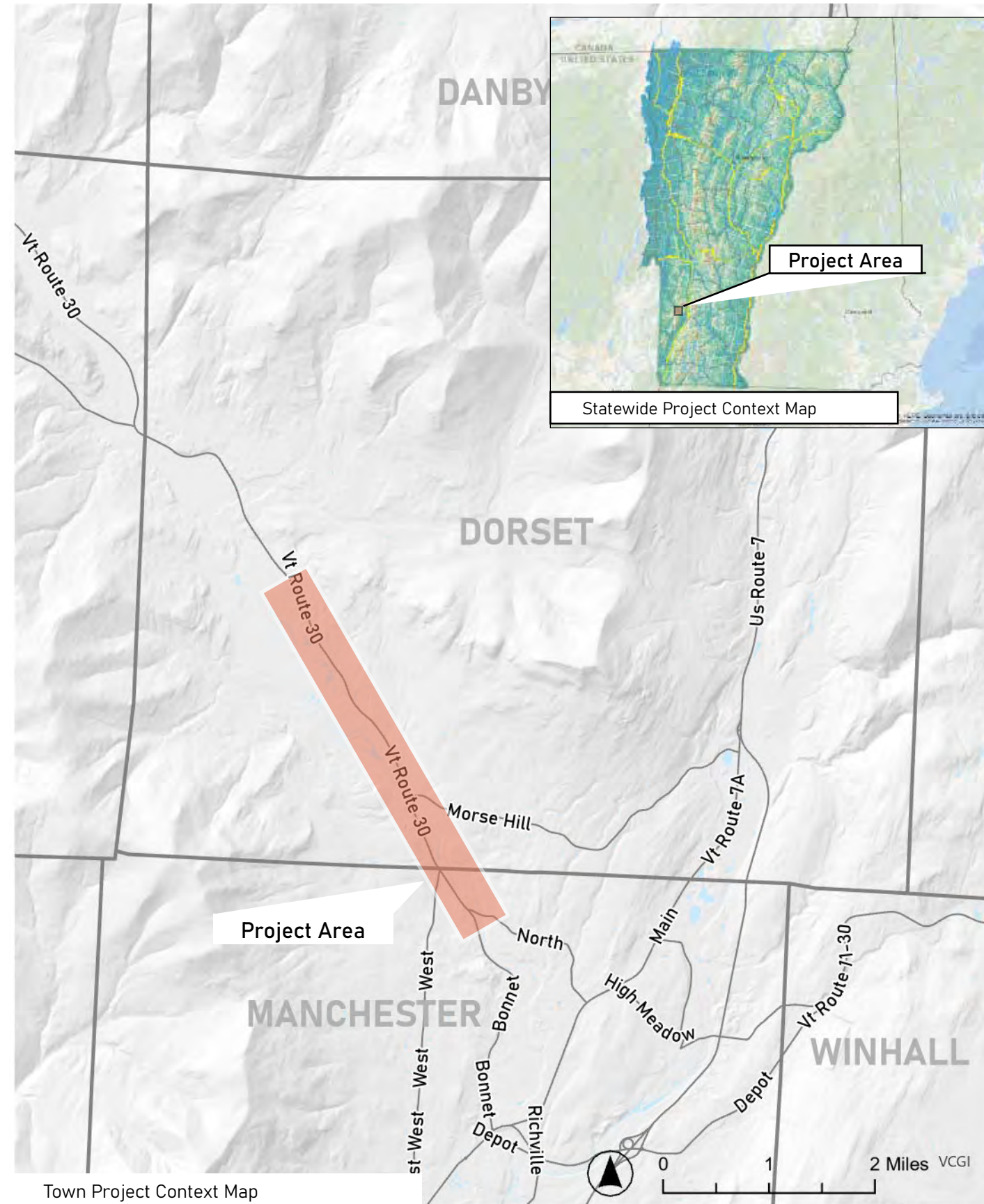


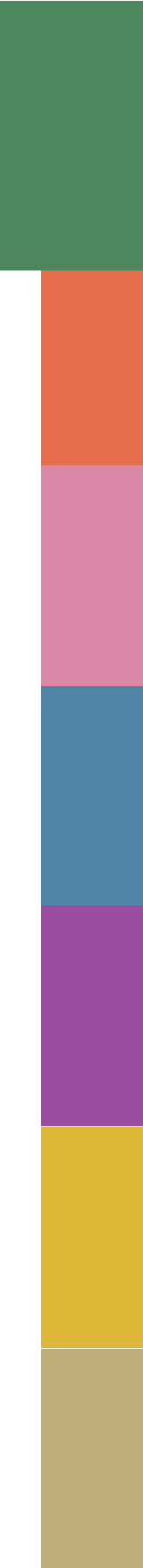
DORSET-MANCHESTER PATH SCOPING STUDY ALTERNATIVES MEETING FEBRUARY 22, 2023



Project Area and Context

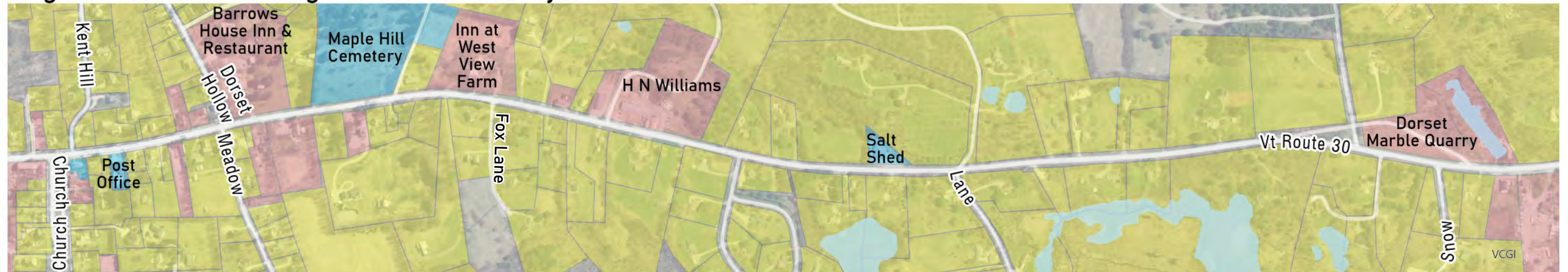


Town Project Context Map



Land Use

Segment 1: Dorset Village to Dorset Quarry



Segment 2: Dorset Quarry to Morse Hill Road

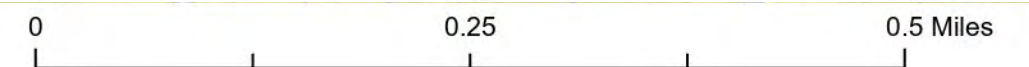


Segment 3: Morse Hill Road to North Road



Legend

- Commercial
- Institutional / Civic
- Residential



The Existing Roadway

Right of Way

- The Route 30 right of way is about 4 rods, or 66 feet wide, in the project area, generally aligned with the road centerline.
- Some sections are wider due to previous Right-of-way acquisition by VTrans for previous projects.
- North Road has a right-of-way of 3-rods, or 49.5 feet wide.

Roadway Section

- The overall paved surface is in fair condition on Dorset Village and the Dorset Quarry; and poor to very poor between the quarry and North Road.
- On Route 30, the typical section includes 11 foot travel lanes, 3 foot paved shoulders, and 19 feet of additional space on each side.
- Some sections have wider shoulders, suitable for use for bicycles.
- Other areas have stone walls, structures, trees and topographical challenges within the right-of-way in the study area that must be considered in this study.
- North Road has 10 foot wide travel lanes and no shoulder. Here, cyclists must ride in mixed traffic and pedestrians must walk in the roadway.



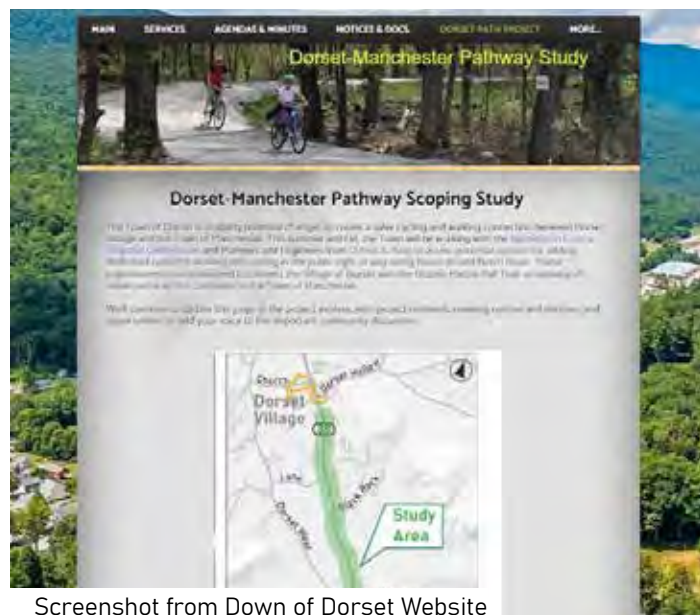
Community Engagement

Community Meeting 1 : September 21st, 2022

Held both in person and remote attendance by video conference with 33 members of the public, five Town of Dorset staff, Bennington County Regional Commission staff and consulting team.

Attendees generally expressed support for the project overall and took the opportunity to ask clarifying questions on process and scope. Two attendees commented with their opinions that this project is “a fantastic idea” as it has potential to provide safe access to local mountain bike and hiking trails from a bigger parking lot like the park in Manchester without overwhelming the limited parking available at Raptor Lane.

One resident expressed concerned that the project will have negative impacts on residents while only benefiting cyclists five months a year. One resident mentioned that if the trail cuts through his private property, he will not support it. The consulting team assured him that the scope of the study is limited to public Right-of-Way along Route 30 and North Road and is not expected to directly impact private property.



Screenshot from Down of Dorset Website

Public Survey Summary

Neighbors' Survey: 46 responses
Community Survey: 98 responses

Key Neighbors findings:

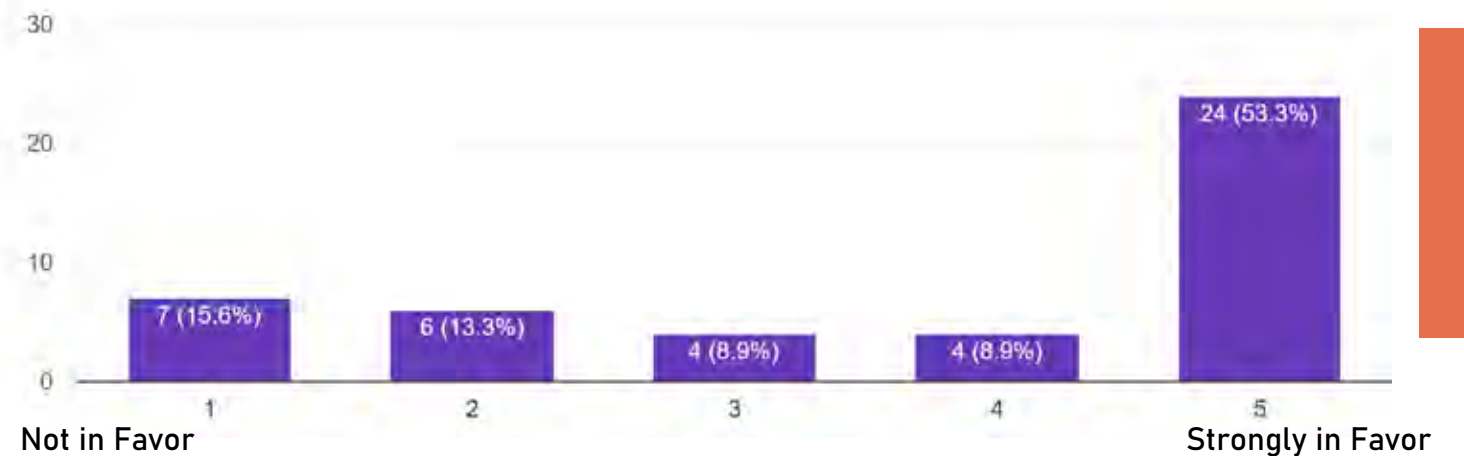
- 62% of respondents were in favor of proposed changes and 53% were strongly in favor. 29% were opposed.
- The vast majority of respondents who provided their addresses were located on the east side of Route 30. Only six were on the west side.
- Private property concerns regarding increased pedestrian and bicycle traffic and tree removal.
- Concerns for safety, traffic impacts, traffic speeds, and grading impacts

Key Community findings:

- Majority of respondents drive along the study corridor on a daily basis but even in its current condition
- 29% walk or bike along the corridor regularly
- Generally feel unsafe walking or biking along Route 30 yet generally feel safe driving along Route 30.
- 80% believe that public funds should be used to build a safe and dedicated space for walking and biking.
- Widespread support for safety improvements along Route 30.
- Excitement about the potential for the path to connect with hiking and mountain biking trails off of Raptor Lane.
- Interest for ensuring that the pathway is designed for all non-motorized modes, not just cycling.

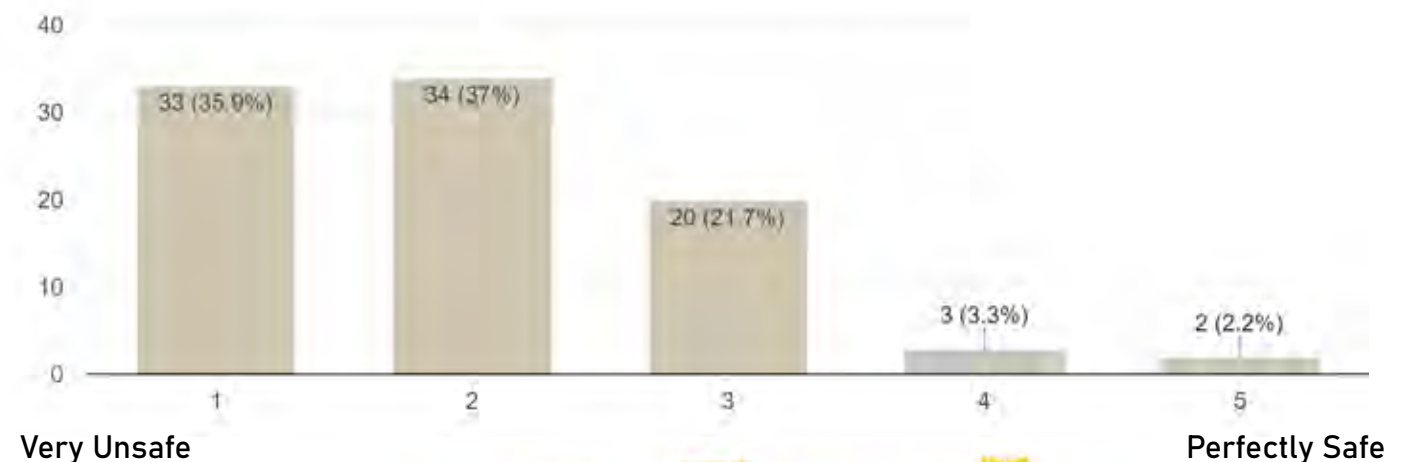
Are you in favor of changes to the roadway along Route 30 to create safe, dedicated space for bicycling and walking?

45 responses



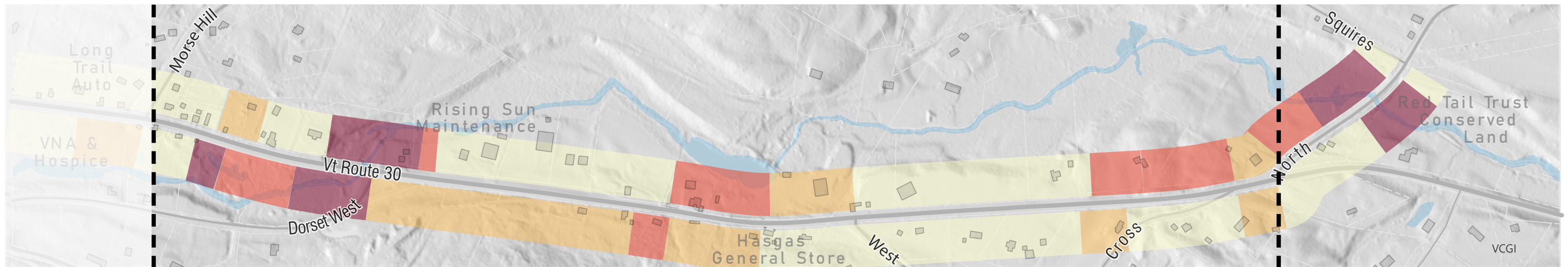
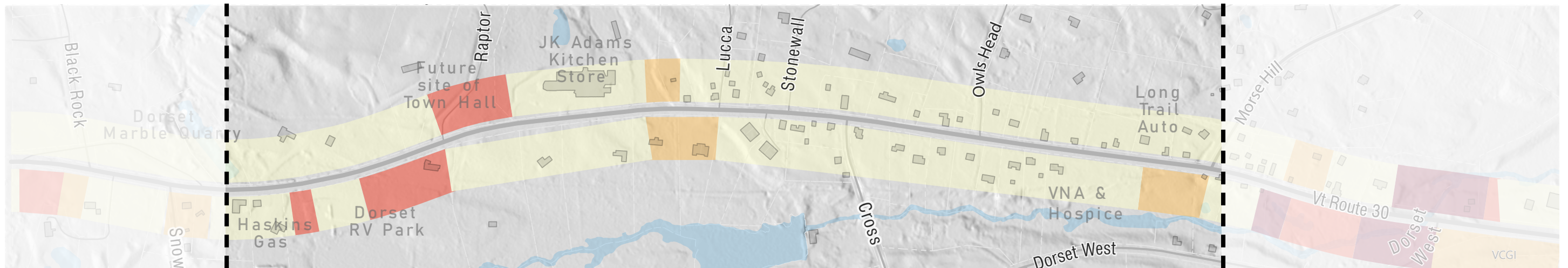
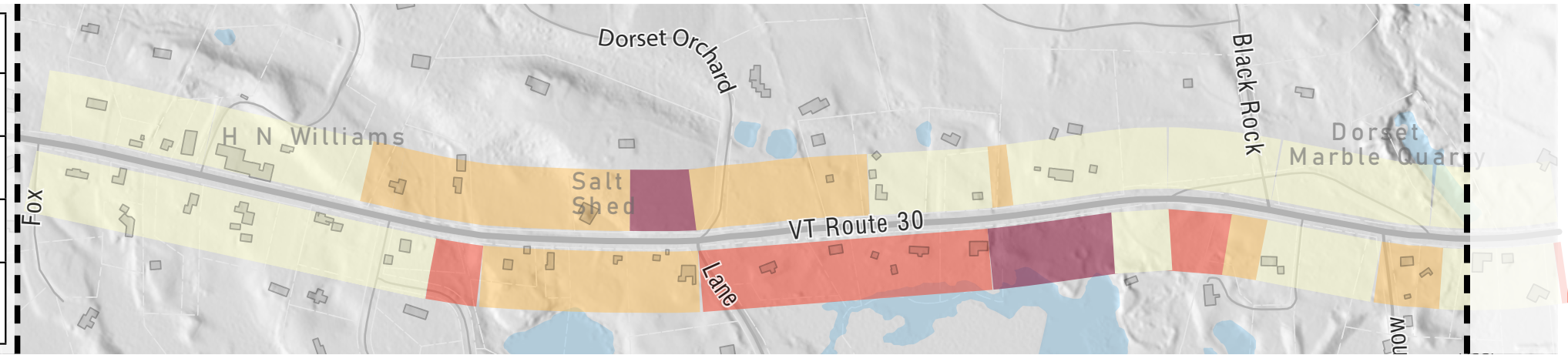
5. How safe do you feel when walking or biking along Route 30 ?

92 responses

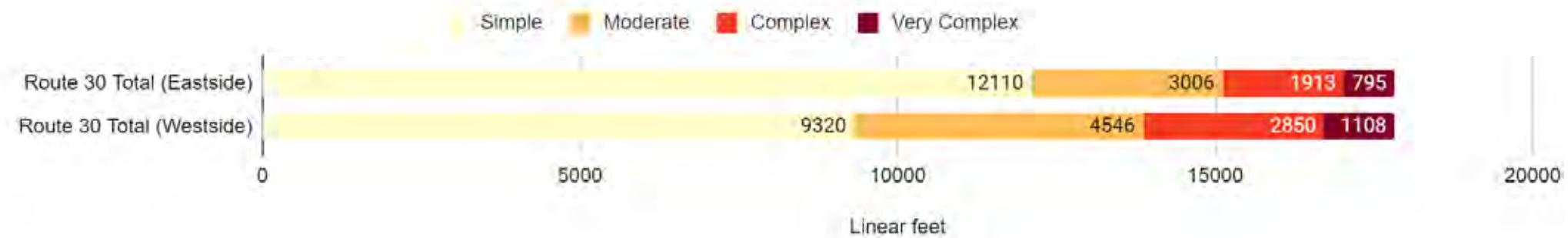


Design Challenges: Topography

Category	Pavement and ROW edge elev +/-	Description
1	0-2	Minimal grading and minor drainage changes required
2	2-4	Moderate cut and fill required moderate to major drainage modifications may be necessary
3	4-7	Major cut and fill or retaining walls needed. Limited blasting may be required
4	7+	Extreme topographical challenge- may require extensive cut and fill, ROW acquisition, large retaining walls, blasting, or boardwalk structures



Comparison of Topographic Complexity by side



Design Challenges: Constraints



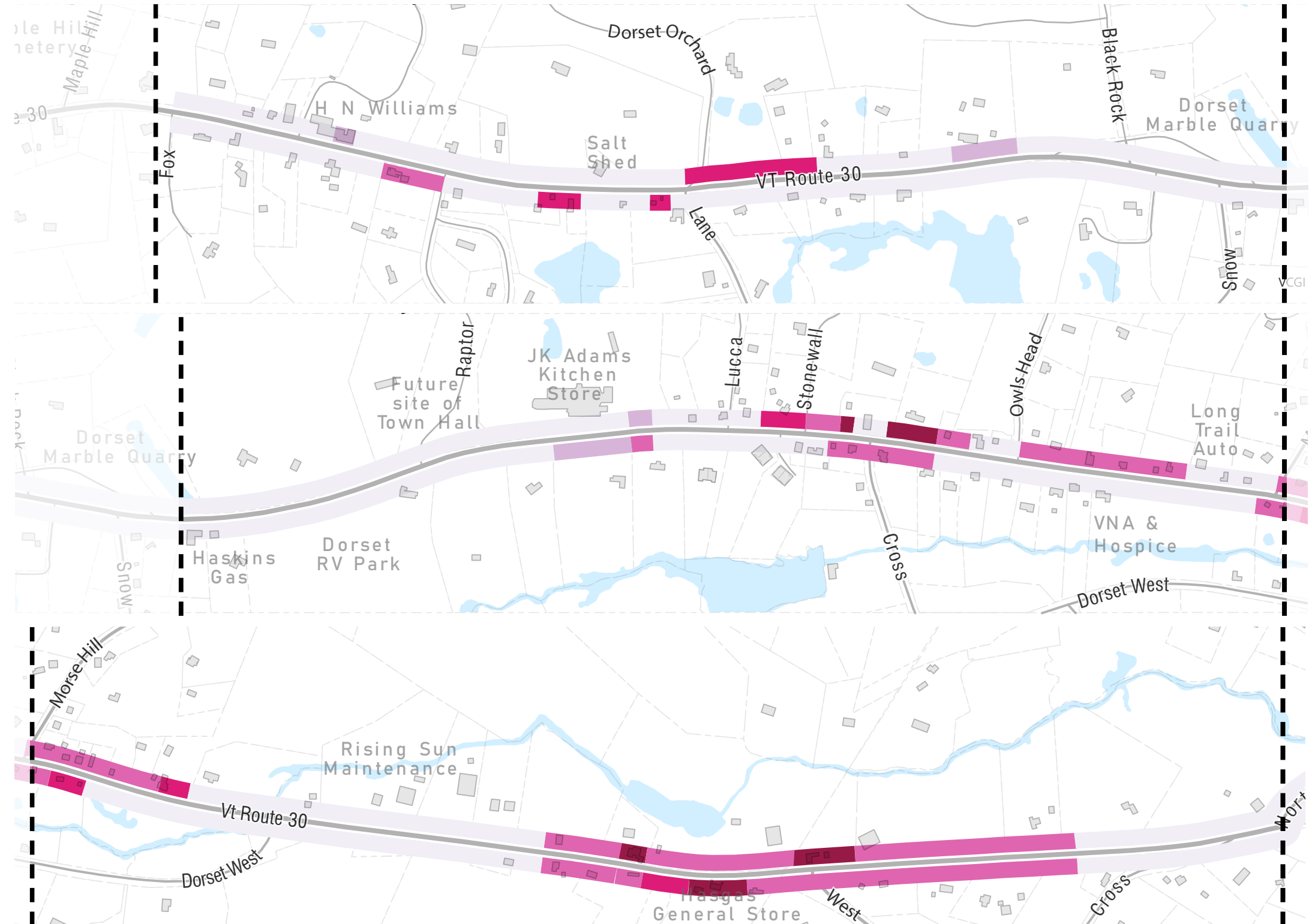
Limited space in front of H N Williams



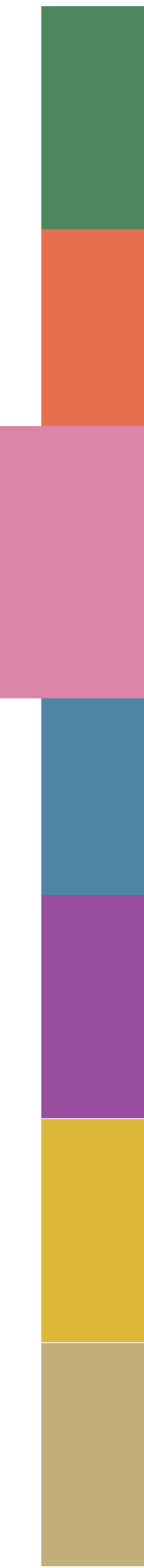
Stone wall within 2 ft of pavement edge; houses within close proximity of road on western side



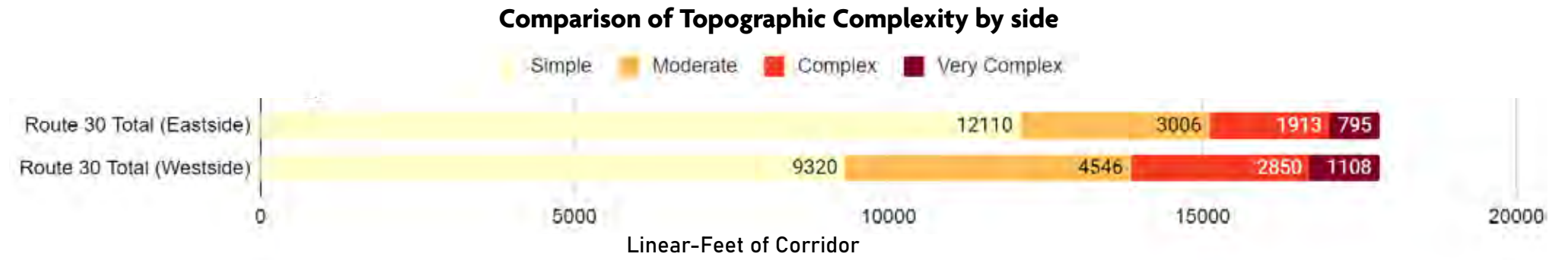
Very limited width due to existing structures on both sides



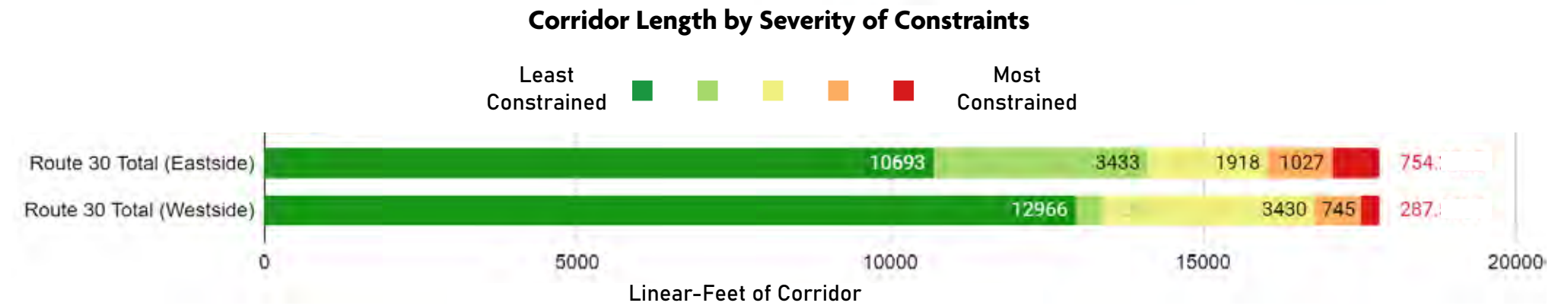
	Feet of incursion from 66' ROW Edge
Least Constrained	0-5
	6-7
	8-11
Most Constrained	12-13
	14-20



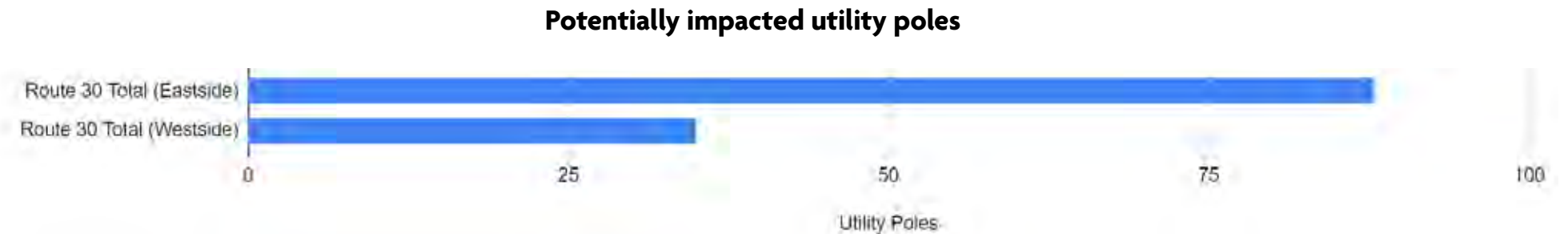
Which side has more topographic complexity?



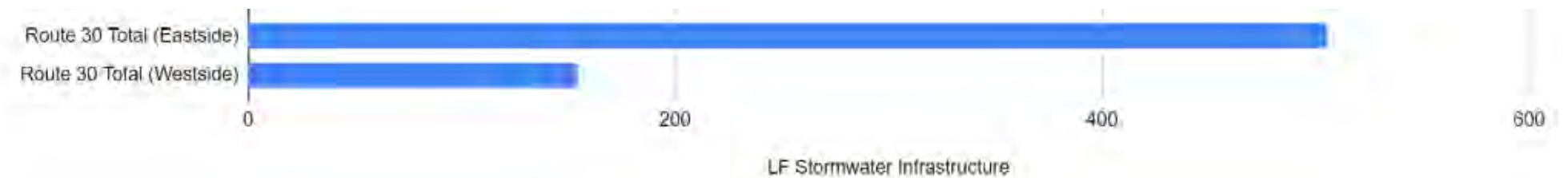
Which side has more constraints?



Which side has more utility impacts?



Linear-feet of potentially impacted Stormwater Infrastructure



Which side has more crossings?

Side of VT-30	Intersections	Driveways
East	10	54
West	8	58

*Excludes culverts perpendicular to the road which are likely to be impacted no matter which side the bike lane or shared-use path is placed.

Design Alternatives

Shared Use Path Design Principles

Two of the three alternatives explored in this scoping study are shared-use paths. This type of facility is a bidirectional paved pathway physically separated from the roadway. Shared-use paths offer a high-quality experience for users of all ages and abilities when compared to on-street bike lanes.

Since shared-use paths are designed to accommodate pedestrians, cyclists and other non-motorized users, it must be sufficiently wide to accommodate simultaneous use by two or more people in either directions. 8 feet of pavement, with sufficient horizontal clearance from obstacles on each side, is the absolute minimum width for shared-use paths but 10 is preferred. In high-traffic areas, 12 feet is ideal. In the case of the design alternatives for the Dorset-Manchester shared-use path, 10 feet is the desired width throughout the corridor.

A 10 foot pathway with generous separation space from traffic is obviously ideal, but the Route 30 corridor presents many spatial and technical constraints such as existing privately owned buildings in close proximity to the roadway, significant trees that may be desirable to preserve, and challenging topography that may be cost-prohibitive to build on. Trade offs are sometimes necessary and the design hierarchy outlined below summarizes the design options available in constrained areas of the corridor.

These design principles are applied to the cross section types explained on the next pages.

Shared-use Path Design Principles

1. Maintain 10 foot path and separation from motor traffic where possible
2. Reduce separation from traffic and add curb or barrier for comfort and safety
3. Reduce Shoulder Width
4. Shift Centerline and Reduce Lane Width
5. Shift Road centerline and Add Pavement on both sides

Least
Constrained
Areas



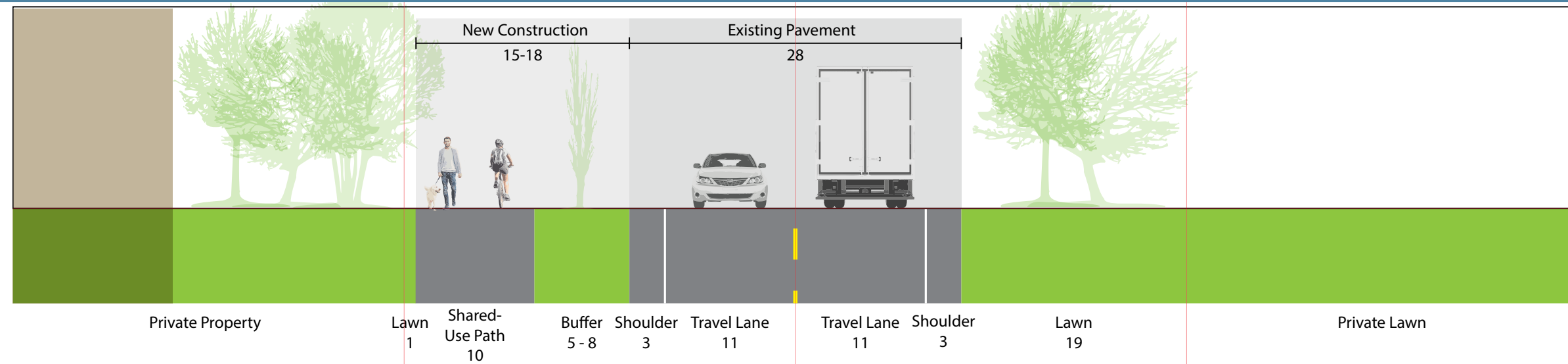
Most
Constrained
Areas



Design Alternatives: Typical Sections

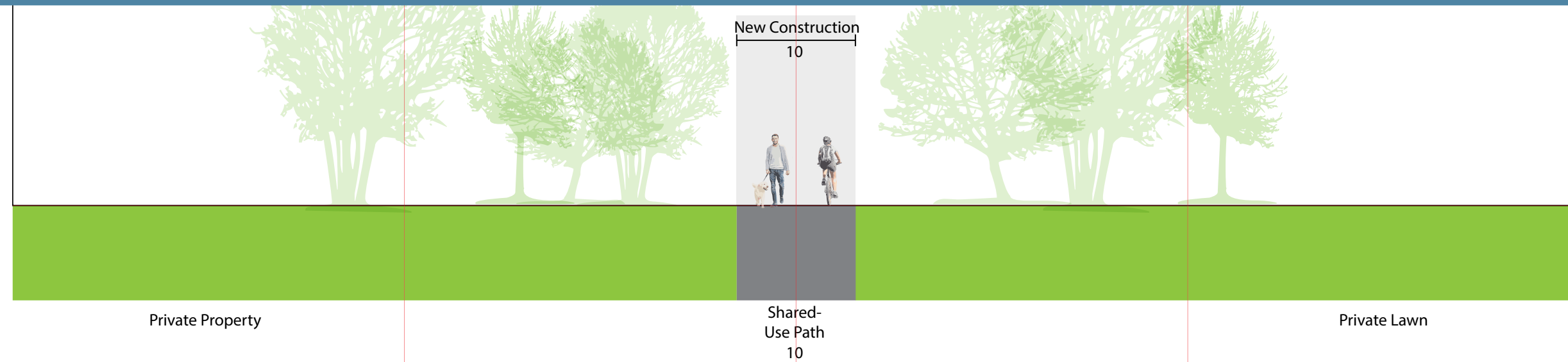
-33 Existing Centerline +33

Section Type A - Facing South - Shared-Use Path - Ideal Width



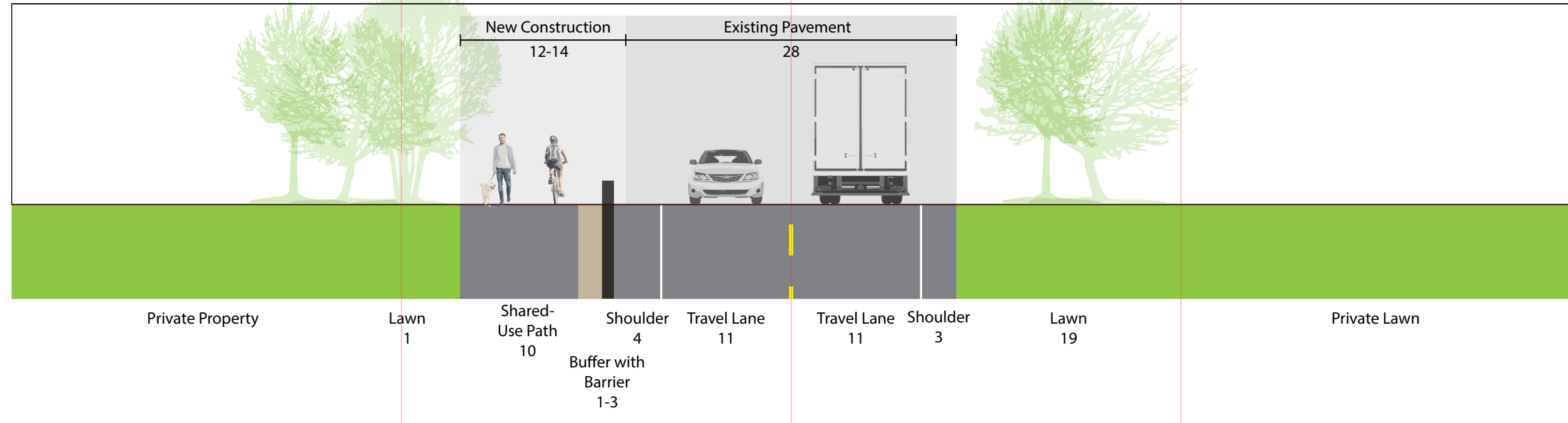
-33 Existing Centerline +33

Section Type I - Separated Path



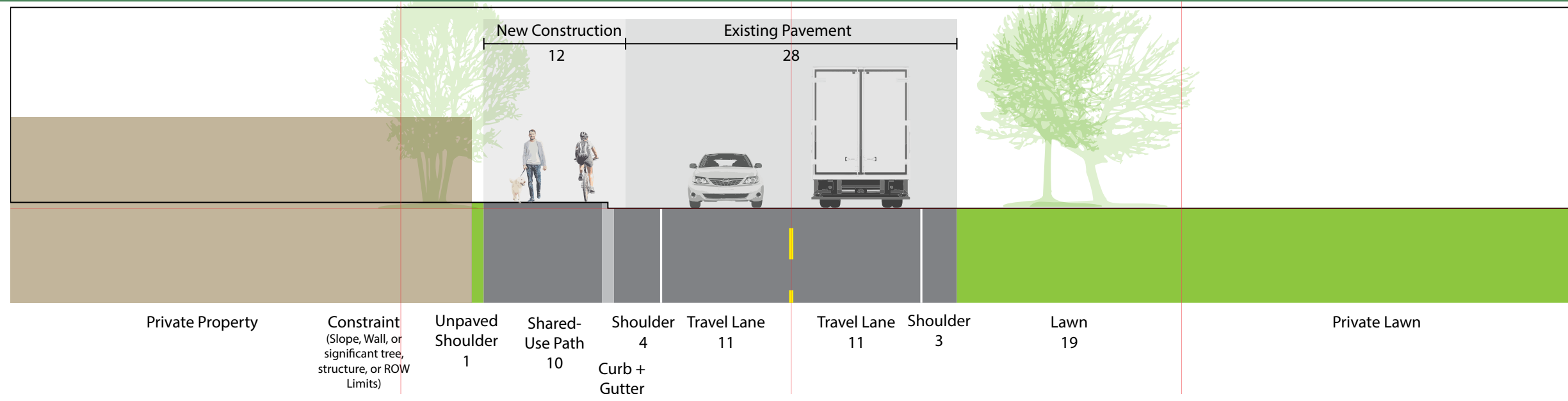
-33 Existing Centerline +33

Section Type B Shared-Use Path with Barrier

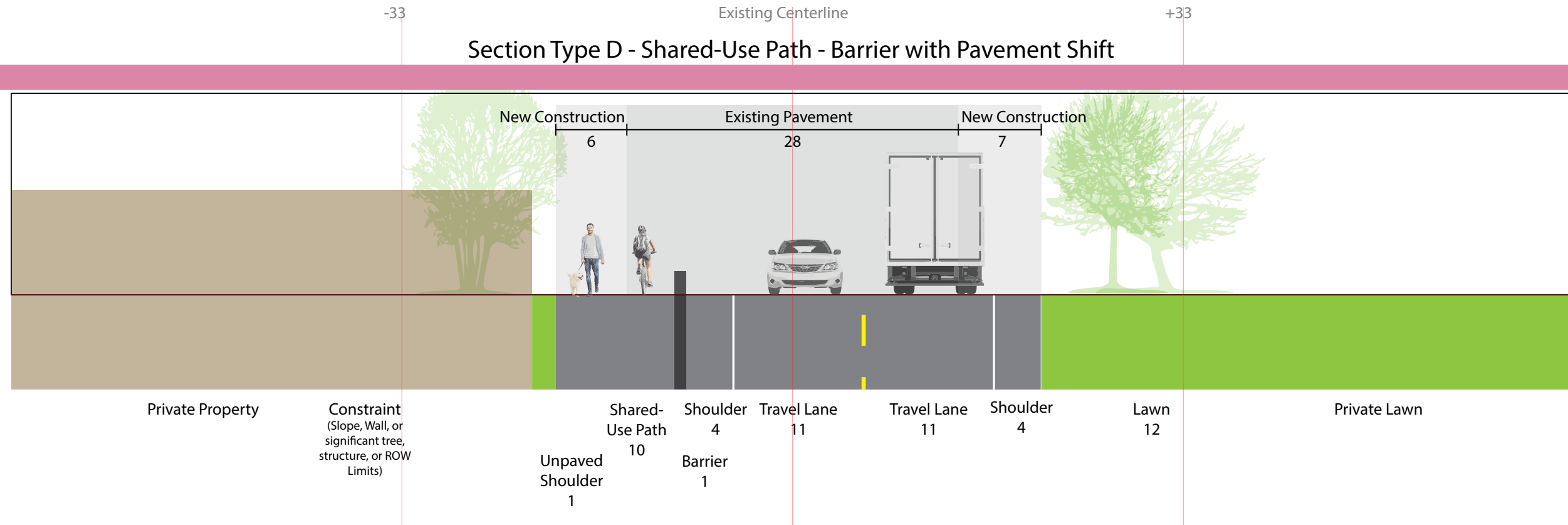


-33 Existing Centerline +33

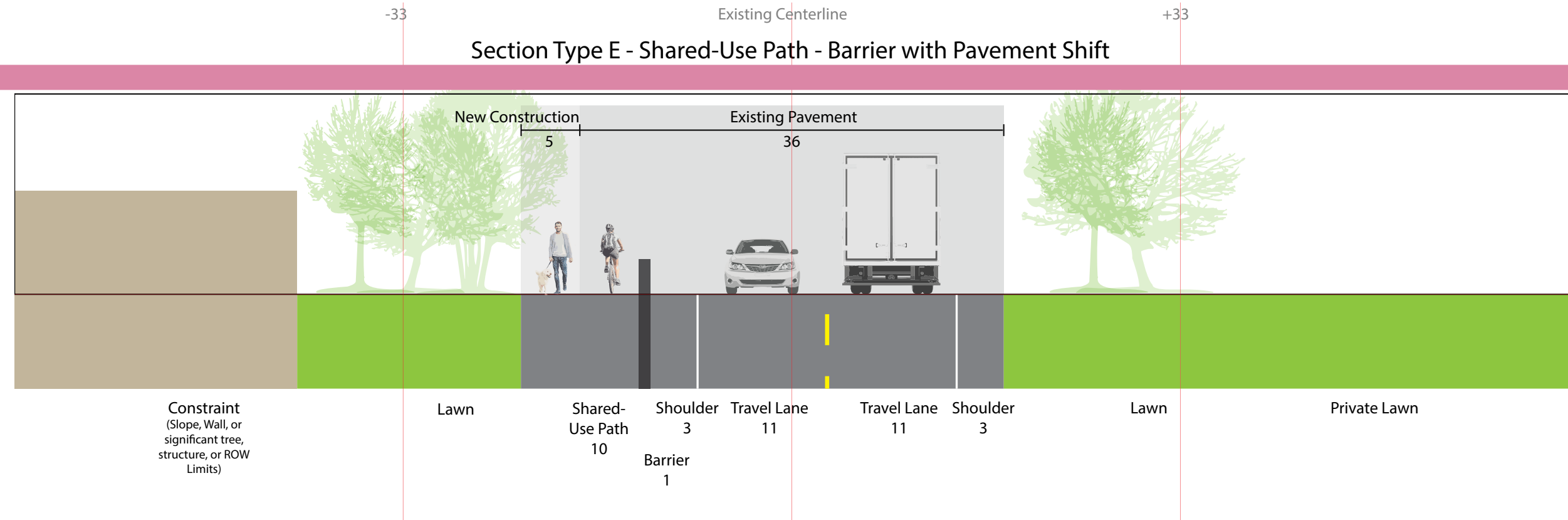
Section Type C - Facing South - Shared-Use Path - Curb



Section Type D - Shared-Use Path - Barrier with Pavement Shift



Section Type E - Shared-Use Path - Barrier with Pavement Shift



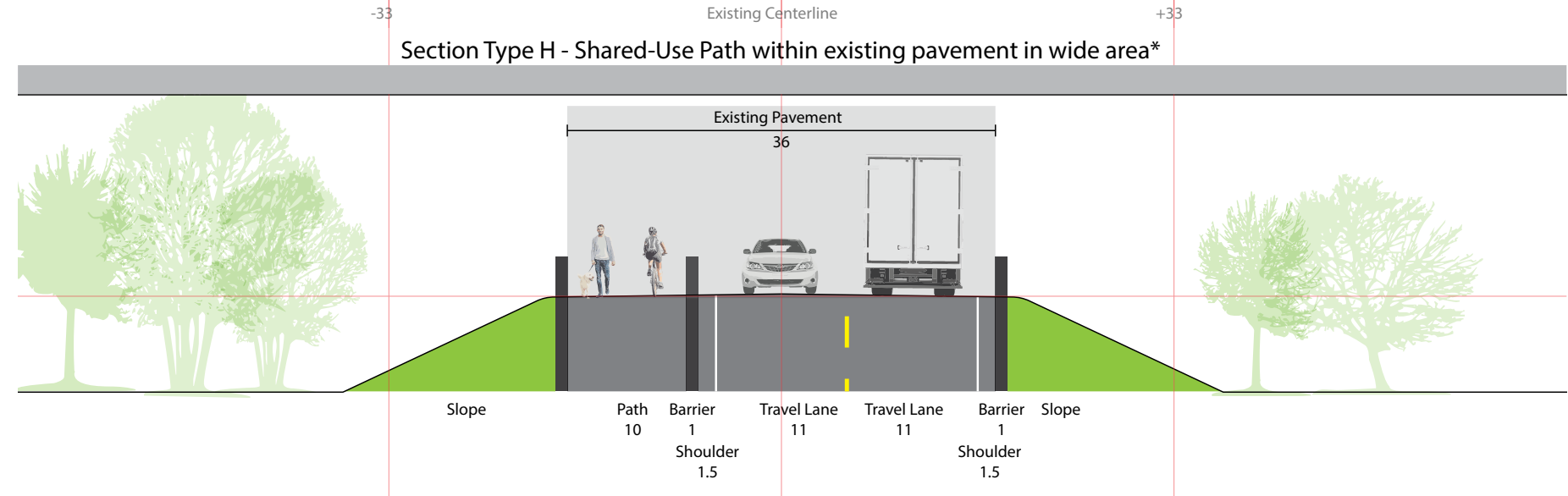
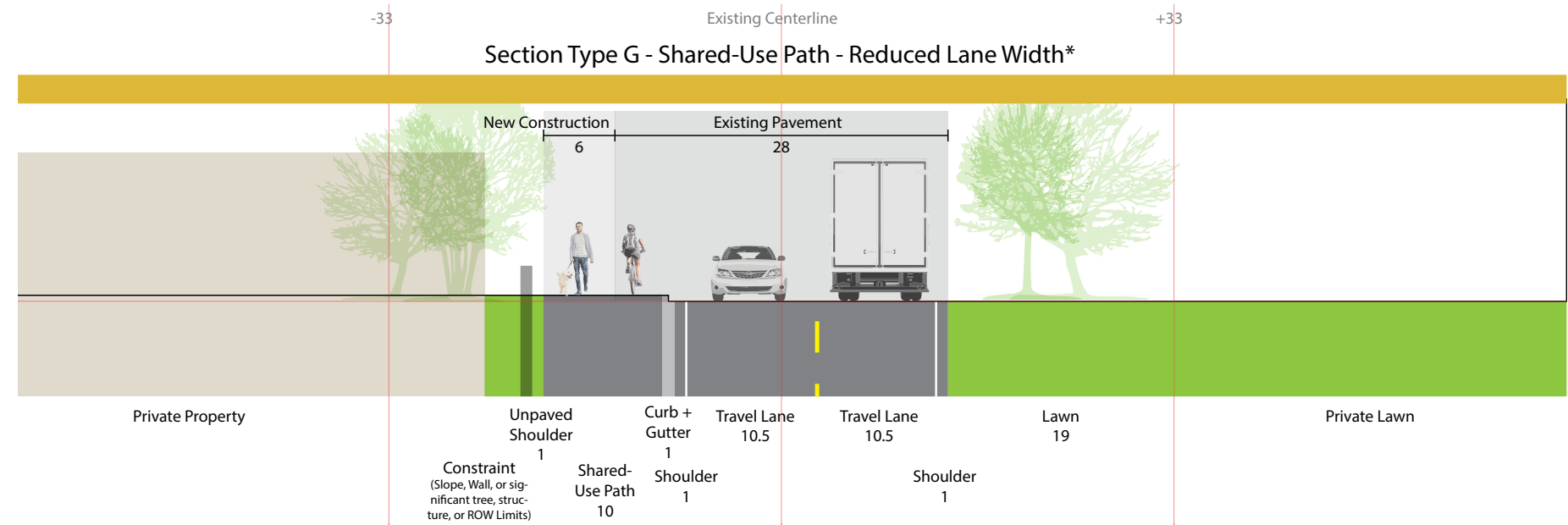
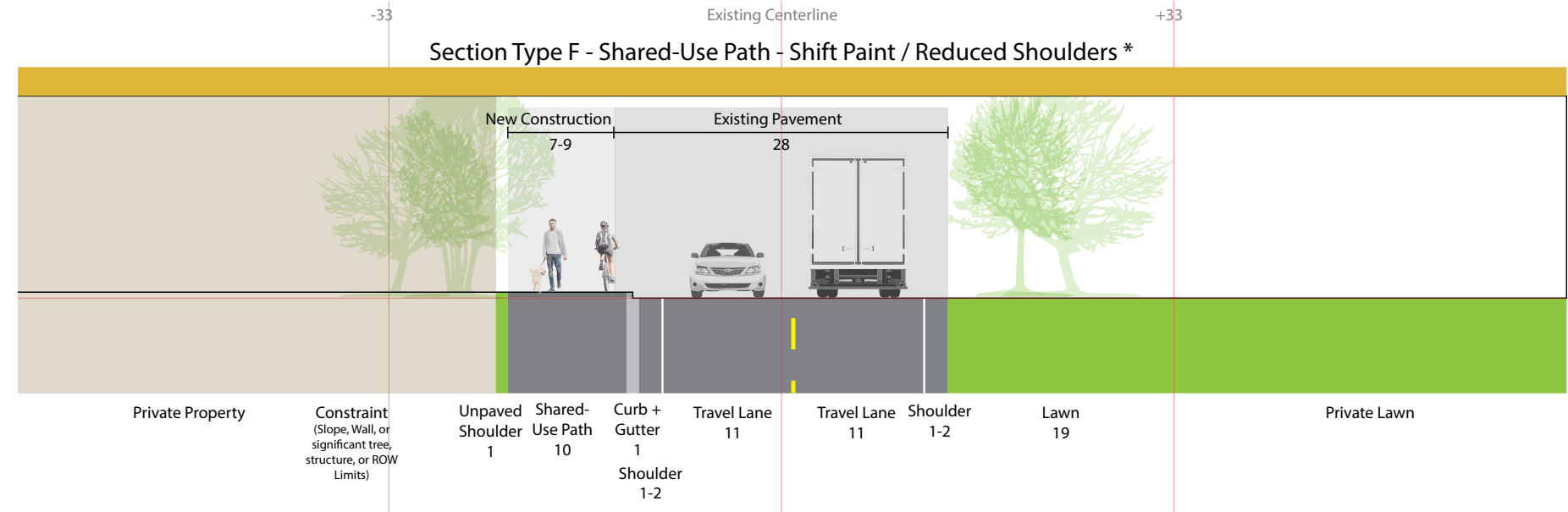
Sections F/G - VTrans Standard Flexibility Required

Current VTrans standards stipulates that state highways classified as “minor arterials” like Route 30, with a design speed of 40 to 50 mph, should have 11-foot lanes and shoulders with at least 4-foot shoulders on each side. Coupled with the state standard for 11 foot lanes, that means roads maintained by VTrans should generally have a minimum road profile of 30-feet.

However, much of the existing highway does not currently meet these shoulder width standards, and a strict compliance with these standards during any roadway reconstruction drives up construction costs and complexity, particularly in constrained areas with severe topological challenges. In these areas, road widening for the addition of a shared-use path may require land-acquisition, the construction of significant retaining walls, rock blasting, and slope stabilization.

Flexibility with lane-width and clear-zone standards may result in significant cost savings, particularly if reduced shoulder and lane width allows the project to avoid major geotechnical work.

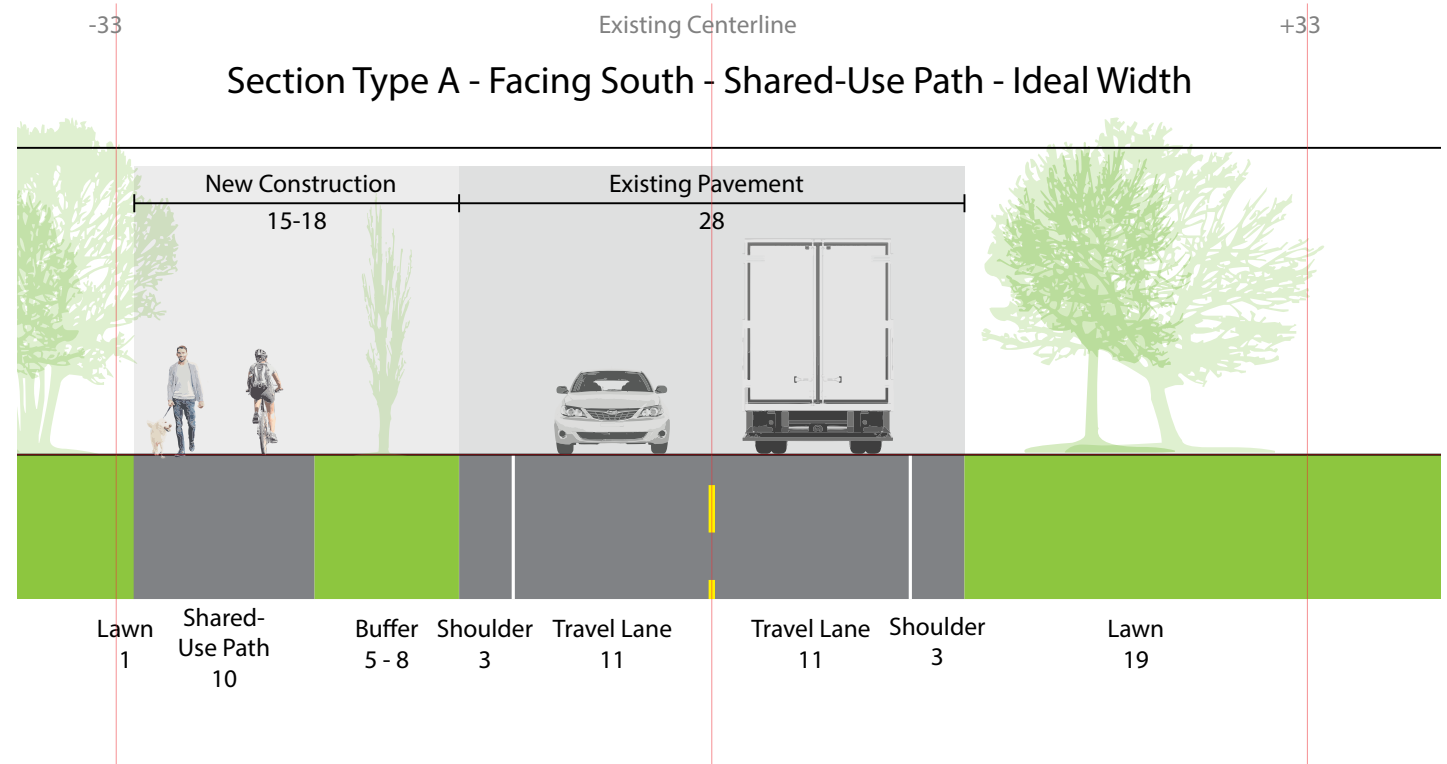
The alternatives included in this project assume full compliance with VTrans clear-zone standards, but section type D and E may be substituted with types F, G, or H if VTrans permits flexibility with lane and shoulder-width standards or if the Town pursues a Class I highway conversion.



Design Alternatives: Photo Simulations



Proposed Conditions



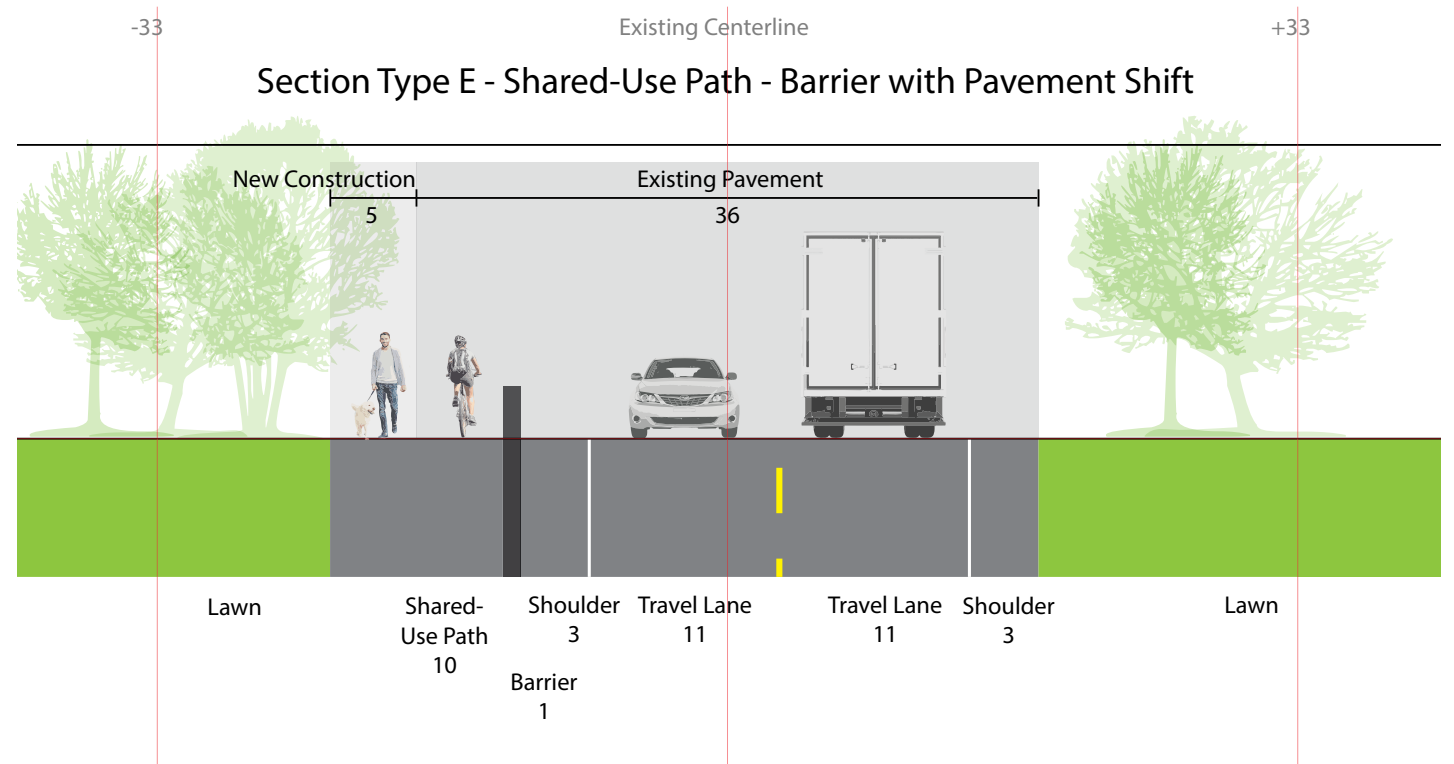
Existing Conditions



Proposed Conditions



Existing Conditions



Design Alternatives: East Pathway

Section Type	Description
A / I	Standard with buffer
B / C	Barrier or Curb
D / E	Barrier or curb with shift
F / G	Non-compliant with VTrans Standards
North Rd	Separate discussion





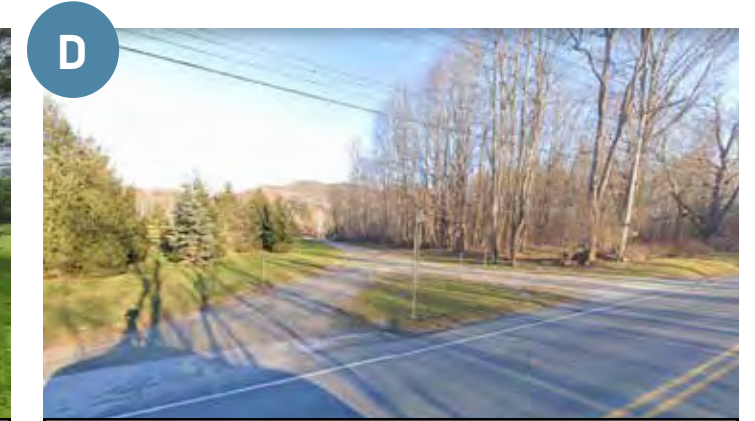
Move fence ~3 feet and restore yard.



Use curb instead of barriers to reduce visual impact in front of H N Williams



Shift pavement and centerline 5 ft to avoid steep slope and trees on east side. OR: if property owner is supportive, acquire easement, remove 11 trees and re-grade slope.



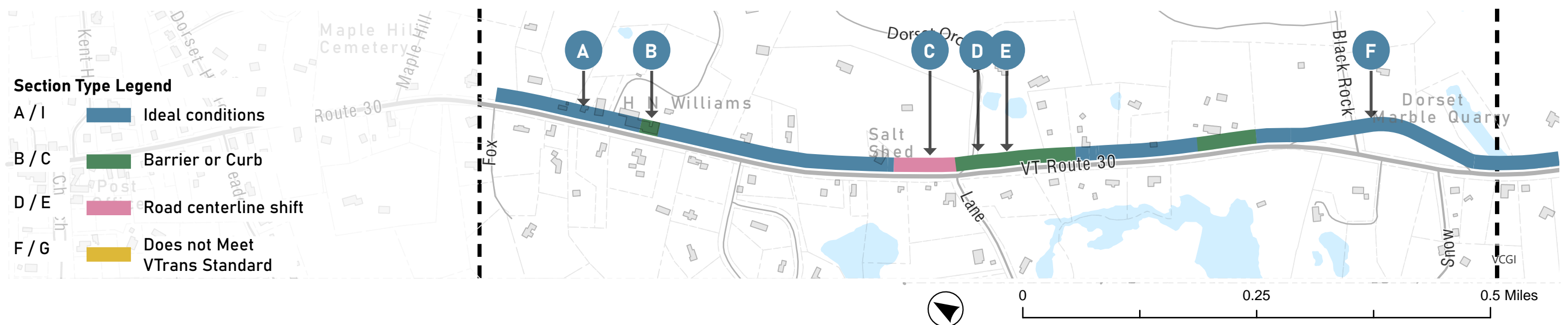
Simplify Dorset Orchard intersection



Existing road is not centered within right-of-way due to slopes on the west side. Build path to right-of-way edge without barrier but no grass buffer.



If private property owners are supportive, use old Kelly Rd alignment for separated path with easement. OR - path along Rt 30.





G
Use Town-Owned parcel and locate path outside of VT-30 Right-of-way for increased separation from traffic.



H
If property owner is supportive, acquire easement behind stone wall for pathway through picnic area. OR - Move stone wall, modify drainage swale and locate pathway beside roadway.



I
Shift pavement and centerline 7 ft to avoid stone walls and houses on east side while minimizing impacts to west side.



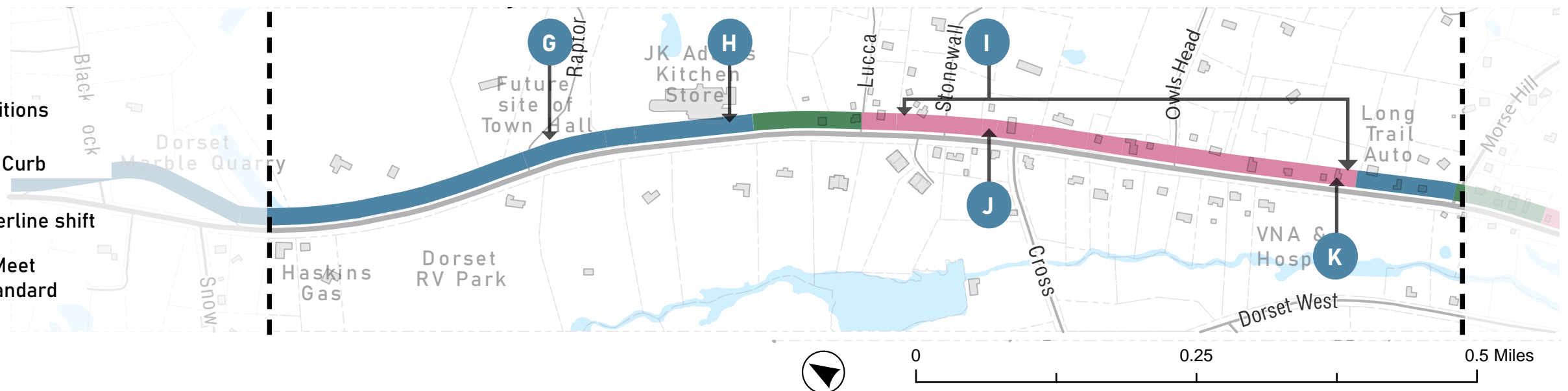
J
Remove or relocate ~70 ft of stone wall at 1148 VT-30 (Misai & Misai) currently located within 2 ft of pavement edge



K
Relocate fences at 860 and 862 VT-30

Section Type Legend

- A / I Ideal conditions
- B / C Barrier or Curb
- D / E Road centerline shift
- F / G Does not Meet VTrans Standard



L



Existing pavement widens from here to the south. Shift lines on existing pavement to re-allocate extra space for pathway on east side. Widen as necessary. Trees will be impacted, particularly outside of 612 VT-30.

M



Avoid changes to causeway or stream crossing.

N



Shift centerline to reduce slope impacts and minimize regrading of driveway.

O



Shift centerline by 5 ft to avoid private garage structure.

P



Shift centerline by 3 ft to reduce slope impacts on east side while avoiding stone wall on west side. Re-grading of driveway and retaining wall may be needed.

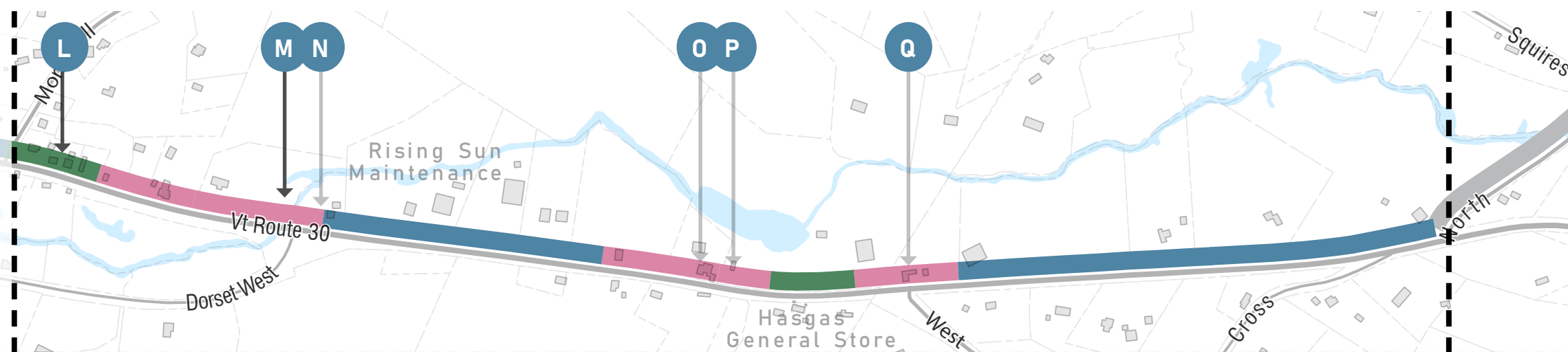
Q



Shift centerline to avoid private house.

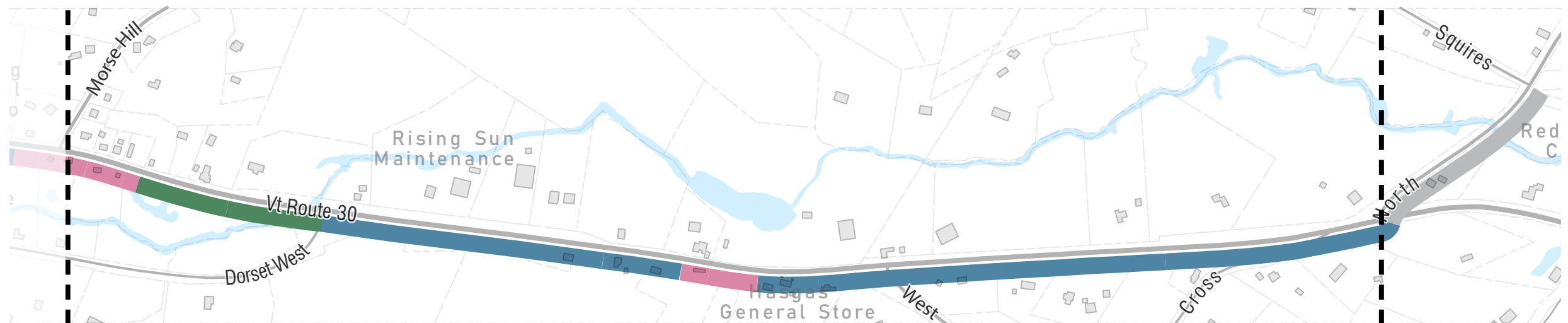
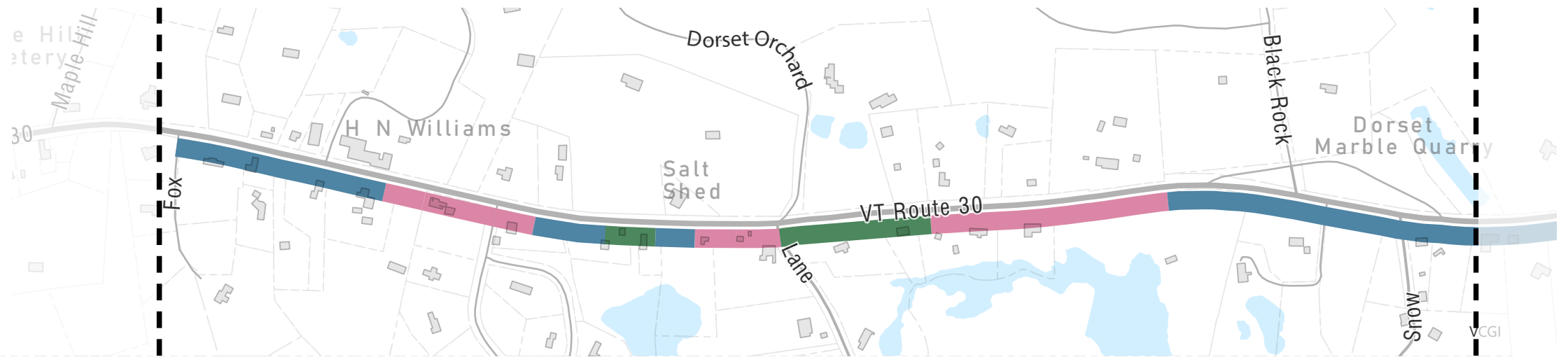
Section Type Legend

- A / I Ideal conditions
- B / C Barrier or Curb
- D / E Road centerline shift
- F / G Does not Meet VTrans Standard
- North Rd Separate discussion



Design Alternatives: West Pathway

Section Type	Description
A / I	Standard with buffer
B / C	Barrier or Curb
D / E	Barrier or curb with shift
F / G	Non-compliant with VTrans Standards
North Rd	Separate discussion





A
Move fence ~3 feet and restore yard.



B
Shift centerline east by 3 ft to avoid private property impacts.



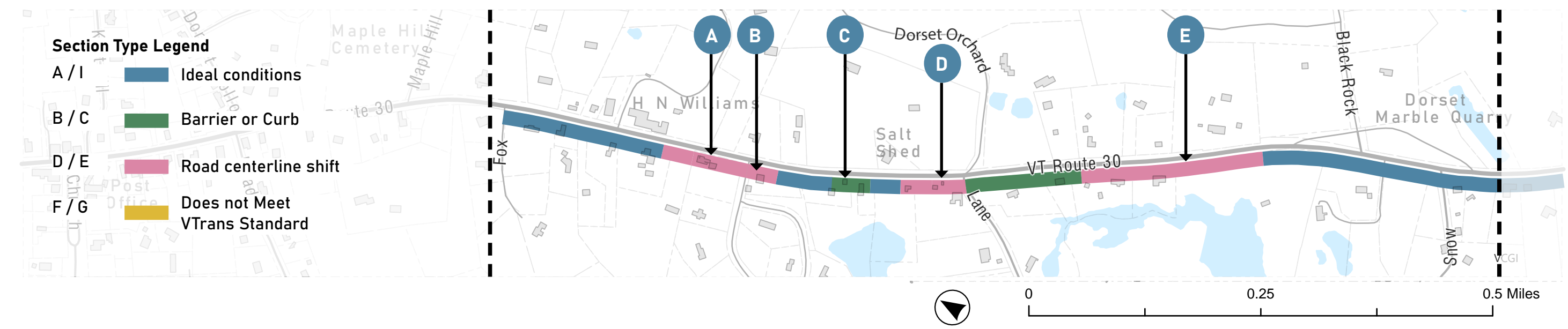
C
Remove grove of trees and re-grade slopes.



D
Pathway will be within 11 feet of garage structure



E
Significant fill necessary due to slope on west side. Some retaining wall may be necessary.





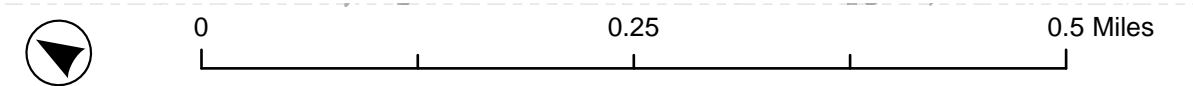
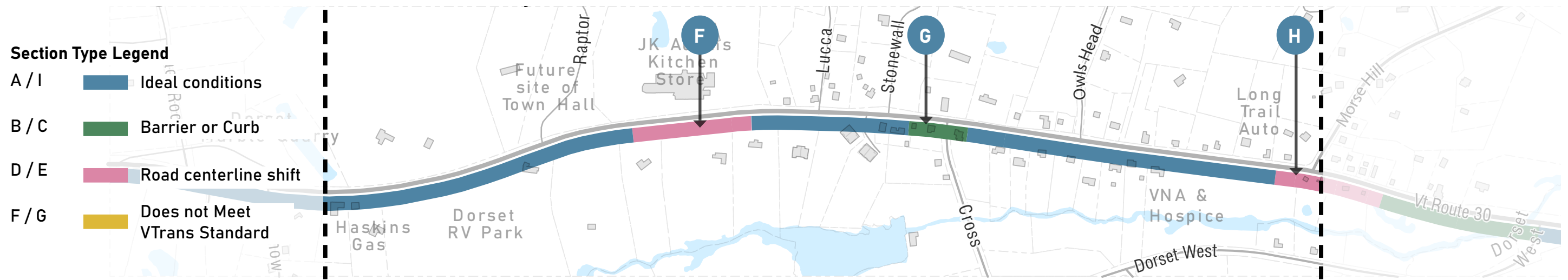
Shift centerline 6 ft to avoid impacts to stone wall on west side

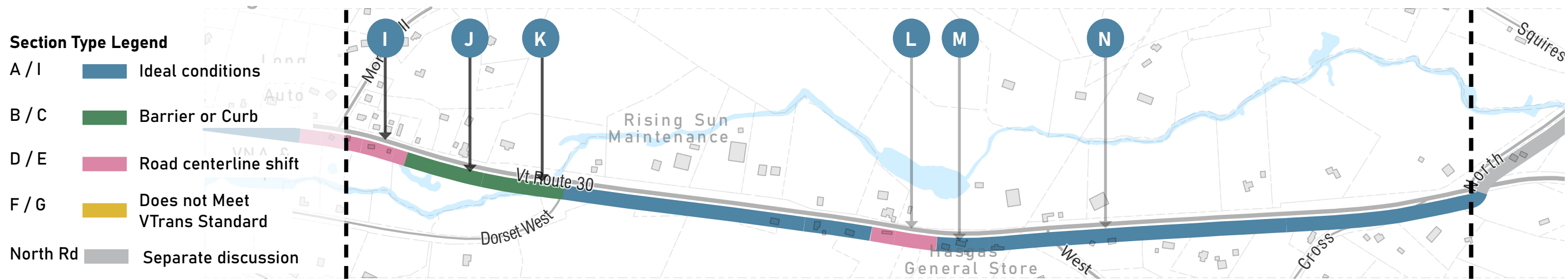


Use curbed instead of barrier to reduce visual impact in front of houses

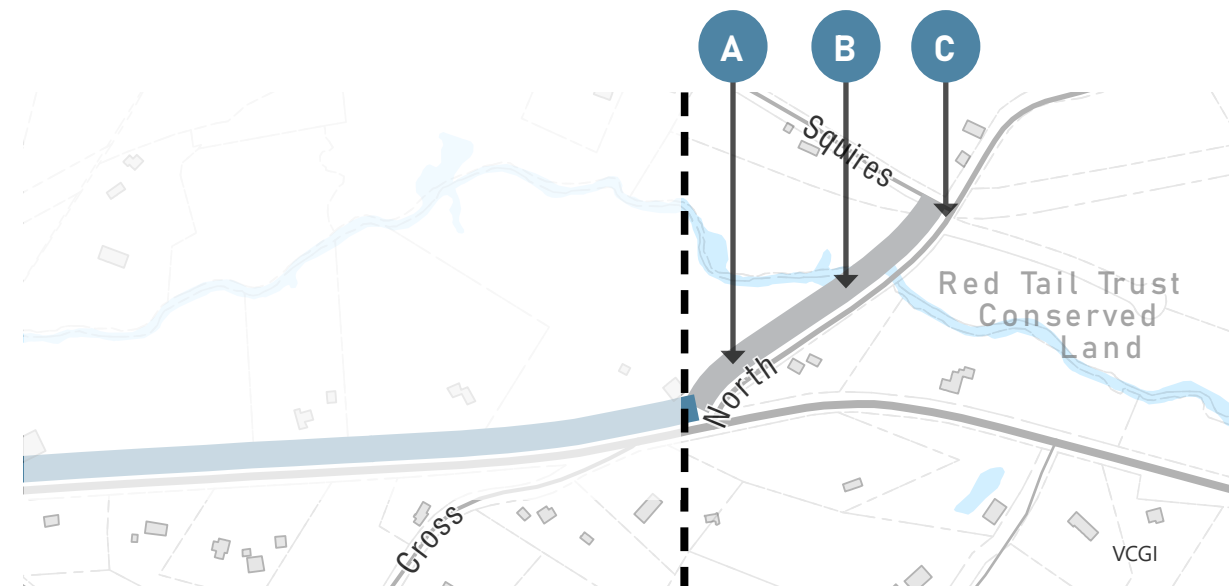
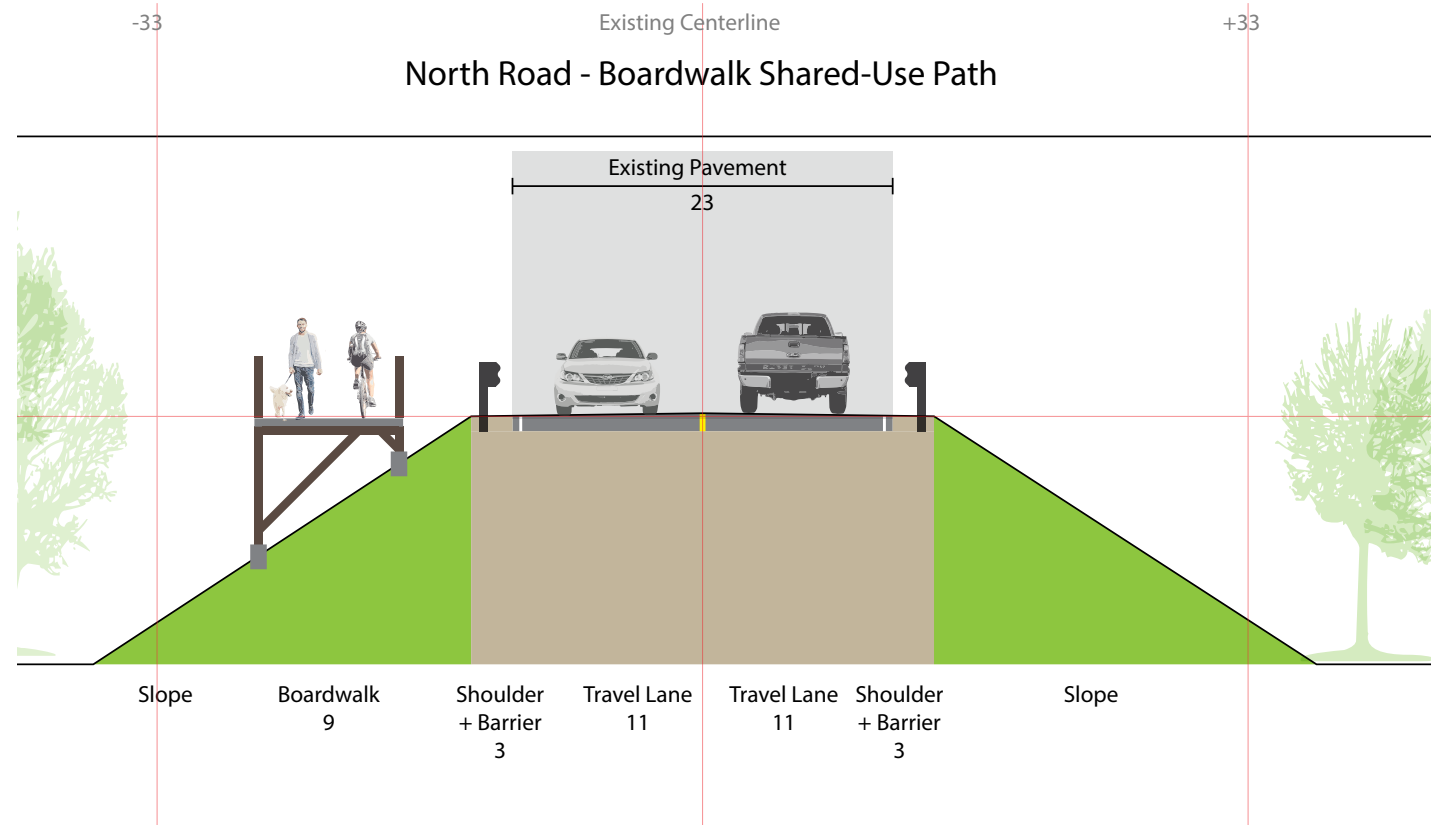
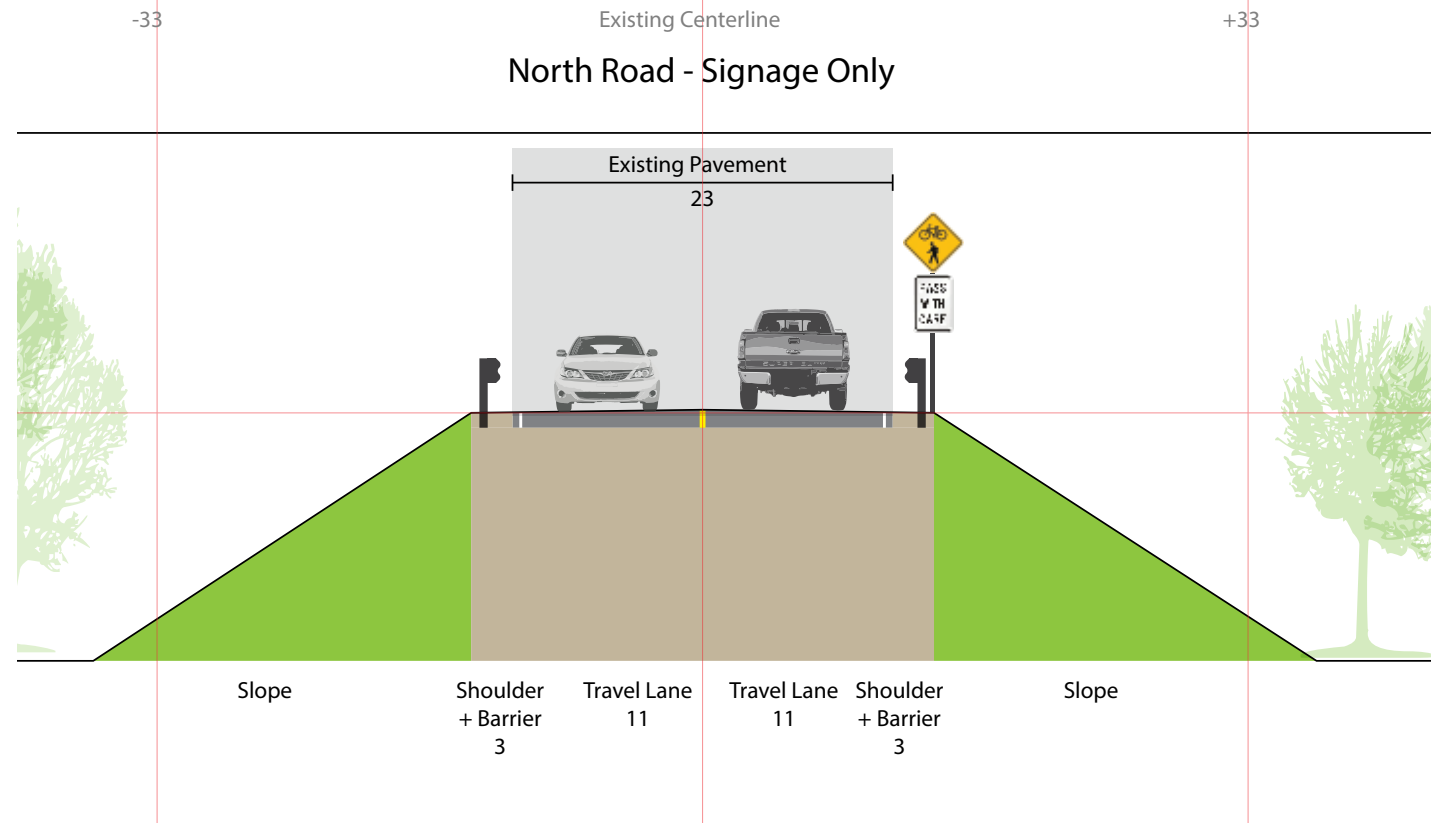


Shift centerline by 11 ft to avoid impacts to private driveway





Design Alternatives: North Road



Design Alternatives: Bike Lanes

Design Principles - Bike Lanes

1. Maintain 5' path and 2' buffer where possible
2. Shift centerline and add pavement on one side where necessary
3. Reduce motor vehicle travel lane width to 10' where required .
4. Remove buffer space if necessary- but restore 11' travel lanes

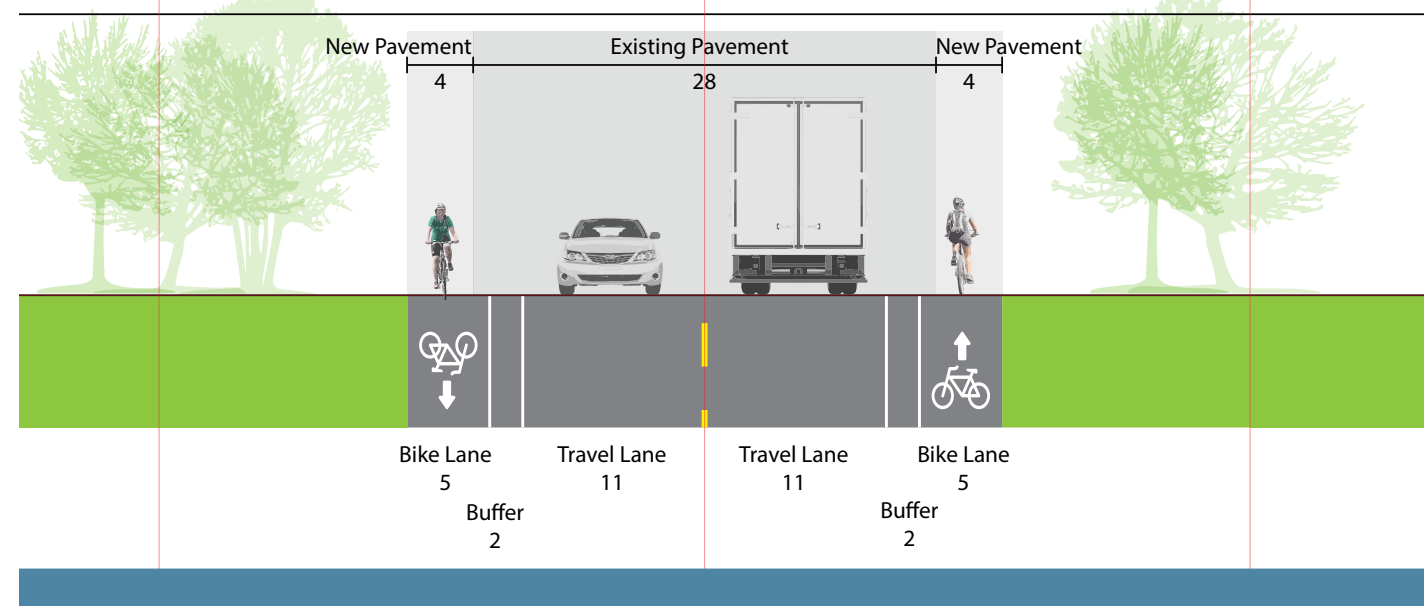
Least Constrained

Most Constrained



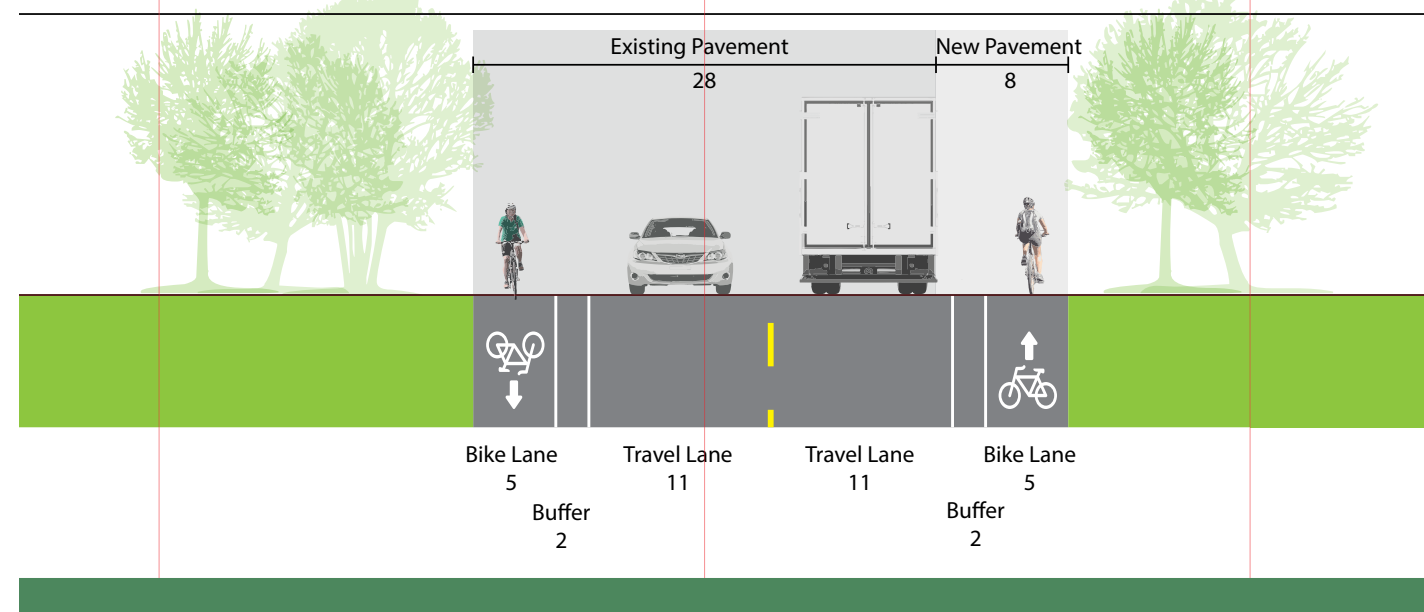
-33 Existing Centerline +33

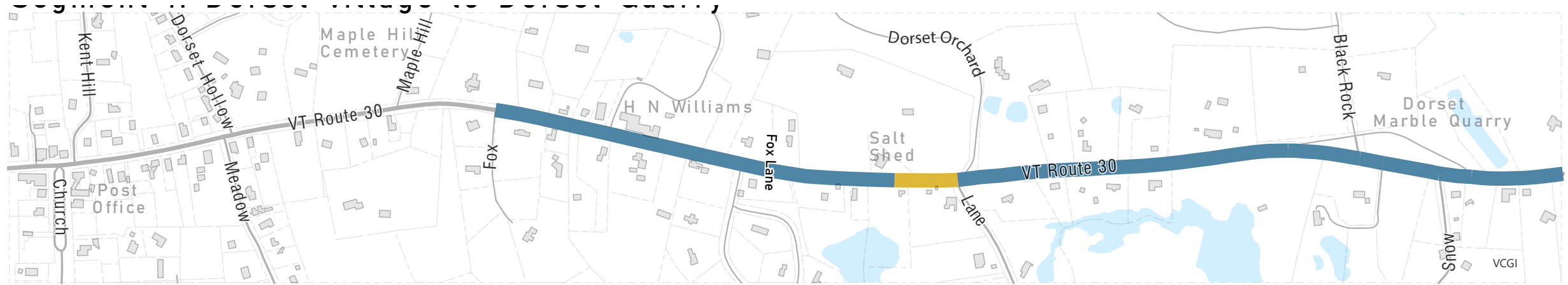
Section Type A - Buffered Bike Lane - Centered (widened pavement on both sides)



-33 Existing Centerline +33

Section Type B - Facing South - Buffered Bike Lane - Pavement Shift (All new asphalt pavement added to one side)





Segment 2: Dorset Quarry to Morse Hill Road



Segment 3: Morse Hill Road to North Road



Section Type	Description
A	Buffered Bike Lane
B	Non-Buffered Bike Lane

THANK YOU!
QUESTIONS / COMMENTS?

PLEASE TAKE OUR SURVEY
(OPENS FEBRUARY 22)

