Environmental Assessment

Lamoille Valley Rail Trail Riverfront Extension Project

PREPARED FOR

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Northern Borders Regional Commission,
and the Town of St. Johnsbury, Vermont

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List of Acronyms

2D	2-dimensional
AADT	Average Annual Daily Traffic
AASHTO	American Association of State Highway and Transportation Officials
ACHP	Advisory Council on Historic Preservation
ADA	1990 Americans with Disabilities Act
ADT	Average Daily Traffic
ANR	Vermont Agency of Natural Resources
APE	Area of Potential Effect
BFE	Base Flood Elevation
BMP	Best Management Practice
CAAA	Clean Air Act Amendments of 1990
Caltrans	California Department of Transportation
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
C.F.R.	Code of Federal Regulations
CO	Carbon Monoxide
CWA	Clean Water Act
dBA	A-Weighted Decibel
DEC	Vermont Department of Environmental Conservation
DHP	Vermont Division for Historic Preservation
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	United States Environmental Protection Agency
EPSC	Erosion Prevention and Sediment Control
ERP	Emergency Response Plan
ESA	Endangered Species Act
FEH	Fluvial Erosion Hazard
FEMA	Federal Emergency Management Agency
FHARC	Flood Hazard Area and River Corridor
FHBM	Flood Hazard Boundary Map
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FIS	Flood Insurance Study
FPPA	Farmland Protection Policy Act
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
FWD	Vermont Fish and Wildlife Department
GIS	Geographic Information System
GMRC	Green Mountain Railroad
GMP	Green Mountain Power
Hartgen	Hartgen Archeological Associates, Inc

IpaC	USFWS Information for Planning and Conservation
Irule	Investigation & Remediation of Contaminated Properties Rule
LEDPA	Least environmentally damaging practicable alternative
Leq	Energy-Equivalent Sound Level
Ldn	day-night average sound level
LWCF	Land and Water Conservation Fund
MCL	Maximum Contaminant Level
MPDH	Multiple Property Documentation Form
mph	miles per hour
MSAT	Mobile Source Air Toxics
NAAQS	National Ambient Air Quality Standards
NAE	No Adverse Effect
NATA	National Air Toxics Assessment
NEPA	National Environmental Policy Act of 1969
NFIP	National Flood Insurance Program
NHPA	No Historic Properties Affected
NO	Nitric Oxide
NO_2	Nitrogen Dioxide
Nox	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	National Resource Conservation Service
National Register	National Register of Historic Places
O_3	Ozone
OHW	Ordinary High Water
OSPC	On-Site Plan Coordinator
PAHs	polycyclic aromatic hydrocarbons
Pb	Lead
PEM	Palustrine Emergent Wetland
PFO	Palustrine Forested Wetland
PM	Particulate Matter
ppb	parts per billion
ppm	parts per million
PPV	peak particle velocity
Project PA	Project Programmatic Agreement
PRT	Potential Roost Tree
RCNM	Roadway Construction Noise Model
RCRA	Resource Conservation and Recovery Act
RHA	Rivers and Harbors Act of 1899
ROW	Right-of-Way
SC	Stream Center
SFHA	Special Flood Hazard Area
SHPO	State Historic Preservation Officer
SO_2	Sulfur Dioxide
SSV	Soil Screening Value
State Register	State Register of Historic Places
TH	Town Highway

TMP	Transportation Management Plan
USACE	United States Army Corps of Engineers
U.S.C.	United States Code
USFWS	United States Fish and Wildlife Service
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USGS	United State Geological Survey
µg/m3	microgram per cubic meter
VdB	vibration velocity in decibels
VCGI	Vermont Center for Geographic Information
VGES	Vermont Groundwater Enforcement Standards
VOC	Volatile Organic Compound
VTNNHP	Vermont Nongame and Natural Heritage Program
VRS	Vermont Rail System
VSS	Vermont State Standards
VTR	Vermont Railway, Inc.
V.S.A.	Vermont Statutes Annotated
VWQS	Vermont Water Quality Standards
VWR	Vermont Wetland Rules
VTrans	Vermont Agency of Transportation
WACR	Washington County Railroad
WNS	White-Nose Syndrome
WOTUS	Waters of the United States
WQC	Water Quality Certification

1

Project Overview

1.1 Introduction

The Lamoille Valley Rail Trail (LVRT) Riverfront Extension Project, hereby referred to as the Project, includes the proposed construction of a shared-use pathway connecting the LVRT trailhead to downtown amenities in The Town of St. Johnsbury (the "Town," see **Map 1.1-1**, Project Location Map). The Town is advancing the Project to complete Phase II of the construction of the Three Rivers Path, which proposes connecting the LVRT eastern terminus at South Main Street to the southern end of the Phase I path that was completed in 2019. Phase I commences at the location of a new pavilion at the intersection of Depot Square and Bay Street and runs south to a location along the Green Mountain Power (GMP) service road east of Bay Street near where the overhead power lines cross the Passumpsic River. The proposed new Phase II pathway (Proposed Action) would include an alignment along the Passumpsic River, offering users a more natural setting for recreation. The Town of St. Johnsbury has contemplated a recreational path along the Passumpsic River for over 20 years and has therefore carried out extensive coordination with federal and state resource agencies and the general public. Recent coordination efforts are outlined in **Chapter 4**.

Because the Town is seeking Federal funding from U.S. Department of Agriculture Rural Development (USDA-RD) and because the Town has been awarded a grant from the Northern Borders Regional Commission (NBRC) State Economic & Infrastructure Development Investment Program in 2021, this Environmental Assessment (EA) has been prepared to support National Environmental Policy Act (NEPA) compliance for both entities. In this instance, USDA-RD is the lead Federal agency, whereas NBRC is a cooperating agency. The NBRC grant is conditional, requiring NEPA compliance before a Notice to Proceed can be issued and funds disbursed.

The intent of an EA is to determine whether or not a Federal action has the potential to cause significant environmental effects. The analysis is done through an examination of resources potentially affected by the Proposed Action and considers the context, duration, and intensity of the effects. This analysis is conducted in compliance with the requirements of NEPA, the Council on Environmental Quality (CEQ) Regulations, 40 C.F.R. Parts 1500 through 1508,USDA-RD Instruction 1970-C, and the

NEPA EA Guidance for NBRC Applicants (July 2022). If the EA leads to a determination by either USDA-RD or NBRC that one or more resources may be significantly impacted, then an Environmental Impact Statement (EIS) is required.

Further, the Project would require permitting under state and federal regulatory requirements. See **Section 3.11** for a list of anticipated Federal and Federally delegated permits that would be required prior to implementing the Proposed Action.

1.2 Project Area Description

The Project is entirely within the Town of St. Johnsbury and extends generally along the Passumpsic River between Sleepers River and the Portland Street Bridge for approximately 0.80 miles. The proposed path would begin just south of the intersection of Main Street and Bay Street at the LVRT trailhead at 543 Main Street and generally travels north along the Passumpsic River and to the east of Bay Street, as it proceeds towards US Route 5 until reaching existing trail facilities (see **Map 1.1-1**, Project Location Map). The Project Area is bounded generally by the Town of St. Johnsbury Wastewater Treatment Facility to the south, Bay Street to the west, the location of the GMP power poles to the north (supporting the aerial power line crossing of the Passumpsic River), and the river to the east. The Town is situated in Caledonia County and borders the Towns of Danville, Barnet, Waterford, Kirby, and London. The Project Area contains a variety of industrial uses, including the treatment plant, a Myers waste and recycling depot, and various commercial services in the Ralston Building, the largest structure in the Study Area. The Study Area has experienced a long history of rail-supported industrial uses, including a past rail connection to the Ralston Building, the most prominent structure in the Study Area. A railyard operated by the Washington County Railroad Connecticut River Division (WACR-CRD) is located just west of and generally parallel to Bay Street.

The Project Area is in the Northern Vermont Piedmont biophysical region of Vermont, which is characterized by hilly topography, numerous rivers, a moderate to cool climate, and rich soils derived from calcareous bedrock. The setting for the Proposed Action is the relatively level, a terraced floodplain with elevations ranging from about 570 feet at Bay Street to about 540 feet at the west bank of the Passumpsic River. The Sleepers River makes confluence with the Passumpsic River just south of the Study Area. Portions of the Study Area are forested, including floodplain wetlands. Other areas are managed grassy areas. The proposed Project alignment passes through both active and formerly operational industrial areas. As noted above, much of the alignment is on existing roadways while a section passes along a dirt/gravel Green Mountain Power access road. The underlying surficial geology in the Project Area is predominantly alluvium from postglacial deposits. On-site soils include the Urban Land-Adams-Nicholville complex and the Ondawa Sunday complex.

1.3 Project Purpose

The Purpose and Need of the Lamoille Valley Rail Trail Riverfront Extension Project were developed based on studies of the Project area and coordination between USDA in consultation with the public and local residents (see **Chapter 4**), and in extensive discussions with the Town of St. Johnsbury and abutting property owners.

The purpose of the Project has been defined in accordance with the requirements of NEPA, CEQ Regulations 40 C.F.R. Part 1500-1508 and the FSA NEPA Regulations 81 FR 51273 as follows:

The purpose of the Project is to address the lack of a dedicated bicycle/pedestrian connection between the LVRT (which has recently been completed for its entire 92-mile distance between St. Johnsbury and Swanton, Vermont) and St. Johnsbury's Designated Downtown and to address the general lack of riverfront access in St. Johnsbury.

1.4 Project Need

The principal need for the Project is to complete a dedicated bike and pedestrian connection between the LVRT trailhead and St. Johnsbury's downtown area, thereby attracting LVRT and other visitors and bolstering economic activity in and the health of the downtown area and to serve as an impetus for redevelopment of the former industrial properties along Bay Street. Drawing visitors from outside the Town and region is crucial to the economic health of the downtown. The opening of the LVRT has resulted in an influx of visitors to the area, bringing in new people in search of excellent recreational opportunities and the goods and services that St. Johnsbury offers. Connecting existing multi-use paths to the Project will provide a safe opportunity for trail users to access the LVRT, Three Rivers Path, and the downtown riverfront area of St. Johnsbury. The Project will address potential safety concerns by implementing new shared lane pavement markings, replacing concrete sidewalk, and installing new granite curb, as well as new signing and striping for crosswalks.

St. Johnsbury currently lacks publicly accessible locations to view and access the Passumpsic River due to the predominantly developed setting and accessibility considerations. The Town has hoped for over a decade that the river could also be an impetus for redevelopment for the former industrial properties along Bay Street, giving those properties value and an amenity to allow the current property owners to either have greater confidence in redevelopment potential or to allow them to sell to enthusiastic new development interests and bring new business and economic opportunities to the town.

The Riverfront Conceptual Access Plan prepared by Greenman-Pederson (GPI 2017) documented the public's strong desire to have a recreational amenity in close proximity to the river (see **Section 2.2.1**). The plan documents widespread support from the riverfront committee and residents of St. Johnsbury to establish public access from the downtown business district to the riverfront accompanied by compatible community and aesthetic improvements.

2

Proposed Action and Alternatives

2.1 Introduction

To satisfy the Purpose and Need for the Project, the Town considered alternative connections between the LVRT trailhead and the existing path on the GMP service road. This chapter describes these alternatives and provides the results of examining each alternative. This chapter concludes with the selection of a single alternative as the Proposed Action.

2.2 Development of Alternatives

The Purpose and Need for the Project (see **Sections 1.3** and **1.4**) identifies objectives for the Project and provides guidance for developing the alternatives to be examined. In developing Project design alternatives, the Town processed information gathered from multiple sources including public input, state and federal design standards, environmental regulations, existing rights-of-way (ROW), property lines, and landowner willingness. The information gathered combined with other factors related to design objectives and limitations were compiled and are discussed below.

Planning Studies

In 2017, a Riverfront Conceptual Access Study was prepared to evaluate concepts for a recreational path along the Passumpsic River between Sleepers River and the Portland Street Bridge (GPI 2017, **Appendix C**). Public participation was an integral component of this study, including meetings and a site walk. The benefit of a riverfront pathway for both local residents and tourists was recognized, with those residing in St. Johnsbury being able to routinely take advantage of ready access to miles of recreational opportunities and for visitors to enhance the economic vitality of the downtown area. During a 2016 site walk, residents "…described the 'new' river path as a 'game changer' in their perception of downtown and the river as a community place and fabulous natural recreational and economic amenity."

Applicable to the Proposed Action, members of the riverfront committee and the general public expressed an interest in having the conceptual plan:

- include a trailhead for parking on Bay Street so that people can follow the river path downstream through GMP parcels from Bay Street to the rail trail;
- engage the interesting natural and built features along the riverbanks and woods;
- interpret the historical and archaeological sites; and
- create park areas for recreation and enjoyment of river access and open spaces.

Design Criteria

The design criteria used for the path include the Vermont Agency of Transportation (VTrans) Standard Drawings for Shared Use Paths and the 2018 VTrans Specifications for Construction.

2.3 Alternatives Considered

The layout of property lines and landowner considerations limit the alternatives that can be considered for this project. Three primary alternatives were evaluated (Alternatives 1, 2, and 3), with slight differences between the alignments, prompted primarily by a consideration of potential impacts to wetland and floodplain features.

Two additional off-road alternatives (4 and 5) were evaluated in the Preliminary Engineering Report but were dismissed from consideration. Alternative 4, which would have utilized on-street facilities along South Main Street and Bay Street, presents safety hazards to users due to the narrow width and truck traffic from the commercial businesses along Bay Street. Alternative 5, which would have consisted of a fully off-road alignment traveling under the South Main Street bridge and crossing the existing rail corridor, was dismissed by the railway owner due to safety concerns associated with a new at-grade crossing.

Alternative 1 – Eastern Alignment

This alignment is depicted on **Map 2.3-1 (Appendix A)** as green line work.[1] It commences at the LVRT trailhead on Main Street and proceeds a short distance on Main Street towards US Route 5 before crossing the road to the west side of Bay Street where it proceeds north to the Bay Street Extension. The path would follow the north side of the Bay Street Extension before diverging east just before the entrance to the Wastewater Treatment Facility to proceed overland. The path would turn northeast at the boundary of the Ralston Building parcel and run roughly parallel to the Passumpsic River, making its closest approach to the riverbank (approximately 60 feet of separation) just south of the circular drive east of the Ralston Building. The path would then proceed north, crossing through public property and a forested floodplain wetland feature while abutting the property line for the Myers waste and recycling facility in order to minimize encroachment on the wetland and maximize distance from the river's edge. However, this alignment would still intersect observed flood chutes within the forested wetland feature, which may be active during flood events with a recurrence interval as frequent as the two-year storm event. The north end of the path would be at the connection with the existing Phase I of the Three Rivers Path, near the power poles associated with GMP's crossing of the Passumpsic River.

Alternative 2 – Western Alignment: Option A

Alternative 2A recognizes the potential regulatory challenges posed by Alternative 1 bisecting a floodplain wetland feature. This proposed pathway would include segments of retaining wall to mitigate wetland impacts at the northern side of the off-road portion of the path This alignment, depicted as purple linework on **Map 2.3-1** would necessitate an easement from the parcel owned by

[1] All Maps referenced in this EA are included in Appendix A.

507 Bay Street LLC, which houses the Myers waste and recycling operation as well as from the triangular CN Brown Company parcel immediately north.

The owners of 507 Bay Street LLC have indicated a desire to limit encroachment in the parcel, and therefore a retaining wall would be necessary based on site topography. Additionally, recognized contamination within the CN Brown Company parcel complicates the establishment of an easement and enhances the potential risk and costs associated with construction in a location with known soil contamination (see **Section 3.10**).

Alternative 3 – Western Alignment: Option B

The alignment for Alternative 3 would be largely the same as Alternative 2. However, prior to connecting to the Phase I section of the path, Alternative 3 would shift east to an alignment between Alternative 1 and Alternative 2. This shift would avoid the CN Brown Company parcel while minimizing wetland impacts relative to Alternative 1. This alternative will also utilize a retaining wall in addition to the alignment shift to further minimize wetland impacts. A plan-view of this alternative is shown as blue linework on **Map 2.3-1**.

No Action

In accordance with NEPA requirements, an EA must consider the "No Action" Alternative. No Action would mean that the proposed Project would not be built. The bicycle and pedestrian improvements constructed during Phase 1 of the Project would not connect to the south end of Phase 1 and supporting amenities, maintaining an incomplete road access network for visitors and residents alike.

A No Action Alternative would sustain the current informal connection between the LVRT trailhead and Phase 1 along Bay Street, which is characterized by bicycle lane pavement markings on the road shoulder and no formal separation between vehicular and bicycle traffic and no sidewalk. This means that visitors and residents would continue to experience limited, informal, and at times unsafe access between the LVRT and the downtown amenities provided by St. Johnsbury.

2.4 Selection of the Proposed Action

Alternative 1 was not selected at the Proposed Action based on the degree of floodplain wetland impact it would entail, which is the largest amongst the three alternatives (see **Table 2.4-1**). While Alternative 3 would involve considerably less (but not unavoidable) wetland impact, the easterly curve to avoid the CN Brown Company parcel would intersect observed flood chutes. Based on coordination with the Vermont Department of Environmental Conservation (DEC) Rivers Program, it was determined that, should a path alignment through these chutes be damaged by a future flood event, DEC authorization for path reconstruction may not be issued.

Based on wetland encroachment and the potential risk of flood-related damage to the path for Alternatives 1 and 3 and the associated possibility that reconstruction may not be authorized, Alternative 2 (see **Plan 2.4-1**) was selected as the Proposed Alternative.

Table 2.4-1 Wetland and Wetland Buffer Impacts by Alternative

Alternative	Wetland Impact (square feet)	Wetland Buffer Impact (square feet)
Alternative 1	17,872	14,008
Alternative 2 (Proposed Action)	0	21,406
Alternative 3	3,357	17,767

2.4.1 Description of Proposed Action

The construction of Phase 1 included bicycle and pedestrian improvements along Bay Street from the Main Street intersection north to the general location of the Myers waste and recycling center at 501 Bay Street. From this point, no formal connection to the south end of Phase 1 exists. Phase 2 proposes to take the on-road path alignment from Bay Street, connecting with the previously constructed path just south of the GMP substation. The proposed path would commence at the existing LVRT trailhead at Main Street near the Sleepers River and continue north as a roadside and overland path to connect to the southern terminus of Phase 1 of the Three Rivers Path. The Proposed Action would complete a multiuse recreational path connection from the LVRT to downtown St. Johnsbury.

The Project proposes a ten-foot-wide paved shared use path from the LVRT trailhead that continues across Main Street to Bay Street (connected by a crosswalk) and adjacent to Bay Street to Bay Street Extension. On Bay Street, the path would cross the railroad tracks, where a rail crossing upgrade may be required by the Washington County Railroad ("WACR"). A crosswalk would take the path across Bay Street to parallel Bay Street Extension where it becomes a 10' wide paved shared used path. Where the path veers east away from Bay Street Extension, the path would become a 10' wide aggregate shared use path.

The alignment for the Proposed Action is described in **Section 2.3.2** and shown on **Map 2.3-1**. Typical sections for the Proposed Action are depicted in **Plan 2.4-1**. Where the path is adjacent to road surfaces, it would consist of a 6'-0" wide bituminous concrete surface with an additional 2'-0" shoulder. Further safety elements are provided with a chain-link fence on the side opposite the road and a grass panel of variable width between the path and the road. A summary of the proposed improvements for the full pathway construction is provided below.

- Sidepath Construction: A sidepath will be utilized for the trail along South Main Street and Bay Street prior to connecting to Bay Street Extension. The typical section for the sidepath will consist of an 8-foot-wide bituminous path surface with a 3-foot-wide green strip with fencing to separate it from South Main Street and Bay Street.
- Shared-Use Path Construction: The construction of the shared-use pathway will begin at Bay Street Extension following the Bay Street crossing. The path will follow Bay Street Extension south along the east side of the street to the wastewater treatment facility. From there, the path would turn east and parallel the Passumpsic River and head north before connecting to the Phase I section of the path. The typical section for the shared-use path will consist of a 10-foot-wide aggregate path surface with 2-foot-wide

shoulders. Drainage swales and culverts will be installed where necessary to maintain existing drainage patterns.

- Bay Street Pavement Markings: The sidepath installation along Bay Street will require shifting the existing curb line along the eastern edge of the roadway to provide adequate space for the path construction. The pavement markings (centerline, edge lines) within this area will need to be reconfigured to account for this change.
- Retaining Wall Construction: Retaining walls have been implemented in the project to help mitigate significant adverse impacts. Both alternatives include approximately 80 feet of retaining wall adjacent to US Route 5 (Railroad Street) to accommodate sidepath widths. Alternative 2 will include additional segments of retaining wall to mitigate wetland impacts at the northern side of the off-road portion of the path.

3

Affected Environment, Environmental Consequences, and Mitigation

3.1 Introduction

This chapter describes the existing environmental conditions within the Project Area that will potentially be affected by the Proposed Action. See **Map 1.1-1** for a map of the overall Project Area and the proposed limits of the path for the Proposed Action.

The Study Area was defined to evaluate potential effects to resources that may result from construction of the Proposed Action. The Study Area includes the proposed limits of disturbance (LOD), as described in preceding **Section 2.4.1**, as well as areas beyond the LOD to identify resources that may be affected by construction of the Proposed Action for the Project (*e.g.,* wetland buffers associated with wetland features at some distance from the LOD).

This Chapter also describes the environmental consequences of the Proposed Action. USDA-RD defines direct effects, indirect effects, and cumulative impacts based on CEQ regulations (40 C.F.R. Parts 1500-1508). Direct effects are caused by an action and occur at the same time and place as the action. Indirect effects are caused by the action and are later in time or farther removed in distance, but still reasonably foreseeable. Cumulative impacts are the impacts on the environment that result from the incremental effects of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions (FHWA Interim Guidance 2003).

For purposes of this discussion, effects resulting from multi-use path improvements as well as temporary construction effects were evaluated collectively for each resource with no attempt to distinguish between direct and indirect effects.

The resource categories considered in this Report are based on USDA-RD Instruction 1970-C and are listed below. Resource categories that were evaluated and dismissed from further analysis are discussed in **Section 3.2**.

- Land Use (Section 3.3)
  - General Land Use
  - Important Farmland
  - Formally Classified Land
- Floodplains (Section 3.4)
- Wetlands (Section 3.5);
- Historic Properties (Section 3.6);
  - Above-ground Historic Resources
  - Archaeological Resources
- Biological Resources (Section 3.7);
  - Threatened and Endangered Species
  - Fish and Wildlife Habitat
  - Vegetation
- Water Quality Issues (Section 3.8);
- Socio-Economic / Environmental Justice Issues (Section 3.9);
- Miscellaneous Issues (Section 3.10);
  - Transportation
  - Noise
  - Hazardous and Contaminated Materials
- Mitigation (3.11)

The existing conditions of the Study Area are then described and the environmental consequences of the Proposed Action are determined. Where impacts could not be avoided, mitigation measures were considered for the Proposed Action and are described where included.

3.2 Resources Categories Dismissed from Analysis

Coastal Resources

There are no coastal resources within the Project Area.

Air Quality

The Project is located in Caledonia County, which is designated by the EPA's Nonattainment of Criteria Pollutants Green Book as in attainment for all criteria pollutants. The project does not propose to add any sources of air pollution and is likely to have a net benefit by enhancing accessibility of St.

Johnsbury for unmotorized uses. Air emissions would be produced during construction by conventional equipment, resulting in temporary impacts.

Except for temporary construction-related purposes, the project does not propose to add any sources of greenhouse gas emissions.

3.3 Land Use

Affected Environment

3.3.1.1 General Land Use

Located within a mixed-use zoning area within St. Johnsbury Village limits, a portion of the Project Area is comprised of a variety of light industrial buildings with areas adjacent to the Passumpsic River being covered with a mixture of upland and floodplain forest types.

3.3.1.2 Important Farmland

A total of approximately 2,000 feet of the riparian zone that is largely coincident with the floodplain terrace below the ~550' contour is mapped as Prime Farmland (Soil Unit 30A, Ondawa-Sunday complex, 0 to 2 percent slopes, occasionally flooded, see **Map 3.2-1**). The Important Farmlands review conducted by the NRCS state soil scientist for Vermont determined that 0.8 acres of Prime Farmland would be directly converted for the Proposed Action.

3.3.1.3 Formally Classified Land

There are no formally classified lands within the Project Area.

Environmental Consequences

3.3.1.4 No Action

Under the No Action alternative, the Proposed Action would not be funded by USDA-RD or NBRC. There would be no anticipated effect on land use or Important Farmland.

3.3.1.5 Proposed Action

Direct Effects

The Proposed Action would be consistent with the 2017 St. Johnsbury Town Plan, Town zoning (Mixed Used District) and would be a Town-owned project. Therefore, no adverse impacts on land use would be anticipated.

There are 0.8 acres of soils mapped as Prime Farmland that would be disturbed for construction of the Proposed Action. The dominant soils mapped within the Study Area were mapped by the Natural Resources Conservation Service (NRCS) and their relative distributions are depicted in **Appendix D**. The classification of each soil according to the Vermont Farmland Classification is provided in (brackets).

- Ondawa-Sunday complex, 0 to 2 percent slopes, occasionally flooded (Prime farmland);
- Urban land-Adams Nicholville complex, 0 to 8 percent slopes (Not prime farmland);
- Urban land-Adams Nicholville complex, 15 to 25 percent slopes (Not prime farmland).

Accordingly, the Proposed Action would have an adverse effect on important farmland. The Farmland and Conversion Impact Rating Form (Form 1006) was completed to document impacts to farm soils and is pending review from the NRCS-USDA. The form was submitted on September 26, 2023 to the NRCS local field office along with maps indicating the location of the sites. In cases where farmland covered by the Farmland Protection Policy Act (FPPA) would be converted by the proposed project, NRCS field offices will submit the form to the Federal agency involved in the project, in this case the USDA. The USDA will make a determination as to whether the proposed conversion is consistent with the FPPA and the agency's internal policies (USDA 2018).

Indirect Effects

The placement of a recreational path through the center of a mapped Prime Farmland soil unit may be considered as fragmenting an otherwise largely intact soil unit and diminishing its potential for farming. However, the location does provide other challenges for farming, including forested wetlands, the floodplain setting, and historic manipulation of the land surface which may have affected the integrity of the soil column and introduced fill material.

3.3.1.6 Summary of Effects and Mitigation

In summary, the Proposed Action is anticipated to have a short term, site-specific, and minor adverse effect on Important Farmland during construction of the Proposed Action. Based solely on an assessment of impacts on mapped soil units, the Proposed Action would have a long-term, site-specific, and negligible adverse effect on Important Farmland. No significant effect is anticipated given that the area mapped as Prime Farmlands is not compatible with agricultural purposes. Past development activities have encroached on the Prime Farmland soil unit, such as for the circle drive east of the Ralston Building.

The extent of industrial development in addition to the mapped floodplain within the Project Area would not readily support future farming activities at the site. Accordingly, no mitigation is proposed for the negligible adverse effect on Important Farmlands.

3.4 Floodplains

Affected Environment

To determine the presence of a FEMA-mapped floodplain, VHB Water Resources Engineers reviewed the Flood Insurance Rate Map ("FIRM") Community-Panel Number 5000310015B (effective date July 3, 1986). Portions of the proposed Three Rivers Path Extension fall within a Zone-A area, a reach of the Passumpsic River that has a detailed flood study. Floods within this reach are anticipated to reach elevations of 560, 557, and 555 feet within specific areas of the Project. See **Map 3.4-1.**

Environmental Consequences

3.4.1.1 No Action

Under the No Action alternative, the Proposed Action would not be funded by USDA-RD or NBRC. The No Action alternative would not result in any changes to the mapped floodplain and therefore would have no effect on floodplains.

3.4.1.2 Proposed Action

Direct Impacts

With the exception of the southernmost portion of the Proposed Action from the LVRT trailhead to the intersection of Bay Street and the Bay Street Extension, the pathway is located within the 100-year floodplain of the Passumpic River (see purple line, **Map 2.3-1** and **Map 3.4-1**).

The Proposed Action would be designed to remain as close as possible to existing grade and to achieve a balanced cut/fill where excavation is required. Therefore, the Proposed Action is anticipated to result in an overall net zero change in floodwater volume and would therefore be in compliance with National Flood Insurance Program (NFIP) standards, thus no mitigation in the form of supplemental floodplain storage is anticipated to be required and is therefore not proposed. Adherence to the final construction plans would be monitored during construction to ensure that fills placed within the floodplain do not exceed the approved quantities. A survey of as-built conditions would be prepared by a licensed land surveyor or professional engineer and would be submitted to the Vermont Department of Environmental Conservation (DEC) Floodplain Manager when project construction is complete.

Indirect Impacts

The minor changes in the topography of the floodplain area for the construction of the proposed action are not anticipated to result in indirect impacts.

3.4.1.3 Summary of Effects and Mitigation

In summary, because the grading for the Proposed Action as designed would result in an overall net zero change in the volume of floodplain storage and avoids observed flood chutes in the forested wetland to its east, no effect (significant or otherwise) on floodplains is anticipated. Past impacts on the FEMA-mapped floodplain include Phase 1 of the Three Rivers Path and building construction over many years, including the wastewater treatment facility.

Adherence to the final construction plans would be monitored during construction to ensure that fills placed within the floodplain do not exceed the approved quantities. A survey of as-built conditions would be prepared by a licensed land surveyor or professional engineer and would be submitted to the Vermont Department of Environmental Conservation (DEC) Floodplain Manager when project construction is complete.

The Proposed Action is subject to the 8-Step Decision-Making Process as required by Executive Order 11988 (Floodplain Management).

- **Step 1. Determine whether: 1) the proposal is located in 100-year floodplain or 500-year floodplain for critical facilities, and 2) the proposal has the potential to affect or be affected by a floodplain.**

  The Proposed Action is located in the 100-year floodplain of the Passumpsic River and has the potential to affect or be affected by the floodplain.

- **Step 2. Notify the public at earliest possible time of the intent to carry out an action in a floodplain, and involve the affected and interested public in the decision-making process (the public notification process will occur when the EA is published for public comment and review after the Agency accepts the EA as a Federal document).**

  Public comment on the Proposed Action is being solicited commencing concurrently with the Notice of Availability for the draft EA.

- **Step 3. Identify and evaluate practicable alternatives to locating the Proposed Action in the floodplain.**

  The southern end of Phase 1 of the LVRT Riverfront Extension to which the Proposed Action must connect is located in the 100-year floodplain of the Passumpsic River. Most of the land between this location and the LVRT trailhead at South Main Street lies within the 100-year floodplain. Therefore, no practicable alternatives to the Proposed Action were identified that meet the purpose of the Project, which mandates a near-river alignment to address the general lack of riverfront access in St. Johnsbury.

- **Step 4. Identify the full range of potential direct or indirect impacts associated with the proposal's occupancy or modification of floodplains, and the potential for direct and indirect support of additional floodplain development that could result from implementing the proposal.**
  - The Proposed Action does propose the introduction of residents or additional workers within the floodplain.
  - The Proposed Action would not result in a decrease in floodplain storage.
  - The Proposed Action would result in beneficial effects on community resources through the enhancement of an existing recreational amenity and connectivity to the downtown area.
  - The Proposed Action involves the construction of a recreational path and is not likely to act as the impetus for further development in the floodplain. Town ordinances regulated construction in FEMA-mapped floodplain areas.
  - The implementation of a retaining wall in proximity to a forested wetland feature may alter flood flows in a way that affects the hydrology of the wetland, though impacts may or may not be adverse.

- **Step 5. If there are no practicable alternatives for the proposal to occupy or modify the floodplain, the evaluation must identify measures that will minimize the potential adverse impacts to the floodplain and, where possible, propose actions that will restore natural and beneficial floodplain values.**

  The Proposed Action would be designed to remain as close as possible to existing grade and to achieve a balanced cut/fill where excavation is required. Furthermore, the Proposed

Action avoids the location of observed flood chutes. Therefore, no adverse impacts to the floodplain are anticipated.

- **Step 6**: **Re-evaluate the proposal to determine: 1) if it is still practicable in light of its exposure to flood hazards; 2) the steps necessary to minimize these impacts; and 3) its potential to take actions that could restore and preserve floodplain values.**
    - The Proposed Action will be constructed at grade to the extent feasible, minimizing exposure to flood hazards.
    - The Proposed Action would achieve a balanced cut/fill where excavation is required, and would therefore not result in a loss of floodplain storage or affect other floodplain areas outside the Project limits.
    - As discussed in Chapter 2, the Proposed Action was selected based on the fact that it is the alignment located farthest from the banks of the Passumpsic River at the location of the forested wetland feature and it avoids observed flood chutes. No other practicable alternatives were identified.
- **Step 7**. **If after evaluating the applicant's analysis, the Agency agrees with the applicant on its analysis that no practicable alternative exists for the proposal to occupy or modify a floodplain, the applicant will document the analysis and findings in the EA. The Agency and applicant will document the finding and provide an explanation of the relevant factors considered in the decision in the public notice announcing the availability of the EA.**
    - See preceding Steps and Section 3.4.1.2 of the EA. The Notice of Availability will include the required information.
- **Step 8**: **After the required public comment period on the EA has expired and after the Agency has considered any public comment(s) on the applicant's proposal to take action to occupy or modify a floodplain, the Agency will document its final decision in the Finding of No Significant Impact (FONSI). The public notice announcing the availability of the FONSI will highlight the decision. The Agency and applicant will ensure that any minimization plans are implemented and that, if appropriate, flood insurance requirements are met.**
    - Pending completion of the public comment period and evaluation of comments received.

3.5 Wetlands

Affected Environment

Three wetlands were identified within the Project Area (**Map 3.5-1**). Wetland 2022-1 and wetland 2022-2 are approximately 0.19 acres and 0.01 acres in size, respectively, and are presumed to be Class III wetlands. Wetland 2022-3 is approximately 3.24 acres in size within the Study Area and is a Palustrine Forested (PFO) wetland (Cowardin *et al.* 1979) that meets at least one of the Vermont Wetland Rules (VWR) Section 4.6 Presumptions necessary to be classified as a Class II wetland. This wetland is also contiguous with a Vermont Significant Wetland Inventory (VSWI)-mapped wetland.

Environmental Consequences

3.5.1.1 No Action

Under the No Action alternative, the Proposed Action would not be funded by USDA-RD or NBRC. The No Action alternative would not result in any activities in wetland areas and therefore would have no effect on wetlands.

3.5.1.2 Proposed Action

Direct Impacts

As discussed in Section 2.4, the Proposed Action was selected in part to avoid direct impacts to wetlands. However, based on the relative positioning of floodplain Class II Wetland 2022-3 and the neighboring 507 Bay Street LLL parcel (to which impacts are to be minimized), avoidance of the buffer for this wetland is not possible. As noted in **Table 2.4-1**, the Proposed Action would result in 9,276 square feet (0.21 acre) of permanent impacts and 12,130 square feet (0.28 acre) of temporary impacts to the associated buffer of Wetland 2022-3 (see **Map 3.5-2**). Temporary buffer and/or wetland impacts may be required based on more advanced design and construction plans, but are anticipated to be minor.

The Proposed Action would require a Vermont Individual Wetland Permit (VIWP) from the DEC Wetlands Program for unavoidable impacts to a Class II wetland buffer. A VIWP was issued to the Town for Phase I of the LVRT path extension on August 30, 2019, which the DEC may choose to amend for the additional impacts of the Proposed Action. Because the Proposed Action would not impact Waters of the U.S., no authorization would be required from the U.S. Army Corps of Engineers pursuance to Section 404 of the Clean Water Act.

To mitigate adverse effects to the wetland buffer, the Proposed Action would employ Best Management Practices (BMPs), which include:

- minimizing the clearing of woody vegetation;
- installing erosion prevention and sediment control (EPSC) measures in accordance with the provisions of the Construction Stormwater Discharge Permit and the associated approved EPSC Plan, including the use of a seed mix consisting of native species to revegetate areas of temporary wetland impact; and
- restoring all areas of temporary disturbance in wetland buffers following construction with seed.

Indirect Impacts

Indirect impacts to Wetland 2022-3 could occur if the path alters the hydrology of the feature, especially the distribution of floodwaters.

3.5.1.3 Summary of Effects and Mitigation

In summary, a long-term, local, and minor adverse effect on wetlands would occur as a result of the Proposed Action due to unavoidable clearing and grading in a wetland buffer and possible changes in the hydrology of Wetland 2022-3 based on potential minor changes in floodwater routing. No

significant effect on wetlands is anticipated. Wetland impacts during construction would be mitigated by adherence to an erosion prevention and sediment control (EPSC) plan and any requirements or conditions in the Vermont Individual Wetland Permit, including but not limited to mitigation measures to limit the spread of non-native invasive species from construction vehicles.

Wetlands in the vicinity of the Proposed Action have likely been affected by historic filling for industrial land uses and rail transportation. The shape and orientation of Wetlands 2022-1 and 2022-2 suggest past alteration. However, Wetland 2022-3 appears to be a relatively intact feature.

3.6 Historic Properties

This section describes the above-ground historic resources within the APE. It describes the environmental consequences of the Proposed Action on those historic resources and discusses the avoidance, minimization, and mitigation of effects on the resources.

Affected Environment

3.6.1.1 Above-ground Historic Resources

In November 2018, VHB completed a Historic Resources Assessment for the Three Rivers Path Extension – Phase 1, and the VDHP concurred with the recommendations of eligibility for listing in the National Register of Historic Places ("National Register") as well as the recommendation of effect – No Adverse Effect. In April 2023, VHB completed a draft Section 106 letter for Phase 2 of the project, which is pending Town review before submittal to the VDHP (see **Appendix E**). Phase 1 and Phase 2 contained 16 of the same properties and contained similar APEs; in the report, VHB which documented the changes to the APE since 2018.

3.6.1.2 Archaeological Resources

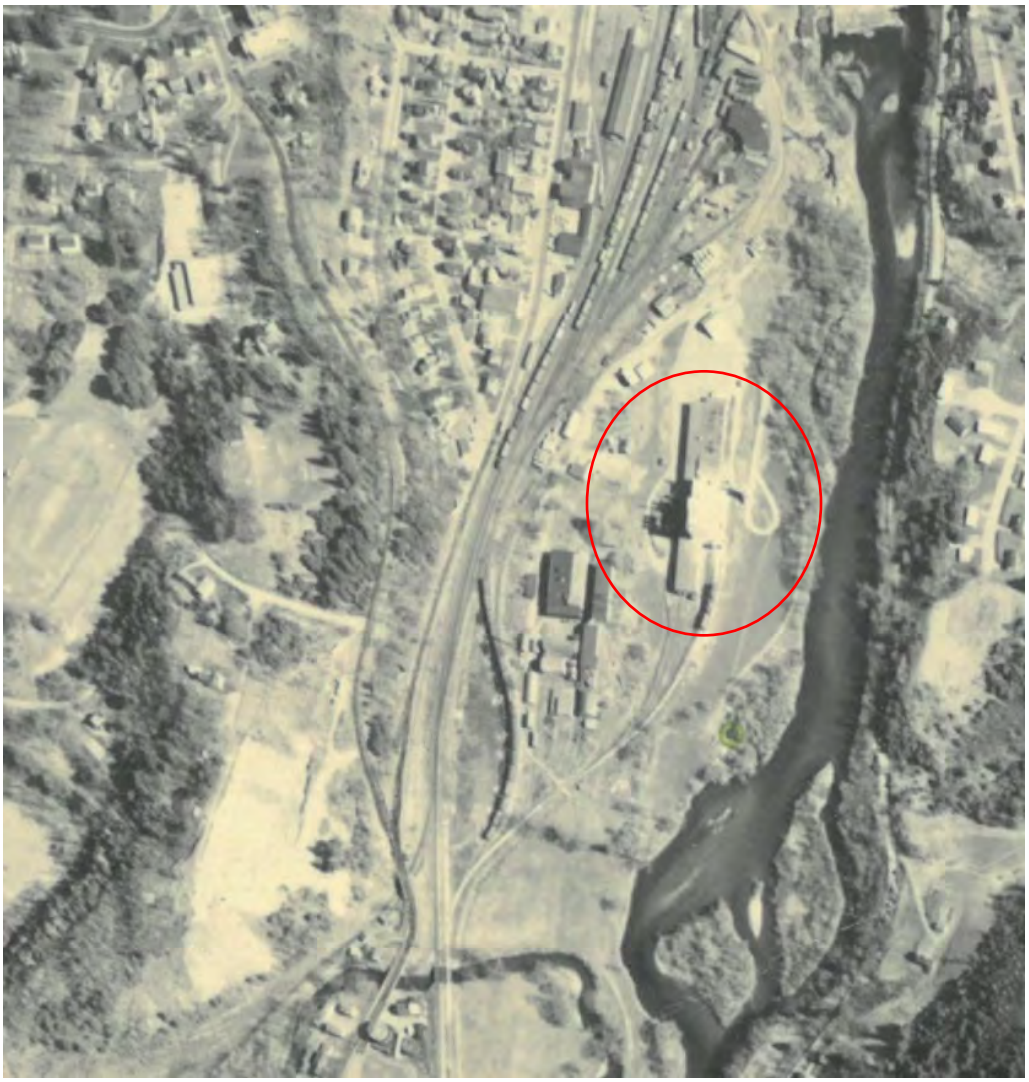
As detailed in the draft Section 106 letter (**Appendix E**), the area of the Three Rivers Path has been evaluated for potential archaeological resources on multiple occasions since at least 1993. Of particular note is backhoe testing completed in 1994 in the vicinity of the Proposed Action (see **Map 3.6-1**). This study is discussed in the 1997 addendum to a 1993 Phase 1A study prepared by Hartgen Archaeological Associates, Inc. ("Hartgen," see **Appendix E**). Backhoe testing was completed because a 50 m (1,640 ft) portion of the path alignment along the Passumpsic River east of Ralston Mill was considered by VDHP to be sensitive for prehistoric archaeological sites.

The 1997 Phase 1B supplement to the 1993 Phase 1A report indicates that:

> "*Extensive backhoe testing along the T0 terrace upon which the bike path will be constructed between STA 0+600 and 1+100 demonstrated that the terrace dates from the nineteenth century. No archaeological field reconnaissance is recommended for this area.*"

This report characterizes the Study Area as previously disturbed and has been repeatedly filled with sand and gravel since the area developed during the last 200 years (Hartgen 1997). A 1962 photograph of the area shows some of the historical disturbance of the APE for the Proposed Action.

Figure 3.6-1. View of Ralston Mill, 1962



The 1962 aerial photograph shows the Ralston Purina Mill (red circle) and the rail spur that went to the mill. The buildings to the southwest of the Ralston mill are no longer extant. The treatment plant had not yet been constructed. The photograph shows the extensive railroad activity. Apparent evidence of another rail spur known as "The Loop" is visible to the east of the Ralston spur, close to the river. Source: Vermont Center for Geographic Information.

3.6.1.3 Properties Formally Listed in the National Register

There are no properties within the APE that are formally listed in the National Register.

3.6.1.4 Properties Determined Eligible for Listing in the National Register

The properties are evaluated in the Section 106 letter to the VDHP (**Appendix E**).

As recommended in the Phase 2 report, there are four (4) historic properties in the Area of Potential ("APE"). One of the properties included multiple resources (202 Bay Street, Ide Flour Mill). The

properties are listed and described below. Descriptions are found in the Section 106 letter to VDHP (**Appendix E**):

The Washington County Railroad ("WACR")

The Project path generally parallels the Washington County Railroad, formerly the Canadian Pacific Railway, originally the Connecticut and Passumpsic Railroad when it reached St. Johnsbury in 1850. The proposed path is located east of the railroad, the latter a prominent feature that separates the more industrial areas of the Town from the downtown area.

The railroad and its related buildings have also been associated with the Boston and Maine Railroad and the St. Johnsbury and Lake Champlain Railroad, among others. The use has changed since 1850, as the passenger station no longer serves passenger trains. Today, the rail line operates for freight service. The roundhouse has been removed, but the turntable still operates at the southeast corner of the railyard. Buildings associated with the railroad remain, including a section house just north of the Ide Flour Mill complex, and the train shed at the Ide Flour Mill complex. In this section, the railroad retains its historic integrity. The railroad and its associated buildings are a potential historic district; however, studying the length of the railroad corridor is beyond the scope of this path project.

515 Bay Street – Ralston Purina Mill

The Ralston Purina Mill was constructed in 1948 with a 1956 one-story wing added to the north. It was a grain (feed) mill building that operated into the 1970s. The main mill building is a 7-story concrete structure with a seven-story silos at the north and eight-story silos rising in the south end. On this main block there are metal windows at the first, third, and seventh stories, only (on the west elevation). To the north of the grain elevator is a five-story concrete wing with metal windows on each story and freight doors at the half stories (on the west elevation). The 1956 wing measures 60′ x 160′, constructed as office space and other employee spaces (lunch room, locker room, laboratory, conference room). It includes a two-story section and a one-story section clad in brick. On the western elevation, the entire wing is clad in metal siding. A rail siding formerly sat to the east of the mill, which can be seen in the 1962 aerial. Today the mill has been rehabilitated into office space.

The Ralston Purina Mill is eligible for listing in the National Register under Criterion A and C representing industry and commerce in northern Vermont and as an example of a mid-20th century mill.

202 Bay Street – E.T. & H.K. Ide Flour Mill Complex

The Ide Flour mills were established in Passumpsic Village, VT by Timothy Ide and the partnership of E.T. & H.K. Ide formed in the late 1860s. In 1879, the family-owned company located on Bay Street on former swamp land reclaimed by the Ide family. The Ide complex consists of multiple buildings including a grinding mill, storage bin, train shed, storage sheds (184 Bay Street), and coal storage (152 Bay Street).

The main building, the grinding mill, was constructed in 1906. It is a four-story building constructed of rock-faced concrete blocks, 4x5 bays with a shed roof measuring 50′ tall on a foundation of piles driven 20′ down to bedrock. A shed roofed timber frame storage bin sits at the southeast corner. A grain storehouse, 1895, is a 5-story elevator monitor, timber frame, with a monitor roof and dimensions 50′ x 80′. The train shed is a gable roofed, timber frame structure with clapboard siding,

sitting over the railroad tracks on the east side of the mill. Additional storage buildings on the parcel contribute to the historic complex.

The Ide Mill complex is no longer in operation as a mill; however, it currently serves the agriculture industry. The Ide Mill complex is eligible for listing in the National Register under Criterion A for Industry, representing a long-standing mill business in St. Johnsbury and under Criterion C for Architecture as an example of a late 19th century flour mill in northern Vermont.

Lamoille Valley Rail Trail ("LVRT")

The Lamoille Valley Rail Trail occupies the former railroad corridor from St. Johnsbury to Swanton, which was constructed between 1869 and 1877 as a segment of the Portland and Ogdensburg Railroad – Vermont Division. The railroad operated under various management and similar names throughout its lifetime. In 1880 the line was renamed the St. Johnsbury and Lake Champlain Railroad (St. J & L.C.). The line was known as "The Bridge Road", named for the six covered railroad bridges on its scenic route traversing small towns, forest, farmland, and picturesque train stations. The St. J & L.C. provided a connection between Portland, Maine and Ogdensburg, NY.

In 1948, the railroad was reorganized as the St. Johnsbury and Lamoille County Railroad. At this time, the conversion from steam to diesel required costly improvements to the track and bridges to support the heavier engines. The advent of the automobile caused declining ridership and in 1956, passenger service was discontinued. The U.S. Postal Service terminated a profitable mail contract that same year. In 1973, the State of Vermont purchased the railroad, renaming it the Lamoille Valley Railroad (LVRR) in 1978. Important businesses such as talc and asbestos companies closed in the 1970s. Excursion trains ran in the 1980s, but the track was not maintained. The LVRR ceased operation in 1994, and in 2002 the State of Vermont began converting the LVRR to the LVRT.

The Lamoille Valley Railroad is eligible for listing in the National Register under Criterion A – Transportation - as a good example of rural, east-west rail service in northern New England. The railroad contributed to the development of rail communities such as Sheldon Junction, Morrisville, Hardwick, and St. Johnsbury. The railroad provided valuable freight and passenger service to the communities along its route, stimulating industrial, commercial, and agricultural growth.

Environmental Consequences

3.6.1.5 No Action

Under the No Action alternative, the Proposed Action would not be funded by USDA-RD or NBRC. No ground disturbing activities would be carried out and no physical structures affected. Therefore, no effect on historic properties would occur.

3.6.1.6 Proposed Action

Direct Impacts

The Proposed Action would construct a path on some of the historic property parcels but would not affect the physical structures. The Proposed Action would not remove or diminish any of the characteristics or the historic integrity that qualify the properties for listing in the National Register. Given that past archaeological studies within the APE for the Proposed Action have recommended no

further studies (**Appendix E**), the Proposed Action is recommended as having no adverse effect on historic properties. This recommendation is pending a formal determination by the State Historic Preservation Officer ("SHPO"). No mitigation or stipulations for above-ground or archaeological resources are proposed. On July 11, 2019, the SHPO issued a determination of No Adverse Effect for Phase I of the Project. The Section 106 letter for Phase II recommending a determination of No Adverse Effect was prepared for SHPO review, subsequent to review and approval of the report from the Town. The comprehensive Section 106 documentation compiled in **Appendix E** demonstrates that the majority of the Project's Area of Potential Effect ("APE") is located within the APE assessed in Phase 1, and that the findings from the Phase 1 Historic Resources Assessment prepared by VHB in 2018 remain valid and are applicable to the Project.

Indirect Impacts

There are no indirect impacts to the historic properties as a result of the Project.

3.6.1.7 Summary of Effects and Mitigation

The Proposed Action would have no adverse effect on historic properties. No significant effect on historic properties is anticipated. Because the Proposed Action would have no adverse effect on historic properties, it is anticipated to add an imperceptible adverse increment to no cumulative impacts on historic properties in the area.

3.7 Biological Resources

This section identifies wildlife resources and habitat, including threatened and endangered species located within, and in the immediate vicinity of, the Study Area and evaluates the potential environmental consequences to these resources that would result from the Proposed Action.

Affected Environment

3.7.1.1 Threatened and Endangered Species

A query of the Vermont Natural Heritage Inventory database did not reveal any documented occurrences of Threatened or Endangered Species in the Project Area. However, a species list derived from the U.S. Fish and Wildlife Service Information for Planning and Consultation ("IPaC") website revealed that the Proposed Action is located within the known range of the state and federally listed endangered northern long-eared bat (*Myotis septentrionalis*), although critical habitat for the species is not present (**Appendix F**). Completion of the Determination Keys for the Study Area reached a preliminary determination that the Proposed Action would have No Effect on the northern long-eared bat with no further consultation with the USFWS required (see **Appendix F**).

In August 29, 2023, VHB conducted a PRT survey for the Study Area, capturing all areas within at least 50' of the proposed project limits of disturbance. VHB identified PRTs based on the Vermont Fish and Wildlife Department's ("FWD") February 2017 documents; "Regulatory Review Guidance for Protecting Northern Long-eared Bats and Their Habitats" and "Survey Methods for Potential Roost Trees for Endangered Bats", which present the following guidance criteria:

- a cavity tree exhibiting any form of decay or excavation by primary cavity producers that provides access to the interior of the bole;
- a tree with cracks or crevices into which bats may roost, including bark furrows;
- a tree with peeling or exfoliating bark;
- live shagbark hickory or black locust; and/or
- a tree with roost features whose total tree height exceeds 10 feet and is at least four inches in Diameter at Breast Height ("DBH").

Three PRTs were recorded in the Study Area during the August 29, 2023 field survey. Locations of on-site PRTs are depicted in the Natural Resources Map (**Map 3.5-1**). Species included American elm, Box elm, and Black ash; and roost types included sloughing bark, cavities, and cracks.

Per FWD's *Tree cutting in Indiana bat range of Vermont during environmental review* (2021), these PRTs may need to be considered in Project planning to minimize potential impacts to roosting bats, and that tree clearing, if necessary, be restricted to the winter months between November 1 and March 31 in order to avoid a potential direct take of MYSE (ANR, 2017), unless further presence/probable absence surveys indicate no protected bats utilize the Project area. However, for the following reasons, it is anticipated that no time of year restriction will be required:

- there are no MYSE occurrences known within a 1-mile vicinity;
- anticipated clearing would be less than one percent of wooded habitat within the 1-mile radius of the Proposed Action, and therefore would avoid triggering further FWD-recommended conservation measures; and
- the USFWS has made a preliminary determination of No Effect on MYSE (**Appendix F**).

3.7.1.2 Fish and Wildlife Resources

Given its proximity to and location within the Passumpsic River Corridor, there is likely to be a variety of both resident and migratory birds as well as aquatic and semiaquatic reptiles and amphibians utilizing the area. There is not likely to be an appreciable amount of medium and large-sized mammals utilizing the Project Area due to its proximity to urban development and those associated disturbances.

The Bald Eagle and six (6) migratory bird species were identified by IPaC as having the potential to occur within the Affected Environment area. See **Tables 3.7-1** and **3.7-2** for an overview of these species, respectively. There is no critical habitat within the Proposed Action's Affected Environment. See **Appendix F** for a copy of the Information for Planning and Consultation (IPaC) Report.

Of these species, based on their life history and habitat requirements, it is unlikely that the Bald Eagle, Bobolink, Cape May Warbler, Chimney Swift, and Wood Thrush would establish nesting sites in the Study Area. The Canada Warbler and Evening Grosbeak may be more likely to establish nesting sites in the Study Area.

Table 3.7-1. Bald and Golden Eagle Protection Act species with the potential to occur within the Affected Environment

Common / Scientific Name	Life History Requirement	Habitat Requirements
Bald Eagle *(Haliaeetus leucocephalus)*	Year-round and breeding	Typically nest in forested areas adjacent to large bodies of water, staying away from heavily developed areas when possible. For perching, Bald Eagles prefer tall super-canopy, mature coniferous or deciduous trees that afford a wide view of the surroundings.

Table 3.7-2. Migratory birds with the potential to occur within the Affected Environment

Common / Scientific Name	BCC Status	Life History Requirement	Habitat Requirements
Bobolink (*Dolichonyx oryzivorus*)	BCC throughout its range in the continental USA and Alaska.	Breeding (May – Jul.) and Aug. presence	Breeds in open areas across the northern United States and southern Canada, preferring large fields with a mixture of grasses and broad-leaved plants like legumes and dandelions. Nests in hayfields and meadows. After breeding, moves to freshwater marshes and coastal areas to molt before migrating.
Canada Warbler (*Cardellina canadensis*)		Breeding (May – Aug.), presence through Sep.	Breeds in mixed conifer and deciduous forest with a shrubby and mossy understory often near water. Frequents forest slopes filled with rhododendrons in the southern Appalachian Mountains, aspen and popular forests in Canada, and forested wetlands in the central part of their range. During migration they forage and rest in shrubby areas in parks, woodlots, and along forest edges.
Cape May Warbler (*Setophaga tigrina*)		Breeding (Jun. – Jul.)	Breeds in forests of spruce and balsam fir, especially in areas where spruce budworms are abundant. Nest only in relatively mature forests, about 25–75 years old (trees usually over 35 feet tall). During migration, they turn up in just about any woods, scrub, or even thicket, especially towards the edges.

Common / Scientific Name	BCC Status	Life History Requirement	Habitat Requirements
Chimney Swift (*Chaetura pelagica*)	BCC throughout its range in the continental USA and Alaska.	Breeding and presence (Mar. – Aug.)	Breeds in urban and suburban habitats across the eastern half of the United States and southern Canada. They are most common in areas with a large concentration of chimneys for nest sites and roosts. In rural areas they may still nest in hollow trees, tree cavities, or caves. Chimney Swifts forage mostly over open terrain but also over forests, ponds, and residential areas. During migration they forage in flocks over forests and open areas and roost in chimneys at night.
Evening Grosbeak (*Coccothraustes vespertinus*)		Breeding (May. – Aug.), presence Oct. – Dec.	Breeds in mature and second-growth coniferous forests of northern North America and the Rocky Mountains, including spruce-fir, pine-oak, pinyon-juniper, and aspen forests. Less commonly, they nest in deciduous woodlands, parks, and orchards.
Wood Thrush (*Hylocichla mustelina*)		Presence (Apr. – Oct.), breeding (May – Aug.)	Breeds throughout mature deciduous and mixed forests in eastern North America, most commonly those with American beech, sweet gum, red maple, black gum, eastern hemlock, flowering dogwood, American hornbeam, oaks, or pines. They nest somewhat less successfully in fragmented forests and even suburban parks where there are enough large trees for a territory. Ideal habitat includes trees over 50 feet tall, a moderate understory of saplings and shrubs, an open floor with moist soil and decaying leaf litter, and water nearby. Favored understory species include southern arrowwood, smooth blackhaw, spicebush, coast pepperbush, rhododendron, and blueberry.

3.7.1.3 Vegetation

The Project Area is characterized by a mix of woody and herbaceous vegetation, including ostrich fern (*Matteuccia struthiopteris*), black ash (*Fraxinus nigra*), box-elder (*Acer negundo*), silver maple (*Acer saccharinum*), and scouring rush (*Equisetum hyemale*) as well as invasive species such as garlic mustard (*Alliaria petiolata (M. Bieb.) Cavara & Grande*), common reed (*Phragmites australis (Cav.) Trin. ex Steud.*) and common buckthorn (*Rhamnus cathartica L.*). No uncommon, rare, threatened or endangered plant species have been recorded or mapped within the Study Area.

Environmental Consequences

3.7.1.4 No Action

Under the No Action alternative, the Proposed Action would not be funded by USDA-RD or NBRC. No vegetation clearing or ground disturbing activities would be carried out. Therefore, no effect on Biological Resources would occur.

3.7.1.5 Proposed Action

Direct Impacts

Threatened and Endangered Species

As no threatened and endangered species have been identified in the Study Area and completion of the IPaC Determination Key for the northern long-eared bat resulted in a preliminary determination of No Effect, the Proposed Action is anticipated to have no direct impacts on threatened and endangered species.

Fish and Wildlife Resources and Vegetation

Earth disturbance and clearing of vegetation during may temporarily displace wildlife habitat and result in the permanent loss / conversion of forested wetland buffer habitat. Tree clearing would occur over less than half of the proposed alignment, limited to the northernmost portion within the wetland buffer and the wooded area north of the wastewater treatment plant. While only two breeding bird species identified by IPaC might use the Study Area for nesting, tree clearing is proposed to occur outside of the breeding period to limit effects on all breeding bird species.

Given the urbanized setting through which a portion of the Proposed Action would be routed and which includes frequent occupation by humans as well as nearby vehicular and rail traffic, it is assumed that migratory bird species (if present) are tolerant of the noise environment and frequent disturbances and thus the construction phase of the proposed Action is not anticipated to result in a significant effect on migratory birds.

During construction, EPSC measures would be implemented to limit potential effects on aquatic and semi-aquatic species. The resulting effects on wildlife and wildlife habitat during construction would be adverse, although short-term, local and minor. The Town of St. Johnsbury prohibits the discharge of firearms within Village limits (which encompasses the Project Area) so the Project will not create additional hunting pressure, and fishing pressure is likely to remain the same because access to the Passumpsic River would not be appreciably increased. Conversely, recreators who utilize the added portion of the LVRT may have increased opportunities for wildlife viewing such as birdwatching which would increase their overall aesthetic enjoyment of the area.

Indirect Impacts

Threatened and Endangered Species

As none have been identified in the Project Area, there are no indirect impacts expected to threatened or endangered species as a result of the Project.

Fish and Wildlife Resources

Increased noise and human activity associated with Project construction may temporarily displace wildlife from the area.

Vegetation

There are no indirect impacts to vegetation as a result of the Project.

3.7.1.6 Summary of Effects and Mitigation

The Proposed Action is anticipated to have a short-term, local and minor adverse effect on wildlife and habitat during construction due to the placement of EPSC measures that would restrict access to a relatively small portion of the riverfront area and noise propagation associated with construction equipment.

Past, present, or reasonably foreseeable projects in the Study Area that have affected or could affect Biological Resources include the construction of the wastewater treatment plant, historic development and redevelopment as described in **Section 3.6**, and mowing of the area east of the Ralston Building. The Proposed Action would contribute a negligible to minor adverse increment to these cumulative impacts to Biological Resources.

In summary, the Proposed Action is anticipated to have a long term, local and minor adverse effect on Biological Resources due to the permanent loss and conversion of a thin strip of forested wetland buffer. No significant effect is anticipated.

3.8 Water Quality Issues

Affected Environment

The state or federally regulated surface waters in the vicinity of the Proposed Action includes only the Passumpsic River, a perennial stream that flows south directly to the east of the Project Area. The Passumpsic River is a considered a navigable water of the United States and Class A Water as defined in the Vermont Water Quality Standards.

Environmental Consequences

3.8.1.1 No Action

Under the No Action alternative, the Proposed Action would not be funded by USDA-RD or NBRC. No anticipated effects on water quality would occur.

3.8.1.2 Proposed Action

Direct Impacts

The placement of fill below the ordinary high water ("OHW") elevation of the Passumpsic River or within its channel are not proposed. Therefore, there would be no direct impacts to surface waters associated with the Proposed Action. No authorization pursuant to Section 404 or 401 of the Clean

Water Act, Section 10 of the Rivers and Harbors Act, or the Vermont Stream Alteration Rule would be required.

Indirect Impacts

Indirect impacts to surface waters could occur as a result of temporary construction activities and due to the proposed addition of impervious surfaces within the floodplain of the Passumpsic River. However, based on the degree of construction disturbance exceeding one acre and the creation of greater than 0.5 acre of new impervious surface, the Proposed Action would require both an authorization under General Permit 3-9020 for Stormwater Runoff from Construction Sites and an authorization under Vermont Stormwater General Permit 3-9050, respectively. Adherence to an erosion prevention and sediment control ("EPSC") plan and the establishment of operational stormwater treatment practices for the completed project (currently under design) would mitigate adverse effects on surface waters.

3.8.1.3 Summary of Effects and Mitigation

In summary, given the construction phase mitigation measures described above, adverse effects on surface waters would be short-term, site-specific, and negligible to minor, due to the potential for soil erosion during construction. The built Proposed Action is not anticipated to result in an adverse impact on surface waters due to the establishment of permitted stormwater treatment practices. No significant effect on surface waters and no cumulative impacts to water quality issues are anticipated as a result of the Proposed Action.

3.9 Social-Economic / Environmental Justice Issues

Affected Environment

The Study Area zoned as a Mixed-Use District and is industrial in setting, characterized by non-residential commercial / industrial buildings and businesses within a prominent transportation corridor that includes US Route 5 and the WACR-CRD just west and Interstates 91 and 93 to the south. The remaining buildings accessed by the two roads are private residential or farm structures. There are no public, financial, or community services of cultural institutions within the Study Area.

Based on an evaluation of the census data for block group 500059574002, the percentage of the population classified as low income is 54 percent and people of color represent 22 percent of the population. According to the CEQ's *Environmental Justice Under the National Environmental Policy Act*, the threshold for identifying minority populations is 50 percent or "meaningfully greater" than the general population or other relevant geographic area. The percentage of the population classified as low income exceeds this threshold. Additionally, though the percentage of the population of people of color is less than 50 percent, is it notably higher than the overall state average (8 percent). Moreover, the median household income of St. Johnsbury between 2017 and 2021 was reported to be $43,190, with 18.6% of St. Johnsbury residents living in poverty. The poverty line threshold is a set of values which vary by family size and family composition used by the Census Bureau to determine poverty conditions. Considering the described demographic characteristics of the stakeholder community, an environmental justice population resides and is active within the Project Area.

Environmental Consequences

3.9.1.1 No Action

The No Action alternative would not be funded by the USDA or NBRC and therefore would not address an expressed public desire for enhanced recreational activities in proximity to the Passumpsic River. Accordingly, the anticipated beneficial socio-economic and environmental justice effects of the Proposed Action would not occur.

3.9.1.2 Proposed Action

Direct Impacts

The Proposed Action is consistent with the Town Plan (2017), and including "waterfront path" on the Three Rivers Path is noted in the Plan Goals and Priorities and in sub-goal 1.3 regarding "*Housing, Neighborhoods and Recreation Policy: Maintain safe housing and recreational facilities within neighborhoods to meet the diverse needs and livability of St. Johnsbury residents.*" Therein, bullet G. reads:

> "*Extend Three River Recreational Path north along the Passumpsic riverfront to connect Summerville and Downtown neighborhoods according to the June, 2017 Municipal Planning Grant Concept*"

Because the Proposed Action is not located within a residential area and would not require building demolition or relocations, it would not affect an environmental justice population. On the contrary, the establishment of a dedicated transportation connection between the LVRT trailhead and downtown St. Johnsbury is anticipated to have a long-term, moderate beneficial effect on all populations, at a local and regional scale. Related, the anticipated enhanced visitation of the St. Johnsbury downtown area caused by the Proposed Action is anticipated to have the same effect on socio-economics.

Given the lack of public, financial, or community services or cultural institutions within the Study Area, construction activities for the Proposed Action are anticipated to have a short-term local, negligible to minor adverse effect on social and economic considerations for those living and working in or traveling through the Study Area.

Indirect Impacts

Attracting LVRT users and other visitors to the downtown area could serve as an impetus for redevelopment of former industrial properties along Bay Street.

No indirect adverse impacts of the Proposed Action on socio-economic and environmental justice issues were identified.

3.9.1.3 Summary of Effects and Mitigation

The opening of the LVRT has resulted in an influx of visitors to surrounding communities, bringing in new people in search of excellent recreational opportunities throughout Vermont. A dedicated bike and pedestrian connection between the LVRT trailhead and St. Johnsbury's downtown area would attract visitors to the goods and services that St. Johnsbury offers, bolstering economic activity and the long-term growth of the downtown area.

The Proposed Action, when considered in connection with Phase 1 of the Three Rivers Path, would have a noticeable increment to beneficial effects on socio-economic and environmental justice issues associated with a dedicated connectivity between the LVRT trailhead and downtown St. Johnsbury and enhanced access to a natural setting in an otherwise urban / industrial area.

In summary, the Proposed Action is anticipated to have a long term, local to regional and moderate beneficial effect on socioeconomics and all populations (including environmental justice populations). No significant effect is anticipated.

3.10 Miscellaneous Issues

This section evaluates potential effects on transportation, potential noise-related effects, and potential sources of subsurface contamination and/or waste materials within the Study Area and evaluates their potential effects on construction of the Proposed Action.

Affected Environment

3.10.1.1 Transportation

Portions of the Proposed Action are located adjacent to public roads, including Main Street, Bay Street, and Bay Street Extension. All roads are two lane roads. Phase 1 of the Three Rivers Path is present along Bay Street from the Main Street intersection to the Myers Water and Recycling Center. An at-grade crossing of the WACR-CRD line occurs just north of the Bay Street / Main Street intersection. Traffic along Bay Street is largely associated with the businesses in the area. Through traffic typically uses US Route 5, which runs parallel to and west of Bay Street.

3.10.1.2 Noise

The existing noise environment is characterized by transportation uses (trains and vehicular traffic, including truck traffic). The WACR-CRD yard lies just to the west, and train making and switching may represent notable sources of noise in the area. The two-way average annual daily traffic ("AADT") as measured in 2022 on Bay Street is 572 trips and on US Route 5 is 4,027 trips.

3.10.1.3 Hazardous and Contaminated Materials

There are nine hazardous waste sites mapped on the ANR Natural Resources Atlas in the Study Area (see **Map 3.10-1**). Of these, six are open sites with the DEC. The closest site, and one with which the Town is familiar based on proximity to the Proposed Action, is the CN Brown Company parcel at 483 Bay Street. A former bulk storage facility, this site was enrolled in the Brownfields Reuse and Environmental Liability Limitation Program (BRELLA) in August 2019. A Phase II Environmental Site Assessment and supplemental site investigations delineated petroleum and arsenic contamination in soil and groundwater, with the extent of PFAS-contaminated groundwater unknown.

There is one mapped hazardous waste generator at Brenntag Lubricants (492 Bay Street), where there is also an above-ground storage tank. Another above-ground storage tank associated with the Bradford Oil Company is mapped on the west side of Bay Street just north of this address. Lastly, there

is one 4,000 gallon underground storage tank for fuel oil #2 or #4 at the Wastewater Treatment Facility that has an active permit (SJ87-0002).

Environmental Consequences

3.10.1.4 No Action

Under the No Action alternative, the Proposed Action would not be funded by USDA-RD or NBRC. No changes in traffic patterns would occur and the noise environment would be unchanged. No additional solid or hazardous waste would be produced. Therefore, there would be no impacts on hazardous and contaminated materials under the No Action alternative.

3.10.1.5 Proposed Action

Direct Impacts

Transportation

The construction of the Proposed Action may have a short-term, local and minor adverse effect on transportation associated with potential temporary and partial lane closures on Bay Street and Main Street. Detours are not anticipated to be required. On-road traffic management would largely cease once the overland component of the Proposed Action commenced construction.

Once completed, the Proposed Action may have a beneficial effect on transportation as a result of a decrease in pedestrian and bicycle traffic on Bay Street, thus lessening potential conflicts between these means of transportation and vehicular traffic.

Noise

During construction of the Proposed Action, it is anticipated that activities would not exceed the federal construction noise guidelines. No blasting is anticipated to be required. Therefore, specific construction noise control measures would not be required. However, best management practices would be used to minimize adverse effects due to construction noise as feasible and reasonable including the following:

- Assuring that equipment is functioning properly and is equipped with mufflers and other noise-reducing features.
- Locating especially noisy equipment as far from sensitive receptors as possible.
- Using quieter construction equipment and methods, as feasible.
- Maintaining strong communication and public outreach with adjacent neighbors is a critical step in minimizing impact. Often providing abutters information about the time and nature of construction activities can minimize the effects of construction noise.

With the deployment of the mitigation measures described above, adverse noise effects resulting from construction would be short-term, local, and minor.

The completed Proposed Action would not allow for use by motorized vehicles. Therefore, the Proposed Action is anticipated to have a long-term, local, and negligible minor effect on noise based

on the introduction of a new pathway (*i.e.,* the overland component) and human activity in what is now a generally inaccessible or rarely accessed location.

Hazardous and Contaminated Materials

The CN Brown Parcel (the "Property") was investigated in a Limited Phase II ESA of the Property performed by Stantec in 2019-2020 (Stantec 2020), which included the completion of nine borings with temporary monitoring wells for the collection of soil and groundwater samples. The extent of contamination associated with the Property has been characterized. Stantec recommended transitioning to the corrective action planning phase; however, additional sampling may be required. Although grading plans at this location have not been completed, the Proposed Action avoids the location of known contaminated materials associated with a former aboveground storage tank farm on the Property. Laboratory analysis detected typical urban contaminants (PAHs, metals) in soil and PFAS and petroleum VOCs and SVOCs in groundwater samples. The mapped locations of soil and groundwater samples where contaminant levels exceeded Vermont Groundwater Quality Standards are included in the Phase II ESA report.

The Project is designed for a net zero floodplain impact, and any soil removal would be conducted in areas of the Property so far determined to be non-contaminated. However, as design of the Proposed Action advances, additional studies would be required as well as coordination with the DEC Waste Management Division and the landowner. The Phase II ESA report recommended the completion of an Evaluation of Corrective Action Alternatives (ECAA) in accordance with §35-604 to review and evaluate potential remedial options to mitigate identified impacts in soil and groundwater at the Property.

Indirect Impacts

There are no indirect impacts as a result of the Project.

3.10.1.6 Summary of Effects and Mitigation Impacts

In summary, the Proposed Action is anticipated to have a long term, local and minor beneficial effect on transportation and a short-term, local and minor adverse effect due to construction-related noise. No significant effects on transportation or due to noise are anticipated. The effect of the Proposed Action on hazardous and contaminated materials is pending further coordination with the landowner and design advancement. The grantee would be responsible for ensuring that the Project is in full compliance with the DEC Waste Management Division requirements, involving implementation of recommendations outlined by the Phase II ESA and a corrective action plan approved by the DEC as needed that ensures long-term effectiveness in protecting human and environmental health during Project construction and implementation.

The Proposed Action is anticipated to contribute a noticeable beneficial increment to cumulative impacts on transportation via the connection to Phase I of the Three Rivers Path, which would allow for unbroken bike/ped access from the LVRT trailhead to downtown St. Johnsbury. The Proposed Action is not anticipated to contribute to cumulative impacts on noise or hazardous and contaminated materials.

3.11 Summary of Mitigation / Anticipated Permits

Table 3.11.1 summarizes the impacts for each resource area and presents the best management practices that have been previously identified in the Environmental Impacts analysis section. The EA and this summary table may support a Finding of No Significant Impact for the Proposed Action. It should be noted that **Table 3.11.1** only includes resource areas that were not dismissed from analysis as identified in **Section 3.2** and also does not include those resources for which the analysis determined that no effect of any kind would occur for the Proposed Action.

Table 3.11.1 Impacts Summary

Impacts Summary		
Resource Area	**Alternatives**	**Mitigation Measures / Best Practices for Proposed Action**
Land Use	**Proposed Action**: No significant impacts identified. The Proposed Action would be consistent with the 2017 St. Johnsbury Town Plan, Town zoning (Mixed Used District) and would be a Town-owned project. Therefore, no adverse impacts on land use would be anticipated. There would be a site-specific adverse impact on Important Farmlands as 0.8 acres of soil mapped as Prime Farmland would be disturbed for construction of the Proposed Action.	**Mitigation Measures:** NRCS has not evaluated soils in the Project Area to be protected under the FPPA. The mapped floodplain within the Project Area would not readily support future farming activities at the site. Therefore, no required mitigation measures are anticipated pursuant to the FPPA. **Best Practices:** Complete NRCS form AD-1006 for USDA-RD to finalize for FPPA compliance.
	No Action Alternative: No impacts identified.	
Floodplains	**Proposed Action:** No significant impacts identified. Grading as designed would result in an overall net zero change in the volume of floodplain storage and avoids observed flood chutes in the forested wetland to its east. Therefore, no effect (significant or otherwise) on floodplains is anticipated.	**Mitigation Measures:** Monitor construction so fills placed in the Passumpsic River floodplain do not exceed approved quantities and are in compliance with the NFIP standards. **Best Practices:** Subject to 8-Step Process and City authorization. A post-construction survey will be submitted to the Floodplain Manager.
	No Action Alternative: No impacts identified.	

Impacts Summary		
Resource Area	**Alternatives**	**Mitigation Measures / Best Practices for Proposed Action**
Wetlands	**Proposed Action:** No significant impacts identified. There would be no direct wetland impacts. There would be unavoidable impacts to a Class II wetland buffer, amounting to 0.27 acres of permanent impacts and 0.28 acres of temporary impacts from path construction.	**Mitigation Measures:** Restore temporarily disturbed wetland buffers after construction is completed. Implement EPSC plan measures to protect wetlands from debris or sediment generated during construction activities. **Best Practices:** Adhere to all permit conditions outlined in the VIWP from Vermont DEC.
	No Action Alternative: No impacts identified.	
Historic Properties	**Proposed Action:** No significant impacts identified. A section of the path would intersect some of the historic property parcels but would not affect the physical structures. Past archaeological studies within the APE for the Proposed Action have not recommended further studies. The Proposed Action would have no adverse effect on historic properties.	**Mitigation Measures:** None. **Best Practices:** None.
	No Action Alternative: No impacts identified.	
Biological Resources	**Proposed Action:** No significant impacts identified. The Proposed Action is anticipated to have a short-term, local and minor adverse effect on wildlife and habitat during construction due to the placement of EPSC measures and noise propagation associated with construction. The Proposed Action is anticipated to have a long term, local and minor adverse effect on Biological Resources due to the permanent loss and conversion of a thin strip of forested wetland buffer.	**Mitigation Measures:** Avoid impacts to endangered bat species and breeding birds of conservation concern by adhering to time-of-year restrictions for tree clearing pursuant to 50 CFR 402. **Best Practices:** The Project proposes minimal tree clearing and will implement EPSC measures to limit potential effects on aquatic and semi-aquatic species.
	No Action Alternative: No impacts identified.	

Impacts Summary		
Resource Area	**Alternatives**	**Mitigation Measures / Best Practices for Proposed Action**
Surface Waters	**Proposed Action:** No significant impacts identified. There would be no direct impacts to surface waters in the Project Area. Anticipated adverse effects on surface waters would be short-term, site-specific, and negligible to minor, as a result of temporary construction activities and additional impervious surfaces within the floodplain of the Passumpsic River.	**Mitigation Measures:** Implement EPSC plan measures to protect surface waters from debris or sediment generated during construction activities. Implement stormwater runoff infrastructure for the completed project. **Best Practices:** Adhere to all permit conditions outlined in the Construction Stormwater Discharge Permit and Stormwater Discharge Permit.
Socioeconomic and Environmental Justice Resources	**Proposed Action:** No significant impacts identified. The Proposed Action is anticipated to have a long-term, moderate beneficial impact on socioeconomic resources at a local and regional scale by enhancing access to the St. Johnsbury Downtown District & Riverfront Area.	**Mitigation Measures:** None. **Best Practices:** None.
	No Action Alternative: No impacts identified.	
Transportation	**Proposed Action:** No significant impacts identified. The Proposed Action would have a short-term, site-specific and minor adverse impact associated with potential temporary and partial lane closures during construction. The completed project is anticipated to have a beneficial effect on transportation as a result of a decrease in pedestrian and bicycle traffic on Bay Street.	**Mitigation Measures:** None. **Best Practices:** A Transportation Management Plan (TMP) would be developed to mitigate the effects of construction-related activities on vehicular traffic on Bay Street and Main Street.
	No Action Alternative: No impacts identified.	

Impacts Summary		
Resource Area	**Alternatives**	**Mitigation Measures / Best Practices for Proposed Action**
Noise	**Proposed Action:** No significant impacts identified. Noise produced by the construction of the Proposed Action would have a short-term, site-specific and minor adverse impact not to exceed the federal construction noise guidelines. The Proposed Action would not allow motorized vehicle use. However, there is an anticipated long-term, local, and negligible minor effect on noise based on the introduction of a new pathway.	**Mitigation Measures:** None. **Best Practices:** Adhere to Town ordinance for construction hours. Ensure construction equipment that uses internal combustion engines is equipped with noise-suppression equipment per the specifications of the manufacturer and kept in proper working order.
	No Action Alternative: No impacts identified.	
Solid and Hazardous Waste	**Proposed Action:** No significant impacts identified. The Proposed Action would have a short-term, site-specific and negligible adverse impact associated with the recycling and/or disposal of construction-related waste. There are potential site-specific, adverse impacts during construction of the Proposed Action if contaminated materials are encountered at the adjacent CN Brown Company parcel at 483 Bay Street.	**Mitigation Measures:** Specific measures are pending further studies, coordination with the property owner and the DEC, and the completion of a more detailed grading plan. **Best Practices:** Pending further study, involve the preparation of a Soil Management Plan or Corrective Action Plan.
	No Action Alternative: No impacts identified.	

An analysis of local, State, and Federal permits was conducted and the anticipated permits which will be required for the proposed improvements for the LVRT Riverfront Extension are summarized in **Table 3.11-2**. Additionally, the Proposed Action would occur in part on a parcel that has an underlying Act 250 Land Use Permit (#7C0896). The Town will coordinate with the District 7 Environmental Coordinator to determine if an amendment to this permit would be required.

Table 3.11-2 Anticipated Permit Requirements and Authorizations

Permitting Agency	Anticipated Permit Requirement
Vermont Department of Environmental Conservation (DEC) Wetlands Program	Vermont Individual Wetland Permit
Town of St. Johnsbury	Zoning Permit (compliance with Zoning Bylaws and Ordinances, Part 5 Flood Hazard)
DEC Stormwater Program	Authorization under General Permit 3-9020 for Stormwater Runoff from Construction Sites
	Authorization under General Permit 3-9050 for Operational Stormwater Discharges
Vermont Agency of Transportation (VTrans)	State Highway Access and Work Permit (19 VSA 1111), Section 1111

4

Agency Coordination/Public Participation

4.1 Agency Coordination

The Town engaged state regulatory agencies with respect to stormwater, wetlands, and floodplains to gather input that helped inform the design of the Proposed Action. The Town has been committed to fully evaluating natural resources in the Study Area, designing the Project in a manner that avoids environmental impacts to the maximum extent feasible and minimizes unavoidable impacts, and implementing best management practices during construction of the Proposed Action.

As the Project planning and design has advanced, the Town has made specific outreach to regulatory agencies for the purpose of understanding regulatory concerns and opportunities to address these in the context of the Project. The dates and topics of agency coordination meetings related to the Project are provided in **Table 4.1-1** below.

Coordination between the Town, USDA RD, NBRC, and other Federal and state agencies is ongoing and will continue through final design of the Proposed Action.

Table 4.1-1 Agency Coordination

Date	Location	Agency Present	Topic
May 17, 2023	ANR Montpelier	DEC Wetland and Rivers Programs	Review proposed plans for effects on the Class II forested wetland and the Passumpsic River floodplain and river corridor.
June 8, 2023	Onsite	DEC Rivers Program	Review forested floodplain wetland feature for flood chutes, discuss project alternatives, evaluate existing encroachments in the river corridor.

4.2 Public Engagement

The Riverfront Conceptual Access Plan prepared by Greenman-Pederson ("GPI") outlines multiple opportunities for the community to engage and give feedback about their thoughts of the project during the planning process. GPI's full report can be found within **Appendix C** and a summary of each event is outlined below:

- Community River Walk –In July 2016, the Town, Project Team, and Northern Vermont Development Association ("NVDA") hosted this event to allow the public to walk the proposed trail alignment. The proposed alignment began at the LVRT trail terminus and followed Bay Street and Bay Street Extension to access the beginning of the off-road section of trail. Alternatives 1 through 3, depicted in **Map 2.3-1,** replicate this walk. A recurring comment throughout the site walk was: "*A strong desire to have a river trail connect to the rail trail as a single unified corridor was expressed by many*".
- Community Forum – This forum was held on the evening of the site walk noted above and included a public workshop with approximately 25 participants. Those involved shared discussions about taking advantage of this extensive riverfront area to establish a recreation environment for residents and tourism alike.

The LVRT Riverfront Extension has received continued local support during the Riverfront Steering Committee meetings, and during the July 2016 community forum and site walk mentioned above. An initial Project-related meeting was held in July 2018 with the Riverfront Committee. On September 8, 2018, the Committee held a public outreach event at which input was solicited from the public on amenities at the envisioned Trailhead Center and riverfront project. These events stem from the community's enthusiasm for a continuous riverfront connector path from the LVRT terminus to downtown amenities.

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A

Maps

1.1-1 Project Location Map

2.3-1 LVRT Riverfront Extension – Alternatives

3.4-1 FEMA FIRMette FM5000310015B

3.5-1 Natural Resources Map

3.5-2 Wetland Buffer Impact Exhibit

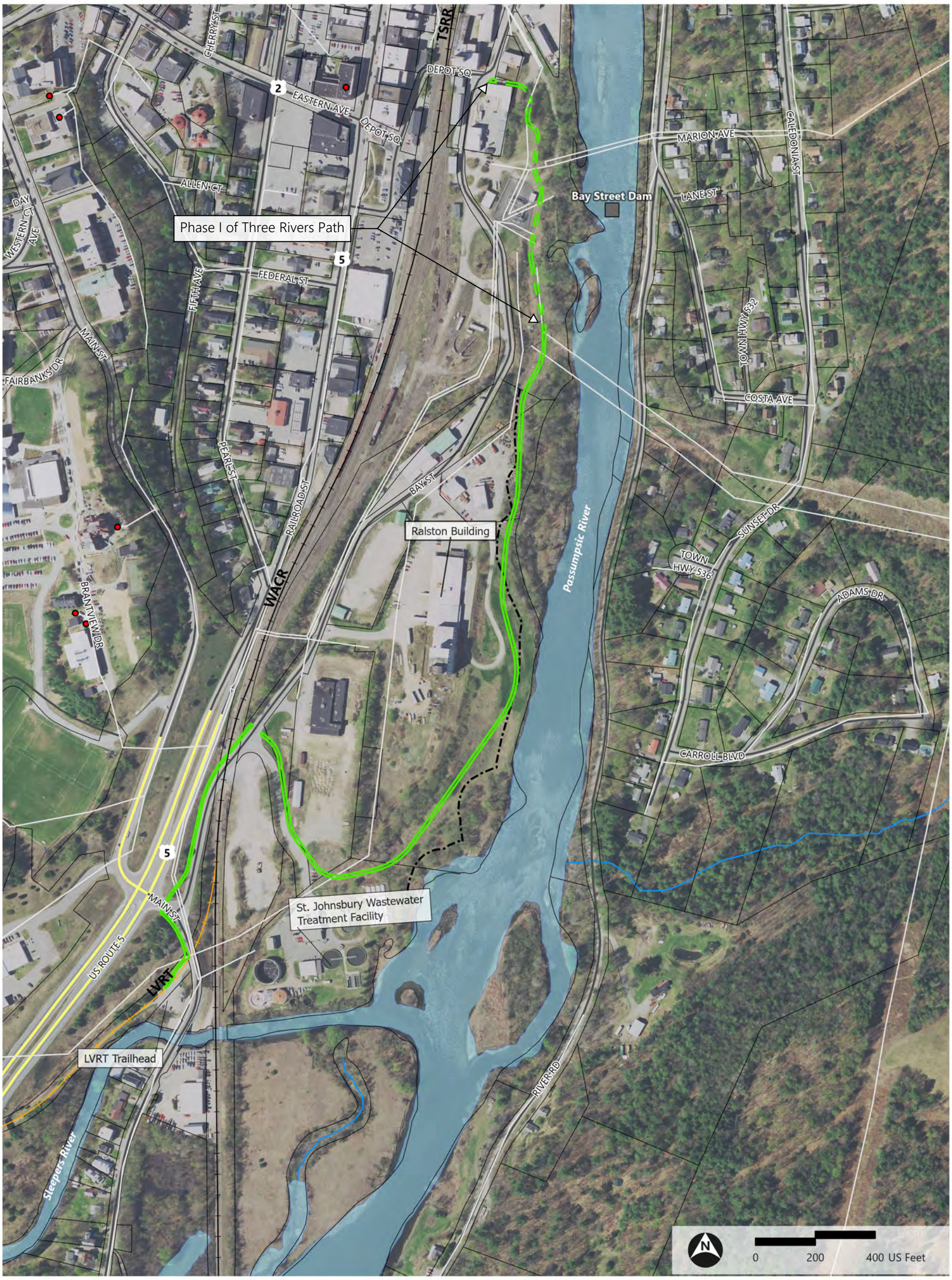
3.6-1 Location of 1994 Archaeological Phase 1B Survey

3.10-1 Hazardous and Contaminated Materials Map

Map 1.1-1: Project Location Map

VTrans Three Rivers Path Extension - Phase II | St. Johnsbury, Vermont

September 26, 2023



Proposed Edge of Path (VHB)

Existing Edge of Path (Phase I, VHB)

GMP Line (VCGI) (13)

Parcel Boundary (VCGI)

Town Boundary (VCGI)

VHD Waterbody VCGI) (3)

VHD Stream (VCGI) (5)

Roads (VTrans)

US Highway

Local Road

Private Road

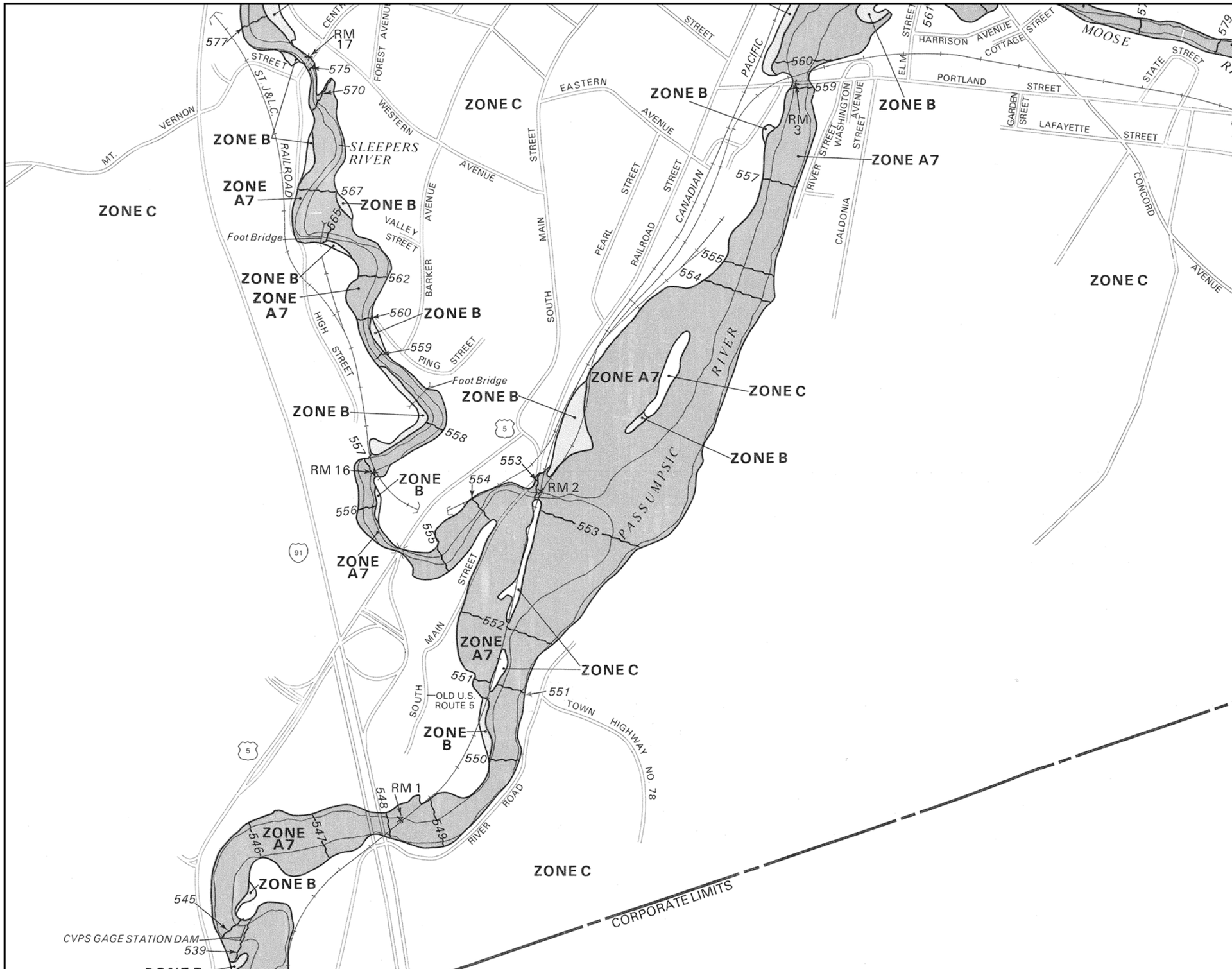
Railroad (VTrans)

Rail Trail (VTrans)

(#) - Represents the number of features present in the map frame.
[1]FEMA Flood Zones have not yet been digitized for this area
Sources: Background imagery by VCGI (Collected in 2021); ANR - Vermont Agency of Natural Resources Web Map Service; VCGI (Vermont Center for Geographic Information Web Map Service); VTrans (Vermont Agency of Transportation Web Map Service); VHB - 2021

Path: \\vhb.com\gis\proj\SBurlington\58090.01 Three Rivers Path Phase2\Project\Three_Rivers_Path_Ext_Ph2_NR\Three_Rivers_Path_Ext_Ph2_NR.aprx (User: cblack, Date: 9/26/2023)

MAP 2.3-1
LVRT RIVERFRONT EXTENSION
ALTERNATIVES 1-3: WESTERN ALIGNMENTS



APPROXIMATE SCALE

800 0 800 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

TOWN OF
ST. JOHNSBURY,
VERMONT
CALEDONIA COUNTY

PANEL 15 OF 20
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
500031 0015 B

EFFECTIVE DATE:
JULY 3, 1986

Federal Emergency Management Agency

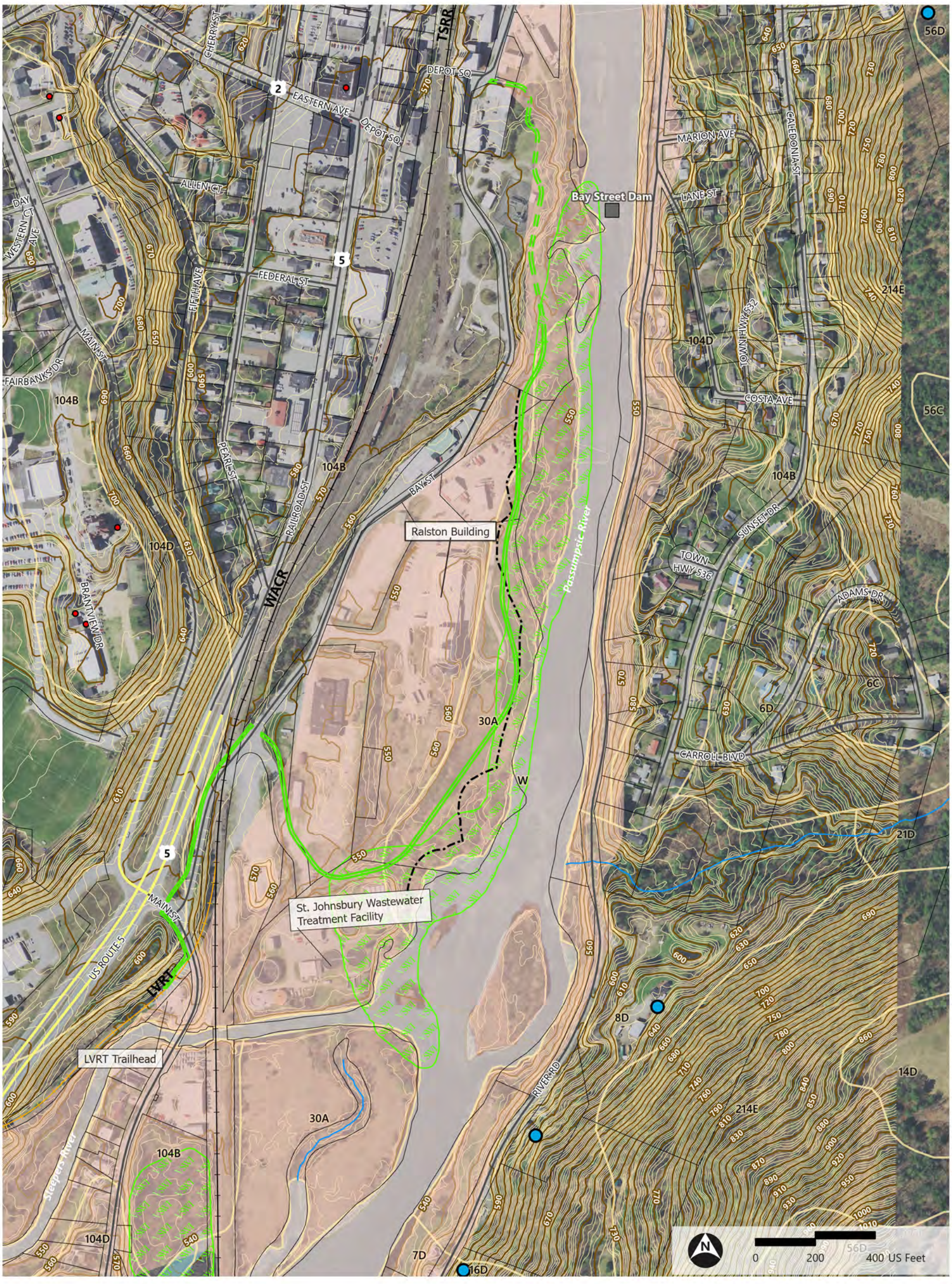
MAP 3.4-1

This is an official FIRMette showing a portion of the above-referenced flood map created from the MSC FIRMette Web tool. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For additional information about how to make sure the map is current, please see the Flood Hazard Mapping Updates Overview Fact Sheet available on the FEMA Flood Map Service Center home page at https://msc.fema.gov.

Map 3.5-1: Natural Resources Map

VTrans Three Rivers Path Extension - Phase II | St. Johnsbury, Vermont

September 26, 2023



Path: \\...jis\proj\SBurlington\58090.01 Three Rivers Path Phase2\Project\Three_Rivers_Path_Ext_Ph2_NR\Three_Rivers_Path_Ext_Ph2_NR.aprx (User: cblack, Date: 9/26/2023)

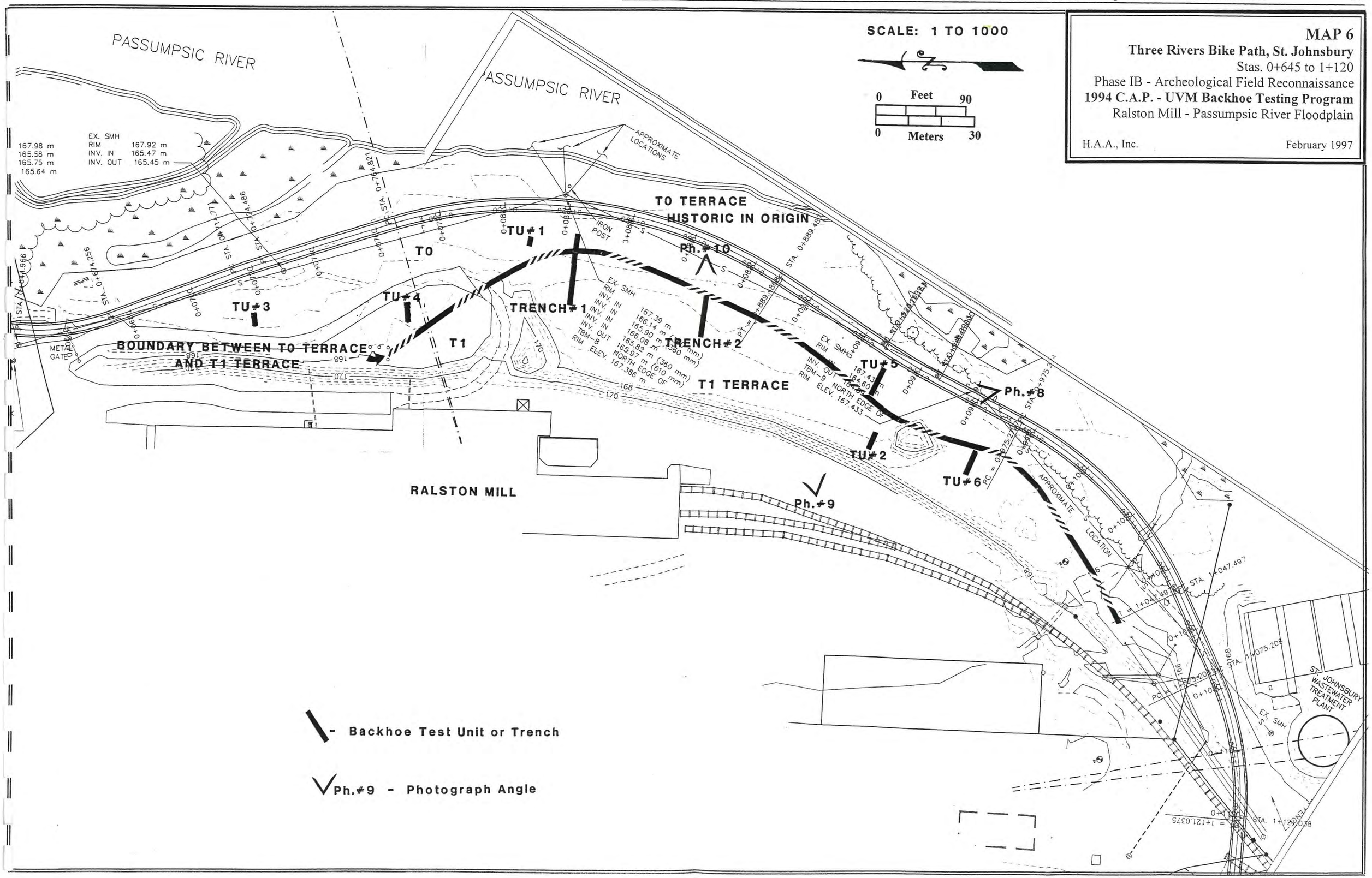
- Proposed Edge of Path (VHB)
- Existing Edge of Path (VHB)
- GMP Line (VCGI) (13)
- Parcel Boundary (VCGI)
- Town Boundary (VCGI)
- VHD Waterbody VCGI) (3)
- VHD Stream (VCGI) (5)

Roads (VTrans)

- US Highway
- Local Road
- Private Road
- Railroad (VTrans)
- Rail Trail (VTrans)

(#) - Represents the number of features present in the map frame
FEMA Flood Zones have not yet been digitized for this area
Sources: Background Imagery by VCGI (Collected in 2021); ANR - Vermont Agency of Natural Resources Web Map Service; VCGI (Vermont Center for Geographic Information Web Map Service); VTrans (Vermont Agency of Transportation Web Map Service); VHB - 2023

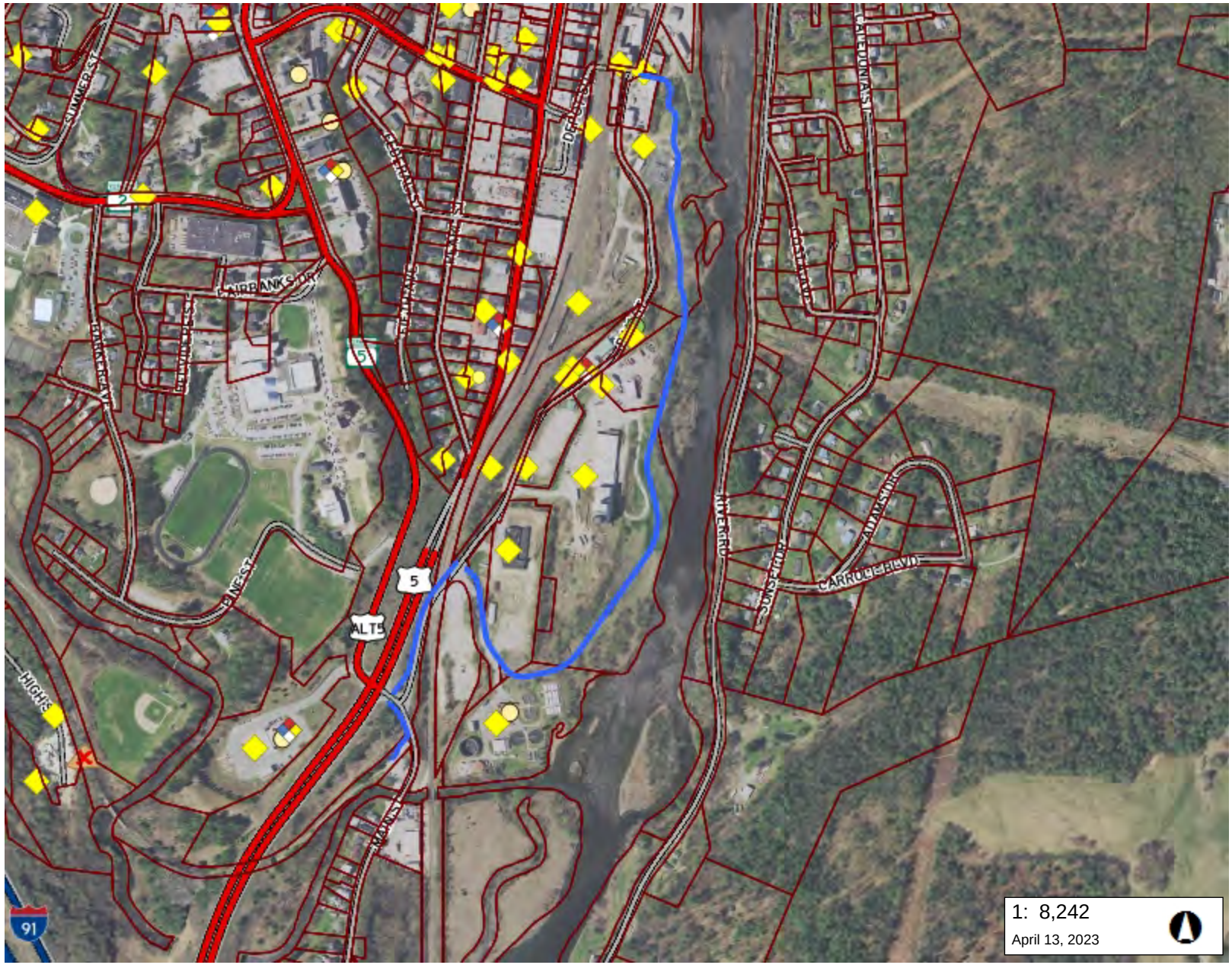
LAMOILLE VALLEY RAIL TRAIL
RIVERFRONT EXTENSION PROJECT
ALTERNATIVE 2


MAP 6
Three Rivers Bike Path, St. Johnsbury
Stas. 0+645 to 1+120
Phase IB - Archeological Field Reconnaissance
1994 C.A.P. - UVM Backhoe Testing Program
Ralston Mill - Passumpsic River Floodplain
H.A.A., Inc.
February 1997
SCALE: 1 TO 1000
0 Feet 90
0 Meters 30
PASSUMPSIC RIVER
PASSUMPSIC RIVER
APPROXIMATE LOCATIONS
T0 TERRACE
HISTORIC IN ORIGIN
T0
TU#1
TU#3
TU#4
TRENCH#1
TRENCH#2
Ph.#10
BOUNDARY BETWEEN T0 TERRACE AND T1 TERRACE
T1
T1 TERRACE
TU#5
TU#2
TU#6
Ph.#8
Ph.#9
RALSTON MILL
APPROXIMATE LOCATION
JOHNSBURY WASTEWATER TREATMENT PLANT
- Backhoe Test Unit or Trench
Ph.#9 - Photograph Angle

Hazardous and Contaminated Materials

Vermont Agency of Natural Resources

vermont.gov



LEGEND

Landfills
- OPERATING
- CLOSED

Land Use Restrictions
- Class IV GW Reclass
- Class VI GW Reclass
- Deed Restriction
- Easement
- Land Record Notice
- Other

Hazardous Site

Hazardous Waste Generators

Brownfields

Aboveground Storage Tank

Underground Storage Tank (w

Parcels (standardized)

Roads
- Interstate
- US Highway; 1
- State Highway
- Town Highway (Class 1)
- Town Highway (Class 2,3)
- Town Highway (Class 4)
- State Forest Trail
- National Forest Trail
- Legal Trail
- Private Road/Driveway
- Proposed Roads

NOTES

LVRT Riverfront Extension. Map created using ANR's Natural Resources Atlas

419.0 0 210.00 419.0 Meters

WGS_1984_Web_Mercator_Auxiliary_Sphere 1" = 687 Ft. 1cm = 82 Meters

© Vermont Agency of Natural Resources

THIS MAP IS NOT TO BE USED FOR NAVIGATION

DISCLAIMER: This map is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. ANR and the State of Vermont make no representations of any kind, including but not limited to, the warranties of merchantability, or fitness for a particular use, nor are any such warranties to be implied with respect to the data on this map.

B

Plans

2.4-1 Alternative 2: Typical Sections and Plan

INDEX OF SHEETS

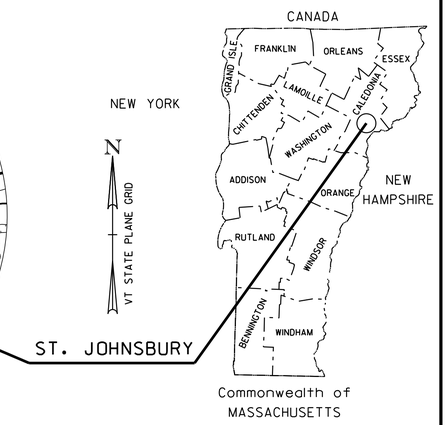
1	TITLE SHEET
2-3	TYPICAL SECTIONS AND DETAILS SHEETS
4-10	ALT 1 LAYOUT PLAN SHEETS
11-12	ALT 2 LAYOUT PLAN SHEETS
13-16	ALT 1 PROFILE SHEETS
17-18	ALT 2 PROFILE SHEETS

TOWN OF ST. JOHNSBURY

COUNTY OF CALENDONIA

PROPOSED IMPROVEMENTS

LAMOILLE VALLEY RAIL TRAIL RIVERFRONT EXTENSION PROJECT

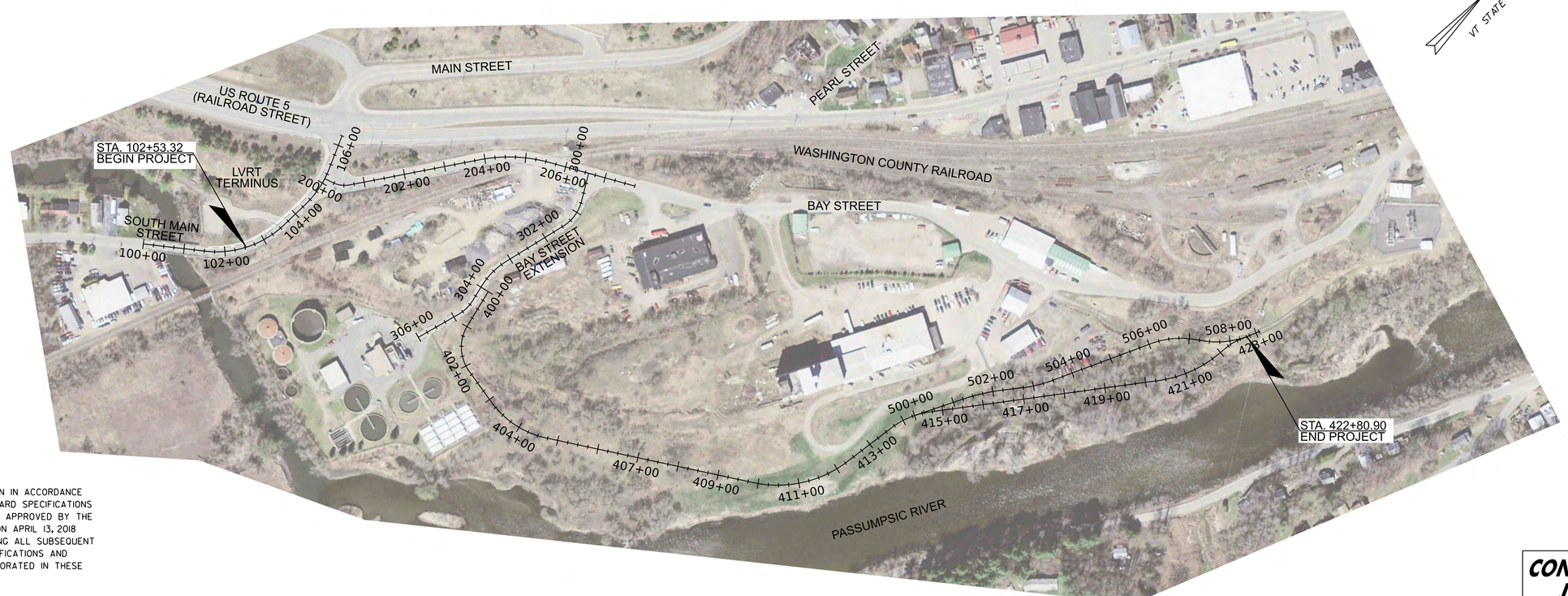


1000 0 1000
SCALE IN FEET

PROJECT LOCATION: BEGINNING AT THE LAMOILLE VALLEY RAIL TRAIL TERMINUS TRAVELING NORTH ALONG SOUTH MAIN STREET AND BAY STREET TO BAY STREET EXTENSION. FOLLOWING THE LENGTH OF BAY STREET EXTENSION ON THE EASTERN SIDE OF THE ROADWAY BEFORE TURNING SOUTH HEADING PARALLEL TO THE PASSUMPSIC RIVER TO CONNECT TO EXISTING TRAIL INFRASTRUCTURE.

LENGTH OF PROJECT: 3,516 FEET = 0.67 MILES

PROJECT DESCRIPTION: WORK TO BE PERFORMED UNDER THIS CONTRACT INCLUDES NEW SIGNING AND STRIPING, CONSTRUCTION OF A NEW SIDEPATH, CONSTRUCTION OF A NEW SHARED-USE PATH, AND INSTALLATION OF NEW CONCRETE SIDEWALKS WITH GRANITE CURB.



CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2018, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON APRIL 13, 2018 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

CONCEPT PLANS
JULY 2023

QUALITY ASSURANCE PROGRAM: N/A

SURVEYED BY : WHITEOUT SOLUTIONS, LLC
SURVEYED DATE : UNKNOWN

DATUM
VERTICAL: NAVD 1988
HORIZONTAL: NAD 1983 (11)

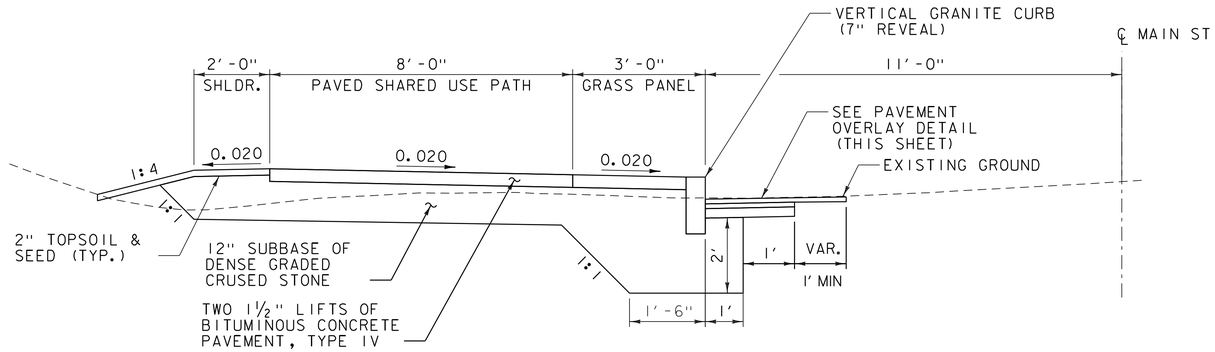
vhb

PROJECT MANAGER : B.M. ROBERTS, P.E.

PROJECT NAME : LVRT RIVERFRONT EXTENSION
PROJECT NUMBER : VHB 58090.01
SHEET 1 OF 18 SHEETS

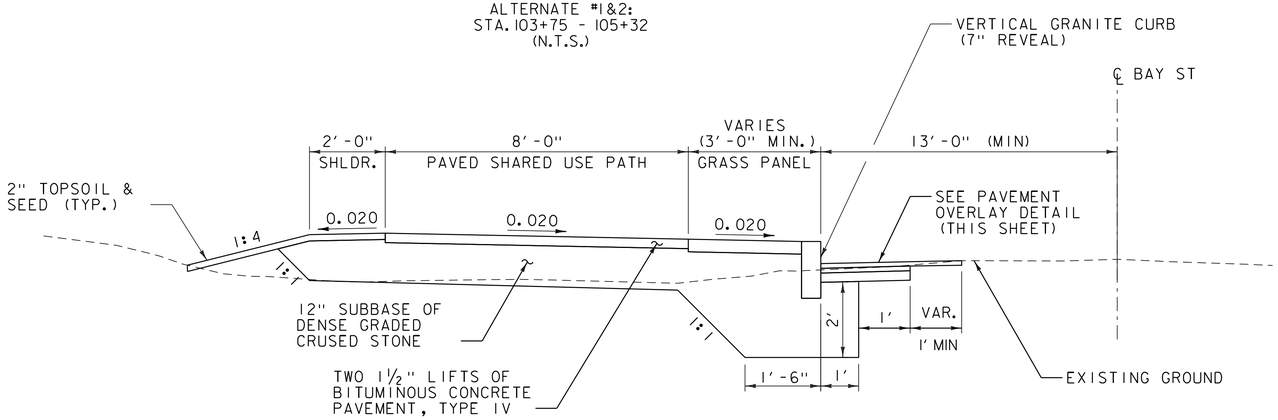
MATERIAL TOLERANCES	
MATERIAL ITEM	THICKNESS TOLERANCE
PAVEMENT (FULL DEPTH)	+/- 1/4" (TOTAL THICKNESS)
SUBBASE	1/2"
SAND BORROW	1"

TYPICAL SECTIONS



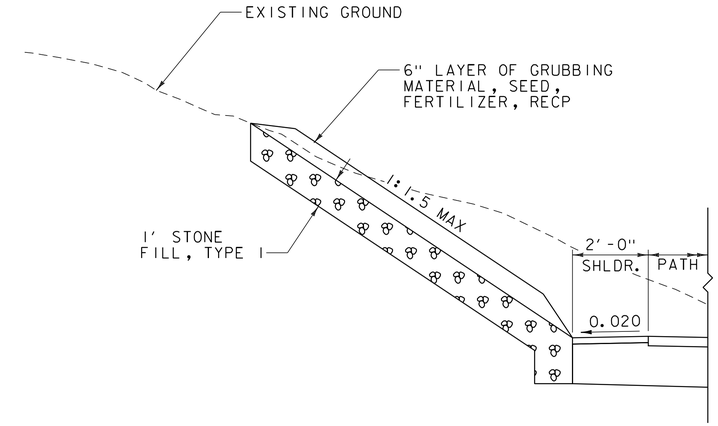
8' PAVED SHARED-USE PATH - SOUTH MAIN ST

ALTERNATE #1&2:
STA. 103+75 - 105+32
(N.T.S.)



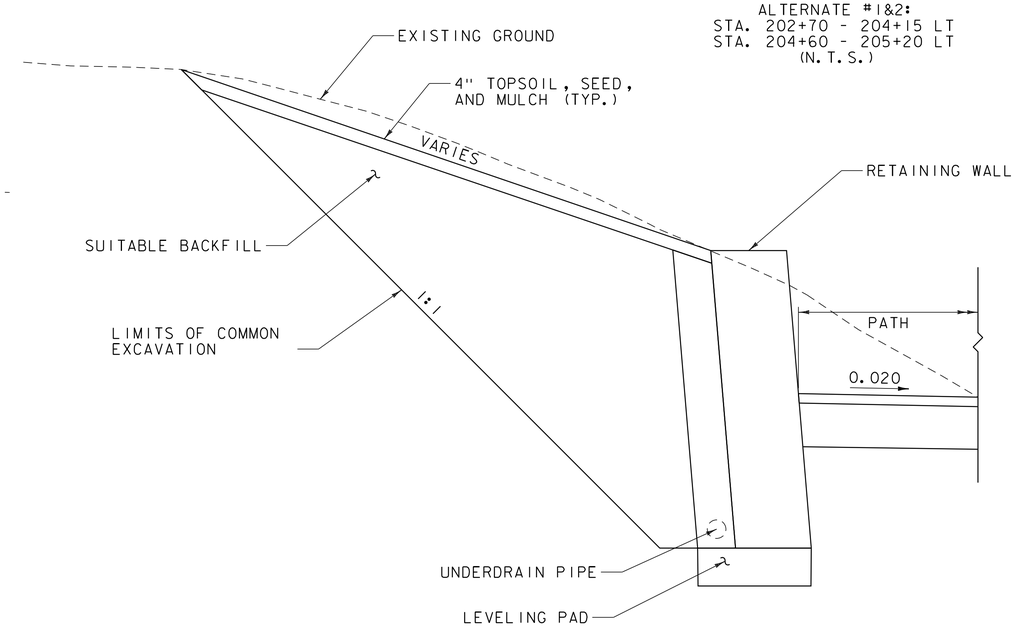
8' PAVED SHARED-USE PATH - BAY ST

ALTERNATE #1&2:
STA. 201+00 - 207+25
(N.T.S.)



ALTERNATIVE END CONDITION
STONE FILL CUT SECTION

ALTERNATE #1&2:
STA. 202+70 - 204+15 LT
STA. 204+60 - 205+20 LT
(N.T.S.)



ALTERNATIVE END CONDITION
RETAINING WALL SECTION

ALTERNATE #1&2:
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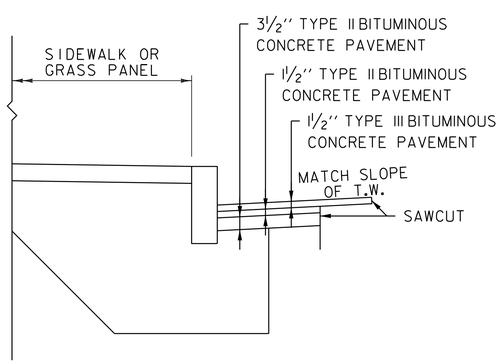
(N.T.S.)



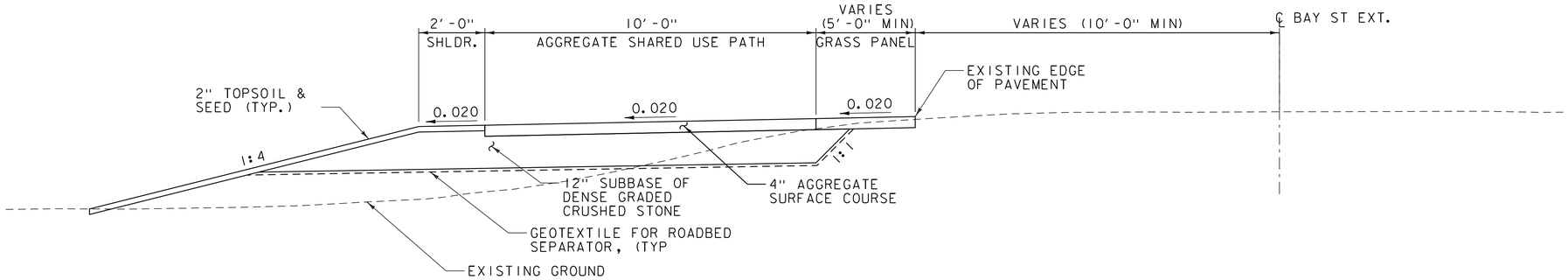
PAVEMENT OVERLAY DETAIL

(N.T.S.)

PROJECT NAME: LVRT RIVERFRONT EXTENSION	
PROJECT NUMBER: VHB 58090.01	
FILE NAME: 58090.01typ.dgn	**PLOT DATE:** 20-JUL-2023
PROJECT LEADER: E.P. DETRICK	**DRAWN BY:** T.D. BURT
DESIGNED BY: T.D. BURT	**CHECKED BY:** B.M. ROBERTS
TYPICAL SECTION SHEET (1 OF 2)	**SHEET** 2 **OF** 18

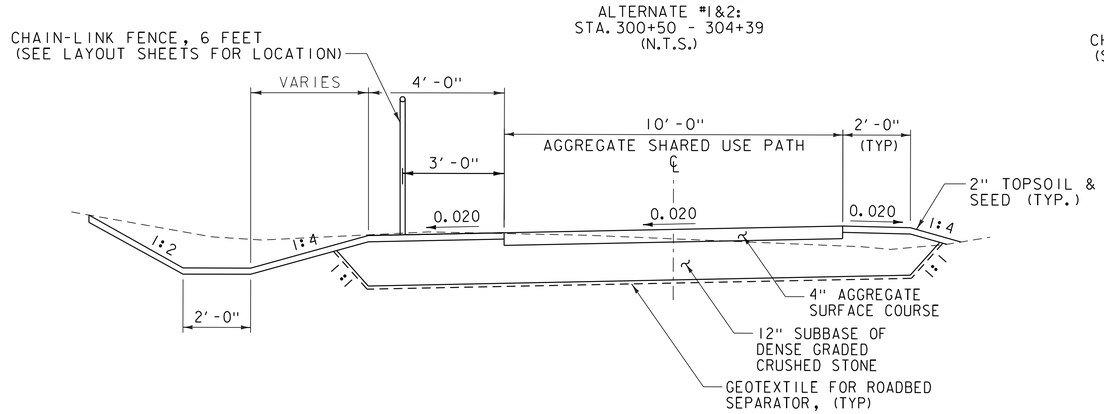
MATERIAL TOLERANCES	
MATERIAL ITEM	THICKNESS TOLERANCE
PAVEMENT (FULL DEPTH)	+/- 1/4" (TOTAL THICKNESS)
SUBBASE	1/2"
SAND BORROW	1"

TYPICAL SECTIONS



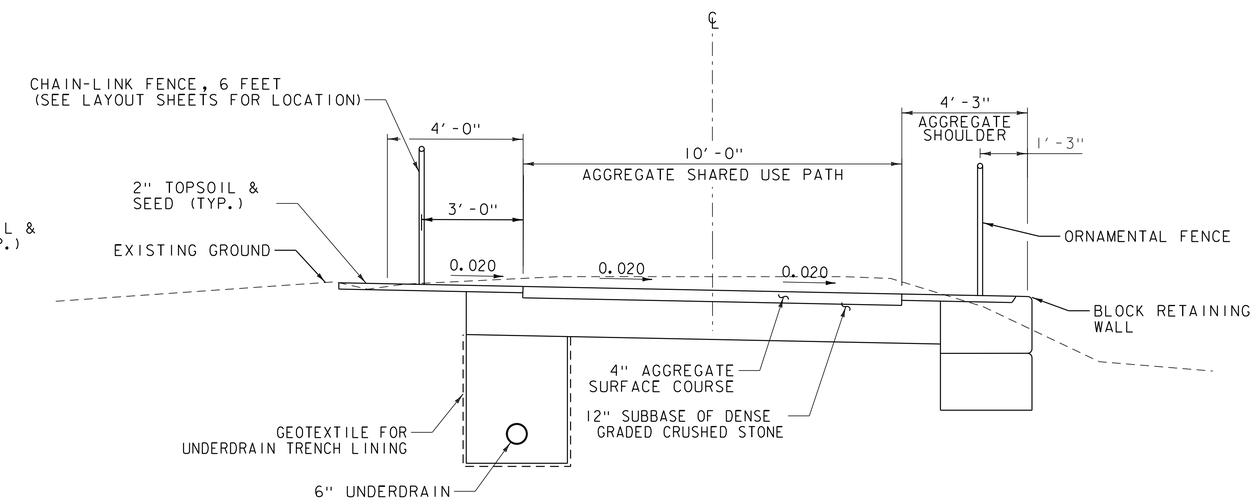
10' AGGREGATE SHARED-USE PATH - BAY ST EXT.

ALTERNATE #1&2:
STA. 300+50 - 304+39
(N.T.S.)



10' AGGREGATE SHARED-USE PATH

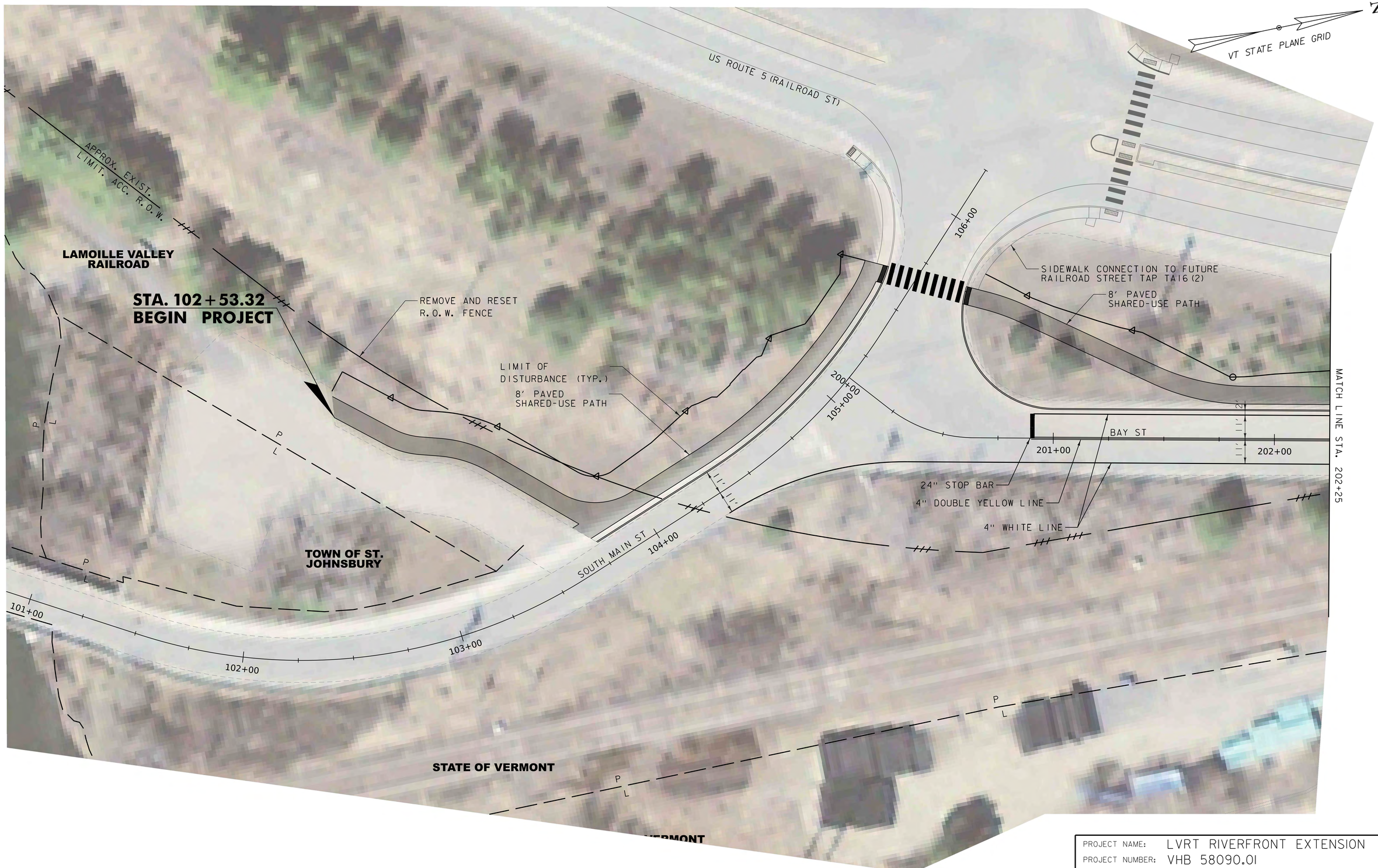
ALTERNATE #1:
STA. 400+39 - 422+81
ALTERNATE #2:
STA. 400+39 - 414+36
STA. 500+00 - 503+03
STA. 507+00 - 508+77
(N.T.S.)



10' AGGREGATE SHARED-USE PATH WITH RETAINING WALL

ALTERNATE #2:
STA. 502+03 - 507+00
(N.T.S.)

PROJECT NAME: LVRT RIVERFRONT EXTENSION	
PROJECT NUMBER: VHB 58090.01	
FILE NAME: 58090.01typ.dgn	**PLOT DATE:** 20-JUL-2023
PROJECT LEADER: E.P. DETRICK	**DRAWN BY:** T.D. BURT
DESIGNED BY: T.D. BURT	**CHECKED BY:** B.M. ROBERTS
TYPICAL SECTION SHEET (2 OF 2)	**SHEET** 3 **OF** 18



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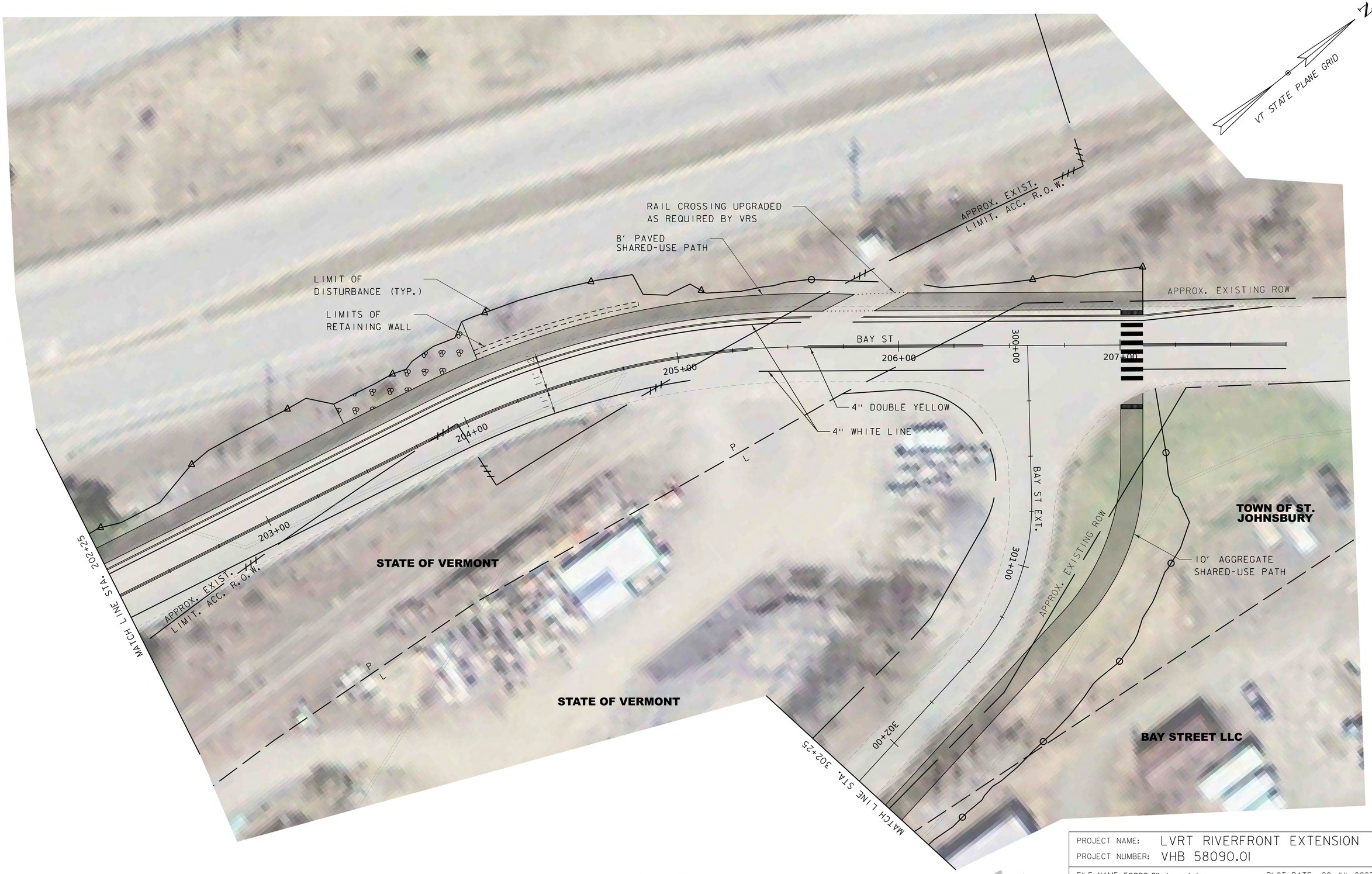
SCALE IN FEET

vhb

PROJECT NAME:	LVRT RIVERFRONT EXTENSION
PROJECT NUMBER:	VHB 58090.01

FILE NAME: 58090.01bdr_nul.dgn	PLOT DATE: 20-JUL-2023
PROJECT LEADER: E.P. DETRICK	DRAWN BY: T.D. BURT
DESIGNED BY: T.D. BURT	CHECKED BY: B.M. ROBERTS
ALT 1 LAYOUT PLAN SHEET (1 OF 7)	SHEET 4 OF 18



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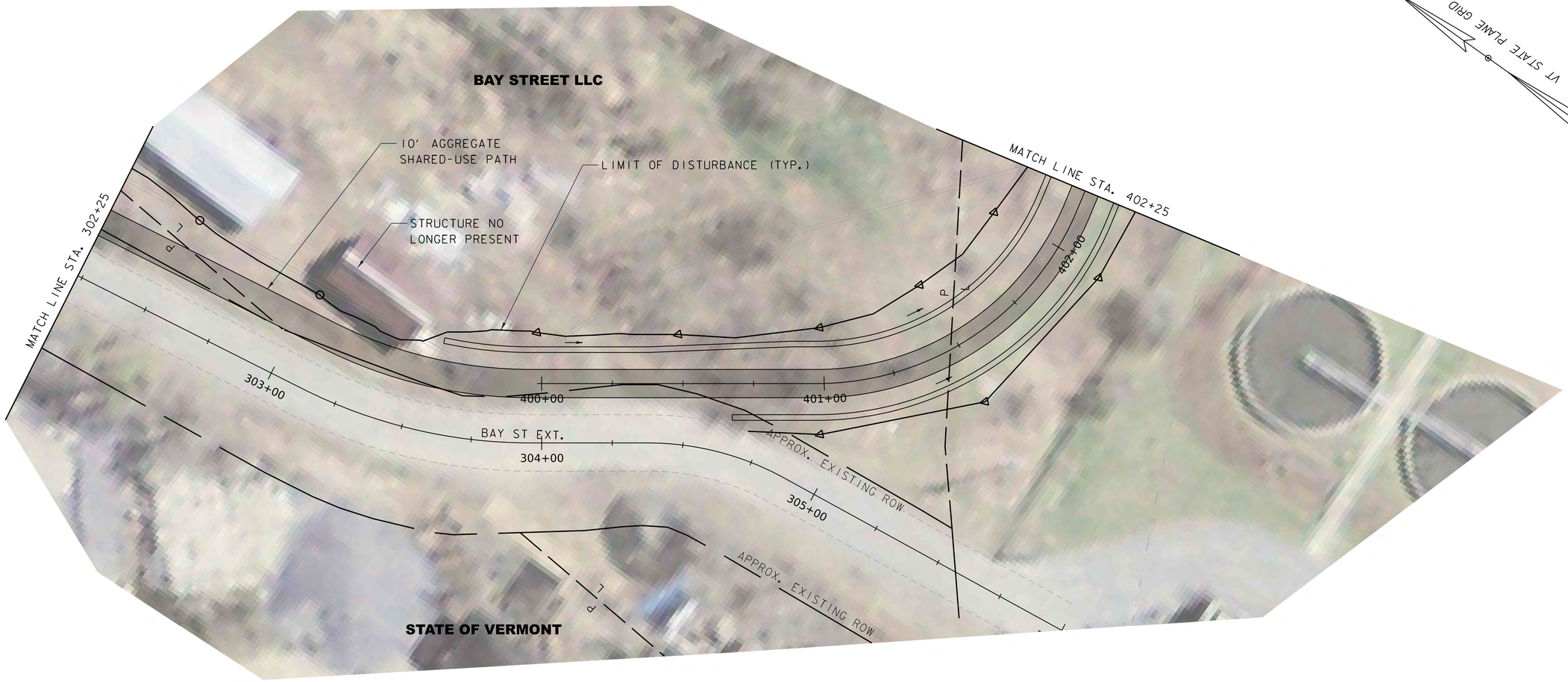
SCALE IN FEET

vhb

PROJECT NAME:	LVRT RIVERFRONT EXTENSION
PROJECT NUMBER:	VHB 58090.01

FILE NAME: 58090.01bdr_nul.dgn	PLOT DATE: 20-JUL-2023
PROJECT LEADER: E.P. DETRICK	DRAWN BY: T.D. BURT
DESIGNED BY: T.D. BURT	CHECKED BY: B.M. ROBERTS
ALT 1 LAYOUT PLAN SHEET (2 OF 7)	SHEET 5 OF 18



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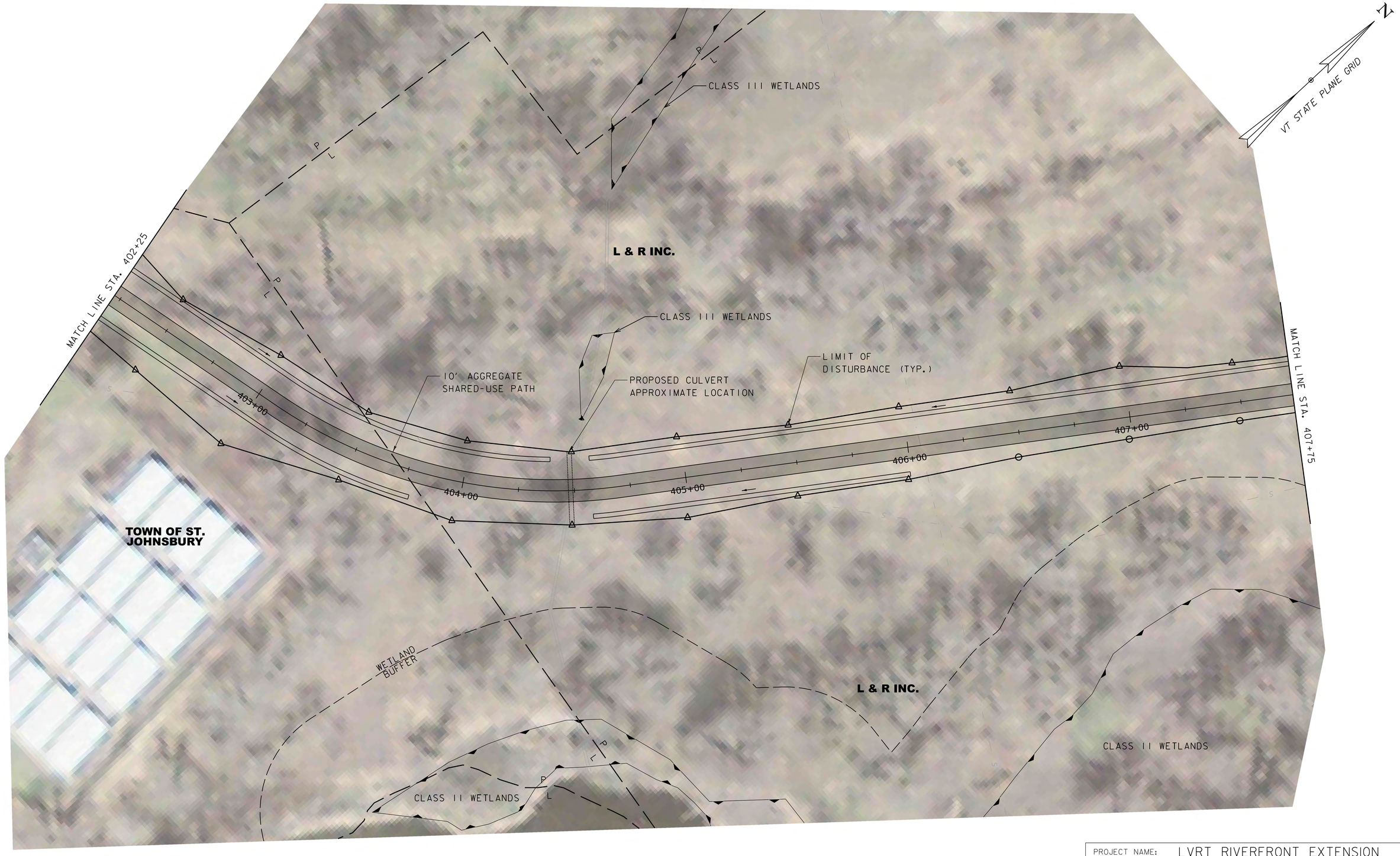
SCALE IN FEET

PROJECT NAME: LVRT RIVERFRONT EXTENSION	
PROJECT NUMBER: VHB 58090.01	
FILE NAME: 58090.01bdr_nul.dgn	PLOT DATE: 20-JUL-2023
PROJECT LEADER: E.P. DETRICK	DRAWN BY: T.D. BURT
DESIGNED BY: T.D. BURT	CHECKED BY: B.M. ROBERTS
ALT 1LAYOUT PLAN SHEET (3 OF 7)	SHEET 6 OF 18



PROJECT NAME:	LVRT RIVERFRONT EXTENSION
PROJECT NUMBER:	VHB 58090.01

FILE NAME: 58090.01bdr_nul.dgn	PLOT DATE: 20-JUL-2023
PROJECT LEADER: E.P. DETRICK	DRAWN BY: T.D. BURT
DESIGNED BY: T.D. BURT	CHECKED BY: B.M. ROBERTS
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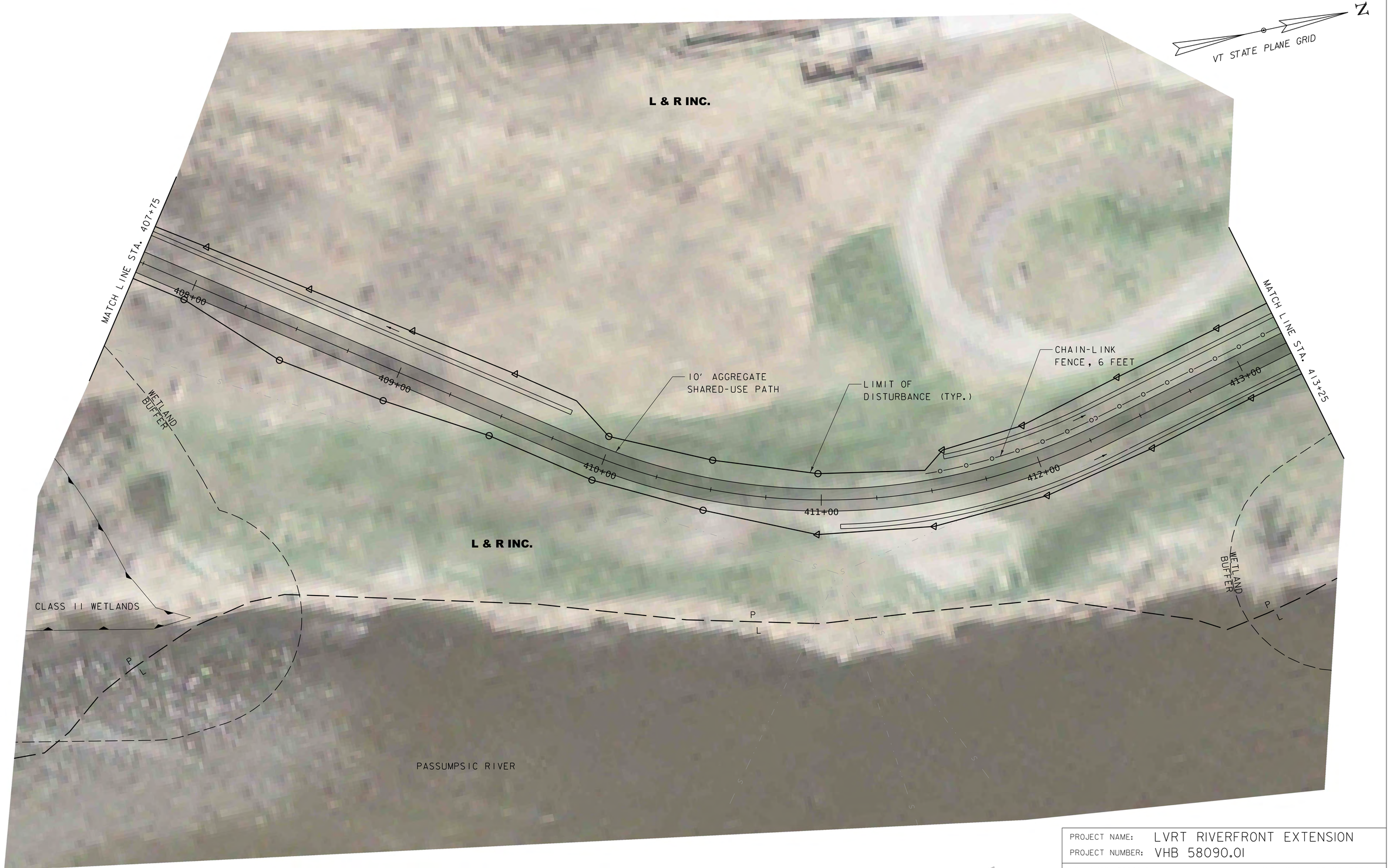

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PROJECT NUMBER:	VHB 58090.01

FILE NAME: 58090.01bdr_nul.dgn	PLOT DATE: 20-JUL-2023
PROJECT LEADER: E.P. DETRICK	DRAWN BY: T.D. BURT
DESIGNED BY: T.D. BURT	CHECKED BY: B.M. ROBERTS
ALT 1 LAYOUT PLAN SHEET (5 OF 7)	SHEET 8 OF 18

PROJECT NAME:	LVRT RIVERFRONT EXTENSION
PROJECT NUMBER:	VHB 58090.01

FILE NAME: 58090.01bdr_nul.dgn	PLOT DATE: 20-JUL-2023
PROJECT LEADER: E.P. DETRICK	DRAWN BY: T.D. BURT
DESIGNED BY: T.D. BURT	CHECKED BY: B.M. ROBERTS
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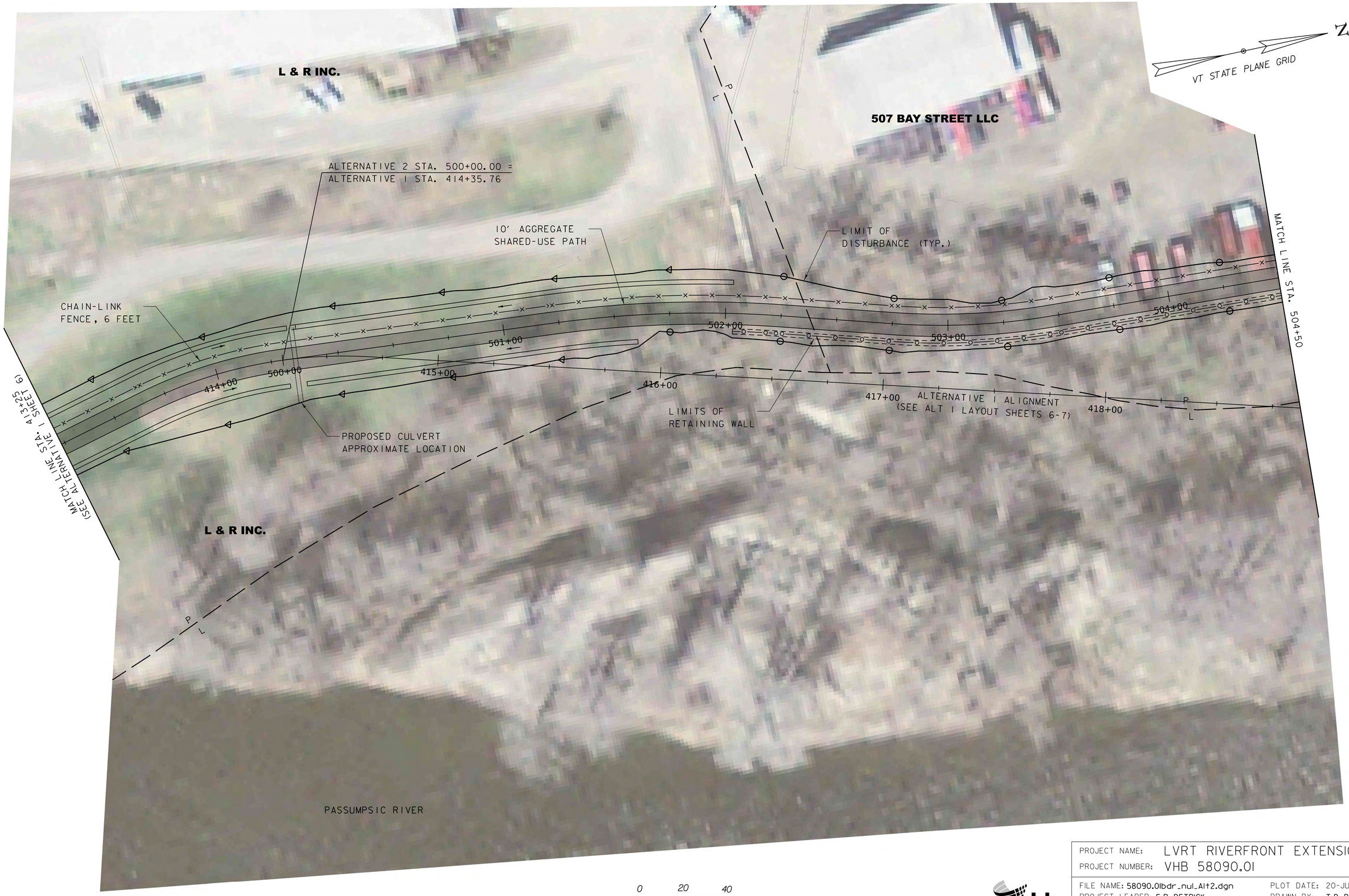

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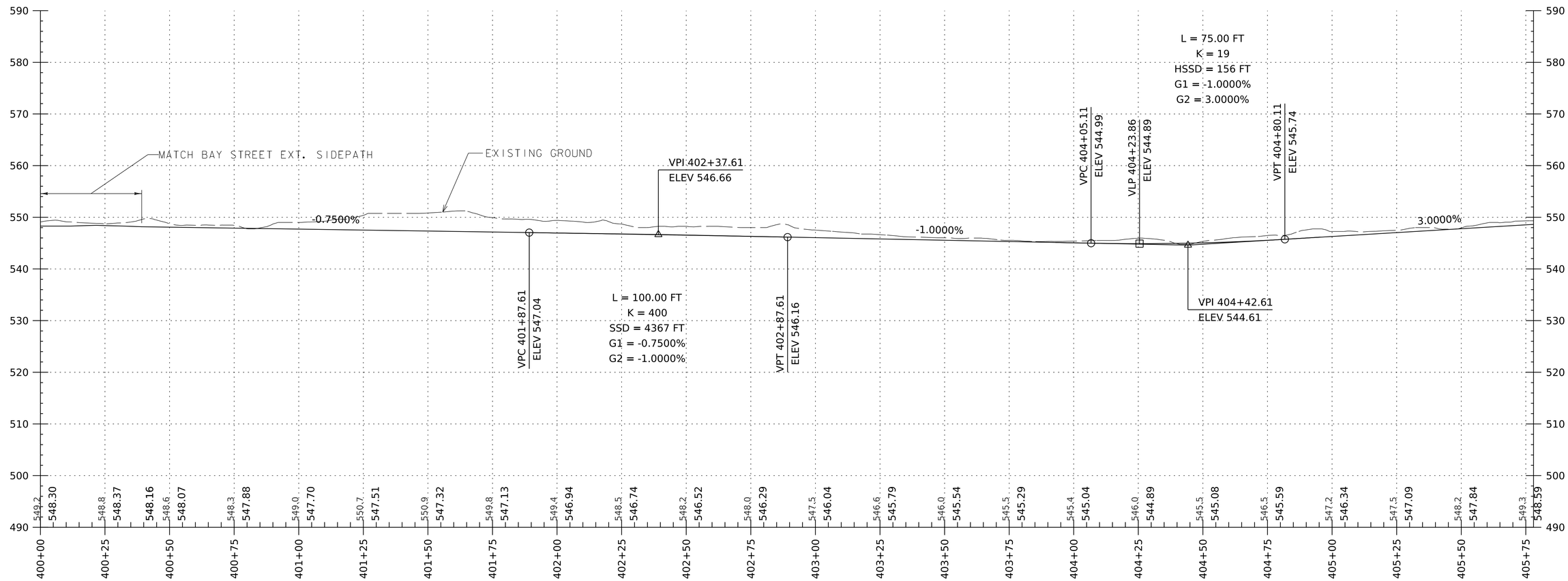
PROJECT NUMBER:	VHB 58090.01

FILE NAME: 58090.01bdr_nul_Alt2.dgn	PLOT DATE: 20-JUL-2023
PROJECT LEADER: E.P. DETRICK	DRAWN BY: T.D. BURT
DESIGNED BY: T.D. BURT	CHECKED BY: B.M. ROBERTS
ALT 2 LAYOUT PLAN SHEET (1 OF 2)	SHEET 11 OF 18

0 20 40
SCALE IN FEET

PROJECT NAME: LVRT RIVERFRONT EXTENSION	
PROJECT NUMBER: VHB 58090.01	
FILE NAME: 58090.01bdr_nul_Alt2.dgn	PLOT DATE: 20-JUL-2023
PROJECT LEADER: E.P. DETRICK	DRAWN BY: T.D. BURT
DESIGNED BY: T.D. BURT	CHECKED BY: B.M. ROBERTS
ALT 2 LAYOUT PLAN SHEET (2 OF 2)	SHEET 12 OF 18

SHARED-USE PATH PROFILE - ALTERNATIVE 1



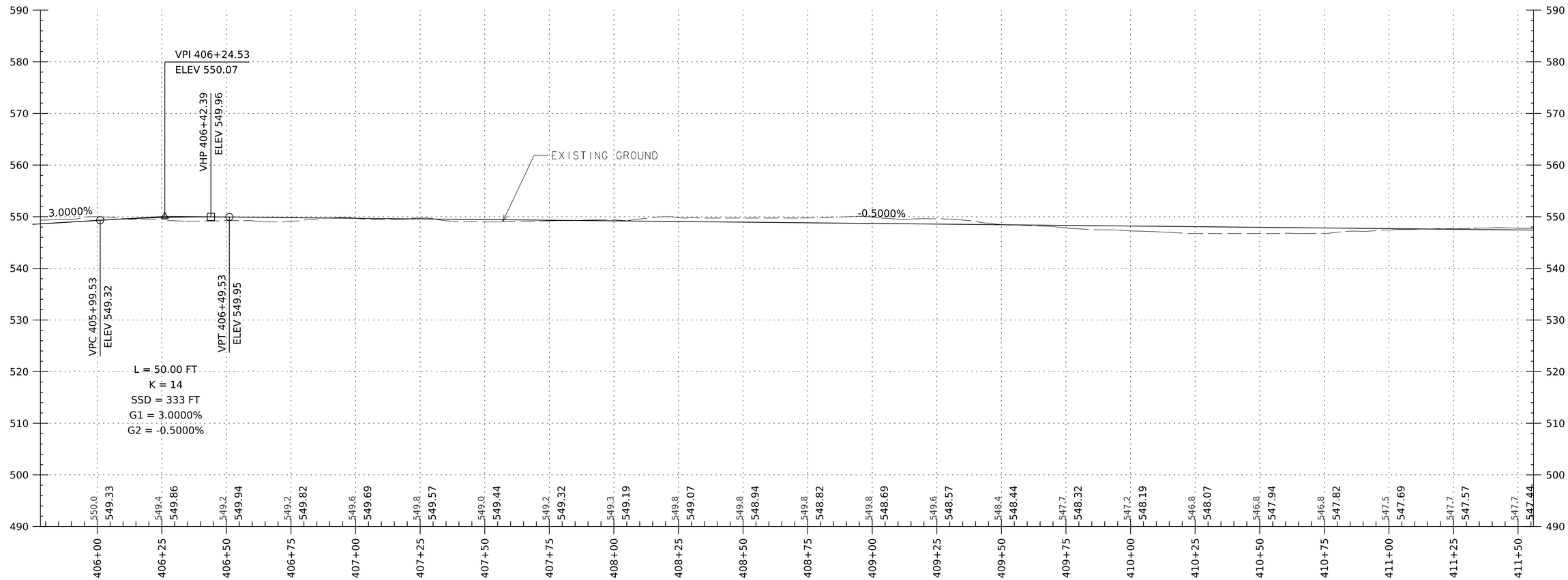
THE GRADES SHOWN TO THE NEAREST TENTH ARE THE ORIGINAL GROUND ELEVATIONS ALONG THE PROPOSED ALIGNMENT.

THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE FINISH GRADES ALONG THE PROPOSED ALIGNMENT.

STATIONING AND ELEVATIONS IN FEET (TYP.)

PROJECT NAME: LVRT RIVERFRONT EXTENSION	
PROJECT NUMBER: VHB 58090.01	
FILE NAME: 58090.01bdr_pro.dgn	PLOT DATE: 20-JUL-2023
PROJECT LEADER: E.P. DETRIK	DRAWN BY: T.D. BURT
DESIGNED BY: T.D. BURT	CHECKED BY: B.M. ROBERTS
ALT 1 PROFILE SHEET (1 OF 4)	SHEET 13 OF 18

SHARED-USE PATH PROFILE - ALTERNATIVE I



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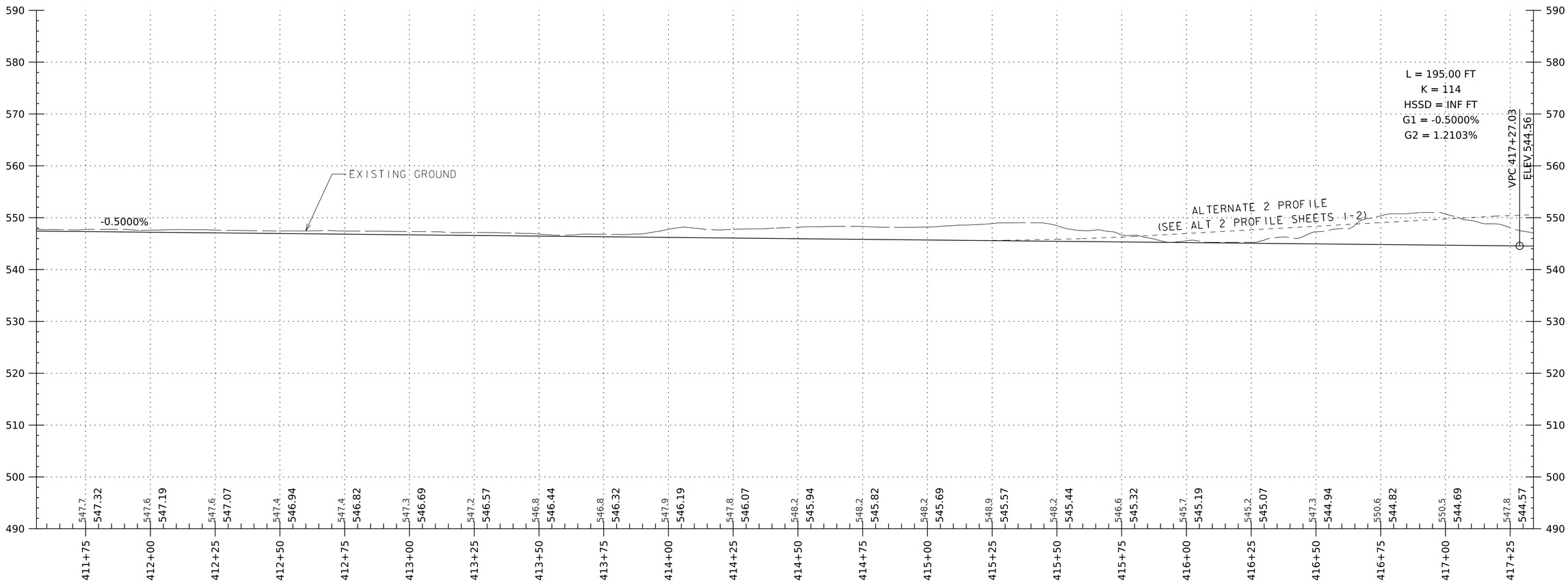
FILE NAME: 58090.01bdr_pro.dgn	PLOT DATE: 20-JUL-2023
PROJECT LEADER: E.P. DETRICK	DRAWN BY: T.D. BURT
DESIGNED BY: T.D. BURT	CHECKED BY: B.M. ROBERTS
ALT 1PROFILE SHEET (2 OF 4)	SHEET 14 OF 18

SHARED-USE PATH PROFILE - ALTERNATIVE 1



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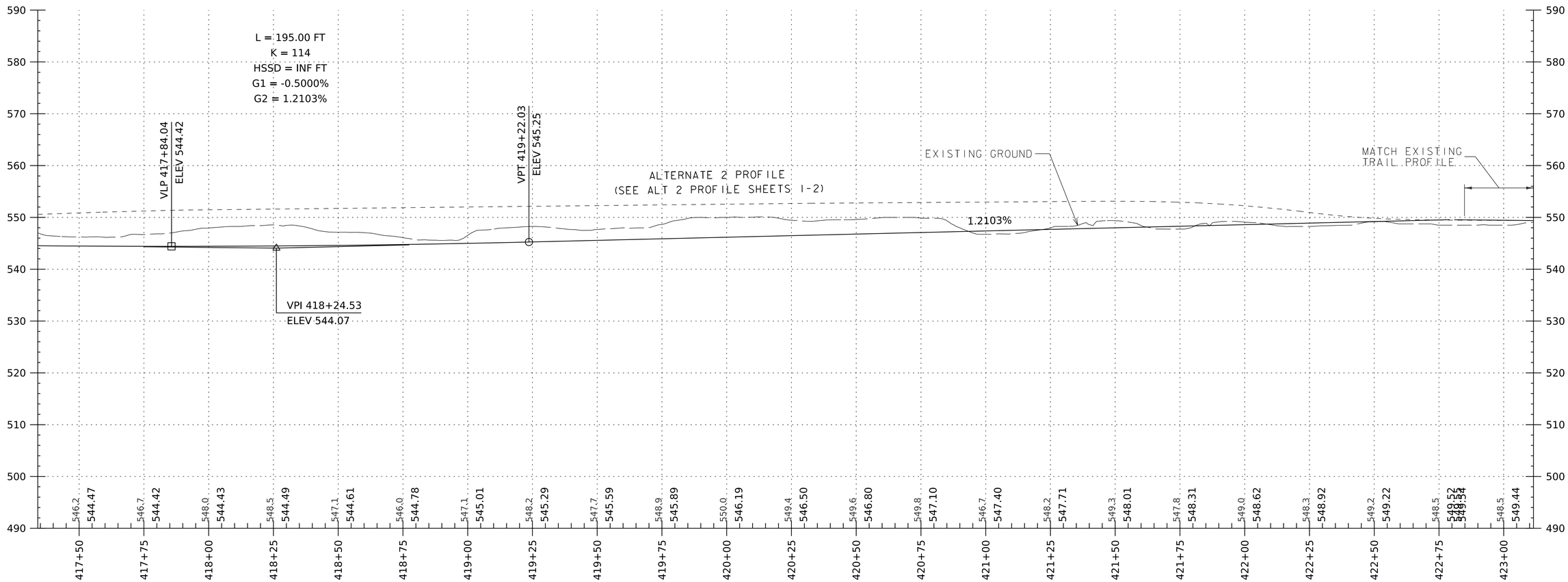
DESIGNED BY: T.D. BURT	CHECKED BY: B.M. ROBERTS
ALT 1PROFILE SHEET (3 OF 4)	SHEET 15 OF 18

SHARED-USE PATH PROFILE - ALTERNATIVE 1



THE GRADES SHOWN TO THE NEAREST TENTH ARE THE ORIGINAL GROUND ELEVATIONS ALONG THE PROPOSED ALIGNMENT.

THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE FINISH GRADES ALONG THE PROPOSED ALIGNMENT.

STATIONING AND ELEVATIONS IN FEET (TYP.)

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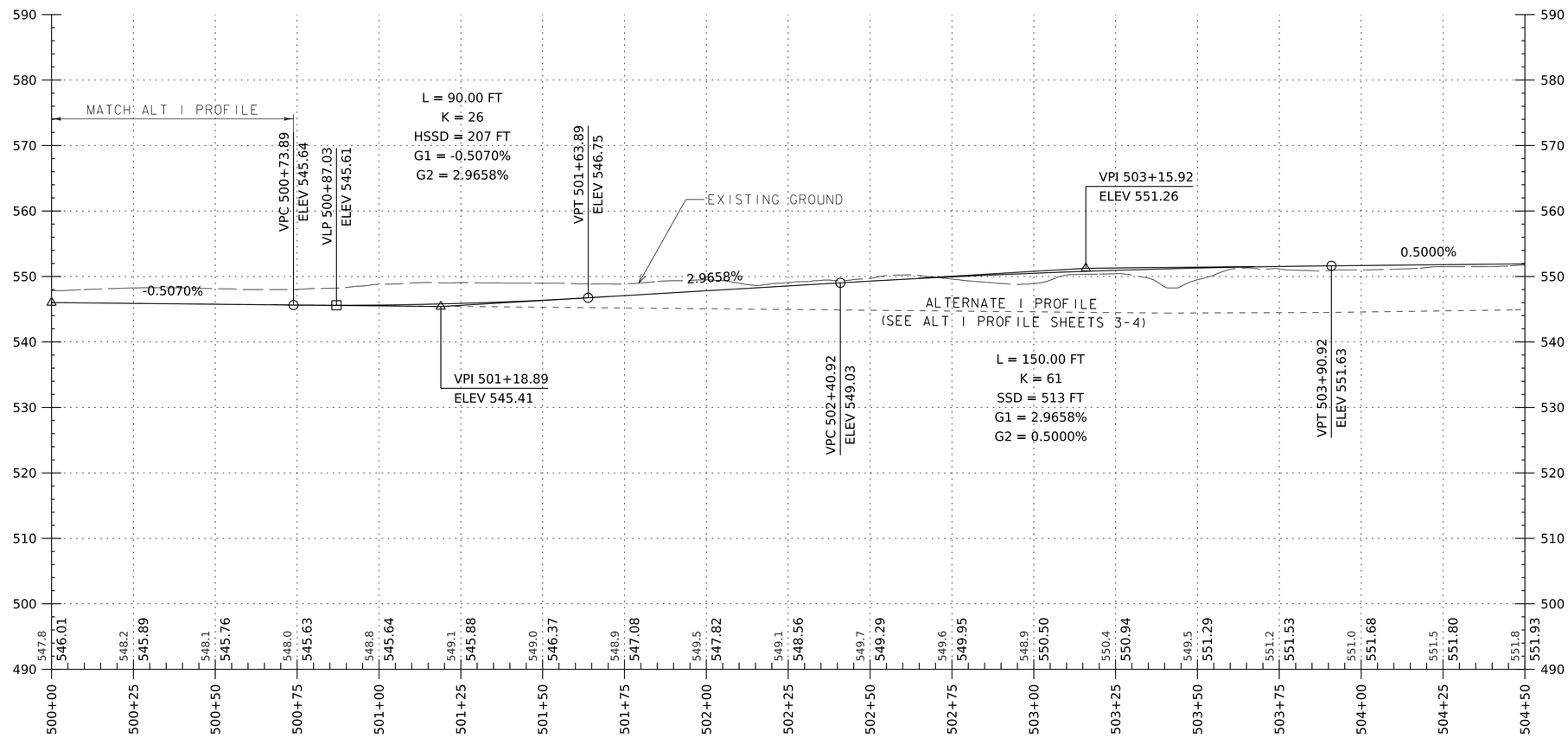
PROJECT LEADER: E.P. DETRICK	DRAWN BY: T.D. BURT
DESIGNED BY: T.D. BURT	CHECKED BY: B.M. ROBERTS
ALT 1PROFILE SHEET (4 OF 4)	SHEET 16 OF 18

SHARED-USE PATH PROFILE - ALTERNATIVE 2



THE GRADES SHOWN TO THE NEAREST TENTH ARE THE ORIGINAL GROUND ELEVATIONS ALONG THE PROPOSED ALIGNMENT.

THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE FINISH GRADES ALONG THE PROPOSED ALIGNMENT.

STATIONING AND ELEVATIONS IN FEET (TYP.)

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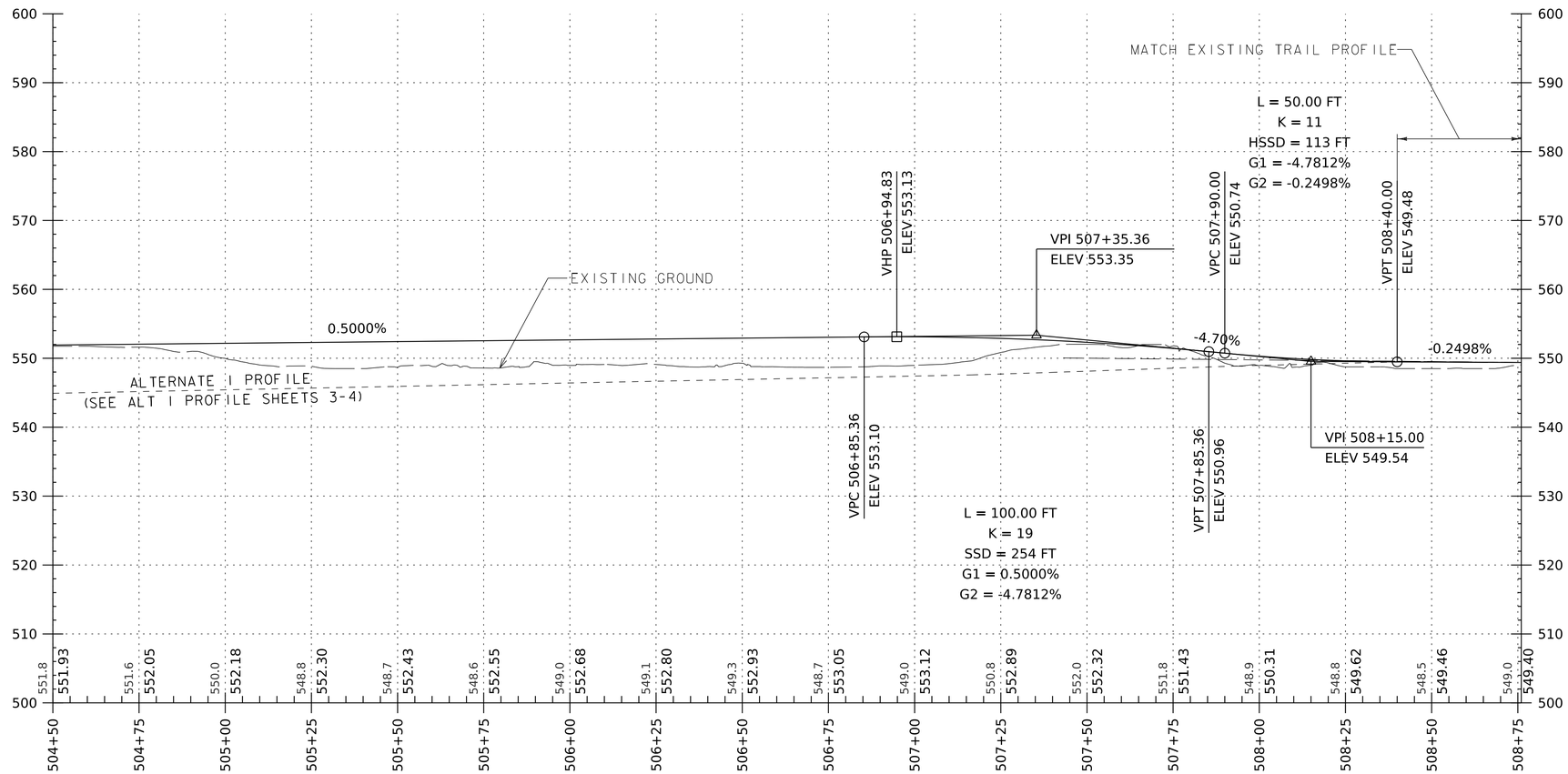
FILE NAME: 58090.01bdr_pro.dgn	PLOT DATE: 20-JUL-2023
PROJECT LEADER: E.P. DETRICK	DRAWN BY: T.D. BURT
DESIGNED BY: T.D. BURT	CHECKED BY: B.M. ROBERTS
ALT 2 PROFILE SHEET (1 OF 2)	SHEET 17 OF 18

SHARED-USE PATH PROFILE - ALTERNATIVE 2



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PROJECT LEADER: E.P. DETRICK	DRAWN BY: T.D. BURT
DESIGNED BY: T.D. BURT	CHECKED BY: B.M. ROBERTS
ALT 2 PROFILE SHEET (2 OF 2)	SHEET 18 OF 18

C

St. Johnsbury Riverfront Conceptual Access Study: Final Report (2017)

ST. JOHNSBURY

RIVERFRONT CONCEPTUAL ACCESS STUDY

FINAL REPORT:

PREPARED FOR
THE TOWN OF ST. JOHNSBURY
ST. JOHNSBURY, VT

PREPARED BY
GPI GREENMAN PEDERSON
WHITE RIVER JUNCTION, VT AND PORTSMOUTH, NH

MAY 30, 2017

Designated river corridor area map:
St. Johnsbury, VT

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Riverside Pathway Development and River Access
Bay Street Bicycle and Pedestrian Improvements
to the Lamoille Valley Rail Trail
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10. Overview of Project phasing 30

1. EXECUTIVE SUMMARY:

A Municipal Planning Grant was awarded to the Town of St. Johnsbury in 2016 by the Vermont Agency of Commerce and Community Development to create a conceptual plan focused on the Passumpsic Riverfront from the Portland Street Bridge south to the confluence with the Sleepers River. The study area is immediately adjacent to the State-designated downtown. With guidance provided by three Riverfront Steering Committee meetings, a public site walk and local public meeting the plan has become resolved into this conceptual plan report.

Just prior to this report's completion, the St. Johnsbury selectboard approved a grant application through the Northern Border Regional Commission for as much as $500,000 in funds with local or other grant source matches of 20% for a project implementation in excess of 600,000. The optimism of the community for a river path and connector trail to the highly popular Lamoille Valley Rail Trail and its local manifestation as the Three Rivers Transportation Path that has been envisioned by the town for more than 15 years- is still alive and well.

This project envisions a river pathway to connect St. Johnsbury's Designated Downtown to the Passumpsic River:

New sidewalks, a riverfront path and bicycle route will allow people to access the river and see it's beauty.

A trail head facility with parking and renovation of a derelict Town-owned building into a trail-head center with space for boat/bike/fishing gear rentals, and river and trail specific information will welcome people and provide economic opportunity in a major market sector for VT tourism.

Connecting to the newly opened and very popular Lamoille Valley Rail Trail a river path can connect to miles of recreational access and enjoyment.

The project's development is equally oriented to local residents as to tourists and visitors. Tourists to support downtown businesses and provide an amenity for St. Johnsbury residents and visitors. This can contribute to improving the physical and economic environment of St. Johnsbury's downtown by linking outdoor water recreation to the downtown experience. It is expected that this connection will enhance the recreational opportunities available on the river, will attract visitors who might not otherwise visit the downtown area, and will create a synergy that increases economic activity in the downtown.

The town has hoped for over a decade that the river could also be an impetus for redevelopment for the former industrial properties along Bay Street, giving those properties value and amenity to allow the current property owners to either have stronger redevelopoment confidence or to allow them to sell to enthusiastic new development interests and bringing new business and economic opportunity to the town.

Drawing visitors from outside the Town and region is crucial to the economic health of the downtown. The recent opening of the Lamoille Valley Rail Trail in a single year saw over 12,000 visitors to the area, bringing in new people in search of excellent recreation opportunities and looking for goods and services, of which St. Johnsbury has a lot to offer.

Making St. Johnsbury a stronger local downtown is also a major opportunity, as recent years have seen the establishment of new and vibrant downtown business with considerable appeal for local residents and has garnered a devoted following.

Residents and many businesses' have embraced the river path in part resulting from the experience of a site walk in July 2016, where on a mowed pathway the length of the river was created by the fabulous efforts of the public works department. Residents described the "new" river path as a "game changer" in their perception of downtown and the river as a community place and fabulous natural recreational and economic amenity. This plays well to St. Johnsbury's desire to have an economically stronger downtown. If residents and visitors linger on a river path - they will soon become hungry and thirsty. Local businesses will have an opportunity to have added customers. Visitors may fall in love with the town and bring other investments.

This plan has identified the best location(s) to establish public access from the downtown business district to the riverfront. The plan has identified compatible improvements, pedestrian paths, canoe and kayak landing areas, vehicular trail head bike parking and a trail head center,a community park, interpretive sites for local heritage and environmental stories, supported by a directional and interpretive signage program.

It is important to note that while this topic has been under study in St. Johnsbury in the past - the Three Rivers Bikepath plan suffered from landowner resistance,and planning fatigue. We have used relevant background from that past work, but have simplified the plan as much as possible.

The current grant application represents one way to build the path - we have also defined less expensive and local grass root efforts to get a path in place.

Which makes this study different - to the following four major points:

1. The path has a stronger and more meaningful connection to downtown economic development: A desire to connect the development of community, economic, recreation, natural resource and aesthetic relationship of St. Johnsbury's downtown to the Passumpsic riverfront is the core proposal, and the value of the path is seen as a very clear economic future. That may not have been as strong a message in the past - although that is still anecdotally based in this study. People really believe in the river now.

2. A cooperative spirit with property owners to do realistic improvements for everyones benefit and not to force unwilling parties to accept a trail on their property if they are unready or unwilling. The the path route focuses on property with the willing landowner cooperation of the Green Mountain Power company and uses public property and road Rights of way for the rest.

3. A willingness to start small and less expensively - but still achieve meaningful improvements. There is a phase of this plan that allows for a smaller scale local grass roots effort to define a passable trail route for the river path.

4. The plan can grow: Incremental development is as equally viable to get a path up and going at less cost and with more local "Sweat Equity" of local volunteers and town staff as opposed to engineered solutions that have greater cost and permitting requirements. The project can be phased.

Welcome to the St. Johnsbury riverfront experiencing as we walk you from the downtown to the Lamoille Valley Rail trail - and you can join the thousands that have already come to St. Johnsbury to walk, bike and enjoy the community.

2.INTRODUCTION:

This project report has the following sections:

1. **Executive summary:**

2. Introduction:

3.Project Goals and Objectives: to give broad direction for the project's priorities.

4. An overview of the **Property Ownership** of the area and guidance provided by property owners and their willingness to be a part of a river path vision.

5. Public Participation

6. A summary of the local, state, regional and federal agency permitting and other approvals for the pathway to be built.

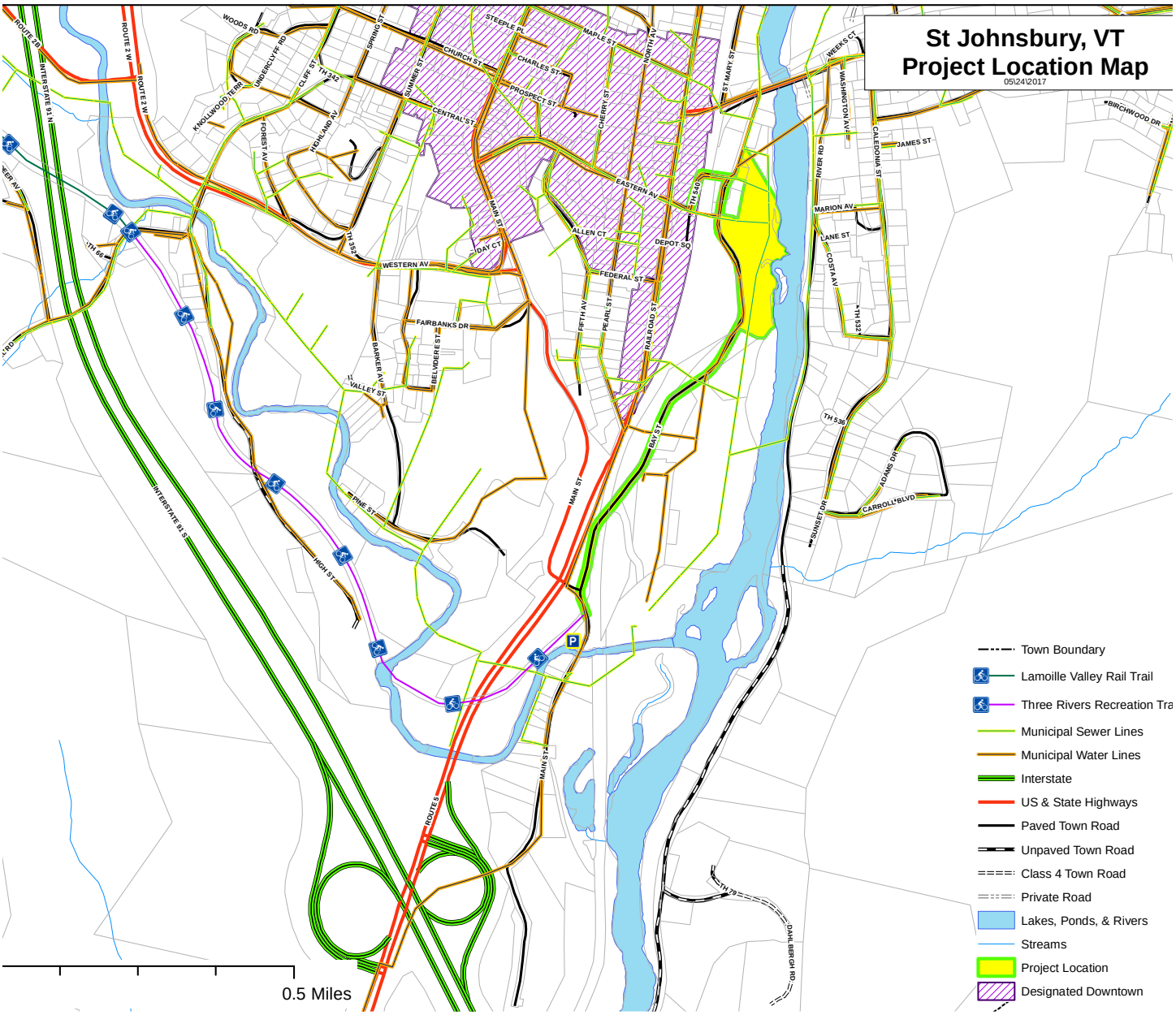
7. **An Overview and time line of previous work** and studies and project developments for the Bay Street and riverfront area.

8. **An Area by Area description of the Proposed Improvements** in three general districts:
   - Downtown Connections
   - Riverside Pathway Development and River Access
   - Bay Street Bicycle and Pedestrian Improvements to the Lamoille Valley Rail Trail

9.**Added Details** for trail design, wayfinding and interpretation.

10. **Overview of Project Costs**

11. **Overview of** and **Project phasing coordinated with funding Sources and strategies.**



Project area Map: St. Johnsbury, VT

3. PROJECT GOALS AND OBJECTIVES:

The riverfront committee and general public wanted the plan to include the following:

1. Connect to and utilize the Connecticut Scenic Byways Visitors Center and downtown.

2. Improve the safety and comfort of the sidewalks through the honking tunnel.

3. Develop a new town park on the corner of Bay street at the Portland Street bridge and connect with sidewalks via Bay Street.

4. Instead of demolishing the KT rentals building - now owned by the town - do selective demolition and clean up - then allow it to be leased to a trail head business operator.

5. Develop trail head for parking on Bay Street so that people can follow the river path downstream through Green Mountain Power parcels from Bay Street to the rail trail.

5. Engage the Interesting natural and built features along the riverbanks and woods.

6. Interpret the historical and archaeological sites.

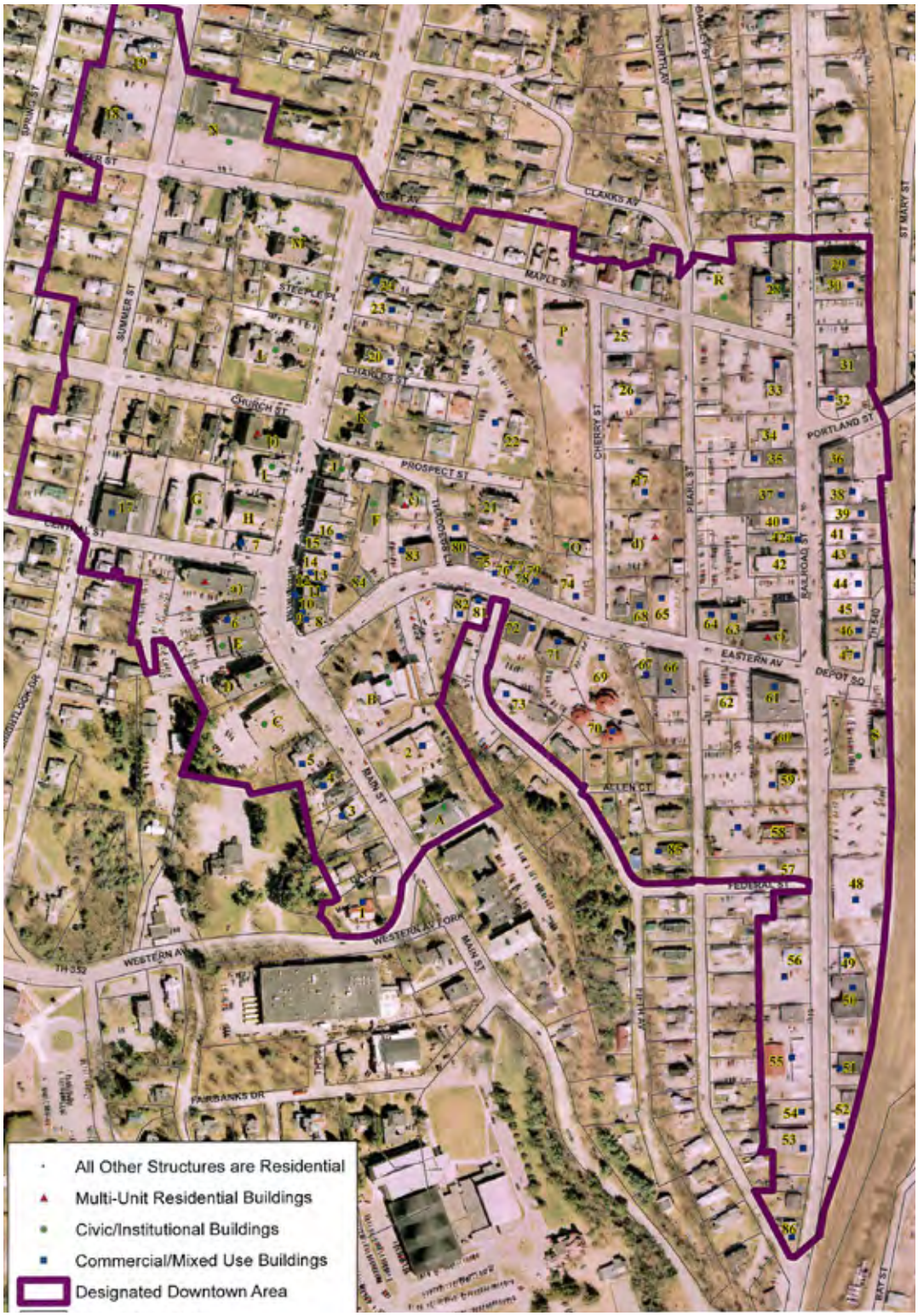
7. Footpath or bikepath for continuous access.

8. Walk - in canoe and kayak access with parking.

9. Create park areas for recreation and enjoyment of river access and open spaces.

10. Integrate river access with river related infrastructure improvements to the storm-sewer outfalls.

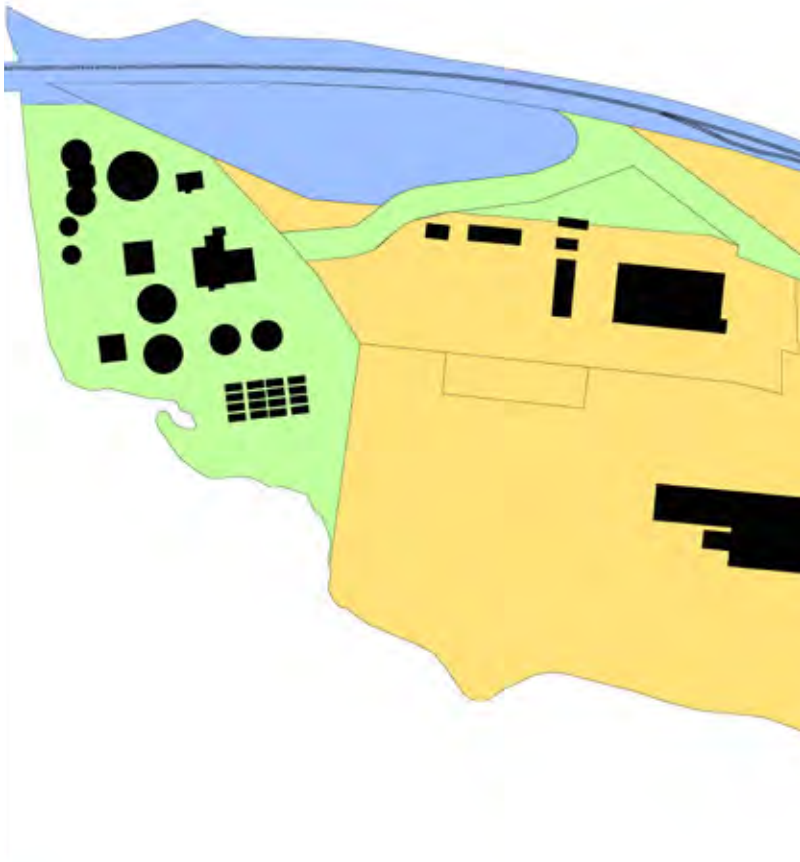
Designated Downtown Map: St. Johnsbury, VT

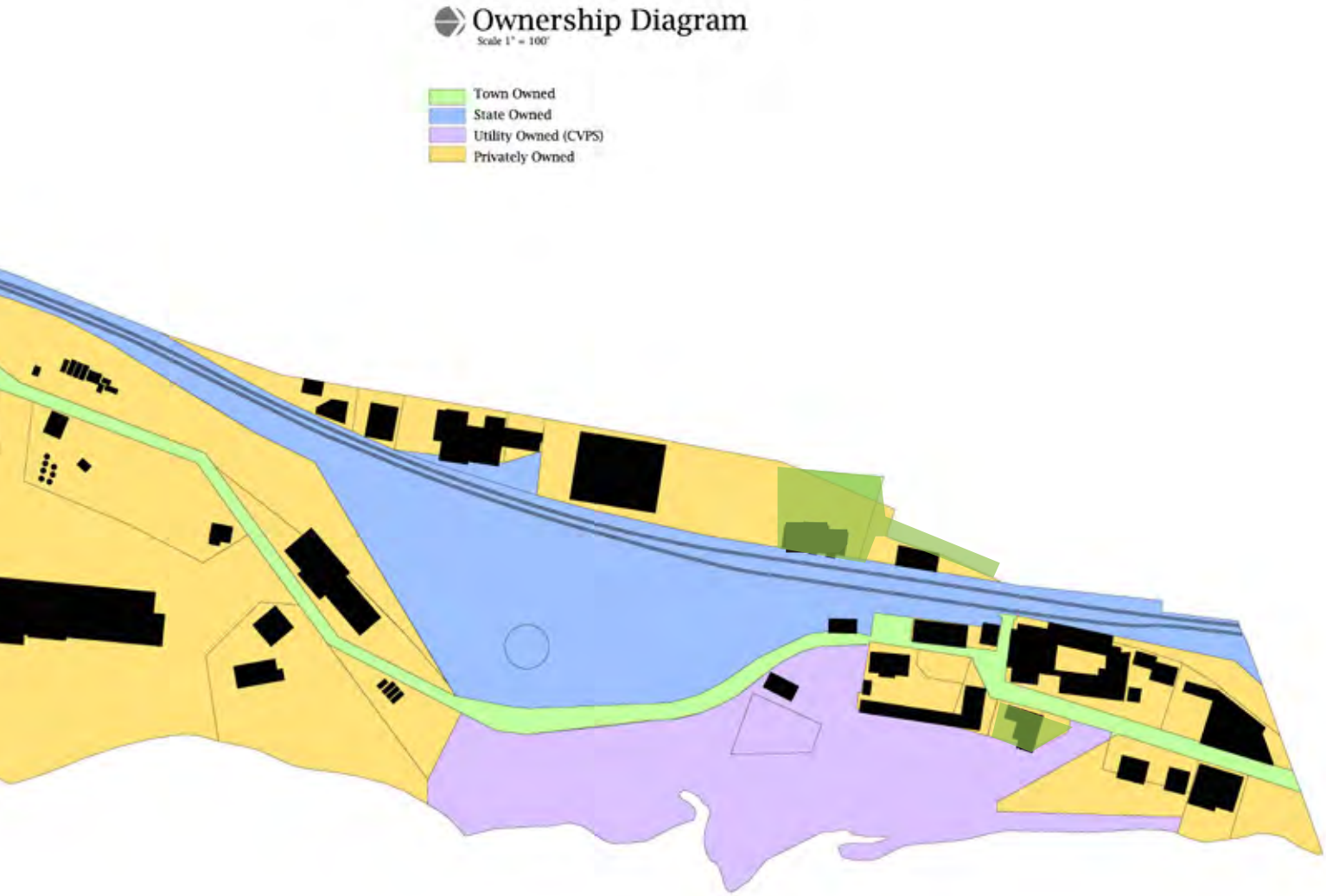


4.PROPERTY OWNERSHIP:

Parcel Number	Cama Number	Property Address	Owner Name
023-008-035-002	023-008-035-002	25 DEPOT SQUARE	C INNOVATIONS LLC
023-008-051-000	023-008-051-000	51 DEPOT SQUARE	ST JOHNSBURY TOWN OF
024-003-022-000	024-003-022-000	PORTLAND ST	MAINE CENTRAL RAILROAD INC
024-003-023-000	024-003-023-000	BAY ST	WSI ST JOHNSBURY TRANSFER STATION
024-003-024-000	024-003-024-000	119 BAY ST	WSI ST JOHNSBURY TRANSFER STATION
024-003-025-000	024-003-025-000	145 BAY ST	ALLEN LUMBER COMPANY
024-003-026-000	024-003-026-000	136 BAY ST	TREMBLAY WILLIAM J & ELIZABETH A
024-003-027-000	024-003-027-000	202 BAY ST	IDE E T & H K
024-003-028-000	024-003-028-000	258 BAY ST	ALLEN LUMBER COMPANY
024-003-029-000	024-003-029-000	256 BAY ST	ALLEN LUMBER COMPANY
024-003-031-000	024-003-031-000	249 BAY ST	ALLEN LUMBER COMPANY
024-003-033-000	024-003-033-000	195 BAY ST	ST JOHNSBURY TOWN OF
024-003-058-000	024-003-058-000	42 COSTA AVE	TOWLE TRACY C
024-003-059-000	024-003-059-000	257 RIVER RD	LEE ANGELA
026-002-026-000	026-002-026-000	492 BAY ST	BAY STREET PROPERTY LLC
026-002-052-000	026-002-052-000	RAILROAD ST	VERMONT STATE OF
026-002-061-000	026-002-061-000	MAIN ST	VERMONT STATE OF
028-000-033-000	028-000-033-000	507 BAY ST	507 BAY STREET LLC
028-000-034-000	028-000-034-000	483 BAY ST	BROWN C N COMPANY

Map of property ownership:




Ownership Diagram
Scale 1" = 100'
Town Owned
State Owned
Utility Owned (CVPS)
Privately Owned

Coordination with property owners:
The following meetings took place either in person or via email or telephone with staff from NVDA, the Town and project team with property owners in the project area:

2-8 Bay Street – Portland St. Park property:

The owners of the WSI parcels have been working with the Riverfront Committee, the St. Johnsbury Development Fund and the Vermont River Conservancy to sell the property for the purpose of a public path.

The property is under some constraint because of Brownfield contamination and it is under a Brownfield order. A Stone Environmental Bay Street Area Wide Assessment dated December 2011 acknowledges the SMAC for this property, but indicates (page 13) that there are several unassessed RECs on these parcels.A SMAC was issued in June 2011, with the caveat that "This SMAC designation is not an endorsement by the SMS that the standard of All Appropriate Inquiry has been met for the entire property or for all conceivable future uses of this property."

A grant application was made to the Vermont Housing and Conservation Trust in the spring of 2016 to acquire this property but was not funded.

Allen Lumber property:
The project coordinator from NVDA and Assistant Town Manager met with the Allen family in regards

to their property and other properties around the project area.

Green Mountain Power
Representatives from Green Mountain Power have been extremely supportive of the project and reminded us that they have been always in that position even when the project was previously owned by the Central Vermont Public Service. It has always been the intention of GMP to cooperate with an easement agreement for a pathway to be developed through the property. GMP representatives clarified that the property is not under any FERC jurisdiction and so they have no requirements to provide recreational access to the public in this place, but they do feel it to be a wonderful community project to which they are supportive.

Green Mountain Power provided permission for access through this area on the site walk and the company has been a supportive partner in the project. It made sense to everyone in discussion to move an easement proposal forward with GMP as a core parcel and cooperative relationship.

The Town of St. Johnsbury
Meetings with St. Johnsbury Town administrative staff including the Town Manager, Assistant Town manager and Public Works director have been held with the project team and NVDA staff. There is enthusiasm in Town hall for the project but there are balancing concerns about cost and phasing both for the early phases of design and permitting in engineering as well as carrying it through and the cost of construction.

There is definitely planning fatigue from the VTrans Three Rivers Bike Path project that while intensely active for well over 15 years, had not gone anywhere in terms of VTrans and property owner approvals and most of the project files had been discontinued to inactivity. Cad files retrieved from the VTrans engaged engineering firm by the project team and copied to the town. However, it was noted that the GMP part of the project has always been in a position to proceed because of their cooperation. The challenging part about project agreement for the path project funded through VTrans was the inability to agree upon a route through the Ralston property.

Other considerations of the properties owned by the town include the following:

The town has acquireded the **KC Rental property** on the corner of Bay Street. The previous intention of the town was to remove the building with its asbestos and lead paint contamination, and its impediment to the completion of the Three Rivers Path project as a contaminated site. The town received an engineer's opinions of proper probable cost ranging from $106 - $132,000 to remove the structure and stabilize the site. The town has not authorized local funds to do this at this time, and grants were being considered.

The riverfront commitee and NVDA and project team members talked about opportunities to approach that building differently and that the building

partially could be removed at less cost - then redeveloped to be an economic value for the town as a trail head oriented business. This would not be redundant with the present function of the visitor center but could be specifically oriented towards an economic activity such as bicycle rental for people wanting to bicycle along the river trail and connect to the rail trail and also to reinforce a downtown connection.

Everyone in town wants the visitor center to be well connected to the River trail, and so a crosswalk across the parking lot at the base of Eastern Avenue in Depot Square is an important part of the project. The town officials expressed interest to complete the improvements to sidewalks to and through the honking tunnel as well as some kind of safety system for traffic through the tunnel.

Follow up discussions about making the tunnel one - way were discussed with no resolution. It is the project team's recommendation that a camera system be included in sidewalk plans with signals oriented in each direction so that cars maybe stopped for other traveling vehicles. The details of that system are a detailed topic for future study.

The town has provided an estimate for what they thought locally built sidewalk, curbing and crosswalk improvements might cost, and they are commensurate with the project teams estimate.

Likewise the town is supportive of a striped bicycle lane along Bay Street to connect over to the Lamoille Valley Rail Trail. Traffic volumes and speeds on Bay Street are relatively low and a safely defined painted bike lane seems adequate at this time to make the connection. Plans in the future could look at a widened pathway buffered from the road.

The Ralston property
This large property and the immense Ralston Mill building have been searching for a redevelopment future for over 20 years. Present uses for offices and storage occupy the lower floors, but the upper floors are unused.

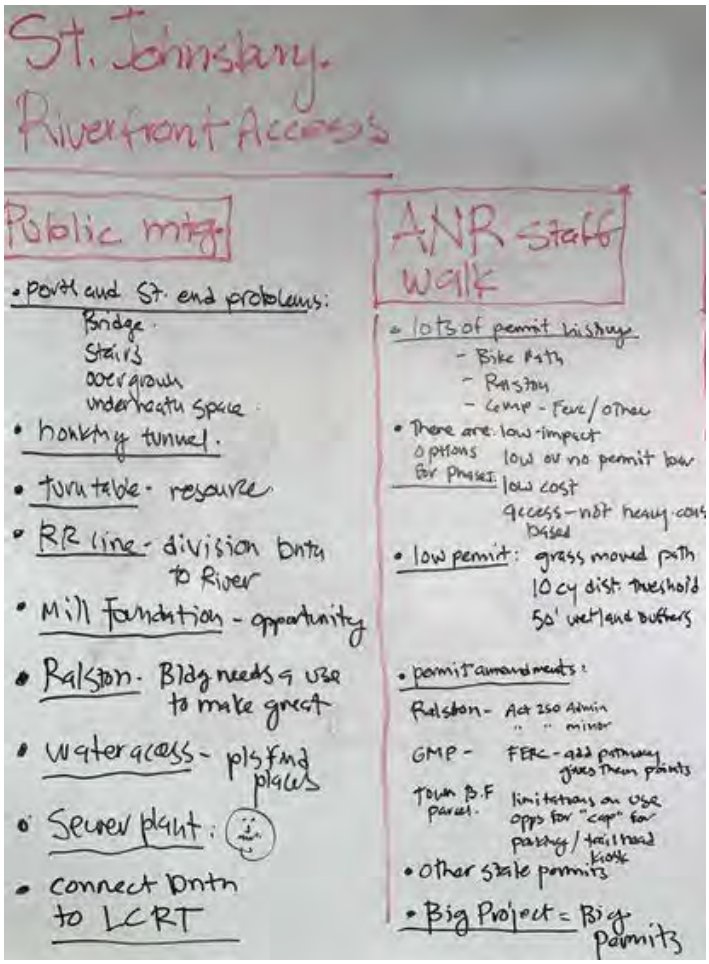
The owner, Bruce Ralston communicated to the project team that he really does not want to enter into any formal agreements for a trail to precede across his property. With that in mind, the project must basically exit from the Green Mountain Power property out to Bay Street for the completion of the path connection to the Lamoille Valley Rail Trail.

Perhaps in the future, either Mr. Ralston or a future owner or developer of the property will reconsider the combined value of the trail or the economic value of the property as a mutually beneficial combination, but that time is not now.

5. PUBLIC PARTICIPATION:

Public Participation in the planning process

Several opportunities for the community to input their dreams and aspirations for a Riverside trail and park for St. Johnsbury have been afforded in this project:



Community River Walk:

In July 2016, the project team, the town, and NVDA hosted a community site walk along the River Trail area, with the consent of the property owners along the possible route of a river trail.

With the consent of Mr. Ralston and the assistance of the town public works department, PWD staff on a tractor brush hogged a path through the area from the Ralston mill south to the town sewage treatment plant. The area was previously impenetrable with 6 feet grasses and knot weed was opened up in a 6 foot swath of accessibility that brought people along the river bank with excellent views up and downstream.

There was an overall introduction and questions and answers before the walk began, and the group proceeded in a north - to - south direction from the visitor center, through the honking tunnel to the park site near Portland Street and then along the river.

The areas viewed included:

- The proposed Park site on property on the northeast corner of Bay Street as it meets Portland Street. This land is been considered as a potential acquisition for a Riverside Park.
- Walking along Bay Street, the need for sidewalks for safety and comfort of pedestrians was discussed and noted.
- The town owned parcel of the building on the corner of Bay Street – KC rental was viewed, as well as the open space adjacent that is owned by Green Mountain Power Company (GMP) that provides access to the riverfront.
- We walked through the GMP property on relatively level ground on the terrace above the river proceeding southbound parallel to the river along a town sewer line easement.
- Side trips were made on fishing paths out to the

waters edge for people to view the river and the riverbank vegetation.

- What emerged quite quickly was that access to the river and enjoyment of it as an amenity - was something that most people in town had never experienced and it was a revelation to many.
- We proceeded in a southerly direction paralleling the river below the GMP power substation. For a short section of a few hundred feet, the topography became steeper and more challenging and we discussed the need to define a trail corridor through there involving regrading the steep slope. Refuse was also noted with some concern about contamination. We scrambled up the hill to the open meadow areas where the power lines cross the river.
- An expansive open area of meadows on an elevated terrace with views of the river extends for the next several hundred feet south. All this is on property owned by GMP.
- Additional side trips were taken to the rivers edge through the floodplain forests and to view combined storm sewer outfalls along this area. What were noted were the areas where storm sewer pipes came out of the hillside, there were eroded channels out to the river from the storm water erosive impacts. We discussed opportunities that restoration of those areas for water quality could also be combined with stabilization for recreational boat access also - because they created an inlet that could provide canoe landing and informal trail access. We liked the idea that those improvements could be combined to have multiple functions for a single investment.
- Proceeding south we arrived at the foundation of the archaeological remains of an old sawmill or factory. This is a dramatic feature in the site, with concrete walls that elevate almost 20 feet above the topography below. We decided that it would be a great interpretive and experience opportunity for people along the River trail, but the safety improvements for a handrail and accessible path would be necessary parts of the project if undertaken there.
- Proceeding from the foundation south we crossed a broad meadow and then went into the woods going along the islands that are defined by channels parallel to the river. This area is all a floodplain forest and is highly constrained in terms of alterations for trail development. State and federal agencies are reluctant to allow

permanent construction in here because it will be flooded and there could be hazardous results or the replacement impact and cost.

- We meandered through the woods and then returned back out to the Meadows lands as we approached the Ralston properties, which are by far the largest single ownership in the Area under consideration for the study.

"A unique and special experience"
"A game - changer in perception of the river and its beauty"

...Were among comments made.

- We emerged from the Ralston property to the sewage treatment plant and walked along the access road from the sewage treatment plant back to Bay Street. At that point we were out of time, but the extension of Bay Street to the terminus of the Lamoille Valley Rail Trail was noted, with the expectation that the trail head parking improvements would be completed in the use of the rail trail could grow considerably with its completion.

- A strong desire to have a river trail connect to the rail trail as a single unified corridor was expressed by many.

Community Forum:

That evening after the site walk, a public workshop was held in the visitor center lobby with about 25 people present:

These were the major points of this discussion:

- Access to the river is an experience that is not widespread to residents of St. Johnsbury and no one coming to visit the area really notices the river.
- Making access possible could be a profound change of paradigm for the whole downtown area connected to a beautiful natural amenity. It could be new, different, and very good.
- There were questions about cost and design and maintenance that would be involved on the town's part in the event of a trail being established.
- One thing that was discussed was the challenge of the park property on the north not necessarily being in the flow of people movement through the honking tunnel out to the river in that it is off to the side - so it would need to be well-connected
- Challenges of making the area more pedestrian desirable in the industrial traffic uses of the road were considerations of some concern.
- Some concern about safety with campsites and unwelcoming people.
- Some concern about it being a natural enclave and not being overrun with people.
- The project team agreed to have contact with all the property owners that might be affected.
- Receive detailed surveys from the past bike path project.

6.COORDINATION WITH PERMITTING AGENCIES:

Agency River Walk:

In July 2016, the project team, the town, and NVDA hosted a state agency staff site walk along the project area. Agencies included:
ACT 250 District Commission.
Vt Agency of Natural Resources

In addition to state agency representatives, a representative from the Vermont River Conservancy also attended.

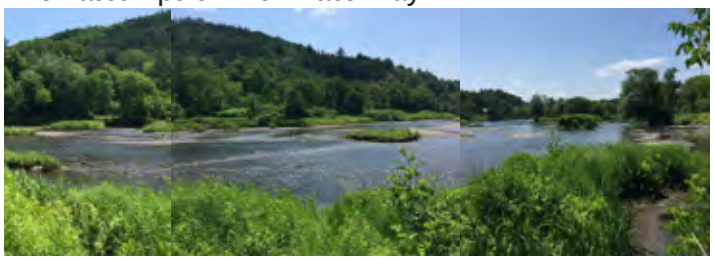
The project team and NVDA gave an overall introduction to the project. Many resource agency staff were familiar with the site from the past VTrans bike path project in years prior. There was recollection of past debates about trail location on various private properties along the river.

Generally it was thought that if the trail design just kept simple and straightforward and not looking to build a paved roadway - that the permitting level of detail would be more appropriate to a trail project assessed at a lower permitting threshold. The site walk with agency staff stopped at the Northern Ralston area terminus due to time limitations.

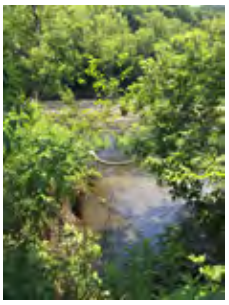
Agency staff from the Vt Division for Historic Preservation was not included in the site walk but will be consulted as the project proceeds. Prior bike path locations along the riveres edge had archeaological issues but this alignment of the path is all on disturbed areas.

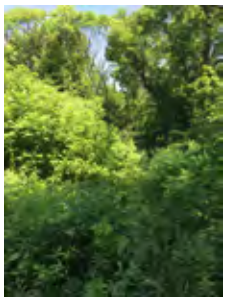
The entire project area has a legacy of brownfield issues. A review of the area with NVDA has identified areas where brownfields have been re-mediated but there do not appear at this time to be brownfield issues that would preclude this vision to proceed with due diligence.

Agency regulated resources in the project area:
The Passumpsic River waterway:



Floodway and floodplain areas mapped by FEMA with natural riverbank areas of the floodplain forests that are both vulnerable and protective.





Stormwater and sewer outfalls from town infrastructure:

Sites with history and archeology:

7. A TIME LINE OF PREVIOUS WORK

EVENTS and DATES - 2001 - Present

St. Johnsbury Charrette 2001: A Community Planning and Design Workshop (VT Chapter of American Society of Landscape Architects, et al) 26-Apr-01

VT CDBG Awarded to Town of St. Johnsbury for Riverfront/Bay Street Corridor Study 7-Apr-03

Tony Pomerleau Donates Former Railroad Station to the Town of St. Johnsbury Spring 03

Bay Street Redevelopment Project Plan (ORW, et al) Oct-04

Proposal for Renovating the Bay Street Area (St. Johnsbury Academy Student Katherine Tolman) 23-May-05

VTrans Comments on Bay Street Development Conceptual Plan 8-Jun-05

Renovation of St. Johnsbury Welcome Center begins 1-Jan-06

Renovated St. Johnsbury Welcome Center Opens 11-Aug-08

Area Wide Assessment of Bay Street, prepared by Stone Environmental for the VT Dept. of Environmental Conservation 31-Dec-11

St. Johnsbury Three Rivers Bike Path completed, with trail end on South Main St. 15-Aug-12

Phase I Environmental Assessment completed for KNTT Investments ("KC Rentals") 19-Oct-12

Town takes title to former "KC Rentals" property Oct-12

Phase II Environmental Assessment completed for former "KC Rentals" property 29-Aug-13

Contract Documents & Specifications prepared for Demolition of former KNTT Building ("KC Rentals") July 28 -14

St. Johnsbury "Community Visit" facilitated by VCRD. St. Johnsbury Riverfront Committee formed. Apr-15

Mt. Vernon Street Bridge Completed, connecting the Three Rivers Bike Path to the Lamoille Valley Rail Trail Fall -15

Route 5/South Main Street Intersection Scoping Study Completed (Dubois & King) Dec-15

Town of St. Johnsbury is awarded an $8,000 Municipal Planning Grant (FY2016) from ACCD to commission a Riverfront Access Concept Plan Dec-15

VHCB Funds Appraisal of two Bay Street Parcels at Portland St. Bridge (owned by ADI) targeted for future waterfront park Mar-16

St. Johnsbury Development Fund, with Town of St. Johnsbury support, applies to VHCB for Conservation Grant to acquire ADI parcels for riverfront park (grant denied) Apr-16

Riverfront Access Concept Plan Complete (GPI) May-17

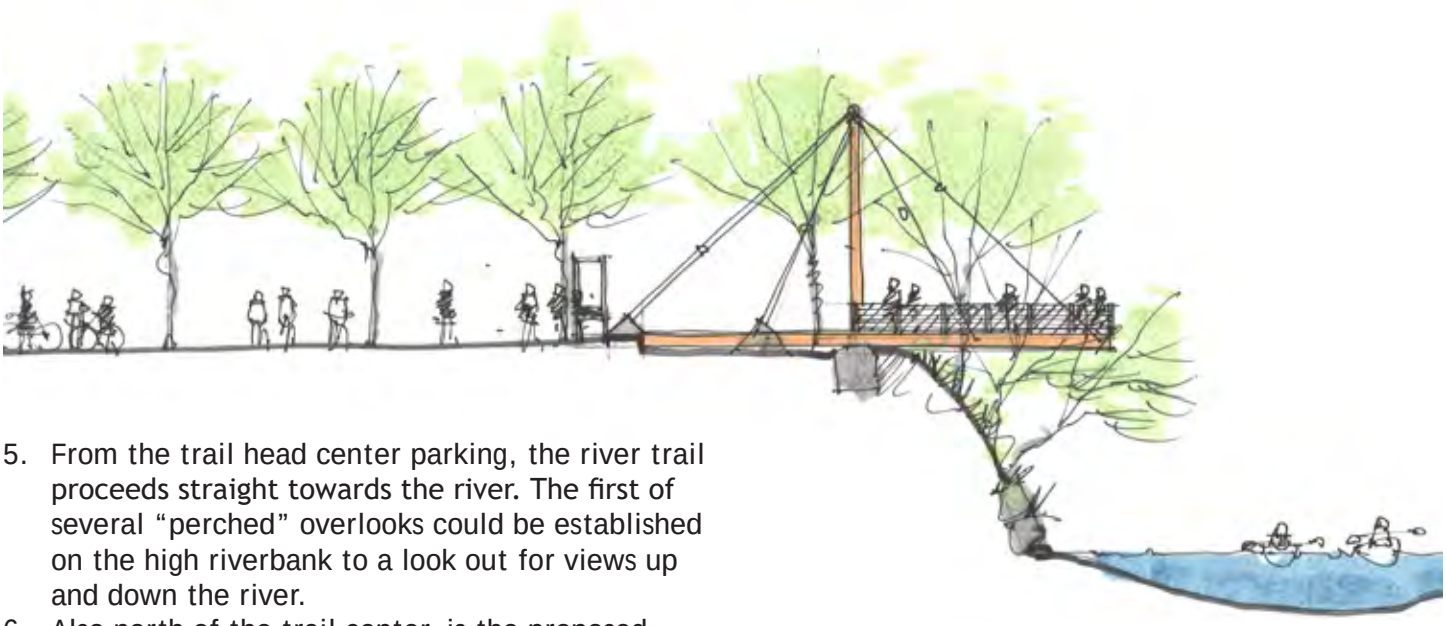
8. AREA DESCRIPTIONS OF THE PROPOSED IMPROVEMENTS:

Connection from Downtown to Bay Street:

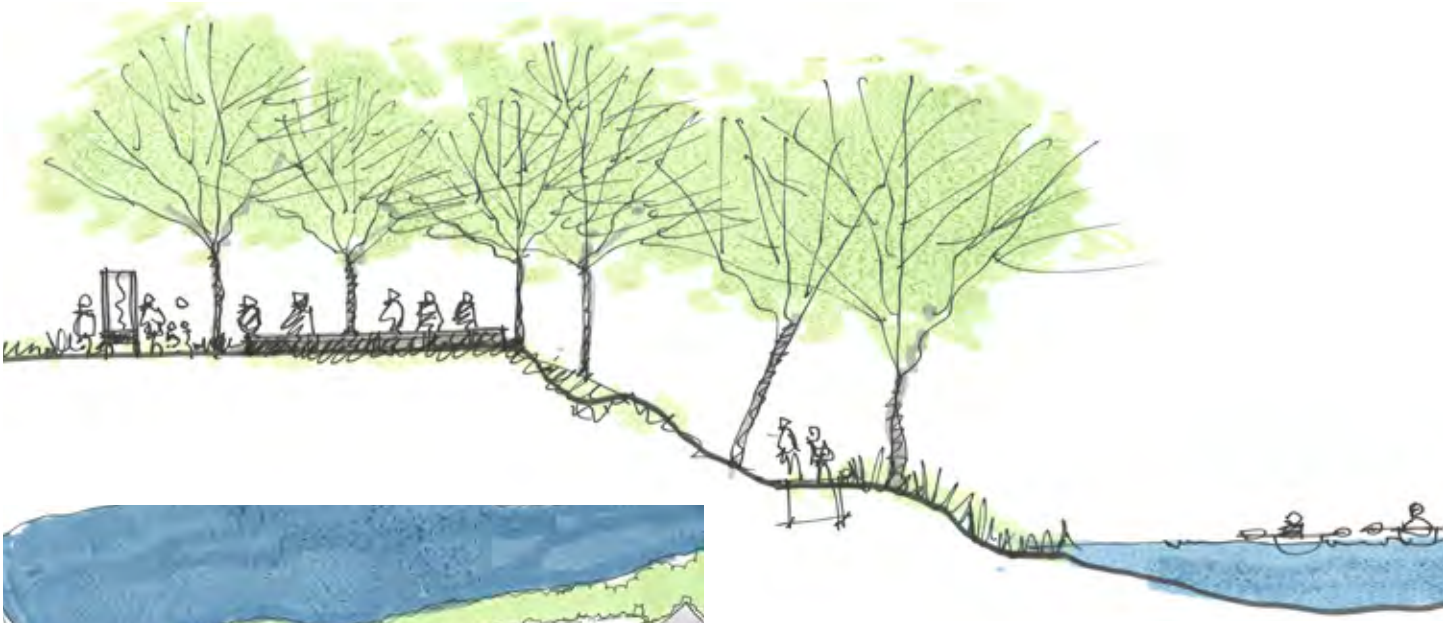
1. An anchor to downtown at Depot Square with the visitor center serving for public information.
2. A crosswalk and sidewalk improvements improvement across the base of Eastern Avenue as it meets Depot Square and proceeds through the honking tunnel.
3. Approximately 550 feet of sidewalk replacing the existing deteriorated sidewalk would be necessary including granite curbing, concrete sidewalk and a repaved road.
4. A safety camera controlled traffic light system for vehicles approaching from each direction of the honking tunnel would make for better traffic management in light of increased pedestrian use of the sidewalk.
5. The sidewalk underneath the honking tunnel should have additional lighting, and the stone and concrete walls of the tunnel could be cleaned to be more attractive.
6. Curbing and sidewalk across the intersection from the tunnel to Bay Street southbound through Allen Lumber and northbound to the proposed park site would better define the intersection for safety and pedestrian use. The configuration of this should still allow for truck traffic to Allen Lumber and through the area for existing businesses.
7. The sidewalk should connect to the park site on Bay St. north heading towards Portland Street. That sidewalk is approximately 500 feet long, and would require a designated crosswalk at the lumberyard driveway.
8. The sidewalk through the honking tunnel straight across Bay Street points straight towards the river and the alignment of the sidewalk as it connects to become the River Trail.

Passumpsic River Trail and Three Rivers Pathway extension:

1. A prominent gateway and wayfinding to the River Trail should be established in this location to encourage people walking from downtown to go to the riverfront.
2. For people coming through the tunnel looking to drive and park for the trail head, wayfinding signs to a parking lot to the left/north of the town owned building should be located.
3. A parking lot with capacity of about 20 to 30 cars with a gravel surface can provide trail head parking to the River Trail. This would be accomplished and also would mutually serve access for Green Mountain Power into the northern part of their property for any service or maintenance needs through the parking area drivable aisle.
4. It is proposed rather than tearing down the town owned rental building completely, that a partial take-down of the one story addition that blocks a direct trail to the River would be preferred. It would be less expensive for demolition and also allow the investment to have an economic return for the redevelopment of the remaining two - story part of the structure that is the more prominent part of the building. Through shared funds from the town in grant sources, as well as private development, much of the building could be renovated to be either a seasonal or year-round trail head business center with the rental bicycles, cross country skis or snowshoes and a warming hut. These could be operated by local businesses as seasonal operations.



5. From the trail head center parking, the river trail proceeds straight towards the river. The first of several "perched" overlooks could be established on the high riverbank to a look out for views up and down the river.
6. Also north of the trail center, is the proposed park property. This is seen as a community amenity area. Unfortunately, the grade change between the level of the park terrace and the water – approximately 20 feet, is not able to provide direct access into the water from the park but there are nice views from the elevated position. Assuming a proper cleanup of the site and eventually development of it into a park, perhaps there could be a performance area and attractive lawns and landscaping to make it a place that people would like to go as a contrast to the urban downtown of Railroad and Portland Street. Conceptual sketches of the Park property are provided on pages 22 - 23 showing some of those features.
7. Back on the river trail, proceeding south from the first overlook, the trail follows the level terrace that is also a sewer line that parallels the river. First it is flat, then gradually sloping, in the end has a short section of about 200 feet that will require regrading of the steep slopes to create the trail surface. This will require excavation, grading, probably some removal of refuse that his been discarded in this area, and the establishment of a trail base and surfacing.
8. Upon arriving at the upper terrace, the trail proceeds across level and gradually sloping land of GMP turning to offer overlooks of the river and then meandering through the meadow in the southerly direction parallel to the river. This includes a stop at a large historic mill foundation.
9. Intermittent side trails are also developed to riverside locations, as there are several storm/ sewer outfalls through this area.
10. Side trails also provide several locations where canoe and kayak access can be created using a combination of river restoration techniques as well as ecological restoration of the storm=sewer outfall areas.
11. The trail proceeds south across the meadows with additional views out to the river from the high terrace. There, one reaches the southern end of the GMP property as the trail swings west across the meadow it rises in a traverse across the embankment of Bay Street to reach the end of a dead end lane, then proceeds to Bay Street.

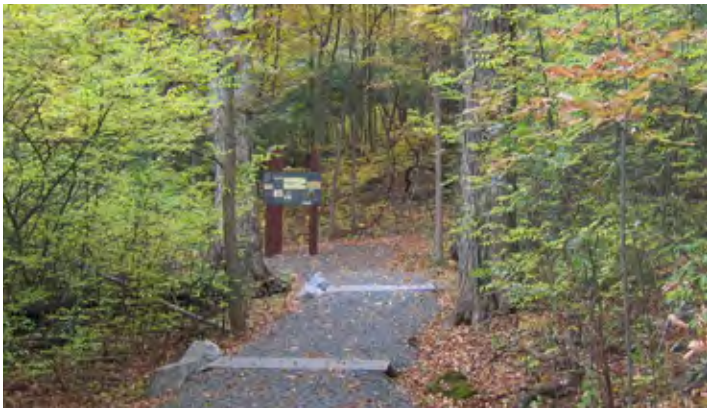


Bay Street to Lamoille Valley Rail trail

1. When path reaches Bay Street, The connection over to the Lamoille Valley Rail Trail is via a striped bicycle lane the length of Bay Street.
2. Staying on the eastern side of Bay Street, bicycle traffic is defined by a striped and colored bike lane defined out of the width of the street for bicycle travel. This extends for about a quarter of a mile and has several driveway crossings, a Rr crossing, then up the hill to the intersection where the bike route would cross S. Main St. onto a widened sidewalk to the Lamoille Valley Rail Trail trail head.

The pathway route has a variety of materials:

- Across Depot Square, a painted crosswalk on the asphalt pavement will define a walking route so that people are not walking in between the parked cars of the wine bar.
- Sidewalks from Depot Square through the honking tunnel and along Bay Street would be a typical downtown St. Johnsbury public sidewalk of a granite curb with concrete surfacing.
- The river path as proposed, would be a crushed gravel or ledge stone surface approximately 4 inches deep over a 12 inch deep base of bank run gravel for stability.
- Much of the Passumpsic River Trail and Three Rivers Pathway extension can have direct applied surfacing over geotextiles with some of the base on existing grade. In the case in the floodplain, a cut - out for to not increase the depth of soil in the floodplain may be required. This would be locally permitted by the town with state input.
- As mentioned, there is an approximately 200-foot section of steep topography where additional grading and earthwork will be necessary in the form of a regraded terrace for the trail.
- There has been some discussion of making the path “passable” just by grading and mowing a route for the trail, and many stretches, the level areas across the meadows are in fact suitable for this as the initial way to establish the route. In order to make this successful in the steep section, though, it would be better to grade in the full trail width along the slope.
- The road section along Bay Street includes traditional shoulder striping and signage for a bicycle lane. The entire quarter mile does not have to have colored pavement but it is recommended at the driveway crossings.
- Driveway crossings that are excessively wide could be narrowed.



River Trail Branding, Wayfinding and Interpretive signage and river trail access

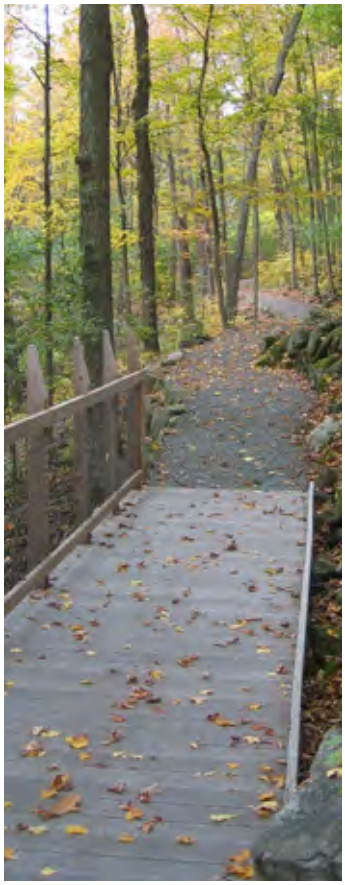
It would be nice to brand the river trail to give it identity, to make residents and visitors comfortable that they are on an official trail, and to give them directions and information.

- The river trail would benefit from a branding logo or symbol of some kind, and it would be nice if that spoke to a specific St. Johnsbury identity.

A hierarchy of signs would support the River Path:

- Trail head kiosks including a map in the area information. This could show area services for hungry walkers, skiers and bikers to encourage them downtown after their trip. Some kiosks even post menus and Q codes for local establishments at trailheads.
- Trail directional signs pointing to features while giving distances and destinations.
- Trailblazers, small plastic or metal markers, nailed to trees or to marker posts.
- Interpretive signs with narrative and graphics in locations along the way to impart environmental, historical, cultural, recreational, and other information.
-

Wayfinding could be expanded to public arts, and made personal with guided walking tours and expanded area docents and interpretationand sites such as the massive foundation of the former industrial complex could interpret a unique story about the town, industry and waterpower and the river. An approach path from the river trail at wheelchair accessible grades would also be desirable.



Passumpsic River Recreational Points - St Johnsbury, Vermont
Arnold Falls
Arnold Falls Portage Trail
Fred Mold Park
Popular park with fishing pier
Moose River
American Legion
ADI Parcel
Potential riverside park
Shallow water
Green Mountain Power
Potential riverside park
Passumpsic River
Ralston Parcel
Potential river access
Sleeper's River
Lamoille Valley Rail Trail
Town Parcel
River access only due to railroad bed. Potential for primitive campsite/ picnic area

Examples of canoe/kayak put-in and landing designs to be incorporated into combined storm/sewer outfalls restoprations areas. These are combined with the riverbank restoration work.

9. OVERVIEW OF PROJECT COSTS

The budget provided is in support of a major grant application on the town's behalf.

The grant program through the Northern Border Regional Commission provides access to as much a $500,000 in funds. Adding a local or other grant source match of 20% the funding could be $600,000 or greater, depending on local match other grants and town completed efforts.

At this conceptual level of development, the grant application has a budget as follows:

Opinion of Probabale cost: based upon conceptual plans

ITEM	UNIT	AMT.	UNIT VALUE	COST
Sidewalks to dntn				
Granite Curb	L.F.	530	$ 30.00	$ 15,900.00
6' wide asphalt paved sidewalk	L.F.	530	$ 55.00	$ 29,150.00
crosswalks	L.F.	450	$ 10.00	$ 4,500.00
subtotal				**$ 49,550.00**
contingency and design/engineering	25%			**$ 61,937.50**
Three Rivers Pathway extension				
excavation/filling in steep area	allowance	1	$ 50,000.00	$ 50,000.00
4" Hard pack pathway surfacing	L.F.	1350	$ 50.00	$ 67,500.00
riverbank allowance	allowance	1	$ 10,000.00	$ 10,000.00
kiosks	allowance	2	$ 5,000.00	$ 10,000.00
subtotal				**$ 137,500.00**
contingency and design/engineering	40%			**$ 192,500.00**
Trailhead Center and Parking at Town parcel				
Granite Curb	L.F.	120	$ 35.00	$ 4,200.00
6' wide asphalt paved sidewalk	L.F.	120	$ 165.00	$ 19,800.00
crosswalks	L.F.	30	$ 10.00	$ 300.00
4" Hardpack Path surface	L.F.	240	$ 60.00	$ 14,400.00
Hardpack paving for car parking	per space	30	$ 1,250.00	$ 37,500.00
Landscaping and placemaking allowance	allowance	1	$ 25,000.00	$ 25,000.00
Demolish partial building and remove hazardous	allowance	1	$ 90,000.00	$ 90,000.00
subtotal				**$ 191,200.00**
contingency and design/engineering	40%			**$ 267,680.00**

Sidepaths and enhancements						
Vt YCC for sidepaths and river restoration	allowance	1	$	25,000.00	$	25,000.00
Foundation boardwalk	S.F.	480	$	65.00	$	31,200.00
Other site interpetations and overlooks	allowance	1	$	25,000.00	$	25,000.00
subtotal					**$**	**81,200.00**
contingency and design/engineering	25%				**$**	**101,500.00**
Striped bike route along Bay Street						
striping	L.F.	1320	$	5.00	$	6,600.00
contingency and design/engineering	15%				**$**	**7,590.00**
Total Estimated Cost					**$**	**631,207.50**
North Park and sidewalk connection						
Fine grade lawn areas	sq. ft.	50000	$	0.10	$	5,000.00
topsoil	sq. ft.	30000	$	2.50	$	75,000.00
walkways	sq. ft.	7500	$	3.50	$	26,250.00
lawn seeding	sq. ft.	30000	$	0.05	$	1,500.00
misc finish work	allowance	1	$	10,000.00	$	10,000.00
trees etc	allowance	1	$	10,000.00	$	10,000.00
overlooks	allowance	1	$	10,000.00	$	10,000.00
electrical service	allowance	1	$	5,000.00	$	5,000.00
Granite Curb	L.F.	300	$	35.00	$	10,500.00
6' wide asphalt paved sidewalk	L.F.	300	$	110.00	$	33,000.00
subtotal					**$**	**186,250.00**
contingency and design/engineering	25%				**$**	**232,812.50**
Total Estimated Cost					**$**	**258,112.50**

10. OVERVIEW OF PHASING COORDINATED WITH FUNDING STRATEGIES:

Approaches to phasing:

Grant funded capital project:

The basis for this phasing approach is in support of the current grant application to the Northern Border Regional Commission.

Grant phases:
Phase 1: Project organization and management

Phase 2: Design plans for grant funded project

Phase 3: Permitting and clearances

Phase 4: Sidewalk project from Depot Square to Bay Street

Phase 5: Trail head center building clean up and parking facilities, kiosks etc.

Phase 6: Trail on even ground for approaches then steep terrace construction.

Phase 7: overlooks and water access points with combined sewer outfalls.

Phase 8: Side trails

Future phases:

Phase 9: sidewalk to north park property

Phase 10: North park property funding and acquisition

Phase 11: Gateway Park development

Locally funded incremental project:

The basis for this phasing approach is to put a simple pathway in place to gain access to the area and use minimal town staff machinery and labor, donated volunteer and locally fund raised efforts.

Phase 1: Volunteer and town staff organization.
Define an action plan and schedule
Define local project mangement for different aspects of the path project: marketing, town laisons, volunteer communications etc.
Define design approach and plans
Seek low impact project clearances
GMP easement documents

Incremental Phase 2:
Bike lanes stripes from LVRT to GMP property - town

Incremental Phase 3:
Trail ready pathway across the GMP meadows - skim trail surface from grass. seek route through even terrain if possible - clear out thickets for improved access.

Incremental Phase 4:
Donated funds to be used for the steep section to regrade into pathway terrace.

Incremental Phase 5:
Path completion to Bay Street

Incremental Phase 7:
Trail head parking and information

Incremental Phase 8:
Trail head center

Concluding thoughts: Why a river path for St. Johnsbury and what's so important about it?

St. Johnsbury has aspired to greater economic wealth in its business district for almost 20 years. Looking for new business, comparing itself to nearby business competition in Littleton and other area cities. At the same time – recent years have seen the downtown regain new vibrancy and its looking into itself that has garnered the great new changes. Local business, local places of pride and culture, and access to natural areas that bring people to the area for visiting and tourism, it can be a source of local pride and support of the local economy.

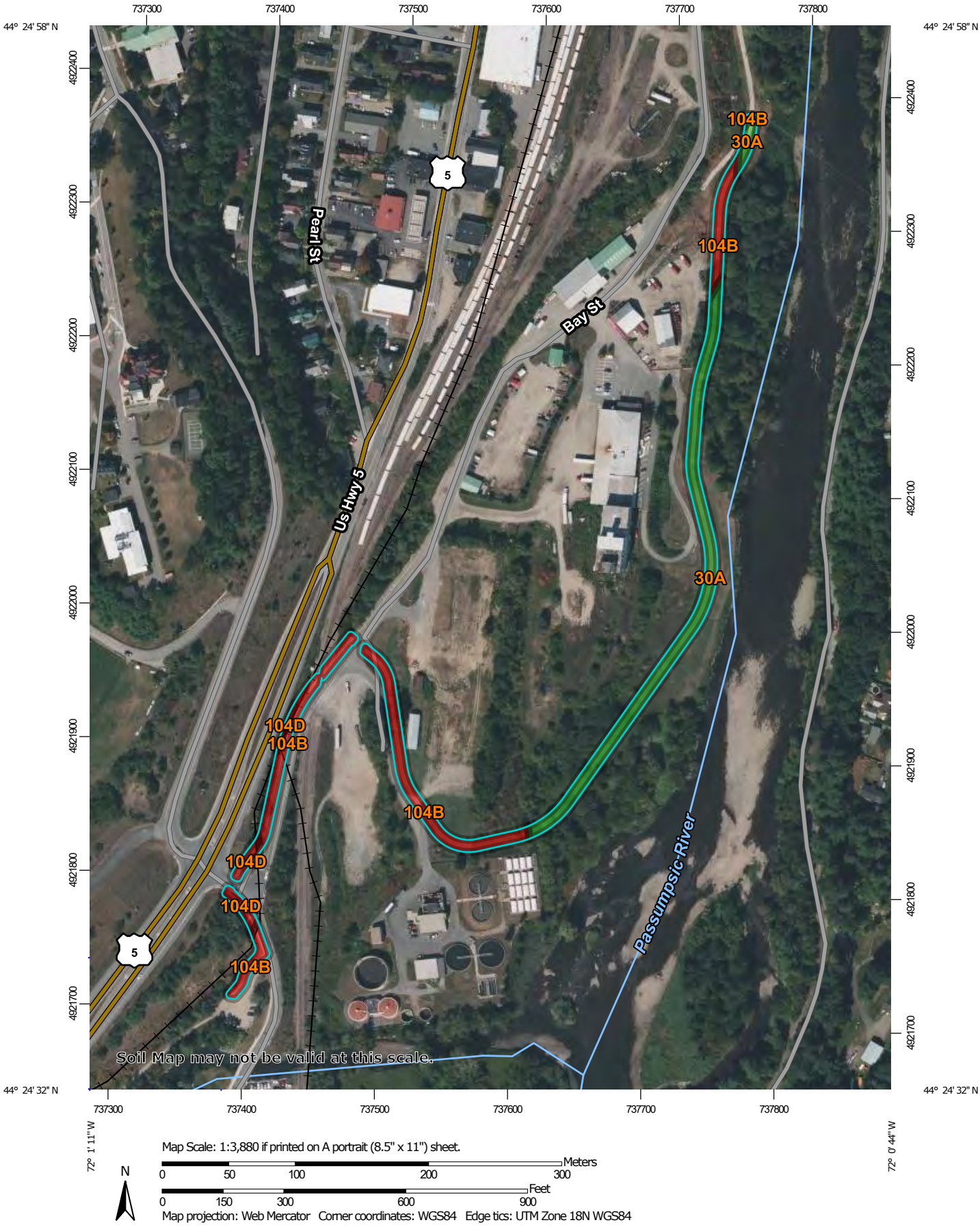
The connection of the downtown to the river and to the LVRT offers promise that makes St. Johnsbury the best of itself - for itself. The resources are local and the revenues are local also. Case in point. The opening of the LVRT in July 2016 garnered some 20,000 seasonal visitors to the trail to walk, bike and ski. With only a small parking area and not connected to downtown - imagine just the transfer of those 20,000 people to come downtown for dinner, to shop and enjoy the area. Its a new demographic that jobs and population growth cannot cover at this present time.

It's a new economy for the town. The payoff of a river trail and river park project for those 20,000 people each year spending even $20.00 apiece for dinner and miscellaneous expenses would add $400,000 of income to downtown St. Johnsbury's economy annually. Simplistically, that would be a 2 - year payoff for the investment in the trail as economic return. Other economic returns could come later. Engaged residents in a natural environment in downtown would have other benefits as well.

D

Farmland Conversion Impact Rating

Farmland Classification—Caledonia County, Vermont
(Proposed Path)



Map Scale: 1:3,880 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of statewide importance, if drained
- Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated
- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Soil Rating Lines

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
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- Farmland of statewide importance, if drained
- Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
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- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Soil Rating Points

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of statewide importance, if drained
- Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated

- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
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- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Caledonia County, Vermont
Survey Area Data: Version 30, Feb 17, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 1, 2020—Sep 21, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Farmland Classification

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
30A	Ondawa-Sunday complex, 0 to 2 percent slopes, occasionally flooded	All areas are prime farmland	1.1	44.7%
104B	Urban land-Adams-Nicholville complex, 0 to 8 percent slopes	Not prime farmland	1.2	49.0%
104D	Urban land-Adams-Nicholville complex, 15 to 25 percent slopes	Not prime farmland	0.2	6.3%
Totals for Area of Interest			**2.5**	**100.0%**

Description

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Rating Options

Aggregation Method: No Aggregation Necessary

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The majority of soil attributes are associated with a component of a map unit, and such an attribute has to be aggregated to the map unit level before a thematic map can be rendered. Map units, however, also have their own attributes. An attribute of a map unit does not have to be aggregated in order to render a corresponding thematic map. Therefore, the "aggregation method" for any attribute of a map unit is referred to as "No Aggregation Necessary".

Tie-break Rule: Lower

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

E

Section 106 Review Letter

April 14, 2023

Ref: 58090.01

Ms. Laura Trieschmann, VT SHPO
Vermont Division for Historic Preservation
1 National Life Drive
Montpelier, VT 05603

Via Electronic Mail Only

Re: St. Johnsbury LVRT Riverfront Extension Project (aka Three Rivers Path Phase 2)
Vermont Division for Historic Preservation - Section 106 Review

Dear Ms. Trieschmann,

On behalf of the Town of St. Johnsbury ("Town"), VHB has prepared this letter to support the Town's application to the U.S. Department of Agriculture Rural Development ("USDA RD") for loan assistance to complete Phase 2 of the Three Rivers Path project, which proposes to construct a new segment of the path, also known as the Lamoille Valley Rail Trail ("LVRT") Riverfront Extension Project ("Phase 2" or the "Project"). The Project would commence at the existing LVRT trailhead at Main Street near the Sleepers River and continue north as a roadside and overland path to connect to the southern terminus of Phase 1 of the Three Rivers Path. The Project would complete a multiuse recreational path connection from the LVRT to downtown St. Johnsbury.

As the Town is seeking federal funding for the Project, compliance with Section 106 of the National Historic Preservation Act of 1966 ("Section 106") is required. This letter provides Project details regarding and demonstrates that the majority of the Project's Area of Potential Effect ("APE") is located within the APE assessed in Phase 1, and that the findings from the Phase 1 Historic Resources Assessment prepared by VHB in 2018 remain valid and are applicable to the Project. Where the current Project has been expanded and was not included in the Phase 1 report, property descriptions and new photographs are provided. This letter seeks VDHP's concurrence on the recommendation of eligibility and effect for the Project.

Project Location and Description

Overview: The Project is located in St. Johnsbury, VT, beginning at the LVRT trailhead at 543 Main Street and proceeding a short distance on Main Street towards US Route 5 before crossing the road to the west side of Bay Street where it proceeds north to the Bay Street Extension. The path would follow the north side of the Bay Street Extension before diverging east just before the entrance to the Wastewater Treatment Facility to proceed overland., The path would turn northeast at the boundary of the Ralston Building parcel and run roughly parallel to the Passumpsic River, making its closest approach to the riverbank (approximately 60 feet of separation) just south of the circular drive east of the Ralston Building. The path would then proceed north, crossing through public property and a forested floodplain wetland feature to connect with the southern terminus of the Phase 1

Engineers | Scientists | Planners | Designers

40 IDX Drive, Building 100
Suite 200
South Burlington, Vermont 05403
P 802.497.6100
F 802.495.5130

DRAFT

alignment south of the Green Mountain Power ("GMP") substation. See **Attachment 1, Project Location, Alignment and APE Map**.

Details: The Project proposes an eight-foot wide paved shared use path from the LVRT trailhead that continues across Main Street to Bay Street (connected by a crosswalk) and adjacent to Bay Street to Bay Street Extension. On Bay Street, the path would cross the railroad tracks, where a rail crossing upgrade may be required by the Washington County Railroad ("WACR"). A crosswalk would take the path across Bay Street to parallel Bay Street Extension where it becomes a 10' wide paved shared used path. Where the path veers east away from Bay Street Extension, the path would become a 10' wide aggregate shared use path. A culvert is proposed at STA 404+50 for drainage, and at STA 417+75. The 10' wide path would connect with the previously constructed path at STA 422+60.

In addition, north of the Project alignment, a five-foot wide concrete sidewalk would be constructed on Bay Street, adjacent to the Three Rivers Trail Pavilion constructed during Phase 1 and on the street side of the three RK Miles storage sheds (the three are on one parcel). This sidewalk would connect to a future parking area for trail users. See **Attachment 2 – Project Plans and Typical Sections**.

Differences Between Phase 1 and Phase 2

The construction of Phase 1 included bike/ped improvements along Bay Street from the Main Street intersection north to the general location of the Myers waste and recycling center at 501 Bay Street. From this point, no formal connection to the south end of Phase 1 exists. Phase 2 proposes to take the on-road path alignment from Bay Street and redirect it off-road as discussed above, connecting with the previously constructed path just south of the GMP substation. The on-road alignment of Phase 1 would be removed. The sidewalk proposed at the Three Rivers Trail Pavilion was not included in the Phase 1 project.

Previous VDHP Review

On behalf of the Town Town, VHB completed a Historic Resources Assessment in 2018 for the Three Rivers Path Extension Project (Phase 1). The purpose of the report was to assist the Town in satisfying its requirements for Section 106 compliance, which was required for receiving funding from the Northern Borders Regional Commission ("NBRC"). The southern portion of the Phase 1 project began on South Main Street at the north side of the bridge over Sleepers River, extended 0.66 miles along Bay Street and Bay Street Extension. The route followed Bay Street to the north end of the Ralston property, where it terminated near the boundary of the vacant CN Brown Company parcel. left the roadway and followed the Passumpsic River corridor across The northern portion of Phase 1 commenced on GMP property near the location of the poles supporting the aerial power line crossing of the river, continuing north through and Allen Lumber properties, reaching the Three Rivers Trail Pavilion near 195 Bay Street.

The APE for Phase 1 included 34 above-ground properties and archaeologically sensitive mill foundations close to the river. VHB recommended a finding of No Adverse Effect to historic (above ground and archaeological) resources. VDHP concurred with the recommendation on July 11, 2019. Properties that were included in Phase 1 and remain in the Phase 2 APE are identified in Table 1, below, in the *Historic Resources Identification* section.

Area of Potential Effect

Per 36 CFR 800.16(d), Area of Potential Effect ("APE") means the geographic area or areas in which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE is influenced by the scale and nature of the undertaking and may be different for different kinds of effects caused by the undertaking.

The APE for the Project can be defined as the Project area, where there are direct effects to the structures and ground disturbance, and where there is potential for indirect effects. The potential for direct effects exists on the ground where work is being undertaken. The potential for indirect effects occurs where there might be visual, audible, or atmospheric effects.

The APE for Phase 2 includes the Project footprint and the parcels abutting the proposed path. These parcels have been included in the 2018 (2019 concurrence) historic resources assessment, except for five parcels. Table 1, below, includes properties in the APE from the Phase 1 report that are also included in the Phase 2 APE. Table 2, below, includes properties in the Phase 2 report that were not included in the Phase 1 APE. See **Attachment 1 – Project Location, Alignment, and APE Map.**

Historic Resources Identification

According to 36 CFR 800.16[1](1), "Historic Property" means any prehistoric or historic district, site, building, structure, or object included in, or eligible for listing in the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such property. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native American organization and that meet the National Register criteria.

As discussed above, the Phase 1 APE and the Phase 2 APE overlap. There are 16 properties from the Phase 1 APE (2018 report) that are included in the Phase 2 APE. They are identified in Table 1, below. There are five (5) properties in the Phase 2 report that were not included in the Phase 1 APE, and are described in Table 2, below. Photographs of the additional (Phase 2) properties are included as **Attachment 3**. The table includes the resource IDs from the Phase 1 2018 report that are applicable to the Phase 2 APE, updated where necessary. Properties recommended as eligible for listing in the National Register are highlighted in green in Tables 1 and 2. All properties are included in **Attachment 1 – Project Location, Alignment, and APE Map**.

There have been some changes to the resources since the 2018 report, which include demolition and construction. These are identified in the Tables. The property at 659 Bay Street (#3 in the 2018 report) has been demolished. The property at 195 Bay Street (#19 in the 2018 report) has been demolished and the Three Rivers Trailhead Pavilion (Map ID Q – see Table 2) was constructed. Additionally, since 2018, the former Ide Flour Mill property has been purchased by Zion Growers with plans to use the facility for industrial hemp processing.

Properties Eligible for the National Register

All surveyed properties in the APE are included in Tables 1 and 2, following the discussion of eligible properties. There are four (4) historic properties in the Area of Potential ("APE"): two former mills and two railroads. These properties are listed and described below. One of the properties included multiple resources (202 Bay Street, Ide Flour Mill), which are identified separately in the tables. The second mill is the Ralston Purina Mill. The two eligible railroads are the WACR and the Lamoille Valley Railroad (now LVRT). These railroads have not been previously included in the State Register or National Register, and are discussed below, as the descriptions would not fit in the space allotted by the Tables.

Washington Country Railroad: The Project path generally parallels the WACR, formerly the Canadian Pacific Railway, originally the Connecticut and Passumpsic Railroad when it reached St. Johnsbury in 1850. The proposed path is located east of the railroad, the latter a prominent feature that separates the more industrial areas of the Town from the downtown area.

The railroad and its related buildings have also been associated with the Boston and Maine Railroad and the St. Johnsbury and Lake Champlain Railroad, among others. The use has changed since 1850, as the passenger station no longer serves passenger trains. Today, the rail line operates for freight service. The roundhouse has been removed, but the turntable still sits at the southeast corner of the railyard. Buildings associated with the railroad remain, including a section house just north of the Ide Flour Mill complex, and the train shed at the Ide Flour Mill complex. In this section, the railroad retains its historic integrity. The railroad and its associated buildings are a potential historic district; however, studying the length of the railroad corridor is beyond the scope of this path project.

Lamoille Valley Rail Trail: The LVRT occupies the former railroad corridor from St. Johnsbury to Swanton, which was constructed between 1869 and 1877 as a segment of the Portland and Ogdensburg Railroad – Vermont Division. The railroad operated under various management and similar names throughout its lifetime. In 1880 the line was renamed the St. Johnsbury and Lake Champlain Railroad (St. J & L.C.). The line was known as "The Bridge Road", named for the six covered railroad bridges on its scenic route traversing small towns, forest, farmland, and picturesque train stations. The St. J & L.C. provided a connection between Portland, Maine and Ogdensburg, NY.

In 1948, the railroad was reorganized as the St. Johnsbury and Lamoille County Railroad. At this time, the conversion from steam to diesel required costly improvements to the track and bridges to support the heavier engines. The advent of the automobile caused declining ridership and in 1956, passenger service was discontinued. The U.S. Postal Service terminated a profitable mail contract that same year. In 1973, the State of Vermont purchased the railroad, renaming it the Lamoille Valley Railroad (LVRR) in 1978. Important businesses such as talc and asbestos companies closed in the 1970s. Excursion trains ran in the 1980s, but the track was not maintained. The LVRR ceased operation in 1994, and in 2002 the State of Vermont began converting the LVRR to the LVRT.

The LVRR is eligible for listing in the National Register under Criterion A – Transportation - as a good example of rural, east-west rail service in northern New England. The railroad contributed to the development of rail communities such as Sheldon Junction, Morrisville, Hardwick, and St. Johnsbury. The railroad provided valuable freight and passenger service to the communities along its route, stimulating industrial, commercial, and agricultural growth.

Ralston Purina Mill - The Ralston Purina Mill was constructed in 19484 with a 1956 one-story wing added to the north. It was a grain (feed) mill building that operated into the 1970s. The main mill building is a 7-story concrete structure with a seven-story tower at the north and eight-story silos rising in the south end. On this main block there are metal windows at the first, third, and seventh stories, only (on the west elevation). To the north of the grain elevator is a five-story concrete wing with metal windows on each story and freight doors at the half stories (on the west elevation). The 1956 wing measures 60′ x 160′, constructed as office space and other employee spaces (lunchroom, locker room, laboratory, conference room). It includes a two-story section and a one-story section clad in brick. On the western elevation, the entire wing is clad in metal siding. A rail siding formerly sat to the east of the mill, which can be seen in the 1962 aerial. Today the mill has been rehabilitated into office space.

The Ralston Purina Mill is eligible for listing in the National Register under Criterion A and C representing industry and commerce in northern Vermont and as an example of a mid-20th century mill.

E.T. & H.K. Ide Flour Mill **-** The Ide Flour mills were established in Passumpsic Village, Vermont by Timothy Ide and the partnership of E.T. & H.K. Ide formed in the late 1860s. In 1879, the family-owned company located on Bay Street on former swamp land reclaimed by the Ide family. The Ide complex consists of multiple buildings including a grinding mill, storage bin, train shed, storage sheds (184 Bay Street), and coal storage (152 Bay Street).

The main building - the grinding mill - was constructed in 1906. It is a four-story building constructed of rock-faced concrete blocks, 4x5 bays with a shed roof measuring 50′ tall on a foundation of piles driven 20′ down to

bedrock. A shed roofed timber frame storage bin sits at the southeast corner. A grain storehouse, 1895, is a 5-story elevator monitor, timber frame, with a monitor roof and dimensions 50' x 80'. The train shed is a gable roofed, timber frame structure with clapboard siding, sitting over the railroad tracks on the east side of the mill. Additional storage buildings on the parcel contribute to the historic complex.

The Ide Mill complex is no longer in operation as a mill; however, it currently serves the agriculture industry as an industrial hemp processing facility. The Ide Mill complex is eligible for listing in the National Register under Criterion A for Industry, representing a long-standing mill business in St. Johnsbury and under Criterion C for Architecture as an example of a late 19th century flour mill in northern Vermont.

Table 1: Surveyed Properties in the Phase 1 APE (2018 report), that are in the Phase 2 APE.

Note that Photographs are included with the 2018 report.

Phase 2 Map ID	Phase 1 Map ID	E-911 Address	Photo ID (2018 report)	Description	VHSSS/SR/NR	NR Eligibility Recommendation
A	N/A	WACR		See discussion above	N/A	Eligible for listing under Criterion A – Transportation.
B	1	Bridge No. 4 on Main Street	1	2017 replacement bridge. Tenney rail with solid concrete parapet and incised panels with steel two-bar box rail above. Located in the South Main Street Historic District.	Former bridge: VHSSS 0311-541. Current bridge not surveyed or listed.	Ineligible due to age.
C	2	799 Bay Street	4	Ca. 1980. St. Johnsbury Wastewater Treatment Facility	N/A	Ineligible due to age.
D	3	659 Bay Street	5-8	No longer extant. Formerly the St. Johnsbury Paper Company.	VHSSS, 0311-539, Building No. 1	Has been demolished since the 2018 report. Ineligible.
E	4	659 Bay Street	9	Ca. 1945, 1-story, wood frame, gable roof structure measuring 15′ x 35′ with metal "vertical board" siding, cornerboards, and frieze. Exposed rafter tails.	VHSSS, 0311-539, Building No. 8.	Ineligible due to loss of setting and association (other buildings have been demolished and main building has loss of integrity).

F	5	659 Bay Street	10	Ca. 1940, 1-story, wood frame, gable roof structure, measuring 15'x30' with metal "vertical board" siding, cornerboards, frieze and single 9 sash. 2 bays on gable end.	VHSSS, 0311-539, Building No. 9.	Ineligible due to loss of setting and association (other buildings have been demolished and main building has loss of integrity).
G	7	515 Bay Street	13-14	Ralston Purina Company, grain mill building, 1948, 1956 wing. Operated until 1970s. 50,000 sq ft building with 20,000 sq ft addition. Concrete construction, 6 stories, metal windows, with long 2-story brick and metal northern wing.	N/A	Yes, eligible under Criterion A and C as an example of a large commercial mill.
H	11	492 Bay Street	18-19	GH Berlin Lubricants. Ca. 1960, 1-story, frame building on concrete foundation with T111 siding. South half of building has asymmetrical, shallow gable roof and 3 garage bays on south end. North building has shallow gable roof, two loading docks on north end, projecting pent roof to shelter the north bays. Windows and doors have been replaced.	N/A	Ineligible due to alterations.

I	12	311 Bay Street	22	GMP Substation. Part of larger (now demolished) complex of hydroelectric facility buildings demolished in the 1960s and the 1990s.	VHSSS 0311-543	Determined ineligible by VT SHPO in 2004 due to loss of integrity.
N/A	19	195 Bay Street	30	No longer extant. Former KC Rentals building. Demolished for the Three Rivers Trailhead Pavilion.	N/A	Demolished as part of the Phase 1 project. Ineligible.
J	20	158 Bay Street	36	Same parcel as Ide Flour Mill. 1.5-story, gable end, return cornices, cornerboards, 2x2 bay building, clad in clapboard and T111, concrete foundation. Altered fenestration and materials.	N/A	Ineligible due to loss of integrity – alterations to materials and fenestration.
K	21	202 Bay Street	26, 31, 32, 37, 38, 39	Ide Flour Mill – Grinding Mill. 1895, 5-story with elevator monitor, monitor roofed, timber framed storehouse with dimensions of 50'x80'. Metal siding, large shed roof awning sheltering scale built into ground.	VHSSS 0311-335, Building No. 3	Eligible as contributing to the Ide Flour Mill Complex.

L	22	202 Bay Street	32, 34	1906, 4-story, 4x5 bay, shed-roofed building with rock-faced concrete block walls and a built-up roof with parapets. The building is 50′ in height, and rests on a foundation of piles driven down 20′ to bedrock. E.F. Moore of Burlington was the contractor.	VHSSS 0311-335, Building No. 1	Eligible as contributing to the Ide Flour Mill Complex.
M	23	202 Bay Street	34	Shed-roofed timber frame storage bin. Original site of 1906 circular corn bin.	VHSSS 0311-335, Building No. 2 (building description does not match VHSSS, not concrete block).	Eligible as contributing to the Ide Flour Mill Complex.
N	24	202 Bay Street	33, 35, 37, 38, 39	Gable-roofed, timber framed train shed with clapboard siding. Roof extends over storage sheds below.	VHSSS 0311-335, Building No. 5	Eligible as part of a potential Washington County Railroad Historic District and contributing to the Ide Flour Mill Complex.
O	25	202 Bay Street	33	2-story, tin clad storage shed that is connected to the train shed on the west and 184 Bay Street on the east.	VHSSS 0311-335, Building No. 6	Eligible as contributing to the Ide Flour Mill Complex.

P	26	184 Bay Street	32, 33, 36	2-story, shed roof commercial and storage building. First story clad in T111 siding, second story clad in tin sheets imitating brick. Varying fenestration on first story. Not included in VHSSS of Ide Flour Mill complex, but clearly associated with the complex and connected to storage sheds to the west.	N/A	Eligible as contributing to the Ide Flour Mill Complex.

Table 2: Additional Properties Surveyed for Phase 2 (that were not included in Phase 1)

Photographs are included as Attachment 3.

Phase 2 Map ID	E-911 Address	Photo ID (2023 report)	Description	VHSSS/SR/ NR	NR Eligibility Recommendation
Q	LVRT Trailhead, Main Street	1	See discussion above.	N/A	LVRT is eligible under Criterion A.
R	(no address) Bay Street	2, 3	Gable roof storage sheds, some open, some enclosed, clad in metal and plywood.	N/A	Does not rise to the level of individual architectural significance.
S	136 Bay Street	4	Constructed ca. 1930 as "Whol. Automotive Supplies". Former St. Johnsbury Paper Company. Now Wild Blue Yonder – commercial and office space. 2-story, rectangular plan, steel frame, commercial building with very shallow gable roof, metal siding, concrete foundation, loading dock on the north, irregular fenestration, mostly covered by siding. Brick chimney remains at NE corner.	N/A	Does not rise to the level of individual significance, ineligible due to alterations.
T	152 Bay Street	5	Same parcel as Ide Flour Mill. Ca. 1935 coal storage building formerly connected to wood shed, 1-story gable roof, wood frame, wood clad building with louvered monitor and large wood sliding doors on the streetside.	N/A	Not previously included in ET & HK Ide Flour Mill complex, but eligible for inclusion Ide Flour Mill Complex.

U	195 Bay Street	6	Three Rivers Trailhead, 2020. Asymmetrical gable roof, timber frame, open air pavilion with metal roof, horizontal wood slats spaced to provide screening on the half the gable end. Large format artwork and picnic tables located inside on concrete floor.	N/A	Ineligible due to age

Archaeological Resources

Hartgen Archaeological Associates, Inc. ("Hartgen") completed an Archaeological Resource Assessment ("ARA") in October 2018 for the Phase 1 project (**Attachment 4**). The ARA states,

> "*The [Phase 1] project alignment has been substantially constructed through development of the area for a variety of industrial and commercial purposes. Visible mill related features are present adjacent to the alignment and side path in the form of mill foundations and the remains of the dam in the Passumpsic River. These features may be eligible for listing [on] the National Register. Within the alignment, there may be related features beneath fill related to demolition of some of these features… Elsewhere, the landform has clearly been modified in relation to the industrial use and/or demolition of industrial features. Further to the south, where the alignment crosses the lower terrace adjacent to the river, it crosses a landform that has seen substantial disturbances from heavy equipment operation, sewer overflow facility installation, power line construction and other activities. In addition, judging by the results of the backhoe trenching Thomas conducted to the south between the former Ralston plant and the river, the landform has seen significant scouring and deposition during the 19th and 20th centuries, indicating the potential for intact historic or precontact deposits to be present in that area to be low.*"

To further evaluate the area between the Ralston Mill and the Passumpsic River, previous reports were reviewed. In 1997, Hartgen completed an addendum to the 1993 Phase 1A literature review titled, "Archaeological Sensitivity Assessment, Three Rivers Path, STP Bike (1), Town of St. Johnsbury, Caledonia County, Vermont." The report also includes a limited Phase 1B study for the project. The portion of the path alignment that was considered by VDHP to be sensitive for prehistoric archaeological sites was 500m (1640 ft) along the Passumpsic River east of the Ralston Mill.

VDHP requested archaeological backhoe testing to search for buried prehistoric sites in this area of alluvial deposits. Backhoe testing was completed in 1994 by the University of Vermont Consulting Archaeology Program ("UVM CAP"). Results were not submitted at that time because the sponsor withdrew the project. However, UVM CAP collaborated with Hartgen to provide results for Hartgen's 1997 report. The backhoe trenching locations are depicted on see Map 6 of 1997 report (see **Attachment 4).** The conclusions for this area of was:

> "*Extensive backhoe testing along the T0 terrace upon which the bike path will be constructed between STA 0+600 and 1+100 demonstrated that the terrace dates from the nineteenth century. No archaeological field reconnaissance is recommended for this area.*"

Hartgen requested a determination of no effect from VDHP for the path construction in this area.

All available archaeological reports included as **Attachment 4**.

Public Input

The public has been involved in the 2016 planning process for the master plan of the Riverfront Access Concept Plan. An initial Project-related meeting was held in July 2018 with the Riverfront Committee. On September 8, 2018, the Committee held a public outreach event at which a portable mural was created, and input was solicited from the public on amenities at the envisioned Trailhead Center and riverfront project. To date, the Project has been favorably received at meetings and public outreach events. Public input was incorporated into the Project design.

Project Effects on Historic Resources

The proposed Phase 2 project does not include demolition of any structures. It includes construction of a path, crosswalks, and two sections of sidewalks. The path would be constructed adjacent to the roadway and across green space. The path passes through an industrial area. In some cases, the path would be located on parcels that contain historic resources; however, the path would not touch the above-ground historic structures. The APE does not contain any historic districts. The setting of the historic resources has evolved over time as

industrial uses of neighboring parcels have changed, and as the railroad's connection to these parcels has changed. Adding a path in the vicinity of the historic buildings would not alter or diminish any of the aspects of historic integrity that qualify them for listing in the National Register. The minor viewshed changes resulting from a new path or sidewalk would not have an adverse effect on the historic resources.

The archaeological studies recommend no further archaeological testing. The sensitive areas were studied and not recommended for further reconnaissance due to prior disturbances. The alignments studied in the archaeological reports are very similar to the Phase 2 alignment; thus, the results can be applied here.
In summary, the Project would improve the connectivity through St. Johnsbury, enhancing bicycle and pedestrian opportunities, opening the Bay Street area to visitors and residents. The relationship between historic buildings and their settings would not be altered. The historic structures would not be altered. The Project would not adversely affect the integrity of the above-ground historic resources and would not affect archaeological resources.

Recommendation of Effect

For the Three Rivers Path Project – Phase 2, VHB recommends a Determination of Effect of No Adverse Effect to historic resources (above-ground and archaeological resources) under Section 106 of the National Historic Preservation Act.

Sincerely,

Kaitlin O'Shea
Senior Preservation Planner

Attachments
1 – Location & Area of Potential Effect Map
2 – Project Plan Sheets and Typical Sections
3 – Photographs
4 – Archaeological Reports

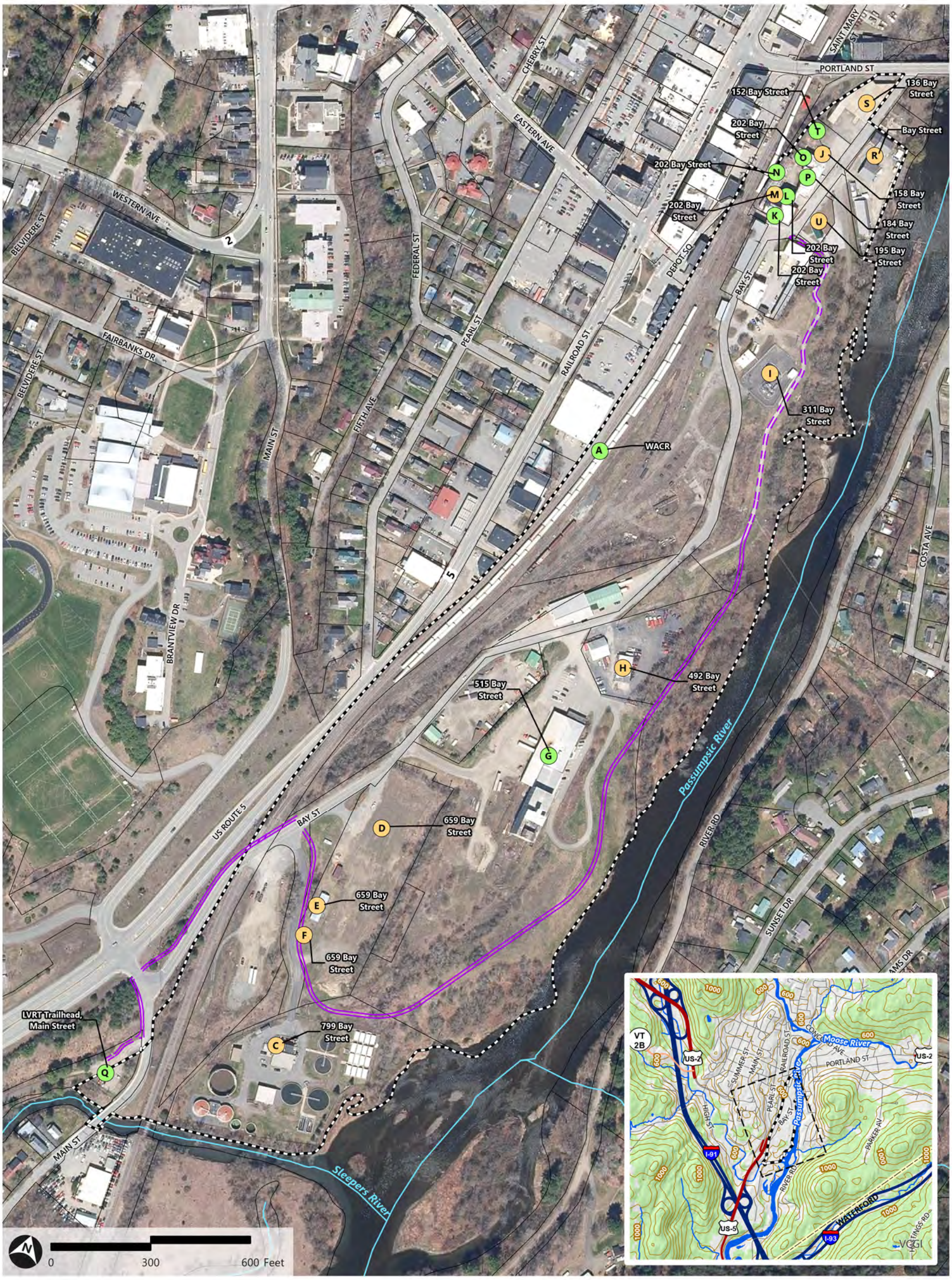
\\vhb.com\gbl\proj\SBurlington\58090.01 Three Rivers Path Phase2\Reports\Section 106\2023-4-14 St. J LVRT Riverfront Extension Historic Resources Report.docx

ATTACHMENT 1

Area of Potential Effect & Surveyed Properties

VTrans Three Rivers Path Extension - Phase II | St. Johnsbury, Vermont

DRAFT *April 17, 2023*



Area of Potential Effect (VHB)
Eligible APE Property (VHB)
Ineligible APE Property (VHB)
Proposed Edge of Path (VHB)
Existing Edge of Path (VHB)
VHD Stream (VCGI)
Railroad (VTrans)
Rail Trail (VTrans)
Parcel Boundary (VCGI)

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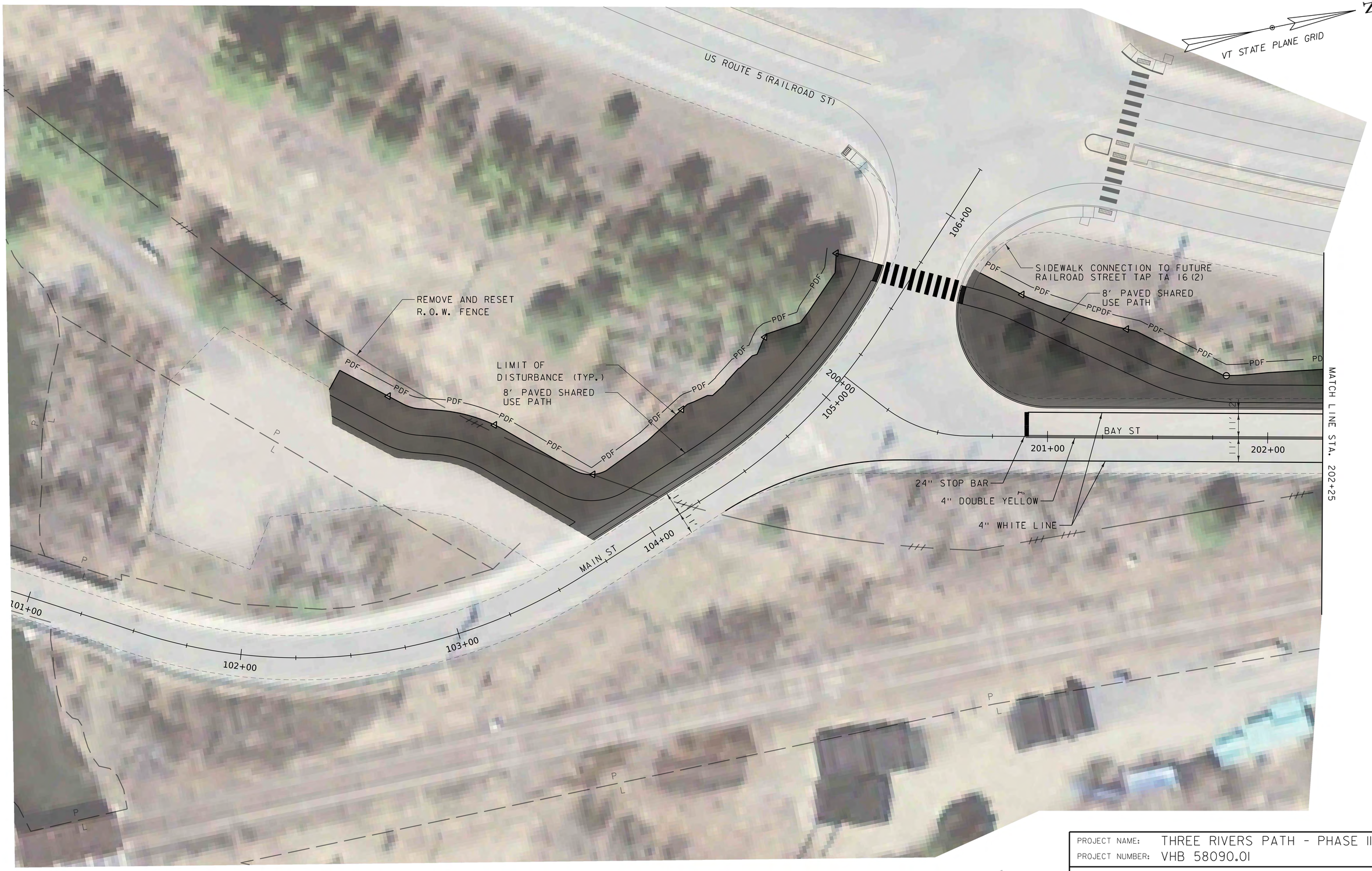
Sources: Background imagery by VCGI (Collected in 2021), VCGI (Vermont Center for Geographic Information Hosted Feature Service), VTrans (Vermont Agency of Transportation Hosted Feature Service), VHB ©2023

ATTACHMENT 2



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vhb

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PROJECT NUMBER: VHB 58090.01	
FILE NAME: 58090.01bdr_LOD.dgn	PLOT DATE: 17-FEB-2023
PROJECT LEADER: E.P. DETRICK	DRAWN BY: T.D. BURT
DESIGNED BY: T.D. BURT	CHECKED BY: B.M. ROBERTS
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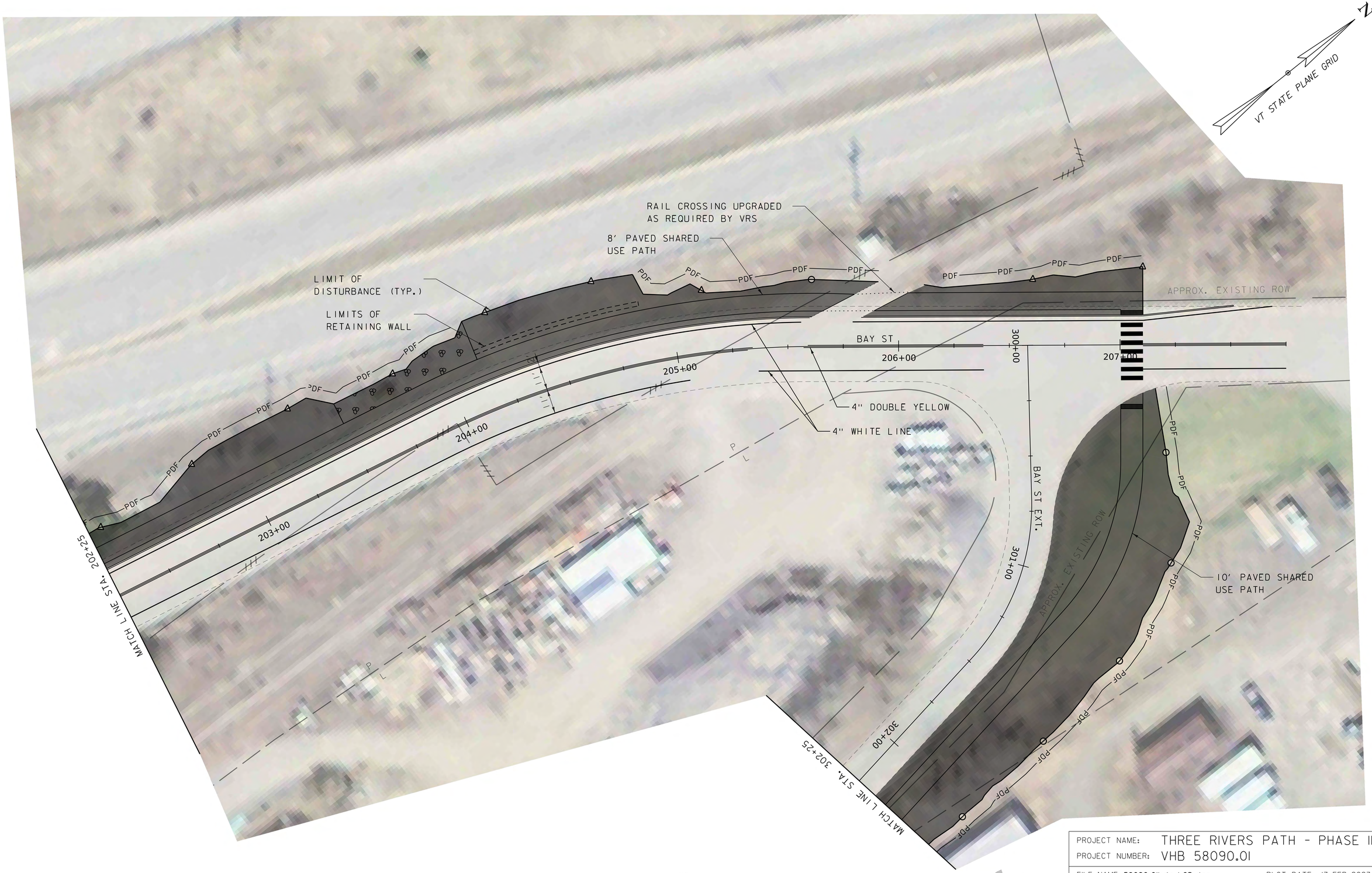

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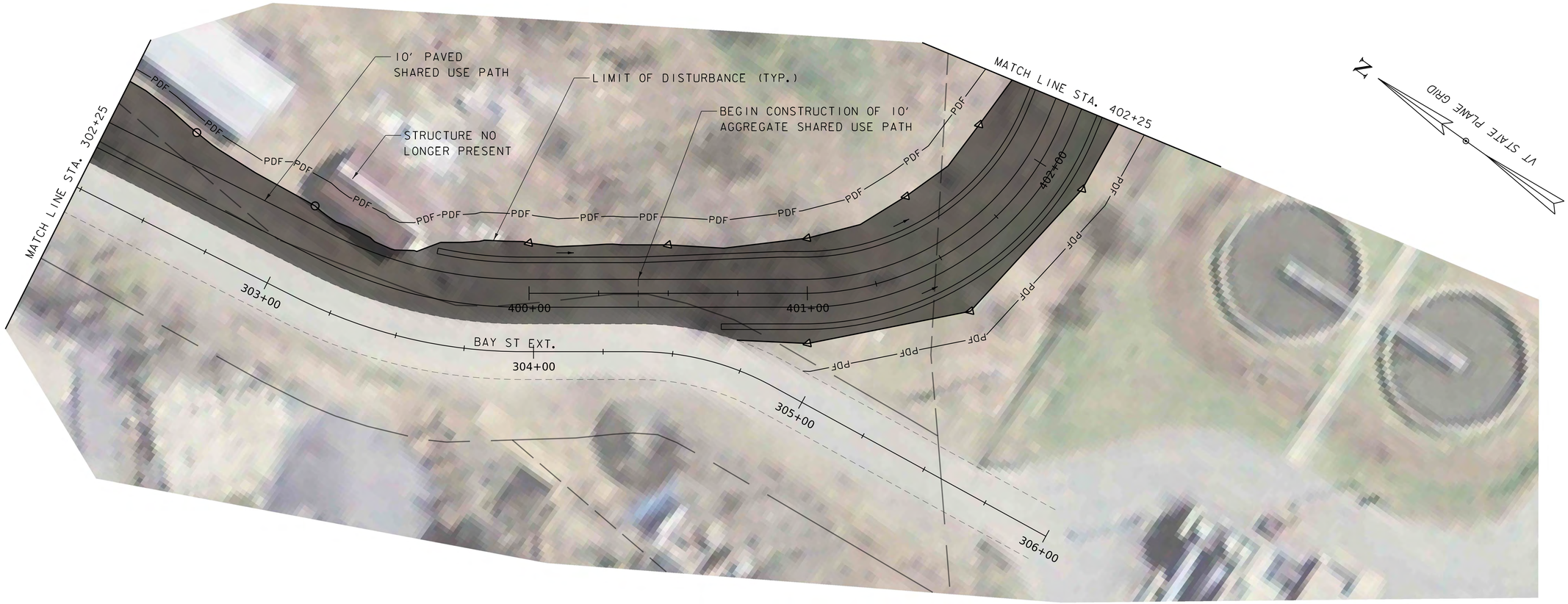

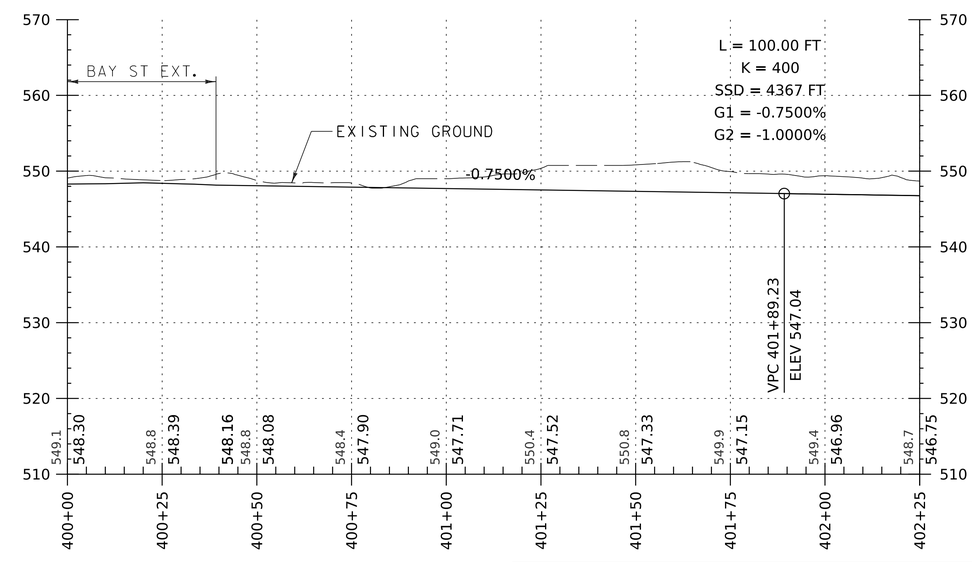

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THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE FINISH GRADES ALONG THE PROPOSED ALIGNMENT.

STATIONING AND ELEVATIONS IN FEET (TYP.)

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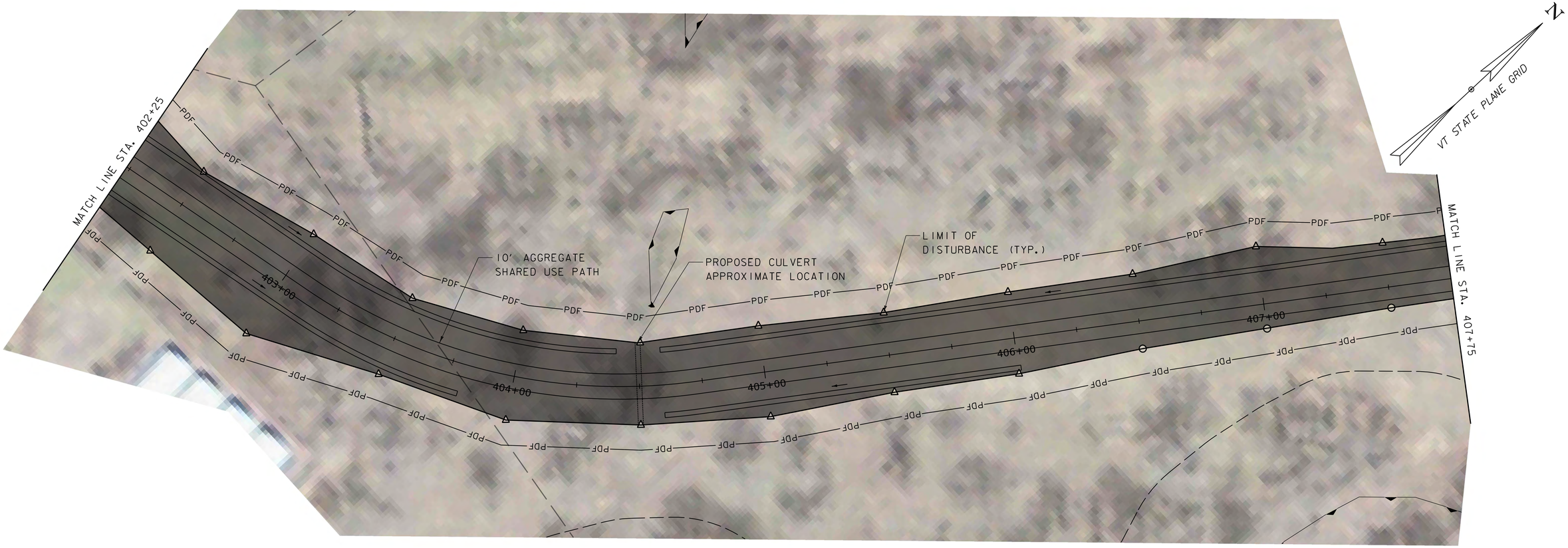

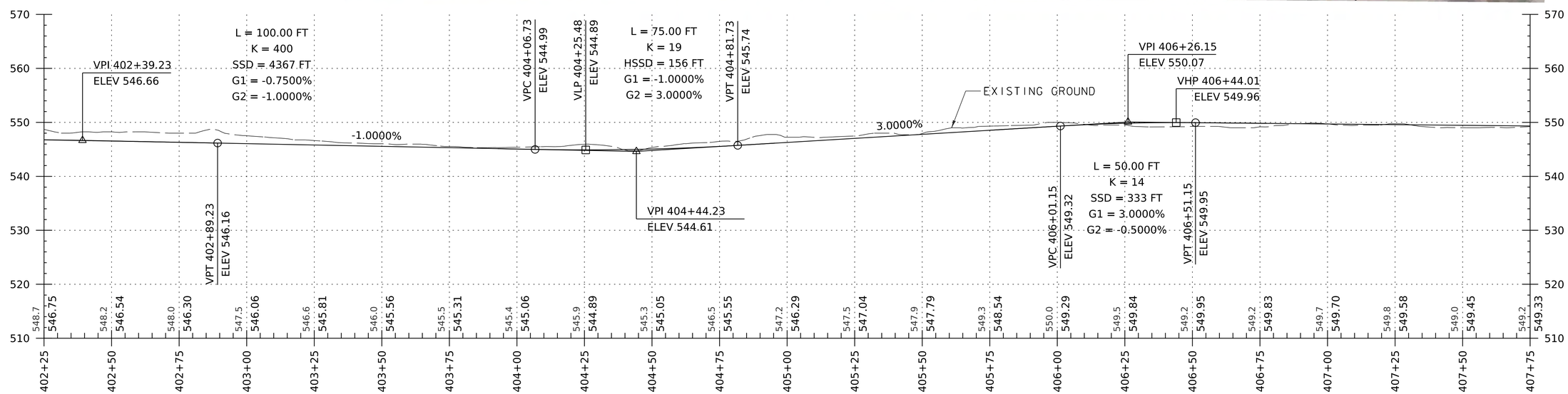

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THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE FINISH GRADES ALONG THE PROPOSED ALIGNMENT.

STATIONING AND ELEVATIONS IN FEET (TYP.)

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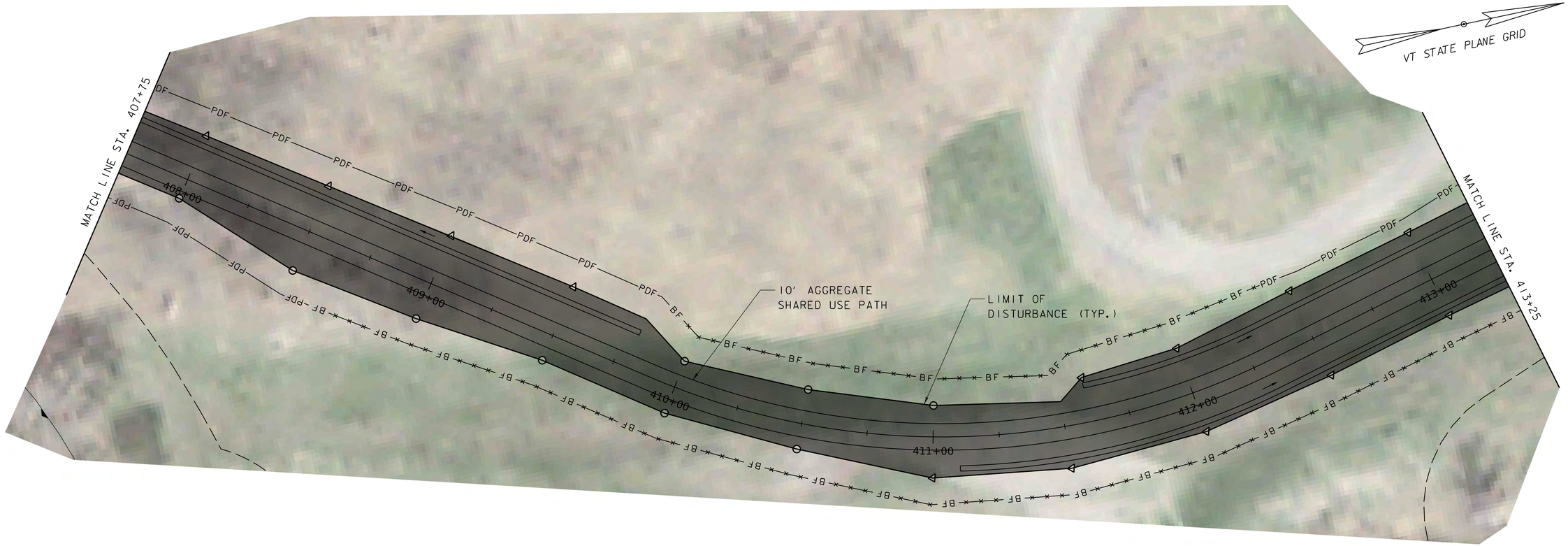

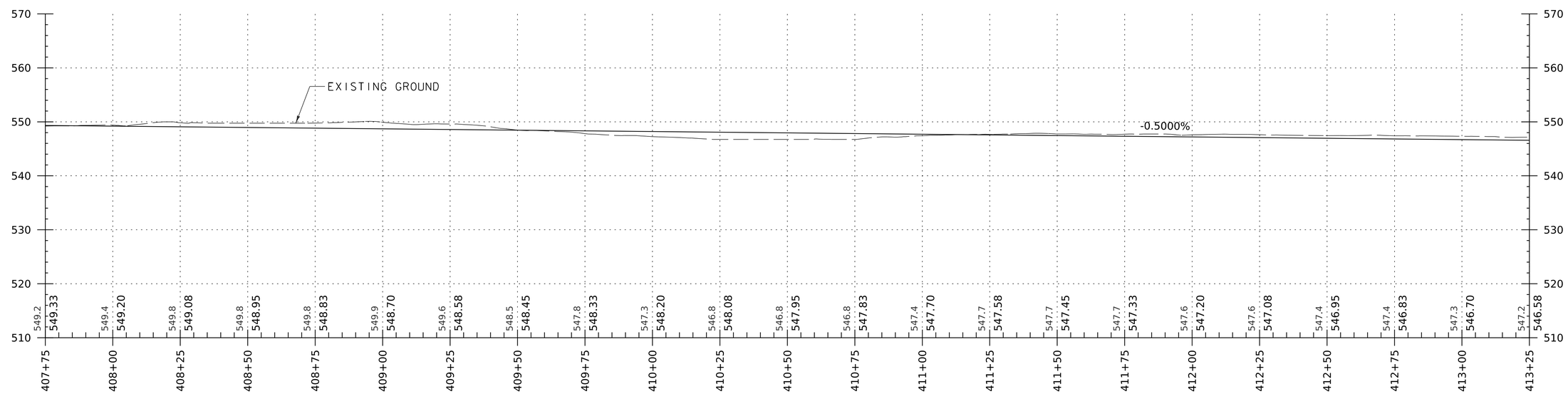

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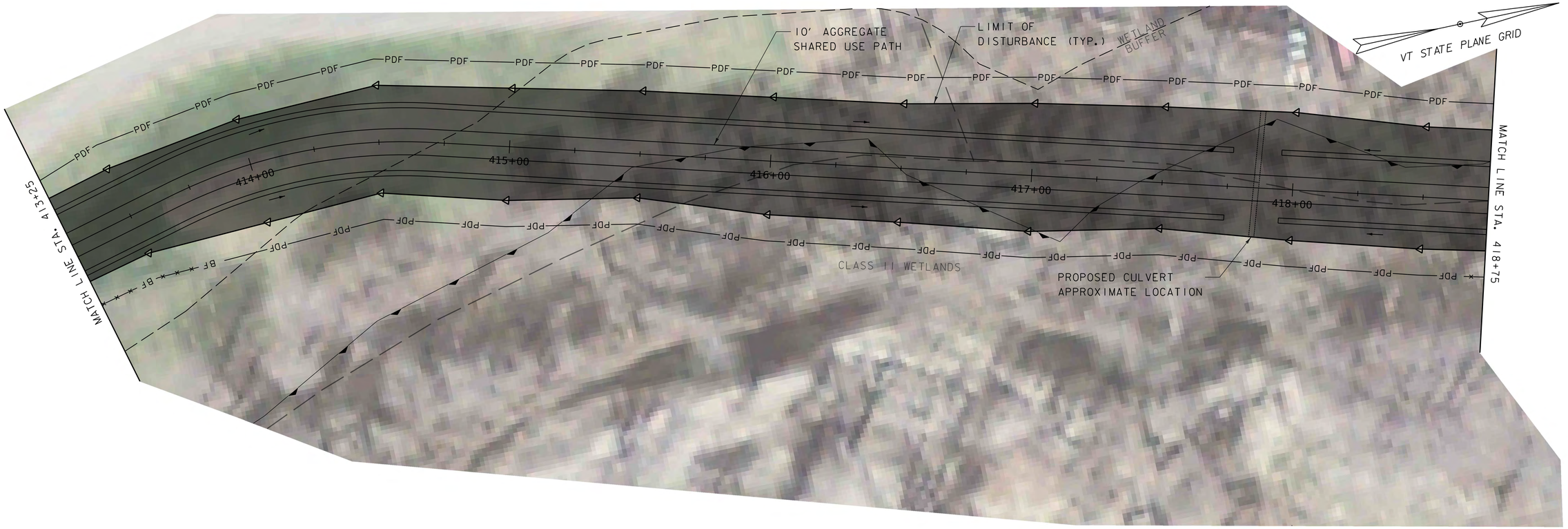
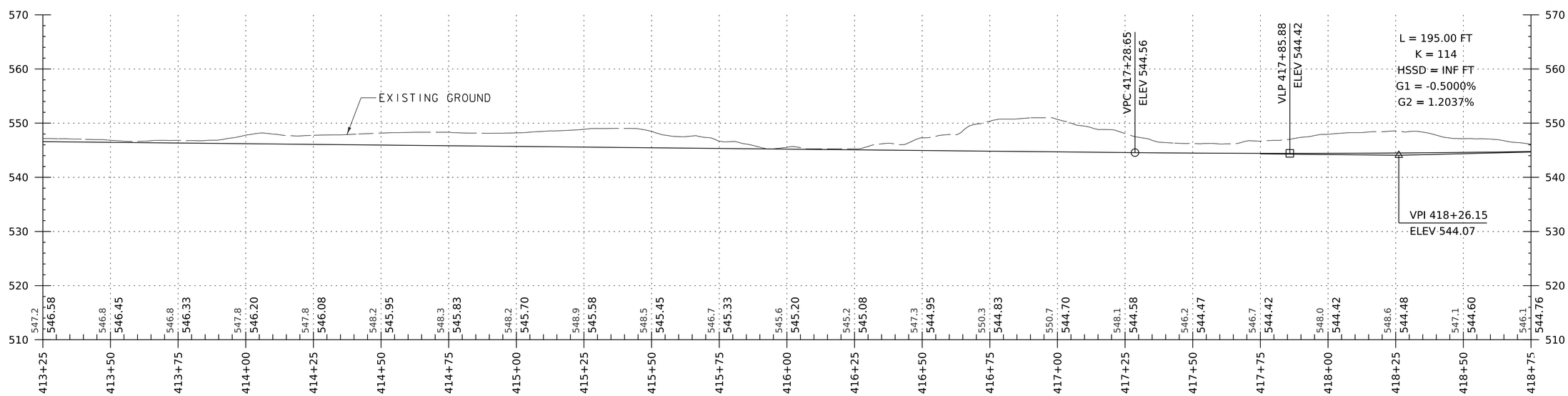
PLAN AND PROFILE SHEET (5 OF 8)	SHEET 5 OF 8





THE GRADES SHOWN TO THE NEAREST TENTH ARE THE ORIGINAL GROUND ELEVATIONS ALONG THE PROPOSED ALIGNMENT.

THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE FINISH GRADES ALONG THE PROPOSED ALIGNMENT.

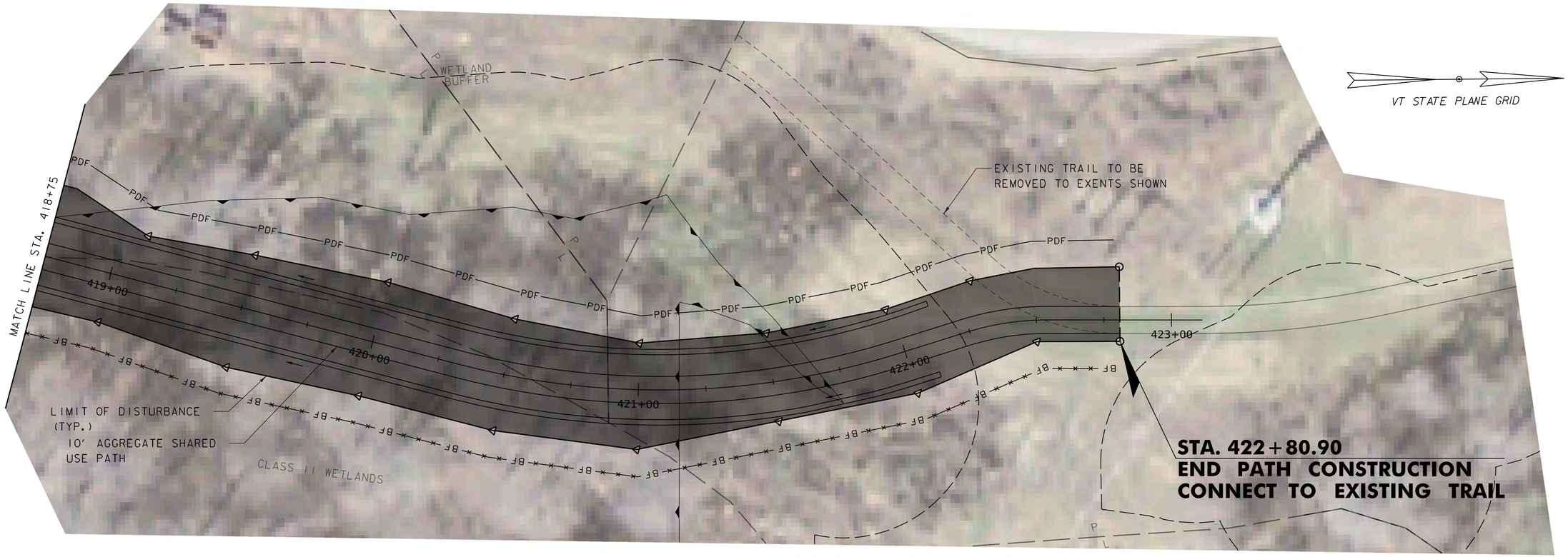
STATIONING AND ELEVATIONS IN FEET (TYP.)

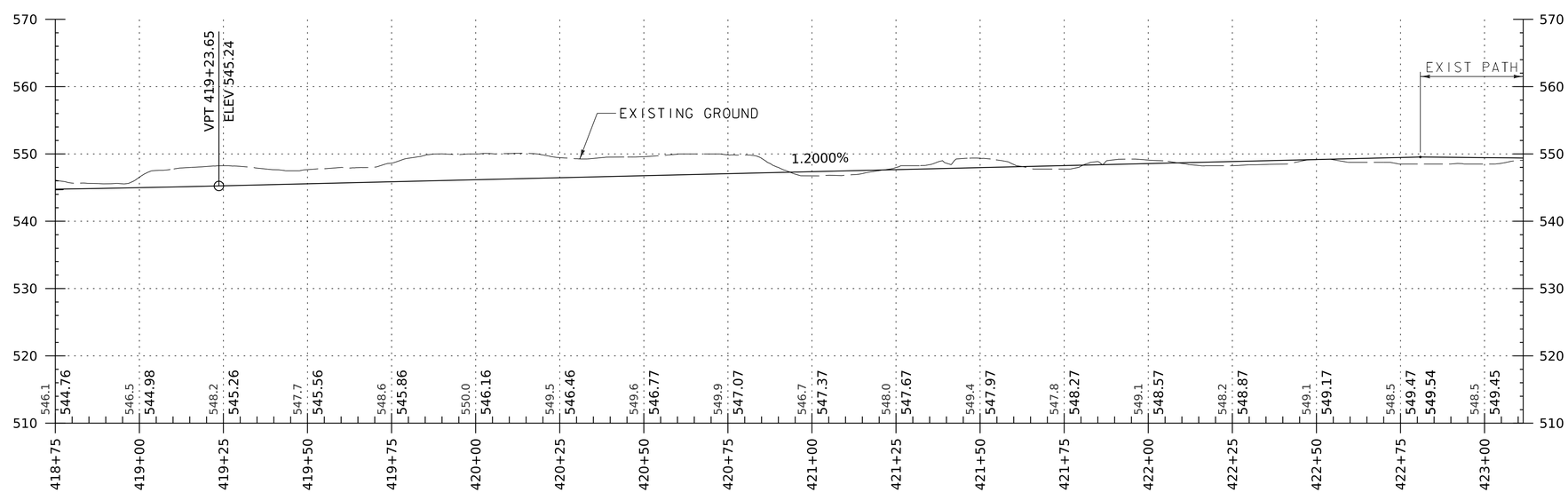
20
10
0

0 20 40
SCALE IN FEET

vhb

PROJECT NAME: THREE RIVERS PATH - PHASE II	
PROJECT NUMBER: VHB 58090.01	
FILE NAME: 58090.01bdr_LOD.dgn	PLOT DATE: 17-FEB-2023
PROJECT LEADER: E.P. DETRICK	DRAWN BY: T.D. BURT
DESIGNED BY: T.D. BURT	CHECKED BY: B.M. ROBERTS
PLAN AND PROFILE SHEET (6 OF 8)	SHEET 6 OF 8





LEGEND

- WETLAND PERMANENT IMPACTS 17,872 SF (TOTAL)
- WETLAND TEMPORARY IMPACTS 8,148 SF (TOTAL)
- PERMANENT BUFFER IMPACTS 14,003 SF (TOTAL)
- TEMPORARY BUFFER IMPACTS 6,984 SF (TOTAL)

THE GRADES SHOWN TO THE NEAREST TENTH ARE THE ORIGINAL GROUND ELEVATIONS ALONG THE PROPOSED ALIGNMENT.

THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE FINISH GRADES ALONG THE PROPOSED ALIGNMENT.

STATIONING AND ELEVATIONS IN FEET (TYP.)

20
10
0

0 20 40
SCALE IN FEET

vhb

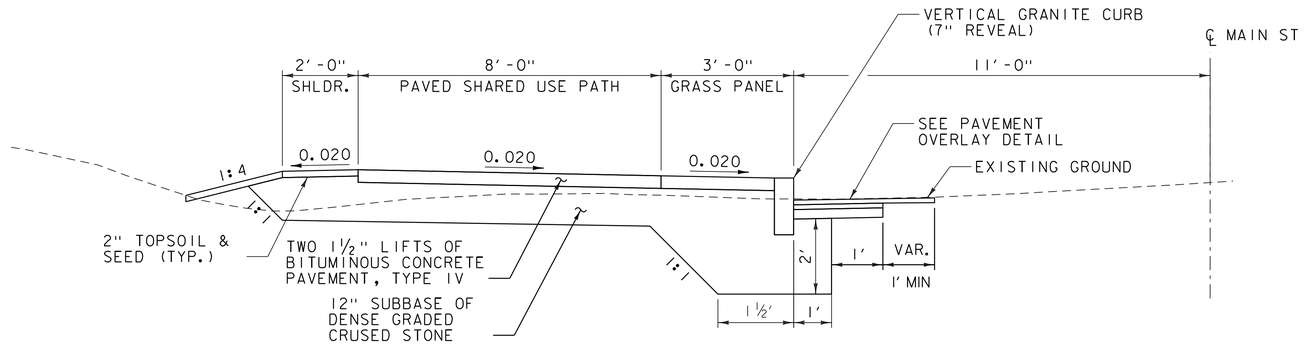
PROJECT NAME: THREE RIVERS PATH - PHASE II	
PROJECT NUMBER: VHB 58090.01	
FILE NAME: 58090.01bdr_LOD.dgn	PLOT DATE: 17-FEB-2023
PROJECT LEADER: E.P. DETRICK	DRAWN BY: T.D. BURT
DESIGNED BY: T.D. BURT	CHECKED BY: B.M. ROBERTS
PLAN AND PROFILE SHEET (7 OF 8)	SHEET 7 OF 8

PROJECT NAME:	THREE RIVERS PATH - PHASE II
PROJECT NUMBER:	VHB 58090.01

FILE NAME: 58090.01bdr_LOD.dgn	PLOT DATE: 17-FEB-2023
PROJECT LEADER: E.P. DETRICK	DRAWN BY: T.D. BURT
DESIGNED BY: T.D. BURT	CHECKED BY: B.M. ROBERTS
PLAN AND PROFILE SHEET (8 OF 8)	SHEET 8 OF 8

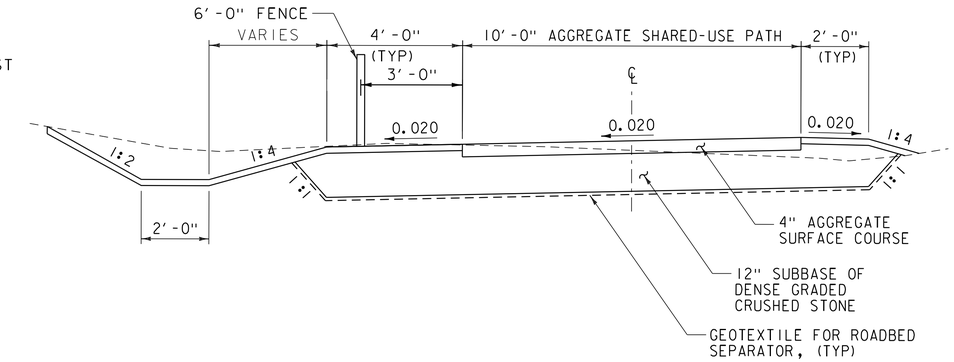
MATERIAL TOLERANCES	
MATERIAL ITEM	THICKNESS TOLERANCE
PAVEMENT (FULL DEPTH)	+/- 1/4" (TOTAL THICKNESS)
SUBBASE	1/2"
SAND BORROW	1"

TYPICAL SECTIONS



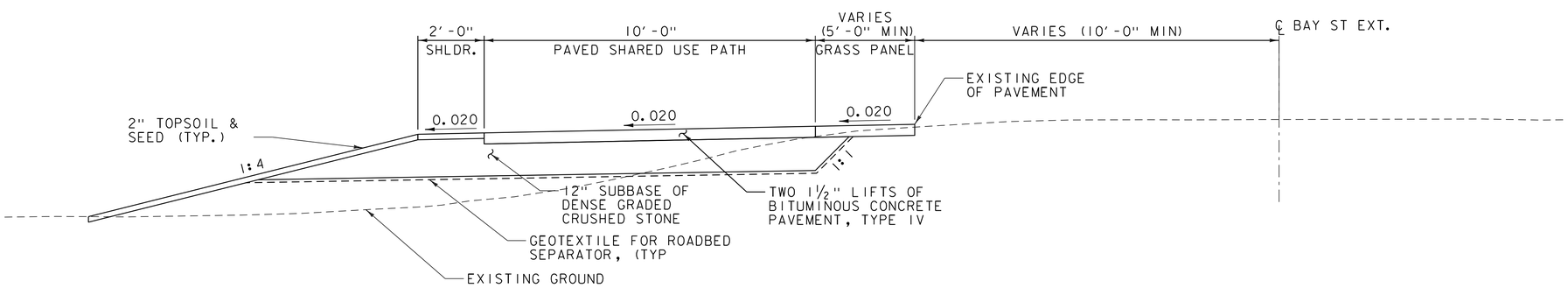
8' PAVED SHARED USE PATH - MAIN ST

STA. 103+75 - 105+32
(N.T.S.)



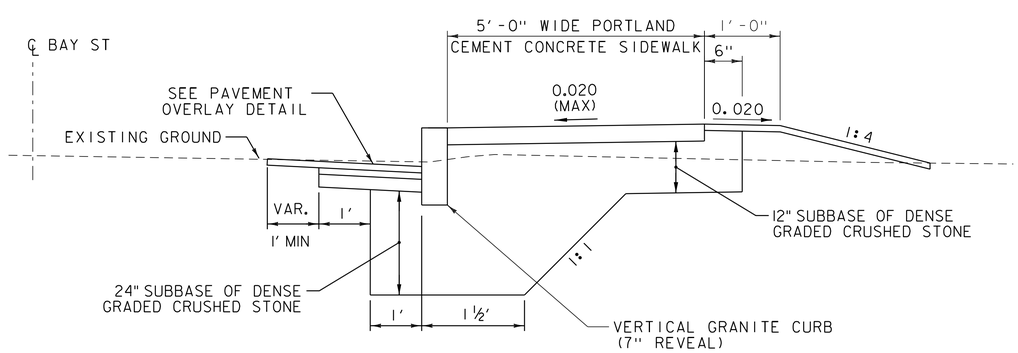
10' AGGREGATE SHARED USE PATH

STA. 400+39 - 422+81
(N.T.S.)



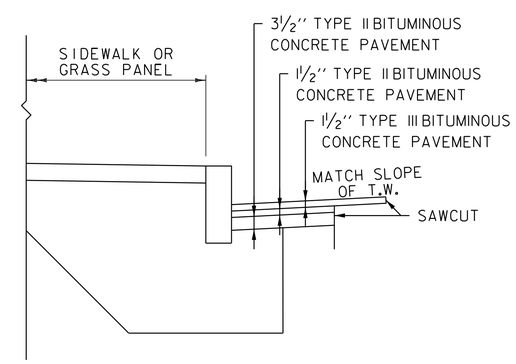
10' PAVED SHARED USE PATH - BAY ST EXT.

STA. 300+50 - 304+39
(N.T.S.)



CURB AND SIDEWALK ADJACENT TO ROAD

STA. 404+50 - 409+00
(N.T.S.)



PAVEMENT OVERLAY DETAIL

N.T.S.

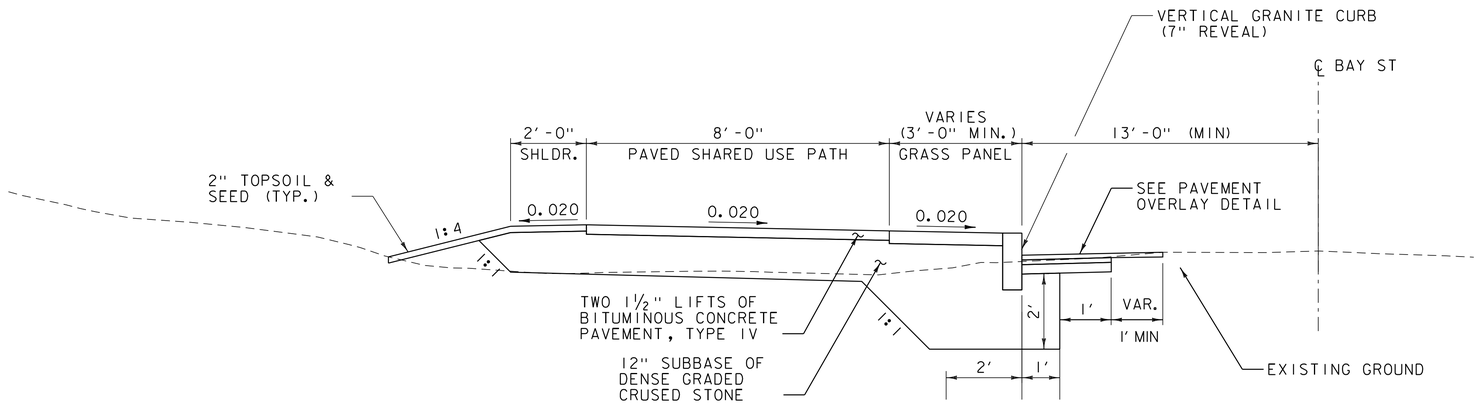
PROJECT NAME: THREE RIVERS PATH - PHASE II
PROJECT NUMBER: VHB 58090.01

FILE NAME: 58090.01typ.dgn
PROJECT LEADER: E.P. DETRICK
DESIGNED BY: T.D. BURT
TYPICAL SECTIONS

PLOT DATE: 1-FEB-2023
DRAWN BY: T.D. BURT
CHECKED BY: B.M. ROBERTS
SHEET 1 **OF** 2

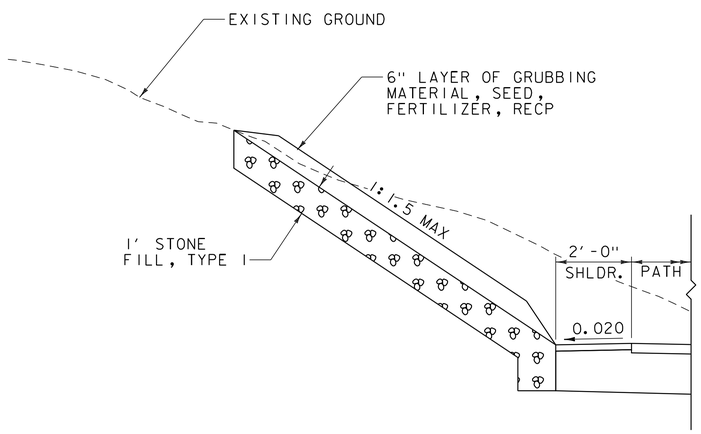
MATERIAL TOLERANCES	
MATERIAL ITEM	THICKNESS TOLERANCE
PAVEMENT (FULL DEPTH)	+/- 1/4" (TOTAL THICKNESS)
SUBBASE	1/2"
SAND BORROW	1"

TYPICAL SECTIONS



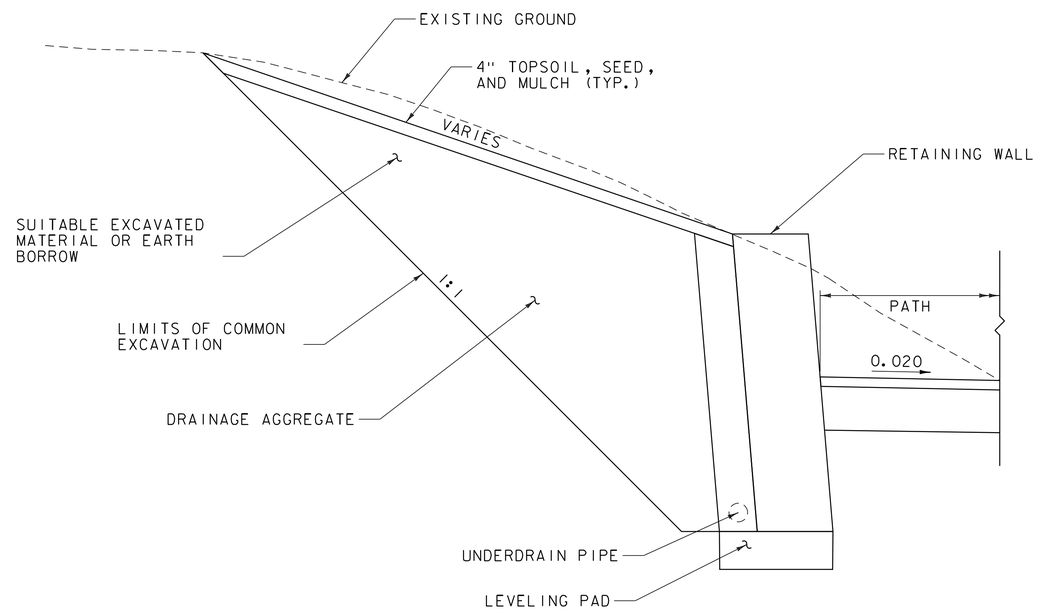
8' PAVED SHARED USE PATH - BAY ST

STA. 201+00 - 207+25
(N.T.S.)



ALTERNATIVE END CONDITION
STONE FILL CUT SECTION

STA. 202+70 - 204+15 LT
STA. 204+60 - 205+20 LT
(N.T.S.)



ALTERNATIVE END CONDITION
RETAINING WALL SECTION

STA. 204+15 - 204+60 LT
(N.T.S.)

PROJECT NAME: THREE RIVERS PATH - PHASE II
PROJECT NUMBER: VHB 58090.01

FILE NAME: 58090.01typ.dgn
PROJECT LEADER: E.P. DETRICK
DESIGNED BY: T.D. BURT
TYPICAL SECTIONS

PLOT DATE: 1-FEB-2023
DRAWN BY: T.D. BURT
CHECKED BY: B.M. ROBERTS
SHEET 2 **OF** 2

ATTACHMENT 3

Photographs – Three Rivers Path Phase 2

All photographs by Chad Whitehead, Town of St. Johnsbury, April 13, 2023, unless otherwise noted.

Photograph 1: LVRT Trailhead, Main Street. Map ID Q.

Photograph 2: Storage buildings associated with RK Miles (294 Bay Street, which is not located within the Phase 2 APE). No address, Bay Street, Map ID R.

Photograph 3: RK Miles storage buildings, no address, Bay Street. Map ID R.

Photograph 4: 136 Bay Street, Map ID S.

Photograph 5: 152 Bay Street, Map ID T.

Photograph 6: 195 Bay Street, Three Rivers Trailhead pavilion, Map ID U.

Photograph 7: Streetscape of Bay Street looking south. The sidewalk will be constructed at left. The Ide Flour Mill complex is at right.

Archeological Sensitivity Assessment (Addendum)
and
Limited Phase IB
Archeological Field Reconnaissance

Three Rivers Path
STP Bike (10)
Town of St. Johnsbury
Caledonia County, Vermont

Submitted to:

SVE Associates
Professional Center, Route 30
P.O. Box 1818
Brattleboro, Vermont 05302

Prepared by:

Hartgen Archeological Associates, Inc.
27 Jordan Road
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(518) 283-0534
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Certified WBE/DBE

February 1997

ABSTRACT

In order to address the archeological potential of areas along a 0.8km (0.5 mi) reroute of the 2.7km (1.5mi) Three Rivers Bike Path in St. Johnsbury, Caledonia, a Phase IA literature review addendum was prepared. The addendum included a re-examination of the VTDHP site files, historic map review, and a site visit to assess existing conditions. The historic map review demonstrated that the rerouted section of the bike path will be constructed on existing streets and mined and graded areas where prior disturbance can be documented. No archeological field reconnaissance is recommended anywhere along the reroute.

Based upon the original archeological assessment that was prepared for the project in 1993 by Hartgen Archeological Associates, Inc. the only potentially archeologically sensitive location along the original 2.7km (1.5mi) of the bike path lay along the Passumpsic River floodplain in the vicinity of the former Ralston Mill. VTDHP recommended backhoe testing in this area to examine the locale for buried prehistoric sites. Coincidentally, in late 1994 a program of deep testing to search for precisely these types of deposits was conducted by Peter Thomas of UVM's consulting archaeology program. Dr. Thomas' study demonstrated the presence of two terraces in the area of interest. The more recent T0 terrace was determined to date not earlier than the nineteenth century. The older T1 terrace did not produce prehistoric artifacts or features and was shown to be partly disturbed. Dr. Thomas concluded that its archeological potential did not warrant further investigation.

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1. Backhoe Trench 1 on the Passumpsic River Floodplain at the Former Ralston Mill
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3. Test Units 1 and 2 on the Passumpsic River Floodplain at the Former Ralston Mill
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II **Qualifications of the Principal Investigator**

INTRODUCTION

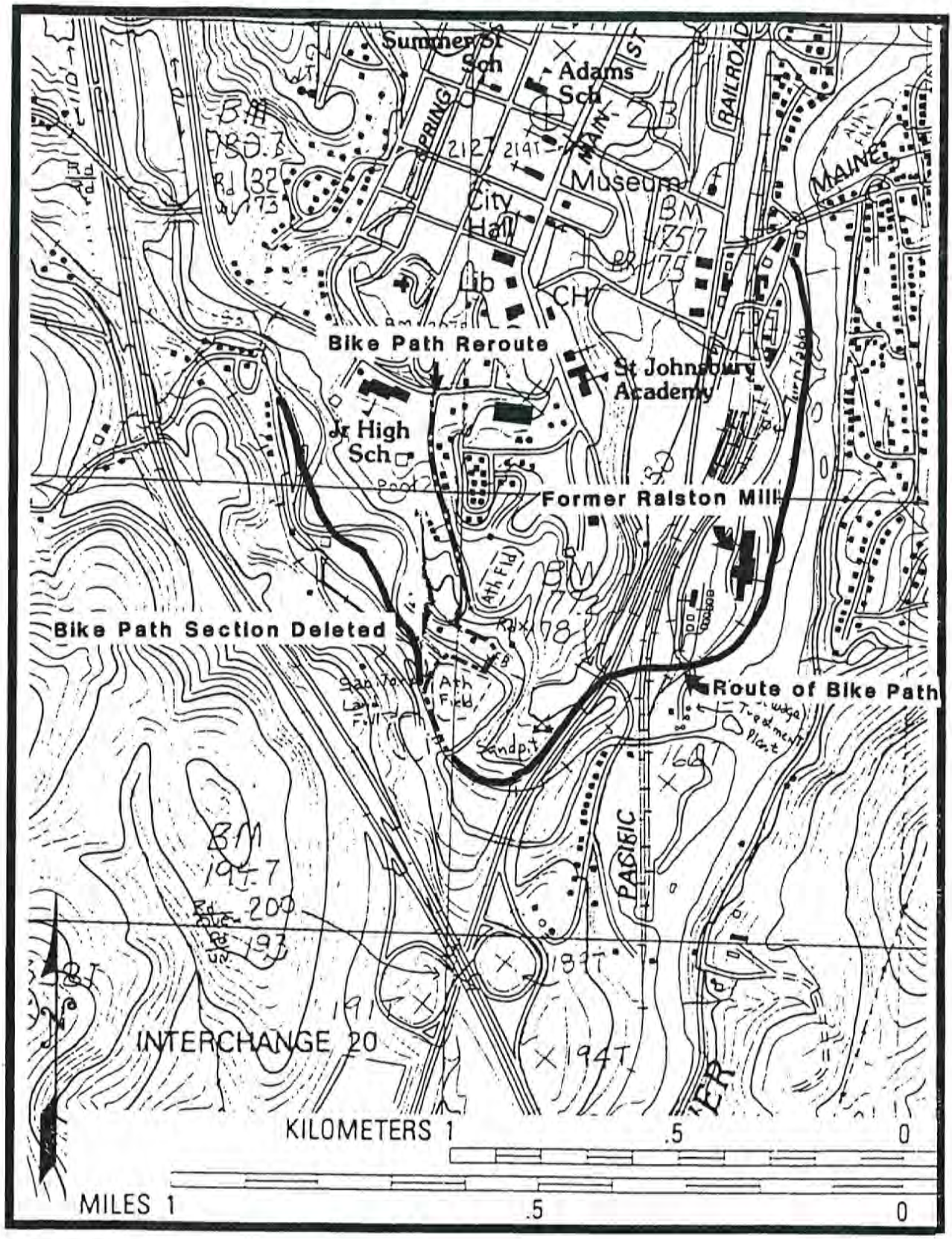
The following report is an addendum to the Phase IA literature review entitled "Archeological Sensitivity Assessment. Three Rivers Path, STP Bike (1), Town of St. Johnsbury, Caledonia County, Vermont" prepared by Hartgen Archeological Associates, Inc. in 1993. Also included in this report is the description of a limited Phase IB study for this project. The literature review addendum assesses information relating to the project that has become available since the 1993 report was completed. First, the alignment of the proposed 2.7km (1.7 mile) bike path has been altered. An approximately 0.8km (0.5 mile) long section at the west end that originally passed through the industrial core of the nineteenth and twentieth century Fairbanks Scale Company has been abandoned in favor of a new route leading southward along Baker Avenue from Western Avenue. Both old and new bike path alignments are shown on Map 1 and a larger-scale map showing the reroute is presented in Map 2. The results of the site visit to assess the new route for cultural resources comprises one focus of the addendum.

Second, the only portion of the original bike path alignment considered by the Vermont Department of Historic Preservation (VTDHP) to be sensitive for prehistoric archeological sites was 500m (1640 feet) along the Passumpsic River east of the twentieth century Ralston Mill. While the mill buildings still stand and some are occupied, no milling operations presently occur there. VTDHP reviewers called for archeological backhoe testing to search for buried prehistoric sites in this area of alluvial deposits. In fact, backhoe testing was completed here by the Consulting Archaeology Program (CAP) at UVM in 1994, but the report of the results was not submitted because the sponsor withdrew the project. Thus, with CAP's cooperation and VTDHP's concurrence, the results of that testing program are presented here. The study addresses the concern for prehistoric resources for the section of the bike path that passes through the mill property. Peter A. Thomas' description of the backhoe testing comprises the limited Phase IB study for the project.

The addendum report includes an updated review of the VTDHP site files, a section on the site visit to examine the bike path reroute, a review and assessment of historic maps showing the reroute, a description of CAP's backhoe testing program at the Ralston Mill by Peter Thomas, Ph.D., summary and conclusions, and recommendations. Maps, photographs, and figures are attached.

SITE FILE REVIEW

The Vermont Department of Historic Preservation (VTDHP) files were re-examined for sites reported since the original Three River's Bike Path literature review was submitted in 1993.



MAP 1

Three Rivers Bike Path, St. Johnsbury

Literature Review Addendum showing Bike Path Reroute - Barker Ave. to the Sleepers River

USGS St. Johnsbury, VT **1983** 7.5' Topographic Quadrangle

The only new archeological location close to the revised study area for the project is the former St. Johnsbury village cemetery on the grounds of the Courthouse about 300m (1000 feet) northeast of the north end of Barker Street. The cemetery was exposed and partly excavated in 1994 for the expansion of the courthouse. While the cemetery site is an interesting resource in its own right, it has little relevancy in assessing the archeological sensitivity of the project area.

SITE VISIT

A site visit was conducted on Friday, January 3, 1997, to examine the new route of the bike path and to view the section of the bike path near the former Ralston Mill property. The reconnaissance of the former Ralston property was undertaken to familiarize the HAA, Inc. project director with the area where, earlier, Dr. Thomas had conducted his backhoe testing program. The description of this segment of the project was presented in HAA, Inc.'s 1993 report and is considered to be adequate; thus, no further discussion of the former Ralston property is warranted here.

The potential effect of the project on National Register (NR) and potentially NR eligible properties was assessed by Liz Pritchett Associates (December 17, 1996). After reviewing the project area Ms. Pritchett determined that two National Register listed properties were located adjacent to the bike path reroute. One is shown in Photo 1 below. The second is located along Belvidere Street which is the next block east of Barker Avenue. These properties are part of the Main Street National Register Historic District, the boundary of which, south of Western Avenue is the east side of Barker Avenue. Ms. Pritchett also indicated that the St. Johnsbury Middle School, formerly the St. Johnsbury Trade School, was probably eligible for NR listing. Ms. Pritchett concluded that the project would have no effect on either the NR listed or potentially NR eligible middle school.

The discussion of the bike path reroute begins at the north end of Barker Avenue at Western Avenue and proceeds southward toward and across the Sleepers River. Photos 1 to 7 illustrate the discussion. Photo angles are shown on Map 2.

Barker Avenue

Photos 1 through 3 show Barker Avenue. Photo 1 is a panoramic view from southeast to south of the vicinity of the intersection of Barker Avenue and Western Avenue. The following features and resources can be seen from left to right:

- Two residences on the nineteenth century Fairbanks estate (see the following section on the historic map review). Farther left is the slate blue Gothic Revival style one-and-one-half story residence. A three story Second Empire brick house with wing at the rear is to the south.

- Next is Barker Avenue which passes immediately to the west of the hill in the middle of the picture. The road begins on nearly level ground, but rises gently as it cuts through the base of the hill and continues southward.

- The parking lot and northernmost building of the St. Johnsbury Middle School.

Photo 2 is a northward-facing view of Barker Avenue from about 30m (100 feet) south of its intersection with Valley Street. Note the cut and fill construction.

Photo 3 shows the road cut at the south end of Barker Avenue at its intersection with Pine Street. From 1m to 2m (3 to 6 feet) of soil has been removed to accommodate the roadway.

Pine Street to the Sleepers River

Photo 4 is a westward facing view taken from approximately Sta. 2+440 of the bike path reroute (Map 2). After turning eastward at the south end of Barker Street, the bike path passes along the north side of Pine Street. This area is shown on the right half of the picture. As is indicated by the steep bank on the right side of the view, this area has been mined; the mined bank cut approaches 2m (6 feet) in height. What is probably a nineteenth century Fairbanks company worker's house is on the south (left) side of Pine Street (see the historic map discussion below).

Photo 5 shows the approach to the pedestrian bridge on the north side of the Sleepers River. This area recently has been graded and filled.

Photo 6 shows the pedestrian bridge as it crosses the Sleepers River. Each end of the bridge rests on a stone-filled wooden crib. There is two to seven feet of fill on the bridge approaches.

Athletic Field South of the Sleepers River

This section of the bike path was originally a spur off the 1993 alignment; it led to the pedestrian bridge described previously. Now, instead of being a spur, it will become the main bike path route. This section of the path begins at about Sta. 2+358 on the north to the second crossing of the Sleepers River at about Sta. 2+040 on the south. Photo 7 shows this area. The bike path route will skirt the St. Johnsbury Academy athletic field by passing along the tree line at the top of the Sleepers River bank on the right side of the picture, continuing to the higher land in the background, and paralleling to the edge of the bank and railroad. The high ground has been disturbed by mining. The snow-covered incline across the far side of the picture is the railroad embankment. The bike path will parallel the near side of the railroad as it continues to the Sleepers River on the left side of the picture.

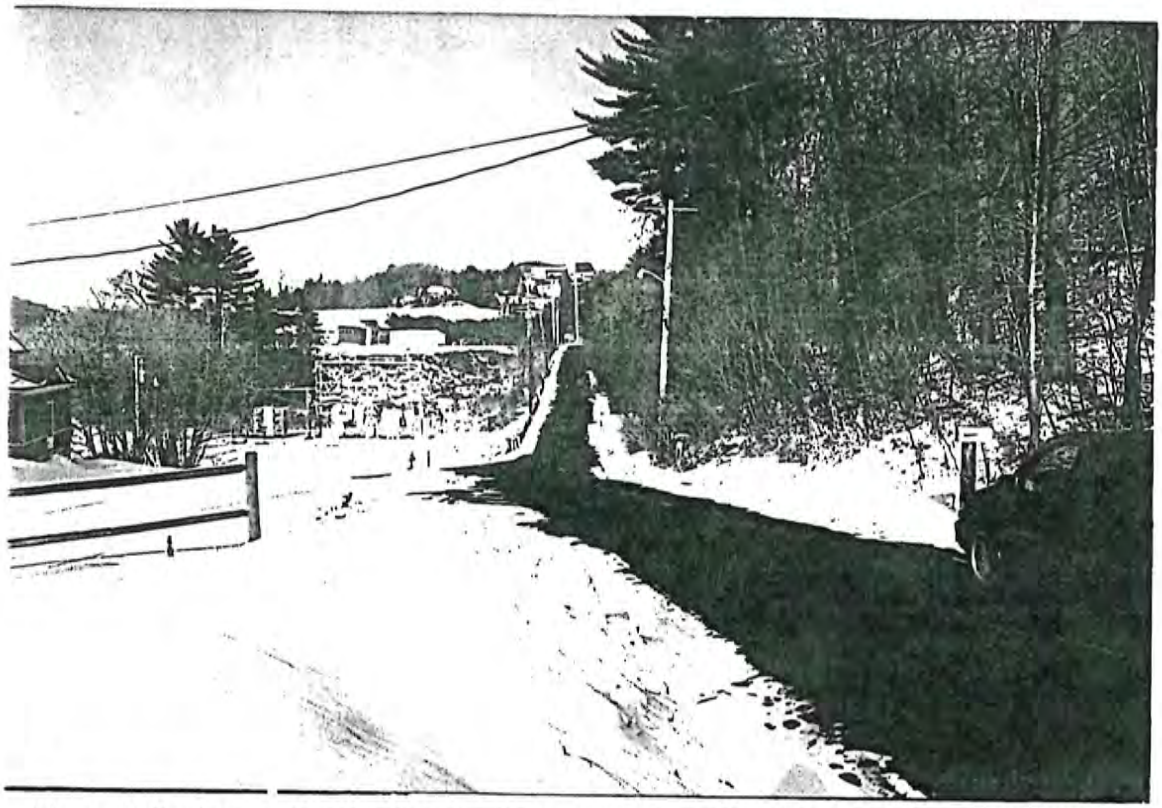


Photo 2: Facing north along Barker Avenue in the Valley Street section of the bike path reroute. The house on the extreme left side of the picture may have once belonged to Thaddeus Fairbanks and was used as worker housing.

Photo 3: Looking north along Barker Avenue at its intersection with Pine Street. The roadway has been cut 1m to 2m (3 to 6 feet) into the original ground surface here.

Photo 4: View west along Pine Street at about Sta. 2+440 of the bike path. The bike path will parallel the mined bank on the right side of the picture then turn to pass in front of the viewer to cross to the south side of Pine Street between the snow fence and the bottom of the picture.

Photo 5: View to the northwest showing the north end of the pedestrian bridge over the Sleepers River and the approach to the bridge from Pine Street which is in the background. This area was recently graded and filled.

Photo 6: The pedestrian bridge over the Sleepers River. Each end of the bridge is supported by stone-filled timber cribs.

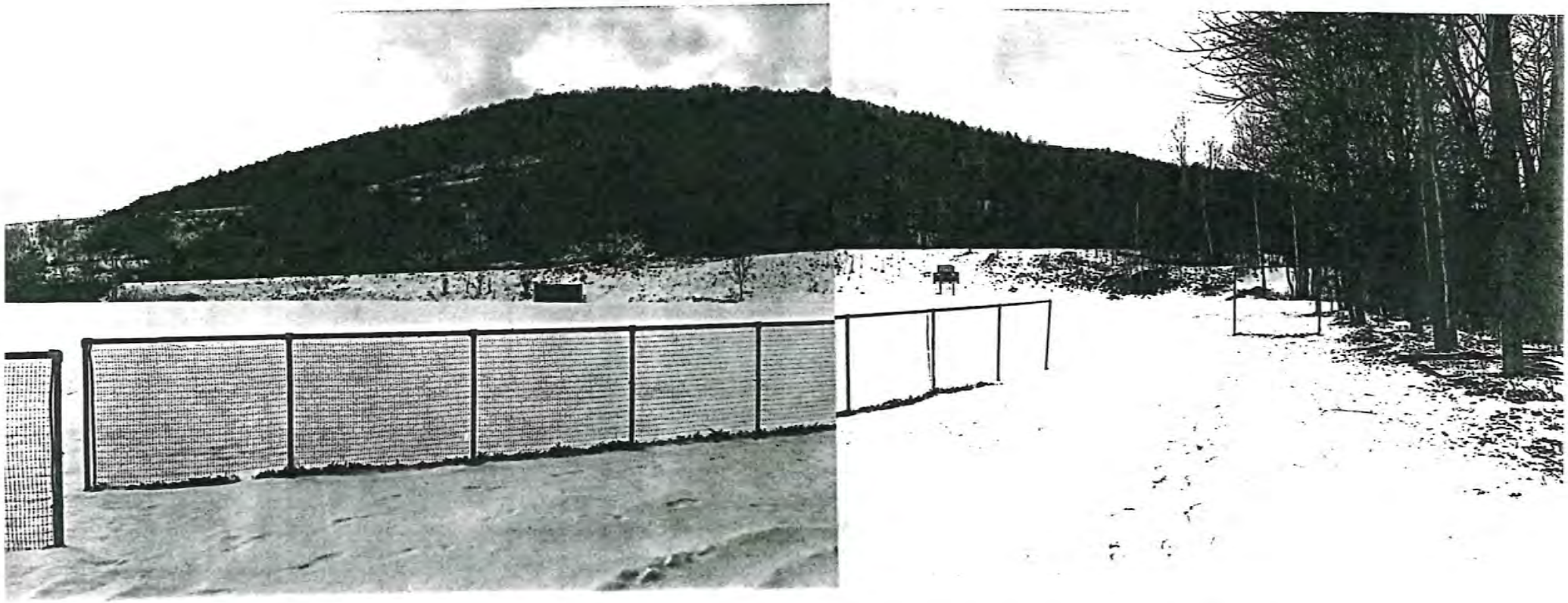


Photo 7: View southwest to west of the section of the bike path between the two crossings of the Sleepers River at about Sta. 2+358 on the right and Sta. 2+040 on the left. The bike path follows the tree line on the right side of the picture to the mined area in the background and then turns south (left) to parallel the railroad embankment to the bridge crossing at the extreme left side of the view.

Discussion

The Barker Avenue and Pine Street sections of the bike path reroute consist of areas of prior disturbance due to roadway construction (Barker Avenue and Pine Avenue), mining (section paralleling the north side of Pine Avenue), and improvement of access to the north approach of the pedestrian bridge (Pine Avenue to the bridge). The archeological sensitivity of these locations is considered to be low for intact historic and prehistoric resources.

The athletic field section, formerly a bike path spur, was assessed in the original literature review where a recommendation of no archeological field reconnaissance was made (HAA, Inc. 1993:7). No new information has become available that requires an alteration of this recommendation.

HISTORIC MAP REVIEW

Introduction

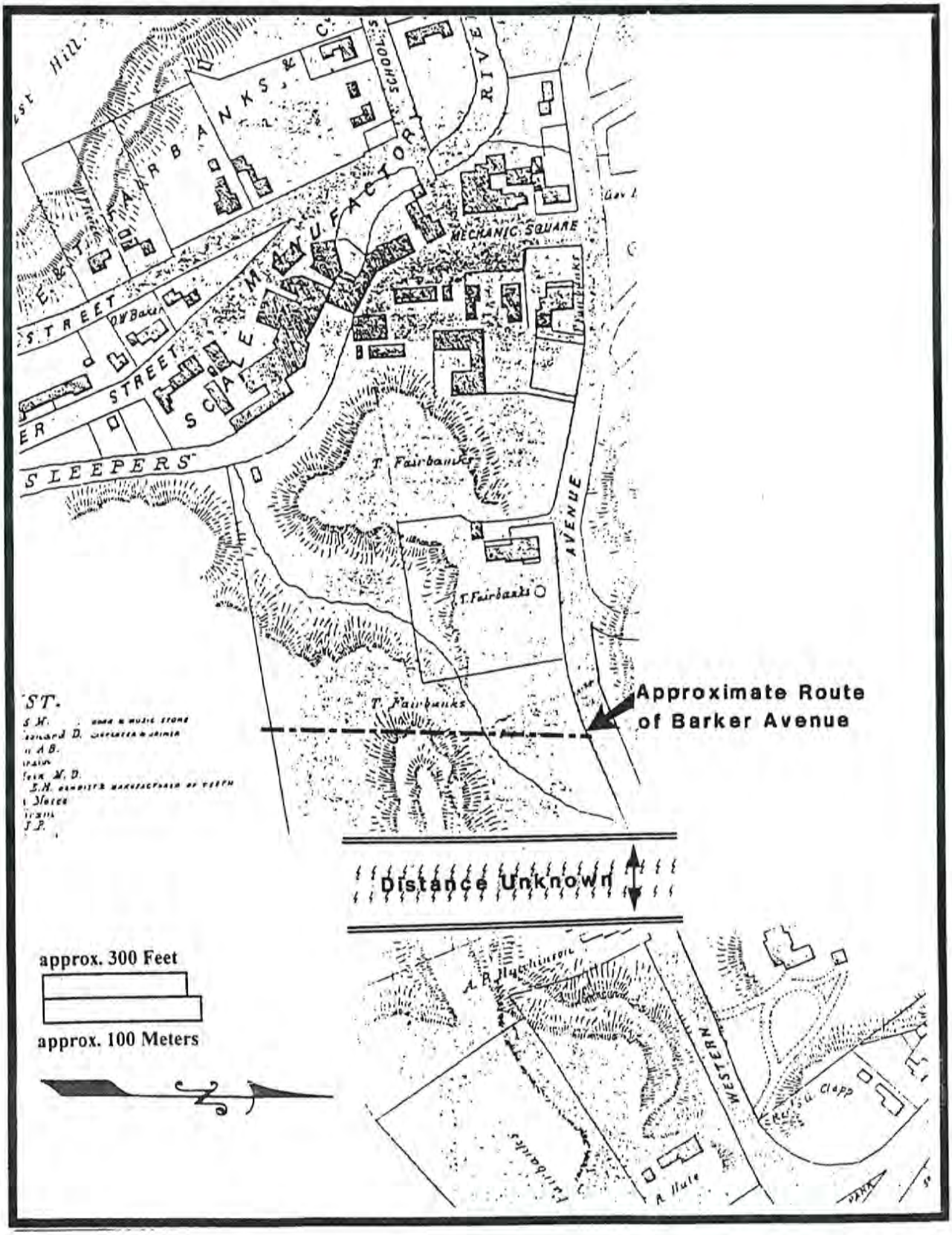
The historic map review concerns the 0.8km (0.5 mile) section of the bike path that has been relocated out of the former Fairbanks Scale Company works to Barker Avenue and other streets and areas south of Western Avenue. As with the original report, only the maps which provided useful information about development along the rerouted bike path are included here, although many maps are discussed.

Presdee and Edwards 1853

Barker Avenue is not shown on this map (Map 4). The route of Barker Avenue passes across land owned by T. Fairbanks. The map ends before the Sleepers River; thus, no development is shown in the area through which the southern section of Barker Avenue and Pine Street now pass.

Walling 1858

Both the county and St. Johnsbury sections of the map were examined. No development is shown along what would be the route of Barker Avenue on the county map. The village map (Map 5) shows two buildings associated with the name "J. Paddock" south of Western Avenue. The more westerly of the two buildings lies along the approximate alignment of Barker Avenue, although that street is not shown. The map ends before the Sleepers River.

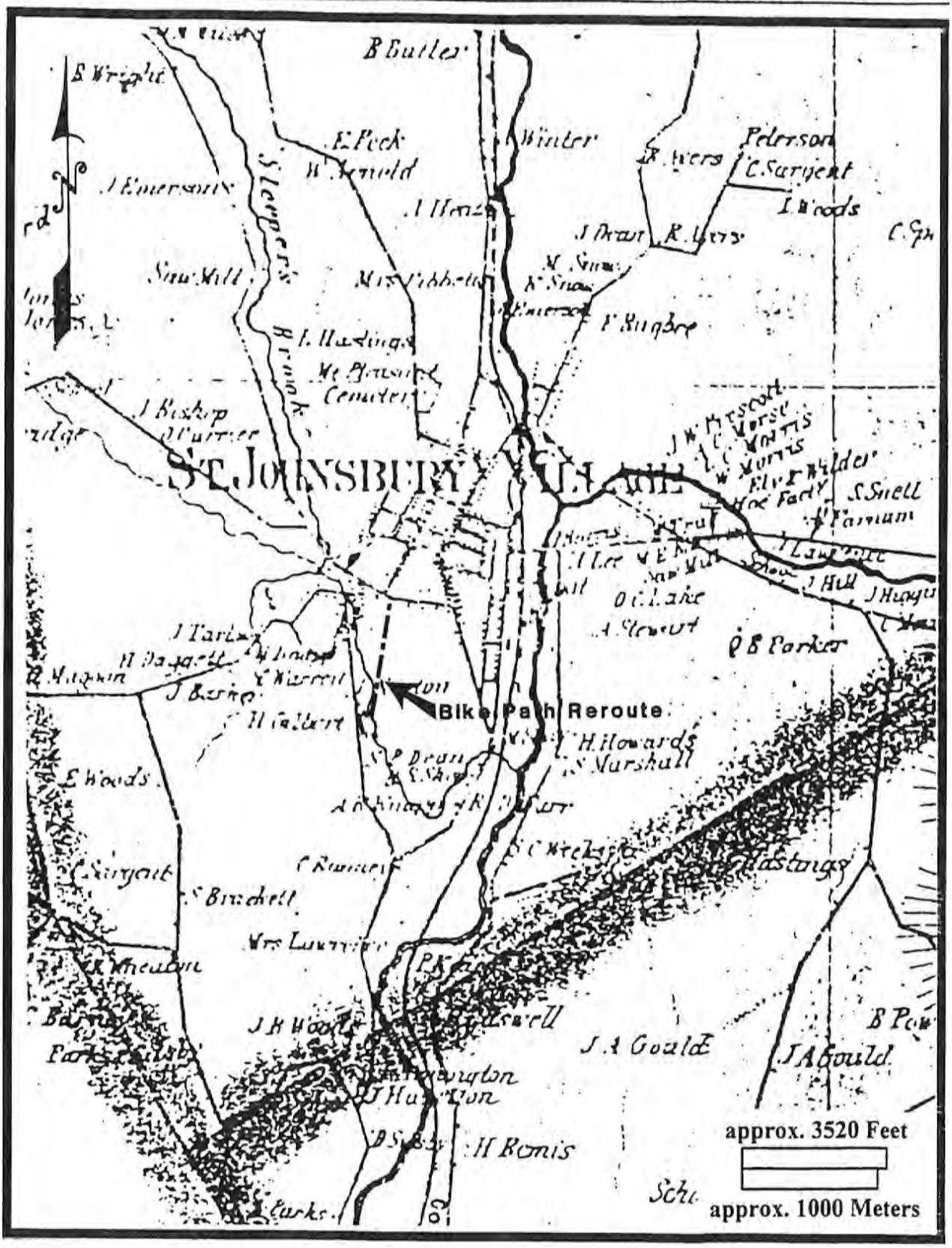


MAP 3

Three Rivers Bike Path, St. Johnsbury

Bike Path Reroute - Barker Avenue to the Sleepers River

Presdee & Edwards 1853



MAP 4

Three Rivers Bike Path, St. Johnsbury
Bike Path Reroute - Barker Avenue to the Sleepers River
Wallings 1858

Beers 1875

Both the town of St. Johnsbury and village of St. Johnsbury maps were examined. The town map shows no development along the cross country route of the bike path. The only substantial historic development is the Portland & Ogdensburg Railroad which roughly parallels the Sleepers River at the south end of the bike path reroute. The village map (Map 6) reveals the sprawling "Thaddeus Fairbanks & Henry Fairbanks" estate along the south side of Western Avenue opposite Summer Street. The Barker Avenue alignment passes between the two main Fairbank residences and continues southward to Valley Street and incorporates part of that street. About half way from Western Avenue to Valley Street, the Barker Avenue alignment passes to the east of a "Summer House" on the Fairbanks estate. At the south end of Barker Avenue, the bike path route turns east on Water Street, today's Pine Street. No development is shown on Water Street. The map ends before the bike path crosses the Sleepers River.

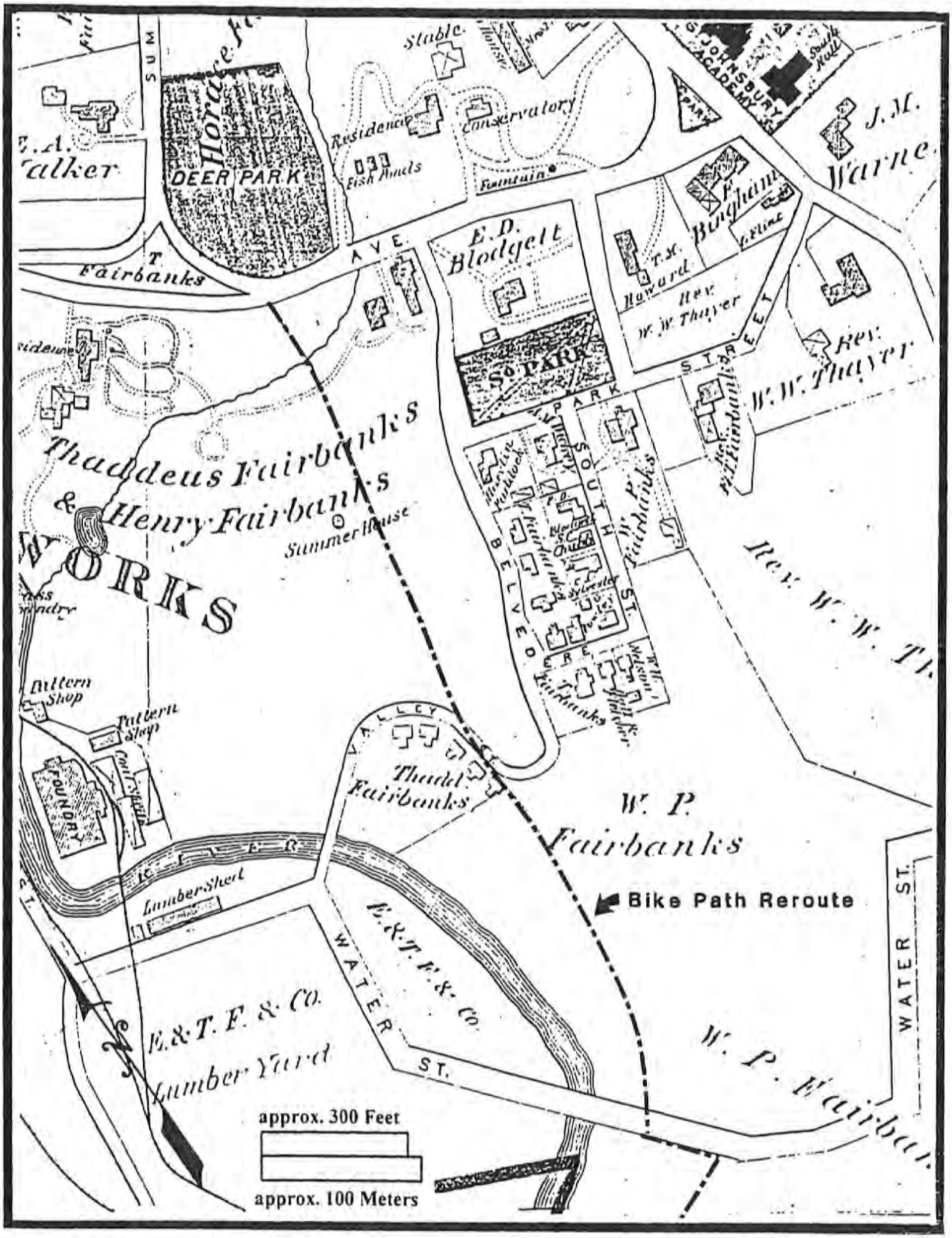
Sanborn 1884, 1889, 1895, 1900, 1905, 1912, 1927/1943

Since none of the earlier maps showed the alignment of Barker Avenue, the index sheet for the seven Sanborn map editions for St. Johnsbury were examined to determine when this thoroughfare was established. Barker Avenue is not shown on any of the Sanborn maps up to 1905, but the street is represented on the 1912 index map. Thus, this street was built during the period 1905-1912. As an aside, the street formerly referred to as Water on the Beers and Norris maps was renamed to Pine by 1900. While shown on several of the later index maps, Barker Avenue is not represented in any Sanborn map sheets regardless of edition, suggesting that there was little or no development there as late as 1927/1943.

Discussion

The historic map review indicates that Barker Avenue, which constitutes 50% of the bike path reroute, was not built until sometime between 1905 and 1912. Prior to about 1875, the land which was eventually used for the street route was not developed. During the last quarter of the nineteenth century, the street's route was incorporated into the Fairbanks estate and part of Valley Street. One summer house shown on the 1875 Beers map probably stood to the west of Barker Avenue where it may have occupied an elevated spot overlooking the Sleepers River valley.

The central part of Barker Avenue appears to incorporate a section of Valley street as the latter is represented on the 1875 Beers atlas map of St. Johnsbury village. A series of five residences built and owned by Thaddeus Fairbanks and possibly rented to company employees are located here. One of these buildings appears on the extreme left side of Photo 2. Other than the railroad, no development is shown on the south side of the Sleepers River where the athletic fields are now located.



MAP 5

Three Rivers Bike Path, St. Johnsbury
Bike Path Reroute - Barker Avenue to the Sleepers River
Beers 1875

Because the bike path route passes along existing roadways such as Barker Avenue and Pine Street that were built with a combination of cut and fill construction techniques, the historic archeological sensitivity is considered to be low. No historic development other than the athletic fields and railroad embankment has been documented for the section of the project between the two crossings of the Sleepers River at the south end of the reroute. Historic sensitivity there is also low.

ARCHEOLOGICAL EVALUATION OF BIKE PATH STA. 0+600 TO STA. 1+100 AT THE FORMER RALSTON MILL PROPERTY ALONG THE FLOODPLAIN OF THE PASSUMPSIC RIVER

by Peter A. Thomas, PH.D. Director, Consulting Archaeology Program, UVM

Setting

At the time of St. Johnsbury's first settlement, most, or perhaps nearly all, of the general project area was a low meadow and floodplain. Today, the floodplain extends 15m to 30m (50-100 feet) from the west bank of the Passumpsic River. It is within this area that the proposed bike path is located (Map 3). Today, the meadow consists primarily of filled land. Aside from the Carlet, Gilson and Hurley property, located on the interior margins of the meadow, the former Ralston Mill property has been built up with fill some 3.7m (12 feet) above the original floodplain (Photo 8). The margins of the fill form a steeply sloping embankment next to the floodplain and, as revealed during archeological testing, thinner deposits of fill extend eastward toward the river from the base of the embankment.

Based on its environmental characteristics and the known locations of prehistoric archeological sites in Vermont, this section of the Passumpsic River floodplain is considered to have a moderate to high archeological potential. Historic research indicates that sites dating to the more recent past are unlikely to be present. Given the extensive filling, the only portion of the floodplain which warrants archeological consideration is the roughly 60m (200 ft) wide zone adjacent to the river.

Methodology

In order to evaluate the archeological potential of the area of a section of the bike path between Sta. 0+600 and Sta. 1+100, two long backhoe trenches and six shorter test units were excavated across portions of the floodplain (Map 3). The fieldwork took place between the 7th and 12th of November, 1994. The trenches were placed across the approximately 3.19 acres of the area to be investigated. Trenches 1 and 2 were positioned across what, based on surface relief, was believed to be the break between a higher and lower alluvial terrace. By geologic convention, the lower terrace closer to the river is referenced as the T0 terrace, while the higher

terrace farther from the stream is called the T1 terrace. The six smaller test units were selected to confirm the approximate limits of both terraces to the north and south of the initial trenches and to further evaluate the possibility of encountering intact archeological deposits.

Detailed stratigraphic profiles were recorded in Trenches 1 and 2 (Appendix I: Figures 1 and 2). Trench 1 was 26m (85 feet) in length; Trench 2 was 12m (40 feet) in length (Photo 9). Vertical control was maintained using a string and line level. Horizontal control was maintained by marking the walls at one meter intervals. Major stratigraphic units were mapped, as well as a few of the individual beds where dip indicated the direction of channel movement. Each major stratigraphic unit was described in terms of texture based on observation and feel; colors were described using a Munsell soil color chart. Particular attention was paid to recording the break between the T0 and T1 terrace sequences, the erosional contacts or evidence of landscape modifications which might have affected the integrity of these sequences, and any cultural artifacts or deposits and buried soil horizons which would indicate the approximate age of the alluvial sediments.

Once the characteristics of the T0 and T1 sequences were identified in Trenches 1 and 2, less detailed stratigraphic information was required to determine whether T0 or T1 sediments existed elsewhere in the project area. For this reason, test units were smaller than the first two trenches and ranged in length from three and nine meters (10 to 30 feet). In each test unit, a one meter wide profile was recorded to identify the general characteristics of the exposed sequence. Both texture and color were noted for each major stratigraphic unit, as was the location of any cultural artifacts or buried soil horizons.

Results

Based upon the stratigraphic sequences exposed in Trenches 1 and 2, alluvial terraces of two different ages were identified. Part of a former river bank, which marks the break between the two terraces, was also identified in the trenches (Appendix I: Figures 1 and 2). Based upon these results, it was possible to map the break between the younger and older terrace (Map 3). Test Units 1, 3, 4 and 5 exposed sequences characteristic of the younger T0 terrace in areas to the north and south of the trenches (Appendix I: Figures 3, 4, and 5). Test Units 2 and 6 exposed sequences beneath the higher T1 terrace to the south of the trenches (Map 3 and Appendix I: Figures 3 and 5).

The T0 terrace is essentially modern in origin. It consists of point bar and overbank sediments which were deposited primarily during the nineteenth century, although there are also some twentieth-century flood deposits in the upper portion of the sequence. As exposed in Trench 1, this sequence is approximately 3.1m (10 feet) thick (Appendix I: Figure 1). The lower 2.1m (6.9 feet) consists of point bar sediments which formed along the lee edge of the channel as the channel shifted to the east. Coarser channel-bottom gravel and a layer of detrital wood mark the base of the point bar sequence.

Photo 8: View to the north along the floodplain of the Passumpsic River east of the Ralston Mill. The mill occupies the filled land on the left. The Passumpsic River is on the right.

Photo 9: Overview of the Passumpsic River floodplain in the vicinity of the Ralston Mill at the time of backhoe testing in late 1994. Trench 2 is under excavation. The sand-covered T1 terrace is in the foreground. The grassy area beyond is the T0 terrace. Facing northeast toward the Passumpsic River from the filled part of the mill lot. (Photo: Peter A. Thomas, CAP, UVM)

Photo 10: The south wall of Trench 2 shows in the T0 sequence in the foreground and T1 overbank sequence beneath fill in the background. (Photo: Peter A. Thomas, CAP, UVM)

The overbank sequence, which formed as a result of periodic flooding of a low-lying terrace, is approximately one meter thick. In Trench 1, a wire nail, one whiteware sherd and a buried plow zone were encapsulated within the overbank sediments. Nails, brick, coal, crushed limestone and a metal cable were encountered in the same stratigraphic unit in Trench 2 and in Test Units 1, 3, 4 and 5. In some instances, particularly in the areas of Test Units 3, 4 and 5, one or more layers of fill cap the alluvial sequence.

A portion of the older T1 terrace was identified between the historic T0 floodplain and the steep bank that rises towards the Ralston Mill building (Map 3). The maximum width of this terrace ranges from 15m to 30m (50 to 100 feet), while its length within the project is approximately 150m (500 ft). As with the T0 terrace, the T1 terrace sequence consists of a basal unit of coarsely bedded, sandy, point bar sediments deposited above channel gravels and coarse sand. This unit is a meter or less thick. Thinly-bedded overbank sediments form the upper part of the sequence. This unit is approximately 40cm to 60cm (16 to 24 inches) thick.

Based on its stratigraphic characteristics, the T1 terrace probably developed fairly rapidly, then remained rather stable for perhaps 1,000 to 1,500 years. This is evidenced by a roughly 40cm (15 in) thick weathered B soil horizon that was visible beneath a relatively stable organic horizon at the surface. During the historic period, the organic layer above the B horizon was actively plowed, with some historic flood deposits contributing to the plow zone's thickness. In Trench 2 and in Test Unit 6, both of which intersected this older alluvial sequence, several thin organic lenses appeared just below the B horizon (Photo 10). These lenses probably represent former floodplain surfaces which were vegetated, but their ephemeral nature suggests that the surfaces were not stable for extended periods of time. In Trenches 1 and 2 and in Test Units 2 and 6, some 70cm to 80cm (28 to 31 inches) of recent sand and gravel fill covers the older alluvial T1 terrace sequence.

Conclusions

Based upon the stratigraphic sequences exposed in Trenches 1 and 2 and in Test Units 1, 3, 4 and 5, the T0 terrace is entirely historic in origin. As such, it contains secondary deposits of nineteenth century building materials and domestic artifacts that are instrumental in dating the deposit but are of little use for other archeological interpretations.

The upper 40cm to 50cm (15 to 20 inches) of the alluvial T1 terrace sequence possibly could contain evidence of prehistoric occupation. However, several factors either reduce the archeological sensitivity of this specific area or preclude the need for further testing. First, no visible evidence of prehistoric cultural activity was encountered in over 38m (125 feet) of trench wall that was exposed during the investigation. Although this result is not conclusive, the lack of artifacts and features suggests a generally low to moderate archeological sensitivity. Second, the upper plow zone has been stripped in the approximately 46m (150 feet) section of the T1 terrace immediately east of the Ralston Mill. Since it is this part of the soil column which is most

likely to contain archaeological deposits, the archaeological potential of this specific area is greatly reduced. Third, this entire terrace is covered with 1.0m to 1.2m (3 to 4 feet) of sand and gravel fill, historic alluvium, and, in the area of Test Unit 6 at the southern end of the terrace, by a foot-thick layer of cinders and coal ash.

Thus, the construction of the proposed bike path between Stations 0+600 and 1+100 is unlikely to have a detrimental effect on prehistoric archeological resources since the path will be constructed on the T0 terrace which developed during the past 200 years, or even more recently. Only scattered artifacts deposited during flooding and materials related to dumping at the Ralston Mill are present. Even in the event that the alignment of the bike path should be shifted to the west onto the higher T1 terrace, prior disturbance in some areas and the presence of at least a meter of sand and gravel fill and recent alluvium across the entire terrace, which creates a significant buffer between the present surface and the underlying terrace sequence, precludes the need for further study. The few artifacts and data recovered during this investigation are curated at the University of Vermont.

CONCLUSIONS AND RECOMMENDATIONS

Bike Path Reroute - Barker Avenue to the Sleepers River

- The northern section of this route passes along Barker Avenue where prior disturbance is clearly demonstrated. No archeological field reconnaissance is recommended here.
- The bike path will also pass over mined land paralleling the north side of Pine Avenue. No archeological field reconnaissance is recommended here.
- The land between Pine Avenue and the north bank of the Sleepers River has been recently disturbed and graded. No archeological field reconnaissance is recommended for this section of the bike path.
- On the south side of the Sleepers River the bike path will skirt a graded athletic field, a mined hillside, and the railroad embankment, all of which are areas of prior disturbance. No archeological field reconnaissance is recommended for these three areas.

Between Stas. 0+600 and 1+100 along the Passumpsic River

- Extensive backhoe testing along the T0 terrace upon which the bike path will be constructed between Stas. 0+600 and 1+100 demonstrated that the terrace dates from the nineteenth century. No archeological field reconnaissance is recommended for this area.

Based upon the information presented in this report concerning the Barker Avenue/Sleepers

River bike path reroute and backhoe testing along the Passumpsic River between bike path Stas. 0+600 and 1+100. HAA. Inc. requests a determination of no effect from the VTSHPO for the Three Rivers Bike Path in St. Johnsbury.

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1889 York.
1900
1905
1912
1927/1943

APPENDIX I:

FIGURES 1 - 5: Soil Profiles of Backhoe Trenches.

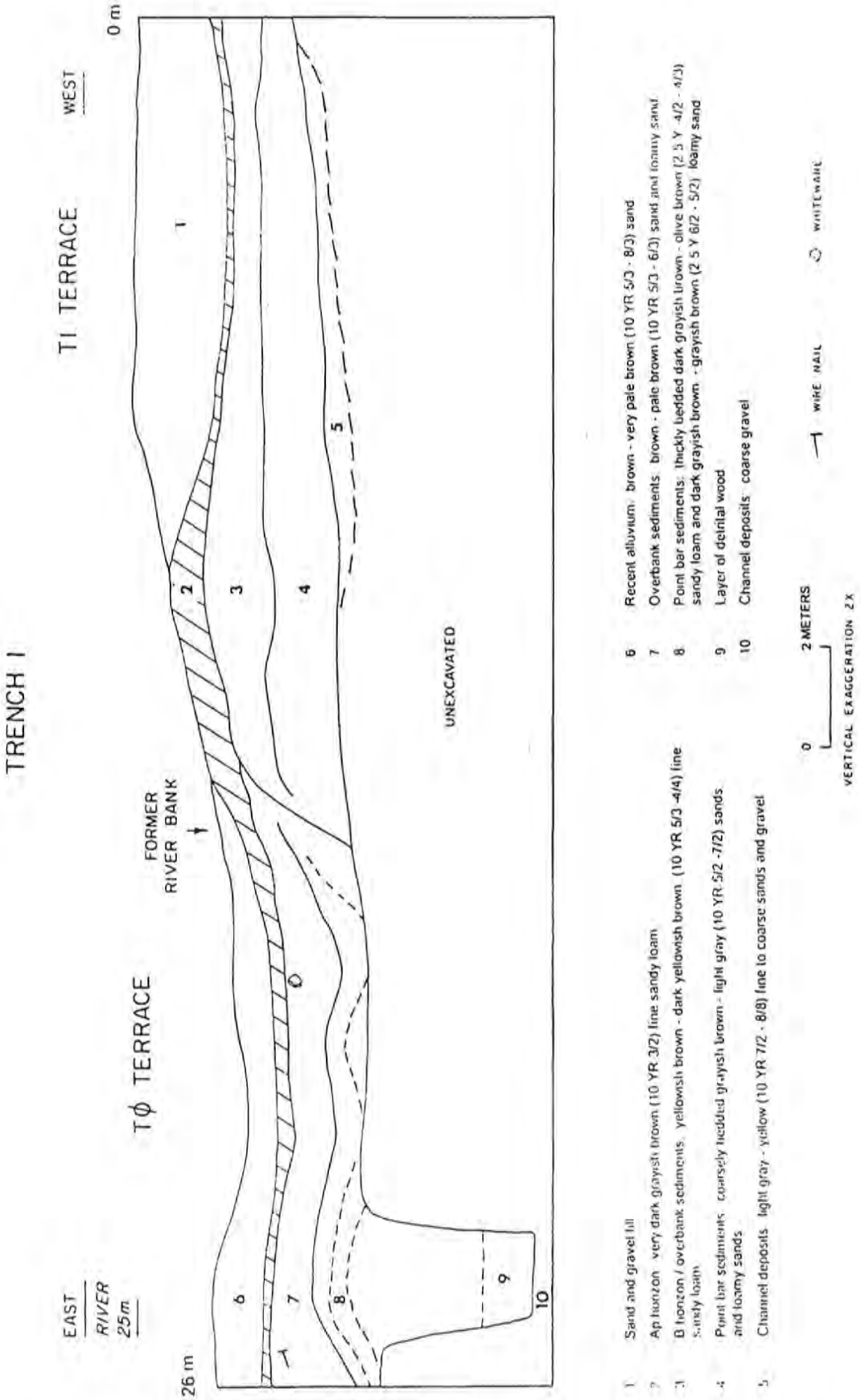

Figure 1: Backhoe Trench 1 on the Passumpsic River Floodplain at the Former Ralston Mill

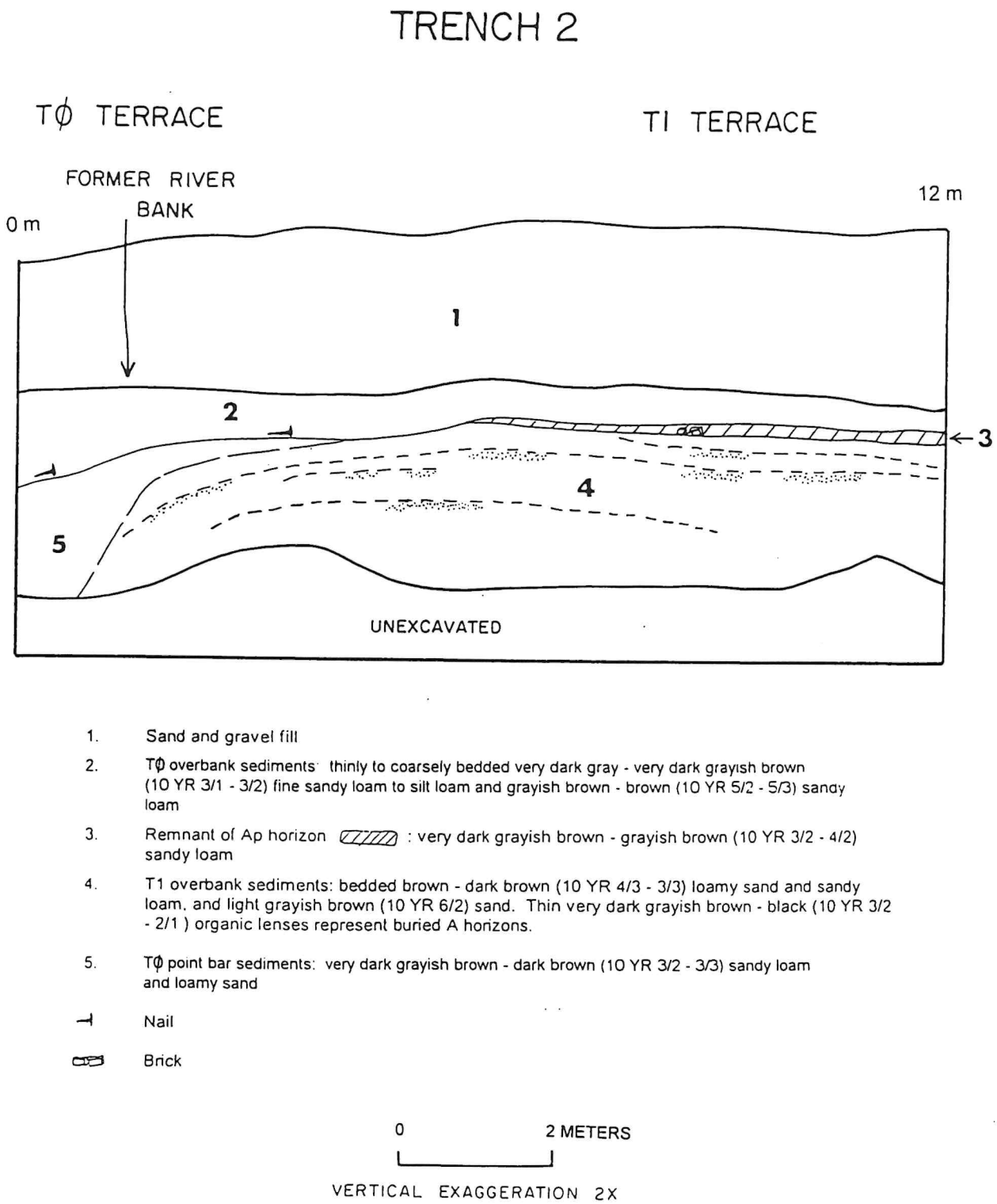

Figure 2: Backhoe Trench 2 on the Passumpsic River Floodplain at the Former Ralston Mill

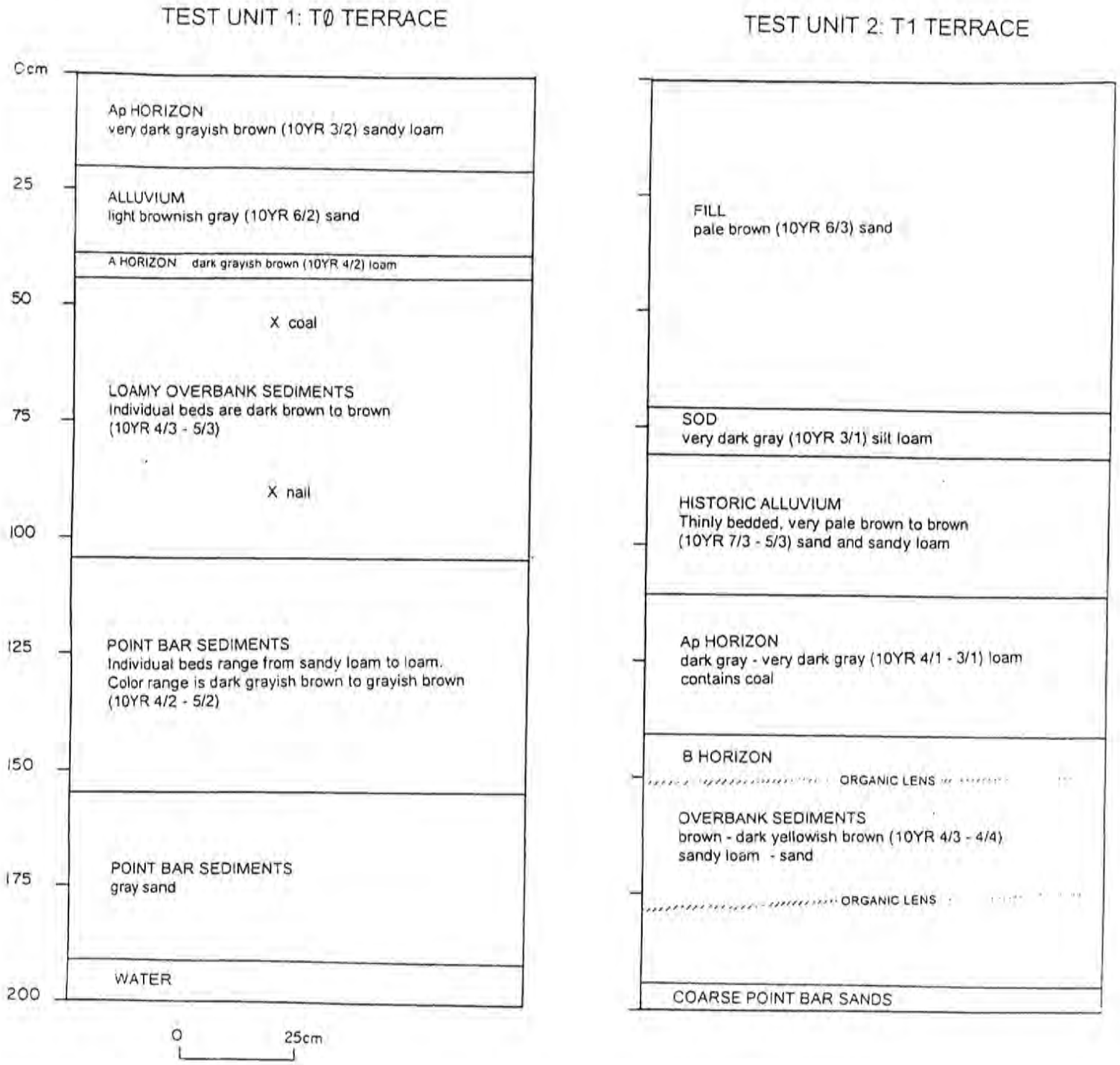

Figure 3: Test Units 1 and 2 on the Passumpsic River Floodplain at the Former Ralston Mill

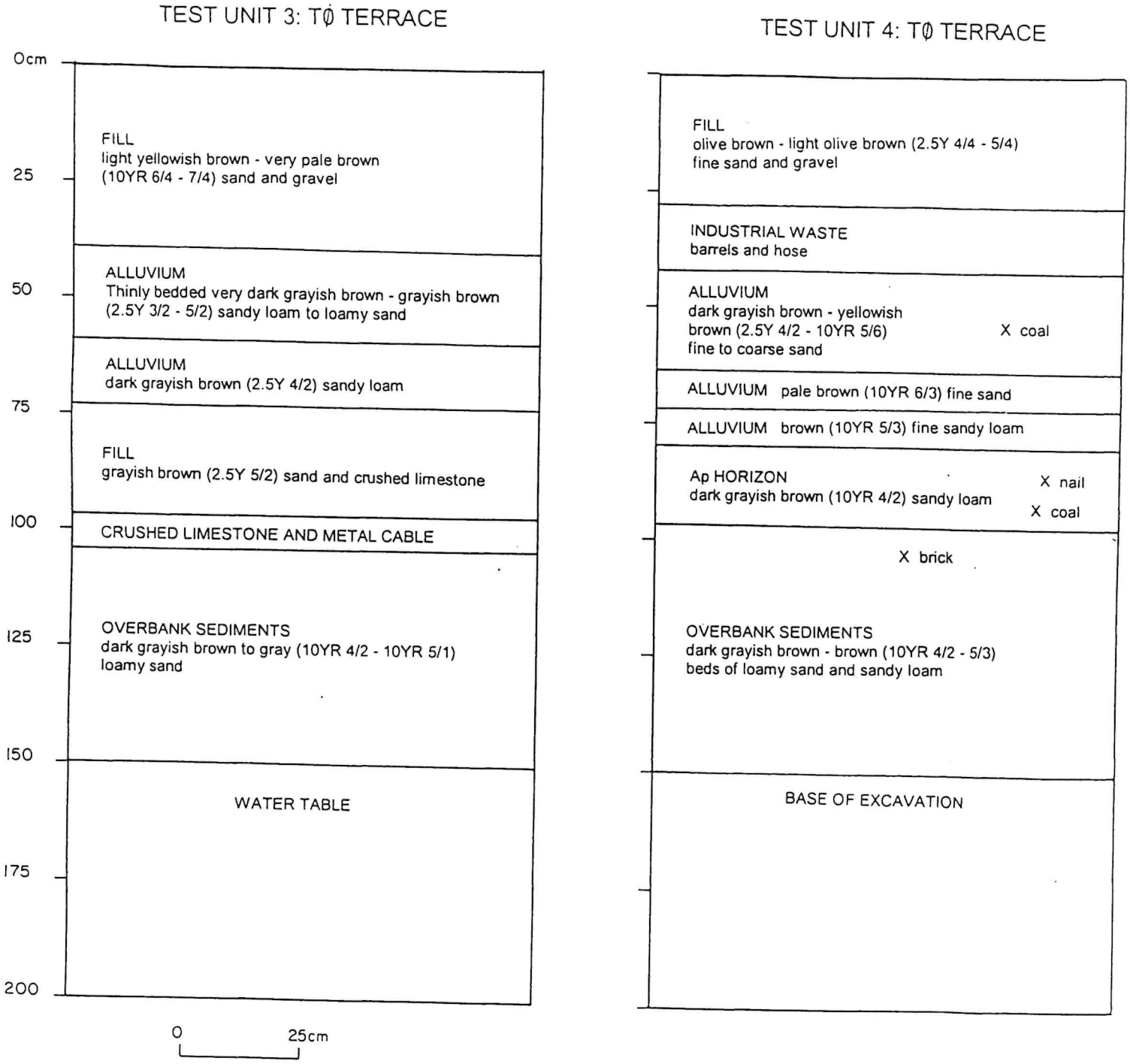

Figure 4: Test Units 3 and 4 on the Passumpsic River Floodplain at the Former Ralston Mill

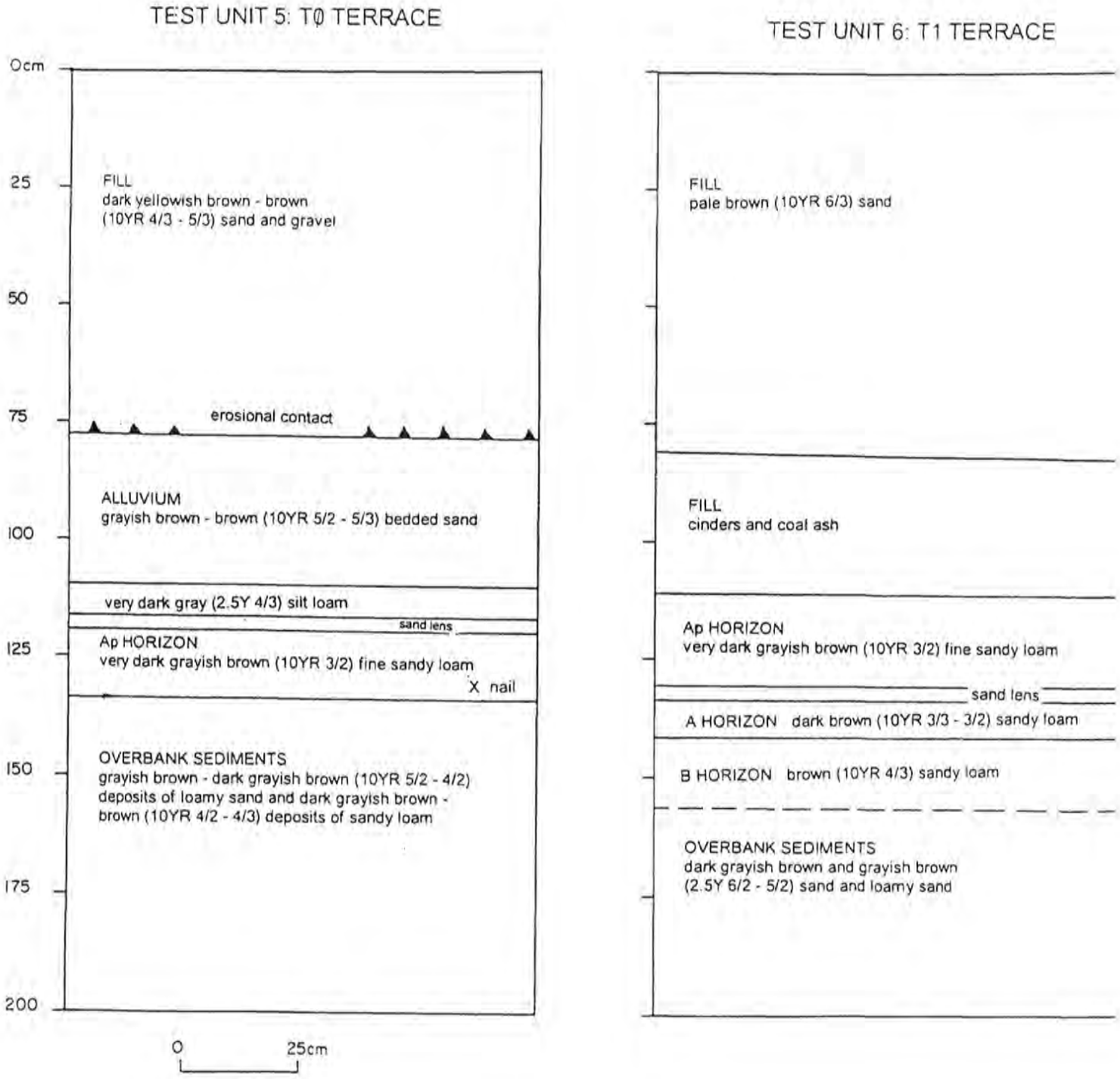

Figure 5: Test Units 5 and 6 on the Passumpsic River Floodplain at the Former Ralston Mill

APPENDIX II:

Qualifications of the Principal Investigator
***Karen S. Hartgen*, MA, SOPA**

Hartgen Archeological Associates, Inc.

Cultural Resource Specialists

27 JORDAN ROAD • TROY, NEW YORK 12180
PO BOX 81 • PUTNEY, VERMONT 05346

KAREN S. HARTGEN

Experience:

March 1973 to Present

President and Principal Investigator
Hartgen Archeological Associates, Inc.

I have directed the cultural resource management firm since 1973, completing over 1000 cultural resource projects. The firm currently has a full time staff of 11, and other specialists are available as needed. We provide services in historical documentation, site file searches, field reconnaissance, archeological survey and excavation, artifact preservation, collection management, cartography, historic structure survey, National Register nominations, Environmental Impact Evaluations as mandated under NEPA, NHPA, SHPA, SEQR, and VT Act 250. Archeological investigations include initial surveys to locate sites, development of research designs and field methodologies to identify sites and subsequently retrieve data as mitigating measures.

June 1974 to 1978

New York State Museum and Science Service
State Education Department, Albany
Assistant Highway Salvage Coordinator

Administration and coordination of the Highway Salvage Archeology Program for New York State during field seasons. Intermediary between various State agencies and cooperating institutions in the process of project evaluation and impact mitigation. Also prepared detailed financial reports for Federal reimbursement.

February 1974 to 1976

New York State Museum and Science Service
Anthropological Survey, State Education Department
Scientific Research Aide

Processing archeological materials from the State Archeologist's current research program. Includes drawing preliminary site maps and profiles, summarizing field notes, restoration and cataloging of artifacts.

Education:

State University of New York at Albany
Master of Arts, Anthropology, December 1988

State University of New York at Albany
Bachelor of Arts, Anthropology, January 1970

Professional Affiliations:

Society of Professional Archeologists, S.O.P.A.
President, New York State Archeological Association
Former President, New York Archaeological Council
Board Member, Federation of Historical Services
Board Member, North Greenbush Environmental Advisory Council
Board Member, Rensselaer County Historical Society Preservation Committee
State Plan for Historic Resources Steering Committee Member, for Office of Parks, Recreation and Historic Preservation
North Greenbush Business and Professional Association
Historic Albany Foundation
American Society of Conservation Archaeology
Society of American Archaeology
Preservation League of New York State
Council for Northeast Historic Archaeology
Northeastern Anthropological Association
National Trust for Historic Preservation
Vermont Archaeological Society
Society for Industrial Archeology
Society of Architectural History
Eastern States Archeological Federation
Hudson-Mohawk Industrial Gateway

Hartgen Archeological Associates, Inc.

Cultural Resource Specialists

PO BOX 81 • PUTNEY, VERMONT 05346

ARCHEOLOGICAL RESOURCE ASSESSMENT, addendum
LETTER REPORT

Date:	January 28, 2003
Project Location:	Town of St. Johnsbury Caledonia County, Vermont
Project Name:	Three Rivers Transportation Path STP BIKE (10) HAA #V273

Prepared By:
Thomas R. Jamison, Ph.D.
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PO Box 81
Putney, Vermont 05346

Prepared For:
Eric Nelson
SVE Associates
2 Friske Avenue, PO Box 1079
Greenfield, Massachusetts 01302

This letter report documents the results of a second addendum to the Archeological Resource Assessment (ARA) study for the proposed Three Rivers Transportation Path in the Town of St. Johnsbury, Caledonia County, Vermont. The original ARA was conducted in 1993 (HAA, Inc. 1993) and an addendum and limited Phase IB study was submitted in 1997 (HAA, Inc. 1997). The current addendum examines three areas where the proposed path alignment has been shifted slightly (Fig. 1). This assessment is conducted under the guidelines of Section 106 of the National Historic Preservation Act, Vermont's Historic Preservation Act, and Act 250. The study follows the VTrans guidelines and is designed to provide a "conservative" estimate of any archeologically sensitive land and to indicate these lands on the project map.

Setting

The project encircles the southern end of St. Johnsbury (Fig. 1), beginning at Bay Street, extending along the west bank of the Passumpsic River, to the wastewater treatment plant. It then joins the bed of the abandoned bed of the Lamoille Valley Railroad at South Street and follows the railroad bed under South Street, under Route 5 and over the Sleepers River. After passing along the western edge of a St. Johnsbury Academy athletic field, the alignment leaves the Lamoille Valley Railroad bed and crosses to an existing pedestrian bridge over the Sleepers River to Pine Street. The path will then parallel the north side of Pine Street to Barker Avenue. At Barker Avenue the project consists of improvements to the existing road including bike lanes, sidewalk and some guard rails, ending at Western Avenue.

Site Visit

Of this alignment, three sections have been slightly modified from previous versions. Therefore, they were the subject of a site visit performed on November 12, 2002. The weather was cool and overcast. The alignment was well staked where the changes had been made. Each section was examined for areas of archeological sensitivity, excessive slope, wetness or disturbance.

Section 1

The first revised section of the path is between Stations 0+280.00 to 0+420.00 (Fig. 2). This section is located at the beginning of the alignment just south of Bay Street. Most of the 140 meter (459 ft) length has been disturbed by various activities including installation of a sewer line, over head transmission lines and dumping of fill (Fig. 3). A soil core at the southern end of the section identified intact stratigraphy that appears to be undisturbed by these activities. The core encountered a very hard packed dark brown silt at 0 to 20 cm (0 to 8 in). From 20 to 50 cm (8 to 20 in) the soil was a dark yellowish brown silt and sand. Finally, at 50 to 90 cm (20 to 35 in) the soil core encountered a olive brown sand.

This section is within the vicinity of the CVPS Substation and Service Center State Historic Site (VHSS# 0311-543) that includes the remains of the power house site, a portion of the 19th-century power generation facility that preceded the electric substation. Much of the fill present along the alignment derives from demolition of buildings, some that may have been associated with the site. However, beneath the fill there are likely to be intact remains of 19th-century features related to the power generation and other industries that once operated on the site.

Although the stratigraphy seen in the soil core is similar to intact stratigraphic sequences in similar locations, it has probably been substantially disturbed in the 19th century. The realigned section is on the T0 river terrace examined during the Phase IB backhoe trenching by Peter Thomas of the University of Vermont Consulting Archaeology Program (UVM-CAP) reported in the previous addendum report (HAA, Inc. 1997). That report identified the terrace as recent in origin with no potential for precontact deposits (HAA, Inc. 1997:18). Judging by the intensive historic

developments that occurred in the vicinity of Section 1, the compacted dark brown silt probably is associated with those activities.

Section 2

The second revised section of the project area is located further to the south between Stations 0+480.00 and 0+700.00 (Fig. 4), a distance of 220 meters (722 ft). In this area the new alignment is also shifted further to the east closer to the river. Much of the section is in a low lying area that has seen substantial scouring by the river over many years. Attempts have been made to stem this action through filling with construction rubble as evidenced in several areas of the alignment (Fig. 5). Two soil cores on the revised section encountered thick sandy strata left by flood events. Core 2 was placed in the low lying scoured area and encountered 50 cm (20 in) of dark yellowish brown sand overlaying a dark brown silty sand to 90 cm (35.5 in). Core 3 was placed at the southern end of the section on a slightly raised area corresponding to Thomas' terrace T0 that he characterized as of recent origin. The core encountered 20 cm (8 in) of dark brown sand underlain by 30 cm (12 in) of dark yellowish brown sand and up to 40 cm (16 in) of yellowish brown sand. All of these strata are characteristic of sediment deposited during moderate energy flooding.

Section 3

The third realigned section of the project begins at the St. Johnsbury Wastewater Treatment Plant at Station 1+080.00 and continues to Station 2+100.00 at the Sleepers River (Fig. 6). The eastern end of this section is characterized by overgrown rail yard areas with a variety of documented disturbances such as drainage ditches, culverts, grading and abandoned railway alignments (Figs. 6 and 7). At Station 1+270.00 the path alignment joins the abandoned bed of the Lamoille Valley Railroad just before it passes under South Street (Figs. 8 and 9). From that juncture the alignment continues on the railroad bed for a distance of 980 meters (3,215 ft) to Station 1+950.00. This portion of Section 3 crosses over Route 5, crosses over the Sleepers River on an existing bridge and extends along one side of a St. Johnsbury Academy athletic field (Fig. 6). All of this length will be on the abandoned railroad line. At the western end of the section it departs from the railroad alignment, crosses a highly modified hillslope adjacent to the railroad line (Fig. 10) and approaches the northern end of the athletic field. Near the northeast corner of the field the revised path alignment ends. After that point it again crosses the Sleepers River on an existing pedestrian bridge to Pine Street.

Disturbance on this section of the alignment is substantial. It consists of the extensive disturbance in the railroad yard area at the eastern end, the abandoned railroad alignment along most of the length, the graded embankment adjacent to the railroad alignment and the former sand and gravel pit location of the St. Johnsbury Academy athletic field. Although it crosses the Sleepers River, it is on an existing bridge so there will be no new disturbance.

Potential Resources

This addendum to the archeological resource assessment identified one area of concern for archeological resources. This location is in Section 1 in the vicinity of the 19th-century power house site. This area has seen substantial disturbance through filling with concrete and asphalt and other materials. However, beneath the fill there may be intact remains of the 19th-century industrial developments.

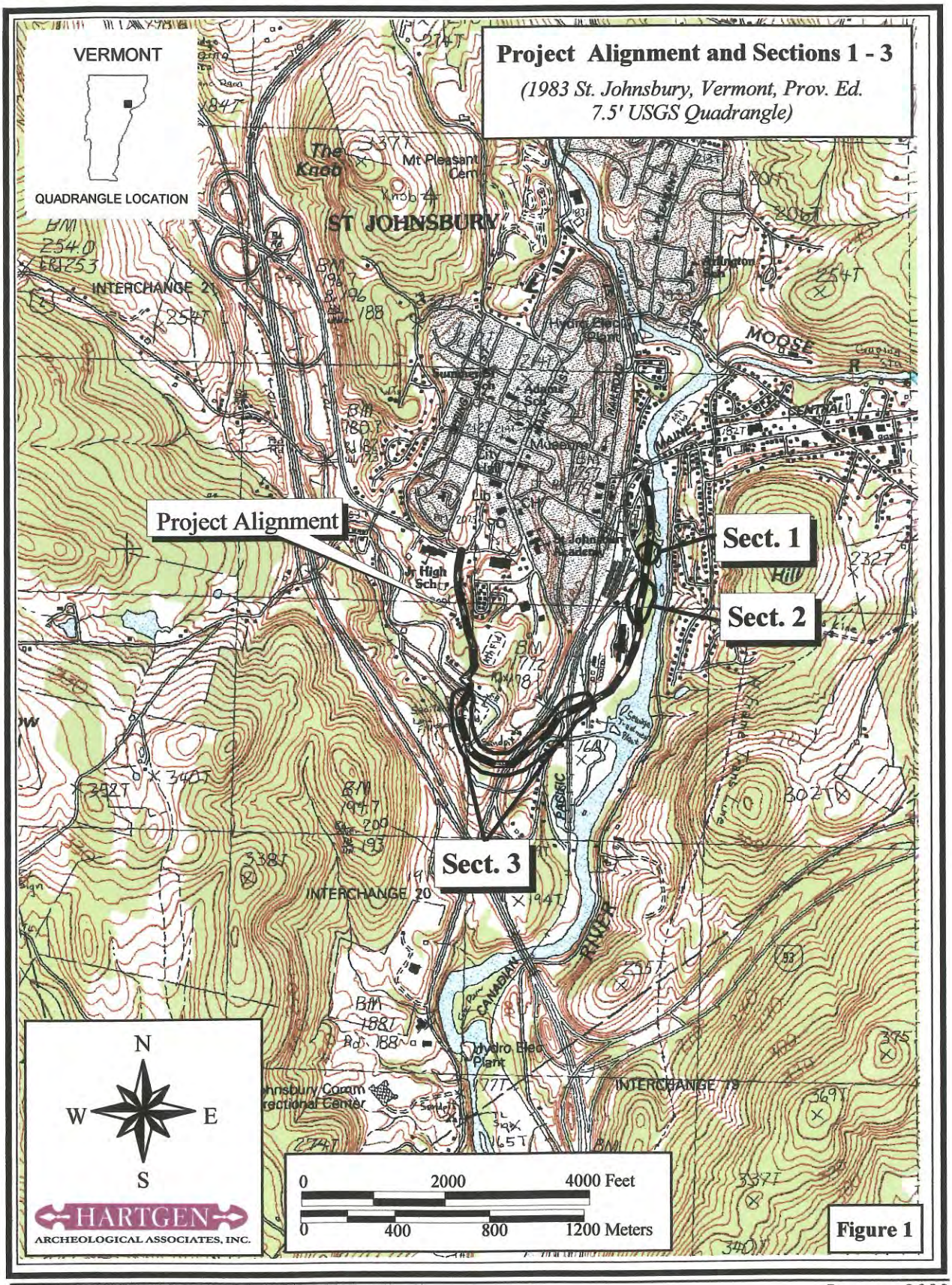
An additional feature that should receive some consideration is the railroad assembly located directly east of the South Street underpass (Fig. 8). This feature served as a notice of the height of the underpass to prevent trains with higher loads from attempting to pass underneath. As such, it should be retained in place as a feature of the railroad system.

Summary and Recommendations

Examination of three revised sections of the Three Rivers Transportation Path alignment identified one area of potential historic features associated with 19th-century industry in Section 1. Although identified in several previous reports (HAA, Inc. 1993; Pritchett 1993), the revised path alignment has a greater potential to intersect undisturbed historic deposits. Therefore, care should be taken to avoid affecting these deposits. The northern end of this location has extensive fill on it presently and the construction of the path should be designed so that the deposits beneath the fill are not disturbed. This could be accomplished through placement of the path on the existing fill and additional fill to the south so as to ramp the path down to the level of the floodplain. If the project can avoid disturbance to these potential deposits in this area, no further archeological review is recommended.

Depending on the design of the pathway the sensitive area in Section 1 could be avoided. Steps to minimize disturbance of deposits below the concrete and asphalt fill in this area could include placing the path on fill and allowing no excavation into the deposits beneath the concrete and asphalt fill.

Attachments:
Figures
Bibliography


Project Alignment and Sections 1 - 3
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VERMONT
QUADRANGLE LOCATION
ST JOHNSBURY
INTERCHANGE 21
INTERCHANGE 20
INTERCHANGE 19
MOOSE R
Project Alignment
Sect. 1
Sect. 2
Sect. 3
N
W
E
S
HARTGEN
ARCHEOLOGICAL ASSOCIATES, INC.
0 2000 4000 Feet
0 400 800 1200 Meters

Figure 1

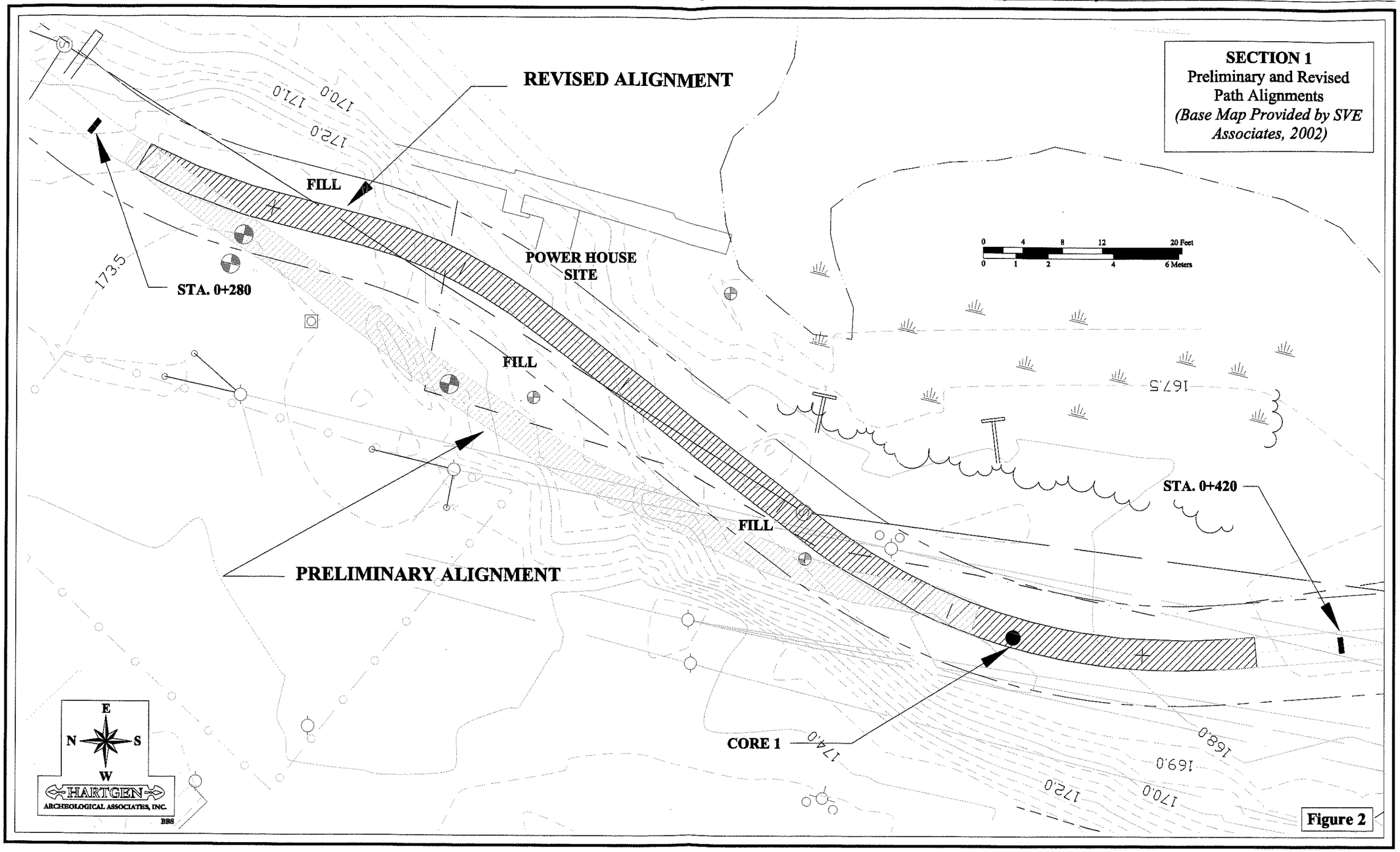

SECTION 1
Preliminary and Revised
Path Alignments
(Base Map Provided by SVE
Associates, 2002)
REVISED ALIGNMENT
FILL
POWER HOUSE
SITE
FILL
FILL
STA. 0+280
STA. 0+420
PRELIMINARY ALIGNMENT
CORE 1
173.5
167.5
174.0
172.0
170.0
171.0
169.0
168.0
0 4 8 12 20 Feet
0 1 2 4 6 Meters
E
N
S
W
HARTGEN
ARCHEOLOGICAL ASSOCIATES, INC.
BBS

Figure 2

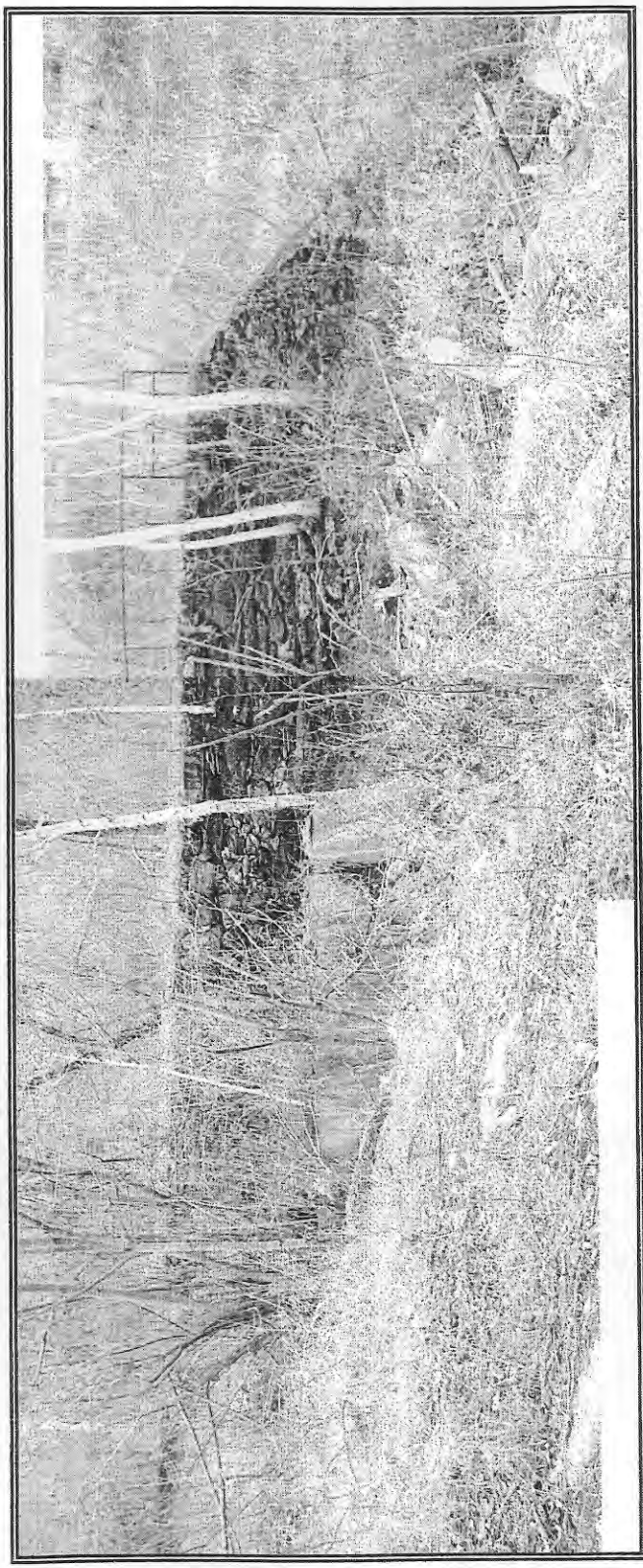
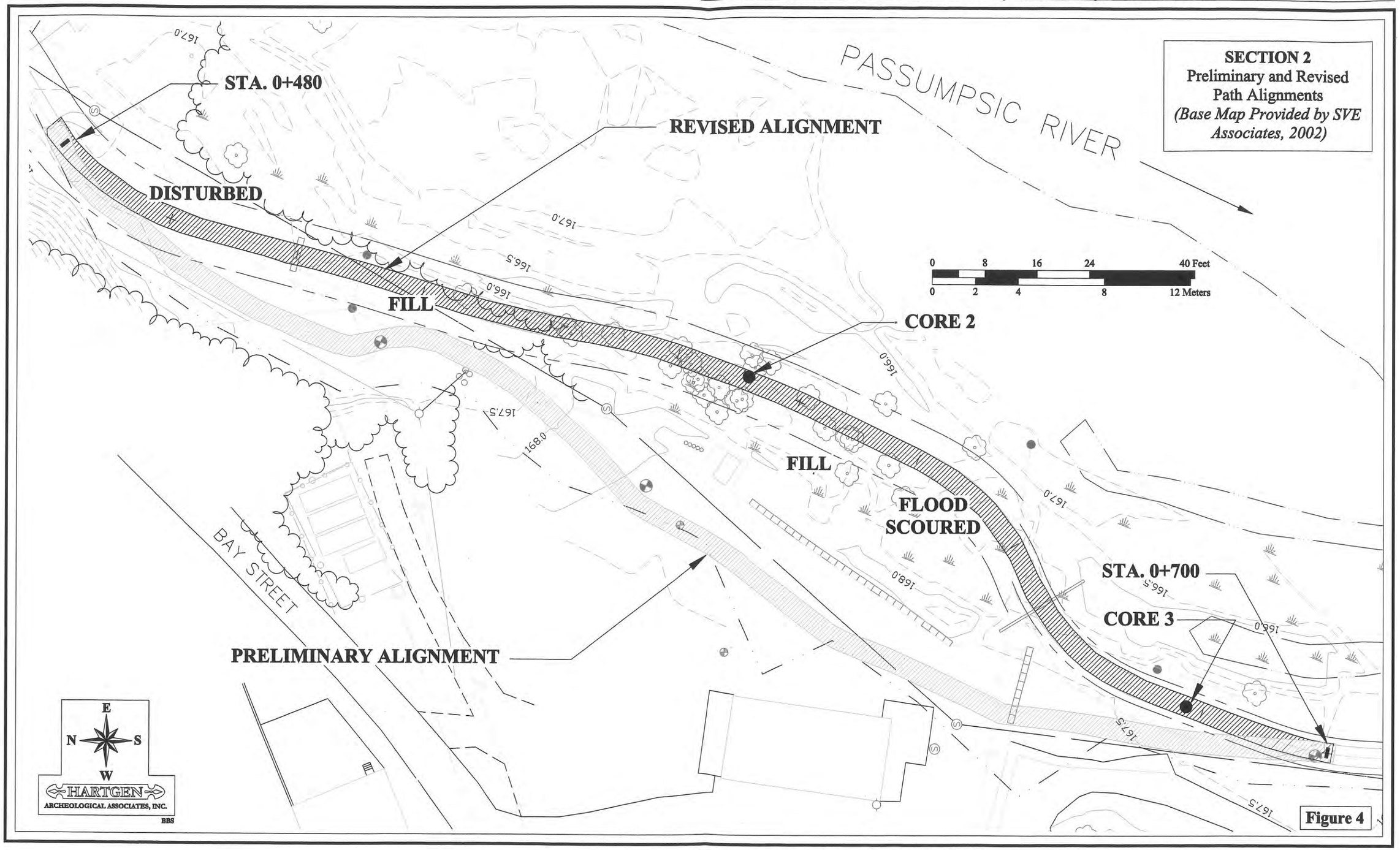


Figure 3. Section 1. Note concrete and asphalt fill in the foreground and the power house tail race feature in the background. The revised alignment crosses from the fill into the low area adjacent to the tail race. View to the east.


SECTION 2
Preliminary and Revised
Path Alignments
(Base Map Provided by SVE
Associates, 2002)
PASSUMPSIC RIVER
STA. 0+480
REVISED ALIGNMENT
DISTURBED
FILL
CORE 2
FILL
FLOOD
SCOURED
STA. 0+700
CORE 3
BAY STREET
PRELIMINARY ALIGNMENT
0 8 16 24 40 Feet
0 2 4 8 12 Meters
E
N
S
W
HARTGEN
ARCHEOLOGICAL ASSOCIATES, INC.
BBS
Figure 4

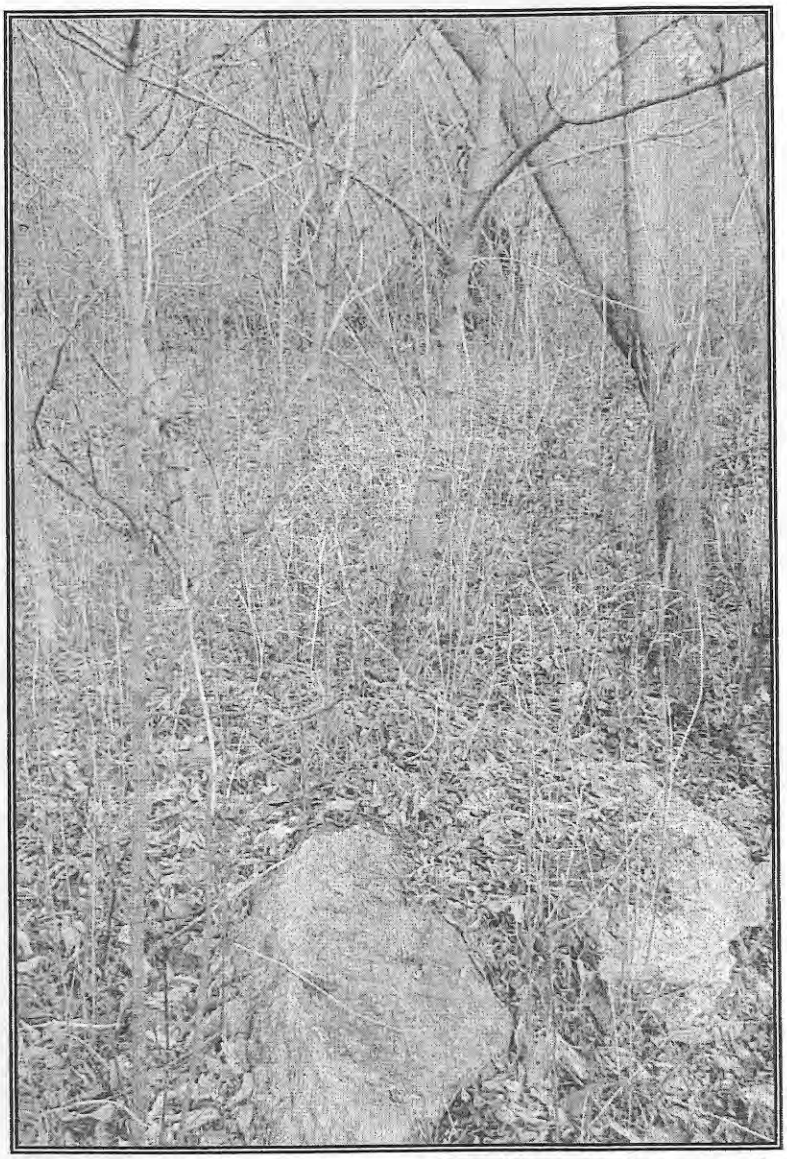


Figure 5. Section 2. Note concrete fill in the foreground and floodplain vegetation. The project alignment extends to the north through the photo. View to the north.

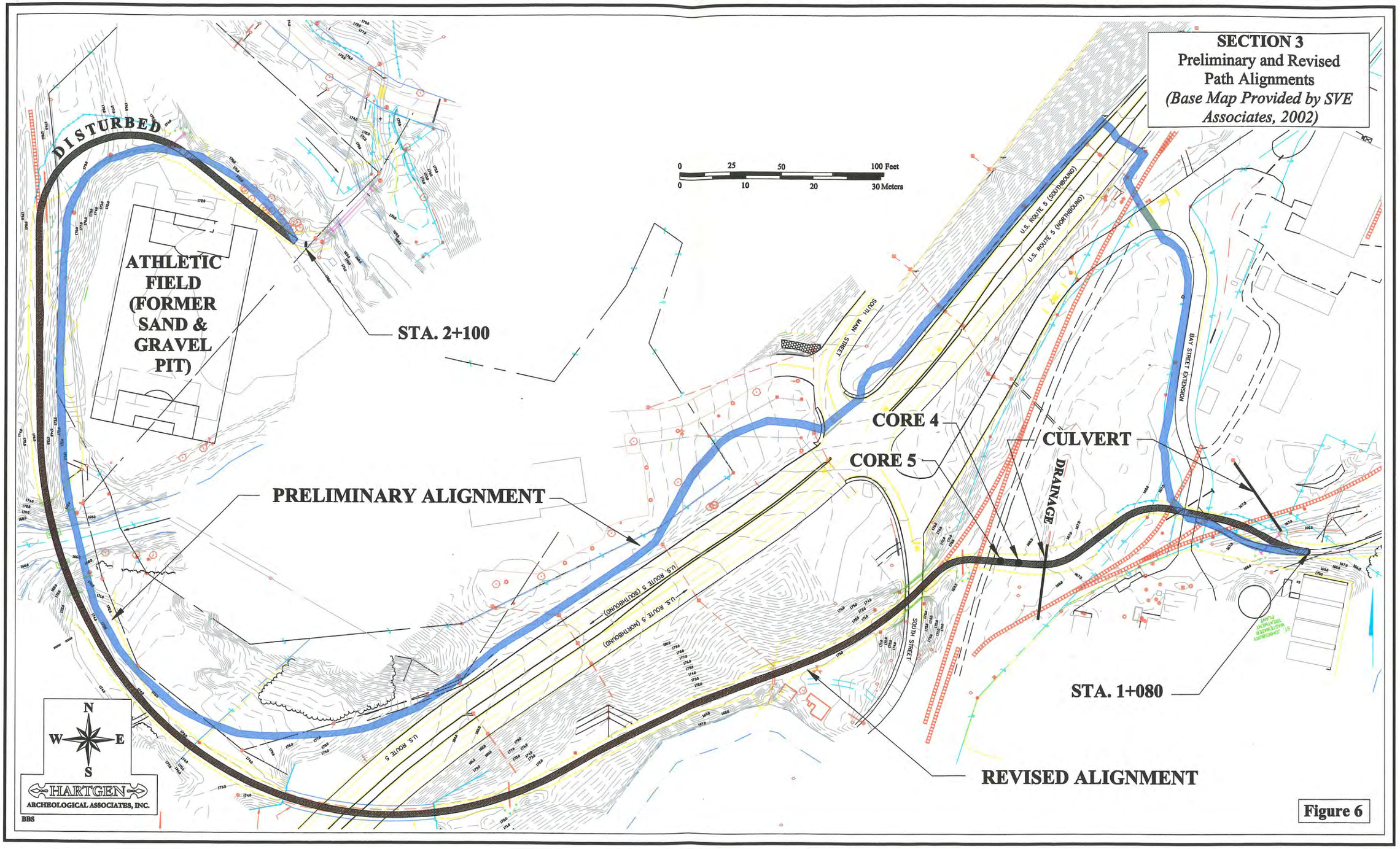

SECTION 3
Preliminary and Revised
Path Alignments
(Base Map Provided by SVE
Associates, 2002)
DISTURBED
ATHLETIC FIELD (FORMER SAND & GRAVEL PIT)
STA. 2+100
PRELIMINARY ALIGNMENT
CORE 4
CORE 5
CULVERT
DRAINAGE
STA. 1+080
REVISED ALIGNMENT
U.S. ROUTE 5 (SOUTHBOUND)
U.S. ROUTE 5 (NORTHBOUND)
U.S. ROUTE 5
SOUTH MAIN STREET
SOUTH STREET
BAY STREET EXTENSION
0 25 50 100 Feet
0 10 20 30 Meters
N
W
E
S
HARTGEN
ARCHEOLOGICAL ASSOCIATES, INC.
BBS

Figure 6

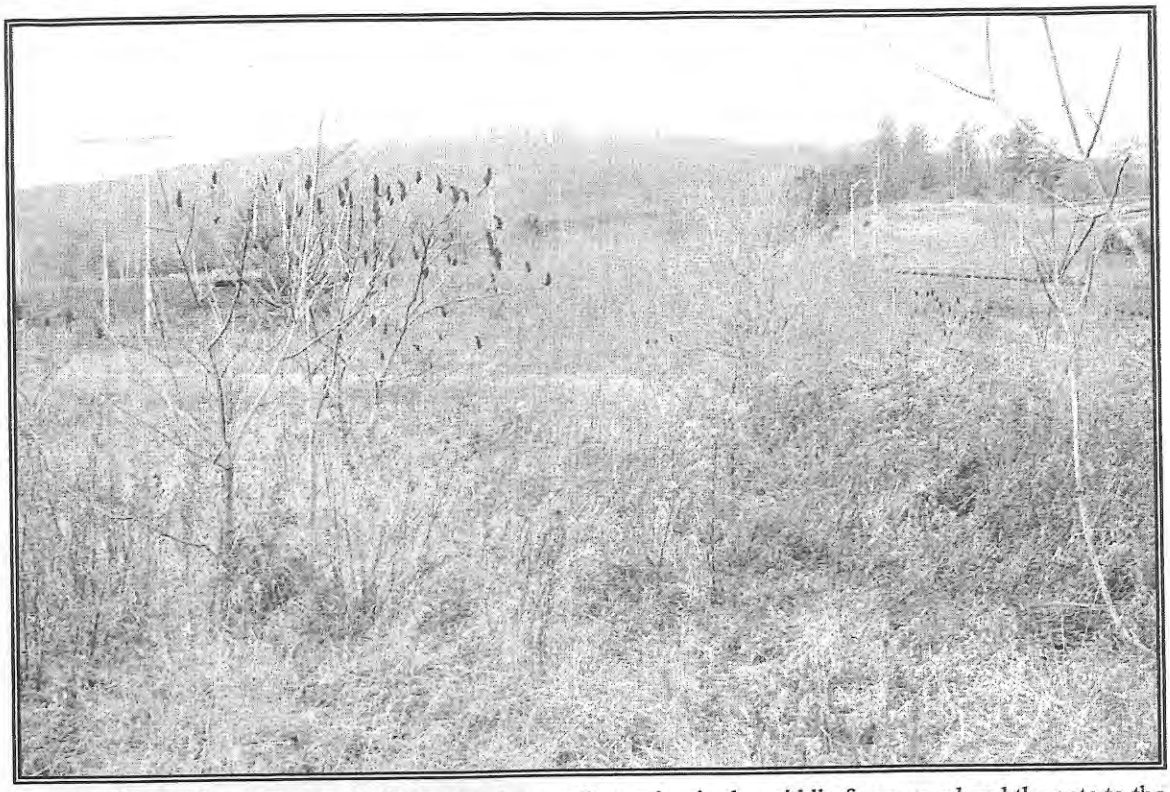


Figure 7. Section 3, East End. Note Bay Avenue Extension in the middle foreground and the gate to the wastewater treatment plant at the left edge of the photo. South Street extends north to south through the middle of the photo and Rte. 5 is in the upper right. View to the west.

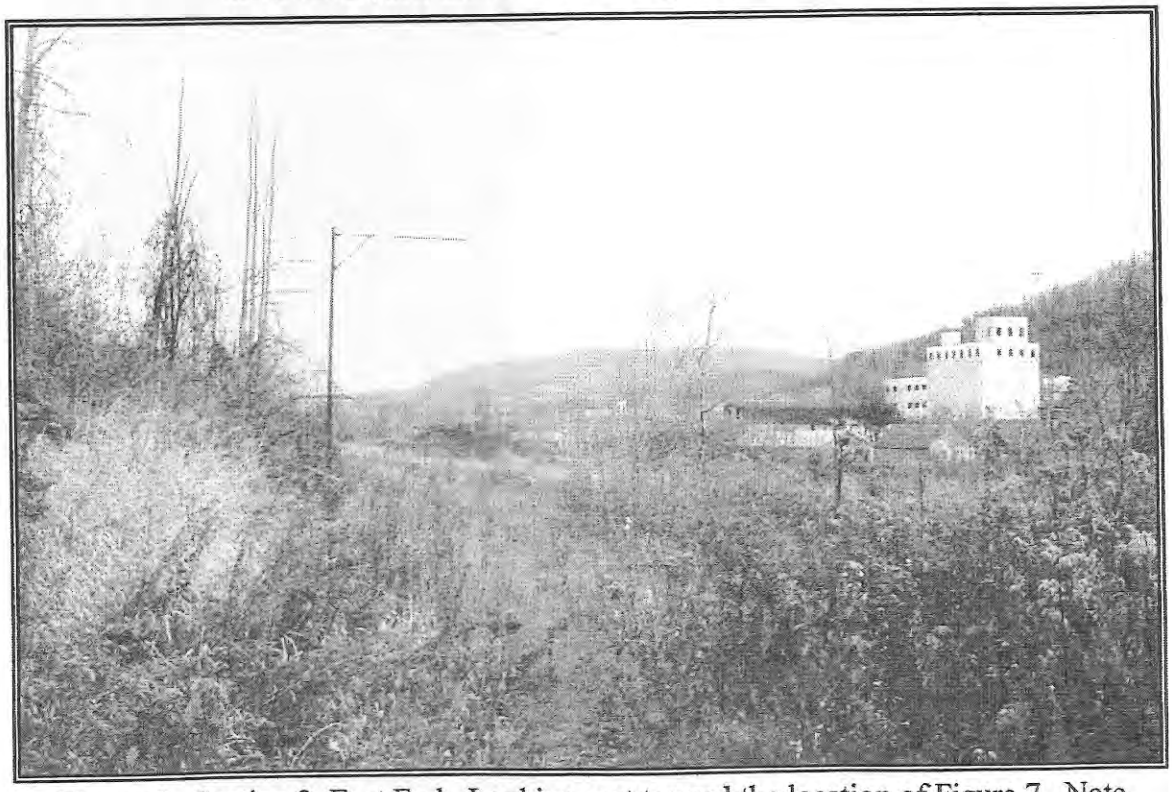


Figure 8. Section 3, East End. Looking east toward the location of Figure 7. Note railroad underpass warning assembly on the left.

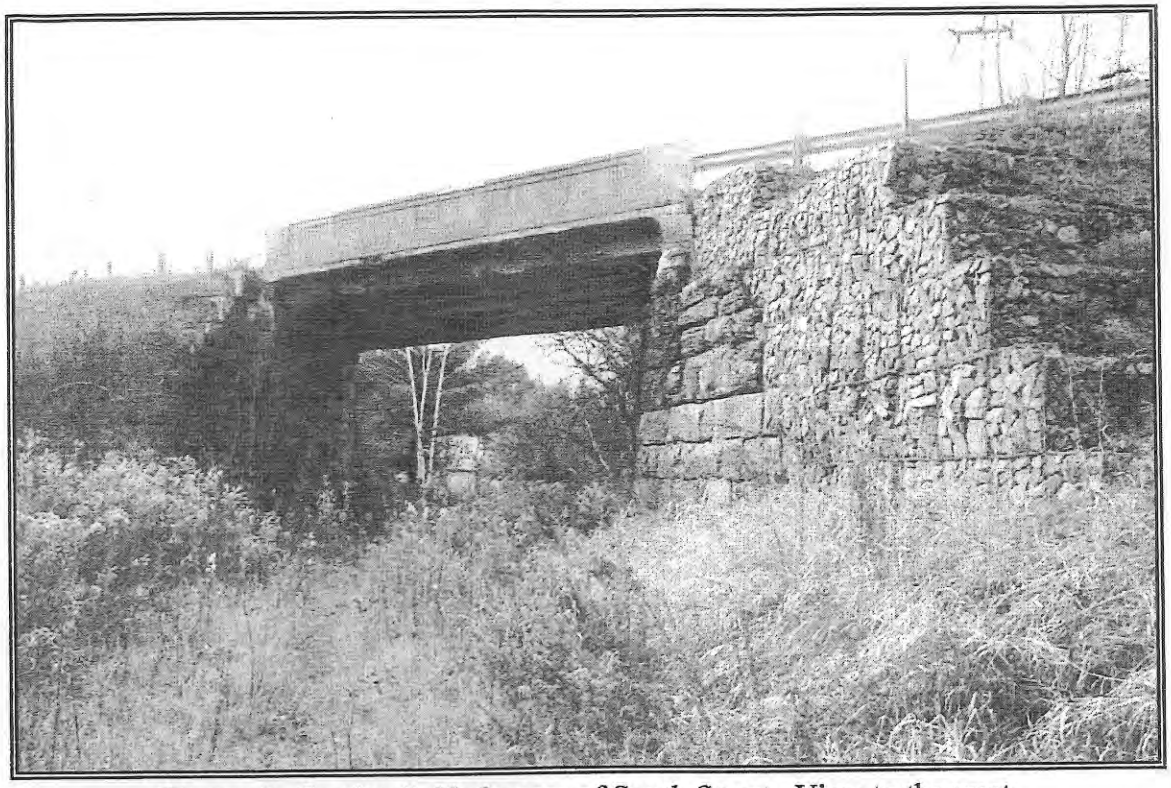


Figure 9. Section 3, Underpass of South Street. View to the west.

Figure 10. Section 3, West End. Railroad alignment is located on level area above and behind athletic field. Revised path alignment departs from railroad and crosses graded areas behind the goal. View to the west.

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CULTURAL RESOURCE SPECIALISTS
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Evan Detrick
DuBois & King, Inc.
28 North Main Street
PO Box 339
Randolph, Vermont 05060

RE: Archeological and Historical Resource Assessment
STP BIKE (10) Revised Alignment – West End
Three Rivers Transportation Pathway Project.
Town of St. Johnsbury, Caledonia County, Vermont
HAA #V273-12
October 23, 2007

Dear Evan,

This letter report presents the results of an archeological and historical resource assessment of the proposed revision to the STP BIKE (10) Three Rivers Transportation Pathway Project in the Town of St. Johnsbury, Caledonia County, Vermont (Fig. 1). The proposed project area is a realignment of the western end of the pathway that was previously reviewed (HAA, Inc. 1997). The previous alignment for this section was to depart from the Lamoille Valley Railroad at the St. Johnsbury Academy ball field, pass along the north side of the field, cross the Sleepers River and connect to Barker Avenue and end at Western Avenue. Instead of leaving the railroad alignment at the ball field, the revised alignment continues on the railroad bed to Mount Vernon Street, drops down to the south side of the street and continues along to the east side of High Street and to Western Avenue (Fig. 2). The revised alignment, as depicted on DuBois & King plans dated September 2007 (Figs. 3A-3G), begins at approximately Sta. 2+160 and extends to 3+200, a distance of 1,040 meters (3,412 ft). The proposed APE width varies from about 4 meters (13 ft) along Mount Vernon Street up to 8 meters (26 ft) at Station 2+340 where some filling is required along the east side of the APE. Therefore, the APE averages about 6 meters (20 ft) in width for a total APE of 6,240 square meters (67,142 sq. ft) or 1.54 acres (0.624 ha). This review is part of the compliance with Section 106 of the National Historic Preservation Act of 1966, as amended.

Background Research

The project area is located in the Town of St. Johnsbury on the western edge of the City of St. Johnsbury. Soils in the project APE are primarily defined as Urban land-Adams-Nicholville complex at 15-215% slopes in the southern third of the APE and 0-8% slopes in the northern end. In between is a section of Vershire-Lombard complex at 15-60% slopes characterized as rocky or very stony (USDA 2007). Beneath the surface deposits the bedrock is the Waits River formation consisting primarily of "gray quartzose and micaceous crystalline limestone" (Doll et al. 1961).

The Waits River formation was not a major source of material for stone tools. Glacial cobbles in the bed of the Sleepers River or scattered on the surface would be a more likely source of materials for making stone tools. No bedrock outcrops were encountered in the project area.

Completion of the VDHP predictive model form yields a score of -32 indicating a very low archeological sensitivity for precontact sites (Attached). This low score is primarily due to disturbance and slope identified in the project APE.

There are two reported precontact archeological sites within a mile (1.6 km) of the APE. These sites include VT-CA-19, a flake scatter of unknown date that was located on a small knoll along the west side of the Sleepers River northwest of the project area. The site was destroyed when I-91 was constructed. The other precontact site in the vicinity is FS 4, reportedly located at the confluence of the Passumpsic and Moose Rivers. This site is reported to have been surrounded by the river on three sides and a palisade on the fourth side. The riverside location of the project APE is certainly typical of many reported precontact sites in the state, but no others have been reported in the vicinity. There are many historic sites in the project vicinity associated with the establishment and growth of St. Johnsbury during the 19th century. Areas adjacent to the project area were dominated by the Fairbanks Scale works during much of the 19th and into the 20th centuries. Most of the structures of the company have been destroyed, probably leaving extensive archeological deposits. However, that area is well outside of the project APE. One of the few historic sites reported for the area is the Paddock Iron Works, VT-CA-20, dating to 1828. A large archeological excavation was recently conducted in downtown St. Johnsbury at the county courthouse that consisted of the excavation of numerous graves from a cemetery that was at the site prior to construction of the courthouse (Kenny et al. 2003). The limited archeological sites reported for the project vicinity are probably due to the limited archeological investigations that have taken place and not a lack of archeological sites.

Table 1. Reported Archeological Sites in Project Vicinity.

VAI Site Number	*Description*
FS 4	Pos. village site with palisade on Passumpsic at Moose River (1.4 km/0.8 mi E).
VT-CA-19	Flake scatter of unknown date west of APE destroyed by I-91 (0.2 km/600 ft W).
VT-CA-20	Paddock Iron Works adjacent to Passumpsic River (1.3 km/0.8 mi E/NE).
VT-CA-40	Old Burial Ground (0.7 km/0.44 mi E)

Historic maps of the project area illustrate the development of the area, in particular, the growth of the E. & T. Fairbanks Scale Company. This establishment was the primary catalyst for the growth of St. Johnsbury. The 1853 Presdee and Edwards (Fig. 4) and the 1858 Walling (Fig. 5) maps of the area show the general layout of the project area at the time prior to installation of the railroad. Mount Vernon Street and High Street are labeled School Street and Forest Street respectively. Several houses shown on these maps are still standing adjacent to the project area and others are no longer extant. The first evidence of the railroad alignment in the APE is illustrated by the 1875 Beers Atlas that depicts the alignment passing behind the row of workers houses on High (Forest) Street (Fig. 6). Features along the alignment include a “station” directly adjacent to the line

and a "gas works" that may have been supplied with coal from the line, probably unloading at the station. The station is not depicted on any other maps, but the other structures continue to be illustrated on maps and drawings including the 1884 Norris birds-eye view of St. Johnsbury and the Sanborn Maps of the area (Figs. 7-10).

The maps illustrate a variety of changes in the area including changes in road alignments, bridges, the railroad and structures. The following developments can be outlined:

- From at least 1853 to 1895 the crossing of the river in this vicinity was a bridge on the alignment of Mount Vernon Street (Figs. 4 to 9)
- From at least 1853 to sometime between 1927 and 1943 a boarding house ("Fairbanks Hotel") was located at the southwest quadrant of the intersection of Mount Vernon (School) Street and High (Forest) Street (Figs. 4 to 10).
- From sometime between 1889 and 1895 to sometime between 1927 and 1943 a railroad bridge was in place north of the project area (Figs. 8 and 9).
- From sometime between 1889 to between 1919 and 1927 a railroad spur serviced a coal shed behind the gas plant (Figs. 8 and 9).
- From sometime prior to 1927 to at least 1943 the remains of the coal shed labeled as a coal trestle are located behind the former gas plant site (Fig. 10).
- Between 1884 and 1889 a dwelling was moved from the corner of Mount Vernon (School) Street and High (Forest) Street to the west, probably to accommodate construction of a large store house along the river (Figs. 7 and 8).
- From 1900 to at least 1943 a steel bridge was located on the alignment of the current bridge on High Street (Figs. 9 and 10).
- From 1900 to at least 1943 a store house of the Fairbanks Company was extended into the alignment of Mount Vernon Street where it met the earlier bridge, thus preventing access to that bridge other than from the store house (Figs. 9 and 10).

These developments led to the realignment of High Street (Forest Street) and Mount Vernon Street (School Street).

There are several historic properties listed on the State Register (SRL) within the immediate project vicinity. These properties include the c. 1850 "Carpenter Gothic" structure rumored to be a Fairbanks store (0311-338/497), the c. 1852 Reginald C. Powers Greek Revival residence (0311-339/449), an unnamed c. 1870 Italianate apartment building (0311-340), and a c. 1830 vernacular duplex residence (0311-498). In addition, the Fairbanks Factory Historic District (0311-246) is located adjacent to the APE. National Register Listed (NRL) historic properties in the general vicinity include the St. Johnsbury Main Street Historic District, the St. Johnsbury Historic District and the c. 1873 Franklin Fairbanks House. The NRL c. 1870 Fairbanks Bridge was also nearby but has been demolished along with most of the Fairbanks Company buildings. The project APE passes directly in front of the Powers House, across the street from the Carpenter Gothic residence and the

Duplex house and behind the Apartment building. The project area is not visible from any of the National Register listed properties due to vegetation, distance and elevation.

Table 2. Historic Properties in the Project Vicinity.

Name	*Description*
Fairbanks Factory Historic District (0311-246)	20th-century features associated with the company
Fairbanks Village Store (0311-338/497)	c. 1850 Carpenter Gothic (5 Mt. Vernon Street)
Reginald C. Powers residence (0311-339/499)	c. 1852 Greek Revival structure (12 Mt. Vernon Street)
Apartment building (0311-340)	c. 1870 Italianate structure (5-9 High Street)
Duplex house (SR 0311-498)	c. 1830 vernacular structure (15 Mt. Vernon Street)
Franklin Fairbanks House (NRL)	c. 1873 Italian Villa style structure (Western Avenue)
St. Johnsbury Main Street Historic District (NRL)	(0.37 km/0.22 mi E)
St. Johnsbury Historic District (NRL)	(0.55 km/0.34 mi E)
Fairbanks Bridge (NRL) - demolished	c. 1870 Gothic Revival Timber Lattice Truss bridge (0.18 km/0.11 mi SE)

Site Visit

A site visit on September 24, 2007 was conducted in good conditions. The purpose of the site visit was to examine the revised project alignment for areas of archeological potential and historic preservation concerns. Photographs were taken characterizing the project area.

The project APE is located primarily on the raised embankment of the former Portland and Ogdensburg or Lamoille Valley Railroad (850 m/2,789 ft; Fig. 2). The railroad alignment has been stripped of most railroad related features including rails, ties, switches, signs, etc. Some ties are visible dumped along the sides of the embankment. The rail bed is covered with the typical crushed stone throughout the APE (Fig. 11). The southern end of this revised section of the project APE is located between High Street and the Sleepers River, adjacent to areas that were formerly covered by Fairbanks Company structures and used as sand and gravel pits. Currently a ball field and open or overgrown space remains. At Station 2+500 the embankment crosses High Street and enters a cut into bedrock. At the northern end of that cut the embankment approaches the first of the series of 19th- to 20th-century workers houses that back up on the APE. The house is a c. 1910-1920 duplex house (Fig. 12). The APE is raised above the back of the house. Continuing to the north, the railroad embankment crosses a ravine and continues through a bedrock cut where it approaches a c. 1910 vernacular worker's house. In this case one corner of the small vernacular house is located within about 3 meters (10 ft) of the proposed path (Fig. 13). Further to the north additional structures including the State Register Listed c. 1870 apartment house and the c. 1852 Powers residence are located in fairly close proximity to the APE (Figs. 3E, 3F and 14). However, vegetation and a bedrock cut limit the visibility of the APE from these structures. The one railroad related feature, aside from the embankment itself, identified in this vicinity is a c. 1895 cut stone abutment located slightly north of the apartment house (Figs. 3E and 15). This feature appears to be associated with the railroad spur that serviced the gas works. This substantial wall anchored the southern end of the coal trestle identified on the later Sanborn maps. Continuing to the north, the

embankment reaches Mount Vernon Street where a railroad bridge has been removed. On the south side is a vegetated slope between the embankment and the street while to the north is a stone abutment for the bridge.

In order for the pathway to descend from the embankment to Mount Vernon Street it is proposed that the alignment slope to the west down from the embankment, cross a portion of a lawn area and angle down to the street over an overgrown slope. This area has clearly been disturbed by filling and cutting for the various late 19th-century and recent landscape modifications (Fig. 16). The APE continues to the south side of Mount Vernon Street, cutting across the face of the slope that forms the end of the railroad embankment and angling down to the street.

The APE reaches the level of Mount Vernon Street in front of the c. 1852 Powers residence and continues to the intersection with High Street. This area has been significantly disturbed by the various 19th-century activities such as the construction of several structures, the demolition of two of them and the installation of water and storm sewer lines along the street in the APE (Figs. 3F and 17).

The final section of the APE crosses to the east side of High Street and onto the pavement to cross the Sleepers River on the bridge (Figs. 3G and 18). This section is entirely disturbed by the demolition and grading of the late 19th-century store house that once stood at the intersection of Mount Vernon and High Streets, the construction of the existing bridge and landscaping around the recently constructed Fairbanks Motor Inn at the intersection of Western Avenue and High Street. Stone retaining walls are present along both sides of the river beneath the existing bridge.

Archeological Recommendations

The revised project APE is located in areas of extensive disturbance associated with construction of the Portland and Ogdensburg Railroad, demolition of the Fairbanks Company complex, cutting and filling and utility placement along Mount Vernon Street and disturbance along High Street. None of the APE is considered sensitive for archeological deposits. No further archeological review is recommended for this project.

Architectural/Historic Preservation Review

Five structures in or adjacent to the project area are listed on the State Register of Historic Places. This status assumes they are eligible for the National Register. Two National Register Listed Historic Districts, the St. Johnsbury Main Street Historic District and the St. Johnsbury Historic District, are located further to the east of the project area.

The historic structures within the project area were chiefly constructed during the period 1830-1920 as housing for workers at the adjacent Fairbanks Scale Company. The earliest of these structures is the house at 15 Mt. Vernon Street, which is thought to have been constructed c.1830.

There are no anticipated effects on any of the National Register eligible or listed properties or districts by the proposed project.

Sidewalks and curbs

The few extant sidewalks in the vicinity are concrete and have concrete curbing. The project proposes bituminous paving for the bike path. Use of metal edge restraints is recommended as they will minimize creeping of the pavement, and will give a longer-lasting and neater appearance.

Retaining walls

Retaining walls are proposed within the project area, particularly in the portion adjacent to Mount Vernon Street. Retaining walls throughout the village are typically comprised of dry-laid local grey limestone, and this type of construction is recommended within the project area.

Exterior Stairs, Historic Fences, Historic Trees

There are no exterior stairs, historic fencing or historic trees or plantings that are anticipated to be affected by this work.

Architectural/Historic Preservation Recommendations

The project is utilizing an historic railroad alignment for a compatible purpose of a bike path. The APE along the railroad embankment is generally hidden from historic structures or will be unobtrusive. Elsewhere the APE is a narrow sidewalk along village streets that will be compatible with existing sidewalks. The project will have no effect on historic properties. No further historic preservation review is recommended for this project.

Conclusions

The extensive disturbance and screened nature of the project APE allows a recommendation of no effect to historic properties. No further archeological or historic preservation review is recommended. If the project plans change significantly to affect areas outside of the current APE, further review is recommended.

Sincerely,

Thomas R. Jamison, Ph.D.
Project Manager

Walter R. Wheeler
Architectural Historian

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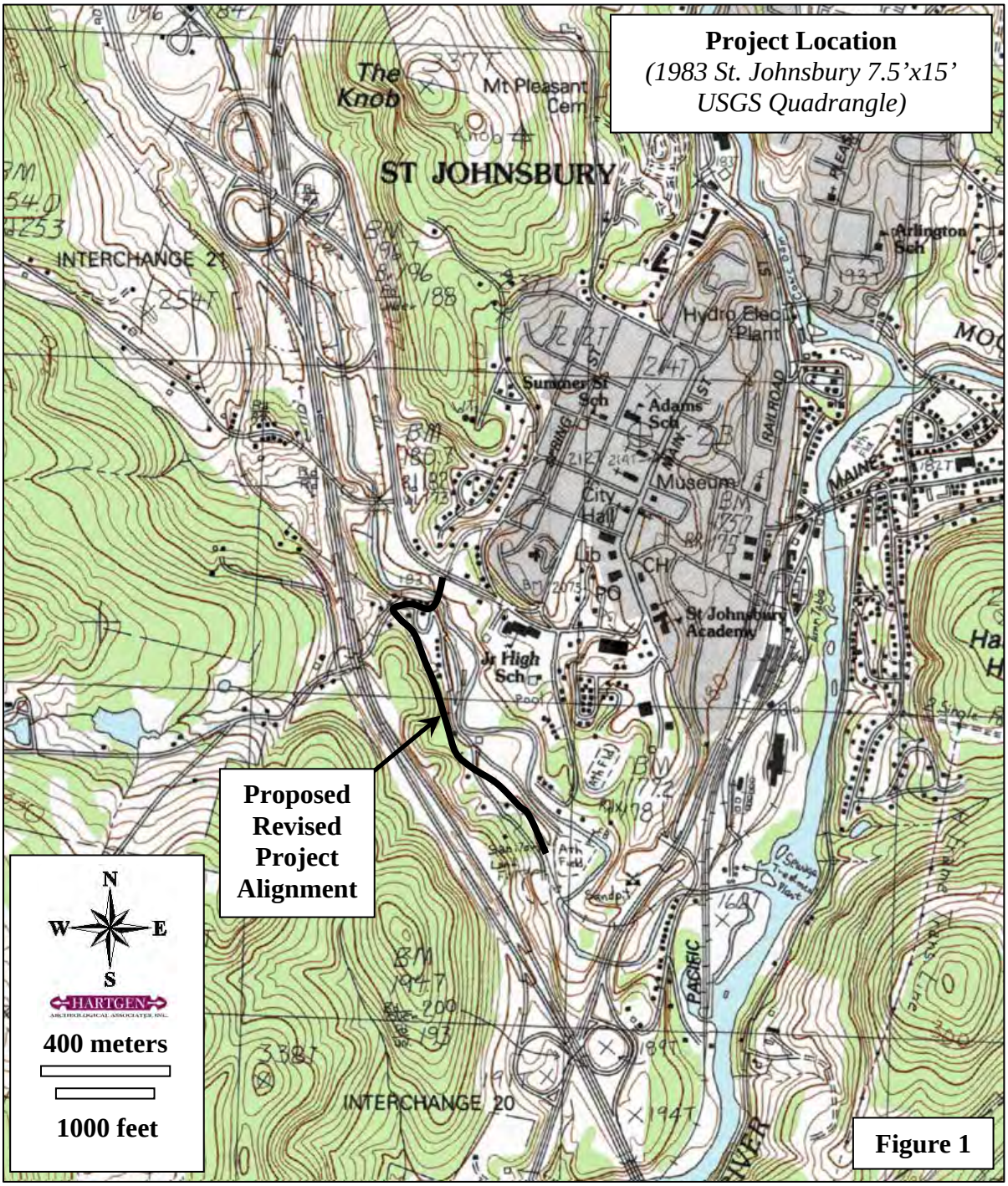
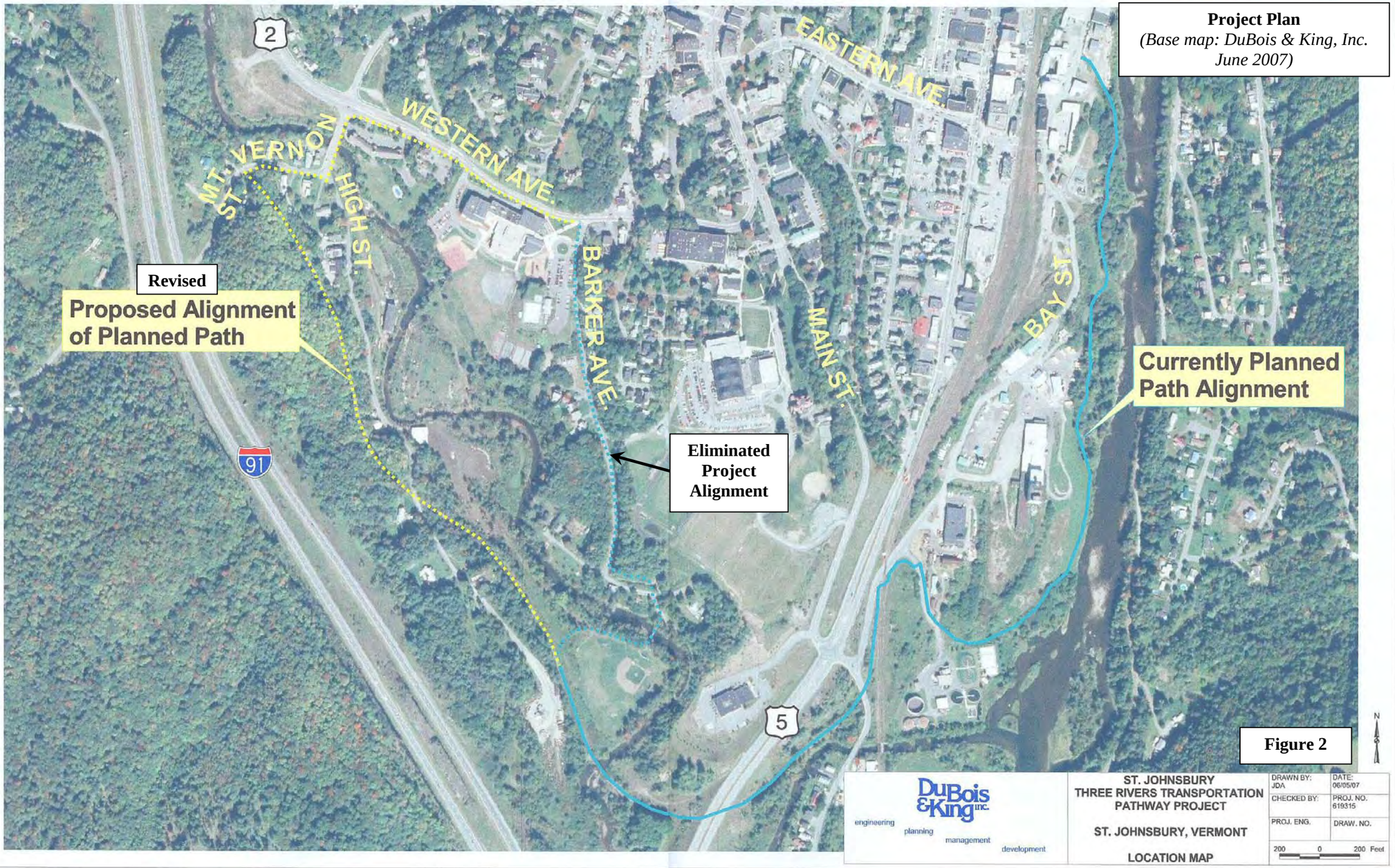

Project Location
(1983 St. Johnsbury 7.5'x15' USGS Quadrangle)
The Knob
Mt Pleasant Cem
ST JOHNSBURY
INTERCHANGE 21
Arlington Sch
Hydro Elec Plant
Summer St Sch
Adams Sch
Museum
City Hall
Lib
PO
CH
St Johnsbury Academy
Jr High Sch
Proposed Revised Project Alignment
N
W
E
S
HARTGEN
400 meters
1000 feet
INTERCHANGE 20
PACIFIC
Figure 1


Project Plan
(Base map: DuBois & King, Inc. June 2007)
2
EASTERN AVE.
WESTERN AVE.
MT. VERNON ST.
HIGH ST.
BARKER AVE.
MAIN ST.
BAY ST.
Revised
Proposed Alignment of Planned Path
Currently Planned Path Alignment
Eliminated Project Alignment
91
5
Figure 2
N
DuBois & King Inc.
engineering
planning
management
development
ST. JOHNSBURY
THREE RIVERS TRANSPORTATION PATHWAY PROJECT
ST. JOHNSBURY, VERMONT
LOCATION MAP
DRAWN BY: JDA
DATE: 06/05/07
CHECKED BY:
PROJ. NO. 619315
PROJ. ENG.
DRAW. NO.
200 0 200 Feet

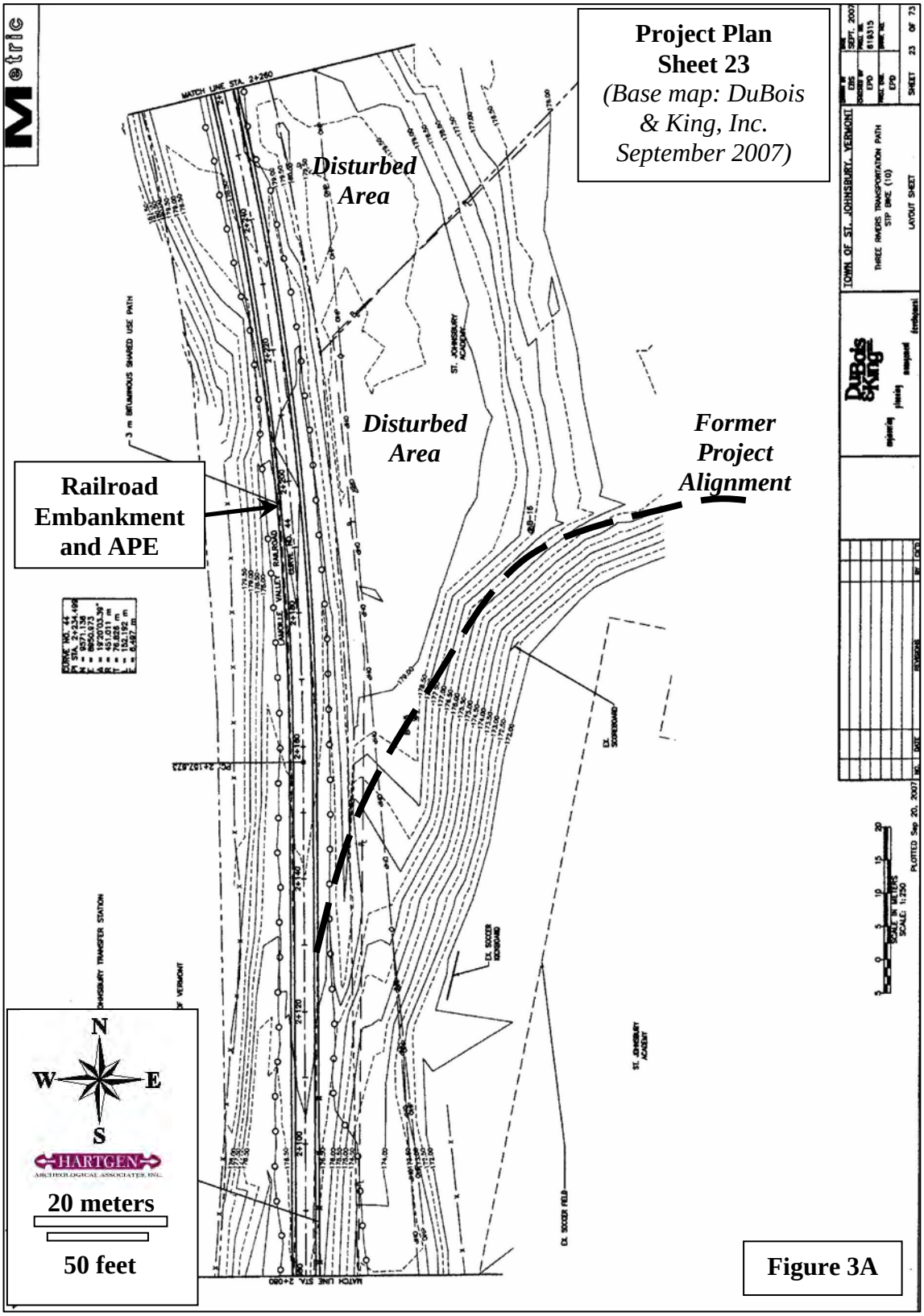

Project Plan
Sheet 23
(Base map: DuBois & King, Inc. September 2007)
Disturbed Area
Disturbed Area
Former Project Alignment
Railroad Embankment and APE
N
W
E
S
HARTGEN
20 meters
50 feet

Figure 3A

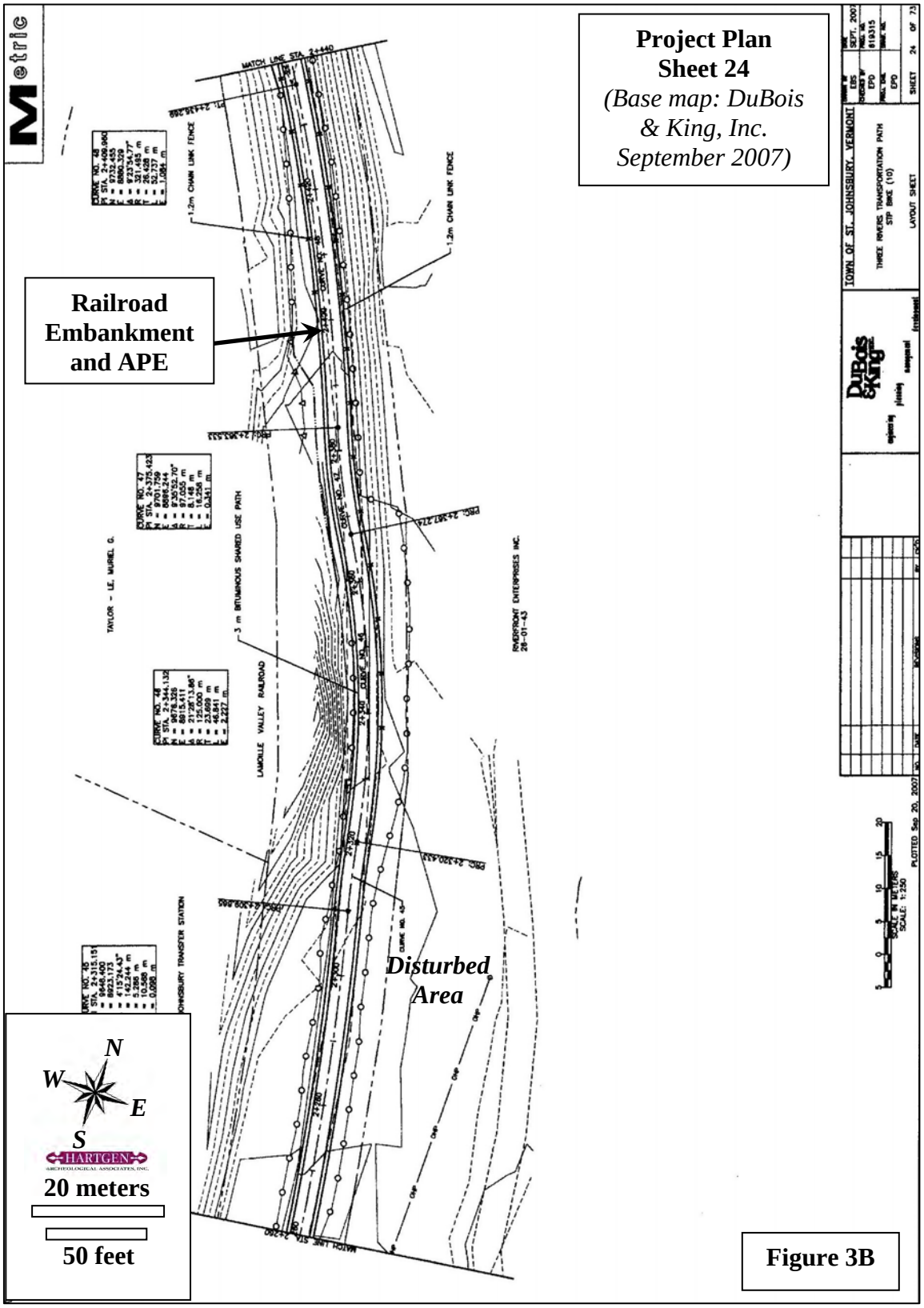

Project Plan
Sheet 24
(Base map: DuBois & King, Inc. September 2007)
Railroad Embankment and APE
Disturbed Area
N
W
E
S
HARTGEN
20 meters
50 feet
Metric
TOWN OF ST. JOHNSBURY, VERMONT
THREE RIVERS TRANSPORTATION PATH
STP BIKE (10)
LAYOUT SHEET
DuBois & King
SHEET 24 OF 73
1.2m CHAIN LINK FENCE
3 m BITUMINOUS SHARED USE PATH
LAMOILLE VALLEY RAILROAD
TAYLOR - LE, MURIEL G.
RIVERFRONT ENTERPRISES INC.
JOHNSBURY TRANSFER STATION
MATCH LINE STA. 2+140
MATCH LINE STA. 2+320

Figure 3B

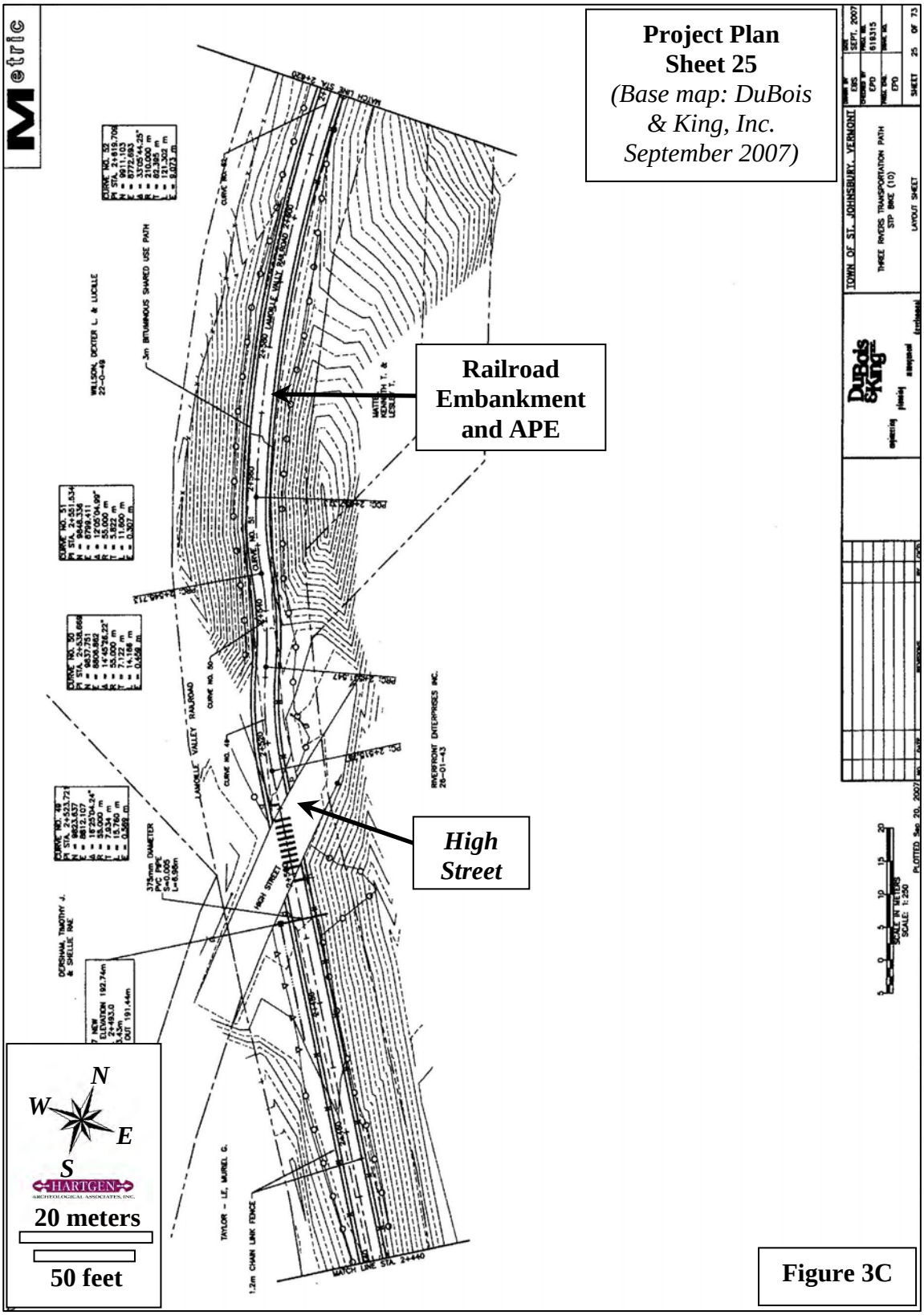

Project Plan
Sheet 25
(Base map: DuBois & King, Inc. September 2007)
Railroad Embankment and APE
High Street
N
W
E
S
HARTGEN
20 meters
50 feet

Figure 3C

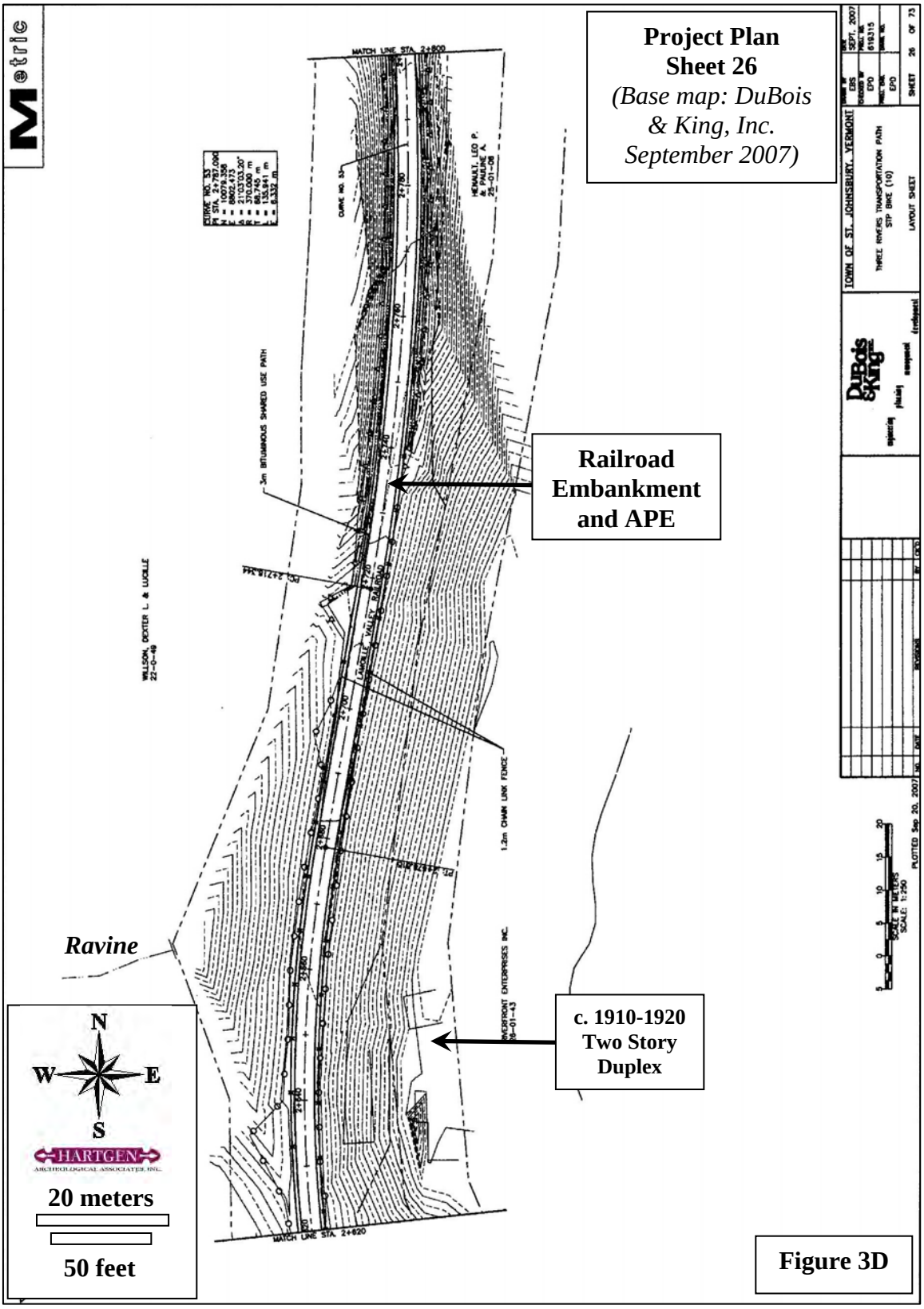

Project Plan
Sheet 26
(Base map: DuBois & King, Inc. September 2007)
Railroad Embankment and APE
c. 1910-1920 Two Story Duplex
Ravine
N
W
E
S
HARTGEN
20 meters
50 feet
MATCH LINE STA. 2+800
MATCH LINE STA. 2+620
3m BITUMINOUS SHARED USE PATH
1.2m CHAIN LINK FENCE
LAMOILLE VALLEY RAILROAD
WILLSON, DEXTER L. & LUCILLE 22-0-49
RIVERFRONT ENTERPRISES INC. 18-01-43
HEMMALT, LEO P. & PAULINE A. 25-01-06
TOWN OF ST. JOHNSBURY, VERMONT
THREE RIVERS TRANSPORTATION PATH STP BIKE (10)
LAYOUT SHEET
SHEET 26 OF 73
SCALE: 1:250
PLOTTED Sep 20, 2007

Figure 3D

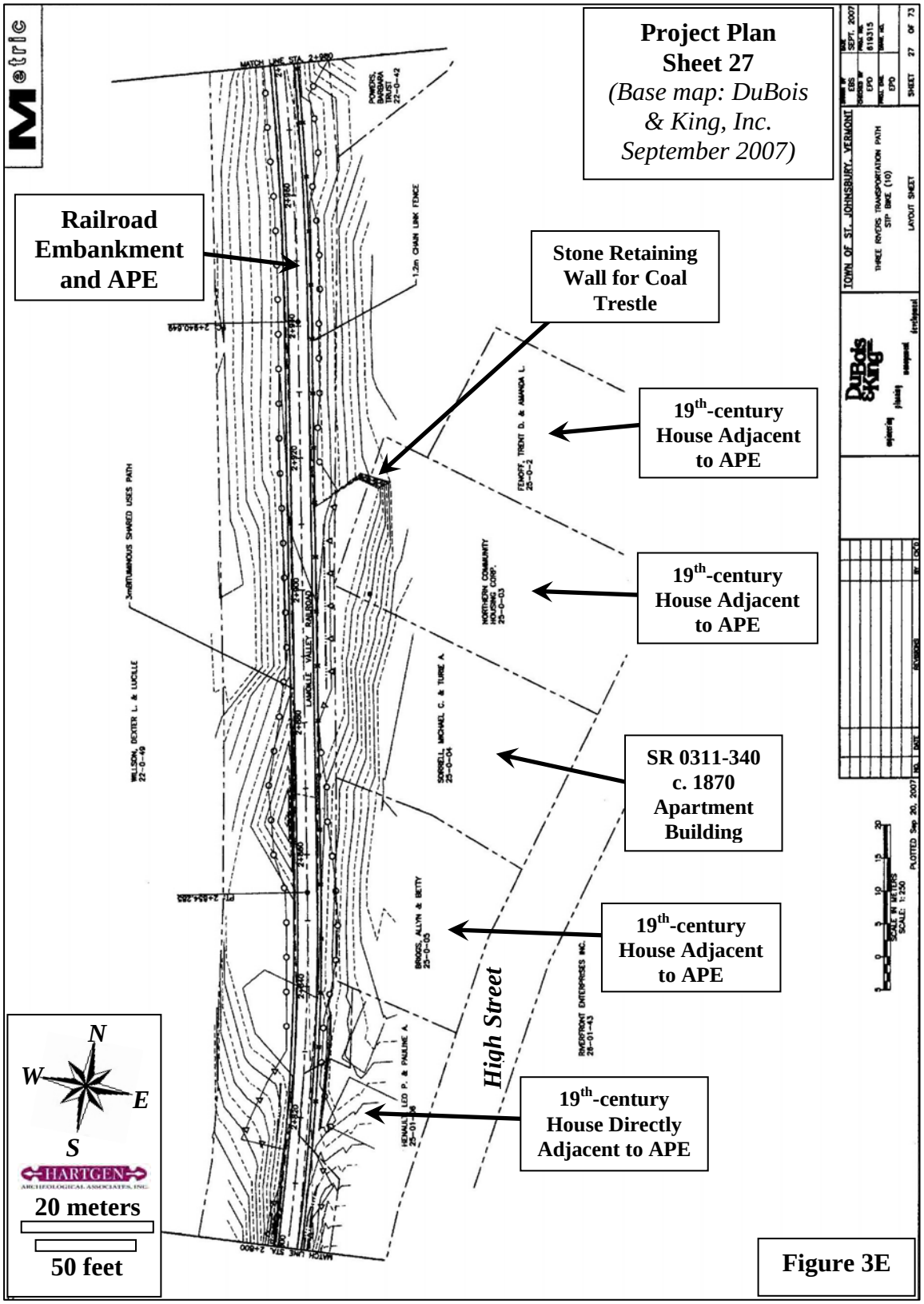

Project Plan
Sheet 27
(Base map: DuBois & King, Inc. September 2007)
Railroad Embankment and APE
Stone Retaining Wall for Coal Trestle
19th-century House Adjacent to APE
19th-century House Adjacent to APE
SR 0311-340 c. 1870 Apartment Building
19th-century House Adjacent to APE
19th-century House Directly Adjacent to APE
High Street
N
W
E
S
HARTGEN
20 meters
50 feet

Figure 3E

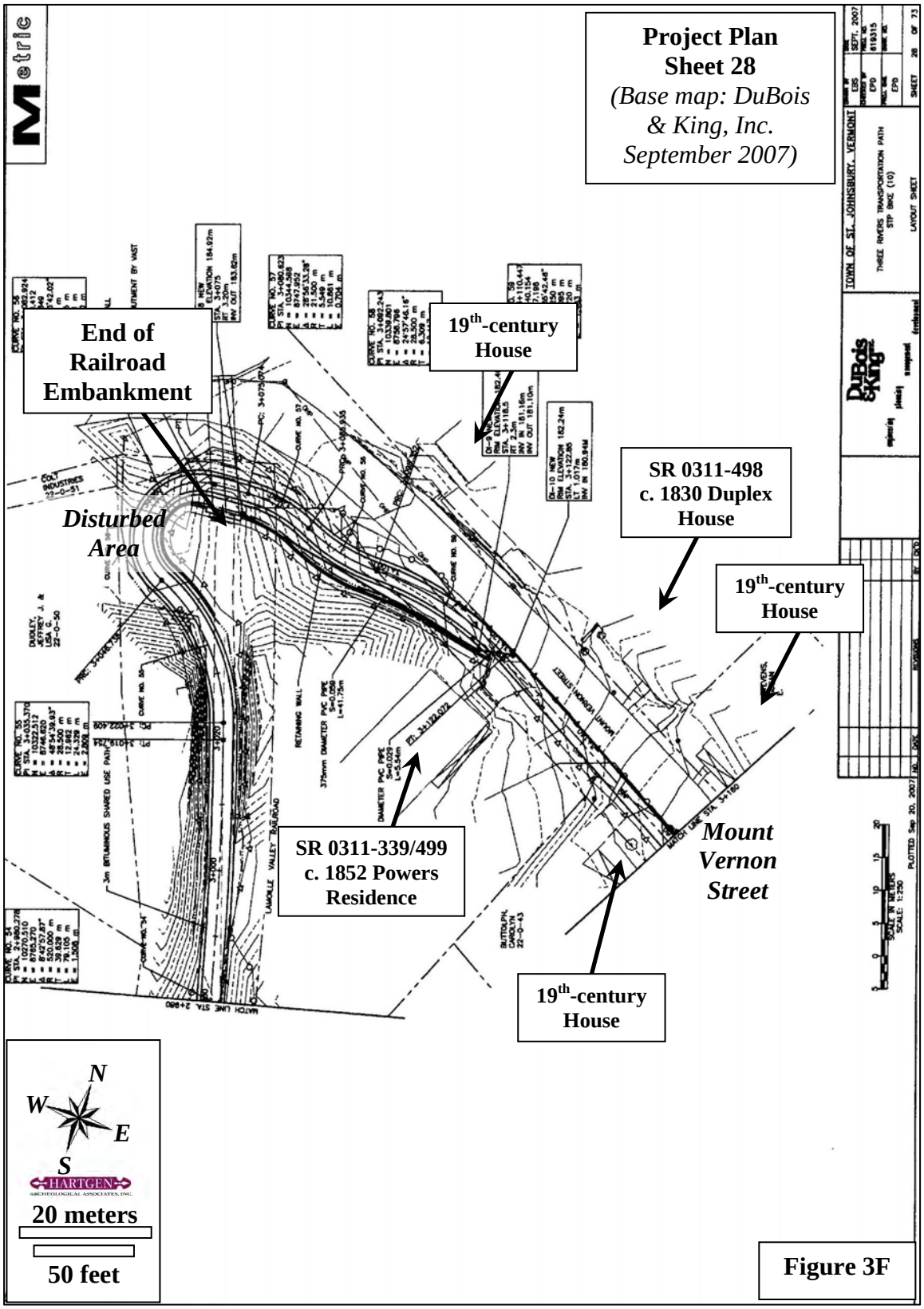
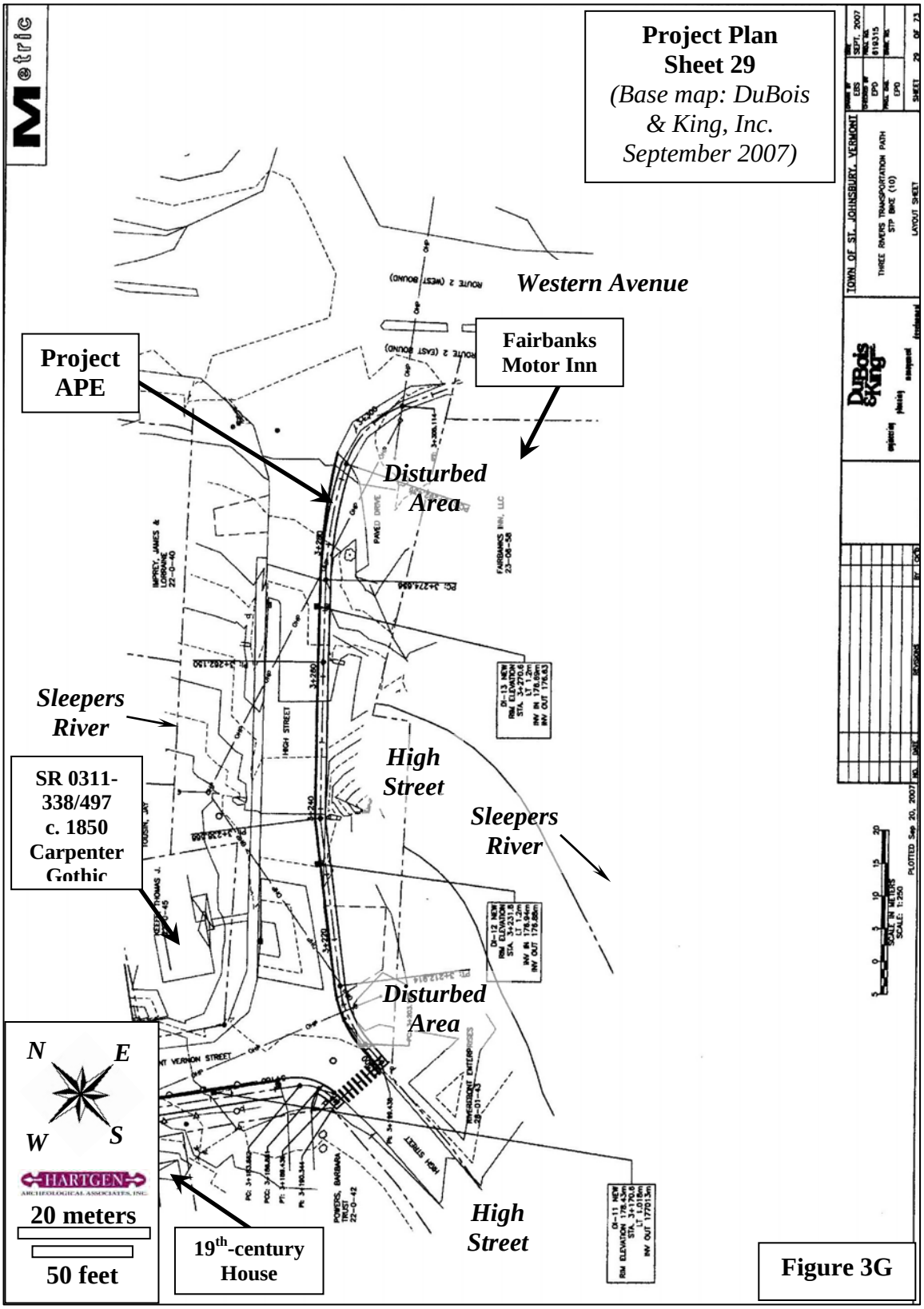

Project Plan
Sheet 28
(Base map: DuBois & King, Inc. September 2007)
End of Railroad Embankment
19th-century House
SR 0311-498
c. 1830 Duplex House
19th-century House
Disturbed Area
SR 0311-339/499
c. 1852 Powers Residence
Mount Vernon Street
19th-century House
N
W
E
S
HARTGEN
20 meters
50 feet

Figure 3F


Project Plan
Sheet 29
(Base map: DuBois & King, Inc. September 2007)
Western Avenue
Project APE
Fairbanks Motor Inn
Disturbed Area
Sleepers River
SR 0311-338/497 c. 1850 Carpenter Gothic
High Street
Sleepers River
Disturbed Area
High Street
N
E
W
S
HARTGEN
20 meters
50 feet
19th-century House
Figure 3G

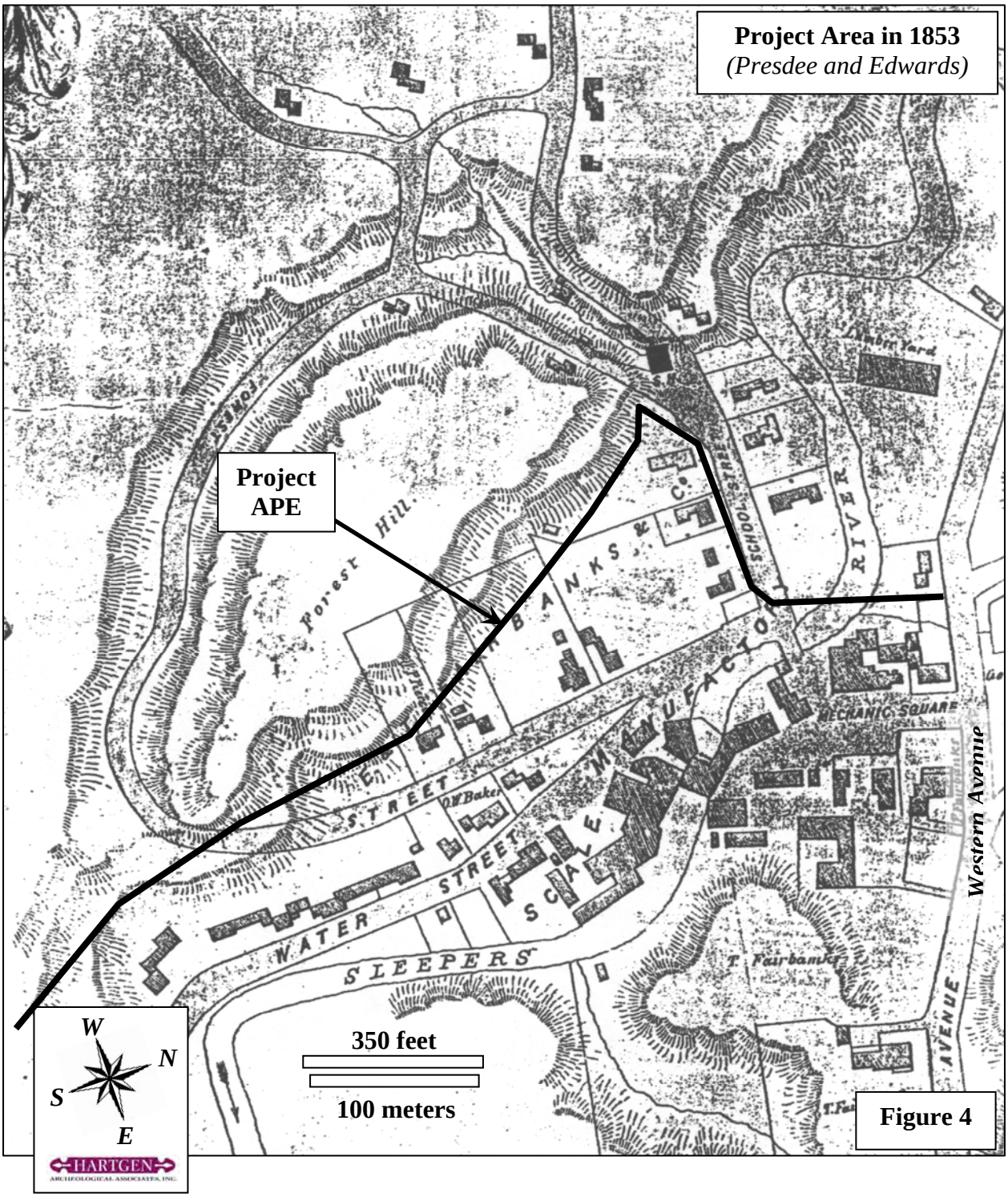

Project Area in 1853
(Presdee and Edwards)
Project APE
Forest Hill
BANKS & Co.
SCHOOL STREET
RIVER
Lumber Yard
MANUFACTORY
MECHANIC SQUARE
STREET
O.W. Baker
WATER STREET
SCALE
SLEEPERS
T. Fairbanks
Western Avenue
AVENUE
350 feet
100 meters
W
N
S
E
HARTGEN
ARCHEOLOGICAL ASSOCIATES, INC.

Figure 4

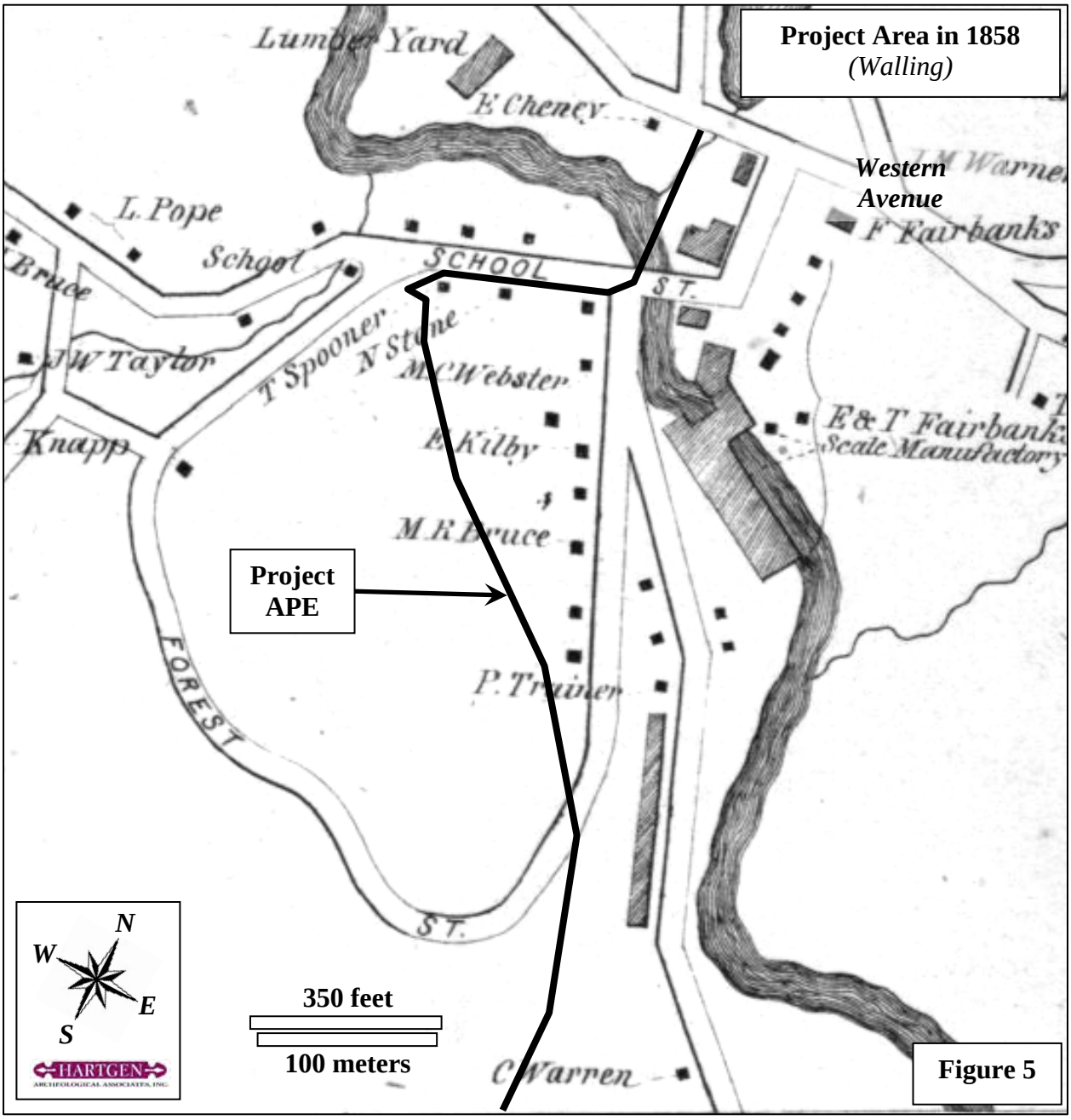

Project Area in 1858
(Walling)
Lumber Yard
E Cheney
Western
Avenue
L. Pope
School
SCHOOL
ST.
F Fairbanks
Bruce
J W Taylor
T Spooner
N Stone
M C Webster
E & T Fairbanks
Scale Manufactory
Knapp
E Kilby
M R Bruce
Project
APE
FOREST
P. Trainer
ST.
N
W
E
S
HARTGEN
ARCHEOLOGICAL ASSOCIATES, INC.
350 feet
100 meters
C Warren

Figure 5

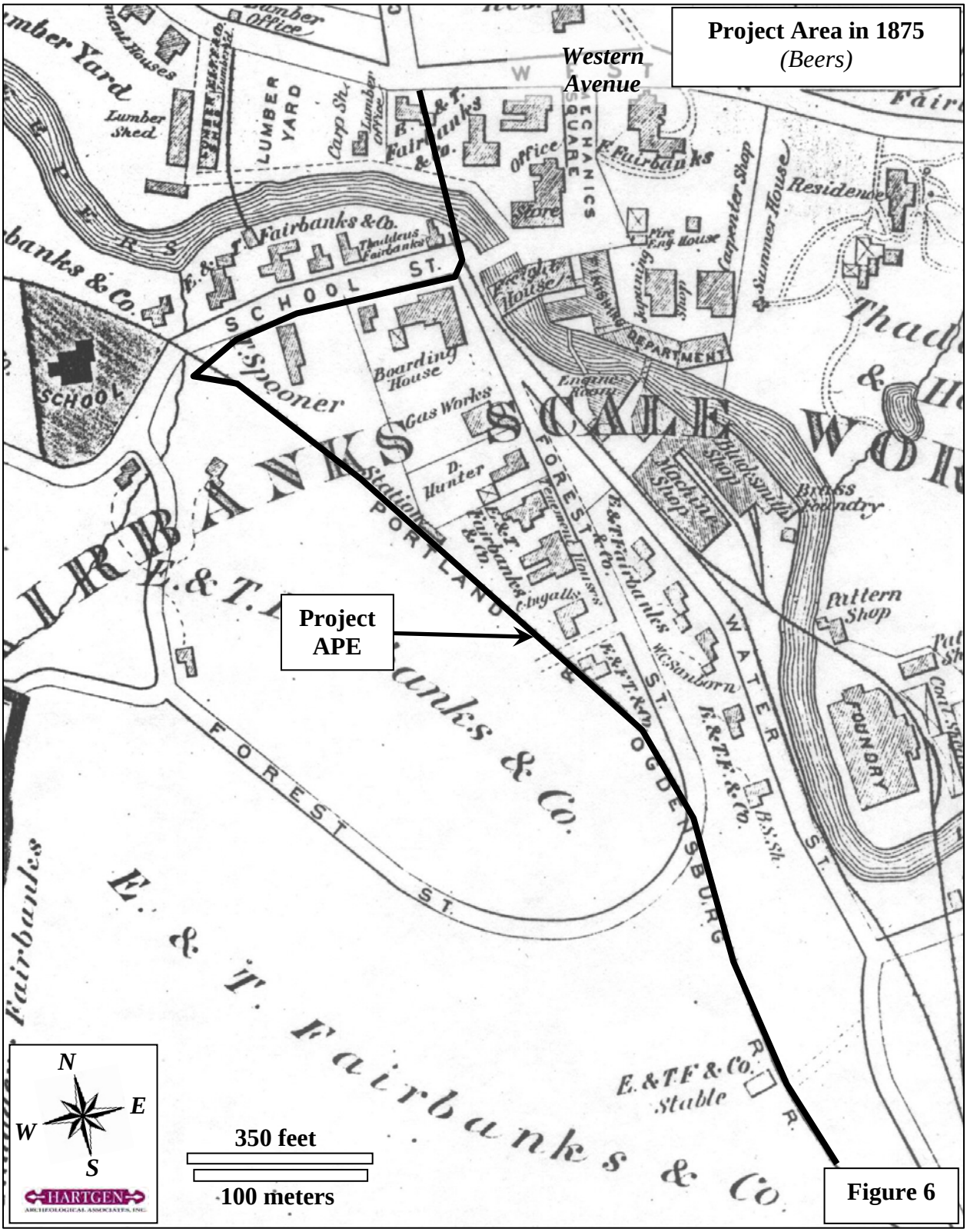
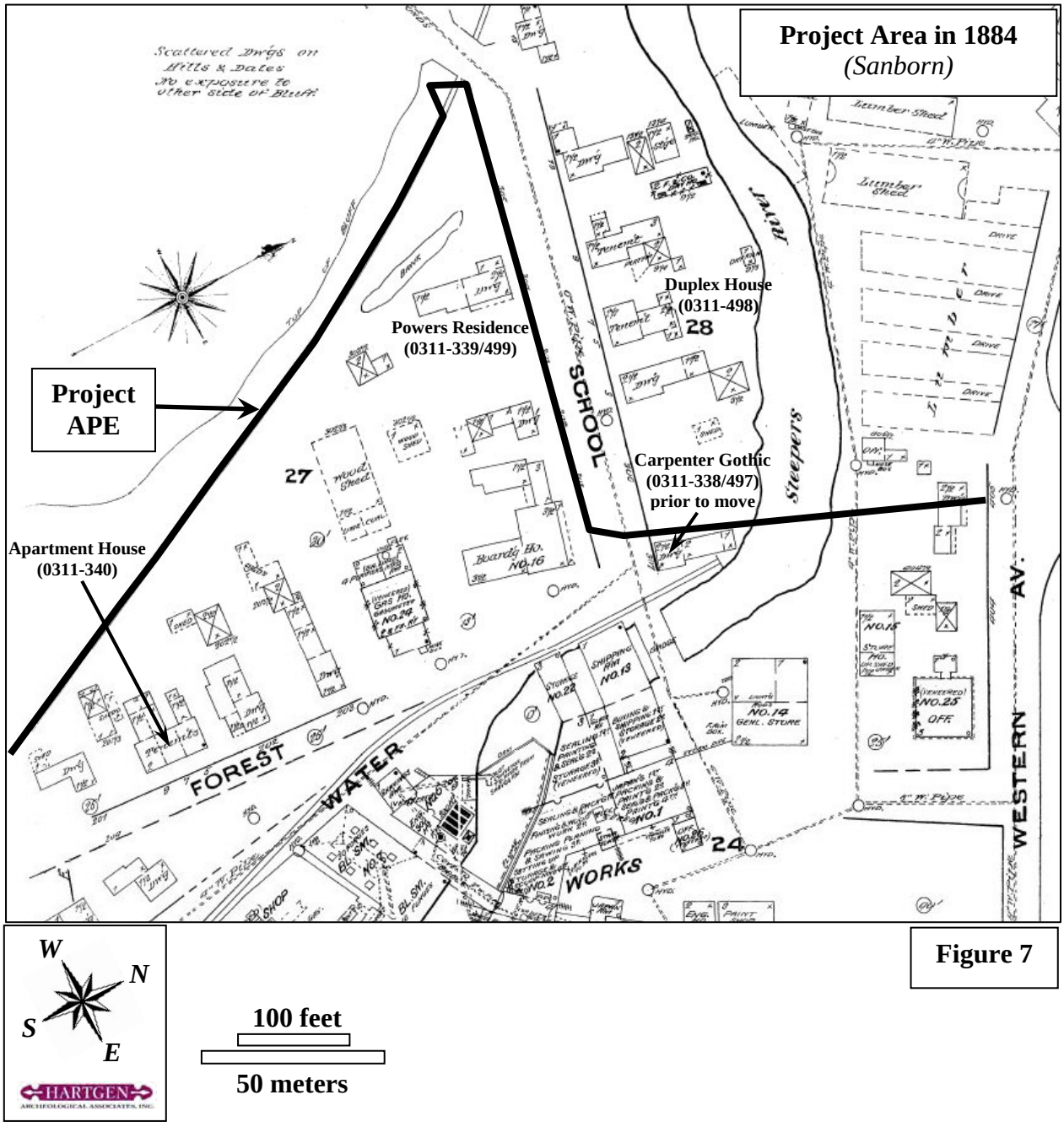

Project Area in 1875
(Beers)
Western Avenue
Project APE
N
E
S
W
350 feet
100 meters
HARTGEN
ARCHEOLOGICAL ASSOCIATES, INC.

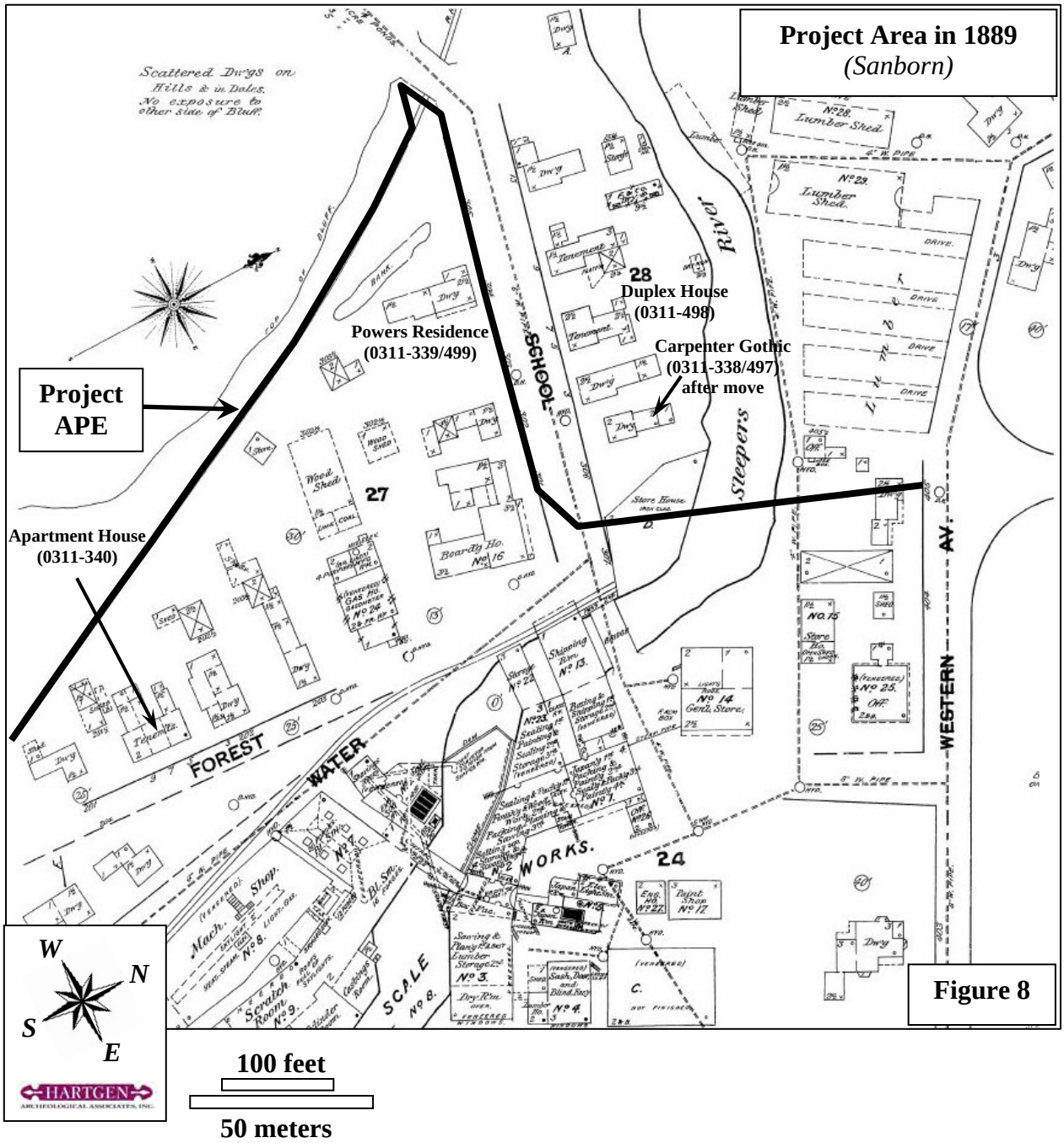
Figure 6

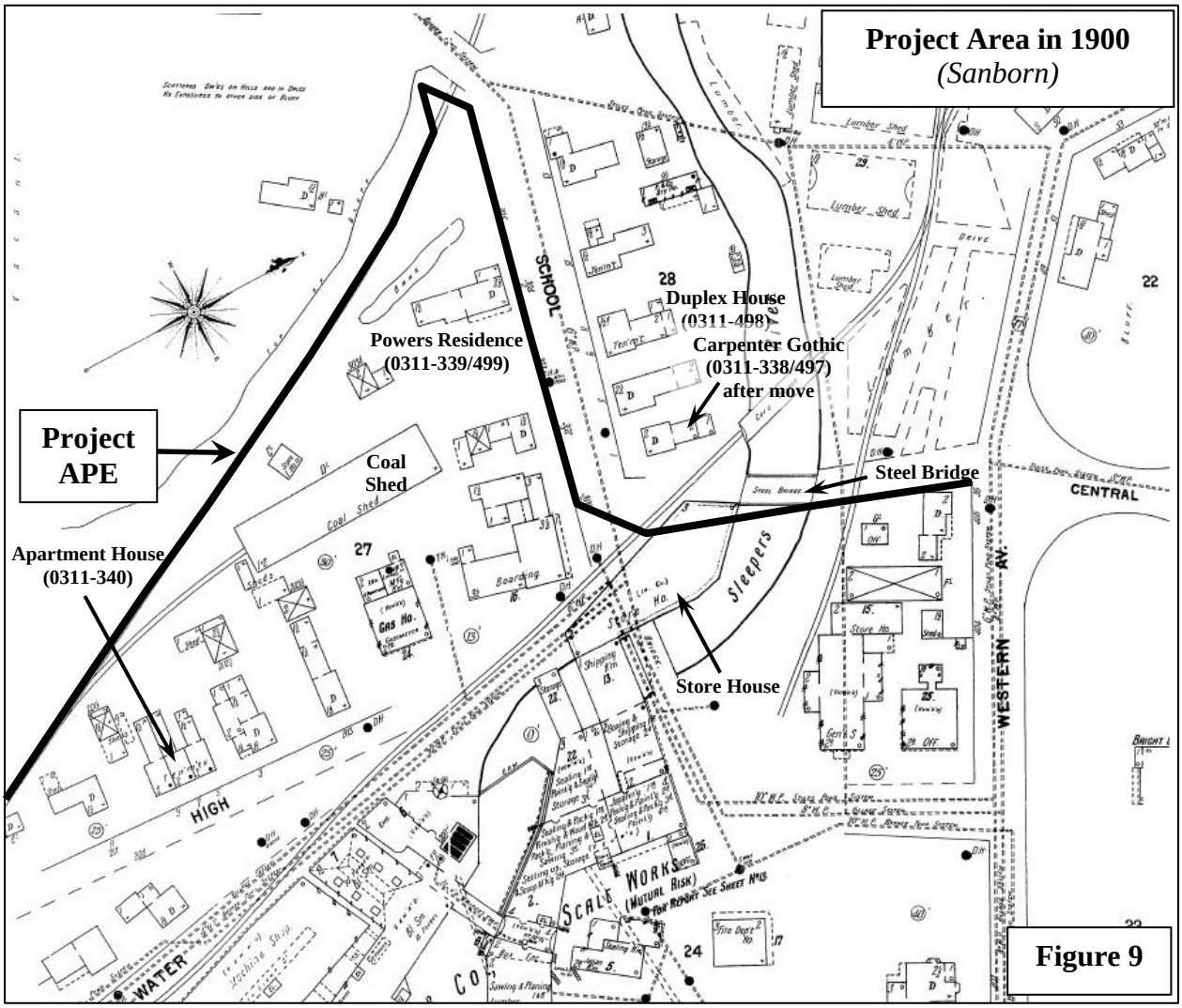


100 feet

50 meters

Figure 7


Project Area in 1889
(Sanborn)
Project APE
Powers Residence
(0311-339/499)
Duplex House
(0311-498)
Carpenter Gothic
(0311-338/497)
after move
Apartment House
(0311-340)
River
Sleepers
SCHOOL
FOREST
WATER
WESTERN
AV.
WORKS.
Lumber Shed
Boarding Ho.
Wood Shed
Store House
Mach. Shop
Scratch Room
Figure 8
W
N
S
E
HARTGEN
ARCHEOLOGICAL ASSOCIATES, INC.
100 feet
50 meters



100 feet

50 meters

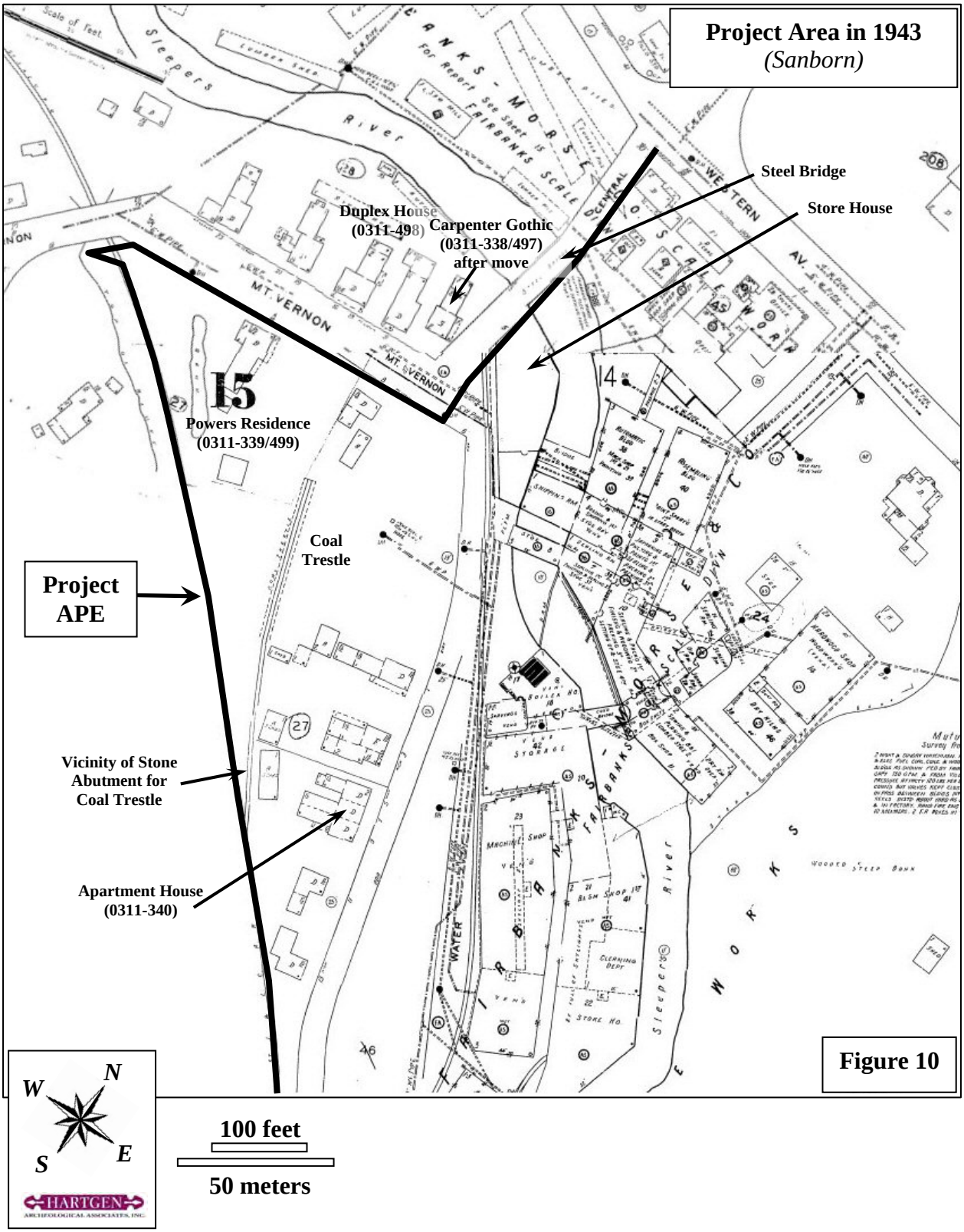

Project Area in 1943
(Sanborn)
Steel Bridge
Store House
Duplex House
(0311-498)
Carpenter Gothic
(0311-338/497)
after move
Powers Residence
(0311-339/499)
Coal
Trestle
Project
APE
Vicinity of Stone
Abutment for
Coal Trestle
Apartment House
(0311-340)
MT. VERNON
River
Sleepers
N
W
E
S
100 feet
50 meters
HARTGEN
ARCHEOLOGICAL ASSOCIATES, INC.

Figure 10

Figure 11. Project alignment on railroad bed north of ball field. Note gravel and cut area on right. View to the northwest.

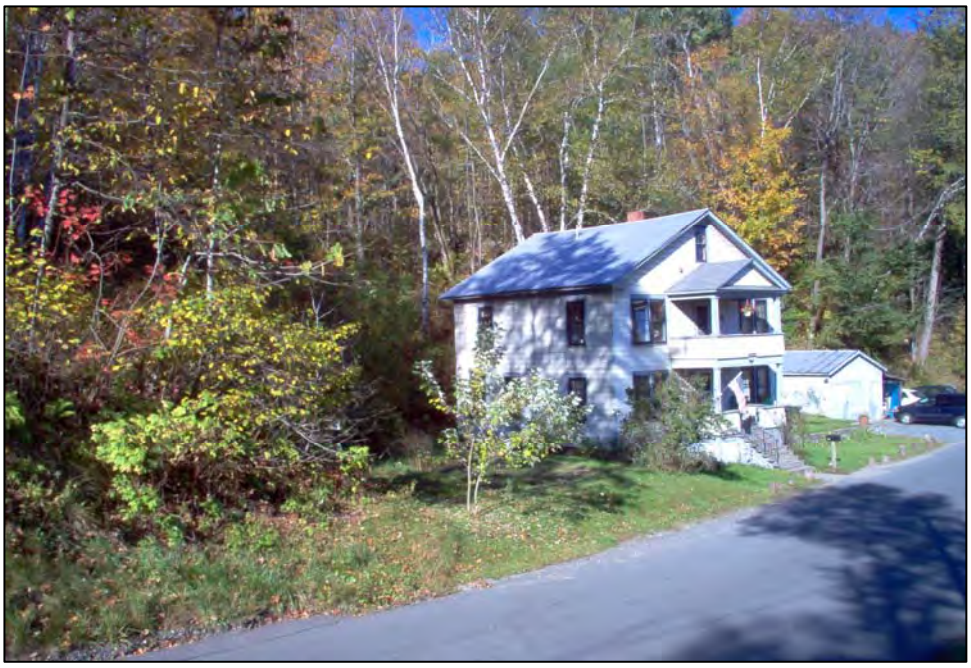


Figure 12. c. 1910-1920 duplex house adjacent to APE. Note slope behind house, APE is in trees at top of slope. View to the west.

Figure 13. c. 1875 vernacular house directly adjacent to APE. Note railroad bed on the left. View to the north/northwest.

Figure 14. Workers housing diverging from APE. Note c. 1870 apartment house in the foreground. View to the north/northwest.

Figure 15. Stone abutment for coal trestle. APE is located behind the abutment. View to the southwest.

Figure 16. End of railroad embankment at Mount Vernon Street. Note street in foreground and railroad embankment to the left. Path will cut across the middle of the view. View to the south.

Figure 17. APE along Mount Vernon Street. Note cut slope in foreground and High Street in the background. View to the east.

Figure 18. APE along High Street. Note bridge on right and stone retaining walls along Sleepers River. View to the west.

VERMONT DIVISION FOR HISTORIC PRESERVATION
Environmental Predictive Model for Locating Precontact Archeological Sites

Project Name STP BIKE (10) Revised Western End County Caledonia Town St. Johnsbury
DHP No._____ Map No._____ Staff Init. T. Jamison Date Oct. 15, 2007
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	8
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	
E. OTHER ENVIRONMENTAL FACTORS:			
19) Caves/Rockshelters		32	
20) [X] Natural Travel Corridor			

[ ] Sole or important access to another drainage [ ] Drainage divide		12	12
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	-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 gravel pit)		-32	-32
**** refer to 1970 Surficial Geological Map of Vermont**			**Total Score: -32**

Other Comments:
Although adjacent to the Sleeper River, the APE is highly disturbed and much is very sloped, reducing precontact site potential.

0-31 = Archeologically Non-Sensitive
32+ = Archeologically Sensitive

HARTGEN
archeological associates inc

ARCHEOLOGICAL RESOURCE ASSESSMENT

Three Rivers Path Extension Project

Town of St. Johnsbury
Caledonia County, Vermont

HAA # 5276-11

Submitted to:
VHB
40 IDX Drive
Building 100, Suite 200
South Burlington, Vermont 05403

Prepared by:
Hartgen Archeological Associates, Inc.

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Putney, VT 05346
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f +1 802 387 8524
e hartgen@hartgen.com

www.hartgen.com

An ACRA Member Firm
www.acra-crm.org

October 2018

MANAGEMENT SUMMARY

SHPO Project Review Number:
Involved State and Federal Agencies: *Vermont Agency of Transportation (VTrans)*
Phase of Survey: *Archeological Resource Assessment (ARA)*

LOCATION INFORMATION

Municipality: *Town of St. Johnsbury*
County: *Caledonia County, Vermont*

SURVEY AREA

Length: *3,780 feet (1,152 m)*
Width: *15 feet (4.6 m)*
Area: *1.3 acres (0.53 ha)*

RESULTS OF RESEARCH

Archeological sites within one mile: *6*
Surveys in or adjacent: *1*
NR/NRE sites in or adjacent: *1, CVPS Substation and Service Center (VHSSS 0311-543)*
Precontact Sensitivity: *Low*
Historic Sensitivity: *Moderate*

RECOMMENDATIONS

No further archeological review if no disturbance to side path alignment.

Report Authors: *Thomas R. Jamison, PhD, RPA #16566*
Date of Report: *October 2018*

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ARCHEOLOGICAL RESOURCE ASSESSMENT

1 Introduction

Hartgen Archeological Associates, Inc. (Hartgen) conducted an Archeological Resource Assessment for the proposed Three Rives Path Extension Project (Project) located in the Town of St. Johnsbury, Caledonia County, Vermont (Map 1). The Project requires approvals by the Vermont Agency of Transportation (VTrans). This investigation was conducted to comply with Section 106 of the National Historic Preservation Act of 1966, as amended, and will be reviewed by VTrans. This investigation adheres to the Vermont State Historic Preservation Office's (SHPO) *Guidelines for Conducting Archeology in Vermont* (2017).

2 Project Information

A site visit was conducted by Thomas R. Jamison on July 25, 2018 to observe and photograph existing conditions within the Project Area. The information gathered during the site visit is included in the relevant sections of the report.

2.1 Project Location

The project is located along the Passumpsic River in St. Johnsbury, extending through current and former industrial sections of the town, primarily between the river and the railroad tracks. The project alignment begins at the intersection of Main Street and Bay Street close to the parking area of the Lamoille Valley Rail Trail. It extends along Bay Street as bike lanes marked on the existing roadway approximately 1900 feet (580 m) to the entrance to the Myers Container Service facility. The alignment then leaves Bay Street and continues north along the dirt/gravel Green Mountain Power access road approximately 796 feet (242 m) overlooking the river. The APE follows the GMP access road up a slope along the east side of the substation, across an open grassey area, through a wooded area on a raised roadbed and curves around to Bay Street between the former KC Rentals building (195 Bay Street) and Allen Lumber Company (249 Bay Street). The alignment then continues on the existing roadway, crossing Bay Street and passing through the tunnel under the railroad tracks, turning south to Depot Square where it ends at the Wine Gate Restaurant (25 Depot Square).

2.2 Description of the Project

Most of the project consists of bike lanes on existing roadways. However, a central section is proposed to be located on the Green Mountain Power access road between Bay Street and the river as a 10 foot (3 m) wide gravel path. One diversion from this alignment included in the project is the resurfacing of an existing dirt path that extends from the GMP access road down a slope to the river.

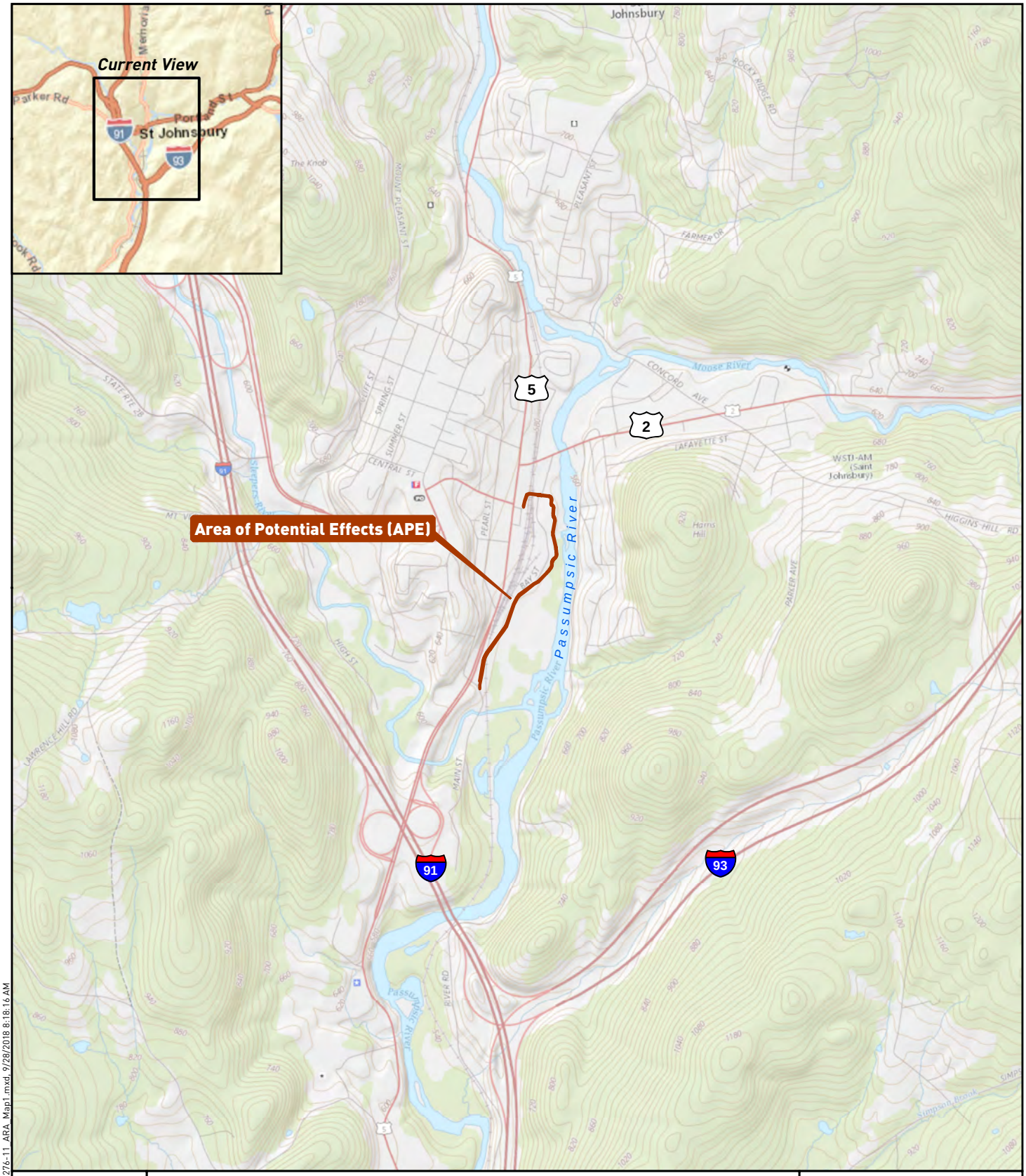
Overall, the project is approximately 3,780 feet (1,152 m) in length and 15 feet (4.6 m) in width.

2.3 Description of the Area of Potential Effects (APE)

The area of potential effects (APE) includes all portions of the property that will be directly or indirectly altered by the proposed undertaking. The APE encompasses 1.3 acres (0.53 ha).

3 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.



1,000 0 1,000 2,000 Feet

300 0 300 600 Meters

Note: Contour interval is 20 feet.

Project Location

GIS Services Accessed 9/28/2018:
Environmental Systems Research Institute, Inc., World Street Map
The National Map, USGS Topo Layer

HARTGEN archeological associates inc

Map 1

E:\5276\GIS\Documents\HAA_5276-11_ARA_Map1.mxd, 9/28/2018 8:18:16 AM

100 0 100 200 Feet

30 0 30 60 Meters

Legend

Photo Angle

Area of Potential Effects (APE)

Project Map

Vermont Center for Geographic Information Imagery, 2011-2015

HARTGEN archeological associates inc

Map 2

G:\5276\GIS\Documents\HAA_5276-11_ARA_Map2.mxd, 10/2/2018 1:38:33 PM

3.1 Present Land Use and Current Conditions

Currently, the project alignment passes through currently or formerly industrial areas. As noted above, much of the alignment is on existing roadways while a section passes along a dirt/gravel Green Mountain Power access road (Photos 1 to 3). That alignment is somewhat overgrown in some areas with low growth along most of the route. The existing side path to be resurfaced extends down a slope to the river where the historic dam and other mill features are visible (Photos 4 and 5).

Photo 1. Project alignment extending from Depot Square to Bay Street. Note narrow roadway with deteriorating sidewalk on the right. This road passes under the railroad tracks when it turns to the right in the background. View to the north.

Photo 2. Informal Green Mountain Power access road along the river. View to the south.

Photo 3. Bay Street passing by the former Ralston plant (out of view to the left). View to the south.

Photo 4. Existing side path from the alignment to the river. Note concrete fill in the foreground. View to the east.

Photo 5. Foundation of the former powerhouse associated with several different industries from the mid-19th to the early 20th centuries. View to the northwest.

3.2 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. According to the USDA, the project alignment is located entirely on the Urban Land-Adams-Nicholville Complex (USDA 2018). This complex is a combination of glaciofluvial deposits and disturbed udorthents. This soil indicates there is no potential for deeply stratified archeological deposits and there is likely a great deal of disturbance in the area.

Table 1. Soils in Project Area

Symbol	Name	Textures	Slope	Drainage	Landform
104B	Urban Land-Adams-Nicholville Complex	Loamy fine sand and redeposited gravel and sand	0-8%	Well to excessively well drained	Glaciofluvial terrace

3.3 Bedrock Geology

The bedrock in the Project Area is the carbonaceous phyllite and limestone member of the Waits River formation consisting of "dark-gray to silvery-gray, lustrous, carbonaceous muscovite-biotite-quartz (±garnet) phyllite containing abundant beds of punky-brown-weathering, dark-bluish-gray micaceous quartz rich limestone in beds ranging from 10 cm to 10 m thick" (Ratcliffe 2011). This formation was not typically used by Native American groups for stone tool manufacture. However, it could have been utilized on an expedient basis.

3.4 Physiography and Hydrology

The Project Area is located along a terrace overlooking the Passumpsic River with the small existing path extending down to the river from the terrace. The APE is level and sloped in various sections. Aside from the side path, the APE is set back from the river on the raised terrace. The APE is located 0.41 miles (0.67 km) south of the confluence of the Moose River and 0.07 miles (0.12 km) north of the Sleepers River with the Passumpsic River. No tributary streams are located within the APE.

4 Documentary Research

Hartgen conducted research at the Vermont Division for Historic Preservation (VDHP) to identify previously reported archeological sites, State and National Register (NR) properties, properties determined eligible for the NR (NRE), and previous cultural resource surveys.

4.1 Archeological Sites

The archeological site files at VDHP contained six sites within one mile (1.6 km) of the Project Area (Table 2). Previously reported archeological sites provide an overview of both the types of sites that may be present in the APE and the relationship of sites throughout the surrounding region. The presence of few reported sites, however, may result from a lack of previous systematic survey and does not necessarily indicate a decreased archeological sensitivity within the APE.

The reported sites in the project vicinity document the precontact occupation of the area and importance of the Passumpsic River and its tributaries for Native American groups. In addition, the several industrial sites reported in the area illustrate the early and late industrial development of the St. Johnsbury area that helped the town to thrive.

Table 2. Vermont Archeological Inventory (VAI) sites within one mile (1.6 km) of the Project Area

VAI Site No.	Site Identifier	Description	Proximity to Project Area
VT-CA-0018	SJ 2	Late Archaic and Woodland, projectile points and tools found along Moose River	0.84 mi/1.35 km to W
VT-CA-0019	Penny Brook Site	Unknown precontact, lithic debitage and tools found along Penny Brook (site destroyed by construction of I-91)	0.8 mi/1.3 km to W
VT-CA-0020	Paddock Iron Works	Early 19th century, iron foundry along Passumpsic River	0.36 mi/0.58 km to N
VT-CA-0032	Site #2, Arnold Falls Survey	Late 19th-early 20th century, concrete foundation and demolition debris on island in Passumpsic River	0.45 mi/0.7 km to N
VT-CA-0033	Site #1, Gage Impoundment	Late 19th-early 20th century, brick and timber historic features adjacent to Passumpsic River	0.94 mi/1.5 km to S
VT-CA-0115	Hooker's Bluff	Unknown precontact, reported site at confluence of Passumpsic and Moose Rivers	0.48 mi/0.78 km to N/NE

4.2 Historic Properties

An examination of the files at VDHP identified one National Register listed property, one State Register listed property, one property previously identified as NR eligible, but has since been degraded through structure removal within the APE (Table 3).

The northern end of the project APE, along Depot Square and Bay Street, passes through the east side of the Railroad Street Historic District adjacent to four of the seven components of the district (Henry 1974). At the north end of the APE the alignment passes along the east side of the former CVPS (now Green Mountain Power) substation and the site of a former granite shed (VHSSS #0311-543). Most of the structures associated with this complex have been removed. However, foundation remains of the millrace are visible down the slope from the APE adjacent to the river. In addition remains of the dam are also visible in the river. Further to the south, along Bay Street, the APE passes in front of the former St. Johnsbury Paper Company (VHSSS #0311-539). The primary structure of this complex appears on the verge of collapsing.

Table 3. Inventoried properties within or adjacent to the APE

VHSSS No.	Property Name/Address	Description of Building
	Railroad Street Historic District, NRL 6/25/1974	Late 19th-century commercial buildings and a small park
0311-543	CVPS Substation and Service Center	Early 20th-century former granite shed, removed, associated mill foundations and dam adjacent to APE and the river
0311-539	St. Johnsbury Paper Company, SRL 2/16/1995	Early to mid 20th-century industrial complex, originally a lumber company and later a paper company and other uses, most of the structures are now gone

4.3 Previous Surveys

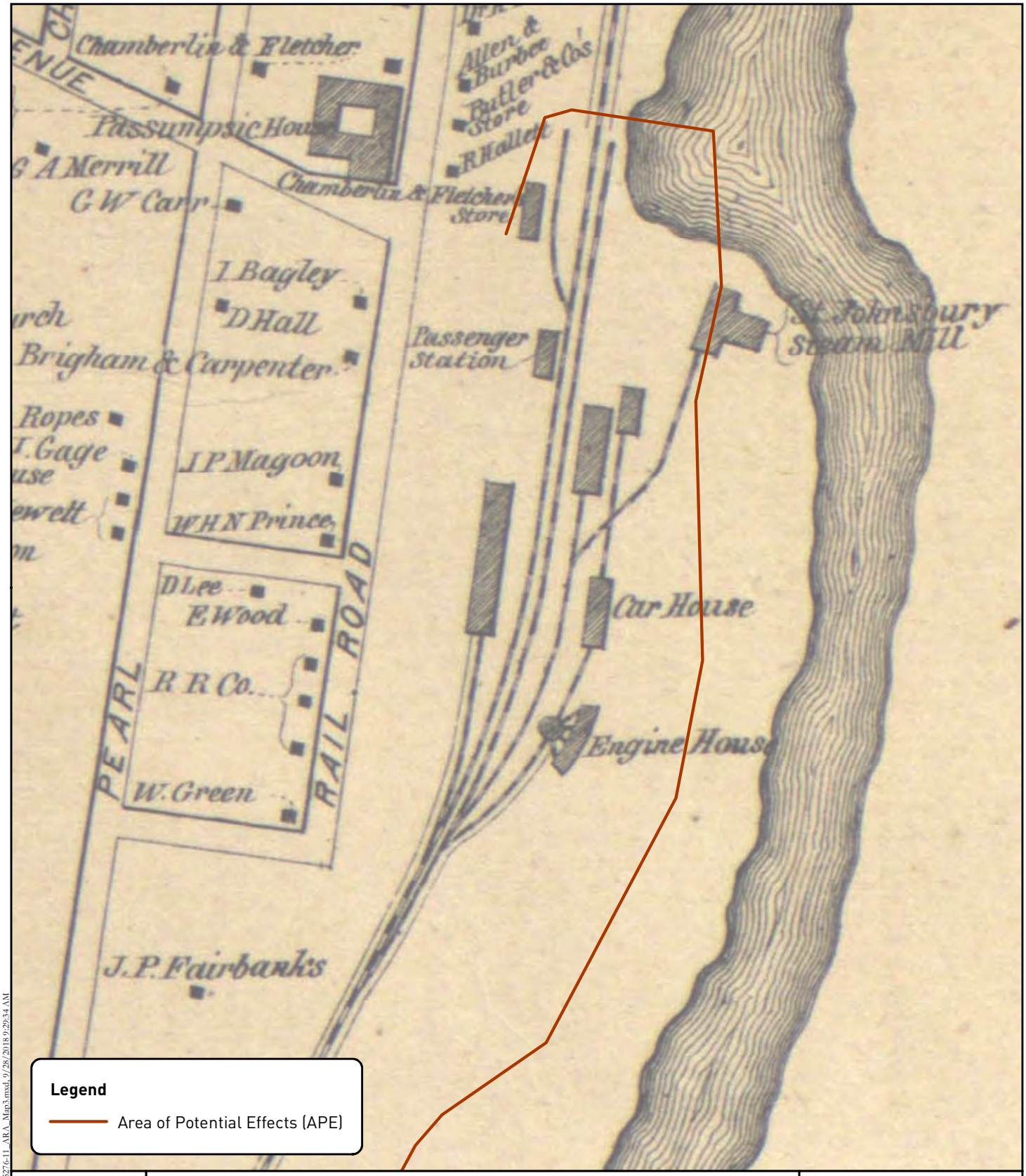
On file at VDHP are one previous survey within the immediate vicinity of the Project (Table 4). Reports on an earlier iteration of this project investigated an alignment close to the Passumpsic River that extended between the Ralston building and the river north to the Portland Railroad Bridge (Hartgen 1993, 1997). This study identified significant recent disturbance, fill and flood deposition along the river terrace, indicating no potential for precontact archeological deposits on the T0 terrace and limited potential on the T1 terrace due to stripping of the A horizon east of the Ralston mill. Much of this interpretation is derived from backhoe trenching conducted by the University of Vermont Consulting Archaeology Program and reported in the 1997 Hartgen report. That investigation did not encounter any evidence of precontact deposits.

Table 4. Relevant previous surveys within or adjacent to the Project

Year	Investigator	Methodology	Results	Notes
1993	Hartgen	Background research and site visit	Recommended testing in areas proposed for ground disturbance along Passumpsic River	(Hartgen 1993)
1997	Hartgen and UVM CAP	Background research, site visit and backhoe trenching by UVM	Identified much of the terrace along the river as recent in origin or disturbed	(Hartgen 1997)

5 Historical Map Review

Settlement in St. Johnsbury began in the late 18th century with a few families arriving to begin clearing land and establishing farmsteads. Established in 1830 as a business to clean hemp for fiber, the Fairbanks Scale Company became the primary employer of the town and inspired a great deal of industrial development over the following 150 years (Hemenway 1867). From an early date the riverside of St. Johnsbury was heavily developed to take advantage of the hydropower available from the Passumpsic River. The Walling, Beers and Sanborn maps of the town depict the development in the north end of the APE in some detail. The railroad depot/station was located near the north end of the APE and, continuing south, there was a cluster of industrial developments along the river including mills, machine shops, foundries and granite sheds, most connected to railroad sidings (Maps 3 to 5). By the early 20th century, the north end of Bay Street was being formalized, but not yet extending to the south (Maps 6 and 7). During the middle of the 20th century, the current alignment of Bay Street was being established, wending its way through the various industrial structures and passing to the east of the railroad roundhouse (Map 8). By that time there were numerous small outbuildings scattered around the larger industrial facilities.



100 0 100 200 Feet

30 0 30 60 Meters

Historical Map

Walling 1858

HARTGEN archeological associates inc

Map 3

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Legend

Area of Potential Effects (APE)

N

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Historical Map

Beers 1875

HARTGEN archeological associates inc

Map 4

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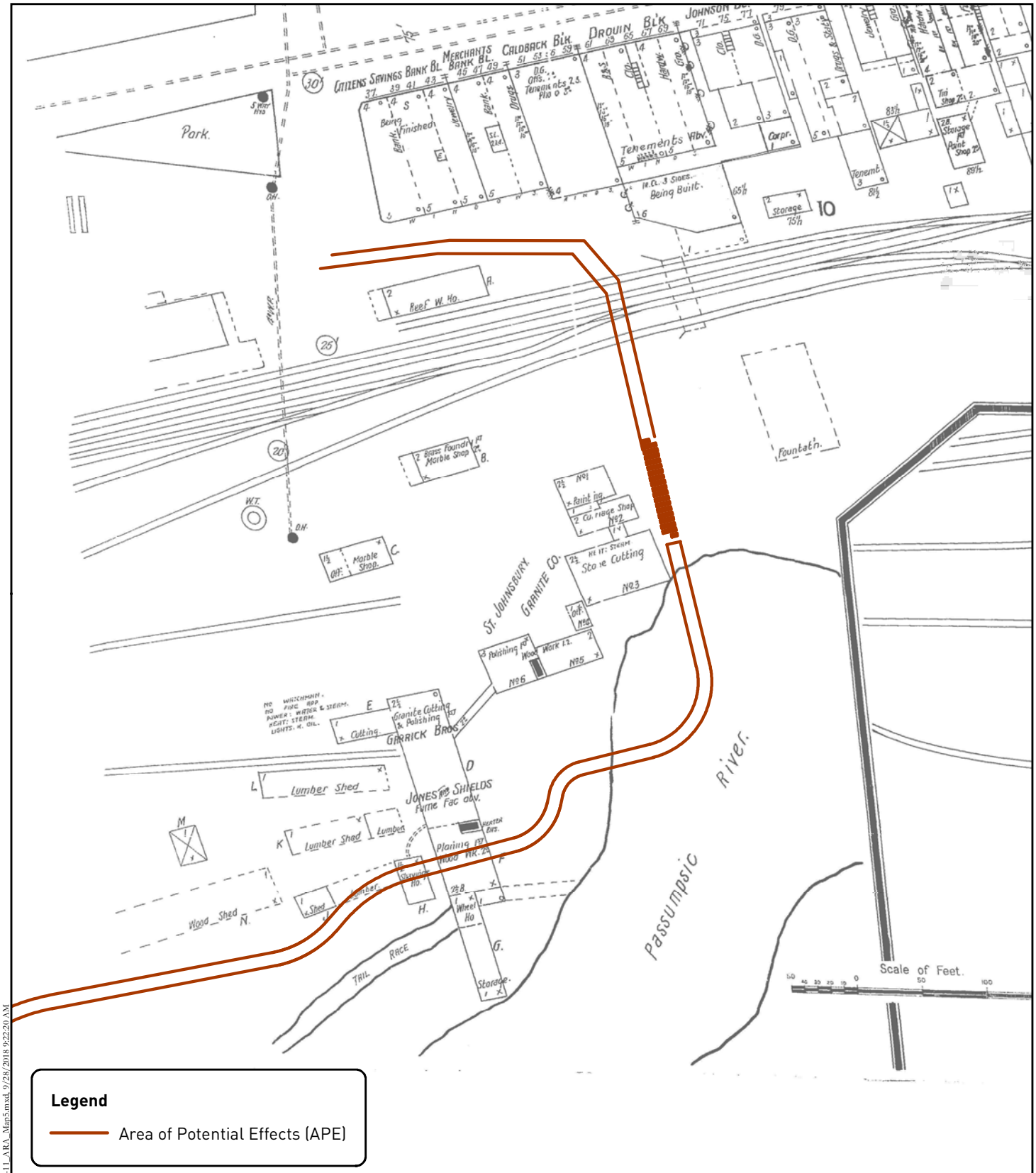

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Area of Potential Effects (APE)

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Historical Map

Sanborn 1895

HARTGEN archeological associates inc

Map 5

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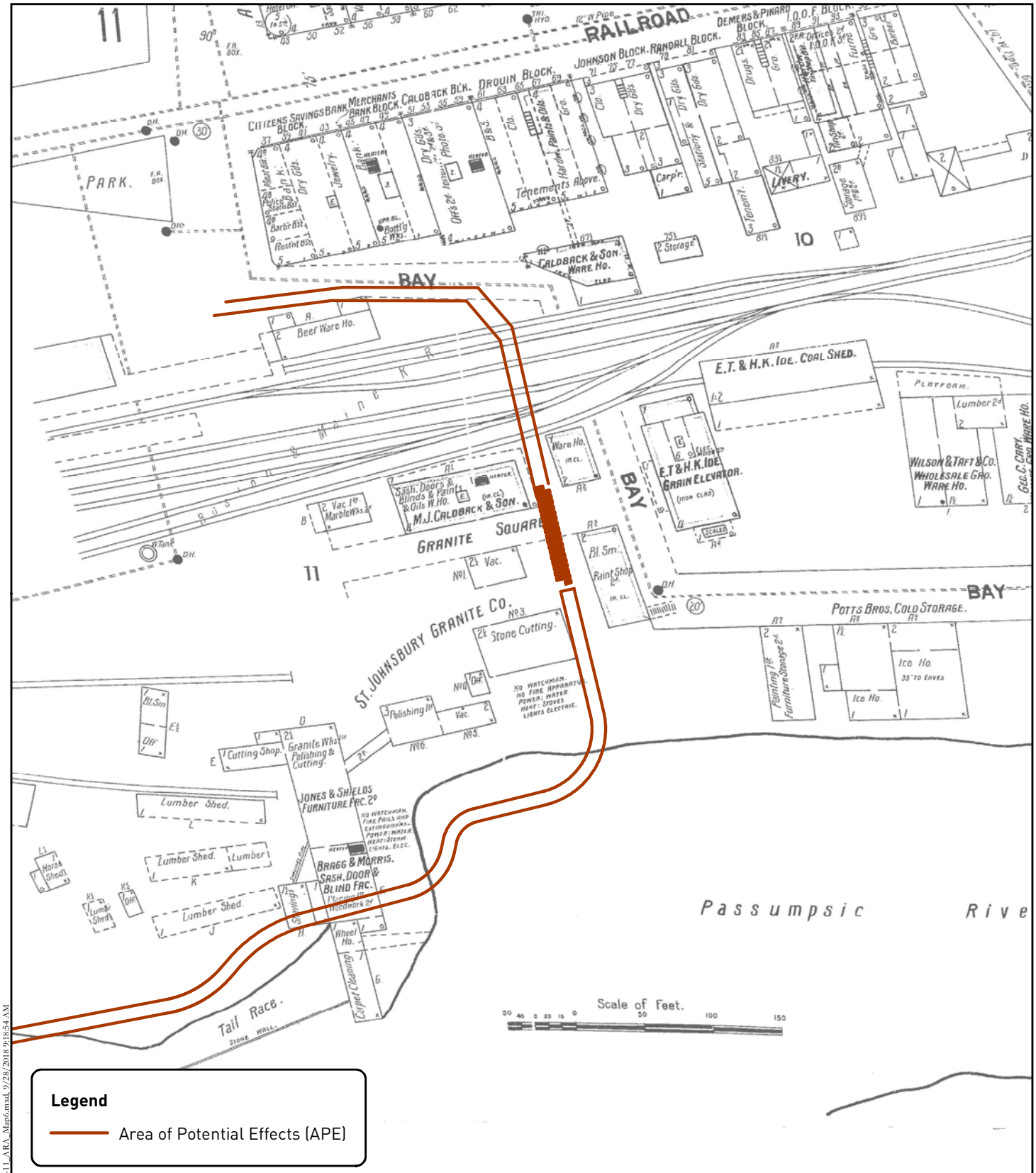

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Historical Map

Sanborn 1900

HARTGEN archeological associates inc

Map 6

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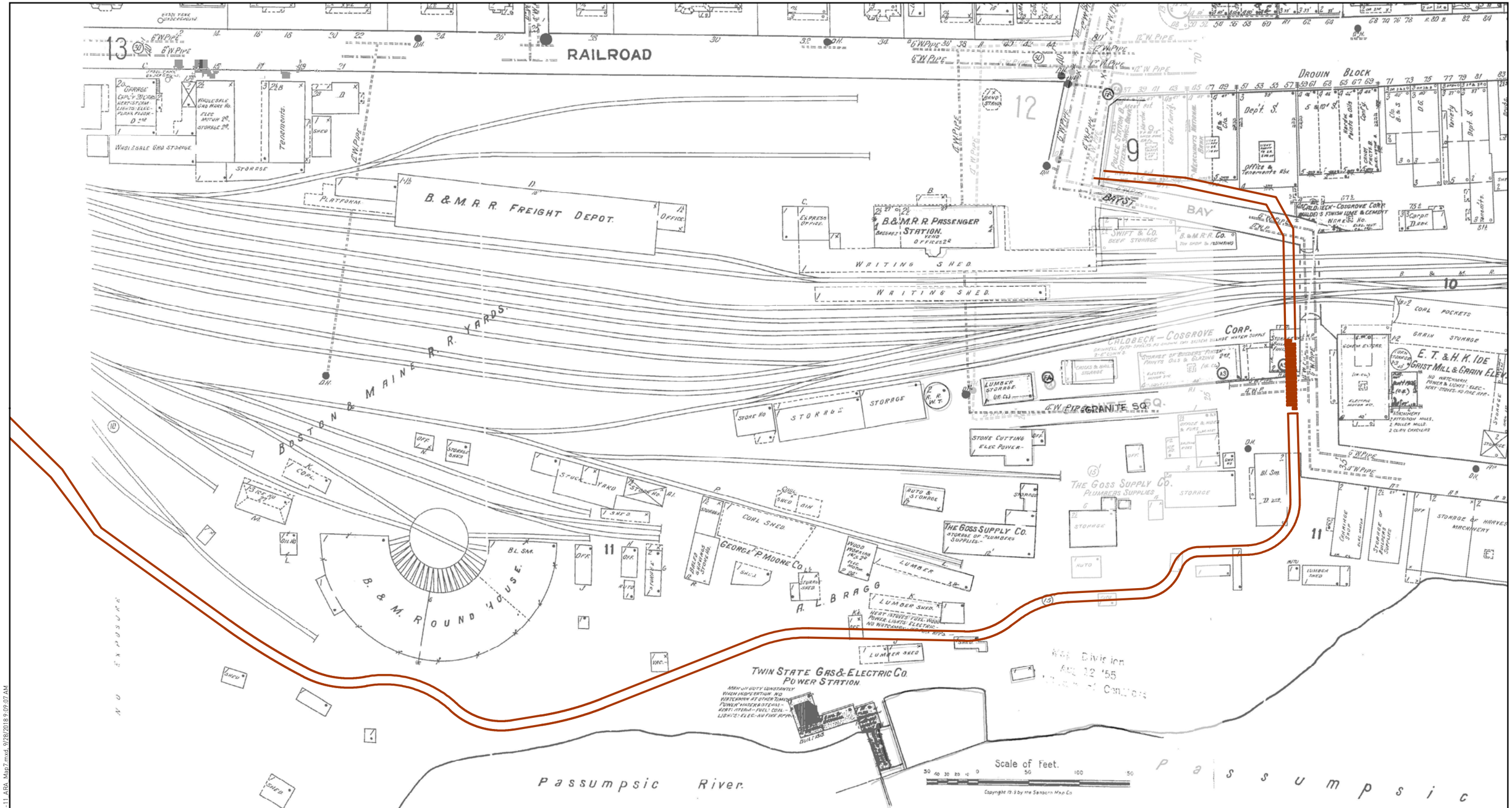

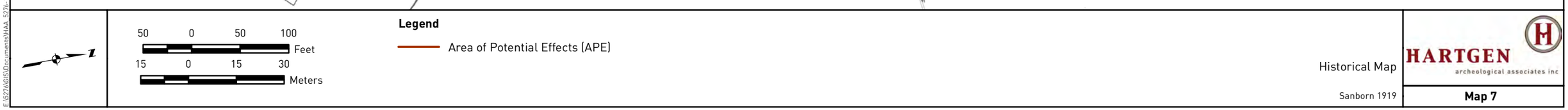

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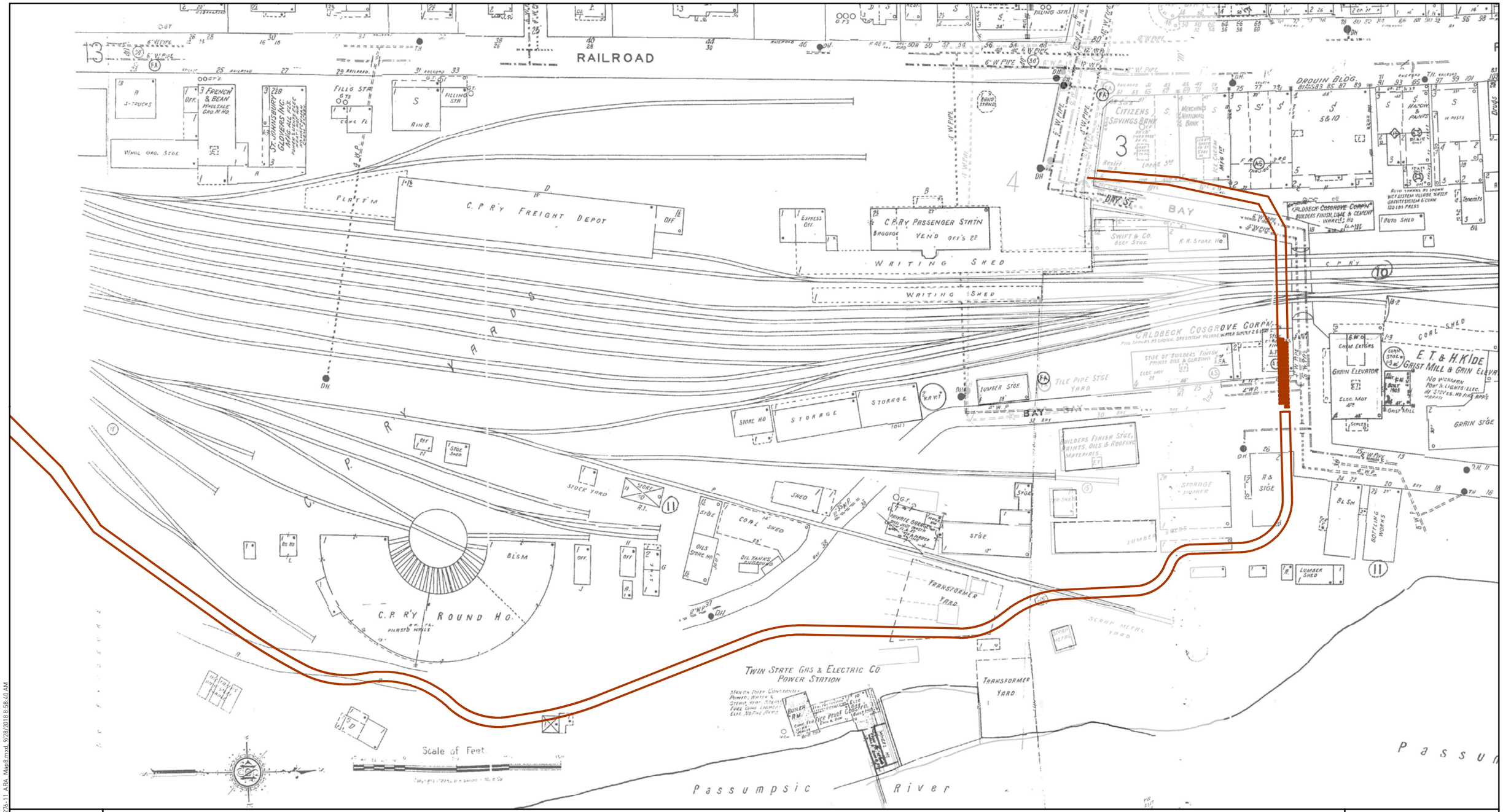

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15 0 15 30 Meters

Legend

Area of Potential Effects (APE)

Historical Map

Sanborn 1927/1943

HARTGEN archeological associates inc

Map 8

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Historic photographs of the area depict significant filling along the river at the north end of the APE (Photos 6 and 7). Few photographs south of the GMP substation are available, but combined with the historic map information, it appears the southern two thirds of the alignment was for many years open field with Bay Street and later industrial development taking place during the late 19th and early 20th centuries (Photo 8).

Photo 6. North end of the project area c. 1885 (Clark n.d.). Note Eastern Avenue on the left with mill complex adjacent to the river and dam. To the north (right), the river extends to the current Bay Street. View to the west.

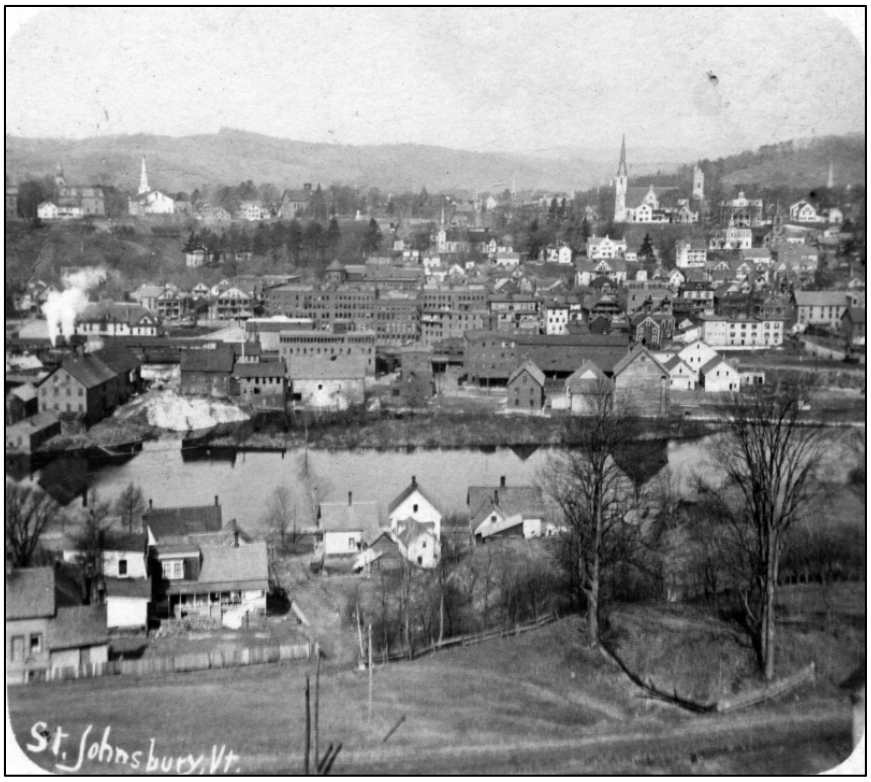

Photo 7. North end of the project area in 1905. Note tunnel under railroad tracks at the center of the photo and mills along river to the left. View to the west.

Photo 8. Overview of the project area c. 1885. Note dam in the river on the right. Although somewhat obscured by trees, the section of the alignment south of the mills and along the river appears relatively undeveloped. View to the north/northwest.

6 Architectural Discussion

Although not part of the scope of work for this report, Hartgen was asked to provide a preliminary comment on the possible National Register status of the structure that may be utilized as part of the Three River's Path trailhead (Photos 9 and 10). This structure is located at 195 Bay Street. It first appears on the Sanborn map of 1919 (Map 7). The structure was at that time was a carriage shop and in 1927/1943 was labeled as a blacksmith shop (Map 8).

A brief examination of this structure by Walter R. Wheeler, Hartgen's architectural historian, suggests it is not individually eligible for listing on the National Register, but may be eligible as part of a potential historic district yet to be defined (Wheeler, personal communication, 9/28/2018).

Photo 9. Trailhead structure at 195 Bay Street. Extension to the right dates post 1943. View to the southeast.

Photo 10. Trailhead structure at 195 Bay Street. View to the northwest.

7 Archeological Discussion

7.1 Precontact Archeological Sensitivity Assessment

Completion of the VDHP Environmental Predictive Model provides a measure of the precontact archeological sensitivity of the project area (Appendix 1). The Project Area is sensitive for proximity to the Passumpsic River, the associated travel corridor, by a small set of rapids where the remains of the dam are now located and being on a glaciofluvial terrace. The score was reduced due to disturbance from the large amount of industrial development and the disturbance of the landform as documented by Peter Thomas (Hartgen 1997) . The Project Area has a score of 12. A score of 32 and above is considered to indicate precontact sensitivity. The extensive 19th-century filling, flood scouring and deposition in the project vicinity has severely reduced any precontact archeological potential within the APE.

7.2 Historic Archeological Sensitivity Assessment

The historic sensitivity of an area is based primarily on proximity to previously documented historic archeological sites, map-documented structures, or other documented historical activities (e.g. battlefields).

The historic development of the project area has been intense over the past 200 years. In particular, the northern end of the APE was the site of a dense collection of mills and other industrial and commercial activities from at least the middle of the 19th century. Therefore, the project area is highly sensitive for historic industrial archeological deposits and features to be present.

7.3 Archeological Potential

Archeological potential is the likelihood of locating intact archeological remains within an area. The consideration of archeological potential takes into account subsequent uses of an area and the impact those uses would likely have on archeological remains.

The project alignment has been substantially constructed through development of the area for a variety of industrial and commercial purposes. Visible mill related features are present adjacent to the alignment and the side path in the form of mill foundations and the remains of the dam in the Passumpsic River (Photos 5, 11 and 12). These features may be eligible for listing on the National Register (Pritchett 1993). Within the alignment, there may be related features beneath fill related to demolition of some of these features (Photos 11 and 13)

Elsewhere, the landform has clearly been modified in relation to industrial use and/or demolition of industrial features (Photo 13). Further to the south, where the alignment crosses the lower terrace adjacent to the river, it crosses a landform that has seen substantial disturbance from heavy equipment operation, sewer overflow facility installation, power line construction and other activities. In addition, judging by the results of the backhoe trenching Thomas conducted to the south between the former Ralston plant and the river, the landform has seen significant scouring and deposition during the 19th and 20th centuries, indicating the potential for intact historic or precontact deposits to be present in that area to be low (Hartgen 1997).

Most of the project consists of bike lanes on the existing pavement of Bay Street. That component has no archeological potential.

Photo 11. The visible mill foundation adjacent to the project alignment and side path in 1993. Note slabs of concrete filling between the alignment on the raised area to the left and the foundation to the right. View to the north.

Photo 12. Dam remains in the Passumpsic River. View to the north/northeast.

Photo 13. Concrete fill adjacent to existing Green Mountain Power substation. In the background the access road is cut into the face of the terrace to the lower terrace. View to the south.

7.4 Archeological Recommendations

The project alignment has seen significant disturbance through industrial development and flood scouring and deposition during the past 200 years. Most of the alignment retains very little potential for archeological deposits or features to be present. In the area of the mill foundations, filling has covered over areas of potential features or deposits related to those foundations.

The project is expected to create little disturbance in the area of the mill foundations. The limited grading for the path is unlikely to penetrate the extensive fill over any areas of archeological potential. The only area of concern is the side path that consists of an existing informal path that passes by the southern end of the mill foundations to the river. The project proposes to resurface this existing path with wood chips. Care should be taken to disturbance to the soil on this path since it is so close to the visible foundation remains. No further archeological review is recommended for this project.

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Appendix 1: VDHP Environmental Predictive Model

VERMONT DIVISION FOR HISTORIC PRESERVATION

Environmental Predictive Model for Locating Pre-contact Archaeological Sites

Project Name Three Rivers Path Ext. **County** Caledonia **Town** St. Johnsbury
DHP No. **Map No.** **Staff Init.** **Date** 10/1/2018

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	8
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	12

17) Marine/Lake Delta Complex**		12	
18) Champlain Sea or Glacial Lake Shore Line**		32	
E. OTHER ENVIRONMENTAL FACTORS:			
19) Caves /Rockshelters		32	
20) ☑ Natural Travel Corridor			
☐ Sole or important access to another drainage			
☐ Drainage divide		12	12
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:	12
Other Comments :			
0- 31 = Archeologically Non- Sensitive **32+ = Archeologically Sensitive**			

F

IPaC Species List and NE Consistency Letter

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104

In Reply Refer To: September 18, 2023
Project code: 2023-0129881
Project Name: Lamoille Valley Rail Trail Riverfront Extension

Subject: Consistency letter for the 'Lamoille Valley Rail Trail Riverfront Extension' project under the amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion (dated March 23, 2023) for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (NLEB).

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request dated September 18, 2023 to verify that the **Lamoille Valley Rail Trail Riverfront Extension** (Proposed Action) may rely on the amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion Opinion (dated March 23, 2023) for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 *et seq.*).

Based on the information you provided (Project Description shown below), you have determined that the Proposed Action will have no effect on the endangered Indiana bat (*Myotis sodalis*) or the endangered northern long-eared bat (*Myotis septentrionalis*). If the Proposed Action is not modified, **no consultation is required for these two species.** If the Proposed Action is modified, or new information reveals that it may affect the Indiana bat and/or northern long-eared bat in a manner or to an extent not considered in the PBO, further review to conclude the requirements of ESA section 7(a)(2) may be required.

For Proposed Actions that include bridge/culvert or structure removal, replacement, and/or maintenance activities: If your initial bridge/culvert or structure assessments failed to detect Indiana bats and/or NLEB use or occupancy, yet later detected prior to, or during construction, please submit the Post Assessment Discovery of Bats at Bridge/Culvert or Structure Form (User Guide Appendix E) to this Service Office within 2 working days of the incident. In these instances, potential incidental take of Indiana bats and/or NLEBs may be exempted provided that the take is reported to the Service.

If the Proposed Action may affect any other federally-listed or proposed species and/or designated critical habitat, additional consultation between the lead Federal action agency and this Service Office is required. If the proposed action has the potential to take bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act may also be required. In either of these circumstances, please advise the lead Federal action agency accordingly.

The following species may occur in your project area and **are not** covered by this determination:

- Monarch Butterfly *Danaus plexippus* Candidate

PROJECT DESCRIPTION

The following project name and description was collected in IPaC as part of the endangered species review process.

NAME

Lamoille Valley Rail Trail Riverfront Extension

DESCRIPTION

The Town of St. Johnsbury is advancing a project to complete Phase II of the construction of the Three Rivers Path which includes connecting the existing path and trailhead at South Main Street to the path that was constructed along the Green Mountain Power (GMP) service road east of Bay Street via a new route along the Passumpsic River, extending a segment of the path north along Bay Street from the new trailhead facility to the lower Portland Street bridge in order to improve bicycle and pedestrian access.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@44.41396125,-72.01425429466674,14z

DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the endangered Indiana bat and/or the endangered northern long-eared bat. Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for these two species.

QUALIFICATION INTERVIEW

1. Is the project within the range of the Indiana bat[1]?

   [1] See Indiana bat species profile

   Automatically answered
   No

2. Is the project within the range of the northern long-eared bat[1]?

   [1] See northern long-eared bat species profile

   Automatically answered
   Yes

3. [Semantic] Does your proposed action intersect an area where Indiana bats and northern long-eared bats are not likely to occur?

   Automatically answered
   Yes

DETERMINATION KEY DESCRIPTION: FHWA, FRA, FTA PROGRAMMATIC CONSULTATION FOR TRANSPORTATION PROJECTS AFFECTING NLEB OR INDIANA BAT

This key was last updated in IPaC on July 27, 2023. Keys are subject to periodic revision.

This decision key is intended for projects/activities funded or authorized by the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and/or Federal Transit Administration (FTA), which may require consultation with the U.S. Fish and Wildlife Service (Service) under Section 7 of the Endangered Species Act (ESA) for the endangered **Indiana bat** (*Myotis sodalis*) and the endangered **northern long-eared bat** (NLEB) (*Myotis septentrionalis*).

This decision key should only be used to verify project applicability with the Service's amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion (dated March 23, 2023) for Transportation Projects. The programmatic biological opinion covers limited transportation activities that may affect either bat species, and addresses situations that are both likely and not likely to adversely affect either bat species. This decision key will assist in identifying the effect of a specific project/activity and applicability of the programmatic consultation. The programmatic biological opinion is not intended to cover all types of transportation actions. Activities outside the scope of the programmatic biological opinion, or that may affect ESA-listed species other than the Indiana bat or NLEB, or any designated critical habitat, may require additional ESA Section 7 consultation.

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Carolyn Black
Address: 40 IDX Drive
City: South Burlington
State: VT
Zip: 05403
Email cblack@vhb.com
Phone: 3512019445

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Highway Administration

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104

In Reply Refer To: September 18, 2023
Project Code: 2023-0129881
Project Name: Lamoille Valley Rail Trail Riverfront Extension

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

Updated 4/12/2023 - Please review this letter each time you request an Official Species List, we will continue to update it with additional information and links to websites may change.

About Official Species Lists

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Federal and non-Federal project proponents have responsibilities under the Act to consider effects on listed species.

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested by returning to an existing project's page in IPaC.

Endangered Species Act Project Review

Please visit the "**New England Field Office Endangered Species Project Review and Consultation**" website for step-by-step instructions on how to consider effects on listed

species and prepare and submit a project review package if necessary:

https://www.fws.gov/office/new-england-ecological-services/endangered-species-project-review

NOTE Please do not use the **Consultation Package Builder** tool in IPaC except in specific situations following coordination with our office. Please follow the project review guidance on our website instead and reference your **Project Code** in all correspondence.

Northern Long-eared Bat - (**Updated 4/12/2023**) The Service published a final rule to reclassify the northern long-eared bat (NLEB) as endangered on November 30, 2022. The final rule went into effect on March 31, 2023. You may utilize the **Northern Long-eared Bat Rangewide Determination Key** available in IPaC. More information about this Determination Key and the Interim Consultation Framework are available on the northern long-eared bat species page:

https://www.fws.gov/species/northern-long-eared-bat-myotis-septentrionalis

For projects that previously utilized the 4(d) Determination Key, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective. If your project was not completed by March 31, 2023, and may result in incidental take of NLEB, please reach out to our office at newengland@fws.gov to see if reinitiation is necessary.

Additional Info About Section 7 of the Act
Under section 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether projects may affect threatened and endangered species and/or designated critical habitat. If a Federal agency, or its non-Federal representative, determines that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Federal agency also may need to consider proposed species and proposed critical habitat in the consultation. 50 CFR 402.14(c)(1) specifies the information required for consultation under the Act regardless of the format of the evaluation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/service/section-7-consultations

In addition to consultation requirements under Section 7(a)(2) of the ESA, please note that under sections 7(a)(1) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Please contact NEFO if you would like more information.

Candidate species that appear on the enclosed species list have no current protections under the ESA. The species' occurrence on an official species list does not convey a requirement to

consider impacts to this species as you would a proposed, threatened, or endangered species. The ESA does not provide for interagency consultations on candidate species under section 7, however, the Service recommends that all project proponents incorporate measures into projects to benefit candidate species and their habitats wherever possible.

Migratory Birds

In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see:

https://www.fws.gov/program/migratory-bird-permit

https://www.fws.gov/library/collections/bald-and-golden-eagle-management

Please feel free to contact us at **newengland@fws.gov** with your **Project Code** in the subject line if you need more information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat.

Attachment(s): Official Species List

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
(603) 223-2541

PROJECT SUMMARY

Project Code: 2023-0129881
Project Name: Lamoille Valley Rail Trail Riverfront Extension
Project Type: Recreation - New Construction
Project Description: The Town of St. Johnsbury is advancing a project to complete Phase II of the construction of the Three Rivers Path which includes connecting the existing path and trailhead at South Main Street to the path that was constructed along the Green Mountain Power (GMP) service road east of Bay Street via a new route along the Passumpsic River, extending a segment of the path north along Bay Street from the new trailhead facility to the lower Portland Street bridge in order to improve bicycle and pedestrian access.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@44.41396125,-72.01425429466674,14z

Counties: Caledonia County, Vermont

ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Carolyn Black
Address: 40 IDX Drive
City: South Burlington
State: VT
Zip: 05403
Email cblack@vhb.com
Phone: 3512019445

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Highway Administration