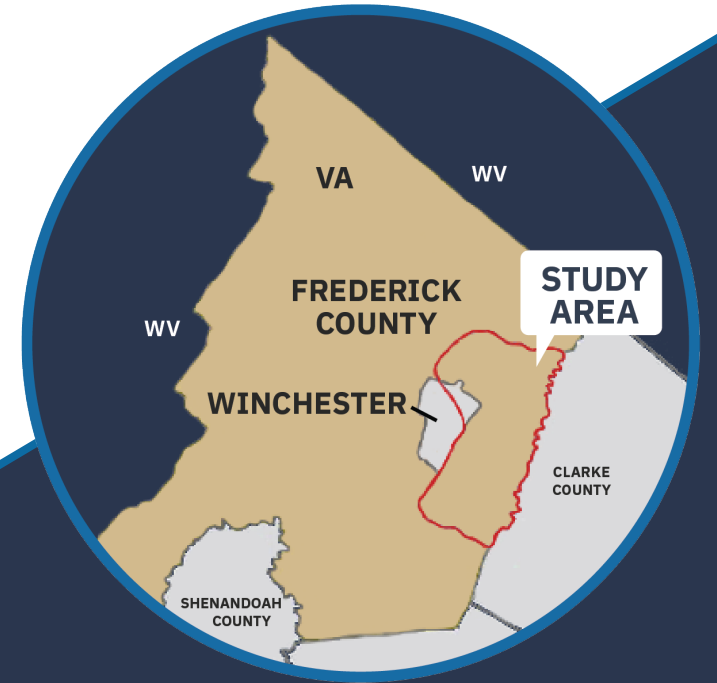


Eastern Frederick County Transportation Study Project Update

Fall Transportation Forum
November 16, 2023



**McCORMICK
TAYLOR**



Current Status & Next Steps

Current Status: 

CURRENT ACTIVITIES

- The 2050 no-build the traffic analysis has been completed
- Created a webmap to sharing and inventory information. Updated the webmap to include the most recent demographical data and 2050 no-build data.

FUTURE ACTIVITIES

- Gathering public comment on presented transportation needs
- Begin reviewing projects to address those needs

ISSUES

- Target of Spring 2024 to complete preliminary findings for benefit of SmartScale pre-application.

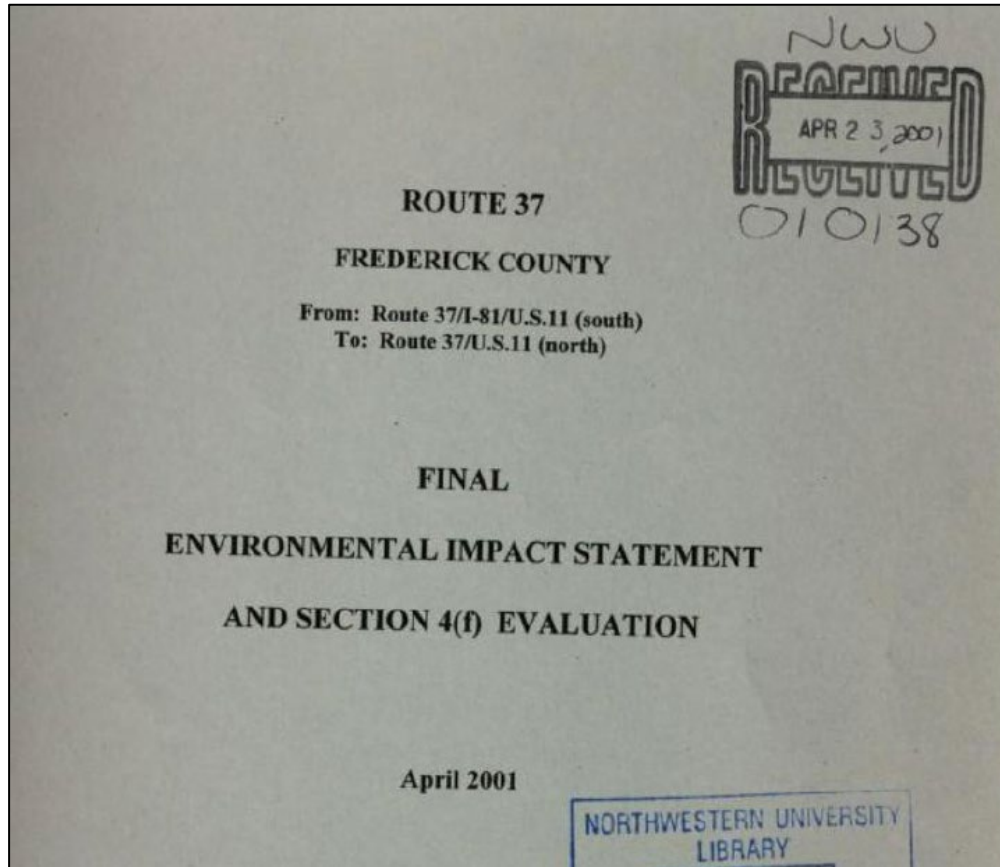
PUBLIC INVOLVEMENT

- First public meeting is participation in this Transportation Forum to share PEP, results of community context surveys (or fact sheet), direct citizens to the website, findings from 2050 no-build traffic analysis
- Meeting in Spring 2024 to review proposed projects to address needs

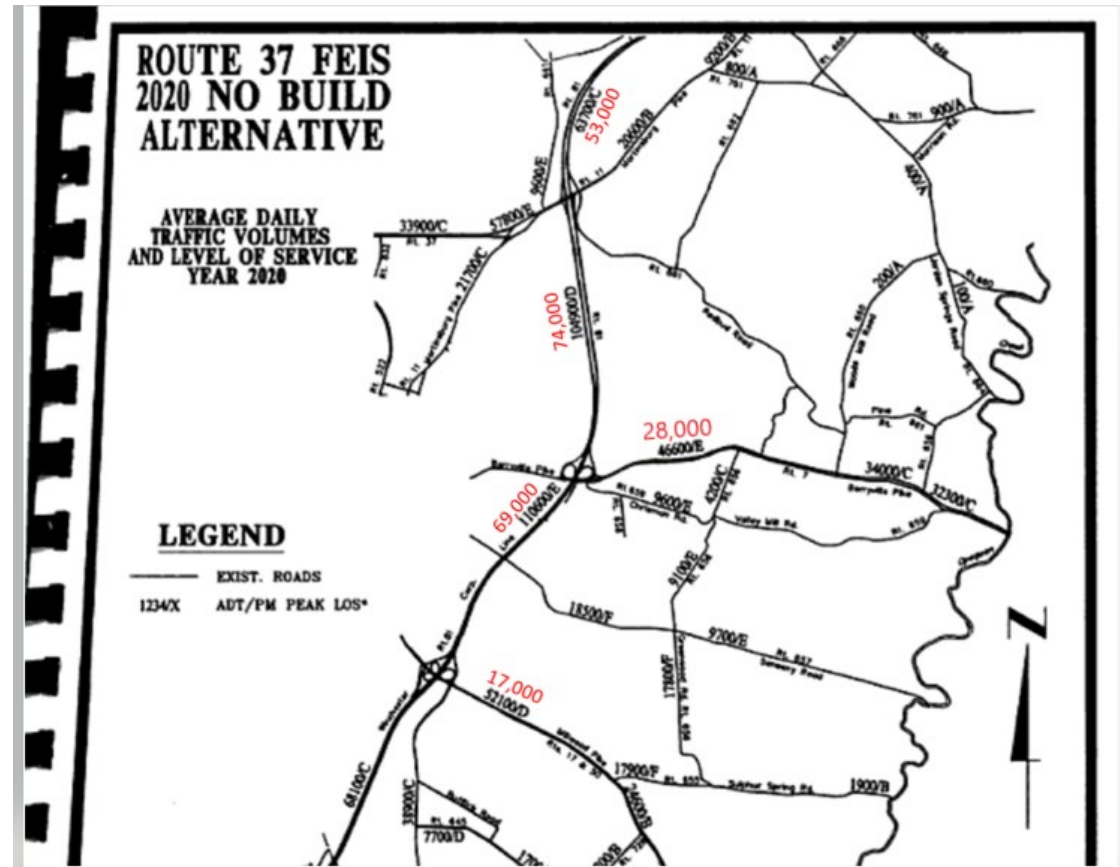


History and Initial Findings

Final Environmental Impact Statement and Section 4(f) Evaluation



Current traffic volumes vs. 2020 No-Build traffic volumes in 2001 FEIS



History and Initial Findings

Legend

SE Final 2050



Projected 2015



Loaded 2040BLink



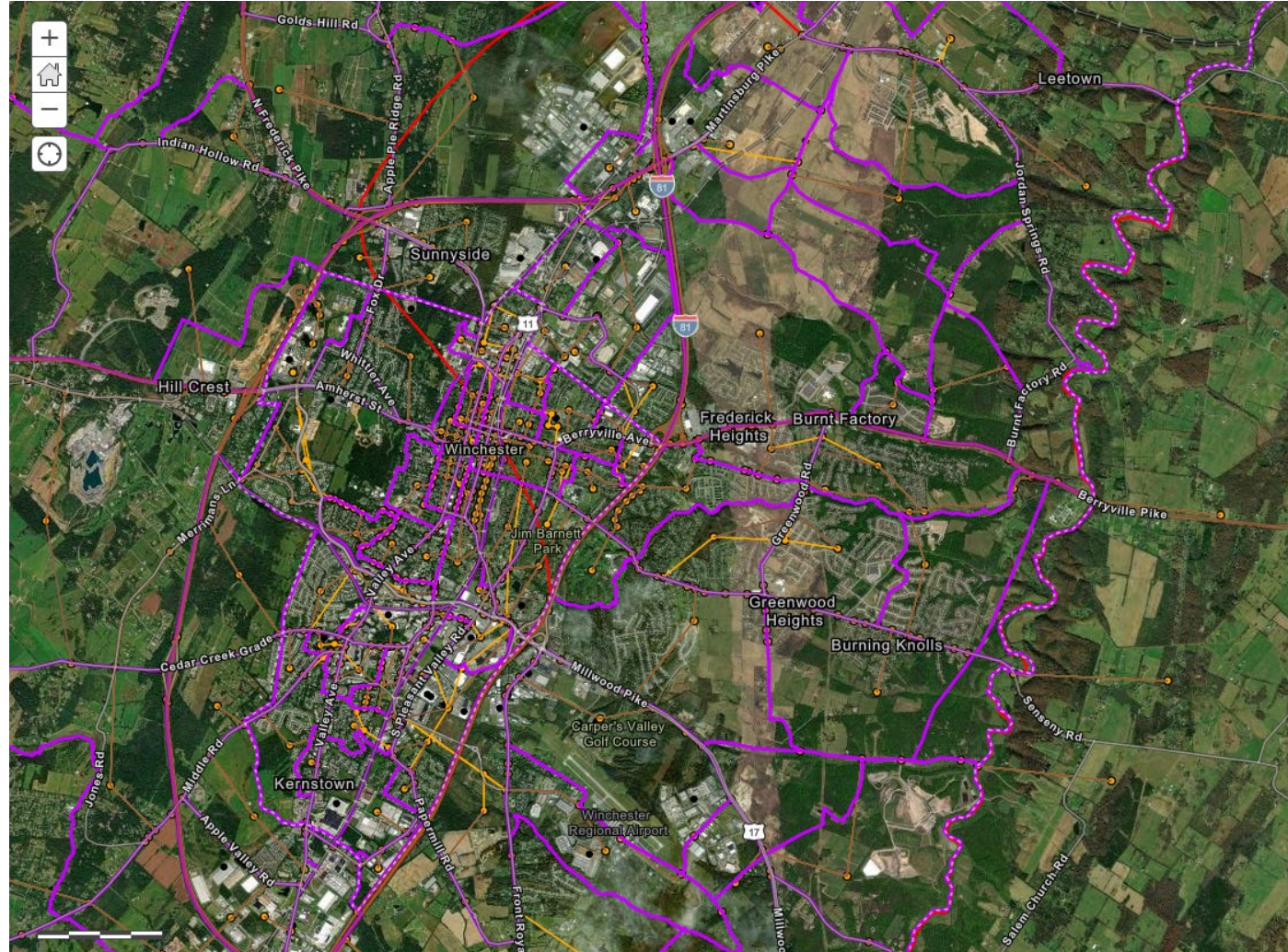
Loaded 2040B Node



Study Area



Major Employers 2023



Initial Findings

[About](#) [Content](#) [Legend](#)

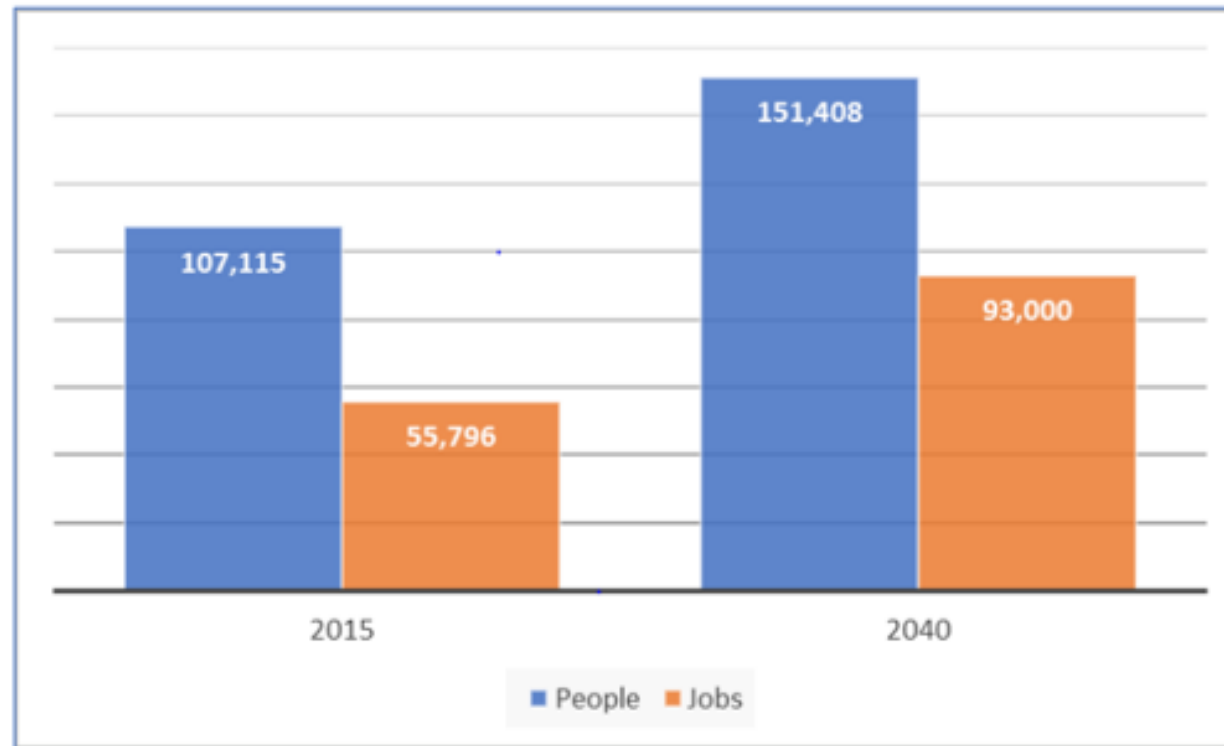
Contents

- WinFred TAZ
- SE Final 2050
- Projected 2015
- Loaded 2040BLink
- Loaded 2040B Node
- Projected Projects
- Study Area
- Major Employers 2023
- Frederick County Race (2021 ACS)
- Frederick County Poverty (2021 ACS)
- Aerial2021
- Imagery Hybrid



Initial Findings

Combined Projected Growth for City of Winchester and Frederick County



Source: Winchester/Frederick County Metropolitan Planning Organization, *Transportation Plan 2040*



Initial Findings: Stakeholder Survey

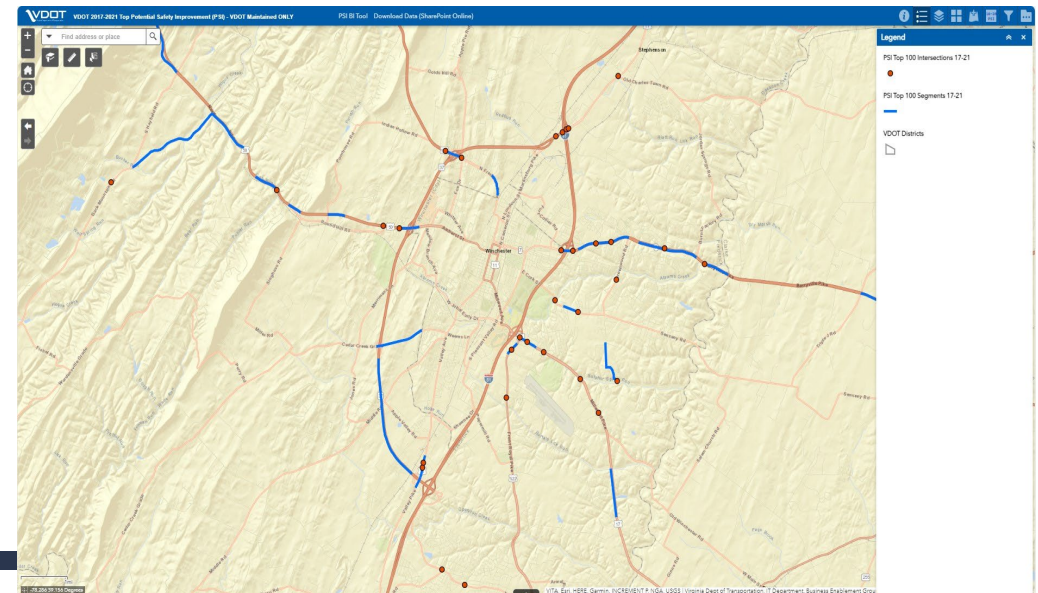
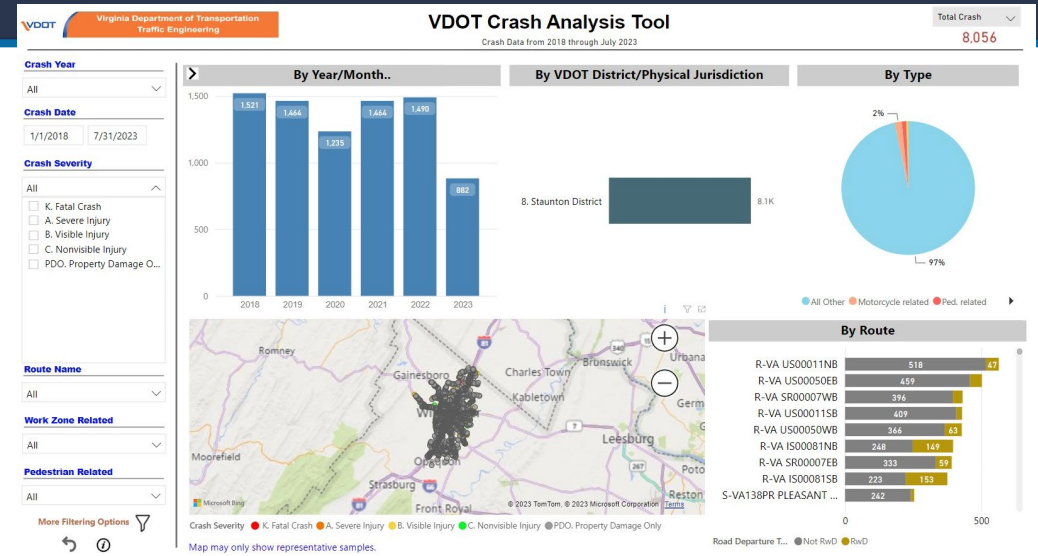


- Frederick County is becoming a bedroom community of Washington, D.C. As a result, morning and evening rush hour has worsened, despite an increase in remote work since the COVID-19 pandemic.
- Alleviating traffic congestion and reducing crashes on I-81 is key to improving mobility in Frederick County.
- Infrastructure capacities at present are not enough for the scale and volume of planned developments.
- Alternative forms of transportation are valued and need to be improved and expanded: walking, biking, public transit.



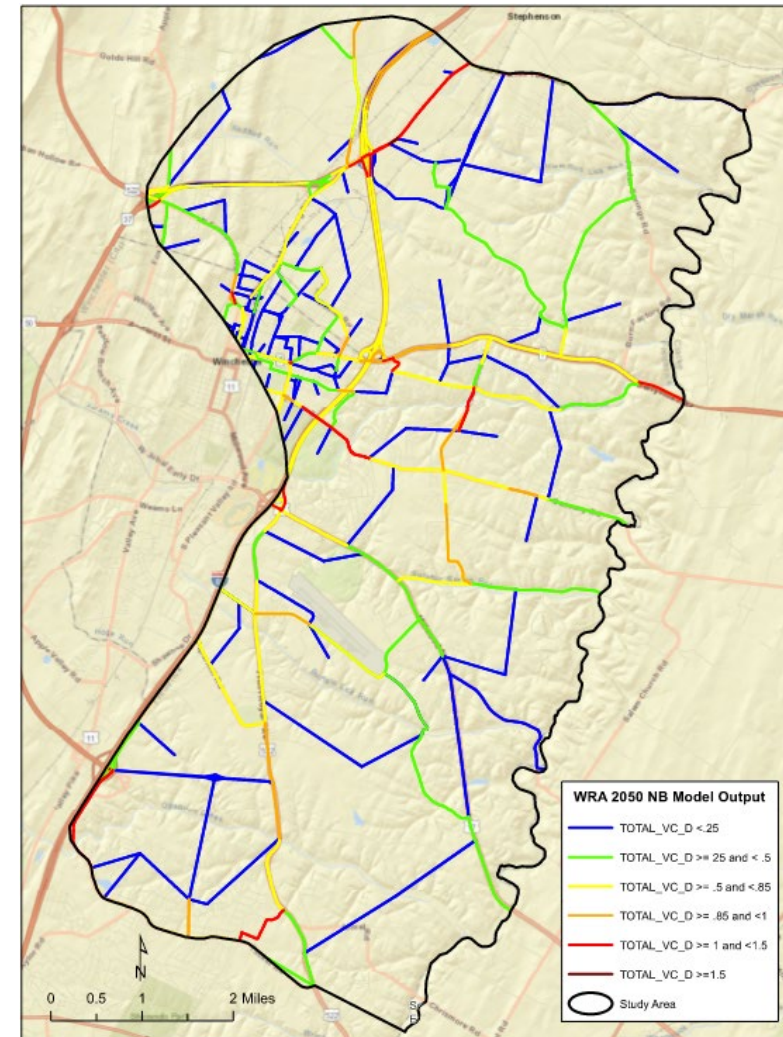
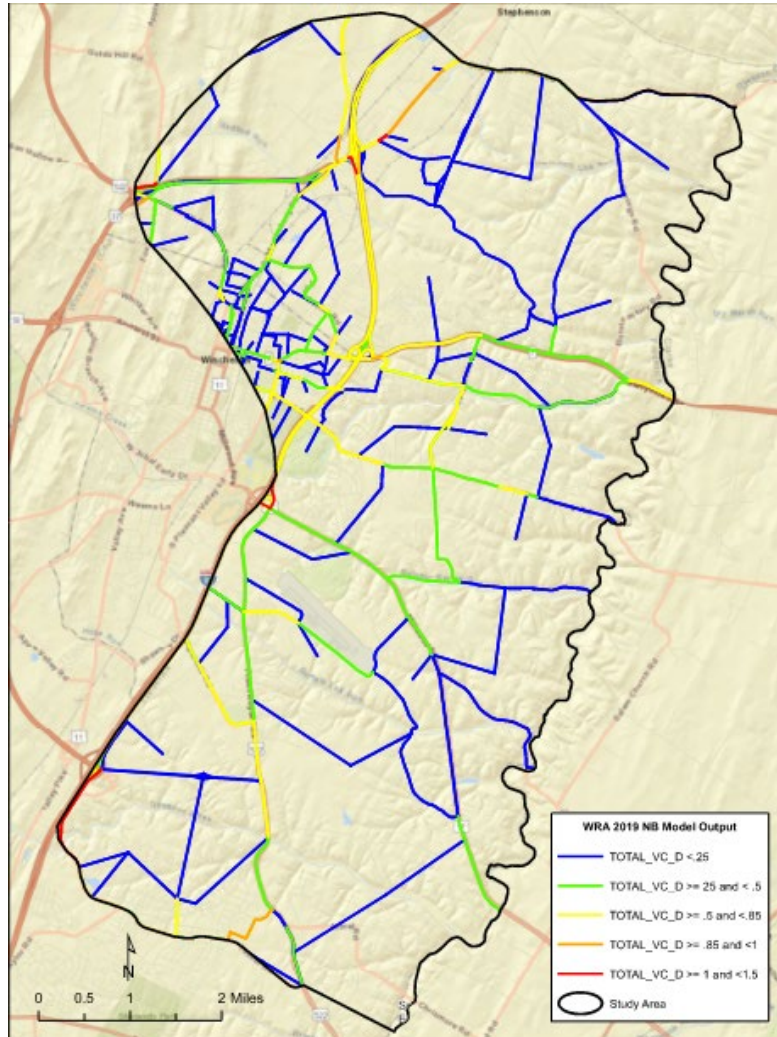
Initial Findings: Safety

- The VA 7 and US 11 corridors have two of the more prominent crash histories, including significant numbers of fatal and injury crashes.
- Roughly 500 non-interstate truck-related crashes over the last five years, with 40% along VA 7 and US 11.
- Eastern Frederick County includes 24 intersections in VDOT's 2017-2021 Top Potential Safety Improvement (PSI) list.



Volume to Capacity Ratio - 2019 vs 2050

No Build Analysis



Draft Purpose Statement

The purpose of this study is to develop and evaluate a range of alternatives to improve mobility and safety for all road users, reduce congestion, and enhance system continuity while meeting the needs of interstate, regional, and local traffic passing through and moving within the study area, including the evaluation of the proposed Route 37 bypass.



Draft Needs Statements – Bicycle & Pedestrian

- As indicated in the 2014 Bicycle and Pedestrian Plan Update, the existing bicycle network lacks infrastructure and 62% of roadways have Level of Service (LOS) D (adequate for advanced riders) or worse. The pedestrian results showed that 60% of the network was either deemed adequate or adequate, but not likely used for choice users. With land development since 2014, it is likely that bicycle and pedestrian needs have only increased since this time and linkages are desired to regional parks, schools, and commercial development.



Draft Needs Statements - Congestion

- Virginia State Route 7 between the Frederick/Clarke County line and the City of Winchester is the major link between Frederick County and destinations in Northern Virginia. Volumes from the STARS study in 2017 indicate that the ADT on this corridor is projected to reach 40,800 vehicles per day (vpd) by 2047. There is a current SMART Scale project aimed at improving safety and traffic flow on Route 7 between Route 815/Millbrook Drive/Blossom Drive and Route 656/First Woods Drive/Greenwood Drive; however, additional segments have been identified in the PSI.
- The intersection of I-81 Exit 317 and Route 11 is the most congested intersection in the Staunton District and is currently being redesigned as a diverging diamond interchange. Additionally, improved connectivity is needed between Route 7 and Route 11 to alleviate congestion.
- Development in the area near the airport along both the Route 50 and Route 522 corridors has the potential to create congestion issues in the future, both at Exit 313 and at intersections along both corridors and the intersection with Crossover Boulevard. This important connection has been identified in the 2035 Frederick County Comprehensive Plan and will offer improved access to the Virginia Inland Port.
- Large scale residential land development on the southern end of the study area is utilizing Warrior Drive and Tasker Road to access I-81 and Route 37. Additional interstate or state route connectivity from Warrior Drive is desired to continue residential development in this area and relieve congestion on Tasker Road.



Draft Needs Statements - Safety

- Since 2017, there have been 206 reportable crashes in the 3.76-mile stretch of roadway on Route 7 between the City of Winchester and the Frederick/Clarke County line. The 1.28-mile segment between Greenwood Road and Valley Mill Road has been identified as the #7 top Potential Safety Improvement (PSI) priority by VDOT. A SMART Scale project is currently in the design phase to add capacity and reduce conflict points to a 0.52-mile segment of roadway in this crash cluster area, however this project only addresses a portion of the study area.
- The VA 7 and US 11 corridors have two of the more prominent crash histories, including significant numbers of fatal and injury crashes.
 - ADT on Route 7 EB: 14,000 vpd; Route 7 WB: 14,000 vpd; Total Crashes = 735; Fatal/Injury (FI) Crashes = 176
 - ADT on Route 11 NB: 14,000 vpd; Route 11 SB: 14,000 vpd; Total Crashes = 347; FI = 71
- Eastern Frederick County includes 24 intersections and 15 segments in VDOT's 2017-2021 Top 100 Potential Safety Improvement (PSI) list.
 - Six of the 15 segments are located on Route 7:
 - Begin MP 1.75, end MP 2.00: Total Crashes = 23; Fatal/Injury (FI) Crashes = 8 (VDOT District Rank 26)
 - Begin MP 2.10, end MP 2.26: Total Crashes = 52; FI = 10 (VDOT District Rank 2)
 - Begin MP 2.26, end MP 2.51: Total Crashes = 16; FI = 3 (VDOT District Rank 60)
 - Begin MP 2.51, end MP 2.82: Total Crashes = 21; FI = 6 (VDOT District Rank 13)
 - Begin MP 2.82, end MP 3.26: Total Crashes = 17; FI = 3 (VDOT District Rank 94)
 - Begin MP 3.48, end MP 4.76: Total Crashes = 59; FI = 14 (VDOT District Rank 7) – improvements to this segment have been committed in the SYIP, with construction completed in 2026.



Draft Needs Statements – I-81

- Improvements are needed at the intersection of I-81 Exit 307 to address safety and congestion; however, this is outside of the study area for this project.
- Recent improvements were completed at the I-81 and Route 37 interchange at Exit 310. The installation of a changeable message sign (CMS) is proposed as a safety measure.
- Safety and congestion are an issue at the I-81 and Route 50 interchange at Exit 313. CMS's are proposed at this interchange, however that does not address the existing congestion issue.
- Widening I-81 to three lanes between Exits 313 and 317 (both Northbound and Southbound) was recommended for funding.
- The addition of an auxiliary lane is a recommended improvement between Exits 313 and 315.
- The addition of traffic cameras was recommended at Exit 317.
- A design concept was created for a diverging diamond interchange (DDI) at Exit 317 to address congestion and safety.



Existing Recommendations on I-81

LEGEND: Contributing Factors and Public Feedback

Targeted Issues By station (as presented at the most public meeting)	Public Issues Identified	Contributing Factors
<ul style="list-style-type: none"> Queue Penetration Crash Severity Proportion of Delay Incidents/Close Lane Change > 1 Hour 	<ul style="list-style-type: none"> Safety Congestion Other 	<ul style="list-style-type: none"> Traffic Volume Grade Curve Ramp Spacing Merge/Change Area
Reference	<ul style="list-style-type: none"> Mile Marker (MM) Incorporated City/Town County/Independent City Boundary 	

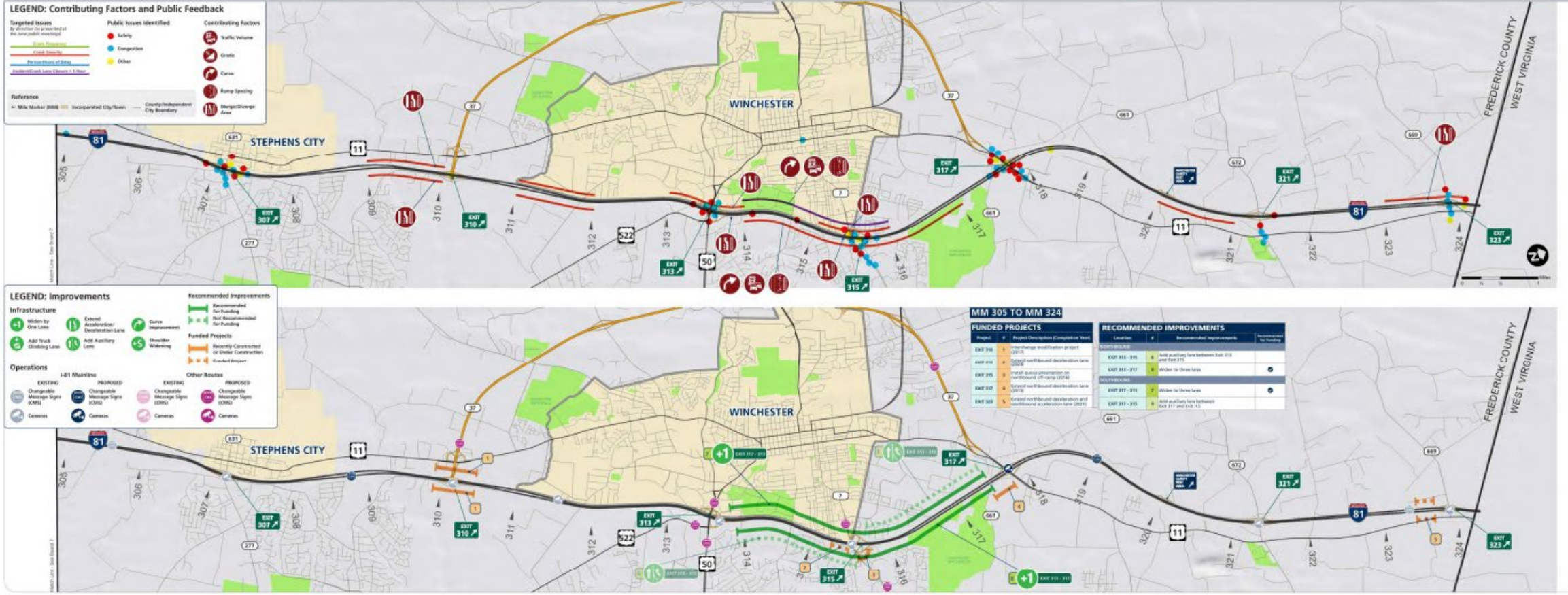
LEGEND: Improvements

Infrastructure	Recommended Improvements
<ul style="list-style-type: none"> Widen by One Lane Add Truck Chalking Lane 	<ul style="list-style-type: none"> External Deceleration Lane Add Auxiliary Lane Curve Improvement Shoulder Widening Recommended for Funding Not Recommended for Funding Funded Projects Recently Constructed or Under Construction Student Request
Operations	Other Routes
<ul style="list-style-type: none"> EXISTING Changeable Message Signs (CMS) EXISTING Cameras PROPOSED Changeable Message Signs (CMS) PROPOSED Cameras 	<ul style="list-style-type: none"> EXISTING Other Routes PROPOSED Other Routes

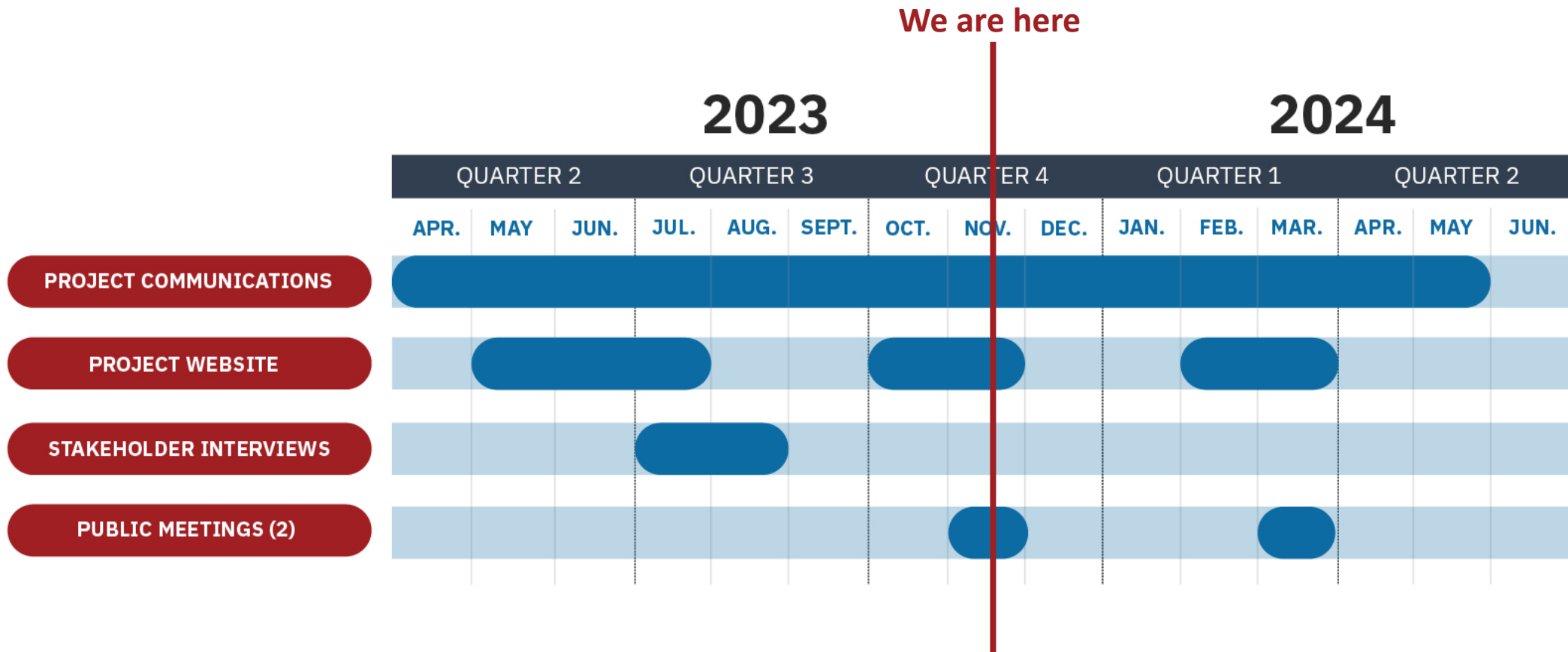
MM 305 to MM 324

Station	Project Description	Completion Year
EXIT 316	General maintenance project	2025
EXIT 315	General northbound deceleration lane	2025
EXIT 315	General southbound deceleration lane	2025
EXIT 315	General northbound deceleration lane	2025
EXIT 315	General southbound deceleration lane	2025
EXIT 315	General northbound deceleration and northbound acceleration lane	2025

Station	Location	Recommended Improvements	Recommendation to Funding
EXIT 316 - 315	Between Exit 316 and Exit 315	Widen to three lanes	•
EXIT 317 - 318	Between Exit 317 and Exit 318	Widen to three lanes	•
EXIT 311 - 315	Between Exit 311 and Exit 315	Add auxiliary lane between Exit 311 and Exit 315	•



Timeline



Note: Dates may be fluid based on unanticipated changes in direction or scope.



Deliverables View

DATE	ACTIVITIES AND DELIVERABLES	STATUS
July 2023	Public Engagement Plan, website content, press release, social media content	Completed, minor updates
Aug 2023	Stakeholder Interviews	Completed
Sept 23 to Feb 24	Periodic updates to local and elected officials	Ongoing
Nov 2023	Open House Meeting – Transportation Forum	Today
Oct to Jan	Complete traffic, safety and needs assessment and develop Draft Recommendations	Ongoing
Feb 2024	Open House Hybrid Meeting	Not Started
Mar-Jun 2024	Complete SmartScale Pre-application for selected project(s)	Not Started
Aug 2024	Complete SmartScale full application	Not Started



Next Steps



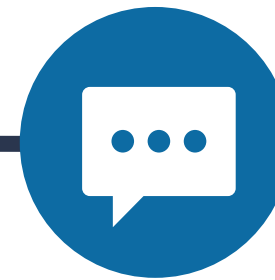
November
transportation
forum



Develop projects
and solutions over
the winter



Back to this
committee with
projects in the
winter



Public outreach
in the spring



Thank you for your time and attention!



EASTERN FREDERICK COUNTY
TRANSPORTATION STUDY

www.FCVA.us/Departments/Planning-Development/Transportation