Stantec

Portland Street Bicycle & Pedestrian Scoping Study

St. Johnsbury, Vermont

September 9, 2022

Prepared for:

Town of St. Johnsbury, Vermont

Stantec

Portland Street Bicycle & Pedestrian Scoping Study

St. Johnsbury, Vermont

September 9, 2022

Prepared for:

Town of St. Johnsbury, Vermont

Table of Contents

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

In the last several years, St. Johnsbury has initiated an effort to invest in the town's revival, creating a bright future for the community and visitors. Portland Street (U.S. Route 2), between Railroad Street (U.S. Route 5), and Snell Road (T.H. #64), is the main corridor into the Town of St. Johnsbury, connecting the Summerville neighborhood with the Passumpsic riverfront. The street has various commercial and residential facilities and some recreational areas along its length. This is a primary transportation corridor, but the existing pedestrian and bicycle facilities are not continuous, and several sections have fallen into disrepair. Additionally, many commercial properties lack proper access management, creating potentially hazardous traffic patterns. This scoping study explores options to create an inviting pedestrian travel corridor that reinforces the town and region's goal for accessibility and the revitalization of the area.

The existing paved roadway is 38 feet curb-to-curb with 8-foot shoulders providing parking and 5-foot sidewalks adjacent to the curb. The speed limit of the study area is 30 mph, with one signalized intersection at Concord Avenue.

1.2 PURPOSE AND NEED

Purpose: The purpose of this project is to create safe, visible, comfortable, convenient, and direct pedestrian and bicycle facilities connecting existing facilities on Portland Street between Railroad Street and Snell Road while maintaining safe and efficient vehicular conditions on Portland Street; supporting healthy and sustainable lifestyles, and connect the Summerville neighborhood with the designated downtown.

Needs:

1. Provide an inviting travel corridor that reinforces the Town's pedestrian and bicycle mobility goals.
2. Facilitate use by all age groups, experience levels, and trip purposes.
3. Contribute to the Town and regional bicycle and pedestrian network.
4. Create safe, comfortable, user-friendly, desirable year-round bicycle and pedestrian connections along Portland Street.

1.3 ALTERNATIVES

The alternatives for this project include no action, sidewalk improvements with an on-road bike lane, and a 10-foot wide sidepath.

Alternative 1: No action.

Alternative 2: Sidewalk and crossing improvements with a protected on-road bike lane replacing the existing parking.

Alternative 3: A 10-foot wide shared-use path to reduce the impact on the roadway and existing parking was developed and evaluated.

1.4 PREFERRED ALTERNATIVE

The preferred alternative for this project is sidewalk improvements with on-road bicycle facilities. Based on input received at the public meetings, the recommendations that the project team produced are as follows:

1. The preferred alternative is Alternative 2: Sidewalk and crossing improvements with a protected on-road bike lane replacing the existing parking.
2. Pedestrian improvements including connecting discontinuous sidewalks, adding crosswalks, and controlling access between the roadway and parking areas to improve safety and convenience. Recommend repairing the sidewalk on the south side of the corridor and completely replacing the sidewalk and curb on the north side.
3. Replace existing parking with striping for a 5' bike lane on both sides of the street and a 3' painted buffer, with a reduced bike lane and painted buffer at the Concord Avenue intersection to accommodate a left turn lane.

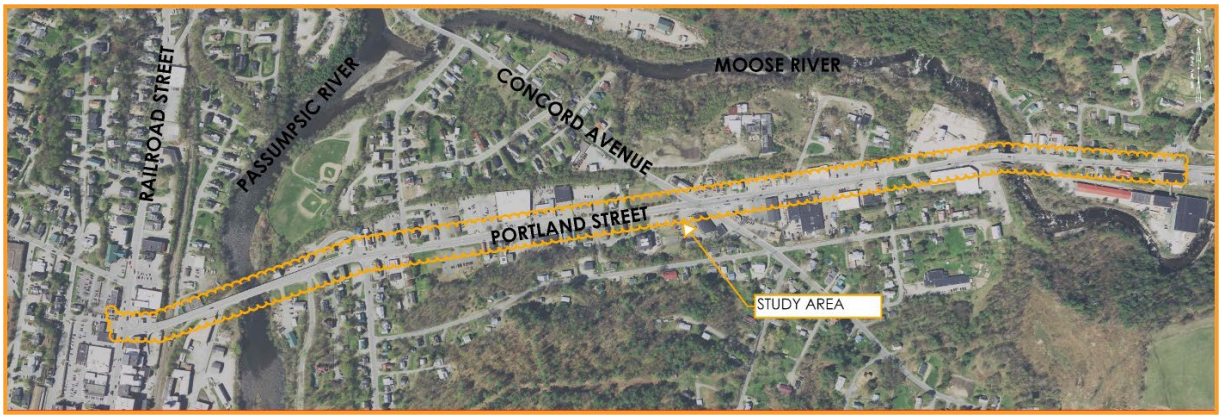
2.0 INTRODUCTION

Stantec Consulting Services, Inc., working with the Town of St. Johnsbury and VTrans, developed a scoping study evaluating sidewalk/path improvements for Portland Street between Railroad Street and Snell Road. The scoping project aims to identify options for an important missing link between the Town and Village pedestrian and bicycle network.

The scoping process involves identifying existing roadway and traffic conditions and then developing a purpose and need for the project. Alternative improvement strategies are then identified and evaluated, leading to the selection of a preferred alternative.

Introduction

Project Overview Map



3.0 PROJECT BACKGROUND

This section of Portland Street is a primary transportation corridor lacking sufficient pedestrian and bicycle facilities. The Town of St. Johnsbury received funding through the VTrans Bicycle and Pedestrian Program for the planning of sufficient facilities to improve the safety and accessibility of the street for pedestrians and cyclists. The Town has been working to enhance the area surrounding downtown to enrich the community and commercial development of St. Johnsbury by creating improved local infrastructure to support those efforts.

3.1 TOWN PLAN REVIEW

The proposed alternatives align with the 2017 St. Johnsbury Town Plans in many respects. Primarily, the design is in accordance with the ideals of Section 2.2 Part F and Section 2.6 Part E by expanding the walkability and cycle-ability of the Town by improving the sidewalks and adding bicycle lanes for community use. It also connects the surrounding areas as per Section 3.3 Part B, providing foot and bike access to Portland Street Park and Pat Buck Memorial Park. Additionally, the improvements to Portland Street would provide access to the envisioned riverfront park that would run from the Portland Street Bridge to the Town's treatment plant from the downtown area. The Town also hopes to improve the infrastructure for walking, biking, and access to recreational facilities. These improvements positively impact public health, community, and economic development, according to Section A.3.1.

3.2 EXISTING PLAN AND STUDY REVIEW

Plans and studies have been developed for this area that consider traffic and pedestrian concerns. Plans and studies reviewed for the preparation of this scoping study are listed below.

- Portland Street Bridge
- VTrans Portland Street Rehabilitation

For the Portland Street Bridge project, the scope of work covered by Stantec involved replacing a number of the bridge's expansion bearings, repairing existing concrete surfaces, and repairing the steel staircase. For the Portland Street Rehabilitation project, Stantec resurfaced the street and made other updates to the street, including new pavement markings, guardrails, and signage. Having experience with projects in the area benefitted understanding the existing infrastructure present, as well as knowing the growth and infrastructure goals of the Town.

4.0 PROJECT AREA AND EXISTING CONDITIONS

The project area for this scoping report is Portland Street in St. Johnsbury from the intersection with Railroad Street at the westerly end to Snell Road at the easterly end. This segment of roadway represents a gateway corridor from points east to St. Johnsbury's downtown. As other areas of the Town, including the downtown district, have been improved, Portland Street's deficiencies have become more apparent. The Town's leadership desires to focus efforts on this segment over the next several years. The existing sidewalk on Portland Street is deteriorating and nonexistent in places, and there are currently no facilities to accommodate bicyclists. No pedestrian or bicycle facilities are in the corridor segment between Concord Ave and Snell Road.

Above: Examples of existing facilities condition

Between Lincoln Street (T.H. #498) and Assisqua Avenue (T.H. #490), Maine Central Railroad Company operates an "active" rail crossing across Portland Street (U.S. Route 2). The Twin State Railroad owns and operates this crossing. The crossing is currently not in use, but reactivating the line has been discussed. Any work in this section must go through the railroad Right-of-Way (ROW) process, so the project team decided not to pursue an alternative along this section of Portland Street.

4.1 ROADWAY CHARACTERISTICS

This scoping study documents current roadway characteristics in the project area, as summarized below.

Portland Street has a speed limit of 30 mph, 38' of pavement width for two-way traffic, and left-turn lanes at the intersection with Concord Avenue. Poor access management exists near several businesses and parking areas.

4.2 TRAFFIC VOLUMES

Traffic volume data, including Annual Average Daily Traffic (AADT) values and Hourly Volumes for the study area, were available from VTrans. Table 1 displays VTrans' 2017 AADT values for Portland Street (U.S. Route 2).

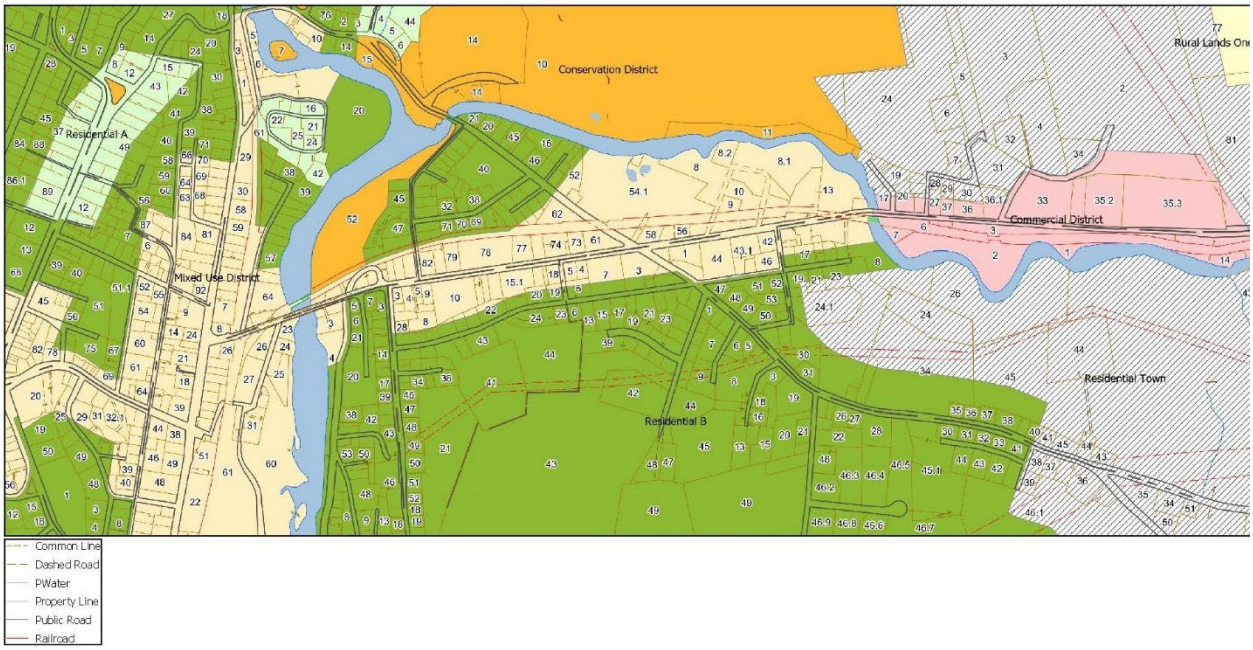
Table 1: Current AADT Volumes

Location	AADT	Count Year
Portland St – Railroad St to Weeks Ct	7,652	2021
Portland St – Weeks Ct to Concord Ave	7,500	2017
Portland St – East of Concord	5,301	2021

4.3 LAND USE AND ZONING

The existing development along Portland Street is a mix of residential, commercial, and industrial properties. Many of the abutting properties have fallen into various states of disrepair. It is hoped that adding bicycle and pedestrian safety improvements will spur redevelopment and a renewed interest in the corridor. The map in Figure 1 shows the Planning and Zoning for the study area, and the entire map is in Appendix A.

Figure 1: Planning & Zoning Map from Town of Saint Johnsbury



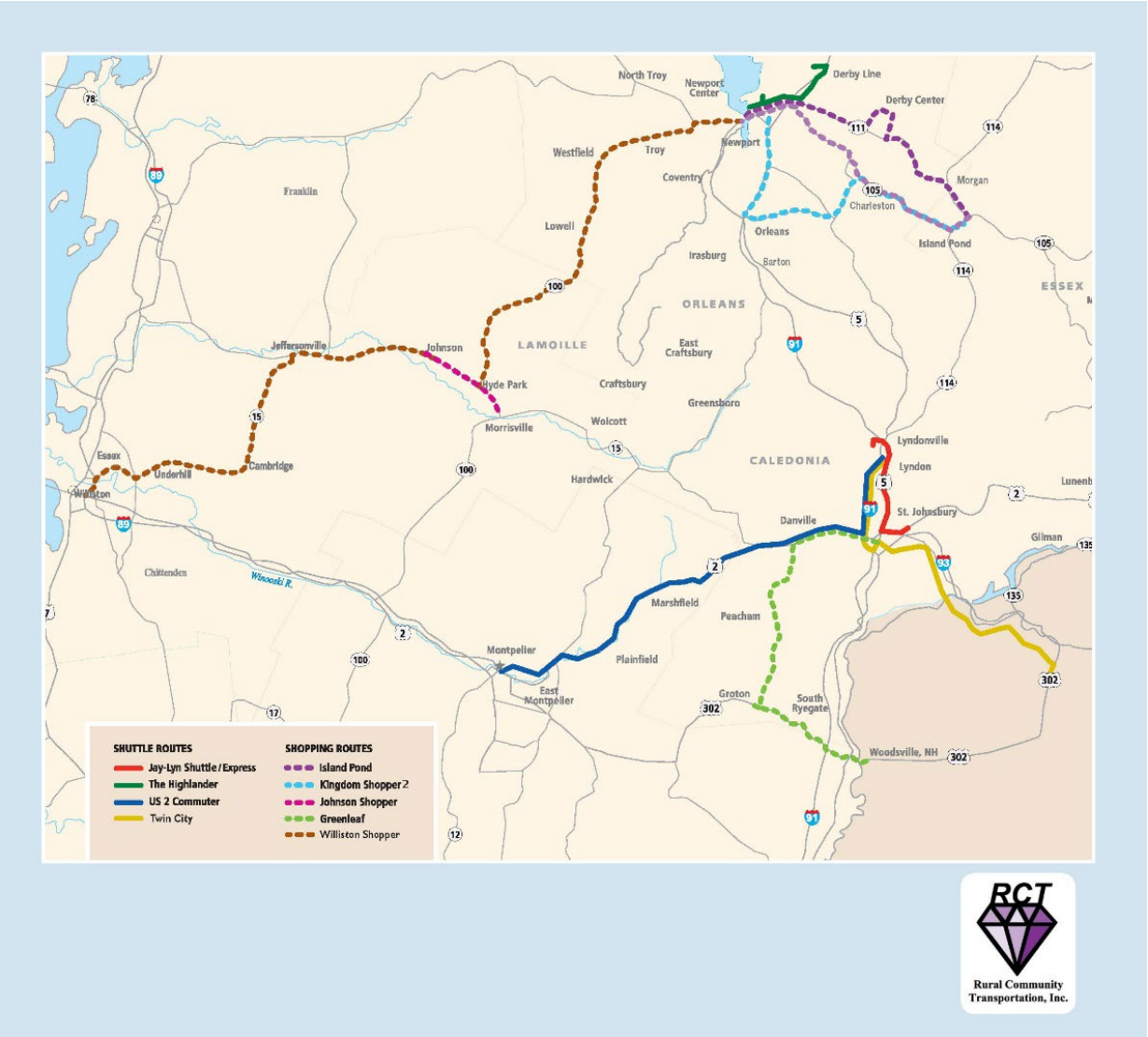
4.4 PEDESTRIAN AND BICYCLE FACILITIES

The entire study corridor has an intermittent sidewalk on the northern side of the street and a consistent sidewalk on the southern side of the street from Railroad Street to Concord Avenue. Parts of the intermittent sidewalk on the northern side of Portland Street consist of a curb-less bituminous sidewalk. There are no existing on or off-road bicycle facilities. Proposed pedestrian and bicycle safety improvements would connect several popular locations, including The White Market, Milkhouse Ice Cream, and St. Johnsbury House of Pizza, to corridor residences and points west, including downtown St. Johnsbury.

4.5 TRANSIT SERVICE

Rural Community Transportation, Inc. provides a bus system that travels on Portland Street. The Saint Johnsbury – Lyndonville (Jay-Lyn) route stops outside the White Market. The nearby Twin City route, which connects Saint Johnsbury to Lyndonville and Littleton, operates through downtown St. Johnsbury along Route 5.

Figure 2: RCT Route Map



4.6 CRASH HISTORY

The crash history for the study area was investigated using the VTrans crash database. VTrans keeps records of reported crashes by milepost along State and Federal Aid highways in Vermont. General Yearly Summaries can be requested from VTrans for given roadway segments. The summaries note the location (mile marker), date, time of day, weather conditions, contributing circumstances, and severity for reported crashes. Stantec reviewed crash data for 2017 through 2021 for Portland Street between Railroad Street and Snell Road. There was one reported crash involving a pedestrian at Cole's Discount Beverage. This location has no defined pedestrian facilities and effectively nonexistent access management. Table 2 provides a summary of the crash data.

Table 2: Crash Summary (2017-2021)

Year	Count
2017	1
2018	2
2019	3
2020	2
2021 (through 12/16/2021)	4
Total	**12**
Type	
Angle	1
Rear-end	5
Head-on	0
Single Vehicle	1
Sideswipe	0
Broadside; No Turns	4
Unknown-other	1
Total	**12**
Severity	
Property Damage	11
Personal Injury	1
Fatality	0
Other	0
Total	**12**
Weather	
Clear	8
Cloudy	2
Rain	0
Snow/Ice	2
Fog	0
Unknown	0
Total	**12**

High Crash Locations

VTrans maintains a listing of High Crash Locations (HCL) within the state. A 0.3-mile highway segment or intersection must have at least five crashes over a 5-year period and the actual crash rate (number of crashes per million vehicles) must exceed a critical crash rate to be classified as an HCL. The critical crash rate is based on the average crash rate for similar highways. The VTrans High Crash Report: Sections and Intersections 2012-2016 does not list any roadway sections or intersections in the project study area as an HCL.

4.7 NATURAL RESOURCES

Stantec used the Vermont Natural Resources Atlas to identify known natural resources within the Project Area and conducted a preliminary review of the natural resources present within the Project Area, summarized here and also presented in Appendix D. The Project Area for this review encompasses Portland Street from Railroad Street east to Snell Road and extends 50 feet north and south from the edge of the roadway. Specifically, as part of this investigation, Stantec identified and characterized wetlands, streams, and river corridors, rare, threatened or endangered (RTE) species, flora/fauna and forest land, and hazardous material sites. Desktop reviews and a brief site investigation were conducted for each feature within the Project Area to assist the assessment.

The Portland Street Project Area includes mixed commercial and residential development with maintained lawns and landscaping adjacent to the existing road in areas. The Passumpsic River flows from north to south near the western end of the Project Area, and the Moose River flows from south to north near the eastern end of the Project Area.

Wetlands and Rivers

According to the Atlas, there are no mapped Vermont Significant Wetland Inventory wetlands or Advisory Layer wetlands in the Project Area. As noted above, the Passumpsic River and Moose River flow through the Project Area, and these have mapped River Corridors.

RTE Species

There are no RTE species mapped within the Project Area. However, all of Vermont is considered critical habitat for the state- and federal-listed northern long-eared bat (*Myotis septentrionalis*). Trees and bridges provide potential habitats for this species. Work proposed for this project may include minimal tree cutting.

Flora/Fauna and Forest Land

No priority habitat areas, habitat blocks, or deer wintering areas are mapped within the Project Area. The small undeveloped portions of the Project Area provide limited habitat for various suburban species but are not considered critical habitat areas. There is no significant forest land present within the narrow project corridor.

Hazardous Material Sites

There are multiple Hazardous Sites mapped adjacent to the Project Area. The project is also located in an Urban Soils Backgrond Area.

5.0 PURPOSE AND NEED STATEMENT

Purpose: The purpose of this project is to create safe, visible, comfortable, convenient, and direct pedestrian and bicycle facilities connecting existing facilities on Portland Street between Railroad Street and Snell Road while maintaining safe and efficient vehicular conditions on Portland Street; support healthy and sustainable lifestyles, and connect the Summerville neighborhood with the designated downtown.

Needs:

1. Provide an inviting travel corridor that reinforces the Town's pedestrian and bicycle mobility goals.
2. Facilitate use by all age groups, experience levels, and trip purposes.
3. Contribute to the Town and regional bicycle and pedestrian network.
4. Create safe, comfortable, user-friendly, desirable year-round bicycle and pedestrian connections along Portland Street.

6.0 ALTERNATIVES

The project team considered a wide range of improvements to address the project's purpose and need. Various combinations of on-road and off-road facilities and sidewalks were discussed. Based on these discussions, the following alternatives were developed and evaluated:

- Alternative 1: No Action
- Alternative 2: Sidewalk Improvements and On-Road Bike Lane
- Alternative 3: Sidepath

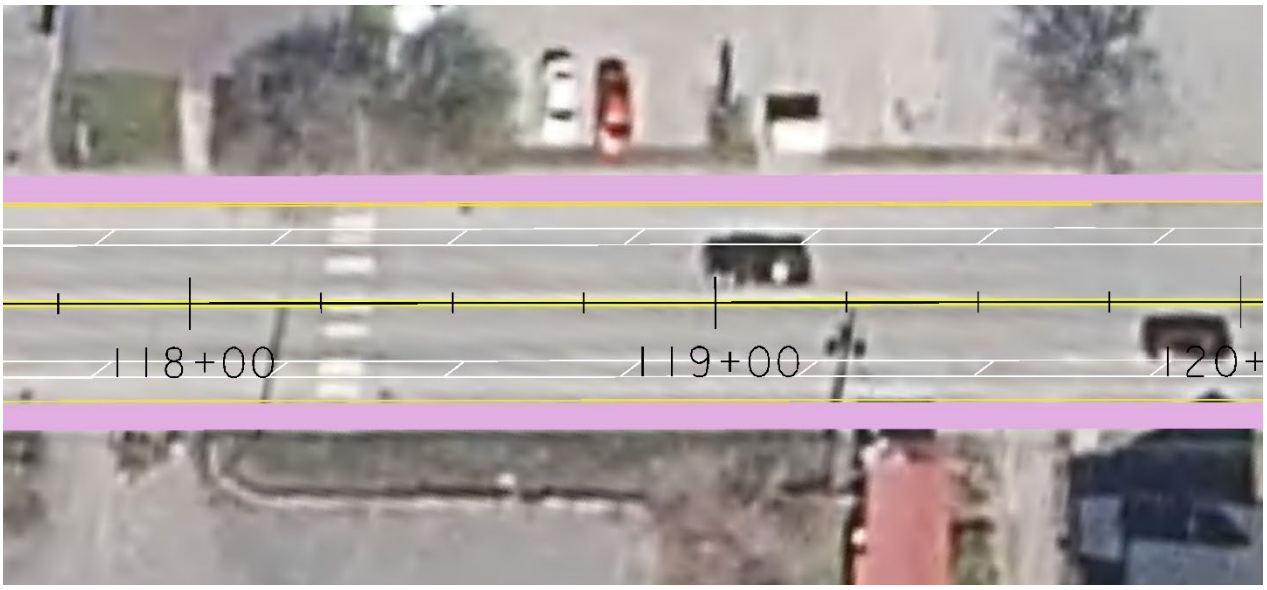
6.1 ALTERNATIVE 1: NO ACTION

For the No Action Alternative, the existing transportation facilities in the project area remain as they exist today. The existing sidewalks will remain in place with no improvements. Bicyclists can share the lane with motor vehicles. The sidewalk on the bridge and the rest of Portland Street will remain without improvements, and there will be no new facilities for bicyclists. This Alternative has no construction costs and has no impacts on the right-of-way, resources, or traffic. The No Action Alternative does not address the project's purpose and need.

6.2 ALTERNATIVE 2: SIDEWALK IMPROVEMENTS AND ON-ROAD BIKE LANE

This alternative proposes improvements to the sidewalks on the north and south sides of Portland Street and the addition of a new sidewalk from Ely Street to Snell Road, as displayed in Figure 3 or Appendix A. There is a proposed on-road bike lane that spans the length of the corridor. Given the existing roadway widths, there is enough space for a buffered bike lane from Weeks Court to State Street and an unbuffered bike lane for the rest of the project heading east. The crosswalk near the House of Pizza and at Caledonia Street provides pedestrians with a connected way to access the designated downtown. This alternative has minimal right-of-way impacts. By providing improved pedestrian facilities and an on-road bike lane, this alternative addresses the purpose and need statement of the project.

Figure 3: Segment of Alternative 2 displaying proposed bike lane and sidewalk development (see Appendix A for complete alternative)



6.3 ALTERNATIVE 3: SIDEPATH

This alternative proposes a 10-foot wide sidepath on the northern side of Portland Street from Weeks Court to Snell Road and sidewalk improvements on the south side of the street, as shown in Figure 4 or Appendix B. The curbed sidepath provides pedestrians and cyclists with a travel way that is removed from the street. This alternative has right-of-way impacts for the entire length of the project. This alternative also directly addresses the purpose and need of the project by connecting the Summerville neighborhood to the downtown with a sidepath that safely accommodates pedestrians and cyclists while maintaining streamlined motor vehicle traffic.

Figure 4: Segment of Alternative 3 displaying the proposed street markings, sidewalk improvements, and sidepath (see Appendix B for complete alternative)

6.4 COMPARISON OF ALTERNATIVES

6.4.1 Alternative Impacts

6.4.1.1 Safety Impacts

Safety for pedestrians and bicyclists is improved in Alternatives 2 and 3 over the No Action Alternative. Alternative 2 provides pedestrians with a continuous curbed sidewalk that extends to Snell Road on the eastern side of the corridor. This alternative also gives cyclists adequate on-road bicycle facilities. Alternative 3 provides both pedestrians and cyclists with a curbed sidepath.

6.4.1.2 Right-of-Way (ROW) Impacts

The No Action Alternative does not have any ROW impacts. Alternative 2 has temporary ROW impacts only on the south side of Portland Street across from Chet & Pat Buck Memorial Park. Any impacts for this alternative would be limited to temporary easements for construction activities only. Alternative 3 poses more significant ROW impacts and would likely require temporary as well as permanent easements along the north side of Portland Street for the entirety of the sidepath. For Alternatives 2 and 3, the Maine Central Railroad Company would need to be involved in any further plan developments.

6.4.1.3 Access Management Impacts

Alternative 1 (No Action) does not provide any access management for the corridor. Alternatives 2 and 3 both provide some level of improvement for access management. More specific access management impacts would be explored during project design.

6.4.1.4 Environmental Resource Impacts

Based on research and a field review, there are no wetlands, floodplains, RTE species, or forest lands in this specific project area. The Northern Long-Eared bat is considered an RTE species State-wide. There are several hazardous waste sites along the corridor and the project is located in an Urban Background Soils Area. See the Natural Resources Memo in Appendix D for more details.

6.4.1.5 Cultural Resource Impacts

The project Area of Potential Effects, including areas directly adjacent to Portland Street has been heavily disturbed through earthmoving and landscaping associated with the construction of roads, bridges, railroad features, sidewalks, paved parking lots, and the installation of utilities. No further archeological investigation is proposed for the project area. More details can be found in Appendix E.

Some tree impacts are possible in Alternatives 2 and 3. One tree by the House of Pizza appears to be in poor health and may need to be removed regardless of project impacts. There are several other small trees along the corridor that construction activities may slightly impact.

6.4.1.6 Utility Impacts

Overhead utilities exist along the south side of U.S. 2 from the beginning of the project approximately to the intersection with Simons Avenue where they shift to the north side of the road before shifting back to the south side near the intersection with Concord Avenue. Alternative 2 would likely not necessitate utility relocations. Alternative 3 would likely require the relocation of the four utility poles located along the north side between Simons and Concord Avenues.

6.4.1.7 Stormwater Impacts

Alternatives 2 and 3 would require updates to existing stormwater systems with possible rim elevation adjustments but would not require redesign as no structures would be added or removed from the system. Under the half-acre rule, any project with new development or redevelopment of more than ½ acre of impervious surface is required to submit general stormwater permits. Both alternatives 2 and 3 would require stormwater permits. This would be a consideration during the design phase.

6.4.1.8 Maintenance Needs

Alternative 2 would require periodic maintenance to the sidewalk, pavement maintenance for the bicycle lane, as well as maintenance to the marking and striping for the bike lane and crosswalks. The state would maintain portions within the State ROW. If waterborne paint is used for markings, annual application is recommended.

Alternative 3 would require periodic pavement maintenance for the 10' shared use path as well as maintenance to the marking and striping for the 10' shared use path, bike lane, crosswalks. The state would maintain portions within the State ROW. If waterborne paint is used for markings, the annual application is recommended.

For Alternatives 2 or 3 to be accessible year-round, they would require the Town to plan for snow removal on the paths as part of their winter plowing operations. A small snowplow on a pickup truck may suffice for path snow removal, but due to the lack of a grass strip between the road and pedestrian alternatives, this must be coordinated with local road plowing services.

6.4.2 Project Costs and Timeline

Table 3 is a summary of the project costs for all alternatives, including preliminary engineering, right of way acquisition, construction, project management, and construction inspection costs. Refer to the appendix for a detailed breakdown of project construction costs.

Table 3: Project Costs

CRITERIA	Alternative 1: No Action	Alternative 2: Sidewalk Improvements	Alternative 3: Sidepath
Project Construction Costs (rounded- construction costs only)	**$0**	**$1,690,000**	**$1,730,000**

6.4.3 Evaluation Matrix

Table 4: Evaluation Matrix

CRITERIA	Alternative 1: No Action	Alternative 2: Sidewalk Improvements	Alternative 3: Sidepath
Total Project Costs	**$0**	**$2,370,000**	**$2,420,000**
Purpose and Need			
Improve pedestrian mobility	**No**	**Yes**	**Yes**
Improve cyclist mobility	**No**	**Yes**	**Yes**
Safe, non-motorized vehicle travel	**No**	**Yes**	**Yes**
Accommodates riders of all ages and abilities	**No**	**No**	**Yes**
Maintain efficient vehicular conditions	**No**	**Yes**	**Yes**
Impacts			
Pedestrian safety	**No Improvement**	**Improved**	**Improved**
Cyclist safety	**No Improvement**	**Improved**	**Improved**
Right-of-way	**None**	**Potential Permanent**	**Permanent**
Environmental	**None**	**None**	**None**
Cultural Resources	**None**	**None**	**None**
Underground Utilities	**None**	**Potential**	**Potential**
Stormwater	**No Change**	**Adjustments to existing systems only**	**Adjustments to existing systems only**
Access Management	**No Improvement**	**Yes**	**Yes**

APPENDIX A

Alternative 2

N

VT STATE PLANE GRID

REPAIR EXISTING SIDEWALK FROM BEGINNING OF PORTLAND ST TO WEEKS CT

0 40 80

SCALE IN FEET

Stantec

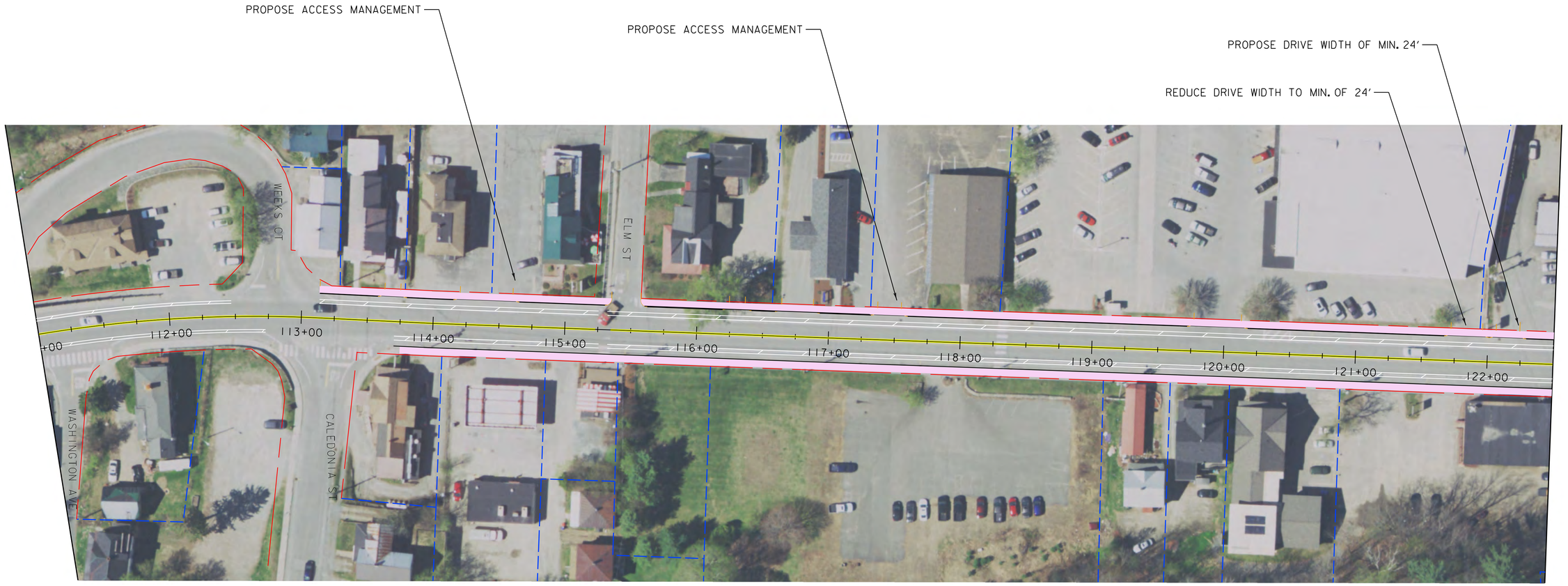
PROJECT NAME: PORTLAND ST SCOPING	
PROJECT NUMBER: 195311761	
FILE NAME: $FILES$	**PLOT DATE:** $$$$DATE$$$
PROJECT LEADER: E. ALLING	**DRAWN BY:** C. WAITE
DESIGNED BY: C. WAITE	**CHECKED BY:** E. ALLING
LAYOUT SHEET 1	**SHEET** $S#$ **OF** $T#$

N

LT STATE PLANE GRID

RECOMMEND REPAIR EXISTING SW ON SOUTH SIDE OF PORTLAND STREET
RECOMMEND COMPLETE REPLACE OF NORTH SW WITH NEW CONCRETE SIDEWALK AND CURB

PROPOSED 5' CONCRETE SIDEWALK, 5' BIKE LANE, 3' PAINTED BUFFER, 10' TRAVEL LANE.



0 40 80
SCALE IN FEET

Stantec

PROJECT NAME:	PORTLAND ST SCOPING
PROJECT NUMBER:	195311761

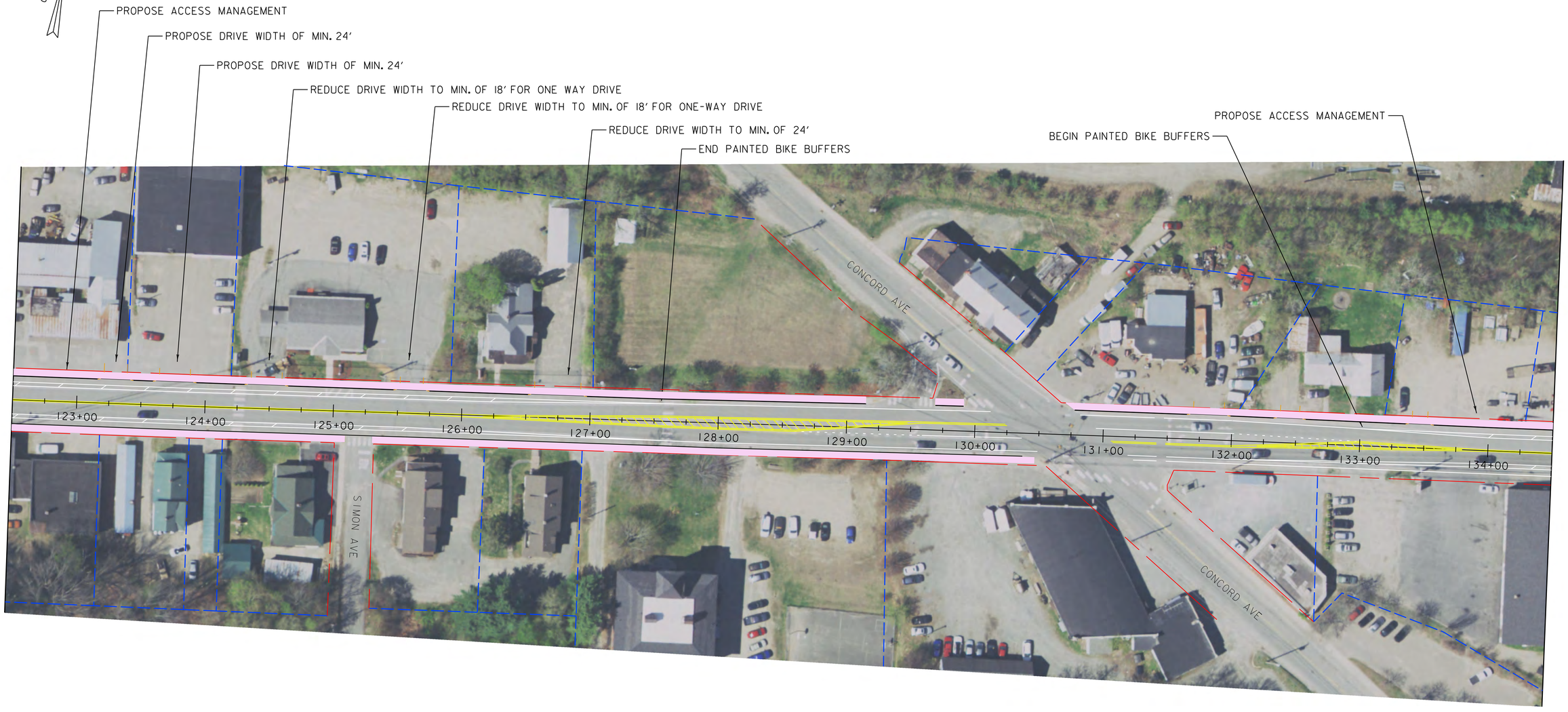
FILE NAME: $FILES$	**PLOT DATE:** $$$$DATE$$$
PROJECT LEADER: E. ALLING	**DRAWN BY:** C. WAITE
DESIGNED BY: C. WAITE	**CHECKED BY:** E. ALLING
LAYOUT SHEET 2	**SHEET** $S#$ **OF** $T#$

N

VT STATE PLANE GRID

RECOMMEND REPAIR EXISTING SIDEWALK ON SOUTH SIDE OF PORTLAND STREET
RECOMEND COMPLETE REPLACEMENT OF NORTH SIDEWALK WITH NEW CONCRETE SIDEWALK AND CURB

PROPOSED 5' CONCRETE SIDEWALK, 5' BIKE LANE, 3' PAINTED BUFFER, 10' TRAVEL LANE.
REDUCE BIKE LANE TO MIN. OF 3' WITHOUT BUFFER THROUGH INTERSECTION.



0 40 80
SCALE IN FEET

Stantec

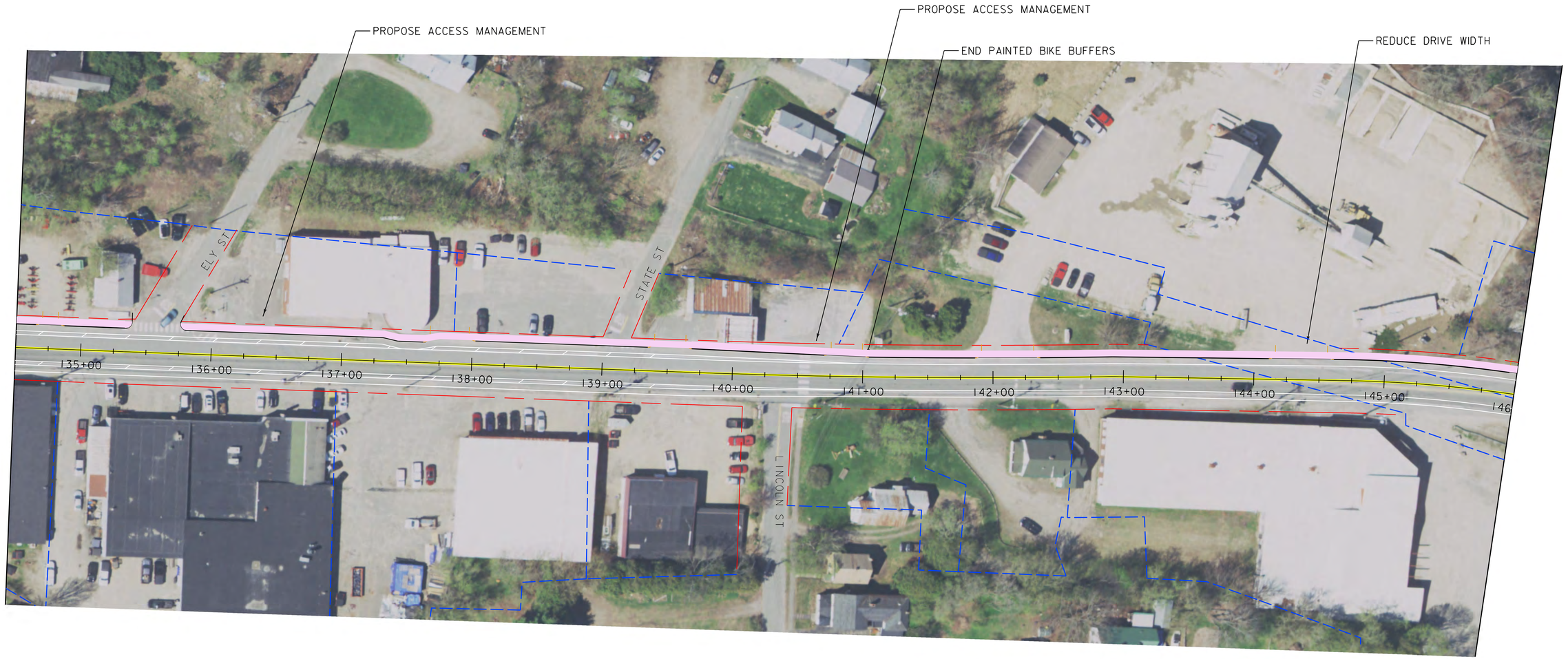
PROJECT NAME:	PORTLAND ST SCOPING
PROJECT NUMBER:	195311761
FILE NAME: $FILES$	**PLOT DATE:** $$$$DATE$$$
PROJECT LEADER: E. ALLING	**DRAWN BY:** C. WAITE
DESIGNED BY: C. WAITE	**CHECKED BY:** E. ALLING
LAYOUT SHEET 3	**SHEET** $S#$ **OF** $T#$

N

VT STATE PLANE GRID

RECOMMEND REPAIR EXISTING SIDEWALK ON SOUTH SIDE OF PORTLAND STREET
RECOMEND COMPLETE REPLACEMENT OF NORTH SIDEWALK WITH NEW CONCRETE SIDEWALK AND CURB

PROPOSED 5' CONCRETE SIDEWALK (NORTH SIDE ONLY AFTER INTERSECTION), 5' BIKE LANE (3' MINIMUM), 10' TRAVEL LANE.



0 40 80
SCALE IN FEET

Stantec

PROJECT NAME:	PORTLAND ST SCOPING
PROJECT NUMBER:	195311761

FILE NAME: $FILES$	**PLOT DATE:** $$$$DATE$$$
PROJECT LEADER: E. ALLING	**DRAWN BY:** C. WAITE
DESIGNED BY: C. WAITE	**CHECKED BY:** E. ALLING
LAYOUT SHEET 4	**SHEET** $S"$ **OF** $T"$

N

VT STATE PLANE GRID

RECOMEND COMPLETE REPLACEMENT OF NORTH SIDEWALK WITH NEW CONCRETE SIDEWALK AND CURB

PROPOSED 10' TRAVEL LANES, 5' BIKE LANES, NEW 5' CONCRETE SIDEWALK AND CURB ON NORTH SIDE

0 40 80

SCALE IN FEET

Stantec

PROJECT NAME:	PORTLAND ST SCOPING
PROJECT NUMBER:	195311761
FILE NAME: $FILES$	**PLOT DATE:** $$$$DATE$$$
PROJECT LEADER: E. ALLING	**DRAWN BY:** C. WAITE
DESIGNED BY: C. WAITE	**CHECKED BY:** E. ALLING
LAYOUT SHEET 5	**SHEET** $S#$ **OF** $T#$

APPENDIX B

Alternative 3

N

VT STATE PLANE GRID

REPAIR EXISTING SIDEWALK FROM BEGINNING OF PORTLAND ST TO WEEKS CT

0 40 80

SCALE IN FEET

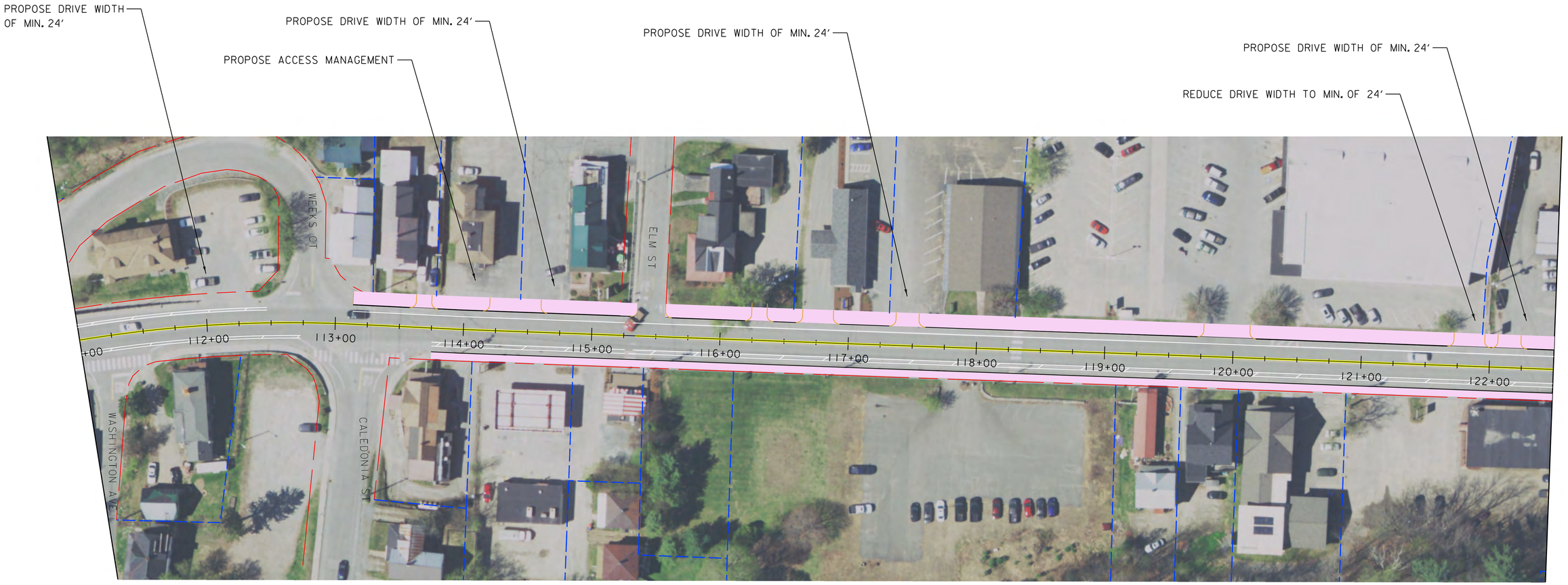
Stantec

PROJECT NAME: PORTLAND ST SCOPING	
PROJECT NUMBER: 195311761	
FILE NAME: $FILES$	**PLOT DATE:** $$$$DATE$$$
PROJECT LEADER: E. ALLING	**DRAWN BY:** C. WAITE
DESIGNED BY: C. WAITE	**CHECKED BY:** E. ALLING
LAYOUT SHEET 1	**SHEET** $S#$ **OF** $T#$

N

VT STATE PLANE GRID

RECOMMEND REPAIR EXISTING SW ON SOUTH SIDE OF PORTLAND STREET



0 40 80

SCALE IN FEET

Stantec

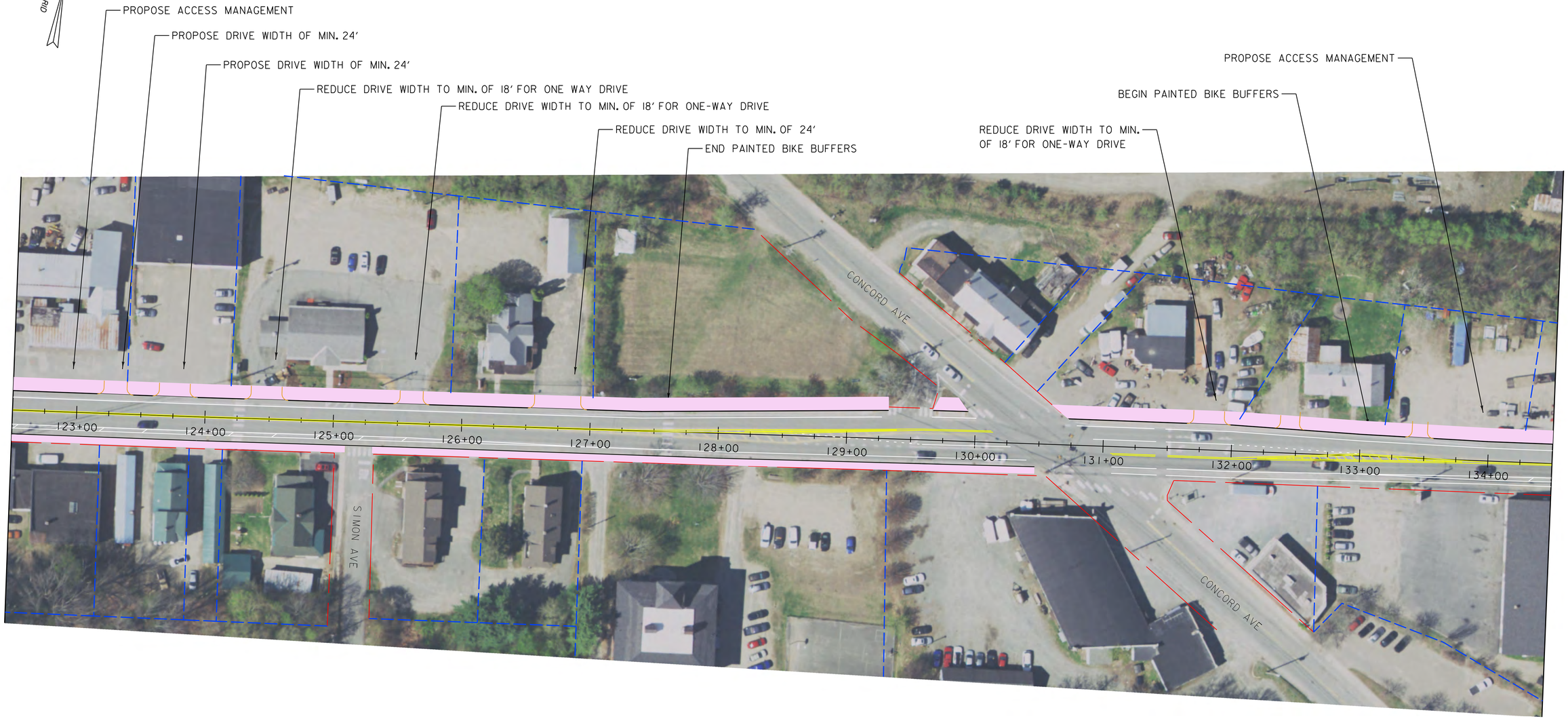
PROJECT NAME:	PORTLAND ST SCOPING
PROJECT NUMBER:	195311761

FILE NAME: $FILES$	**PLOT DATE:** $$$$DATE$$$
PROJECT LEADER: E. ALLING	**DRAWN BY:** C. WAITE
DESIGNED BY: C. WAITE	**CHECKED BY:** E. ALLING
LAYOUT SHEET 2	**SHEET** $S#$ **OF** $T#$

RECOMMEND REPAIR EXISTING SW ON SOUTH SIDE OF PORTLAND STREET

N

VT STATE PLANE GRID



0 40 80

SCALE IN FEET

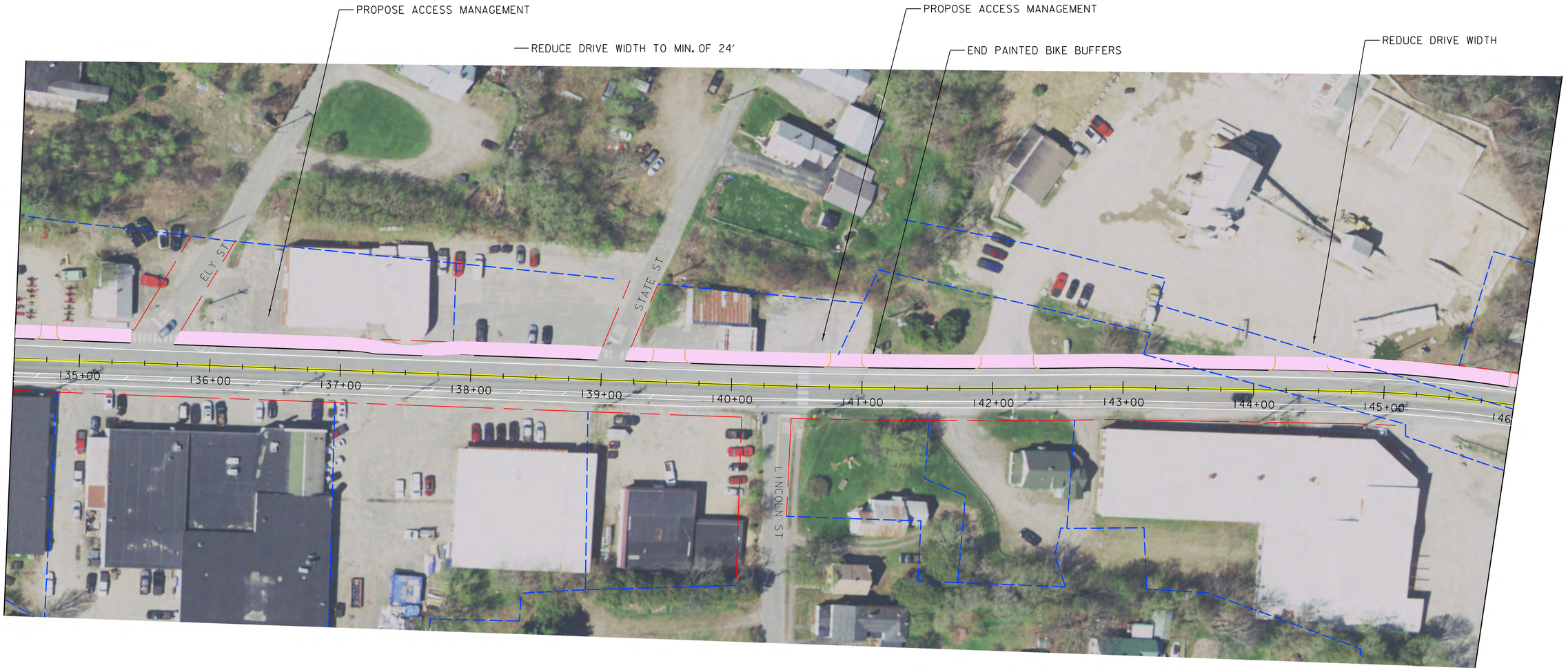
Stantec

PROJECT NAME:	PORTLAND ST SCOPING
PROJECT NUMBER:	195311761
FILE NAME: $FILES$	**PLOT DATE:** $$$$DATE$$$
PROJECT LEADER: E. ALLING	**DRAWN BY:** C. WAITE
DESIGNED BY: C. WAITE	**CHECKED BY:** E. ALLING
LAYOUT SHEET 3	**SHEET** $S#$ **OF** $T#$

N

VT STATE PLANE GRID

RECOMMEND REPAIR EXISTING SW ON SOUTH SIDE OF PORTLAND STREET



0 40 80

SCALE IN FEET

Stantec

PROJECT NAME:	PORTLAND ST SCOPING
PROJECT NUMBER:	195311761
FILE NAME: $FILES$	**PLOT DATE:** $$$$DATE$$$
PROJECT LEADER: E. ALLING	**DRAWN BY:** C. WAITE
DESIGNED BY: C. WAITE	**CHECKED BY:** E. ALLING
LAYOUT SHEET 4	**SHEET** $S"$ **OF** $T"$

N

VT STATE PLANE GRID

RECOMEND COMPLETE REPLACEMENT OF NORTH SIDEWALK WITH 10' SHARED USE PATH

REDUCE DRIVE WIDTH

REDUCE DRIVE WIDTH

REDUCE DRIVE WIDTH

0 40 80

SCALE IN FEET

Stantec

PROJECT NAME:	PORTLAND ST SCOPING
PROJECT NUMBER:	195311761
FILE NAME: $FILES$	**PLOT DATE:** $$$$DATE$$$
PROJECT LEADER: E. ALLING	**DRAWN BY:** C. WAITE
DESIGNED BY: C. WAITE	**CHECKED BY:** E. ALLING
LAYOUT SHEET 5	**SHEET** $S#$ **OF** $T#$

APPENDIX C

Town Zoning Map

N

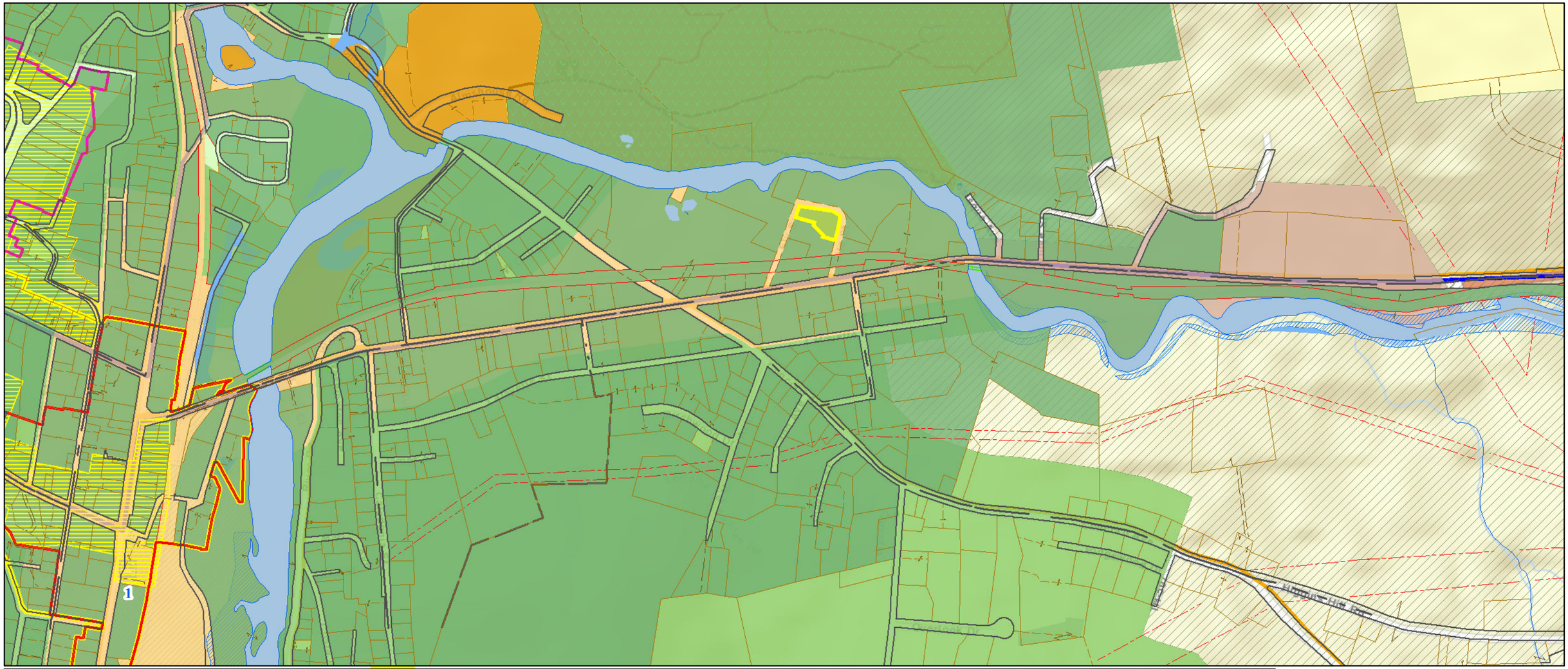
St Johnsbury, VT

1 inch = 538 Feet

0 538 1076 1614

CAI Technologies
Precision Mapping. Geospatial Solutions.

August 9, 2020



Block
Bridge
CommonNotPar
Dashed Road
Property Hook
Property TIC
Right of Way
RoadNotPar
Utility
WaterLines
WaterPolys
Proposed TIF District Boundary
Designated Downtown Boundary
Design Control District
Downtown Historic Overlay Districts
SpecialServices
Town Forest Parcels
100 Year
500 Year
Conservation District
Commercial District
Mixed Use District
Residential A
Residential B
Residential Town
Rural Lands One
Bus Stops
Bus Route
Town Forest Picnic Area
BLUE TRAIL
GREEN TRAIL
LOGGING ROAD
POND
RED TRAIL
YELLOW TRAIL
Riverfront Corridor
Bike Trail
CULTURAL
EDUCATION
RECREATION
TOWN

APPENDIX D

Natural Resources Memo

Stantec

Memo

To:	Erik Alling, Stantec South Burlington VT Office	From:	Polly Harris, Stantec South Burlington VT Office
File:	195311761	Date:	July 16, 2020

Reference: Natural Resource Review for St. Johnsbury Portland Street Bicycle and Pedestrian Scoping Study

ST. JOHNSBURY PORTLAND STREET BICYCLE AND PEDESTRIAN SCOPING STUDY

The City of St. Johnsbury is studying improvements to bicycle and pedestrian facilities along Portland Street. The project area extends along Portland Street in St. Johnsbury from the intersection with Railroad Street at the westerly end to Snell Road at the easterly end. This segment of roadway represents a gateway corridor from points east to St. Johnsbury's downtown. The purpose of this project is to improve pedestrian and bicycle facilities on Portland Street between Railroad Street and Snell Road. The currently proposed alternatives to be constructed within the existing road and sidewalk footprint include:

- a new 5-foot curbed sidewalk on the north side of Portland Street with designated buffered bike lanes, or
- a new 10-foot wide shared use path on the north side of Portland Street with an on-road bike lane on the north side and a buffered bike lane on the south side.

Both alternatives include repairs to the existing degraded sidewalk on the south side of Portland Street.

Stantec conducted a preliminary review of the natural resources present within the Project Area in St. Johnsbury, Vermont. For the purposes of this review, the Project Area along Portland Street extends Railroad Street east to Snell Road, and extends 50 feet north and south from the edge of road. Specifically, as part of this investigation, Stantec identified and characterized wetlands, streams and river corridors, rare, threatened, or endangered (RTE) species, flora/fauna and forest land, and hazardous material sites.

Desktop reviews were conducted for each of these features within the Project Area. Following is a summary of the findings based on a review of existing resource information and the field visit.

GENERAL SITE DESCRIPTION

The Portland Street Project Area includes mixed commercial and residential development with maintained lawns and landscaping adjacent to the existing road in areas (see Appendix A: Representative Photographs). The Passumpsic River flows from north to south near the western end of the Project Area, and the Moose River flows from south to north near the eastern end of the Project Area.

NATURAL RESOURCE REVIEW SUMMARY

Desktop Survey Results

Stantec used the Vermont Natural Resources Atlas[1] to identify known natural resources within the Project Area (see Appendix B: Figures – ANR Maps).

[1] https://anrmaps.vermont.gov/websites/anra5/

Reference: **Natural Resource Review for St. Johnsbury Portland Street Bicycle and Pedestrian Scoping Study**

Wetlands and Streams. According to the Atlas, there are no mapped Vermont Significant Wetland Inventory wetlands or Advisory Layer wetlands in the Project Area. As noted above, the Passumpsic River and Moose River flow through the Project Area, and these have mapped River Corridors.

RTE Species. There are no RTE species mapped within the Project Area. However, all of Vermont is considered critical habitat for the state- and federal listed northern long-eared bat (*Myotis septentrionalis*). Trees and bridges provide potential habitat for this species. Work proposed for this project may include minimal tree cutting.

Flora/Fauna and Forest Lands. No priority habitat areas, habitat blocks, or deer wintering areas are mapped within the Project Area. The small undeveloped portions of the Project Area provide limited habitat for various suburban species but are not considered critical habitat areas. There is no significant forest land present within the narrow project corridor.

Hazardous Material Sites. There are multiple Hazardous Sites mapped adjacent to the Project Area. Urban Soils are also mapped within the length of the Project Area.

SUMMARY AND ATTACHMENTS

In summary, based on the desktop review, the Passumpsic and Moose Rivers are present within the Project Area. These rivers have mapped River Corridors. The area also includes potential RTE bat habitat. Finally, there are numerous Hazardous Sites and Urban Soils mapped within the Project Area.

Please refer to attached ANR maps for the mapped resources in the Project Area.

Stantec Consulting Services Inc.
Polly Harris
Project Manager

Phone: 802 497 6407
Polly.Harris@stantec.com

Appendices: Appendix A: Representative Photographs
Appendix B: Figures

Reference: **Natural Resource Review for St. Johnsbury Portland Street Bicycle and Pedestrian Scoping Study**

Appendix A: Representative Photographs

Photo 1. View of Portland Street with existing sidewalk and adjacent development. Stantec, 09/23/19.

Photo 2. View of Portland Street with adjacent development and limited natural habitat. Stantec, 09/23/19.

Reference: **Natural Resource Review for St. Johnsbury Portland Street Bicycle and Pedestrian Scoping Study**

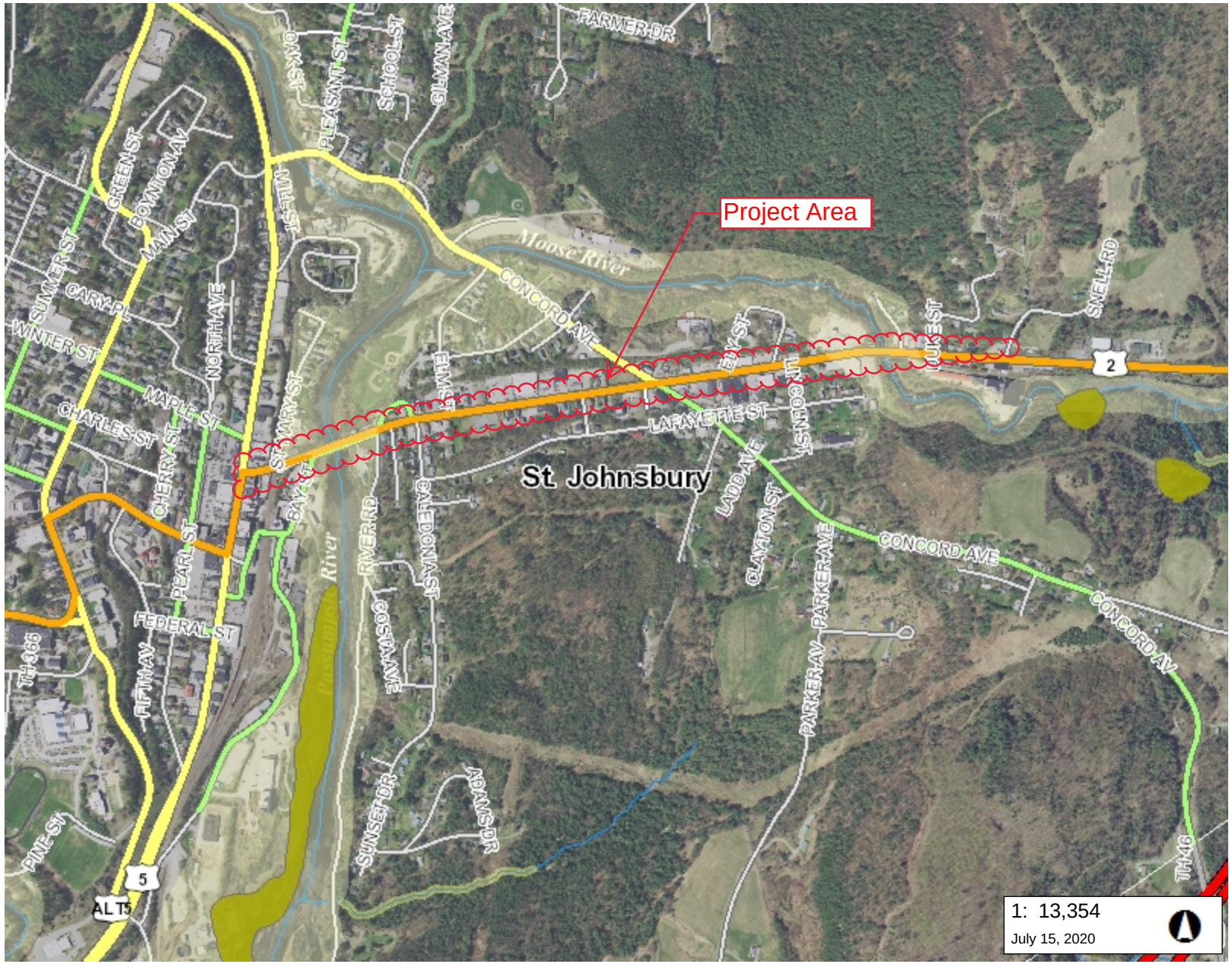
Appendix B: Figures

VERMONT

St Johnsbury Portland St **Path** - ANR Wetlands/ Streams/RTE

Vermont Agency of Natural Resources

vermont.gov



LEGEND

- Rare Threatened Endangered
  - Threatened or Endangered
  - Rare
- Significant Natural Community
- Wetland - VSWI
  - Class 1 Wetland
  - Class 2 Wetland
  - Buffer
- Wetlands Advisory Layer
- River Corridors (Aug 27, 2019)
  - .5 - 2 sqmi.
  - .25-.5 sqmi.
- Parcels (non-standardized)
- Roads
  - Interstate
  - Principal Arterial
  - Minor Arterial
  - Major Collector
  - Minor Collector
  - Local
  - Not part of function Classification S
- Stream/River
- Town Boundary

NOTES

Map created using ANR's Natural Resources Atlas

678.0 0 339.00 678.0 Meters

WGS_1984_Web_Mercator_Auxiliary_Sphere 1" = 1113 Ft. 1cm = 134 Meters

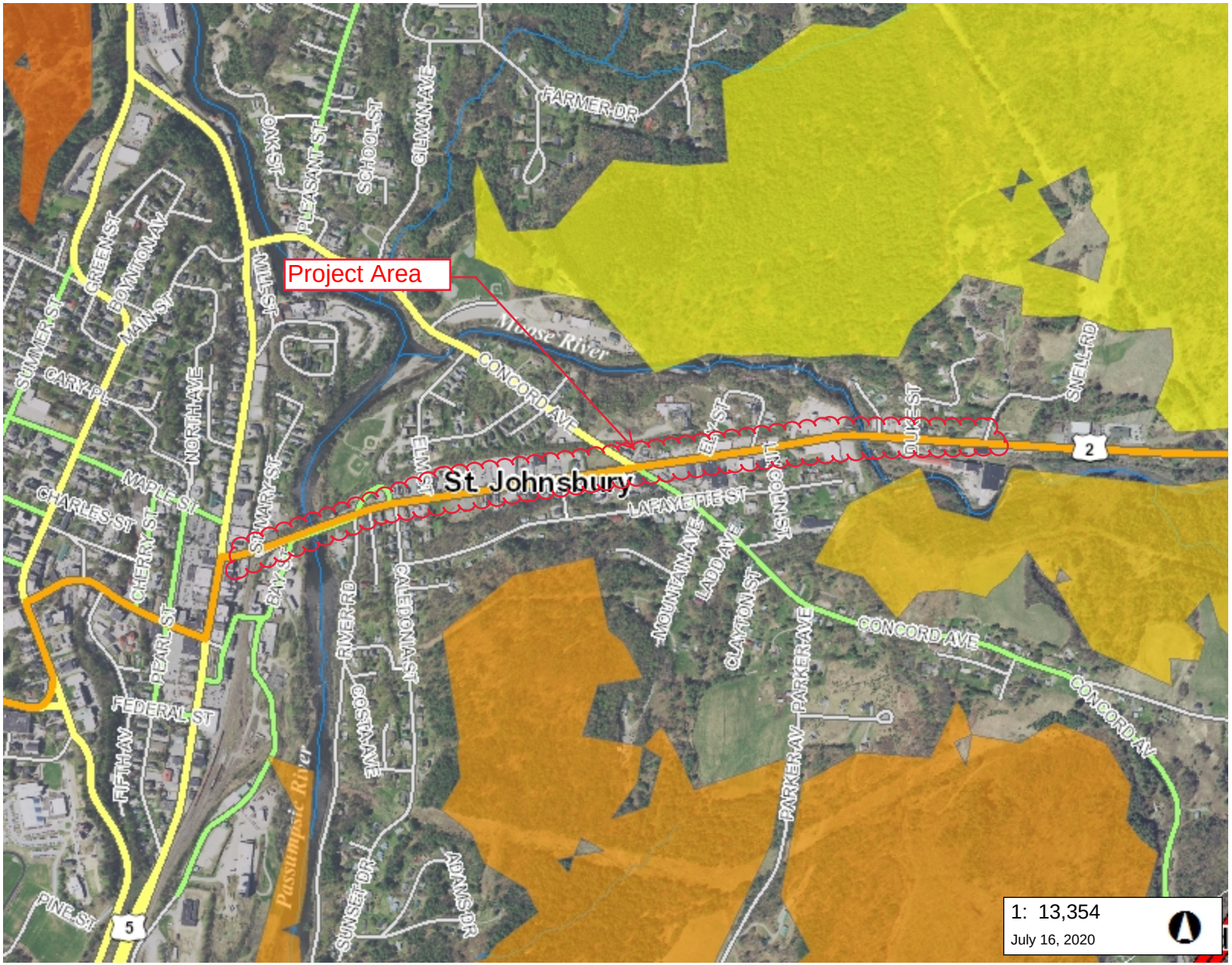
THIS MAP IS NOT TO BE USED FOR NAVIGATION

VERMONT

St Johnsbury Portland St Path - ANR Habitat Blocks

Vermont Agency of Natural Resources

vermont.gov



LEGEND

- Deer Wintering Areas
- Habitat Blocks
  - 10 - Higher Priority
  - 9
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1 - Lower Priority
  - 0
- Parcels (non-standardized)
- Roads
  - Interstate
  - Principal Arterial
  - Minor Arterial
  - Major Collector
  - Minor Collector
  - Local
  - Not part of function Classification S
- Stream/River
- Town Boundary

NOTES

Map created using ANR's Natural Resources Atlas

678.0 0 339.00 678.0 Meters

WGS_1984_Web_Mercator_Auxiliary_Sphere 1" = 1113 Ft. 1cm = 134 Meters

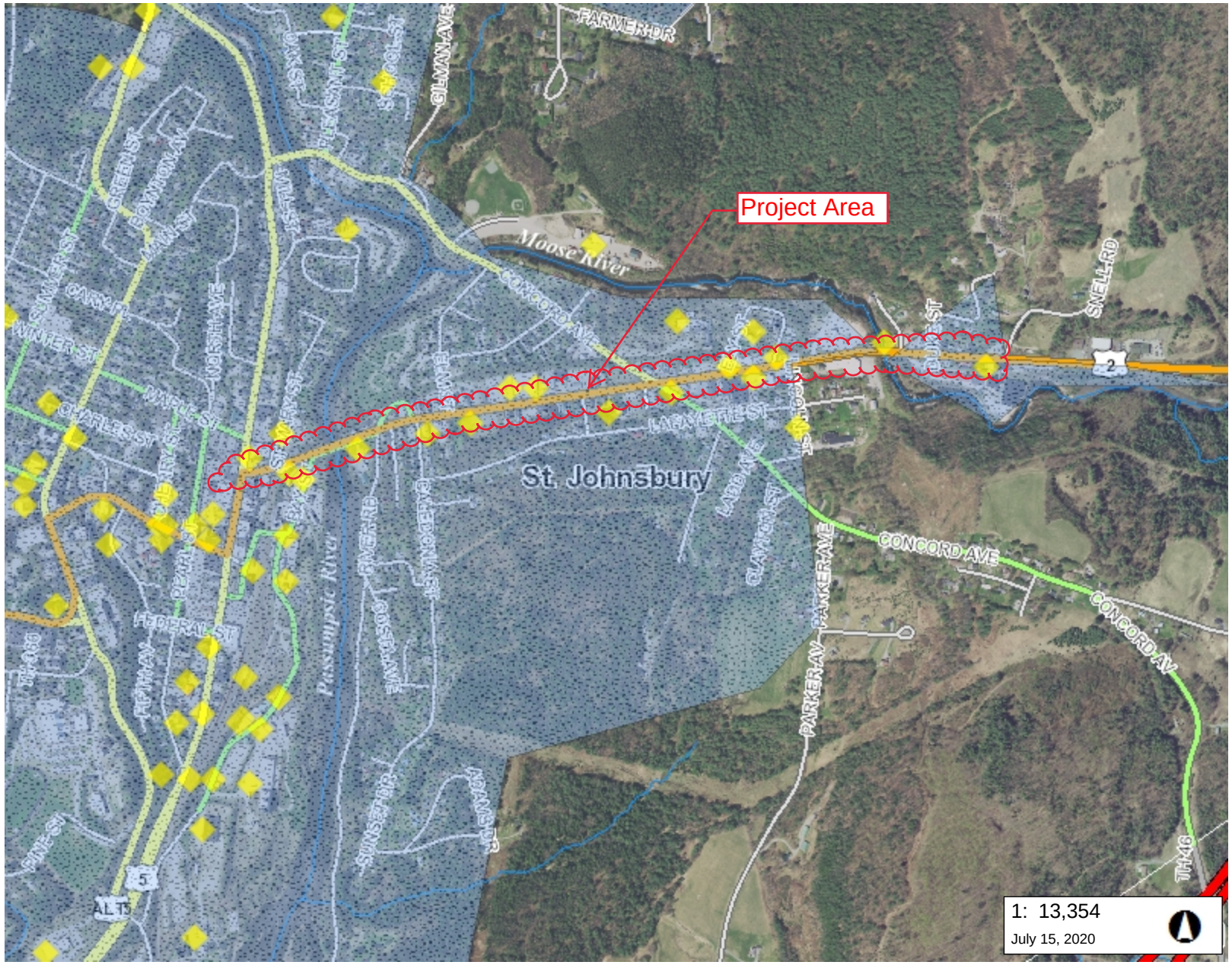
THIS MAP IS NOT TO BE USED FOR NAVIGATION

VERMONT

St Johnsbury Portland St **Path** - ANR Hazardous Sites & Urban Soils

Vermont Agency of Natural Resources

vermont.gov



LEGEND

- Rare Threatened Endangered
  - Threatened or Endangered
  - Rare
- Significant Natural Community
- Hazardous Site
- Urban Soil Background Areas
- Parcels (non-standardized)
- Roads
  - Interstate
  - Principal Arterial
  - Minor Arterial
  - Major Collector
  - Minor Collector
  - Local
  - Not part of function Classification S
- Stream/River
- Town Boundary

NOTES

Map created using ANR's Natural Resources Atlas

678.0 0 339.00 678.0 Meters

WGS_1984_Web_Mercator_Auxiliary_Sphere 1" = 1113 Ft. 1cm = 134 Meters

THIS MAP IS NOT TO BE USED FOR NAVIGATION

APPENDIX E

Cultural Resource

HARTGEN
archeological associates inc

ARCHEOLOGICAL RESOURCE ASSESSMENT

Portland Street Bicycle and Pedestrian Scoping Study

Town of St. Johnsbury
Caledonia County, Vermont

HAA # 5553.11

Submitted to:

Greg Edwards, PE, ENF SP
Senior Principal
Stantec
Phone: 802-497-6398
Cell: 603-289-0025
E: greg.edwards@stantec.com

Prepared by:

Hartgen Archeological Associates, Inc.
PO Box 81
Putney, Vermont 05346
p +1 802 387 6020
f +1 802 387 8524
e emanning@hartgen.com

www.hartgen.com

An ACRA Member Firm
www.acra-crm.org

March 2021

MANAGEMENT SUMMARY

Involved State and Federal Agencies: Vermont Agency of Transportation (VTrans)
Phase of Survey: Archeological Resource Assessment

LOCATION INFORMATION

Location: Portland Street from its Intersection with Railroad Street to Maple Grove Farms
Town: Town of St. Johnsbury
County: Caledonia County, Vermont

PROJECT COMPONENTS

Area of APE: Approximately one mile in length

7.5 Minute Quadrangle Map: 1988 St. Johnsbury

RESULTS OF RESEARCH

Precontact Archeological sites within one mile: Four
Historic Archeological sites within one mile: Five
NR/NRE sites in or adjacent: Two
VDHP inventoried structures in or adjacent: 25
Precontact Sensitivity: Low due to previous disturbance
Historic Sensitivity: Low

RECOMMENDATIONS

The project Area of Potential Effects (APE), including areas directly adjacent to Portland Street have been heavily disturbed through earthmoving and landscaping associated with the construction of roads, bridges, railroad features, sidewalks, paved parking lots and the installation of utilities. No further archeological investigation is proposed for the project area.

Report Authors: Elise Manning-Sterling, MA
Date of Report: March 2021

ARCHEOLOGICAL RESOURCE ASSESSMENT

Introduction

Hartgen Archeological Associates, Inc. (Hartgen) was retained by the Stantec to conduct an Archeological Resource Assessment for the proposed **Error! Reference source not found.** located in the **Error! Reference source not found.** (Map 1). The cultural resources investigation is required according to Section 106 of the National Historic Preservation Act. The project requires approvals by the Vermont Agency of Transportation (VTrans). The report will be reviewed by the VTrans archeology and historic preservation officers.

The Town of St Johnsbury has received funding through the VTrans Bicycle and Pedestrian Program to plan for and identify issues with construction of a sidewalk/bicycle facility on Portland Street. The proposed project consists of the evaluation of existing conditions, needs and alternatives for pedestrian and bicycle travel along both sides of Portland Street, beginning at the intersection of Railroad Street continuing east over the Portland Street Bridge and continuing through the Summerville Neighborhood to the end of the Town maintained sections of Portland Street (US Route 2) near Maple Grove Farms, an approximate length of one mile (Map 2).

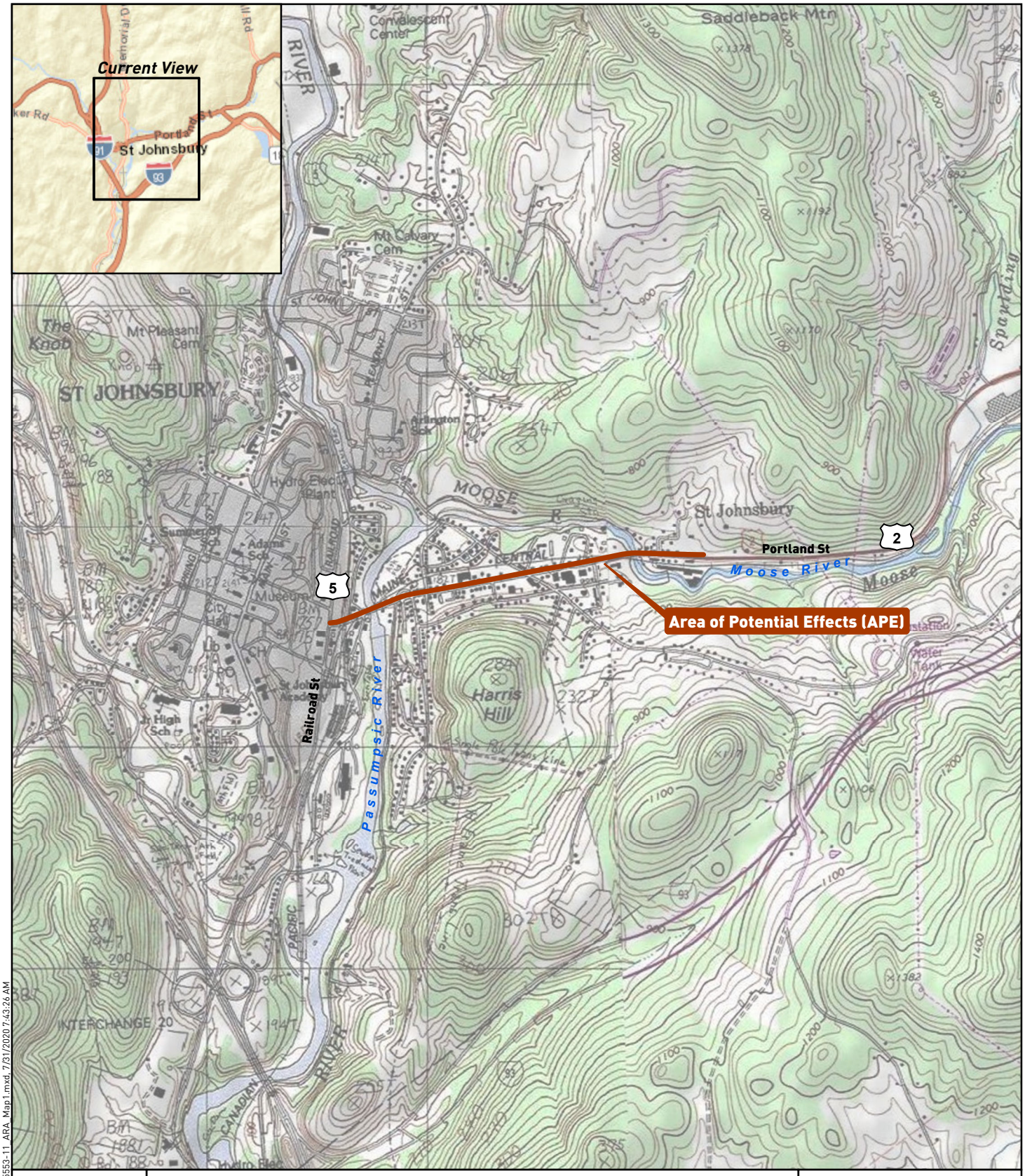
Environmental Background

The environment of an area is significant for determining the sensitivity of the project area for archeological resources. Precontact and historic groups often favored level, well-drained areas near wetlands and waterways. Therefore, topography, proximity to wetlands, and soils are examined to determine if there are landforms in the project area that are more likely to contain archeological resources. In addition, bedrock formations may contain chert or other resources that may have been quarried by precontact groups. Soil conditions can provide a clue to past climatic conditions, as well as changes in local hydrology.

The project area is located within the Vermont Piedmont physiographic region, located at an elevation of 600 feet above means sea level, on a predominantly level terrace situated within the Passumpsic and Moose River valleys. The Passumpsic River, flowing north to south, is located near the western end of the project alignment. The Moose River, flowing west to east, is located to the north, and crosses the project alignment near its eastern end. The confluence of the Passumpsic River and Moose River is located approximately 1,000 feet north of the central portion of the project area. To the north and south of the project area are steep sided rounded hill tops which reach to heights over 1,000 feet amsl, including Saddleback Mountain to the north, The Knob to the northwest and Harris Hill to the south.

The project area is characterized as mixed commercial and residential along Portland Street, a primary east-west thoroughfare, connecting St. Johnsbury with towns in the Northeast Kingdom and northern New Hampshire. Both sides of Portland Street contain a large amount of developed land, primarily with the presence of structures with associated parking areas, driveways and sidewalks, as well as utilities. Within the project area, there are several road intersections, two bridges and railroad tracks and features.

On the west, the project alignment begins at the T-intersection of Railroad Street and Portland Street, a corner that contains 19th century commercial structures (Photo 1). Directly to the east is the substantial bridge spanning the Passumpsic River. The bridge, arched high above the river, spans over several paved town roads lined with houses and businesses, as well as railroad features (Photo 2). All the land at the four corners of the bridge have been developed through historic and modern development. The western end of Portland Street contains 19th and 20th century houses, many of which have been altered to accommodate small businesses (Photo 3). The eastern end of Portland Street, on the west side of the Moose River, is characterized as commercial with 20th-century buildings (Photo 4). The land adjacent to the four corners of



1,000 0 1,000 2,000 Feet

300 0 300 600 Meters

Note: Contour interval is 20 feet.

Project Location

GIS Services Accessed 7/31/2020: Environmental Systems Research Institute, Inc., World Street Map; USGS The National Map

HARTGEN archeological associates inc

Map 1

E:\5553\GIS\Documents\HAA_5553-11_ARA_Map1.mxd, 7/31/2020 7:43:26 AM

N

100 0 100 200 Feet

30 0 30 60 Meters

Legend

Area of Potential Effects (APE)

Project Map

Environmental Systems Research Institute, Inc.,
World Imagery Accessed 7/29/2020

HARTGEN archeological associates inc

Map 2a

E:\5553\GIS\Documents\HAA_5553_11_ARA_Map2a.mxd, 7/29/2020 8:12:03 AM

N

100 0 100 200 Feet

30 0 30 60 Meters

Legend

Area of Potential Effects (APE)

Project Map

Environmental Systems Research Institute, Inc.,
World Imagery Accessed 7/29/2020

HARTGEN archeological associates inc

Map 2b

E:\5553\GIS\Documents\HAA_5553_11_ARA_Map2b.mxd, 7/29/2020 8:12:22 AM

Photo 1. Photo shows the southeast corner at the intersection of Railroad Street and Portland Street. View is to the southeast.

Photo 2. Photo shows the east end of the bridge spanning the Passumpsic River. Note the structures are below the level of the bridge. View is to the east.

Photo 3. Photo shows residences and houses converted to small businesses. View is to the southeast.

Photo 4. Photo shows larger businesses at the eastern end of Portland Street. View is to the west.

the bridge over the Moose River have been heavily impacted by modern road and bridge construction and historic development, including the presence of 20th-century structures and a concrete plant located west of the river (Photos 5-8). There are a number of 19th- and 20th-century homes on the east side of the Moose River, and the Maple Grove Farms mill complex at the end of the project alignment (Photo 9).

Photo 5. Photo shows the southwest corner at the bridge over the Moose River. View is to the northeast toward structures located on the northeast quadrant of the bridge.

Soils

Soil surveys provide a general characterization of the types and depths of soils that are found in an area. This information is an important factor in determining the appropriate methodology if and when a field study is recommended. The soil type also informs the degree of artifact visibility and likely recovery rates. For example, artifacts are more visible and more easily recovered in sand than in stiff glacial clay, which will not pass through a screen easily.

The soils in the project area are designated as Urban land – Adams Nicholville Complex 0-8% slopes (USDA 2021). The soils within the Adams Nicholville Complex are found at the foot slope of lake terrace landforms and are characterized as somewhat excessively drained loam fine sand over sand subsoil. Urban Land is defined as land mostly covered by streets, parking lots, buildings and other structures characteristic of urban areas, with the original soils potentially altered or removed. (USDA 2021).

Photo 6. Photo shows a structure located on the northwest corner of the bridge spanning the Moose River. View is to the northeast.

Photo 7. Photo shows the paved parking lot on the southeast corner of the bridge over the Moose River. View is to the west.

Photo 8. Photo shows the concrete mixing facility located west of the bridge over the Moose River. View is to the north.

Photo 9. Photo shows the westernmost building at the Maple Grove mill complex. View is to the east.

Bedrock Geology

The bedrock geology of the project vicinity consists of Waits River formation that is characterized as "gray quartzose and micaceious crystalline limestone interbedded with gray quartz-muscovite phyllite or schist" and the Gile Mountain formation consisting of "gray quartz-muscovite phyllite or schist and gray micacious quartzite, calcareous mica schist and quartzose and micaceous crystalline limestone" (Doll et al. 1961). This material is not likely to have been sought after by Native American groups for stone tools.

HISTORIC DOCUMENTARY RESEARCH

Historic Archeological Sites and Cemeteries

The study of the VDHP site files revealed that there are several historic archeological sites located within one mile of the project area. No historic archaeological sites are located within or directly adjacent to the project area. The historic archeological sites in the general project vicinity include:

VT-CA-20 – Arnold Forge, a circa 1828 Iron works and blast furnace with a domestic complex known as "Paddock Village", located at Arnold's Falls. Located in St. Johnsbury on the west side of the Passumpsic River.

VT-CA-31 – A stone retaining wall located approximately one mile northwest of the APE.

VT-CA-32 – Industrial ruins dating from 1850-1950, which were located at Arnold's Falls. A Phase IA archaeological survey was conducted here in 1990 by Louis Berger and Associates, Inc. Located in St. Johnsbury on the west side of the Passumpsic River.

VT-CA-33 – Gage Impoundment - a historic standing structure and industrial ruins dating to 1850-1950. A Phase IA archaeological survey was conducted here in 1990 by Louis Berger and Associates, Inc.

VT-CA-40 – Grave excavations at a historic house in St. Johnsbury.

There are no known cemeteries located within the project area (Hyde and Hyde 1991).

State Register and National Register Sites

A search of the VDHP online resource files revealed that St. Johnsbury has over 500 structures and at least four districts that are listed on the Vermont Sites and Structures Survey (VSSS). There are at least 25 structures located on Portland Street that are listed on the VSSS. The most prominent structure is the c. 1900 Summerville School, also known as the Portland Street School (Photo 10). This school, designed by the firm of St. Johnsbury's most prominent architect, Lambert Packard, is considered to be a "significant unaltered example of the firm's work" (VSSS 1982).

St. Johnsbury also has numerous National Register districts. The *St. Johnsbury Paper Company Historic District* is located on both sides of Bay Street, located approximately 0.6 miles south of the project APE.

The *Railroad Street Historic District* included the lower portion of the block south of Portland St which extended south to the old railroad station. The *St. Johnsbury Main Street Historic District* included a large portion of Main Street, located west of Railroad Street, and several smaller east-west aligned side streets. In 1980, a National Register Boundary Increase document was prepared that created the *St. Johnsbury Historic District* which combined the *Railroad Street Historic District* and the *St. Johnsbury Main Street Historic District*. The boundary increase included the north section of Railroad Street, extending to the intersection Portland Street within the project APE.

In 1984, the Vermont Advisory Council on Historic Preservation reviewed a request for the nomination of the Maple Grove complex, also known as the Cary Maple Sugar factory, to the National Register of Historic Places. The Council determined that the complex appeared to meet the criteria for inclusion in the NR. Of

Photo 10. Photo shows the c.1900 Summerville School located on the south side of Portland Street. View is to the south.

particular interest was the large four-story structure and its attached buildings which were over fifty years old (ORC NR files 1984). No additional paperwork about the Maple Grove complex was found, so it assumed that the official NR nomination was never completed.

Historical Map Review and Archeological Sensitivity

Examination of the 1858 Walling historic atlas map of Caledonia County depicts only a few historic dwellings located along Portland Street – identified as the homes of *A. Lee, J. Harris* and *W. True.* This map shows the well-established railroad complex and the north-south aligned Connecticut and Passumpsic Railroad located on the west side of the river (Map 3).

The 1875 Beers map displays how the Summerville section of St. Johnsbury had prospered and grown since 1858, possibly due in part by the establishment of the east-west aligned Portland and Ogdenburg Railroad (Map 4). East of the Passumpsic River, Portland Street was lined with residences and businesses.

The 1884 Norris birdseye map presents a detailed view of St. Johnsbury and includes an inset of the Summerville section of town (Map 5). This map illustrates the covered railroad bridge across the Passumpsic River, located north of the vehicular bridge.

The project plans maps (Maps 2a and 2b) illustrate how Portland Street continued to be developed through the 19th and 20th centuries, with houses and businesses constructed along its length, extending east of the Moose River to the Maple Grove mill complex located at the eastern end of the project APE. Because of this extensive development, which includes the construction of roads, bridges, railroad features, houses, parking lots and driveways, the historic sensitivity of the project area is considered to be low.

Legend

Area of Potential Effects (APE)

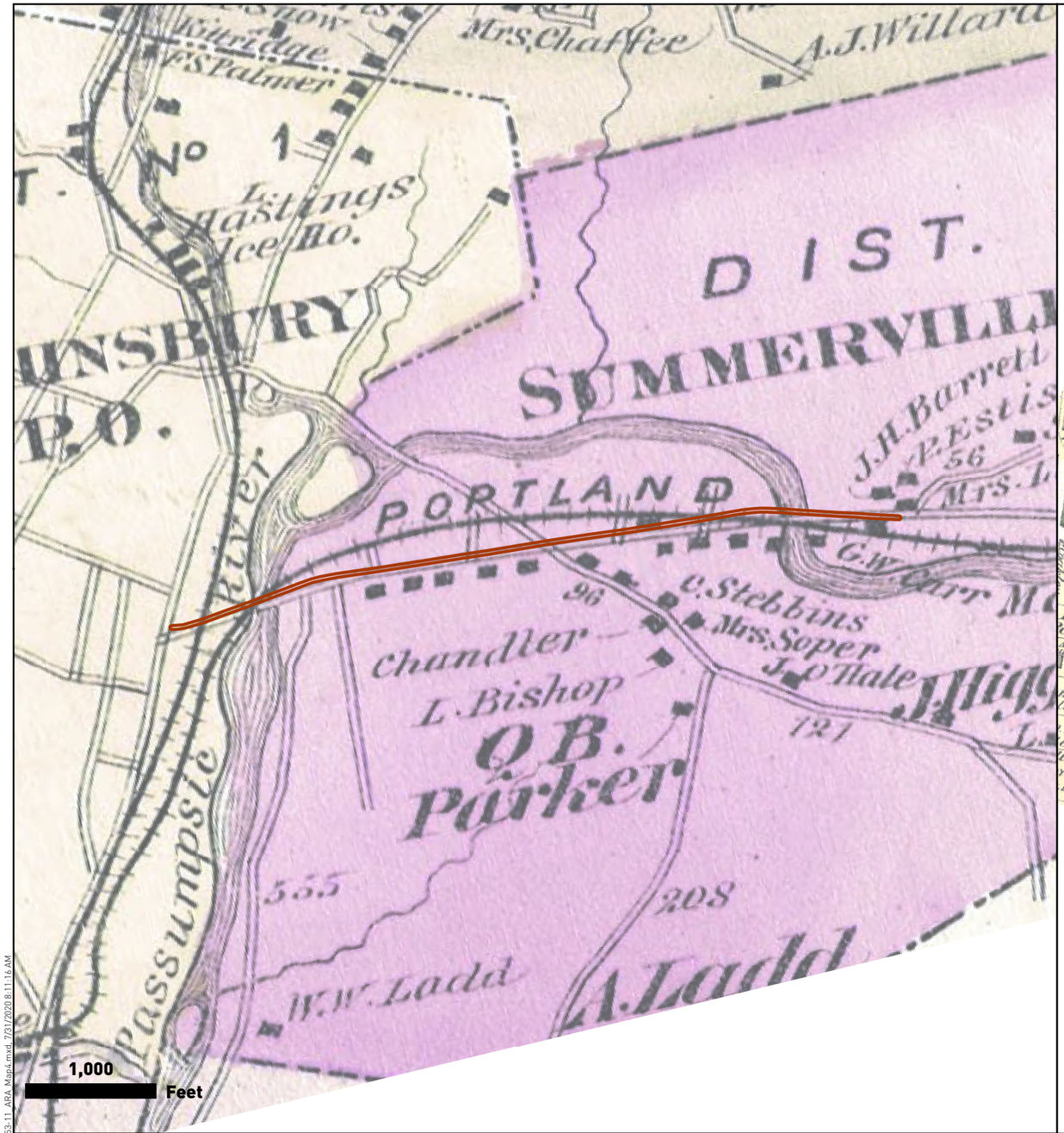
Historical Maps

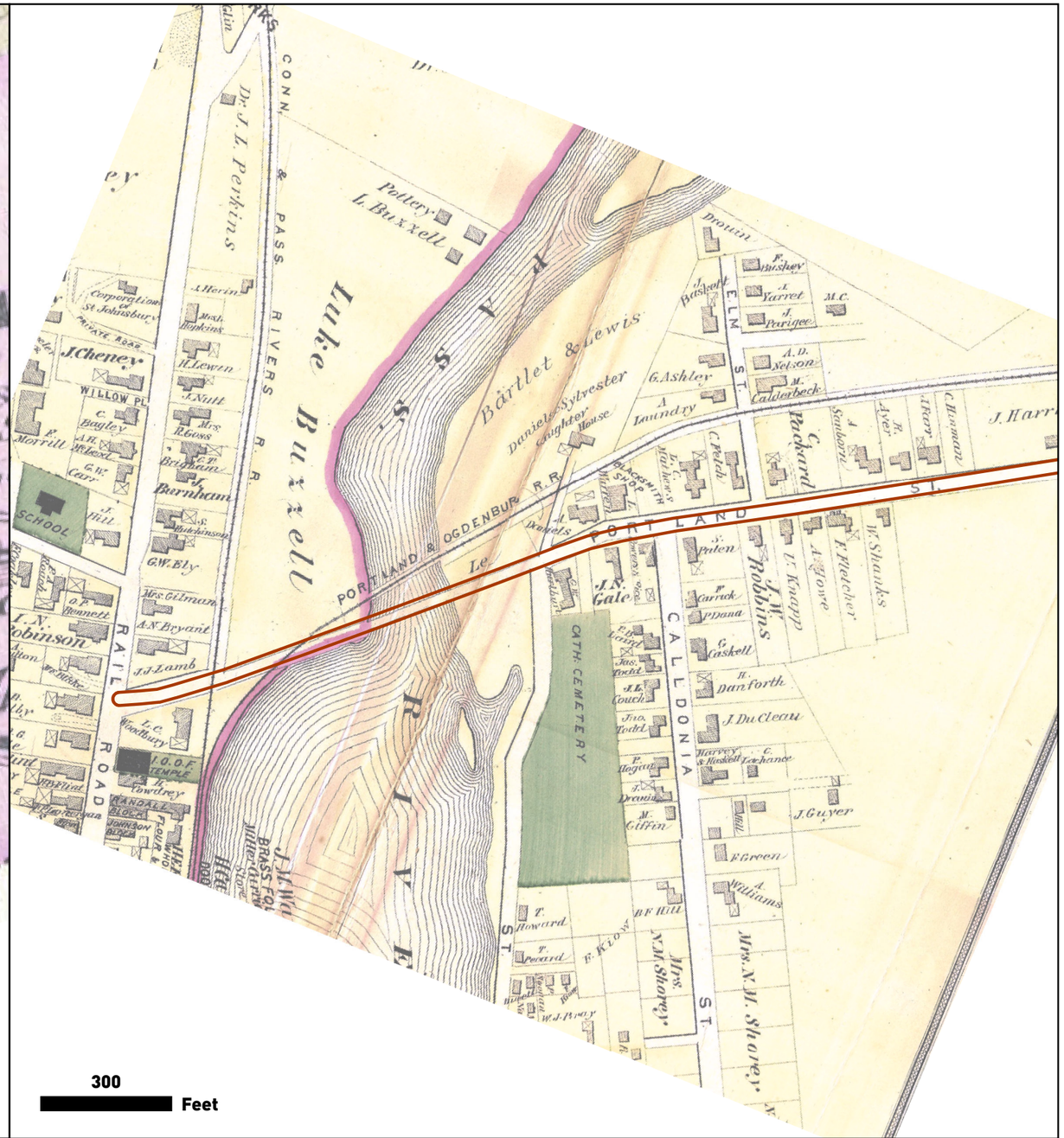
Walling 1858

HARTGEN archeological associates inc

Map 3

E:\5553\GIS\Document\HAA_5553-11_ARA_Map3.mxd, 7/31/2020 8:09:17 AM





Legend

Area of Potential Effects (APE)

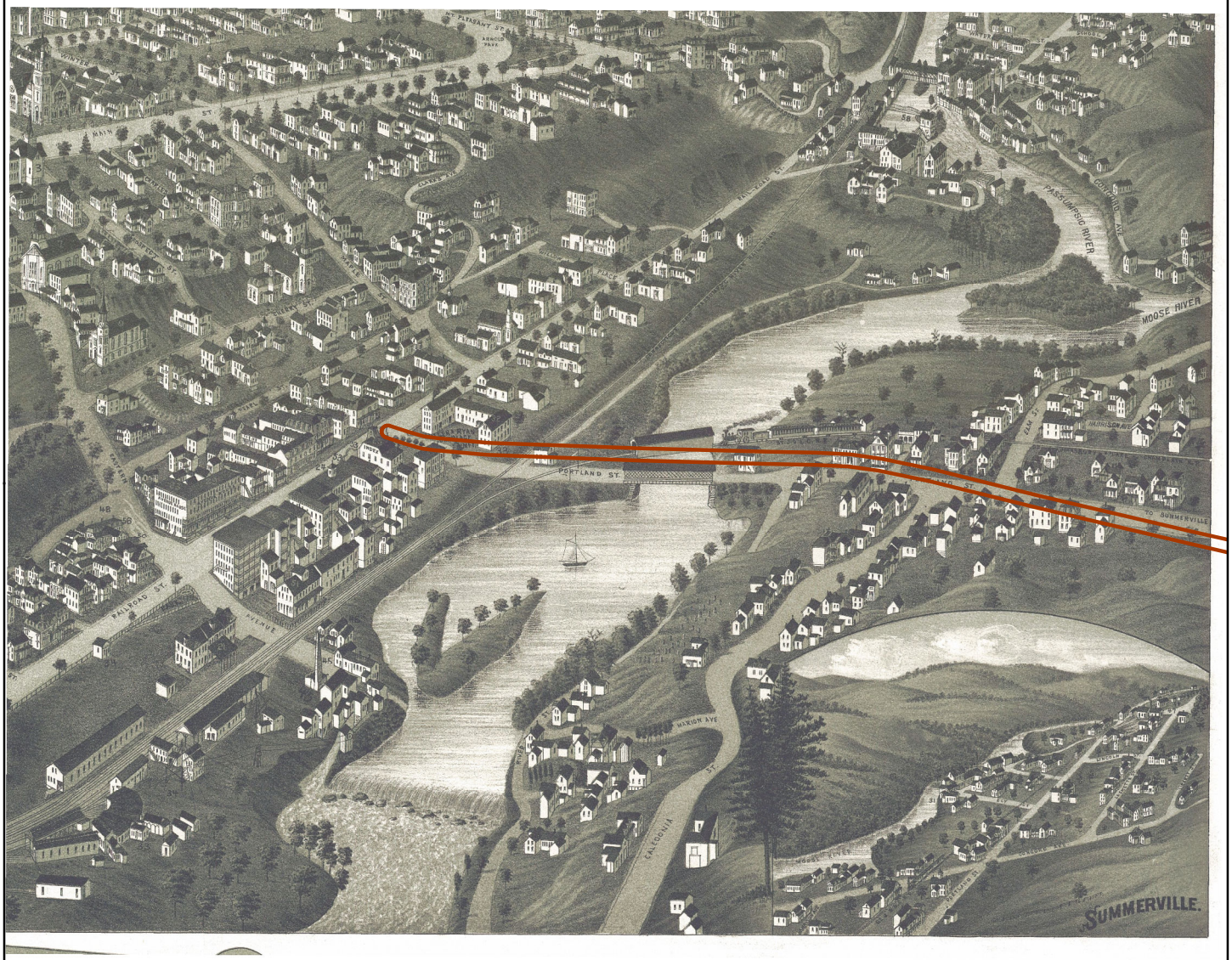
Historical Maps

Beers 1875

HARTGEN archeological associates inc

Map 3

E:\5553\GIS\Documents\HAA_5553-11_ARA_Maps4.mxd, 7/31/2020 8:11:16 AM



Legend

Area of Potential Effects (APE)

200 0 200 400 Feet

60 0 60 120 Meters

Historical Map

Norris 1884

HARTGEN archeological associates inc

Map 5

E:\5553\GIS\Documents\HAA_5553-11_ARA_Map5.mxd, 7/31/2020 8:16:41 AM

PRECONTACT DOCUMENTARY RESEARCH

Precontact Archeological Sites

Previously reported archeological sites provide an overview of both the types of sites that may be present in the project area and relation of sites throughout the surrounding region. Examination of Vermont Archaeological Inventory (VAI) online resource center (orc) site files indicates that there are several recorded precontact sites in the general area in similar settings as the project area.

There are four precontact sites reported within one mile of the project area including VT-CA-18, outlined below, which is located a few hundred feet south of Portland Street on the west side of the Moose River. Because of the proximity of the Passumpsic and Moose Rivers, it is assumed that there would be a greater number of precontact sites in the area. The paucity of precontact archaeological sites near the project area is more likely attributable to limited archeological investigations rather than a true lack of sites. In particular, the proximity of Moose River and its confluence with the Passumpsic River would have drawn Native Americans to the area to exploit natural resources. The general location is highly sensitive for precontact sites as indicated by known Native American settlement patterns. However, extensive disturbance within the project APE has removed much of the archeological sensitivity of the immediate project area.

There are four precontact sites located within several miles of the APE which are outlined below:

VT-CA-18 – SJ2 - A Late Archaic site located on the south/west bank of the Moose River located approximately 200 feet south of the Portland Street project area. Lithic debitage and eleven projectile points of various material types were recovered from this site.

VT-CA-19 – Penny Brook Site (SJ3) - A precontact site of undetermined time period, located near the confluence of Sleepers River and Creamery Brook. Artifacts collected included stone debitage and bifaces of poor quality gray/black chert, and quartz. The site was located on the east side of the Passumpsic River located near I-91, whose construction destroyed the site.

VT-CA- 70 – A Middle Woodland site located on the Passumpsic River approximately one mile northwest of the project area was interpreted to be a small, short-term occupation camp. The cultural material included a basalt Fox Creek-like project point, and several quartzite flakes. A study conducted by UVM concluded that the site was not eligible for listing on the NRHP.

VT-CA-115 – Hookers Bluff Site – The site is reported based on antidotal reports and archival references to a precontact site located on an island at the confluence of the Passumpsic and Moose Rivers, approximately 1,000 feet to the north of the APE.

Precontact Archeological Sensitivity

The VDHP Environmental Predictive Model was completed for the project area, which produced an overall rating of 36 (Appendix 1), with a rating of 32 or above indicating precontact sensitivity. This rating is based on proximity to the Passumpsic River, the Moose River and their confluence, as well as its location within a primary travel corridor through the region. However, the extensive disturbance caused by modern construction of Portland Street, earlier railroad and bridge construction as well as associated sidewalks and utility lines greatly decreased the overall sensitivity rating.

ARCHEOLOGICAL POTENTIAL AND RECOMMENDATIONS

The archeological potential of the project APE is considered to be low for the presence of historic resources.

If there were intact and level ground surfaces present within the project APE, these areas would be considered to have a moderate to high precontact sensitivity. However, the majority of the project area has been adversely impacted by the construction of historic and modern structures, railroad, roads bridges, sidewalks, parking areas and utilities. Within the project APE, there are no areas that are considered to be sensitive for the presence of precontact cultural material.

.

BIBLIOGRAPHY

Beers, Frederick W.
1875 *Atlas of Caledonia County, Vermont.* F. W. Beers, New York.

Child, Hamilton
1887 *Gazetteer and Business Directory of Caledonia County, Vermont.* The Journal Office, Syracuse, NY.

Doll, Charles G., Wallace M. Cady, James B. Thompson, Jr. and Marland P. Billings
1961 *Centennial Geologic Map of Vermont*, State of Vermont Geological Survey, Waterbury, Vermont.

Hyde, Arthur L., and Frances P. Hyde (eds.)
1991 *Burial Grounds of Vermont*, Vermont Old Cemetery Association, Bradford, Vermont.

Norris, George E.
1884 *St. Johnsbury, County Seat of Caledonia County, VT.* George E. Norris. Brockton, Mass.

Ritchie, William A.
1953 A Probable Paleo-Indian Site in Vermont. *American Antiquity* 18(3):249-258.

Stewart, David P.
1956-1966 Draft Surficial Geology Map. Annotated 1943 St. Johnsbury 15' USGS Quadrangle, on CD provided by Vermont Geological Survey, Waterbury, Vermont.

United States Department of Agriculture (USDA)
2021 Soil Survey Information for Caledonia County. Information provided by the Caledonia County office of the USDA.

United States Geological Survey (USGS)
1943 *St. Johnsbury, Vermont 15' USGS Quadgrangle.* USGS, Washington, DC.
1983 *St. Johnsbury, Vermont 7.5'x15' USGS Quadrangle.* USGS, Reston, Virginia.

Vermont Division for Historic Preservation (VDHP)
2015 Vermont's Prehistoric Cultural Heritage. *Vermont Historic Preservation Plan,* Division for Historic Preservation, Montpelier.

Walling, H. F.
1858 *Map of Caledonia County, Vermont.* Baker and Tilden, New York.

VERMONT DIVISION FOR HISTORIC PRESERVATION

Environmental Predictive Model for Locating Pre-contact Archaeological Sites

Project Name St. Johnsbury Sidewalk **County** Caledonia **Town** St. Johnsbury
DHP No. **Map No.** **Staff Init.** **Date** 3/2021

Additional Information

Environmental Variable	Proximity	Value	Assigned Score
A. RIVERS and STREAMS (EXISTING or RELICT):			
1) Distance to River or Permanent Stream (measured from top of bank)	0- 90 m 90- 180 m	12 6	12
2) Distance to Intermittent Stream	0- 90 m 90-180 m	8 4	
3) Confluence of River/River or River/Stream	0-90 m 90 –180 m	12 6	
4) Confluence of Intermittent Streams	0 – 90 m 90 – 180 m	8 4	
5) Falls or Rapids	0 – 90 m 90 – 180 m	8 4	
6) Head of Draw	0 – 90 m 90 – 180 m	8 4	
7) Major Floodplain/Alluvial Terrace		32	
8) Knoll or swamp island		32	
9) Stable Riverine Island		32	
B. LAKES and PONDS (EXISTING or RELICT):			
10) Distance to Pond or Lake	0- 90 m 90 -180 m	12 6	
11) Confluence of River or Stream	0-90 m 90 –180 m	12 6	
12) Lake Cove/Peninsula/Head of Bay		12	
C. WETLANDS:			
13) Distance to Wetland (wetland > one acre in size)	0- 90 m 90 -180 m	12 6	
14) Knoll or swamp island		32	
D. VALLEY EDGE and GLACIAL LAND FORMS:			
15) High elevated landform such as Knoll Top/Ridge Crest/ Promontory		12	
16) Valley edge features such as Kame/Outwash Terrace**		12	

17) Marine/Lake Delta Complex**		12	
18) Champlain Sea or Glacial Lake Shore Line**		32	32
E. OTHER ENVIRONMENTAL FACTORS: 19) Caves /Rockshelters		32	
20) ☑ Natural Travel Corridor ☐ Sole or important access to another drainage ☑ Drainage divide		12	24
21) Existing or Relict Spring	0 – 90 m 90 – 180 m	8 4	
22) Potential or Apparent Prehistoric Quarry for stone procurement	0 – 180 m	32	
23)) Special Environmental or Natural Area, such as Milton acquifer, mountain top, etc. (these may be historic or prehistoric sacred or traditional site locations and prehistoric site types as well)		32	
F. OTHER HIGH SENSITIVITY FACTORS: 24) High Likelihood of Burials		32	
25) High Recorded Site Density		32	
26) High likelihood of containing significant site based on recorded or archival data or oral tradition		32	
G. NEGATIVE FACTORS: 27) Excessive Slope (>15%) or Steep Erosional Slope (>20)		- 32	
28) Previously disturbed land as evaluated by a qualified archeological professional or engineer based on coring, earlier as-built plans, or obvious surface evidence (such as a gravel pit)		- 32	-32
**** refer to 1970 Surficial Geological Map of Vermont** **Total Score**: 36			
Other Comments :			
0- 31 = Archeologically Non- Sensitive **32+ = Archeologically Sensitive**			

APPENDIX F

Cost Estimate

Stantec

55 Green Mountain Drive
South Burlington, VT 05403
Tel: (802) 864-0223

Quantity Summary

Saint Johnsbury

195311761

SAINT JOHNSBURY SCOPING STUDY - Alternative 2, Sidewalk Improvements

	Initials	Date
Calc'd By:	CJW	2/13/2020
Checked By:		
Revised By:		
Checked By:		

Item No.	Item Description	Unit	Unit Price	Quantity	$
201.10	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	LS	$10,000.00	1	$10,000.00
203.15	COMMON EXCAVATION	CY	$20.00	2295	$45,900.00
301.35	SUBBASE OF DENSE GRADED CRUSHED STONE	CY	$42.00	1900	$79,800.00
406.38	HAND-PLACED BITUMINOUS CONCRETE PAVEMENT, DRIVES	SY	$22.00	2300	$50,600.00
616.28	CAST-IN-PLACE CONCRETE CURB, TYPE B	LF	$32.00	4150	$132,800.00
618.10	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	SY	$85.00	2300	$195,500.00
630.15	FLAGGERS	HR	$35.00	1000	$35,000.00
635.11	MOBILIZATION/DEMOBILIZATION	LS	$44,054.40	1	$44,054.40
641.11	TRAFFIC CONTROL, ALL-INCLUSIVE	LS	$15,000.00	1	$15,000.00
651.35	TOPSOIL	CY	$36.00	30	$1,080.00
900.645	SPECIAL PROVISION BRIDGE REPAIR	LS	$190,000.00	1	$190,000.00

Sub Total	$799,734
Contengencies (25%)	$199,934
Total Opinion of Probable Construction Cost	$999,668

Stantec

55 Green Mountain Drive
South Burlington, VT 05403
Tel: (802) 864-0223
Fax: (802) 864-0165

Quantity Summary

Saint Johnsbury

195311761

SAINT JOHNSBURY SCOPING STUDY -
Alternative 2, Sidewalk Improvements

201.10

CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS

	Initials	Date
Calc'd By:	CJW	2/13/2020
Checked By:		
Revised By:		
Checked By:		

201.10 CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS

Subtotal =	**1**	**LS**
Rounding	**0**	**LS**
201.10 CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	**1**	**LS**

Stantec

55 Green Mountain Drive
South Burlington, VT 05403
Tel: (802) 864-0223
Fax: (802) 864-0165

Quantity Summary

Saint Johnsbury

195311761

SAINT JOHNSBURY SCOPING STUDY -
Alternative 2, Sidewalk Improvements

203.15

COMMON EXCAVATION

	Initials	Date
Calc'd By:	CJW	2/13/2020
Checked By:		
Revised By:		
Checked By:		

203.15 COMMON EXCAVATION

Sidwalk length:	4100	LF
XS Area:	8.60	SF
Volume:	35260	CF
Subtotal:	1306	CY
Curb Length:	4100	LF
XS Area:	6.50	SF
Volume:	26650	CF
Subtotal:	987	CY

Subtotal =	**2293**	**CY**
Rounding	**2**	**CY**

203.15 COMMON EXCAVATION	**2295**	**CY**

55 Green Mountain Drive
South Burlington, VT 05403
Tel: (802) 864-0223
Fax: (802) 864-0165

Quantity Summary

Saint Johnsbury

195311761

SAINT JOHNSBURY SCOPING STUDY - Alternative 2, Sidewalk Improvements

301.35

SUBBASE OF DENSE GRADED CRUSHED STONE

	Initials	Date
Calc'd By:	CJW	2/13/2020
Checked By:		
Revised By:		
Checked By:		

301.35 SUBBASE OF DENSE GRADED CRUSHED STONE

Sidwalk length:	4100	LF
XS Area:	6.50	SF
Volume:	26650	CF
Subtotal:	987	CY

Curb Length:	4100	LF
XS Area:	5.50	SF
Volume:	22550	CF
Subtotal:	835.19	CY

Subtotal =	**1822**	**CY**

Rounding	**78**	**CY**

301.35	**SUBBASE OF DENSE GRADED CRUSHED STONE**	**1900**	**CY**

55 Green Mountain Drive
South Burlington, VT 05403
Tel: (802) 864-0223
Fax: (802) 864-0165

Quantity Summary

Saint Johnsbury

195311761

SAINT JOHNSBURY SCOPING STUDY - Alternative 2, Sidewalk Improvements

406.38

HAND-PLACED BITUMINOUS CONCRETE PAVEMENT, DRIVES

	Initials	Date
Calc'd By:	CJW	2/13/2020
Checked By:		
Revised By:		
Checked By:		

406.38 HAND-PLACED BITUMINOUS CONCRETE PAVEMENT, DRIVES

Curb Lengh:	4100	LF
Width Lift 1:	2	LF
Area:	8200	SF
Curb Length:	4100	LF
Width Lift 2:	3	LF
Area:	12300	SF
Subtotal for Curb Patches:	2278	SY
Drives:		
		SF
		SF
		SF
		SF
Subtotal for Drives:	0	SY

Subtotal =	**2278**	**SY**
Rounding	**22**	**SY**

406.38 HAND-PLACED BITUMINOUS CONCRETE PAVEMENT, DRIVES	**2300**	**SY**

55 Green Mountain Drive
South Burlington, VT 05403
Tel: (802) 864-0223
Fax: (802) 864-0165

Quantity Summary

Saint Johnsbury

195311761

SAINT JOHNSBURY SCOPING STUDY - Alternative 2, Sidewalk Improvements

616.28

CAST-IN-PLACE CONCRETE CURB, TYPE B

	Initials	Date
Calc'd By:	CJW	2/13/2020
Checked By:		
Revised By:		
Checked By:		

616.28 CAST-IN-PLACE CONCRETE CURB, TYPE B

Microstation measured length: 4100 LF

Subtotal =	**4100**	**LF**
Rounding	**50**	**LF**

616.28	**CAST-IN-PLACE CONCRETE CURB, TYPE B**	**4150**	**LF**

Stantec

55 Green Mountain Drive
South Burlington, VT 05403
Tel: (802) 864-0223
Fax: (802) 864-0165

Quantity Summary

Saint Johnsbury

195311761

SAINT JOHNSBURY SCOPING STUDY - Alternative 2, Sidewalk Improvements

618.10

PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH

	Initials	Date
Calc'd By:	CJW	2/13/2020
Checked By:		
Revised By:		
Checked By:		

618.10 PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH

Microstation Measured Area: 20510 SF
Area: 2279 SY

Subtotal =	**2279**	**SY**
Rounding	**21**	**SY**
618.10 PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	**2300**	**SY**

55 Green Mountain Drive
South Burlington, VT 05403
Tel: (802) 864-0223
Fax: (802) 864-0165

Quantity Summary

Saint Johnsbury

195311761

SAINT JOHNSBURY SCOPING STUDY -
Alternative 2, Sidewalk Improvements

630.15

FLAGGERS

	Initials	Date
Calc'd By:	CJW	2/13/2020
Checked By:		
Revised By:		
Checked By:		

630.15 FLAGGERS

Subtotal =	**1000**	**HR**
Rounding	**EST**	**HR**
630.15 FLAGGERS	**1000**	**HR**

Stantec 55 Green Mountain Drive South Burlington, VT 05403 Tel: (802) 864-0223 Fax: (802) 864-0165	**Quantity Summary** **Saint Johnsbury** **195311761** **SAINT JOHNSBURY SCOPING STUDY - Alternative 2, Sidewalk Improvements**	**635.11** **MOBILIZATION/DEMOBILIZATION**

	Initials	Date
Calc'd By:	CJW	2/13/2020
Checked By:		
Revised By:		
Checked By:		

635.11 MOBILIZATION/DEMOBILIZATION

Subtotal =	**1**	**LS**
Rounding	**0**	**LS**

635.11	**MOBILIZATION/DEMOBILIZATION**	**1**	**LS**

55 Green Mountain Drive
South Burlington, VT 05403
Tel: (802) 864-0223
Fax: (802) 864-0165

Quantity Summary

Saint Johnsbury

195311761

SAINT JOHNSBURY SCOPING STUDY -
Alternative 2, Sidewalk Improvements

641.11

TRAFFIC CONTROL, ALL-INCLUSIVE

	Initials	Date
Calc'd By:	CJW	2/13/2020
Checked By:		
Revised By:		
Checked By:		

641.11 TRAFFIC CONTROL, ALL-INCLUSIVE

Subtotal =	**1**	**LS**
Rounding	**0**	**LS**
641.11 TRAFFIC CONTROL, ALL-INCLUSIVE	**1**	**LS**

Stantec

55 Green Mountain Drive
South Burlington, VT 05403
Tel: (802) 864-0223
Fax: (802) 864-0165

Quantity Summary

Saint Johnsbury

195311761

SAINT JOHNSBURY SCOPING STUDY -
Alternative 2, Sidewalk Improvements

651.35

TOPSOIL

	Initials	Date
Calc'd By:	CJW	2/13/2020
Checked By:		
Revised By:		
Checked By:		

651.35 TOPSOIL

Microstation Measured Area:	2050	SF
Depth:	4	IN
Volume:	683	CF
Volume:	25	CY

Subtotal =	**25**	**CY**
Rounding	**5**	**CY**
651.35 TOPSOIL	**30**	**CY**

55 Green Mountain Drive
South Burlington, VT 05403
Tel: (802) 864-0223
Fax: (802) 864-0165

Quantity Summary

Saint Johnsbury

195311761

SAINT JOHNSBURY SCOPING STUDY -
Alternative 2, Sidewalk Improvements

900.645

SPECIAL PROVISION

	Initials	Date
Calc'd By:		2/13/2020
Checked By:		
Revised By:		
Checked By:		

900.645 SPECIAL PROVISION

Subtotal =	**1**	**LS**
Rounding	**0**	**LS**
900.645 SPECIAL PROVISION	**1**	**LS**

Stantec

55 Green Mountain Drive
South Burlington, VT 05403
Tel: (802) 864-0223

Quantity Summary

SAINT JOHNSBURY

195311761

SAINT JOHNSBURY SCOPING STUDY - Alternative 3, Sidepath

	Initials	Date
Calc'd By:	FE	2/12/2020
Checked By:		
Revised By:	CJW	6/22/2020
Checked By:		

Item No.	Item Description	Unit	Unit Price	Quantity	$
201.10	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	LS	$20,000.00	1	$20,000.00
203.15	COMMON EXCAVATION	CY	$20.00	2325	$46,500.00
301.35	SUBBASE OF DENSE GRADED CRUSHED STONE	CY	$42.00	1830	$76,860.00
406.35	SUPERPAVE BITUMINOUS CONCRETE PAVEMENT	TON	$100.00	800	$80,000.00
406.38	HAND-PLACED BITUMINOUS CONCRETE PAVEMENT, DRIVES	SY	$25.00	2300	$57,500.00
616.28	CAST-IN-PLACE CONCRETE CURB, TYPE B	LF	$35.00	4150	$145,250.00
618.10	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	SY	$100.00	940	$94,000.00
630.15	FLAGGERS	HR	$35.00	1000	$35,000.00
635.11	MOBILIZATION/DEMOBILIZATION	LS	$80,431.00	1	$80,431.00
641.11	TRAFFIC CONTROL, ALL-INCLUSIVE	LS	$15,000.00	1	$15,000.00
651.35	TOPSOIL	CY	$40.00	55	$2,200.00
900.645	SPECIAL PROVISION (BRIDGE REPAIR)	LS	$190,000.00	1	$190,000.00
900.645	SPECIAL PROVISION (STORMWATER MODIFICATIONS)	LS	$42,000.00	1	$42,000.00

Sub Total	$884,741
Contengencies (25%)	$221,185
Total Opinion of Probable Construction Cost	$1,105,926

55 Green Mountain Drive
South Burlington, VT 05403
Tel: (802) 864-0223
Fax: (802) 864-0165

Quantity Summary

SAINT JOHNSBURY

195311761

SAINT JOHNSBURY SCOPING STUDY - Alternative 3, Sidepath

201.10

CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS

	Initials	Date
Calc'd By:		
Checked By:		
Revised By:		
Checked By:		

201.10 CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS

Subtotal =	**1**	**LS**
Rounding	**0**	**LS**
201.10 CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	**1**	**LS**

Stantec

55 Green Mountain Drive
South Burlington, VT 05403
Tel: (802) 864-0223
Fax: (802) 864-0165

Quantity Summary

SAINT JOHNSBURY

195311761

SAINT JOHNSBURY SCOPING STUDY - Alternative 3, Sidepath

203.15

COMMON EXCAVATION

	Initials	Date
Calc'd By:	FE	2/19/2020
Checked By:		
Revised By:		
Checked By:		

203.15 COMMON EXCAVATION

Sidepath length:	4100	LF
XS Area:	8.60	SF
Volume:	35260	CF
Subtotal:	1306	CY

Sidepath curb Length:	4100	LF
XS Area:	6.50	SF
Volume:	26650	CF
Subtotal:	987	CY

Subtotal =	**2293**	**CY**

Rounding	**32**	**CY**

203.15 COMMON EXCAVATION	**2325**	**CY**

55 Green Mountain Drive
South Burlington, VT 05403
Tel: (802) 864-0223
Fax: (802) 864-0165

Quantity Summary

SAINT JOHNSBURY

195311761

SAINT JOHNSBURY SCOPING STUDY - Alternative 3, Sidepath

301.35

SUBBASE OF DENSE GRADED CRUSHED STONE

	Initials	Date
Calc'd By:	FE	2/19/2020
Checked By:		
Revised By:		
Checked By:		

301.35 SUBBASE OF DENSE GRADED CRUSHED STONE

Sidepath length:	4100	LF
XS Area:	6.50	SF
Volume:	26650	CF
Subtotal:	987	CY

Sidepath curb Length:	4100	LF
XS Area:	5.50	SF
Volume:	22550	CF
Subtotal:	835.19	CY

Subtotal =	**1822**	**CY**

Rounding	**8**	**CY**

301.35	**SUBBASE OF DENSE GRADED CRUSHED STONE**	**1830**	**CY**

55 Green Mountain Drive
South Burlington, VT 05403
Tel: (802) 864-0223
Fax: (802) 864-0165

Quantity Summary

SAINT JOHNSBURY

195311761

SAINT JOHNSBURY SCOPING STUDY - Alternative 3, Sidepath

406.35

SUPERPAVE BITUMINOUS CONCRETE PAVEMENT

	Initials	Date
Calc'd By:	FE	2/19/2020
Checked By:		
Revised By:		
Checked By:		

406.35 SUPERPAVE BITUMINOUS CONCRETE PAVEMENT

Sidepath Area:	41061	SF
Depth	3.00	IN
Volume:	10265	CF
Subtotal:	380	CY
Conversion Rate:	2.1	TON/CY
Subtotal:	798.41	TON

Subtotal =	**798**	**TON**
Rounding	**2**	**TON**

406.35	**SUPERPAVE BITUMINOUS CONCRETE PAVEMENT**	**800**	**TON**

55 Green Mountain Drive
South Burlington, VT 05403
Tel: (802) 864-0223
Fax: (802) 864-0165

Quantity Summary

SAINT JOHNSBURY

195311761

SAINT JOHNSBURY SCOPING STUDY - Alternative 3, Sidepath

406.38

HAND-PLACED BITUMINOUS CONCRETE PAVEMENT, DRIVES

	Initials	Date
Calc'd By:	CJW	2/13/2020
Checked By:		
Revised By:		
Checked By:		

406.38 HAND-PLACED BITUMINOUS CONCRETE PAVEMENT, DRIVES

Curb Lengh:	4100	LF
Width Lift 1:	2	LF
Area:	8200	SF
Curb Length:	4100	LF
Width Lift 2:	3	LF
Area:	12300	SF
Subtotal for Curb Patches:	2278	SY
Drives:		
		SF
		SF
		SF
		SF
Subtotal for Drives:	0	SY

Subtotal =	**2278**	**SY**
Rounding	**22**	**SY**

406.38 HAND-PLACED BITUMINOUS CONCRETE PAVEMENT, DRIVES	**2300**	**SY**

Stantec

55 Green Mountain Drive
South Burlington, VT 05403
Tel: (802) 864-0223
Fax: (802) 864-0165

Quantity Summary

SAINT JOHNSBURY

195311761

SAINT JOHNSBURY SCOPING STUDY - Alternative 3, Sidepath

616.28

CAST-IN-PLACE CONCRETE CURB, TYPE B

	Initials	Date
Calc'd By:	FE	2/19/2020
Checked By:		
Revised By:		
Checked By:		

616.28 CAST-IN-PLACE CONCRETE CURB, TYPE B

Length: 4100 LF

Subtotal =	**4100**	**LF**
Rounding	**50**	**LF**

616.28	**CAST-IN-PLACE CONCRETE CURB, TYPE B**	**4150**	**LF**

Stantec

55 Green Mountain Drive
South Burlington, VT 05403
Tel: (802) 864-0223
Fax: (802) 864-0165

Quantity Summary

SAINT JOHNSBURY

195311761

SAINT JOHNSBURY SCOPING STUDY - Alternative 3, Sidepath

618.10

PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH

	Initials	Date
Calc'd By:	CJW	6/22/2020
Checked By:		
Revised By:		
Checked By:		

618.10 PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH

Microstation Measured Area: 8358 SF
Area: 929 SY

Subtotal =	**929**	**SY**
Rounding	**11**	**SY**
618.10 PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	**940**	**SY**

Stantec	Quantity Summary SAINT JOHNSBURY 195311761	630.15 FLAGGERS

55 Green Mountain Drive
South Burlington, VT 05403
Tel: (802) 864-0223
Fax: (802) 864-0165

SAINT JOHNSBURY SCOPING STUDY -
Alternative 3, Sidepath

	Initials	Date
Calc'd By:		
Checked By:		
Revised By:		
Checked By:		

630.15 FLAGGERS

Subtotal =	**1000**	**HR**
Rounding	**EST**	**HR**
630.15 FLAGGERS	**1000**	**HR**

55 Green Mountain Drive
South Burlington, VT 05403
Tel: (802) 864-0223
Fax: (802) 864-0165

Quantity Summary

SAINT JOHNSBURY

195311761

SAINT JOHNSBURY SCOPING STUDY - Alternative 3, Sidepath

635.11

MOBILIZATION/DEMOBILIZATION

	Initials	Date
Calc'd By:		
Checked By:		
Revised By:		
Checked By:		

635.11 MOBILIZATION/DEMOBILIZATION

Subtotal =	**1**	**LS**
Rounding	**0**	**LS**

635.11 MOBILIZATION/DEMOBILIZATION	**1**	**LS**

55 Green Mountain Drive
South Burlington, VT 05403
Tel: (802) 864-0223
Fax: (802) 864-0165

Quantity Summary

SAINT JOHNSBURY

195311761

SAINT JOHNSBURY SCOPING STUDY - Alternative 3, Sidepath

641.11

TRAFFIC CONTROL, ALL-INCLUSIVE

	Initials	Date
Calc'd By:		
Checked By:		
Revised By:		
Checked By:		

641.11 TRAFFIC CONTROL, ALL-INCLUSIVE

Subtotal =	**1**	**LS**
Rounding	**0**	**LS**

641.11	**TRAFFIC CONTROL, ALL-INCLUSIVE**	**1**	**LS**

55 Green Mountain Drive
South Burlington, VT 05403
Tel: (802) 864-0223
Fax: (802) 864-0165

Quantity Summary

SAINT JOHNSBURY

195311761

SAINT JOHNSBURY SCOPING STUDY - Alternative 3, Sidepath

651.35

TOPSOIL

	Initials	Date
Calc'd By:	FE	2/19/2020
Checked By:		
Revised By:		
Checked By:		

651.35 TOPSOIL

Microstation Measured Area:	4100	SF
Depth:	4	IN
Volume:	1367	CF
Volume:	51	CY

Subtotal =	**51**	**CY**
Rounding	**4**	**CY**
651.35 TOPSOIL	**55**	**CY**

55 Green Mountain Drive
South Burlington, VT 05403
Tel: (802) 864-0223
Fax: (802) 864-0165

Quantity Summary

SAINT JOHNSBURY

195311761

SAINT JOHNSBURY SCOPING STUDY - Alternative 3, Sidepath

900.645

SPECIAL PROVISION

	Initials	Date
Calc'd By:		
Checked By:		
Revised By:		
Checked By:		

900.645 SPECIAL PROVISION

Subtotal =	**1**	**LS**
Rounding	**0**	**LS**
900.645 SPECIAL PROVISION	**1**	**LS**

55 Green Mountain Drive
South Burlington, VT 05403
Tel: (802) 864-0223
Fax: (802) 864-0165

Quantity Summary

SAINT JOHNSBURY

195311761

SAINT JOHNSBURY SCOPING STUDY - Alternative 3, Sidepath

900.645

SPECIAL PROVISION

	Initials	Date
Calc'd By:		
Checked By:		
Revised By:		
Checked By:		

900.645 SPECIAL PROVISION

# of structures impacted 7.00
$6,000 ea $ 42,000.00

Subtotal =	**1**	**LS**
Rounding	**0**	**LS**
900.645 SPECIAL PROVISION	**1**	**LS**

APPENDIX G

Meeting Minutes

TOWN OF ST. JOHNSBURY

Town Manager's Office
51 Depot Square, Suite 3
St Johnsbury, VT 05819
802-748-3926
www.stjvt.com

Town Clerk 802-748-4331
Dispatch 802-748-2314
Police 802-748-2314
Fire 802-748-8925
Public Works 802-748-4408
Assessor Office 802-748-4272

Select Board Meeting Minutes
51 Depot Square, St Johnsbury, VT
June 22, 2020 6:00 PM

Present :
Select Board: Jeff Moore, Kevin Oddy, Tim Angell, Dennis Smith, Brendan Hughes (via. Zoom)
Staff: Chad Whitehead, Stacy Jewell
Press: Todd Wellington(via Zoom), KATV
Public: Jim Brown, Adam Kane, Erik Alling (via Zoom), Bobbie Wagner (via Zoom), Keith Whitmore (via Zoom), Nick Anzalone (via Zoom).

Agenda Amendments: none

Public Comment: no public comments were made

Minutes:

- On a motion by Dennis and second by Kevin the minutes for 4/27 were approved

Warrants:

- On a motion by Kevin and second by Dennis the warrants were approved.

Liquor License:

- None

Portland Street Scoping Study Alternatives

- Erik Alling of Stantec reviewed proposed options for the Portland Street Scoping Study. Alternatives included:
    - New sidewalks and bike lanes on both sides of the road from the east end of Portland Street to Concord Avenue then only one sidewalk on the north side of the street from Concord Ave to the end of the project limits.
    - A new multipurpose sidewalk/ bike path on the north side of Portland Street from the east end of the Portland Street Bridget to Concord Avenue with sidewalk on the south side- no bike lanes.
- The board agreed the next step should include polling property and business owners impacted before choosing a preferred alternative.

Fairbanks Museum Solar Setback Request

- Adam Kane of Fairbanks Museum addressed the board and reviewed the solar project.
- On a motion by Tim and second by Kevin the board approved the request for variance to the solar setback.

CUD Alternate Appointment:

- On a motion by Dennis and second by Kevin the board appointed Bobbie Wagner as an alternative CUD representative.
- On a motion by Tim and second by Kevin the board appointed Keith Whitmore as an alternative CUD representative.

S.344 Tax Abatement:

- On a motion by Kevin and second by Dennis the board voted to adopt S.344.

WWTF Generator Replacement:

- Chad Whitehead addressed the board regarding the replacement of an emergency generator at the Wastewater Treatment Facility.
- On a motion by Tim and second by Dennis the board voted to table the item.

Manager's Report:

- The Gilman Avenue and Pleasant Street project is moving from final design into construction phase. The Town is awaiting final funding packages from the State revolving loan funds.
- DPW has hired 4 new seasonal workers to conduct beautification work as well as mowing that is generally completed by probation and parole and the work camp crews
- The board asked about a tax sale for this year and the manager indicated he would put the discussion on the agenda for the next meeting.

Other Business:

- There is a primary election scheduled for August 11. Voters are encouraged to vote by absentee ballot. Election officials are looking for volunteers to assist.

Executive Session:

- On a motion by Kevin and second by Dennis the board voted that there was a need for an executive session to discuss a contractual matter that premature general public knowledge would clearly place the public body at a substantial disadvantage.
- On a motion by Kevin and second by Dennis the board voted to enter executive session and invited the Town Manager to join them.
- On a motion by Dennis and second by Tim the board voted to exist executive session.
- The chair had nothing to report.
- On a motion by Dennis and second by Tim the board adjourned by unanimous decision.

Design with community in mind