Vermont Multimodal Roadway Guide

(VT State Design Standards Replacement)

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VERMONT AGENCY OF TRANSPORTATION

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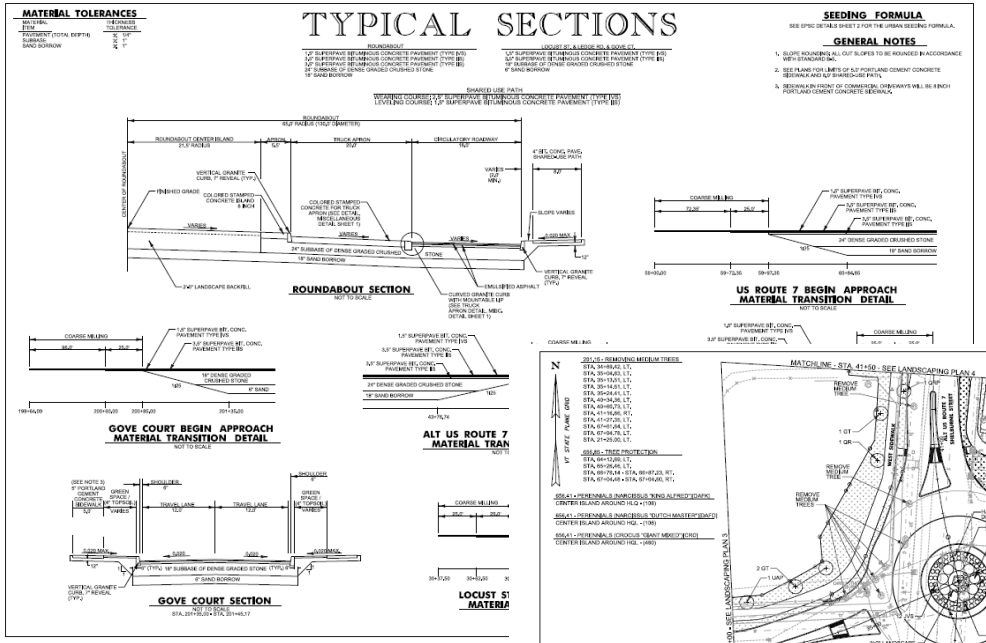
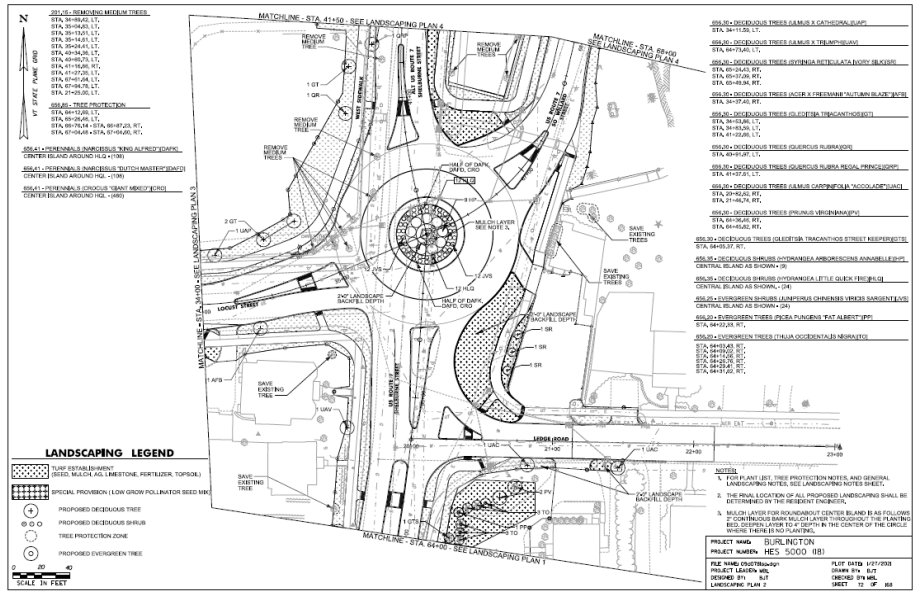
What are the VT State Design Standards?

- Last published - 1997
- Purpose:
  - "To provide clear technical direction to the designers of transportation projects in Vermont."
  - "To achieve roadway and bridge designs which provide access, mobility and safety for users, and which are also sensitive to the social and environmental context of Vermont."





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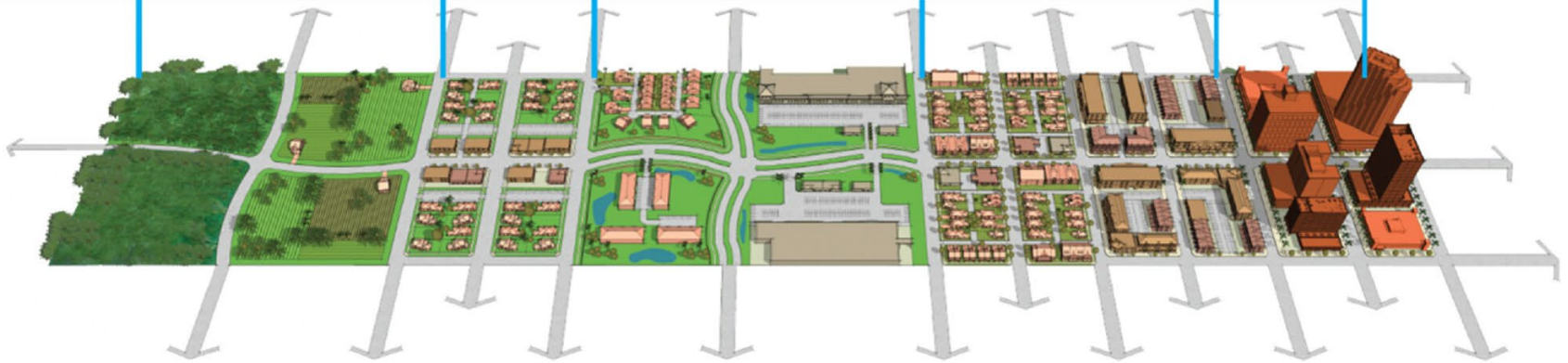
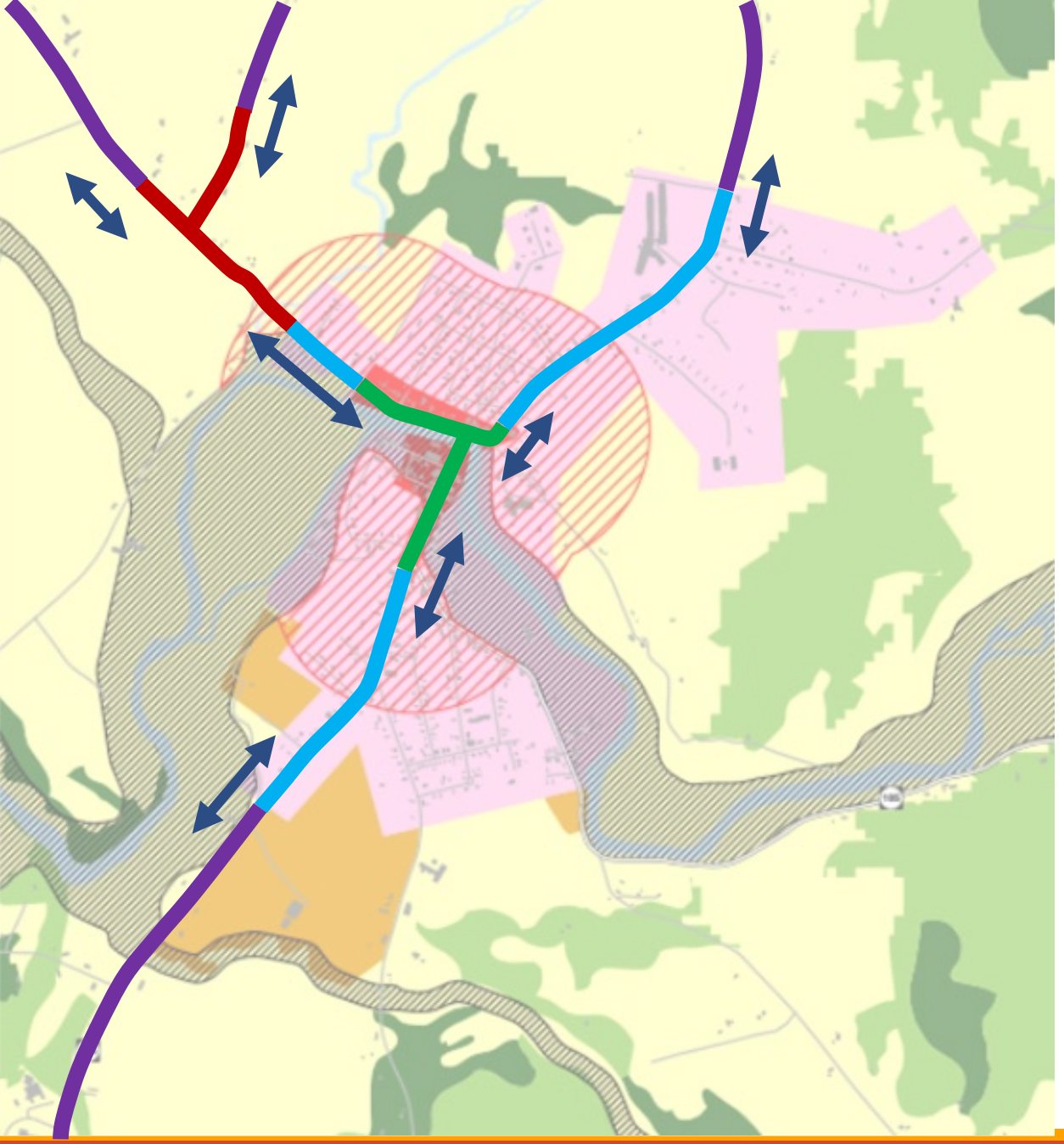
Why the Update?

- Keep pace with national best practice
- Continue providing effective transportation infrastructure for all Vermonters
- Build upon previous efforts - Multimodal Design and Delivery (M2D2)
- Respond to future land use needs with focus on context-based design
- Sec. 31 of Act 148 of 2024

Green Book 1-6	**Rural**			**Urban**						
SmartCode (2003)/ **ITE/CNU** (2010)	Natural	Rural		Suburban			General Urban	Urban Center	Urban Core	Special District
Massachusetts (2006)	Rural Natural	Rural Developed	Rural Village	Low Density	Town Center	High Density	Urban Residential	Urban Park	Commercial Business District	
Pennsylvania/ New Jersey (2008)	Rural			Suburban Neighborhood	Suburban Corridor	Suburban Center	Town/Village Neighborhood	Town/Village Center	Urban Core	
California (2016)	Natural	Developing	Rural Main Street	Suburban Low Density		Suburban High Density	Urban Low Density		Urban High Density	
Florida (2017)	Natural	Rural	Rural Town	Suburban Residential		Suburban Commercial	Urban General	Urban Center	Urban Core	Special District
Minnesota (2018)	Natural	Rural	Rural Crossroad	Suburban Residential		Suburban Commercial	Urban Residential	Urban Commercial	Urban Core	Industrial Warehouse
Green Book 7/ NCHRP 855 (2018)	**Rural**		**Rural Town**	**Suburban**			**Urban**		**Urban Core**	
Oregon (2019)			Rural Community	Suburban Fringe	Suburban Residential Corridor	Suburban Commercial Corridor	Urban Mix		Downtown/ Commercial Business District	
Washington (2019)	Rural			Suburban			Urban		Urban Core	
AASHTO TCGD (2019)	**Rural & Natural Areas**		**Rural Town**	**Suburban**			**Urban**		**Urban Core**	**Industrial, Warehouse, or Port**
Maryland (2019)	Rural		Traditional Town Center	Suburban		Suburban Activity Center		Urban Center	Urban Core	
Pennsylvania (2020)	Rural		Rural Town	Suburban			Urban		Urban Core	



Shifting the Paradigm: Context Based Design



Alignment with Act 181

Legend

Designated Centers

- Richford Village Center
- 1/4 Mile Buffer Area

NRPC Future Land Use

- DT/Village Centers
- Village Area
- Transitional
- Rural – General
- Rural – Ag and Forestry
- Rural – Conservation

VMRG Context-Sensitive Roadway Classifications

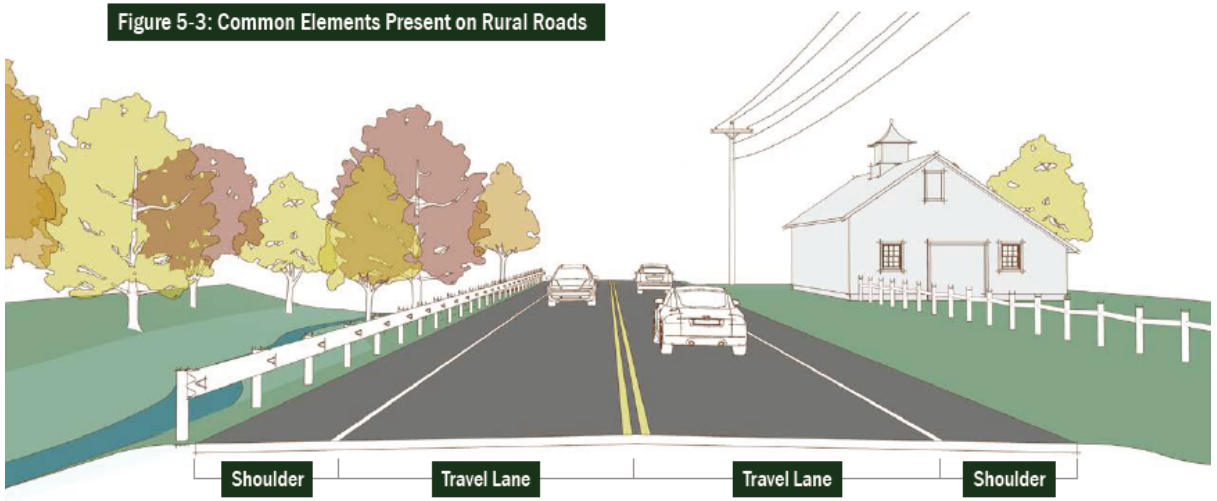
- Urban Main Street
- Town/Village Main Street
- Urban Connector
- Rural Connector
- Rural Road
- Transition Zone

Update Information

- Consultant Team - VHB
- Stakeholder Advisory Group, Technical Working Group, Steering Committee
- Annotated Outline (April 2025)
- Draft Document (January 2026)
- Extensive and ongoing process and outcomes conversations
- Project Website: https://vtrans.vermont.gov/highway/VSDSUP

Context Overview

Figure 5-3: Common Elements Present on Rural Roads

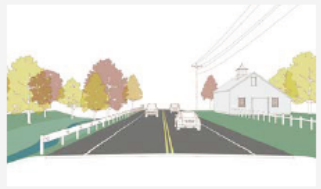


	Shoulder	Travel Lane	Active Transportation Element
Design Range	0-4' (low volume) 4-8' (high volume)	9-12'	5-8' shoulder for formal accommodation, or 10-14' side path

For additional design details on common elements for each "most common" rural cross-section type, see the following sections:

Section 5.3.1: Roads with No Paved Shoulders

Section 5.3.2: Roads with Narrow Paved Shoulders



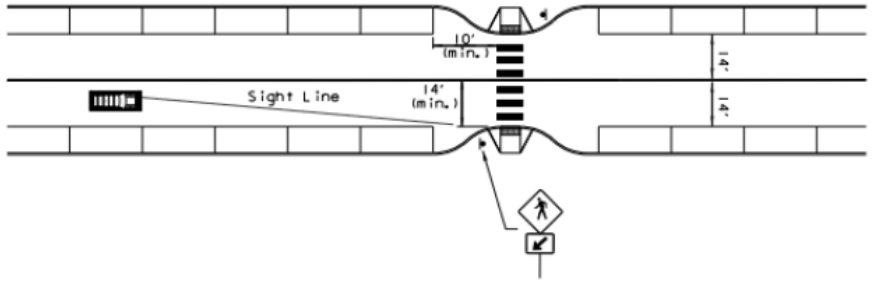
Section 5.3.3: Roads with Wide Paved Shoulders

Design Element

7.2.10.1 Midblock Curb Extensions

Midblock curb extensions, when coupled with a pedestrian crossing, reduce crossing distance for pedestrians at marked midblock crossings. They work particularly well on streets with on-street parking because they improve sight lines between approaching motorists and pedestrians crossing the street. A typical midblock curb extension is shown in Figure 7-4.

Figure 7-4 Typical Midblock Bulb-Out Dimensions for State Highway Facilities



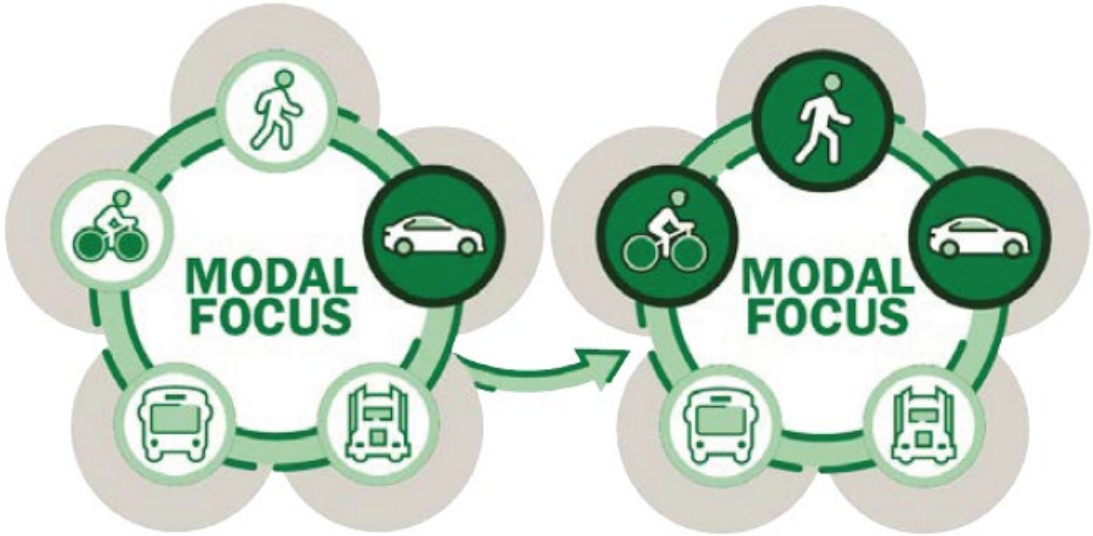
Midblock bulb-outs offer the following benefits:

- Reduce roadway crossing distance, decreasing the time pedestrians are exposed to traffic.
- Improve the ability of motorists and pedestrians to see one another.
- Provide space for street furniture or utility infrastructure when they can be placed without interfering with sight lines.
- Provide a traffic calming effect along the roadway.
- Buffer parked vehicles to reduce the potential of sideswipe crashes.
- Improve the ability to meet accessible pedestrian ramp grading requirements.

Midblock bulb-outs can complicate snow removal operations; therefor, designers should consult with the organization responsible for snow removal throughout the design process. They also require consideration of drainage patterns where curb lines are present.

Additional design considerations for midblock curb extensions are provided in the *VTrans Guidelines for Pedestrian Crossing Treatments*.

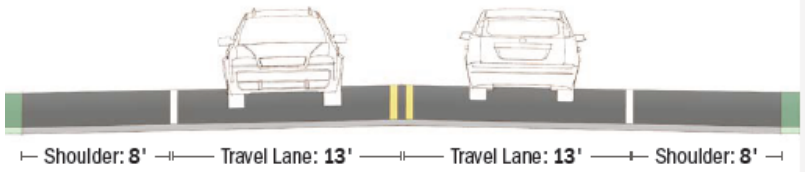
Modal Focus



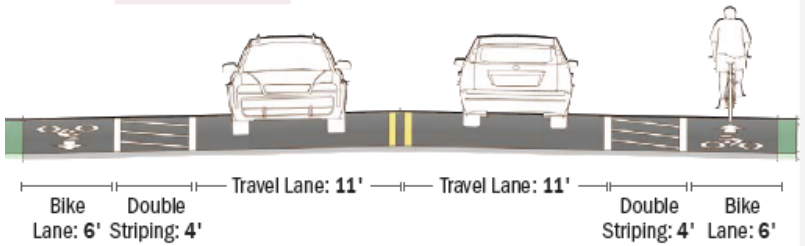
Case Studies

Roadway Reconfiguration to Reallocate Wide Lane and Shoulder Widths

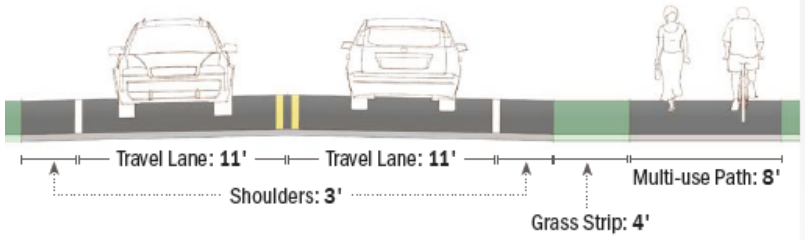
EXISTING



MODIFIED OPT A



MODIFIED OPT B



Context

- High volume
- Provides access for longer distance private vehicle trips, freight vehicles and inter-city buses.
- Bicyclists and pedestrians are not primary focus but access to adjacent land uses still important for those users. Volume of these users varies by context.

Existing Safety Challenges

- No dedicated bicycle or pedestrian facility.
- Wider lanes promote higher vehicle speeds.
- Existing 8-foot-wide shoulder provides clear zone and can be used by pedestrians and bicyclists.

User Comfort After

- Narrower travel lanes reduces vehicle speeding. Dedicated bike lanes with bugger or multi-use path significantly improve pedestrian and bicyclist safety.

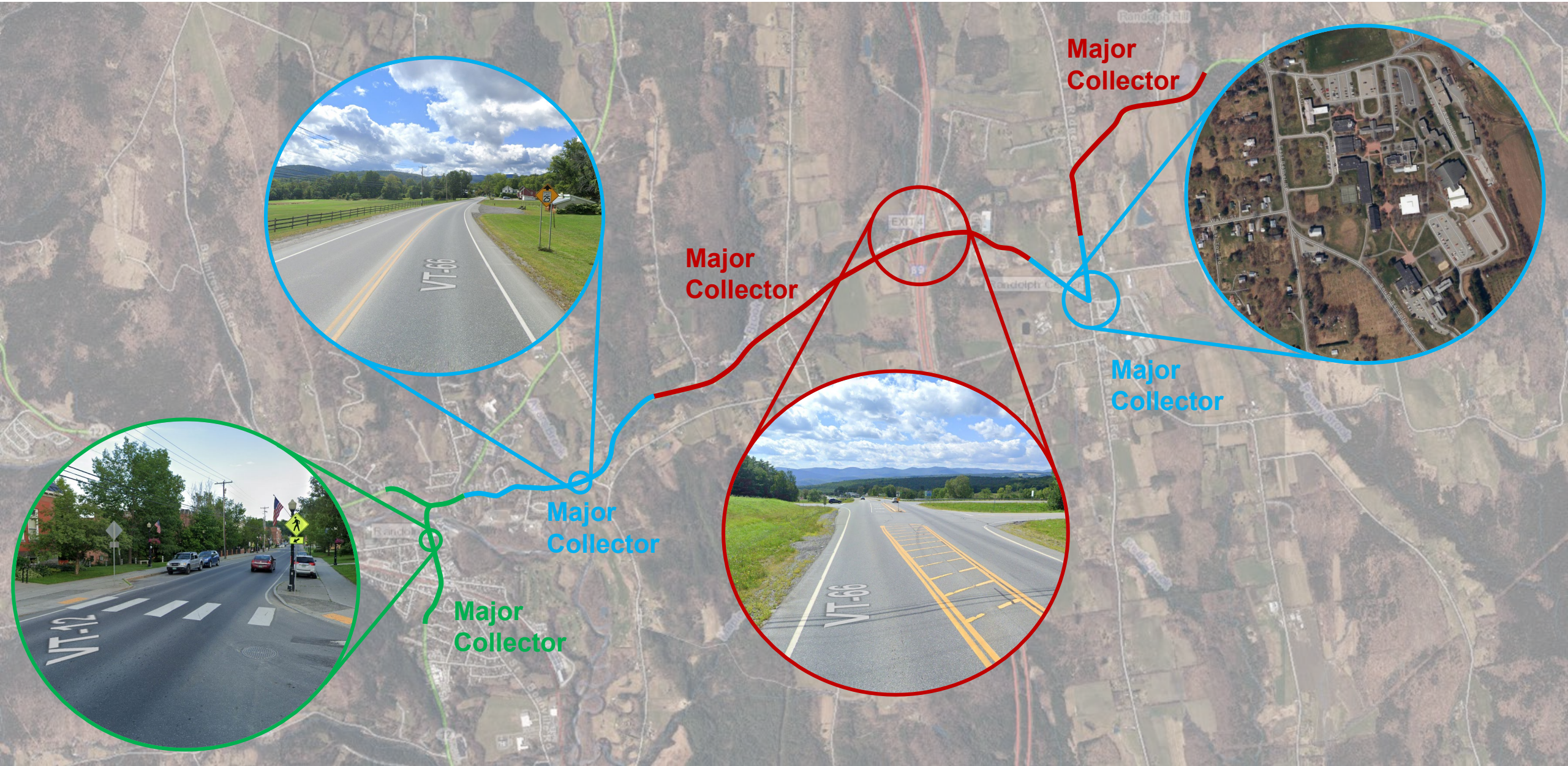
Current Status and Next Steps

- Phase 1 – Project Definition and Stakeholder Engagement
  - Annotated Outline – April 2025
- Phase 2 – Development of Guide
  - Draft - January 2026
  - Currently under extensive review
  - Targeted completion – July 2026
- Phase 3 – Implementation and Training

Thank you! Questions?

Project Webpage:
https://vtrans.vermont.gov/highway/VSDSUP

Roadway Classifications



Shifting to Context-Sensitive Solutions & Outcomes