Richmond **Cochran Road Corridor Study**

MONDAY, FEBRUARY 10, 2025

7:00 PM



CHITTENDEN COUNTY RPC Communities Planning Together

Project Team





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Agenda

- Project Context
- Project Goals
- Local Concerns Meeting Recap
- Purpose and Need Statement
- Draft Improvements
 - Richmond, Jonesville concepts
 - Cochran Road
- Next Steps



Project Context – Cochran Road

- Scoping Study for the two 25mph village segments; Richmond, Jonesville.
- Feasibility Study for the 45mph middle section; build on the recommendations and alternatives presented in the Town of Richmond Bike, Walk, and Trails Plan.
- Traffic Calming review the recently installed traffic calming measures and recommend supplemental devices, if needed.





Project Goals

- 1. Village segments Identify new infrastructure such as sidewalks that can be incorporated
- 2. Corridor segment Identify specific on-road and off-road improvements and multi-modal strategies that address safety, capacity and connectivity for pedestrians and cyclists
- 3. Evaluate the traffic calming measures and recommend additional solutions or devices.





Local Concerns Meeting- Recap

LCM meeting was held on April 9, 2024. Concerns included:

- •Unsafe conditions for all road users
 - The road is narrow and has no shoulders, sidewalks
 - Cars speed and there is limited sight distance
- •Limited parking at trails and other recreation sites
- •Potential flood plain issues
- •*Right-of-Way constraints*
- •Village areas lack sidewalks and parking



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Purpose and Need Statement

Purpose. The purpose of this project is to develop and identify a recommended alternative for Cochran Road that improves safety, comfort, and mobility for non-motorized users along the corridor and to expand access to recreational sites.

Need. Cochran Road is considered deficient based on the narrow roadway width, vehicle speeds, and alignment. The roadway has two travel lanes with no shoulders or sidewalks. The numerous recreational uses attract a variety of motorized and non-motorized users; however, residents are concerned about high traffic speeds, lack of space for pedestrians and cyclists, and limited parking at the recreational sites along the corridor.





Study Area

Project Limits:

- A. Richmond Village
- B. Jonesville Community
- C. Cochran Rd corridor ~2.5 miles





Richmond Village Concepts





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Richmond Village

Concept ideas:

- 1. Improve Pedestrian Safety and connectivity within the Village
- 2. Provide sidewalk on both sides of the road to reinforce village environment
- 3. Consider curb extensions and a crosswalk at Round Church Rd for structure
- 4. Continue sidewalk to Preston Forest Trail at the cemetery for recreation
- 5. Maintain current traffic calming elements (humps, signs, etc.)



SPEED HUMP

-COCHRANIRD-

SPEED FEEDBACK SIGN







* Cochran Road layout is 3 rods (49.5 ft) and should have about 13 ft. available on each side for sidewalks.

Table 4-3. Minimum recommended dimensions for sidewalks

Volume And User Mix	Frontage Zone	Pedestrian Through Zone	Furnishing Zone	Total Width
Constrained Minimum	1 <mark>ft (</mark> 0.3 m)	5 ft (1.2 m)	2 ft (0.6 m)	8 ft <mark>(2.4 m)</mark>
Recommended Minimum	2 ft <mark>(</mark> 0.6 m)	6 ft (1.5 m)	4 ft (1.2 m)	12 ft (3.6 m)

Improvement Options:

- 1. Sidewalk with granite curb on north side (2,350 ft) to Trail and cemetery parking
- 2. Sidewalk with granite curb on south side (700 ft) shorter due to ledge/rock
- 3. Signs & Markings for safety – alert road users of bikes

Potential Impacts:

 Utilities poles, grading, drainage, Ledge, rock, trees



Richmond Village

Challenges:

- 1. Widening for a sidewalk or separated path on the south side would be costly due to ledge/rock outcroppings
- 2. Potential utility pole relocations



Cost Methodology

- 1. Report on Shared-Use Path and Sidewalk Costs 2020 as reference
- 2. Estimated units of each alternative
- 3. Estimated total costs for preferred alternatives
- 4. Price escalation to 2025 is not included at this time

Note: The estimated total costs for this study are intended for high-level planning purposes only and do not represent a detailed project cost estimate. Factors such as extreme topographic conditions, structures (bridges, retaining walls, tunnels), and other site-specific conditions may lead to increased construction expenses.



Report on Shared-Use Path and Sidewalk Costs

January 2020





Produced by the VTrans Bicycle and Pedestrian Program

For further information or questions, contact Jon Kaplan at (802) 498-4742 or <u>jon.kaplan@vermont.gov</u>

The information in this report should be used for planning or verification purposes only and is not intended to substitute for "good engineering judgment" and detailed project cost estimates.

Vermont Agency of Transportation

Richmond Options Menu: Preliminary Estimated Cost

Alternatives	Cost Per Unit	Estimated Distance	Total Cost
1. Sidewalk on North Side	\$317/foot	Sidewalk: 2350 FT	\$745,000
2. Sidewalk on South Side	\$317/foot	Sidewalk: 700 FT (shorter due to Ledge/Rock)	\$225,00
3. Signs & Markings for safety	Crosswalk Markings: \$14/ LF	Crosswalk Markings: 50 FT & misc. Traffic Signs	\$10,000
4. Other; Ledge/rock, utility conflicts, misc.		Estimated at 5% of sidewalk cost	\$50,000
5. Grading & Drainage		Estimated at 15% of sidewalk cost	\$150,000
Design Engineering & Surveying		Engineering at 10%	\$100,000
		TOTAL	\$1,280,000
Source for per foot cost: 2020 VTrans Bicycle and Pedestrian Program Unit Cost Report and no price escalation has been included.			

Note: Estimated cost does not include any required permits and easements.

Jonesville Community Concepts







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<u>Jonesville</u> <u>Community</u>

Concept ideas:

- 1. Improve Pedestrian Safety and connectivity within the Village
- 2. Provide sidewalk on both sides of the road to reinforce village environment
- 3. Consider intersection treatments for traffic calming & safety. Potential curb extensions; Dugway & Wes White Hill
- 4. Consider additional street parking near the meadow and the river for recreational access
- 5. Maintain current traffic calming elements (humps, signs, etc.)







Improvement Options:

- 1. Sidewalk with granite curb on north side (1500 ft)
- 2. Sidewalk with granite curb on south side (1750 ft)
- 3. Signs & Markings for safety – alert road users of bikes
- 4. Gravel Parking

Potential Impacts:

- Utilities poles
- •Grading/drainage
- ■*Trees*



Jonesville Options Menu: Preliminary Estimated Cost

Alternatives	Cost Per Unit	Estimated Distance	Total Cost
1. Sidewalk on North Side	\$317/foot	Sidewalk: 1500 FT	\$475,500
2. Sidewalk on South Side	\$317/foot	Sidewalk: 1750 FT	\$555,000
3. Signs & Markings for safety	Crosswalk Markings: \$14/ LF	Crosswalk Markings: 75 FT Traffic Signs	\$10,000
4. Gravel parking spaces		Estimated at \$3,000 each	\$6,000
5. Grading & Drainage		Estimated at 15% of sidewalk cost	\$155,000
Design Engineering & Surveying		Engineering at 10%	\$103,000
		TOTAL	\$1,304,500
Source for per foot cost: 2020 VTrans Bicycle and Pedestrian Program Unit Cost Report and no price escalation has been included.			

Note: Estimated cost does not include any required permits and easements.

Cochran Road – Feasibility Study



- Length: ~2.5 miles
- Classification: Minor Collector
- Right of way: +/- 49.5 feet (3 Rods)
- Pavement width: +/- 22-24 feet
- Lane width: +/- 11 feet (9/2)
- ADT (May-June 2023):
 - Daily total 2,700 vehicles per day
- ■Speed limit 25/45/25 mph
- Truck Route (24,000-pound limit)



Cochran Road

Concept ideas:

- 1. Improve Pedestrian and Bicycle Safety and mobility along the roadway
- 2. Provide connectivity between village centers
- 3. Provide access to recreational areas such as Overocker Park and the Winooski river, ski area, etc.
- 4. Allow for healthy transportation alternatives



Cochran Road

Challenges:

- **1.** Steep uphill grades on Mountain side (south side)
- 2. 45 MPH speed limit
- 3. Roadway curves and limited sight distance
- 4. Ledge outcroppings



Cochran Road

Challenges Cont'd:

- **1.** Steep downgrades on River side (north side)
- **2.** Floodplain concerns

Improvement Options:

- 1. Paved Shoulder Concept
- 2. Warning & Advisory Signs and Markings



Paved Shoulder Concept

- 1. Expands current ~22 ft Roadway
- 2. Adds a 6 ft Paved Shoulder to each side
- 3. Improves Pedestrian & Bicycle Safety





Functional classification	Volume (AADT)	Speed (Mi/h)	Recommended Minimum Paved Shoulder Width
Minor Collector	up to 1,100	35 (55 km/h)	5 ft (1.5 m)
Major Collector	up to 2,600	45 (70 km/h)	6.5 ft (2.0 m)
Minor Arterial	up to 6,000	55 (90 km/h)	7 ft (2.1 m)
Principal Arterial	up to 8,500	65 (100 km/h)	8 ft (2.4 m)





Cochran Road Options Menu: Preliminary Estimated Cost

Alternatives	Cost Per Unit	Estimated Distance	Total Cost
1. Paved Shoulder on North Side	\$510,000/mile	Shoulder: 1.0 mile (limited by grades drops)	\$ 510,000
2. Paved Shoulder on South Side	\$510,000/mile	Shoulder: 2.5 mile	\$1,275,000
3. Pavement Markings & traffic signs for safety	\$3.25/foot \$500/each	Pavement markings, Traffic Signs & symbols	\$85,800 \$10,000
4. Gravel parking spaces along the road		Estimated at \$3,000 each Say 8 spots	\$24,000
5. Grading & Drainage		Estimated at 15% of paved shoulder cost	\$267,750
Design Engineering & Surveying		Engineering at 10%	\$300,000
		TOTAL	\$2,472,550
Source for per foot cost: 2020 VTrans Bicycle and Pedestrian Program Unit			

Source for per foot cost: 2020 VTrans Bicycle and Pedestrian Program Unit Cost Report and no price escalation has been included. Note: Estimated cost does not include any required permits and easements.

Vtrans Cost/Foot Examples

Table 1 – 5 ft. Wide Sidewalk Unit Costs

Curb/Walk Configuration	Basic Cost/Foot	Total Cost/Foot
Concrete Walk w/No Curb	\$63	\$184
Concrete Walk w/Granite Curb	\$109	\$317
Concrete Walk w/Concrete Curb	\$95	\$277
Bituminous Walk w/No Curb	\$33	\$94
Bituminous Walk w/Granite Curb	\$78	\$227
Bituminous Walk w/Concrete Curb	\$64	\$187
Aggregate Walk w/No Curb	\$28	\$68
Aggregate Walk w/Granite Curb	\$74	\$214
Aggregate Walk w/Concrete Curb	\$60	\$175

The "total" cost reflects the combined cost of sidewalk construction with other costs that are incidental to the construction. For example, pavement markings, new signs, traffic control, contractor mobilization, drainage, and landscaping are included in the total costs.

Table 2 – Shared Use Path Unit Costs

Shared Use Path Configuration	Basic Cost/Foot	Total Cost/Foot
8 Ft. Wide Bituminous Concrete Path	\$71	\$297
10 Ft. Wide Bituminous Concrete Path	\$82	\$342
12 Ft. Wide Bituminous Concrete Path	\$92	\$384
8 Ft. Wide Aggregate Surface Path	\$64	\$267
10 Ft. Wide Aggregate Surface Path	\$72	\$301
12 Ft. Wide Aggregate Surface Path	\$80	\$334

Pavement markings, new signs, traffic control, drainage, and landscaping are included in the total costs



Report on Shared-Use Path and Sidewalk Costs

January 2020



Produced by the VTrans Bicycle and Pedestrian Program

For further information or questions, contact Jon Kaplan at (802) 498-4742 or <u>jon.kaplan@vermont.gov</u>

Vermont Agency of Transportation



Next Steps – how to stay involved

Project Introduction – March 26, 2024 Task 1. Local Concerns Meeting – April 9 Task 2. Village Scoping Study – (Oct – Jan) Public Meeting – Feb 2025 (this meeting) Task 3. Traffic Calming Priorities (April) Task 4. Cochran Road Feasibility Study – (April – May) Task 5. Study Recommendations (June 2025)



Contact Us!



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