

APPENDIX 8: 2019 CHAMPLAIN PARKWAY NEPA REEVALUATION



State of Vermont
Agency of Transportation
Environmental Section
One National Life Drive
Montpelier, VT 05633

Matthew Hake, Division Administrator
Federal Highway Administration
87 State Street, Montpelier, Vermont 05602

May 2, 2019

Attn: Kenneth R. Sikora, Environmental Program Manager
Re: Burlington MEGC M5000 (1), Southern Connector/Champlain Parkway
FSEIS Reevaluation

Dear Mr. Hake:

The Burlington MEGC M5000 (1), Southern Connector/Champlain Parkway project, is located in the city of Burlington, Vermont. The project is a proposed transportation link located in the southwestern quadrant of the City of Burlington, Chittenden County, Vermont providing access between Interstate 189, U.S. Route 7 (Shelburne Street), and the City Center District (CCD).

A Record of Decision (ROD) was issued on January 13, 2010 based on a 2009 Final Supplemental Environmental Impact Statement (FSEIS). The FSEIS included a Section 106 determination of No Adverse Effect and a de minimis use of Section 4(f) resources. Since the completion of the FSEIS and the issuance of the ROD, there have been some minor revisions to the project. A Section 106 Amendment/ No Adverse Effect was issued on April 6, 2017 and an additional Section 4(f) De Minimis Determination was issued on May 5, 2017. The project is scheduled to be advertised for bids in 2019.

In accordance with 23 CFR 771.129(c) a re-evaluation of the FSEIS has been prepared for the project prior to FHWA's authorization of the construction phase. The re-evaluation discusses changes to the project design, project impacts, and proposed mitigation that have occurred subsequent to the 2009 FSEIS. A section by section summary of the changes are as follows:

Section C/2

- The Grocery Spur tracks will be removed to eliminate the at-grade crossing.

Section C/6

- The addition of a shared-use path along the western side of Pine Street between Lakeside Avenue and Kilburn Street.
- Traffic calming features on Pine Street including curb bump-outs and pedestrian actuated rectangular rapid flashing beacons at mid-block crosswalks will be added.
- On-street bike lanes between Lakeside Avenue and Locust Street, and Kilburn Street and Maple Street will be added.
 - Between Lakeside Avenue and Locust Street, the design will accommodate a 13-foot southbound combined bike/turn lane, one 11-foot travel lane in each direction, and a five-foot bike lane in the

northbound direction.

- Between Locust Street and Kilburn Street, and between Maple Street and Main Street, the design will feature a two-foot shoulder and 11-foot shared lane in the southbound direction while the northbound direction will consist of an 11-foot shared lane, a four-foot painted parking lane buffer and a seven-foot parking lane.
- Between Kilburn Street and Maple Street, the design consists of an 11-foot travel lane, 1.5-foot bike lane buffer and 5-foot bike lane in both directions.
- The Pine Street Rail Spur will be partially removed.
- The proposed shared-use path has been relocated from the southern side to the northern side of Lakeside Avenue to connect to the proposed share-use path on Pine Street.
- The City of Burlington received VTrans' approval in 2017 to underground overhead utilities on Lakeside Avenue.

In addition, a summary of the changes in the affected environment within the project study area are as follows:

- The location of new wetlands (P and Q) along with delineations and renewed permitting.
- Impacts to a Special Flood Hazard Area as a result of 2011 revisions in the FEMA Flood Insurance Rate Maps.
- The Northern Long-eared Bat was identified as existing in the geographic area of the project.
- A 2015/2016 evaluation of developmental soils per new Agency of Natural Resources regulations resulted in the preparation of a Corrective Action Plan.
- Several localized traffic control changes have been incorporated into the project to integrate land use/development traffic.

These design modifications and changes in the affected environment have generally resulted in minor changes in project impacts and proposed mitigation. These changes are discussed in detail in the Re-evaluation of the 2009 FSEIS. The Vermont Agency of Transportation (VTrans) has reviewed the Re-evaluation for the project, considered the potential environmental consequences in accordance with the National Environmental Policy Act (NEPA), and recommends that the Record of Decision remains valid and requests your concurrence.

Please find attached a copy of the referenced Re-evaluation of the 2009 FSEIS for project Burlington MEGC M5000 (1), Southern Connector/Champlain Parkway. Please contact Jeff Ramsey at (802) 917-4467 or jeff.ramsey@vermont.gov if you have any questions or are in need of additional information.

Respectfully,



Andrea Wright, P.E.
Environmental Services Manager

Endorsement to the Vermont Agency of Transportation

Concur Kenneth R. Sikora, Jr.
Kenneth R. Sikora Jr. FHWA Environmental Project Manager

May 6, 2019

[Date]

Attachments

cc: Wayne Davis, Project Manager
Project File

**KENNETH R
SIKORA**

Digitally signed by
KENNETH R SIKORA

Date: 2019.05.06

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**SOUTHERN CONNECTOR/CHAMPLAIN PARKWAY
PROJECT MEGC-M5000(1)
BURLINGTON, VERMONT**

**REEVALUATION OF
2009 FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT
STATEMENT**

MARCH 2019

PREPARED FOR:
FEDERAL HIGHWAY ADMINISTRATION
VERMONT AGENCY OF TRANSPORTATION
CITY OF BURLINGTON

PREPARED BY:
CLOUGH HARBOUR & ASSOCIATES, LLP
IN ASSOCIATION WITH
STANTEC CONSULTING SERVICES, INC.

1. PROJECT PURPOSE AND NEED

1.1 Introduction

The Federal Highway Administration (FHWA) approved the 2009 Final Supplemental Environmental Impact Statement (FSEIS) for the Southern Connector/Champlain Parkway (Project) on September 22, 2009. A Record of Decision (ROD) was signed on January 13, 2010. The ROD selected Build Alternative 2 for further implementation, consisting of the C-1 Section, C-2 Section and C-6 Section, as described in the FSEIS. Following a Rail Diagnostic Update, various upgrades to two highway-rail crossing locations on Home Avenue and Flynn Avenue along the Project's C-2 Section were incorporated into the Project's scope. As these crossings lie outside the Project area demarcated in the FSEIS, the upgrades were reviewed under a separate Reevaluation. The Reevaluation for the highway-rail crossings received concurrence from FHWA on May 31, 2017. Since the completion of the FSEIS and issuance of the 2010 ROD, the Project plans have been refined as more detailed information has become available. Other changes have been incorporated as result of ongoing coordination between the City of Burlington and the public. The Project is currently in the right-of-way phase with construction scheduled to begin in 2019.

The intent of this Reevaluation is to assess the continued validity of the analysis contained in the 2009 FSEIS and the basis of the decision contained in the 2010 ROD. This Reevaluation will evaluate the environmental impacts associated with the current Selected Alternative, including any design advancements or refinements, and the Selected Alternative as described in the ROD. This Reevaluation will also review changes in the existing environment in the Project area that have occurred since the 2009 FSEIS.

1.2 Summary of Project History since the ROD

Following the identification of the Selected Alternative and the issuance of the 2010 ROD, the City of Burlington held a series of informational meetings to update the public on the status of the Project and to provide an opportunity to comment prior to the commencement of the permitting process. In response to the information gathered at public meetings and input from other concerned parties in the city, several new features were incorporated into the C-6 Section. These new features include:

- The addition of a shared-use path along the western side of Pine Street between Lakeside Avenue and Kilburn Street.
- Traffic calming features on Pine Street including curb bump-outs and pedestrian actuated rectangular rapid flashing beacons (RRFB) at mid-block crosswalks.
- On-street bike lanes between Lakeside Avenue and Locust Street, and Kilburn Street and Maple Street.

The City of Burlington subsequently obtained several construction permits previously described in the 2009 FSEIS and outlined in Chapter 4 of this Reevaluation.

The 2009 FSEIS stated that a revised Land Use Permit Application for the Act 250 permit would need to be filed to reflect the revisions incorporated therein (p 4-152). The City of Burlington filed this application at the Act 250 Regional District Office on April 15, 2011. The District Environmental Commission issued a Land Use Permit amendment to the City of Burlington and the Vermont Agency of Transportation (VTrans) on August 25, 2014.

A Rail Diagnostic Update was conducted on May 29, 2014 and amended on March 4, 2016 in accordance with the draft VTrans' Public Grade Crossing Guidance. As a result, upgrades to highway-rail crossings on Home Avenue and Flynn Avenue have been incorporated into the Project, including:

- Full-depth reconstruction of the crossings,
- Removal of existing gates and replacement with new gates in all four quadrants,
- Installation of a fixed-delay time system,
- Removal of curbed medians, and
- Installation of crossing gates for pedestrians and cyclists.

The upgrades at Home Avenue will include extending the shared-use path across the railroad tracks.

A separate FSEIS Reevaluation (attached in Appendix 3) was completed for the incorporation of the crossing upgrades at Home Avenue and Flynn Avenue. A Section 106 Amendment/No Adverse Effect was issued on April 6, 2017 and a Section 4(f) De Minimis Determination was issued on May 5, 2017. On May 31, 2017, FHWA determined that the 2010 ROD remained valid.

Due to regulations promulgated by the Vermont Department of Environmental Conservation (DEC) subsequent to the 2009 FSEIS, the City's consultants performed additional soil and groundwater investigations along the proposed Project corridor in 2015 and 2016 to evaluate the risk to groundwater associated with relocating Development Soil, as defined by the Resources Investigation and Remediation of Contaminated Properties Rule (I-Rule). A Corrective Action Plan has been prepared to outline corrective action activities for the Project and to mitigate the impact of hazardous materials to sensitive receptors to the maximum extent practicable. Refer to Chapter 4 of this Reevaluation for a more detailed discussion of hazardous materials impacts.

In 2017, the City of Burlington reached an agreement with Vermont Railway, Inc. to remove two obsolete rail spurs in the Project area. The so-called "Grocery" Spur near Sears Lane, and the Pine Street Rail Spur will both be partially removed as part of the Project. The 2009 FSEIS alluded to the partial removal of the Pine Street Rail Spur to a lesser extent and proposed a highway-rail grade crossing at the intersection of the Champlain Parkway and the Grocery Spur. With the Grocery Spur removed, the highway-rail grade crossing will not be necessary.

1.3 Project Description

The Southern Connector/Champlain Parkway remains divided into three construction contracts referred to as the C-1 Section, the C-2 Section, and the C-6 Section. The description and limits for the C-1 Section and C-2 Section are unchanged from the 2009 FSEIS and Selected Alternative in the ROD. The C-6 Section commences at the terminus of the C-2 Section at Lakeside Avenue and proceeds easterly along Lakeside Avenue to Pine Street. It then follows Pine Street northerly to its intersection with Main Street in the City Center District of Burlington (CCD). The current C-6 Section is similar to the C-6 Section as described in the Selected Alternative in the 2009 FSEIS except for the proposed shared-use path which now extends to Kilburn Street along the western side of Pine Street.

1.4 Statement of the Project Need

The existing problems and deficiencies that were identified in the 2009 FSEIS have not changed and are still considered valid. In summary, the Project needs defined in the 2009 FSEIS are:

1. Congestion (including insufficient capacity to appropriately service traffic volumes and provide appropriate access);
2. Safety concerns created by vehicles utilizing roadways that functionally operate at a higher classification than intended, both along the minor arterials and in neighborhood areas which are acting as short-cuts; and
3. Mix of local and through-traffic in neighborhood areas (including truck traffic) created by a lack of a north/south arterial to access the CCD.

1.5 Project Purpose

The purpose of the Southern Connector/Champlain Parkway is unchanged from the Project purpose that was stated in the 2009 FSEIS:

The purpose of the Southern Connector/Champlain Parkway project is to improve access from the vicinity of the interchange of I-189 and U.S. Route 7 to the Burlington CCD and the downtown waterfront area; and to improve circulation, alleviate capacity overburdens, improve safety on local streets in the project study area and provide traffic relief in the southwestern quadrant of the City of Burlington.

The purpose of the project is also to eliminate the disruption to local neighborhoods and separate the local and through-traffic. Truck traffic that is destined for the CCD or the industrial areas accessed from Home Avenue and Flynn Avenue would be directed onto the Southern Connector/Champlain Parkway and removed from the local street network. The proposed transportation corridor is expected to become the

major routing for north-south through-traffic in the area. The reassignment of the majority of through-traffic to this route would reduce traffic volume levels along neighborhood streets and improve accessibility to adjacent neighborhood areas.

2. ALTERNATIVES

2.1 Introduction

This chapter will review the refinements to the design of the Selected Alternative as described in the 2009 FSEIS and 2010 ROD.

2.2 Final Design of the Selected Alternative

As described in the 2009 FSEIS, the Selected Alternative consists of the C-1 Section, the C-2 Section, and the C-6 Section. This alternative will be constructed as a two-lane roadway with turn lanes as needed. The Selected Alternative will connect I-189/U.S. Route 7 (Shelburne Street) to the CCD. The three sections of the final design of the Selected Alternative, including design refinements that have been implemented since the ROD, are described below. Layout plan sheets for all three sections are attached in Appendix 4.

C-1 Section:

The C-1 Section is generally unchanged from the description included in the 2009 FSEIS and the Selected Alternative in the ROD. This section consists of the reconstruction of the I-189/U.S. Route 7 (Shelburne Street) interchange, and the construction of the Champlain Parkway to Home Avenue. This portion of the Champlain Parkway was previously constructed as a four-lane facility. Within the limits of this previously built section, the roadway will be reconfigured to taper the cross section to one lane in each direction. Excess pavement will be removed or incorporated into a widened, raised grass center median along with lighting and landscaping. This section of the Project will provide a transition between the interstate and the city street system; the speed limit will be stepped down to 40 miles per hour near the Burlington City limit and to 25 miles per hour at a point immediately south of the Home Avenue intersection. The City of Burlington established a citywide speed limit of 25 miles per hour effective November 30, 2011. A typical cross section of C-1 Section is shown in **Figure 2-1**.

C-2 Section:

The C-2 Section will commence at the northern terminus of the C-1 Section, near Home Avenue, and extend northerly on a new alignment for approximately 0.7 mile and ending at a point immediately south of Lakeside Avenue. The C-2 Section is generally unchanged from the description provided in the 2009 FSEIS. The C-2 Section would still be a two-lane facility with dedicated turn lanes at the intersections. Subsequent to the 2009 FSEIS and the ROD, minor design refinements have been incorporated. Intersection corner radii have been reduced at certain locations to shorten pedestrian crossing distances and reduce vehicle turning speeds. The plans shown in the 2009 FSEIS included a new highway-rail at-grade crossing where the Champlain Parkway

would intersect the so-called “Grocery Spur” near Sears Lane. An agreement has been reached with the affected landowners and Vermont Railway, Inc. to remove the tracks and eliminate the at-grade crossing associated with a portion of the Grocery Spur within the Project right-of-way limits. A typical cross section of the proposed two lane, C-2 Section is shown in **Figure 2-2**.

C-6 Section

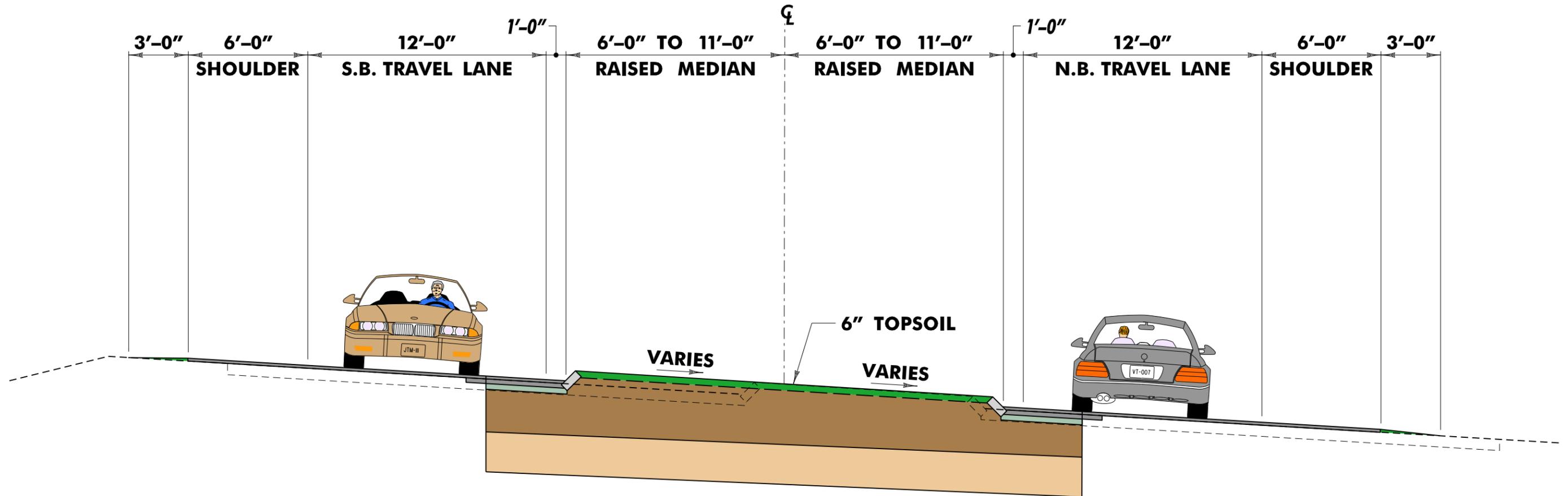
As described in the 2009 FSEIS, C-6 Section will utilize Lakeside Avenue and Pine Street to connect C-2 Section of the Project to the Burlington CCD at the intersection of Pine Street and Main Street.

Lakeside Avenue:

The proposed improvements to Lakeside Avenue are generally the same as those described in the 2009 FSEIS. The proposed shared-use path has been relocated from the southern side to the northern side of Lakeside Avenue to connect to the proposed share-use path on Pine Street. The City of Burlington received VTrans’ approval in 2017 to underground overhead utilities on Lakeside Avenue. The typical cross section for Lakeside Avenue is shown in **Figure 2-3**.

Pine Street:

The proposed design for Pine Street consists of cold planing and resurfacing the existing pavement, drainage improvements, new curbing, new concrete sidewalk, and construction of a new shared-use path between Lakeside Avenue and Kilburn Street on the western side. The typical cross sections for Pine Street are shown in **Figures 2-4 to 2-8**. Between Lakeside Avenue and Locust Street, the design will accommodate a 13-foot southbound combined bike/turn lane, one 11-foot travel lane in each direction, and a five-foot bike lane in the northbound direction. Between Locust Street and Kilburn Street, and between Maple Street and Main Street, the design will feature a two-foot shoulder and 11-foot shared lane in the southbound direction while the northbound direction will consist of an 11-foot shared lane, a four-foot painted parking lane buffer and a seven-foot parking lane. Between Kilburn Street and Maple Street, the design consists of an 11-foot travel lane, 1.5-foot bike lane buffer and 5-foot bike lane in both directions. The Project will extend along Pine Street up to and including the Main Street intersection. Traffic calming features including curb bump-outs; raised intersections at Howard Street, Marble Avenue and Kilburn Street have also been incorporated into the design.



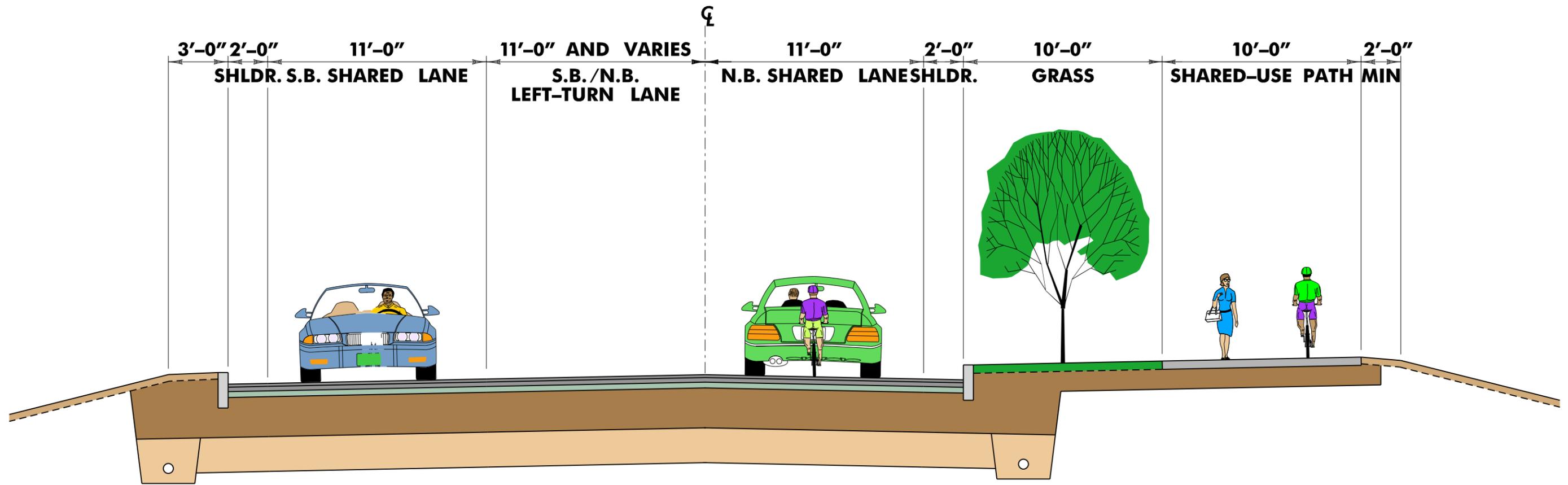
**SECTION C-1
 PROPOSED TYPICAL SECTION
 ROUTE 7 INTERCHANGE TO HOME AVENUE**

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Southern Connector/Champlain Parkway MEGC-M5000(1)



FIGURE 2-1
 (TYPICAL I)
 C-1 SECTION
 SELECTED ALTERNATIVE

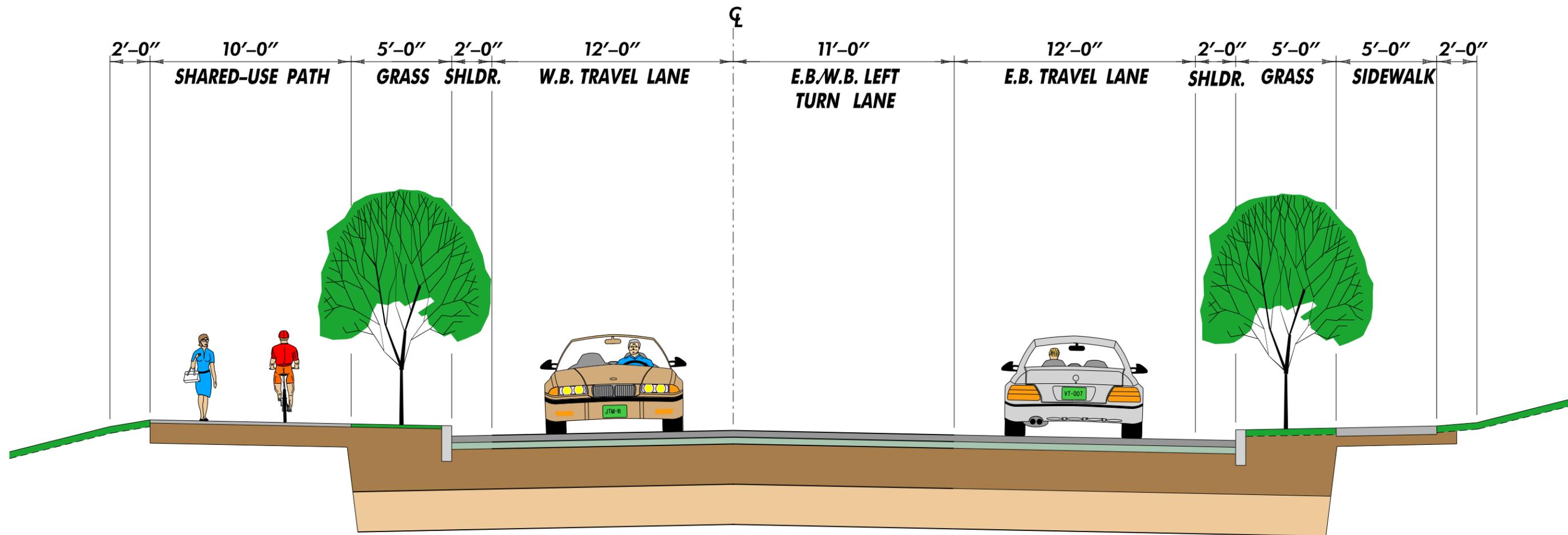


**SECTION C-2
PROPOSED TYPICAL SECTION
HOME AVENUE TO LAKESIDE AVENUE**

Southern Connector/Champlain Parkway MEGC-M5000(1)



FIGURE 2-2
(TYPICAL 2)
C-2 SECTION
SELECTED ALTERNATIVE

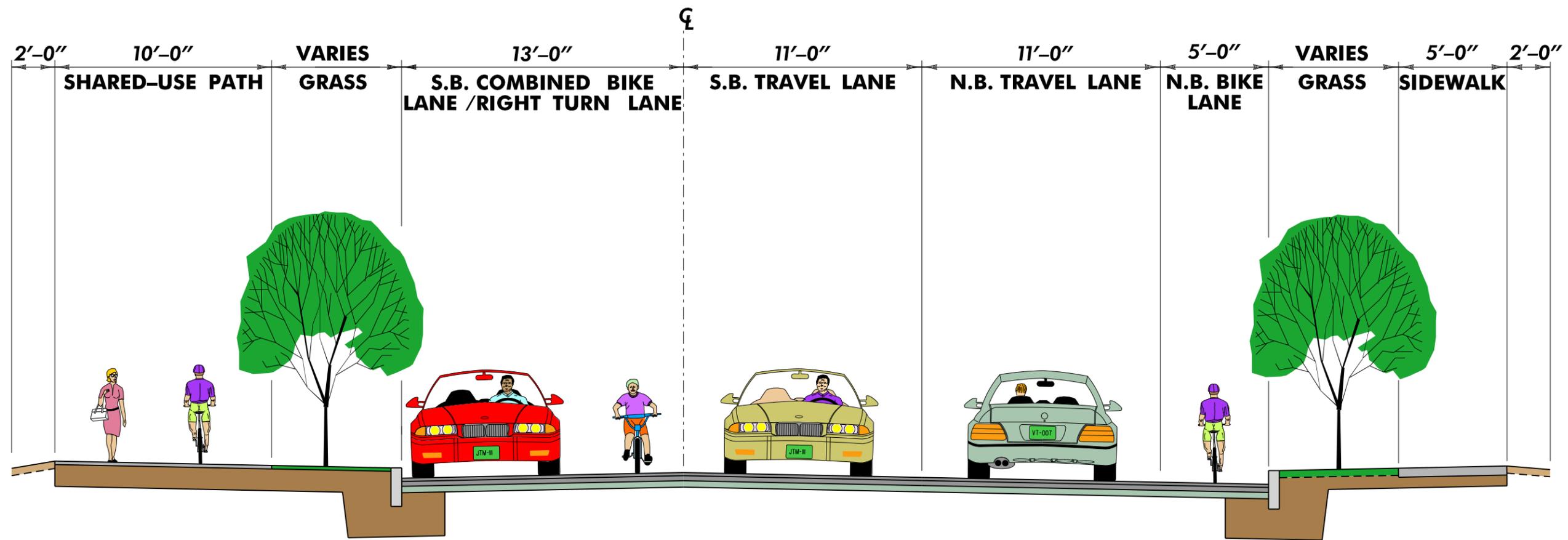


**SECTION C-6
PROPOSED TYPICAL SECTION
LAKESIDE AVENUE**

Southern Connector/Champlain Parkway MEGC-M5000(1)



FIGURE 2-3
(TYPICAL 3)
C-6 SECTION
SELECTED ALTERNATIVE



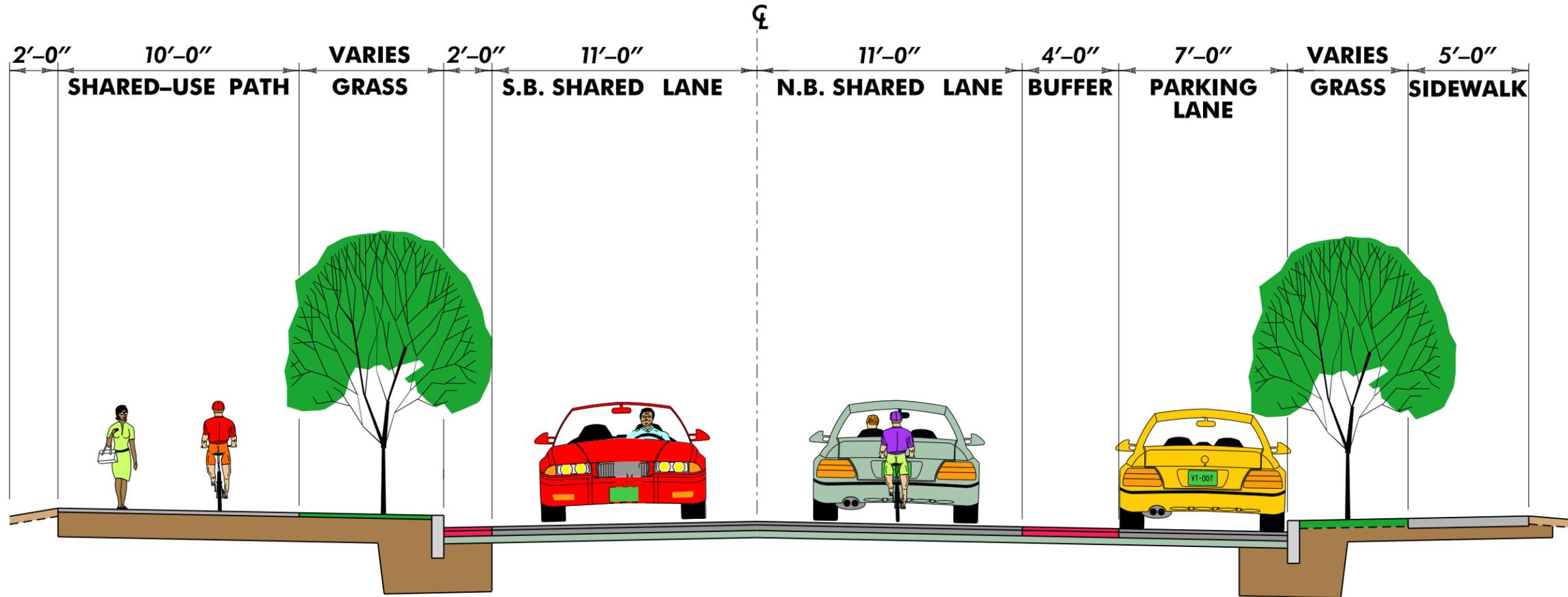
**SECTION C-6
 PROPOSED TYPICAL SECTION
 PINE STREET
 LAKESIDE AVENUE TO LOCUST STREET**

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Southern Connector/Champlain Parkway MEGC-M5000(1)



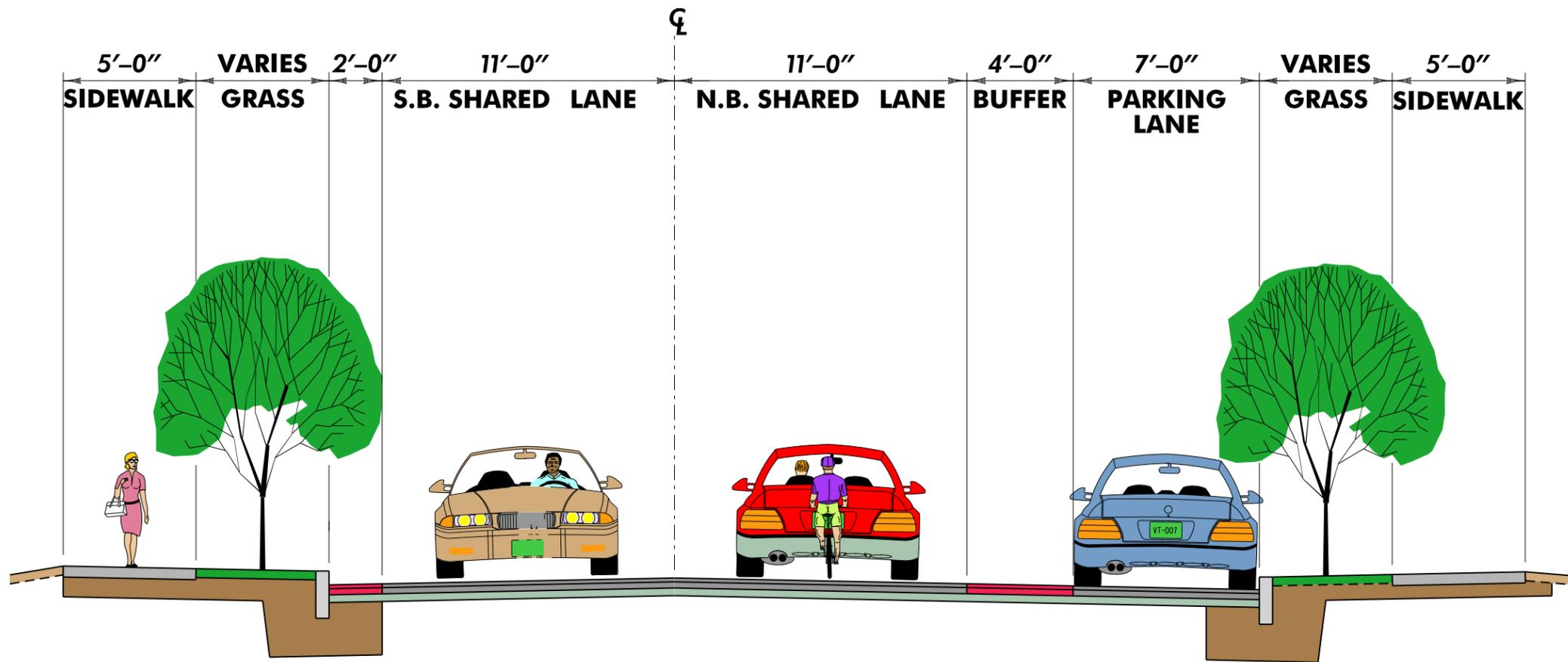
FIGURE 2-4
 (TYPICAL 4)
 C-6 SECTION
 SELECTED ALTERNATIVE



**SECTION C-6
 PROPOSED TYPICAL SECTION
 PINE STREET
 LOCUST STREET TO KILBURN STREET**

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 DATE 10/20/2018
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Southern Connector/Champlain Parkway MEGC-M5000(1)	
 <small>11 Winners Circle, PO Box 5269 Albany, NY 12205-0269 518.453.4300 • www.chacompanies.com</small>	FIGURE 2-5 (TYPICAL 5) C-6 SECTION SELECTED ALTERNATIVE

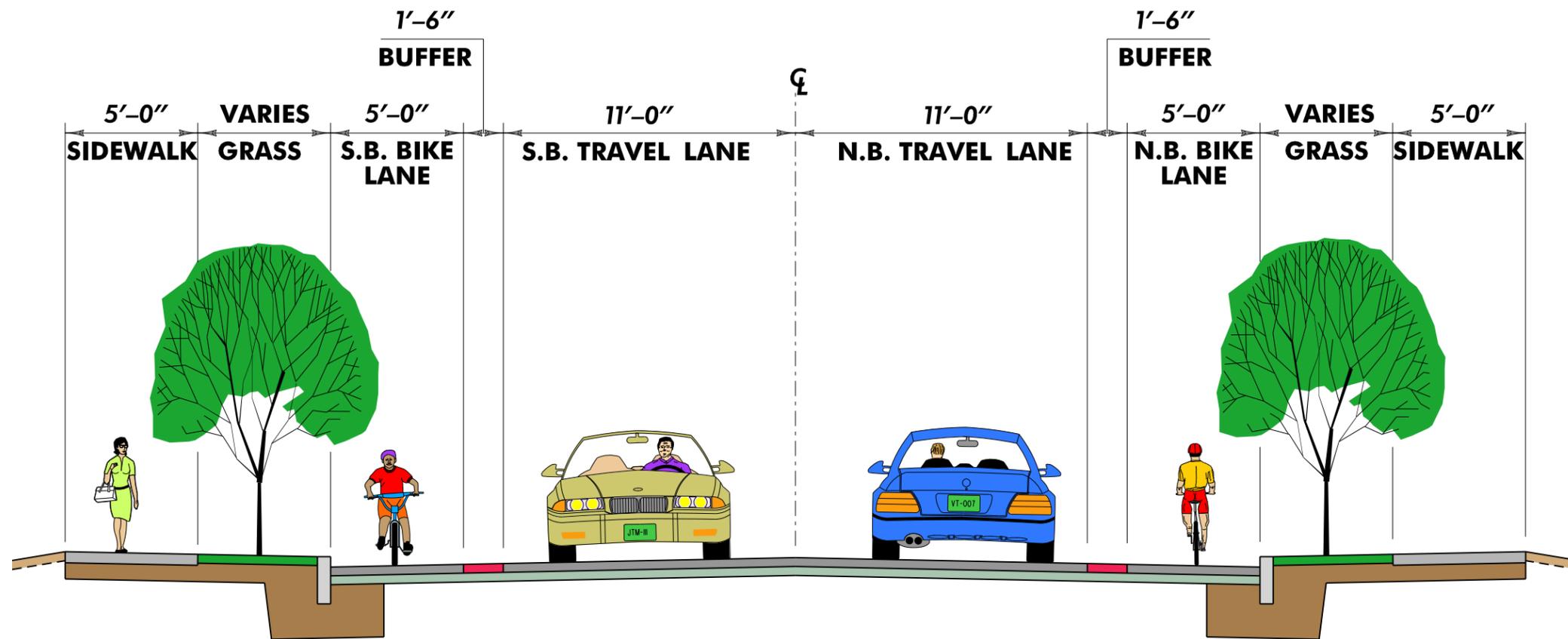


**SECTION C-6
PROPOSED TYPICAL SECTION
PINE STREET
MAPLE STREET TO KING STREET**

Southern Connector/Champlain Parkway MEGC-M5000(1)



FIGURE 2-6
(TYPICAL 6)
C-6 SECTION
SELECTED ALTERNATIVE



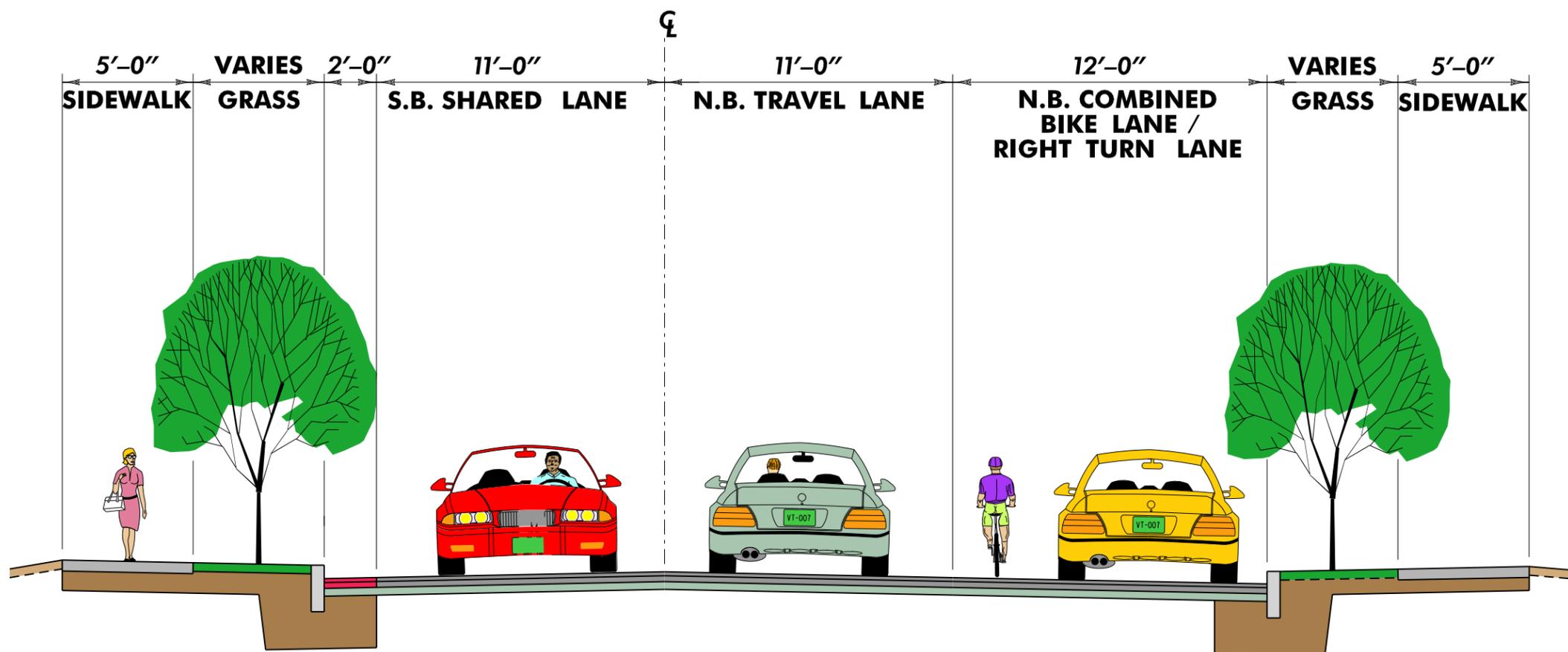
**SECTION C-6
 PROPOSED TYPICAL SECTION
 PINE STREET
 KILBURN STREET TO MAPLE STREET**

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Southern Connector/Champlain Parkway MEGC-M5000(1)



FIGURE 2-7
 (TYPICAL 7)
 C-6 SECTION
 SELECTED ALTERNATIVE



**SECTION C-6
 PROPOSED TYPICAL SECTION
 PINE STREET
 PINE STREET & MAIN STREET INTERSECTION**

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 USER 13573

Southern Connector/Champlain Parkway MEGC-M5000(1)



FIGURE 2-8
 (TYPICAL 8)
 C-6 SECTION
 SELECTED ALTERNATIVE

3. AFFECTED ENVIRONMENT

3.1 Introduction

The following sections provide updated information regarding the transportation system, natural and cultural resources, and social and economic characteristics in the Project area that have arisen since the completion of the 2009 FSEIS.

3.2 Transportation Systems

3.2.1 Traffic Operations

The study areas for the traffic operations aspect of the Project are unchanged from the 2009 FSEIS. Table 3-1 (next page) presents a summary of existing (2016) traffic volumes within the Primary study area. This table also shows the 2003 volumes from the 2009 FSEIS (base year condition), and the percentage of volume changes over this time period.

The traffic volumes representing 2016 existing conditions shown in Table 3-1 were compiled from road tube counts and manual intersection counts available through the VTrans Traffic Data Management System¹ for various years (2009-2016). This data was also supplemented with manual peak-hour counts conducted by CHA at several intersections in 2013. The volume data were adjusted to the 2016 year consistent with the methodologies used for volume development of the 2003 base conditions for the 2009 FSEIS.

In general, traffic volumes have decreased within the Primary study area, although the basic patterns of traffic flow continue to be similar. One notable change is the increased volume on Lakeside Avenue resulting from development that has occurred along this street since the completion of the 2009 FSEIS. Although traffic volumes along Pine Street have decreased by 5-10% throughout the corridor during the same time period, the volumes on the segment between Flynn Avenue and Maple Street continue to be high, with two-way volumes between 1,200 and 1,500 vehicles per hour during peak hours.

¹ VTrans Transportation Data Management System website:
<http://vtrans.vermont.gov/operations/technical-services/traffic>

Table 3-1: Traffic Volume Summary – Primary Study Area

Roadway	Segment	2003			2016			% Change		
		AAAT	AM Peak Hour	PM Peak Hour	AAAT	AM Peak Hour	PM Peak Hour	AAAT	AM Peak Hour	PM Peak Hour
Pine Street	Home Avenue to Flynn Avenue	8,600	880	1,030	8,080	885	925	-6%	1%	-10%
	Flynn Avenue to Lakeside Avenue	14,100	1,255	1,550	13,100	1,280	1,475	-7%	2%	-5%
	Lakeside Avenue to Maple Street	12,800	1,195	1,410	11,960	1,135	1,235	-7%	-5%	-12%
	Maple Street to Main Street	5,500	455	500	5,110	420	465	-7%	-8%	-7%
Battery Street	Maple Street to Main Street	9,500	1,040	1,250	8,360	910	1,100	-12%	-13%	-12%
Lakeside Avenue	Rail Overpass to Pine Street	4,300	345	430	5,850	475	585	36%	38%	36%
Maple Street	Pine Street to Battery Street	7,400	740	890	6,300	730	755	-15%	-1%	-15%
King Street	Pine Street to Battery Street	4,000	320	445	4,130	345	460	3%	8%	3%
Main Street	Pine Street to Battery Street	7,900	705	795	7,600	710	765	-4%	1%	-4%

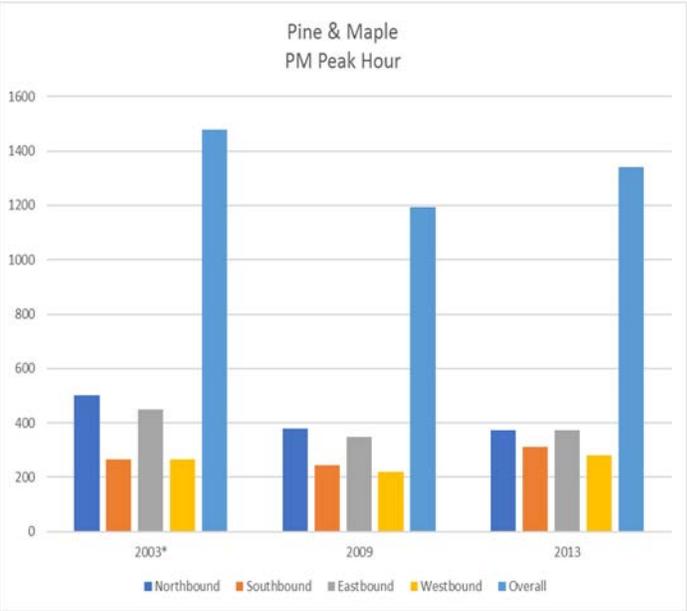
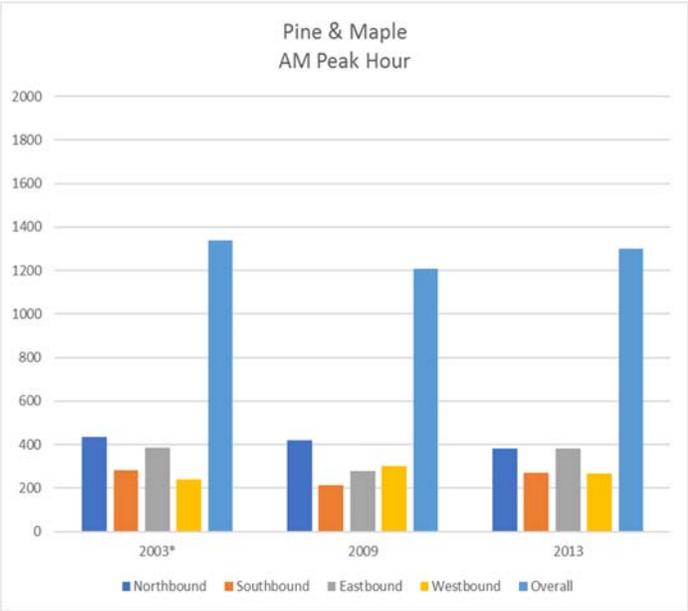
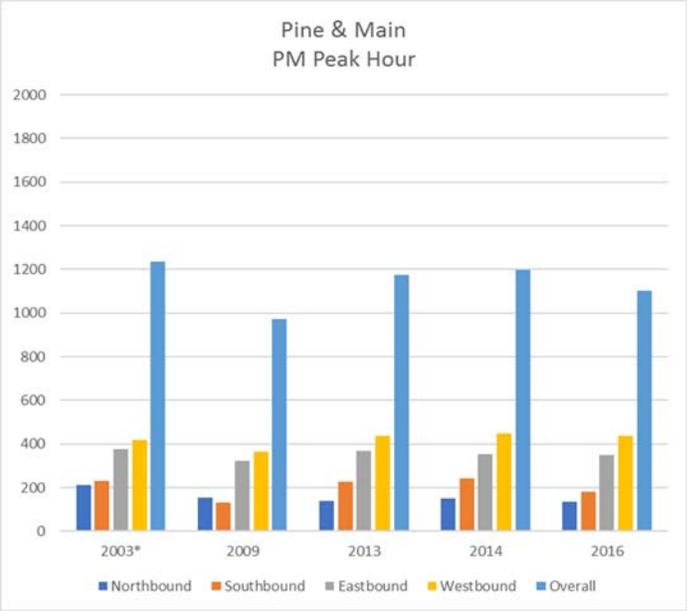
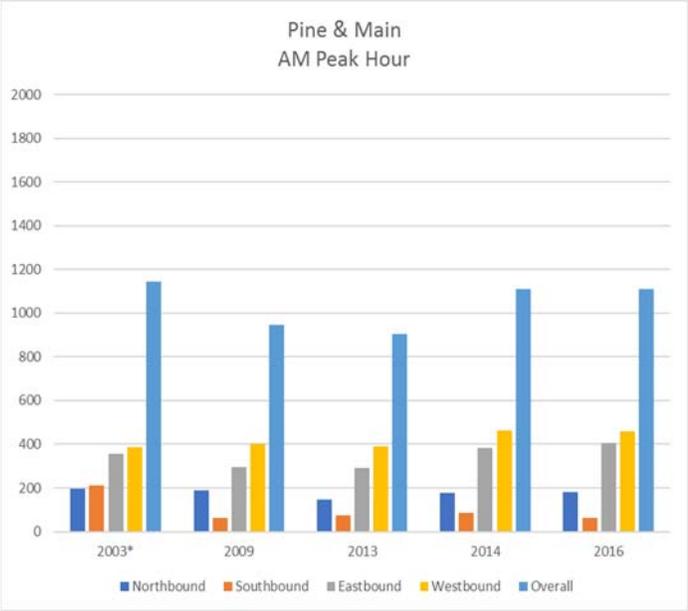
Intersection turning movement data was compiled for five representative intersections within the Primary Study area along Pine Street and four intersections within the Secondary study area to show the changes in peak-hour volume that has occurred between 2003 and 2016. These key intersections are shown in Exhibit 3-1.

Exhibit 3-1: Key Study Intersections

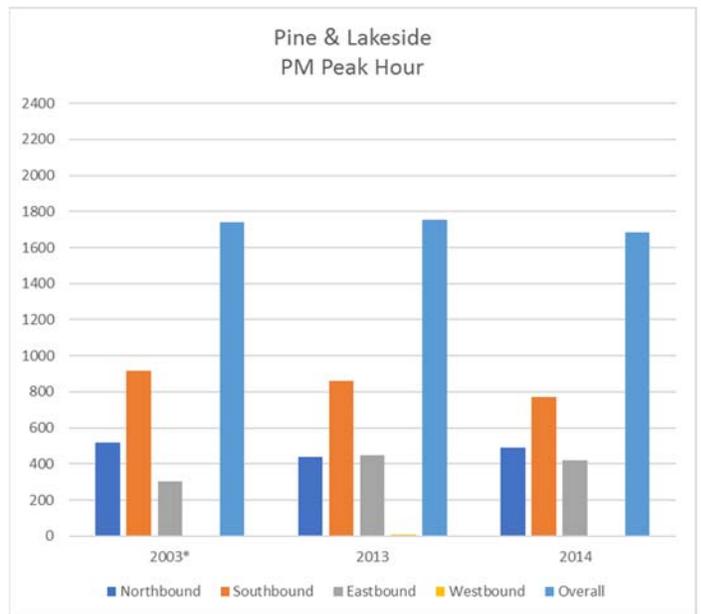
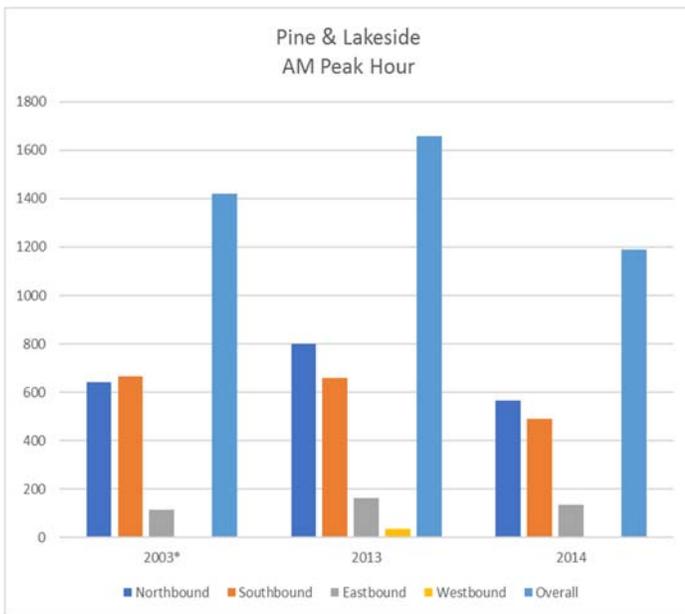
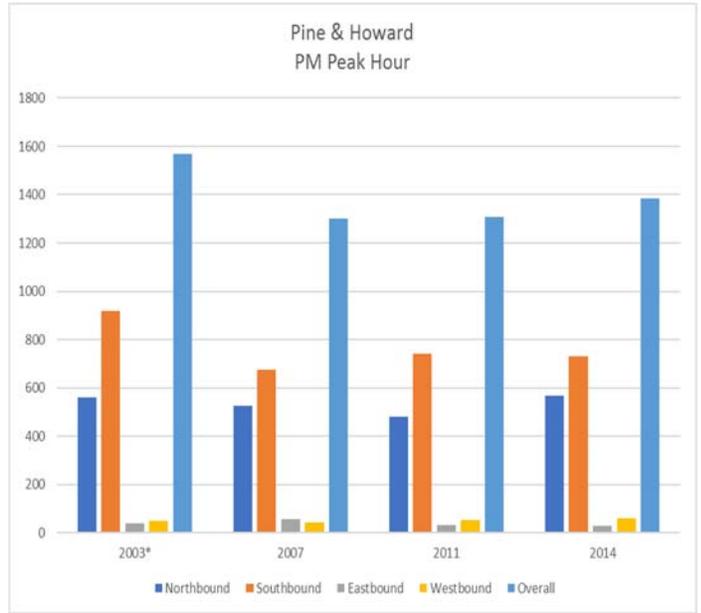
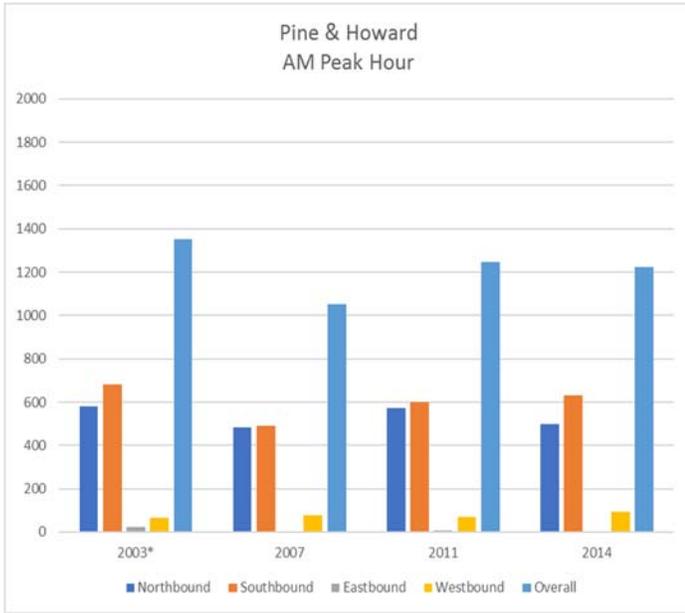


The AM and PM peak hour traffic volumes at each of these intersections are presented below, showing the volume trends from available data through the period from 2003 to 2016.

Exhibit 3-2 Primary Study Intersection Traffic Volumes



* volumes from the Champlain Parkway 2009 FSEIS



* volumes from the Champlain Parkway 2009 FSEIS

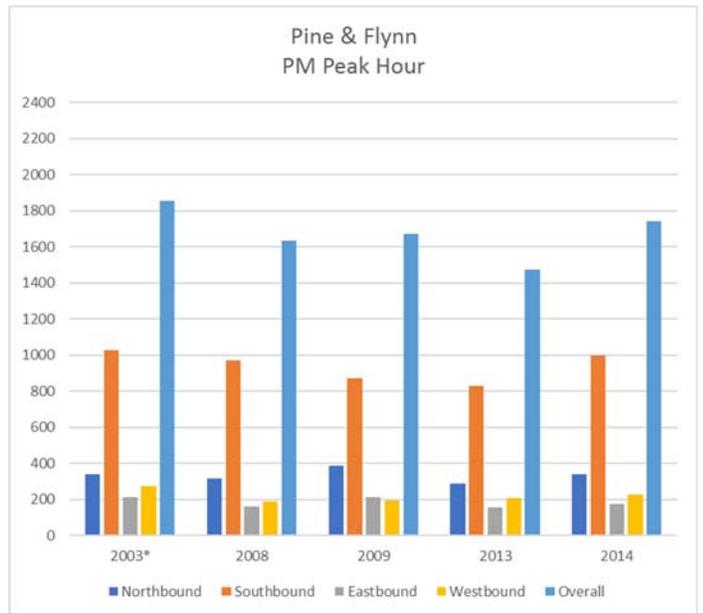
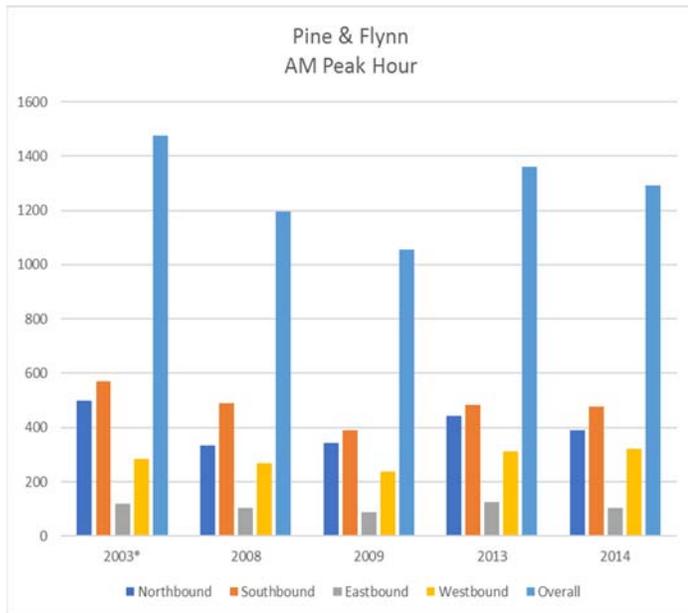
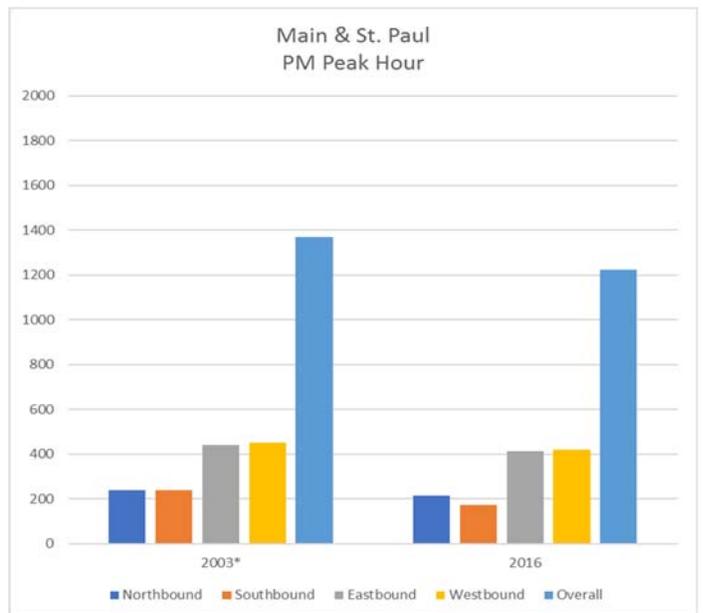
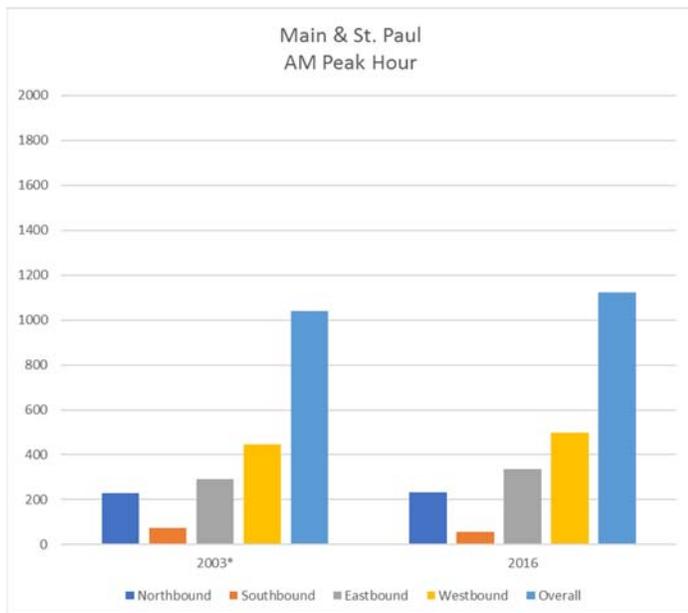
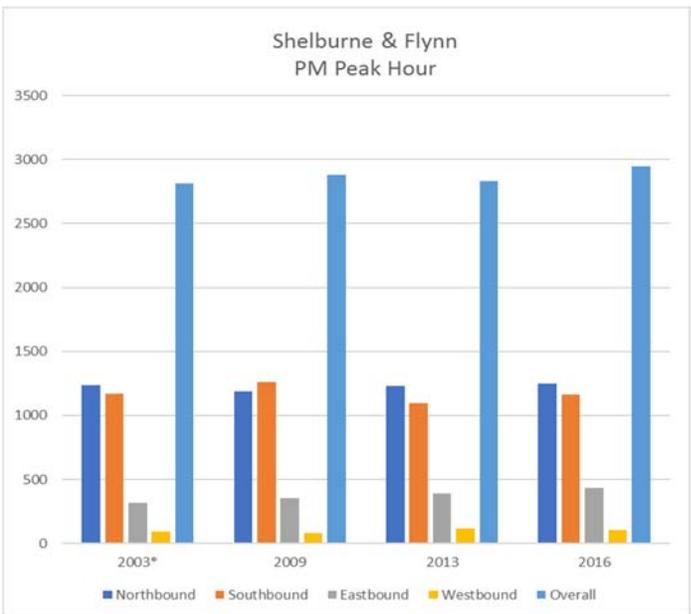
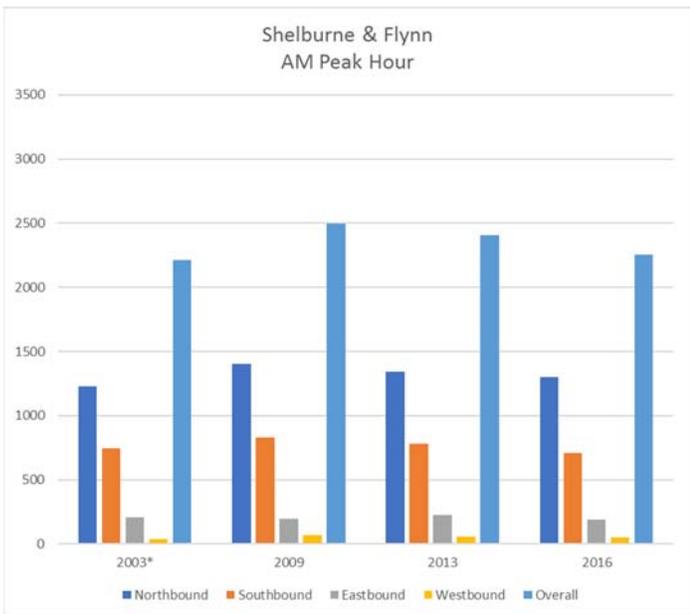
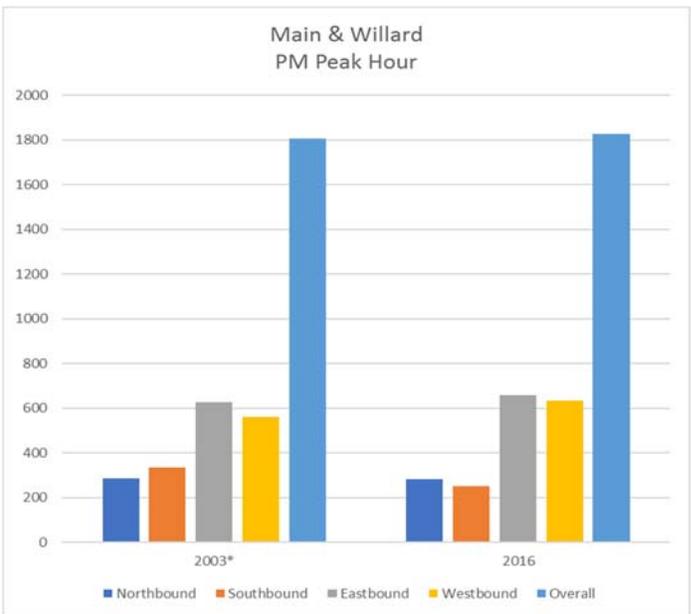
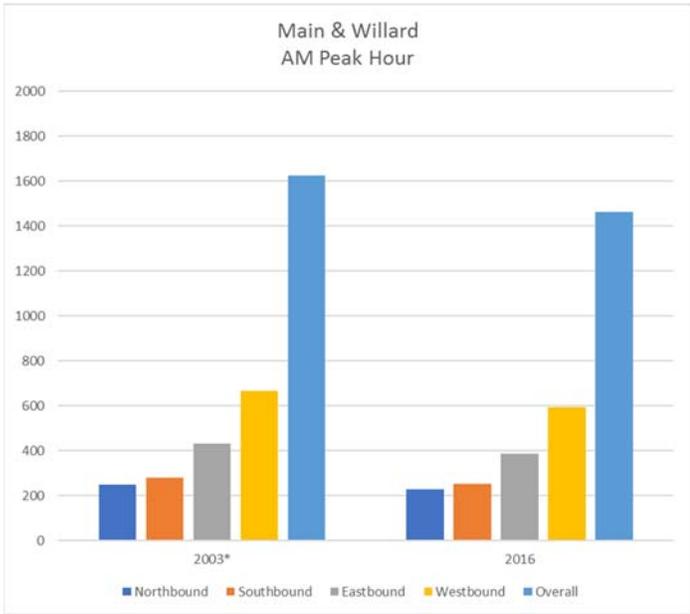


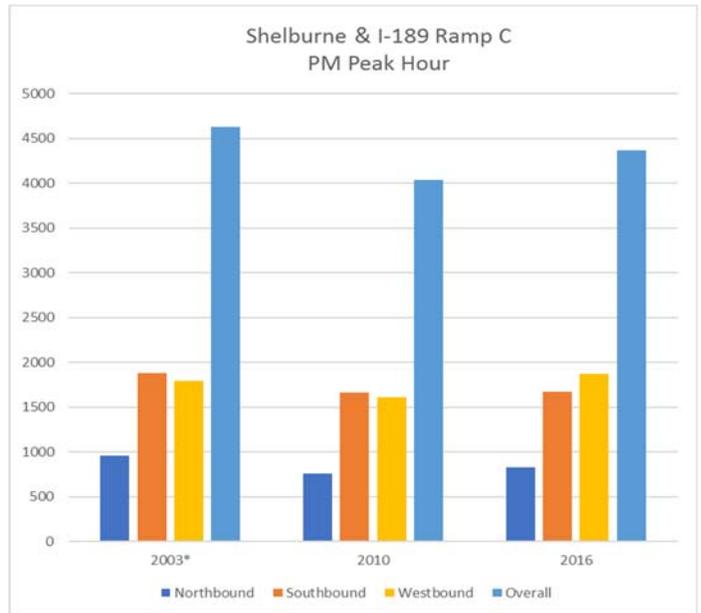
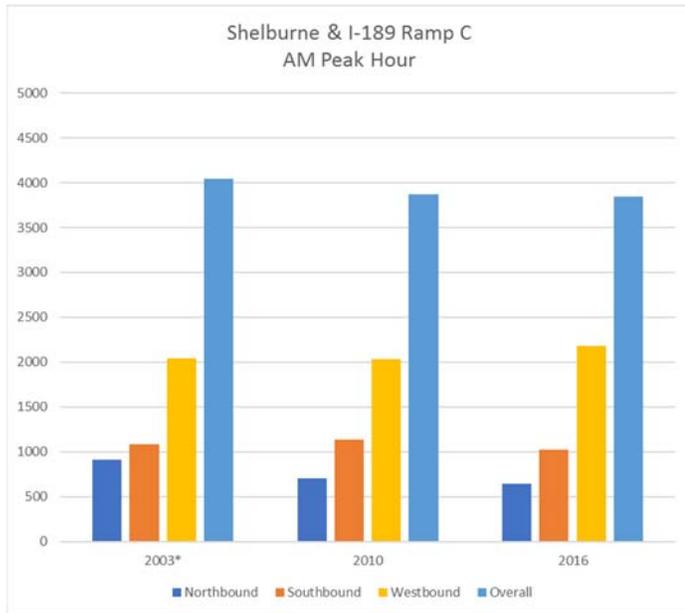
Exhibit 3-3 Secondary Study Intersection Traffic Volumes



* volumes from the Champlain Parkway 2009 FSEIS



* volumes from the Champlain Parkway 2009 FSEIS



* volumes from the Champlain Parkway 2009 FSEIS

The peak hour volume data at these intersections shows that the peak hour volumes have been generally consistent over the past 10-15 years. The year-to-year variations of traffic volumes are relatively small.

Heavy trucks (single unit and tractor trailer combinations) constitute approximately 10% of the daily traffic on Pine Street between Flynn Avenue and Lakeside Avenue, and 5% of daily traffic north of Lakeside Avenue. Buses account for about 2% of daily traffic throughout the corridor. Trucks and buses together comprise about 6% of the AM peak hour traffic and 3% of the PM peak hour traffic at the key intersections along Pine Street. These peak hour truck percentages are higher than in the 2003 base condition of the 2009 FSEIS (2%). Some of the increase in truck percentage may be attributed to lower overall volumes at the intersections.

The Level of Service analyses of the study area intersections were not updated for 2016 existing conditions because of the generally consistent volume conditions compared to the 2003 volumes. It is concluded that the current traffic operations are similar to what were identified in the 2009 FSEIS because current volumes are also comparable to what they were in 2003. The difference in truck percentage may have a modest effect on the level of service results presented in the 2009 FSEIS for the AM peak hour, but the AM peak hour is generally not the critical hour for design. The difference in truck percentage during the PM peak hour is not substantial in terms of its effect on intersection capacity, as the resulting truck adjustment factor for calculating saturation flow in the capacity analysis is essentially the same.

A signal warrant evaluation was conducted for the intersection of Pine Street and Howard Street in 2011 to address concerns that were brought forward during the Act 250 process. The LOS analysis conducted for that engineering study identified that the LOS for the Howard Street approach was E in the AM peak hour and F in the PM peak hour. This is a change in LOS from the 2009 FSEIS analysis (D in the AM and E in the PM). However, the evaluation concluded that the conditions at the intersection did not satisfy the warranting criteria of the Manual on Uniform Traffic Control Devices (MUTCD) for signal control. The signal warrant study also evaluated conditions for installing a Pedestrian Hybrid Beacon (PHB) device and found that the applicable warranting criteria was also not met for this type of control.

The City replaced the traffic signal equipment at the intersection of Pine Street and Lakeside Avenue in 2016 as a separate effort by the City, to address maintenance issues, to maintain MUTCD compliance and to improve pedestrian access and safety. This equipment update provides traffic-actuated operations and was designed by the City to be compatible with the proposed improvements of the Project. Traffic analysis conducted for this interim design shows that the overall intersection Level of Service is B in the AM peak hour and C in the PM peak hour with the signal improvements. This is a change from the operations reported in the 2009 FSEIS for 2003 volumes, which were LOS A in the AM and LOS B in the PM. The factors associated with the change in level of service are higher traffic volumes on Lakeside Avenue, incorporating the westbound driveway access for Feldman's Bakery store into the signal control, and providing advance pedestrian phasing.

3.2.2 Rail Operations

There have been no relevant changes to existing rail operations along the Project corridor since the 2009 FSEIS. Impacts to rail operations resulting from the Project are discussed in Chapter 4 of this Reevaluation.

3.2.3 Additional Transportation Services in the Area

The following sections provide an update to the information provided in the 2009 FSEIS regarding transportation services.

3.2.3.1 Existing Facilities

- **Bus Service:** The City of Burlington is presently served by Green Mountain Transit (GMT), formerly known as Chittenden County Transportation Authority.
- **Downtown Transit Center:** The 2009 FSEIS identified the Downtown Transit Center as a planned facility to be constructed near Cherry Street and St. Paul Street. In 2016, the Downtown Transit Center was completed. The facility is located on St. Paul Street, between Cherry Street and Pearl Street. The facility is owned by Green Mountain Transit, however, Megabus, Vermont Translines and Greyhound will utilize the transit hub.

3.2.3.2 Planned Facilities

- Passenger Rail: The *Ethan Allen Express* passenger rail service, operated by Amtrak between New York City and Rutland, Vermont, is anticipated to be extended to Burlington by 2021.

3.3 Land Use and Socio-Economics

This section addresses changes in land uses and socio-economics in the Project area that have occurred since the 2010 ROD.

3.3.1 Current Land Use

The 2009 FSEIS described the apparent shift in land use from manufacturing to retail and office use along the Pine Street and Lakeside Avenue corridor. In general, this shift in development patterns in the South End is ongoing as the area continues to evolve from its heavy industrial and manufacturing past to industries such as technology, art and design, and small-scale retail uses. Several buildings in the South End, particularly on Pine Street and Lakeside Avenue, have been converted from industrial uses to commercial and retail spaces. Notable examples of development that has occurred since the 2009 FSEIS include the following:

- Dealer.com (Pine Street)
- Innovation Center (Lakeside Avenue)
- The Howard Center (Flynn Avenue)
- Champlain College (Lakeside Avenue)
- City Market Co-op (Flynn Avenue)
- Various Microbreweries (Flynn Avenue and Pine Street)

As stated in the 2009 FSEIS, a shift in land use from industrial to commercial typically results in increased automobile traffic and reduced commercial vehicle movements. However, there are still industrial uses along the Project corridor that will continue to attract commercial vehicle traffic. The Project will provide a suitable and efficient access route for this traffic, consistent with the purpose and need. In some instances, such as City Market, the traffic impact mitigation for the redevelopment was predicated on the construction of the Project to alleviate access and circulation for employees, customers and truck deliveries.

3.3.2 Land Use Restrictions

The deed restrictions and Institutional controls imposed by the EPA's 1998 Record of Decision for the Pine Street Barge Canal Superfund Site are described in depth in the 2009 FSEIS and remain in effect.

3.4 Land Resources

Land resources such as farmlands and woodlands, and earth resources are unchanged from the description provided in the 2009 FSEIS.

3.5 Water Resources

This section describes changes to water resources in the study area that have arisen since the completion of the 2009 FSEIS and the 2010 ROD. Water resources include wetlands, surface waters, groundwaters, floodplains, and wild and scenic rivers.

3.5.1 Wetlands

Additional wetland delineations were performed in 2015-2016 for the purposes of renewing the Section 404 VT General Permit and Vermont Conditional Use Determination. A summary of the existing wetlands by class and size is shown in **Table 3-1**. Wetlands P and Q have emerged since the approval of the 2009 FSEIS due to the natural causes discussed below. A map of the wetlands in the Project area is attached in Appendix 5. These wetlands are described as follows:

Wetland P

This wetland occurs in a slight depression and does not appear to have an inlet. It is dominated by a forested community that does not closely resemble a community type listed in Thompson and Sorenson (2000), possibly due to its early successional stage, but is classified as red maple-black ash swamp (PFO1). There is a small opening dominated by shallow emergent marsh (PEM2).

The canopy of the forested wetland is dominated by quaking aspen (*Populus tremuloides*) with lesser occurrences of cottonwood (*Populus deltoides*) and American elm (*Ulmus americana*). The shrub stratum is well-developed and dominated by red osier dogwood (*Cornus alba*) with lesser occurrences of European buckthorn (*Rhamnus cathartica*), green ash (*Fraxinus pennsylvanica*) and meadowsweet (*Spiraea tomentosa*). The herbaceous stratum is dominated by jewelweed (*Impatiens capensis*), horsetail (*Equisetum arvense*), white avens (*Geum canadense*), tall buttercup (*Ranunculus acris*) and green ash. Riverbank grape (*Vitis riparia*) vines occur in low numbers. Hydrology indicators include surface water (A1), high water table (A2) and saturation (A3). The hydric soil indicators are depleted below dark surface (A11) and depleted matrix (F3).

The shallow emergent marsh has sparse shrub cover dominated by red osier dogwood and meadowsweet. The dense herbaceous stratum is dominated by sensitive fern (*Onoclea sensibilis*) with lesser occurrences of meadowsweet, jewelweed and tall buttercup. Hydrology indicators include surface water (A1), high water table (A2), saturation (A3) and FAC-neutral test. The hydric soil indicator is depleted below dark surface (A11).

Wetland Q

This small shallow emergent marsh (PEM1) formed, likely due to soil compaction, in a slight depression within a previously disturbed field. It is heavily invaded by reed canary grass and purple loosestrife. Hydrology indicators include surface water (A1), high water table (A2), saturation (A3) and FAC-neutral test (D5). The hydric soil indicator is depleted matrix (F3). A surface hydrology connection to nearby wetlands or streams was not observed during the delineation.

Table 3-1: Existing Wetlands – Class and Size

Wetland Area	Vermont Wetland Class	2009 Approx. Wetland Size (acres)	2018 Approx. Wetland Size (acres)
Wetland A	III	0.190	0.190
Ditch B	III	0.012	0.029
Ditch C/D	III	0.138	0.085
Wetland E	III	0.145	0.145
Wetland F	III	0.320	0.411
Wetland H/I	II	0.782 **	1.168 **
Ditch J	III	0.005	0.005
Wetland K	III	0.010	0.010
Wetland L	III	0.056	0.075
Wetland M	III	0.010	0.028
Wetland N	III	0.080	0.093
Wetland O	III	0.306	0.306
Wetland P	III	-	0.389
Wetland Q	III	-	0.065
Wetland W	III	-	0.040
Wetland Z	III	0.049	0.032
Ditch ZZ	III	-	0.024

** Only 1.168 acres (50,878 square feet) of wetland were delineated based on anticipated Project limits. Previous estimates indicate that this wetland area encompasses approximately 13.3 acres (579,350 square feet).

3.5.2 Surface Waters

There are no additional surface water resources in the Project area beyond those already described in the 2009 FSEIS. The surface waters identified in the Project area include Potash Brook and Englesby Brook which drain to Lake Champlain.

3.5.3 Groundwaters

There are no changes to existing groundwater resources in the Project area since the approval of the 2009 FSEIS.

3.5.4 Floodplains

Through the Federal Emergency Management Agency's (FEMA) flood hazard mapping program, FEMA identifies flood hazards, assesses flood risks and partners with states and communities to provide flood hazard and risk data to guide them to mitigation actions. FEMA's flood hazard mapping serves as the basis for the National Flood Insurance Program (NFIP) regulations and flood insurance requirements.

The most recent FEMA Flood Insurance Rate Map (FIRM) (Community Number 500032, Panel 0254 effective July 18, 2011) indicates that a portion of the Project area is within a Special Flood Hazard Area (SFHA), Zone A. This area coincides with the Potash Brook floodplain. Coordination with City of Burlington Department of Planning and Zoning is necessary to determine if a permit is required before construction or development begins within any SFHA to ensure that proposed projects meet the requirements of the NFIP and the community's floodplain management ordinance. The City of Burlington has adopted the SFHAs identified on the FEMA mapping by reference into its Comprehensive Development Ordinance and regulates development within these areas.

The 2009 FSEIS considered the FEMA mapping that was available at the time of writing which did not depict any SFHA in the Project area.

3.5.5 Wild and Scenic Rivers

There are no wild and scenic rivers within the Project corridor.

3.6 Vegetation and Wildlife Resources

This section describes any additional vegetation and wildlife resources and threatened and endangered species that have been encountered in the Project area since the 2009 FSEIS and 2010 ROD.

3.6.1 Vegetation and Wildlife Resources

The vegetation and wildlife species within the Project area are generally unchanged since the 2009 FSEIS and the predominant land uses are similar. The description of vegetation and wildlife resources in 2009 FSEIS documents remains valid, except for some of the areas previously identified as early successional habitat that have matured into forests within the vacant land along the C-2 Section of the Project right-of-way.

3.6.2 Threatened and Endangered Species

An updated list of threatened and endangered species was obtained on December 27, 2017 from the United States Fish and Wildlife Service (Appendix 1). The USFWS indicated that the Northern Long-eared Bat (NLEB) should be considered in any effects analysis for the Project. The Project complies with the Programmatic Biological Opinion Final 4(d) Rule for the Northern Long-eared Bat and Activities Excepted from Take Prohibitions, dated January 5, 2016. The Project has also been screened for threatened and endangered species by Vermont Agency of Natural Resources (ANR). Correspondence with ANR (Appendix 1) confirmed that there are “no significant natural communities in the area.”

The ANR correspondence indicated that conservation measures for NLEB may be required if greater than one acre of tree clearing would be performed. Typical conservation measures are imposing time-of-year restrictions on tree cutting or performing acoustic surveys. The NLEB is listed as threatened on the federal level and endangered in the State of Vermont. According to USFWS, the NLEB roost singly or in colonies underneath bark, in cavities or in crevices of live and dead trees during the summer months. The USFWS has not designated a critical winter or summer habitat for NLEB and the ANR Natural Resources Atlas does not identify a known hibernaculum or documented summer habitat within a one-mile radius. The forested land within Project corridor is considered a potential summer habitat; acoustic surveys can be completed to determine the presence or absence of NLEB.

ANR also identified two Rare species of fish (mottled sculpin and rosyface shiner) existing at the mouth of Englesby Brook and one species (central mudminnow) in Potash Brook. None of the plant species in the Project area are listed as State Threatened or Endangered. The ANR correspondence indicated that there are sixteen Rare or Uncommon plant species in the Project area (Attached in Appendix 1). Most of the species have been found along the Lake Champlain shoreline but could occur elsewhere in the area. Winged loosestrife has been identified in the Barge Canal area along Pine Street. ANR indicated that an updated plant survey may be warranted in this area (see attached correspondence in Appendix 1). The proposed work on the western side of Pine Street consists of removing a underutilized rail spur and constructing a shared-use path along the western side of the street. This work will take place upland of the Barge Canal

area on previously disturbed ground. Therefore, it is not considered necessary to perform an intensive plant survey.

3.7 Historic and Archaeological Resources

The Project area was previously surveyed to identify historic structures, districts and archaeological sites in conjunction with the 2009 FSEIS as well as prior environmental impact studies. This section describes any updated information regarding historic and archaeological resources in the Project area that has been considered since the 2009 FSEIS and that has not been previously evaluated in any of the preceding studies or historical surveys.

3.7.1 Historic Resources

The 2009 FSEIS presented an overview of historic resources within the Project study area. Since the study area has not changed, the analysis of historic structures and districts contained in the 2009 FSEIS remains valid.

3.7.2 Archaeological Resources

Since the Area of Potential Effect in regard to archaeological resources has not changed since the 2009 FSEIS, no additional archaeological investigations have been necessitated or performed since the completion of the 2009 FSEIS. The previous review conducted by the senior archaeologist for VTrans concluded that there were no anticipated archaeology concerns and that no further work was necessary to identify archaeological resources. As the Project has not been fundamentally altered, these findings are still considered valid.

3.8 Air Quality

The State of Vermont is categorized as an attainment area for all of the United States Environmental Protection Agency (EPA) criteria pollutants (total suspended particulates, carbon monoxide, sulfur dioxide, nitrogen oxides, ozone and lead). This categorization has not changed since the 2009 FSEIS and 2010 ROD.

3.9 Noise Environment

VTrans issued an updated noise analysis and abatement policy in conformance with the requirements set forth by FHWA Noise Standard at 23 CFR Part 722 on June 13, 2011. The noise analysis performed for the 2009 FSEIS is still considered valid. The VTrans' policy states that the date of public knowledge for a Federal-aid highway project is considered to be the date of the 2010 ROD for the Project. Therefore, noise analysis and abatement would not be required for new development or land use changes that occurred

subsequent to the ROD. Furthermore, the change in land usage from industrial to retail facilities would not represent a change in the Noise Abatement Activity Category as dictated by Table 1 to 23 CFR Part 772.

3.10 Public, Conservation and Recreation Land

There are no additional publicly owned parks in the study area compared to those already listed in the 2009 FSEIS. The publicly owned parks in the study area are Baird Park, Lakeside Park, Callahan Park (South Park), Champlain Street Park, Perkins Pier, Smalley Park and City Hall Park. Lake Champlain is also a recreational resource.

3.11 Hazardous Materials

The 2009 FSEIS identified the Pine Street Barge Canal Superfund site as the biggest contributing factor to hazardous materials in the Project area. Since the 2009 FSEIS, the Vermont DEC regulations for contaminants have evolved regarding the procedures for managing development soils and for establishing background concentrations for arsenic, lead, and polycyclic aromatic hydrocarbons (PAHs). The Vermont Investigation and Remediation of Contaminated Properties Rule (I-Rule) was adopted in July 2017 and dictates the procedural and substantive requirements on a responsible party and Agency for the cleanup of a site. The I-Rule requires a corrective action investigation and a public notice process consistent with Act 150. The I-Rule also requires that all sites leaving contamination in place have an Institutional control plan.

In anticipation of the adoption of the I-Rule, subsurface soil quality assessments performed in 2015 identified contaminant concentrations which in some cases exceeded the applicable soil screening values (SSVs) adopted by the State of Vermont. A Soil Management Plan (SMP) was preliminarily developed in order to outline a series of soil management strategies that will mitigate risks to human health and the environment. The SMP prescribes that soil with polycyclic aromatic hydrocarbon (PAH) and arsenic concentrations that exceed the applicable SSVs be managed as solid waste and disposed of at a certified landfill. In 2017, a Supplemental Soil Quality Assessment and Disposal Pre-Characterization report was prepared which focused on the portion of the Project area known to contain excessive levels of soil contamination. This report pre-characterized the soils on site by comparing them to the applicable soil screening values and thereby determining the appropriate management strategies.

3.12 Visual Setting

The general visual characteristics of the Project area and sensitive visual receptors along each Project segment are unchanged since the completion of the 2009 FSEIS.

4. ENVIRONMENTAL CONSEQUENCES

4.1 Introduction

The following sections address any updates to environmental impacts that are anticipated as result of design refinements as well as changes to the existing environment that have occurred since the completion of the 2009 FSEIS.

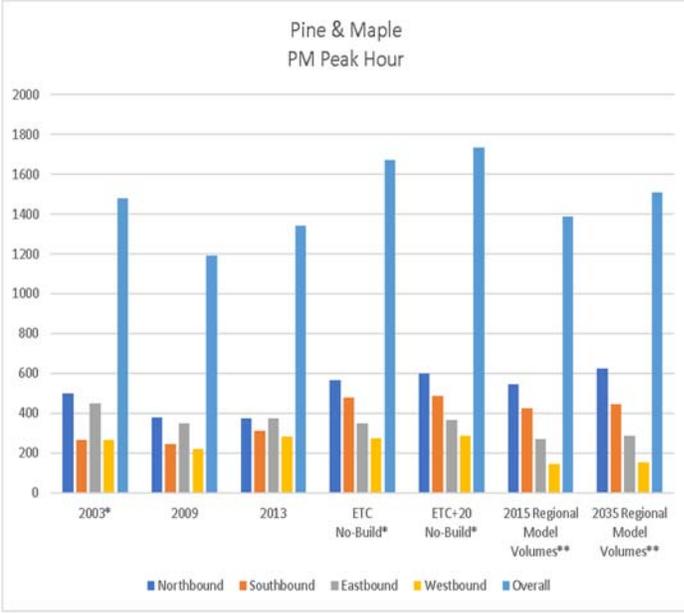
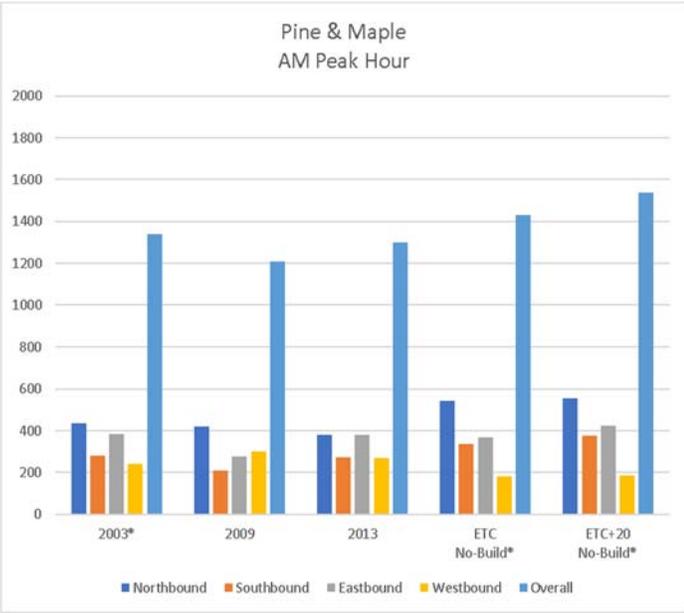
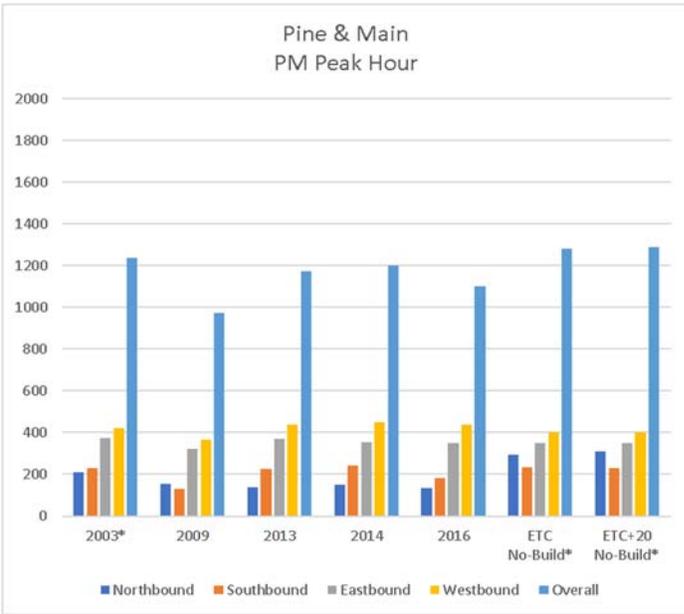
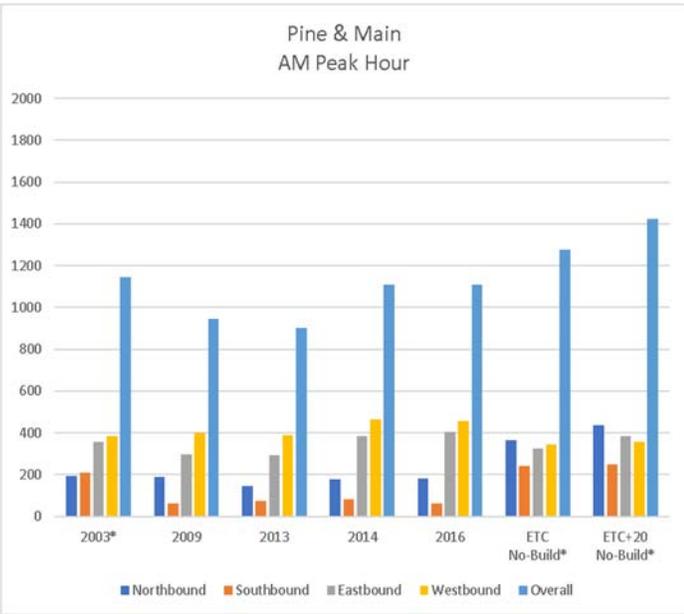
4.2 Transportation Systems Impacts

4.2.1 Traffic Operations

The 2009 FSEIS was based on traffic forecasts that corresponded to a previously estimated time of construction (ETC) of 2008. The traffic forecasting work for the 2009 FSEIS was completed over the course of several years, concluding in 2005. The ground-truth refinements for the forecasting effort were based upon traffic data collected during the period from 1998 to 2003. At the time the traffic data were collected and the modeling was being prepared, the Parkway ETC was 2008, and the twenty-year post-construction date was 2028. The current Project schedule is for an ETC in 2019. Although the Project's construction schedule has been pushed out, the traffic data and forecasts utilized for the Project are still relevant. This is because actual traffic data collected in the Project area in recent years, as described in Section 3.2.1, shows that the modeling for the 2009 FSEIS used conservative growth assumptions, resulting in a higher forecast of traffic volumes than has actually occurred to date. Thus, traffic volumes have not yet reached the levels forecast for the 2008 ETC, making it appropriate to continue to use the 2008 forecast traffic volumes for the ETC of the Project. However, these design volumes are not so conservatively high as to affect the overall objectives of the Project or the elements of the design.

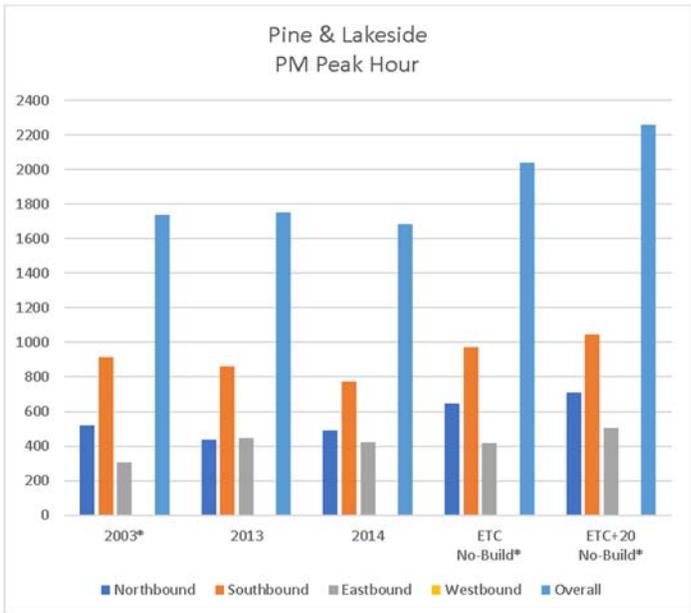
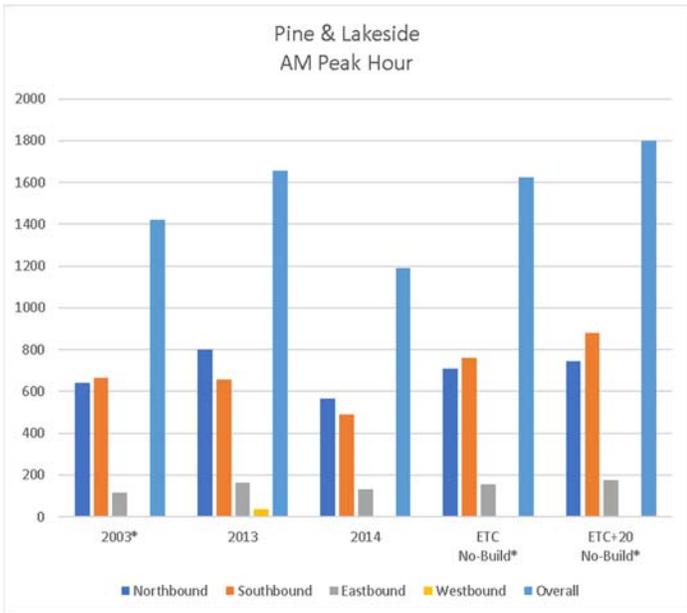
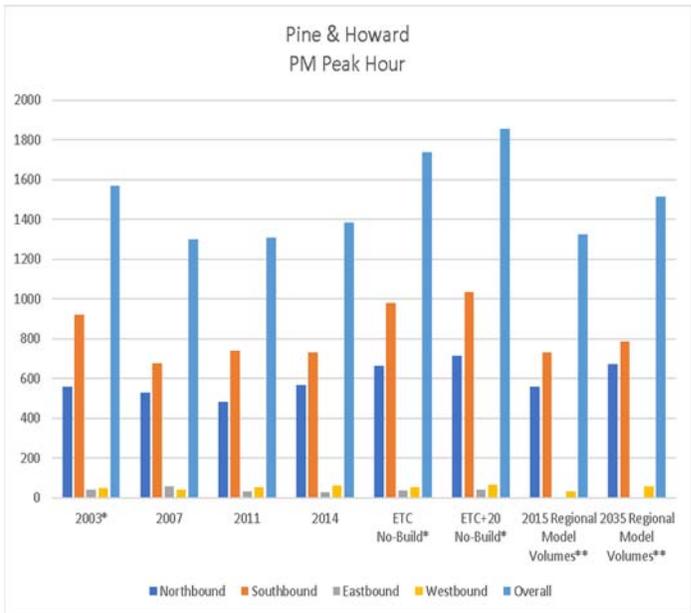
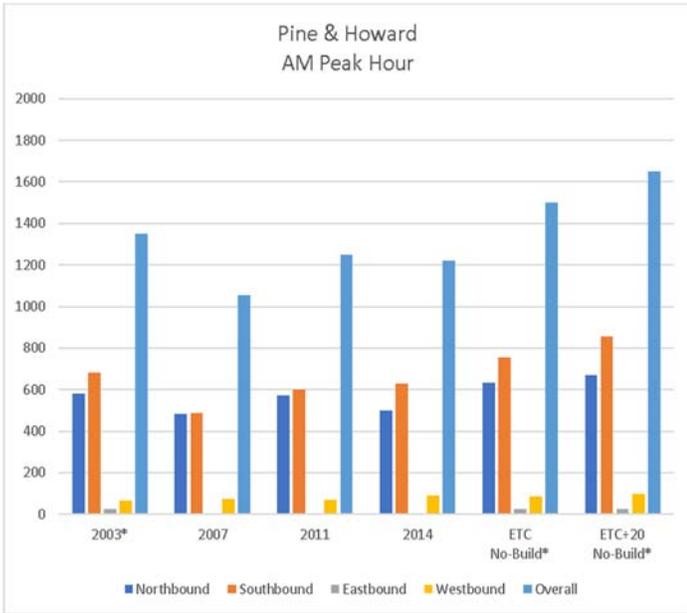
The traffic forecasts for the 2009 FSEIS were developed using the Chittenden County Transportation Model that was current at the time. These forecasts projected an average annual increase in daily (ADT) traffic along Pine Street of approximately 2.5 percent between 2003 and 2008, assuming the Project is not constructed (a total 12.5% increase). As described in Section 3.2.1, actual traffic volumes in the Project area have not grown as fast. The AM and PM peak hour traffic volumes at the five key intersections within the Primary study area are presented in Exhibit 4-1, showing the ETC and ETC+20 projections from the 2009 FSEIS in the context of the 2003-2016 volume trends. Traffic forecasts for the 2015 and 2035 conditions were also developed as part of the Railyard Enterprise Project (REP) Scoping/Planning and Environmental Linkages (PEL) Report. These forecasts are incorporated by reference where indicated in Exhibit 4-1.

Exhibit 4-1 Primary Study Intersection Traffic Volumes



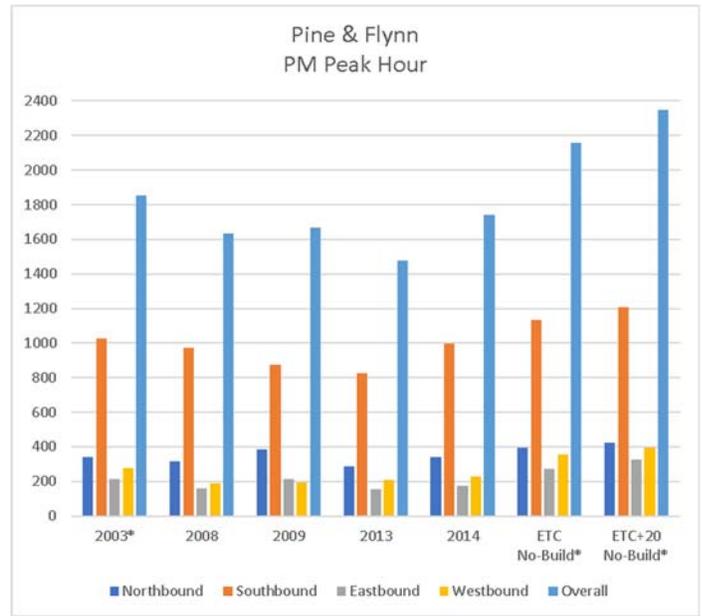
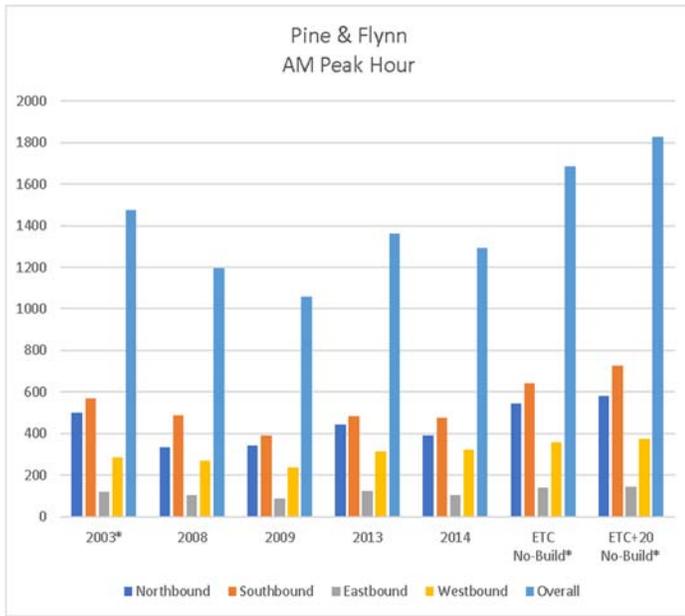
* volumes from the Champlain Parkway 2009 FSEIS

** volumes from the REP Scoping/PEL Report



* volumes from the Champlain Parkway 2009 FSEIS

** volumes from the REP Scoping/PEL Report



* volumes from the Champlain Parkway 2009 FSEIS

Although the traffic volumes have not grown at the pace that was originally projected in the 2009 FSEIS, the use of these ETC and ETC+20 volumes are not unreasonably high for the purpose of assessing the design elements of the Project and the resulting traffic operations. The Project design has evolved to reflect contemporary ‘Complete Streets’ multimodal concepts, where vehicular capacity is not the paramount performance metric.

Statewide trends show that overall Annual Vehicle-Miles Traveled (AVMT) have increased by 1.8% over the period 2010-2016. The data also shows that VMT growth has been more significant in the urban areas of the state, where annual VMT has increased 15% over this period. Travel in the state’s urban areas represented about 29% of the total statewide VMT in 2016, compared to 25% in 2010.

Table 4-1: Statewide Travel Trends

Annual Vehicle-Miles Traveled (AVMT)*

Vermont

	2010	2013	2014	2015	2016
Rural	5,400	5,258	4,975	5,199	5,251
Urban	1,848	1,858	2,085	2,115	2,131
Total	7,248	7,116	7,060	7,314	7,382
% Urban VMT	25.5%	26.1%	29.5%	28.9%	28.9%
% Change	2010-2013		2010-2016		
Statewide	-1.8%		1.8%		
Urban	0.5%		15.3%		

* millions

Sources: Table VM-2 (2010, 2013, 2014, 2015 and 2016) "Highway Statistics" series, Federal Highway Administration

The Chittenden County region is also anticipated to continue to grow. In June 2018, the CCRPC adopted the ECOS (Environment, Community, Opportunity, Sustainability) Plan 2018, a coordinated planning effort that integrated the Regional Plan, Metropolitan Transportation Plan (MTP), and Comprehensive Economic Development Strategy (CEDS) in one comprehensive plan. Demographic projections for the 2050 planning horizon project a 14% growth in population over this time (approximately 0.5% annual growth).

Table 4-2: Chittenden County 2050 Population, Employment & Household Forecast

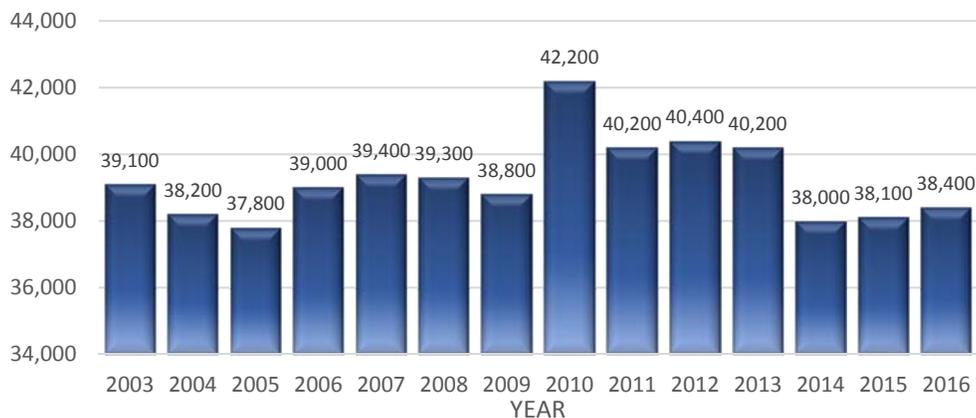
Demographics	2015	2050	% change
Population	161,382	183,172	+ 14%
Employment	135,511	182,688	+ 35%
Household	63,498	79,151	+ 25%

Source: ECOS Plan 2018, Main Document, ECOS Plan Priorities & Implementation, Forecast & Scenario Planning, Table 1, page 6

Employment is projected to grow at a faster rate than population, suggesting continued increases in peak-hour commuter travel demand to access jobs. As noted in the ECOS Plan, Chittenden County’s rate of single-occupant driving to work has been consistently in the range of 70-75% since 1990. Also considering carpools and vanpools, motor vehicles continue to account for most of the region’s work-based travel.

VTrans maintains a continuous traffic counter on I-189 that collects traffic data hourly for every day of the year. The count station has been in operation numerous years and provides a reasonable indicator of regional traffic changes in the Project study area because of its proximity. As shown in Exhibit 4-2, the daily volumes on I-189 have risen and fallen periodically between 2003 and 2016, with a 10% difference between the highest and lowest volume in this 14-year period. Over the past several years, the volumes have been modestly trending upward, but still remain lower than the peak recorded in 2010.

Exhibit 4-2: I-189 Annual Average Daily Traffic (AADT)



Data Source: VTrans Transportation Data Management System, 2018

The ECOS Plan’s transportation goal is “to provide accessible, safe, efficient, interconnected, secure, equitable and sustainable mobility choices for the region’s business, residents and visitors.” The Metropolitan Transportation Plan investments articulated by the ECOS Plan are:

- Maintenance & Preservation of existing transportation assets
- Address safety and localized roadway congestion
- Expand ITS
- Focus new transportation system investment on projects detailed on the MTP Project List
- Complete current TIP projects (including the Champlain Parkway Project)

- Areas planned for growth supported by investments in transit, walk/bike infrastructure, and TDM programs
- Promote shift from gas/diesel to electric or other non-fossil fuels transportation options
- Enhance passenger and freight rail infrastructure

The Project continues to be relevant and integral to these regional goals by completing a major component of the current TIP, expanding the roadway network to help address localized roadway congestion, providing ITS features within the traffic control system, enhancing rail infrastructure, and expanding and enhancing facilities for pedestrians and bicyclists.

The fact that traffic volumes have increased at a slower rate makes it appropriate to continue to use the previous ETC and ETC+20 volumes in the 2009 FSEIS as the ETC and ETC+20 traffic forecasts for the Reevaluation. Further, the fact that traffic increased at a slower rate than forecasted does not invalidate the results of the traffic analysis, it simply makes the traffic analysis a more conservative forecast of future conditions. One conclusion from the slower traffic growth is that if traffic continues to grow at a slower pace, the design life of the Project will effectively be extended.

Traffic Operations Changes Since the 2009 FSEIS

Based on the correlation of existing and projected volumes, traffic operations within the corridor are expected to be consistent with the analysis presented in the 2009 FSEIS, although actual LOS may be better with less vehicular delay through the horizon years of the Project if development and traffic growth does not occur as rapidly as was forecasted.

Several localized traffic control changes have been incorporated into the Project to integrate land use/development traffic that has occurred after the 2009 FSEIS was completed, and to address localized issues that arose during the Act 250 permitting process. These include:

- Champlain Parkway and Flynn Avenue: The traffic generated by the City Market development will increase traffic delay at the intersection from what was presented in the 2009 FSEIS. The development's mitigation plan addresses the impacts of the development on the transportation system.
- Lakeside Avenue and Pine Street: A minor commercial access driveway was incorporated as a fourth leg to the intersection, with signal control of the driveway access.

- Champlain Parkway and Lakeside Avenue: the traffic signal operations have been modified to include traffic signal control of the driveway access to No. 128 Lakeside Avenue (Innovation Center). The added phasing and time allocation for these movements reduces the overall LOS of the intersection, with several approaches operating at LOS E or F. The operations of this intersection will be monitored after construction as an Act 250 permit condition to optimize signal timings and traffic operations. There are no changes to roadway geometry, right-of-way limits or Project limits associated with this change.

Pedestrian activity in the Project corridor has increased as a result of development that has occurred since the 2009 FSEIS. This, along with added pedestrian/bicycle facilities incorporated into the Project are anticipated to result in more pedestrian crossing activity at the signalized intersections along C-2 Section and C-6 Section than was considered in the 2009 FSEIS. This increased pedestrian and bicyclist activity may contribute to higher vehicular delays than were presented in the 2009 FSEIS because more signal time will be allocated to the exclusive pedestrian phase.

The design refinements are not expected to result in additional impacts to traffic operations beyond those discussed in the 2009 FSEIS, or as noted above.

Other Reasonably Foreseeable Projects

Burlington Town Center Redevelopment

The Burlington Town Center (BTC) redevelopment is a planned project to revitalize the existing retail mall for mixed use. This project is located at Bank Street, two blocks north of the Champlain Parkway Project's northern terminus at Main Street. The BTC plan involves reestablishing the connection of Pine Street between Bank Street and Cherry Street that was closed as part of the original mall construction. This reconnection will improve access and circulation within the City Center District. The Traffic Impact Study (TIS) prepared by the consultants for the developer of the BTC project assessed the impacts of traffic diversions associated with this re-established street connection in the context of the Champlain Parkway Project and found that there were no impacts that affect the design or operational performance of the Champlain Parkway Project.

Railyard Enterprise Project

The Burlington Railyard Enterprise Project (REP) is a City-initiated project that is separate from the Champlain Parkway Project. It has been planned to address multimodal safety, mobility and operational transportation issues and advance economic development opportunities, through new urban streets, in the Waterfront South Area of Burlington.

The REP project area is located adjacent to the Champlain Parkway's northern terminus in the Maple Street/King Street area of Pine Street. Key objectives of the REP² are:

- To support economic development opportunities within the project area which will be facilitated by the creation of a new street system;
- To facilitate multimodal connections between the light industrial/mixed use Pine Street neighborhoods with the Lake Champlain Waterfront;
- To enhance livability for the residents in the project area; and
- To improve access to the Burlington Railyard, a National Highway System (NHS) - designated intermodal facility.

The traffic study conducted for the REP Scoping/PEL Report was based on the 2009 FSEIS volumes from the Champlain Parkway Project, but also included a sensitivity analysis to reflect CCRPC's calibrated travel demand model projections for years 2015 and 2035. The REP study area also included intersections along Pine Street that are common to both projects, from King Street to Marble Avenue. Because of this foundation built on the Champlain Parkway 2009 FSEIS, the REP study provides an assessment of the cumulative influences of the Champlain Parkway and REP projects.

The CCRPC model used for the REP study was a model developed in 2013 calibrated to 2010 base year conditions. The travel demand model forecasts for years 2015 and 2035 included current land use projections developed from the ECOS Planning effort and information provided by the City of Burlington. These models also reflect the effects of other reasonably foreseeable transportation improvements that are programmed on the Transportation Improvement Program (TIP). The TIP includes the Champlain Parkway Project as well as a variety of spot safety/operations improvement projects, pedestrian and bicycle facility enhancements, and the intersection and interchange improvements comprising the Circumferential Highway Alternatives.

The CCRPC model forecasts of volumes along the northern section of the Champlain Parkway Project along Pine Street for years 2015 and 2035 are lower than were previously estimated for the 2009 FSEIS. The most notable difference is the forecast of the northbound and southbound through movement volumes on Pine Street at Maple Street and at King Street, where the 2009 FSEIS Build volumes have higher traffic projections than current modeling.

A core feature of the street network alternatives considered in the REP Scoping/PEL Report is a new street connecting Pine Street with Battery Street. There are three alignment variations of this concept that were identified for potential advancement through a future NEPA process, which received Burlington City Council support³. These

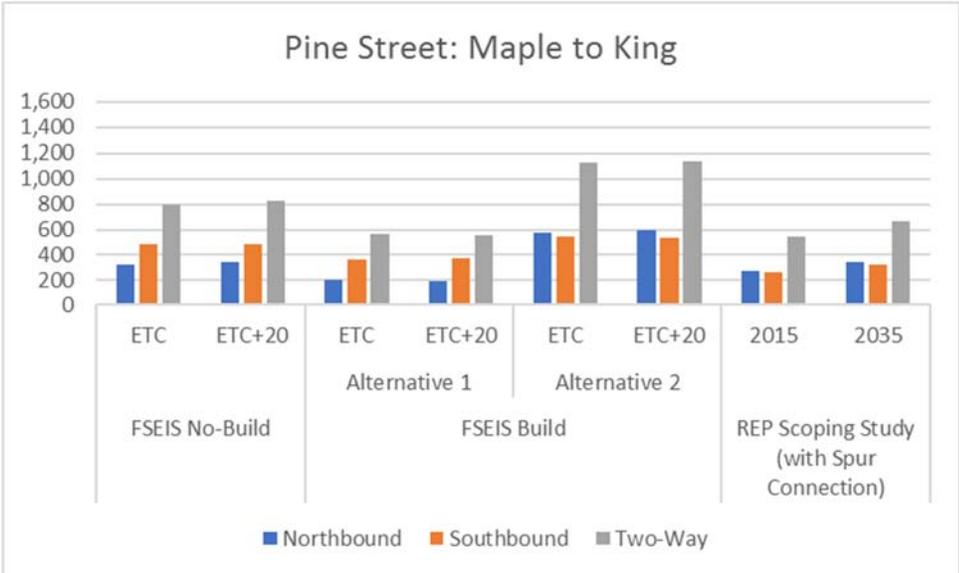
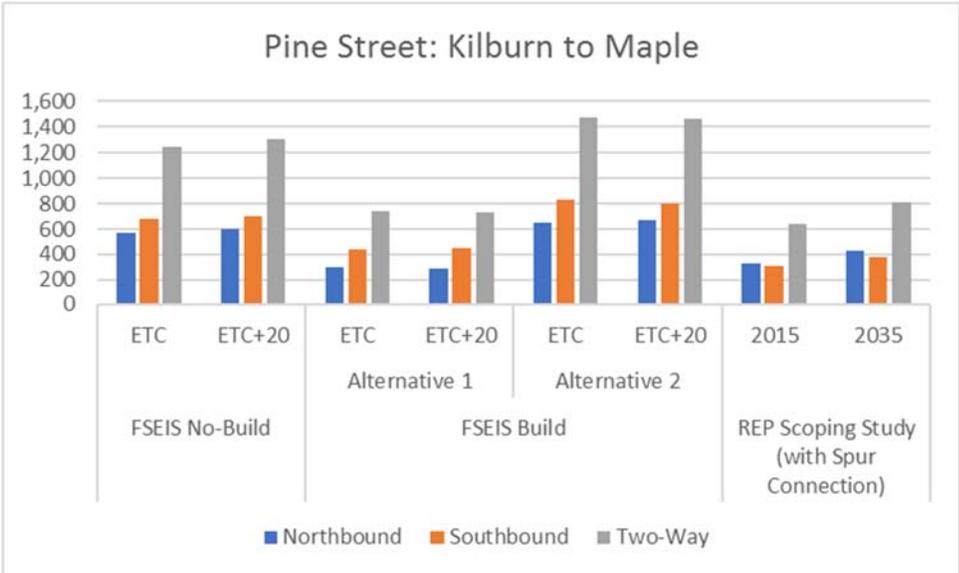
² Railyard Enterprise Project Final Scoping/PEL Report, RSG (2016); <https://www.ccrpcvt.org/our-work/transportation/current-projects/scoping/railyard-enterprise-project/>

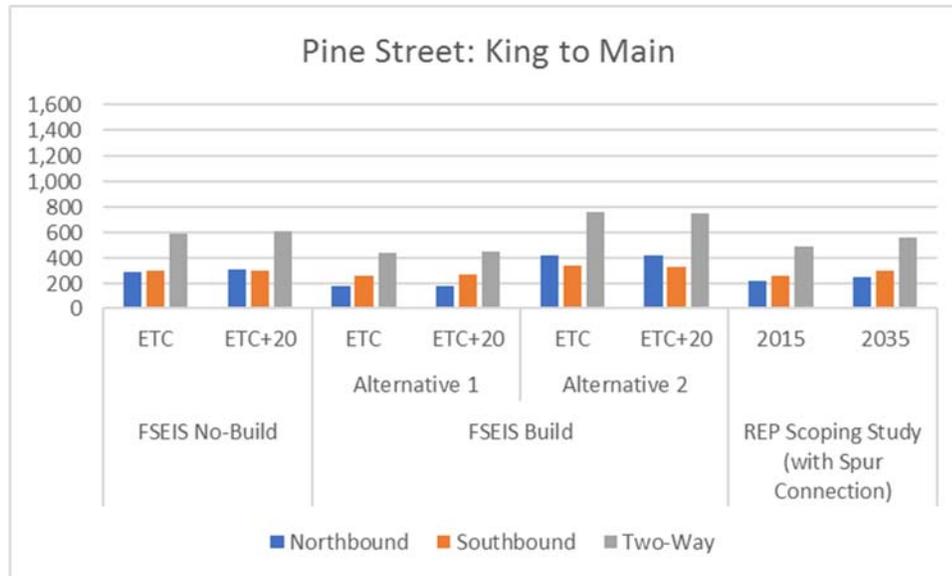
³ *ibid*; Section 8.0, page 55.

alternatives are similar to the Build Alternative 1 concept considered in the 2009 FSEIS for the Champlain Parkway Project, but providing a less direct connection.

Exhibit 4-3 shows the forecasted traffic volumes along Pine Street (between Kilburn Street and Main Street) associated with the Champlain Parkway Project and those projected for the Railyard Enterprise Project. As can be seen from this exhibit, the projected design volumes for the REP project (using the current CCRP model) are very similar to the volumes that were projected for the Champlain Parkway Build Alternative 1 in the 2009 FSEIS.

Exhibit 4-3 Pine Street Volume Comparison





The REP Scoping/PEL Report identifies the traffic operations for two intersections common to the Champlain Parkway Project: [1] Pine Street and Maple Street, and [2] Pine Street and King Street⁴. Table 4-3 shows the ETC+20 LOS analysis results for the PM peak hour at these intersections for the two Build alternatives considered for the Champlain Parkway Project and for the REP Build concept.

Table 4-3: LOS Summary ETC+20 PM Peak Hour

Intersection	Champlain Parkway		REP
	Build Alt 1	Build Alt 2	Build
Pine Street & King Street	B	C	A
Pine Street & Maple Street	C	D	B

It should be noted that the REP Build analysis is cumulative, including the Champlain Parkway Project. As shown from these analyses, the combined REP and Champlain Parkway projects will provide better traffic operations in the Maple-to-Main part of the corridor.

4.2.2 Rail Operations

The removal of the Grocery Rail Spur and Pine Street Rail Spur will preclude any future use of the spurs for rail purposes since the City of Burlington acquired the rights associated with their use. However, this is only considered a minor impact since the rail spurs are currently underutilized.

⁴ Railyard Enterprise Project Scoping/PEL Report – Appendix C, Table 1 (2016)

Removing the Pine Street Rail Spur will allow the construction of the shared-use path in its place. The VTrans' Historic Preservation Officer recommended a Section 4(f) de minimis impact finding in 2011 for the Project wherever minor amounts of property are to be acquired, including the Pine Street Rail Spur. The affected landowners, have been offered compensation for the relinquishment of their rail rights.

4.2.3 Impacts on Additional Transportation Services in the Study Area

- **Bus Service:** There are no additional impacts to the Green Mountain Transit (GMT) bus routes beyond those discussed in the 2009 FSEIS for the Selected Alternative. Since the 2009 FSEIS, improvements to the Project including bus shelters on Pine Street and transit signal priority provide an added benefit to bus service in the City.
- **Bicycle/Pedestrian Facilities:** The design refinements include the incorporation of bicycle pavement markings on C-2 Section and C-6 Section as well as the extension of the shared-use path on Pine Street. These changes will increase motorists' awareness of and safety for bicyclists. Curb extensions in conjunction with rectangular rapid flashing beacons on Pine Street will likewise increase pedestrian safety and provide additional crossing locations.

4.2.4 Emergency Vehicle Access

An emergency vehicle preemption system will be installed on the Champlain Parkway and Pine Street as part of the Project. The design refinements would not introduce additional impacts to emergency vehicle access beyond those discussed in the 2009 FSEIS.

4.2.5 Parking

Subsequent to the 2009 FSEIS, the proposed addition of buffered bike lanes on Pine Street between Kilburn Street and Maple Street would require prohibiting parking at all hours. A total of fourteen parking spaces would be lost between Kilburn Street and Maple Street. The residences and businesses on this portion of Pine Street would continue to have access to off-street parking.

4.2.6 Mitigation

No further mitigation measures are considered necessary for impacts to transportation systems. No mitigation is necessary to counterbalance the loss of parking on Pine Street between Kilburn Street and Maple Street. The residences and businesses on this portion of Pine Street currently have adequate off-street parking facilities; the loss of on-street parking is considered only a minor impact.

4.3 Land Use and Socio-Economic Impacts

This section describes updates to the impacts to land uses and socio-economics compared to the 2009 FSEIS.

4.3.1 Impacts to Neighborhoods

The design refinements and changes to the existing condition would not result in additional impacts to neighborhood connectivity in the Project area since the 2009 FSEIS.

4.3.2 Right-of-Way Impacts

The removal of the Pine Street Rail Spur involved right-of-way acquisitions from the affected parcels. As discussed in Section 4.2, this process was completed in 2017 and the land occupied by the rail spur has been transferred to the City of Burlington. The Project has advanced through various phases of the right-of-way planning and acquisition process since the 2010 ROD. The 2009 FSEIS stated that the selected alternative would generally require small strip takings of land along the Project corridor. The final Right-of-Way Plans developed in 2018 are consistent with this statement; the rights necessary to construct the Project are in the nature of easements. The location of the easements is generally adjacent to the existing highway right of way and the vast majority of the Project is located within existing rights of way. The majority of temporary and permanent easements have been acquired as of the writing of this Reevaluation. The remaining easements that need to be acquired for the Project generally consist of construction easements and permanent easements for necessary utility improvements and the construction of the shared-use path.

4.3.3 Impacts on Properties with Land Use Restrictions

The design refinements since the 2009 FSEIS include the relocation of the Maltex parcel driveway to align with Howard Street for improved traffic operations and safety. In addition, the proposed shared-use path extension will be constructed along the location of the former Pine Street Rail Spur on the Maltex parcel. This property is subject to the deed restrictions and other conditions imposed by the EPA's 1998 Record of Decision for the Pine Street Barge Canal Superfund Site. Coordination with EPA regarding these changes is on-going.

4.3.4 Consistency with Local and Regional Plans

This section describes the applicable local and regional plans that have been developed since the 2009 FSEIS and includes an assessment of the Project's consistency with the recent planning efforts.

In the fall of 2010, the City of Burlington was awarded a Sustainable Communities Challenge Grant by the U.S. Department of Housing and Urban Development (HUD) which provided the City an opportunity to advance several development and economic growth initiatives. The result of these efforts to guide downtown and waterfront development resulted in "planBTV" which will guide sustainable growth over the next 10 to 20 years. The redevelopment known as planBTV represents the City's current approach to continuously updating the Municipal Development Plan; instead of preparing an overall update to the Plan every five years in accordance with state statute, the City's Department of Planning and Zoning is continuously developing various area-wide master plans or topic specific plans that update the corresponding chapters of the Municipal Development Plan. The City Council unanimously adopted planBTV: Downtown and Waterfront Master Plan on June 10, 2013.

In the spring of 2014, the City introduced the next step of the planBTV initiative with the commencement of "planBTV South End." The South End is defined as the area bounded by Maple Street, South Union Street/Shelburne Road, and the southern City boundary. The majority of the South End is comprised of the residential area surround the Enterprise Zoning District. The planBTV South End is a master plan that documents input gathered from the community regarding the South End neighborhood.

The Great Streets initiative is a culmination of the City of Burlington's planning and development effort to make new investments in the downtown's public infrastructure. The initiative will advance key projects envisioned by other City plans including planBTV. Great Streets will also establish downtown street standards that meet or exceed VTrans' or AASHTO's design standards where applicable and will guide the selection of streetscape elements, including street trees, stormwater infrastructure, paving materials, furnishings, lighting, and appropriate street and sidewalk widths. The

standards will apply to all streets in downtown Burlington from Pearl Street to Maple Street, and Battery Street to Union Street.

The City of Burlington planBTV Open Space Protection Plan (OSPP), adopted in March 2014, identifies open space goals and provides action steps to meet them. The OSPP considered input from the public, city boards and commissions and other stakeholders. The OSPP serves to identify under-served areas of the city and determines practical locations for open space protection.

The 2014 City of Burlington Climate Action Plan established a detailed and strategic framework for measuring, planning, and reducing greenhouse gas emissions and related climatic impacts. The plan set forth reduction goals and prioritized reduction actions or strategies.

The design refinements discussed in this Reevaluation are consistent with the ongoing planBTV municipal planning studies. Furthermore, planBTV presumes the construction of the Southern Connector/Champlain Parkway will be completed. The incorporation of bicycle accommodations and shared-use path on Pine Street and the improvements to pedestrian facilities would be consistent with the City's planning studies and improve safety and access to Lake Champlain, city parks and the Burlington Bike Path. The enhanced bicycle accommodations are consistent with the City's adoption of Complete Streets strategies as stated in their 2011 Transportation Plan. Improving trail connectivity is a stated priority in the OSPP. The extension of the shared-use path on Pine Street will serve to connect the Burlington Bike Path with the Howard-Kilburn Street neighborhood which is also a distinct location marked for access improvement in the OSPP.

4.3.5 Mitigation

Additional mitigation for land use impacts is not considered necessary. Coordination with EPA regarding the Project is currently on-going.

4.4 Land Resource Impacts

There are no additional impacts to farmlands, woodlands or earth resources compared to the 2009 FSEIS.

4.5 Water Resource Impacts

This section describes the changes and impacts to the Selected Alternative since the 2009 FSEIS.

4.5.1 Wetland Impacts

The design refinements discussed in this Reevaluation do not introduce any new impacts to wetlands. Rather, new wetlands have either emerged since 2009 or existing wetlands have changed in size. A comparison of the impacts to wetlands between 2009 and 2018 is provided below. Mitigation for the impacts to wetlands will be made using the Ducks Unlimited - Vermont In-Lieu Fee (ILF) Program in accordance with permit conditions for the US Army Corps of Engineers Section 404 Vermont General Permit.

The 2009 FSEIS identified 20 individual wetland areas and noted impacts to wetlands A, H/I and N for the Build Alternative 2 (the Selected Alternative). Since the 2009 FSEIS, two additional wetlands (wetland P and Q) have been identified in the Project area and will be impacted. The Wetland Impacts Plan provided as Appendix 5 illustrates the proposed work and associated impacts.

Impacts to wetlands P and Q are as follows:

- Wetland P will be permanently filled to accommodate construction of the Southern Connector/Champlain Parkway and a stormwater detention pond.
- Wetland Q will be permanently filled for construction of the Southern Connector/Champlain Parkway roadway.

The proposed impacts have been evaluated and minimized to the greatest extent possible and are the minimum necessary to accomplish the goals of the Project.

Table 4-4 summarizes wetland impacts compared to the 2009 FSEIS.

Table 4-4: Wetland Impacts Summary

Wetland Area	Vermont Wetland Class	2009	2018
		Wetland Impact Area (acres)	Wetland Impact Area (acres)
Wetland A	III	0.190	0.190
Ditch C/D	III	0.000	0.003
Wetland H/I	II	0.473	0.415
Wetland N	III	0.031	0.031
Wetland P	III	-	0.389
Wetland Q	III	-	0.064
TOTAL IMPACTS		0.694	1.092

It should be noted that Table 4-4 indicates a reduction in impact area to Wetland H/I in the vicinity of Englesby Brook. The impacts to the Englesby Brook are now being considered separately as Stream Impacts (approximately 0.06 acre) and have been deducted from the total Wetland Impact to H/I. See the Wetland Impacts Plan attached as Appendix 5 for additional details.

4.5.2 Surface Waters

As stated in the 2009 FSEIS, the surface waters within the Project area include Potash Brook, Englesby Brook, the Pine Street Barge Canal, the Oakledge Tributary, and Lake Champlain. The design refinements described in this Reevaluation would not introduce any new impacts to any of these surface waters.

4.5.3 Groundwaters

The 2009 FSEIS concluded that there would be no impact to either Class III or Class IV groundwaters. Excavation depths are anticipated to be above the groundwater table. In general, based on information obtained from the 2004 groundwater investigation, groundwater flow is to the west toward Lake Champlain. Groundwater analytical results from this investigation for two wells located downgradient of the Project corridor between Pine Place and Maple Street, indicated there were exceedances above Vermont Groundwater Enforcement Standards for RCRA metals (arsenic, cadmium, chromium and lead) and one PAH (BaP). Therefore, though not anticipated, if groundwater is encountered during construction activities between Pine Place and Maple Street, it will be treated as potentially contaminated and will be infiltrated in-place or containerized. If groundwater is encountered during construction activities outside of this area, it is assumed clean and will be managed in accordance with the general erosion and sedimentation control plan for this Project.

4.5.4 Floodplains

As stated in Section 3.5.4, the 2009 FSEIS preceded the 2011 FEMA Flood Insurance Rate Maps which identify the Potash Brook floodplain as a Special Flood Hazard Area. The fill slopes from the proposed shared-use path along Potash Brook encroach upon the Special Flood Hazard Area (SFHA) mapped on the FEMA FIRM panel (Community Number 500032, Panel 0254 effective July 18, 2011). The total fill being placed in the SFHA is approximately 330 cubic yards. A hydraulic model for Potash Brook was developed to assess the potential floodplain impacts associated with this fill. The proposed condition hydraulic analysis indicates that the addition of fill will not result in increases in water surface elevations during the 100-year storm event. As such, the

Project is designed in accordance with the applicable FEMA and City of Burlington floodplain regulations. Based on this analysis and coordination with the City of Burlington Zoning Department, no mitigation is necessary for impacts to the SFHA associated with placing 330 cubic yards of fill within the 100-year floodplain.

4.5.5 Wild and Scenic Rivers

Similar to the 2009 FSEIS, there are no wild and scenic rivers designated within the Project area.

4.5.6 Mitigation

Mitigation for the impacts to wetlands will be made using the Ducks Unlimited - Vermont In-Lieu Fee (ILF) Program in accordance with permit conditions for the US Army Corps of Engineers Section 404 Vermont General Permit.

Mitigation for floodplain impacts will be determined through coordination with the City of Burlington Department of Planning and Zoning.

4.6 Vegetation and Wildlife Impacts

As discussed in Section 3.6.2, the Northern Long-eared Bat (NLEB) is listed as an Endangered species in the State of Vermont and certain areas of the Project corridor are considered potential summer habitat. In accordance with ANR guidance, an acoustic survey will be performed since the Project will involve clearing between 1-2% of the forested habitat within a one-mile radius. Confirmation with ANR (Vermont Fish and Wildlife Department) will be completed and is ongoing. If the acoustic survey finds a presence of the NLEB, conservation measures for known, occupied summer habitats will be applied including time-of-year cutting restrictions, applying potential roost tree retention guidelines, and minimizing habitat and canopy fragmentation, as applicable and in accordance with ANR Regulatory Review Guidance for Protecting Northern Long-eared Bats and Their Habitats

The new plant species identified by ANR are not expected to be encountered or impacted by the Project. These plant species occur either along the Lake Champlain shoreline or within the Barge Canal area. The proposed shared-use path is located upland of these two resources and will not impact the Barge Canal area or Lake Champlain shoreline.

4.7 Historical and Archaeological Resource Impacts

There are no changes to historical and archaeological resources in the Project area and the design refinements will not result in adverse impacts to previously identified resources. The Grocery Spur and Pine Street Rail Spur are considered to be non-contributing elements; the partial removal of both rail spurs does not adversely affect the historic district.

4.8 Air Quality Impacts

The air quality analysis performed as part of the 2009 FSEIS remains valid. Changes to traffic operations as discussed in this Reevaluation will lessen the impacts to air quality evaluated in the 2009 FSEIS.

4.9 Noise Impacts

The noise analysis included in the 2009 FSEIS remains valid. Noise abatement or other mitigation is not considered necessary.

As stated in the 2011 VTrans Noise Analysis and Abatement Policy, as well as in 23 CFR Part 772, the date of public knowledge for a Federal-aid highway project shall be the date of the Record of Decision for the Project. Therefore, noise receptors developed after the January 13, 2010 ROD are not being considered for analysis or mitigation per FHWA and VTrans' noise abatement policies.

4.10 Public, Conservation and Recreation Land Impacts

There are no additional impacts to the publicly-owned parks or conservation and recreation lands identified in Section 3.10.

4.11 Hazardous Materials Impacts

The 2017 Supplemental Soil Quality Assessment and Disposal Pre-Characterization Report characterized soils within the Project area based on the applicable soil screening values. A Corrective Action Plan (CAP) has been prepared in accordance with the IRule, effective July 27, 2017 and in view of the VT DEC Procedure for an IWMEA Request for Storage or Use of development Soils in State and Local Highway Projects. This CAP describes the contamination on site and summarize the results of the previous soils investigations. It also discusses the necessary monitoring activities during construction operations and provide a summary of locations where contaminated soils are likely to be encountered. In accordance with the CAP soils will be disposed of at a certified facility, relocated within Chittenden County, reused on site or otherwise relocated without any restriction or additional handling. The CAP is attached as Appendix 2.

4.12 Visual Impacts

The design refinements and environmental updates described in this Reevaluation would not affect the visual impacts that were assessed in the 2009 FSEIS. The assessment of visual impacts contained in the 2009 FSEIS remains valid.

4.13 Energy Impacts

The design refinements and environmental updates described in this Reevaluation would not result in temporary or long-term increases in energy consumption. The assessment of energy impacts contained in the 2009 FSEIS remains valid.

4.14 Construction Impacts

The construction impacts associated with the Project are largely the same as stated in the 2009 FSEIS.

4.15 Cumulative Impacts

As stated in the 2009 FSEIS, the Project would be taking place in the context of the long-term trend of shifting land uses within the Project area from industrial to commercial uses. Section 4.3.4 of this Reevaluation discusses the relationship between the design refinements, specifically bicycle and pedestrian safety enhancements, with growth and development plans within the study area.

An assessment of concurrent and additional future projects in the study area identified subsequent to the 2009 FSEIS was undertaken to determine overlapping resource impacts that could result in cumulative impacts with the Project. The following additional projects (subsequent to the 2009 FSEIS) were considered for cumulative impacts under this evaluation:

- Railyard Enterprise Project (REP)/Planning and Environmental Linkages (PEL)
- Burlington Town Center Redevelopment
- Shelburne Street Roundabout

The REP Scoping/PEL Report includes the evaluation of new roadway alignment alternatives that would connect Pine Street to South Champlain Street and Battery Street. As discussed in Section 4.2.1, the REP is expected to improve traffic operations on Pine Street between Maple Street and Main Street when considered in conjunction with the

Southern Connector/Champlain Parkway Project. The REP Scoping/PEL Report also provides a cursory analysis of environmental impacts for each alternative but does not include special investigations that would occur within the NEPA process. Based on a review of the potential resource impacts described in the REP Scoping/PEL Report, the Southern Connector/Champlain Parkway project does not share any common resource impacts with the REP.

One aspect of the Burlington Town Center project involves restoring the connection between Pine Street and Cherry Street. As stated in Section 4.2.1, this reconnection would not impact the traffic design or operational performance of the Southern Connector/Champlain Parkway Project. Based on a review of the available Burlington Town Center project documents, there are no other common resource impacts with the Southern Connector/Champlain Parkway project that would result in a cumulative impact.

The Shelburne Street Roundabout project involves the reconfiguration of the intersection of Locust Street, Shelburne Street and South Willard Street. This intersection was included in the Secondary study area in the 2009 FSEIS. The Shelburne Street Roundabout is expected to improve local traffic operations at that intersection but would not affect traffic patterns or impact the design and traffic flow projections for the Southern Connector/Champlain Parkway project. There are no other potential common resource impacts between the Southern Connector/Champlain Parkway project and the Shelburne Street Roundabout project.

Since the 2009 FSEIS and 2010 ROD, additional private development projects in the study area have performed varying degrees of resource impact analyses that presume the completion of the Southern Connector/Champlain Parkway project. Consequently, any mitigation measures required under the respective projects is predicated by the completion of the Southern Connector/Champlain Parkway project. Examples include the City Market and Champlain College traffic impact studies which propose mitigation strategies that depend on the Southern Connector/Champlain Parkway to divert added traffic from local streets.

After researching and evaluating the resource impacts described in this Reevaluation, it was determined that the Southern Connector/Champlain Parkway Project will not result in any attributable cumulative impacts with any of the other past, present and reasonably foreseeable projects discussed in this section.

There are no additional adverse cumulative impacts expected as a result of the Project. Therefore, no mitigation is necessary or proposed.

4.16 Relationship of Local Short-Term Uses versus Long-Term Productivity

The relationship between short-term impacts and long-term productivity described in the 2009 FSEIS remains valid. The short-term uses of resources related to the Project are unchanged by the design modifications or other factors. The excavation of contaminated soil represents a short-term impact during construction due to the potential to generate dust or volatile organic compound levels in ambient air which could pose a health hazard to workers or the public. However, the excavation of this potentially hazardous material has been mitigated by a Corrective Action Plan (CAP) which details the necessary environmental oversight and proposes a remedial construction and maintenance plan in addition to establishing an Institutional control on the Project. The long-term benefits to productivity as stated in the 2009 FSEIS are still considered to be greater than short-term uses or impacts.

4.17 Irreversible and Irretrievable Commitments of Resources

The design refinements and environmental updates described in this Reevaluation would not alter the irretrievable and irreversible commitments of resources that were listed in the 2009 FSEIS. Accordingly, the analysis of these resources included in the 2009 FSEIS is still considered valid.

4.18 Permit Requirements and Environmental Regulatory Compliance

4.18.1 Federal Permitting

Section 404 of the Clean Water Act

The Section 404 VT General Permit expired on December 6, 2017. An application for the new VT General Permit was submitted in August 2018 and issued in October 2018.

4.18.2 State Permitting

Vermont Operational Stormwater Discharge Permit

The Operational Stormwater Discharge Permit has been amended to account for the differences in impervious area compared to the original design. The permit was renewed in 2018 and will expire on June 18, 2023.

Public Water System Permit to Construct

The Public Water System Permit to Construct was issued on July 30, 2018. The permit will expire on July 31, 2020.

Vermont Conditional Use Determination (CUD)

The CUD was extended on September 8, 2016 for the Project. It is not expected that the design refinement discussed in this Reevaluation will carry any further implications for the CUD.

Individual (NPDES) Construction Stormwater Permit

The Project plan will have to be resubmitted to VTDEC for formal approval of the plan change. This involves providing written justification for the changes and updating the Erosion Protection and Sediment Control (EPSC) plans to conform to Vermont Standards and Specifications for EPSC. The permit expires on April 15, 2019 and will have to be amended prior to the start of construction.

Vermont Water Quality Certification (WQC)

The Section 401 WQC will need to be updated.

Vermont Act 250 Land Use Permit

The application to amend the Project Act 250 permit was submitted on April 15, 2011. During 2011-2012 public hearings took place and approval was granted for the comprehensive amendment to the permit. Subsequently, several parties appealed the Act 250 approval and the City of Burlington reached settlements with all but one party.

The refinements discussed in this Reevaluation are not anticipated to be material changes to the issued Act 250 permit. However, a request for Jurisdictional Opinion (JO) by the District Environmental Coordinator will be processed to confirm this opinion or to identify if additional administrative actions or permit amendment is required.

4.19 Summary of Resource Impacts

Table 4-5 lists the quantifiable resource impacts anticipated from the Selected Alternative as described in the 2009 FSEIS and the updated Selected Alternative as described in this Reevaluation.

Table 4-5: Summary of Resource Impacts

	ALTERNATIVES	
	2010 ROD Selected Alternative	2018 Updated Selected Alternative
Meets Project Purpose and Need	Yes	Yes
Displacements/Relocations	0	1*
Construction Cost Estimate	\$20,000,000	\$28,000,000
Number of New Railroad Crossings	1	0
Air Quality (Violations of Standards)	0	0
Farmland Impacts (acres impacted)	0	0
Wetland Impacts (acres impacted)	0.69	1.09
Floodplain Impacts (acres impacted)	0	0.41
Urban Vegetation/Wildlife Impacts (acres impacted)	0	4.90***
Threatened/Endangered Species Impacted	0	Potential***
Section 4(f) Recreation Sites Used	0	0
Section 4(f) Historic Resources Used	0	0
HISTORIC DISTRICTS		
Battery Street Historic District	No Adverse Effect	No Adverse Effect
Pine Street Historic District	No Adverse Effect	No Adverse Effect
Queen City Cotton Mill Historic District	No Adverse Effect	No Adverse Effect
Lakeside Historic District	No Adverse Effect	No Adverse Effect
Additional Archaeological Work Required?	No	No
Visual Impacts	Yes	Yes
Rivers/Streams (number crossed)	1	1
Superfund Site Issues	No	No**

* Rail rights associated with the removal of Grocery Rail Spur and Pine Street Rail Spur have been extinguished. Small strips takings and temporary easements are not included in this table

**Involvement with restricted parcels requires coordination with EPA

***An acoustic survey will be performed to determine the presence of Northern Long-eared bats. 4.90 acres is the area of proposed clearing that corresponds to with potential summer habitat.

4.20 Mitigation Measures and Commitments

The following bullet list is a summary of additional mitigation measures proposed subsequent to the 2009 FSEIS.

Traffic Operations

No additional mitigation is proposed.

Rail Operations

The previous owners of rail rights to the Grocery Rail Spur and Pine Street Rail Spur have been offered just compensation and have all relinquished their rail rights. In addition, the removal of the Pine Street Rail Spur will allow for the extension of the shared-use path in its place. Elimination of the Grocery Spur and Pine Street Rail Spur has no impact to rail operations.

Bus Service

No mitigation is proposed for bus service.

Park and Ride Facilities

No mitigation is proposed for Park and Ride facilities.

Bicycle/Pedestrian Facilities

No mitigation is necessary for bicycle/pedestrian impacts. The design refinements discussed in Section 4.2.3 will provide a safety benefit to pedestrians and bicyclists.

Emergency Vehicle Access

Subsequent to 2009 FSEIS, Emergency Vehicle Preemption was incorporated into the traffic signal design.

Impacts to Neighborhoods

There are no anticipated impacts to neighborhoods, therefore no additional mitigation is necessary.

Right-of-Way Impacts

Design refinements resulted in minor right-of-way impacts. Landowners were offered just compensation for the minor right-of-way impacts in accordance with VTrans' Right-of-Way Acquisition Policy.

Impacts to Properties with Land Use Restrictions

Coordination with EPA is required.

Consistency with Local and Regional Plans

The Project is still consistent with local and regional plans.

Wetland Impacts

Additional wetland impacts will be mitigated by additional in-lieu payment to Ducks Unlimited.

Floodplain

The Project would not result in increases in water surface elevations within the SFHA; therefore, no mitigation would be required.

Threatened and Endangered Species

A habitat assessment and acoustic survey will be performed to determine the presence or absence of the Northern Long-eared Bat. Conservation measures such as time-of-year restrictions, applying roost retention guidelines, and minimizing habitat and canopy fragmentation will be applied as required by ANR.

Historic and Archaeological Resource Impacts

The Project would not result in adverse impacts to historic or archaeological resources; therefore, no mitigation would be required.

Air Quality Impacts

The Project would not result in adverse impacts to air quality; therefore, no mitigation would be required.

Noise Impacts

No mitigation is proposed for noise impacts. Potential receptor locations developed since the 2010 ROD are not considered for analysis or mitigation in accordance with VTrans' and FHWA's policy.

Public, Conservation and Recreation Land Impacts

No impacts to public, conservation and recreation lands are expected; therefore, no mitigation is required.

Hazardous Materials Impacts

The adoption of the Vermont DEC I-Rule in 2017 resulted in the development of a Corrective Action Plan (CAP) to manage contaminated soils in the Project area.

Visual Impacts

The 2009 FSEIS proposed mitigating visual impacts by providing landscaping. The design refinements would not require any additional mitigation for visual impacts.