

CHAPTER 4: RECOMMENDATIONS AND IMPLEMENTATION PLAN

This Chapter describes the final concepts presented to and chosen by the Advisory Committee for short-, medium- and long-term multimodal improvement concepts for the City's consideration and possible approval. These improvement concepts were developed and refined through an extensive public process and committee input and were evaluated for their ability to meet the corridor's vision and goals (see page TBD). A detailed description of all concepts is provided in Chapter 3 of this report.

The Advisory Committee's recommended improvement concepts are presented in the *Implementation Matrix* section of this Chapter. The study team (staff from DPW, CCRPC and PB) has concerns on the ability to implement some of these concepts, which are discussed in detail in subsequent sections of this chapter.

Implementation Timeframes

All improvement concepts were organized into three implementation periods:

- Short term (< 3 years)
- Medium term (3 to 7 years)
- Long term (> 7 years)

These timeframes help differentiate between concepts that could be implemented relatively quickly versus concepts that require additional time to develop. Improvement concepts were placed into each implementation period based on several factors, including project complexity (i.e., the extent of evaluation, scoping, and design required), length of the public process, construction costs, and feasibility of obtaining funding.

Short Term

Short-term projects could be implemented in less than three years because there are minimal evaluation/design requirements and no

major reconstruction of the roadway. Examples of short-term projects include new striping (e.g., bike lanes, narrowed lanes, on-street parking), traffic signal optimization, ADA improvements, high-priority new pedestrian crossings, high-priority and minor intersection construction, and new transit shelters. Some short-term projects will require additional public process for regulatory changes, some will benefit from additional public engagement, but the most basic short-term projects will advance without any additional review (e.g. signal optimization, pedestrian countdown signals, and ADA improvements).

Medium Term

Medium-term projects could be implemented within three to seven years. These projects require a more detailed design process because of more complex construction, which may include curb relocations at some locations. Examples of medium-term projects include gateway treatments (i.e., curb extensions, special pavement), minor intersection construction, and more complex striping patterns. These projects require a greater degree of public input and additional time may be needed to seek funding from multiple sources.

Long Term

Long-term projects represent the most significant investments in the North Avenue Corridor, and may take more than seven years to fully implement. Long-term projects require full evaluation, scoping, and design, as well as a robust public involvement process throughout all phases of the project, including construction. Examples of long-term projects include full curb and planting strip reconstruction, low-stress cycling facilities (e.g., protected bike lanes), utility burial or relocation, more complex intersection reconstruction, and stormwater treatments. Long-term projects also take more time to implement due to their high costs (could exceed several millions of dollars) which makes securing a variety of funding sources critical to their implementation.

Voting for Preferred Concepts

At their last meeting on July 1, 2014, the Advisory Committee voted for their preferred cross-sections, intersections, crosswalks and corridor-wide concepts by timeframe. Concepts that received a simple majority were advanced as Committee recommendations for the Transportation, Energy, and Utility Committee's (TEUC) and City Council's consideration and possible approval. The final Implementation Plan will be selected by the City Council during their meeting in September 2014.

The organizations represented on the Advisory Committee are:

- American Association of Retired Persons (AARP)
- Burlington Partnership for a Healthy Community (BPHC)
- Chittenden County Transportation Authority (CCTA)
- City Council
- Burlington Department of Public Works (DPW)
- Local Motion
- Burlington Department of Planning and Zoning
- Burlington Department of Community and Economic Development
- Neighborhood Planning Assembly (NPA) Representatives from Wards 3, 4, and 7
- Burlington School District
- Vermont Agency of Transportation

Each organization represented on the Advisory Committee received a single vote, although not every organization participated in the voting process. Short, medium and long-term improvement concepts representing the voting options for the Advisory Committee are discussed in the following sections.

Cross-Section Concepts

The Advisory Committee was asked to vote for preferred cross-section concepts and their implementation timeframe (see Chapter 3 for more details on the concepts considered and the criteria used to evaluate them). Committee members were asked the following questions:

1. Do you support the short-term cross section Concept A1 (Figure 1), or do you prefer another concept?
2. Do you support the medium-term cross section Concept A2 (Figure 2), or do you prefer another concept?
3. Which long-term cross section concept do you prefer?

Short- & Medium-Term

The Advisory Committee rejected short-term Concept A1 which included the following elements:

- Parking only on one-side of the avenue
- On-street bike lanes where feasible (Plattsburg Ave to Shore Rd and VT 127 to Institute Rd)
- Begin planning for a 4-lane to a 3-lane conversion from Shore Rd to VT 127 but retain 4 lanes in the short-term

The committee also rejected Concept A2 which called for a 4-lane to 3-lane conversion from Shore Rd to VT 127 in the medium term and instead voted (8 to 2) in favor of a new short-term pilot project (Concept A3: see Figure 3) with the following elements:

- Three-lane configuration between Shore Rd and VT 127 with 10.5 foot travel lanes and 4.5 foot bike lanes
- 25 MPH throughout the corridor
- All parking eliminated north of Washington Street
- Bike lanes, enhanced/buffered where space allows
- Protected bike lanes (with flex posts) from VT 127 to Institute Road

- Replacement of existing drainage grates with bicycle-friendly grates

The study team has concerns with some elements of Concept A3 including the 4.5' bike lane (DPW's standard is 5' minimum for new bike lanes) and the comprehensive parking removal north of Washington Street. The comprehensive parking removal was not evaluated or thoroughly discussed during the public outreach phase of this study; retaining on-street parking on one side of North Avenue could accommodate demands in areas such as St. Mark's Church and could also bolster the economic sustainability of the North Avenue corridor by inviting future street-facing neighborhood commercial activities. In addition, the team has concerns with the feasibility of a 4- to 3-lane conversion between Shore Road and VT 127 within the 3-year timeframe endorsed by the Advisory Committee. The 4- to 3-lane conversion pilot project will need a strong public outreach plan, a comprehensive data collection plan, necessary funding, and the political support to complete within the 3 year timeframe.

As a result, the study team's recommended short-term cross-section is A1 and medium-term cross-section is A2.

Figure 1: Study Team's Recommended Short-term Cross-section Concept A1

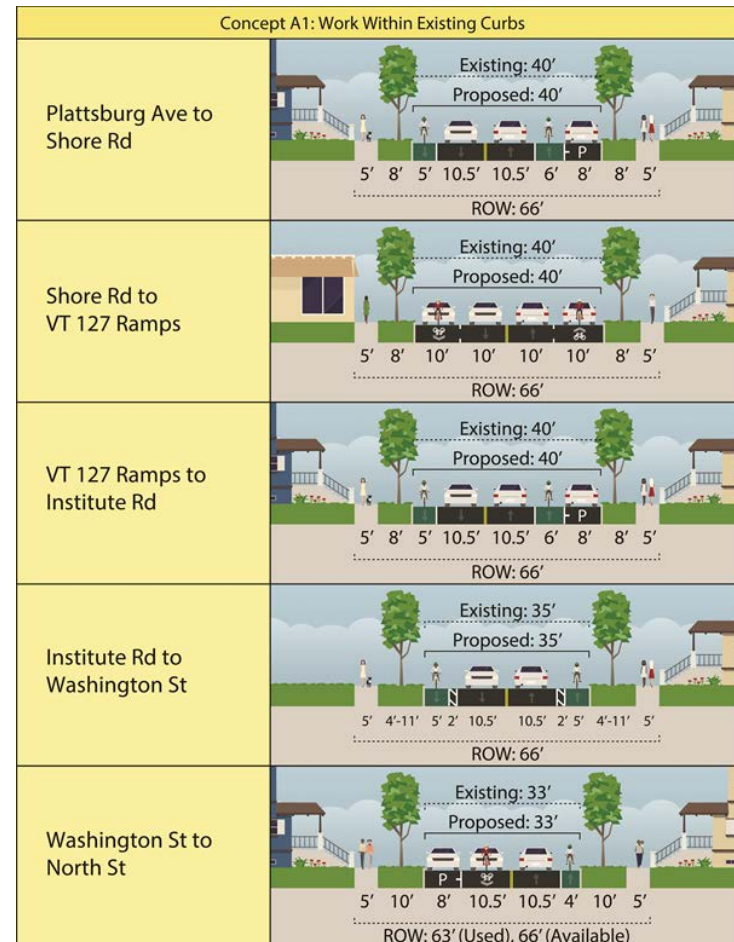


Figure 2: Study Team’s Recommended Medium-term Cross-section Concept A2

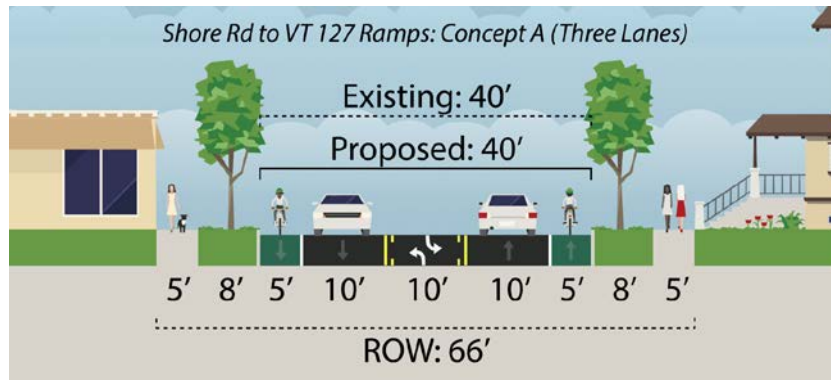
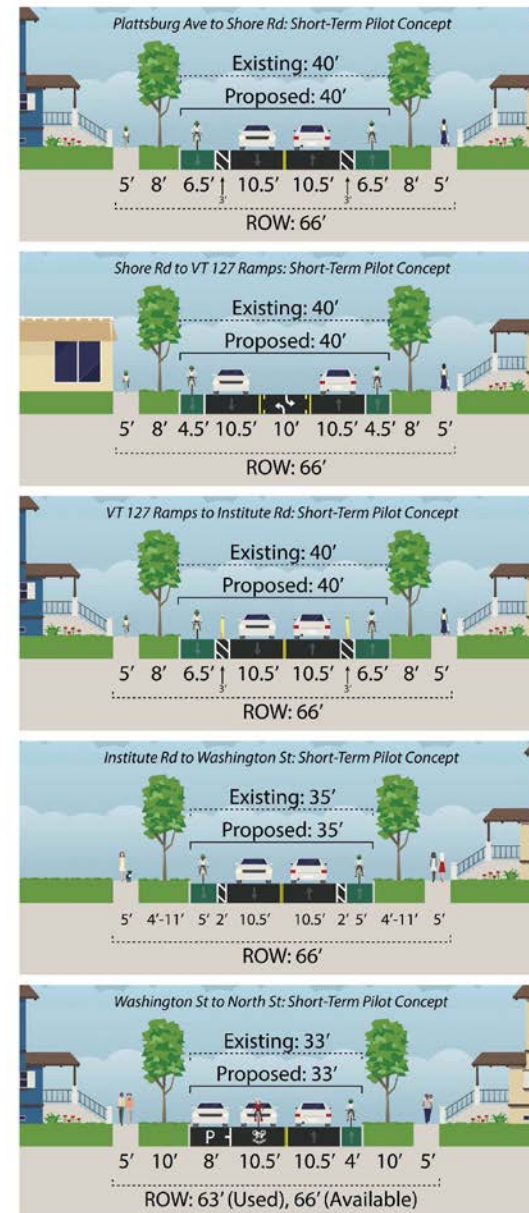


Figure 3: Advisory Committee’s Preferred Short-term Cross-section Concept A3

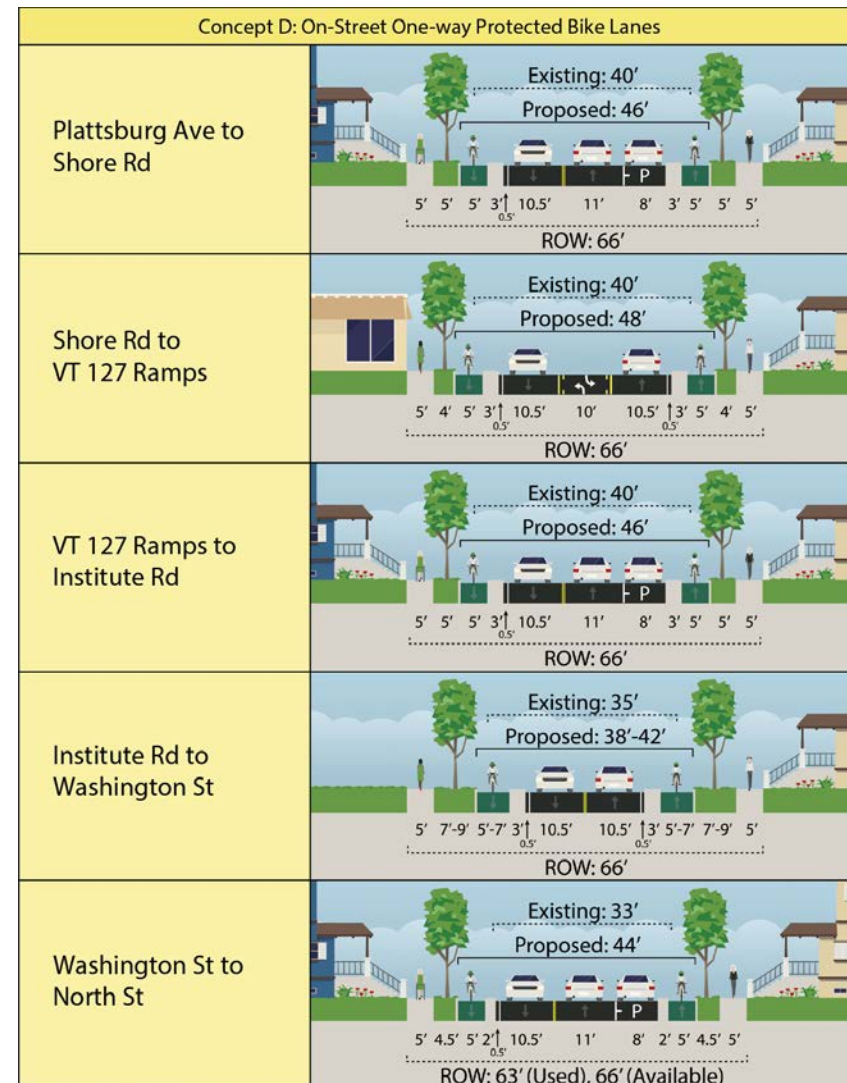


Long-Term

The Advisory Committee voted (6 to 4) in favor of *Concept D: On-Street One-Way Protected Bike Lanes* (Figure 4) as the long-term cross-section for North Avenue. The Study Team also supports this concept.

Please note that the need for on-street parking north of Washington St. in the long-term will be evaluated during the scoping study for Concept D.

Figure 4: Long-term Cross-section Concept D: On-Street One-Way Protected Bike Lanes



Unsignalized/Mid-Block Pedestrian Crossings

A list of nine candidate locations for new unsignalized/mid-block pedestrian crossings was developed based on comments received from the public via the online voting tool and public meetings. Advisory Committee members were asked to vote for three to five preferred locations. The five locations with the most votes were assigned to the short-term timeframe, and the remaining four were assigned to the medium term.

Based on additional comments received through the online input tool and public meetings, the study team also assigned four additional pedestrian crossings to the long-term timeframe, which are intended to provide safer crossing opportunities for bus passengers at stops along North Avenue (Table 1 and Figure 5). All unsignalized/mid-block crossing locations will be evaluated for the most appropriate crosswalk design features, which may include high-visibility treatments, lighting, and alignment.

Table 1: Implementation Timeframes for Unsignalized/Mid-Block Pedestrian Crossings

Proposed Pedestrian Crossing Location (Listed North to South)	Timeframe
Loaldo Drive/Fairmont Place	Medium
Green Acres Drive/Cayuga Court	Short
Staniford Road	Long
Gosse Court	Short
Poirier Place	Medium
Lakewood Parkway	Medium
Killarney Drive/Village Green Drive	Short
Saratoga Avenue	Medium
Mid-block at bus stop pair south of VT 127 ramps	Long
Burlington College	Short
Convent Square	Long

Ward Street	Short
Canfield Street	Long

Figure 5: Implementation Timeframe for Unsignalized/Mid-Block Pedestrian Crossings

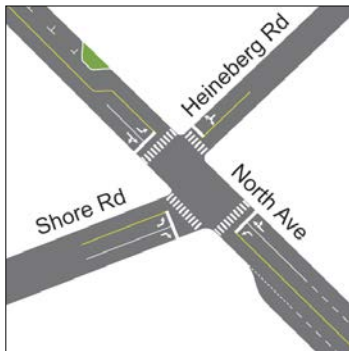


Intersection Concepts

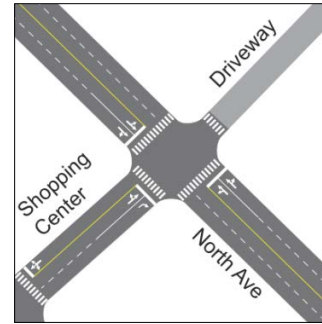
The Advisory Committee was asked to vote on preferred short, medium, long-term concepts for all signalized intersections in the corridor and the unsignalized Washington St. intersection. The committee unanimously supported the following corridor-wide short-term intersection improvements.

- Crosswalks on all approaches at signalized intersections
- Audible pedestrian countdown timers
- Minimum of 5 seconds (push-button) leading pedestrian interval at signalized intersection
- Where present in advance of intersections, bicycle facilities will be maintained through intersections

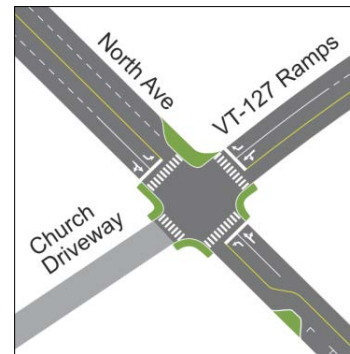
Preferred Short-term Intersection Improvements:



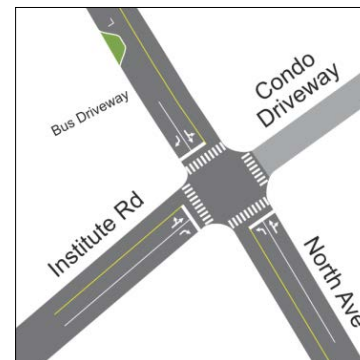
Shore Road: increase pedestrian crossing times, implement split phasing for Shore Road and Heineberg Road approaches, and install pedestrian-activated no right turn on red



Ethan Allen Shopping Center: increase pedestrian crossing times and install pedestrian-activated no right turn on red.

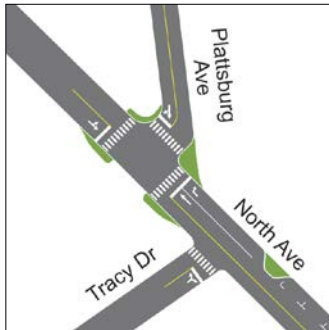


VT 127: remove high-speed northbound and westbound ramps.

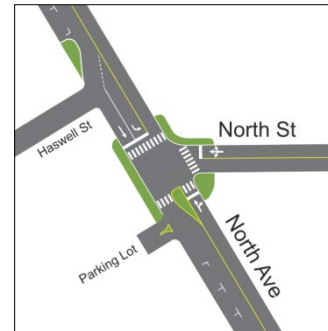


Institute Road: reduce intersection footprint (using paint for short-term), relocate northbound bus shelter to north of Institute Road, realign southbound sidewalk, and install pedestrian-activated no right turn on red.

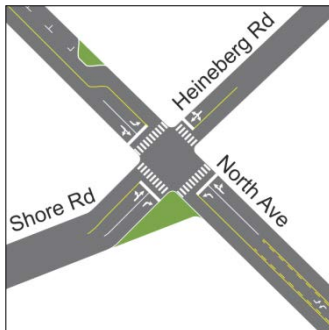
Preferred Medium-term Intersection Improvements:



Plattsburg Avenue: eliminate high-speed northbound right turn and pedestrian activated no right on red.

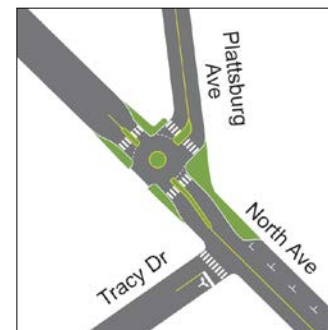


North Street: parking lot right in / right out or curb cut removal, realign north and south crosswalks, add protected / permitted southbound left turns, pedestrian-activated no right turn on red

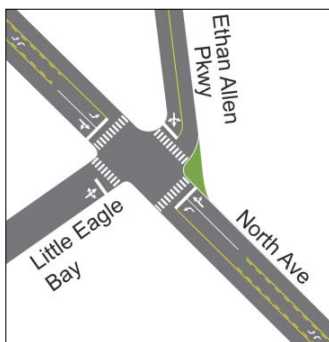


Shore Road: if ROW is donated or easily acquired, realign Shore Road, keep longer crossing times and pedestrian-activated no right on red.

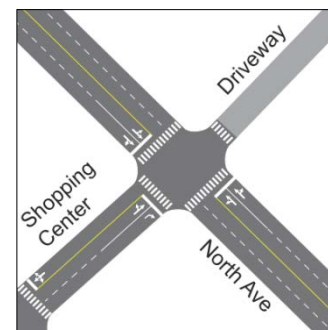
Preferred Long-term Intersection Improvements:



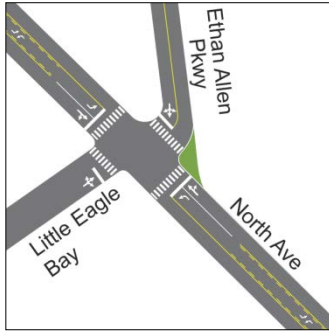
Plattsburg Avenue: scoping for single-lane mini-roundabout



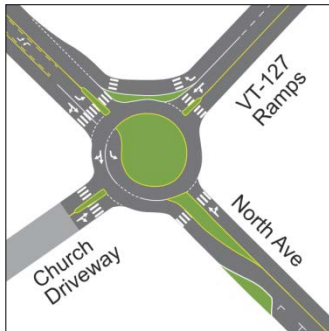
Ethan Allen Parkway: scoping study to relocate Park entrance and remove from intersection, add Little Eagle Bay into signal, eliminate high-speed northbound right turn.



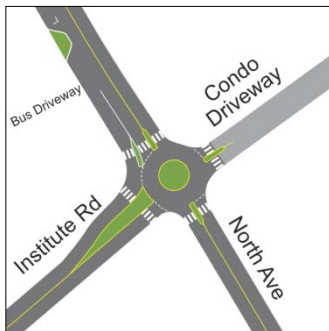
Ethan Allen Shopping Center: reconstruct curb and sidewalk at Farrington's Mobile Home Park and Bamboo Hut to reduce curb cut and define the driveway.



Ethan Allen Parkway:
signalized intersection



VT 127: scoping for roundabout



Institute Road: scoping for roundabout and resolution of the bus driveway

Transit Concepts

Even though there is currently transit service on North Avenue provided by CCTA, improvements to the routes and shelters have been consistently identified by the public as a critical issue for this corridor.

The following transit improvements for the North Ave corridor were supported by the Advisory Committee and CCTA, pending funding availability:

- Additional bus shelters at high-usage stops and larger shelters at Burlington High School (CCTA supports up to three new shelters in the short term);
- Fifteen-minute peak period weekday headways for Route 7 in the medium-term; and
- Increased weekend services

These three transit recommendations were carried forward as part of the Advisory Committee’s preferred concepts for approval by the TEUC and City Council.

In addition, the committee paid particular attention to the interaction between protected bike lanes (the preferred long-term cross-section for North Avenue) and bus stops. Bus stops and conventional bike lanes typically conflict with one another because buses must pull into the bike lane to reach the curb. This creates an unsafe interaction on the street between buses and cyclists. Protected bike lanes are designed to travel behind bus stops—in effect creating a floating bus bulb—removing direct conflicts between buses and cyclists. The conflict between buses and cyclists was a vital consideration and topic of much discussion, particularly when weighing advantages and disadvantages between one-way or two-way protected bike lanes. As a result, the committee noted that future scoping, evaluation, and design of cross-section Concept D should incorporate safe and proven designs at bus stop locations.

Implementation Matrix

The Implementation Matrix provides a summary of the Advisory Committee's preferred Implementation Plan for short-, medium- and long-term multimodal improvement concepts. This plan will be presented at the August 13, 2014 TEUC meeting for consideration.

[Placeholder for results from the TEUC approval process.]

The Implementation Matrix describes important aspects associated with each recommendation, including:

- Details: An overview of the elements and design features.
- Leader(s): Those agencies expected to take the lead for implementation of a project.
- Direct Partners: Those agencies expected to have direct involvement to support the implementation of a project.
- Next Steps/Comments: Summary of important notes and next steps to advancing the recommendation.

Implementation Matrix: Short -Term Recommendations

Recommendation	Details	Leaders	Direct Partners	Next Steps/Comments
<p>Cross-section Concept A3: Corridor-wide on-road improvements</p>	<ul style="list-style-type: none"> • Consistent 25 mph speed limit • 3-lane cross section between Shore Rd and VT 127 ramps • Bicycle facilities: <ul style="list-style-type: none"> ○ Plattsburg to Shore: buffered bike lanes ○ Shore to VT 127: conventional bike lanes ○ VT 127 to Institute: protected bike lanes (flexposts) ○ Institute to Washington: buffered bike lanes ○ Washington to Institute: conventional bike lane (NB), Sharrows (SB) • 10.5' travel lanes • All parking eliminated north of Washington St • Replace existing drainage grates with bicycle-friendly grates 	<p>DPW</p>	<p>CCRPC, Public Works Commission, Public</p>	<ul style="list-style-type: none"> • Initiate planning and design for pilot project, including 90-second cycle lengths and signal coordination. • Initiate public involvement process. • Identify duration of the pilot. • Define measurable multimodal metrics, both quantitative (e.g. crashes, number of cyclists, vehicle delay, etc.) and qualitative (e.g. survey responses), to track before and after performance and assess effectiveness. • Identify funding source(s).
<p>High priority pedestrian crossings at unsignalized intersections or mid-block locations</p>	<ul style="list-style-type: none"> • Green Acres Dr/Cayuga Ct • Gosse Ct • Killarney Dr/Village Green Dr* • Burlington College • Ward St 	<p>DPW</p>	<p>Public Works Commission, Public, CCTA</p>	<ul style="list-style-type: none"> • Identify the highest priority pedestrian improvement projects • Initiate public involvement process. • Assess the need for flashing beacons or refuge islands at unsignalized/mid-block crossings.
<p>Pedestrian crossings on all approaches of</p>	<ul style="list-style-type: none"> • High visibility continental or solid (red) crosswalks 	<p>DPW</p>		

Recommendation	Details	Leaders	Direct Partners	Next Steps/Comments
all signalized intersections	<ul style="list-style-type: none"> American with Disabilities (ADA) compliant curb ramps with detectable warning surfaces 			<ul style="list-style-type: none"> Coordinate with CCTA regarding bus stop location near proposed crossings (relocate stops if necessary).
Leading pedestrian intervals (LPIs) on all approaches of all signalized intersections	<ul style="list-style-type: none"> Minimum 5-second length Audible, pedestrian countdown timers Push-button activation 			<ul style="list-style-type: none"> Investigate drainage issues at ADA ramps for long-term solutions (e.g. raised crossings at side streets). Identify funding source(s). <i>Note:</i> Killarney Dr/Village Green Dr crossing only compatible with a three-lane conversion.
Bicycle facilities (where provided) maintained through all intersections	<ul style="list-style-type: none"> Crossbike markings Bike boxes Two-stage left-turn boxes 	DPW		<ul style="list-style-type: none"> Initiate public involvement process. Coordinate with and implement alongside Concept A3, as well as short-term intersection concepts at Shore, Ethan Allen Shopping Center, VT 127, and Institute Rd.
Shore Rd/Heineberg Rd Intersection - Concept 1	<ul style="list-style-type: none"> Increase pedestrian crossing times for seniors Pedestrian activated no right turn on red Split phasing 	DPW		<ul style="list-style-type: none"> Identify funding source(s). Initiate public involvement and outreach.
Ethan Allen Shopping Center Intersection - Concept 1	<ul style="list-style-type: none"> Increase pedestrian crossing times for seniors Pedestrian activated no right turn on red 			<ul style="list-style-type: none"> Identify funding source(s).

Recommendation	Details	Leaders	Direct Partners	Next Steps/Comments
VT 127 Intersection - Concept 1	<ul style="list-style-type: none"> • Close high-speed NB on-ramp • Remove free flow WB right-turn • Remove gantry 		VTrans, City, CCRPC, Public	<ul style="list-style-type: none"> • Initiate planning and design. • Initiate public involvement process. • Initiate public outreach process and educational campaign of proposed changes. • Identify funding source(s).
Institute Rd Intersection Concept 1	<ul style="list-style-type: none"> • Fix vehicle detection • Pedestrian activated no right turn on red • Address conflict between SB cyclists and right-turning vehicles • Reduce intersection footprint (with paint for short-term) • Relocate NB bus stop to far side • Resolve bus driveway access 		City, VTrans, CCRPC, CCTA, BSD	<ul style="list-style-type: none"> • Initiate planning and design. • Initiate public involvement process. • Coordinate with CCTA to relocate the NB bus stop. • Coordinate with Burlington School Department to resolve driveway access. • Identify funding source(s).
Transit: New bus shelters	<ul style="list-style-type: none"> • Additional shelters at high ridership stops (up to three shelters in the short term, pending funding) • Larger shelters at Burlington High School 	CCTA	City, BSD	<ul style="list-style-type: none"> • Initiate public involvement process. • Investigate high ridership stops for candidate shelter locations • Assess site restrictions and land availability • Coordinate with Burlington School Department regarding shelter sizes at Burlington High School • Identify funding source(s).

Implementation Matrix Medium -Term Recommendations

Project	Project Details	Leaders	Direct Partners	Next Steps/Comments
Additional pedestrian crossings at unsignalized intersections or mid-block locations	<ul style="list-style-type: none"> Loaldo Dr Poirier Pl* Lakewood Pkwy* Saratoga Ave* 	DPW	Public Works Commission, Public	<ul style="list-style-type: none"> Initiate public involvement process. Assess the need for flashing beacons or refuge islands are warranted for unsignalized/mid-block crossings. Coordinate with CCTA regarding bus stop location near proposed crossings (relocate stops if necessary). Identify funding sources. <i>Note:</i> Poirier Pl, Lakewood Pkwy, and Saratoga Ave crossings only compatible with a three-lane conversion. Identify funding source(s).
Plattsburg Ave Intersection - Concept 1	<ul style="list-style-type: none"> Slow high-speed NB right turns with curb extension Resolve Tracy Dr turns and access to Merola’s Market Exclusive pedestrian phase at south crosswalk Gateway treatments (north entrance to corridor) 	DPW	VTrans, CCRPC, Burlington City Arts, Public	<ul style="list-style-type: none"> Initiate planning and design. Initiate public involvement process. Identify funding source(s).
Shore Rd / Heineberg Rd Intersection - Concept 2	<ul style="list-style-type: none"> Increase pedestrian crossing times for seniors Pedestrian activated no right turn on red 		VTrans, CCRPC, Public, Private landowner	<ul style="list-style-type: none"> Initiate planning and design. Initiate public involvement process. Coordinate with St. Mark Church regarding permanent easement

Project	Project Details	Leaders	Direct Partners	Next Steps/Comments
	<ul style="list-style-type: none"> • Realign Shore Rd (contingent upon St. Mark Church right-of-way donation) 			<ul style="list-style-type: none"> • or ROW donation for Shore Rd realignment • Identify funding source(s).
Ethan Allen Pkwy Intersection - Concept 1	<ul style="list-style-type: none"> • Incorporate Little Eagle Bay into signal • Slow high-speed NB right turns with curb extension • Opposing NB/SB left-turn lanes • Relocate vehicle entrance to park 	DPW/CCRPC	VTrans, Burlington Department of Parks and Recreation, Public	<ul style="list-style-type: none"> • Initiate scoping and design, including alternative for single-lane roundabout. • Initiate public involvement process. • Coordinate with Department of Parks and Recreation to locate a suitable vehicle entrance for Ethan Allen Park. • Identify funding source(s).
Washington St Intersection - Concept 1	<ul style="list-style-type: none"> • Consider raised intersection with special pavement material • Rapid flash beacon for crosswalk • Gateway treatments (transition between Old and New North End) 	DPW	VTrans, CCRPC, Burlington Fire Department, Burlington City Arts, Public	<ul style="list-style-type: none"> • Initiate planning and design. • Initiate public involvement process. • Identify funding source(s).
North St Intersection - Concept 1	<ul style="list-style-type: none"> • Pedestrian activated co right turn on red • Right-in, right-out or curb cut removal at parking lot access • Realign south crosswalk and add pedestrian refuge • Realign north crosswalk to align with push button • Protected/permitted SB left turns 		VTrans, CCRPC, VT Division for Historic Preservation, Burlington City Arts, Public	<ul style="list-style-type: none"> • Initiate planning and design. • Initiate public involvement process. • Study access to parking lot and Depot St to determine whether right in, right out or curb cut removal is best solution. • Coordinate with the Vermont Division for Historic Preservation

Project	Project Details	Leaders	Direct Partners	Next Steps/Comments
	<ul style="list-style-type: none"> Gateway treatments (southern entrance to corridor, entrance to North Street Historic District) 			regarding potential impacts to North Street Historic District. <ul style="list-style-type: none"> Identify funding source(s).
Transit: 15-minute peak period weekday headways on North Ave	<ul style="list-style-type: none"> Upgrade AM and PM peak period headways from 30 minutes to 15 minutes. 	CCTA		<ul style="list-style-type: none"> Continue to develop existing plans for 15-minute service on North Avenue. Identify funding source(s).
Transit: Increased weekend services on North Ave	<ul style="list-style-type: none"> Replace Route 18 (limited Sunday service only) on North Avenue with new Sunday service on Route 7 			<ul style="list-style-type: none"> Identify funding source(s).

Implementation Matrix Long -Term Recommendations

Project	Project Details	Leaders	Direct Partners	Next Steps/Comments
<p>Cross-section – Concept D: On-street one-way protected bike lanes</p>	<ul style="list-style-type: none"> • Consistent 25 mph speed limit • 3-lane cross section between Shore Rd and VT 127 ramps (maintained from short-term pilot project) • Bicycle facilities: <ul style="list-style-type: none"> ○ 5’ to 7’ on-street protected bike lanes ○ 2’ to 3’ raised curb buffer • 10.5’ travel lanes with 0.5’ shoulders against curbs/parking • Potential 8’ parallel parking on one side of the street (pending results of pilot project) • Utility burial or relocation, as needed for curb movement • Stormwater management (address ponding issues) • Use bicycle-friendly drainage grates 	<p>DPW/CCRPC</p>	<p>VTrans, private utilities, CCTA, DPR, VT Division for Historic Preservation, Public</p>	<ul style="list-style-type: none"> • Initiate scoping study with a robust public involvement process. • Evaluate results of the pilot project (Concept A3), including the on-street parking north of Washington St. • Coordinate with Department of Parks and Recreation to incorporate clear, safe, and inviting pedestrian and bicycle connections to pathways (Island Line Trail and 127 Path) and parkland via side streets (e.g. Shore Rd, Leddy Park Rd, etc.). • Create maintenance and snow plowing policy and action plan for protected bike lanes. • Coordinate with utilities regarding burial or relocation as curbs are moved. • Coordinate with CCTA regarding bus stop consolidation or relocation, as well as interaction between cycle tracks and bus stops. • Coordinate with the Vermont Division for Historic Preservation regarding potential impacts to North Street Historic District. • Identify funding source(s).

Project	Project Details	Leaders	Direct Partners	Next Steps/Comments
Additional pedestrian crossings at unsignalized intersections or mid-block locations	<ul style="list-style-type: none"> • Staniford Rd • Mid-block at bus stop pair south of VT 127 ramps • Convent Sq • Canfield St 	DPW	Public Works Commission, Public	<ul style="list-style-type: none"> • Initiate public involvement process. • Assess the need for flashing beacons or refuge islands are warranted for unsignalized/mid-block crossings. • Coordinate with CCTA regarding bus stop location near proposed crossings (relocate stops if necessary). • Identify funding sources.
Plattsburg Ave Intersection - Concept 3	<ul style="list-style-type: none"> • Maintain Concept 1 improvements • Mini-roundabout <ul style="list-style-type: none"> ○ No flared entry to increase visibility of pedestrians and cyclists to drivers, and to slow turns into roundabout ○ Separated protected bike lane around roundabout • Additional gateway treatments (northern entrance to corridor) 	DPW/CCRPC	VTrans, Public	<ul style="list-style-type: none"> • Initiate Scoping and alternatives evaluation before proceeding to design. • Initiate public involvement process. • Identify funding source(s).
Ethan Allen Shopping Center Intersection - Concept 2	<ul style="list-style-type: none"> • Maintain Concept 1 improvements • Reconstruct Farrington’s Mobile Home Park entrance • Reconstruct Bamboo Hut sidewalk and curb cuts 	DPW	Public	<ul style="list-style-type: none"> • Initiate design of intersection. • Initiate public involvement process. • Coordinate with Bamboo Hut and Farrington’s Mobile Home Park • Identify funding source(s).
VT 127 Ramps - Concept 3	<ul style="list-style-type: none"> • Gateway treatments (transition between highway speeds and 25 mph corridor) 	DPW	VTrans, Burlington City Arts, CCRPC, Public	<ul style="list-style-type: none"> • Initiate scoping and evaluation of alternatives (including a single lane roundabout) before proceeding to design.

Project	Project Details	Leaders	Direct Partners	Next Steps/Comments
	<ul style="list-style-type: none"> • Remove unused ramp pavement • Roundabout: <ul style="list-style-type: none"> ○ Dual SB approach lanes ○ WB right-turn bypass lane ○ No flared entry to increase visibility of pedestrians and cyclists to drivers, and to slow turns into roundabout ○ Separated cycle track around roundabout 			<ul style="list-style-type: none"> • Initiate public involvement process. • Identify funding source(s).
<p>Institute Rd Intersection - Concept 2</p>	<ul style="list-style-type: none"> • Roundabout: <ul style="list-style-type: none"> ○ SB right-turn bypass lane ○ No flared entry to increase visibility of pedestrians and cyclists to drivers, and to slow turns into roundabout ○ Resolve bus driveway access (this is included in Concept 1, but driveway may need to be moved again with a roundabout concept) ○ Separated cycle track around roundabout 	<p>DPW</p>	<p>VTrans, CCRPC, BSD</p>	<ul style="list-style-type: none"> • Initiate scoping and evaluation of alternatives (including a single lane roundabout) before proceeding to design. • Initiate public involvement process. • Coordinate with Burlington School Department to resolve driveway access and regarding ROW needs for a roundabout. • Identify funding source(s).

Next Steps

Improving and reconstructing North Avenue will occur in phases. Over the next years and into the next decade, the multimodal improvements outlined in the Implementation Matrix will transform North Avenue into the safe, efficient, and convenient corridor that the community has envisioned.

The recommendations in this report are concepts and detailed visions for the community to work toward. The next step for many recommendations will be a Scoping Study, which will clearly define the project and identify any impacts to adjacent resources. The recommendation will be vetted against other potential alternatives, and a more detailed conceptual design and cost estimate will be developed. The scoping process includes a public involvement plan similar to the public involvement for this Corridor Study. Following the scoping process, projects will undergo preliminary and final design, right-of-way acquisition (if needed), and construction. Public outreach and involvement will occur throughout the process, as projects progress from scoping to construction.

Central to these efforts is the identification of funding to complete design and construction work. Implementing any recommended project will require a combination of funding sources, which may include:

- Federal:
 - Congestion Mitigation and Air Quality Improvement Program
 - Highway Safety Improvement Program
 - Surface Transportation Program
 - Transportation Alternatives Program
- State:
 - Bicycle and Pedestrian Program
 - Statewide Transportation Improvement Program (STIP)
- Development impact fees, including those generated by the recently passed Fair Share legislation
- Local planning assistance grants
- Regional:
 - Unified Planning Work Program
 - Transportation Improvement Program (TIP)
 - Sidewalk Program
- Local:
 - Bond measures (popular vote)
 - Capital infrastructure funds
 - Voter-approved sales tax
- Private:
 - Developers
 - Institutions