

BICYCLE & PEDESTRIAN PATHWAY SCOPING STUDY STP BP13(19) REPORT DANVILLE, VERMONT

December 11, 2014



Existing Sidewalk along Hill Street

Submitted to:
Tim Ruggles, P.E.
Town of Danville
36 Route 2 W
Danville, VT 05828

Presented By:



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TABLE OF CONTENTS
BICYCLE AND PEDESTRIAN PATHWAY SCOPING STUDY
DANVILLE, VERMONT
December 11, 2014

Section	Description	Page
1	SUMMARY	1-1
2	EXISTING FACILITIES	
	Existing Conditions	2-1
	Study Area.....	2-3
	Land Uses	2-3
	Transportation Facilities	2-5
	Natural and Cultural Resources	2-8
	Right-of-Way	2-11
	Utilities.....	2-11
3	PURPOSE AND NEED	
	General	3-1
	Purpose and Need Statement.....	3-1
	Local Concerns and Alternatives Presentation Meeting	3-1
	Relationship to Town and Regional Plans	3-1
	Goals	3-2
	Objectives.....	3-2
	Recommendations.....	3-2
4	EVALUATION OF ALTERNATIVES	
	General	4-1
	Design Considerations for Pathway Alternatives	4-1
	Alternative 1a and 1b.....	4-4
	Alternative 2a and 2b.....	4-5
	Alternative 3a and 3b.....	4-6
	Alternative 4a and 4b.....	4-6
	Environmental Concerns.....	4-8
	No Build Alternative	4-8
	Recommended Alternative.....	4-8
	Construction Cost Estimate	4-13
5	FISCAL IMPLEMENTATION	
	Project Description.....	5-1
	Total Project Cost Estimate	5-1
	Permit Summary	5-1
	Maintenance	5-1
	Project Schedule.....	5-4
	Funding Implications	5-4

LIST OF FIGURES
BICYCLE AND PEDESTRIAN PATHWAY SCOPING STUDY
DANVILLE, VERMONT
December 11, 2014

Figure	Title	Page
2-1	Study Area and Route	2-2
2-2	Zoning Districts	2-4
2-3	High Crash Locations	2-7
2-4	Natural Resources and Environmental Features	2-10
2-5	Right-of-Way and Parcel Mapping	2-12
4-1	Shared Use Path Typical Standard A-78	4-2
4-2	Alternative Cross Sections	4-7
4-3	Shared Pathway Route Photos 1 of 3	4-10
4-4	Shared Pathway Route Photos 2 of 3	4-11
4-5	Shared Pathway Route Photos 3 of 3	4-12

LIST OF TABLES
BICYCLE AND PEDESTRIAN PATHWAY SCOPING STUDY
DANVILLE, VERMONT
December 11, 2014

Table	Title	Page
2-1	Existing Roadway Characteristics for Alternative Path Segments.....	2-5
4-1	Path Design Criterion	4-3
4-2	Preliminary Construction Cost Estimate Peacham Road Shared Pathway.....	4-14
4-3	Preliminary Construction Cost Estimate Hill Street Sidewalk Improvements	4-15
4-4	Preliminary Construction Cost Estimate Hill Street Business Block Improvements.....	4-16
4-5	Evaluation Matrix.....	4-17
5-1	Estimated Total Project Cost Shared Pathway Phase 2 Improvements	5-3
5-2	Project Schedule	5-4

APPENDICES
BICYCLE AND PEDESTRIAN PATHWAY SCOPING STUDY
DANVILLE, VERMONT
December 11, 2014

Appendix A: Truline Land Surveyors
Right-of-Way Research Results

Appendix B: Hartgen Archeological Associates, Inc. Archeological and Historical
Resource Assessment; Danville STP BP13 (19) Project, July 2014

Appendix C: Meeting Minutes
Kickoff Meeting May 20, 2014
Local Concerns Meeting July 10, 2014
Alternatives Presentation Meeting August 28, 2014

**SECTION 1
SUMMARY
BICYCLE AND PEDESTRIAN PATHWAY SCOPING STUDY
DANVILLE, VERMONT
December 11, 2014**

The objective of this project is to create a safe route for pedestrians, bicyclists and other potential recreational users to travel from the Hill Street Park to the recreational fields on Peacham Road and to bring trail users from the Lamoille Valley Rail Trail (LVRT) into town to patronize the businesses. During a Local Concerns Meeting of the Danville residents the following Purpose and Need Statement was developed:

The purpose of the project is to create a safe route for recreational users from the intersection of Hill Street and Highland Avenue to the Danville recreational fields located off Peacham Road and to bring users of the Lamoille Valley Rail Trail into Danville Village.

The need for the project is to improve and expand safe routes for recreational users in the town of Danville.

The study includes an evaluation of the following alternatives:

Hill Street	
Alternative 1a	Attached 5' wide curbed sidewalk with bike lanes
Alternative 2a	Attached and detached 8' wide shared use pathway
Alternative 3a	Attached 5' wide curbed sidewalk without bike lanes

Peacham Road	
Alternative 1b	Attached 5' wide curbed sidewalk with bike lanes
Alternative 2b	Attached 8' wide curbed shared use pathway
Alternative 3b	Attached 5' wide curbed sidewalk without bike lanes

Danville Green	
Alternative 4a	Remove existing sidewalk and replace with 10' wide sidewalk adjacent to existing curb
Alternative 4b	Install bike racks only

Characteristics for each of these alternatives are reviewed within this scoping study including right-of-way widths, roadway features, traffic data, historic/archaeological features, natural resources and other environmental impacts. Preliminary construction costs are developed and a preferred alternative is recommended.

An Archaeological Resource and Historical Preservation Assessment has been completed which identifies that the majority of these corridors have been previously disturbed during grading and roadway construction, therefore adverse impacts are not expected in the project area. When the proposed route and limits of construction are

further defined during final design, the potential for archaeological impacts should be reviewed again if the disturbed area will be beyond 15 feet from the paved surface of the roadway.

Two potential environmental impacts were identified for Alternatives 1a and 1b. However, no environmental impacts were identified for the other routes. The environmental issues for Alternatives 1a and 1b would occur due to the proposed bike lane on the west side of Hill Street and east side of Peacham Road as discussed further in Section 2.

All of the alternative routes start at the intersection of Hill Street and Highland Avenue and terminate at the entrance to the Recreational Fields off Peacham Road. No routes outside of existing road right-of-way were determined to be feasible due to environmental considerations and easement acquisition requirements.

The preferred alternative determined at the Alternatives Presentation Meeting held on August 28, 2014 is to connect Hill Street to the entrance to the recreational facilities off Peacham Road by providing a 5' wide curbside sidewalk along Hill Street (Alternative 3a) and an 8' wide curbside shared use path along Peacham Road (Alternative 2b). No bike lanes are desired along Hill Street due to the lack of bicycle traffic in this area, and a walkway on the west side of the first block of Hill Street, delineated by a flush stamped concrete walkway with a narrow curbed boulevard was identified to be included with improvements. The Town stressed the desire to have the sidewalk adjacent to the roadway to make maintenance easier and to improve storm drainage in the project area. The preferred alternative for the Danville Green was the addition of a bike rack with no other changes.

Alternative materials of construction were considered for the pathway surface. A concrete surface with granite curb is recommended due to the increased durability and the minimal increase in capital costs compared to asphalt pavement. The concrete surface will also better match the existing pedestrian improvements recently completed on US Route 2. The construction cost in 2017 dollars for the concrete pathway along Peacham Road is estimated at \$342,000. The construction cost in 2017 dollars for the sidewalk along Hill Street is estimated at \$254,000.

The total project cost for all improvements identified within this scoping study is \$927,000 based on a construction cost of \$596,000 in 2017. If the project is separated into two phases, the total project cost for Phase 1, along Hill Street, is \$400,000 and the total project cost for Phase 2, along Peacham Road is \$527,000. Based on the local 10% match, the local share of the total project cost is \$92,700. After the Town reviews and endorses this study, we recommend applying to the VTrans Bicycle and Pedestrian Program for final design and construction funds by July 2015 to implement final design of the pathway project.

**SECTION 2
EXISTING FACILITIES
BICYCLE AND PEDESTRIAN PATHWAY SCOPING STUDY
December 11, 2014**

Existing Conditions

Study Area

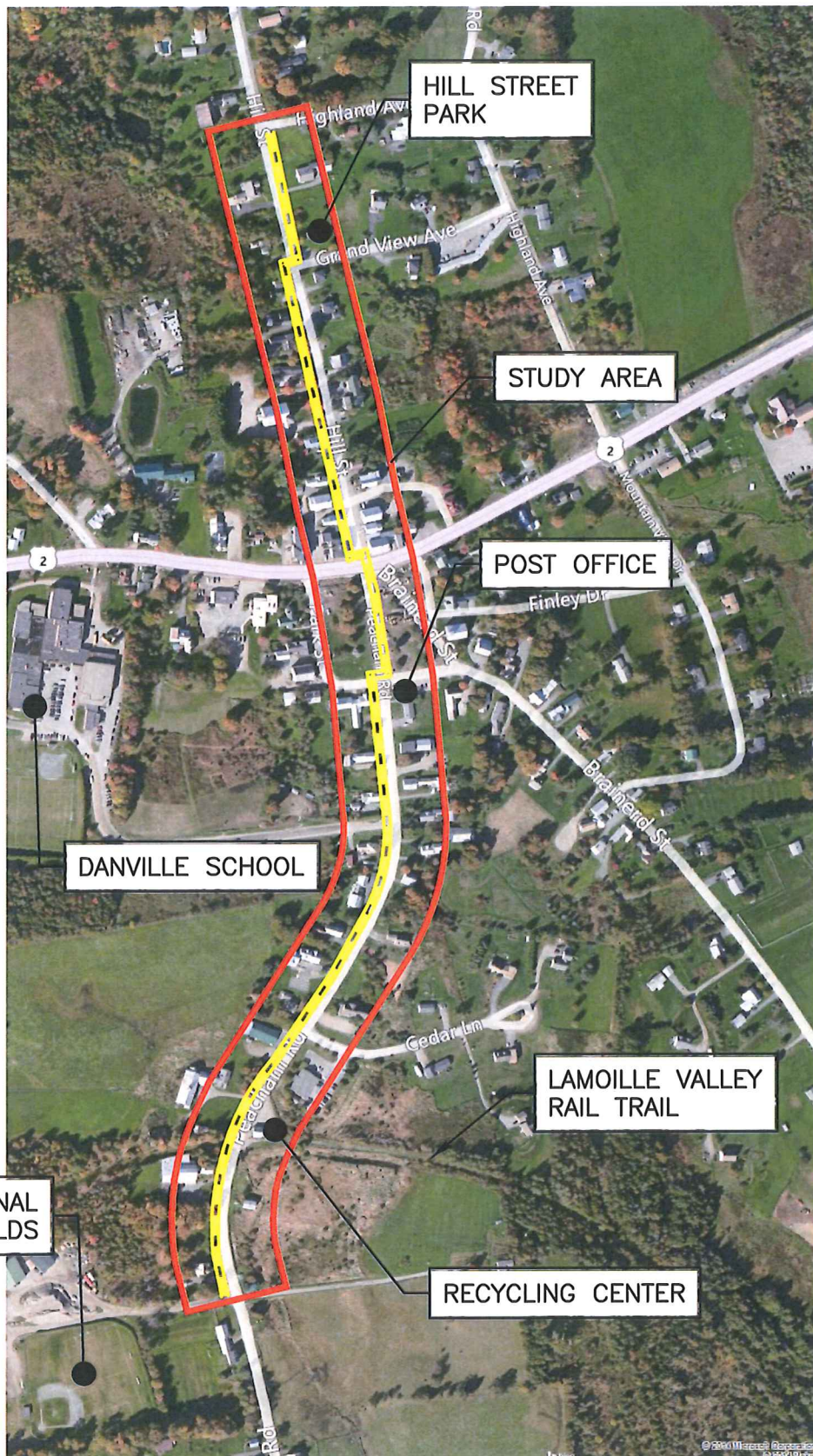
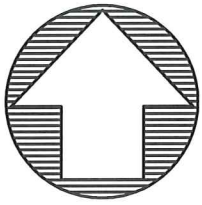
The objective of this project is to create a pedestrian route from north of Danville Village to the Peacham Road recreation fields. The study area was broken into Hill Street, Peacham Road and Danville Green with options presented for each section:

Hill Street	
Alternative 1a	Attached 5' wide curbed sidewalk with bike lanes
Alternative 2a	Attached and detached 8' wide shared use pathway
Alternative 3a	Attached 5' wide curbed sidewalk without bike lanes

Peacham Road	
Alternative 1b	Attached 5' wide curbed sidewalk with bike lanes
Alternative 2b	Attached 8' wide curbed shared use pathway
Alternative 3b	Attached 5' wide curbed sidewalk without bike lanes

Danville Green	
Alternative 4a	Remove existing sidewalk and replace with 10' wide sidewalk adjacent to existing curb
Alternative 4b	Install bike racks only

The proposed route for all options starts on the east side of Hill Street at Highland Avenue, travels south to Grand View Avenue then crosses Hill Street and continues south on the west side of Hill Street until the intersection with US Route 2 where it crosses Hill Street and US Route 2 at existing crosswalks. The route then follows existing sidewalks to pass through the Danville Green on the east side of Peacham Road and existing crosswalks to cross Peacham Road at Park Street and continues south along the west side of Peacham Road to the Recreational Fields. The proposed project route is shown in Figure 2-1.



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FIGURE 2-1

**BICYCLE AND PEDESTRIAN STUDY
STUDY AREA AND
PROPOSED ROUTE**

DANVILLE, VERMONT

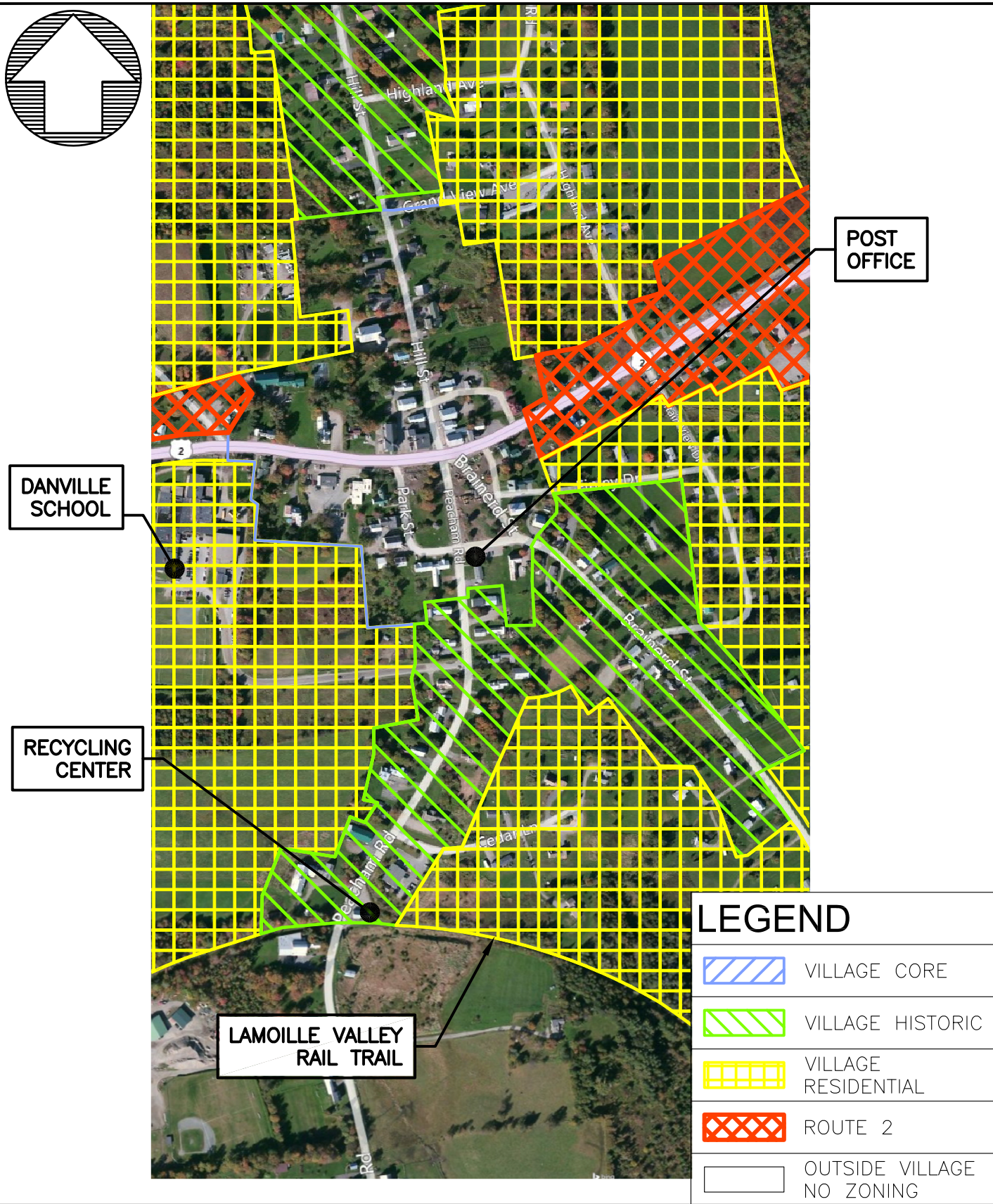
PROJECT NO.	7140010
PROJECT MJR.	AJD
SCALE	1" = 500'
DATE	JULY 2014
DRAWING NO.	fig 2-1.dwg

Land Uses

Zoning Districts within the study area are shown in Figure 2-2 and include the following four zones:

- Village Core
- Village Historic
- Village Residential
- Route 2

Danville School is located off Peacham Road along the proposed project route and the Danville Recreational Fields are at the southern end of the project area and include soccer and baseball fields. At the north end of the project area is the Hill Street Park and secondary residential area. See Appendix A for the summary and corresponding deeds.



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FIGURE 2-2

**BICYCLE AND PEDESTRIAN STUDY
ZONING DISTRICTS**

DANVILLE, VERMONT

PROJECT NO.	7140010
PROJECT MJR.	AJD
SCALE	1" = 500'
DATE	JULY 2014
DRAWING NO.	fig 2-2_zoning.dwg

Transportation Facilities

Based on the Right-of-Way work completed by Truline Land Surveyors, the roads along the route have four rod (66 foot) right-of-way widths. There are some land surveys in the project area that assumed a right-of-way width of three rods so additional right-of-way work will be necessary during the design phase of the project.

A summary of the existing pedestrian/bicycle facilities and speed limits is included in Table 2-1.

TABLE 2-1
EXISTING ROADWAY CHARACTERISTICS
FOR ALTERNATIVE PATH SEGMENTS
DANVILLE, VERMONT

Path Segment	Sidewalks	Roadway	Speed limit (mph)
Hill Street: Highland Ave to Historical Society	None	2 lane	30
Hill Street: Historical Society to Business Block	Single	2 lane	30
Hill Street Business Block	None	2 lane	30
Peacham Road: Danville Green	Single	2 lane	30
Peacham Road: Park Street to Danville School Drive	Single	2 lane	30
Peacham Road: Danville School Drive to Recreational Fields	None	2 lane	30

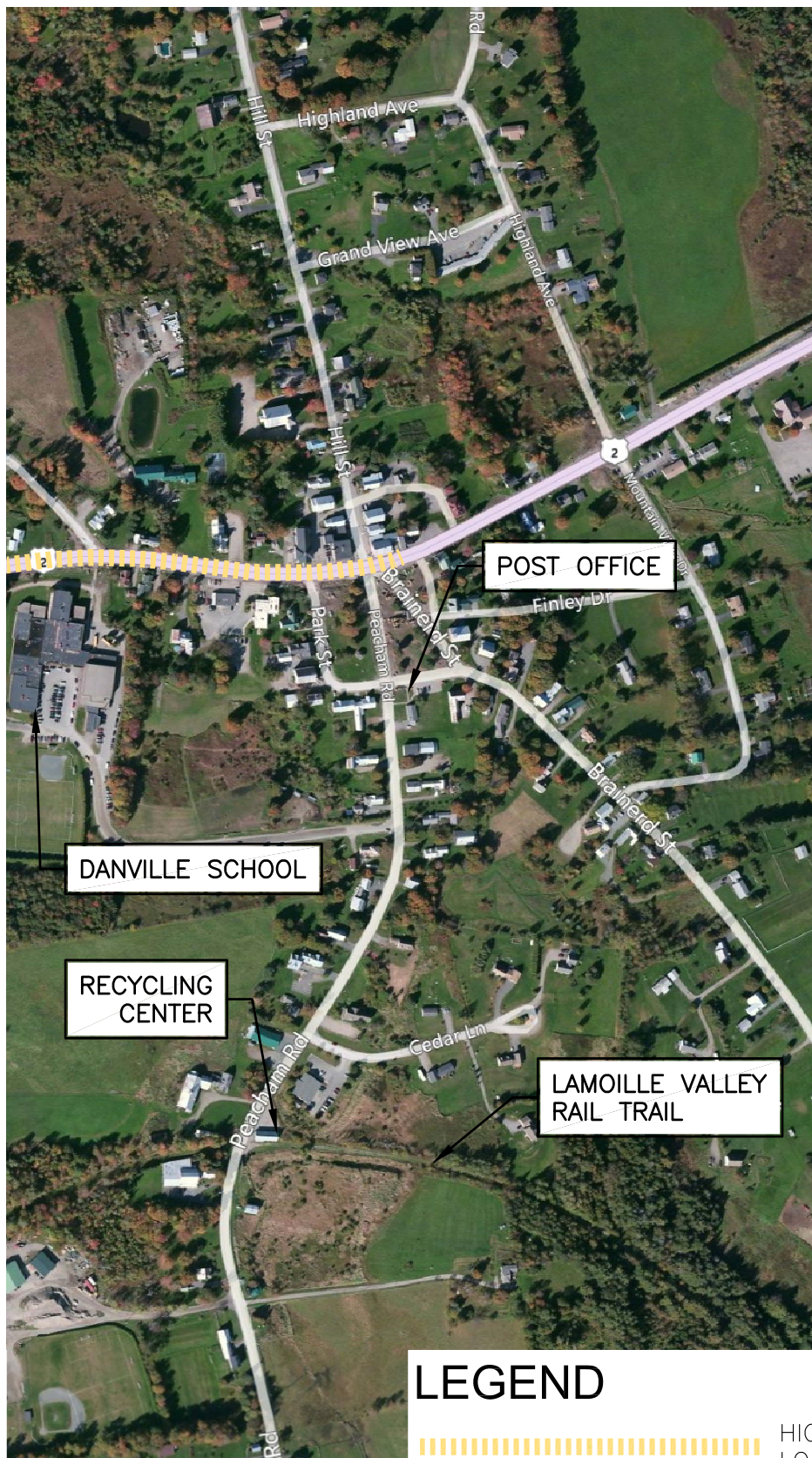
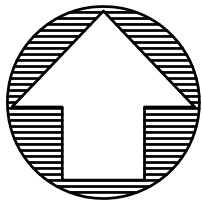
All of these roads are paved and average approximately 24 feet in width with minimal shoulders. Existing narrow dilapidated sidewalks are located for approximately 470 feet along Hill Street starting just north of the Danville Congregational Church and terminating prior to the southernmost block of Hill Street; newer 5' wide sidewalks are located along the Danville Green and for approximately the first 90 feet of Peacham Road, those sidewalks then transition into an older sidewalk that is nearly 5' wide including the curb but is in poor condition terminating at the entrance to the Danville School. No other sidewalks exist along the project route and roadway shoulders are very narrow and do not provide for a walking area which forces walkers into the road or across lawns.

Hill Street is a rural Major Collector Town highway. According to data from Northeastern Vermont Development Association (NVDA), the 2012 Annual Average Daily Traffic (AADT) was 1,600 on Hill Street approximately 600 feet north of Route 2.

Peacham Road is also classified as a rural Major Collector. Traffic count data from VTrans from 2008 indicates 1,600 AADT approximately 600 feet south of Park Street.

All of the proposed routes will cross US Route 2 which is classified as a Principal Arterial and the VTrans data indicates a 2012 AADT of 7,000 in Danville at the intersection with Hill Street and Peacham Road.

We obtained VTrans data for high crash locations, compiled for the 2006-2010 period. The intersection of US Route 2 and Hill Street is not currently identified as a high crash location however the section of US Route 2 in Danville Village has been identified as a high crash section prior to the recent improvements on US Route 2. See Figure 2-3.



LEGEND

HIGH CRASH LOCATION SECTION

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FIGURE 2-3 BICYCLE AND PEDESTRIAN STUDY HIGH CRASH LOCATIONS

DANVILLE, VERMONT

PROJECT NO. 7140010
PROJECT MJR. AJD
SCALE 1" = 500'
DATE JULY 2014
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Natural and Cultural Resources

We compiled Geographic Information System (GIS) data available from the Agency of Natural Resources, VT Center for Geographic Information, the Town of Danville and Northeastern Vermont Development Association including:

- Utilities
- Surface water
- Rare, threatened and endangered species
- Fluvial erosion hazard areas
- Floodways
- Wetlands
- Ecological habitat
- Hazardous waste sites

The features of interest within the study area include:

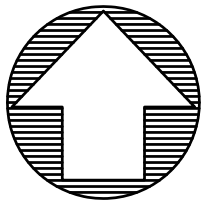
1. Class II wetlands
2. Underground storage tanks

There are two Class II wetland areas along the project route, based on GIS mapping and a site visit by wetland scientist Brad Wheeler of Wheeler Environmental Services. One wetland area is located to the west of Hill Street near Highland Avenue and the second wetland is just south and east of the Danville Recycling Center on Peacham Road, as shown in Figure 2-4. If Alternative 1a or 1b is selected, more detailed wetland delineations will be necessary during the project design phase and the proposed improvements will need to comply with the Vermont Wetland Rules.





Within the study area, there are two hazardous waste sites on properties adjacent to the proposed pathway routes that formerly had underground storage tanks, as shown in Figure 2-4. These sites have been identified as “Site Management Activities Completed” by the State of Vermont. The excavation depths for constructing pathways in these areas will be limited to approximately two feet and it is not expected that contamination will be encountered during construction. Provisions for working in and around contaminated soils should be included in contract documents developed during Final Design in the event that unanticipated contaminated soils are encountered.

An Archaeological Resource and Historical Preservation Assessment was completed in July 2014 by Hartgen Archaeological Associates, Inc. along the project site from the recreational field access road to the Hill Street Park. Another Archaeological Resources and Historical Assessment by Hartgen Archaeological Associates, Inc. was completed in 2003 for a previous water project along Hill Street. Other areas near the project have also had previous Archaeological Resources Study’s completed for projects completed by VTrans . These studies should be consulted prior to additional Archaeological research. The report recommended that no further archaeological investigation would be necessary as long as disturbance is limited to within 15 feet of the edge of pavement. If during the design phase, it is determined that work outside of that zone is

necessary a Phase 1B reconnaissance survey of undisturbed areas outside of that zone may be necessary. The complete report is included in Appendix B.



LEGEND

-  STREAM LINE
-  VSWI WETLAND
-  HAZARDOUS WASTE SITES
-  UNDERGROUND STORAGE TANK

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FIGURE 2-4 BICYCLE AND PEDESTRIAN STUDY NATURAL RESOURCES AND ENVIRONMENTAL FEATURES

DANVILLE, VERMONT

PROJECT NO. 7140010

PROJECT MJR. AJD

SCALE 1" = 500'

DATE JULY 2014

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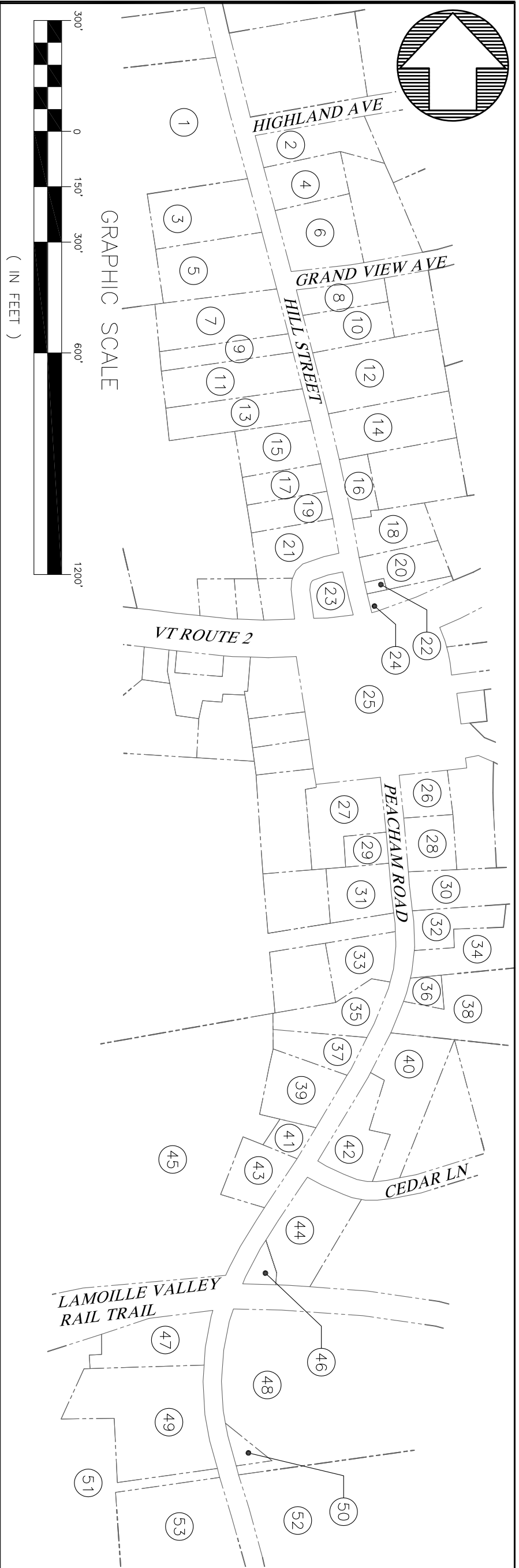
Right-of-Way

The public road right-of-way widths were researched by Shane Clark, LS of Truline Land Surveyors, Inc. and was found to be 4-rods (66 feet) wide along the entire project route. The routes are generally within the public right-of-way. Permanent easements will likely not be required for the pathway or sidewalk however utility relocations may require permanent easements which will need to be verified during final design. Temporary construction easements may be necessary and should be obtained during the design and construction phase of the project once limits of disturbance have been identified. Also, there are some property surveys in the project area that assumed a right-of-way width of three rods so additional right-of-way work will be necessary during the design phase of the project. See Figure 2-5 for Right-of-Way and Ownership information.

Utilities

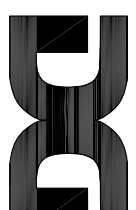
Overhead and underground utilities in the project area include the following:

1. The municipal sewer collection system serves the majority of the study area.
2. The municipal water distribution system serves the majority of the study area.
3. Numerous overhead electrical cable TV and communication lines exist throughout the project area.
4. Several storm drainage structures are located in the study area.



PROPERTY TABLE

NO.	OWNER	PARCEL NO.	NO.	OWNER	PARCEL NO.	NO.	OWNER	PARCEL NO.
1			20	BEATTIE	25-SA02-004	37	R. & K. SEVIGNY	25-SA03-011
2			21	BEATTIE	25-SA02-006	38		
3	C.M. LINSLEY	25-SA02-021	22	FONTAINE PROP.	25-SA02-001	39	J. & S. JURENTKUFF	25-SA03-013
4			23	OPEN DOOR	25-SA02-003	40	GRAVES	25-SA03-012
5	S. BURNHAM	25-SA02-019		FIREHOUSE LLC	25-SA02-002	41	T. CAHOON	25-SA03-014
6	HILL ST. PARK	25-SA02-020		BEATTIE	25-2W-002	42	STEWART PROP. MANAGEMENT	25-SA03-015
7	PEACOCK	25-SA02-018	24	DAUTEUIL	25-2E-001	43	TOWN OF DANVILLE - FIRE STATION	25-SA03-016
8	LADD	25-SA02-017	25	DANVILLE GREEN	25-SA01-001	44	HEALTH CENTER	25-127-001
9	E. GRAVES	25-SA02-015	26	BEATTIE	25-94-006	45	GALLERANI	25-SA03-018
10	JOHNSON	25-SA02-016	27	HAFNER	25-94-005	46	TOWN OF DANVILLE - RECYCLE	25-SA03-017
11	GRAVES	25-SA02-014	28	WITHERS	25-SA03-002	47	E. FARR	15-SA03-001
12	US BANK NAT. ASSOC.	25-SA02-012	29	METHODIST PARSONAGE	25-SA03-001	48	K. MUNDINGER	15-SA03-005
13			30	SIEBENBRUNNER	25-SA03-003	49	M. PAYEUR	15-SA03-002
14	STEWART	25-SA02-011	31	ZUCKER	25-SA03-004	50		
15	CONGREGATIONAL CHURCH	25-SA02-010	32	HOE	25-SA03-006	51	TOWN OF DANVILLE	15-SA03-003
16	BACH	25-SA02-008.1	33	RODRIGUEZ	25-SA03-007	52	R. DAUPHIN	15-SA03-004
17	SALEZ	25-SA02-009	34	A. SILVA	25-SA03-008	53	R. DAUPHIN	15-SA03-004
18	BEATTIE	25-SA02-005	35	K. & T. ZSCHAU	25-SA03-010			
19	J. PERRY	25-SA02-007	36	VIANO	25-SA03-009			



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Project #	7140010
Project Mgr.	AJD
Design	AJD
Drawn	EAE
Checked by	R.E. DUFRESNE
Date	JULY 2014
Scale	AS SHOWN
Approved by	APPROVED BY

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BICYCLE AND PEDESTRIAN STUDY
STP BP 13(19)

FIGURE 2-5
RIGHT-OF-WAY AND
PARCEL MAPPING

DANVILLE, VERMONT

FIG 2-5

DWG. NO. Drawing2.dwg
SHEET 1 OF 1

**SECTION 3
PURPOSE AND NEED
BICYCLE AND PEDESTRIAN PATHWAY SCOPING STUDY
DANVILLE, VERMONT
December 11, 2014**

General

Developing a Purpose and Need statement requires obtaining input from local citizens, and meeting with Town representatives. This task also includes reviewing characteristics of the area and reviewing local/regional plans to identify the relationships of the planned improvements to these plans. The following purpose and need statement was developed during this process for this project:

The purpose of the project is to create a safe route for pedestrians from the intersection of Hill Street and Highland Avenue to the Danville recreational fields located off Peacham Road and to bring bicycle traffic from the Lamoille Valley Rail Trail into town to patronize businesses in town.

The need for the project is to improve and expand safe routes for recreational users and support local businesses in the Town of Danville.

Local Concerns and Alternatives Presentation Meeting

A Local Concerns Meeting was conducted on July 10, 2014 to obtain input from the public on preferences, anticipated user groups and regarding the purpose and need for the project. Based on this meeting a draft purpose and need statement was developed.

An Alternatives Presentation Meeting was held on August 28, 2014. The purpose and need statement developed based on the Local Concerns Meeting and several alternatives were presented. The purpose and need statement was approved and a preferred alternative was selected at the meeting as discussed in Section 4.

A copy of the meeting minutes and written public comment letters are included in Appendix C. The attendees voiced strong support for the project and expected the pathway would receive heavy use.

Relationship to Town and Regional Plans

Northeastern Vermont Development Association's (NVDA) Northeastern Vermont Regional Transportation Plan and the Danville Town Plan both contain goals, policies and recommendations in support of the proposed improvements.

NVDA's Transportation plan includes the following goal:

- Promote transportation in growth centers, downtowns, and village centers that feature bicycle, pedestrian and other non-motorized forms of transportation.

The Transportation Plan also states “it makes sense not only from a quality of life perspective but from an economic development perspective to support the development of [Bicycle and Pedestrian] facilities and the activities they attract.”

The Danville Town Plan contains language in the recreation and energy conservation section as follows:

Goals:

- To maintain and expand the local recreational opportunities for citizens and visitors.
- To encourage energy conservation and maximize community independence from nonrenewable energy resources.

Objectives:

- Maintain, enhance and expand, where appropriate, existing public recreational facilities.
- Encourage low intensity outdoor activities such as skiing, snowshoeing and hiking on both private and public lands/waters.
- Encourage development of private, low impact recreational enterprises, and recreation opportunities on private lands.
- Support a recreation committee officially charged with bringing together existing activities and the development, and support of municipal recreation facilities on behalf of the community.

Recommended actions:

- Ensure access to Danville School and other town public properties and facilities to maximize public use.
- Promote pedestrian, bicycle and public transit opportunities.

Both the Regional Transportation and Town Plans support the project.

**SECTION 4
EVALUATION OF ALTERNATIVES
BICYCLE AND PEDESTRIAN PATHWAY SCOPING STUDY
DANVILLE, VERMONT
December 11, 2014**

General

During the Local Concerns Meeting, the northern project limit was defined as the intersection of Hill Street and Highland Avenue due to the existing pedestrian patterns and limited sight distance on Hill Street in this area. The southern limit was defined as the intersection of Peacham Road and the access road to the Recreational fields. Residents and public officials stated there was a high amount of pedestrian traffic from students traveling from the school to the fields along Peacham Road. It is also anticipated that there will be increased pedestrian traffic due to the development of the LVRT that will cross Peacham Road once complete in 2015. The alternatives were presented previously and are described below:

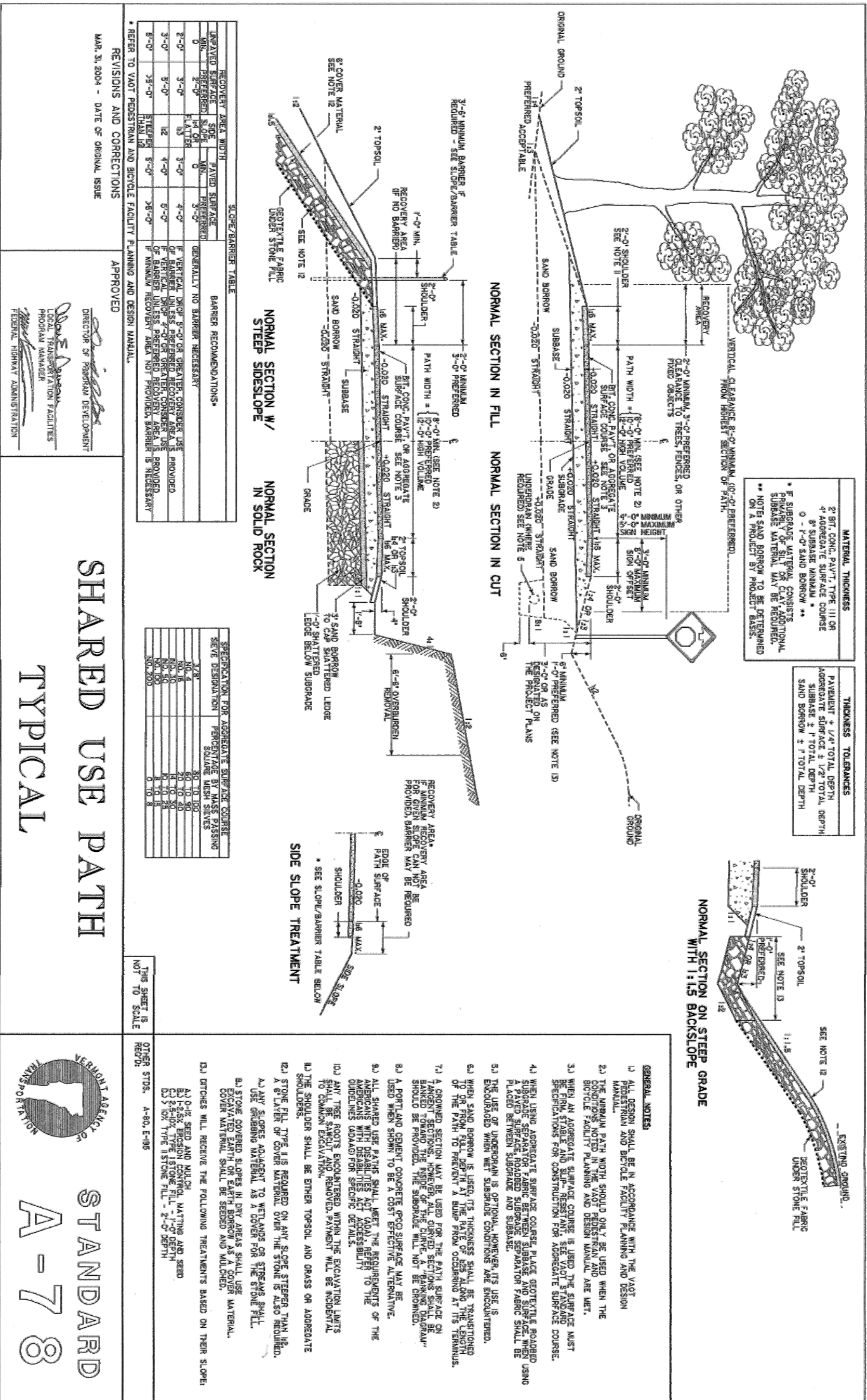
Hill Street	
Alternative 1a	Attached 5' wide curbed sidewalk with bike lanes
Alternative 2a	Attached and detached 8' wide shared use pathway
Alternative 3a	Attached 5' wide curbed sidewalk without bike lanes

Peacham Road	
Alternative 1b	Attached 5' wide curbed sidewalk with bike lanes
Alternative 2b	Attached 8' wide curbed shared use pathway
Alternative 3b	Attached 5' wide curbed sidewalk without bike lanes

Danville Green	
Alternative 4a	Remove existing sidewalk and replace with 10' wide sidewalk adjacent to existing curb
Alternative 4b	Install bike racks only

Design Considerations for Pathway Alternatives

The Vermont Pedestrian and Bicycle Facility Planning and Design Manual recommends a minimum path width of 8 feet and a preferred path width of 10 to 12 feet. There are additional requirements for setbacks or clearances. The design criterion are depicted in Figure 4-1 and summarized in Table 4-1 as follows:



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Drawn	EAE
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Scale	AS SHOWN
Approved by	APPROVED BY

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BICYCLE AND PEDESTRIAN STUDY
STP BP13(19)

VAOT STANDARD DRAWING A-78

DANVILLE, VERMONT

DWG. NO. FIG 4-1.dwg
SHEET 1 OF 1

**TABLE 4-1
PATH DESIGN CRITERION
DANVILLE, VERMONT**

Item	Path Type			
	Shared	Bicycle Lane	Pedestrian Walk	Shoulder
Path Width	8 ft. min. 10 ft. preferred	4-6 ft.	5 ft.	3 ft. (bicycles)
Minimum horizontal clearance from objects	2 ft.			
Minimum Shoulder	2 ft.			
Recovery Area	3-5 ft.			
Distance from signs	3 ft. min. – 6 ft. max.			
Roadway/path separation (uncurbed sections)	5 ft. buffer or a barrier		5 ft. or a curb/barrier	

Notes:

1. Generally the minimum paved shoulder width to accommodate bicyclists is 3 feet. There are no specific design criteria or additional width requirements for unpaved roads. Roadway shoulder widths depend on road type, design speed and AADT as listed in the VT State Design Standards.
2. A recovery area is required where side slopes are 3H:1V or steeper.
3. The recovery area and lateral clearance for signs and objects includes the shoulder.
4. Pedestrian accommodations along the shoulders of roadways do not need to comply with the American Disability Act Accessibility Guidelines.

The path width requirements are important for determining what facilities can be accommodated within the existing public road rights-of-way. Right-of-way considerations and other advantages and disadvantages of the various pathway routes are reviewed individually for each of the options.

The existing ROW and roadway widths were compared to VTrans design criteria to determine the level of improvements necessary to accommodate a shared path or separate bicycle/pedestrian facilities.

Under VTrans road design criteria for a local road with an estimated AADT of 1,600, both Hill Street and Peacham Road should have 10 foot wide lanes with 3 ft. wide shoulders, for a total width of 26 feet. Both Hill Street and Peacham Road have 66 foot wide right-of-ways with a two lane local road. On Hill Street, the pavement width is generally 24 feet until the business block then the entire distance between the buildings is paved. The pavement width on Peacham road varies from 23 to 24 feet wide throughout the length of the project.

Options available for pedestrian and bicycle traffic through the first block off Hill Street are limited due to topography and existing structures. The only option determined to be viable due to strong community concerns over the loss of parking is to provide a sidewalk or shared use path that would be stamped concrete or have a similar surface delineating treatment directly in front of the businesses. Parallel parking is proposed

along this route to minimize the impact on parking. The parking would be separated from the pathway with curb or a narrow median. The pathway cannot be raised in elevation to be higher than the parking due to the elevation of the business entrances.

All options presented below travel through a highly populated area with several driveways. Routes were not available to avoid driveway crossings therefore the pathway should be well marked at driveway crossings to enhance both path user and driver awareness.

Alternative 1a-Hill Street

Alternative 1a includes a curbed sidewalk directly adjacent to the roadway along Hill Street with widened shoulders to accommodate bikes. The VTrans road design criteria indicates that the 3 foot paved shoulder should be sufficient for a bike lane on the side away from the curbed sidewalk and 4 feet adjacent to the sidewalk. If bike lanes and a 5 foot curbed sidewalk are proposed the total width required would be 32 feet. With this option, there should be sufficient room within the 66 foot right-of-way to increase the bike lane width to 4 to 6 feet to accommodate bicycle users of varying abilities. If a 5 foot bike lane on each side and 5 foot curbed sidewalk on one side are utilized the total width required would be 35 feet. To accommodate 5 foot wide bike lanes, Hill Street would need to be widened by 3 feet on each side of the road.

The proposed Route for Alternative 1a is to start on the east side of Hill Street at Highland Avenue, travel south along Hill Street until Hill Street Park. This selected route will minimize disturbance to Class II wetlands on the west side of Hill Street in this area and also avoid significant filling due to the existing topography on the west side of Hill Street. The route will then cross Hill Street at Grand View Avenue utilizing a new crosswalk to be installed as part of this project to the west side of Hill Street and continue south along Hill Street with a 5 foot wide sidewalk as discussed above. At the last block of Hill Street in front of the businesses, the sidewalk would transition to the stamped sidewalk as discussed above. At the intersection of Hill Street and US Route 2, the route would use an existing crosswalk to cross Hill Street to the east side of Hill Street then utilize another existing signaled cross walk to cross US Route 2 and tie into the sidewalk in the Danville Green.

The installation of the sidewalk directly adjacent to the roadway along Hill Street will require the installation of a storm drain system to eliminate the existing roadside ditch located in front of the Congregational Church. There will also be a minimum of two utility pole relocations required to allow for the installation of the sidewalk that may require acquisition of easements. In addition, the bike lane on the west side of Hill Street will end at the crest of a hill where poor visibility exists. Extending the bike lane further north on Hill Street in this area may need to be considered if this Alternative is pursued.

Alternative 2a- Hill Street

Alternative 2a follows the same route as Alternative 1a. However, in place of curbed sidewalk adjacent to the roadway a shared pathway is proposed.

Between Highland Avenue and Grand View Avenue along Hill Street the pathway would be adjacent to the road with curb due to an existing fire hydrant and utility pole. The pathway in this area would be 10 feet wide. Between Grand View Avenue and the Business block of Hill Street the pathway would be approximately 6 to 9 feet off the roadway to avoid existing utility poles and drainage ditches and be 8 feet wide with 1 foot shoulders on each side. An existing sidewalk that starts at the historical society currently follows this route and would be reconstructed and widened to allow for both bicycle and pedestrian traffic. Within the Business block of Hill Street the route would be the same as proposed above.

Between Highland Avenue and Grand View Avenue the pathway is proposed to be directly adjacent to the roadway with curb due to existing utilities. In this area a minimum width of 36 feet for the pathway and roadway would be required. In areas where the pathway will be separated from the roadway along Hill Street a total of up to 45 feet may be necessary due to the conflicts noted above. However, due to the existing sidewalk in this area, obstructions are limited and sufficient room is available to widen the sidewalk to 8 feet with little impact on existing utilities.

Alternative 3a-Hill Street

Alternative 3a is the same as Alternative 1b with the exception that no bike lanes are proposed. During the local concerns meeting, the community members present indicated that they were not significantly concerned with bicycle traffic along Hill Street. The elimination of bike lanes with this option would allow the existing road to remain in its current condition.

Alternative 1b-Peacham Road

Alternative 1b is very similar to Alternative 1a. It includes a curbed sidewalk directly adjacent to the roadway along Peacham Road with widened shoulders to accommodate bikes. The VTrans road design criteria indicates that the 3 foot paved shoulder will be sufficient for a bike lane on the side away from the sidewalk and 4 feet adjacent to the sidewalk. If bike lanes and a 5 foot curbed sidewalk are proposed the total width required would be 32 feet. With this Alternative, there should be sufficient room within the 66 foot right-of-way to increase the bike lane width to 4 to 6 feet to accommodate bicycle users of varying abilities. If a 5 foot bike lane on each side and 5 foot curbed sidewalk on one side are utilized the total width required would be 35 feet. To accommodate 5 foot wide bike lanes, Hill Street would need to be widened by 3 feet on each side of the road.

The route for Alternative 1b starts at Park Street. At the intersection of Park Street and Peacham Road, pedestrian and bicycle traffic will separate. Pedestrian traffic will cross Peacham Road and Park Street at the Peacham Road and Park Street intersection utilizing existing crosswalks then travel south on the west side of Peacham Road using a 5 foot wide curbed sidewalk to the Recreational Fields. Bicycles will utilize bicycle lanes on either side of Peacham Road from Park Street to the terminus of the route at the Recreational Fields.

Alternative 2b-Peacham Road

Alternative 2b follows the same route as Alternative 1b. However, in place of curbed sidewalk adjacent to the roadway a shared pathway is proposed. The pathway would be directly adjacent to the road with curb.

After the Danville Green, the route for Alternative 2b would follow the existing crosswalks to gain access to the west side of Peacham Road. Along Peacham Road, topography and existing features limit the width and ability to separate the pathway from the road. Therefore, the pathway along Peacham Road is proposed to be 8 feet wide with curbing directly adjacent to the roadway.

A significant constraint of Alternative 2b is conflicts with existing utilities. There are several storm drains along Peacham Road. These storm drain structures will need to be relocated or modified to allow for construction of the pathway. In addition, there are some areas that will require additional review after topographic survey mapping is completed to determine grading requirements. Limiting the width to 8 feet in width minimizes impacts on existing trees and surrounding drainage.

Alternative 3b-Peacham Road

Alternative 3b is the same as Alternative 1b with the exception that no bike lanes are proposed. The elimination of bike lanes with this option would allow the existing road to remain in its current condition. However, the purpose and need statement identifies bringing bicycle traffic from the Lamoille Valley Rail Trail (LVRT) into town as a purpose of the project and this option does not meet that purpose.

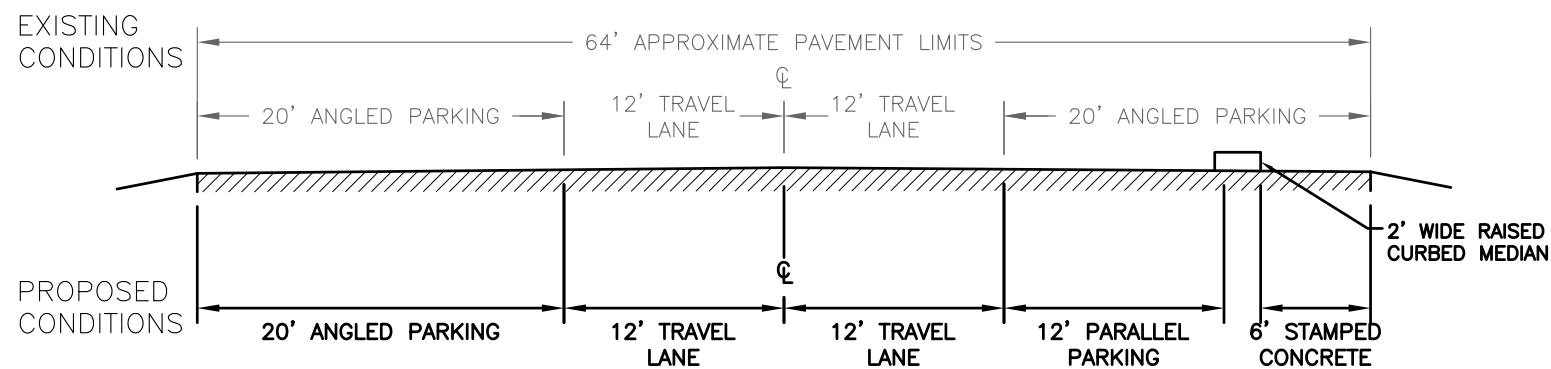
Alternative 4a-Danville Green

The Danville Green was recently improved as part of the Route 2 reconstruction project. As a result the Green has existing 5 foot wide concrete boulevard sidewalk with granite curb on each side of the roadway. Lighting and landscaping improvements were also installed in the Green as part of the Route 2 project. Therefore, options for improvement in the Green are limited. The existing roadway through the Green is not wide enough to accommodate bicycle traffic on the road so the only viable option to accommodate bicycle traffic through the Green is to remove the existing concrete sidewalk and replace it with a 10 foot wide sidewalk. There are existing utility vaults in the boulevard between the existing sidewalk and curb that would have to be accommodated in construction of the widened sidewalk.

Alternative 4b-Danville Green

In lieu of removing the existing sidewalks in the Danville Green, a bike rack could be installed to provide bike parking for people that want to come up from the LVRT and visit the businesses in town. However, this would not address travel for through bicycle traffic and those users would need to walk their bicycles through the Green or travel with traffic in the roadway.

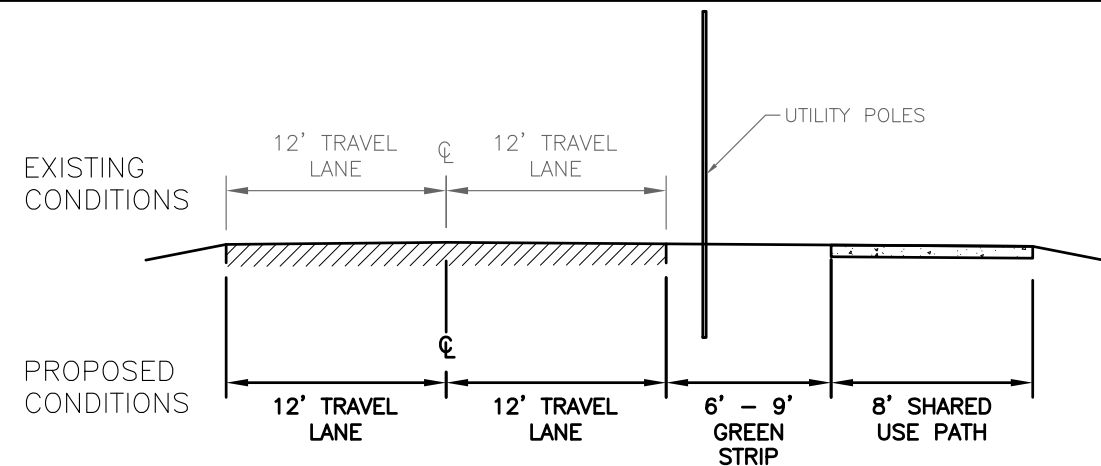
FILE: J:\Danville VT\Town Projects\71400010 - STP BP13(19) SCOPING STUDY\CAD\FIG 4-3.dwg Dec 10, 2014 - 1:51pm



SHARED USE PATH ALTERNATIVE

NOT TO SCALE

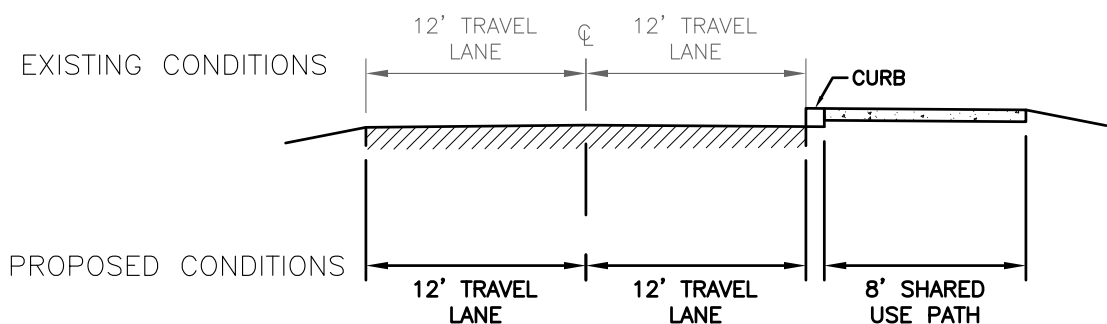
HILL STREET - BUSINESS BLOCK



SHARED USE PATH ALTERNATIVE - DETACHED

NOT TO SCALE

OPTION 2A - HILL STREET FROM HILL STREET PARK TO BUSINESS BLOCK (WEST SIDE)

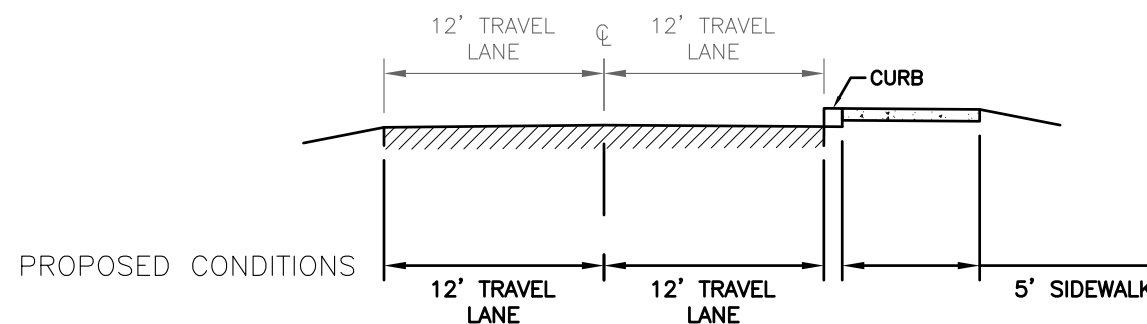


SHARED USE PATH ALTERNATIVE - ATTACHED

NOT TO SCALE

OPTION 2A - HILL STREET FROM HIGHLAND AVENUE TO HILL STREET PARK (EAST SIDE)

OPTION 2B - PEACHAM ROAD (WEST SIDE)

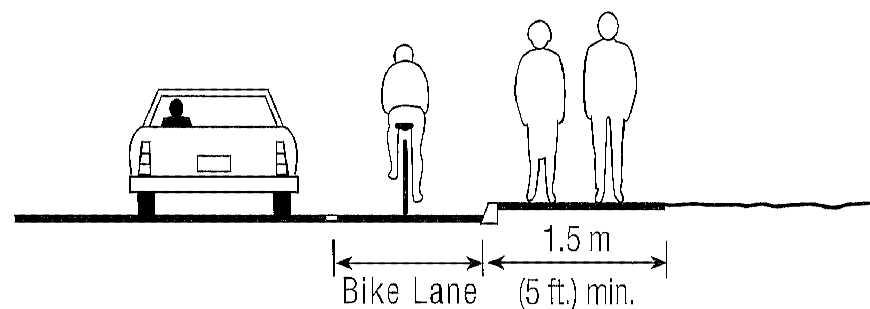


SIDEWALK ALTERNATIVE - ATTACHED

NOT TO SCALE

OPTION 3A - HILL STREET FROM HILL STREET PARK TO BUSINESS BLOCK (WEST SIDE)

OPTION 3B - PEACHAM ROAD (WEST SIDE)



BIKE LANE WITH ATTACHED SIDEWALK ALTERNATIVE

NOT TO SCALE

OPTION 1A - HILL STREET FROM HIGHLAND AVENUE TO BUSINESS BLOCK

OPTION 1B - PEACHAM ROAD

NOTE:

THIS SCHEMATIC IS ADAPTED FROM FIGURE 3-18 IN THE VTRANS PEDESTRIAN AND BICYCLE FACILITY PLANNING AND DESIGN MANUAL.



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Approved by	APPROVED BY

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BICYCLE AND PEDESTRIAN STUDY
STP BP13(19)

ALTERNATIVE CROSS SECTIONS

DANVILLE, VERMONT

FIG 4-2

DWG. NO. FIG 4-3.dwg

SHEET 1 OF 1

No Build Alternative

The no build alternative must be considered for all projects funded by the Federal Highway Administrative Act to comply with the National Environmental Policy Act (NEPA). For the proposed pathway project, the no build alternative is pedestrian use of the existing sidewalks and utilization of roadway shoulders and private property by bicyclists as well as pedestrians where sidewalks do not exist. In many sections of the study area, the shoulders are not adequate to provide safe use by both bicyclists and pedestrians.

The no build alternative does not satisfy the Purpose and Need Statement and therefore it is not recommended.

Environmental Concerns

As noted in Section 2, permitting will be required for the bike lanes proposed in Alternatives 1a and 1b adjacent to the Class II wetlands south of the Recycling Center and at the north end of the route along Hill Street. The State of Vermont Wetland Rule regulates activities in wetlands under Individual Permits and the Wetlands General Permit. The project should be designed to minimize the wetlands impacts, including maintaining the wetlands functions and values and minimizing vegetation removal, hydrology changes and earthmoving. The pathway is defined as a Linear Project under the DEC regulations, and would qualify for a General Permit if the project impacts less than 3,000 square feet of Natural Areas with less than 150 sf of impacts in Surface Water Margins.

If the path cannot meet the area thresholds, an Individual Permit will be required, but the project must avoid adverse impacts to wetlands functions and values and must demonstrate an alternate route is not available.

A formal Wetlands Delineation should be conducted at the initial stages of final design to determine the boundaries of the wetland and develop conceptual plans for avoiding the wetlands and minimizing impacts.

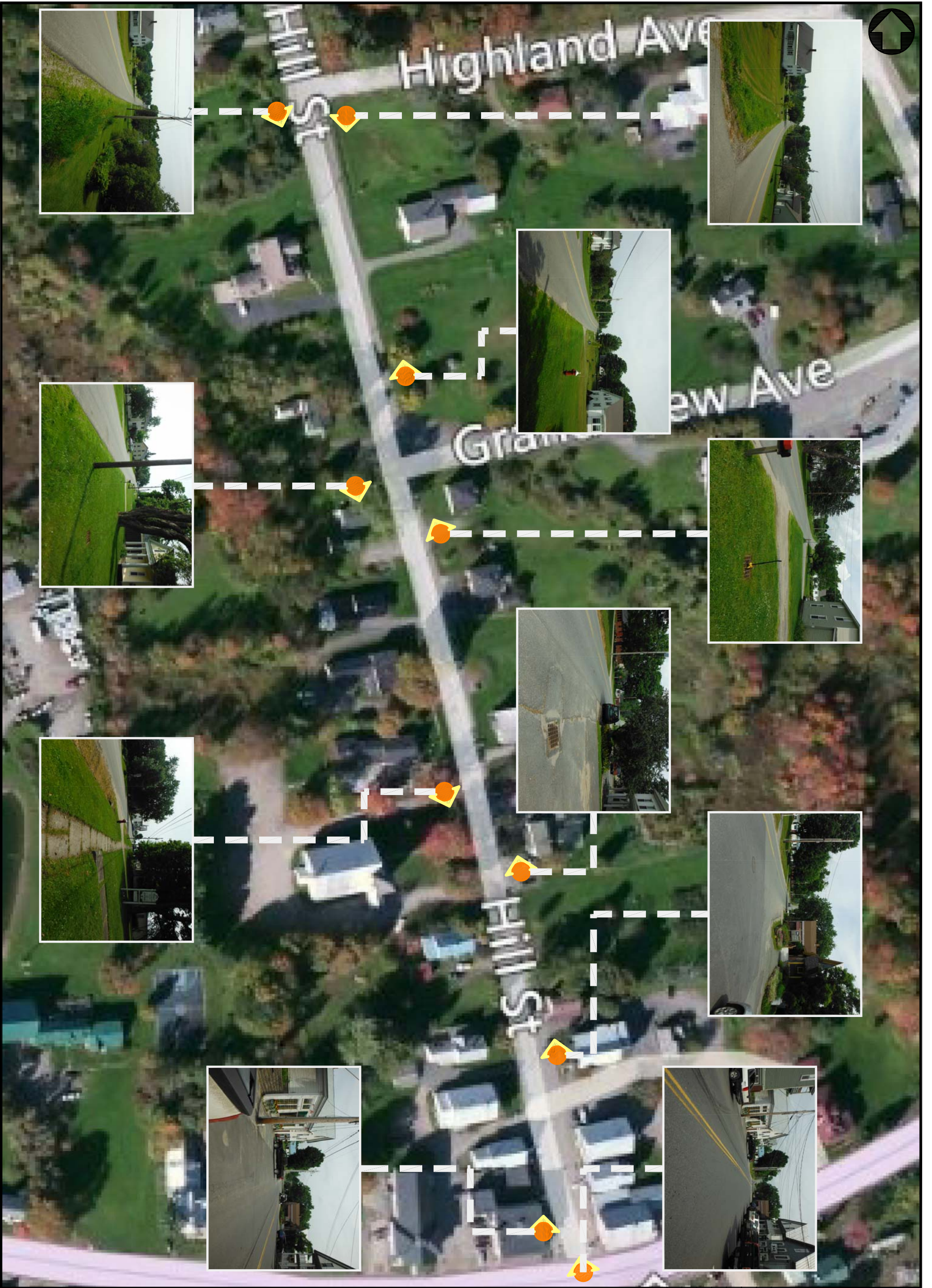
In addition, once topographical survey is completed during the final design stage and the route is refined, the plans should be reviewed by the Zoning Administrator to confirm compliance with local regulations.

Recommended Alternative

Alternatives 3a and 2b were identified as the preferred alternatives in the Alternatives Presentation Meeting. Alternative 3a includes a curbside sidewalk along Hill Street with no bike lanes. Alternative 2b is an 8 foot wide curbside shared use pathway along Peacham Road. The preferred alternative for the Danville Green was determined to be Alternative 4b, the addition of a bicycle rack. Through the first block of Hill Street, stamped concrete to delineate the walkway and parallel parking was the preferred option.

Photographs along the route are included as Figures 4-3 through 4-5.

The proposed route will utilize existing crosswalks with the exception of one location on Hill Street next to the Hill Street Park where a new crosswalk will be necessary.



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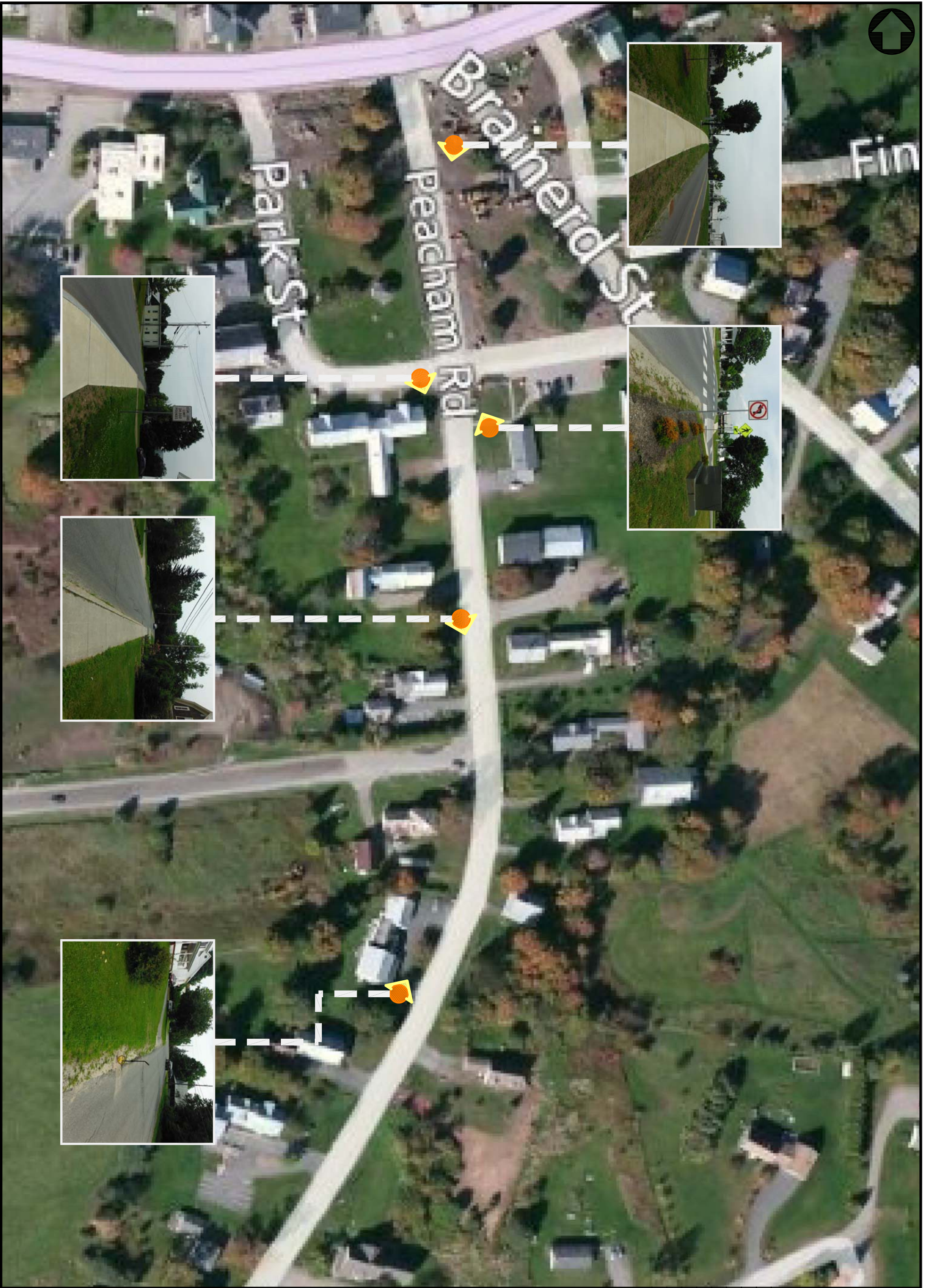
FIGURE 4-3
PROJECT ROUTE
PHOTOS 1 OF 3

DANVILLE, VERMONT

FIG 4-3

DWG. NO. fig 4-.dwg

SHEET 1 OF 1



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**FIGURE 4-4
PROJECT ROUTE
PHOTOS 2 OF 3**

DANVILLE, VERMONT

FIG 4-4

DWG. NO. fig 4-.dwg
SHEET 1 OF 1



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BICYCLE AND PEDESTRIAN STUDY
STP BP 13(19)
**FIGURE 4-5
PROJECT ROUTE
PHOTOS 3 OF 3**
DANVILLE, VERMONT

FIG 4-5

Construction Cost Estimate

We have completed a preliminary construction cost estimate for the preferred alternative of 5' wide sidewalk from Highland Avenue to the business block of Hill Street and the shared pathway from the Danville Green to terminate at the recreational fields off Peacham Road. The construction cost estimates include two alternatives for the shared pathway surface materials: bituminous asphalt paving and concrete.

As shown in Table 4-2, the cost for a concrete surface is estimated at \$54,000 more than the cost for a bituminous asphalt paved surface. The additional cost is not substantial compared to the total construction costs and a concrete surface is recommended due to increased durability. The construction cost for a concrete pathway is estimated at \$342,000 in 2017 dollars.

Table 4-3 presents the construction costs for sidewalk improvements between Highland Avenue and the business block of Hill Street. The construction cost is \$210,000 in 2017 dollars.

The total project cost for the shared pathway with a concrete surface and new sidewalk from Highland Avenue to the recreational fields is \$856,000 based on a construction cost of \$562,000 in 2017 dollars.

In addition, a preliminary construction estimate for the installation of stamped concrete and a two foot wide landscaped median to separate the parallel parking from the walkway in the business block of Hill Street was prepared. The total estimated project cost is \$71,000 based on a construction cost of \$44,000 in 2017 dollars as shown in Table 4-4.

For the Danville Green, the town indicated that they will likely work with community members to install a bike rack at little or no cost to the Town and that work can be done separate from this project.

We have broken the improvements into two phases, separated by US Route 2. Depending on funding availability, the project can be constructed on Peacham Road or Hill Street independent of the other phase.

An evaluation matrix providing a summary of each option and its construction characteristics, impacts, local and regional issues, permits and safety is included in Table 4-5.

TABLE 4-2
PRELIMINARY CONSTRUCTION COST ESTIMATE
SIDEWALK
Danville, Vermont
December 11, 2014

DESCRIPTION	ESTIMATED QUANTITY	UNITS	UNIT PRICE	TOTAL COST
2,000 ft Shared Path from Danville Green to Recreational Fields				
Earth stripping and stockpile	3,111	SY	\$0.50	\$1,556
Subbase gravel	1,444	CY	\$30.07	\$43,434
Aggregate shoulders, in place	44	CY	\$48.21	\$2,143
18" Corrogated Polyethylene Smooth Lined Storm Drain	80	LF	\$28.62	\$2,290
Precast Reinforced Concrete Catch Basin with Cast Iron Grate	4	EA	\$2,275.96	\$9,104
Adjust Existing Catch Basin, Manhole Rims	6	EA	\$492.41	\$2,954
Signs - No Motor Vehicles	16	SF	\$11.30	\$181
Square tube sign post and anchor	32	LF	\$7.33	\$235
Remove and Reset existing signs	1	EA	\$28.43	\$28
Relocate Mailbox Single Support	9	EA	\$147.74	\$1,330
Block Retaining Wall (<4' High)	75	LF	\$175.00	\$13,125
Granite Curb	1,500	LF	\$25.07	\$37,605
Detectable Warning Surface	48	SF	\$48.17	\$2,312
Remove Existing Curb	320	LF	\$5.33	\$1,706
Remove Existing Sidewalk	31	CY	\$20.50	\$633
Topsoil	148	CY	\$25.18	\$3,730
Seed, Winter Rye	24	LB	\$3.90	\$94
Uniform Traffic Officer	200	MHR	\$42.07	\$8,414
Mobilization/demobilization	1	LS	\$20,000.00	\$20,000
			Subtotal	\$151,000

Surfacing Alternatives:

Alternative 1: Bituminous Asphalt Pavement Surface

Common Excavation	1,605	CY	\$15.27	\$24,507
2" Thick Bituminous Asphalt Pavement	200	TON	\$177.27	\$35,000
			Total	\$59,507

Alternative 2: Concrete

Common Excavation	1,846	CY	\$15.27	\$28,184
5" Thick Portland Cement Concrete	1,778	SY	\$40.07	\$71,000
			Total	\$99,184

Surface Alternative 1: Total Construction Cost shared pathway with pavement surface	\$210,507
Surface Alternative 2: Total Construction Cost shared path with Concrete	\$250,184

Subtotal Construction Cost (Alternative 1 - paved pathway)	\$210,507
Contingency 25%	\$53,000
Total Construction Cost 2014	\$263,507
Total Construction Cost 2017	\$288,000

Subtotal Construction Cost (Alternative 2 - concrete pathway)	\$250,184
Contingency 25%	\$63,000
Total Construction Cost 2014	\$313,184
Total Construction Cost 2017	\$342,000

Notes:

- Costs for the shared pathway are for a 2,000 lf, 8 ft wide shared-use pathway.
- Construction costs are preliminary and are not based on detailed plans and specifications. Actual costs may vary substantially from these estimates.
- The Engineering News Record Construction Cost Indices (CCI) was 9,681 when the cost estimate was completed in February 2014. The 2017 construction cost estimate is projected based on an assumed inflation rate of 3% per year.
- Contingencies are based on 25% of the construction cost at the preliminary planning stage.

TABLE 4-3
PRELIMINARY CONSTRUCTION COST ESTIMATE
SIDEWALK
Danville, Vermont
December 11, 2014

DESCRIPTION	ESTIMATED QUANTITY	UNITS	UNIT PRICE	TOTAL COST
1,400 ft Concrete Sidewalk from Highland Avenue to Hill Street Business Block				
Earth stripping and stockpile	1,244	SY	\$0.50	\$622
Common Excavation	588	CY	\$15.27	\$8,973
5" Thick Portland Cement Concrete	778	SY	\$40.07	\$31,166
Subbase gravel	622	CY	\$30.07	\$18,710
Aggregate shoulders, in place	31	CY	\$48.21	\$1,500
18" Corrogated Polyethylene Smooth Lined Storm Drain	430	LF	\$28.62	\$12,307
Precast Reinforced Concrete Catch Basin with Cast Iron Grate	5	EA	\$2,275.96	\$11,380
Adjust Existing Catch Basin Rims	5	EA	\$492.41	\$2,462
Relocate Mailbox Single Support	4	EA	\$147.74	\$591
Granite Curb	900	LF	\$25.07	\$22,563
Detectable Warning Surface	32	SF	\$48.17	\$1,541
Remove Existing Sidewalk	32	CY	\$20.50	\$664
Crosswalk Marking	50	LF	\$2.98	\$149
Signs - Crosswalk	39	SF	\$11.30	\$441
Square tube sign post and anchor	16	LF	\$7.33	\$117
Topsoil	181	CY	\$25.18	\$4,570
Seed, Winter Rye	29	LB	\$3.90	\$115
Uniform Traffic Officer	150	MHR	\$42.07	\$6,311
Easement Acquisition for Utility Relocation	1	EA	\$15,000.00	\$15,000
Mobilization/demobilization	1	LS	\$15,000.00	\$15,000
			Subtotal	\$154,000
			Contingency 25%	\$38,500
			Total Construction Cost 2014	\$192,500
			Total Construction Cost 2017	\$210,000

Notes:

1. Costs for the shared pathway are for a 1,400 lf, 5 ft wide concrete sidewalk.
2. Construction costs are preliminary and are not based on detailed plans and specifications. Actual costs may vary substantially from these estimates.
3. The Engineering News Record Construction Cost Indices (CCI) was 9,681 when the cost estimate was completed in February 2014. The 2017 construction cost estimate is projected based on an assumed inflation rate of 3% per year.
4. Contingencies are based on 25% of the construction cost at the preliminary planning stage.

TABLE 4-4
 PRELIMINARY CONSTRUCTION COST ESTIMATE
 SIDEWALK
 Danville, Vermont
 December 11, 2014

DESCRIPTION	ESTIMATED QUANTITY	UNITS	UNIT PRICE	TOTAL COST
Hill Street Business Block				
Common Excavation	73	CY	\$15.27	\$1,122
Excavation of Surfaces and Pavements	16	CY	\$20.50	\$319
5" Thick Portland Cement Stamped Concrete	117	SY	\$48.08	\$5,610
Subbase gravel	58	CY	\$30.07	\$1,754
Granite Curb	350	LF	\$25.07	\$8,775
2' Wide Landscape Median	175	LF	\$25.00	\$4,375
Detectable Warning Surface	8	SF	\$48.17	\$385
4" Striping	40	LF	\$0.95	\$38
Mobilization/demobilization	1	LS	\$10,000.00	\$10,000
Subtotal				\$32,000
Contingency 25%				\$8,000
Total Construction Cost 2014				\$40,000
Total Construction Cost 2017				\$44,000

Notes:

1. Construction costs are preliminary and are not based on detailed plans and specifications. Actual costs may vary substantially from these estimates.
2. The Engineering News Record Construction Cost Indices (CCI) was 9,681 when the cost estimate was completed in February 2014. The 2017 construction cost estimate is projected based on an assumed inflation rate of 3% per year.
3. Contingencies are based on 25% of the construction cost at the preliminary planning stage.

Table 4-5
 PRELIMINARY EVALUATION MATRIX
 SHARED PATHWAY AND SIDEWALK IMPROVEMENTS
 Danville, Vermont
 December 11, 2014

Category	Do Nothing	Hill Street			Peacham Road			Danville Green		Hill Street Commercial Block	
		Option 1a	Option 2a	Option 3a	Option 1b	Option 2b	Option 3b	Option 4a	Option 4b	N/A	
Description		Concrete Sidewalk with Granite Curb and bike lanes	Asphalt Shared Use pathway, attached with curb for 375 feet, detached for 790 feet	Concrete Sidewalk with Granite Curb and NO bike lanes	Concrete Sidewalk with Granite Curb and bike lanes	Attached asphalt shared Use pathway with granite curb	Concrete Sidewalk with Granite Curb and NO bike lanes	8'-10' wide concrete shared use pathway	Install bike racks in Green only	Painting of sidewalk and pin down curb	
Construction Characteristics	Length (ft)	0	1375	1375	1980	1980	1980	310	N/A	150	
	Width (ft)	0	5	8	5	8	5	10	N/A	5	
	Surface	0	Concrete	Asphalt	Concrete	Concrete	Asphalt	Concrete	N/A	Painted asphalt	
Impacts	New Impervious (sf)	0	6,875	11,000	6,875	9,900	15,840	9,900	3,100	100	0
	Ag. Lands	None	None	None	None	None	None	None	None	None	None
	Archaeological	None	None	None	None	None	None	None	None	None	None
	Historical	None	None	None	None	None	None	None	None	None	None
	Hazardous materials	None	Potential	Potential	Potential	Potential	Potential	Potential	None	None	None
	Floodplains	None	None	None	None	None	None	None	None	None	None
	Fish & Wildlife	None	None	None	None	None	None	None	None	None	None
	Rare, Threatened & Endangered Species	None	None	None	None	None	None	None	None	None	None
	Public Lands - Sect. 4(f)	None	None	None	None	None	None	None	None	None	None
	LWCP - Sect. 6(f)	None	None	None	None	None	None	None	None	None	None
	Noise	None									
	Wetlands	None	Potential	None	None	Potential	None	None	None	None	None
	Utilities - aerial	None	2 Utility Pole Relocations	None	2 Utility Pole Relocations	None	None	None	None	None	None
Utilities - underground	None	375' Storm Drain to replace open ditch and 5 catch basins	Addition of one catch basin along curbed portion	375' Storm Drain to replace open ditch and 5 catch basins	1 Sewer manhole conflict, 3 storm drain conflicts	1 Sewer manhole conflict, 3 storm drain conflicts	1 Sewer manhole conflict, 3 storm drain conflicts	None	None	None	
Local & Regional Issues	Concerns	Pedestrian Safety	None	None	Bicycle Safety	None	None	Bicycle Safety	None	Bicycle Safety, parking	
	Aesthetics	Unchanged	Improved	Improved	Improved	Improved	Improved	Improved	Improved	Improved	
	Community Character	Unchanged	Improved	Improved	Improved	Improved	Improved	Improved	Improved	Improved	
	Economic Impacts	Negative due to lack of connection with LVRT	Positive	Positive	Negative	Positive	Positive	Negative	Positive	Positive	Positive
	Conformance to Town Plan	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Permits	Satisfies Purpose & Need	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	
	ACT 250	No	No	No	No	No	No	No	No	No	
	401 Water Quality	No	No	No	No	No	No	No	No	No	
	404 COE permit (<3,000 SF - Self Verification)	No	No	No	No	No	No	No	No	No	
	Stream Alteration	No	No	No	No	No	No	No	No	No	
	Conditional Use Determination	No	No	No	No	No	No	No	No	No	
	Storm Water Discharge	No	No	No	No	No	No	No	No	No	
	Lakes & Ponds	No	No	No	No	No	No	No	No	No	
	T & E Species	No	No	No	No	No	No	No	No	No	
	SHPO	No	No	No	No	No	No	No	No	No	
Safety	Number of Driveway Crossings	N/A	11	11	11	14	14	14	0	N/A	
	Number of Roadway Crossings	N/A	3	3	3	3	3	3	0	N/A	

SECTION 5
FISCAL IMPLEMENTATION
BICYCLE AND PEDESTRIAN PATHWAY SCOPING STUDY
DANVILLE, VERMONT
December 11, 2014

Project Description

As presented in Section 4, the proposed project is a pathway and sidewalk to provide a safe route for pedestrians walking along Hill Street between US Route 2 and Highland Avenue and for pedestrians and bicyclists travelling along Peacham Road between the Danville Green, Danville School, Lamoille Valley Rail Trail and recreational fields.

Total Project Cost Estimates

As shown in Table 5-1 the total project cost is estimated at \$927,000 including Construction, Contingency, Final Design Engineering, Construction Phase Engineering, Local Project Management and Legal and Fiscal expenses for construction of improvements on Peacham Road and Hill Street as recommended.

Permit Summary

At this time, we anticipate the following permits may be required for the project:

- Stormwater General Permit to Construct
- Stormwater General Discharge Permit
- Wetlands General Permit
- NEPA Categorical Exclusion

In addition, some surveys in the area show the right-of-way of Hill Street and Peacham Road to be 3-rods. Historical documents show a dedicated 4-rod right-of-way. This discrepancy may require additional right-of-way work and coordination with the impacted property owners.

Maintenance

The Town of Danville recently invested in a snowplow to maintain the sidewalks that were installed around and in the Danville Green. They have had success in maintaining those sidewalks for use during the winter months and anticipate that they could expand their maintenance program to include the sidewalk and pathway proposed for this project.

The Town of Danville began a sidewalk maintenance program in 2013 and does not currently track their sidewalk maintenance program costs separate from their road maintenance costs. The Town is committed to maintaining the existing and any new sidewalks developed in the Town and will budget necessary funds for such maintenance. In the future, as Danville expands their sidewalks the expense for

maintenance will likely be tracked separately from other Town road maintenance expenses but as that is currently not the case it is difficult to predict maintenance costs.

TABLE 5-1
TOTAL PROJECT COST
SHARED PATHWAY AND SIDEWALK IMPROVEMENTS
Danville, Vermont
December 9, 2014

DESCRIPTION	TOTAL COST
Peacham Road Pathway Construction Cost in 2017 with 25% contingency	\$342,000
Engineering:	
Design Phase Engineering	\$69,000
Construction Phase Engineering	\$69,000
Local Project Management	\$37,000
Legal and Fiscal	\$10,000
Total Project Cost Pathway	\$527,000

DESCRIPTION	TOTAL COST
Hill Street Sidewalk Construction Cost in 2017 with 25% contingency	\$210,000
Engineering:	
Design Phase Engineering	\$43,000
Construction Phase Engineering	\$43,000
Local Project Management	\$23,000
Legal and Fiscal	\$10,000
Total Project Cost Sidewalk	\$329,000

DESCRIPTION	TOTAL COST
Business Block Sidewalk Construction Cost in 2017 with 25% contingency	\$44,000
Engineering:	
Design Phase Engineering	\$10,000
Construction Phase Engineering	\$10,000
Local Project Management	\$6,000
Legal and Fiscal	\$1,000
Total Project Cost Business Block Sidewalk	\$71,000

Total Project Cost **\$927,000**

Notes:

1. Construction costs are preliminary and are not based on detailed plans and specifications. Actual costs may vary substantially from these estimates.
2. The 2017 construction cost estimate is projected based on an assumed inflation rate of 3% per year.
3. Contingencies are based on 25% of the construction cost at the preliminary planning stage.
4. Engineering costs are estimated based on guidance from VTrans Report on Shared-Use Path and Sidewalk Unit Costs, August 2014
5. Legal, Admin, and Fiscal costs are estimated at approximately 3% of the Construction Cost.

Project Schedule

The proposed project schedule is based on several criteria including the following factors:

- The need for the improvements as defined by local officials.
- The cost of the project to property owners and local approval of the project.
- Securing temporary and, if necessary, permanent easements for the shared pathway.
- Funding requirements.
- Permitting requirements

Based on these factors we suggest a project schedule as shown in Table 5-2.

TABLE 5-2
PROJECT SCHEDULE
BICYCLE AND PEDESTRIAN PATHWAY
DANVILLE, VERMONT
December 8, 2014

<u>PROJECT TASK</u>	<u>DATE</u>
Receive Study Approval	November 2014
Submit Funding Application for Final Design Funds	June 2015
Receive Approval of Funding Application	August 2015
Grant Agreement Executed	October 2015
Procurement for Design Services	January 2016
Complete Topographic Survey and ROW	May 2016
Final Design Plans and Specifications Advertised for Bid	April 2017

Notes:

1. The project schedule is based on several items beyond the control of the Town of Danville including the availability of funding, the time necessary to obtain permits, the time the regulatory and funding agencies need to review plans and specifications and the success or failure of local bond votes. The schedule may change based on the actual time needed to complete these tasks.
2. Obtaining easements and determining Right-of-Way (ROW) is one of the most common causes of construction delay. This schedule assumes no issues occur during easement acquisition and ROW clearance.

Funding Implications

The Town of Danville does not have the funds to finance the pathway project locally and therefore must receive grants or take on long-term debt to finance the proposed project. The VTrans Bicycle and Pedestrian Program, administered by the VTrans Local Transportation Facilities (LTF), provided funding for this report and is the most likely funding source for design and construction.

The proposed path is an eligible project under the Bicycle and Pedestrian Program. The funding shares are 90% Federal/State and 10% local. However, if a project funded

under this program does not proceed to construction, any funds provided for the preliminary and design phases are subject to being paid back by the municipality. Grant applications are accepted annually and are generally due by the last week of July.

The Transportation Alternatives Program (TA), also administered by LTF, is an option for funding design, but the maximum Federal award under the TA Program is limited to \$300,000, therefore this is not an option for funding of this project unless it were broken into several phases and completed over the course of several years.

Based on funding under the Bicycle and Pedestrian Program, the local share of the total project cost is estimated to be \$92,700. However, since this is a reimbursement program, the town will need to have sufficient funds available to pay invoices prior to reimbursement from the funding program.

APPENDICES
BICYCLE AND PEDESTRIAN PATHWAY SCOPING STUDY
DANVILLE, VERMONT
December 11, 2014

Appendix A: Truline Land Surveyors
Right-of-Way Research Results, July 2014

Truline

LAND SURVEYORS, INC.



448 SUMMER STREET, SUITE 102
ST. JOHNSBURY, VT 05819-2159
PHONE/FAX: (802) 748-3946 / truline448@gmail.com



July 14, 2014

Andrea J. Day, PE
459 Portland Street
St. Johnsbury, VT 05819

Re: Peacham Road / Hill Street, Danville, VT

Dear Ms. Day,

Enclosed are copies of the deeds for the layout of a County Road currently known as Peacham Road and Hill Street along with a sketch of the same.

The roads were laid out as four rods wide (66 feet) in May 1798 as recorded in Book 4, Page 128 and Book 4, Page 131 of the Danville Land Records.

There are various surveys that exist along the project area which had assumed a 3 rod wide limit (49.5 feet), copies of which can be made available upon request.

Please review the documents and feel free to contact me with any questions or if we can be of further assistance.

Sincerely,

Shane B. Clark, LS
Truline Land Surveyors

Whereas the Legislature of Vermont by an act passed the 3 day of Nov^r last appointed the Subscribers a Committee to lay out & Survey a County road from the County house in Chelsey to the Court house in Danville, we have laid out said Road from the North line of Danville to the Court house in said Town four rods wide, as follows— Beginning on the Descent of a hill in the North line of the Town and running

Courses	Chains links	Remarks
N 30° E —	7. 00	
N 10 E —	7. 00	
N 35 E —	11. 50	
N 51 E —	4. 30	To a beech tree Marked 36 Miles
N 34 E —	18. 50	
N 15 E —	8. 50	
N 32 E —	20. 00	
North —	13. 00	
N 8 W —	18. 50	
N 18 W —	2. 50	To a board Marked 37 Miles
N 18 W —	4. 00	
N 10 E —	16. 50	
N 3 W —	14. 00	
N 30 E —	4. 50	
N 40 E —	12. 00	
N 4 E —	11. 00	To a Stake in the front of the Court house at four rods, distance the courses are designed for the middle of the Road.

Continuation of the County or post road from Danville
 Court House to the North line of Danville in pursuance of
 the act of the General Assembly passed in Windsor Nov. 3 1797
 the following Points being the center of the road and extending
 two rods each way from said line viz Beginning four rods ~~each~~
 opposite the Court House door at a Stake thence

4/131

^D N 5 ^m W	Rods
N	60
N 35 E	22
N 43 E	50
N 35 E	20
N 45 E	46 1 Mile
N 50 E	38
N 50 E	140
N 40 E	124 2 Miles
N 40 E	83
N 60 E	81
N 3 E	351
N 28 E	59
N 2 E	76
Do	64
Do	10
N 7 W	80
N 30 E	26
N 18 E	30
N 11 E	48
N 5 E	60
N 20 E	30
N	22

N 18 E	96
N 30 E	180
N 2 W	84
N 11 E	28
N 8 E	44
N 30 E	33
N 5 E	108
N 18 E	20
N	96
N 22 W	20
N 10 W	20
N 50 E	12
N 40 E	14
N 25 E	38
N 2 E	83

to Danville North Line

The foregoing is a true copy of the
 Survey of the points and distances from
 the Court House in Danville to the
 N 44 E W will as surveyed by us

Appendix B: Hartgen Archeological Associates, Inc. Archeological and Historical
Resource Assessment; Danville STP BP13 (19) Project, July 2014

ARCHEOLOGICAL RESOURCE AND HISTORIC PRESERVATION ASSESSMENT

Danville Sidewalk Scoping Study STP BP13(19)

Hill Street and Peacham Road
Town of Danville
Caledonia County, Vermont

HAA # 4751-11

Submitted to:

Dufresne Group Consulting Engineers
54 Main Street
Windsor, Vermont 05089

Prepared by:

Hartgen Archeological Associates, Inc.

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Putney, Vermont 05346
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e tjamison@hartgen.com

www.hartgen.com

An ACRA Member Firm
www.acra-crm.org

July 2014

ABSTRACT

Hartgen Archeological Associates, Inc. (Hartgen) was contracted by Dufresne Group Consulting Engineers to conduct an Archeological Resource and Historic Preservation Assessment for the proposed Danville STP BP 13(19) sidewalk scoping project located along Hill Street and Peacham Road in the Town of Danville, Caledonia County, Vermont. The current review is conducted under Section 106 of the National Historic Preservation Act of 1966, as amended. The project requires approvals by the Vermont Agency of Transportation (VTrans). The project area of potential effects (APE) includes approximately 275 feet (84 m) along Hill Street and 1,588 feet (484 m) along Peacham Road. The APE will be on one side of the road and is defined as 15 feet (4.6 m) in width, for a total APE of 0.64 acres (0.26 ha). However, for the scoping study, both sides of the road were examined.

A site visit was conducted on July 14, 2014 to examine the project area for areas of archeological sensitivity, disturbance as well as to document historic structures and features within or adjacent to the APE. The APE extends through two historic districts surveyed on the Vermont Historic Sites and Structures Survey (Danville Green HD and Railroad Street HD). The background research and the site visit identified some archeological sensitivity in the area. However, disturbance from several utility alignments, road and earlier sidewalk construction has reduced the archeological potential within the narrow APE. If, upon project design, the APE is expanded beyond the 15 foot (4.6 m) limit, Phase IB archeological reconnaissance survey may be warranted.

There are no historic preservation concerns related to this project as currently defined.

UTM coordinates (NAD 1983): Zone 18

NE: 727777N, 4921811E

NW: 727483N, 4921801E

SE: 727859N, 4920849E

SW: 727385N, 4920785E

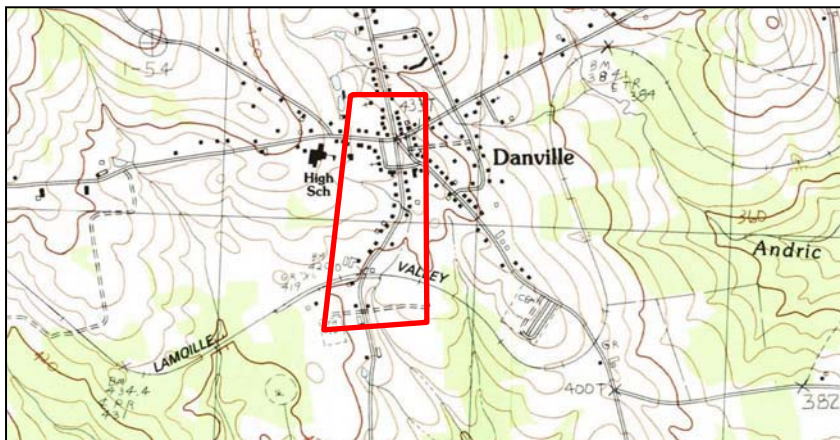


TABLE of CONTENTS

ARCHEOLOGICAL RESOURCE AND HISTORIC PRESERVATION ASSESSMENT..... 1

Introduction..... 1

Project Information..... 1

 Project Description..... 1

 Description of the Area of Potential Effects (APE)..... 1

Environmental Background..... 1

 Present Land Use and Current Conditions..... 1

 Soils 5

 Bedrock Geology 5

 Physiography and Hydrology 5

Documentary Research..... 5

 Archeological Sites..... 5

 State and National Register 6

 Previous Surveys 8

Historical Map Review 8

Architectural Discussion..... 11

 Structures..... 11

 Associated Landscape Features 12

 Sidewalks 12

 Curbs 12

 Retaining walls..... 12

 Other Street Furniture..... 12

Archeological Sensitivity Assessment 20

 Precontact Archeological Sensitivity..... 20

 Historic Archeological Sensitivity 20

Archeological Potential..... 20

Recommendations 22

Bibliography..... 23

APPENDIX 1: VDHP Environmental Predictive Model

Map List

Map 1. Project location..... 2

Map 2. Project alignment with structures and photo angles..... 3

Map 3. Project area in 1875..... 9

Map 4. Detail of project area in 1875..... 10

Photograph List

Photo 1. Hill Street APE. Note close proximity of buildings to the road. View to the north..... 4

Photo 2. Peacham Road APE. Note lawns extending to the roadside and slightly rolling topography. Structure 19 on the left and Structure 20 on the right. View to the south..... 4

Photo 3. Structure 5, 53 Hill Street (VHSSS 0303-160, 38). View to the west/northwest..... 13

Photo 4. Structure 11, 10-12 US Route 2 (VHSSS 0303-160, 33). View to the northeast..... 13

Photo 5. Structure 12, 11 US Route 2 (VHSSS 0303-160, 8). View to the northeast. 14

Photo 6. Structure 14, 132 Peacham Road (VHSSS 0303-163, 15). View to the west/northwest..... 14

Photo 7. Structure 13, 123 (?) Peacham Road (VHSSS 0303-163, 2). View to the northeast..... 15

Photo 8. Structure 17, 143 Peacham Road (VHSS 0303-163, 14). View to the west/northwest..... 15
 Photo 9. Structure 20, 192 Peacham Road (VHSS 0303-163, 13). View to the north/northwest..... 16
 Photo 10. Structure 21, 218 Peacham Road (VHSS 0303-163, 12). View to the northwest..... 16
 Photo 11. Structure 29, 347 Peacham Road (VHSS 0303-163, 7). Former railroad depot structure. Note
 railroad alignment adjacent to the structure. View to the north/northeast. 17
 Photo 12. Structure 30, 378 Peacham Road (VHSS 0303-69). View to the northwest..... 17
 Photo 13. Structure 32, 428 Peacham Road (VHSS 0303-60). View to the west. 18
 Photo 14. Structure 35, 478 Peacham Road (VHSS 0303-55). View to the southwest. 18
 Photo 15. Structure 15, 148 Peacham Road, Danville Central School. A masonry educational structure
 constructed between 1938 and the late 20th century. View to the north. 19
 Photo 16. Structure 31, unidentified address on Peacham Road. A gambrel-roofed barn not associated with
 a standing house. View to the northeast. 19
 Photo 17. Structure 34, unidentified address on Peacham Road. A one-and-a-half story vernacular cottage.
 View to the northeast. 20
 Photo 18. The stream crossing along the railroad alignment. View to the northeast..... 21
 Photo 19. Existing sidewalk along the west side of Hill Street. View to the south. 21
 Photo 20. Peacham Road with hydrant on the right and storm drainage swale on the left. View to the north.
 22

Table List

Table 1. Soils in Project Area..... 5
 Table 2. Vermont Archeological Inventory (VAI) Sites in the general project vicinity 5
 Table 3. VHSS Properties and Inventoried Buildings within or Adjacent (<200ft) to the Project Area..... 6

ARCHEOLOGICAL RESOURCE AND HISTORIC PRESERVATION ASSESSMENT

INTRODUCTION

Hartgen Archeological Associates, Inc. (Hartgen) was retained by Dufresne Group Consulting Engineers to conduct an Archeological Resource and Historic Preservation Assessment for the proposed Danville Sidewalk Scoping Study (STP BP 13(19)) located on Hill Street and Peacham Road in the Town of Danville, 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. The investigation was conducted according to the *Vermont State Historic Preservation Office's Guidelines for Conducting Archeology in Vermont* (2002).

PROJECT INFORMATION

A site visit was conducted by Thomas R. Jamison on July 10, 2014 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. Walter R. Wheeler provided the historic preservation assessment for the project.

Project Description

The project is a scoping study to determine the feasibility of expanding the existing sidewalk network to improve access and safety for pedestrians north of the commercial district, and to the Rail Trail and the athletic fields to the south. It includes the following components:

- Approximately 275 feet (84 m) along Hill Street extending north of Route 2 (Map 2).
- Approximately 1,588 feet (484 m) along Peacham Road extending from the existing sidewalk to the entrance to the athletic fields to the south (Map 2).
- The project area is estimated to extend 15 feet (4.7 m) from the edge of pavement. Although the sidewalk will be located on one side of the road, both sides are examined in this report.

Description of the Area of Potential Effects (APE)

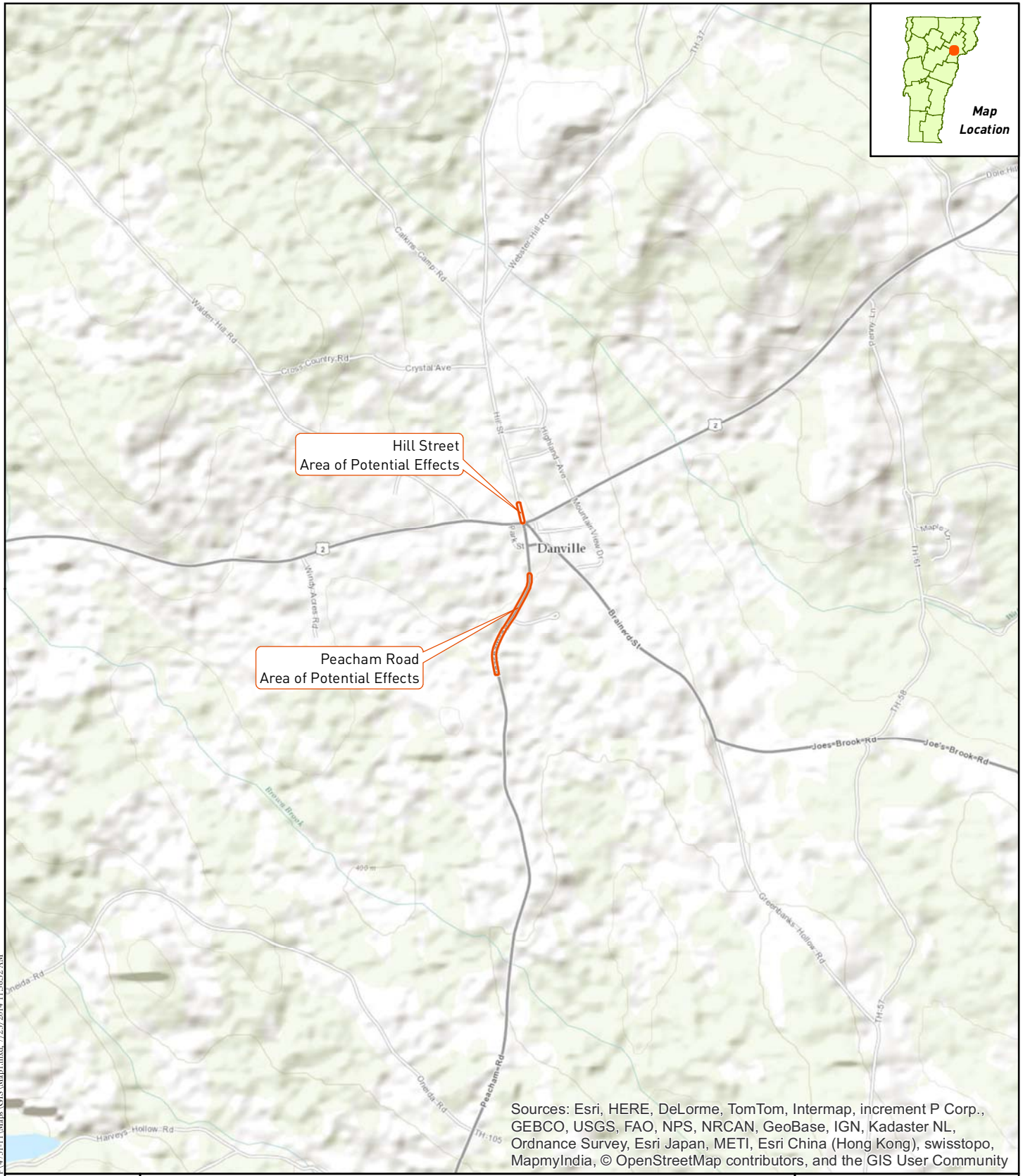
VTrans requires that all projects under archeological review have a clearly defined area of potential effects (APE) that includes all areas where ground disturbance is proposed and areas that may be affected temporarily or unintentionally such as staging areas and rights-of-way. Based on the proposed effects listed above, the APE (one side of the road) for direct effects includes approximately 0.64 acres (0.26 ha).

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.

Present Land Use and Current Conditions

The project area is divided into two sections, Hill Street and Peacham Road. The Hill Street section is lined with closely spaced residential and commercial buildings with small lawn areas in front of a few of the structures (Photo 1). The Peacham Road section is in a less built up area of town, extending to the south adjacent to more widely spaced, mostly residential, structures with more open space between them (Photo 2).

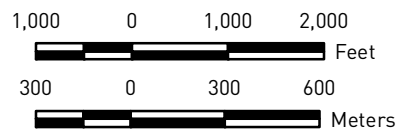


Hill Street
 Area of Potential Effects

Peacham Road
 Area of Potential Effects

Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

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- Legend**
- ⊘ Structure
 - Photograph Angle
 - ▭ Area of Potential Effects (APE)


HARTGEN
 archeological associates inc.
 Project Map
 (Hartgen 2014, VCGI 2011)
Map 2

Aerial photography courtesy of Google Earth. Map data courtesy of Esri, DeLorme, NAVTEQ, Swisstopo, U.S. Geological Survey, AeroGRID, IGN, Esri, Mapbox, and others.



Photo 1. Hill Street APE. Note close proximity of buildings to the road. View to the north.



Photo 2. Peacham Road APE. Note lawns extending to the roadside and slightly rolling topography. Structure 19 on the left and Structure 20 on the right. View to the south.

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 soil survey, the project area is characterized by soils that developed on glacial till (USDA 2014). However, the Vermont Geological Survey identified the surficial geology to be moraine deposits (Doll et al. 1970). This distinction is unlikely to be significant for archeological potential.

Table 1. Soils in Project Area

Symbol	Name	Textures	Slope	Drainage	Landform
14C	Vershire-Lombard complex	Rocky sandy loam	3-8%	Well drained	Glacial till
22B	Cabot silt loam	Silt loam	3-8%	Poorly drained	Glacial till
24A	Peacham muck	Mucky loam	0-3%	Very poorly drained	Depression in glacial till

Bedrock Geology

The bedrock in the project area is the carbonaceous phyllite and limestone member of the Waits River formation (Ratcliffe et al. 2011). Although it contains some quartz and may have been a source for expedient tools, it was not utilized as a source of raw materials for stone tool production.

Physiography and Hydrology

The Village of Danville is located on the generally southeast facing upland landform. The Hill Street portion of the project area slopes down to the east, while the Peacham Road section is in an area with a more gentle slope to the south and is generally level with gradual slopes down to the east, west and south. There are no significant waterways within the APE. Adjacent to an abandoned railroad alignment near the south end of the Peacham Road section, a small drainage crosses the APE, flowing from west to east. Otherwise, the general vicinity is bounded by Brown Brook that flows south on the west side and Water Andric that flows south on the east side. However, both are located well away from the APE. Somewhat closer, but still outside of the APE, are several wetlands.

DOCUMENTARY RESEARCH

Archeological Sites

Previously reported archeological sites provide an overview of both the types of sites that may be present in the project area and relation of sites throughout the surrounding region. 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 project area.

An examination of the archeological site files at the Vermont Division for Historic Preservation (VDHP) identified no reported archeological sites within a one mile (1.6 km) radius of the project area. However, several sites further removed from the APE (Table 2) provide an indication of the types of sites that may be present in the project vicinity. These site locations reflect the distance of waterways from the project APE.

Table 2. Vermont Archeological Inventory (VAI) Sites in the general project vicinity

VAI Site No.	Site Identifier	Description	Proximity to Project Area
VT-CA-2		19 th -century foundations, Deweyburg?	6.47 km to W
VT-CA-3		Late Archaic tools and pos. cremation	2.87 km to SW
VT-CA-17	Harvey Hollow Site	Late Archaic projectile points, Joes' Pond	2.62 km to S

VAI Site No.	Site Identifier	Description	Proximity to Project Area
VT-CA-52		19 th -century mill dam	5.92 km to SE
VT-CA-53		19 th -century foundations	2.47 km to E
VT-CA-54		19 th -century foundation	2.39 km to E
VT-CA-100	Eliakin Hunt Farm	Early 19 th -century farm and precontact site of unknown date	2.78 km to SW

State and National Register

A search of the files at VDHP identified five properties surveyed by the Vermont Historic Sites and Structures Survey (VHSSS) located directly adjacent to the project APE. These properties include two historic districts (Danville Green HD and Railroad Street HD) and three individual structures. The Danville Green Historic District has been determined by the Vermont Advisory Council on Historic Preservation to be eligible for listing on the National Register of Historic Places, but has yet to be nominated. The locations of and a brief description of all seven properties is provided below in Table 3.

Table 3. VHSSS Properties and Inventoried Buildings within or Adjacent (<200ft) to the Project Area

VHSSS Number	Property Name or Address	Str. #	Photo # (Map 2)	Status	Description of Building
0303-160, 38	71 Hill Street	1		NRE	19 th century wood-framed Classic Cottage with detached early 20 th century garage
0303-160, 5	60 Hill Street	2		NRE	Late 19 th or early 20 th century gambrel-roofed 1 ½ story vernacular wood-framed dwelling
0303-160, 6	46 Hill Street, Creamery Restaurant	3		NRE	Late 19 th century gable-entry 1 ½ story vernacular wood-framed cottage
0303-160, 6	46 Hill Street	4		NRE	Heavily altered 1 ½ story 19 th century wood-frame vernacular cottage
0303-160, 37	53 Hill Street	5	3	NRE	c. 1875 Two story wood-frame side-passage gable-entry dwelling with prominent two-story bay window and Greek revival detailing
0303-160, 36	45 Hill Street	6		NRE	Two story wood-frame vernacular gable-entry dwelling with two-story covered porch, heavily altered
0303-160, 35	29 Hill Street, The Open Door	7		NRE	Two story late 19 th or early 20 th century vernacular mixed use building, wood-framed with gable entry, Greek revival detailing
0303-160, 7	32 Hill Street, Health Source Chiropractic	8		NRE	Two story wood-frame vernacular gable-entry mixed-use building with two-story covered porch, Greek revival detailing
0303-160, 8	20 Hill Street	9		NRE	Two story wood-frame vernacular gable-entry mixed-use building with Greek revival detailing
0303-160, 34	23 Hill Street, The Open Door	10		NRE	One-story wood-framed vernacular commercial structure with flat roof.
0303-160, 33	10 - 12 US Route 2	11	4	NRE	Two story on high brick basement mixed use building wood-framed building with flat roof and two-story porch extending along its Route 2 elevation, c.1900

VHSSS Number	Property Name or Address	Str. #	Photo # (Map 2)	Status	Description of Building
0303-160, 8	11 US Route 2, Diamond Hill Store	12	5	NRE	Two story wood-frame vernacular gable-roofed mixed-use building with Queen Anne details and two-story covered porch
0303-163, 2	123 Peacham Road?	13	6		19 th century vernacular wood-framed Classic Cottage with attached back house and barn
0303-163, 15	132 Peacham Road	14	7		One-story wood-framed gable entry gambrel-roofed house, c.1900, with later detached garage
0303-163, 3	137 Peacham Road?	16			19 th century wood-framed Classic Cottage with attached back house and barn
0303-163, 14	146 Peacham Road	17	8		Late 19 th or early 20 th century two-story side-passage wood-framed vernacular house with pyramidal roof, with associated carriage barn
0303-163, 4	163 Peacham Road	18			19 th century wood-framed Classic Cottage with associated gable-entry barn
0303-163, 12	218 Peacham Road	21	10		Two story gable-entry wood-framed vernacular house from the late 19 th century, with attached barn
0303-163, 11	246 Peacham Road, Danville Place	23			Mid-19 th century wood-framed two-story center-passage house with attached backhouse and barn, the latter extensively altered
0303-163, 10	272 Peacham Road	24			c.1900 two story center-passage wood-framed vernacular house with hipped pyramidal roof and detached two-bay garage
0303-163, 6	263 Peacham Road	25			Two story T-plan gable-entry vernacular wood-framed house with Italianate wrap-around porch
0303-163, 9	296 Peacham Road, Danville Volunteer Fire Department	26			Three-bay wood-framed gable entry fire station
0303-163, 8	332 Peacham Road	27			19 th century wood-framed Classic Cottage with attached back house and barn, and associated outbuilding
0303-163, 7	347 Peacham Road, Danville Recycling Center	29	11		c. 1895 one-story wood-framed former railroad depot
0303-69	378 Peacham Road, Farr's Antiques	30	12		c. 1855 vernacular Classic Cottage with attached back house and gambrel-roofed barn
0303-60	428 Peacham Road	32	13		c. 1918 vernacular Colonial Revival wood-framed house with associated garage
0303-55	478 Peacham Road	35	14		c. 1855 two-story vernacular wood-framed center-passage Greek Revival house with attached back house and barn

Previous Surveys

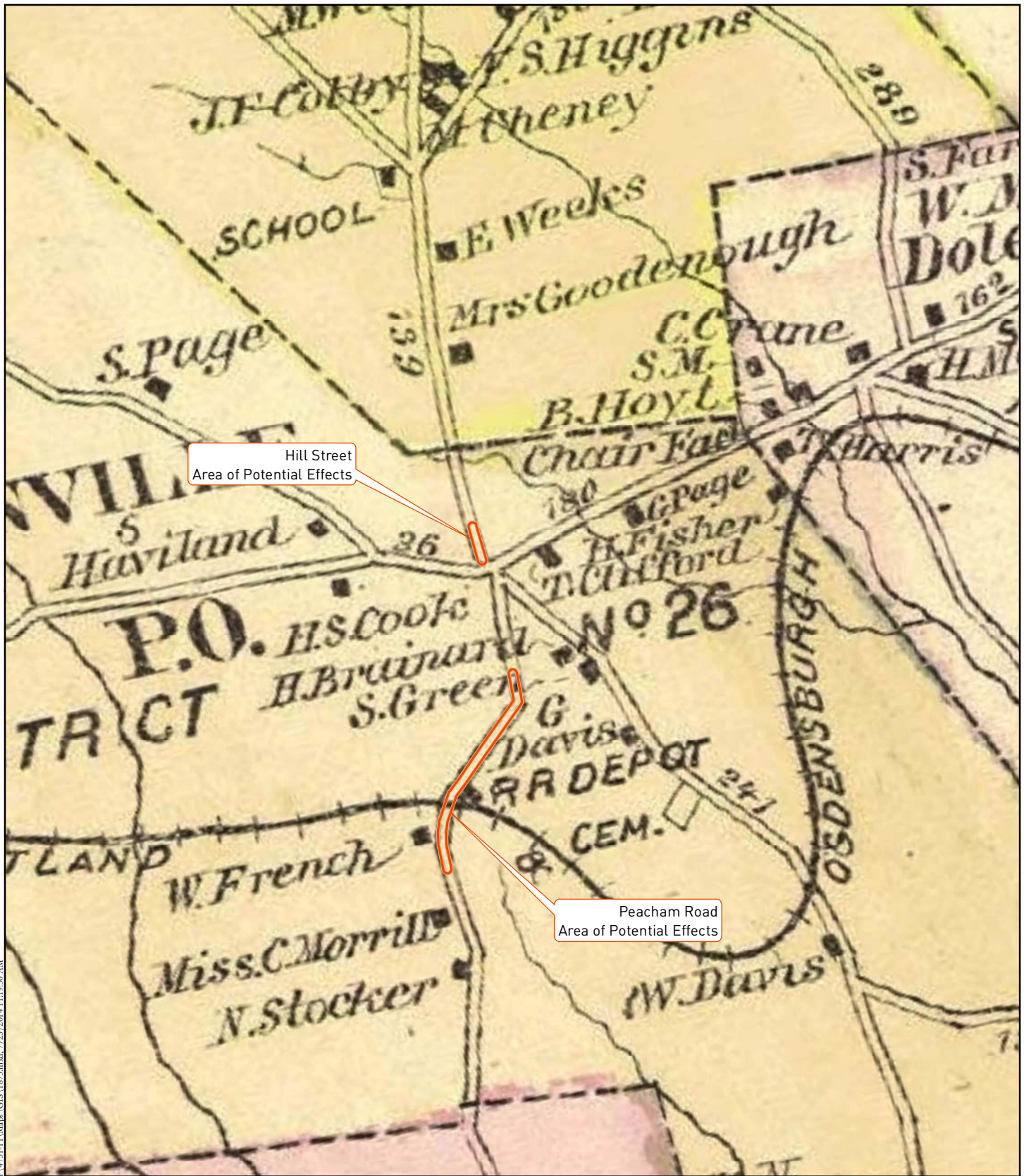
Very little archeological investigation has taken place in the project vicinity. Four reports are included in the VDHP files. In 1981, UVM conducted two Phase I studies in the area. One Phase I survey was for a wastewater treatment facility located 0.43 miles (0.7 km) east of the south end of the Hill Street APE (Thomas et al. 1981a). The survey did not identify any precontact archeological sites. One 19th-century foundation was identified, but it does not appear to have been given a VAI number. The second investigation was a Phase IA study for upgrades to Route 2 east and west of the APE (Thomas et al. 1981b). The study determined the areas along Route 2 to have a low potential for precontact deposits. It did identify several historic foundations, but they were not given VAI numbers.

A site visit by the USDA-NRCS examined an area proposed for development of an RV park. The Sugar Ridge RV project was located approximately 0.7 miles (1.1 km) to the east of the Hill Street APE (Skinsas 1998). During the site visit two foundations were identified that may relate to maple sugar production, although the substantial size suggested to the investigator that they may have been less specialized use. These sites were inventoried as VT-CA-53 and VT-CA-54.

Finally, a proposed condominium project area was identified as having archeological potential. Owners of 332 Peacham Road (Str. 27 on Map 2) proposed to construct condominiums in the field behind the standing house and barn (Lendway 2007). The property was identified as being archeologically sensitive and requiring a site visit. It is unclear if any additional investigation was conducted.

HISTORICAL MAP REVIEW

Both the 1858 Walling map and the 1875 Beers atlas of the project area provide details of the Hill Street APE with little detail of the Peacham Road APE. Walling identifies many of the structures along the Hill Street APE with business activities including store and printing office, hotel, doctors office, cabinet shop, shoe store, harness shop, tin shop and general store (Walling 1858). The Beers map shows greater detail in the layout of the structures adjacent to the APE (Beers 1875, Maps 3 and 4). Combined, they provide a good view of the myriad activities that characterized a small Vermont village center. None of these maps indicate a potential for buried historic structure remains to be present within the APE. However, there is certainly the potential that such remains are present, representing structures that are not represented on the maps. The same can be said for the Peacham Road APE, where the potential for structures that do not appear on the historic maps may be greater due to the area being removed from the better documented village center.



Hill Street
Area of Potential Effects

Peacham Road
Area of Potential Effects

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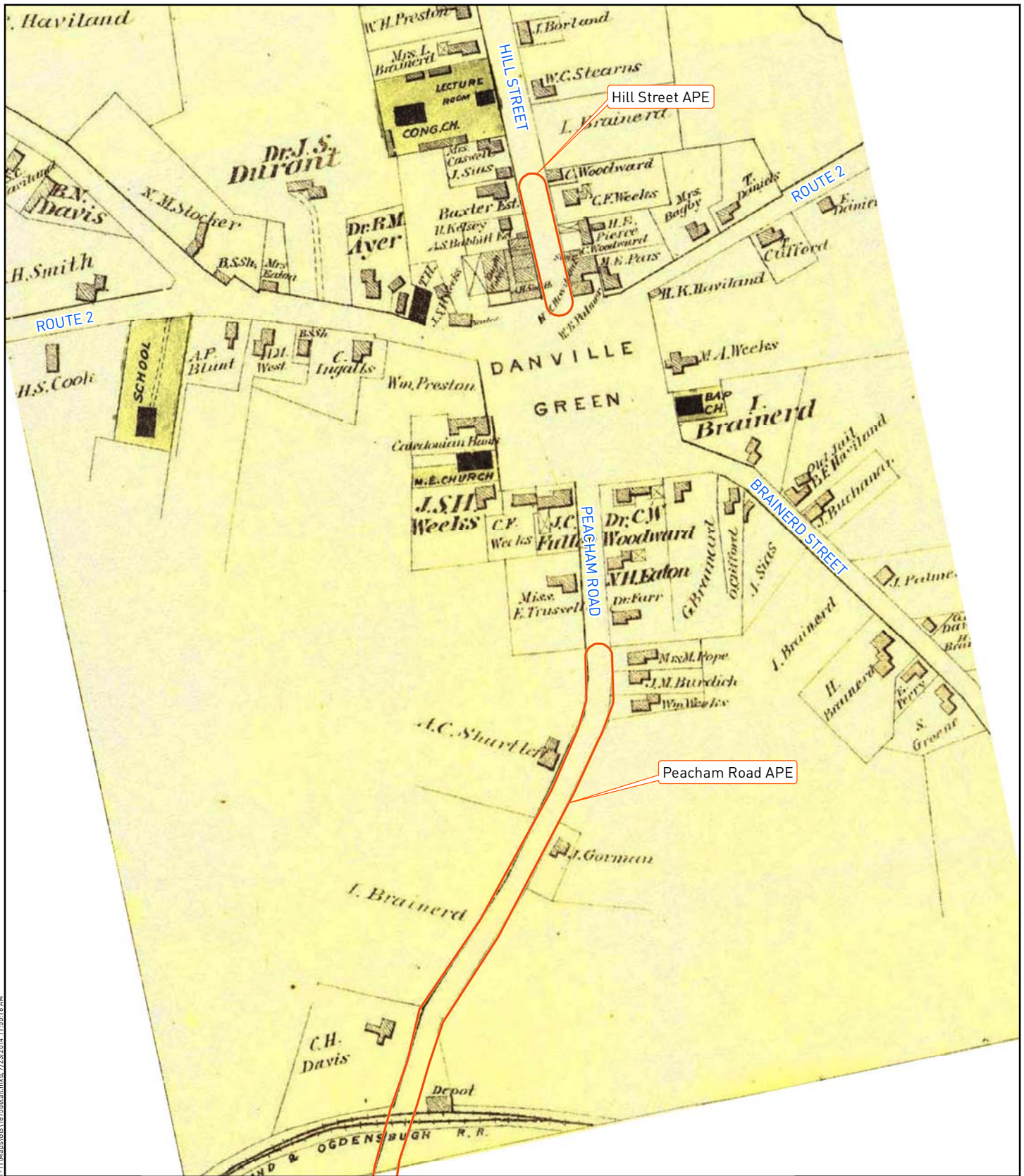


Town of Danville
(Beers 1875)

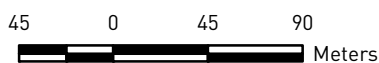
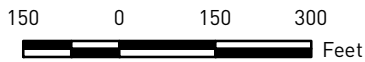


HARTGEN
archeological associates inc

Map 3



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HARTGEN
 archeological associates inc

Town of Danville Detail Map,
 Beers 1875

ARCHITECTURAL DISCUSSION

Structures

The majority of the 35 structures adjacent to the two parts of the project APE have been previously surveyed. (Table 3). Twelve of these structures have previously been determined to be eligible for listing on the National Register as part of a proposed Danville Village Historic District. Seven structures have not previously been surveyed (Table 4). Three of these are in excess of 50 years in age (Structures 15, 31 and 34; Photos 15 thru 17).

All but one of the structures within the two project APEs are wood-framed. Their construction dates span from the second quarter of the 19th century until the recent past, with by far the greatest number of structures having been built in the period c.1850-1915, and representing the area's greatest period of prosperity, including the end of its period as county seat and heyday as a railroad stop.

The building types include late 19th and early 20th century commercial and mixed-use buildings in a village setting (Structures 7, 8, 9, and 11; Photos 4 and 5) and 20th century institutional buildings (Structures 15, 26 and 33; Photo 15). By far the largest number of structures consist of small 19th century farmsteads with associated agricultural structures. Examples of the region's most common vernacular rural house types are well-represented in this group, including the Classic Cottage with and without attached backhouse and barn (Structures 1, 13, 16, 18, 27 and 30; Photos 7 and 12). Gable-entry two-story dwellings are also well-represented (Structures 5, 6, 21 and 25; Photos 3 and 10), as are two-story center-passage houses (Structures 23, 24, and 35; Photo 14). Smaller house types from the late 19th and early 20th centuries are exemplified by Structures 14, 17 and 32 (Photos 6, 8, and 13). Almost all of the buildings in the project APEs can be said to be vernacular in style, many feature details associated with the Greek revival or Italianate styles. A few structures participate more fully in the revival styles of the late 19th century, including the Colonial Revival (Structure 32, Photo 13) and the Queen Anne styles (Structure 12, Photo 5).

Table 4. Structures Not Previously Surveyed within the Project Area

Structure	Photo	Property Name or Address	Description	50 years or more in age
15	15	148 Peacham Road, Danville School	1938 school with additions dating to c.1960 and later	x
19	-----	183 Peacham Road	Vernacular 1 ½ story wood-frame house, constructed after 1982.	
22	-----	205 Peacham Road	Late 20 th century vernacular cape style wood-frame house of 1 ½ stories	
28	-----	26 Cedar Lane, Danville Health Center	Late 20 th century gable-roofed wood frame and concrete vernacular structure	
31	16	Peacham Road	Early 20 th century gambrel-roofed barn	x
33	-----	Peacham Road, Danville Highway Department	Late 20 th century wood-framed utility structure	
34	17	Peacham Road	1 ½ story gable-roofed wood-frame vernacular cottage with enclosed porch addition.	x

Associated Landscape Features

Sidewalks

There is an existing somewhat deteriorated sidewalk along the west side of Hill Street at the north end of the project APE. This sidewalk may also be traced to the south end of the APE where a narrow concrete surface is located along the east side of Structures 7 and 11. Most of the remainder of the Hill Street APE is characterized by paved road shoulders that extend up to the building facades or to small lawn/garden areas. The south end of the Hill Street APE ends at Route 2. There has been major sidewalk construction adjacent to the APE, focused on and around the village green, but including a sidewalk along the south side of Structure 11. At the Peacham Road APE, there is an existing sidewalk that ends at the northern limit of the APE. All of these sidewalks are poured concrete, and are not considered to be historic.

Curbs

Most of the curbing in the project area is granite curbing associated with the concrete sidewalks recently installed around the Green. The sidewalk at the north end of the Peacham Road APE has a concrete curb.

Retaining walls

A dry laid retaining wall is present in front of Structure 3, surrounding a garden. It appears to be of recent date of construction.

Other Street Furniture

A stone post is located on the north side of the driveway of Structure 13. Impacts to this feature should be avoided.

There are no anticipated impacts to historic structures or associated features located adjacent to or within the project APEs based upon current project plans.



Photo 3. Structure 5, 53 Hill Street (VHSS 0303-160, 38). View to the west/northwest.



Photo 4. Structure 11, 10-12 US Route 2 (VHSS 0303-160, 33). View to the northeast.



Photo 5. Structure 12, 11 US Route 2 (VHSS 0303-160, 8). View to the northeast.



Photo 6. Structure 14, 132 Peacham Road (VHSS 0303-163, 15). View to the west/northwest.



Photo 7. Structure 13, 123 (?) Peacham Road (VHSS 0303-163, 2). View to the northeast.



Photo 8. Structure 17, 143 Peacham Road (VHSS 0303-163, 14). View to the west/northwest.



Photo 9. Structure 20, 192 Peacham Road (VHSS 0303-163, 13). View to the north/northwest.



Photo 10. Structure 21, 218 Peacham Road (VHSS 0303-163, 12). View to the northwest.



Photo 11. Structure 29, 347 Peacham Road (VHSS 0303-163, 7). Former railroad depot structure. Note railroad alignment adjacent to the structure. View to the north/northeast.



Photo 12. Structure 30, 378 Peacham Road (VHSS 0303-69). View to the northwest.



Photo 13. Structure 32, 428 Peacham Road (VHSS 0303-60). View to the west.



Photo 14. Structure 35, 478 Peacham Road (VHSS 0303-55). View to the southwest.



Photo 15. Structure 15, 148 Peacham Road, Danville Central School. A masonry educational structure constructed between 1938 and the late 20th century. View to the north.



Photo 16. Structure 31, unidentified address on Peacham Road. A gambrel-roofed barn not associated with a standing house. View to the northeast.



Photo 17. Structure 34, unidentified address on Peacham Road. A one-and-a-half story vernacular cottage. View to the northeast.

ARCHEOLOGICAL SENSITIVITY ASSESSMENT

Precontact Archeological Sensitivity

The precontact sensitivity of the APE appears generally low. Completion of the VDHP Environmental Predictive Model form results in a score of -4 with 32 and above indicating archeological sensitivity (Appendix 1). Although the APE is close to a permanent stream (Photo 18), is on a raised ridge landform that can be considered a travel corridor, significant disturbance along the narrowly defined APE (15 feet/4.6 meters from the edge of pavement) has greatly reduced any archeological sensitivity.

Historic Archeological Sensitivity

The historic archeological sensitivity of the APE is also considered to be low. There is some potential for historic structures that do not appear on the 19th-century maps to have been located within the narrow APE (Hartgen 2008). However, the front yards of structures are typically not associated with significant archeological deposits (Borstel 2005).

ARCHEOLOGICAL POTENTIAL

The project APE has been narrowly defined as extending up to 15 feet (4.7 m) from the edge of pavement. Evidence of disturbance along this alignment was noted during the site visit on both sides of the road consisting of old sidewalk, water, sewer and storm sewer installations. These installations have substantially disturbed much of the APE (Photos 19 and 20). Therefore, the archeological potential of the project APE has been compromised.



Photo 18. The stream crossing along the railroad alignment. View to the northeast.



Photo 19. Existing sidewalk along the west side of Hill Street. View to the south.



Photo 20. Peacham Road with hydrant on the right and storm drainage swale on the left. View to the north.

RECOMMENDATIONS

No further archeological investigation is recommended for the project APE as defined. However, if upon project design the APE is redefined to extend outside of the 15 feet (4.7 m) from edge of pavement zone, Phase IB reconnaissance survey of undisturbed areas outside of that zone would be warranted.

BIBLIOGRAPHY

Beers, Fredrick W.

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

Borstel, Christopher L.

2005 *Historic Front Yards and Transportation Archaeology in Vermont: Retrospect and Prospect*. The Louis Berger Group, Inc., East Orange, NJ. On file at VDHP, Montpelier.

Esri, Inc.

2014 *World Topographic Map*. Esri, Inc., Redlands, California, http://services.arcgisonline.com/ArcGIS/rest/services/World_Topo_Map/MapServer.

Hartgen Archeological Associates, Inc. (Hartgen)

2008 *Phase IB Archeological Survey for the Castleton Fire District #1 Project, Town of Castleton, Rutland County, Vermont*. On file at VDHP, Montpelier.

Lendway, Jane

2007 Letter concerning the proposed housing development at 332 Peacham Road, Danville, Vermont. Dated October 30, 2007. On file at VDHP, Montpelier.

Skinas, David

1998 Letter concerning the proposed Sugar Ridge RV Village and Campground, Danville, Vermont. Dated October 8, 1998. On file at VDHP, Montpelier.

Thomas, Peter A., Prudence Doherty and Brian S. Robinson

1981a *Phase I Archeological Study, Danville: Wastewater Treatment Facility*. Submitted to Town of Danville. UVM Report #33, March 1981. On file at VDHP, Montpelier.

1981b *Danville F028-3(13): Phase I Archeological Assessment*. Submitted to Vermont Agency of Transportation. UVM Report #35, April 1981. On file at VDHP, Montpelier.

United States Department of Agriculture (USDA)

2014 Web Soil Survey of Caledonia County, Vermont. Available online at <http://websoilsurvey.nrcs.usda.gov/> accessed June 26, 2014.

Vermont Center for Geographic Information (VCGI)

2011 *Color & Infrared Orthoimagery, Addison, Orange, Washington Counties, 0.5 m (VTORTHO_0_5M_CLRIR_2012)*. Vermont Center for Geographic Information, Waterbury, Vermont, <http://vcgi.vermont.gov/>.

Vermont Division for Historic Preservation (VDHP)

2002 *Vermont State Historic Preservation Office's Guidelines for Conducting Archeology in Vermont*. VDHP, Montpelier, Vermont.

Walling, H. F.

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

APPENDIX 1: VDHP Environmental Predictive Model

**Vermont Division for Historic Preservation
Archeological Resources Assessment Form**

DHP#

Organization & Recorder: Hartgen Archeological Associates, Inc./T. Jamison
Date: July 22, 2014

Environmental Predictive Model		ArcheoMapTool GIS Model		Assigned Score	Field Inspection Comments
Variable	Proximity	Value	Variable		
A. Rivers and Streams (Existing or relict)					
1) Proximity to Rivers and Permanent Streams*	0-90 m	12	Layer 1: Proximity to Rivers and Permanent Streams (0-180 m)	12	
	90-180 m	6			
2) Proximity to Intermittent Streams	0-90 m	12	-		
	90-180 m	6			
3) Proximity to Permanent River/Stream Confluences	0-90 m	8	Layer 6: Proximity to River/Stream Confluences (0-180 m)		
	90-180 m	4			
4) Proximity to Intermittent Stream Confluences	0-90 m	12	-		
	90-180 m	6			
5) Proximity to Waterfalls	0-90 m	8	Layer 7: Proximity to Waterfalls (0-180 m)		
	90-180 m	4			
6) Proximity to Heads of Drainages	0-90 m	8	Layer 5: Proximity to Heads of Permanent Drainages (0-300 m)	4	
	90-180 m	4			
	0-90 m	8			
	90-180 m	4			
7) Major Floodplain - Alluvial Terrace	0-90 m	8	Layer 10: Floodplain Soils Presence		
	90-180 m	4			
8) Knoll or Swamp Island		32	Layer 1: Proximity to Rivers and Permanent Streams (0-180 m)		
		32			
B. Lakes and Ponds					
10) Proximity to Pond or Lake	0-90 m	12	Layer 2: Proximity to Waterbodies (0-180 m)		
	90-180 m	6			
11) Proximity to Stream-Waterbody Confluences	0-90 m	12	Layer 4: Proximity to Stream-Waterbody Confluences (0-180 m)		
	90-180 m	6			
12) Lake Coves, Peninsulas, and Bayheads	0-90 m	12	Layer 2: Proximity to Waterbodies (0-180 m)		
	90-180 m	6			
C. Wetlands					
13) Proximity to Wetlands*	0-90 m	12	Layer 3: Proximity to Wetlands (0-180 m)		
	90-180 m	6			

Environmental Predictive Model			ArcheoMapTool GIS Model		Field Inspection Comments
Variable	Proximity	Value	Assigned Score	Variable	
14) Knoll or Swamp Island		32		Layer 3: Proximity to Wetlands (0-180 m)	
<i>D) Valley edge and Glacial Landforms</i>					
15) High Elevated Landform (e.g. Knoll Top, Ridge Crest, Promontory)		12		See Landmarks (Info Layers) and Catchment layers (Water-related Layers)	
16) Valley Edge Features (e.g. Kame Outwash Terrace)		12		Layer 9 Glacial Outwash and Kame Terrace Soils	
17) Marine/Lake Delta Complexes		12		Layer 9 Glacial Outwash and Kame Terrace Soils Presence	
18) Champlain Sea or Glacial Lake Shore Line**		12		Layer 8: Paleo Lake Soils Proximity (0-180 m)	
<i>E. Other Environmental Factors</i>					
19) Caves and Rockshelters		32		-	
20) Natural Travel Corridors (e.g. Drainage Divides)		12	12	See Landmarks (Info Layers) and catchment layers (Water-related Layers)	
21) Existing or Relict Springs	0-90 m	8		-	
	90-180 m	4			
22) Potential or Apparent Prehistoric Quarry for Lithic Material Procurement	0-90 m	8		See Soils with "M" parent material (Under Construction)	
	90-180 m	4			
23) Special Environmental or Natural Area~	0-180 m	32		-	
<i>F. Other High Sensitivity Layers</i>					
24) High Likelihood of Burials		32		See VAI layer (Under Construction)	
25) High Recorded Archeological Site Density		32		See VAI layer (Under Construction)	
26) High likelihood of containing significant site based on recorded or archival data or oral tradition		32		See VAI layer (Under Construction)	

Environmental Predictive Model			ArcheoMapTool GIS Model		Field Inspection Comments
Variable	Proximity	Value	Assigned Score	Variable	
G. Negative Factors					
27) Excessive (>15%) or Steep Erosional (>20%) Slopes		-32		See Slope Layer (Info Layers folder)	
28) Previously Disturbed Land***		-32	-32	See Land Use ND Building Footprint Layers (Info Layers folder)	
Total Score:			-4		

*measured from top of bank
 ** remains incompletely mapped; digital layer includes paleo lakes and wetlands based on soils data
 *** 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)
 ~such as Milton aquifer, mountain top, etc. (historic or prehistoric sacred or traditional site locations, other prehistoric site types)
 *Environmental predictive model limits wetlands to those > one acre in size; ArchSensMap

Appendix C: Meeting Minutes

Kickoff Meeting	May 20, 2014
Local Concerns Meeting	July 10, 2014
Alternatives Presentation Meeting	August 28, 2014



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 459 Portland Street
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 Saint Johnsbury, Vermont 05819
 Tel: (802) 748-8605 Fax: (802) 748-4512
 E-mail: info@dufresnegroup.com

Memo

To: Town of Danville
CC: Tim Ruggles, PE, Joel Perrigo
From: Chad Whitehead, PE
Date: May 20, 2014
Re: Danville STP BP13(19) Kickoff Meeting

On May 20, 2014 a meeting was held at the Danville Town Offices to initiate the Danville STP BP13(19) Scoping Study. The following individuals attended:

<u>Individual</u>	<u>Representing</u>
Ken Linsley	Select Board
Angelo Incerpi	Select Board
Craig Vance	Select Board
Wendy Somers	Town Clerk
Kevin Gadapee	Road Foreman
Tim Ruggles, PE	Local Project Manager
Chad Whitehead, PE	Dufresne Group

I have prepared the following summary of my notes taken at the meeting. Please notify me if you have any corrections or additions to these minutes.

- The VTrans Project Manager for the project was previously Nancy Avery, but Tim has heard that she has taken a new position, but has not heard who the contact person will be. Kevin thought it was Joel Perrigo temporarily. Tim will investigate and verify.
- Chad provided his contact information and indicated that project related correspondence should go through Tim.
- Chad asked where invoices should be sent, and Tim replied to send them to the Town Clerk's office and they would provide to him.
- Chad asked the Town about the northern project limits, and Kevin indicated that the end of the project was not yet defined, but wherever they ended with

- this project, they wanted it left so that the sidewalk could be expanded further to the North in the future.
- Craig indicated that he thought it should extend to the top of the hill near Highland Avenue, as this is the loop that is most actively used by pedestrians in Town.
 - Chad indicated that the northern project boundary will likely be established based on available funds for this phase of the project, but DG will begin research for right of way and natural and cultural resources to this limit.
 - Ken mentioned that there was Archeological and Historical Clearances done for the recent water project completed on Hill Street. Chad said that DG carried a subconsultant on a T&E basis in our scope of services, but have not yet executed a subconsultant agreement. Tim will work with the Fire District determine who Stantec used for the archeological and historic work, and Chad will contact them to get a cost to expand the existing area completed for the water main to include Peacham Road.
 - Chad discussed that the next meeting will be the Public Concerns Meeting, and once DG has obtained some initial GIS information about the project site, the board will take input from the public. They will need to develop a purpose and need statement from the information gathered at the Kickoff Meeting and Public Concerns Meeting.
 - Chad asked if they would prefer to have a special meeting for the Public Concerns Meeting, or have the meeting concurrently with a regularly scheduled selectboard meeting. The Selectboard will discuss and let Chad and Tim know.
 - Chad discussed the schedule. The proposed schedule in the proposal has the scoping study completed at the end of August. Chad said this depends on public involvement and local review and decisions made on alternatives, but anticipates that DG can complete the scoping report in the proposed timeframe at this time.
 - Kevin asked about the timeline for the next round of grant applications, and wondered if someone from the Town should attend the upcoming Training Sessions required for new grant applications if they anticipate a second grant application for the Final Design phase. He will contact Joel Perrigo to discuss.
 - The selectboard members, Kevin, Tim and Chad field walked the project area and the following items were noted:
 - Several items will need to be addressed at the first block of Hill Street, north of US 2, including impact on parking, drainage, overhead power, access into existing buildings
 - Kevin prefers sidewalks attached to the road for maintenance purposes. The existing sidewalk, which is only about 3' wide and unmaintained has a grass strip
 - Installation of a new sidewalk with curbing may require installation of a new storm sewer system.

- Kevin pointed out drainage structures near the Creamery Restaurant and along the west side of Hill Street extending towards Grand View Avenue. Much of this drainage utilizes existing grass ditches.
- There is an existing sewer force main, gravity sewer, and water main located on Peacham Road
- Kevin noted several drainage structures along Peacham Road.
- The storm drain in the vicinity of the School Entrance is old and inadequate resulting in drainage issues in this area.
- The Town has a desire to expand the parking at the recycling center, in the old RR station near the LVRT crossing but there are possible wetlands located adjacent.



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Memo

To: Town of Danville
CC: Tim Ruggles, PE, Joel Perrigo
From: Andrea Day, PE
Date: July 10, 2014
Re: Danville STP BP13(19) Local Concerns Meeting

On July 10, 2014 a meeting was held at the Danville Town Offices to discuss Local Concerns in relation to the Danville STP BP13(19) Scoping Study. The following individuals attended:

<u>Individual</u>	<u>Representing</u>
Ken Linsley	Select Board
Angelo Incerpi	Select Board
Craig Vance	Select Board
Michael Walsh	Select Board
Douglas Pastula	Select Board
Wendy Somers	Town Clerk
Kevin Gadapee	Road Foreman
Tim Ruggles, PE	Local Project Manager
Chad Whitehead, PE	Dufresne Group
Andrea Day, PE	Dufresne Group
Richard Sevigny	
Jeff Frampton	
Judy Garland	
Winona Gadapee	
Kay Hopkins	
Edward Farr	
Tom Beattie	

I have prepared the following summary of notes taken at the meeting. Please notify me if you have any corrections or additions to these minutes.

- The Select Board called the meeting to order at 6:00pm and turned it over to Tim Ruggles, PE and Dufresne Group.
- Tim Ruggles, PE introduced the project team and gave a brief introduction of the VTrans LTF program
- Andrea Day gave a power point presentation on the Scoping Study process and overview of the anticipated project
- Craig Vance discussed that the Select Board applied for the grant for this Scoping Study to look at options for addressing safety concerns for walkers; parking on the first block of Hill Street and safety concerns related to vehicles pulling out of parking spots and people walking; kids traveling between the school and ball fields; and to provide a connection from the Village to the Lamoille Valley Rail Trail (LVRT) so that people from the LVRT would have access to come into Town to visit the businesses. Craig also mentioned that the study originally only included from the ball fields to Hill Street Park but it was decided to extend the study to Highland Ave.
- Winona Gadapee spoke and said she walks along Hill Street and fell two times this past winter, but the areas with existing sidewalks were kept up very well. She also mentioned that it is dangerous along Peacham Road from the school to the ball fields.
- Doug Pastula said that after the Route 2 project was completed, maintenance of sidewalks was a concern and the Town invested in equipment to maintain the sidewalks and it has worked out well and maybe they will be able to expand that maintenance.
- Rick Sevigny lives halfway down Peacham Road to the ball fields and suggested the route be on the West side. He indicated that he wouldn't have a problem if a few feet of his land was needed for construction. He sees a lot of kids along the road and believes it is dangerous since there is no sidewalk from the school to the ball fields.
- Winona Gadapee asked which side of the road the path would be on and noted that the Town Park on Hill Street is on the east side so it makes sense to have it on that side there.
- Kevin Gadapee introduced himself as the road foreman. Kevin said his vision for a sidewalk is adjacent to the road with curb along Hill Street on the west side with a crossing at Hill Street park then along the east side to Highland Avenue. A sidewalk on Peacham Road should be on the west side and replace the existing 4' wide sidewalk with a 5' wide sidewalk. He would also like to continue with granite curb as it lasts longer than concrete curb.
- Andrea Day asked the residents if they had any concerns about bicycle traffic.
- Kevin Gadapee mentioned that maybe a bike lane would be appropriate.
- Chad Whitehead pointed out that if they want to have pedestrian and bike traffic on the same pathway the minimum width is 8 feet.
- Doug Pastula said that a green strip between the sidewalk and road doesn't work, and pointed out that the existing green strip in the Danville Green is not green as all the grass has died off and it is difficult to maintain.

- Ed Farr a resident of Peacham Road said he walks every day along Peacham Road and Hill Street and has noticed that there has been an increase in traffic. He also noted that cars are traveling fast along the route which is dangerous for pedestrians and bicycles. He noted that on Hill Street sometimes pedestrians walk across private lawns to avoid walking in the street.
- Jeff Frampton, former owner of the bakery on Hill Street, pointed out that on the first block of Hill Street it is dangerous because there is no buffer between the parking and buildings for pedestrian safety and that a couple of years ago a couple of people almost got pinned against the building by a car. He thinks there is room for a sidewalk and parking on the West side on the first block of Hill Street.
- Kevin Gadapee asked about lighting and said that the lighting that was installed in the Green is very nice and adds to the appeal of the village. Something similar to the lighting in the Green would be nice.
- Andrea mentioned that lighting is something that can be included in the study as an option and asked about the amount of bike traffic, if any, in the Village. If the Town wants a sidewalk for pedestrians a 3' shoulder for bikes could be looked at.
- Craig Vance noted that one of the original purposes when the select board decided to pursue this funding was to try and bring bike traffic from the LVRT to the Village but that there isn't a place for bikes to travel in the green unless the new sidewalks in the green are replaced.
- Ed Farr noted that he rarely sees bikes when he is out walking. Others in the community noted that they sometimes see bikes along Hill Street.
- Tom Beattie asked how the first block of Hill Street will be handled due to limited parking and businesses along that area. He noted that there is a house site that could potentially be turned into parking.
- Craig Vance said that parking is an issue and although the primary purpose of this study is not to address existing parking concerns, impacts on parking should be considered.
- Kevin Gadapee said that the catch basins on the first block of Hill Street don't catch all the runoff and that areas along Hill Street that have roadside ditches should have a new stormwater collection system installed to get rid of the ditches.
- Craig Vance stated that one of the goals should be to bring LVRT traffic into Town to patronize the businesses.
- Jeff Frampton noted that if it won't be possible to get a bike lane through the green perhaps they install bike racks in the green, then people can walk to the businesses.
- Tom Beattie stated that parking is a major concern, if you are going to bring people to Town and expect to keep businesses in Town, there needs to be parking.
- It was asked if a parking project could be included in the bike and pedestrian project, Chad Whitehead said that would need to be discussed with VTrans.

- Dufresne Group provided written survey questions and stamped envelopes for participants to bring home, fill out and return.
- The Select board adjourned the meeting at approximately 7:15pm.

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JUL 14 2014

Dufresne Group

DUFRESNE GROUP
CONSULTING ENGINEERS

Danville STP BP13(19)

Local Concerns Meeting

July 10, 2014

Danville, VT

459 Portland Street
Suite 102

Saint Johnsbury, Vermont 05819
Tel: (802) 748-8605 Fax: (802) 748-4512
E-mail: info@dufresnegroup.com

1. What should the purpose of this project be?

The purpose of this project should be to promote safety in walking Hill Street and Peacham Road. Also it will encourage users of the new Railroad Activity Trail to use the town roads.

2. Do you feel a pathway in the proposed area is necessary? Why?

Yes, as a daily walker on Hill Street I'm very aware of the necessity to improve safety with sidewalks.

3. What are your preferences for:

Location (i.e. east or west side, separated or adjacent to road, etc.):

I have no preference, but as a landowner of Hill Street, we'd be cooperative by your East Side.

Width:

whatever is required

Surface type (i.e. asphalt, concrete, gravel):

Concrete YES!

4. Other concerns or comments?

I do hope the project will do all within possible to improve parking in the village.

5. If you are willing, please provide your contact information so we can contact you with any follow up questions.

Name: Monica P. Gadapee

Address: 279 Highland Ave 05828

Phone Number: 1-802-684-3321

Email: _____

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JUL 14 2014

Dufresne Group
St. Johnsbury, VT

DUFRESNE GROUP
CONSULTING ENGINEERS

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July 10, 2014

Danville, VT

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Suite 102

Saint Johnsbury, Vermont 05819
Tel: (802) 748-8605 Fax: (802) 748-4512
E-mail: info@dufresnegroup.com

1. What should the purpose of this project be? PRIMARYLY SAFETY FOR PEDESTRIANS IN THE VILLAGE CORE (HILL ST) AND SECONDLY TO PROVIDE PEDESTALIAN ACCESS FROM THE GREEN UP HILL ST TO THE CHURCH, HISTORICAL MUSEUM, SENIOR RESIDENCE, PARK + SKATING RINK IN THE WINTER. ALSO TO PROVIDE ACCESS FROM LVRT TO VILLAGE CORE BUSINESSES.
2. Do you feel a pathway in the proposed area is necessary? Why? HILL ST IS VERY DANGEROUS FOR PEDESTRIANS AS THEY MUST WALK AROUND THE END OF PARKED CARS AND OUT INTO THE STREET. WE MUST ALSO TAKE THE POTENTIAL BUSINESS OPPORTUNITY THE LVRT WILL PROVIDE BY BRINGING FOLK INTO THE VILLAGE CORE BUSINESSES.
3. What are your preferences for:
 Location (i.e. east or west side, separated or adjacent to road, etc.): HILL ST VILLAGE CORE -> WEST SIDE OF STREET FROM ROUTE 2 TO EXISTING SIDEWALK PAST THE OPEN DOOR
 Width: ADA (5FT) WHERE POSSIBLE BUT PERHAP 4FT IN THE HILL ST VILLAGE CORE. WE CANNOT AFFORD TO
 Surface type (i.e. asphalt, concrete, gravel): VILLAGE CORE - LOSE PARKING SHOULD BE PAVED ONLY WITH PERHAPS SAFETY DIVIDER BETWEEN PARKING + PATHWAY. STREET GRADE IS TO HIGH FOR EXISTING BUILDING TO ADD ADDITIONAL SIDE WALK HEIGHT.
4. Other concerns or comments? SEE OVER

SEE OVER

5. If you are willing, please provide your contact information so we can contact you with any follow up questions.

Name: JEFF FRAMPTON
 Address: 175 MAPLE LANE
 Phone Number: 802-684-3952
 Email: framptonjn@gmail.com

PREVIOUS OWNER OF BENTLEY'S BAKERY + CAFE + past chairman of the Danville Planning Commission.

CONCERNS OR COMMENTS

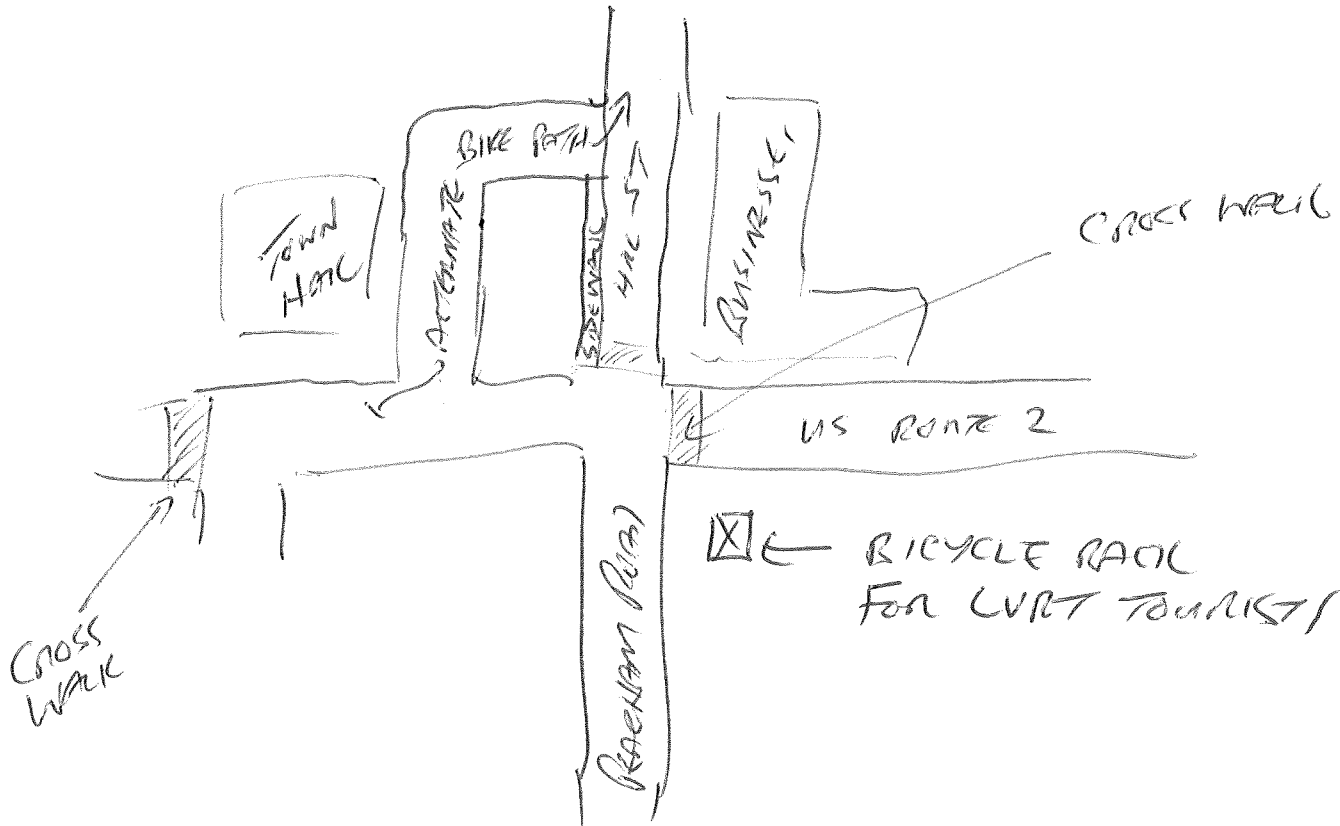
ALTHOUGH IT WOULD BE GREAT TO ADDRESS OTHER ISSUES THAT HAVE LONG BEEN ISSUES LIKE MORE PARKING, BETTER LIGHTING, IMPROVED DRAINAGE, ELIMINATION OF DITCHES, ETC., WE MUST NOT LET THIS PROJECT GROW TO A POINT WHERE IT WILL BECOME VERY COSTLY AND SCARE OFF SUPPORT VIA HIGHER TAX CONCERNS LOSING SIGHT OF THE ORIGINAL OBJECTIVE OF PROVIDING SAFE PEDESTRIAN PASSAGE TO LINK UP OUR HILL ST + NORTH PART OF THE TOWN WITH OUR TOWN CENTER (GREEN + BUSINESS DISTRICT)

THIS TOWN IS STILL FEELING THE DISRUPTION OF THE US ROUTE # 2 PROJECT. AND THE FASTEST WAY TO KILL SUPPORT FOR THIS ESSENTIAL PROJECT IS TO MAKE IT SOUND LIKE A DIFFICULT, DISRUPTIVE + LONG TERM COSTLY PROJECT!! I OWNED BENTLEY'S BAKERY + CAFE FOR 5 YEARS SELLING IT LAST SEPTEMBER SO I HAVE FIRST HAND KNOWLEDGE ON HOW DANGEROUS THIS PART OF HILL ST. IS. I HAVE ALSO MEASURED WHAT A 5 FOOT ADA COMPLIANT SIDEWALK WOULD LOOK LIKE ON THE WEST SIDE OF THE STREET AND IT COULD BE INTEGRATED WITHOUT IMPACTING CURRENT PARKING PATTERNS. IN OTHER WORDS, WE HAVE PARKING LIMITATIONS TODAY IN THE VILLAGE CORE, BUT THEY HAVE ALWAYS EXISTED AND THE ADDITION OF A SIDEWALK ON ONE SIDE OF THE STREET WILL NOT MAKE IT WORSE. WE NEED TO SHOW PEOPLE THIS AND TAKE THE ISSUE OFF THE TABLE. WHILE WE GO THROUGH THE NEXT 4 YEARS OF GRANT ATHLETICS, THE TOWN SHOULD GO FORWARD + PAINT A SIDEWALK ON THE WEST SIDE OF THE STREET SO WE PROVIDE SAFETY NOW + PEOPLE CAN GET USED TO THE IDEA OR LEARN FROM POSSIBLE ISSUES THAT COULD —>

Continued

be addressed in the DESIGN STAGE. I DO NOT BELIEVE THERE IS ANYTHING PREVENTING THE TOWN TO SET UP A TRIAL "TEMPORARY" PATHWAY/SIDEWALK ON HILL ST IN THE VILLAGE CORE. MOST IMPORTANTLY IT WILL PROVIDE IMMEDIATE SAFETY FOR PEDESTRIANS & POTENTIAL VISITORS COMING OFF THE LVRT AS EARLY AS THIS FALL. LET'S NOT ALLOW SOMEONE TO GET HURT.

REGARDING BICYCLE PASSAGE ON HILL ST IN THE VILLAGE CORE, I WOULD RECOMMEND THAT THE CYCLISTS SHARE THE ROAD FOR THE 1/2-250 FT PERROUTE THEM BEHIND THE OPEN DOOR & BY THE TOWN HALL & ALSO PROVIDE A BIKE RACK ON THE GREEN NEAR THE INTERSECTION OF US ROUTE 2 & THE PEACHAM ROAD FOR LVRT VISITORS. THEY WILL HAVE THE OPTION TO PARK THEIR BIKES & SAFELY WALK ACROSS ROUTE 2 TO THE BARRIERS.



Purpose and Need Statement

The purpose of the project is to create a recreational pathway from Riverside Middle School to the North Springfield Reservoir and Springweather Recreational Area located in North Springfield.

The need for the project is to improve and expand recreational opportunities beyond the existing travelways that are currently not safe or accessible to the intended users.

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JUL 14 2014

Dufresne Group

Saint Johnsbury, VT

DUFRESNE GROUP
CONSULTING ENGINEERS

**Danville STP BP13(19)
Local Concerns Meeting**

July 10, 2014

Danville, VT

459 Portland Street
Suite 102

Saint Johnsbury, Vermont 05819
Tel: (802) 748-8605 Fax: (802) 748-4512
E-mail: info@dufresnegroup.com

1. What should the purpose of this project be?

TO provide sidewalks

2. Do you feel a pathway in the proposed area is necessary? Why?

Yes. I walk frequently and there
are many areas w/o sidewalks.

3. What are your preferences for:

Location (i.e. east or west side, separated or adjacent to road, etc.):

Peacham Road - on the right
Hill Street - on the left

Width:

Surface type (i.e. asphalt, concrete, gravel):

4. Other concerns or comments?

5. If you are willing, please provide your contact information so we can contact you with any follow up questions.

Name:

Judy Garland

Address:

21 RT 2 E

Phone Number:

227-3036

Email:

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JUL 17 2014

DUFRESNE GROUP
CONSULTING ENGINEERS

Danville STP BP13(19) Local Concerns Meeting

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1. What should the purpose of this project be?

PROVIDE SAFE AND MAINTAINED SIDEWALKS FOR PED. TRAFFIC

2. Do you feel a pathway in the proposed area is necessary? Why?

SIDEWALKS - YES to continue improving "is village" infrastructure as the town continues to grow.

3. What are your preferences for:

Location (i.e. east or west side, separated or adjacent to road, etc.):

Hill St. - WEST

Prachin Rd - WEST

Width: 5' min.

Surface type (i.e. asphalt, concrete, gravel):

4. Other concerns or comments?

concrete surface, granite curb constructed next to road. NO Green strip.

5. If you are willing, please provide your contact information so we can contact you with any follow up questions.

Name: Kevin Gaudapex Danville Highway Fireman

Address:

Phone Number: 535-7991

Email:

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DUFRESNE GROUP
CONSULTING ENGINEERS

Danville STP BP13(19)

Local Concerns Meeting

July 10, 2014

Danville, VT

Dufresne Group
St. Johnsbury, VT 459 Portland Street
Suite 102

Saint Johnsbury, Vermont 05819
Tel: (802) 748-8605 Fax: (802) 748-4512
E-mail: info@dufresnegroup.com

1. What should the purpose of this project be? *To get people & kids safely from new sidewalks in middle of town down Peachum Rd to the Ball Fields and up Hill Street to the park & top of Hill. Also to get bikers from the new WRT to the center of town to help support our businesses and to accomplish all this as safely as possible.*
2. Do you feel a pathway in the proposed area is necessary? Why?
Yes, both as a safety concern and also as an economic boost for community businesses.
3. What are your preferences for: *side walks west Bike path east*
Location (i.e. east or west side, separated or adjacent to road, etc.):
Road Granite curb sidewalk, Eastside widen shoulder for bike path
Width: *CODE*
Surface type (i.e. asphalt, concrete, gravel): *Concrete sidewalk
Asphalt Bike Path*
4. Other concerns or comments?
Once built the town would take over maintaining them as they are all new sidewalks in the village. Care both summer & winter.
5. If you are willing, please provide your contact information so we can contact you with any follow up questions.
Name: *Craig R. Vance (selectman)*
Address: *P.O. Box 13*
Phone Number: *802-274-0060*
Email: *Craig@charlescurchsllc.com*

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E-mail: info@dufresnegroup.com

1. What should the purpose of this project be?

TO ALLOW PEOPLE AND BIKERS SAFE PASSAGE
TO WALK TO AND FROM THE VILLAGE OF DANVILLE!

2. Do you feel a pathway in the proposed area is necessary? Why? NO

WITH A GOOD SIDE WALK YOU DO NOT NEED
A PATHWAY, UNLESS YOU HAVE ROOM TO PUT
ONE IN.

3. What are your preferences for:

Location (i.e. east or west side, separated or adjacent to road, etc.):

WEST SIDE

Width: 4-5 FEET

Surface type (i.e. asphalt, concrete, gravel): CONCRETE

4. Other concerns or comments?

5. If you are willing, please provide your contact information so we can contact you with any follow up questions.

Name: EDWARD C. FARR

Address: P.O. BOX 04, 378 PRICHAM, RD, DANVILLE, VT. 05828

Phone Number: (802) 684-3333

Email: FARR378@YAHOO.COM



Dufresne Group
 459 Portland Street
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 E-mail: info@dufresnegroup.com

Memo

To: Town of Danville
CC: Tim Ruggles, PE, Joel Perrigo
From: Andrea Day, PE
Date: August 28, 2014
Re: Danville STP BP13(19) Alternatives Presentation Meeting

On August 28, 2014 a meeting was held at the Danville Town Offices to present alternatives in relation to the Danville STP BP13(19) Scoping Study. The following individuals attended:

<u>Individual</u>	<u>Representing</u>
Ken Linsley	Select Board
Angelo Incerpi	Select Board
Craig Vance	Select Board
Michael Walsh	Select Board
Kevin Gadapee	Road Foreman
Tim Ruggles, PE	Local Project Manager
Andrea Day, PE	Dufresne Group
Virginia Incerpi	

I have prepared the following summary of notes taken at the meeting. Please notify me if you have any corrections or additions to these minutes.

- The Select Board called the meeting to order at 6:00pm and turned it over to Dufresne Group.
- Andrea Day gave a power point presentation on the Alternatives for pedestrian and bicycle improvements for the anticipated project.
- Near the Hill Street Park, the existing hydrant and power pole were noted as a potential conflict. Kevin Gadapee stated that the hydrant could be easily moved and the power pole was just a support pole so it could also be easily moved if necessary.

- Ken Linsley stated that in the first block of Hill Street, he is concerned about losing parking. He also stated that he doesn't believe bicycle traffic is significant on Hill Street and that pedestrian traffic should be the primary focus on Hill Street.
- Kevin Gadapee stated he prefers the 5' wide concrete sidewalk with granite curb and no bike lanes.
- Ken Linsley and Craig Vance agreed with Kevin and stated that they would prefer an 8' wide shared use pathway on Peacham Road.
- Ken requested costs for both concrete and asphalt for the shared use pathway on Peacham Road.
- Andrea Day asked how the town wants to handle pedestrian traffic on the first block of Hill Street.
- Kevin Gadapee stated that he would like to see stamped concrete and pin down curb on the west side.
- Discussion ensued regarding the loss of parking on the first block of Hill Street and the impact to businesses.
- Craig Vance asked if the cost of replacing the parking could be covered under the project.
- Andrea stated that the question was posed to Joel Perrigo at VTrans and Joel stated that it may be possible to include the cost of replacing lost parking if it was replaced in the project area.
- Angelo Incerpi stated that he is concerned with the loss of parking and it hurting businesses. Regardless of the pedestrian project, he believes pin down curb should be installed in front of the parking spaces so that cars don't accidentally drive into the buildings and that additional parking is still required.
- Andrea Day stated that VTrans tells communities to plan on 5 years from the start of the project to construction and asked if the Town thought it was possible that a solution to the Hill Street parking would be determined within that timeframe.
- Mike Walsh said it was possible that additional parking would be available within 5 years.
- Kevin Gadapee stated that he doesn't want to wait 5 years and that he hopes this project will help drainage issues.
- Craig Vance said he would rather take the time to get funding from the State so the town doesn't have to pay for the entire project.
- The Select board adjourned the meeting at approximately 6:55pm.