many trains and they don't come to stop to block the crossing for long periods. Drivers are just not very patient.	1/13/2022 7:52 PM
18	Glade Creek crossing is safer than the Layman Road crossing .	1/13/2022 7:29 PM
19	The Glade Creek crossing is after a bridge in need of repair. The road to the crossing is windy and narrow, only allowing for one car and the sight lines are poor. Depending on the direction of your crossing and the direction of the train, you may not be warned of the train until after you start your crossing and the signal lights come on. At that point the train has just blown its horn and is quite close.	1/13/2022 2:46 PM
20	In the past 2yrs...too often blocked by trains cutting off access. The curve at Layman also is a safety concern with limited visibility.	1/10/2022 8:53 PM
21	Norfolk Southern feels it has no responsibility to clear crossings. When there is congestion on Roanoke Terminal, westbounds are held at Mile Post N-254 near Vinton, but the rear of the train blocks one of the Glade Creek road crossings at Bonsack. These trains have over 250 cars. In Alabama or Tennessee, NS is operating 400-car trains. If this practice is used on the Virginia Division, probably grade separation projects will be necessary --- PAID FOR BY VIRGINIA TAX PAYERS .	1/8/2022 11:08 AM
22	The actual crossings are safe but the safety issue is that the long freights frequently block the crossings (ONLY ACCESS) to the old bonsack and glade creek residents. Sometimes these blockages have been for hours and due to "the yard being backed up". They should know where their trains are BEFORE stopping and blocking crossings. We have families who may need emergency services at times and there would be NO WAY to access our neighborhoods. We have sent letters and made calls to NS RR . It is completely WRONG!	1/7/2022 12:59 PM
23	As these are the only public ways in and out of these communities, I would like to hear some alternative options. The railroad does a good job of maintaining the track and crossings and we should be a good neighbor in appreciating the need for the railroad. There have been incidences in the last year where the train stop for longer than the acceptable times and citizens have no choice but to WAIT! These were not all related to engine failures. I have seen the crossing arms drop when there was no train or worker, but never not work when there was a train coming.	1/5/2022 7:04 PM
24	No	1/5/2022 3:27 PM
25	Norfolk and southern has blocked these crossings a couple times in the last year because they have added length to the trains, county needs to fine the railroad when they block the crossing intentionally . At this time, roanoke county officers do nothing.	1/5/2022 12:50 PM

Q21 What is your impression of Bonsack's history?

Answered: 186 Skipped: 34

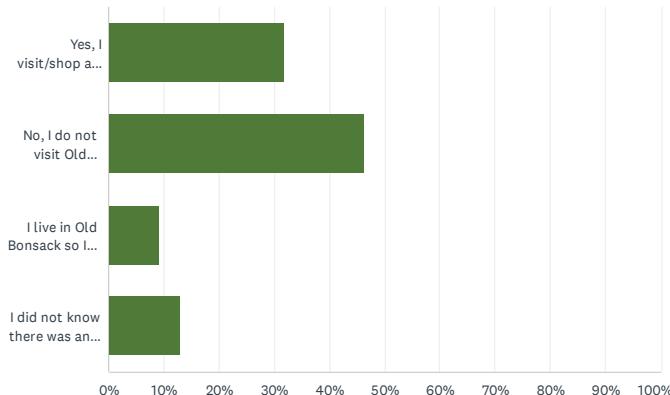


ANSWER CHOICES	RESPONSES	
I have no insight on the history of Bonsack.	42.47%	79
Its history, while important, should not drive future development patterns and land use decisions.	35.48%	66
It has a rich and important history and should be preserved by limiting future growth.	17.20%	32
Other (please specify)	4.84%	9
TOTAL		186

#	OTHER (PLEASE SPECIFY)	DATE
1	While it is important that importance should be limited.	1/14/2022 9:53 AM
2	All roads need improvement in this area	1/14/2022 8:51 AM
3	History has its place and should be preserved as best as possible in a changing world	1/14/2022 12:10 AM
4	Wouldn't want to disturb the old farms	1/13/2022 11:28 PM
5	Its history involves the tobacco industry and how Mr. Bonsack prospered. His invention affected all who smoke.	1/13/2022 5:04 PM
6	I like the heritage of old Bonsack and would like to see it incorporated into any development. I dont think it should necessarily STOP development. It is a nice area all thru there - relatively quiet yet wonderfully close to stores and services - and I would hate to see that lost to super shopping centers, big box stores, etc. I would rather see smaller local businesses and family friendly!!	1/5/2022 7:22 PM
7	really nothing in old bonsack that is worth saving, old churches need to be torn down, almost no membership, at least 3 old homes sitting vacant and need to be torn down	1/5/2022 12:51 PM
8	Grow the area	1/5/2022 6:24 AM

Q22 Do you ever visit the Old Bonsack Community? (defined as properties east of U.S. Route 460 off Bonsack Road)

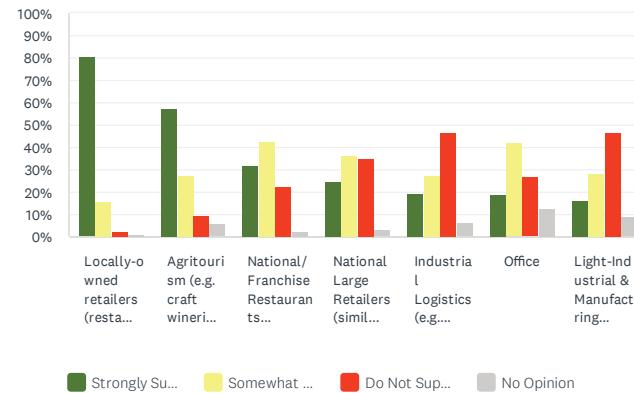
Answered: 186 Skipped: 34



ANSWER CHOICES	RESPONSES
Yes, I visit/shop at businesses or otherwise visit Old Bonsack.	31.72% 59
No, I do not visit Old Bonsack.	46.24% 86
I live in Old Bonsack so I am there generally every day.	9.14% 17
I did not know there was an Old Bonsack.	12.90% 24
TOTAL	186

Q23 Please indicate your opinion about future growth of business types in the Study Area and along the Challenger Avenue Corridor.

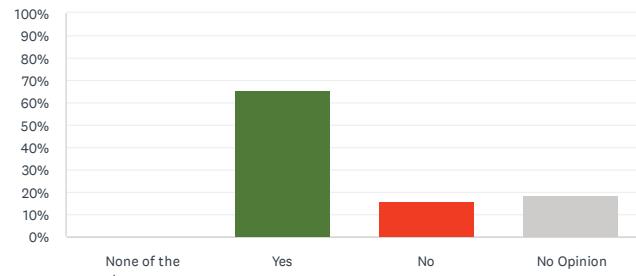
Answered: 184 Skipped: 36



	STRONGLY SUPPORT	SOMEWHAT SUPPORT	DO NOT SUPPORT	NO OPINION	TOTAL
Locally-owned retailers (restaurants, services, and goods)	80.43% 148	15.76% 29	2.72% 5	1.09% 2	184
Agritourism (e.g. craft wineries and breweries, Jeter Farm)	57.61% 106	27.17% 50	9.24% 17	5.98% 11	184
National/ Franchise Restaurants (similar to McDonald's, Panera)	32.07% 59	42.39% 78	22.83% 42	2.72% 5	184
National Large Retailers (similar to Lowes, Walmart)	25.00% 46	36.41% 67	35.33% 65	3.26% 6	184
Industrial Logistics (e.g. Amazon fulfillment center, etc.)	19.57% 36	27.17% 50	46.74% 86	6.52% 12	184
Office	19.02% 35	41.85% 77	26.63% 49	12.50% 23	184
Light-Industrial & Manufacturing (similar to Coca-Cola Bottling)	16.30% 30	28.26% 52	46.74% 86	8.70% 16	184

Q24 Do you support additional business growth in the Old Bonsack area?

Answered: 184 Skipped: 36



ANSWER CHOICES	RESPONSES	
None of the above	0.00%	0
Yes	65.76%	121
No	15.76%	29
No Opinion	18.48%	34
TOTAL		184

Q25 What is your overall opinion of future growth in the Study Area? Please be as detailed as you like.

Answered: 131 Skipped: 89

#	RESPONSES	DATE
1	I hope effective change can come from this, but I understand it takes time.	1/28/2022 8:46 AM
2	Do not cheapen Bonsack. Nicer restaurants or locally owned shops. Help us be a community that supports local vendors businesses retailers. Do not want to see Popeyes McDonald's burner kings Exxon gas pumps and things that attract crime and drug by people loitering like Roanoke City has done. There are already plenty of those places within a few miles. Help to let us grow but not to have more of the same as the city	1/27/2022 9:29 PM
3	Growth is good for jobs and the economy	1/27/2022 8:37 PM
4	Needs to be balanced	1/27/2022 8:00 PM
5	Growth is good.	1/27/2022 8:49 AM
6	We need growth. Expand and make this region powerful! Attract young people. Bring fun and vibrancy to the area!!!	1/26/2022 11:13 AM
7	I favor non excessive growth. This is a residential area in my opinion.	1/26/2022 8:43 AM
8	Congestion seems to always be a problem when there is growth.	1/24/2022 9:37 AM
9	This corner of Roanoke needs to embrace industry of all shapes and sizes. Particularly ones that drives growth of jobs for skilled workers and employment opportunities for younger employees.	1/23/2022 2:04 PM
10	Commercial growth is appropriate but good mix is important. Fulfillment, restaurant and light industry are appropriate. Traffic flow very important. Do not repeat Chic fi la mistake. Small local business needs inclusion.	1/23/2022 11:34 AM
11	Just don't make traffic worse. Creating jobs would be great though.	1/22/2022 11:11 PM
12	Future growth will help in shopping and eating at restaurants in this community. With future growth in housing and businesses in this area . Both lanes on 460 traveling East and West needs to have another lane added and connected to the three lanes at thirteen street on Orange Ave. Traffic is only going to get worse with more accidents and heavier travel on 460 over the next 20 years. All the up grades to the intersections also needs added to the lane expansions for better flow of traffic.	1/22/2022 4:20 PM
13	Traffic problems, getting to populated	1/17/2022 9:23 AM
14	While I do not oppose well planned growth, traffic is a large concern.	1/17/2022 9:05 AM
15	along and east of 460 business growth rather than residential. Also multifamily housing	1/16/2022 12:06 PM
16	Allow for traffic flow so that anyone not going through can safely get off the road (turn lanes)	1/16/2022 11:25 AM
17	Retail, sports complex, entertainment venue, steakhouse	1/16/2022 8:45 AM
18	We need a Target store outside of Valley View. This area can support more. As a transplant to Roanoke, the city planning is just off. This is the best area, and we need more amenities over here. Please widen 460. Double it. Please.	1/15/2022 5:50 PM
19	local businesses that would benefit from a more intimate environment than 460	1/15/2022 2:36 PM
20	reckless	1/15/2022 2:31 PM
21	I think there will be significant growth in this area, and it definitely needs to be planned for an managed in a way that keeps the inherent beauty of the area and doesn't turn it into Williamson	1/15/2022 1:41 PM

22	Road. I'm okay living through construction, etc, as long as the end product is in keeping with the natural beauty of the area.	1/15/2022 12:09 PM	portion of 460 near the Co line. I encourage the County to continue developing the area in a way the promotes new business and residential opportunities.	1/14/2022 12:42 PM
23	4 lanes of 460 isn't sufficient for current traffic here, and if this is really 2nd highest trafficked road in the county, this will continue to get worse as more expansion occurs east. As we get new retail pads along 460, or a new tenant in the old Walmart/Kroger location, I see it getting even worse. Doing more to interconnect more access roads to nearby businesses could do a lot to help flow around some current intersections such as those near Chickafilat, Blue Hills, and the ER. I suspect Old Bonsack wants to keep its current feel, but others are already using it as the Walmart bypass when heading east despite the low speed limit. I also don't see any solutions to this congestion involving the recent trend of adding roundabouts.	1/15/2022 10:50 AM		
24	Congestion and growth should be top priorities. Attracting new business and development to such a heavily used artery should be a given.	1/15/2022 9:54 AM		
25	Serious planning considerations are needed. The number of car washes along the corridor is ridiculous.	1/15/2022 2:09 AM		
26	Small businesses and local businesses, nothing big! It's a cute community as is	1/14/2022 11:26 PM		
27	Carson Road needs to be widened and the one car only small bridge needs to be bigger or removed all together. There needs to be a Right turn lane from 460 onto Carson Road. I currently use the shoulder to turn right onto Carson as the traffic tries to run me over if I stay in the current lane to slow down and turn. It is very difficult to turn left from Carson onto 460 during heavy traffic times.	1/14/2022 10:51 PM		
28	While I like the idea of new businesses, I'm concerned about growing traffic. I guess this is what it's all about! Keep tax payer dollars in mind. Roanoke County citizens are already paying more than surrounding areas.	1/14/2022 10:17 PM		
29	It is going to harm the charm of the area. This is a very friendly neighborhood area without much traffic. Goods and services are readily available, and there is not a need for locals. Commuter traffic is the only advantage which is just bringing heavy traffic into an otherwise quiet area. It will harm the charm and appeal to the area.	1/14/2022 9:54 PM		
30	This area is somewhat rural and special. People enjoy the wildlife, the country environment, and the pace. We walk the neighborhoods and talk. If we want growth, it's all around us and a short drive. Once you install commercialization, it will never go back. Its only new and cool for a short time and for the rest of time, history and the atmosphere has been destroyed. Put growth along alt 220 or out in the village or near Kroger. Leave the rest of the area alone.	1/14/2022 9:25 PM		
31	Growth should be limited to businesses that will raise the profile of the community and grow job opportunities and tax income for the county	1/14/2022 8:04 PM		
32	I believe future growth in this area is important as it is beneficial to people living in the study area as well as those living in the NE part of Roanoke City	1/14/2022 7:49 PM		
33	More store variety	1/14/2022 5:51 PM		
34	It's a mess to drive on these roads that were designed for general traffic. I feel it's not designed for truck traffic. I am originally from Ft Wayne Indiana area and worked in the area. Look at the road around the city 469 it allows the truck traffic out of the city and allows for faster travel for people who need to get to the other side. We need a major highway around the south side and the east side. It's time	1/14/2022 5:13 PM		
35	We need more restaurants, especially sit-down and casual dining.	1/14/2022 4:48 PM		
36	This area does not need additional growth. If growth is needed it needs to happen further down 460 in Botetourt county	1/14/2022 4:38 PM		
37	Strongly support it. Would love to see more amenities instead of having to travel to south Roanoke, valley view, or daleville.	1/14/2022 3:41 PM		
38	I am in support of growth but not industrial or office space.	1/14/2022 3:15 PM		
39	460 is not capable of dealing with more traffic. You will just cause more crashes because people are unhappy with all the extra time they sit inch by inch to get home from work. We are tired Do not add more trouble !	1/14/2022 3:02 PM		
40	I think Roanoke Co is taking advantage of the City's inability to promote growth on the City's	1/14/2022 2:42 PM	These parts of Rt 460 are highly traveled. I'm for change to have the safest commute to and from Lynchburg/Roanoke.	1/14/2022 12:42 PM
41			I love seeing Bonsack grow. I hope that new businesses consider the 460/Challenger part of Bonsack but would be happy with anything. While I think our intersections need improvement this does not mean I do not want new businesses. I think improvements need to be made to accommodate the growth of our area.	1/14/2022 12:39 PM
42			Concerned about proposed multiple u-turns as solutions to handle traffic. U-turn points will back up into main traffic flow, and cause crashes when oncoming traffic is misjudged. Prefer stoplights to regulate traffic flow.	1/14/2022 12:20 PM
43			I'd love to see more restaurant options	1/14/2022 12:17 PM
44			Growth can be a good thing for the community and surrounding areas.	1/14/2022 12:13 PM
45			There is not much out this way. Everything is always pushed for SW county. This area seems kind of neglected, BUT, we don't really have the congestion or growth issues, so it's a two-edged sword. Growth would be great if it's done correctly. Case in point: I never knew cardinal glass was where it is. It doesn't seem to be disruptive and it's fairly hidden.	1/14/2022 11:48 AM
46			Transportation needs to be addressed before more growth occurs. In an older regional plan, there had been a proposal to build a road connecting 220 South of the Clearbrook area with 220-A in Bonsack, helping traffic heading that direction to bypass the 460 corridor. While I understand the difficulties in such a project, something along those lines needs to be done. 460 is already a nightmare without adding another big box store complex or major employer on top of it.	1/14/2022 11:29 AM
47			Growth along 460 is okay as long as maybe adding some additional lanes or bridges or signals.	1/14/2022 11:28 AM
48			Thoughtful, sustainable growth is good!	1/14/2022 11:10 AM
49			I would very much like to see both that area and the 460 area north /east of the 460/220 intersection provide more/better shopping and dining options as the area continues to grow.	1/14/2022 11:08 AM
50			Future growth must be supported by significant infrastructure upgrades.	1/14/2022 10:24 AM
51			We've lived in the area 34+ years and in the last 5-8 years seems growth has been explosive. If you have to travel 460/Orange Ave during rush hours you'll find it stop and go to standstill a lot of the times. Some issues of three lanes to two lanes. Seems like expanding to three lanes (+), would help in moving the traffic.	1/14/2022 10:06 AM
52			Need to be more cognizant of safety when placing businesses. Chickfila's placement was a horrible decision and now you're adding an ER to the mess. WRuritan is not meant to be a commercial road.	1/14/2022 10:00 AM
53			You already have The Hsn warehouse reuse that. No additional growth of big business.	1/14/2022 9:39 AM
54			Growth is good as long as it doesn't encroach on the rights or decrease property values of those already there.	1/14/2022 9:33 AM
55			The area is too congested to add more businesses or 'ER'. It will only create more congestion, more wrecks.	1/14/2022 8:57 AM
56			We definitely need more food & restaurant options	1/14/2022 8:53 AM
57			Seems like the area is already packed full. Traffic has overgrown the roads.	1/14/2022 8:14 AM
58			Preserve as much green space as possible. Avoid large retail and manufacturing developments.	1/14/2022 8:12 AM
59			Would like more retail and restaurants	1/14/2022 7:47 AM
60			I'd like to see more stuff for kids and families to enjoy together. Not many restaurants in our area either.	1/14/2022 7:31 AM
61			The study area outlined has excellent potential for large scale growth due to the convenience	1/14/2022 7:29 AM

	to route 220 alt linking straight to I81. I would love to see the area accept the growth to support better jobs in the region.		
62	Improving existing businesses would be the first step. Big-box stores along the corridor have, from the time they opened, offered less variety than stores in other areas (e.g., Lowe's and Walmart have always carried products in other stores which the Bonsack areas don't have); I often have to travel to other Roanoke area stores for basic needs.	1/14/2022 6:27 AM	1/10/2022 10:13 PM
63	right now it would seem the growth is limited, one by it being a historic area, and additionally by the residential areas surrounding much of the study area. however, this does not have to be the case moving forward as opening up the roadways, and allowing for business growth will create opportunities for local and regional development. growth should be focus along business as well as consumer use, business meaning manufacturing or service based industries like Amazon, and consumer use meaning new businesses and eateries (Target, Homegoods, Hobby Lobby, Cabelas, Chilis Zaxbys to name a few options).	1/14/2022 1:36 AM	1/10/2022 8:40 PM
64	Stay on bonsack road preferably only on the one side that is along 460. As long as the growth does not go down the roads off of bonsack road into the neighborhoods then I would think it's fine.	1/14/2022 12:57 AM	1/10/2022 8:07 PM
65	The Bonsack area needs other nice, sit-down restaurants, like a Melting Pot or Texas Roadhouse. I'd like to see a restaurant which has a really nice salad bar -- perhaps one where you pay by the weight of your container/tray. (I miss having a grocery store with a self-serve salad bar where you pay by the weight.) I'd even take a large friendly sports bar if it had reasonably priced, delicious foods. We have only a few, limited choices for flavorful food here. Additionally, I WOULD LOVE FOR COSTCO TO COME HERE!!!	1/14/2022 12:50 AM	1/10/2022 3:33 PM
66	Would love to see new shops and life in the area	1/14/2022 12:13 AM	1/10/2022 2:45 PM
67	I would not like to see our section of 460 become even more congested. Better restaurants would be welcome-not more like McDonalds.	1/14/2022 12:10 AM	1/10/2022 2:01 PM
68	I see this corridor as a target growth area and support improvements in the area. I live in the city but use this area heavily for retail and dining. I access the corridor at Hollins road. I support growth from Exit 150/hollins down to bonsack and believe it would be good for home values and the quality of life. However, something needs to be done about traffic flow. Williamson road to botetourt line during rush hour is a nightmare.	1/13/2022 11:38 PM	1/10/2022 1:40 PM
69	Part of the charm of the area is the quaint quietness of it. Filling it with big businesses could detract from that and I would ask for careful consideration of the present and future residents in the area. Thank you.	1/13/2022 11:33 PM	1/10/2022 1:13 PM
70	Would love to see more diversity in restaurants in the area	1/13/2022 11:31 PM	1/10/2022 12:59 PM
71	I perceive my input has little value	1/13/2022 8:38 PM	1/10/2022 12:58 PM
72	I see growth as a positive in the study area, especially where it reutilizes/replaces buildings and land that is currently dilapidated and overgrown. Not only would growth add economic benefits, but also resolve the eye-sores which pepper US 460. (Driving 460 into Roanoke leave a terrible impression.)	1/13/2022 8:11 PM	1/10/2022 12:56 PM
73	All the land on Route 460 should be commercial.	1/13/2022 7:36 PM	1/10/2022 9:55 AM
74	County government can be vague and then become very tribal	1/13/2022 5:12 PM	1/10/2022 7:06 PM
75	Future growth will no doubt come to this area, but it simply has to be effectively managed	1/13/2022 4:57 PM	1/8/2022 7:03 PM
76	Tastefully done, very restrictive with regards to appearance	1/13/2022 4:51 PM	1/8/2022 11:12 AM
77	Limited	1/13/2022 4:39 PM	1/8/2022 9:45 AM
78	As long as traffic delays can be alleviated in some capacity, I fully support growth in this area.	1/13/2022 2:51 PM	1/7/2022 6:17 PM
79	Would like to maintain the charm of the area while providing for more local and unique shopping/dining experiences	1/13/2022 2:49 PM	1/7/2022 1:08 PM
80	I just would like Bonsack Road itself to be preserved, but I'm okay with growth up around 460 level.	1/12/2022 10:41 AM	1/7/2022 11:29 AM
81	I think it's great as long as the traffic situation is taken care of.	1/11/2022 4:59 PM	

down Orange Avenue and then 581 to the Valley View shopping area. I wish we had more shopping/restaurants closer to Bonsack/Vinton. Preferably businesses not currently in the area like Trader Joes.

102	Too much development taking away from the beauty of the area, including subdivision development. There are so many ratty places along 460 that can be rejuvenated to make this a real standout area in Roanoke. Preserving charm and easy access to outdoor recreation, maintaining a family-first environment, with an emphasis on more businesses like the County Corner store, would serve the community best. If new development needs to happen, consider building up instead of out.	1/7/2022 10:28 AM
103	Need a Trader Joe's. It's a need here. We have had a huge population growth. Also need to have an upscale restaurant.	1/7/2022 9:09 AM
104	Intelligently managed growth is good. Need the infrastructure for increased traffic. Well designed mixed use areas similar to the Daleville towncenter would be welcomed.	1/7/2022 5:30 AM
105	If you develop Old Bonsack, the traffic safety issues must be the top priority.	1/6/2022 10:33 PM
106	Would love to see the area grow with locally owned shopping, retail, restaurants, breweries, etc.	1/6/2022 9:50 PM
107	Some changes will be welcomed others not so much.	1/6/2022 9:41 PM
108	We have lived in LaBelview for 42 years. I have seen businesses com and go. If more business cause any more congestion than Chick-fil-a, forget it. Too many stop lights.	1/6/2022 9:02 PM
109	Their is a need for business growth to support the huge residential communities on areas Mountain.	1/6/2022 5:52 PM
110	All I read about is making it harder for me to get anywhere I want by the road changes on 460. I have not read or seen anything that relates to future growth. The only thing that is going to grow is more traffic on Carson Road with this change	1/6/2022 1:43 PM
111	I believe the infrastructure does not support additional growth in the Bonsack area, even with improvements to traffic.	1/6/2022 9:17 AM
112	It is nice to have more stores for convenience, but NOT at the price of more congestion. Roanoke is not so big we can't get somewhere fairly easily. Perhaps consider service roads at a stoplights to get to further future developed businesses - like a "neighborhood" of businesses. And make it look attractive, not just bricks and concrete/pavement. Nice turn lanes that are not confusing. I moved out here to NOT BE LIKE CAVE SPRING! I do not want millions of lights and buildings and congestion. I want to see some big green areas mixed in between - make it a pleasant area like the rural roots it has! Thanks fo asking for input! Good luck!	1/5/2022 7:31 PM
113	Unavoidable	1/5/2022 3:29 PM
114	The transportation congestion needs to be addressed before more growth should be considered. Additional stoplights would be a detriment to this area.	1/5/2022 9:35 AM
115	I support future economic growth as long as infrastructure and traffic concerns are proactively addressed and rectified.	1/5/2022 9:11 AM
116	It's already too congested. It would be nice to have more unique business to keep it from being another Williamson road in 30 years	1/5/2022 7:56 AM
117	NA	1/5/2022 7:16 AM
118	I believe we are headed down a great path. BONSACK area could be the next big thing in roanoke if we only put some efforts in it	1/5/2022 6:26 AM
119	People live in this area because it is the opposite of the City. We are getting more and more crime in the area moving East from Williamson Rd intersection and many of us are considering moving out of the area. We want to keep it green (country feel). What neighbors want is restaurants (nice sit down style like Olive Garden for example). We have grocery stores, car washes and oil changes; we could use the bike and walking greenway in places that won't bring in MORE outside people. We do not want increased crime!! We do not want transients and beggars in the street. We do not want big offices and buildings in this beautiful area! Keep	1/5/2022 5:13 AM

it residential and give us somewhere to go eat with our families after we get home from work besides fast food.

120	I'm torn on it, honestly	1/4/2022 7:21 PM
121	It should have more recreational places.. small amphitheater for live music and events, breweries, a bowling alley. Everyone just drives through bonsack and it's so pretty people should stay awhile.	1/4/2022 6:59 PM
122	Depending upon where the growth occurs, and what business it is, I would support it, although I like the neighborhood the way it is.	1/4/2022 6:43 PM
123	do not over grow the area	1/4/2022 4:07 PM
124	Would need better roads. Orange ave is already overwhelmed.	1/4/2022 3:50 PM
125	Not sure	1/4/2022 3:32 PM
126	The area already seems saturated to me with food, retail and industrial, medical and housing developments. I would love more connections to recreational activities. I use read mountain very regularly. I would really like to be able to ride my bike to Vinton where there is a nice walkable area with community gathering spots (library, new coffee shop, etc) but I feel totally unsafe riding on Carson road. I also use the read mountain greenway (in industrial park) occasionally but it's underdeveloped right now.	1/4/2022 2:47 PM
127	N/A	1/4/2022 1:55 PM
128	Traffic congestion overwhelm available space more than once daily. Highly contributes to dangerous driving conditions to families already living in specified area. NO MORE businesses are needed! Fix traffic issues NOW - do not add more congestion to an already dangerous situation.	1/4/2022 1:25 PM
129	I would love to see the land and resources to enhance the area. For many years, folks have almost regarded this area as "the country". It would be sad to see it trashed with neon signs and plot-to-plot businesses; however, it would be fantastic to see it develop an infrastructure to serve its community. Suggestion would be a YMCA, community college opportunities, place for people to gather and good (emphasis on good) restaurants. (Please no more car washes or service places for cars. 460 is loaded with them already).	1/4/2022 12:40 PM
130	growth is great	1/4/2022 12:13 PM
131	I'd like to see chain sit down restaurants--not fast food like Panera and McD's mentioned above.	1/3/2022 4:50 PM

Q26 Finally, please comment below if you have any additional information you would like to share relevant to this study that has not been addressed in the previous answers and comments.

Answered: 80 Skipped: 140

#	RESPONSES	DATE
1	Specifically, I think the Bonsack area needs a Target.	1/28/2022 8:46 AM
2	Bring more internet to the area!!	1/26/2022 11:13 AM
3	n/a	1/26/2022 8:43 AM
4	BE WISE, intersections similar to the CVS, Kroger, Lewis Gayle, & Chick-fil-A is unwise and hasn't been thought through to be kind or helpful to travelers.	1/24/2022 9:37 AM
5	Need to coordinate well with neighboring jurisdictions. Study area not an island. Ingress egress/flow critical. Lots of 460 commercial property seems available. Be careful about any development on steep (Belle/Carson) and rocky ground (Southern Comfort) and floodplains. 100 yr is now 10yr. Try to avoid duplication of services (Did not need 2 car washes) while encouraging competition.	1/23/2022 11:34 AM
6	none	1/22/2022 4:20 PM
7	There is entirely too much traffic for the number of lanes on the current roadways. They more lanes and better timing of the traffic lights. You can sometimes sit thru 2 to 3 light changes trying to get onto Challenger from the Lowe's parking lot. Additional construction of businesses will only make traffic worse.	1/17/2022 12:19 PM
8	Major need is for an artery from L intersection SE to Vinton and Rt 220 (Clearbrook).	1/16/2022 12:06 PM
9	This is important to me since I commute from Blue Ridge to downtown weekdays. As more people move to this beautiful area, keep it safe for travel. As a side note, where were the snow plows JAN 3?	1/16/2022 11:25 AM
10	N/a	1/16/2022 8:45 AM
11	Please	1/15/2022 5:50 PM
12	I am glad to see a focus on this corridor.	1/15/2022 2:36 PM
13	It appears that local politicians do not give recommendations made by residents any credence. Building the Chic Fil A on the lot chosen was irresponsible.	1/15/2022 2:31 PM
14	Let's not pollute an area that is more clean and bring higher population to an area that can't contain it! Handle what's here first before trying to grow even more	1/15/2022 2:09 AM
15	There seems to be a huge amount of large truck traffic in this area....are there alternatives? It's not just the traffic on 460, you have to look at the intersections and side streets too. Allowing several very busy businesses on the same intersection is not a good idea.	1/14/2022 11:02 PM
16	The new traffic patterns that are proposed are going to be very harsh to the locals. The traffic patterns are only nicer to those outside the area and the locals will feel the pain the most. The redirection of traffic to go the wrong way to go the right way is actually going to double the amount of traffic at each intersection and make it less desirable. Please do NOT do this.	1/14/2022 10:17 PM
17	The new traffic patterns you are proposing are not going to be friendly to those of us who live here. It is actually going to impede our commute and ability to get out. Traffic is going to have to go around in circles to get around, actually creating more traffic in both directions, not less. I've been in other communities in Ohio and other areas with similar layouts and this is not a good solution to the perceived problem.	1/14/2022 9:54 PM
18	None	1/14/2022 9:25 PM

19	all crossovers along 460 should have extended turning lanes for the crossovers to prevent traffic from stopping on 460 when turning in particular at Country Corner, the entrance to Old Bonsack and Carson Rd	1/14/2022 8:04 PM
20	Na	1/14/2022 7:49 PM
21	I did above	1/14/2022 5:51 PM
22	Please more restaurants!	1/14/2022 5:13 PM
23	Please for Gods sake to not add to the traffic cluster of 460 alt 220!!!	1/14/2022 3:41 PM
24	Your ideas for this road are stupid.	1/14/2022 3:15 PM
25	460 needs to be widened from 2 lanes to 3 lanes starting at 11th St NE in the City all the way until 220/604.	1/14/2022 3:02 PM
26	We love seeing our area grow and hope that this continues.	1/14/2022 12:39 PM
27	Two options that do not appear to be considered presently that would help: 1) Use of synchronized stoplights (timed to allow drivers to pass through multiple lights before stopping) to keep traffic flowing, and 2) Creation of side access roads that funnel traffic to stoplight intersections to enter/exit 460.	1/14/2022 12:20 PM
28	Extending bonsack road ro Carson road and making that 460 inspection for those 2 roads and shorting the turn lane to west Ruritan.	1/14/2022 11:28 AM
29	Chick-fil-a should have been built in front of Kroger! We can't move it now but maybe we can learn from that mistake and improve that intersection. I'm trying to keep an open mind about the new Lewis Gale emergency room but I do not have high hopes.	1/14/2022 11:10 AM
30	There should be a designated lane/entrance to the new Lewis Gale ER. The turning lane off of 460 to W Ruritan Rd gets backed up leading into Chic-fil-A's parking lot. Also, I heard after renovations to 460, you will need to make a U-turn to get to CVS traveling 460 W...? That's not a good idea. It's already difficult to cross over to get to Advanced Auto and Famous Anthony's without causing more cars to be backed up trying to make a U-turn.	1/14/2022 10:18 AM
31	Get rid of the stop lights and put roundabouts in so traffic can flow.	1/14/2022 9:56 AM
32	There is already to much traffic in the area. Redoing the 220/460 intersection might help some but more big business in the area is not the answer. It will make things worse for us on bottom end of Botetourt co. Read mountain road will become even more trafficked.	1/14/2022 9:39 AM
33	Two-lane service roads where feasible would be ideal for travel between businesses and leave 460 for through traffic	1/14/2022 9:33 AM
34	Please take out the yellow blinking lights in the Roanoke Co and all others it causes way too many accidents and they are unsafe	1/14/2022 8:53 AM
35	It is a shame that these traffic problems are created by the Roanoke county board of supervisors. When the board of supervisors approves rezoning residential areas, into commercial areas they instantly create a nightmare. The Chick-fil-A/LewisGale urgent care centers should never have been approved for this highly residential area. They created this nightmare for the residence and the 32,000 cars that travel daily. Had the commercial properties been kept and zoned within the commercial property zoning, these traffic concerns would not need to be addressed in 2022.	1/14/2022 8:14 AM
36	Make the area more walkable and bikeable to reduce vehicle traffic.	1/14/2022 8:12 AM
37	Making u-turns on 460 is a disaster waiting to happen. 6 lane highway is better.	1/14/2022 7:47 AM
38	The area is congested at times and others not. Bike would add more to it. The greenway is a good idea though and bring all the businesses you can	1/14/2022 6:28 AM
39	The Walmart stoplight really should be based on a sensor and not a timer when the store is closed.	1/14/2022 6:27 AM
40	lastly, looking at the entirety of 460 including sections in Roanoke City, maybe a joint project should be undertaken similar to the Oak Grove projects. the continued growth and enhancement of one on the areas most travel corridors will create only opportunities for investments, jobs and a thriving community.	1/14/2022 1:36 AM

41	I have seen the proposed intersection at 220/460 and that is awful. That intersection is fine other than people who run red lights. There are far to many accidents at the county corner store at that intersection. Also from bonsack road to 460 with West Ruritan traffic is dangerous, there should be a signal there. More family restaurants with accessible parking not clogging up the intersections. Maybe add bridges over traffic or add lanes. Then less banks and car repair places.	1/14/2022 12:57 AM
42	Personally, I feel your Bonsack map should have included the neighborhoods behind Wal-mart as part of Bonsack. Read Mountain is a natural geographical barrier which certainly lends to making these neighborhoods part of Bonsack. Also, locally everyone calls this entire area Bonsack -- except this study. It makes it seem as if the powers that be want to give more clout to opinions from the east side of Challenger Ave. However, there are a lot of residents in Huntridge/The Orchards, etc. who utilize the roads and businesses in "our" Bonsack area.	1/14/2022 12:50 AM
43	Slow speed on alt 220, do not put u turns turns in on 460	1/14/2022 12:13 AM
44	Current plans suggest making u turns on 460. This seems dangerous on this high volume road.	1/13/2022 11:55 PM
45	Please get rid of the turns that are all along orange Ave. Make all left turns only an option at a traffic light. Add a 3rd lane both directions all the way past Walmart. Put in wide sidewalks all the way down	1/13/2022 11:44 PM
46	Bottlenecks in the city are a major hinderance to the community. Support more growth at Kroger shopping center. Empathize with neighbors on Ruritan who are frustrated with chick fil a.	1/13/2022 11:38 PM
47	NA	1/13/2022 11:33 PM
48	With the hospital being built on W Ruritan and the Chick fil a already there, traffic is terrible. I would suggest a light at E Ruritan and 460 for safer access to the housing in that area	1/13/2022 11:31 PM
49	You might what to relocate the U-turn feature planned at Country Corner a bit more to the west. Drivers leaving Country Corner are notorious for inventing ways to cross eastbound 460 in order to head westbound. They drive backward (westward) in the parking area until they can access the current cross-over area. They will access your U-turn feature in a similar manner if it's located in the planned location. Moving the U-turn further west will defeat this maneuver and better enforce discipline of using the Huntridge U-turn. Recommend a reconnaissance to view for yourself once Country Corner opens in the spring. I think you'll be surprise by what you see.	1/13/2022 8:11 PM
50	Add more lanes to Route 460!	1/13/2022 7:36 PM
51	Change the name from Bonsack to something more socially appealing.	1/13/2022 5:12 PM
52	It is unlikely that the growth for this corridor could or should be stopped, but it should be managed to ensure the safety and vibrancy of the overall area.	1/13/2022 4:57 PM
53	I think the proposed East Ruritan/Carson Road improvements will have unintended negative consequences. Because you are forcing all traffic from E. Ruritan heading North on 460 to utilize the u-turn at Carson Road, that turn will bottleneck. Also, it will create a line of traffic backed up towards E. Ruritan.... Then the traffic from E. Ruritan will back up because they cannot get across to get in the turn lane. Put a light at E. Ruritan.	1/13/2022 4:51 PM
54	no.	1/12/2022 10:41 AM
55	There is a vacant lot between east and west Ruritan that would be a good place for a county park or rec area	1/10/2022 8:40 PM
56	460 shuttle system from designated areas that could be used for workers in the industrial parks would be an idea. That may have the potential to eliminate 81, 460 and 581 traffic	1/10/2022 2:45 PM
57	This survey and the community meeting are just appease the residents. You already have your mind made up about what you're going to do, and it will most likely be the worse decision for the community--like traffic circles, diverging diamonds, and flashing yellow lights.	1/10/2022 2:01 PM
58	Access management.	1/10/2022 1:40 PM
59	No U-turn sight at 460 and West Ruritan Rd and fix Chick-fil-A traffic are 2 of the biggest concerns i have living in the neighborhood behind there.	1/10/2022 1:13 PM
60	There needs to be parks for kids to play in. A skateboard park, fields for soccer, softball and	1/9/2022 7:22 PM

	tennis courts	
61	intersection of Challenger and West Ruritan is extremely dangerous. Traffic is backed up into Challenger and becomes grid-locked. IT will be impossible for entry to the new urgent care facility that is under construction. There needs to be a separate entry specific for Chick Fillet from Challenger (needs its own lane) to allow other traffic to continue to flow with no interruption	1/9/2022 7:06 PM
62	Connect Crumpacker Drive in Samuel Gates community to Gregg Drive which connects to East Ruritan Road. This will help even out traffic flow.	1/8/2022 9:45 AM
63	N/A	1/7/2022 6:17 PM
64	The county and state need to continue looking for ways to move the industrial traffic (18 wheelers) OFF CHALLENGER AVENUE. These trucks pay little attention if any to the speed limits and traffic lights. IT IS A DANGER ZONE between Cloverdale Rd. and 581. With the high traffic volume during early morning and late afternoon, these trucks increase the risk of multiple vehicle accidents (even if they are not directly involved in the accident). The speed limit on Challenger needs to be enforced, especially where it comes in from the east towards Roanoke. The speed limit drops from 60 to 45 just before Cloverdale Rd. and I can guarantee you that DOES NOT HAPPEN!! The speed limit should be dropped much sooner and enforced!!	1/7/2022 1:08 PM
65	I'd like to see more pedestrian areas and beautification to the area.	1/7/2022 11:29 AM
66	It's been a pattern in this area to sell off land, have it bulldozed and then abandoned. This ruins the natural beauty of the area and turns the study area into a constant construction zone. We don't need more "new" things built. We need to fix what we have first.	1/7/2022 10:28 AM
67	I came extremely close to being seriously injured or killed at intersection B. It was when the Blue Hills Car Wash was under construction. I was at the light, headed toward the Civic Center on 460 and stopped behind 4-5 other cars for the red light. In my rear view mirror I saw a pickup truck barreling down on me (about 40 mph). As it got closer, I saw that the driver was looking to the left, not at the road. (I think he was looking at the car wash construction site.) In a split second I considered 3 options. I decided to stay where I was, because I believed that if the driver looked back at the road, he might go to the left or right to avoid hitting my car, so I decided not to change lanes. Watching in my rear view mirror, I saw the driver finally look back at the road. A look of absolute horror and surprise came across his face. I genuinely thought I was about to die in an explosion of gasoline. I closed my eyes and prayed. Miraculously, there was no impact. The other driver had slammed on his brakes. I opened my eyes to see the driver of the car behind me, slumped over his steering wheel, head and arms on the wheel, looking down. He clearly understood the gravity of the situation. The traffic light changed and I wondered if he'd had a heart attack as a result of the shock of that moment or if he needed assistance. I mentally weighed getting out of my car to check on him, but felt that would not have been safe, as traffic was moving again. I drove forward slowly and kept looking back to see if his vehicle moved. He did not make the green light, but eventually he slowly moved up to the light, which was red. So I felt he must be ok and I drove on. But at least two of us were very shaken up that night. *** Please minimize distractions on 460, use as many stoplights as necessary even if it slows traffic and help keep drivers focused on the road.	1/6/2022 10:33 PM
68	Getting in out of Carson rd is a nightmare, there could be a run out lane going east, it would help blend with the traffic going east.	1/6/2022 9:41 PM
69	It is almost impossible to go west at 4:pm. Workers from the companies on 220 (Botetourt) and the companies behind Kroger create terrible traffic congestion. Pleas help!!	1/6/2022 9:02 PM
70	There is no bicycle access anywhere in the area so any will be an improvement.	1/6/2022 5:52 PM
71	Please stop making it harder for people on Carson Road to get to business. Please stop promoting more traffic routed through Carson with the changes to 460 paths.	1/6/2022 1:43 PM
72	I think I have said my piece.	1/5/2022 7:31 PM
73	The East Ruritan Rd. intersection is in desperate need of a traffic light. The current layout is not safe and I worry about my future teen drivers being able to navigate the intersection without hurting themselves or others.	1/5/2022 9:11 AM
74	NA	1/5/2022 7:16 AM

75	Crime and bums moving into the area is my biggest concern and we seriously are considering moving out of RoCo to Botetourt Co. very soon. Please talk with State police about the crime moving its way down 460 from the City towards Bonsack. People chose to live in this area because it is had a safe, semi rural feel and too much development will be horrible for the many neighborhoods nearby. You didn't include the neighborhoods on Carson Rd in this study area...but we are the citizens using the main roads in this study and these changes will greatly affect our daily lives.	1/5/2022 5:13 AM
76	Na	1/4/2022 7:21 PM
77	I think Carson Rd would be very dangerous to add a bike lane, it's already narrow and there are a lot of tight turns.	1/4/2022 6:59 PM
78	N/A	1/4/2022 3:32 PM
79	N/A	1/4/2022 1:55 PM
80	None.	1/4/2022 12:40 PM

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Appendix E

Public Engagement Results - Survey Two

Prior to the second community meeting, a website with survey features was released to the public. The website described the potential transportation improvements in various zones of the Study Area. Community members were asked to provide their thoughts on the improvements presented to them for each zone. There were 140 total website responses and these are shown in the following appendix.

May 2022 Route 460 Land Use and Connectivity Study Survey Results

Transportation Area Name	Comment	The information presented on the website was clear and easy to understand.	Please indicate your level of support for the transportation improvement area.
Access to East of Railroad	Why not consider replacing the NS crossing with a bridge? Would greatly improve safety and aid in future housing development! May receive funding from Smart Scale or Economic Development EDA grants?	Agree	Agree
Access to East of Railroad	I think M, N, and O would be great if that were something that could actually happen	Agree	Agree
Access to East of Railroad	Agree on the option N to build bridge between North end of Bonsack Rd and existing Glade Creek Road. This will eliminate the railroad crossing.	Agree	Strongly agree
Access to East of Railroad	Good	Agree	Strongly agree
Blue Hills to East Ruritan	Has potential. May have citizen opposition.	Strongly agree	Agree
Blue Hills to East Ruritan	Road A - Trail Drive is already very narrow and the left turn from Blue View Drive onto West Ruritan is difficult to see oncoming traffic due to grade and vegetation. Increasing traffic on these roads should include improvements to these roads. Road B - I support this plan. Road C - The Valley Gateway Blvd traffic signal is already very busy and often backs up into the West Ruritan light during evening commutes. Increasing traffic through this signal needs to be carefully studied. These two intersections are very close together and I do not support increasing the complexity of that intersection as it is designed now.	Strongly agree	Neutral
Blue Hills to East Ruritan	Roads A, B, and C seem helpful.	Agree	Agree
Blue Hills to East Ruritan	I think all three options would be realistic improvements for the corridor. I believe that B and C options could have more direct impact of the neighborhood off of 460 but could be very beneficial for better connectivity in that area to avoid congestion.	Agree	Agree
Blue Hills to East Ruritan	Good	Agree	Strongly agree

May 2022 Route 460 Land Use and Connectivity Study Survey Results

Transportation Area Name	Comment	The information presented on the website was clear and easy to understand.	Please indicate your level of support for the transportation improvement area.
Blue Hills to East Ruritan	<p>If Option A takes place, please keep in mind that Trail Dr should be widened. It is a 1.5 lane road at best, and adding more traffic to Trail could be dangerous. Additionally, visibility from Blue View turning onto W Ruritan is poor due to the hill AND the overgrown property at Blue View and W Ruritan. Care would have to be taken here when also increasing the traffic at this intersection. Otherwise as a resident living off of W Ruritan I highly support option A. This would allow us easy access to the businesses on and around Blue Hills Dr without having to go through the lights on Challenger.</p> <p>I have no major opinions for or against options B or C. I think I saw an option that if C happened, then you'd be able to use the light at C to cross Challenger into the Kroger shopping area. I think this would be a great way to keep some of the traffic off of Challenger. However... the light at Kroger is already not synced with the light at W Ruritan, and can cause quite the backup at the light with Chick Fil A during peak traffic times. I believe this rubber band effect is part of what causes so many accidents at that intersection. Care would need to be taken when adding to the light cycle another turn option to the intersection. This also seems to go against the VDOT plans for up and down 460 to limit cross traffic/left turns at lights.</p>	Agree	Agree
Blue Hills to East Ruritan	Their should not be any more traffic on this road. This road  is way too small for this kind of traffic !! Who ever wants to put this plan into place has not been here to walk the area. Just have the traffic turn left coming out of the cleaner's parking lot onto 460 West. Their is a right hand turn lane there all ready . Just bring it down to Trail Drive. Then you have your road into the Industrial Park.	Strongly disagree	Strongly disagree
Blue Hills to East Ruritan	Strongly agree	Strongly agree	Strongly agree
Blue Hills to East Ruritan	460 needs more lanes, off topic but true.	Agree	Agree
Carson Road	Has potential but could be citizen concerns. Carson does need safety improvements.	Strongly agree	Agree
Carson Road	I prefer the option 1 that includes access to Glade Creek greenway and potential park.	Strongly agree	Agree
Carson Road	I am 100% on board with Option 1, to include the roundabout and greenway system. I am a runner and have to drive at a minimum over to Tinker Creek to pick up the greenway system and have no option to run in and around my neighborhood due to Carson Road not being pedestrian friendly. This would be a welcome change, and I guarantee you that the number of people that would use this would make it completely worth the expense.	Agree	Strongly agree

May 2022 Route 460 Land Use and Connectivity Study Survey Results

Transportation Area Name	Comment	The information presented on the website was clear and easy to understand.	Please indicate your level of support for the transportation improvement area.
Carson Road	I do not support any walking trail access through Carson Road area. Residents of this area chose to live here because of the privacy. The last thing we want is the bums that now spend all day on every corner at the intersections at King Street and Walmart having easier access to walk to and around our neighborhoods. We already had a string of robberies over last summer by people who do not live in this neighborhood. The increase in crime in this area is going to drive out good, hardworking, productive citizens. Many neighbors are already talking about moving to Botetourt. We do not want to live in the city, and this plan...along with the new Sheets on King St is going to impact our quiet neighborhood in a negative way. It is already dangerous making a right hand turn onto Carson Rd when leaving Kroger. Although the new road to connect Carson directly to Kroger would be great...having turning vehicles from Carson onto the new road would be dangerous to those making the sharp right turn onto Carson and then having to abruptly stop for turning vehicles heading to Kroger on Carson.	Agree	Disagree
Carson Road	We as residents in this area do not want a greenway, roundabout or more traffic in our neighborhood due to increased theft, suspicious persons in and around our neighborhood! No Thank You!	Disagree	Strongly disagree
Carson Road	Would love to see a park on carson with no greenery or any parks near by this is an amazing idea as a neighbor right off carson i strongly agree with this plan and the road improvements i think many could benefit from this	Strongly agree	Strongly agree
Carson Road	I live off of Carson road and a park and greenway would be fantastic to have access too.	Agree	Strongly agree
Carson Road	The proposed park and greenway would essentially be in my backyard. We enjoy the seclusion, privacy, and safety that comes along with it. There is been an increase in panhandling and homeless activity on Orange Avenue in recent years. Myself and our neighbors strongly feel that bringing this park and greenway would provide an area for these activities to spread, therefore jeopardizing the safety that many people in our neighborhood enjoy. While a park would theoretically be enjoyable for our children, I do not feel that it would be worth it, at the expense of jeopardizing the security and safety that we currently have.	Strongly agree	Strongly disagree
Carson Road	All of these options provide access and reasons for MORE traffic on Carson road. I have lived here for over 20 years and while traffic has increased it is never congested nor have there been numerous wrecks or tragedies due to the cars cutting through. This is a HUGE waste of taxpayer money that will only cause more safety concerns for the homeowners in this area. Please think of the homeowners FIRST.	Strongly disagree	Strongly disagree
Carson Road	Bike paths and pedestrian paths seem to add to the chaos of Carson. I like the roundabouts to slow traffic down and access from Carson to the Kroger center. I like the idea of a park too that is nearby but the bike path and pedestrian paths concern me for how hectic traffic can be as well as safety of the surrounding neighborhoods when it comes to unwanted traffic.	Agree	Neutral

May 2022 Route 460 Land Use and Connectivity Study Survey Results

Transportation Area Name	Comment	The information presented on the website was clear and easy to understand.	Please indicate your level of support for the transportation improvement area.
Carson Road	Carson Rd should not be used as a through way, King St already provides that access and should be considered for improvement before Carson Rd. Carson Rd is more of a neighborhood.	Disagree	Strongly disagree
Carson Road	Improvements to Carson road would be welcomed with open arms. Seems like there's way too much traffic on this road for its size. Easy access to Kroger would be greatly appreciated, as well.	Agree	Strongly agree
Carson Road	Please leave Carson Road as a neighborhood. The below "improvements" only build Carson Road as a thoroughfare to Vinton.	Strongly disagree	Strongly disagree
Carson Road	I live on Carson Road at the entrance to Mountain Meadow Estates. I pay property taxes on more of my property than I can use. Too much traffic on Carson now, known as the Bonsack Bypass. Will my property on Carson Road be taken by eminent domain if the widening plans go through without my consent? Will Roanoke County erect noise reducing fencing like those on the interstates? What's to keep a speeding vehicle leaving the road and hitting my home? I didn't cause this problem. I just want to live a quiet life with my wonderful neighbors.	Strongly disagree	Strongly disagree
Carson Road	I want the County to leave Carson Road alone. There currently is no safety issue on this road other than the folks who think it is the Daytona Speedway. I don't think that a residential access road needs to be used to reduce traffic on Rt 460. I live off of Carson Rd and do not want an increase in traffic on this road; nor do I want the inconvenience of a lengthy construction project that will reduce the flow on the road I use daily to get to and from my home.	Neutral	Strongly disagree
Carson Road	Realigning Carson (Point P) seems very difficult to do without disrupting the landscape and houses already along it. Though to be honest, some of those houses/trailers/farms are unpleasant to the eye and I would be happy to see them gone if it resulted in higher property values I personally would prefer that Carson does not become a high volume cut through due to the amount of deer, lack of speed monitoring by law enforcement, and presence of many residential neighborhoods with very active foot/family/pet traffic. The cut though (Point J, I, G, and H) to reach the Kroger and CVS is absolutely necessary. It is next to impossible to make that left from Carson out onto challenger heading toward 581. Having access to a new park/greenway would raise property values but I can't support turning Carson into a high traffic alternative to Challenger. Fix Challenger and its lights or make Gus Nicks-King St-Walnut Ave the better cut through since they are already higher volume. The new Sheetz at King street will need roads to be reworked anyways. Heck a cut through from 13st SE to Norfolk Ave or Wise Ave across tinker creek might be good too. I have no problems with the roundabout either if it slows people down but I don't think it will have much of an effect for the road as a whole.	Agree	Neutral
Carson Road	Kroger access from Carson will result in heavy traffic cutting into Carson to avoid red lights. This will make it harder for residents to get home off 460. The greenway and park would be nice but a roundabout is just encouraging more people cutting through Carson.	Neutral	Strongly agree

May 2022 Route 460 Land Use and Connectivity Study Survey Results

Transportation Area Name	Comment	The information presented on the website was clear and easy to understand.	Please indicate your level of support for the transportation improvement area.
Carson Road	I think this sounds great. Much needed improvements and great recreation access. As long as the neighborhoods along Carson Rd are kept at their natural beauty onlooking the mountains and parkway. Safety, privacy, and natural beauty along Carson Rd. preserved	Agree	Strongly agree
Carson Road	I am for the option including new park, greenway, roundabout, and access to Kroger from Carson Rd	Agree	Strongly agree
Carson Road	Carson Rd could stand to be a little wider but should not be improved just for the sake of a cut thru to Rke City.	Agree	Disagree
Carson Road	To whom it may concern, As a citizen (and taxpayer) who will be impacted by the proposed Route 460 Land Use and Connectivity Study/realignement/widening of Carson Rd. I would like to have several questions/concerns addressed by the county. 1. What is the proposed timeline for this project? 2. When is this project projected to begin? 3. How will this impact taxes? I am very interested in the answer to this question seeing as our property taxes have increased every year since we moved to this area. 4. What is the proposed percentage of 460/Challenger Ave. traffic that would be diverted to Carson Rd? While I appreciate the need to improve throughput and reduce accidents along the 460/Challenger corridor I am not in favor of increasing traffic along Carson/Belle. Currently, even though people tend to speed along that stretch of road the amount of traffic is fairly light on an average day. 5. Will Carson/belle remain closed to tractor trailers and large trucks? Allowing Tractor trailers etc. access would significantly impact safety along Carson/Belle. I would vehemently oppose opening Carson/Belle to allow large trucks. 6. How do you propose to address the safety of the residents that have homes along Carson/Belle? The speed of traffic will increase once it exits the roundabout. That along with increased traffic negatively impacts the safety of homeowners/residents in that area. 7. Pedestrian and bike paths are needed, and I am not opposed to the addition. 8. I would not oppose the greenway or a small parking lot for access to the greenway. I would oppose a park. 9. I support the addition of the road connecting Carson to the Kroger shopping center however, what is the plan to mitigate the increase in traffic turning onto Carson from this addition? Additional motorists will use this as a convenient detour plus, you will still have traffic turning from 460. 10. Is there additional connectivity between 460 and Carson/Belle planned? 11. How is this project being coordinated with Roanoke City since this will affect residents along Belle? On the Roanoke County VA/Route 460 Land Use and Connectivity Study/Carson Road site the happiness and convenience of the motorist is the main focus. Little is said about the residents of Carson Rd. and associated	Disagree	Neutral

May 2022 Route 460 Land Use and Connectivity Study Survey Results

Transportation Area Name	Comment	The information presented on the website was clear and easy to understand.	Please indicate your level of support for the transportation improvement area.
Carson Road	RoCo is guilty of developing this section of 460 for revenue. RoCo is guilty of creating the congestion on 460 and now is looking for an "answer" by making changes to Carson Road. All of this is being done at detriment and safety of the subdivisions in this area AND the homes that run adjacent to Carson Road. These changes will only create more traffic on Carson which means more speeding, accidents and crime. Taking land for this project will drive our house values down as no one wants to raise children in a thorough fare area. If you are looking for improvements, please stop developing an already busy 460 corridor. Your doing's don't leave justification for taking away from my safety, my privacy, my home value. There has NEVER been a back up of traffic that would justify a roundabout. There are parks in Huntridge, Berkleys bottom and Goode that all of our area utilizes. Its like the park was put in there to diminish the blow of the increase in traffic that will incur. Also, why would you want to put a park there and make changes to the road that will lead to in that will only increase traffic? Hopefully, by now, you will understand your changes all support your selfishness - lets help relieve 460 congestion by running more cars through this area and oh by the way, lets give them a park as something to pacify the changes. DO BETTER ROANOKE COUNTY	Strongly disagree	Strongly disagree
Carson Road	Regardless of which option is chosen, there certainly is the need for improving that road!	Agree	Strongly agree
Carson Road	Carson Rd is way too curvy and dangerous for the amount of traffic that it receives. I strongly recommend the plan with the roundabout.	Neutral	Strongly agree
Carson Road	I like option 1	Agree	Agree
Carson Road	Not opposed to road J that connects Carson to Kroger. The rest of the plan I dislike.	Agree	Disagree
Carson Road	Any improvement to carson will only increase traffic problems, and devalue properties near the affected areas. Speed bumps would help more than anything, and no one that lives on carson is pushing for greenway access or a park. Also, alot of houses sit higher up off the road and any proposed widening would require alot of hillsides to be cut out. Are retaining walls going to be put up to protect against erosion and will the county accept liability for potential property damage due to erosion?	Disagree	Strongly disagree
Carson Road	Option 1 road J. Both sound awesome!	Strongly agree	Strongly agree
Carson Road	Option 2	Agree	Agree
Carson Road	Maps were hard to interpret, fuzzy when enlarged.	Strongly disagree	Strongly disagree
Carson Road	Just install a signal light at Carson and King St	Strongly disagree	Strongly disagree

May 2022 Route 460 Land Use and Connectivity Study Survey Results

Transportation Area Name	Comment	The information presented on the website was clear and easy to understand.	Please indicate your level of support for the transportation improvement area.
Carson Road	<p>As a resident in the Glade Creek neighborhood on Carson Rd option one negates the needs of the area. Option one includes a roundabout in the King Street junction. This is not a viable option due to the upcoming increase in traffic after the Sheetz and new housing development are completed. Roundabouts are not conducive to the area, a stop light would be better at the intersection.</p> <p>Both of the options provided show access to Kroger from Carson but the location for the access is too close to Challenger Ave. Considering the current traffic and potential new traffic this will cause a bottleneck on both sides of Carson and endanger traffic turning in from Challenger as well as turning into Kroger. The access to Kroger should be further back on Carson. School busses already have a difficult time in this area.</p> <p>The primary concern of residents in this area is the dangerous intersections on both ends of Carson as well as the width of the roads. In neither of these options is there a sufficient turning lane onto Carson from Challenger. Currently if you intend to take a left turn onto Challenger from Carson you are in for a lengthy wait. In several areas of Carson there is a steep terrain, blind turns and a single lane bridge. The lanes are insufficient in width to allow a car and bus to pass in several of the turns; add the cyclists and pedestrians and is an accident waiting to happen.</p>	Agree	Strongly agree
Carson Road	<p>I travel Carson Rd a lot, and yes it is a narrow road and a one lane bridge, but this is an out of control project. Simply replacing the bridge with a new and wider bridge will help a lot. Widening Carson Rd from 460 to the bridge will also help, but will take out the entire front yards of a number of homes. The roundabout is simply ridiculous there, and again will destroy a farm and a number of homes right at that location. The farm owner is a lawyer, so you know this will end up in court. The home values at both ends of Carson street will also go down. There are more expensive homes at the opposite end of Carson from 460, and this will make these neighborhoods more congested. As a construction person who deals with earth moving all of the time, the entrance to Kroger itself will be an expensive project. This is an over priced, land grabbing, not thought out well project that will cost millions of dollars and not solve the problems was intended for. It will most likely end up in court over eminent domain and fair market values for properties. The project will end up cost a least 20% to 40% than estimated. Bad idea, with even worse consequences for the neighborhoods and homeowners in the area. Rethink this project.</p>	Agree	Strongly disagree
Carson Road	Great improvement to the area very well needed	Strongly agree	Strongly agree
Carson Road	We need more places for activities in our area great job	Strongly agree	Strongly agree
Carson Road	The maps are very difficult to read to the point that they are next to useless, particularly when it comes to the exact placement of the roundabout. You cannot enlarge them to see where exactly the roundabout would be placed and whose property the access roads would go through. Also, this is a rather vague survey. I support improvement of Carson Road, but I prefer the non-roundabout, non-park option as opposed to putting in a roundabout, parking lot and park.	Disagree	Agree

May 2022 Route 460 Land Use and Connectivity Study Survey Results

Transportation Area Name	Comment	The information presented on the website was clear and easy to understand.	Please indicate your level of support for the transportation improvement area.
Carson Road	Love the sidewalks and greenway!	Agree	Strongly agree
Carson Road	Carson Road is a fully residential area, and by making any of these changes you are endangering the families that live here. There is no reason to bring more traffic through the area - it is RESIDENTIAL the entire length of the road and would reduce safety for families that live here. Taking away property from people who love this area and have chosen to live here because of its location, adding more traffic, years of construction, and closing off roads is absurd. We don't want a park here - there are plenty in the area with easy access, and this will only become a secluded area for criminal activity. We did not ask for this - we love our home just the way it is! We have chosen to live here because it's somewhat secluded yet still close to what we need. Bringing more traffic and any of these changes will ruin everything we love about our homes. I ask that you take the hundreds of families that live here into consideration! So many kids playing on streets/driveways in our neighborhoods, families taking walks, and neighbors gathering. Making this more of a "thoroughfare" will reduce the safety & ruin our neighborhoods. This is not a solution because there is not an issue to begin with on Carson road!	Neutral	Strongly disagree
Carson Road	This is very visually difficult to interpret. I think Option 1 is good but hard to determine based on the visuals presented. It is nice that they are trying to increase connectivity with active modes of transportation - bike and pedestrians and usage of greenways.	Neutral	Neutral
Carson Road	Good	Agree	Strongly agree
Carson Road	Disagree with access to Kroger from Carson Road; Bad topography, Bad crossing of creek, Added pressure to Residential areas and less likely to obey speed limit. Disagree with expansion of Carson Road; Disagree with the roundabout; Disagree with the extension from roundabout to parking of greenway; Disagree to greenway west of Railroad tracks, (destroys protected farming operation which is the most "Green" use of property, More dangerous with liability of crossing RR); Maps and disclosure of the notice of public community meetings fail to adequately inform of the massive changes proposed. Comments in open forum such as not taking property is outright inaccurate and at most a lie.	Strongly disagree	Strongly disagree

May 2022 Route 460 Land Use and Connectivity Study Survey Results

Transportation Area Name	Comment	The information presented on the website was clear and easy to understand.	Please indicate your level of support for the transportation improvement area.
Carson Road	<p>I live on Carson Rd. with my wife and young child and we currently lack access to the Kroger shopping center that is in any way pedestrian or bike friendly. In addition the neighborhoods on and along Carson are not connected by any bike or pedestrian friendly infrastructure. We have close neighbors we like to visit and find ourselves driving more than we would like due to no sidewalks or bike lanes on Carson Rd. The proposal with a roundabout and park with greenway access is the only way to do this right. Otherwise we are increasing traffic flow without a slowdown, and providing amazing greenway infrastructure with no access point to those it could benefit the most. The road does need to be widened, and bike lanes would be a most welcome addition. The bike lanes do not serve runners, parents with strollers, dog-walkers, etc so I also want sidewalks on Carson in addition to the bike lanes, at least to access the potential park and greenway. Greenway access, a local park, and bike friendly infrastructure would be surefire ways for us to increase our home value as well. The five cities featured as platinum level bike friendly cities by the League of American Bicyclists carry home values well above the national average.</p> <p>https://www.bikeleague.org/content/new-platinum-new-gold-bicycle-friendly-communities. I have been an avid bike commuter and rider for years and Roanoke's current infrastructure and potential were a key factor that attracted us to the area. My only chief concern is that traffic flow would increase on Carson, though the potential for alternative travel far outweighs this concern for me. Regarding the bike lanes protecting the lanes via a small barricade or a buffer is a wonderful way to increase usage by those concerned that riding on the road may be too risky. Here is a link with a few examples.</p> <p>https://ggwash.org/view/71253/arlington-tests-the-future-of-protected-bikeways If I can provide any additional feedback or help in any way I would be happy to.</p> <p>Thank you!</p>	Strongly agree	Strongly agree
Carson Road	<p>Transparency on the part of Roanoke County would go a long way. The flyer specifically states exploring changes to 460, yet never even mentions Carson Rd or Bonsack Rd. Making changes to turn lanes and traffic on 460 may upset or inconvenience some people, but it's not nearly as impactful as taking land from a private citizen. What you are proposing is not a simple shift in traffic. You would be leaving me with ruined property, tearing down the house of at least one (if not more) of my neighbors, and taking farmland from another. On top of that, traffic (and speed) would increase, thus negating your proposed plan to make the road "safer". And no, a roundabout is not the magic solution to slower traffic. People will speed before and after it, so it only serves to slow traffic for the approximate 5 seconds that a car is actually in it. So, in a move of transparency, please publish the specific impacts to the property owners of Carson Rd when you send out your next flyer or have your next open house. Put it in black and white and then see how much support you get for these "improvements" to Carson Rd.</p>	Disagree	Strongly disagree

May 2022 Route 460 Land Use and Connectivity Study Survey Results

Transportation Area Name	Comment	The information presented on the website was clear and easy to understand.	Please indicate your level of support for the transportation improvement area.
Carson Road	<p>Carson Road and Bonsack are incredible gems for this area, but there's something missing. We have the Blue Ridge Parkway in our backyard, yet we can't access it without 460. We have a grocery store, restaurants, modern conveniences, yet we can't access that easily either without 460 or King St (which is only getting busier & busier). Truly, living in this area, we are completely car dependent. We cannot safely walk to our neighbors house on Belle Ave or Carson Road; if we cannot safely walk, we definitely cannot safely run. That being said, I most certainly do not feel comfortable biking, with my family, to Vinton, downtown Roanoke, or the Blue Ridge Parkway. Cars, cars, cars. The infrastructure here is completely and 100% car dependent.</p> <p>As an avid cyclist, who has, at my peak, commuted over 5,000 miles in three months by bicycle, I hope my input is well-received. Any improvements you make to Carson will be better than it is. That's a fact. Option 1 is the only option that provides greenway access. We cannot miss out on this greenway access point. Addressing Carson Road is vital to a healthy, growing infrastructure. This road has been used as a cut through for years, and I think out of the two, Option 1 with a park and greenway access is vital for building and supporting the health and vitality of our community.</p> <p>Adding bike lanes is simply not enough. If I'm biking with my family, those glorified shoulders, bike lanes to some, are not going to keep me or my family safe from the ever-increasing distracted driver. If we add bike lanes, we would need them protected. Let's role model this progressive, sustainable model here. An excellent example of this is shown by a project in Fort Collins, CO:</p> <p>https://www.fcgov.com/bicycling/west-mulberry-street-improvements. A poor example of this is shown by the replacement of the Swing Bridge in Surf City, NC. I can't find a link, but they protected the pedestrian lanes, but put the cyclists on the road with the drivers, and the cyclists never use it. It doesn't feel safe! They should have protected cyclists AND pedestrians/runners/those with strollers, etc.</p> <p>, and I appreciate you collaborating with the locals. If you're looking to build and support the health and vitality of a community, one must invest.</p> <p>I think a roundabout is a great idea, but will it solve the problem? As someone who has lived for years in Europe and Australia, roundabouts function differently here in the United States. I think they are great, but will it solve the problem? Are there other ways, perhaps in addition, where we can mitigate the increased traffic (and not those flashing speedometers, etc. as it only seems to make people go faster to see how fast they're going).</p> <p>Let's think about life without a car. How do you get places? How can you promote your health and the time spent bonding on a walk, run, or bike ride together.</p> <p>Also, are you aware we're building an (Lewis Gale perhaps) Urgent Care alongside a Chick-Fil-A? The lines to the infamous restaurant already cause delays on 460. Are people thinking about how to address this potential concern. Just wanted to vocalize it here. That and the development building on King Street. That road is also used as a cut-through, and I can see it becoming even worse as time goes on and more people move here.</p> <p>Thank you for taking the time to collaborate and build a better future together. I'm beyond grateful for the opportunity to provide feedback.</p>	Agree	Strongly agree
Carson Road	Definitely Option 1 w/a new park.	Strongly agree	Strongly agree
Carson Road	Option 1 would be better	Strongly agree	Strongly agree
Carson Road	Absolutely love this idea!	Strongly agree	Strongly agree
East Ruritan to Walmart	Has potential.	Strongly agree	Agree
East Ruritan to Walmart	I believe there is a significant grade change from the Lowes Parking lot to existing Huntridge Rd. - how will this be handled with Road "F"?	Neutral	Neutral
East Ruritan to Walmart	All options seem great.	Agree	Agree
East Ruritan to Walmart	I think all 3 options are good and would be beneficial both for those in the adjacent neighborhood and people wanting to get to the shopping center without getting on 460.	Agree	Agree

May 2022 Route 460 Land Use and Connectivity Study Survey Results

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East Ruritan to Walmart	good	Agree	Strongly agree
East Ruritan to Walmart	This road will go right by my back yard, of course I don't want it!	Agree	Strongly disagree
East Ruritan to Walmart	I purchased this house two years ago knowing that nobody could build on the empty lot beside my house because of land issues. I really do not want a road going directly beside my house please reconsider. huntridge rd is busy enough we do not need more traffic coming from Lowe's or Walmart or Applebee's or sonic it would make it very dangerous for the children on the street. If you're not aware A lot of people speed up and down this road,	Strongly agree	Strongly disagree
East Ruritan to Walmart	I believe the way of the map will put more traffic on Huntridge Rd . We have enough traffic now . This includes speeders and accidents. Cars going up and down do not go 25 MPH. They come down Huntridge knocking over mailboxes, spinning around and going down the culvert, flipping upside down and hitting the main electrical box (this had to be replaced) and hitting the floor porch of neighbor.NO MORE traffic is needed. Build a bridge over Huntridge Rd with no turns to connect another 1000 families from East and West Ruritan to come thru the neighborhood.	Neutral	Strongly disagree
East Ruritan to Walmart	I do not agree with this proposal, we have enough traffic on Huntridge Rd has it is, we don't need anymore. I think what needs to be done is to have a stop light put in. you have stop lights at CVS and then again at Kroger why can there not be one put at the Huntridge subdivision.	Neutral	Strongly disagree
East Ruritan to Walmart	This is not the smartest plan that the county has had. The neighborhood know why the county is proposing. No one will buy the property because there is no access to it. The county is just after the tax revenue from the future businesses. This neighborhood is the largest in Roanoke yet the county wants to add more traffic to it. There is already a problem with traffic in this neighborhood and you very rarely see an officer drive by. I cannot think of the last time radar was set up. Huntridge Road is basically a drag strip. Under the county plan who will have to stop where the roads intersect on Huntridge Road? What is the plans for the piece of property behind the Lewis Gale Clinic? There is an underground well and a required storm runoff pond for the clinic. The county plan is to run traffic into the Lowes parking lot. Will tractor trailers be able to use this road? If not what is the plan to enforce it ? Some days you have to multiple lights to get out on 460. That will be a major backup in the parking lot. Another part of the plan is to block the median on 460 where you can't turn left on 460 and head west. the county plan is to have to turn right and make a U turn at Country Corner or at Carson Rd. Talk about unsafe. There are more accidents at those two crossovers that the one at Hunt Ridge Road. The best idea would be put up a traffic light. I wouldn't be any closer between a light at Huntridge Road than it is between West Ruritan Road and the light at Krogers. I surely the county rethinks this idea and scraps it. It will just be more headaches and troubles for this area.	Disagree	Strongly disagree

May 2022 Route 460 Land Use and Connectivity Study Survey Results

Transportation Area Name	Comment	The information presented on the website was clear and easy to understand.	Please indicate your level of support for the transportation improvement area.
East Ruritan to Walmart	as a home owner on 5300 Setter Road, the propose road runs right by my house, which will no doubt increase traffic and decrease the quality of living	Neutral	Strongly disagree
East Ruritan to Walmart	We are highly concerned as to the use of U turns to allow us to go east from East Ruritan Road by U turning at Carson Road or for those coming out of Bonsack Road to U turn in front of Country Corner. 50 more houses are to be built at the back of Wedgewood starting in June and bringing 50-100 more vehicles in and out of East Ruritan. U turns will be causing cars to slow down and the turning lanes are fairly short for such a large number of vehicles. Country Corner median does not even have a turning lane. The police do not slow down the traffic, speed limits do not slow them down but a stop light at East Ruritan would stop the cars speeding from Walmart stop light and also from Kroger stop light. I know you are only concerned with traffic flow on 460 but way too many people live in these neighbors to safely get in or out and the wrecks at both Kroger's and Country Corner have proven that, and wrecks slow down the flow of traffic more than stop lights.	Agree	Neutral
East Ruritan to Walmart	As a property owner living on Setter Road, I have a number of questions that were addressed on the map. First, how close to my residence will the road run? Will there be a physical barrier or wall between residential and commercial properties? How will the road impact property values and restate taxes? I am retired and on a fix income. Secondly, the proposed land use is a buffer between 460 and my street. How will the addition of this road and subsequent land use impact the noise levels in my neighborhood? Currently, the area is exceedingly quite. Who will be responsible for cleaning up the trash and inevitable debris that will collect? Third, was an environmental impact conducted? Currently, this area is a natural habitat for numerous species of animals including red fox, owls, possums, squirrels, skunk, rabbits, hawk, raccoon and of course deer. Fourth, for what purpose will the land be used? If commercial, residential neighborhoods need to be protected from environmental, noise and light pollution.	Strongly disagree	Strongly disagree
East Ruritan to Walmart	First of all, Britaney is narrow and not suitable for heavy traffic. To widen road, you will have cut into my yard as well as my neighbors. This could case my property to decline. A large number of my neighbors are retirees. We do not need heavy traffic up and down our streets. Widen 460 for excess traffic as it should have been done years ago. By doing this you are not solving the congestion of traffic you are just funneling the traffic into neighborhoods. You would not want this traffic in front of your home. Who ever came up with this idea should be ashamed of themselves.	Disagree	Strongly disagree

May 2022 Route 460 Land Use and Connectivity Study Survey Results

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East Ruritan to Walmart	Overall, I'm all for increasing route options that keep traffic off of Challenger Ave. This route would not specifically impact me as I don't live in that direct area, but it is a route that I would use (specifically Option F from E Ruritan to Lowes) should it be built.	Agree	Agree
East Ruritan to Walmart	These are quiet neighborhoods. I don't suggest ruining that by adding roads to peoples property.	Neutral	Strongly disagree
East Ruritan to Walmart	Use 460.	Neutral	Strongly disagree
East Ruritan to Walmart	Dumb idea.	Strongly disagree	Strongly disagree
East Ruritan to Walmart	Who in their right mind would think of this?	Strongly disagree	Strongly disagree
East Ruritan to Walmart	BAD IDEA!!!!!!!!!!!!!!	Neutral	Strongly disagree
East Ruritan to Walmart	I have lived on Setter Rd for 37 years. It is a peaceful neighbor hood. The road you propose will not help the residents in Huntridge. It just makes more traffic in and out and people coming down our streets. It is already hard to get out with just the people in our neighborhood. Not to mention road noise when you tear down the wooded area behind our houses. And if you build any businesses there it will take away from the value of our homes. This is a nightmare waiting to happen. This will not alleviate 460 traffic.	Disagree	Strongly disagree
East Ruritan to Walmart	I have lived in Huntridge for 30 years. One of the things we love about the area is the relaxed atmosphere, which this road will destroy. The area under consideration provides a buffer from the noise and traffic of US 460, as well as being a haven for many types of wildlife. It is unconscionable that this will be devastated just so someone could build something else here. We do not need any more car washes, grocery stores, gas stations, convenience stores, restaurants (fast food or otherwise), coffee shops, banks, medical centers or strip malls. My family and I deeply oppose this disastrous project. This will turn backyards and side streets into thoroughfares without decreasing the traffic on 460 one iota. I see no benefit to the residents of this neighborhood from this project, and calling it an "improvement" is almost insulting. Once again, I go on record in the strongest terms possible as saying I oppose this project.	Agree	Strongly disagree

May 2022 Route 460 Land Use and Connectivity Study Survey Results

Transportation Area Name	Comment	The information presented on the website was clear and easy to understand.	Please indicate your level of support for the transportation improvement area.
East Ruritan to Walmart	I have reviewed the all the plans provided. While I'm interested in all, my main concern is this new road that crosses over Huntridge Rd. I've lived on Huntridge since the neighborhood was just five streets. When we purchased we were told all that could be built behind us was apartments or townhomes. They opened our nice little subdivision to the Orchards and the developments kept growing. We are the largest neighborhood in Roanoke with a portion being in Botetourt Co. The traffic on our street is ridiculous. We have constant issues with speeding and numerous wrecks. The first three homes on the right as you enter the neighbor hood are especially susceptible to the traffic issues. Our house has been hit twice, my neighbors house to left has been hit. Our decorative borders to our driveways have been destroyed numerous times. We have had cars roll over in our yard, catch fire, destroy the utility boxes, damage property, and the list goes on. We have replaced our mailbox so many times we used to keep a spare in the garage. When the county change the zoning and decided to allow Walmart and Lowes to build, the people of the area filled Bonsack Baptist withstanding room area saying NO. But we were told it was a done deal. On our part, the three neighbors, it's been a nightmare. It's been a battle with noise, lights, tractor trailers idling overnight, dumpster trash pick ups, etc... As of today, we are still battling the light issue that shines in our house all night long!! The county did not give us a buffer zone. Now you want to connect another huge neighborhood and give them access to our neighborhood roads. Our neighborhood will be used as the route to 604 (alt.220) so all that traffic will be funneled through Huntridge Rd.. On the reverse, this will be a way to bypass the intersection at 604/460 and become a through way for 604 traffic. Along with the depreciation of value to every home you place this new road next too. The additional volume of traffic in the neighborhoods of Huntridge, The Orchards, etc. I'm tired of our neighbor hood being sacrificed. A more viable and long-term solution would be to widen 460 to three lanes all the way to the intersection of 604/460 or beyond. The current plan looks like very disruptive, short term, and expensive fix. I would expect better.	Neutral	Strongly disagree
East Ruritan to Walmart	People are not going to Walmart & Lowes when the congestion is at its worse, they are going to work! If I wanted to live on a road like Huntridge I would have bought there. Your proposal is one of desperation and to say you are doing something which this one proposal will do nothing to solved the counties problem. If this goes through I will move but it want be Roanoke County and I'm sure I am not the only one. For this proposal why don't you just come thru Plantation Grove from East Ruritan. Less road to build, I know of several ways to cut thru there, why was that not looked at?????	Agree	Strongly disagree

May 2022 Route 460 Land Use and Connectivity Study Survey Results

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East Ruritan to Walmart	<p>There is no need to apologize to the Ruritan neighborhood for the abysmal traffic situation you have caused with Chick Fil A and the Emergency Room that isn't even open, by punishing the Huntridge/Setter Road people who have all been there long before Walmart existed. Instead of spending my tax dollars on a road that will do no good, why don't you instead add a traffic light somewhere. There is no need for you to add a road behind the house I grew up in, or add one beside my mother's house connecting to Setter Rd. This is just ridiculous.</p>	Neutral	Strongly disagree
East Ruritan to Walmart	<p>I strongly object to the construction of this road. I really do not understand how this is going to alleviate any traffic congestion problems on Route 460. If you want to cut down on traffic, STOP DEVELOPING THE LAND ALONG ROUTE 460! More development will bring more traffic. I feel that the construction of this road will diminish the quality of life I enjoy in Roanoke County. I live on Setter Road (have lived here for 30 years) in the Huntridge subdivision. The land that you plan on destroying to construct this road is a forested parcel which provides a natural buffer to the noise of the traffic on Route 460. This land is also a habitat for many wild creatures which have been pushed from their habitats again and again as the development has marched up Route 460. This parcel is one of only a few remaining forested areas along 460. LET IT BE!</p> <p>I also worry about the increased traffic this proposed road will bring into my neighborhood. One section of the road (Section D) leads right into Britaney Rd. which is in the heart of our subdivision. The F Section of the road crosses Huntridge Rd. on its way to Lowe's parking lot. Huntridge Rd. is a very busy thoroughfare--the main road into the subdivision. The last thing Huntridge Rd. needs is another busy intersection.</p> <p>Let's be honest. The real reason Roanoke County wants a road here is so that a business or businesses can develop that vacant land. If the county provides the road, the potential business will have a much cheaper construction cost. I understand that Roanoke County needs tax revenue to fund our schools and to provide the excellent services we county residents enjoy. We do not need another car wash, bank, gas station, convenience store, grocery store, big box store, etc. We moved here because it is county--not city. Please allow us to maintain the wonderful quality of life we now enjoy in our Roanoke County!</p>	Agree	Strongly disagree
East Ruritan to Walmart	<p>My Wife and I have lived here since 1985 and loved every minute. Now we are going to have to live with a road running virtually through our back yard. This is going to a disaster for not only me, but all the residents on Setter Road. If the traffic wasn't bad enough already, now you're trying to make it more congested, to say nothing of the extra noise it will create. This will also ruin our property value after all these years of keeping our property in extra nice shape. This is ridiculous and should be stopped before it creates some of the biggest messes and problems this beautiful area has ever known. FIND ANOTHER WAY!!!!</p>	Agree	Strongly disagree

May 2022 Route 460 Land Use and Connectivity Study Survey Results

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East Ruritan to Walmart	No reason for this. When Walmart and Lowes moved in, access via Huntridge was a hard no. And access to Setter Rd would destroy the value of the two homes it would run between, increase traffic for the whole neighborhood. Poor planning on your part should not result in wrecking our neighborhoods.	Strongly disagree	Strongly disagree
East Ruritan to Walmart	This should not be done. You will allow people to drive 40 miles an hour where our kids play and get school bus.	Neutral	Strongly disagree
East Ruritan to Walmart	This will not help eliminate the problem with traffic on 460. The traffic to the Walmart is not just from the neighborhood. Many of the people who visit the area are not from this neighborhood. Many people walk their dogs through this area and children ride their bikes. The extra traffic will impede our way of life. Please consider alternatives as this will have a huge effect on our neighborhood and minimal effect on the problem with 460.	Neutral	Strongly disagree
East Ruritan to Walmart	<p>The need for traffic improvements along the 460 corridor are virtually undeniable. Unfortunately, this entire study is often misguided at best and downright harmful at worst. I will focus on the East Ruritan Road to Walmart route, but this feedback generally applies to the entire study. Here are only a few of myriad issues with the ideas submitted in the proposed transportation improvement study:</p> <p>1) This study addresses the symptoms, NOT the root cause of the problem. As noted in the study purpose, the goal is to "reduce congestion and improve safety." Hence, the root cause is too much vehicular traffic, with insufficient infrastructure on 460 to handle the traffic volume. This study - particularly the E. Ruritan Rd. to Walmart route - does not address increasing infrastructure capacity on 460.</p> <p>2) Fails to reduce traffic in a meaningful way. Most of this study diverts traffic into residential subdivisions. Traffic going to Roanoke via 460 through Bonsack (e.g., people that do not live in Bonsack, commercial drivers, and visiting shoppers to Walmart/Lowe's) will still traverse 460 daily. While I do not have exact numbers on hand, I am supremely confident that a majority of drivers fall into this category. Virtually NONE of the study proposals addresses this in a meaningful way.</p> <p>3) Will REDUCE safety of Residents and Drivers, not enhance it. This study - particularly the E. Ruritan Rd. to Walmart route - will make the residential area less safe. This is contradictory to the stated project purpose. Adding a new road that creates additional through traffic adds proportionally more traffic volume than the current daily average for Huntridge and the neighboring area. Many of these roads are narrow and not built to handle much traffic. In fact, some roads are so narrow that two cars can't easily pass each other without one pulling over to the grass. The volume that the County aspires to divert with this project cannot be handled by many of the neighborhood roads. Currently there are more walkers and dogs on some of these roads than cars.</p> <p>4) Detrimental to Local Wildlife. This proposal would jeopardize the safety of drivers and wildlife by increasing the likelihood of deer/vehicular collisions. Due to close proximity to the Reed Mountain Preserve, many types of wildlife have migratory patterns they use daily that run through the E. Ruritan Rd. to Walmart route. This will destroy habitats, as well as endanger drivers' property and lives by introducing increased vehicular traffic to areas with a large number of deer and other wildlife - even bears - that live at and commute around the Reed Mountain Preserve. Hence, this proposal fails to enhance public safety by endangering wildlife and putting driver lives and property at risk.</p> <p>5) Decreases Quality of Life. With more vehicular traffic purposefully diverted into a quiet residential subdivision will dramatically decrease the ability of people to jog through the neighborhood, walk dogs, let kids play, ride bikes, and more. These are the things that made people want to move into the Bonsack area. This proposal does NOT add value to quality of life.</p> <p>6) Roanoke County Policies made the traffic and safety problems WORSE yet provided few solutions. Despite the knowledge that zoning and economic development policies would likely increase traffic, there were few recommendations over the years to address the anticipated activity over time.</p> <p>7) This proposed study spreads misery, as opposed to solving the problem. Another example of Roanoke County policies creating problems is seen in the Chik-fil-a and upcoming Lewis Gale Emergency Room intersection. That traffic has been a massive problem to the citizens around Ruritan Rd. Local planning decisions did immense harm to the 460 area and was a massive blow to the quality of life for Ruritan Rd. area residents. Both of these institutions are a HUGE benefit for the County in many ways. Unfortunately, both entities were poorly located due to inadequate planning. Both entities should have been built here, but in different locations. To address the self-inflicted wound of traffic bottlenecks, the County wants to spread similar misery into Huntridge by providing Ruritan Rd. area residents access to Walmart. Sounds great in theory but will fail in practice. The socio-economic demographics for Walmart shoppers do not align with the demos for Ruritan Rd. and Huntridge residents. Do residents shop there? Of course. Often enough to have a statistically significant impact on 460 traffic? Not! Instead, the proposed route will add traffic to a residential area enough to decrease quality of life, reduce public safety, and negatively impact wildlife, but NOT enough to significantly reduce vehicular traffic congestion along 460.</p> <p>In conclusion, I applaud Roanoke County taking steps to "reduce congestion and improve safety" along the 460 corridor and am happy to work with the County to be part of the solution.</p>	Strongly agree	Strongly disagree

May 2022 Route 460 Land Use and Connectivity Study Survey Results

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East Ruritan to Walmart	<p>First of all, I have been "kicked off" this attempt to give feedback several times by my own iPad so I hope I can get this typed within 15 minutes as it is now 11:45 PM on May 31 and I realize that midnight is the deadline. If late, Please consider that I am not the most technology savvy person!</p> <p>I totally disagree with this plan that you have to disrupt our entire quiet neighborhood of Hunridge. Just because you all disrupted the West Ruritan neighborhood traffic flow and future noise levels when the new LGH ER opens should not mean that they have to disrupt ours. We have a standalone LewisGale clinic at the entrance to Hunridge and we have an urgent care facility in the nearby Valley Gateway strip mall. We also have ambulance service and paramedic services from the Station 12 Botetourt County Fire Department on Route 604. They are easily readily available to this neighborhood within a matter of minutes. Trust me, I am well aware of this because I've had to use their services several times as have several of my neighbors. I believe that we are pretty well covered for emergency services. A neighborhood is NOT the place for an ER with noisy ambulances coming in and out 24 hours a day!! Perhaps, in retrospect, you may now see that these problems with the West Ruritan area could've been avoided. You already have an LGH ER at Tanglewood but that did not involve being part of a subdivision area. You had already allowed a Chick-fil-A to be built on the opposite corner which causes many traffic issues at busy times of the day. Again, this has terribly inconvenienced residents of the West Ruritan area. When I think of where our other Chick-fil-A restaurants are in the Roanoke Valley, I believe you find them in business/retail areas. It appears to me that you're addressing some of the symptoms rather than the root cause of the situation. There are more cars and there will continue to be more cars as time goes on.</p> <p>I fail to see where it may be a little more difficult for some of these county residents to get to the Bonsack Walmart should be a reason to disrupt existing neighborhoods and spend a lot more money generated by our county taxes. The majority of the Bonsack Walmart shoppers are probably not even from the Hunridge or the East and West Ruritan subdivisions but from Botetourt County, Montvale, Blue Ridge, Stewartsville and Vinton areas. So are you simply trying to appease them because you've totally disrupted their quiet neighborhood and, at the same time, totally disrupt another quiet neighborhood and spend millions of our tax revenues doing so?? Not very good planning in my eyes!!</p> <p>We designed and built our "dream house" on Britaney Road and moved here in December, 1984. We raised three children here. They all received excellent educations in Roanoke County schools and graduated from William Byrd. Two of them live out of state due to their jobs and one lives here in Roanoke County. I wouldn't want to live in any other part of the Roanoke Valley. And now you say you want to make Britaney Road a major thoroughfare To make it easier for some people to shop at Walmart? That makes no sense whatsoever!! You're going to spend millions of dollars developing a piece of wooded and hilly piece of land behind our neighbors' homes that will destroy a natural sound barrier from 460? None of these actions show any sense of responsibility to the residents of this neighborhood!! Our streets are narrow and certainly not equipped for heavy traffic. We have children and grandchildren who play in the neighborhood and this would certainly endanger their lives.</p> <p>I don't believe that you would find anyone in the Roanoke Valley and even nearby Bedford County who would deny that route 460 E. need to be wider!! Unfortunately, there are very few areas in which this can be done because businesses are so close to the road. Perhaps it would be possible to add some turn lanes to replace some of the medians (and some of the local vagrants begging for money!!)</p> <p>Please go back to the drawing board and put some more heads together and see if you can come up with some better ideas than these. We should be able to have a voice in how our tax dollars are spent. We should not be at the mercy of some folks who have listened to some complaints from a neighborhood whose lives have been adversely affected by some decisions of the Board of Supervisors who, in turn, decide to ruin a nearby subdivision!! ALL SO SOME FOLKS CAN SHOP AT WALMART????? RIGHT !!! WHO ARE YOU KIDDING???? It seems like it would be simpler to just put another traffic light at East Ruritan Road. What's one more between Walmart and Chick-fil-A? This would not be nearly as expensive as the plan you all are considering!</p> <p>Thank you for your time. I realize I got this at a little late but I hope it does not fall onto deaf ears. ☺</p>	Disagree	Strongly disagree
East Ruritan to Walmart	I do not understand why you would want to take this quiet, family friendly neighbor and reroute traffic through it just to make it easier to get to Walmart. Shame on you!	Neutral	Strongly disagree
East Ruritan to Walmart	Love the approach. I also notice more controlled crossover which would really help.	Strongly agree	Strongly agree
East Ruritan to Walmart	Love this change.	Agree	Strongly agree
Future Land Use Opportunities	Do not support Core on 460 where Transition now exists.	Agree	Neutral
Future Land Use Opportunities	Good	Agree	Strongly agree
Future Land Use Opportunities	ADA rest stops must be added, and new property managers must be encouraged to accept Section 8 so that people with disabilities have equal opportunities for housing.	Agree	Neutral

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Future Land Use Opportunities	I love bringing more business to Bonsack. But please, please, please WIDEN 460 before you do ANY of this other stuff. The traffic is horrible as it is. Trying to get to Vinton or 581 is a nightmare. Cut-throughs in neighborhoods, bike lanes, and restrictive barriers to prevent left hand turns at intersections are not going to fix the current problem, much less the problem of additional traffic with additional businesses. Rather than a 4 lane road, please make it a 6 (or even plan for farther in the future and make it an 8) lane road before you bring more houses and more business.	Disagree	Neutral
Future Land Use Opportunities	This corridor has issues, alot due to poor planning in years past. And am glad it is being looked at. But if the issue is traffic, this will not fix the issues. If you restrict left hand turns from side roads, the people will go up and make uturns which will cause more crashes. If safety is the idea for any 4 lane highway first thing that is needed it to prohibit left hand turns unless there is a deceleration lane in place. Second if traffic lights are close together, synchronize the traffic lights. This area the signage at the Walmart/Lowes area which would help people that think they are turning onto Alt 220 and then jump back out onto the left lane causing crashes. US 460 west bound before you reach Alt 220 needs to be graded down several feet to give a better line of sight to the light. Alt 220 to west 460 needs a light not a yield sign, people are looking back over their shoulders to see if they can pull out and as soon as they do the light at Walmart is red, another crash. Country Corner store parking lot which has people backing out into the traffic is a major issue and the cars using that crossover. VDOT needs to finish the Alt 220 that was build many decades ago with the idea of taking this to 220 south below Clearbrook. Which would help the traffic thru the city. It is sad the last road project in Roanoke was Peters creek road extention and even that project wasnt completed as they promised.	Agree	Disagree

May 2022 Route 460 Land Use and Connectivity Study Survey Results

Transportation Area Name	Comment	The information presented on the website was clear and easy to understand.	Please indicate your level of support for the transportation improvement area.
Future Land Use Opportunities	<p>I strongly disagree with your plan for future land use opportunities. I live on Setter Road in the Huntridge subdivision. The land you have designated for "potential core use" is one of the last natural, forested parcels on the westbound side of Route 460. The land in question provides a natural buffer for the traffic noise from Route 460. One of the things I love about my neighborhood—we have all of the convenience of living close to a main highway without all of the noise. We moved to Roanoke County to get away from the hustle and bustle and development of the city. Now you are planning to take this away from us!</p> <p>I realize that another business or businesses on this vacant parcel would provide more tax revenue to Roanoke County. And I know that tax revenue funds our schools and all of the excellent services we have in Roanoke County. Do we have to develop every empty piece of land to do that? We don't need another car wash, bank, gas station, grocery store, convenience store, restaurant, big box store, etc. I agree that there is a traffic problem on Route 460. However, I don't see how more development is going to solve that problem. I think it will only make traffic worse. My quiet neighborhood will be exposed to all of the noise from Route 460 and all of the heat emanating from the asphalt of new roads and new development. There goes my quality of life! Please reconsider this land use plan. Let's keep Roanoke County a county. Don't try to make it into an urban area!</p>	Neutral	Strongly disagree
Future Land Use Opportunities	<p>On the future land use map, I think that Carson Road should be the boundary between Core Land Use and Transitional Land Use. Nothing toward Bedford from Carson Road should be core on the Old Bonsack side of Challenger Ave. I think that the side of Challenger Avenue where Walmart and Lowes are already makes sense to develop more Core businesses. I would like to see more good restaurants! Chick-Fil-A has been incredibly popular since its opening. However, I live in Little Tree Acres and am completely opposed to any Core Land Use along Bonsack Road. Little Tree Acres and Old Bonsack are quiet, residential places with very low traffic. Land values and quality of life would be greatly diminished in Little Tree Acres and Old Bonsack if Core Land Use came in! Little Tree Acres is a wonderful and unique residential neighborhood. Core land use is completely out of character near it. Thank you.</p>	Agree	Disagree
Future Land Use Opportunities	This involves my house and I'm just now finding out about this. I would have more to say but today is the last day for the survey and I haven't had a chance to look in more detail.	Neutral	Strongly disagree
Future Land Use Opportunities	What ever is finally decided on needs to be both viable for transportation, the community and also have a boost to the economic outlook of the area. Additionally, these surveys are very informative, not only for you, but for the community to voice opinions and ideas. lastly, while any improvement is good to challenger (460), could the county do a oak grove like project with the city to improve the entirety of the highway, to accommodate the influx of traffic throughout Roanoke?	Neutral	Neutral

May 2022 Route 460 Land Use and Connectivity Study Survey Results

Transportation Area Name	Comment	The information presented on the website was clear and easy to understand.	Please indicate your level of support for the transportation improvement area.
Future Land Use Opportunities	I am a Ro County resident, very interested in good economic development balanced with residential excellence (ie I claim no expertise but live and shop in a great community and have an idea proposal at then end that i think is worth considering). I am not in favor of changing designations from "Transitional" to "Core" east of Carson Rd. Increased commercial development appears detrimental to the benefits of the new intersection plans at 220 Alt/360 which is intended to move traffic more quickly and safely through the area. Additional small business especially along the Bonsack Rd side of 460, without proper deceleration space along the road causes slowdowns and accidents - Country Corner being a good example of a dangerous intersection with numerous accidents with no decel lanes. On the Bonsack side of the road the land is narrow and steep not ideal for development. However, flat land with wider space is possibly available in the Bonsack opposite the Walmart/Lowes traffic light. If VDOT and Ro County connected the traffic light at Walmart/Lowe's across the street into Bonsack the land appears to have more value for commercial development (more tax revenue) w/o the safety issues due to a new traffic light. Note - I'd also consider closing both left turns (West toward Roanoke City) out of Bonsack road onto 460 and force all left hand traffic to the new traffic light a Walmart. Additionally, i'd consider eliminating both current left hand turns from 460 east into Bonsack (crossing 460 west) and force that traffic to use the new add on part of the Walmart/460 traffic light. I'm asking Jason Peters about this tomorrow and he will know more than I but i hope we can improve the area for current residence as well as those moving to and shopping in the Bonsack area. thank you	Agree	Strongly disagree
Glade Creek Road Option	The current crossings are very dangerous. My two teenagers were hit by a train and almost killed while trying to cross these tracks. The bridges over the tracks are long over due and should be a top priority for the safety of the people that live in these neighborhoods.	Strongly agree	Strongly agree
Greenways and Paths	I strongly prefer Option 1.	Strongly agree	Strongly agree
Greenways and Paths	Option 1 seems way more practical.	Agree	Agree
Greenways and Paths	Love the idea of a greenway and improved Carson Rd along with better access to shopping and dining	Agree	Strongly agree
Greenways and Paths	I can't see the graphics. Make them clickable as .pdf files or some other format that allows viewers to zoom in and see the details. I'm serious. I can't see anything in the graphics. I work on a medium-sized laptop screen. This is a very poorly designed way to obtain citizen feedback.	Strongly disagree	Neutral
Greenways and Paths	Option 1	Agree	Agree
Greenways and Paths	Either options would provide a great greenway experience. Option 1 may provide more access from bordering neighborhoods but the two railroad crossings could be problematic.	Agree	Strongly agree
Greenways and Paths	Greenways much needed in this area	Neutral	Strongly agree

May 2022 Route 460 Land Use and Connectivity Study Survey Results

Transportation Area Name	Comment	The information presented on the website was clear and easy to understand.	Please indicate your level of support for the transportation improvement area.
Greenways and Paths	I live in the Little Tree Acres neighborhood. I lean toward not wanting a greenway in my area at all as it encourages more foot traffic into quiet residential areas. Also, I think that this area is remote enough that safety would be a factor. Women would not want to be walking alone in such a remote area. However, if it had to be built, I definitely prefer OPTION 2 where almost all of the greenway would be on the far (South) side of the railroad tracks away from the yards of most residents. Thank you.	Agree	Disagree
Greenways and Paths	I love the train along Bonsack but I'd rather loose the train than add a greenway in my back yard. I'm an avid biker and runner and appreciate all that Ro has done with greenways. However, 1st we are in a rural area of Ro and Bot Counties with less need for green space than most in The Roanoke Valley...put the money elsewhere in the county that needs more greenspace/greenways...second, growing up in a community that added a greenway I've learn of some negative effects like higher crime for homes/robberies along the greenway as well as muggings/rapes... along the greenway. Much of this area is very remote and help from neighbors is not always close by...and the train will mask any noise from anyone breaking into a home or people in distress along the greenway ...before i could support this I'd want to know what Ro County resources will fund our police to keep the area safe. Also - keeping people away from the railroad track is needed for safety. Will a greenway encourage people to hang out along a busy railroad track? No greenway is my vote - if it must happen then put it on far side of the railroad track and consider proper fencing along the greenway to protect children playing along the greenway from the trains and to keep thieves etc out of the Bonsack community.. ☺	Agree	Strongly disagree
Greenways and Paths	Definitely option 1 with the Carson Road park	Strongly agree	Strongly agree
Greenways and Paths	Any access to recreation is superb.	Agree	Strongly agree
Old Bonsack	As a Planning Commissioner for this area, I've had a number of folks from Little Tree Acres reach out to me about this proposal. In particular, several living along Red Barn Lane. I do believe this plan would significantly disrupt the rural and tranquil nature these folks enjoy and it would create a cut through condition as an alternate to Route 460 congestion. It has been suggested to me to look at extending Old Bonsack Road, as a frontage road of sorts, and connecting to Carson Road. Granted, this would cause some issues with the close proximity of this intersection with Route 460. Nonetheless, I suspect many from this neighborhood will voice their opposition to this approach and I do understand why they would do so.	Agree	Strongly disagree
Old Bonsack	There is a need for an optional way to get out of Bonsack.	Agree	Strongly agree

May 2022 Route 460 Land Use and Connectivity Study Survey Results

Transportation Area Name	Comment	The information presented on the website was clear and easy to understand.	Please indicate your level of support for the transportation improvement area.
Old Bonsack	I am the owner of red barn lane. I also own land on adjacent to this on the roads your outlined as L and K. These are private roads in a quiet neighborhood. I own 4 parcels which would be affected by this plan. In creating this roadway you will be disrupting a peaceful private neighborhood community with homes intentionally placed on acreage of land. You would have to run these roads through my and my neighbors yards and remove barns, garages and concrete structures or put the roadway very close to these structures. The benefit of this bypass does not outweigh the disruption and upheaval it will cause,	Neutral	Strongly disagree
Old Bonsack	This proposal is extremely intrusive on the owners of the current properties that this plan intends to steal. I fail to see the benefit of destroying the homestead of approximately 10 families for the meager benefit of roughly 40 other properties. I don't believe this will have any real effect in reducing traffic in the studied area. Furthermore, this Bonsack /460 area does not seem to be the treacherous area on Challenger Ave. There seems to be weekly accidents from the Blue Hills intersection to the Valley Gateway light. The Chick-Fil-A intersection is extremely hazardous. Perhaps Timmons group could study how that area affects traffic into Bonsack. Consider eliminating left turns from 460 in a similar fashion to busy New Jersey thoroughfares.	Neutral	Strongly disagree
Old Bonsack	Essentially you are wanting to cut our property (5.42 acres) into half. By doing this we will be having to cross a two-lane road cutting through our property to access the other side to mow and maintain the property. As well there are two buildings that we use that again we will have to cross a two-lane road cutting through our property to get to. I'm not sure you have looked at this property or others because just our property and three other neighbors you are cutting the road through are on huge hillsides. So now not only will we have a road cutting through our property, but it will cause run off from where you cut through for the road and cause a huge drop off for us as well. I'm not thinking anyone has even looked at what you're doing other than from the air. I doubt anyone who was on the committee for this idea wouldn't want in their back yard what you're wanting to do to ours and all the neighbors.	Agree	Strongly disagree
Old Bonsack	I do not want to see travel being rerouted from 460 to Bonsack Road and Red Barn Lane. My property connects to Red Barn Lane and it is a private road maintained by the residents. The neighborhood is not a thoroughfare. It is a nice neighborhood where people are able to walk and enjoy using golf carts for some residents. Bringing more traffic through this neighborhood is not going to alleviate traffic on 460. A stop light at the end of Bonsack Road would help slow down traffic that speeds through the 45 mph section that goes past WalMart. The big traffic trailers that downshift the hill heading to Walmart need to be slowed down also.	Disagree	Strongly disagree

May 2022 Route 460 Land Use and Connectivity Study Survey Results

Transportation Area Name	Comment	The information presented on the website was clear and easy to understand.	Please indicate your level of support for the transportation improvement area.
Old Bonsack	As a resident whose property contacts the existing private road (Red Barn Lane) I am NOT in favor of expanding the road. We do not need additional traffic coming into old Bonsack...we already have drivers bypassing the traffic lights for Lowes/WalMart and the 220 interchange and speeding down Bonsack Rd. The idea of tying Red Barn lane into Carson Rd (which has twists and turns and a one lane bridge) is idiotic to me. The comment made that "residents would be able to sub-divide their property" is equally insulting. The reason we bought property here (26 years ago) was that it gave us some space to enjoy, a quality of life, as opposed to living in a crowded subdivision. Your suggested changes to old Bonsack will NOT alleviate traffic congestion on 460 but will directly impact 22 landowners and the other 72 residents who call this quiet neighborhood home. Please reconsider.	Agree	Strongly disagree
Old Bonsack	Much needed road improvements for safe and efficient travel	Agree	Strongly agree
Old Bonsack	I live in the Little Tree Acres neighborhood and do NOT want the roads K or L. Please remove K and L. We like that our neighborhood is not very accessible. I do not mind having to go up to the upper intersection to turn left on 460 toward town. That is okay.	Strongly agree	Strongly disagree
Old Bonsack	Roads K and L seem like they would be beneficial.	Agree	Agree
Old Bonsack	good	Agree	Strongly agree
Old Bonsack	The extension of Red Barn Lane through our neighbors' private property to connect to Carson Road is not a good idea for many reasons. Right now, our neighborhood is not a thru area. The roads end up in a dead end or a private road, lending to our neighborhood's safe and calm area for children to play and our enjoyment of a rural environment. Adding the extension of Red Barn Lane through to Carson Road would cause many more vehicles to cruise through our neighborhood and would make it much more unsafe for our kids and would expose our neighborhood to more crime, as it would be much more accessible to the general public. Please do not extend Red Barn Lane through to Carson Road. Thank you	Agree	Strongly disagree
Old Bonsack	Please do not bring connect a very busy road (Carson) through the Little Tree Acres neighborhood. Very often cars are using Carson as a time saver to stay off 460 and they speed. As a runner along 460 (Bonsack to Kroger) I have frequently observed drivers "run through" the stop sign entering 460. Speeding drivers coming into Little Tree Acres does not sound like an effective "improvement." Please consider eliminating K and L through Little Tree Acres from the plan.	Agree	Strongly disagree
Old Bonsack	Good idea!	Strongly agree	Strongly agree

May 2022 Route 460 Land Use and Connectivity Study Survey Results

Transportation Area Name	Comment	The information presented on the website was clear and easy to understand.	Please indicate your level of support for the transportation improvement area.
Old Bonsack	I'm not 100% clear on this potential land use map. We do not want to see more commerce on 460 that will interrupt Old Bonsack. Specifically, there is a neighboring plot of land beside us on Bonsack Rd that is for sale. (we are 4496) with potential 460 frontage. We do not want this to be rezoned as commercial. It would ruin the property value and historic appeal of the neighborhood. I would like more information on these proposed plans.	Strongly disagree	Strongly disagree
Old Bonsack	Not sure. Not familiar with this area.	Agree	Neutral
Valley Gateway	Cost concerns are a factor. Whom pays ?	Strongly agree	Neutral
Valley Gateway	Roads H and G would be helpful in opening opportunities while minimizing the impact on the 460 corridor.	Strongly agree	Strongly agree
Valley Gateway	Do it. Please. This plus the Kroger cut through to Carson would be so much more practical. If only Mexico Way wasn't wasted on that church.	Agree	Strongly agree
Valley Gateway	I think it is hard to visualize these concepts. I believe that redirecting the traffic off of 460 is a good idea for minimizing congestion but it will just be putting that off onto these new roads. In causing congestion on these offset roads could negatively impact the industrial plants - tractor trailers with high car traffic.	Neutral	Neutral
Valley Gateway	Make 460 speed limit through higher like Lynchburg to reduce less traffic that particular area is awful with traffic and not only that make it 3 lane highway instead of two	Agree	Agree
Valley Gateway	Love the idea	Strongly agree	Strongly agree
Valley Gateway	Has potential. Not sure how much it would help the majority of 460 traffic though. 460 just needs more lanes.	Agree	Agree

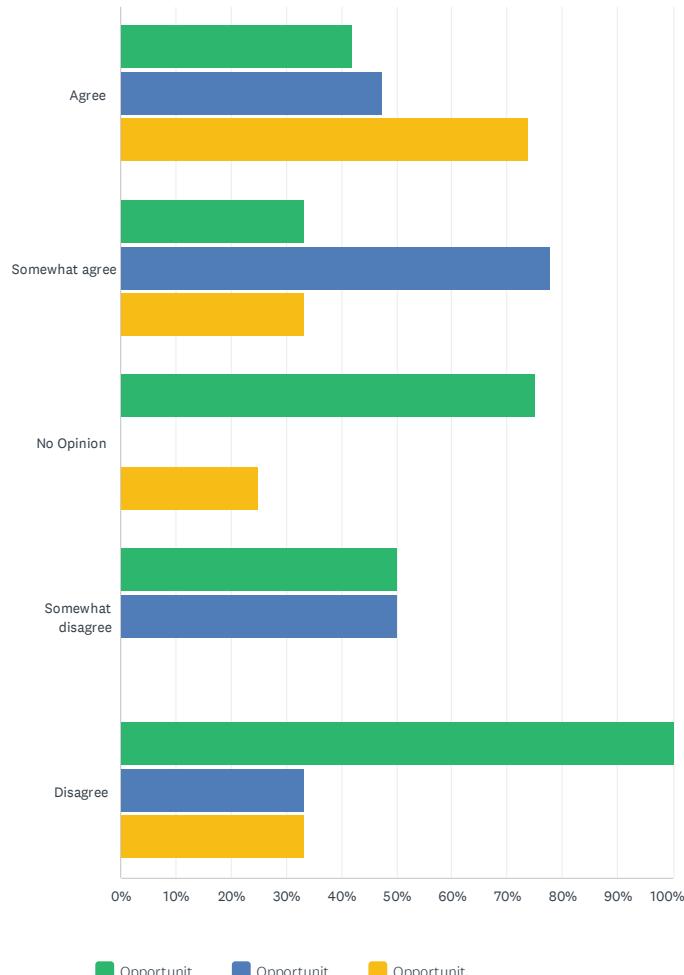
Appendix F

Public Engagement Results - Survey Three

Prior to the third and final community meeting, a survey was released to the community to review the final recommendations of the Challenger Avenue Corridor. There were 39 total responses and these are shown in the following appendix.

Q1 What are your thoughts about the recommendations shown in the area above?

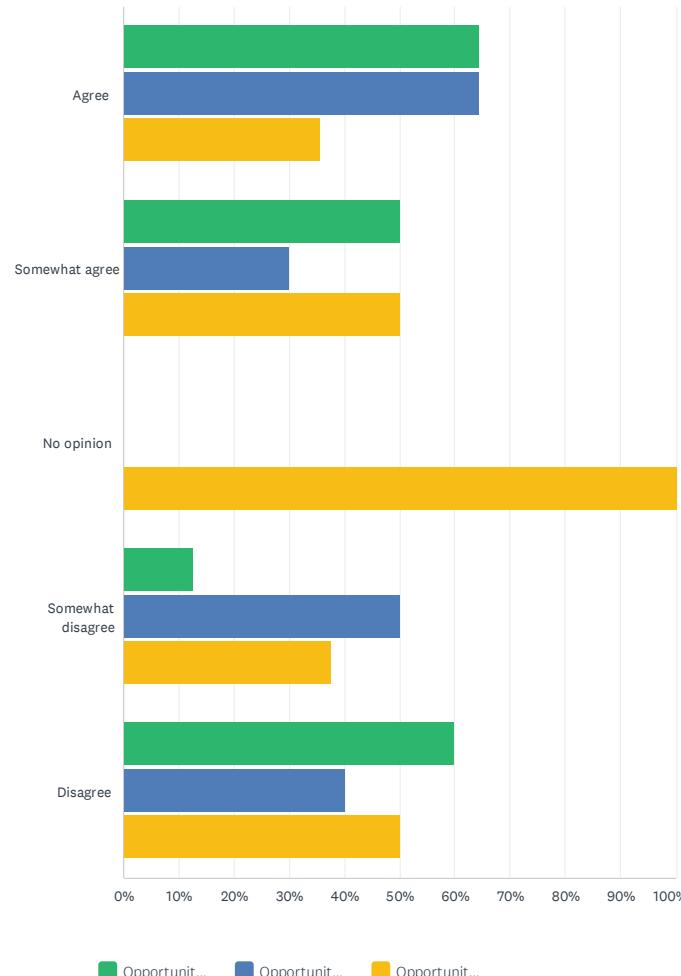
Answered: 24 Skipped: 11



	OPPORTUNITY A	OPPORTUNITY B	OPPORTUNITY C	TOTAL RESPONDENTS
Agree	42.11% (8)	47.37% (9)	73.68% (14)	19
Somewhat agree	33.33% (3)	77.78% (7)	33.33% (3)	9
No Opinion	75.00% (3)	0.00% (0)	25.00% (1)	4
Somewhat disagree	50.00% (1)	50.00% (1)	0.00% (0)	2
Disagree	100.00% (6)	33.33% (2)	33.33% (2)	6

Q2 What are your thoughts about the recommendations shown in the area above?

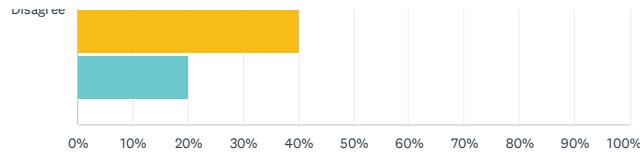
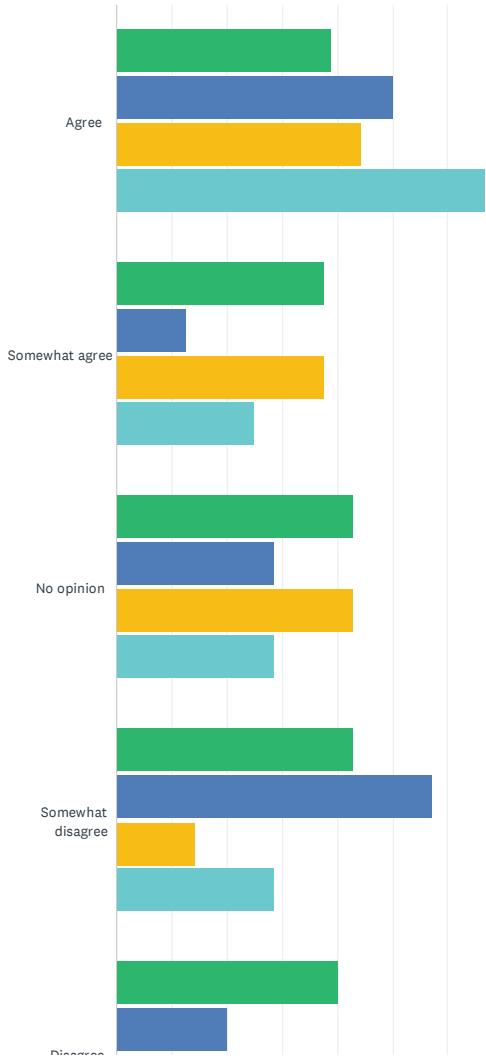
Answered: 22 Skipped: 13



	OPPORTUNITY D	OPPORTUNITY E	OPPORTUNITY F	TOTAL RESPONDENTS
Agree	64.29% 9	64.29% 9	35.71% 5	14
Somewhat agree	50.00% 5	30.00% 3	50.00% 5	10
No opinion	0.00% 0	0.00% 0	100.00% 1	1
Somewhat disagree	12.50% 1	50.00% 4	37.50% 3	8
Disagree	60.00% 6	40.00% 4	50.00% 5	10

Q3 What are your thoughts about the recommendations shown in the area above?

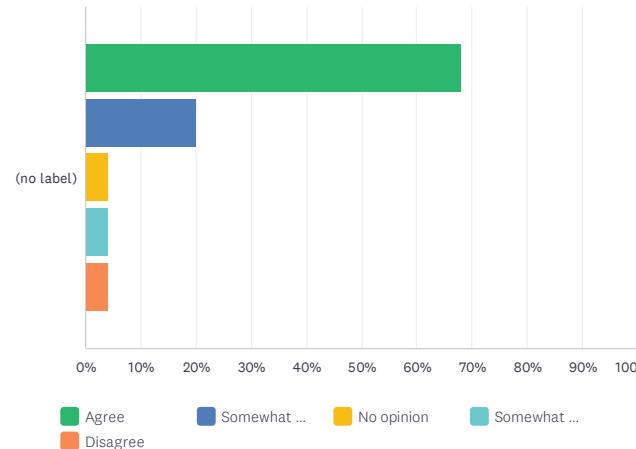
Answered: 21 Skipped: 14



	OPPORTUNITY G	OPPORTUNITY H	OPPORTUNITY I	OPPORTUNITY J	TOTAL RESPONDENTS
Agree	38.89% 7	50.00% 9	44.44% 8	66.67% 12	18
Somewhat agree	37.50% 3	12.50% 1	37.50% 3	25.00% 2	8
No opinion	42.86% 3	28.57% 2	42.86% 3	28.57% 2	7
Somewhat disagree	42.86% 3	57.14% 4	14.29% 1	28.57% 2	7
Disagree	40.00% 2	20.00% 1	40.00% 2	20.00% 1	5

Q4 What are your thoughts about the recommendations shown in the area above?

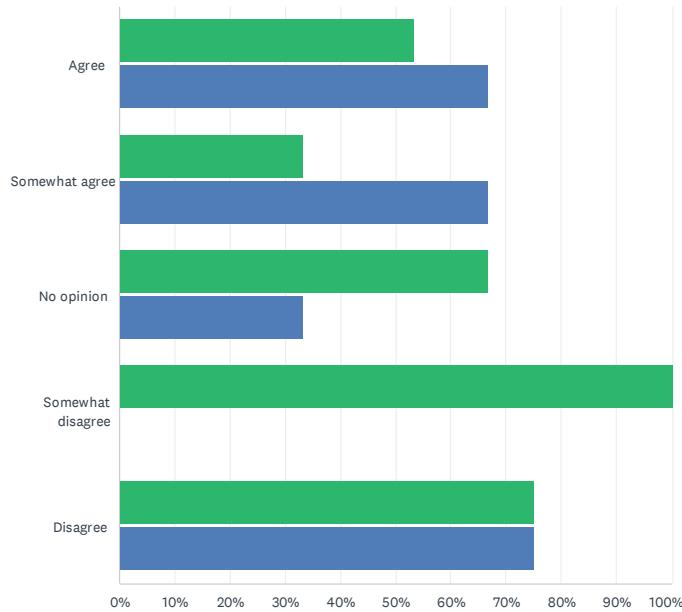
Answered: 25 Skipped: 10



	AGREE	SOMEWHAT AGREE	NO OPINION	SOMEWHAT DISAGREE	DISAGREE	TOTAL	WEIGHTED AVERAGE
(no label)	68.00% 17	20.00% 5	4.00% 1	4.00% 1	4.00% 1	25	0.24

Q5 What are your thoughts about the recommendations shown in the area above?

Answered: 23 Skipped: 12

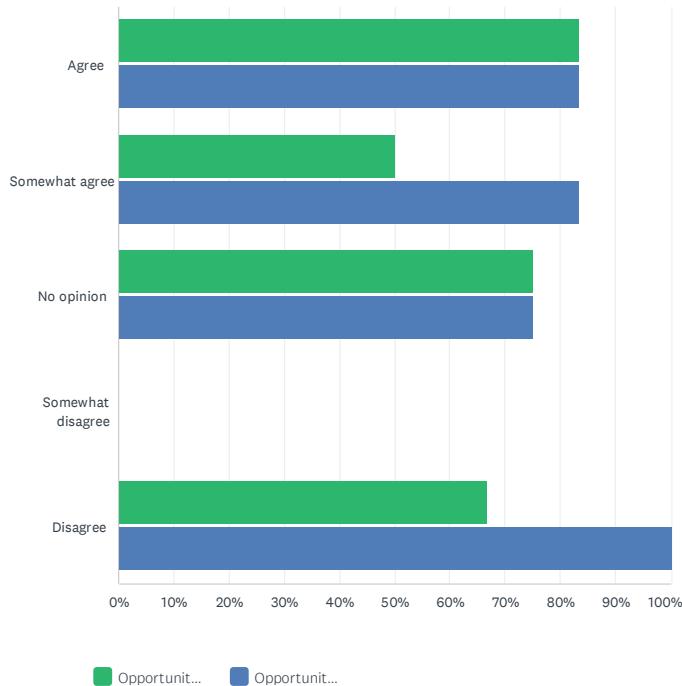


Shared Use... Greenway (...)

	SHARED USE PATH FOR BICYCLISTS & PEDESTRIANS (MAGENTA LINES)	GREENWAY (GREEN LINES)	TOTAL RESPONDENTS
Agree	53.33% 8	66.67% 10	15
Somewhat agree	33.33% 4	66.67% 8	12
No opinion	66.67% 2	33.33% 1	3
Somewhat disagree	100.00% 4	0.00% 0	4
Disagree	75.00% 3	75.00% 3	4

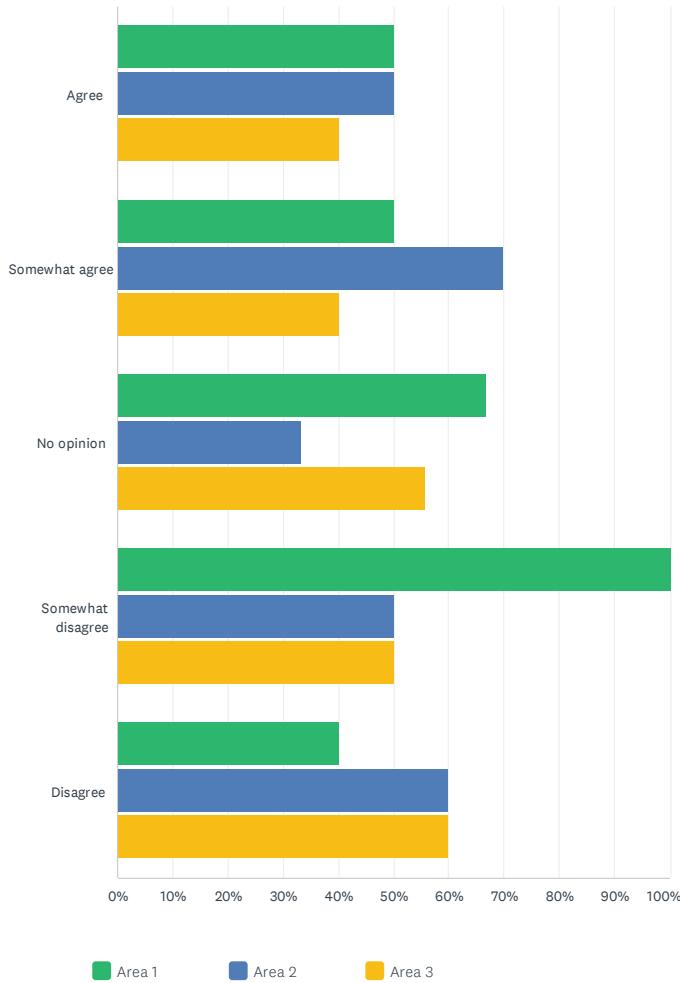
Q6 What are your thoughts about the recommendations shown in the area above?

Answered: 23 Skipped: 12



Q7 What are your thoughts about the recommendations shown in the area above?

Answered: 21 Skipped: 14



	AREA 1	AREA 2	AREA 3	TOTAL RESPONDENTS
Agree	50.00% 5	50.00% 5	40.00% 4	10
Somewhat agree	50.00% 5	70.00% 7	40.00% 4	10
No opinion	66.67% 6	33.33% 3	55.56% 5	9
Somewhat disagree	100.00% 2	50.00% 1	50.00% 1	2
Disagree	40.00% 2	60.00% 3	60.00% 3	5

Q8 Please provide any additional feedback you may have about the recommendations below.

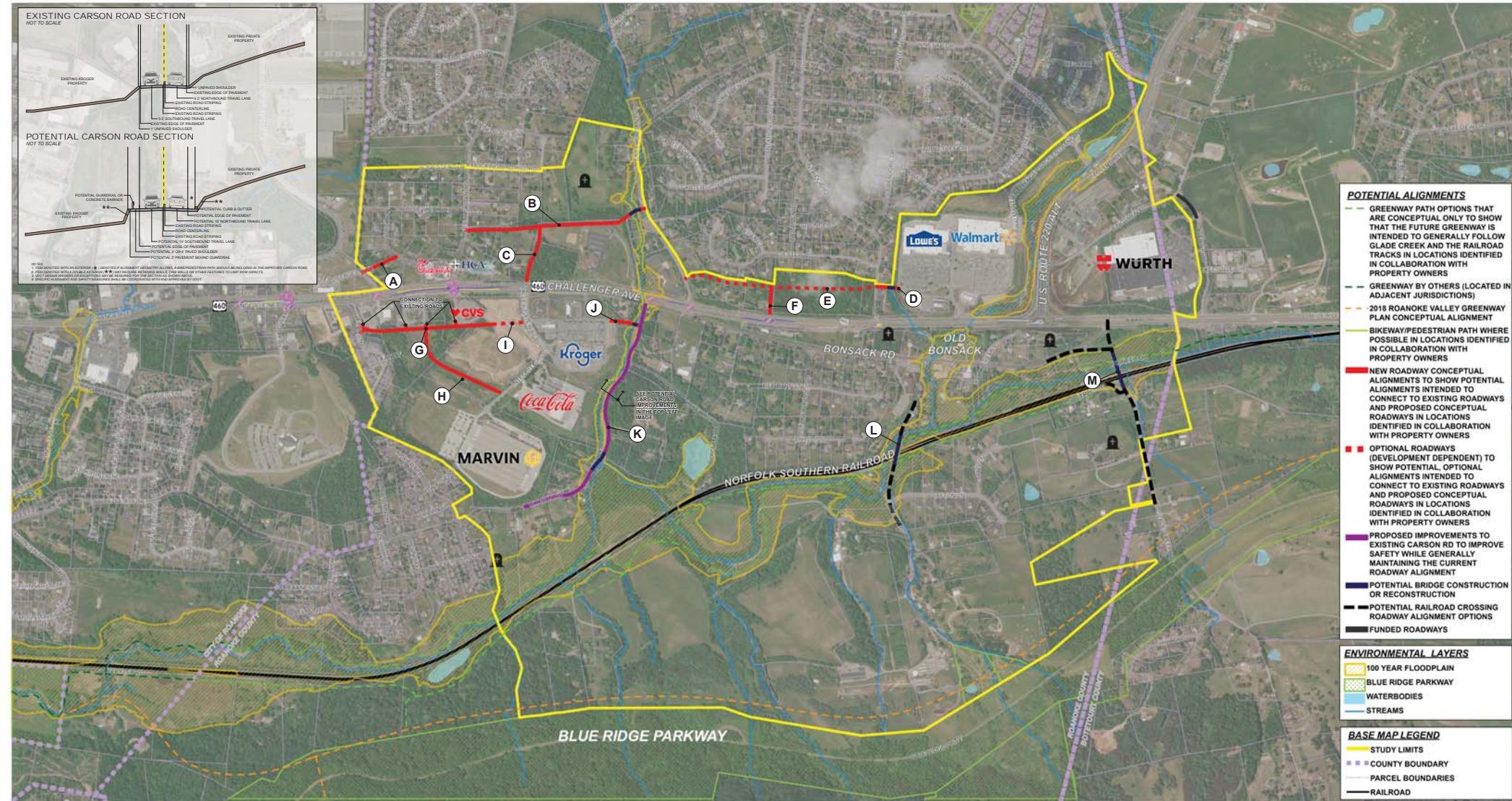
Answered: 11 Skipped: 24

#	RESPONSES	DATE
1	In terms of offloading traffic from US460, the study should consider areas beyond the defined study area. For example, connecting Crumpacker Drive (in the Samuels Gate subdivision) to Cregin Drive (which connects to East Ruritan). This would permit travel between West Ruritan and Cloverdale Road without ever having to access USA460, including going to Lowe's and Walmart. The land between the two existing roads is currently undeveloped, so it should be a reasonable project.	10/6/2022 6:14 PM
2	Would love to see alternative connections for the neighborhoods north of 460 to commercial areas and avoid 460 more. Greenway would be an excellent addition to the community.	10/6/2022 12:36 PM
3	The plans MUST take into account, and accommodate the recently announced plans for: 1) townhomes and apartments on Huntridge Rd, and 2) the new home community planned for the Murray Farm property with an entrance likely at Cortland Rd/Alt. US-220. Both will significantly increase traffic – cut-through and destination traffic on Huntridge (#1), and cut-through traffic on Cortland, and destination traffic on Alt. US-220 (#2). In addition to the proposed plans here, the planning for US-460/Alt. US-220 intersection needs to take this into account. All need to be coordinated with Botetourt County as well.	10/4/2022 1:43 PM
4	I live in the Little Tree Acres neighborhood. I have warmed up to the idea of a greenway along the east side of the railroad tracks, essentially following the creek. However, I would want to be sure it could be constructed in a way that discouraged people from walking into the yards along Phyllis Road. Be sure the greenway stays well away from the boundary of the Little Tree Acres neighborhood and always on the far side of the railroad track. Regarding the magenta line down Bonsack Road... bicyclists already use Bonsack Road and it is a great road for that, but I hesitate to encourage a lot of pedestrian and bicycle traffic coming that close to our peaceful and quiet neighborhood by connecting Bonsack Road itself to a greenway. Regarding the land use changes... my concern is that areas 1 and 3 encroach too close to existing homes and area 2 includes a change to the wedge shaped piece of the land along Bonsack Road going from yellow to red which also threatens the character of the Little Tree Acres neighborhood. Finally, I want to thank you for removing the roads from the plan that were originally proposed within the Little Tree Acres neighborhood. Thank you for taking our feedback seriously.	10/3/2022 11:22 PM
5	This survey does not allow me to go back to look at the proposals but I particularly like the one that would connect the new fire station to Eastern Roanoke County by a second road and not just by US 460 (I think it went to the Kroger Stoplight). I would like the fire station to be able to avoid the light at Chick-fil-A at certain times of the day. I particularly do not like the proposals that add more traffic to West Ruritan Road; I think the traffic light at Chick-fil-A is enough burden for those of us who live in the developments up Ruritan Road.	10/3/2022 5:04 PM
6	I live on Apricot Trail (off Carson). My biggest concerns are having more traffic/speeding along Carson as well as more pedestrians in the area. I do not want more crime to come into our neighborhood because the county has made it more accessible to those along 460. (Particularly the people hanging out at the Sheetz and abandoned hotels/motels up near Williamson Road and sitting in the medians panhandling). With the new Sheetz location being so close...it is probable these types of people will be migrating closer to my neighborhood and within walking distance. We also would love to see more sit-down restaurants in Bonsack. Thank you!!	10/3/2022 4:37 PM
7	connecting neighborhoods a complete waste of money and land. This area needs additional lanes to resolve the 460 issues. Lanes with appropriate speed limits and traffic light timing is the answer.	9/30/2022 4:21 PM
8	Please make sure measures are taken to prohibit tracker trailers on Carson Road. Also, the use of speed humps and other "slow street" features could help to maintain the neighborhood	9/30/2022 9:01 AM

feel of this area and keep it from becoming a "fast cut through." The street must be improved, but it needs to be designed in a way that discourages speeding.

9	I think the changes will help defer traffic from 460 but it is a stop gap measure compared to what is truly needed to improve 460 along this area.	9/29/2022 5:32 PM
10	make the survey capable of a common response for more than one option in a question. If I agree with two options, the survey only lets me choose one for "agree"	9/28/2022 8:38 AM
11	The proposed left-hand turn lanes from Cloverdale onto 460 is going to be confusing for most motorists and probably cause increased motor vehicle accidents.	9/23/2022 11:09 AM





U.S. ROUTE 460 LAND USE AND CONNECTIVITY STUDY POTENTIAL TRANSPORTATION IMPROVEMENTS

ROANOKE COUNTY, VA - MARCH 2023



Q1 Please share your thoughts about the draft U.S. Route 460 Land Use and Connectivity Study:

Answered: 7 Skipped: 0

#	RESPONSES	DATE
1	<p>I will begin with expressing my support for planning that provides for connectivity of residences to places of employment and retail services - minimizing traffic on major highways. Unfortunately, I believe that the proposed "connecting" roadways will have very little impact on reducing 460 traffic, are impractical in several cases and will in fact hinder the development of undeveloped or under developed properties. The concept is valid - it just a bit too late for it to be affective. Some comments about the proposed roadways ("lines on a map" was the way it was explained to me). Roads A & B would likely be the most logical and affective - but even at that - the impact on the existing residential neighborhood for this connection weighted with the relatively few people that would benefit from it, hardly seems worthwhile. Road D, connecting Huntridge and Lowes is thru developed property, has a significant grade difference and crosses a jurisdictional streambed. How is this paid for? The residents that would benefit from this already have an available access point to Wal-Mart and Lowes off of Crumpacker. Road E would have a negative impact on the development of this vacant parcel. Some type of connection (private) might be valid - but with the site being shallow - a public street would have a significant impact on how this tract could be used. Road J Carson Road to Kroger - it is just not practical in any way - very steep, creek crossing and again - how and by who is this funded? Road H does not seem to serve any upside to connectivity that would mitigate traffic on 460. I understand there are concerns over traffic from the two industrial uses that have the same shift changes - why not get one of them to change the shift 30 minutes - seems simple enough. I guess with Road G a handful of residents could see some benefit. Road H is a hindrance to the marketing and ultimate use of vacant land. Road I would essentially destroy the use of the tract it passes thru - it is located in the only buildable part of this tract. Suggest that the Lidl plans be reviewed. In summary, the plan implies a great deal of expense with very little impact on 460 traffic. There is no funding, no schedule and no measurable (positive) impact on the concern. I asked staff if the consultant had provided any statistics about traffic reduction and was told no. Not sure how you can adopt a plan with so little assurance of implementation or affect. Thank you</p>	3/14/2023 10:00 AM
2	<p>Challenger ave has become a 460 bypass around walmart and lowes. Drivers speed excessively to get ahead of traffic. There are people that run for exercise, people walk with or without their dogs, and some residents back into the road from their driveway. We have found empty syringes and cars are frequently meeting and passing things before speeding away. I have lived on this road 35 years and pay considerable taxes to live on a speedway in a drug zone. Thanks.</p>	3/10/2023 5:36 PM
3	<p>Sending CVS customers to an already congested u-turn is asking for more wrecks not fewer. That u-turn is already congested. I can't tell what the plans are for the traffic light at West Ruritan as it is a very confusing diagram. Making a new road from West Ruritan to East Ruritan is simply causing more traffic noise to the community who actually have to deal with it and going to make the intersection at East Ruritan more dangerous. It seems to me you are just shuffling things around hoping to lower wrecks. It is overthinking everything, at best. I have lived in this area many years and have gotten hit twice, both at Blue Hills Drive intersection. Routing more traffic to that intersection is just compounding the problems again...Also, adding yet another road from the ER and WR "new" road down to Challenger avenue at the Kroger intersection is adding more problems to that intersection as well. People in this area, all the area, are tired of going through traffic delays for road construction, all because the Board of Supervisors are more concerned with revenue , rather than people who live here. It is true because all of these problems that you are spending millions to fix directly stem from the revenue they insisted on making for businesses they ok'd to be here.</p>	3/5/2023 11:19 PM
4	<p>Living in the old Bonsack area I have one area of concern that doesn't appear to be addressed in the projected plans. Since you are eliminating the use of being able to go Westbound on the 460 from the west end of Bonsack Road this only leaves all the residents in old Bonsack to be able to cross the 460 to go westbound on 460 at the eastern end of Bonsack Road. This is a</p>	2/24/2023 11:33 AM

terrible crossing currently as it is. The westbound traffic on 460 at this crossing currently backs up past the Bonsack crossing because of the light at Cloverdale Road. There is so much traffic that is always traveling westbound on 460 it is nearly impossible to get across the 460 from Bonsack Road at this location. The only break from the westbound traffic on 460 is when the light further down on 460 at Laymantown Road turns red. This will create a small break allowing the 1 or possibly 2 cars to get across. All residents in the old Bonsack area will now only have 1 access point to get on the 460 westbound. This will become a nightmare unless something is done to somehow give us a chance to get across the eastbound 460 traffic and then somehow merge into the westbound 460 traffic as this will now become the only way for us to get onto westbound 460.

5	I love the idea of adding the greenway along Glade Creek. I think a very important aspect of adding the greenway is ensuring that people from all over the area can access it from their home by walking or biking so that car trips can be reduced. Ideally, bike and pedestrian routes to the greenway should be planned in a way that a parent would feel comfortable taking their 10 year old on a ride from their house. A big challenge is getting across 460. The pedestrian accommodations in the Thru Cut configurations look extremely scary. To get across 460 you have to cross a dangerous right turn slip lane, cross 3 lanes of traffic, stand in a small refuge island in the middle of the intersection, cross 3 more lanes of traffic, then go across another slip lane. I can't imagine taking a child across that or even going myself. This kind of infrastructure does not encourage bike and pedestrian activity and there are much better alternatives, such as a bike and pedestrian only lights that go across the new R-Cut intersections. Also, VDOT's YouTube video "VDOT's Innovative Intersections: Thru Cut" has a much less chaotic pedestrian crossing configuration there. I would love for the possible greenway to be used to its maximum potential, but if most people can only access it by car, its usefulness in reducing car trips will be limited. I like the look of the bikeway/pedestrian path in purple on page 49 but there needs to be more ways to safely get across 460 so that people who live in the neighborhoods off E/W Ruritan and Huntridge can access the greenway. Getting this area to be safely and conveniently traversable on foot or by bike is a big challenge but one that I think is worthwhile.	2/20/2023 6:28 AM
6	West Ruritan intersection. There will be no safe way to go from West Ruritan to CVS or back without making a U-turn with is the most unsafe act in an intersection, or drive to Kroger parking lot and turn around. Second is there will be thousands of dollars wasted on crosswalks and pedestals in an intersection that has no foot traffic. I imagine the foot traffic that was seen during initial studies were actually just the contractors working on the ill-placed emergency room. The crossover at Countey Corner. The only thing this barrier will do is cause people to drive the wrong direction on 460 to get around it so they don't have to go to Walmart and try to make a dangerous U-turn there. Drivers already do this and won't stop. Your spending a lot of tax payers money to fix people bad driving habits and none of it will change the way they drive. Than your going to bring those horrible drivers closer into the neighborhoods. Please save the taxpayers money and use it for something useful instead of taking peoples advise from up north that only see this area in a brief study and fix issues like Hollins road intersection and leave the biggest issue still there.	2/15/2023 6:04 PM
7	Last page of the study: I do not agree with the ranking of these projects on this page. I feel that the other connector roads at Valley Gateway, Blue Hills/Ruritan etc should be given higher priority over the railroad crossings that fewer people will use. I have lived in this area since 2001 and have been in those railroad crossing areas maybe twice if that. The other road improvements will be more used and improve safety along 460 more. The worst part of traveling 460 area is the Valley Gateway and Chick Fil A intersections. I have seen so many terrible accidents at those lights. I hold my breath everytime I have to travel through those intersections which is several times per day. Thanks.	2/15/2023 8:33 AM

Megan Cronise - [EXTERNAL] - U.S. Route 460 Land Use and Connectivity Study

From: "Pam H. Feuer" <pfeuer@sfcs.com>
To: "mcronise@roanokecountyva.gov" <mcronise@roanokecountyva.gov>
Date: 3/15/2023 10:02 AM
Subject: [EXTERNAL] - U.S. Route 460 Land Use and Connectivity Study

Ms. Cronise,

I live on Bonsack Road and I have concerns about making the west end of Bonsack Road left turn only. As one resident already commented, it is very difficult to make a left turn onto the Challenger Avenue from the east end during peak travel times due to its proximity to the traffic light. This means I will have to turn right, get across the left lane of traffic to the new turn lane and then make a U-turn. I do not see how this makes traffic safer. In my opinion, it is less safe. I also wonder what the school busses are going to do? They currently enter the east end of Bonsack Road and exit the west end and then turn on Carson Road. Has anyone talked to Roanoke County Schools about how they will navigate the busses?

Pamela H. Feuer, [AIA](#), [CCCA](#), [CCS](#), [LEED AP BD+C](#) | Project Manager / Senior Associate | [SFCS](#)
Direct: [540.682.8029](tel:540.682.8029) | Office: [540.344.6664](tel:540.344.6664) | Cell: [540.525.7395](tel:540.525.7395)

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AT A REGULAR MEETING OF THE PLANNING COMMISSION OF ROANOKE COUNTY, VIRGINIA, HELD AT THE ROANOKE COUNTY ADMINISTRATION CENTER, TUESDAY, MARCH 7, 2023

RESOLUTION RECOMMENDING ADOPTION OF AN AMENDMENT TO THE COMPREHENSIVE PLAN FOR ROANOKE COUNTY, VIRGINIA, TO INCORPORATE THE U.S. ROUTE 460 LAND USE AND CONNECTIVITY STUDY INTO THE COMPREHENSIVE PLAN FOR ROANOKE COUNTY, VIRGINIA

WHEREAS, § 15.2-2223 of the Code of Virginia requires that the Planning Commission of every jurisdiction prepare and recommend a comprehensive plan for the physical development of their jurisdiction; and

WHEREAS, § 15.2-2230 of the Code of Virginia requires that the Planning Commission shall review the comprehensive plan at least once every five years to determine whether it is advisable to amend the plan; and

WHEREAS, it is proposed that the Comprehensive Plan be amended to incorporate the U.S. Route 460 Land Use and Connectivity Study into the Roanoke County Comprehensive Plan; and

WHEREAS, the Planning Commission held a public hearing on the proposed amendment to the Comprehensive Plan on March 7, 2023, after posting, advertisement and notices as required by § 15.2-2225 and § 15.2-2204 of the Code of Virginia.

NOW THEREFORE, BE IT RESOLVED, by the Planning Commission of Roanoke County, Virginia, as follows:

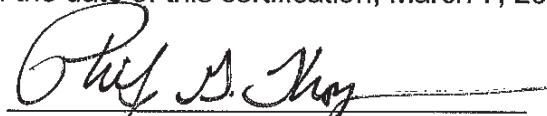
- 1) The Commission recommends that the Board of Supervisors amend the Comprehensive Plan to incorporate the U.S. Route 460 Land Use and Connectivity Study.

- 2) Pursuant to § 15.2-2225 of the Code of Virginia, the Secretary to the Planning Commission shall certify this Resolution to the Board of Supervisors by providing a copy of it to the Clerk to the Board.
- 3) Pursuant to § 15.2-2225 of the Code of Virginia, the Secretary to the Planning Commission shall also post this Resolution on the Commission's website.

Commissioners absent	McMurray, Woltz
Votes in favor	Bower, James, Henderson
Votes against	None
Abstentions	None

CERTIFICATION

The undersigned secretary of the Roanoke County Planning Commission does hereby certify that the foregoing is a true, complete and correct Resolution adopted by a vote of a majority of the Roanoke County Planning Commissioners, present at a regular meeting of the Commission held on March 7, 2023, at which a quorum was present and acting throughout, and that the same has not been amended or rescinded and is in full force and effect as of the date of this certification, March 7, 2023.



Philip D. Thompson
Philip Thompson, Secretary,
Roanoke County Planning Commission

AT A REGULAR MEETING OF THE BOARD OF SUPERVISORS OF ROANOKE COUNTY, VIRGINIA, HELD AT THE ROANOKE COUNTY ADMINISTRATION CENTER ON TUESDAY, MARCH 28, 2023

RESOLUTION ADOPTING AN AMENDMENT TO THE COMPREHENSIVE PLAN FOR ROANOKE COUNTY, VIRGINIA BY INCORPORATING THE U.S. ROUTE 460 LAND USE AND CONNECTIVITY STUDY INTO THE COMPREHENSIVE PLAN FOR ROANOKE COUNTY, VIRGINIA

WHEREAS, Virginia Code § 15.2-2223 requires that every jurisdiction adopt a comprehensive plan for the physical development of that jurisdiction; and

WHEREAS, Virginia Code § 15.2-2230 requires that the Planning Commission review the comprehensive plan at least once every five years to determine whether it is advisable to amend the plan; and

WHEREAS, it is proposed that the Comprehensive Plan be amended to incorporate the U.S. Route 460 Land Use and Connectivity Study into the Comprehensive Plan for Roanoke County, Virginia; and

WHEREAS, three community meetings were held on January 13, 2022, May 18, 2022, and September 29, 2022 on the U.S. Route 460 Land Use and Connectivity Study, as well a 29-day public comment period on the same ending on March 17, 2023; and

WHEREAS, the Planning Commission held a public hearing on the proposed amendment to the Comprehensive Plan on March 7, 2023, after providing notice as required by Virginia Code § 15.2-2225; and

WHEREAS, the Planning Commission recommends that the Board of Supervisors amend the Comprehensive Plan to incorporate the U.S. Route 460 Land

Use and Connectivity Study into the Comprehensive Plan for Roanoke County, Virginia; and

WHEREAS, the Board held a public hearing on the amendment to the Comprehensive Plan on March 28, 2023.

NOW THEREFORE, BE IT RESOLVED, by the Board of Supervisors of Roanoke County, Virginia, as follows:

- 1) The Comprehensive Plan is hereby amended by incorporating the U.S. Route 460 Land Use and Connectivity Study into the Comprehensive Plan for Roanoke County, Virginia.
- 2) This Resolution is effective upon its adoption.