

Introduction

Vision and Mission for Transportation in the Region

We envision a transportation system that promotes the economy by effectively moving people and commerce, safely supports all modes of travel, promotes energy efficiency and conservation, enhances regional land uses and the Region's sense of place, exhibits resilience to natural hazards, and receives sufficient funding to conduct timely, cost effective maintenance and growth or adaptation to meet the Region's emerging and future needs.

Overall Purpose of the Plan

The Plan identifies goals, policies and recommendations that will develop a more sustainable, efficient, and equitable transportation system. To achieve this, the Plan sets forth a long-range agenda for the development and improvement of the regional transportation system, in all its parts. A regional planning effort helps to ensure a consistent, coordinated, and proactive response among all twenty-one of our member towns, the State of Vermont, and the various other providers of transportation services. Regional transportation planning promotes transportation as a complete system. That system implements the vision and mission noted above through the Goals, Policies, and Recommendations contained throughout the Plan.

This chapter is intended to be used for, but not limited to, the following purposes:

- To provide useful information regarding the condition of the existing regional transportation system to local and regional decision makers;
- To express the Region's transportation planning concerns and priorities at the State and local levels;
- To guide public investment in transportation infrastructure within the Region;
- To be consistent with state planning goals (24 V.S.A., Chapter 117 §4302);
- To implement the Transportation Planning Initiative and fulfill the duties of regional planning commissions in accordance with 19 V.S.A., Chapter 1 §101(b);
- To serve as a basis for evaluating transportation programs and projects that impact the Region;
- To guide project prioritization in the VTrans Project Selection and Project Prioritization (VPSP2) process;
- To serve as the foundation for the RPC's annual transportation work plan; and,
- To implement the state's energy planning goals under 10 V.S.A. §§ 578(a) and 580.

This Regional Plan contains goals, policies and recommendations for action. The goals and policies frame a condition which the Plan seeks to achieve and how to reach that condition. The recommendations for action implement the policies to reach the Region's goals. Each section of this Plan includes recommended actions which should be taken to implement the plan, who is responsible for implementation and a rough time frame for implementation. The timeframe has five categories:

- **ASAP** – The recommendation for action should be implemented as soon as feasibly possible by the responsible party. These recommendations usually reflect an urgent need.

- **Short Term** – The responsible party should implement the recommendation for action within 1-5 years of the adoption of this Plan.
- **Mid-Term** – Mid-term recommendations for action should be implemented within 5-10 years of the adoption of this Plan. Recommendations of this nature often require specific funding that will need to be acquired before implementation, have multiple steps that must be taken to reach implementation, or require substantial public process.
- **Long-Term** – Recommendations for action that are important to this plan, but may take extensive effort and substantial shifts in policy at multiple levels of government, are viewed as long-term. Implementation of these action items may take longer than the eight-year life of this Plan.
- **Ongoing** – Some of the recommendations for actions contained in this Transportation Plan represent the day-to-day work of ACRPC and our municipalities. By designating these action items as ongoing, the Regional Plan acknowledges that these items need consistent actions to further the goals of the Plan and the State of Vermont.

The recommendations contained within this document, while extensive, do not constitute a complete and final listing of the Region's transportation needs over the lifespan of this document. Rather, it is a living, working document.

Transportation Advisory Committee (TAC)

The Transportation Advisory Committee provides local input and involvement in the transportation planning process. The TAC is composed of delegates from the region's 21 municipalities. Each municipality may have a delegate and an alternate. Alternates represent the municipality when the delegates cannot.

The TAC is responsible for updating the Regional Transportation Plan, recommending transportation-related planning studies and projects in the region, and commenting on transportation policy. The TAC also is responsible for establishing local priority for capital program projects that are in the project development process. Each year the TAC solicits input on local and regional transportation or traffic-related issues and problems. The TAC works with regional planning commission staff, VTrans, and other agencies and officials to provide local input into the statewide transportation planning and project development process.

Long and Short Range Planning

Regional Plans expire after eight years. However, Regional Commissions must look beyond that short timeframe and consider how the region may change in the next 10, 20, even 30 years. This Plan takes two approaches. First (short-range planning) looks at the current transportation system and determines how to maintain it to serve the needs of the Region in the near term – the next 10-15 years. The second (long-range planning) looks at population trends, state and national policy, environmental changes, etc., and considers how the transportation system may need to be adapted to accommodate these changes in the more distant (15-30 years) future. In this plan, short term planning focuses largely on maintaining transportation corridors with a focus on roads and bridges. Long term planning focuses more on alternative modes of transportation, electrifying the vehicle fleet and energy conservation.

The State of Vermont has set very significant goals to reduce greenhouse gasses and overall energy use. These goals reach as far into the future as 2050. Working toward the state's emissions/energy goals will not have a significant impact on the region in the near term; however, meeting the final targets by 2050

will dramatically change the system. To reach the targets, almost 90% of all vehicles will need to be powered by electricity. Additionally, the Region's pattern of land use and related travel will need to change to reduce daily trips. This plan seeks to balance the immediate short-range needs of the transportation system, with long-range planning goals.

The Regional Transportation Goals are intended to be universal and address both short and long-term goals. The portion of this Plan entitled the "Regional Transportation System" focuses on existing conditions. It includes recommendations for transportation infrastructure and modes of transportation for the near term. The portion of this Plan entitled, "Issues & Opportunities" considers planning for the transportation system of the future. It includes ACRPC's planning process, the intersection of transportation and energy planning; the intersection of transportation and land use planning and the intersection of transportation and natural resource planning. It also includes broader policy recommendations regarding each of those opportunities.

Regional Transportation Goals

The following goals support the vision and mission described above.

1. *Promotes the Economy.* The primary purpose of the transportation system is to facilitate the movement of people, goods and services. Transportation networks serve the local, regional and the statewide economies. In some cases, these different levels will have different needs and uses of the transportation system. For example, bicycling on Addison County's scenic rural roads contributes to the local economy, as does large scale agriculture and trucking. Sharing the road between these two uses can be problematic. The policies in this Plan must balance the needs of the larger-statewide transportation system and its value to the economy with the needs of the Region and its municipalities. The impacts of transportation, both positive and negative, on the local economy must be considered in regional transportation planning.
2. *Safely supports all modes of travel:* Addison County's Transportation infrastructure should receive timely preventative maintenance and selected reconstruction of substandard elements in order to keep functioning safely and efficiently for residents, businesses and travelers using all modes of travel. Sections of several of the Region's roadway corridors experience conditions that strain their carrying capacity. Examples of strains include the burdens of many heavy trucks passing through downtowns on a daily basis; high volumes of commuter traffic on local roads challenging the ability of local residents to walk or bike safely; and heavy agricultural trucks and equipment damaging local roads.
3. *Promotes energy efficiency and conservation:* This plan encourages incremental and systematic changes to the Region's transportation infrastructure and practices to reduce transportation energy use and reduce greenhouse gas (GHG) emissions region-wide. Transportation contributes about 37.2 % of greenhouse gasses in Vermont, by far the largest single source of GHG emissions. This Plan encourages reducing vehicle miles traveled by using alternative transportation modes, and promoting land use patterns and transportation design choices that reduce reliance on single-occupancy vehicles. It also promotes the use of electric vehicles and other technological innovations to reduce greenhouse gas emissions.
4. *Enhances Regional land uses and the Region's sense of place.* The Region's historic communities, buildings and landscapes constitute scenic and cultural resources unique to the Addison Region. All entities responsible for transportation infrastructure should choose and design transportation projects

to enhance the land uses in the project's immediate vicinity. Transportation projects should support historic downtowns and village centers, and the rural, scenic landscapes that define this Region.

5. *Exhibits Resiliency to Natural Hazards:* The Region's transportation infrastructure should be designed, constructed, maintained and improved to survive increased rainfall intensity and flooding severity predicted under future climate change scenarios to preserve the infrastructure's use and promote clean water and functioning ecosystems.
6. *Receives sufficient Funding:* Investments in the Region's transportation infrastructure should position the Region for a more sustainable future in terms of energy utilization, environmental quality, and financial stability. Municipalities and the State should use a life cycle, least-cost approach in the planning and design of infrastructure, which considers the full costs and impacts to residents, municipalities, and state agencies. Investments should focus on achieving an efficient, cost-effective system that reduces energy utilization per trip over time.

The Regional Transportation System

Existing Conditions

The following sections provide a description of the diverse elements that form the Region's transportation system. The Plan divides the system into four different types of infrastructure:

- Air
- Navigable Waterways
- Rail, and
- Roadways

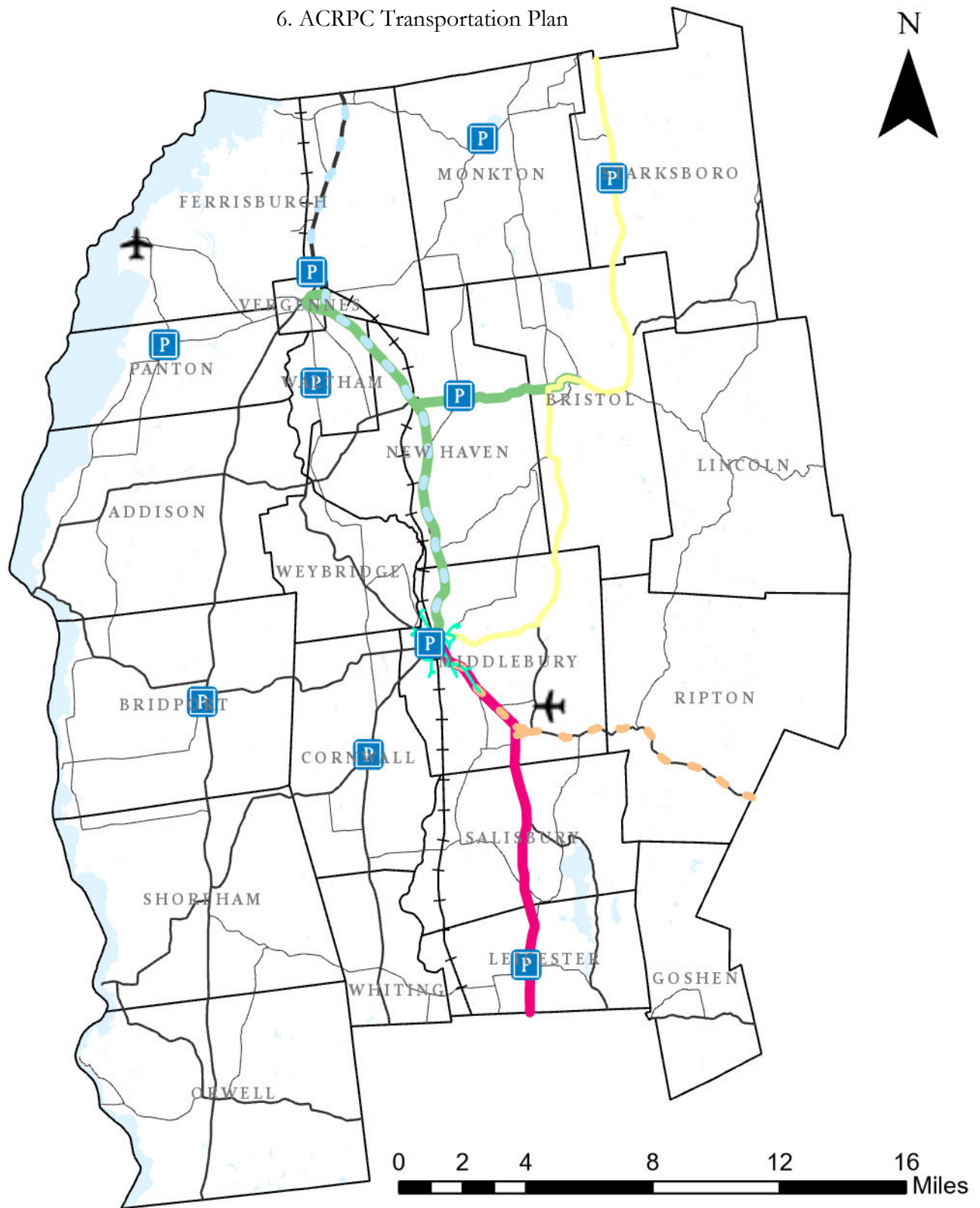
Each section describes the existing conditions of each type of infrastructure. Each includes a description of the infrastructure's condition and use, the challenges or opportunities the infrastructure faces, and makes recommendations to maintain and/or improve the functionality of each type of infrastructure.

This works well for Air, Navigable Waterways and Rail because of their relatively limited use and scope within the Region. However, because roadways are so pervasive and also support many different modes of travel (cars, trucks, buses, bikes, walkers, etc.), this Plan further divides the Roadway Section as follows:

- Roadway network general conditions including:
 - functional classification;
 - traffic volumes;
 - high crash locations;
 - bridge infrastructure;
- Major roadway corridors
- Modes of transportation including:
 - Cars
 - Truck Traffic and Freight
 - Public Transit
 - Ridesharing, Car sharing and Ride hailing
 - Pedestrian and Bicycle Facilities

Figure 1

6. ACRPC Transportation Plan



ACRPC's Air, Railroad, Transit, and Park and Ride Infrastructure

Source(s): Roads, Rail, Airports, and Park & Rides: VTrans.
Tri-Valley Routes: Digitized by ACRPC.

Rail, Air. & Public Transit

Park and Ride

Rail

Private Airport

State Airport

Tri-Valley Transit Routes

Tri-Town Shuttle

Middlebury Shuttle

Snow Bowl Shuttle

116 Commuter

LINK to Burlington

Rutland Connector

Air Transportation

Middlebury State Airport, located just outside Middlebury's town center, is classified as a "local service" facility. Its primary purpose is to serve recreational and personal flying activities to the community – Sixty-six percent (66%) of all flights are made for local aviation purposes. Corporate activities include flight training, storage for aircraft, specialized local travel businesses, and most notably College use. Middlebury College brings a large number of users to the airport, including students, their parents, and other visitors. While the Middlebury State Airport does not have national or international significance, it is an important asset to Middlebury and the Region.

The 2021 Vermont Airport Systems Plan identified a need to add non-precision approach capability, and extend the runway to 5000'. This Plan supports the safe, thoughtful expansion of the airport.

The Basin Harbor Airport is a specialty service facility for single-engine and smaller aircraft (e.g. ultralights and gliders). The airport is open seasonally, closing during the winter. The majority of flights to and from this location are transient general aviation, many of them relating to the Basin Harbor Club's operation (guests, etc.).

Goals

- *Promote the Middlebury Airport to support economic development in the Region*
- *Support infrastructure investment and services necessary to allow the Middlebury Airport to function effectively as a small, regional airport*
- *Thoughtfully implement improvements recommended in the 2021 VT Airport System Plan*

Policies

Air - Recommended Actions:		
Middlebury Airport	Construct additional hangars and parking	
	<i>Responsible:</i> VTrans	<i>Timeframe:</i> mid-term
General	Work with VTrans and Addison County Economic Development (ACEDC) to help recruit new business to use the Middlebury Airport facility	
	<i>Responsible:</i> ACRPC, VTrans, ACEDC	<i>Timeframe:</i> short-term

Navigable Water Transportation

The Addison Region borders Lake Champlain, a large navigable lake. Also, historically, many of the Region's rivers were used for travel corridors. Today however, water transportation is related almost exclusively to recreational uses. The Region's only formal water transport is the Ticonderoga Ferry, which connects Shoreham with Ticonderoga, New York. It was originally established in 1759 and operates seasonally on a cable system. Year round (weather permitting during winter) ferry service is available from nearby Charlotte, via Lake Champlain Ferry, connecting passengers to Essex, NY.

Goals

- *Maintain the Region's access to safe and efficient water transportation for commerce and recreation.*

Policies

- *Encourage continued use of the Ticonderoga Ferry and other ferry services just outside the Region.*
- *Promote the recreational travel aspects of the Region's Rivers and Lake Champlain*

Rail Transportation

The Vermont Rail System provides heavy haul freight rail service to Vermont, New Hampshire, and upstate New York through its five affiliated short lines. Vermont Railway passes through ACRPC member municipalities of Leicester, Salisbury, Middlebury, New Haven, Vergennes and Ferrisburgh parallel to Lake Champlain. This Plan supports opportunities for continued expansion of freight rail through the Region, particularly if rail can reduce truck traffic on the Region's roadways. The 2021 Vermont State Rail Plan (SRP) lauded the improvements that had been made along the Western Corridor including the construction of a new rail tunnel in Middlebury, and called for continuing signal system and track improvements to bring the rail speed up to 79 mph.

Passenger service on Amtrak's Ethan Allen Express extended from Rutland to Burlington in 2022. The line serves Addison County with daily stops north and south in Vergennes/Ferrisburgh and Middlebury. Middlebury constructed a platform to accommodate new passenger service stops. The State also relocated and completed renovations of the historic Vergennes Rail station. The Station now sits on the tracks next to the Vergennes/Ferrisburgh Park and Ride in Ferrisburgh.

Goal

- *Increase passenger, and freight rail services in the Region.*

Policies

- *Improve existing rail infrastructure to broaden rail services and improve safety by working with the Vermont Agency of Transportation to prioritize investments.*
- *Encourage the use of rail freight where practical and economically feasible.*
- *Continue to support the Vermont Western Corridor Transportation Management Plan and its recommendations for improvements.*
http://54.172.27.91/transportation/corridor_studies/western_corridor/

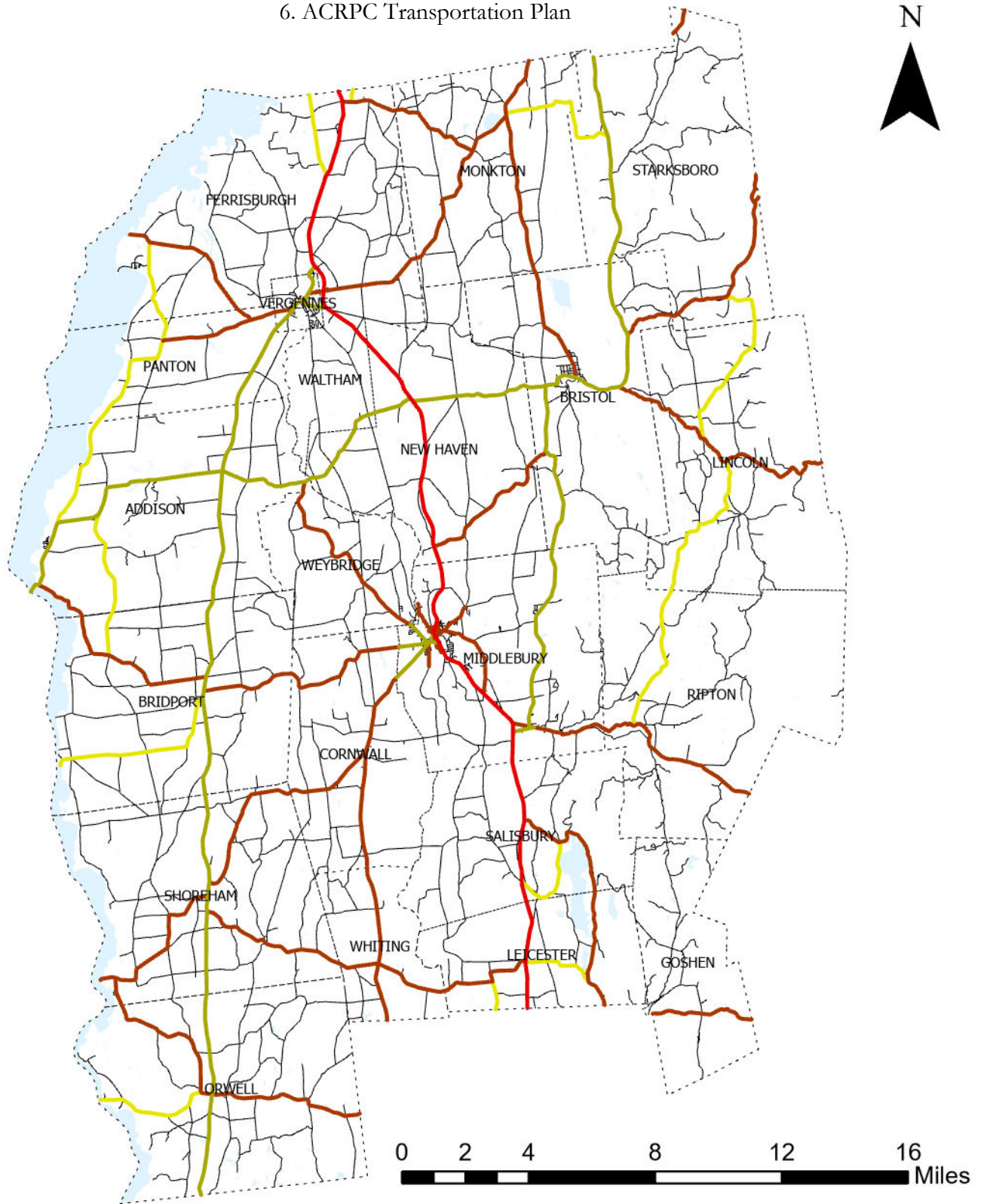
Rail - Recommended Actions:		
General	Implement the signal system and track improvements called for in the 2021 VT State Rail Plan to improve the safety and efficiency of the corridor to serve the Region's economy	
	Responsible: ACRPC, VTrans, towns	Timeframe: short-term

Roadway Network

While the Region's transportation networks are complex and multimodal, the Region's roadway network currently serves as the Region's primary transportation infrastructure. The Region is bracketed by the Green Mountains to the east and Lake Champlain to the west, which means that the primary movement corridors are north/south.

Figure 2

6. ACRPC Transportation Plan



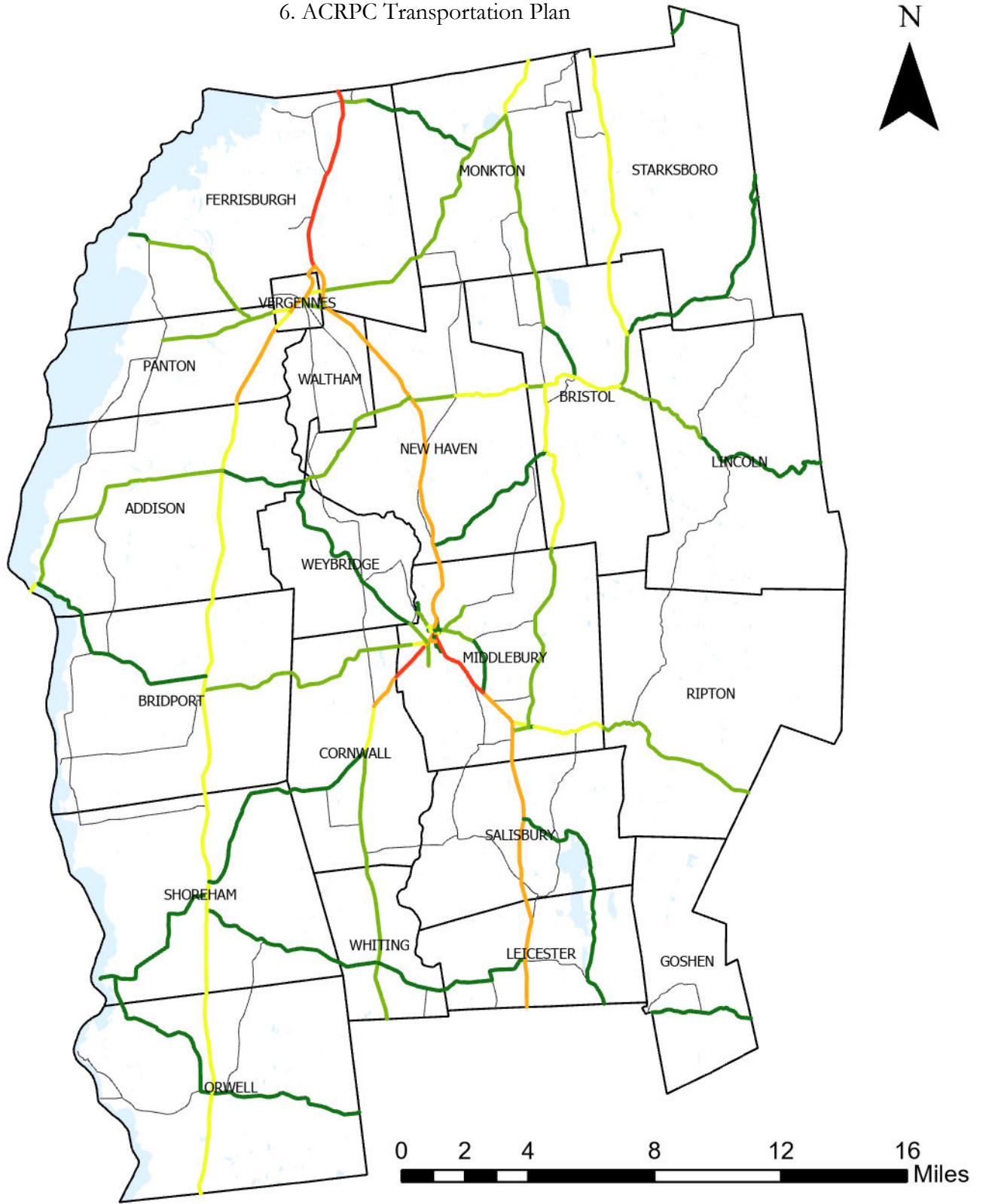
ACRPC's Regional Transportation Plan Functional Classification

Source(s): Roads, and Functional Class: VTrans (2022).

Functional Classification

- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector

Figure 3



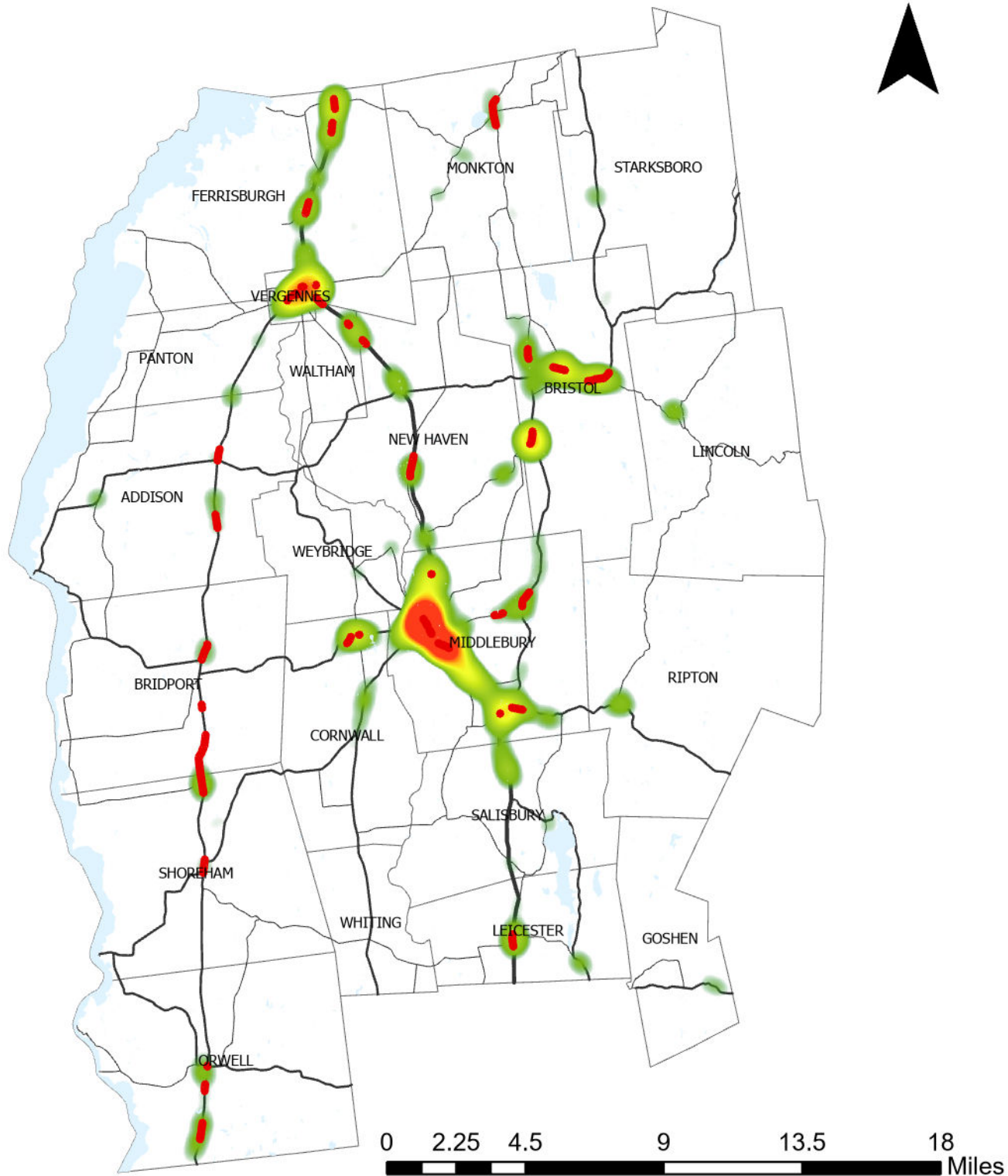
Traffic Volume in ACRPC Region

Source(s): Roads, and Annual Average Daily Traffic: VTrans (2022).

Vehicles per Day (2022)

- Fewer than 1,600
- 1,600-3,200
- 3,200-5,800
- 5,800-9,400
- 9,400-14,600

Figure 4



High Crash Locations

Source(s): Roads & Crash data: VTrans Crash Query Tool (2016-2023).
 High Crash Locations: Digitized by ACRPC using data derived from VTrans
 Crash Query Tool (2016-2023).

— High Crash Locations

Note: This heatmap shows
 the locations of accidents that
 led to either injury or fatality.

The following sections review the primary factors influencing the functionality of the roadway network, including classification systems, traffic volumes, crash and safety data and bridge sufficiency ratings.

Functional Classification

The State of Vermont maintains a system to classify state-owned routes by their highway function with US Route 7 as the highest level of Principal Arterial. While there are no interstate highways in Addison County, Route 7 is the most heavily traveled. Minor arterials are the next highest classification. Vermont Routes 22A, 17, and 116 are in this category. Among these, Route 22A has higher traffic and higher truck volumes than the other two routes. The remaining state highways, plus a number of more significant town highways that serve as key connectors between communities, are classified as “Major Collectors.”

Town-owned major collector routes can disproportionately burden municipalities, as they serve a regional need, but are funded and maintained through municipal budgets. In theory, major collectors are eligible for federal aid, but in practice, as funding is limited, these corridors seldom rise on the priority list for investment. While the state’s functional classification system does not always match the local or regional perception of a road, it can affect both funding and state priorities.

Traffic volumes: Historic Trends and Future Projections

The traffic volumes on the region’s roadways generally follow the patterns of the functional classification system, with the highest volumes found on the US Route 7 corridor. The highest traffic in the Region is in Middlebury, where the combination of local trips and through traffic on US Route 7 result in traffic congestion during peak hours. Volumes are also high on the northern end of US Route 7 as it enters Chittenden County, collecting commuters from Addison County. Route 22A through downtown Vergennes and Route 116 through downtown Bristol sometimes experience congestion as these routes serve both local and through-traffic. In the region’s smaller communities, congestion is primarily associated with school drop-off times.

Traffic volume trends in the region vary considerably, with some corridors seeing traffic growth, others are stable, and some are even declining. More detail on trends is presented later in the corridor sections.

Safety and Crashes

Crash data collected by the Vermont State Police and reported to the Vermont Agency of Transportation provides valuable data on the safety of our roadway network. Fatalities are relatively rare, with 17 occurring in the five-year period from 2019 through 2023. Crashes resulting in injuries are more common, and provide useful information on locations where recurring serious crashes should be evaluated for interventions or countermeasures. Figure 4 shows a “heat map” of injury crashes, and also “High Crash Locations” as reported by VTrans, which are highway segments or intersections with statistically elevated crash rates.

Table 1: Crashes in ACRPC region 2019-2023 as recorded in [VTrans Crash Query Tool](#)

<i>Collision Direction</i>	Fatal	Injury	Property Damage Only	Grand Total	
Unrecorded			28	144	172
Head On		3	44	33	80

Left and Right Turns, Simultaneous Turn Crash --vv--			6	6
Left Turn and Thru, Angle Broadside -->v--		23	32	55
Left Turn and Thru, Broadside v<--	2	16	16	34
Left Turn and Thru, Head On ^v--		5	8	13
Left Turn and Thru, Same Direction Sideswipe/Angle Crash vv--		2	21	23
Left Turns, Opposite Directions, Head On/Angle Crash --^v--			3	3
Left Turns, Same Direction, Rear End v--v--			1	1
No Turns, Thru moves only, Broadside ^<	3	32	69	104
Opp Direction Sideswipe	1	19	44	64
Other - Explain in Narrative	2	16	62	80
Rear End		76	199	275
Rear-to-rear		1	37	38
Right Turn and Thru, Angle Broadside -->^--		1	5	6
Right Turn and Thru, Broadside ^<--		6	1	7
Right Turn and Thru, Head On v^--			1	1
Right Turn and Thru, Same Direction Sideswipe/Angle Crash ^^--		1	13	14
Right Turn, Same Direction, Rear End ^--^--			1	1
Same Direction Sideswipe		13	91	104
Single Vehicle Crash	6	174	291	471
Grand Total	17	457	1078	1552

Figure 4 and Table 1 analyze the region's crash data, and provide some insights on the conditions that are associated with injuries and fatalities, in particular. Injuries and fatalities are most prevalent on roads with posted speeds of 50 mph. The table shows the type of collision, with the far most prevalent being a single vehicle crash, typically a driver leaving the road, often due to excessive speed for the road conditions or distraction. These types of crashes are not often correctable by infrastructure improvements, but rather might be prevented through education and enforcement. Additional crash data is available online through the VTrans Crash Public Query Tool (<http://apps.vtrans.vermont.gov/CrashPublicQueryTool/>).

High crash locations are also shown as part of each roadway corridor in Section 6.6. Recommended actions for each corridor include evaluating high crash locations for improvements to reduce their susceptibility to accidents.

Bridges

Bridges constitute an important part of the Region's roadway infrastructure. Bridge sufficiency ratings are developed by VTrans based on detailed bridge inspections to assess structural integrity, adequacy of hydraulic capacity (for bridges crossing a waterway), and "functional" components such as width and alignment. Any of these factors could indicate that a bridge might be considered for replacement or

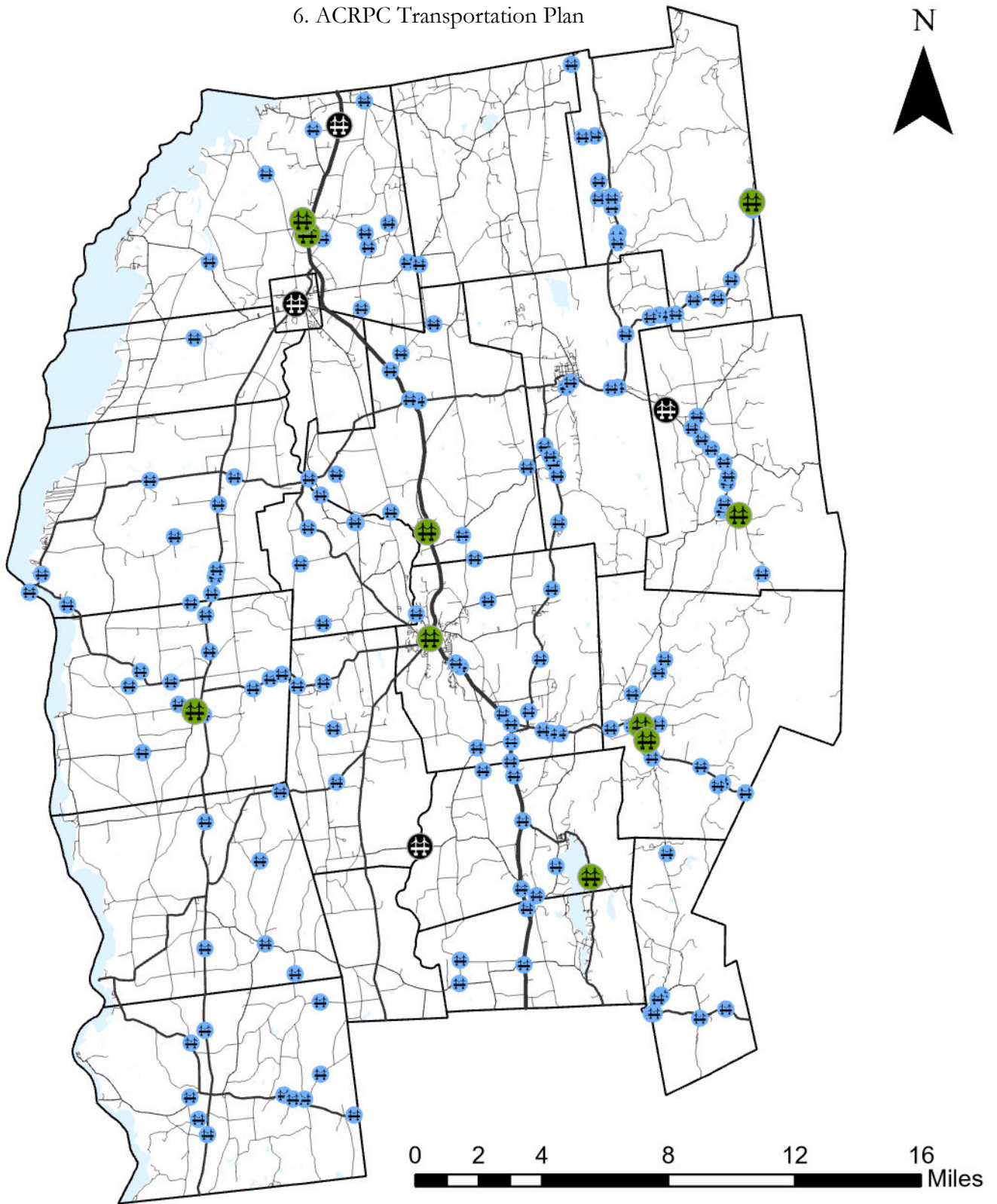
rehabilitation. It also looks at additional considerations such as the context, historical status, and cost of the various options. While deficiency status indicates the condition of the structure, the sufficiency rating determines eligibility for federal funding. The sufficiency rating is a score of 0 to 100. A rating of less than 50 means that the structure is eligible for federal replacement or rehabilitation funds; a score between 50 and 80 makes the structure eligible for federal rehabilitation funds. VTrans pays close attention to the condition of the bridges on state the system and town bridges of more than 20 feet in length.

Table 2: Addison County Bridges with VTrans Projects Scheduled as of 2024				
Municipality	Bridge #	Road	Crossing	Project ID
Ferrisburgh	139	US 7	Lewis Creek	BF 019-4(35)
Lincoln	46	York Hill Rd.	New Haven R.	BO TRUS(7)
Salisbury/ Cornwall	8	Creek/Swamp Rd.	Otter Creek	BO 1445(39)
Vergennes	27	VT 22A/Main St.	Otter Creek	BF 017-1(19)

Table 3: 2024 TAC identified priority bridges				
TAC Rank	Town/City	Bridge #	Location	River
1	Ferrisburgh	137	US7	Little Otter Creek
2	Salisbury	6	Lake Dunmore Rd.	Sucker Brook
3	Middlebury	101	Main Street	Otter Creek
4	Bridport	4	Crown Point Rd.	Potash Brook
5	Ripton	15	VT125	Middlebury R. Middle Branch
6	New Haven	30	Dog Team Road	New Haven River
7	Lincoln	18	Grimes Road	New Haven River
8	Ferrisburgh	11	Little Chicago Road	Little Otter Creek
9	Starksboro	7S	Gore Road	Huntington River
10	Ripton	5	Old Town Road	Middlebury R. South Branch



Recognizing that bridge ratings are not the only consideration when investing in bridge improvements or repairs, the agency also solicits input from the regional commissions through the VTrans Project Selection and Project Prioritization Process (VPSP2) consultation process on bridge priority. Regional commissions add qualitative factors that are difficult to quantify to be considered in selecting and advancing projects. The TAC rates bridges regularly and ACRPC expects the rankings to change over time as bridges are repaired/upgraded, or are identified as needing rehabilitation. These rankings are incorporated into VTrans project prioritization. Bridges prioritized for repair are also highlighted as recommended action within the roadway corridor they serve. As the list is updated, roadway recommendations should also change.

Figure 5



Addison County Bridges

Source(s): Roads (VTrans), Long Structures (VTrans).

-  Bridge
-  Bridge with VTrans Project Scheduled as of 2024
-  TAC Identified Priority Bridge

Addison County
REGIONAL PLANNING COMMISSION

Transportation

Major Roadway Corridors

Roadway corridors provide a useful scale for transportation planning. The character and conditions on ACRPC's primary roadway corridors varies widely with the Region's diverse topography, economy and environment. Corridor planning is an approach to understand transportation, environmental, land use and community development issues in a comprehensive manner that can help identify priorities for implementation. The following sections review the conditions and issues for the Region's primary roadway corridors to inform needs and priorities for action. For a section of road or intersection to be identified as a High Crash Location (HCL), the location must have experienced five or more crashes in a five-year period, or the average of one crash per year. The table below provides some summary information based on High Crash Location Reports 2012-2016 published by VTrans:

Table 4: Primary Corridors in the Addison County Region with High Crash Locations

Route Name	Maximum Volume and location	High Crash Locations	Features
US 7	17,700 Middlebury	7	Primary arterial travel corridor through the region, which also passes through a number of villages serving local traffic
VT 22A	11,400 Vergennes	7	High level of concern in Vergennes with increasing truck volumes and impacts
VT 116	5,800 Bristol	4	Provides an alternate to US Route 7; passes through downtown Bristol
VT 125	4,700 Middlebury	2	East-west route over the Middlebury Gap Scenic Highway to Middlebury.
VT 74	2,000 Cornwall	1	Major collector route
VT 30	6,350 Cornwall	4	Rural collector route parallel to US 7 and VT Route 22A
VT 53	2,100 Leicester & Salisbury	2	Town Highway major collector; eligible for federal aid; provides access to Lake Dunmore
Monkton Ridge/ Bristol Rd/Silver St	4,000 Monkton (South of Hinesburg t/l)	4	Aka Bristol Rd + Silver St Growing commuter traffic, avoiding US 7 and VT 116 corridors
New Haven Rd.	3,400 Vergennes	1	Minor arterial connecting Vergennes to US7
Panton Rd.	4,600 Vergennes	1	Major Collector
River Rd.	1,900 Lincoln	2	Major Collector and route over Lincoln Gap

US Route 7

Route 7 constitutes the primary route of travel through the Region, and is the primary north-south travel corridor in Vermont between the Green Mountains and Lake Champlain. Important considerations include:

- There are numerous high crash locations along the corridors, which primarily lie at intersections with higher volume side streets. Particularly in the northern end, high through volumes make it difficult for side road traffic to enter the corridor. Volumes in this area may be high enough to warrant the installation of roundabouts. ACRPC supports the installation of roundabouts, not signals, to preserve the carrying capacity of the route 7 corridor.
- High crash locations, such as at US Route 7/River Road in New Haven, warrant investigation through a road safety audit or scoping study.
- Exchange Street roundabout is advancing through VTrans Capital Program
- Bicyclists should be encouraged to utilize parallel north-south routes on local roads that are safer, more scenic, and nearly as direct (Greenbush Road in Ferrisburgh is a great example of this).

Figure 7 shows that traffic has increased overall since the 1970s, but has leveled off in the most recent decade. Several locations show a very recent uptick in volume, but not enough yet to indicate a long-term trend.

US Route 7 - Recommended Actions:		
Middlebury	Exchange Street: enhance U.S. Route 7-Exchange Street Gateway & construct the proposed roundabout	
	<i>Responsible:</i> Town of Middlebury, VTrans, U.S. DOT	<i>Timeframe:</i> short-term
Middlebury	Perform traffic study to address congestion at Foote Street-Middle Road South-U.S. 7 intersection	
	<i>Responsible:</i> VTrans, U.S. DOT, Town of Middlebury,	<i>Timeframe:</i> mid-term
Middlebury	Identify and implement intersection improvements at Boardman Street-U.S. 7 intersection.	
	<i>Responsible:</i> VTrans, U.S. DOT, Town of Middlebury,	<i>Timeframe:</i> mid-term
Middlebury	Implement improvements at (1) Charles Avenue-Monroe Street -U.S. 7 and (2) Court Street-Mary Hogan Drive intersections	
	<i>Responsible:</i> Town of Middlebury, VTrans, U.S. DOT	<i>Timeframe:</i> short-term
General	Advocate for corridor improvements outlined in Western Corridor Plan, including: shoulder widening, truck climbing lanes, etc.	
	<i>Responsible:</i> VTrans, ACRPC	<i>Timeframe:</i> long-term
General	Study High Crash Locations along U.S. 7 and identify recommended improvements	
	<i>Responsible:</i> VTrans, ACRPC	<i>Timeframe:</i> mid-term

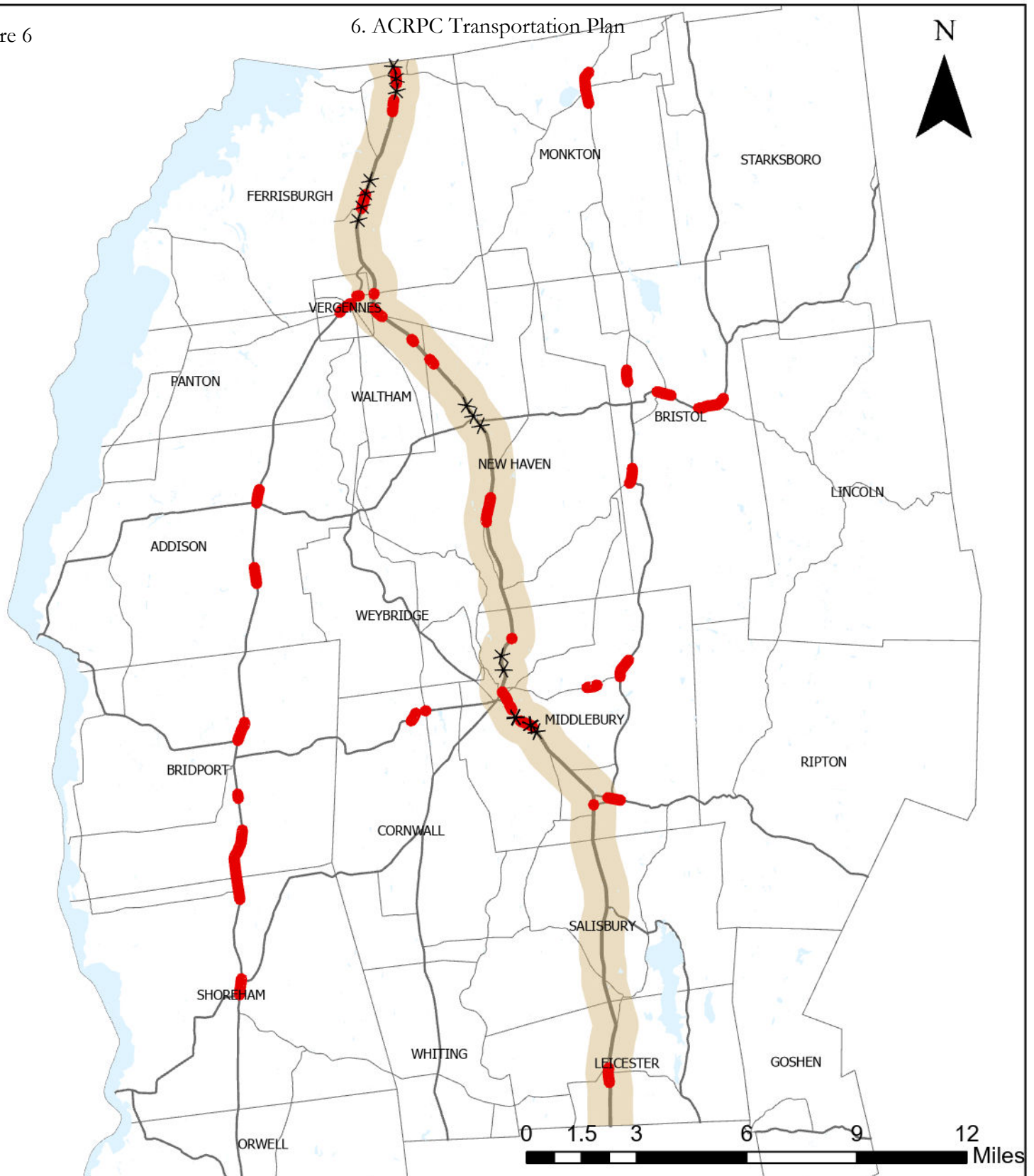
VT Route 22A

The Route 22A corridor is an important link connecting the Route 4 corridor in New York with Chittenden County. Compared to other major routes in the Region, it has higher rates of traffic growth. Concerns and observations include the following:

- A study of potential truck bypasses of downtown Vergennes have been revisited through a Planning and Environment Linkages (PEL) Study.

Figure 6

6. ACRPC Transportation Plan



US Route 7 High Crash Locations

Source(s): Roads & Crash data: VTrans Crash Query Tool (2016-2023).
 High Crash Locations: Digitized by ACRPC using data derived from VTrans
 Crash Query Tool (2016-2023).

● High Crash Locations
X Reduced Speed Zones

6. ACRPC Transportation Plan

- Outside of Vergennes, crashes primarily occur at intersections, involving conflicts between through traffic and turning or crossing vehicles. There are several intersections with poor sight lines and difficult turns in Addison, Bridport, Shoreham and Orwell, some are high crash locations. The rural stretches of the corridor need to provide passing lanes, to alleviate driver frustration and reduce risky maneuvers.
- Sections of the corridor near villages or intersections need improvements and management to enhance safety.
- Narrow shoulders along much of the length of the corridor is not adequate for bicycle use. However, the high speeds and high proportion of tractor trailers on the corridor make it a very low priority for bicycling.
- VTTrans has programmed pavement reclamation, shoulder reconstruction and widening between Orwell and Addison
- The Regional Planning Commission should discuss qualifications and benefits of reclassification of Route 22A as a Principal Arterial and pursue reclassification if warranted.

Figure 7 shows that traffic growth along all segments in the corridor has been steady over the past four decades, especially compared to other corridors.

VT Route 22A - Recommended Actions:		
Addison, Bridport & Shoreham	Apply traffic calming elements identified by previous studies, including the Western Corridor Plan, Middlebury Traffic Calming Feasibility Study (contains traffic calming toolbox applicable to entire region), Traffic Calming and Non-Vehicular Routes for Five Addison County Towns, and RRPC Route 22A Corridor Study (Orwell)	
	<i>Responsible:</i> Towns, ACRPC, VTTrans	<i>Timeframe:</i> short-term
Vergennes	Reconstruct intersection at VT 22A-South Water Street-MacDonough Drive	
	<i>Responsible:</i> City of Vergennes, ACRPC, VTTrans	<i>Timeframe:</i> mid-term
Vergennes	Address congestion forecasted in 2030 at Panton Road-VT 22A intersection	
	<i>Responsible:</i> City of Vergennes, ACRPC, VTTrans	<i>Timeframe:</i> long-term
Orwell	Identify and implement actions to improve safety and traffic flow at the VT 73 - VT 22A intersection	
	<i>Responsible:</i> Town of Orwell, ACRPC, VTTrans	<i>Timeframe:</i> long-term
Addison	Identify and implement actions to improve safety and traffic flow at the VT 17- VT 22A intersection	
	<i>Responsible:</i> Town of Addison, ACRPC, VTTrans	<i>Timeframe:</i> long-term
General	Advocate for corridor improvements outlined in Western Corridor Plan, including: shoulder widening, traffic calming, truck climbing lanes, cellular service, etc.	
	<i>Responsible:</i> VTTrans, ACRPC	<i>Timeframe:</i> long-term
General	Create truck routes that address concerns of Vergennes & neighboring communities as identified in the PEL Study.	
	<i>Responsible:</i> VTTrans, ACRPC, towns	<i>Timeframe:</i> short-term
General	Study High Crash Locations along Route 22A and identify recommended improvements	
	<i>Responsible:</i> VTTrans, ACRPC	<i>Timeframe:</i> mid-term

VT Route 17

This corridor has relatively low volumes, limited traffic congestion and very few high crash locations. Its character is narrow and not well-suited for high volumes, and many stretches, especially between Addison and Bristol, have reduced posted speeds for this reason. Key issues to consider include the following:

- Difficulty at VT Route 22A intersection for crossing traffic due to high volumes and speeds; yet volumes are not sufficient to warrant a traffic signal or roundabout.
- The City of Vergennes has suggested the segment between VT Route 22A and US Route 7 as a possible northbound truck route around Vergennes. The option has been considered as part of the on-going PEL Study.
- Intersections (i.e. with Hallock Road/Quaker Village Road) have poor sight lines.
- East of Bristol, narrow shoulders and high bicycle popularity strain the corridor, and therefore there is a need to find a way to expand the corridor to allow for safe biking.

Figure 9 shows relatively low volumes, and low growth along VT Route 17.

VT Route 17 - Recommended Actions:		
New Haven	Identify and implement actions to improve safety at the VT 17- Hallock Rd.- Quaker Village Rd. intersection.	
	<i>Responsible:</i> VTrans, ACRPC, U.S. DOT, New Haven	<i>Timeframe:</i> mid-term
Bristol	Advocate for bicycle & pedestrian-related improvements east of Bristol Village, including recommendations in Bristol to Rockdale Bicycle and Pedestrian Feasibility Study	
	<i>Responsible:</i> Bristol, VTrans, ACRPC	<i>Timeframe:</i> mid-term
Addison	Complete study to explore safety improvements at Route 17-Route 22A intersection	
	<i>Responsible:</i> Addison, ACRPC, VTrans	<i>Timeframe:</i> short-term
General	Study High Crash Locations along Route 17 and identify recommended improvements	
	<i>Responsible:</i> VTrans, ACRPC	<i>Timeframe:</i> mid-term

VT Route 30

This corridor is very rural, also with low traffic volumes and low traffic growth. There are no High Crash Locations, and public comments were limited to the narrow shoulders, making bicycling challenging.

- VT Route 30 is a popular bike route. Like much of the region's roads, narrow shoulders and high bicycle popularity impact the route and, therefore, there is a need to find a way to expand the corridor to allow for safe biking.

VT Route 30 - Recommended Actions:		
General	Promote the use of this scenic and low -volume corridor as a byway for traffic desiring to enjoy the Region's rural countryside.	
	<i>Responsible:</i> ACRPC, VTrans, towns	<i>Timeframe:</i> Short-term

General	Advocate for improvements necessary to promote as bike alternative to Route 22A and U.S. 7	
	<i>Responsible:</i> ACRPC, VTrans, towns	<i>Timeframe:</i> Short-term

VT Route 116

This corridor has relatively higher traffic volumes, and more recent growth in traffic. The perception is that this corridor is serving as an alternate to US 7 for commuters seeking to avoid congestion. There are numerous high crash locations along the length of the corridor, which primarily are at intersections with side streets that either have higher traffic volumes or poor sightlines at the intersection. These should also be evaluated for improvements such as roundabouts, or realignment to address visibility and safety. Issues along this corridor include:

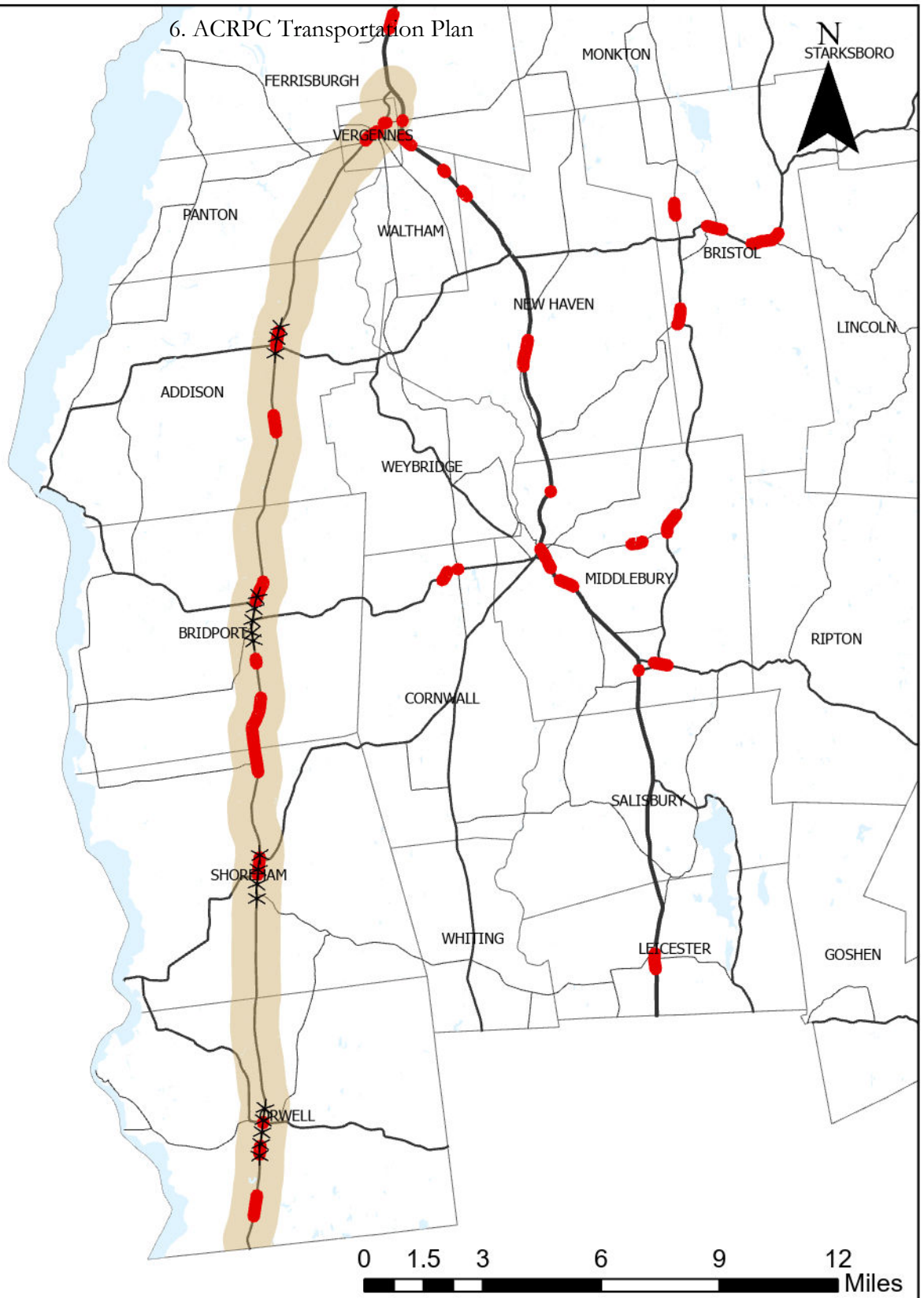
- East of Bristol, narrow shoulders and high bicycle popularity strain the corridor and, therefore, need to find a way to expand the corridor to allow for safe biking.
- Work with Bristol to create a gateway into the Village at the Daniels Four Corners intersection
- The high accident locations in Middlebury, Starksboro and Bristol should be studied in depth to determine how best to reduce the number of vehicle conflicts in these areas.

VT Route 116 - Recommended Actions:		
Bristol	Monitor capacity at VT 116-VT17 intersections both north and south of Bristol	
	<i>Responsible:</i> ACRPC, VTrans	<i>Timeframe:</i> mid-term
Bristol	Advocate for bicycle & pedestrian-related improvements east of Bristol Village, including recommendations in Bristol to Rockydale Bicycle and Pedestrian Feasibility Study	
	<i>Responsible:</i> Bristol, VTrans, ACRPC	<i>Timeframe:</i> mid-term
Bristol	Work with Town of Bristol to implement improvements to create village gateways	
	<i>Responsible:</i> Bristol, VTrans, ACRPC	<i>Timeframe:</i> short-term
General	Apply traffic calming elements identified by previous studies, including Middlebury Traffic Calming Feasibility Study, Starksboro Complete Streets study, and Traffic Calming and Non-Vehicular Routes for Five Addison County Towns (Starksboro)	
	<i>Responsible:</i> Town of Starksboro, ACRPC, VTrans	<i>Timeframe:</i> short-term
General	Address all structurally deficient bridges identified in Tables 2 & 3 on page 16	
	<i>Responsible:</i> VTrans, U.S. DOT	<i>Timeframe:</i> mid-term
General	Study High Crash Locations along Route 116 and identify recommended improvements	
	<i>Responsible:</i> VTrans, ACRPC	<i>Timeframe:</i> short-term

VT Route 125

Outside of Middlebury, the traffic volumes on VT Route 125 are generally very low. The character of the corridor varies tremendously from the Middlebury Gap Scenic Highway, through the Ripton Gorge, and then traversing a rolling rural landscape to Lake Champlain. There are several high crash locations, again

Figure 7

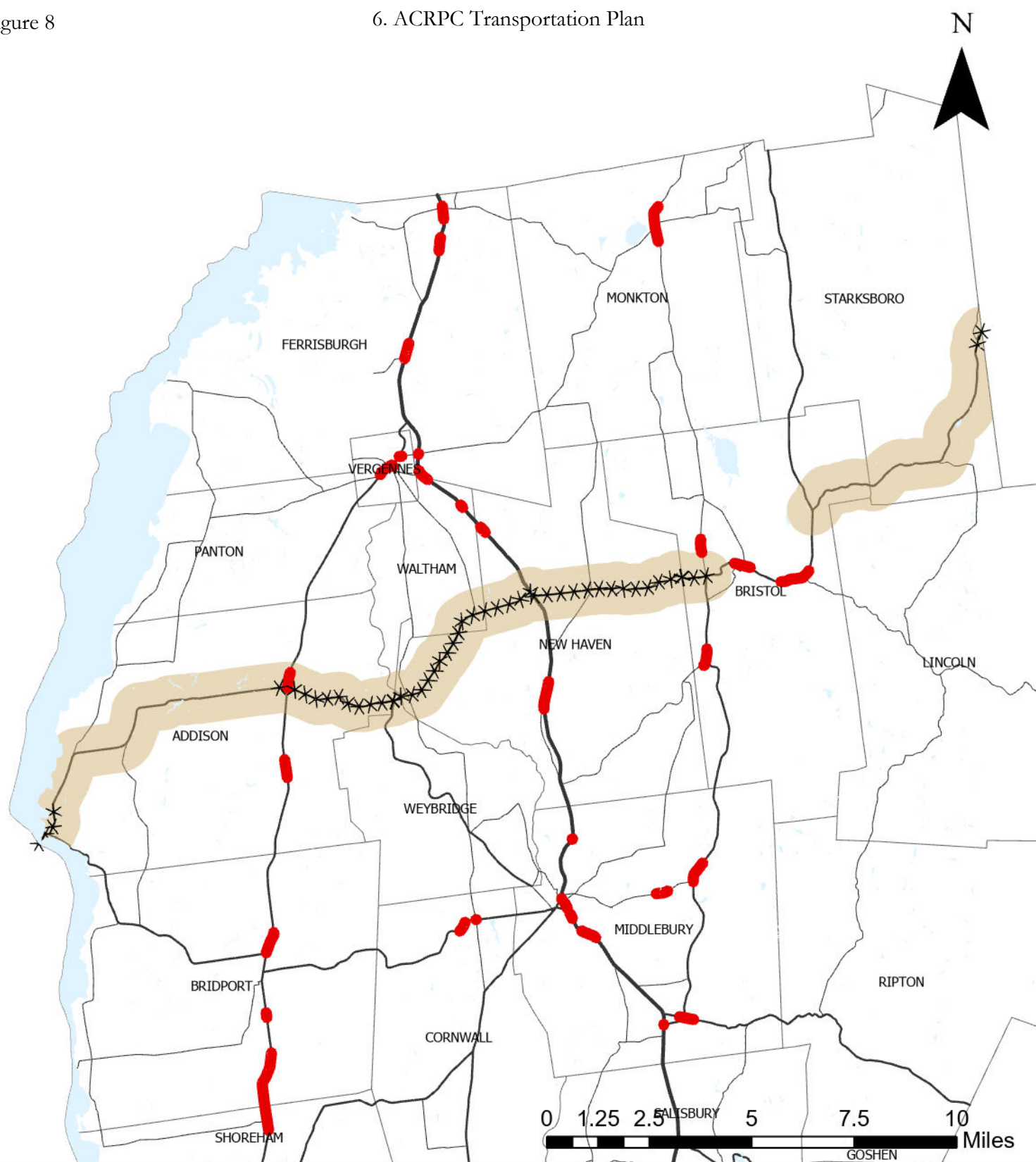


VT22A High Crash Locations

Source(s): Roads & Crash data: VTrans Crash Query Tool (2016-2023).
High Crash Locations: Digitized by ACRPC using data derived from VTrans
Crash Query Tool (2016-2023).

 High Crash Locations
 Reduced Speed Zones

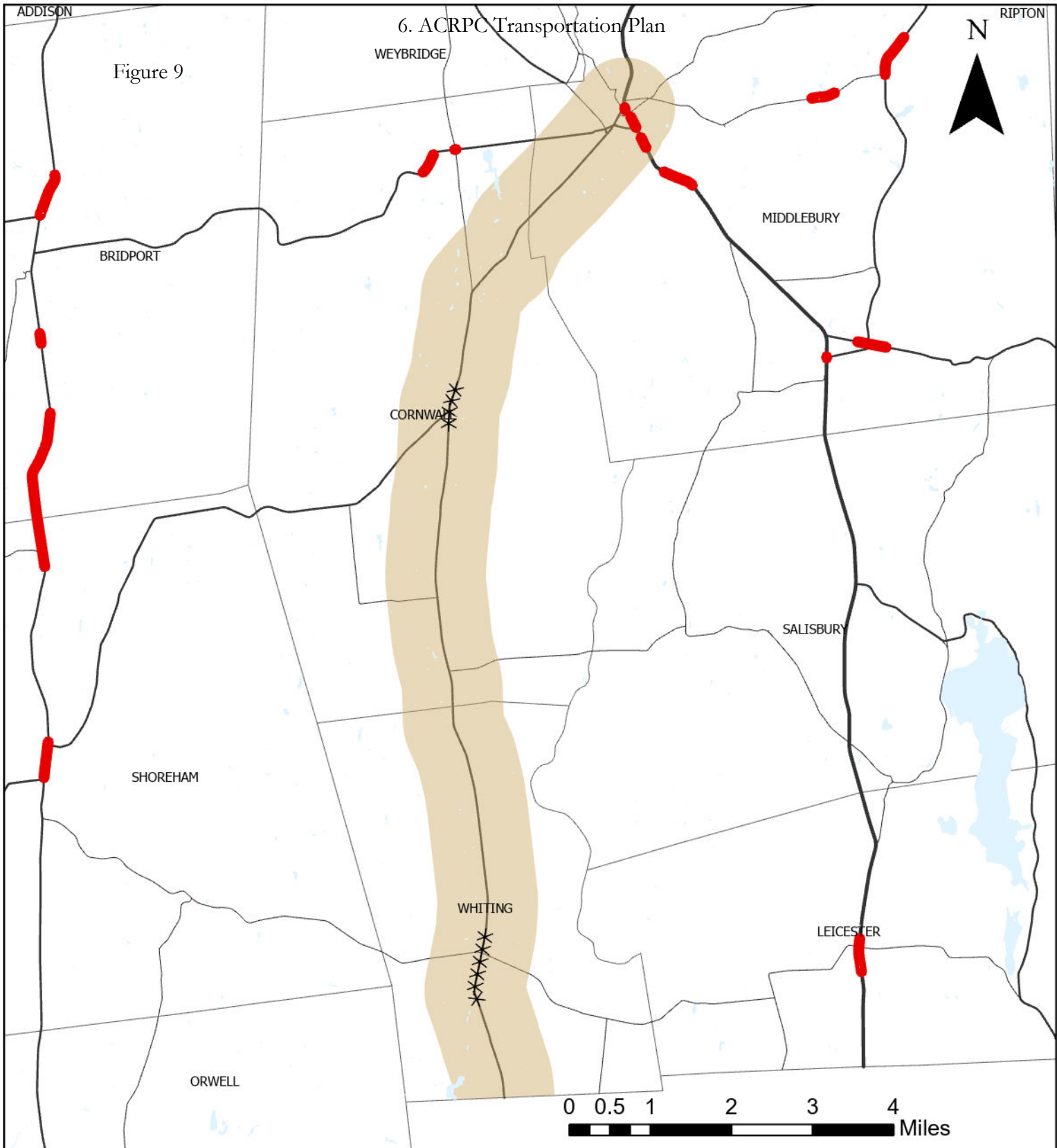
Figure 8



VT17 High Crash Locations

Source(s): Roads & Crash data: VTrans Crash Query Tool (2016-2023).
High Crash Locations: Digitized by ACRPC using data derived from VTrans
Crash Query Tool (2016-2023).

- High Crash Locations
- XXXX Reduced Speed Zones

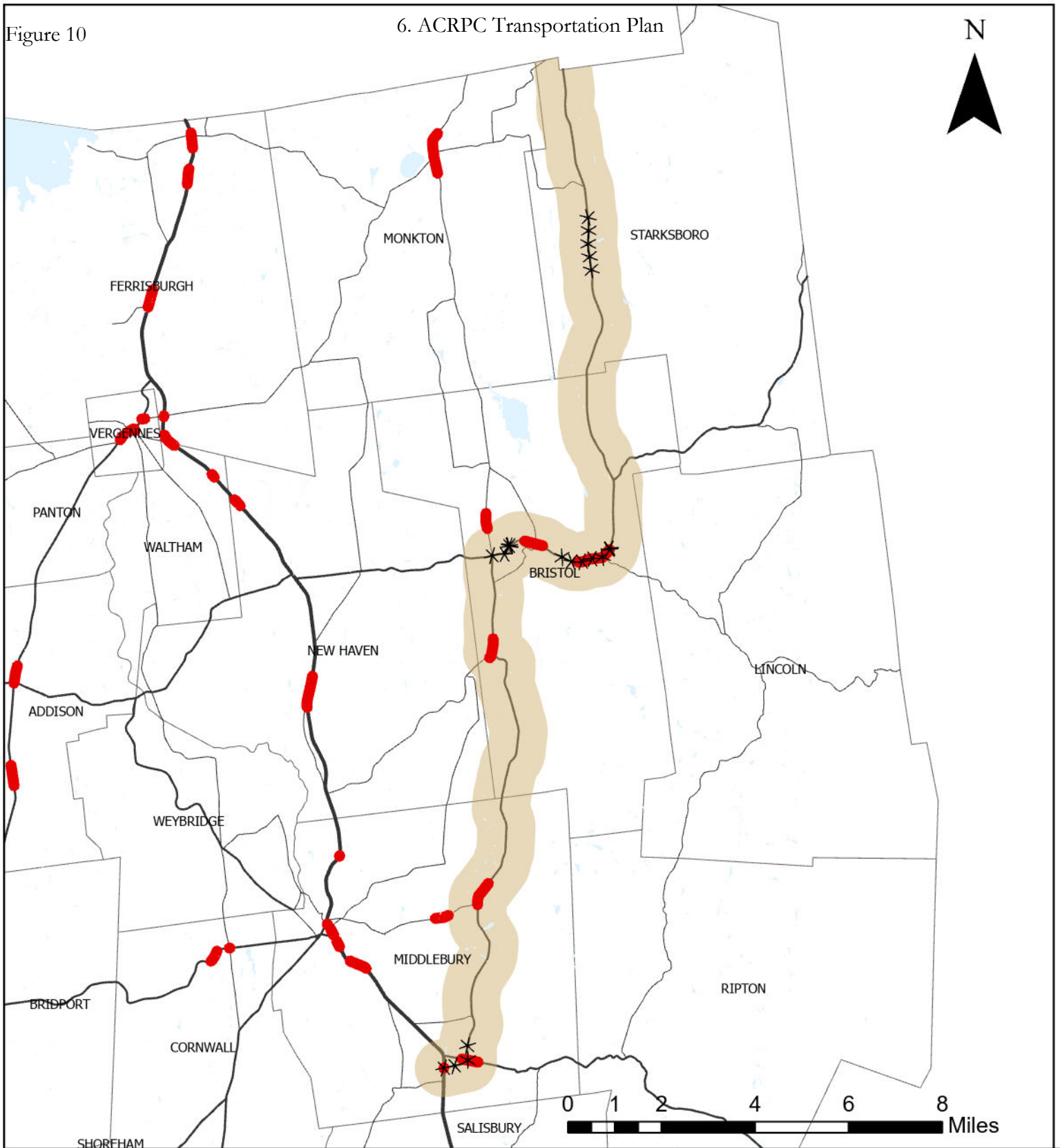


VT30 High Crash Locations

Source(s): Roads & Crash data: VTrans Crash Query Tool (2016-2023).
 High Crash Locations: Digitized by ACRPC using data derived from VTrans
 Crash Query Tool (2016-2023).

- High Crash Locations
- XXXX Reduced Speed Zones

Figure 10



VT116 High Crash Locations

Source(s): Roads & Crash data: VTrans Crash Query Tool (2016-2023).
High Crash Locations: Digitized by ACRPC using data derived from VTrans
Crash Query Tool (2016-2023).

- High Crash Locations
- XXXX Reduced Speed Zones

primarily at intersections. The section through the Ripton Gorge is narrow and winding, and is also a very popular bicycling route for advanced cyclists seeking a challenge. Issues include the following:

- West of Middlebury, narrow shoulders for walking and biking and poor site lines create conflicts. Demand is significantly higher for bicycling in this area, therefore it should be considered a high priority bike road. As of spring 2024, VTrans is nearing completion of a study on safety improvements for this portion of the corridor. ACRPC recognizes the importance of such safety improvements
- Resiliency through Ripton Gorge - Old Town Rd., a class 4 Road from Middlebury to Ripton, offers an alternate road corridor in the event that Route 125 suffers catastrophic damage from flooding.
- High accident locations should be analyzed to determine the most practical mitigation methods.

Traffic growth on the corridor has been nearly flat for decades, according to VTrans data.

VT Route 125 - Recommended Actions:		
125 East	Identify and advocate for general corridor improvements, including shoulder widening, truck climbing lanes, , etc.	
	<i>Responsible:</i> ACRPC, VTrans	<i>Timeframe:</i> long-term
125 East	Implement flood and erosion-related resiliency improvements recommended by the Middlebury River/VT 125 Benefit-Cost Analysis	
	<i>Responsible:</i> VTrans, ACRPC, Middlebury, Ripton	<i>Timeframe:</i> long-term
125 West	Implement the recommendations of STP 0172(11) in Cornwall and Middlebury related to roadway profile improvements, intersection improvements, shoulder widening, and ledge removal.	
	<i>Responsible:</i> VTrans, ACRPC	<i>Timeframe:</i> long-term
General	Support development of Old Town Rd. as an alternative route in the event of catastrophic flooding	
	<i>Responsible:</i> VTrans, Ripton, Middlebury, ACRPC	<i>Timeframe:</i> medium-term
General	Address all structurally deficient bridges identified in Table 3 on page 6-16 as that list is amended annually	
	<i>Responsible:</i> VTrans, U.S. DOT	<i>Timeframe:</i> mid-term
General	Study High Crash Locations along Route 125 and identify recommended improvements	
	<i>Responsible:</i> VTrans	<i>Timeframe:</i> mid-term

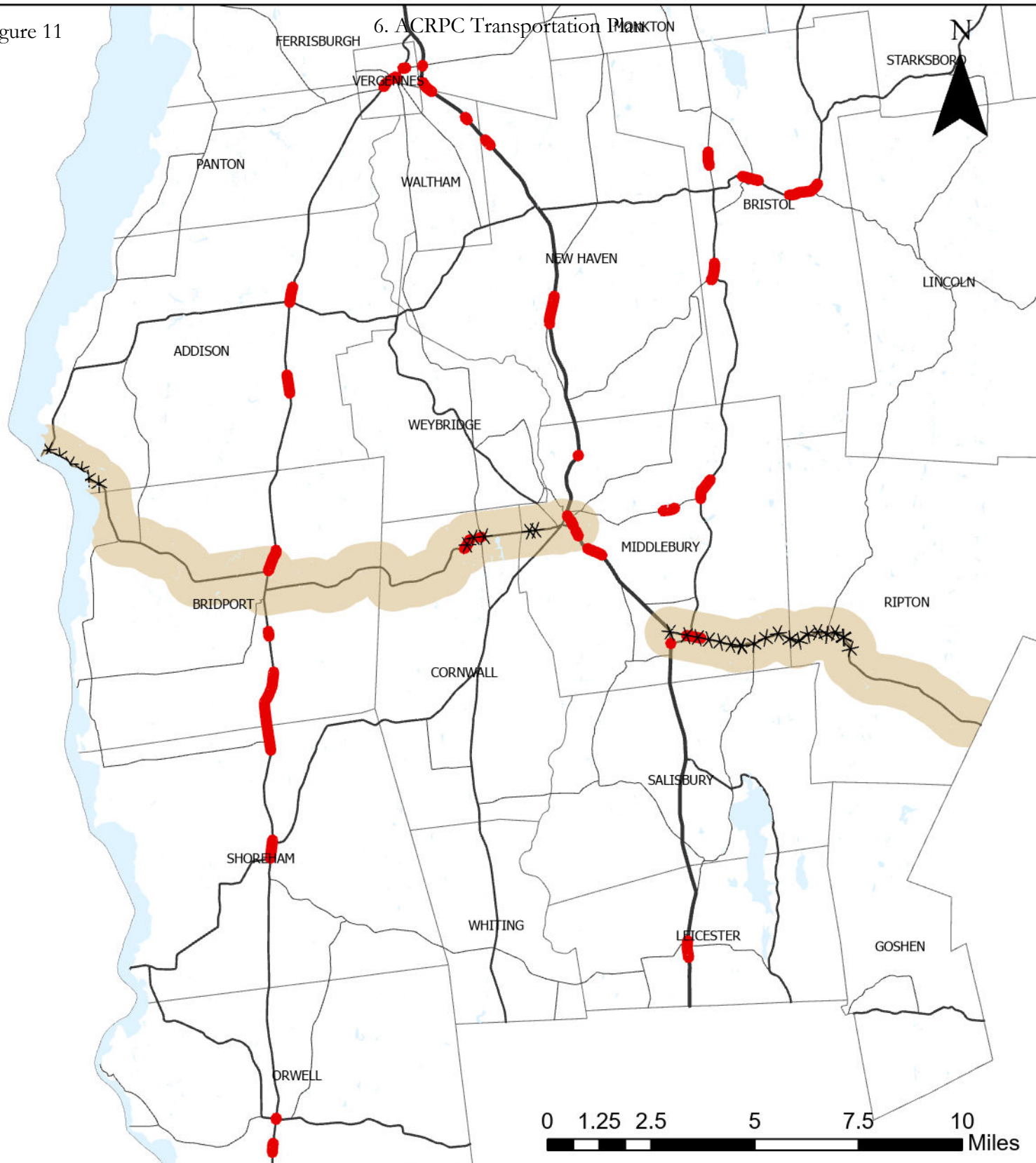
VT Route 53

Route 53 is a small, rural highway that parallels Route 7 traveling on the Eastern side of Lake Dunmore. Issues include:

- Becoming a cutoff route between Route 73 east and US 7 north.
- The close proximity of Route 53 presents the potential for stormwater runoff impacts on Lake Dunmore.
- Increased traffic creates many conflicts in summer months especially with vehicles, walkers and bicycles.

Figure 11

6. ACRPC Transportation Plan



VT125 High Crash Locations

Source(s): Roads & Crash data: VTrans Crash Query Tool (2016-2023).
 High Crash Locations: Digitized by ACRPC using data derived from VTrans
 Crash Query Tool (2016-2023).

- High Crash Locations
- XXX Reduced Speed Zones

VT Route 53 - Recommended Actions:		
General	Address safety concerns, including improvements to signs, sight distances, and drainage along Lake Dunmore in Salisbury and Leicester	
	<i>Responsible:</i> Salisbury, Leicester, ACRPC, VTrans, U.S. DOT	<i>Timeframe:</i> short-term
General	Work to identify and implement measures to reduce detour traffic traveling between U.S. 7 and Route 73 East	
	<i>Responsible:</i> VTrans, Salisbury, Leicester, ACRPC	<i>Timeframe:</i> mid-term

Local Corridors of Concern

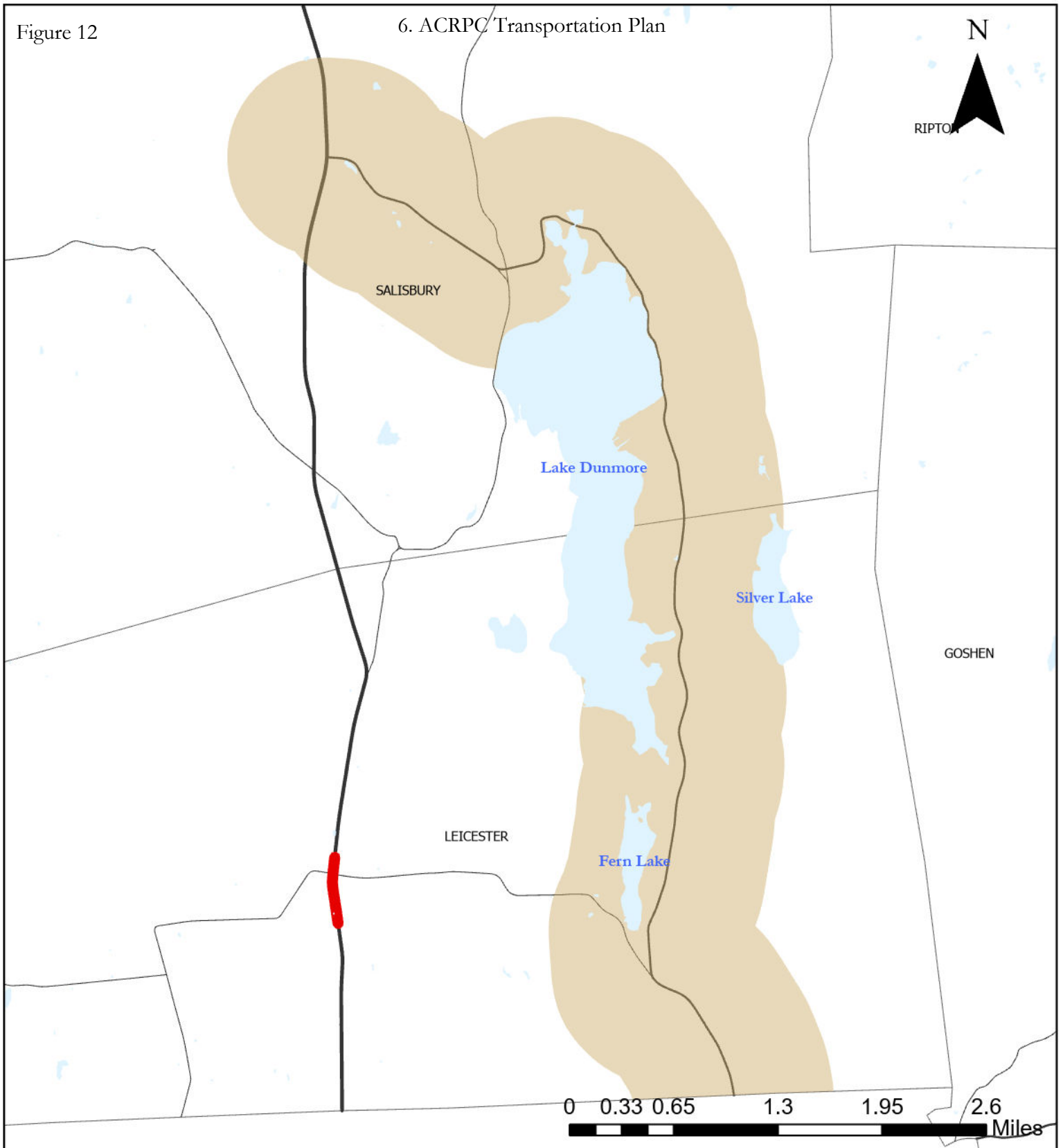
There are a number of local road corridors that play an important role in the Region's roadway network as alternate routes or connectors between communities, and they can have a burden on local budgets. The following is a partial list of local corridors which have Regional use and demands:

- Monkton Road - commuter traffic impacts and speeds
- Monkton Ridge/Silver St. - increasing use by commuters
- Leicester-Whiting Road - drainage and flooding

Local Corridors - Recommended Actions:		
Leicester-Whiting	Address drainage and flooding issues along Leicester-Whiting Rd.	
	<i>Responsible:</i> ACRPC, VTrans, Leicester, Whiting	<i>Timeframe:</i> short-term
Monkton	Apply traffic calming elements and other improvements identified by previous studies in Monkton Ridge and Boro areas, including the Town of Monkton - Commuter Corridor Planning & Feasibility Study and Monkton Ridge Village Complete Streets Planning & Feasibility Study	
	<i>Responsible:</i> Town of Monkton, ACRPC, VTrans	<i>Timeframe:</i> short-term

Figure 12

6. ACRPC Transportation Plan



VT53 High Crash Locations

Source(s): Roads & Crash data: VTrans Crash Query Tool (2016-2023).
High Crash Locations: Digitized by ACRPC using data derived from VTrans
Crash Query Tool (2016-2023).

 High Crash Locations

Modes of Transportation

Passenger Vehicles

Like most of Vermont, the rural nature of Addison County, which is made up of small communities connected primarily by a network of roadways, means that the most prevalent mode of transportation is the passenger vehicle. Residents use their cars or trucks to travel to work and to reach locations where goods and services are readily available, or to deliver goods and services.

When residents commute to work, they generally do so alone, the US American Community Survey (ACS) indicates that in 2016, 70% of Addison County's total working population drove by themselves.

While 10% of workers carpool, the number of "workers per car" is only 1.8. Seventy percent (70%) of residents work in Addison County, which means their mean travel time to work is roughly 24 minutes.

Single-occupancy vehicles, while incredibly convenient for those that can afford them, can also have negative impacts including the cost of fuel, energy use and impacts on the environment. To achieve more affordability and reduce greenhouse gasses, this plan envisions offering the citizens of Addison County other options besides commuting alone. It anticipates that it can maintain access to jobs, goods and services, but reduce driving alone and promote switching to cleaner fuel sources. Many aspects of this plan discuss the actions necessary to enact these long-term shifts.

Truck Traffic and Freight

According to the 2021 Vermont Freight Plan, trucks carry approximately 84% of all goods moving in, out, within, and through the State by weight. Trade with New York in particular, accounts for 60% of all trade weight (15 million tons) and over 50% by value (14.7 billion). Overall freight transportation demand in Vermont is expected to grow 68 percent between 2018 and 2045. This growth has a direct impact on the ACRPC region as two sections of the Vermont Truck Network (the road network designated for freight truck travel in Vermont) are located within the county. US 7 and VT22A are the primary north-south transportation corridors on Vermont's western edge.

The growth of truck traffic puts pressure on roads and can present a hazard to the traveling public. Heavy vehicles also generate significant noise, dust and vibration that is detrimental to villages and downtowns. In addition to the physical impacts of truck traffic, many residents' express concerns about the materials transported through the Region. In an inventory conducted by ACRPC in 2010, it determined that roughly 8% of materials that trucks transport through Addison County are identified as hazardous. This includes the transport of combustible fuels, chemicals, blasting agents and other potentially dangerous products. The majority (60%) of hazardous materials constitute heating and vehicle fuels which are delivered by bulk rail and semi-truck to distribution centers around the County. More of these materials are transported along Route VT22A (11.8%) than other routes (6.8%).

The transport of hazardous materials via rail is more challenging to identify. Vermont Railway does not release information regarding hazardous materials for confidentiality reasons. However, during ACRPC's study of hazardous materials, it observed that Vermont Railway transports gasoline and related petroleum products to depots in Middlebury and Burlington. Each daily northbound train through Addison County includes roughly fifteen loaded gasoline tanks.

The most significant hazardous materials incident involved a 20-car train derailment in downtown Middlebury in 2007, which included 14 tank cars of gasoline. Several cars caught fire and some fuel leaked into the nearby Otter Creek. The incident required the evacuation of schools, homes and businesses and the activation of the State Hazardous Materials crew. While the instance of hazardous materials releases in Addison County is low, regular accidents occur that require notifying the state HazMat hotline. These shipments present the possibility of a danger to our communities and a challenge to local first responders. Addison County's Local Emergency Planning Committee adopted a Hazardous Materials Emergency Plan (HMEP) in 2021. This plan formalizes the response procedures, emergency resources, hazard analysis and training requirements for municipalities and first responders in the event of a hazardous materials release.

Goal

- *Provide for the safe and efficient transport of goods through the Addison Region and mitigate the impact of heavy truck traffic.*

Policies

- *Structure, operate and maintain the Region's roadway network to mitigate the impacts of traffic and freight on the Region's communities, especially in villages and downtowns.*
- *Support sound, equitable and well-planned alternative routes for freight transport that will reduce negative impacts on our villages and downtowns, including investigating new, equitable & well-planned alternative routes.*
- *Support the Addison County Regional Emergency Management Committee and regular updates to the Hazardous Materials Emergency Plan and Local Emergency Operations Plans.*

See also rail recommended actions on page 6-9.

Truck Traffic and Freight - Recommended Actions:		
General	Encourage towns to develop hazard mitigation plans that address hazards from materials transported through the community	
	<i>Responsible:</i> Towns, ACRPC, VTrans	<i>Timeframe:</i> short-term
General	Explore and create truck routes that address concerns of Vergennes & neighboring communities	
	<i>Responsible:</i> VTrans, ACRPC, towns	<i>Timeframe:</i> short-term
General	Study High Crash Locations along Route 22A and identify recommended Improvements	
	<i>Responsible:</i> VTrans, ACRPC	<i>Timeframe:</i> mid-term

Agricultural Impacts

This Plan is intended to support agriculture. Agriculture plays a significant role in Addison County's economy. Our farms use our road system to maintain and harvest their crops and bring their foods to market. However, residents of the ACRPC Region have voiced concerns about the impacts of agriculture on the road system. Addison County is home to some of Vermont's largest commercial agricultural operations. Overall, farm production and activity in Addison County is growing.

This growth in farm scale means that farms often have to move large agricultural equipment over longer distances via the road network, which can (over time) damage roads, cause traffic congestion and even present a safety hazard to other drivers. Although communities have the authority to set weight limits on local roads, there is a statutory exemption from permit requirements for agricultural vehicles up to 60,000

pounds. Communities are unable to obtain compensation for damages to municipal roads done by vehicles under 60,000 pounds. Heavier farm vehicles do require permits. Municipalities or the State also can control where agricultural vehicles access the public highway system and should carefully consider access requests. If not properly planned, access points can cause damage to road infrastructure and present a traffic safety hazard. A permit is required from either the state or municipality for any new road access.

Agriculture Impact-Recommended Actions:

General	This Plan encourages farms and government agencies to use best management practices and work to minimize damage to the road system
	Responsible: VTrans, ACRPC, towns
	Timeframe: short-term

Passenger Transportation

Public Transit

Passenger transportation in the ACRPC Region is served primarily by Tri-Valley Transit (TVT), a non-profit public transit provider that offers a number of routes throughout the Region. TVT's primary goal is to "provide services that are safe, reliable, accessible and affordable for everyone." Utilizing western Vermont's primary transportation corridor, US Route 7, TVT links the three primary employment centers in the Region – Vergennes, Bristol, and Middlebury – with each other. TVT also links many communities in the ACRPC Region to Rutland and Burlington, which is a particularly valuable resource for residents who are employed in those communities.

Overview of current routes

TVT offers two distinct services, the Dial-a-Ride system, which provides older adults, persons with disabilities and other vulnerable populations with access to medical services, shopping and eating destinations, and the TVT Bus System, which runs to multiple locations within and outside of the ACRPC Region. For more up-to-date route information, go to <https://www.trivalleytransit.org/>.

Potential Service Extensions

TVT Bus routes are currently active Monday - Friday with Saturday service available on selected routes. Trips are generally offered multiple times a day, but are not available earlier than 5:30a.m. or later than 7:00 p.m. depending on the route.

TVT's long-range plans have identified several potential areas for expansion which would be dependent on available funding and ridership needs. In addition to the fixed routes discussed above, this plan also supports the expansion of TVT's Demand Response services to meet the needs of the Region's transit dependent population. This includes harnessing new technology to facilitate ridesharing.

Communities that have a specific need, such as congestion, high levels of commuters, or an underserved population, should reach out to TVT to determine what criteria they would need to demonstrate to allow TVT to access State and Federal funding to support new services.

In May of 2024 TVT initiated a weekday microtransit program called EZ Trip to serve the downtown Middlebury area. This is a door to door on-demand ride service as an alternative to fixed route bus services. Ride coordination is handled by a central dispatch that seeks to optimize ride sharing to increase efficiency. See details under the ride-hailing section.

Between 2012-2015, TVT experienced about a 5% increase in overall ridership between the Demand Response and Bus programs. Ridership on the TVT bus line is heavily influenced by the cost of gasoline.

TVT Ridership

In fiscal year 2019, the last complete service year before COVID, TVT provided 7% more rides than the year before. 2020 was trending to surpass those numbers, but then the pandemic forced lockdowns and TVT had to curtail its services to the most essential elements. Ridership dropped 60% and telecommuting became more common. Since then, TVT has “built back better” to better match services with shifting demands and ridership has grown significantly each year.

Year	Dial-A-Ride	Bus	Combined Total
2019	59,783	114,418	174,201
2020	44,571	93,588	138,159
2021	19,864	49,333	69,197
2022	30,260	66,571	96,831
2023	29,919	85,964	115,883

TVT’s Transit Dependent Population

The Region has a significant population of people characterized as “transit dependent” who may not be able to afford a car, are unable to drive, reside in a household without a car, are elderly or for other reasons are more likely to rely on the public transportation system. Table 5 summarizes this population by town. It should be noted that the categories often overlap, resulting in a person being counted more than once. However, the numbers also demonstrate that a significant portion of the Region’s population relies on public transportation. Projections expect these numbers to increase as the Region’s population ages.

Table 5: Transit Dependent Population by Town						
	Disabled Residents Age 18 and up	Auto-Less Households	Residents Below the Poverty Line (Age 18 and up)	Residents Age 65+	Residents Age 15-19	Total Town Population
Addison	203	13	59	375	21	1365
Bridport	124	9	86	284	42	1225
Bristol	719	86	356	700	207	3782
Cornwall	126	5	14	314	49	1207
Ferrisburgh	431	12	114	553	77	2646
Goshen	52	2	12	55	4	172
Leicester	194	4	98	262	76	990
Lincoln	140	6	64	277	89	1323
Middlebury	1629	251	879	1931	1724	9152
Monkton	283	7	85	403	62	2079
New Haven	289	7	47	385	104	1683
Orwell	176	15	115	287	56	1239
Panton	84	10	52	110	36	646
Ripton	146	0	79	217	45	739

6. ACRPC Transportation Plan

Salisbury	123	3	98	358	41	1221
Shoreham	218	24	115	312	54	1260
Starksboro	241	8	114	262	178	1756
Vergennes	396	73	278	416	163	2553
Waltham	61	2	31	190	16	446
Weybridge	71	2	74	201	52	814
Whiting	72	47	44	67	38	405

Source: <https://data.census.gov/>. Retrieved 4/1/2024 except Auto Less Households which is from US Census Bureau, 2022 Table B08201 Household Size by Vehicles Available

Emerging Infrastructure Needs and Opportunities

Infrastructure investments allow TVT to operate efficiently and effectively and advance the state of public transportation in the Region in parallel with investments in other modes. TVT's downtown Middlebury transit hub was displaced by reconstruction of the railroad bridge and relocated to a new permanent home on Academy Street. TVT also built new passenger shelters for downtown Bristol and added a public art installation to the shelter in Vergennes.

Now TVT is looking to support state carbon reduction goals by replacing aging gas-powered buses with electric ones. The statewide goal is 10% electrification by 2025 and 100% by 2050. In order to make this change, TVT will need covered bus storage at its Addison County Community Transportation Center (ACCTC), access to dedicated Phase III power for fast charging stations and new safety technology to increase fire suppression capacity. TVT is seeking funds to build a bus barn that will achieve those fleet electrification goals. Additionally, the new covered storage will decrease wear and tear on the fleet, help vehicles last more than 15 months longer each, reduce labor costs and reduce GHG emissions by eliminating winter pre-trip idling. The expanded rooftop solar array will make the facility net zero, and the expanded rain/snow collection system will wash more buses without treated municipal water. All these efficiencies will position TVT to add 2,288 potential hours of expanded service annually by redirecting cost savings. Getting more service on the road not only helps more people who can't drive themselves but brings services up to a level of convenience that convinces more car owners to replace single-occupant vehicle rides with transit trips.



Public art at Vergennes bus shelter.

Goal

- *Create and sustain a Region-wide public transit system serving all citizens of the ACRPC region.*

Policies

- *Support TVT and town and human service agencies in providing public transportation services for a greater percentage of the Region.*

Public Transit - Recommended Actions:		
TVT	Support actions which provide TVT with the resources needed to provide optimum service	
	<i>Responsible:</i> TVT, ACRPC	<i>Timeframe:</i> short-term
TVT	Continue to explore pilot programs to expand potential TVT services	
	<i>Responsible:</i> TVT, ACRPC	<i>Timeframe:</i> short-term
TVT	Continue assisting TVT with planning, marketing, and general coordination	
	<i>Responsible:</i> ACRPC	<i>Timeframe:</i> ongoing
General	Support connectivity between transit and bicycling and walking	
	<i>Responsible:</i> Towns, ACRPC, VTrans	<i>Timeframe:</i> short-term
General	Incorporate transit planning into town plans, focusing on possible transit stops and hubs in proximity to parking availability.	
	<i>Responsible:</i> Towns, TVT, ACRPC, VTrans	<i>Timeframe:</i> short-term
General	Monitor transit demand to ensure that service continues to perform at acceptable levels and connects to places where riders can access the system with Park & Rides	
	<i>Responsible:</i> TVT, ACRPC	<i>Timeframe:</i> mid-term
General	Support TVT's efforts to expand facilities to accommodate transition to electric vehicles and maintenance savings.	
	<i>Responsible:</i> TVT, ACRPC	<i>Timeframe:</i> mid-term
General	Assist TVT in recruiting volunteer drivers	
	<i>Responsible:</i> TVT, ACRPC	<i>Timeframe:</i> short-term

Ride sharing-Car sharing-Ride hailing

To encourage reduced single-occupancy vehicle trips and to encourage collective travel either by ridesharing or by use of public transit, the Region contains a system of 11 formal and informal park and rides. Of the 11, one is maintained by the State of Vermont, 8 are maintained by municipalities and the remaining 1 is an informal lot. These facilities are rarely at capacity, indicating that the number of spaces available at the existing park and ride facilities in Addison County is currently sufficient.

Highest Carpool Commute	
Shoreham	17%
Bristol	17%
Vergennes	13%
Whiting	13%
Waltham	13%
Leicester	12%
Middlebury	12%

The VTrans “Go! Vermont” program helps commuters connect statewide to encourage ridesharing. There are 10 official park and rides in the ACRPC Region. The traditional ridesharing model, whereby a driver makes a seat in his or her vehicle available for passengers who may or may not pay for the trip, is changing due to growing technological connectivity.

The following Park & Ride facilities are served by TVT Addison Region and can also be used for ridesharing:

- **Ferrisburgh:** (Vergennes border): Jct of Rte 22A and Rte 7
- **Hinesburg:** Behind Town Hall, Rte 116
- **Leicester:** Next to town office on Leicester-Whiting Rd
- **New Haven:** Behind Town Hall, North St
- **Salisbury:** Jct of Maple St and W Salisbury Rd, just off Rte 7
- **Starksboro:** Behind Town Hall, Rte 116

Additionally, ride-share only Park and Rides can be found in the following towns:

- **Bridport:** Across street from Town Office
- **Cornwall:** Town Office parking lot, Rte 30
- **Monkton:** Monkton Central School
- **Panton:** Across street from Town Office
- **Waltham:** Co-located with Town Office

In Middlebury, overnight parking spaces are available behind Ilsley Library on the lower level as well as in the Frog Hollow municipal lot.

Car-sharing services, which have similarities to traditional car rental models, have expanded over the past decade, but have not penetrated the Addison County market. Occasional contractors for Uber and Lyft are available in and around Middlebury and in areas near Burlington. As technology advances, these services may become more effective in the lower-density areas of Addison County. This may present an opportunity to provide transportation to populations that need it such as elderly individuals who are no longer able to drive themselves, people with disabilities and people with low incomes.

TVT's microtransit pilot, EZ-Trip Middlebury, started in 2024 and replaced MSB College, Hospital, Marble Works, and Shaw' fixed route neighborhood loops with a much larger Middlebury Trip Zone. EZ Trip Middlebury offers free rides by reservation to bring riders door to door. Reservations may be self-booked by app or internet portal. Riders may also call TVT for assistance with a booking. The goals of the EZ Trip microtransit project are to increase transit ridership of current riders, create new access to transit for more Middlebury residents, decrease the cost per transit trip, and reduce greenhouse gas emissions through use of electric vehicles.

Travel Demand Management (TDM)

A vast majority of daily vehicle trips involve residents driving to and from work. Major employers in the ACRPC Region are well positioned to play an active role in reducing vehicle trips by encouraging carpooling, bicycling and allowing telecommuting. The Region's three largest employers are Middlebury College, The University of Vermont – Porter Medical Center, and Collins Aerospace. Local schools are also a significant employer. Employers can employ some or all of the following Transportation Demand Management (TDM) practices to reduce vehicle trips and increase vehicle occupancy:

- **Financial Incentives** - Employers can offer financial incentives to employees that reduce their single-occupancy vehicle (SOV) trips through carpooling or, like Middlebury College, they can provide free access to local public transit.
- **Facilities** - They can provide facilities for employees, such as secure locations for bicycles and access to showers and lockers, or carpoolers can be given preferred parking.

- **Services** - Employers can offer access to vanpooling, shuttles or car-sharing. In addition to their on-campus Zipcars, Middlebury College provides shuttle access for students and employees to the village.
- **Flexible Scheduling** - As access to the internet becomes more broadly available, the ability for an employee to work remotely has significantly improved. With the right equipment and a connection to the internet, employees can access their office workstations remotely, make and receive calls via the office phone system and otherwise work productively from home. For those occupations that are not well-suited to telecommuting, employers can allow for flex time or a compressed work week. By enabling employees to be able to work more hours over fewer days, the number of vehicle trips to and from work can be reduced. A 2015 project led by TVT concluded that TDM programs for employers require the following conditions:
 - An ongoing commitment from leadership/management.
 - An investment on the part of the business to create a fringe benefit program that could:
 - Offer benefits to employees;
 - Organize vanpool or carpooling options for its employees;
 - Provide facilities for bike/walking commuters, such as showers and bike rack ;
 - Establish a telecommuting policy.
 - The existence of costs to employers that could be mitigated with TDM techniques (eg. parking constraints, retention/recruitment issues).

Few of these conditions exist in Addison County at the current time.

Goals

- *Support transportation access for all Addison County residents.*
- *Provide alternative infrastructure to reduce single occupancy vehicle dependency.*
- *Continue to support public transportation, ride-share and car-share programs to reduce the Region's dependency on single-occupancy vehicle trips.*

Policies

Travel Demand Management -Recommended Actions:		
	Work with TVT, GoVT and others to make emerging ridesharing technologies available in the Region.	
	Responsible: TVT, ACRPC, VTrans	Timeframe: Mid-term

Pedestrian and Bicycle Facilities

Vermont's Complete Streets law, Act 34, requires that all users be considered in the planning, design, construction and maintenance of our roadway system. Under these Complete Streets principles, the context of each project is recognized in any recommendations for additional facilities or accommodations. In very rural areas, riders/walkers may share the road with vehicles, in other areas road shoulders provide a reasonable safe and cost-effective facility for pedestrians. In these cases, measures to maintain lower speeds to enhance safety, such as traffic calming, are appropriate. In areas with more multimodal activity, such as downtowns and village centers, there are a range of appropriate accommodations for non-motorized users, including sidewalks of varying widths and designs, bicycle lanes, shared lanes, and

separated bicycle paths. Current or future transit stops should be designed to anticipate pedestrian travel to and from the rider's final destination. This Plan supports Complete Streets and its implementation on a rural scale that is appropriate for the Region.

Walking and bicycling infrastructure is an important component of the Region's goals for sustainable transportation. Higher use of these modes will provide numerous benefits for the Region, including lower traffic volumes, lower emissions, and improved public health. While Vermont's Complete Streets policy should ensure that transportation improvement projects provide for these modes, there are additional considerations that can further the Region's goals. The Safe Routes to School program is a national initiative designed to promote walking and bicycling among school children. Improving safety is the primary program emphasis, but there are also other goals of improving physical fitness and mitigating school-caused traffic impacts. The Region has been supportive of federal and state initiatives that incorporate safe routes programs primarily in schools in or near our villages and downtowns.

Bicycle and pedestrian facilities in Addison County are generally concentrated in major villages and downtowns, although non-recreational bicycle travel on all of the Region's roads is seasonally common. This concentration in villages and downtowns is due primarily to the distances people are willing to walk and bike to work, recreation, school or services. Generally, between 2-5 miles is as far as the average person would bike to a specific destination (excluding biking for recreational purposes, which can be significantly larger distances), and between half and one mile is as far as a person is likely to walk. In addition to distance, weather and topography can have a significant influence on one's willingness to walk or bike for transportation. Middlebury, Bristol and Vergennes have downtowns with a network of pedestrian infrastructure. Additionally, these communities - particularly Middlebury, which is home to two of the Region's largest employers - are job centers, which means that cyclists within the 2-5 mile range can bike to work. Over the past decade the Towns of Middlebury, New Haven, Weybridge, Vergennes, Bristol, Cornwall and Ferrisburgh have all actively planned for future improvements to their pedestrian and bicycle infrastructure. As topography is relatively favorable for bicycling, increasing travel by this mode could potentially alleviate traffic congestion and downtown parking demands.

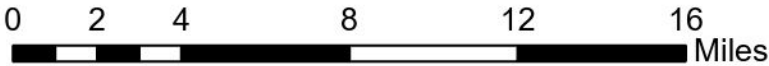
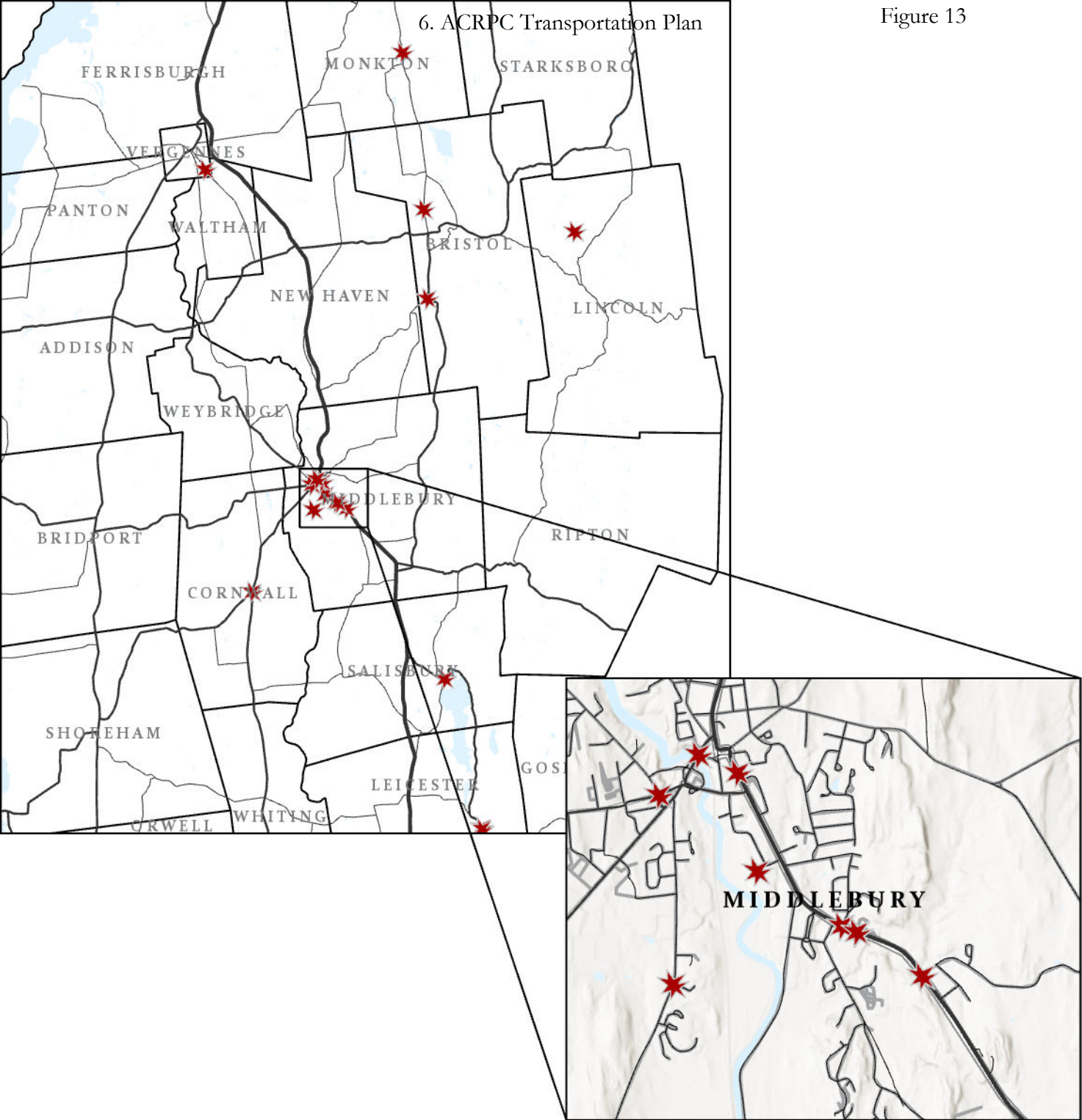
The unique character and diverse topography make Addison County amongst the most desirable destinations in Vermont for recreational cyclists. The Lake Champlain Bikeway, a 1,400-mile bicycle route that circles Lake Champlain through parts of Vermont, New York and Quebec, passes through Addison County, as does the Western New England Greenway, which links Montreal, QC to New York City. The Triangle Bike Loop is a designated bike trail that connects the region's three largest communities: Middlebury, Bristol and Vergennes. The [Triangle Bike Loop](#) mostly utilizes local roads with lower traffic volumes where cyclists are more comfortable. In addition, there are many other recreational road bike routes that connect Addison County with other parts of the state. The Moosalamoo National Recreation Area offers off-road cycling opportunities.

Electric Bikes

Electric bikes (E-bikes) are becoming more popular. Sales in the United States leaped by 269% between 2019 and 2022. A study from the Physical Activity Council found that in 2023, 19.4% of Americans who rode a bike at least once reported using an e-bike, up from 7.8% in 2021. The use of E-bikes has been incentivized by the Vermont Legislature. In 2022, the State launched the nation's [first statewide EBike incentive program](#). The most recent transportation bill (FY25) reauthorized the program. Incentives have been available on a first come-first served basis.

Figure 13

6. ACRPC Transportation Plan



Bike Crash Locations

Source(s): Roads: VTrans. Crash Locations: Digitized by ACRPC using data derived from VTrans Crash Query Tool (2016-2023).

 Crash Location



Figure 14



VTrans Bicycle Corridor Priorities

Source(s): Roads: VTrans; Bike Routes: Vtrans Bicycle Corridor Priority.

Bicycle Use Categories

- Low Use/Priority
- Moderate Use/Priority
- High Use/Priority

Some elements of public bike infrastructure are insufficient for E-bikes. E-bikes are heavier and more expensive than traditional bikes and require charging. Adapting public infrastructure to E-bikes will require increasing access to secure parking that includes shelter and charging opportunities. In many cases, e-bikes exceed the weight limit of bus bike racks. Loading a bike that is heavier than the rack weight limit may result in damage to your e-bike, or the bus, or cause the rack to fail.

Bike and Pedestrian Safety

The primary concern for cyclists as they travel through the Region is safety. While statewide bicycle crash trends have been moving slightly downward, the average yearly number of reported crashes in Vermont is 42. A majority of all bicycle crashes take place during the day, on a weekday at intersections.

In 2017, ACRPC collected citizen input with regard to bicycling and walking within the Region. Utilizing an online “wikimap,” residents indicated areas where they experienced safety concerns, where they regularly walk and bike and where they would walk or bike if safety was improved. Respondents identified 65 distinct areas of concern. Forty-one percent of all comments made were related to a lack of adequate road shoulders for bicycle safety throughout the Region. Traffic and traffic speeds, poor visibility, dangerous intersections and poor road conditions were also noted in locations around the Region. See ACRPC website at www.acrpc.org/programs-services/transportation for detailed information on the wikimap project.

It is unlikely that bike/ped improvements will occur in every area of the Region, therefore it is important to focus on where bike/ped infrastructure is used the most. A significant amount of foot travel occurs in areas where population density is highest – villages and downtowns. In these areas communities should:

- Develop bike/ped plans (stand alone or as part of their municipal plan) that plan for new pedestrian infrastructure (where appropriate) and provide connections between important areas of the community, whether for recreation or commerce, as well as connections between other communities.
- Identify local priority bike/ped routes.
- Utilize innovative and inexpensive techniques such as “tactical urbanism” to test possible bike/ped improvements.
- Maintain existing infrastructure and address safety issues quickly.
- Focus improvements on key intersections where pedestrian and bicycle movements conflict with vehicular traffic.

For cyclists, connections between population centers are also valuable. Many riders choose to commute via bike to their jobs, often traveling from more rural areas to employment centers such as Middlebury or Vergennes. This makes the stretches of municipal and state roads between the Region’s population centers an important focus of any long-range transportation planning.

The Vermont Agency of Transportation (VTrans) developed their Bicycle and Pedestrian Strategic Plan (BPSP) in 2021. The goal of the BPSP was to identify strategies that will broaden the inclusion of bicycling and walking throughout VTrans projects and activities. ACRPC recognizes that many of the best cycling opportunities occur on local roads, and has worked with and will continue to work with municipalities in the region to cost-effectively promote interconnected routes that provide the greatest benefit at the least cost. For example, ACRPC has assisted in development and promotion of the Triangle

Bike Loop which connects Middlebury, Bristol, and Vergennes through New Haven and includes parts of Ferrisburgh, Weybridge, and Waltham.

Regional Health Benefits of Walking and Biking

It is important not to understate the added health benefits that safer walking and biking opportunities can bring to the Region. The Vermont Department of Health estimates that more than one in three adults in Addison County do not get the recommended amount of physical activity and more than half (63%) are above a healthy weight, making them susceptible to chronic disease.

Using a context sensitive Complete Streets approach to developing the Region's transportation system will support safe walking and biking. When safe environments for exercise exist, communities have been shown to experience a 35% increase in physical activity.¹ Residents are 65% more likely to walk in a neighborhood with sidewalks.² In 2005, a comprehensive study of walkability found that people in walkable neighborhoods did about 35-45 more minutes of moderate intensity physical activity per week and were substantially less likely to be overweight or obese than similar people living in low-walkable neighborhoods.³

Designing our transportation system to encourage walking and biking expands economic benefits in a number of ways. The 2017 Burlington Walk Bike Master Plan describes the following:

- Walking/biking increases household purchasing power by reducing transportation related expenditures.
- Human-friendly streets boost retail performance.
- Walking/biking keeps people fit, healthy, and socially connected as they age.
- Walk/bike investments help attract and retain talent.
- Better walk/bike conditions contribute to a healthy and happy workforce.

Walk-Bike Council of Addison County (WBCAC)

Following two fatal bicycle crashes in the Region, ACRPC partnered with nonprofit bike/ped advocacy group Local Motion and concerned citizens to form the Walk Bike Council of Addison County (WBCAC). The WBCAC includes residents and experts in such fields as law and enforcement, transportation planning, marketing, recreation, health and community planning. The Council's primary goals are to:

- Improve on-the-ground conditions for walking and biking through technical review of Regional transportation projects, walk-bike planning guidance and other technical assistance.
- Increase public officials' knowledge of and engagement in walk-bike issues by building relationships with law enforcement and local transportation officials, providing training and outreach to key stakeholders and reviewing local land use regulations.
- Build community acceptance of and respect for everyday walking and biking through grassroots outreach and the marketing of a "walk-bike identity" for Addison County.

¹ VT Department of Health, 3-4-50 Vermont County Data Brief, Addison County, 2017

² Giles-Corti, B., & Donovan, R.J. (2002). "The relative influence of individual, social, and physical environment determinants of physical activity." *Social Science & Medicine*, 54 1793-1812.

³ Besser, L. M. and A. L. Dannenberg. (2005). Walking to public transit steps to help meet physical activity recommendations. *American Journal of Preventive Medicine* 29(4): 273-280.

6. ACRPC Transportation Plan

- Increase rates of walking and biking across all ages, abilities, and communities by supporting the Safe Routes to School Program throughout the Region, identifying opportunities for promotions that incentivize and highlight biking and walking and advising businesses and municipalities about bike infrastructure.

As is the case in many parts of Vermont, not all areas of local transportation are well-suited for walking or biking. In order to ensure safe travel for pedestrians and cyclists, the road network must be designed and maintained to accommodate more than vehicular traffic.

Goals

- *A walking and biking network that is safe, enjoyable and well-maintained.*
- *A well-educated public that understands bicycle and pedestrian safety.*
- *Increased rates of walking and biking across all ages, abilities and the Region.*
- *Reduce energy use by encouraging walking and biking.*

Policies

- *Construction projects should consider improvements for bicyclists and pedestrians as central to project's purpose, rather than an "enhancement." Accommodations for pedestrians include not only the sidewalk surface, but amenities to make walking feel safer and more comfortable including trees, plantings, benches and lighting.*
- *Any future VTrans investments in bike/ped infrastructure in Addison County should include locally identified priority areas.*
- *Encourage the development of bike/ped connections between the Region's population centers, by providing adequate travel space along significant routes.*

Pedestrian and Bicycle Facilities - Recommended Actions:		
General	Continue to support the efforts of the Walk-Bike Council of Addison County, by providing staff assistance, outreach and coordination, especially as liaison to the TAC.	
	<i>Responsible:</i> ACRPC	<i>Timeframe:</i> ongoing
General	Pursue the projects identified in the Regional Bicycle and Pedestrian Plan and by the Walk-Bike Council of Addison County	
	<i>Responsible:</i> Towns, ACRPC, WBCAC	<i>Timeframe:</i> short-term
General	Assist communities with the development of local transportation plans and policies that consider and plan for multi-modal improvements	
	<i>Responsible:</i> Towns, ACRPC	<i>Timeframe:</i> short-term
General	Encourage Safe Routes to School programs/plans for all Village Center Designation areas	
	<i>Responsible:</i> ACRPC	<i>Timeframe:</i> short-term
General	Identify and promote designated parking facilities for E-bikes	
	<i>Responsible:</i> Towns, ACRPC	<i>Timeframe:</i> short-term

General	Support projects to improve conditions on designated bike routes including the Triangle Bike Loop and Champlain Bikeways	
	<i>Responsible:</i> Towns, ACRPC	<i>Timeframe:</i> medium-term
Bristol	Improve pedestrian and bicycle connectivity along VT116 between South Street and Lincoln Road	
	<i>Responsible:</i> VTrans, Town of Bristol, ACRPC	<i>Timeframe:</i> mid-term
Middlebury	Implement local bicycle and pedestrian system plan	
	<i>Responsible:</i> Town of Middlebury, ACRPC	<i>Timeframe:</i> short-term
Middlebury	Improve pedestrian connection on US 7 south to Boardman St.	
	<i>Responsible:</i> Town of Middlebury, ACRPC, VTrans	<i>Timeframe:</i> medium-term
Middlebury	Improve pedestrian and bicycle conditions on Exchange St.	
	<i>Responsible:</i> Town of Middlebury, ACRPC	<i>Timeframe:</i> medium-term
Monkton	Support safer connections from Ridge to Borough	
	<i>Responsible:</i> Town of Monkton, ACRPC	<i>Timeframe:</i> short-term
New Haven	Support follow-up to 2016 walk-bike survey work	
	<i>Responsible:</i> Town of New Haven, ACRPC	<i>Timeframe:</i> short-term
Salisbury/Leicester	Complete conceptual alignment analysis of route around Lake Dunmore & Fern Lake	
	<i>Responsible:</i> Towns of Salisbury & Leicester, ACRPC	<i>Timeframe:</i> short-term
Vergennes	Support implementation of Downtown-Basin Plan	
	<i>Responsible:</i> City of Vergennes, ACRPC	<i>Timeframe:</i> mid-term
Waltham	Support safe sidewalk/bike route connections to Vergennes	
	<i>Responsible:</i> Town of Waltham, ACRPC	<i>Timeframe:</i> short-term
Weybridge	Support walk/bike connections to downtown Middlebury	
	<i>Responsible:</i> Town of Weybridge, ACRPC	<i>Timeframe:</i> short-term

Issues and Opportunities

Promotes the Economy

Addison County's transportation network provides benefits – particularly economic benefits - by connecting us with the work we do, the services we need and our families. Our roadways and rail lines serve as the arteries feeding our facilities and by which our businesses transport our goods to market. Keeping traffic moving freely on our arterial roads is essential to our production economy. Additionally, visitors travel to the Region for leisure, business and personal travel. Seven percent of Addison County's business establishments cater directly to the recreation and tourism industry. Many other businesses

benefit indirectly. The Vermont “brand” relies heavily on travel because of the unique rural qualities of the state.

Future transportation improvements must provide safe and efficient multi-modal travel that also preserves the characteristics that make Addison County unique. ACRPC desires a transportation system that allows all its citizens, businesses and visitors to safely and efficiently move from one place to another.

Transportation improvements should utilize a Complete Streets approach which considers the context of an area as much as current and potential travel patterns. While sidewalks and well-defined bike lanes are appropriate in the context of a village or a downtown, in rural areas accommodations for multiple modes of travel might mean improving road shoulders to allow for separation between pedestrians and vehicular traffic.

ACRPC continues to support all modes of transportation structured to help build stronger, more vibrant communities. Vibrant communities will attract new businesses and maintain economic stability.

Promotes Economy - Recommended Actions:		
General	Strategically improve arterial roads and practice access management to preserve travel times for commerce	
	<i>Responsible:</i> VTrans, ACRPC	<i>Timeframe:</i> mid-term
General	Build complete streets, especially in village and downtowns to create vibrant attractive communities	
	<i>Responsible:</i> ACRPC, towns, VTrans	<i>Timeframe:</i> mid-term
General	Support rail and air improvements within the western corridor to provide additional opportunity for commercial and passenger activity	
	<i>Responsible:</i> VTrans, ACRPC	<i>Timeframe:</i> short-term

Safely Supports All Modes of Travel

One of the Regional Commission’s primary considerations is the safety of travelers throughout the region, regardless of mode of travel. In section 6.6, a number of high automobile crash locations were identified along the Region’s major roadway corridors. Many of these locations can benefit from safety improvements, including the installation of roundabouts, which the RPC supports at specific locations.

Automobiles and other modes of transportation, such as bicycle or pedestrian, must exist safely within the transportation system. Throughout the region there are areas where existing infrastructure does not provide a safe environment for multi-modal transportation. Future investments in these travel corridors should consider improvements that enhance the safety of bicycle and pedestrian travel.

Safe Modes of Travel - Recommended Actions:		
General	Support the installation of highway safety improvements at high crash locations as identified and recommended in the corridor plans	
	<i>Responsible:</i> VTrans, ACRPC	<i>Timeframe:</i> mid-term
General	Support context-sensitive roadway improvements that enhance bicycle and pedestrian safety	
	<i>Responsible:</i> ACRPC, VTrans	<i>Timeframe:</i> mid-term

General	ACRPC will continue to support programs like the Safe Routes to School, and Strong Communities, Better Connections to ensure safe multi-modal transportation	
	<i>Responsible:</i> VTrans, ACRPC	<i>Timeframe:</i> mid-term

Promotes Energy Efficiency and Conservation

The prolific use of fossil fuels over the past two centuries has had a significant impact on air quality, water quality, and climate patterns. Climate change, sometimes referred to as global warming, has resulted from the rapid release of billions of tons of carbon (also referred to as Greenhouse Gases or GHG) that had been locked in solid and liquid fossil fuels. The worldwide impacts of climate change—destruction of ecosystems, sea level rise, greater frequency and intensity of drought and severe storms that threaten millions of homes, farms, and businesses—are already being observed. The Addison Region chooses to write this Plan to limit future damage and adapt to a changing reality. In Vermont, climate change has the potential to alter the composition of our ecosystems, affect the viability of agriculture, and result in more damaging tropical storms, floods, and other severe weather events.

The 2022, State of Vermont Comprehensive Energy Plan (CEP) intended to address Vermont’s Greenhouse Gas emissions, and its energy future for electricity, thermal energy, transportation and land use. The 2022 CEP reestablished the very significant goals for the state, most notably to transition the state’s energy use from 75% fossil fuels to 90% renewable by 2050. The 2022 CEP set a goal of increasing the number of electric vehicles in Vermont, and have zero-emission vehicles account for 100% of light-duty vehicles sales by 2035. The 2022 CEP did not specify targets for transportation demand reducing activities, but did continue to prioritize Transportation Demand Management (TDM), due to its broad benefits across Vermont’s energy policy goals. The ACRPC Regional Plan supports these goals as part of a strategy to reduce GHG emissions and overall energy use.

Transportation constitutes the most significant contributor to greenhouse gas emissions in Vermont, accounting for 37.2% of Vermont’s total in 2015. Use of the automobile as our primary source of travel and truck freight transport is the root cause. Seventy percent of all commuters drive alone in single-occupancy vehicles. This creates a significant opportunity for the Regional Commission to play a role in the reduction of GHG’s. ACRPC intends to use its plan to maintain existing economic vitality, but also adopt policies developed to shift future use patterns.

Goal

- *Reduce the Region’s contribution to greenhouse gas emissions.*

Policies

- *Reduce vehicle miles traveled by supporting efforts to provide the Region with opportunities to work closer to home and encouraging public transit ridership.*
- *Support programs and planning initiatives such as park and rides and ridesharing that will reduce single occupancy trips throughout the Region.*

Energy Efficiency & Conservation - Recommended Actions:		
General	Actively support TVT and other forms of local public transit	
	<i>Responsible:</i> ACRPC	<i>Timeframe:</i> ongoing
General	Promote the expansion of the existing park and ride system, focusing on low-cost options in or adjacent to village centers	

	<i>Responsible:</i> ACRPC	<i>Timeframe:</i> ongoing
General	Provide technical assistance to the Addison County Walk-Bike Council, and support their mission to increase walking and biking region-wide	
	<i>Responsible:</i> ACRPC	<i>Timeframe:</i> ongoing
General	Work with VTrans and GoVT to actively support and promote van pools between Chittenden and Addison County	
	<i>Responsible:</i> ACRPC	<i>Timeframe:</i> ongoing

Electric Vehicles

The range of electric vehicles (EV) in the 2024 model year varied from 114 miles to over 500 miles on a full charge. Most EV owners charge at home, however given the distance between our communities and centers of employment, it is essential that the ability to recharge EVs is readily available to the EV owner, if more EVs are to be encouraged. A Level 1 charging station (120 volts) provides 2-5 miles per hour of charging while a Level 2 charger (240 volts) provides 10-20 miles and a DC Fast Charger (up to 1000 Volts DC) provides 180-240 miles per hour. While Level 3 chargers are the most appealing because of their short charging time, they are significantly more expensive to install and require the availability of 3-phase power.

Since 2014 the State of Vermont has invested over \$14.5M in Community EV charging stations in the state. Park and Rides in Panton, Starksboro, and New Haven host Level 2 chargers, and the Mill St. municipal parking lot in Middlebury has a fast charger. Providing regular fast charging opportunities along the Region's major travel corridors (Route 7 and Route 22A) is essential to encouraging the use of EVs in the Region. The federal Infrastructure Investment and Jobs Act of 2021 provided dedicated funding to states for deployment of EV charging infrastructure. New stations constructed with these funds must be within one mile of an intersection with a designated Alternative Fuel EV Corridor intersection, and within fifty miles of the next charging station. US7 through Addison County is the only Alternative Fuel EV Corridor in the region.

Goal

- *Increase the number of Electric Vehicles region-wide.*

Policies

- *Encourage the development of a network of EV charging stations along the Region's largest transportation corridors.*
- *To provide complete coverage for electric vehicle charging, encourage expansion of the DC Fast Charge (Level 3) vehicle charging station network throughout the region.*

Electric Vehicles - Recommended Actions:		
General	Identify ideal locations and develop strategies for construction of EV charging stations along major regional corridors	
	<i>Responsible:</i> VTrans, ACRPC	<i>Timeframe:</i> mid-term
General	Encourage municipalities to explore potential for EV charging stations in village centers or at other recreational/community facilities or Park and Rides	
	<i>Responsible:</i> ACRPC, towns	<i>Timeframe:</i> mid-term
	Encourage commercial development to provide for charging stations in timed/metered parking areas.	

	<i>Responsible: Towns, ACRPC</i>	<i>Timeframe: mid-term</i>
	<i>Encourage residential development to provide for 220 volt receptacles in accessible spaces.</i>	
	<i>Responsible: Towns, ACRPC</i>	<i>Timeframe: mid-term</i>

Enhances Regional Land Uses & the Region's Sense of Place

Traditional transportation planning techniques have often focused primarily on enhancing auto-mobility – the ability to move freely and easily by car. In many areas nationwide, this focus has led to improvements that allow for faster traffic flow, such as the widening of roads or the installation of turning lanes and streetlights. While in some places these techniques may be the best choice, if applied universally to all locations, they can have detrimental effects. For example, the widening of rural back roads often requires removing the trees that line the road. Tree-lined rural roads are one of the distinct characteristics of rural Addison County. As an alternative to a one-size-fits-all approach to planning, New Urbanists developed the “transect” approach. This approach recognizes that there are different scales of development in every Region, ranging from sparsely developed rural areas, to small hamlets, to densely populated downtowns. Rather than apply one transportation approach to all areas, differing transportation techniques are encouraged in each area.

In the ACRPC Region, planners should focus on a healthy balance between mobility and livability. While moving people from one population center to another at optimal speeds is important along the Region's primary transportation corridors, it is less so along more rural roads. Along the Region's rural roads, it is important to recognize that the character of these roads have a direct impact on livability. Narrow, tree-lined dirt roads lend themselves reasonably well to walking and biking. By keeping these roads lined with trees and vegetation, roads feel naturally narrower, thus slowing vehicle speed. Likewise, the tree-lined road contributes to the rural aesthetic.

While multi-modal transportation is important Region-wide, transportation planning within the Region's villages and downtowns should focus directly on providing a diverse range of transportation options using Complete Streets policy as a guide. Providing pedestrian infrastructure such as sidewalks or walking paths, reducing traffic speeds through streetscaping and other traffic calming techniques, help encourage walking. Developing bike paths, incorporating bike lanes along streets and placing bike racks in useful areas are ways communities can encourage multi-modal transportation that is appropriate for their village. These transportation enhancements help preserve the traditional feel of our villages and downtowns and provide opportunities for residents to interact socially, which further enforces the sense of livability a community has. At the same time, encouraging a high volume of traffic through our villages and downtowns can have detrimental effects. As mentioned earlier, truck traffic through population centers like Vergennes is having a negative impact on the community. Evaluating options that reduce these impacts is important to striking a balance between mobility and livability.

A livable community is one that has affordable and appropriate housing, supportive community features and services, and adequate mobility options, which together facilitate personal independence and the engagement of residents in civic and social life. It is important to recognize that land use decisions also have a significant impact on livability. Population centers should encourage a wide range of appropriately scaled (and affordable) housing and areas of mixed use that are easily accessible by foot.

Goal

- *A transportation system that successfully balances mobility with livability.*

Policies

- *Patterns of land use within the ACRPC Region should support the traditional pattern of densely populated villages and downtowns surrounded by open countryside.*
- *To enhance livability, investments in transportation infrastructure in villages and downtowns should incorporate Complete Streets design.*

Enhancing Regional Land Uses & Sense of Place - Recommended Actions:		
General	Encourage appropriately scaled roundabouts and other traffic calming features as preferred safety improvements and as community/village gateways	
	<i>Responsible:</i> VTrans, ACRPC, towns	<i>Timeframe:</i> ongoing
General	Complete Streets appropriate scale to location	
	<i>Responsible:</i> ACRPC, towns	<i>Timeframe:</i> short-term
General	Support access management efforts, focusing on keeping major arterial roads moving freely	
	<i>Responsible:</i> ACRPC, towns, VTrans	<i>Timeframe:</i> ongoing

Exhibits Resilience to Natural Hazards

Shifting climate patterns have led to an increase in severe weather events. In Vermont, a vast majority of declared disasters are flood related. Floods often damage roads and bridges. The cost of repairing or replacing failed infrastructure after a severe weather event can be challenging for the Region's communities. To mitigate against future damages, hazard mitigation techniques such as culvert upsizing, lengthening bridges based on stream hydraulic studies and improved bank stabilization can be implemented. Funding is the primary barrier to implementation at the local level.

ACRPC can pursue funding opportunities to advance the planning and construction of projects that preserve or enhance water quality, while also mitigating against future damage. Replacing deficient culverts and bridges has the best return on investment. Designing appropriately scaled structures that can handle flood events, stormwater runoff, and minimize the discharge of sediment has the dual benefit of protecting water quality and reducing the potential for failure during a severe flooding event. In some instances, there are locations that should be avoided or where transportation infrastructure or roadway growth should be limited so as to not exacerbate the potential for damage. In these cases, downgrading or relocating existing roadways may be the best option. In more urban areas, flooding can be reduced by installing green infrastructure, eliminating system infiltration and/or separating stormwater systems from sewer systems.

To assist in planning a more resilient transportation system, VTrans has developed the [Transportation Resilience Planning Tool](#) (TRTPT). The tool is a web-based application that identifies bridges, culverts, and road embankments that are vulnerable to damage from floods, estimates risk based on the vulnerability, and criticality of roadway segments, and identifies potential mitigation measures based on the factors driving the vulnerability. The TRPT combines river science, hydraulics and transportation

planning methods and is applied at a watershed scale. The TRPT has been developed for the entire state and is ready to be applied to inform project scoping, capital programming, and hazard mitigation planning for state and local highways. The TRPT informs the resilience criterion in the VTrans Project Selection and Prioritization Process (VPSP2) which is used to select new VTrans Capital Program projects.

While the Federal Emergency Management Agency (FEMA) can cover a portion (generally 75%) of eligible expenses under a federally declared disaster, communities are responsible for the remainder (25%). Given the cost of rebuilding infrastructure, even one quarter of the total cost can be significant. Vermont created the Emergency Relief and Assistance Fund (ERAF) to help defray the cost to communities, contributing a minimum of 7.5% to their share. In return for taking additional flood mitigation measures, the State will contribute a higher percentage to cover municipal recovery costs. Mitigation measures include:

1. Participation in the National Flood Insurance Program;
2. Adoption of Town Road and Bridge Standards;
3. Annual adoption of a Local Emergency Operations Plan;
4. Adoption of a FEMA approved Local Hazard Mitigation Plan;
5. Adoption of River Corridor Protections.

Table 6: Example ERAF Percentage			
	7.5%	12.5%	17.5%
Total Disaster Cost	\$1,000,000	\$1,000,000	\$1,000,000
Federal Share	\$750,000	\$750,000	\$750,000
State Share	\$75,000	\$125,000	\$175,000
Municipal Share	\$175,000	\$125,000	\$75,000

Communities that take steps 1-4 will receive a 12.5% contribution from the state for their 25% share of the costs. Those communities who add the adoption of River Corridor protections to their mitigation efforts will receive a total contribution of 17.5% from the state. As indicated in the example in Table 6, the increased state contribution can defray a significant portion of the cost of a reconstruction project to communities.

In 2017, the Legislature passed Act 64, an act relating to improving the quality of State Waters. Act 64 establishes a number of water quality related regulations. In particular, municipalities are required to implement a customized, multi-year plan to stabilize their road drainage systems. These systems must be brought up to basic maintenance standards and corrective measures must be implemented to reduce erosion as is required to meet a Total Maximum Daily Load (TMDL) or water quality restoration effort. The Municipal Roads General Permit (MRGP) includes (but is not limited to) the following:

- A valid road inventory of roads that are hydrologically-connected to surface waters through ditches, culverts or other drainage structures.
- The development of an Implementation Plan that prioritizes road segment remediation to bring non-complying road segments up to MRGP standards.
- New projects must be designed to Vermont Stormwater Manual standards if over the permit threshold of 1-acre of impervious surface, or greater than 5,000 square feet.

Goal

- *To develop a transportation system that is safe, efficient and protected from damage during a severe weather event.*

Policies

- *Encourage the moving or abandonment of roads that often experience serious flood damage.*
- *Design culverts and bridges to provide the best possible mitigation of potential flood damage, which at a minimum should meet VTrans Hydraulics Manual and ANR Stream Alteration Standards.*

Resilience to Natural Hazards - Recommended Actions:		
General	Assist ACRPC municipalities with efforts to conform to MRGP requirements.	
	<i>Responsible:</i> ACRPC, VTrans	<i>Timeframe:</i> ongoing
General	Continue to support Addison County Regional Emergency Management Committee and encourage all communities to adopt Local Hazard Mitigation Plans and Local Emergency Operations Plans.	
	<i>Responsible:</i> ACRPC	<i>Timeframe:</i> short-term
General	Assist communities with the adoption of flood mitigation measures which increase the percentage of ERAF funding offered by the state in the event of a Federally Declared Disaster.	
	<i>Responsible:</i> ACRPC, VTRANS, ANR/DEC	<i>Timeframe:</i> short-term

Receives Sufficient Funding

Funding of maintenance and repair of roads remains the most tangible and immediate challenge for our communities. Town highway expenses are typically the second largest local expenditure after school budgets, often averaging several thousand dollars per mile to maintain. The State of Vermont provides an annual appropriation to towns for highway maintenance, but that amount generally falls short of the total cost to the community. Municipalities, with assistance from ACRPC, need to maximize potential alternative funding streams to offset maintenance costs. For example, the Better Roads program provides funds for planning and erosion control projects that protect water quality and reduce maintenance costs. Additionally, communities that implement a well-designed Capital Budget and Program for their road work are better able to predict and stabilize costs over the long term.

By supporting State, Regional and local transportation policy and action that strives to reduce SOV trips and VMT, increases ridership and access to public transit, and encourages biking and walking, ACRPC helps to create a more comprehensive, sustainable transportation system. In addition, assisting communities with applying for other funding sources to offset road management expenses and developing strong capital budgeting for transportation improvements and maintenance will be needed.

Sufficient Funding - Recommended Actions:		
General	Diversify transportation funding and policies to address rising maintenance costs	
	<i>Responsible:</i> ACRPC, VTrans, towns, TVT	<i>Timeframe:</i> mid-term
General	Address limited availability of road maintenance materials (e.g. sand & gravel)	

6. ACRPC Transportation Plan

	<i>Responsible:</i> ACRPC, VTrans, U.S. DOT	<i>Timeframe:</i> short-term
General	Help municipalities to plan for and implement capital budgeting for transportation infrastructure	
	<i>Responsible:</i> municipalities, ACRPC, VTrans	<i>Timeframe:</i> short-term
General	Help municipalities access additional funding to improve water quality and reduce long term maintenance expenses	
	<i>Responsible:</i> VTrans, ANR, ACRPC	<i>Timeframe:</i> short-term
General	Advocate for more non-municipal dollars (e.g. state, federal) to support our transportation network.	
	<i>Responsible:</i> ACRPC, municipalities	<i>Timeframe:</i> short-term