

Final Scoping Report

Plainfield US2 and Main Street Intersection Transportation Study



June 16, 2005

Prepared for:



Central Vermont
Regional Planning
Commission

Prepared by:



**Final Scoping Report
Plainfield US 2 and Main Street Intersection Transportation Study**

Table of Contents

EXECUTIVE SUMMARY

SECTION 1 – INTRODUCTION 1

A. Background 1

B. The Scoping Process 1

SECTION 2 – PURPOSE AND NEED STATEMENT 3

SECTION 3 – EXISTING CONDITIONS 5

SECTION 4 – TRAFFIC DATA AND ANALYSIS 6

A. Existing Traffic Volumes 7

B. Future Traffic Volumes 7

C. Level of Service (LOS) Evaluation 7

D. Traffic Signal Warrant Analysis 8

E. Crash Data 9

SECTION 5 – ENVIRONMENTAL AND CULTURAL RESOURCES 9

A. Wetlands 9

B. Flood Hazard Areas 11

C. Fish and Wildlife Habitats 11

D. Water Quality 11

E. Threatened and Endangered Species 11

F. Agricultural Resources 11

G. Parks and Recreation Lands 11

H. Hazardous Wastes 11

I. Historic and Archaeological Resources 12

SECTION 6 – IDENTIFIED ALTERNATIVES 12

A. Alternative 1: No Build Alternative 13

B. Alternative 2: Lower Speed Limit to 25 mph 13

C. Alternative 3: Add Mirrors 14

D. Alternative 4: Rotary Intersection 14

E. Alternative 5: “T” Intersection 15

F. Alternative 6: “T” Intersection and Traffic Signal 15

G. Alternative 7: “T” Intersection and Minor Lowering of US 2 15

H.	Alternative 8: “T” Intersection and Minor Lowering of US 2 with Relocation of the Furniture Store.....	16
I.	Alternative 9: “T” Intersection, Lower US 2 Significantly, and Regrade Harvey Hill Road.....	16
J.	Alternative 10: “T” Intersection, Lower US 2 Significantly, and Relocate Harvey Hill Road.....	17
K.	Alternative 11: “T” Intersection, Traffic Signal, and Minor Lowering of US 2	18
L.	Alternative 12: Signalization without Reconstruction	18
M.	Alternative 13: All Way Stop intersection.....	20

SECTION 7 – TRAFFIC CALMING MEASURES AND OPPORTUNITIES 21

A.	Investigated Measures Considered To Be Feasible	27
B.	Investigated Measures Considered To Be Infeasible	29

SECTION 8 – EVALUATION MATRIX 31

SECTION 9 – PUBLIC COMMENT SUMMARY 34

A.	Local Concerns Meeting.....	34
B.	Alternative Presentation Meeting.....	35

SECTION 10 – SUMMARY AND RECOMMENDATIONS 35

FIGURES

Figure 1:	Location Map.....	2
Figure 2:	Environmental Resources Map	10
Figure 3:	Alternative 11A Proposed Plan Sheet	37
Figure 4:	Alternative 11B Proposed Plan Sheet	38
Figure 5:	Cross-Sections at Hardware Store, Section A-A.....	39

TABLES

Table 1:	Available and Required Stopping Sight Distances	6
Table 2:	Traffic Volumes	7
Table 3:	Level of Service Descriptions and Measurements.....	8
Table 4:	Level of Service Results.....	8
Table 5:	Traffic Signal Warrants Analyzed	9
Table 6:	Evaluation Matrix.....	32 & 33

EXHIBITS

Exhibit 1: VTrans Traffic Calming Study Information..... 22-26

APPENDICES

- A Project Kick-Off Meeting
- B Traffic Volumes
- C Traffic Analysis
- D Signal Warrant Analysis
- E Historic and Archaeological Assessments
- F Cost Estimates
- G Local Concerns Meeting
- H Alternatives Presentation Meeting
- I Post Alternatives Presentation Correspondence

EXECUTIVE SUMMARY

The US 2 and Main Street Intersection in Plainfield, Vermont has been perceived as a problem area by local residents, as well as commuters that pass through the intersection. Poor sight lines, sharp curves, narrow lanes, steep grades and lack of pedestrian facilities are examples of the factors that contribute to difficulties at this Intersection.

The Central Vermont Regional Planning Commission (CVRPC), working with the Town of Plainfield and the Vermont Agency of Transportation (VTrans), has commissioned this Scoping Study to identify and evaluate alternatives to address these concerns. The alternatives have been developed with the goal of addressing the following issues:

- Improve sight lines at the intersection
- Remove hazards from intersection
- Reduce grades at the Main Street approach
- Reduce vehicle speeds with traffic calming measures
- Provide safe access to adjoining parcels/businesses
- Provide safe bicycle and pedestrian access through the intersection
- Create an attractive, but functional, low maintenance streetscape

Alternatives to address these goals were formulated with input from local officials, residents, and VTrans. A total of thirteen alternatives were identified and investigated. Alternatives were evaluated considering:

- Results of traffic analyses
- Feasibility
- Cost
- Ability to meet the purpose and need
- Input from project participants

DuBois & King, Inc. (D&K) presents the recommended alternative as creating a “T” intersection, adding a traffic signal, and minor lowering of the profile of US 2 (later referred to as Alternative 11).

This study was conducted in accordance with VTrans procedures for scoping studies. This process included public and agency participation in the development of alternatives. This participation was helpful for identification of project issues and concerns, for identification of alternatives, and building a general consensus for the preferred alternative.

SECTION 1 – INTRODUCTION

A. Background

The concept of providing improvements to the US 2 and Main Street Intersection has been considered for some time. In 1999, the CVRPC completed a US Route 2 Corridor Design for several intersections, including the US 2 and Main Street Intersection. At that time, no detailed engineering evaluation was performed to determine the feasibility of improvement options.

To move forward with development of alternatives at this intersection that address existing issues, CVRPC has undertaken a Scoping Study to identify and evaluate alternatives to improve conditions within the project area with the objective of identifying a recommended alternative. This study expands on the concept previously developed in the 1999 Study. Therefore, this project conforms to local and regional plans for the Village of Plainfield. The project area includes the US 2 and Main Street Intersection, as illustrated in Figure 1.

B. The Scoping Process

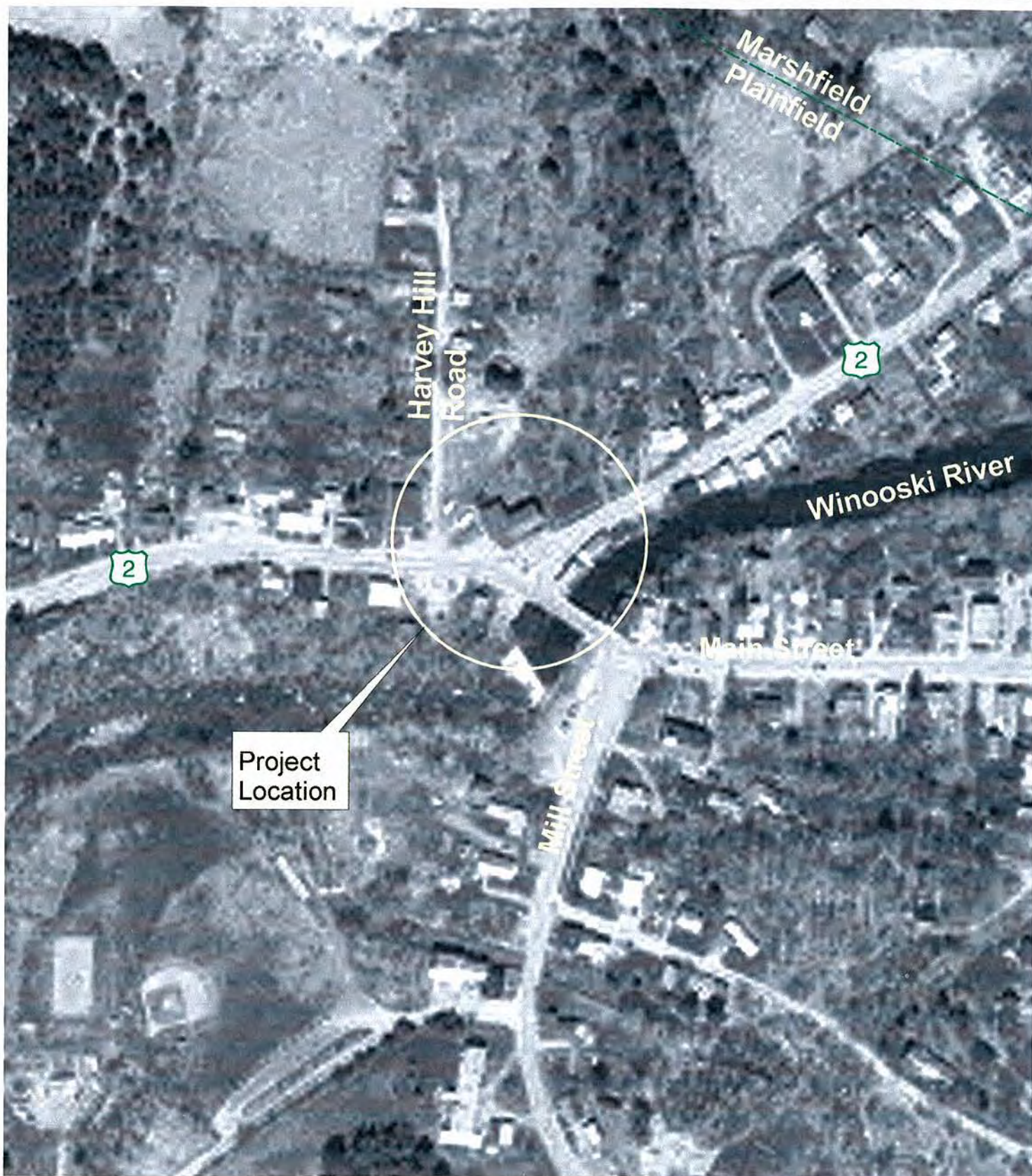
This Scoping Study and the process used to identify and evaluate alternatives have been based on procedures developed by the VTrans scoping process. The purpose of this process is to:

- Identify the transportation problem.
- Define the purpose and need for solving the problem.
- Develop alternatives that address the problem, and avoid or minimize impacts to social, economic, natural, and/or cultural resources

Ideally, an alternative is developed that has no adverse impacts, and enjoys broad support by the public, as well as local, regional and State officials.

The first step of this project included a project kick-off meeting and site visit on June 28, 2004. A memorandum summarizing the kick-off meeting is included in Appendix A. At this time, elements and known issues of the project were discussed. Representatives from VTrans, CVRPC, and the Plainfield Selectboard were present.

The next step of this project was a Local Concerns Meeting, which was a publicly notified meeting held at the Plainfield Municipal Building. The public was invited to listen to a description of existing conditions and how the intersection functions on a daily basis. The objective at the end of this meeting was to ascertain public perception of deficiencies within the project area.



engineering
 planning
 management
 development

CENTRAL VERMONT
 REGIONAL PLANNING COMMISSION

US 2 AND MAIN STREET INTERSECTION

FIGURE 1: LOCATION MAP

DRAWN BY: JDA	DATE: 12/15/2004
CHECKED BY:	PROJ. NO. 618723L1
PROJ. ENG.	DRAW. NO.

0 200 Feet

Working with the CVRPC, D&K prepared a Purpose and Need Statement. This statement defines and summarizes the project problems, the purpose for addressing them, and why improvements are needed. The statement serves as justification for the expenditure of public funds for the project.

Following the Local Concerns Meeting and preparation of the Purpose and Need Statement, an initial list of feasible alternatives was prepared. Elements of these alternatives were determined, including costs, performance, impacts to resources, and engineering and permitting issues. This information was summarized in an Evaluation Matrix that serves as a summary to compare and contrast each alternative. This information was presented to the local Transportation Advisory Committee (TAC) and a decision was made whether to add or remove any alternatives from the list.

The alternatives were then presented to the public at an Alternatives Presentation Meeting. The purpose of this meeting was to present the alternatives, solicit input on them or other alternatives, and understand and document any concerns. The objective at the end of this meeting was to have formed a consensus in support of a single, preferred alternative.

Once the alternatives were identified, presented, and discussed, this Initial Scoping Report was developed. This Report summarizes the results of the evaluation performed to date. This report is to be reviewed by members of the CVRPC, Town, and VTrans. Any comments made or concerns raised will be addressed, and a Final Scoping Report will be prepared. The purpose of the Final Scoping Report is to form the basis of design for an alternative solution that:

- Addresses the identified problems.
- Avoids or minimizes impacts to the public and environment.
- Was developed through a comprehensive public participation process.

SECTION 2 – PURPOSE AND NEED STATEMENT

A Purpose and Need Statement was prepared to define existing problems and the need to address them. The Purpose and Need Statement was prepared and distributed to the project team for review. The Final Purpose and Need Statement is as follows:

Introduction

The Plainfield Village U.S. 2 / Main Street Intersection Transportation Study is being developed by the Central Vermont Regional Planning Commission (CVRPC), with input from VTrans, the Town of Plainfield, and the public. The Study is to evaluate alternatives to improve safety and pedestrian mobility at the U.S. 2 / Main Street Intersection. The Study Area includes the intersection and the roadway approaches for several hundred feet in each direction. The CVRPC has retained DuBois & King, Inc. (D&K) to assist in the development of this Study.

The focus of this Study is the evaluation of alternatives that directly improve the safety and pedestrian movements at the intersection. Traffic volumes are generally heavy because U.S. 2 is a principal arterial roadway that connects I-89 to I-91. It is part of the National Highway System, and has the additional classification of Truck Network. The intersection is located in the Village of Plainfield, where there is significant pedestrian traffic. High volumes, combined with the existing geometrics of the intersection, cause this intersection to be dangerous.

The geometry of the intersection is a major contributor to the difficulty with turning movements. The grade for Main Street vehicles making a left turn onto U.S. 2 is very steep. The retaining wall in the island at the intersection limits the sight distance of drivers on Main Street to see oncoming U.S. 2 traffic.

To the west of this intersection is the intersection of U.S. 2 and Harvey Hill Road. Harvey Hill Road is very steep; therefore any grade changes to U.S. 2 in this vicinity will have to be looked at in regards to impacts to Harvey Hill Road as well.

Purpose

The purpose of this project is to determine a preferred alternative that will improve the safety of this intersection for motorists and pedestrians.

Need

The existing intersection is considered deficient because:

- *Sight distances are inadequate for vehicles turning onto Main Street from U.S. 2, for vehicles turning onto U.S. 2 from Main Street, and for vehicles turning onto U.S. 2 from Harvey Hill Road.*
- *Existing U.S. 2 is not properly superelevated for the posted speed limit. Town records indicate that running speeds along the corridor generally exceed the posted speed limit.*
- *There are presently no crosswalks near the intersection to adequately accommodate pedestrian traffic.*
- *The approach grades of Main Street and Harvey Hill Road exceed VTrans standards.*
- *The cross-sectional width of U.S. 2 does not meet VTrans standards.*

- *The stairs in the middle of the intersection are not ADA compliant, and the retaining wall in the middle of the intersection is a potentially hazardous obstruction.*
- *Traffic Calming is needed to encourage lower speeds through the intersection.*

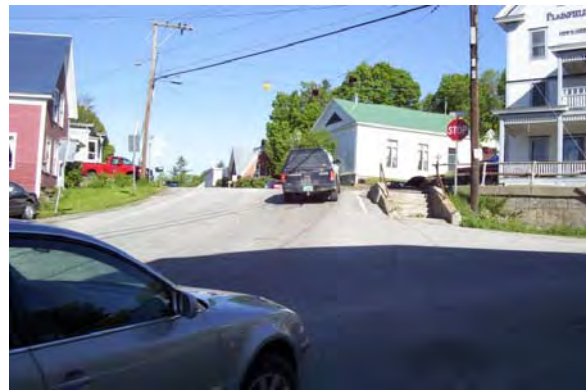
SECTION 3 – EXISTING CONDITIONS

US 2 is classified as a rural principal arterial within the Town of Plainfield and is a State Highway. This route is part of the National Highway System and is classified as a Truck Network. Vehicles along this segment include local and commuting traffic. US 2 is a direct link between I-89 in Berlin / Montpelier and I-91 in St. Johnsbury. The posted speed limit on US 2 within the project area is 30 mph.

Main Street is a town highway that serves as the primary access for Plainfield residents living on the southern side of the Winooski River. It is also the only access point to the Lower Village from US 2. Main Street provides a commuter connection to adjacent communities such as Barre Town, Barre City, Orange, and other towns.



Looking east along US 2 from west side of Intersection.



Looking north along Main St. towards US 2.

The existing intersection is marked with a flashing yellow beacon for the US 2 approaches and a flashing red beacon for Main Street. Eastbound and westbound both have one approach lane. Northbound comes to a “Y” at the intersection with US 2. An island is located at the center of the intersection with a retaining wall to separate the grade differential between US 2 and Main Street. Lanes at all approaches are approximately eleven-feet wide.

The Plainfield Furniture Store is located on the north side of US 2, just to the north of the sidewalk. To the south side of US 2, on the east side of the intersection, is the Plainfield Hardware Store. There is no formal parking in front of the Hardware Store, but there are often vehicles parked along the island. Although there are stairs on the

west side of the island, there are no crosswalks at the intersection. Sidewalks are located along the north side of US 2 to the west of the furniture store and the south side of US 2 to the east of the intersection (currently paved over).

The Harvey Hill Road Intersection is located less than one-hundred-feet to the west of the US 2 and Main Street Intersection. Local residents consider this intersection to be dangerous due to very steep grades along Harvey Hill Road and limited sight distance along US 2 to the east.

Because of the close proximity to the US 2 and Main Street Intersection, the Harvey Hill Road Intersection must be considered when developing alternatives for the US 2 and Main Street Intersection, especially when changes to existing grade are considered. For example, significantly lowering the elevation of US 2 at the intersection with Main Street will make conditions on Harvey Hill Road worse.

Existing sight distance is a concern, due to the grades and geometrics of the intersection. Currently, Main Street northbound left turn and Harvey Hill left turning vehicles do not have adequate sight distance using VTrans Standards and a 30 mph design speed. If using a 35 mph design speed criteria, US 2 westbound left turn vehicles also do not have adequate sight distance. The available and required stopping sight distances are as follows:

Table 1: Available and Required Stopping Sight Distances

Movement	Existing Available	Minimum Required Stopping Sight Distance	
		30 mph	35 mph
US 2 Westbound Left Turns	63 m	61 meters	69 meters
Main Street Northbound Left Turns	59 m*		
Main Street Northbound Right Turns	81 m*		
Harvey Hill Road	42 m*		

* looking to the left

SECTION 4 – TRAFFIC DATA AND ANALYSIS

In order to compare alternatives and determine a preferred alternative, a number of factors were considered. One such factor was traffic. For this project, traffic volumes were investigated for several design years, including current (2004), 5-year (2009) and 15-year (2019), in accordance with VTrans practice. Traffic data was evaluated for the level of service (LOS) using methodology outlined in the 2000 Highway Capacity Manual. In addition, turning lane warrants were investigated, and signal warrants were analyzed using procedures in the 2003 Manual on Uniform Traffic Control Devices (MUTCD). Results of analyses are described later in this section.

In addition to traffic volumes, accident data was analyzed using VTrans methodology from the 1998-2002 High Crash Location Report. Accident data was obtained through VTrans.

The following paragraphs summarize the collection of traffic data, development of traffic volumes and traffic analysis. For more details, data has been provided in Appendix B.

A. Existing Traffic Volumes

To determine existing traffic volumes, traffic turning movement counts conducted by VTrans were obtained and utilized. These counts were performed in late June and early July, 2003 and covered the time period between 6:00 a.m. and 6:00 p.m.

Daily and monthly factors were used to translate turning movements counts to design hour volumes (DHVs). The DHVs represent the 30th highest hour throughout the year. Additional detail on the development of traffic volumes is provided in Appendix B.

B. Future Traffic Volumes

Future traffic volumes were determined by applying growth factors to the 2003 DHVs. These factors were taken from the VTrans growth factor charts for rural primary and secondary roadways. A growth rate of 2% was used to project 2003 volumes to 2004. Growth from 2003 to 2009 and 2019 was determined to be 9% and 25%, respectively. Additional detail on development of future traffic volumes is provided in Appendix B. DHV, and average annual daily traffic (AADT) for this intersection, including all approaches, was estimated to be the following:

Table 2: Traffic Volumes

Year	AADT*	DHV
2003	8,100	777
2004	8,200	791
2009	8,900	854
2019	10,200	974

*AADT rounded to the nearest 100

C. Level of Service (LOS) Evaluation

The US 2 and Main Street Intersection was analyzed to determine the LOS for existing and future years for both unsignalized and signalized conditions. Because many of the alternatives envision the intersection being reconfigured into a "T" intersection, the analysis was performed for this configuration. The LOS corresponding to vehicle delays is different for unsignalized intersections than for signalized intersections. The following table describes LOS measurements for unsignalized and signalized intersections.

Table 3: Level of Service Descriptions and Measurements

LOS	Description	Vehicle Delay, seconds	
		Unsignalized	Signalized
A	No / Very Little Delay	< 10	< 10
B	Short Delays	> 10 – 15	> 10 – 20
C	Average Delays	> 15 – 25	> 20 – 35
D	Long Delays	> 25 – 35	> 35 – 55
E	Very Long Delays	> 35 – 50	> 55 – 80
F	Extreme Delays	> 50	> 80

Results of unsignalized and signalized analyses are presented in Table 4. The all-way stop condition causes eastbound and westbound LOS to drop from A to B or C, depending on approach and year. The signalized condition shows the best overall performance of the three options. Results of the traffic analysis are provided in Appendix C.

Table 4: Level of Service Results

Analysis Type	US 2 EB		US 2 WB		Main St. NB		Overall	
	2004	2019	2004	2019	2004	2019	2004	2019
Unsignalized (Main Street Stop)	A (7.6)	A (7.7)	A (8.7)	A (9.2)	C (15.6)	C (21.4)	*	*
Unsignalized (All-Way Stop)	B (14.5)	C (23.7)	B (11.0)	B (13.4)	A (9.8)	B (11.2)	B (12.7)	C (18.6)
Signalized	A (8.4)	A (9.5)	A (7.3)	A (8.2)	B (19.3)	C+ (20.9)	A (9.8)	B+ (10.9)

() = delay per vehicle, seconds

* = not given in output

Changes in vehicle delay between 2004 and 2019 are not significant and show acceptable levels of service for both years. Results for 2009 are not indicated above, but the LOS was found to be similar to those of 2004 and 2019. Due to the high performance of the intersection, it was not necessary to determine turning lane warrants at the various approaches.

D. Traffic Signal Warrant Analysis

A signal warrant analysis was performed to determine whether a new traffic signal would meet warrants for installation at this intersection. This analysis followed procedures given in the 2003 MUTCD. In order for a signal to be warranted, one or more of the eight signals warrants must be met. The following table lists all warrants analyzed:

Table 5: Traffic Signal Warrants Analyzed

Warrant	Description	Warrant Met
1.	Eight Hour Vehicular Volume	
1a.	Minimum Vehicular Volume	Yes
1b.	Interruption of Continuous Traffic	No
2.	Four-Hour Vehicular Volume	Yes
3.	Peak Hour	No
4.	Pedestrian Volume	No
5.	School Crossing	No
6.	Coordinated Signal System	No
7.	Crash Experience	No
8.	Roadway Network	No

The analyses were performed using 2004 traffic volumes. It was determined that two warrants were met: (1) Warrant 1a: eight hour vehicular volume and (2) Warrant 2: four-hour vehicular volume. Because one or more Warrant is met, installation of a traffic signal would be acceptable to VTrans. According to VTrans, Warrant 1 is a typical Warrant that is met for installation of a traffic signal.

Analysis was not performed for years 2009 or 2019. Since the analysis shows two Warrants are met for 2004, and traffic volumes increase over time, these two Warrants would likely be met for future years as well. Signal warrant analyses are included in Appendix D.

E. Crash Data

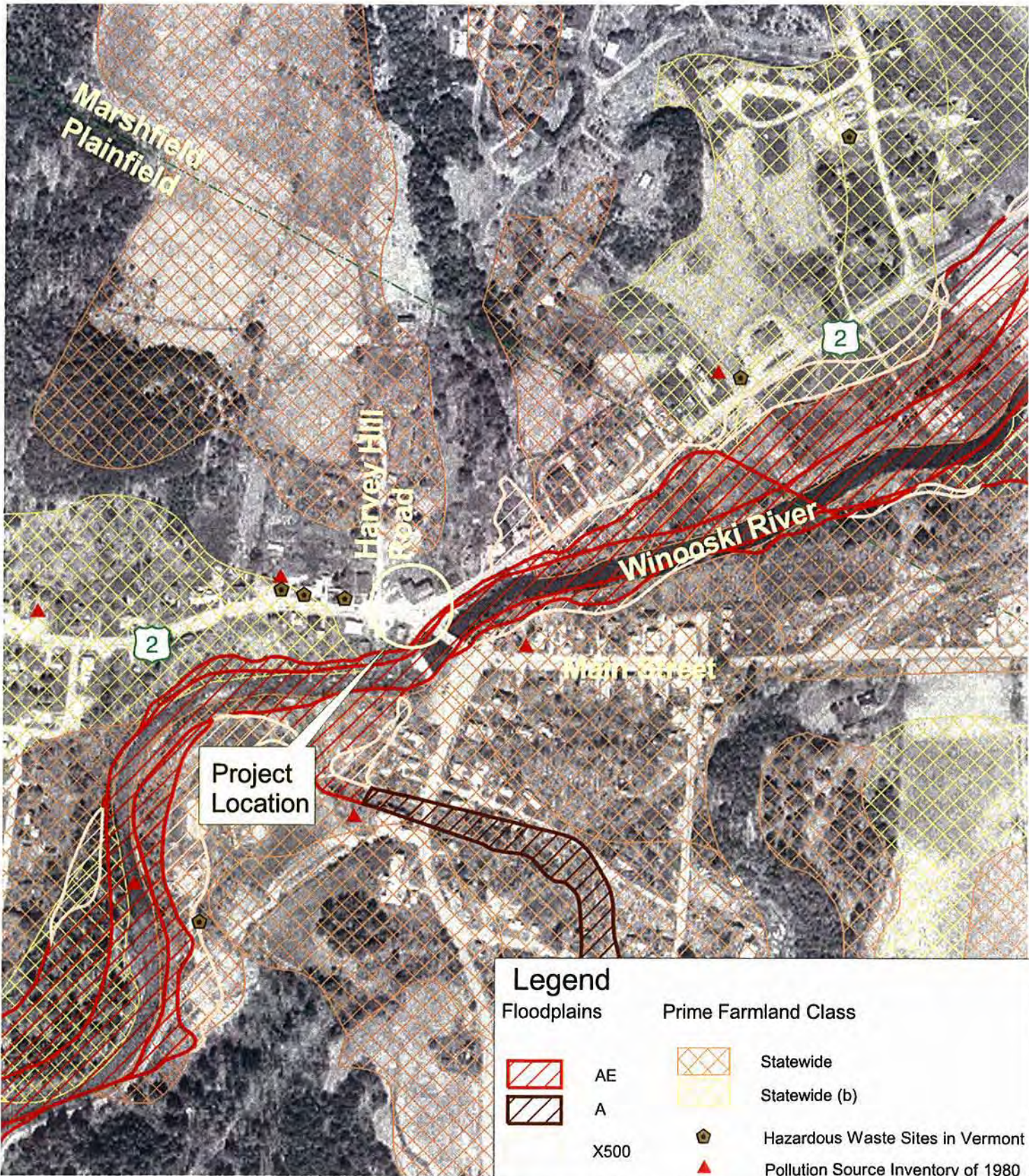
Crash data was analyzed for the US 2 and Main Street Intersection. Analysis indicates that this location is not considered a high crash location. Only two accidents were located at this intersection between 1998-2002. A minimum of five accidents per five-year analysis period are needed for an intersection to be considered a high crash location. As observed at the Local Concerns Meeting, the low number of crashes may be due to the fact that locals know how dangerous the intersection is and use extreme caution as they drive through it.

SECTION 5 – ENVIRONMENTAL AND CULTURAL RESOURCES

The following are findings in regards to environmental and cultural resources within the project area. Resources within the project area are shown on Figure 2.

A. Wetlands

Wetland resources within the project were investigated using available GIS Wetlands Mapping (Vermont Significant Wetland Inventory and National Wetland Inventory). No resources were listed in these inventories for the project area. In addition, no wetlands were identified during site visits.



DuBois & King
INC.

engineering

planning

management

development

CENTRAL VERMONT
REGIONAL PLANNING COMMISSION

US 2 AND MAIN STREET INTERSECTION

FIGURE 2: ENVIRONMENTAL
RESOURCES MAP

DRAWN BY:
JDA

DATE:
12/15/2004

CHECKED BY:

PROJ. NO.
618723L1

PROJ. ENG.

DRAW. NO.

0 400 Feet

B. Flood Hazard Areas

Floodplain information was obtained from the Vermont Center for Geographic Information (VCGI) database to identify 100-year flood hazard areas within the project area. The originator of this data is the Federal Emergency Management Agency (FEMA). Figure 2 illustrates where floodplains are located adjacent to the project area.

C. Fish and Wildlife Habitats

This project does not impact any fish or wildlife habitats. The nearby Winooski River will not be affected by this project. In addition, there are no known wildlife habitats within the project area per VCGI databases and site visits.

D. Water Quality

Based upon a review of the VCGI database, there are no wellhead protection areas within the project area.

E. Threatened and Endangered Species

Threatened and endangered species GIS data was obtained from VCGI. This data layer is maintained by the Vermont Nongame and Natural Heritage Program of the Fish and Wildlife Department. This data shows no threatened or endangered species within the project area.

F. Agricultural Resources

Prime agricultural soils data was obtained from VCGI to determine whether these soils exist within the project area. As depicted on Figure 2, there are no prime agricultural soils within the project area.

G. Parks and Recreation Lands

According to database information obtained from VCGI, this project does not impact any lands owned and managed by the State of Vermont Department of Forests, Parks, and Recreation. In addition, there are no Land and Water Conservation Fund Projects affected by this project.

H. Hazardous Wastes

The Vermont Active Hazardous Sites List (October 2004) lists no hazardous waste sites within the project limits. In addition, VCGI GIS data shows no hazardous waste sites or locations of hazardous waste generating facilities in the project area.

I. Historic and Archaeological Resources

A Historical Resources Review and a Pre-Phase I-A Assessment (archeological) was performed as part of a June 1996 Conceptual Alignment Analysis Report (CAA) prepared by Pinkham Engineering Associates, Inc. The following is a summary of the findings from these reviews. For complete historic and archeological reviews, see Appendix E. This appendix also includes other information regarding the historic nature of the project area.

Historic Resources Review

The Historic Resources Review performed by Liz Pritchett Associates, contained in the CAA, illustrates the project area being within the Plainfield Village Historic District. Specific areas of concern listed in this review include the following:

- Town Hall and the “possibly historic” stonewall fronting the Town Hall.
- The former Plainfield Hotel.
- The bridge and all structures in the village center along Main Street.
- Lawns, vegetation and fencing in shallow front yards.

The historic review does not specifically indicate the Plainfield Hardware Store as an area of concern. However, the Hardware Store building is listed as a historic structure as it is one of the original Village stores.

The historic review recommended the Vermont State Historic Preservation Office (SHPO) review potential designs for transportation paths. This would apply to projects other than paths as well, including any improvements to the US 2 and Main Street intersection.

Pre-Phase I-A Archeological Assessment

The CAA contains a Pre-Phase I-A Assessment conducted by Archaeology Consulting Team Inc., for Pinkham Engineering Associates, Inc. Results of this assessment state “the potential for encountering Native American archaeological resources within the proposed Plainfield Bike and Pedestrian Path Project is very high”. However, the project area for that study included a broader area than is part of the US 2 and Main Street Intersection Study. The US 2 and Main Street project area encompasses only previously disturbed areas, and the need for further archeological investigations is not expected.

SECTION 6 – IDENTIFIED ALTERNATIVES

The following are the alternatives investigated for this project, with a summary of their benefits and negative impacts. These alternatives were presented at the Alternatives

Presentation Meeting. A summary of the impacts, costs, and ability to address the purpose and need for the project is included in the Evaluation Matrix prepared for the project. The Matrix is included as Table 6, located in Section 8 of this Report.

A. Alternative 1: No Build Alternative

The No Build alternative was evaluated and used as a baseline against which other alternatives were measured. There are no improvements from the existing conditions with this alternative.

Benefits:

There is no expense required for this alternative. Since no construction required, no permits or environmental clearances are required.

Negative Impacts:

This alternative does not improve any of the deficiencies listed in the Purpose and Need Statement.

B. Alternative 2: Lower Speed Limit to 25 mph

Plainfield representatives expressed concern regarding excessive travel speeds along US 2 within the project area. These concerns led to this alternative. D&K has discussed this alternative with VTrans Traffic Division Representatives, but they were not in support of it. They did not believe this would decrease vehicle speeds in this area, based on their experience with lowering speed limits in other areas throughout the State.

The current posted speed limit on US 2 is 30 mph. Previous speed studies show speeds nearby the project area to be approximately 35 mph. Therefore, it is unlikely that a new speed study would show justification for lowering the speed limit as suggested. Typically, posted speed limits cannot be lowered unless justified through a speed study that concludes actual running speeds are lower than the posted speed.

Benefits:

There are minimal expenses required for this alternative. Since there is no construction required, no permits or environmental clearances are required.

Negative Impacts:

This alternative does not improve any of the deficiencies listed in the Purpose and Need Statement.

C. Alternative 3: Add Mirrors

This alternative would entail adding mirrors at certain locations to improve the sight lines for vehicles entering US 2 from Main Street and Harvey Hill Road. However, VTrans Traffic Division Representatives were not supportive of the alternative as mirrors are often damaged, become dirty, need adjustment, and are not a permanent solution.

Benefits:

- There are minimal expenses required for this alternative.
- Since there is no construction required, no permits or environmental clearances are required.
- Sight distance improvements.

Negative Impacts:

- Does not provide adequate superelevation on US 2.
- No accommodation of pedestrians.
- No improvements to approach grades on side roads.
- No improvements to cross-section width.
- Does not remove the stairs and retaining wall obstruction.

D. Alternative 4: Rotary Intersection

This alternative would entail creating a rotary intersection at the US 2 and Main Street Intersection. This alternative would require significant grading and roadway construction, total property acquisitions, destruction of numerous historic resources, and extensive permitting.

Benefits:

- Improvements to sight distances
- Provides proper superelevation
- Accommodation for pedestrians
- Possible improvements to approach grades
- Cross-section width improvements to US 2
- Elimination of stairs at intersection
- Incorporation of traffic calming

Negative Impacts:

There are significant negative impacts that are associated with this alternative. These include the following:

- Significant Right-of-Way impacts
- Untenable historic impacts
- May require ACT 250 Permit
- Very expensive alternative
- Substantial utility impacts

E. Alternative 5: “T” Intersection

This alternative consists of maintaining existing grades along US 2 and altering the alignment of Main Street so that the intersection is a “T” configuration.

Benefits:

- Removal of the existing stairs and island within the intersection.

Negative Impacts:

- Utility Impacts
- Possible Right-of-Way impacts
- Possible historic impacts
- No other improvements to existing deficiencies besides that listed in the benefits.

F. Alternative 6: “T” Intersection and Traffic Signal

This alternative is the same as Alternative 5, but with the addition of a traffic signal.

Benefits:

- Accommodation of pedestrians
- Removal of the existing stairs and island within the intersection
- Traffic calming opportunities
- Adding a traffic signal provides improved safety for vehicles by reducing the number of conflicting movements

Negative Impacts:

- Utility Impacts
- Possible Right-of-Way impacts
- Possible historic impacts
- No improvements to sight distances
- Does not provide adequate superelevation for US 2
- No improvements to grades on side roads
- No cross-section width improvements

G. Alternative 7: “T” Intersection and Minor Lowering of US 2

Minor lowering of the intersection for this analysis has been assumed to be approximately 1.5-feet (0.5 meters), and would be affected over a length of approximately 360-feet (110 meters) along US 2.

Benefits:

- Improve sight distance for US 2 and Main Street
- Provide proper superelevation
- Cross-section width improvements to US 2
- Removal of the existing stairs and island within the intersection
- Traffic calming opportunities

Negative Impacts:

- Utility Impacts
- Minimal Right-of-Way impacts
- Possible historic impacts
- Does not improve sight distance for Harvey Hill Road
- No accommodation for pedestrians

H. Alternative 8: “T” Intersection and Minor Lowering of US 2 with Relocation of the Furniture Store

This alternative is an alteration of Alternative 7. Relocation of the furniture store would involve moving the store approximately 25-feet (7.5 meters) back away from US 2. This allows for additional grading in this area to provide improved sight distance from Harvey Hill Road.

Benefits:

- Improve sight distance for US 2, Main Street and Harvey Hill Road
- Provide proper superelevation
- Cross-section width improvements to US 2
- Removal of the existing stairs and island within the intersection
- Traffic calming opportunities

Negative Impacts:

- Utility Impacts
- Significant Right-of-Way impacts
- Concerns with relocation of furniture store (historic impacts and high costs)
- No accommodation of pedestrians

I. Alternative 9: “T” Intersection, Lower US 2 Significantly, and Regrade Harvey Hill Road

Alternative 9 includes significant lowering of US 2 at the intersection with Main Street. We have assumed significant lowering to be in the order of magnitude of 3-feet (0.9 meters). Currently, Harvey Hill Road is a very steep road. In order to lower US 2 by

this magnitude, adjustments must be made (i.e. regrading) to Harvey Hill Road for this alternative. US 2 would be affected over a length of approximately 410-feet (125 meters).

Benefits:

- Improve sight distance for US 2 and Main Street
- Provide proper superelevation
- Cross-section width improvements to US 2
- Removal of the existing stairs and island within the intersection
- Traffic calming opportunities
- Improved approach grade on Main Street

Negative Impacts:

- Utility Impacts
- Right-of-Way impacts
- Possible historic impacts
- More costly than the alternative for minor lowering of US 2
- No improvements to sight distance for Harvey Hill Road
- No accommodation for pedestrians

J. Alternative 10: “T” Intersection, Lower US 2 Significantly, and Relocate Harvey Hill Road

This alternative is a modification of Alternative 9. Due to the steepness of Harvey Hill Road, there has been the notion that Harvey Hill Road could be relocated to have a different entrance onto US 2.

Benefits:

- Improve sight distance for US 2, Main Street and Harvey Hill Road
- Provide proper superelevation
- Improve approach grades on side roads
- Cross-section width improvements to US 2
- Removal of the existing stairs and island within the intersection
- Traffic calming opportunities

Negative Impacts:

- Utility Impacts
- Significant Right-of-Way impacts
- Possible historic impacts
- Possible environmental impacts and extensive permitting
- No accommodation for pedestrians

- Very expensive alternative

K. Alternative 11: “T” Intersection, Traffic Signal, and Minor Lowering of US 2

This alternative is similar to components of some of the alternatives already defined.

Benefits:

- Conformance to regional plan
- Improve sight distance for US 2 and Main Street
- Provide proper superelevation
- Accommodation of pedestrians
- Cross-section width improvements to US 2
- Removal of the existing stairs and island within the intersection
- Traffic calming opportunities
- Improved approach grade on Main Street

Negative Impacts:

- Utility Impacts
- Right-of-Way impacts
- Possible historic impacts
- No improvements to sight distance for Harvey Hill Road. However, the traffic signal will improve safety of Harvey Hill Road movements by creating gaps in US 2 traffic.
- No improvements to approach grades on Harvey Hill Road

L. Alternative 12: Signalization without Reconstruction

This alternative was suggested at the Alternatives Presentation Meeting. It was not investigated in detail prior to the meeting, and was not discussed in detail at the meeting. Therefore, it is presented in detail here as follow-up to the meeting.

The intersection could be signalized without reconstructing the intersection into a “T” configuration. This alternative would have a lower cost than alternatives with signalization and reconstruction to a “T” intersection. This alternative appears to have no other benefit and several drawbacks. Due to the following factors, this alternative is not feasible.

Without reconfiguring the intersection, westbound US 2 traffic turning left onto southbound Main Street would first have to turn left into the narrow roadway directly in front of the Hardware Store, and then turn left onto southbound Main Street. Conversely, the same would hold true for Main Street northbound right turning vehicles.

Use of the narrow roadway in front of the Hardware Store would be necessary because turning at the western leg of the “Y” is impractical under the current intersection configuration.

If both of these movements (US 2 westbound onto southbound Main Street, and northbound Main Street onto eastbound US 2) were to be permitted simultaneously, the narrow roadway directly in front of the Hardware Store would need to allow two vehicles to pass side by side. This would cause the elimination of all parking directly in front of the store. All parking would need to be relocated, possibly at a nearby location such as the existing municipal parking lot just west of the intersection. As expressed at both public meetings, relocating the Hardware Store parking is highly undesirable to the Hardware Store owner. Additionally, the northwest corner of the Hardware Store is so sharp that larger vehicles must encroach into the oncoming traffic lane as they turn from northbound Main Street towards eastbound US 2.

Another way to accommodate traffic would be to allow only a single traffic lane directly in front of the Hardware Store. The traffic signals would need to control traffic through the narrow roadway, one direction at a time. Traffic heading north on Main Street would be stopped south of the store while the US 2 traffic was permitted to come through the single lane. Then traffic heading north on Main Street would be allowed to use the lane while traffic on US 2 was stopped. A formal lane would have to be designated to help control the flow of traffic in front of the store. This would allow the retention of some of the informal parking that is located directly in front of the store today.

Leaving the intersection configured as a “Y” would increase vehicle delay to the average travel time through the intersection because the stop bars would be set back considerably farther than a signalized intersection configured as a “T”. The stop bars on US 2 would be 14 meters farther apart than under a “T” configuration, for a total separation of 60 meters. This would make for a very wide distance between stop bars. Also, the stop bar for Main Street traffic would be set back approximately 18 meters farther from the intersection than it would under a “T” configuration.

Additionally under the “Y” configuration, sight distance for westbound US 2 traffic turning onto southbound Main Street would be limited to 63 meters, which just meets minimum allowed for 30 mph. Under a “T” configuration, the sight distance would be increased to approximately 90 meters.

If not reconfigured, the intersection will continue to have sight distance limitation for eastbound US 2 traffic turning onto southbound Main Street. There is currently approximately 30 meters of sight distance for these vehicles looking for traffic pulling out from the narrow roadway directly in front of the Hardware Store. Under the “T” configuration, sight distance would be virtually unlimited. Leaving the intersection configured as a “Y” will also leave the existing retaining wall and stairs in the middle of the intersection, and it would provide neither the opportunity to provide the minimal travel lane widths nor proper cross slope for US 2 within the project area.

Benefits:

- There are minimal expenses required for this alternative.
- Since there is no construction required, no permits or environmental clearances are required.
- Accommodation of pedestrians
- Adding a traffic signal provides improved safety for vehicles by reducing the number of conflicting movements
- The traffic signal will improve safety of Harvey Hill Road movements by creating gaps on US 2.

Negative Impacts:

- Does not improve sight distance for US 2
- Does not provide adequate superelevation on US 2
- No improvements to approach grades on side roads
- No improvements to cross-section width
- Does not remove the stairs and retaining wall obstruction

M. Alternative 13: All Way Stop Intersection

This alternative was suggested at the Alternatives Presentation Meeting. It was not investigated in detail prior to the meeting, and was not discussed in detail at the meeting. Therefore, it is presented in detail here as follow-up to the meeting.

The last alternative identified was to change the intersection to an all way stop intersection without reconstructing the intersection into a “T” configuration. The only benefit for this alternative would be the minimal costs associated with this option. Due to the following factors, this alternative is not feasible.

For this alternative, the narrow roadway directly in front of the Hardware Store would need to accommodate two-way traffic. Similar to Alternative 12, use of the narrow roadway in front of the Hardware Store would be necessary because turning at the western leg of the “Y” is impractical under the current intersection configuration.

As with Alternative 12, this alternative would cause elimination of all parking in front of the Hardware Store and force turning vehicles into oncoming traffic lanes. Sight distance concerns would remain under this alternative. The same concerns as described in Alternative 12 would exist for this option.

Analysis was performed to determine the change in Level of Service between the intersection as a Main Street stop only to an all-way stop intersection. As expected, the Main Street approach improves during the all-way stop intersection. The eastbound and westbound approaches perform worse with the all-stop intersection because now all vehicles have to stop at the intersection, whereas they currently do not.

Benefits:

- There are minimal expenses required for this alternative.
- Since there is no construction required, no permits or environmental clearances are required.
- The all-way stop intersection will improve safety of Harvey Hill Road movements by creating gaps on US 2.

Negative Impacts:

- Does not improve sight distance for US 2
- Does not provide adequate superelevation on US 2
- No improvements to approach grades on side roads
- No improvements to cross-section width
- Does not remove the stairs and retaining wall obstruction
- No accommodation of pedestrians

SECTION 7 – TRAFFIC CALMING MEASURES AND OPPORTUNITIES

Plainfield representatives expressed their desire at the Local Concerns Meeting and Alternatives Presentation Meeting that traffic calming measures be incorporated into the preferred alternative.

There are a number of measures typically used for traffic calming. The measure used depends on the feasibility of the use within the project area. The following five pages are from the VTrans Traffic Calming Study and Approval Process for State Highways, September 2003 publication. These pages include Appendix B of this publication, Evaluation for Traffic Calming Devices, which shows advantages and disadvantages of several traffic calming measures, Village traffic calming concepts from TC-13M, and Village traffic calming prototypes. These are provided as background for current traffic calming measures and to demonstrate what was considered for this project.

APPENDIX B EVALUATION FOR TRAFFIC CALMING DEVICES

TRAFFIC CALMING DEVICE	ADVANTAGES	DISADVANTAGES
<p>Speed Hump (TC-1)</p> <p>Speed Table (TC-2)</p>	<ul style="list-style-type: none"> • Appropriate for low-traffic local, streets. • Relatively inexpensive to install and maintain. 	<ul style="list-style-type: none"> • Local, residential streets only. • May increase noise and pollution from vehicles accelerating and decelerating for hump. • Requires special plow settings or slower operations. • May be unpopular. These require strong local support to succeed. • Special design needed for cyclists, disabled and for storm drainage. • Should not be used on critical emergency response routes or bus routes. May affect emergency service response times.
Chicane (TC-3)	<ul style="list-style-type: none"> • May reduce traffic volumes • Traffic noise may be reduced due to lower speeds and volume. • Landscaped chicanes may improve street appearance. • May be effective in reducing the number of collisions.¹ 	<ul style="list-style-type: none"> • With two-lane chicanes, motorists may attempt to increase travel speeds by crossing the centerline to maintain a straight line of travel. • Will require loss of on-street parking spaces. • Useful only for low volume, neighborhood streets.
Neckdown (TC-4)	<ul style="list-style-type: none"> • Improves visibility of pedestrians. • Shortens the crossing distance for pedestrians. • May reduce vehicle-pedestrian conflicts. • Landscaping and special pavement may enhance village area. 	<ul style="list-style-type: none"> • May lose on-street parking spaces. • May make it difficult to accommodate full bicycle lanes. • May impact drainage. • Requires provisions for maintenance and snow removal.
<p>Mini-Roundabout (TC-9B)</p> <p>Traffic Circle (TC-5M)</p>	<ul style="list-style-type: none"> • See Roundabout comments below. • May act as gateways on neighborhood streets with low speeds and low volume. • May be enhanced with landscaping. 	<ul style="list-style-type: none"> • See Roundabout comments below. • For local, neighborhood streets only. • Not be used on critical emergency response routes.
Raised Intersection (TC-6)	<ul style="list-style-type: none"> • May reduce travel speed. • May slow right-turning vehicles. • Prevents illegal parking close to intersection. • May improve appearance with landscaping and/or textured treatments. 	<ul style="list-style-type: none"> • Expensive to construct and maintain. • May create a minor increase in delay for emergency vehicles. • For use in special situations with high levels of pedestrian activity. • Recommended only with very low percentage of long wheel-base vehicles.

¹ Insurance Corporation of British Columbia, summarizing 43 international studies concluded that chicanes were effective in reducing the number of collisions.

TRAFFIC CALMING DEVICE

ADVANTAGES

DISADVANTAGES

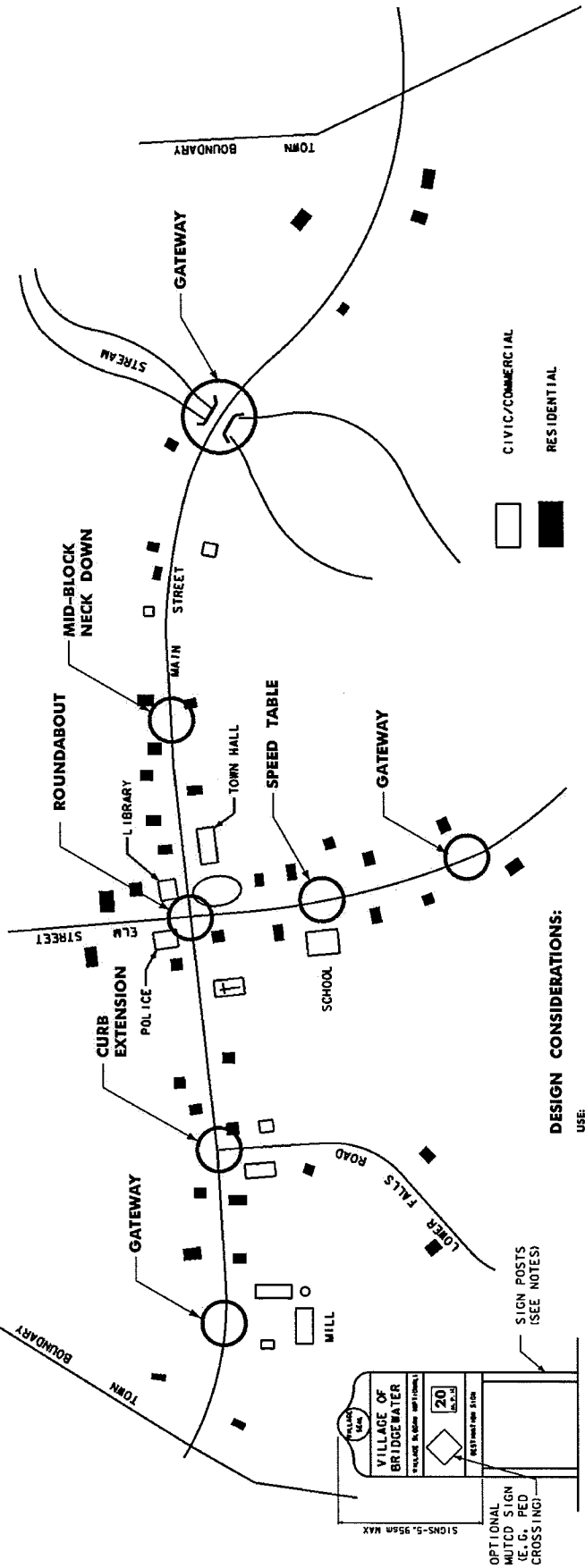
<p>Curb Extension (TC-7)</p>	<ul style="list-style-type: none"> • May reduce vehicle-pedestrian conflicts. • May visually enhance the street, especially if landscaped. • Vehicle speeds may decrease. • Shortens the crossing distance for pedestrians. • Improve visibility of pedestrians. 	<ul style="list-style-type: none"> • May make it difficult to accommodate full bicycle lanes. • May impact drainage. • Requires provisions for maintenance and snow removal.
<p>Raised Median Island (TC-8)</p>	<ul style="list-style-type: none"> • May help to form a visual "gateway" at the edge of community. • Separate opposing vehicle travel lanes and prevent passing movements. • Can be designed with breaks for pedestrian refuges to allow pedestrians to cross half of the street at a time. • May reduce vehicle-pedestrian conflicts. • May visually enhance the street through landscaping. 	<ul style="list-style-type: none"> • May require removal of on-street parking to create room for median. • May need to restrict access to driveways from one direction. • Requires provisions for maintenance and snow removal. • May make it difficult to accommodate full bicycle lanes. • May impact drainage.
<p>Roundabout (TC-9A)</p>	<ul style="list-style-type: none"> • Reduce more serious motor vehicle collisions, particularly right angle conflicts. • Reduces the number of potential conflict points at an intersection. • Enhances intersection appearance when properly landscaped. • Allows for easy u-turns and access control. • Deflection reduces vehicle speed on approach. 	<ul style="list-style-type: none"> • Adequate turning radii must be provided to insure access for emergency vehicles, buses and trucks to turn left. • May be inappropriate on major emergency response routes. • May require removal of some on-street parking at approaches. • Requires provisions for snow and ice removal. • May require additional ROW at intersection. • Requires attention for pedestrians and bicycles including pedestrian crossings since no signal is provided. • Requires attention to assist vision impaired pedestrians w/ detectable warnings and clearly defined edges.
<p>Gateway Sign</p>	<ul style="list-style-type: none"> • Identifies change in character to more densely settled area. • Helps to orient the driver. • May help to reduce travel speeds. • Inexpensive 	<ul style="list-style-type: none"> • Amount of speed reduction uncertain. • Must comply with MUTCD if located within the State Highway right-of-way. Currently not allowed within the State Highway right-of-way under State law.
<p>Pavement Marking</p>		<ul style="list-style-type: none"> • Effectiveness not yet measured. • Needs maintenance and not highly visible in winter months.

TRAFFIC CALMING DEVICE		ADVANTAGES	DISADVANTAGES
Delineation	<ul style="list-style-type: none"> • Inexpensive 	<ul style="list-style-type: none"> • Effectiveness not yet measured. • If paint, it may be expensive. 	
On-Street Parking	<ul style="list-style-type: none"> • May reduce travel speeds depending on extent of use. • Parked vehicles provide a buffer between traffic and pedestrians on sidewalks. This provides a comfort level for pedestrians that can be particularly important in commercial or village areas. 	<ul style="list-style-type: none"> • On-street parking can reduce the visibility of pedestrians and vehicles to each other. • Increased risk of suddenly opened doors hitting cyclists or vehicles where the adjacent travel lane is narrow. • May require parking ban during snow periods. 	
Speed Reader (Permanent)	<ul style="list-style-type: none"> • Raises awareness of speeding problem. • Encourages driver to slow to speed limit. 	<ul style="list-style-type: none"> • Only reduce speeds temporarily. 	

Source: Pennsylvania's Traffic Calming Handbook with changes and additions.

Source: Chicanes- Insurance Corporation of British Columbia summarized 43 international reports: chicanes may be effective in reducing the number of collisions.

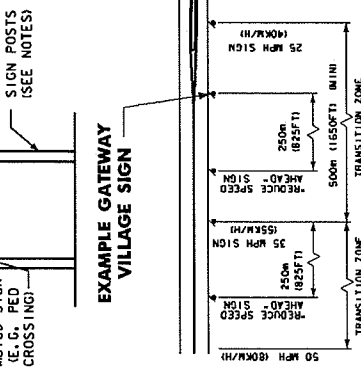
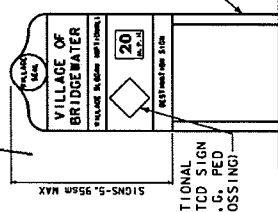
APPENDIX D



DESIGN CONSIDERATIONS:

- USE:**
 -ENTERING AND WITHIN VILLAGE OR TOWN CENTER
- GOAL:**
 -WELCOMING, VISUAL ENHANCEMENT, AESTHETICS AND SPEED CONTROL
- DESIGN PHILOSOPHY:**
 -TRAFFIC CALMING IS A COORDINATED SERIES OF DEVICES IMPLEMENTED TO CHANGE DRIVER BEHAVIOR AND IMPROVE SAFETY
- ACHIEVE THE PROJECT GOAL:**
 -SPEED REDUCTION
 -PEDESTRIAN AND MOTORIST SAFETY
- GATEWAYS SHOULD BE LOCATED 150m (500 ft) IN ADVANCE OF VILLAGE**
 -GATEWAYS MAY BEGIN AT AN EXISTING STRUCTURE, BRIDGE, HISTORIC BUILDING AS WELL AS A CREATED LOCATION.
- SEE STANDARDS FOR TRANSITION SPEED ZONES**
 -FORM FOR MATERIAL SELECTION AND OVERALL SITE DESIGN TAKE CUES FROM SURROUNDING ARCHITECTURE AS WELL AS THE HISTORICAL AND SOCIAL CONTEXT OF THE AREA

EXAMPLE GATEWAY VILLAGE SIGN



EXAMPLE GATEWAY (MEDIAN NOT REQUIRED)

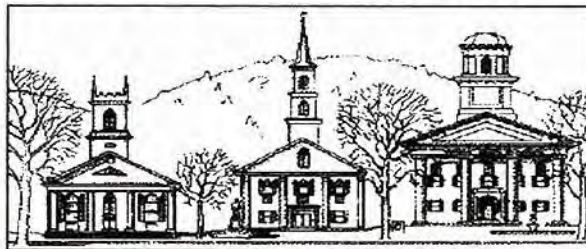
- ELEMENTS:**
 -POTENTIAL ELEMENTS INCLUDE:
- INFORMATION: VEHICULAR AND PEDESTRIAN
 - LIGHTING: VEHICULAR, PEDESTRIAN AND FEATURE/DECORATIVE
 - TRAFFIC CONTROL & PROTECTION: BOLLARDS, CURBS AND RAMPS, RAILINGS AND FENCING AND PLANTS
 - SPECIAL FEATURES: HISTORIC ELEMENTS, FOUNTAINS AND SCULPTURE
- OTHER:**
 -POSTS FOR GATEWAY VILLAGE SIGN SHOULD BE BREAKAWAY IF SIGN IS WITHIN CLEAR ZONE OF ROAD
 -WOOD POSTS MAY BE USED
 -SIGN IS OUTSIDE THE CLEAR ZONE OR IS PROTECTED BY GUARDRAIL WITHIN THE CLEAR ZONE.

NOTE: INDIVIDUAL TRAFFIC CALMING DEVICE SHEETS FOR DIMENSIONS AND STORAGE.
 OTHER STDS. REQUIRED: NONE
 NOTE: ALL DIMENSIONS ARE IN MILLIMETERS (mm) EXCEPT WHERE NOTED.

VILLAGE CONCEPT WITH GATEWAYS

TRAFFIC CALMING PROTOTYPE FOR STATE HIGHWAYS

Examples of Possible Signs and Devices



Note: Calming Devices and Signs must follow VTrans standards, regulations, and State laws related to State highways.

BJF September 2001

A number of traffic calming measures were investigated for this project. The following includes measures that were considered both feasible and infeasible for the project area. Except where otherwise noted, illustrations of the traffic calming measures shown below were obtained from the trafficalming.org website.

A. Investigated Measures Considered To Be Feasible

The following five traffic calming measures (on street parking, landscaping, lighting, patterned/colored asphalt crosswalks, and gateway markers) are feasible for the project area and can be incorporated into any of the alternatives. It is our recommendation to include the following traffic calming measures into the preferred alternative. Locations for such traffic calming measures are illustrated later in this Report.

These traffic calming measures would be more effective for the Town of Plainfield if they were incorporated into the entire Village. The project area is very short and therefore measures will have limited effect. Similar landscaping, lighting and crosswalks could be placed throughout the Village, maintaining one streetlight type and crosswalk style. Gateway markers would look best if placed at both ends of the village.

While the measures will likely have little effect on traffic calming if used only within the project area, incorporating them into the project is a good first step if the Village plans on extending them throughout the Village where possible.

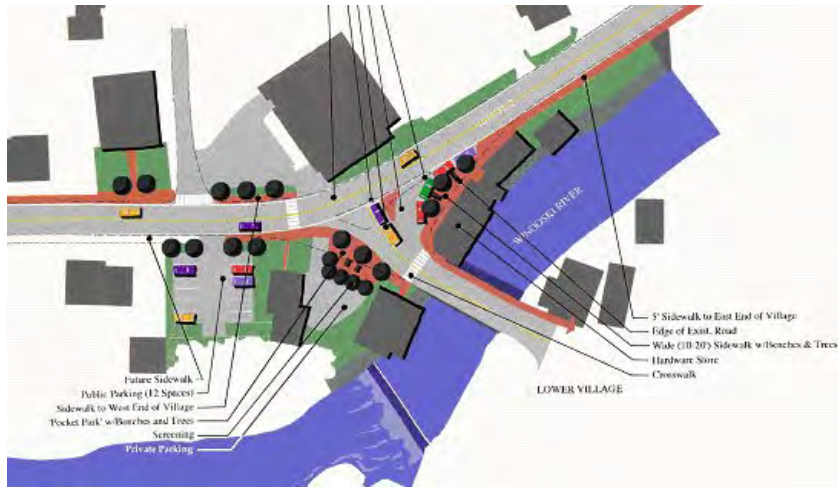
On Street Parking

On street parking is a common traffic calming measure. Although not feasible for US 2 throughout the Village due to existing geometric constraints, there is the opportunity for on street parking in front of the Hardware Store. See Figures 3 and 4 located in Section 10 of this Report for potential on street parking layouts.

Landscaping

Landscaping is another common treatment for traffic calming. The Town can decide on the overall approach and look. Landscaping can vary from seasonal flowers, shrubs or trees. The photo to the right was provided by CVRPC and shows a photo rendering of landscaping in Plainfield (outside of the project limits for this project). This photo was part of a presentation on January 20, 2005 during a US 2 Sidewalk Hearing. The following picture is an example of landscaping within the project area. This was included in the 1999 US Route 2 Corridor Design report.





Lighting

Lighting is also a common measure for traffic calming. There are thousands of different lighting manufacturers and options for the Town to choose from when deciding on lighting. If there are other streetlights in Town, the lighting can match these other areas. The following are two options from the www.moldcast.com website.



Patterned/Colored Asphalt Crosswalks

Patterned/colored asphalt crosswalks are gaining popularity throughout Vermont as a traffic calming measure. These crosswalks use stamped pavement or alternate paving materials to create an uneven surface for vehicles to traverse. Textured pavements are good for "Main Street" areas where there is substantial pedestrian activity. The Town will have the opportunity to decide on the type of patterned/colored crosswalk. The following examples of patterned crosswalks were obtained from the www.streetprint.com website.



Gateway Markers

Gateway markers are often effective for traffic calming. They help alert motorists that they are entering a village and promote vehicles to slow down. The photo to the right was taken from the VTrans Traffic Calming Study and Approval Process publication, and shows a modest gateway marker in Brattleboro, Vermont. Gateway markers can range in size, style and price greatly. Simple markers may include bollards or signs identifying the entrance to a village. More elaborate markers may include large, overhead gateways with ornate fencing, and even traffic roundabouts with landscaped islands. Costs may range from several thousand dollars for simple signing or bollards to hundreds of thousands of dollars for elaborate entranceways. Gateway markers are intended to only slow traffic in one direction, normally as vehicles enter a village.



B. Investigated Measures Considered To Be Infeasible

Dynamic Striping

Dynamic striping is another traffic calming measure. This striping is designed in a way to make the road look narrower than it really is and draw attention to an intersection. This measure is a type of psycho-perceptive treatment and there is debate as to its effectiveness.

According to the VTrans Traffic Operations Division, dynamic striping is not a practice of



VTrans. FHWA had conditionally approved this as an experimental use with the condition that States apply for permission to use this measure and commit to studying the results. An experimental use of dynamic striping is being performed in Windham County. However, according to VTrans, at this time FHWA would not allow other uses of dynamic striping until VTrans has at least preliminary results showing that it is effective in Windham. The only fully FHWA approved and MUTCD compliant use of dynamic striping is in conjunction with speed bumps.

Lowering Speed Limit

VTrans Traffic Operations Division did not view this option, presented earlier as Alternative 2, to be effective for this location. However, as noted at the Transportation Advisory Committee meeting where this project was discussed, if other traffic calming measures result in reduced speeds, it would make sense to revisit this issue.

Lane Width Reductions or Neckdowns

Reducing lane widths can often cause vehicles to slow down as the roadway is not perceived as being “open”. This option is not feasible because the proposed lane widths are the minimum widths given in VTrans Standards for the given roadway classification and volumes. The picture below, right is taken from the VTrans Traffic Calming Study and Approval Process publication.



Raised Speed Bumps or Tables

Speed bumps are rounded raised areas placed across the roadway, and are typically three to four inches high. A speed table is similar, but has a flat section in the middle. These measures are normally only appropriate for local roads, and would not be permitted by VTrans within the project area because the roadway classification of US 2 within the project area is a principal arterial.



Chicanes

Chicanes are curb extensions that alternate from one side of the street to the other, forming S-shaped curves. Curb extensions narrow the street by widening the sidewalk or the landscaped parking strip. Alternating on street parking can create chicanes, either diagonal or parallel, between one side of the street and the other. These are not possible within the project area because the existing houses within the Village are too close to the road.



Roundabouts

Roundabouts require traffic to circulate around a center island. They are very effective in moderating speeds and improving safety. However, it is often difficult for large vehicles to navigate through these. Due to geometry at the intersection, this traffic calming measure is infeasible.

SECTION 8 – EVALUATION MATRIX

Following the Local Concerns Meeting, an initial list of feasible alternatives was prepared. Elements of the alternatives were then determined, including costs, performance, impacts to resources, and engineering and permitting issues. This information was summarized in an Evaluation Matrix that serves as a summary to compare and contrast each alternative. This Matrix, given in Table 6, follows the

Table 6: Evaluation Matrix

Alternative Description	1	2	3	4	5	6	7	8	9	10	11	12	13
	Existing Geometrics	Lower Speed Limit to 25 mph	Add Mirrors	Rotary Intersection	"T" Intersection only	Traffic Signal	Minor Lowering of US 2	Minor Lowering of U.S. 2 & Relocate Furniture Store	Lower U.S. 2 Significantly, Regrade Harvey Hill Road	Lower U.S. 2 Significantly, Relocate Harvey Hill Road	Traffic Signal & Minor Lowering of U.S. 2	Signalization without reconstruction	All way stop
COST													
Roadway		\$240	\$2,000	Lump	\$346,000	\$346,000	\$368,000	\$806,000	\$464,000	Lump	\$368,000		\$2,000
Detour				Sum	\$20,000	\$20,000	\$100,000	\$100,000	\$100,000	Sum	\$100,000		
Traffic & Safety				of	\$40,000	\$40,000				of	\$40,000	\$80,000	
TOTAL	\$0	\$240	\$2,000	>>\$1,000,000	\$366,000	\$406,000	\$468,000	\$906,000	\$564,000	>>\$1,000,000	\$508,000	\$80,000	\$2,000
Typical Section (lanes:shoulders in meters)	3.4:0-6	3.4:0-6	3.4:0-6	3.4:0-6	3.4:0-6	3.4:0-6	3.4:0-6	3.4:0-6	3.4:0-6	3.4:0-6	3.4:0-6	3.4:0-6	3.4:0-6
ENGINEERING													
Alignment Change	No	No	No	Yes	minor	minor	minor	minor	minor	Yes	minor	No	No
Utility Relocation / Impacts	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Right-of-Way Impacts	No	No	No	Yes	Possible	Possible	Yes	Yes	Yes	Yes	Yes	No	No
Agricultural Lands	No	No	No	No	No	No	No	No	No	No	No	No	No
Archaeological	No	No	No	Possible	No	No	No	No	No	Possible	No	No	No
Historic Structure, Site & Districts	No	No	No	Yes	Possible	Possible	Possible	Yes	Possible	Possible	Possible	Possible	Possible
Hazardous Materials	No	No	No	No	No	No	No	No	No	Possible	No	No	No
Floodplain	No	No	No	Possible	No	No	No	No	No	No	No	No	No
Fish & Wildlife	No	No	No	No	No	No	No	No	No	No	No	No	No
Rare, Threatened & Endangered Species	No	No	No	No	No	No	No	No	No	No	No	No	No
Public Lands - Section 4(f)	No	No	No	No	No	No	No	No	No	No	No	No	No
LWCF-Section 6(f)	No	No	No	No	No	No	No	No	No	No	No	No	No
Noise	No	No	No	No	No	No	No	No	No	No	No	No	No
Wetlands	No	No	No	No	No	No	No	No	No	Possible	No	No	No
ISSUES													
Concerns	See Note 1	See Note 2		See Note 3				See Note 3					
Aesthetics	No	No	No	Yes	No	No	No	Yes	No	No	No	No	No
Community Character	No	No	No	Yes	No	No	No	Yes	No	Yes	No	No	No
Economic Impacts	No	No	No	Possible	Possible	Possible	Possible	Possible	Possible	Possible	Possible	Possible	Possible
Conform to Regional Transportation Plan	No	No	No	No	No	No	No	No	No	No	Yes	No	No

Table 6: Evaluation Matrix

Alternative Description	PURPOSE AND NEED												
	1	2	3	4	5	6	7	8	9	10	11	12	13
	Existing Geometrics	Lower Speed Limit to 25 mph	Add Mirrors	Rotary Intersection	"T" Intersection only	Traffic Signal	Minor Lowering of US 2	Minor Lowering of U.S. 2 & Relocate Furniture Store	Lower U.S. 2 Significantly, Relocate Harvey Hill Road	Lower U.S. 2 Significantly, Relocate Harvey Hill Road	Lower U.S. 2 Significantly, Relocate Harvey Hill Road	Existing Geometrics	All way stop
Satisfies Purpose & Need Statement	No	No	No	Possible	No	No	No	No	No	No	Yes	No	No
Improve Sight Distance for U.S. 2	No	No	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	No
Improve Sight Distance for Main Street	No	No	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	No
Improve Sight Distance for Harvey Hill Road	No	No	Yes	Yes	No	No	Yes	Yes	No	Yes	No	No	No
Adequate Superlevation on U.S. 2	No	No	No	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	No
Accommodation of Pedestrians	No	No	No	Yes	No	Yes	No	No	No	No	Yes	No	Yes
Improve Approach Grades on Side Roads	No	No	No	Possible	No	No	No	No	No	Yes	Yes	No	No
Cross Section Width Improvements	No	No	No	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	No
Remove Stairs & Retaining Wall Obstruction	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Traffic Calming	No	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No
ACT 250	No	No	No	TBD	No	No	No	No	No	TBD	No	No	No
401 Water Quality	No	No	No	No	No	No	No	No	No	No	No	No	No
404 COE Permit	No	No	No	Unlikely*	No	No	No	No	No	No	No	No	No
Stream Alteration	No	No	No	No	No	No	No	No	No	No	No	No	No
Conditional Use Determination	No	No	No	Unlikely*	No	No	No	No	No	No	No	No	No
Stormwater Discharge	No	No	No	No	No	No	No	No	No	Possible	No	No	No
Lakes & Ponds	No	No	No	No	No	No	No	No	No	No	No	No	No
T&E Species	No	No	No	No	No	No	No	No	No	No	No	No	No
SHPO	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Possible	Possible

Notes:

- 1 No Build Alternative will not improve existing conditions of the intersection
- 2 Alternative may or may not improve existing conditions of the intersection
- 3 Significant historic concerns
- △ Sight distance not improved, but signal/stop provides gaps in traffic stream
- Main Street improved, Harvey Hill Road unchanged
- * A site review for wetlands has not been conducted. There are no known wetlands.

Matrix Preparation Date: 01/19/05
 Matrix Print Date: 06/17/05

guidelines provided the VTrans Local Transportation Facilities (LTF). As shown in Table 6, a cost is listed for each alternative. Appendix F gives details on the cost estimates.

SECTION 9 – PUBLIC COMMENT SUMMARY

A. Local Concerns Meeting

The Local Concerns Meeting was held at the Plainfield Town Hall on Monday, August 23, 2004. Representatives from the CVRPC, the Plainfield Selectboard, and D&K attended this meeting, in addition to local residents. Appendix G includes minutes from the Local Concerns Meeting. The following is a summary of comments resulting from this meeting:

Existing Issues and Concerns

- One resident was concerned that a widened roadway or improvements to corner may encourage speeding.
- Town pursuing installation of signage to prohibit “j-braking”.
- Concern of utility impacts. The public should not be affected by utility impacts.
- Improvements should be made for pedestrians.
- The existing conditions of the Harvey Hill Road Intersection were recognized as a safety concern, especially during bad weather conditions.

Possible Alternatives

- Installation of traffic signal. Related concerns include queues, difficulty for vehicles trying to go to/from driveways due to blockages.
- Reduce speed limit to 25 mph. The Town has previously investigated implementing a lower speed limit.
- Rotary or roundabout.
- Install a mirror for Harvey Hill Road to see around the corner.
- Traffic calming.

General Comments

- It is expected that no changes to the Main Street Bridge will be recommended as part of the study.
- Parking and access will be considered in the study.
- Relocation of buildings is not being ruled out.
- Current Town sidewalk project should be coordinated with this project.

B. Alternatives Presentation Meeting

The Alternatives Presentation Meeting was held on November 30, 2004 to present alternatives to the public. All project participants, including adjacent property owners and the public, were invited to attend. A summary of concerns from local residents at this meeting included the following. More information regarding this meeting, including meeting minutes, can be found in Appendix H.

- Parking at the Hardware Store was a concern, especially to the Owner of the Store. One individual thought an additional parking space could be located adjacent to the three shown in the exhibit. This area is currently used for delivery trucks. Parking spaces will be finalized in the design phase of the project.
- One resident pointed out there is no flat approach on Main Street for vehicles. Project team members pointed out that the alternatives are not ideal, but they are better than existing conditions.
- One resident did not think the grade on Main Street was a concern and thought a traffic signal with existing geometrics should be considered. It was stated that the intersection needs to accommodate WB-40 vehicles. This requires the turning radius shown in the exhibits. If the slip ramp were widened for two lanes and still allow WB-40 vehicles, there would be no parking at the Hardware Store.
- It was mentioned that the Conservation Committee has monies set aside for trees. The Town can coordinate with this Committee if they would like to utilize these funds.
- It was asked whether the Hardware Store and sidewalk are ADA accessible. The center parking space is not ADA accessible, but the end parking spaces are at the same grade as the sidewalk.
- The question was asked whether diagonal parking could be used or if the parking spaces could be shorter. It was explained that diagonal parking was investigated but not feasible at this location. The spaces cannot be shorter because they need to meet certain standards.
- There are plans within VTrans for upgrades to the existing bridge on Main Street, which is outside of the scope for this project. The possibility of rerouting Main Street to another location along US 2 was mentioned.

SECTION 10 – SUMMARY AND RECOMMENDATIONS

After the above steps were completed, the preferred alternative was determined. The preferred alternative being presented by D&K is Alternative 11: “T” Intersection, Traffic Signal, and Minor Lowering of US 2. This conclusion is based on the following:

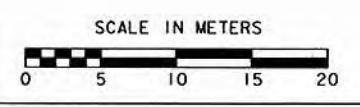
- Only alternative that remediates or does not cause the deficiencies listed in the Purpose and Need Statement to get worse.
- Signal warrant analysis verifies that a traffic signal is warranted.

- The existing intersection operates a Level of Service A for 2004 and B+ for 2019.
- Widened US 2 travel lanes
- Proper cross slope on US 2
- Removes stairs and retaining wall at island
- Provides for safer pedestrian crossing
- Provides for gaps in US 2 traffic to allow safe entry by Harvey Hill Road traffic
- Improves approach grade on Main Street
- Improves sight lines along US 2.

The following can be concluded regarding the feasibility of the other alternatives:

- Alternative 2 (Lower Speed Limit) was not seen as a viable alternative by VTrans.
- Alternative 3 (Add Mirrors) was not seen as a viable alternative by VTrans.
- The alternative to modify this intersection into a rotary intersection, Alternative 4, is not feasible due to very high costs, historical impacts, and possible archeological impacts.
- Accommodation of pedestrians is a major concern with residents. Alternatives 1, 2, 3, 5, 7, 8, 9 and 10 do not accommodate pedestrians.
- The only geometric improvement Alternative 5 has is the removal of the existing stairs and retaining wall obstruction.
- The only geometric improvements Alternative 6 has are accommodation for pedestrians, removal of the stairs and retaining wall obstruction and traffic calming.

Figures 3 and 4 show two options (A and B) for Alternative 11. The differences between the two include landscaping in front of the Hardware Store, the configuration of the parking in front of the Hardware Store, and grades of these parking spaces. Figure 5 shows a cross-section at the Hardware Store that illustrates these differences. Option A provides for landscaping near the Hardware Store and flatter grades at the parking spaces. The precise treatment for the area in front of the Hardware Store will be determined during Final Design of the project.



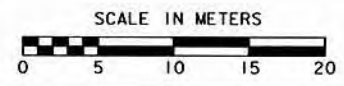
PLOTTED 02/09/2005

NO.	DATE	REVISIONS	BY	CHK'D

DuBois & King inc.
 engineering planning management development

CENTRAL VERMONT REGIONAL PLANNING COMMISSION
 PLAINFIELD VILLAGE US 2/MAIN STREET INTERSECTION TRANSPORTATION STUDY
 FIGURE 3: ALTERNATIVE IIA
 PROPOSED PLAN SHEET

DRAWN BY	JDA	DATE	NOV. 2004
CHECKED BY	EPD	PROJ. NO.	618723
PROJ. ENG.		DRAW. NO.	
SHEET			1 OF 1



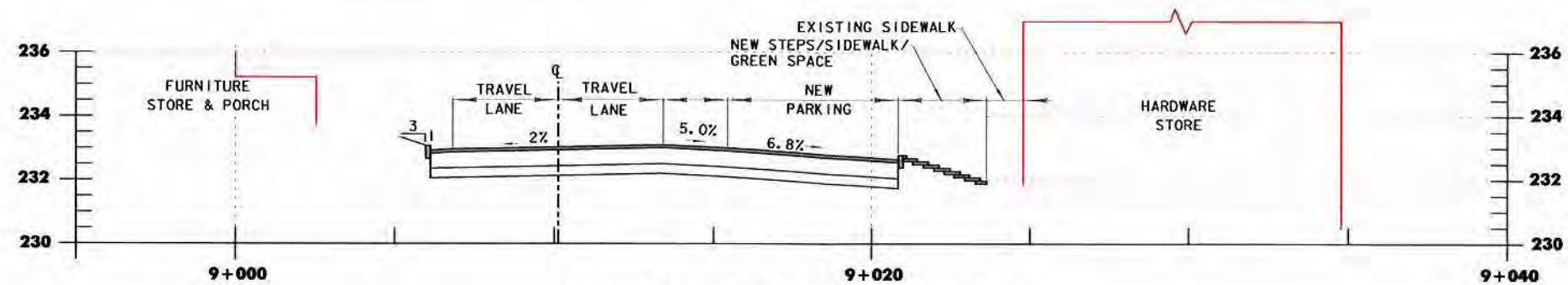
PLOTTED 02/09/2005

NO.	DATE	REVISIONS	BY	CHK'D

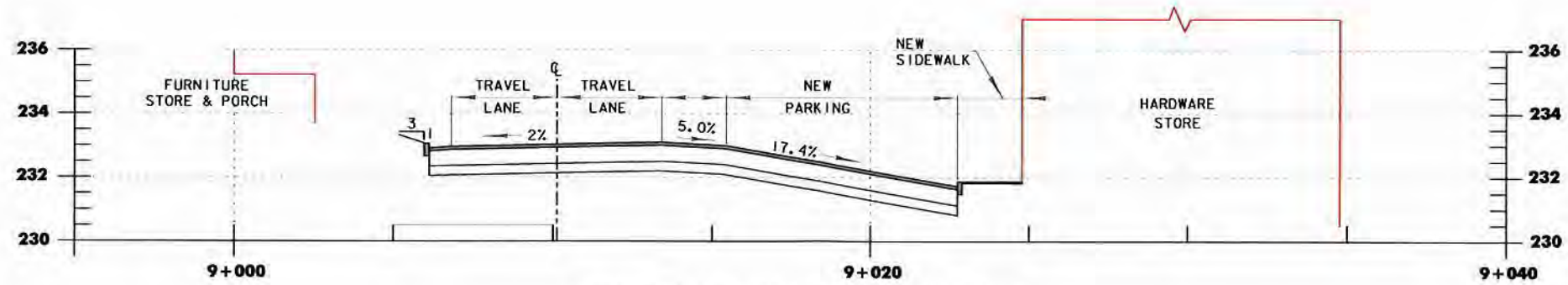
DuBois & King inc.
 engineering planning management development

CENTRAL VERMONT REGIONAL PLANNING COMMISSION
 PLAINFIELD VILLAGE US 2/MAIN STREET INTERSECTION TRANSPORTATION STUDY
FIGURE 4: ALTERNATIVE IIB PROPOSED PLAN SHEET

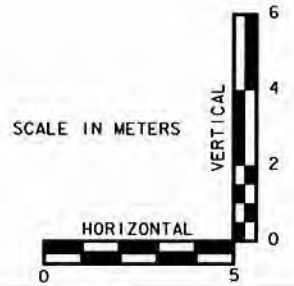
DRAWN BY JDA	DATE NOV. 2004
CHECKED BY EPD	PROJ. NO. 618723
PROJ. ENG.	DRAW. NO.
SHEET 1 OF 1	



**PROPOSED CROSS SECTION AT HARDWARE STORE
WITH LANDSCAPING IN FRONT OF STORE**



**PROPOSED CROSS SECTION AT HARDWARE STORE
WITHOUT LANDSCAPING IN FRONT OF STORE**



PLOTTED 02/09/2005

NO.	DATE	REVISIONS	BY	CHK'D

engineering planning management development

**CENTRAL VERMONT REGIONAL
PLANNING COMMISSION**
PLAINFIELD VILLAGE US 2/MAIN STREET
INTERSECTION TRANSPORTATION STUDY
**FIGURE 5+ CROSS SECTIONS AT
HARDWARE STORE, SECTION A-A**

DRAWN BY PGJ	DATE SEPT. 2004
CHECKED BY EPD	PROJ. NO. 618723
PROJ. ENG.	DRAW. NO.
SHEET 1 OF 1	

Appendix A

Project Kick-Off Meeting



Route 66
Randolph, VT 05060
(802) 728-3376 x265
Fax (802) 728-4930
jaustin@dubois-king.com
ENGINEERING · PLANNING
PROGRAM MANAGEMENT

Jenny D. Austin, E.I.
Design Engineer

MEMORANDUM

TO: Steve Gladczuk, CVRPC
Bill Preis, VTrans (LTF)
Aimee Neveau, VTrans (Policy & Planning)
Stacey Sharp, Plainfield
Sarah Albert, Plainfield
Liz Perreault, Plainfield Selectboard
Michael Nolan, Plainfield
Jeffrey Tucker, P.E., DuBois & King, Inc.

cc: File

RE: Plainfield Village US 2 / Main Street Intersection Study
Project Kick-Off Meeting

DATE: June 29, 2004

A project kick-off meeting and site visit were held Monday, June 28, 2004 for the Plainfield Village US 2/Main Street Intersection Transportation Study project. In attendance were Steve Gladczuk of CVRPC, Bill Preis and Aimee Neveau of VTrans, Stacey Sharp, Sarah Albert, Liz Perreault, and Michael Nolan from the Town of Plainfield, and Jeff Tucker and Jenny Austin from DuBois & King.

Project Kick-Off Meeting

We held the first portion of the meeting in the Plainfield Town Hall. Jeff thanked the Project Team for having the opportunity to work on the project. It was confirmed that DuBois & King will communicate directly to Steve Gladczuk (CVRPC) on project issues.

The meeting was opened to any questions the Team had for DuBois & King regarding the scope or otherwise. The following are clarifications as a result of this discussion.

- The extent of historical and archaeological resource evaluation will be limited to review of the reports included in the Conceptual Alignment Analysis for Pedestrian Facilities in Plainfield, Vermont report dated June 24, 1996. DuBois & King will not be having historical or archaeological experts visit the site area.
- DuBois & King has coordinated with Griffin International to get plans for their adjacent project for a new sidewalk on Main Street that wraps around Plainfield Hardware and continues to the east. This project is in the development of Preliminary Plans phase. It is not known at this time whether this project will have impacts to the sidewalk project. The project teams of the two projects will work together to ensure that the projects compliment each other and both teams are aware of the proposed improvements of the other project.

The meeting then proceeded with a general discussion of the project, including project issues, schedule, meetings, etc. The following is a summary of this discussion.

General

- The time frame for the Local Concerns Meeting was discussed. Our proposal shows this during the second week in September, and it was agreed that this could be moved sooner. The purpose of this meeting will be to discuss alternative options and obtain input from the Town and Selectboard on these alternatives and any issues, concerns or preferences they may have. Liz Perreault will check with the Selectboard for their availability. The Selectboard generally hold meetings every second and fourth Monday of each month. This meeting will be open to the public. Town ordinances will need to be checked for public notice policy.
- DuBois & King will coordinate with Steve on format of the speed study files previously obtained from CVRPC which DuBois & King cannot currently open.
- Jeff mentioned that if the Town would like to meet in addition to the meetings listed in the Scope, DuBois & King would easily and gladly be able to meet with the Town. Jeff lives nearby in Barre and drives through the project area quite frequently.

Possible Alternatives

- There was consensus among the Team that a primary focus of the project will be evaluating improvements to the existing geometry (e.g. grade) of the intersection.
- Traffic calming is a possible improvement and will be looked at. Current speeds, as noted during previous speed studies, are approximately 35mph (speed limit is 30mph). The Town noted that the transition from 50mph to 30mph has been changed to 50mph to 40mph to 30mph. This may have slightly improved (by lowering) speeds in this area.
- One alternative includes moving the intersection so that Main Street intersects

with US 2 further to the east. This would include a new bridge as well as new roadway construction. It was agreed that this option will not be evaluated.

- The option to turn the intersection into a signalized intersection, which may be flashing at times, will be evaluated.
- The possibility of relocating of building(s) was brought up. Town representatives did not think this option would go over well with the Town and thought there might be significant hurdles with this option. Nevertheless, it was noted that it is an alternative and would be looked at, at least during the early stages of the project, to determine whether the geometrics would work.

Project Issues

- Pedestrian access and safety are important issues. It was noted that there are stairs at the existing island and a VTrans pedestrian sign, but there are no crosswalks.
- There is a concern with difficulty to make certain turning movements due to grade, sight distance and geometry.
- Harvey Hill Road, to the west of the intersection, is very steep. Lowering the elevation on US2 at the intersection with Harvey Hill Road will worsen the condition on Harvey Hill Road. There have been problems with runoff from this road entering the Town Hall. Recent ditching measures have improved this condition. Partial reconstruction of Harvey Hill Road will be considered. The Town did not know if there was any way to relocate Harvey Hill Road to another location on US2.
- DuBois & King will coordinate with the Town, through Jay Jewett, to gain insight on utilities in the area, including water and wastewater systems. Jenny Austin will discuss and walk the site with Jay. If needed, Ernie Englehardt of VTrans, District 6 DTA, will be contacted for additional information.
- DuBois & King will coordinate with the Town to obtain relevant GIS layers.

Site Visit

Following this discussion, we continued the meeting outside to the project area. The following is a summary of additional items discussed at this time.

- The adjacent project for a new sidewalk cannot make any alterations or improvements to the bridge on Main Street. According to VTrans, this bridge is on their cycle of bridges to be replaced. Jeff mentioned that raising the bridge, or at least the northern end of the bridge, would make transition to the intersection of US 2 better.
- The municipal parking area located on US2 to the west of the intersection with Main Street is reasonably new (i.e. within the last ten years) and is a fill area. The elevation of US2 in this area can be lowered.
- Turning movements at the intersection were observed, which emphasizes the

difficulty vehicles have making turns at this intersection. Vehicles traveling eastbound often cross over the centerline.

Next Steps

The next steps for this project include the following:

- DuBois & King will investigate alternatives, including geometric feasibility.
- Establish a date and time for the Local Concerns meeting. After Liz checks with the Selectboard, DuBois & King will collaborate with CVRPC, VTrans and the Town to set up a date and time for this meeting.

DuBOIS & KING, INC.

- Randolph, VT 05060 (802) 728-3376
 - Rutland, VT 05702 (802) 773-7016
 - Williston, VT 05495 (802) 878-7661
 - Nashua, NH 03063 (603) 883-0463
- Engineering*Planning*Development*Management

JOB _____

SHEET NO. _____ OF _____

CALCULATED BY _____ DATE _____

CHECKED BY _____ DATE _____

SCALE _____

Plainfield Intersection

28-Jun-04

Jeff Tucker D&K + King 728-3376
 JTucker@D&K-King.com

Bill Preis VAOT - LTF

Sarah Albert Plainfield 476-0526
 sarah@vtlink.net

Michael Nolan Plainfield 454-7166

STACEY SHARP PLAINFIELD 454-0181
 FROZNI@VT2001.COM

Jenny Austin D+K
 → jaustin@dubois-king.com

Steve Gladczuk CVRPC 229-0589

Aimee Newell VTrans
 Policy & Planning 828-3976

Liz Perczault Plainfield Schoolboard 454-1108

Appendix B

Traffic Volumes



PROJECT NO: 618723L1

PROJ. NAME: Plainfield US2 & Main St.

SHEET NO: _____ OF _____

CLIENT: CVRPC

CALC. BY: JDA

DATE: 7.19.04

CHECKED BY: _____

DATE: _____

REVIEWED BY: _____

DATE: _____

Development of Traffic Data

July-04



PROJECT NO: 618723L1

PROJ. NAME: Plainfield US2 & Main St.

SHEET NO: OF

CLIENT: CVRPC

CALC. BY: JDA DATE: 7.19.04

CHECKED BY: _____ DATE: _____

REVIEWED BY: _____ DATE: _____

Development of Traffic Data Summary

The following are the steps followed for developing and evaluating traffic data for the US 2 and Main Street intersection in Plainfield, Vermont.

1. Obtain turning movement counts from VTrans. These counts include Harvey Hill Road as the southbound approach of this intersection. Counts obtained were performed on July 1, 2003 for 6am-12pm and on June 30, 2004 for 12pm-6pm.
2. Peak hour volumes, %D and %adtt were determined using the VTrans turning movements.

PM peak hour volume = 877

% medium trucks = 4.8%

% heavy trucks = 1.6%

% trucks = 6.4%

% D: EB: 54%
WB: 30%
NB: 16%
SB: 0%

3. DHVs were determined using turning movements counts and factors obtained and/or calculated using ATRs of a similar location type. For this project, there are no ATRs in the direct vicinity of the intersection. There is one in Danville that was used for comparison. A factor was determined to project the peak hour volumes to the DHV. Projection of volumes to the current (2004), 5-year (2009) and 15-year (2019) was determined using annual growth rates. The 2003 VTrans Red Book was used to determine these factors. Not all references to the Red Book are attached.

DHV Summary: 2004 - 791 (Not including
2009 - 854 Harvey Hill Rd.)
2019 - 974

4. ADT for 2004, 2009 and 2019 were calculated using DHVs and the %k factor (ratio of the DHV to the AADT, expressed as a percent). The %k factor was determined using the Danville ATR and applying a conservative factor to compensate for the fact that this ATR is not in the direct vicinity of the project intersection and therefore the actual factor may vary.

ADT Summary: 2004 - 8244 (Not including
2009 - 8900 Harvey Hill Rd.)
2019 - 10151



Project No.: 618723L1
 Description: Plainfield US 2/Main Street Study
 Intersection: US 2 & Main Street
 Town: Plainfield, VT

Time: 6am-12pm -- Tuesday, July 1, 2003
 12pm-6pm -- Monday, June 30, 2003
 Counters: VTrans -- H. Hutchinson
 Weather: Sunny, warm

NB		SB		EB		WB		15 Min. Totals	Hour Totals
Main Street		Harvey Hill Road		US 2 from E.		US 2 from Marshfield			
P	T	P	T	P	T	P	T		
6:00	0	0	0	0	0	0	0	67	6:00 - 7:00
6:15	0	0	0	0	0	0	0	95	6:15 - 7:15
6:30	0	0	0	0	0	0	0	156	6:30 - 7:30
6:45	0	0	0	0	0	0	0	146	6:45 - 7:45
7:00	0	0	0	0	0	0	0	166	7:00 - 8:00
7:15	0	0	0	0	0	0	0	167	7:15 - 8:15
7:30	0	0	0	0	0	0	0	197	7:30 - 8:30
7:45	0	0	0	0	0	0	0	180	7:45 - 8:45
8:00	0	0	0	0	0	0	0	157	8:00 - 9:00
8:15	0	0	0	0	0	0	0	174	8:15 - 9:15
8:30	0	0	0	0	0	0	0	173	8:30 - 9:30
8:45	0	0	0	0	0	0	0	182	8:45 - 9:45
9:00	0	0	0	0	0	0	0	166	9:00 - 10:00
9:15	0	0	0	0	0	0	0	164	9:15 - 10:15
9:30	0	0	0	0	0	0	0	146	9:30 - 10:30
9:45	0	0	0	0	0	0	0	164	9:45 - 10:45
10:00	0	0	0	0	0	0	0	156	10:00 - 11:00
10:15	0	0	0	0	0	0	0	178	10:15 - 11:15
10:30	0	0	0	0	0	0	0	165	10:30 - 11:30
10:45	0	0	0	0	0	0	0	130	10:45 - 11:45
11:00	0	0	0	0	0	0	0	149	11:00 - 12:00
11:15	0	0	0	0	0	0	0	184	11:15 - 12:15
11:30	0	0	0	0	0	0	0	154	11:30 - 12:30
11:45	0	0	0	0	0	0	0	168	11:45 - 12:45
12:00	0	0	0	0	0	0	0	203	12:00 - 13:00
12:15	0	0	0	0	0	0	0	184	12:15 - 13:15
12:30	0	0	0	0	0	0	0	175	12:30 - 13:30
12:45	0	0	0	0	0	0	0	186	12:45 - 13:45
13:00	0	0	0	0	0	0	0	223	13:00 - 14:00
13:15	0	0	0	0	0	0	0	172	13:15 - 14:15
13:30	0	0	0	0	0	0	0	165	13:30 - 14:30
13:45	0	0	0	0	0	0	0	201	13:45 - 14:45
14:00	0	0	0	0	0	0	0	153	14:00 - 15:00
14:15	0	0	0	0	0	0	0	204	14:15 - 15:15
14:30	0	0	0	0	0	0	0	175	14:30 - 15:30
14:45	0	0	0	0	0	0	0	170	14:45 - 15:45
15:00	0	0	0	0	0	0	0	183	15:00 - 16:00
15:15	0	0	0	0	0	0	0	188	15:15 - 16:15
15:30	0	0	0	0	0	0	0	183	15:30 - 16:30

JDA
7.19.04



- Randolph, VT 05060 (802) 728-3376
- Nashua, NH 03063 (603) 883-0463
- Rutland, VT 05495 (802) 773-7016
- Williston, VT 05495 (802) 878-7661

Engineering Planning Development Management

JOB 618723

SHEET NO. _____ OF _____

CALCULATED BY JDA DATE 7.19.04

CHECKED BY _____ DATE _____

SCALE _____

Determination of Truck Traffic (%ADTT) using Turning Movement Counts

AM Peak Hour Volumes

	NB Main St.	SB Harvey Hill Road	EB US 2 from E. Montpelier	WB US 2 from Marshfield	% of Total At Intersection
Auto	135	3	110	423	94.5%
Medium	4	0	11	8	3.2%
Heavy	0	0	9	7	2.3%
Totals:	139	3	130	438	710

PM Peak Hour Volumes

	NB Main St.	SB Harvey Hill Road	EB US 2 from E. Montpelier	WB US 2 from Marshfield	% of Total At Intersection
Auto	747	14	2059	1530	93.5%
Medium	22	1	105	104	5.0%
Heavy	2	0	38	30	1.5%
Totals:	771	15	2202	1664	4652

Summary: Average of Peak Hour Volumes % Trucks

Auto	93.6%
Medium	4.8%
Heavy	1.6%



- Randolph, VT 05060 (802) 728-3376
- Nashua, NH 03063 (603) 883-0463
- Rutland, VT 05495 (802) 773-7016
- Williston, VT 05495 (802) 878-7661

Engineering Planning Development Management

JOB 618723

SHEET NO. _____ OF _____
 CALCULATED BY SDA DATE 7-19-04
 CHECKED BY _____ DATE _____
 SCALE _____

DHV Calculations

See "DHV Factor" sheet for explanation of the DHV Factor

DHV Adjustment Factor: 0.89
 Annual Adjustments:
 2003-2004 1.02
 2004-2009 1.08
 2009-2019 1.14

DHV 2003 = Peak Hour Volume * DHV Adjustment Factor
 DHV 2004 = DHV 2003 * Annual Adjustment (2003-2004)
 DHV 2009 = DHV 2004 * Annual Adjustment (2004-2009)
 DHV 2019 = DHV 2009 * Annual Adjustment (2009-2019)

Peak Hr (PM) Volumes using 2003 Counts

		<i>SB</i>					
2	0	0	0	0	0	0	0
EB	344	t	Peak Hour Volumes	t	184	WB	129
r	129	r	56	1	83	NB	76
r	2	l	l	t	r	l	2
							Sum = 877

DHV 2003

		<i>SB</i>					
2	0	0	0	0	0	0	0
EB	306	t	2003 DHV	t	164	WB	115
r	115	r	50	1	74	NB	68
r	2	l	l	t	r	l	2
							Sum = 782



- Randolph, VT 05060 (802) 728-3376
- Nashua, NH 03063 (603) 883-0463
- Rutland, VT 05495 (802) 773-7016
- Williston, VT 05495 (802) 878-7661

Engineering Planning Development Management

JOB 618723

SHEET NO. _____ OF _____
 CALCULATED BY JDA DATE 7.19.04
 CHECKED BY _____ DATE _____
 SCALE _____

DHV Calculations Continued

DHV 2004

			<i>SB</i>				
2	0	0	0	r	t	l	r 2
<i>EB</i> 312	t		<i>2004</i>		<i>DHV</i>	t	167 <i>WB</i>
117	r					l	69
51	l	1	t	75	r		
		<i>NB</i>					Sum = 796

DHV 2009

			<i>SB</i>				
2	0	0	0	r	t	l	r 2
<i>EB</i> 337	t		<i>2009</i>		<i>DHV</i>	t	180 <i>WB</i>
126	r					l	75
55	l	1	t	81	r		
		<i>NB</i>					Sum = 859

DHV 2019

			<i>SB</i>				
2	0	0	0	r	t	l	r 2
<i>EB</i> 384	t		<i>2019</i>		<i>DHV</i>	t	205 <i>WB</i>
144	r					l	86
63	l	1	t	92	r		
		<i>NB</i>					Sum = 979



- Randolph, VT 05060 (802) 728-3376
- Nashua, NH 03063 (603) 883-0463
- Rutland, VT 05495 (802) 773-7016
- Williston, VT 05495 (802) 878-7661

Engineering Planning Development Management

JOB 618723

SHEET NO. _____ OF _____
 CALCULATED BY JDK DATE Dec 09
 CHECKED BY _____ DATE _____
 SCALE _____

ADT Calculations

DHV (As calculated in "DHV Calculations")

Year	DHV
2003	782
2004	796
2009	859
2019	979

Using a similar road segment, the %k is used to determine ADT from the DHV.
 The following are ATRs with Seasonal Adj. Factor Group 2 and Regression Group C.

ATR Station	Town	%k
-- (Project Location)	Plainfield	TBD

P6C028 Danville 6/30/2003 10.1 (Assume 200th ranking, 6/30/03 is not listed in top 200)

Assumption for %k is 95% of above = 9.6 (Conservative, ATR ex. not in same town as project)

ADT = DHV / %k

Year	Including Harvey Hill Road		Not Including Harvey Hill Road		
	DHV	ADT	Year	DHV	ADT
2003	782	8150	2003	777	8098
2004	796	8296	2004	791	8244
2009	859	8953	2009	854	8900
2019	979	10203	2019	974	10151

VERMONT AGENCY OF TRANSPORTATION
Program Development Division
Traffic Research Unit

US ROUTE 2, FC = 2 within project area

TOWN	BEGINNING REFERENCE		ENDING REFERENCE		1992		1994		1996		1998		2000		2002	
	MM	NAME	MM	NAME	AA DT	AA DT	AA DT	AA DT	AA DT	AA DT	AA DT	AA DT	AA DT	AA DT	AA DT	AA DT
PLAINFIELD	0.00	E MONTPELIER TL	0.89	VT 214	6380	6380	6380	6380	6400	6400	7500	7500	6600	6600	7300	7300
PLAINFIELD	0.89	VT 214	1.29	MIDDLE RD/HARDY HILL RD	6885	6885	6885	6885	6900	6900	8000	8000	7100	7100	7900	7900
PLAINFIELD	1.29	MIDDLE RD/HARDY HILL RD	1.49	MARSHFIELD TL	6105	6105	6105	6105	6100	6100	7100	7100	6300	6300	6600	6600
MARSHFIELD	0.00	PLAINFIELD TL	0.16	HOLLISTER HILL RD	6105	6105	6105	6105	6100	6100	7100	7100	6300	6300	6600	6600

AA DTs within project area along US 2 from VTrans Traffic Research Web-Site.

Appendix C

Traffic Analysis

TWO-WAY STOP CONTROL SUMMARY							
General Information				Site Information			
Analyst	Jenny D. Austin			Intersection	US 2 & Main Street		
Agency/Co.	DuBois & King, Inc.			Jurisdiction	Plainfield		
Date Performed	1/7/2005			Analysis Year	2004 - Unsignalized		
Analysis Time Period	Peak Hour						
Project Description US 2 & Main Street Intersection Study							
East/West Street: US 2				North/South Street: Main Street			
Intersection Orientation: East-West				Study Period (hrs): 0.25			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume	0	312	117	69	167	0	
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR	0	346	130	76	185	0	
Percent Heavy Vehicles	0	--	--	8	--	--	
Median Type	Undivided						
RT Channelized			0				0
Lanes	0	1	0	0	1	0	
Configuration			TR	LT			
Upstream Signal		0			0		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume	51	0	75	0	0	0	
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR	56	0	83	0	0	0	
Percent Heavy Vehicles	3	0	3	0	0	0	
Percent Grade (%)	10			0			
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0			0	
Lanes	0	0	0	0	0	0	
Configuration		LR					
Delay, Queue Length, and Level of Service							
Approach	EB	WB	Northbound			Southbound	
Movement	1	4	7	8	9	10	11
Lane Configuration		LT		LR			
v (vph)		76		139			
C (m) (vph)		1056		479			
v/c		0.07		0.29			
95% queue length		0.23		1.19			
Control Delay		8.7		15.6			
LOS		A		C			
Approach Delay	--	--		15.6			
Approach LOS	--	--		C			

ALL-WAY STOP CONTROL ANALYSIS								
General Information					Site Information			
Analyst	Jenny D. Austin				Intersection	US 2 & Main Street		
Agency/Co.	DuBois & King, Inc.				Jurisdiction	Plainfield		
Date Performed	1/7/2005				Analysis Year	2004-Unsignalized All-Way Stop		
Analysis Time Period	Peak Hour							
Project ID US 2 & Main Street Intersection Study								
East/West Street: US 2					North/South Street: Main Street			
Volume Adjustments and Site Characteristics								
Approach	Eastbound				Westbound			
Movement	L	T	R	L	T	R		
Volume	0	312	117	69	167	0		
%Thrus Left Lane	50			50				
Approach	Northbound				Southbound			
Movement	L	T	R	L	T	R		
Volume	51	0	75	0	0	0		
%Thrus Left Lane	50			50				
	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	TR		LT		LR			
PHF	0.90		0.90		0.90			
Flow Rate	476		261		139			
% Heavy Vehicles	7		8		3			
No. Lanes	1		1		1		0	
Geometry Group	1		1		1			
Duration, T	0.25							
Saturation Headway Adjustment Worksheet								
Prop. Left-Turns	0.0		0.3		0.4			
Prop. Right-Turns	0.3		0.0		0.6			
Prop. Heavy Vehicle	0.1		0.1		0.0			
hLT-adj	0.2	0.2	0.2	0.2	0.2	0.2		
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6		
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7		
hadj, computed	4.60		4.60		4.60			
Departure Headway and Service Time								
hd, initial value	3.20		3.20		3.20			
x, initial	0.42		0.23		0.12			
hd, final value	4.60		4.60		4.60			
x, final value	0.61		0.37		0.21			
Move-up time, m	2.0		2.0		2.0			
Service Time	2.6		2.6		2.6		2.6	
Capacity and Level of Service								
	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity	726		511		389			
Delay	14.48		10.97		9.82			
LOS	B		B		A			
Approach: Delay	14.48		10.97		9.82			
LOS	B		B		A			
Intersection Delay	12.70							
Intersection LOS	B							

SIGNAL2000/TEAPAC[Ver 1.11.16] - Capacity Analysis Summary

Intersection Averages for Int # 1 - US 2 & Main Street
Degree of Saturation (v/c) 0.40 Vehicle Delay 9.8 Level of Service A

Sq 11 **/**	Phase 1	Phase 2
/ \		<++++
		++++
		v
North	<* *>	*****
	* *	*****
	* *	v
G/C=0.275 G/C=0.592		
G= 16.5" G= 35.5"		
Y+R= 4.0" Y+R= 4.0"		
OFF= 0.0% OFF=34.1%		

C= 60 sec G= 52.0 sec = 86.7% Y= 8.0 sec = 13.3% Ped= 0.0 sec = 0.0%

Lane Group	Width/Lanes	g/C Reqd Used	Service Rate @C (vph)	Adj @E Volume	v/c	HCM Delay	L S	Queue Model 1
S Approach							19.3	B
RT+TH+LT	12/1	0.147 0.275	350	434	140	0.323 19.3	*B	97 ft
E Approach							7.3	A
TH+LT	12/1	0.254 0.592	780	813	263	0.323 7.3	A	123 ft
W Approach							8.4	A
RT+TH	12/1	0.317 0.592	1014	1038	477	0.460 8.4	*A	230 ft

SIGNAL2000/TEAPAC[Ver 1.11.16] - Summary of Parameter Values

Intersection Parameters for Int # 1 - US 2 & Main Street

METROAREA	NonCBD			
SIMULATION PERIOD	15			
LEVELOFSERVICE	C	S		
QUEUEMODELS	1	90	25	40
NODELOCATION	0			0

Approach Parameters

APPLABELS	N	E	S	W
GRADES	0.0	5.0	10.0	-5.0
PEDLEVELS	0	0	0	0
BIKEVOLUMES	0	0	0	0
PARKINGSIDES	None	None	None	None
PARKVOLUMES	0	0	0	0
BUSVOLUMES	0	0	0	0
RIGHTTURNONREDS	0	0	0	0
UPSTREAMVC	0.00	0.00	0.00	0.00

Movement Parameters

MOVLABELS	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
VOLUMES	0	0	0	0	167	69	75	0	51	117	312	0
WIDTHS	0.0	0.0	0.0	0.0	12.0	0.0	0.0	12.0	0.0	0.0	12.0	0.0
LANES	0	0	0	0	1	0	0	1	0	0	1	0
GROUPTYPES	Norm	Norm	Norm	Norm	Norm	Norm	Norm	Norm	Norm	Norm	Norm	Norm
UTILIZATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRUCKPERCENTS	0.0	0.0	0.0	8.0	8.0	8.0	3.0	3.0	3.0	7.0	7.0	7.0
PEAKHOURFACTORS	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
ARRIVALTYPES	3	3	3	3	3	3	3	3	3	3	3	3
ACTUATIONS	No	No	No	No	No	No	No	No	No	No	No	No
REQCLEARANCES	0.0	0.0	0.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
MINIMUMS	0.0	0.0	0.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
STARTUPL0ST	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
ENDGAIN	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
STORAGE	0	0	0	0	0	0	0	0	0	0	0	0
INITIALQUEUE	0	0	0	0	1	1	1	0	1	1	1	0
IDEALSATFLOWS	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
FACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
DELAYFACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NSTOPFACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SATURATIONFLOWS	0	0	0	0	1381	0	0	1586	0	0	1761	0

Phasing Parameters

SEQUENCES	11	ALL					
PERMISSIVES	No	No	No	No	LEADLAGS	None	None
OVERLAPS	Yes	Yes	Yes	Yes	OFFSET	0.00	1
CYCLES	60	120	15		PEDTIME	0.0	0
GREENTIMES	16.18	35.82					
YELLOWTIMES	4.00	4.00					
CRITICALS	8	11					
EXCESS	0						

TWO-WAY STOP CONTROL SUMMARY								
General Information			Site Information					
Analyst	Jenny D. Austin		Intersection	US 2 & Main Street				
Agency/Co.	DuBois & King, Inc.		Jurisdiction	Plainfield				
Date Performed	1/7/2005		Analysis Year	2019 - Unsignalized				
Analysis Time Period	Peak Hour							
Project Description US 2 & Main Street Intersection Study								
East/West Street: US 2			North/South Street: Main Street					
Intersection Orientation: East-West			Study Period (hrs): 0.25					
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume	0	384	144	86	205	0		
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90		
Hourly Flow Rate, HFR	0	426	160	95	227	0		
Percent Heavy Vehicles	0	--	--	8	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration			TR	LT				
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume	63	0	92	0	0	0		
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90		
Hourly Flow Rate, HFR	70	0	102	0	0	0		
Percent Heavy Vehicles	3	0	3	0	0	0		
Percent Grade (%)	10			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	0	0		
Configuration		LR						
Delay, Queue Length, and Level of Service								
Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT		LR				
v (vph)		95		172				
C (m) (vph)		960		389				
v/c		0.10		0.44				
95% queue length		0.33		2.20				
Control Delay		9.2		21.4				
LOS		A		C				
Approach Delay	--	--		21.4				
Approach LOS	--	--		C				

ALL-WAY STOP CONTROL ANALYSIS								
General Information					Site Information			
Analyst	Jenny D. Austin				Intersection	US 2 & Main Street		
Agency/Co.	DuBois & King, Inc.				Jurisdiction	Plainfield		
Date Performed	1/7/2005				Analysis Year	2019-Unsignalized All-Way Stop		
Analysis Time Period	Peak Hour							
Project ID US 2 & Main Street Intersection Study								
East/West Street: US 2					North/South Street: Main Street			
Volume Adjustments and Site Characteristics								
Approach	Eastbound			Westbound				
Movement	L	T	R	L	T	R		
Volume	0	384	144	86	205	0		
%Thrus Left Lane	50			50				
Approach	Northbound			Southbound				
Movement	L	T	R	L	T	R		
Volume	63	0	92	0	0	0		
%Thrus Left Lane	50			50				
	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	TR		LT		LR			
PHF	0.90		0.90		0.90			
Flow Rate	586		322		172			
% Heavy Vehicles	7		8		3			
No. Lanes	1		1		1		0	
Geometry Group	1		1		1			
Duration, T	0.25							
Saturation Headway Adjustment Worksheet								
Prop. Left-Turns	0.0		0.3		0.4			
Prop. Right-Turns	0.3		0.0		0.6			
Prop. Heavy Vehicle	0.1		0.1		0.0			
hLT-adj	0.2	0.2	0.2	0.2	0.2	0.2		
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6		
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7		
hadj, computed	4.87		4.87		4.87			
Departure Headway and Service Time								
hd, initial value	3.20		3.20		3.20			
x, initial	0.52		0.29		0.15			
hd, final value	4.87		4.87		4.87			
x, final value	0.79		0.48		0.28			
Move-up time, m	2.0		2.0		2.0			
Service Time	2.9		2.9		2.9		2.9	
Capacity and Level of Service								
	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity	731		572		422			
Delay	23.72		13.35		11.17			
LOS	C		B		B			
Approach: Delay	23.72		13.35		11.17			
LOS	C		B		B			
Intersection Delay	18.63							
Intersection LOS	C							

SIGNAL2000/TEAPAC[Ver 1.11.16] - Capacity Analysis Summary

Intersection Averages for Int # 1 - US 2 & Main Street
Degree of Saturation (v/c) 0.49 Vehicle Delay 10.9 Level of Service B+

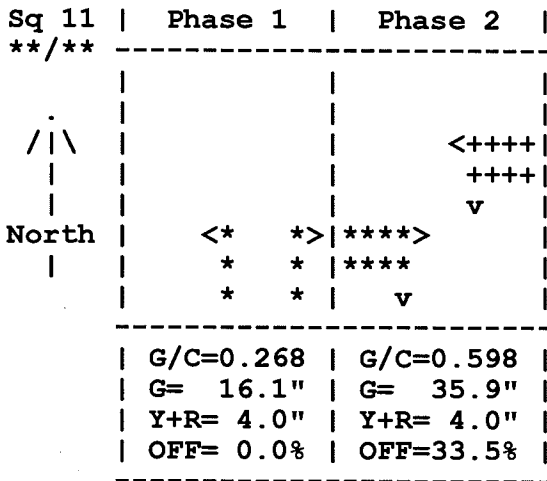
Sq 11	Phase 1	Phase 2
/		
/ \		<++++
		++++
		v
North	<* *>	****>
	* *	****
	* *	v
G/C=0.268 G/C=0.598		
G= 16.1" G= 35.9"		
Y+R= 4.0" Y+R= 4.0"		
OFF= 0.0% OFF=33.5%		

C= 60 sec G= 52.0 sec = 86.7% Y= 8.0 sec = 13.3% Ped= 0.0 sec = 0.0%

Lane Group	Width/Lanes	g/C Reqd	g/C Used	Service Rate @C (vph)	Adj @E Volume	v/c	HCM Delay	L S	Queue Model 1
S Approach									20.9 C+
RT+TH+LT	12/1	0.168	0.268	339	424	172	0.406	20.9	*C+ 122 ft
E Approach									8.2 A
TH+LT	12/1	0.311	0.598	741	774	324	0.419	8.2	A 159 ft
W Approach									9.5 A
RT+TH	12/1	0.374	0.598	1026	1049	587	0.560	9.5	*A 300 ft

SIGNAL2000/TEAPAC[Ver 1.11.16] - Evaluation of Intersection Performance

Intersection # 1 - US 2 & Main Street



C= 60 sec G= 52.0 sec = 86.7% Y= 8.0 sec = 13.3% Ped= 0.0 sec = 0.0%

MVMT TOTALS Param:Units	N Approach			E Approach			S Approach			W Approach			Int Total
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
AdjVol: vph	0	0	0	0	228	96	102	0	70	160	427	0	1083
Wid/Ln:ft/#	0/0	0/0	0/0	0/0	12/1	0/0	0/0	12/1	0/0	0/0	12/1	0/0	
g/C Rqd@C:%	0	0	0	0	31	0	0	17	0	0	37	0	
g/C Used: %	0	0	0	0	60	0	0	27	0	0	60	0	
SV @E: vph	0	0	0	0	774	0	0	424	0	0	1049	0	2247
Svc Lvl:LOS				A			C+			A			B+
Deg Sat:v/c	0.00	0.00	0.00	0.00	0.42	0.00	0.00	0.41	0.00	0.00	0.56	0.00	0.49
HCM Del:s/v	0.0	0.0	0.0	0.0	8.2	0.0	0.0	20.9	0.0	0.0	9.5	0.0	10.9
Tot Del:min	0	0	0	0	11	0	0	15	0	0	23	0	49
# Stops:veh	0	0	0	0	43	0	0	35	0	0	89	0	167
Queue 1:veh	0	0	0	0	6	0	0	5	0	0	12	0	12
Queue 1: ft	0	0	0	0	159	0	0	122	0	0	300	0	300

APPR TOTALS Param:Units	N Approach			E Approach			S Approach			W Approach			Int Total
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
AdjVol: vph	0			324			172			587			1083
Svc Lvl:LOS				A			C+			A			B+
Deg Sat:v/c	0.00			0.42			0.41			0.56			0.49
HCM Del:s/v	0.0			8.2			20.9			9.5			10.9
Tot Del:min	0			11			15			23			49
# Stops:veh	0			43			35			89			167
Queue 1:veh	0			6			5			12			12
Queue 1: ft	0			159			122			300			300

SIGNAL2000/TEAPAC[Ver 1.11.16] - Summary of Parameter Values

Intersection Parameters for Int # 1 - US 2 & Main Street

METROAREA	NonCBD			
SIMULATION PERIOD	15			
LEVELOFSERVICE	C	S		
QUEUEMODELS	1	90	25	40
NODELOCATION	0			0

Approach Parameters

APPLABELS	N	E	S	W
GRADES	0.0	5.0	10.0	-5.0
PEDLEVELS	0	0	0	0
BIKEVOLUMES	0	0	0	0
PARKINGSIDES	None	None	None	None
PARKVOLUMES	0	0	0	0
BUSVOLUMES	0	0	0	0
RIGHTTURNONREDS	0	0	0	0
UPSTREAMVC	0.00	0.00	0.00	0.00

Movement Parameters

MOVLABELS	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
VOLUMES	0	0	0	0	205	86	92	0	63	144	384	0
WIDTHS	0.0	0.0	0.0	0.0	12.0	0.0	0.0	12.0	0.0	0.0	12.0	0.0
LANES	0	0	0	0	1	0	0	1	0	0	1	0
GROUPTYPES	Norm	Norm	Norm	Norm	Norm	Norm	Norm	Norm	Norm	Norm	Norm	Norm
UTILIZATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRUCKPERCENTS	0.0	0.0	0.0	8.0	8.0	8.0	3.0	3.0	3.0	7.0	7.0	7.0
PEAKHOURFACTORS	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
ARRIVALTYPES	3	3	3	3	3	3	3	3	3	3	3	3
ACTUATIONS	No	No	No	No	No	No	No	No	No	No	No	No
REQCLEARANCES	0.0	0.0	0.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
MINIMUMS	0.0	0.0	0.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
STARTUPL0ST	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
ENDGAIN	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
STORAGE	0	0	0	0	0	0	0	0	0	0	0	0
INITIALQUEUE	0	0	0	0	1	1	1	0	1	1	1	0
IDEALSATFLOWS	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
FACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
DELAYFACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NSTOPFACTORS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SATURATIONFLOWS	0	0	0	0	1294	0	0	1580	0	0	1753	0

Phasing Parameters

SEQUENCES	11	ALL					
PERMISSIVES	No	No	No	No	LEADLAGS	None	None
OVERLAPS	Yes	Yes	Yes	Yes	OFFSET	0.00	1
CYCLES	60	120	15		PEDTIME	0.0	0
GREENTIMES	16.11	35.89					
YELLOWTIMES	4.00	4.00					
CRITICALS	8	11					
EXCESS	0						

Appendix D

Signal Warrant Analysis



PROJECT NO: 618723L1 PROJ. NAME: Plainfield US2 & Main St.
SHEET NO: _____ OF _____
CLIENT: CVRPC CALC. BY: JDA DATE: 7-19-04
CHECKED BY: _____ DATE: _____
REVIEWED BY: _____ DATE: _____

Signal Warrant Analysis
(2004 Volumes)

July-04



Randolph, VT 05060 (802) 728-3376
 Nashua, NH 03063 (603) 883-0463
 Rutland, VT 05495 (802) 773-7016
 Williston, VT 05495 (802) 878-7661

Engineering Planning Development Management

JOB 618723

SHEET NO. _____ OF _____

CALCULATED BY: JDT DATE: 7.19.04

CHECKED BY: _____ DATE: _____

SCALE: _____

SIGNAL WARRANT ANALYSIS SUMMARY

The preceding sheets show that a signal is necessary due to the 2003 MUTCD Warrants for Traffic Signal Installation. Calculations follow MUTCD standards, Chapter 4, section C.

SIGNAL WARRANT 1: EIGHT HOUR VEHICULAR VOLUME

Warrant 1 is met

SIGNAL WARRANT 1a: MINIMUM VEHICULAR VOLUME

Warrant 1a is met

SIGNAL WARRANT 1B: INTERRUPTION OF CONTINUOUS TRAFFIC

Warrant 1b is not met

SIGNAL WARRANT 2: FOUR-HOUR VEHICULAR VOLUME

Warrant 2 is met

SIGNAL WARRANT 3: PEAK HOUR

Not Applicable

SIGNAL WARRANT 4: PEDESTRIAN VOLUME

Warrant 4 is not met

SIGNAL WARRANT 5: SCHOOL CROSSING

Not applicable

SIGNAL WARRANT 6: COORDINATED SIGNAL SYSTEM

Warrant 6 is not met

SIGNAL WARRANT 7: CRASH EXPERIENCE

Warrant 7 is not met

SIGNAL WARRANT 8: ROADWAY NETWORK

Warrant 8 is not met

Summary:

As indicated above, two of the 8 Signal Warrants are met. As stated in the MUTCD 2003, satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal. A traffic control signal should not be installed unless an engineering study indicates that installing a traffic control signal will improve the overall safety and/or operation of the intersection.

Signal Warrant Analysis includes volumes from Harvey Hill Road. A signal would theoretically not control Harvey Hill Road. Volumes were included to be conservative. Volumes from this road are very low.



- Randolph, VT 05060 (802) 728-3376
- Nashua, NH 03063 (603) 883-0463
- Rutland, VT 05495 (802) 773-7016
- Williston, VT 05495 (802) 878-7661

Engineering Planning Development Management

JOB 618723

SHEET NO. _____ OF _____

CALCULATED BY JDA DATE 7.19.04

CHECKED BY _____ DATE _____

SCALE _____

Hourly Volumes - 2004 - To be used for Signal Warrant Analysis

Major Street - US 2
 Minor Street - Main Street and Harvey Hill

2003 Turning Movements

2004 Volumes to use for Average Day

Hour	Higher Volume		Lesser Volume	Major St.	Higher Volume		Lesser Volume
	Major St.	Minor St.	Minor St.		Minor St.	Minor St.	Minor St.
6-7 AM	368	96	0	334	87	0	
7-8 AM	568	139	3	516	126	3	
8-9 AM	553	129	4	502	117	4	
9-10 AM	529	107	4	480	97	4	
10-11 AM	503	126	0	457	114	0	
11-12 AM	535	117	3	486	106	3	
12-1 PM	615	131	2	558	119	2	
1-2 PM	638	122	1	579	111	1	
2-3 PM	584	114	4	530	103	4	
3-4 PM	613	141	5	556	128	5	
4-5 PM	732	134	0	665	122	0	
5-6 PM	684	129	3	621	117	3	



Randolph, VT 05060 (802) 728-3376
 Nashua, NH 03063 (603) 883-0463
 Rutland, VT 05495 (802) 773-7016
 Williston, VT 05495 (802) 878-7661

Engineering Planning Development Management

JOB 618723
 SHEET NO. _____ OF _____
 CALCULATED BY JDA DATE 1-19-04
 CHECKED BY _____ DATE _____
 SCALE _____

SIGNAL WARRANT 1a: MINIMUM VEHICULAR VOLUME

Warrant 1 is applied where the volume of intersecting traffic is the principal reason for consideration of signal installation. The warrant is satisfied when, for each of any 8 hours on an avg. day, the volumes as listed below exist on the major street and on the higher-volume minor approach to the intersection.

No. of lanes for moving traffic on each approach	Major Street	Minor Street	Veh/hr on major st. (both approaches)	Veh/hr on higher-volume minor-street approach (1 direction only)	
1	1	1	500	150	(a)
		70% of Warrant Volumes:	350	105	(c)

If the 85th percentile speed of major-st. traffic > 40 mph or in an isolated community with a population of less than 10,000, then use warrant (c). The estimated 85th percentile speed of US2 is less than 40 mph. The Town of Plainfield population is less than 10,000, therefore use (c).

Based on 2004 DHV's.

	Major St.	Minor St.	(c) Is warrant (70%) met?
6-7 AM	334	87	No
7-8 AM	516	126	Yes
8-9 AM	502	117	Yes
9-10 AM	480	97	No
10-11 AM	457	114	Yes
11-12 AM	486	106	Yes
12-1 PM	558	119	Yes
1-2 PM	579	111	Yes
2-3 PM	530	103	No
3-4 PM	556	128	Yes
4-5 PM	665	122	Yes
5-6 PM	621	117	Yes

CONCLUSION:

Assume Condition c. Warrant is met 9 of the 12 hours.

NOTE: Condition C is assumed due to population of Plainfield being less than 10,000. Warrant is considered to be met if for 8 or more hours the warrant is met.

SIGNAL WARRANT 1a: MINIMUM VEHICULAR VOLUME

Warrant 1a is met



- Randolph, VT 05060 (802) 728-3376
- Nashua, NH 03063 (603) 883-0463
- Rutland, VT 05495 (802) 773-7016
- Williston, VT 05495 (802) 878-7661

Engineering Planning Development Management

JOB 68723
 SHEET NO. _____ OF _____
 CALCULATED BY YJDA DATE 1-19-04
 CHECKED BY _____ DATE _____
 SCALE _____

SIGNAL WARRANT 1B: INTERRUPTION OF CONTINUOUS TRAFFIC

Warrant 1 is applied where the volume of intersecting traffic is the principal reason for consideration of signal installation. The warrant is satisfied when, for each of any 8 hours on an avg. day, the volumes as listed below exist on the major street and on the higher-volume minor approach to the intersection.

No. of lanes for moving traffic on each approach	Major Street	Minor Street	Veh/hr on major st. (both approaches)	Veh/hr on higher-volume minor-street approach (1 direction only)	
1	1	1	750	75	(a)
		70% of Warrant Volumes	525	53	(c)

If the 85th percentile speed of major-st. traffic > 40 mph or in an isolated community with a population of less than 10,000, then use warrant (c). The estimated 85th percentile speed of US2 is less than 40 mph. The Town of Plainfield population is less than 10,000, therefore use (c).

Based on 2004 DHV's.

Hour	Major St.	Minor St.	Is warrant met?
6-7 AM	334	87	No
7-8 AM	516	126	No
8-9 AM	502	117	No
9-10 AM	480	97	No
10-11 AM	457	114	No
11-12 AM	486	106	No
12-1 PM	558	119	Yes
1-2 PM	579	111	Yes
2-3 PM	530	103	Yes
3-4 PM	556	128	Yes
4-5 PM	665	122	Yes
5-6 PM	621	117	Yes

CONCLUSION:

Assume Condition c. The above warrant is met for 6 of the 12 hours.

NOTE: Condition C is assumed due to population of Plainfield being less than 10,000. considered to be met if for 8 or more hours the warrant is met.

SIGNAL WARRANT 1B: INTERRUPTION OF CONTINUOUS TRAFFIC

**Warrant 1b is not met
 because Warrant 1a is met,
 Warrant 1 is met**



- Randolph, VT 05060 (802) 728-3376
- Nashua, NH 03063 (603) 883-0463
- Rutland, VT 05495 (802) 773-7016
- Williston, VT 05495 (802) 878-7661

Engineering Planning Development Management

JOB 18723
 SHEET NO. _____ OF _____
 CALCULATED BY JSA DATE 7-19-04
 CHECKED BY _____ DATE _____
 SCALE _____

SIGNAL WARRANT 3: PEAK HOUR

The Peak Hour signal warrant is intended for use a a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street. This typically is applied only in unusual cases (i.e. office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

No unusual cases are applicable in the project area that would make this signal warrant applicable. Therefore assume Signal Warrant 3 is not applicable.

CONCLUSION:

NOTE:

SIGNAL WARRANT 3: PEAK HOUR

Not Applicable



<input checked="" type="checkbox"/>	Randolph, VT 05060	(802) 728-3376
<input type="checkbox"/>	Nashua, NH 03063	(603) 883-0463
<input type="checkbox"/>	Rutland, VT 05495	(802) 773-7016
<input type="checkbox"/>	Williston, VT 05495	(802) 878-7661

Engineering Planning Development Management

JOB 618723

SHEET NO. _____ OF _____

CALCULATED BY YJA DATE 07-14-04

CHECKED BY _____ DATE _____

SCALE _____

SIGNAL WARRANT 4: PEDESTRIAN VOLUME

The Pedestrian Volume signal warrant is intended for application where the traffic volume on a major street is so heavy that pedestrians experience excessive delay in crossing the major street.

- Criteria: A. Pedestrian volume crossing major street during average day is:
 100 or more for each of any four hours; or
 190 or more during any one hour and
- B. There are fewer than 60 gaps per hour in the traffic stream of adequate length to allow pedestrians to cross during the same period when the pedestrian volume criterion is satisfied.

* The Pedestrian Volume signal warrant shall not be applied at locations where the distance to the nearest traffic control signal along the major street is less than 300 ft, unless the proposed traffic control signal will not restrict the progressive movement of traffic.

The total number of pedestrians between 6am-6pm during the 2003 traffic counts is 17. Therefore Criteria A is not met. Subsequently, the warrant is not met. Also, the " * " criteria is not met.

SIGNAL WARRANT 4: PEDESTRIAN VOLUME
Warrant 4 is not met



- Randolph, VT 05060 (802) 728-3376
- Nashua, NH 03063 (603) 883-0463
- Rutland, VT 05495 (802) 773-7016
- Williston, VT 05495 (802) 878-7661

Engineering Planning Development Management

JOB 618723
SHEET NO. _____ OF _____
CALCULATED BY JDA DATE 7-9-04
CHECKED BY _____ DATE _____
SCALE _____

SIGNAL WARRANT 5: SCHOOL CROSSING

The school Crossing signal warrant is intended for application where the fact that school children cross the major street is the principal reason to consider installing a traffic control signal.

There are no schools within the vicinity of the US 2 and Main Street intersection therefore Warrant 5 is not applicable.

SIGNAL WARRANT 5: SCHOOL CROSSING
Not applicable



Randolph, VT 05060 (802) 728-3376
 Nashua, NH 03063 (603) 883-0463
 Rutland, VT 05495 (802) 773-7016
 Williston, VT 05495 (802) 878-7661

Engineering Planning Development Management

JOB 618723

SHEET NO. _____ OF _____

CALCULATED BY JDA DATE 7-19-04

CHECKED BY _____ DATE _____

SCALE _____

SIGNAL WARRANT 6: COORDINATED SIGNAL SYSTEM

Progressive movement in a coordinated signal system sometimes necessitates installing traffic control signals at intersections where they would not otherwise be needed in order to maintain proper platooning of vehicles.

Criteria - one of the following must be met:

1. On a 1-way street or street that has traffic predominantly in one direction, the adjacent signals are so far apart that they do not provide necessary degree of vehicle platooning.
2. On a 2-way street, adjacent signals do not provide the necessary degree of platooning and speed control and the proposed and adjacent signals will collectively provide a progressive operation.

Assume that this warrant does not apply.

SIGNAL WARRANT 6: COORDINATED SIGNAL SYSTEM
Warrant 6 is not met



- Randolph, VT 05060 (802) 728-3376
- Nashua, NH 03063 (603) 883-0463
- Rutland, VT 05495 (802) 773-7016
- Williston, VT 05495 (802) 878-7661

Engineering Planning Development Management

JOB 618723
 SHEET NO. _____ OF _____
 CALCULATED BY YJDA DATE 7-19-04
 CHECKED BY _____ DATE _____
 SCALE _____

SIGNAL WARRANT 7: CRASH EXPERIENCE

Signal warrant 7 applies when all of the following criteria are met.

1. Adequate trial of less restrictive remedies with satisfactory observance and enforcement has failed to reduce the crash frequency; and
 Lack of adequate trial of less restrictive remedies with satisfactory observance and enforcement therefore this criteria is not met.

2. Five (5) or more crashes of types susceptible to correction by traffic signal control have occurred within a 12-month period, each involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash; and
 VTrans crash data indicates 1 crash at the intersection and 1 crash within 200 feet (stopping distance for 30mph design speed) of the intersection between 1997 and 2001. This is less than five therefore this criteria is not met.

3. For each of any 8 hrs of an average day, the vph given in both of the 80% columns of Condition A in Table 4C-1, or the vph in both of the 80% columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80% of the requirements specified in the Pedstrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.
 This criteria was not determined. Because criteria 1 and 2 are not met, Warrant 7 is not met. If Criteria 3 was met, Warrant 7 would still not be met because the other 2 criteria are not met.

SIGNAL WARRANT 7: CRASH EXPERIENCE
 Warrant 7 is not met



- Randolph, VT 05060 (802) 728-3376
- Nashua, NH 03063 (603) 883-0463
- Rutland, VT 05495 (802) 773-7016
- Williston, VT 05495 (802) 878-7661

Engineering Planning Development Management

JOB 618723

SHEET NO. _____ OF _____
 CALCULATED BY YDA DATE 7-19-04
 CHECKED BY _____ DATE _____
 SCALE _____

SIGNAL WARRANT 8: ROADWAY NETWORK

Installing a traffic control signal at some intersections might be justified to encourage concentration and organization of traffic flow on a roadway network.

This warrant is met if the one or both of the following criteria is met:

- A. (1) The intersection has a total existing, or immediately projected, entering volume of at least 1000 vehicles per hour during the peak hour of a typical weekday and (2) a 5-year projected traffic volumes that meet one or more of Warrants 1, 2, and 3 during an average weekday; or
- B. The intersection has a total existing or immediately projected entering volume of at least 1000 vph for each of any 5 hours of a nonnormal business day (Saturday or Sunday).

A major route, as referred to above, has one or more of the following characteristics:

- 1. Part of the street or highway system that serves as the principal network for through traffic flow;
- 2. Includes rural or suburban highways outside, entering or traversing a city;
- 3. Appears as a major route on an official plan

Assume US2 is considered a major route. Main Street is not considered a major route. Therefore this warrant is not needed. As shown below, this intersection does not meet the criteria listed above.

Hour	2004 DHV Hour Totals	Hour	2004 DHV Hour Totals
6-7 AM	421	12-1 PM	679
7-8 AM	645	1-2 PM	691
8-9 AM	623	2-3 PM	637
9-10 AM	581	3-4 PM	689
10-11 AM	571	4-5 PM	787
11-12 AM	595	5-6 PM	741

A(1). None of the 2004 DHVs totals more than 1000 vph during the peak hour of a typical weekday therefore Warrant 8 A(1) is not met and therefore Warrant 8 A is not met.

B. Warrant 8B is assume not met. To be met, Saturday or Sunday vph would have to be approximately greater than during the 2004 DHV which is unlikely.

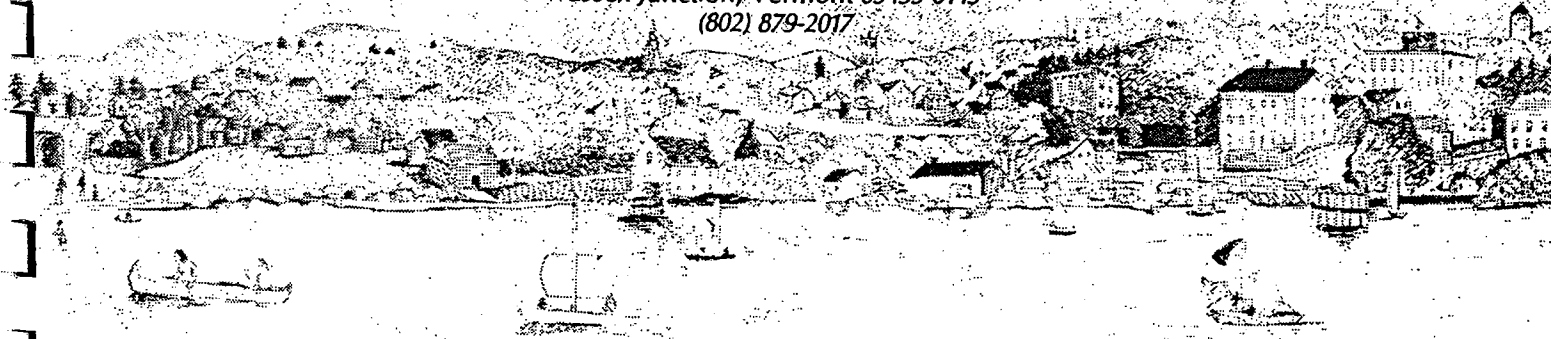
SIGNAL WARRANT 8: ROADWAY NETWORK
Warrant 8 is not met

Appendix E
Historic and
Archaeological Assessments

**Phase I-A Archaeological Assessment
(1996 CAA)**

Archaeology Consulting Team, Inc.
P.O. Box 145
67 Lincoln Street
Essex Junction, Vermont 05453-0145
(802) 879-2017

MAR 07 1995



March 6, 1995

Mr. Douglas Weber
Pinkham Engineering Associates, Inc
The Maltex Building
431 Pine Street
Burlington, Vermont 05401

Re: STP Tech (1)S -- Plainfield Bike and Pedestrian Path

Dear Mr. Weber:

Please find enclosed our Pre-Phase I-A assessment of the archaeological potential for the Plainfield Bike and Pedestrian Path Project. Also enclosed is our invoice for this project. Thank You.

Sincerely,

Douglas S. Frink
Principal Investigating Archaeologist

PRELIMINARY PHASE I-A ARCHAEOLOGICAL ASSESSMENT
OF THE PLAINFIELD BIKE AND PEDESTRIAN PATH
PLAINFIELD VERMONT

The Town of Plainfield Vermont, is proposing to construct a pedestrian and bicycle path under the Vermont Agency of Transportation STP Tech (1) Bicycle and Pedestrian Path Program. The segment of the proposed path being considered at this time is approximately 4 kilometers (2.50 miles) long. It would begin at Goddard College, and follow Route 2 east through the lower village, ending at the Maple Valley Cafe. There is a connecting loop starting at the Main Street bridge, which proceeds east to the junction of Maple Hill and East Hill Roads. Connecting with Main Street the path goes south along Creamery Street until Brook Road, which is followed to the Mill Street junction and proceeds along Mill to Main Street. The path then follows the Winooski River down stream from Mill Privilege to the Recreation Field, and from the recreation field to Martin Meadows and Cross Vermont Trail.

A preliminary archaeological assessment has been requested as part of the scoping phase of this project. Archaeology Consulting Team Inc., of Essex Junction, Vermont, has been retained by Pinkham Engineering Associates, Inc., of Burlington, Vermont, to provide a preliminary Phase I-A archaeological assessment of the potential for archaeological sites which may be affected by bike path construction activities.

The preliminary Phase I-A archaeological assessment consists of: 1) a brief review of the proposed project; 2) a review of the environmental and historical potential for archaeological resources which may be affected by the proposed project; and 3) whether further archaeological studies may be warranted. Following the preliminary documents research, a drive-by and/or walk-over reconnaissance survey is conducted to assess particular areas which may contain archaeological resources.

The project area is located in the Vermont Piedmont physiographic region. The Vermont Piedmont physiographic region contains the eastern foothills of the Green Mountains which are made up of a mixture of limestone, granite, and schist. The Landscape is characterized by gentle hills, broad valleys and quiet lakes. An occasional higher peak punctuates the region. The location of the Piedmont region in the lee of the Green Mountains, has a moderating effect on generally severe climate. Regional variation in topography, however produce numerous cold pockets and valleys. The predominate forest community in the Plainfield area consists of the northern hardwoods-hemlock-white pine grouping. A short distance to the north however a southerly extending lobe of the spruce-fir-northern hardwoods community is found.

The Plainfield segment of the Winooski River flows westerly along Route 2, and is fed by Great Brook from the south, and two unnamed tributaries feeding from the north. The bike path crosses

these drainages at eight corridor locations and parallels the Winooski River along two sections. The soils within project area are sandy and gravelly soils formed in relic glacial lake and kame terrace deposits. Silty soils formed in flood deposits of the local drainages also occur.

There are two known Native American sites in the general vicinity of the project area, one in Plainfield along Great Brook and a second in East Montpelier along the Winooski River. Neither site has been studied and are of unknown temporal affiliation. The Winooski River flowing through the center of town formed part of a passageway known as the Newbury Trail. This important communications corridor linked the Abenakis living along Lake Champlain with the Cowasuck village located north of Newbury Vermont.

Historically, the Town of Plainfield was first settled around 1794. By 1804 the first store had opened on present day Creamery Street. By 1858 a thriving community with numerous residences, two churches, a school, blacksmith shop, machine shop, shoe shop, saw and grist mill, cider mill and hotel had been established.

The current settlement model used in determining site sensitivity in the state of Vermont suggests that sloping to level terrain of well-drained soils within 200 feet of water (existing, seasonal, or remnant) are the most likely to contain Native American sites. The project corridor is within relatively level terrain and the studied portion lies along Winooski River and its associated drainages. The corridor will cross existing water sources a total of eight times: the Winooski River in two areas, Great Brook in four areas and each unnamed tributary once. Additional portions of the path come within 200 feet of the Winooski River.

The settlement model based on topography and water indicates that along the Winooski River the potential for encountering Native American archaeological resources within the proposed Plainfield Bike and Pedestrian Path Project is very high. Native American sites may be encountered along the eight crossings of the Winooski River and its tributaries, and the areas within 200 feet of these waterways.

Part of the proposed path is to be built on already existing sidewalks and partly as new construction. The sidewalks are in disrepair and narrow requiring widening and resurfacing. Many of the potentially historic buildings in the village stand close enough to be affected by the sidewalk alteration. Buildings along areas without sidewalks may also be affected.

It is our recommendation that further archaeological investigations be conducted prior to any ground-disturbing activities to assess potential archaeological resources and how they may be affected by construction. First, design plans accurately detailing the proposed location of the pedestrian and bicycle path will be needed in order to determine which areas warrant further archaeological study. Geomorphological (landform) and pedomorphological (soils) assessments will be necessary to identify and

focus on specific areas that are likely to contain Native American sites within the proposed project corridor. We also recommend that in-depth, archival background research be undertaken to identify and locate the potential for historic sites dating to both the early commercial and residential use of the project area.

**Historic Resources Review
(1996 CAA)**

Liz Pritchett Associates

HISTORIC PRESERVATION • ARCHITECTURAL CONSERVATION

June 5, 1995

Douglas A. Weber, Engineering Consultant
Pinkham Engineering Associates
431 Pine Street
Burlington, VT 05401

Re: Letter Report - Historic Resources Review
VAOT Plainfield Village Pathway, Plainfield, Vermont

Dear Douglas,

This Letter Report will outline my findings, list anticipated issues, and make recommendations for future historic resources investigations, in regard to review of the above-referenced VAOT project.

INTRODUCTION

This report summarizes literature review conducted at the Vermont Division for Historic Preservation and the Vermont Historical Society, and site visit findings for possible adverse effects to historic resources along or adjacent to the proposed transportation pathway in Plainfield. All photographs were taken by Liz Pritchett during her site visit on May 25, 1995.

PROJECT AREA

Three pathway alignments were reviewed (Figure 1):

Route 2 Corridor This begins at the northwesterly terminus on Route 2, adjacent to Goddard College (photo #1), and extends easterly along the north side of Route 2 to the village center where it crosses to the south side of Route 2, extending northeasterly to the town line just prior to the Maple Valley Cafe (photo #11).

Village Core At the intersection of Route 2 and Main Street, the pathway follows the north side of Main Street across the bridge over the Winooski River and extends along both sides of Main Street easterly to Creamery St., where it extends southerly along the west side of the road to Elm St., continuing along the north side of Elm to Water Street. The pathway follows northerly along the east side of Water Street where, just south of the bridge over Great Brook it will return to Main Street along both sides of the road.

Martin Meadows This proposed alignment will follow the east bank of the Winooski River from the mill privilege area at Main Street by the bridge, crossing to the west side of the river at the town recreation area, and extending up the bank to Martin Meadows southwest of the village.

The Route 2 Corridor and the Village Core alignments are proposed as 5 foot wide pedestrian sidewalks; bike users would be required to ride in the road. The Martin Meadows alignment is being considered, but not as seriously as the other two alignments, and would probably be a gravel path. The proposed Cross-Vermont Trail, for bikers, would connect with the village center along Water Street and extend north to Route 2.

Currently, sidewalks in varying states of repair, exist along much of the proposed alignment. Generally, the sidewalks within the village core are constructed of concrete, those outside of the village are of asphalt and are constructed along the shoulder of the roads.

MAPS

F. W. Beers' *Atlas of Washington County, Vermont, 1871* (Figure 4) indicates that Plainfield was relatively built up by the mid 19th century. Not only was Route 2 a stage road between Burlington and Maine, but also the Montpelier and Wells River Railroad had trackage through Plainfield by the 1860s. The town's growth and development was most likely directly associated with its location along these transportation corridors, as well as its

favorable site along the banks of the Winooski River which provided power for various milling enterprises. Many of the historic structures indicated on the Beers' map, within the project area, exist today in a generally intact condition.

HISTORIC SITES

National Register Most of the proposed pathway alignments fall within the Plainfield Village Historic District (see Figures 2 & 3), entered on the National Register of Historic Places in February 3, 1983. According to the National Register documentation, the Plainfield Village Historic District represents an intact nineteenth century village-scape. See the attached Statement of Significance for specific details of the distinctive character of the historic resources in Plainfield Village.

State Register Outside of the National Register District, two properties are listed on the Vermont Historic Sites and Structures Survey (see Figure 5). These two sites are the Greatwood Campus of Goddard College (VHSS #1) and the Harold and Marjorie Townsend house (VHSS #2). See the survey forms at the end of this report for details of the VHSS properties.

Bridges Three bridges within the project area are historic concrete bridges dating from the 1920s (see Photos 13, 24, 27). Although not yet listed on either the National or State Register, these three bridges may be eligible for the National Register, if an amendment were made to the National Register district.

POSSIBLE ISSUES

The proposed pathway follows an alignment along the roadways that in most sections either follows the path of an existing sidewalk and/or follows the side of the roadway with the widest yards fronting the structures, in comparison with the yards on the opposite side of the roads. In several areas however, preservation issues may arise when developing a possible alignment, because of possible adverse effects to the historic resources, including the *setting* of the historic resources along the alignments.

Specific areas of concern where the pathway appears to pass very close to significant resources are:

- the Town Hall and the (possibly historic) stone wall fronting the Town Hall
- the former Plainfield Hotel
- the bridge and all the structures in the village center along Main Street
- lawns, vegetation and fencing in shallow front yards

Repair or replacement of the three historic concrete bridges is an issue of concern.

RECOMMENDATIONS

Further investigations are necessary to determine if any additional structures or sites are eligible for the National Register. The Vermont SHPO will need to review designs for transportation paths through this proposed project area because of the existing National Register district, the two sites listed on the State Register, and other significant cultural resources that may not be listed on either the State or National Register.

Materials General recommendations are to retain the use of concrete for sidewalks where already existing, especially in the village core. Use hard pack gravel as the surface material for the remaining pathway alignments.

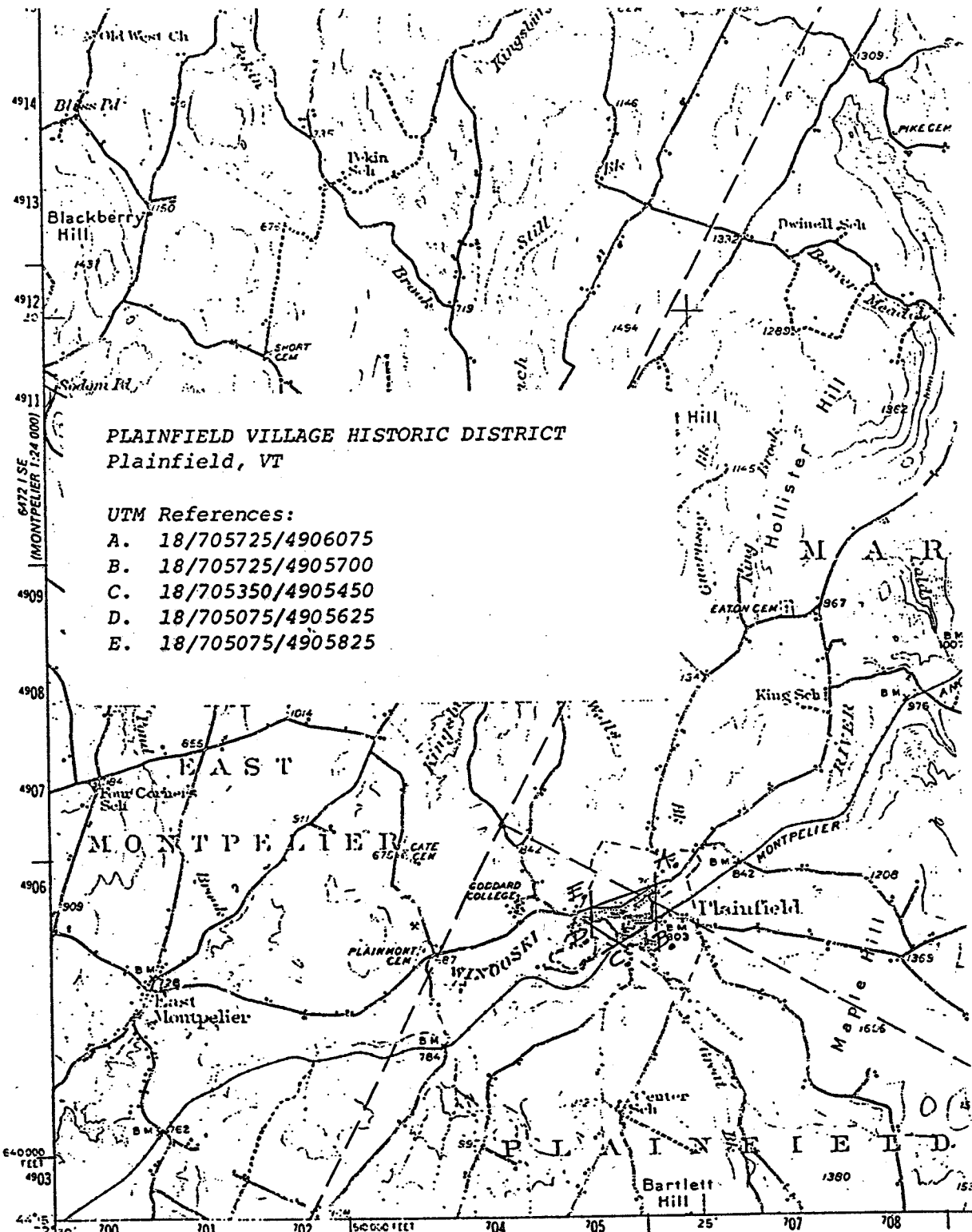
Please contact me if you would like additional information.

Sincerely yours,



Liz Pritchett
Architectural Historian

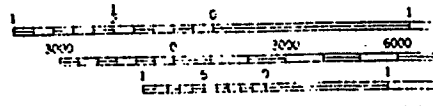
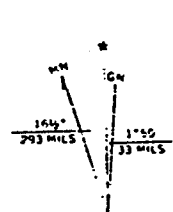
attachments:
maps, survey forms, photos



PLAINFIELD VILLAGE HISTORIC DISTRICT
Plainfield, VT

- UTM References:
- A. 18/705725/4906075
 - B. 18/705725/4905700
 - C. 18/705350/4905450
 - D. 18/705075/4905625
 - E. 18/705075/4905825

Mapped, edited, and published by the Geological Survey
 Control by USGS and USC&GS
 Topography by plane-table surveys 1939-1940. Revised 1953
 Polyconic projection. 1927 North American datum
 10,000-foot grid based on Vermont coordinate system
 1000-meter Universal Transverse Mercator grid ticks,
 zone 18, shown in blue

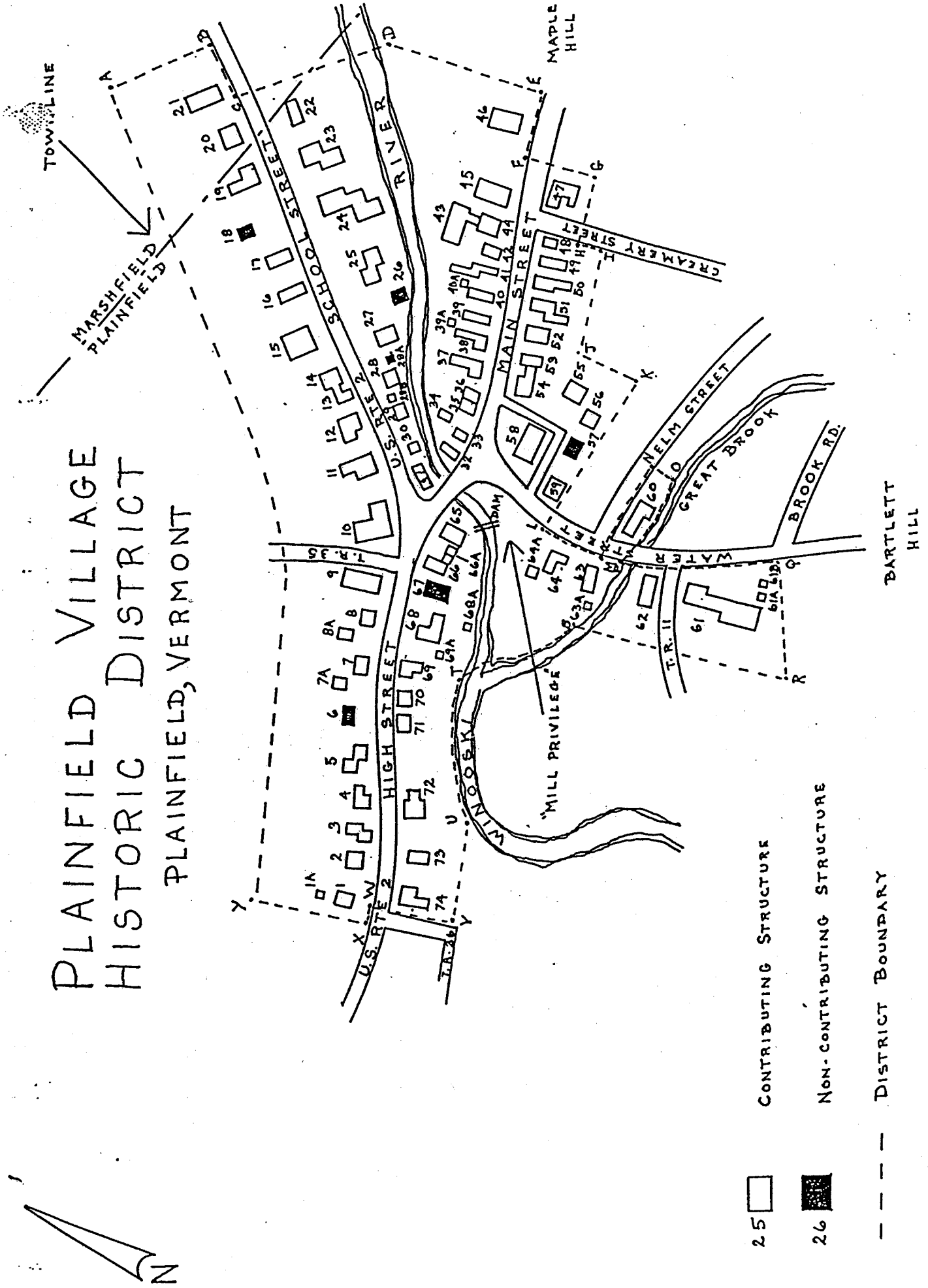


CONTROL NATIONAL GEOGRAPHIC

FOR SALE BY U.S. GEOLOGICAL SURVEY
 A FOLDER DESCRIBING TOPOGRAPHY

Figure 2
Plainfield Village Historic District
U.S.G.S. Map, 1953

PLAINFIELD VILLAGE HISTORIC DISTRICT PLAINFIELD, VERMONT



25 CONTRIBUTING STRUCTURE

26 NON-CONTRIBUTING STRUCTURE

--- DISTRICT BOUNDARY

SCALE: 1 INCH EQUALS 400 FEET

Figure 3
Plainfield Village Historic District
Stretch Map, 1982

PLAINFIELD

TOWN OF PLAINFIELD.

Scale: 20 feet to the inch.

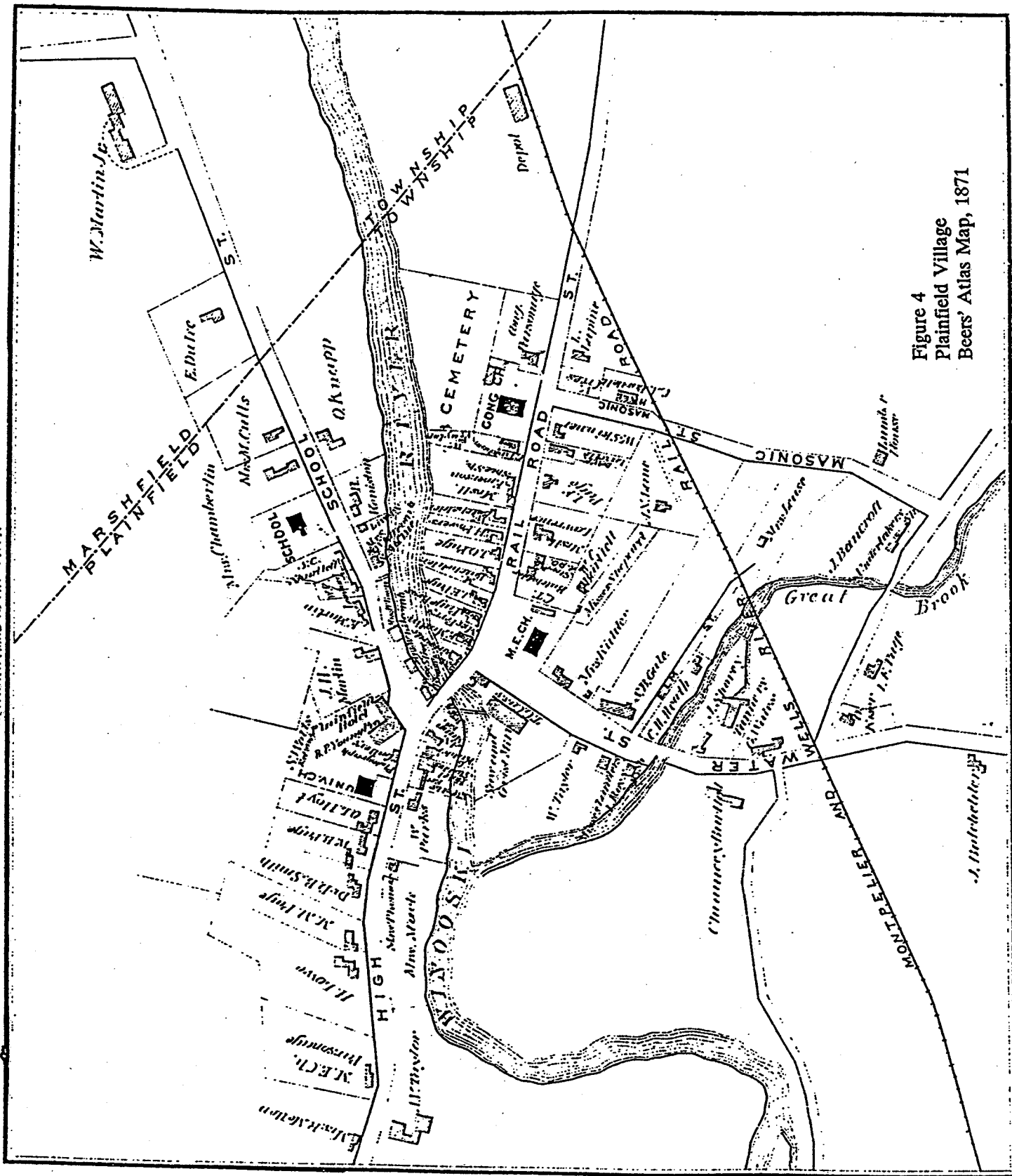


Figure 4
Plainfield Village
Beers' Atlas Map, 1871

8. Significance

Period	Areas of Significance—Check and justify below			
<input type="checkbox"/> prehistoric	<input type="checkbox"/> archeology-prehistoric	<input type="checkbox"/> community planning	<input type="checkbox"/> landscape architecture	<input type="checkbox"/> religion
<input type="checkbox"/> 1400-1499	<input type="checkbox"/> archeology-historic	<input type="checkbox"/> conservation	<input type="checkbox"/> law	<input type="checkbox"/> science
<input type="checkbox"/> 1500-1599	<input type="checkbox"/> agriculture	<input type="checkbox"/> economics	<input type="checkbox"/> literature	<input type="checkbox"/> sculpture
<input type="checkbox"/> 1600-1699	<input checked="" type="checkbox"/> architecture	<input type="checkbox"/> education	<input type="checkbox"/> military	<input type="checkbox"/> social/ humanitarian
<input checked="" type="checkbox"/> 1700-1799	<input type="checkbox"/> art	<input type="checkbox"/> engineering	<input type="checkbox"/> music	<input type="checkbox"/> theater
<input checked="" type="checkbox"/> 1800-1899	<input type="checkbox"/> commerce	<input type="checkbox"/> exploration/settlement	<input type="checkbox"/> philosophy	<input type="checkbox"/> transportation
<input checked="" type="checkbox"/> 1900-	<input type="checkbox"/> communications	<input type="checkbox"/> industry	<input type="checkbox"/> politics/government	<input type="checkbox"/> other (specify)
		<input type="checkbox"/> invention		

Specific dates N/A Builder/Architect N/A

Statement of Significance (in one paragraph)

The Plainfield Village Historic District represents an intact nineteenth century village-
scape. Endowed with a moderately high percentage of representative examples of nine-
teenth century architecture, the village's historic significance lies not so much in the
survival of a few outstanding examples as in the architectural cohesiveness of the village-
scape as a whole, including a significant concentration of brick buildings derived from
an early nineteenth century local building tradition. Few other villages of similar ori-
gins and purpose within the state can claim such uniformity, especially on such an exten-
sive scale. The only significant losses to this well preserved environment have been those
of the third generation sawmill and grist mill, located next to the falls of the Winooski
River on the site traditionally referred to as the "Mill Privilege" and destroyed by fire
in 1947, and the 1958 demolition of the Montpelier and Wells River Railroad Depot.

The Plainfield Village Historic District, which encompasses the village's historic core,
has always served as the social, cultural, educational, governmental, commercial and manu-
facturing heart of the town. No other village centers ever developed in competition within
the town limits, principally because they lacked the essential water power to do so. Loca-
ted as it is in the northernmost corner of the town with a portion of its incorporated
village limits overlapping into the neighboring town of Marshfield, it has also served, to
a lesser degree, as a commercial center for the western part of that town as well.

At the village center survive not only the first frame house (#55, 1798) but what may pos-
sibly be the two oldest surviving brick, Federal style commercial buildings in the state.
Dated by local oral tradition to 1803-04, but only documentable to 1826-27, the two, two-
and-one-half story, gable-front stores are a matched pair, a unique survival.

Besides the village school (#15), three of the four original churches (#'s 9, 45 and 58 -
only one of these presently serves as a church, the other two having been remodeled into
the town hall and the town fire station), the original fire station (#34), a second genera-
tion hotel (Plainfield Inn, #10), and seven of the eight original stores (#'s 31, 32, 33,
35, 36, 53 and 65), the historic district also contains fourteen pre-Civil War brick dwell-
ings, an unusually high number for a state traditionally dependent on wood frame construc-
tion for rural development (#'s 2, 4, 8, 11, 12, 37, 46, 50, 52, 54, 61, 63, 64 and 74).
All but two are one-and-one-half stories in height, and all but three are Classic Cottages
in design. Stylistically, they represent the Federal, Greek Revival and Gothic Revival.
Together with the two Federal style brick stores, they represent an outstanding concentra-
tion of a local building tradition.

Looking up from the Main Street Bridge towards the northwest, the intersection of High,
School and Main Streets is overlooked by the Plainfield Town Hall (#9 - formerly the
Universalist Church) and the former Plainfield Inn (#10). Looking down Main Street
from High, the view across the bridge is constricted between two flat-roofed, Italianate
Revival commercial buildings before opening out once again into the village's historic
commercial center. This area, dominated on the east side by the spruce enshrouded,
fieldstone walled Plainfield United Methodist Church (#58) and on the north by a pair of
matching, Federal style, brick stores (#'s 35 and 36), is the site of the "Mill Privi-

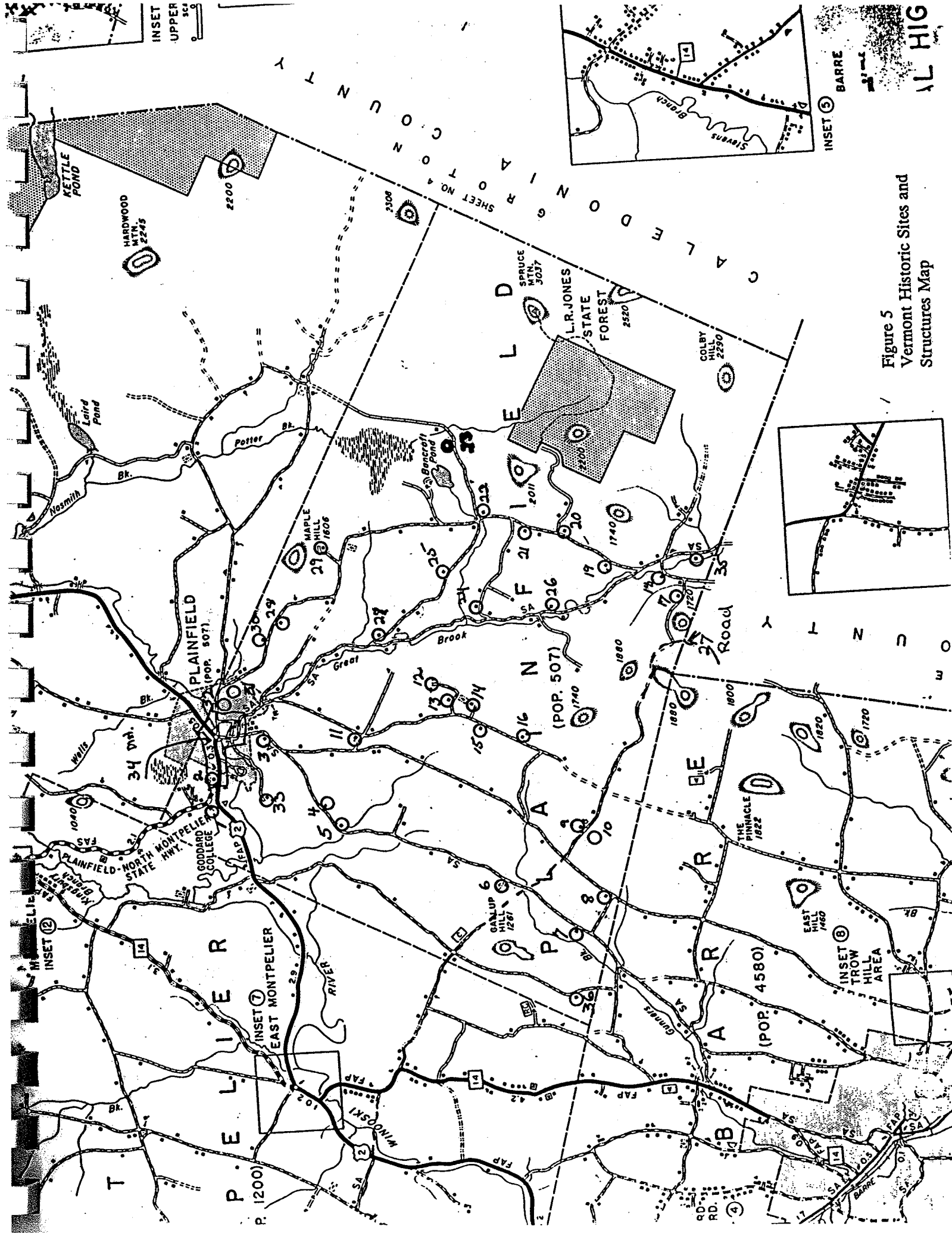


Figure 5
 Vermont Historic Sites and
 Structures Map

INSET
 UPPER

INSET
 BARRE

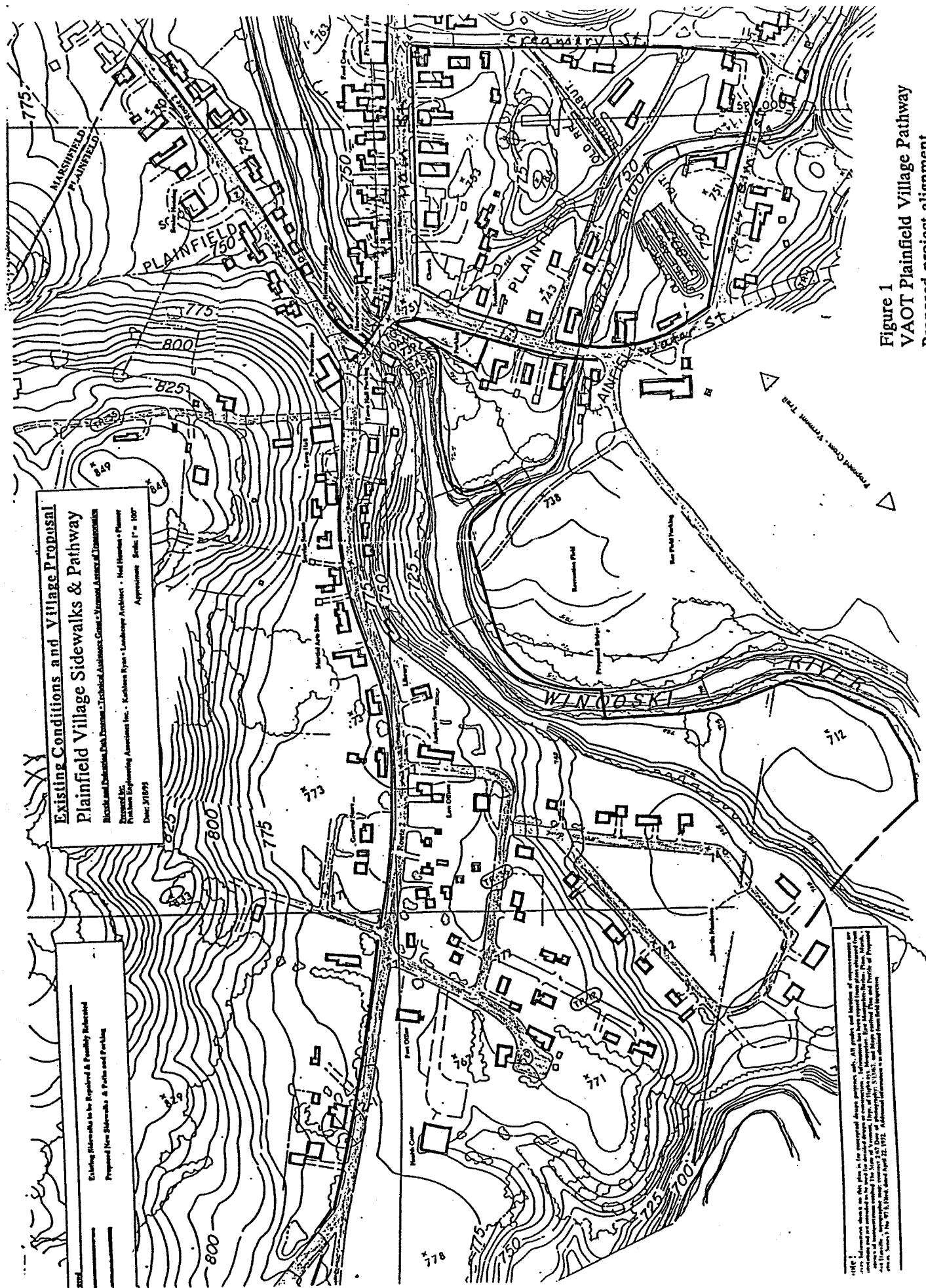
AL
 HIG

P. 1200

(POP. 4580)

RD. 1

WINDSKI



Existing Conditions and Village Proposal
Plainfield Village Sidewalks & Pathway
 Ricketts and Dickinson Park Zoning Technical Assistance Grant - Vermont Agency of Transportation
 Prepared by:
 Piedmont Engineering Associates Inc. • Kathleen Ryan • Landscape Architect • Neil Thomas • Planner
 Approximate Scale: 1" = 100'

Legend:
 Existing Sidewalks to be Repaired & Possibly Replaced
 Proposed New Sidewalks & Paths and Parkings

1/18/07
 All information shown on this plan is for conceptual design purposes only. All projects and locations of improvements shown on this plan are subject to final design and construction. Information has been prepared from the best available information and is not intended to be used for any other purpose. The State of Vermont, Department of Transportation, and the Vermont Agency of Transportation are not responsible for any errors or omissions in this plan. All information is subject to change without notice.

Figure 1
 VAOT Plainfield Village Pathway
 Proposed project alignment

STATE OF VERMONT
 Division for Historic Preservation
 Montpelier, VT 05602

HISTORIC SITES & STRUCTURES SURVEY
 Individual Structure Survey Form

SURVEY NUMBER: 1214-2

NEGATIVE FILE NUMBER:
 76-A-145, 76-A-295

UTM REFERENCES:
 Zone/Easting/Northing
 18 704800 4905800

U.S.G.S. QUAD. MAP:
 Plainfield Quad., 15' Series

PRESENT FORMAL NAME:

ORIGINAL FORMAL NAME:

PRESENT USE:

ORIGINAL USE:

ARCHITECT/ENGINEER:

BUILDER/CONTRACTOR:

PHYSICAL CONDITION OF STRUCTURE:
 Excellent Good
 Fair Poor

STYLE: Federal/Greek Revival

DATE BUILT: c. 1827

COUNTY: Washington

TOWN: Plainfield

LOCATION: North side of U. S. route
 #2 East of Road to N.
 Montpelier.

COMMON NAME:
 Allen Wood

FUNCTIONAL TYPE: farmhouse

OWNER: Harold Townsend
 ADDRESS: & Marjorie
 Plainfield, Vt.

ACCESSIBILITY TO PUBLIC:
 Yes No Restricted

LEVEL OF SIGNIFICANCE:
 Local State National

GENERAL DESCRIPTION:

Structural System large

1. Foundation: Stone Brick Concrete Concrete Block
2. Wall Structure
 - a. Wood Frame: Post & Beam Balloon
 - b. Load Bearing Masonry: Brick Stone Concrete
 Concrete Block 9-course American Bond
 - c. Iron d. Steel e. Other:
3. Wall Covering: Clapboard Board & Batten Wood Shingle
 Shiplap Novelty Asbestos Shingle Sheet Metal
 Aluminum Asphalt Shingle Brick Veneer Stone Veneer
 Bonding Pattern: Other:
4. Roof Structure
 - a. Truss: Wood Iron Steel Concrete
 - b. Other:
5. Roof Covering: Slate Wood Shingle Asphalt Shingle
 Sheet Metal Built Up Rolled Tile Other:
6. Engineering Structure:
7. Other:

Appendages: Porches Towers Cupolas Dormers Chimneys
 Sheds Ells Wings Bay Window Other:

Roof Style: Gable Hip Shed Flat Mansard Gambrel
 Jerkinhead Saw Tooth With Monitor With Bellcast
 With Parapet With False Front Other:

Number of Stories: 1 1/2

Number of Bays: 5 x 3

Entrance Location: central

Approximate Dimensions: 22 x 30 & wing

THREAT TO STRUCTURE:
 No Threat Zoning Roads
 Development Deterioration
 Alteration Other:

LOCAL ATTITUDES:
 Positive Negative
 Mixed Other:

ADDITIONAL ARCHITECTURAL OR STRUCTURAL DESCRIPTION:

House has boxed cornice and eave returns. 12/12 sash windows have rectangular cut granite lintels and sills. Both the front parlor and narrow rear bedroom on first floor have fireplaces which use the same single end chimney. A central stair is enclosed. Front door, with 3/4 length sidelights with leaded panels on interior, has massive granite lintel, sill and steps. Six panel door has latch handle with tails. Porch on front of wing has turned posts and brackets.

RELATED STRUCTURES: (Describe)

Barn. Horse barn, now used as an office.

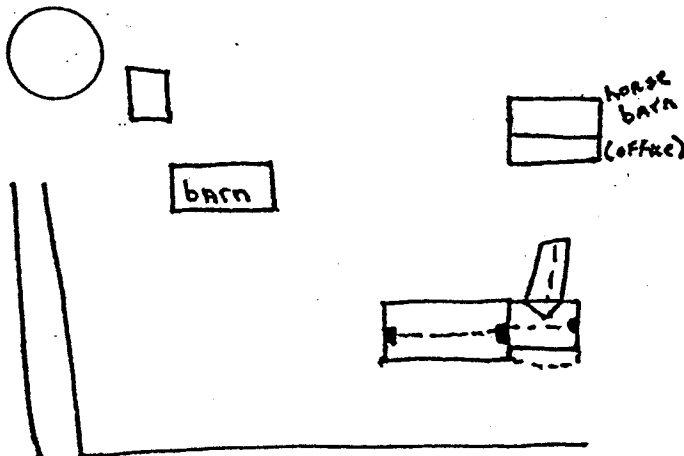
STATEMENT OF SIGNIFICANCE:

This brick cottage is one of a group of brick houses built in Plainfield and East Montpelier from locally made bricks and granite. The central door surround with attenuated paneled pilasters and drilled dentil ornament, retains Federal style characteristics into the early part of the Greek Revival period. The heavy granite lintels are characteristic of the Greek Revival period. The wing, built originally as a log house, was rebuilt after the construction of the brick portion. A fireplace with bee hive oven is still used. Outstanding interior woodwork includes a parlor fireplace mantel with unusual gorged ornamentation.

REFERENCES:

Harold and Marjorie Townsend.

MAP: (Indicate North in Circle)



U.S. Route 2

SURROUNDING ENVIRONMENT:

- Open Land Woodland
- Scattered Buildings
- Moderately Built Up
- Densely Built Up
- Residential Commercial
- Agricultural Industrial
- Roadside Strip Development
- Other:

RECORDED BY:

Harvey M. Kaplan

ORGANIZATION:

VI. Div. for Historic Preservation

DATE RECORDED:

Summer-1976

NAME OF SITE	SITE NO.	NEGATIVE FILE NO.	I.R.
Greatwood Campus of Goddard College	1214-1	78-A-334	
Harold-Marjorie Townsend	1214-2	76-A-295 76-A-145	
H. Gordon-Marion Martin	1214-3	76-A-145	
E. R. Armstrong	1214-4	76-A-145	
Kenneth Russell	1214-5	76-A-145	
Jean Morrissey	1214-6	76-A-145	
Donald-Janna Osman	1214-7	76-A-145	
Grant-Grace McClellan	1214-8	76-A-145	
Peter, Annie & Joseph Griffith	1214-9	76-A-145	
South District School	1214-10	76-A-145	
Center School	1214-11	76-A-145	
Bartlett-Petit House	1214-12	76-A-144	
Howard Bartlett House	1214-13	76-A-144	
Carroll, Carol & Bessie Farnham	1214-14	76-A-144	
L. R.-Lois LaVallee	1214-15	76-A-144	..
Mark N. Yorra & Catherine M. Gates	1214-16	76-A-144	
Ethel Bower	1214-17	76-A-295	
Carroll Laundry	1214-18	76-A-295	
Ernest Wheeler	1214-19	76-A-295	
Lester Macek	1214-20	76-A-295	
The Dix Place	1214-21	76-A-295	
George-Jean Olson	1214-22	76-A-295	
Old Bean Farm	1214-23	76-A-295	
Mrs. Horace P. Lovell	1214-24	76-A-295	
William Prescott	1214-25	76-A-295	
June Arnold	1214-26	76-A-145	
Andree & Albert Griggs	1214-27	76-A-295	
Andrew Potok	1214-28	76-A-295	

STATE OF VERMONT
 Division for Historic Preservation
 Montpelier, VT 05602

HISTORIC SITES & STRUCTURES SURVEY
 District Complex Survey Form

SURVEY NUMBER: 1214-1
NEGATIVE FILE NUMBER(S): 78-A-334, 79-A-10
UTM REFERENCES: Zone/Easting/Northing A 18 704250 4905750 B C D
U.S.G.S. QUAD. MAP: Plainfield Quad., Series 15'
COMPLEX INFORMATION ONLY
COMMON NAME: Greatwood Campus of Goddard College
PRESENT FORMAL NAME:
ORIGINAL FORMAL NAME: Greatwood Farm
TYPE OF COMPLEX: Educational
TYPES OF STRUCTURES: Manor house and adapted farm buildings
PRESENT USE: educational
ORIGINAL USE: agricultural
ARCHITECT/ENGINEER: James T. Kelly, Architect, Arthur Shurcliff, Landscape
BUILDER/CONTRACTOR:
ACCESSIBILITY TO PUBLIC: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Restricted <input type="checkbox"/>

COUNTY: Washington
TOWN: Plainfield
LOCATION: West of Plainfield Village, Northwest of intersection U. S #2 & road to north Montpelier.
NAME OF DISTRICT:
TYPE OF DISTRICT:
PHYSICAL CONDITION OF STRUCTURES: Excellent % Good % Fair % Poor %
LEVEL OF SIGNIFICANCE: Local <input type="checkbox"/> State <input checked="" type="checkbox"/> National <input checked="" type="checkbox"/>
THEMES:

STATEMENT OF SIGNIFICANCE:

Plainfield's Greatwood Farm is an unusual complex of buildings, representing a major architectural and cultural statement by a prominent local family. Built for Willard Shepard Martin in 1908 by a Boston architect, James T. Kelly. It utilized the site and barn of the Martin family farm originally settled in the early 1800's. The main house is a large, shingled mansion with formal gardens to the rear. The architect was reputedly influenced by the bungalows of India, a typical theme of this era. The buildings had hipped roofs with wide overhanging eaves and exposed rafters. The distinctive shingled agricultural complex forms a quadrangle around a two-story clock house.

Mr. Martin was educated at Goddard Seminary in Barre, Vermont and Tufts College (1893). For many years he was associated with Mead-Morrison Manufacturing Co. of Boston, New York and Chicago. In 1929 he was treasurer and general manager of that company and maintained a winter home in Cambridge, Mass. "Greatwood Farm", the principal family home, was renowned for its prize Shropshire sheep, milking Shorthorn cattle and trained sheep dogs. Mr. Martin was the president of the Milking Shorthorn Society of the U. S. and, at the farm, hosted agricultural lectures on "Sheep Days". The estate appeared in "The Field Illustrated" of March 1920 as "Vermont's finest farm". (It at one time contained 1500 acres of fields and 4800 acres of wood-land.)

The Martins relocated U. S. Route #2 that runs along the south of the Greatwood complex, since the original road ran directly through the estate. The area was landscaped with masses and avenues of trees, which have now outgrown the design of Arthur A. Shurcliff (Harolds, Graves and Shurcliff of Boston) which includes gardens bounded by dry stone walls varying in height from three to ten feet tall. A lower garden (on map) adjacent to the main house is divided into two parts by a wooden fence. One part contained a rose garden and small pool, the other a formal garden with hedges and a pergola. Stone steps lead from the pergola to a rectangular pool.

THREAT TO STRUCTURES: No Threat <input type="checkbox"/> Zoning <input type="checkbox"/> Roads <input type="checkbox"/> Development <input type="checkbox"/> Deterioration <input type="checkbox"/> Alteration <input checked="" type="checkbox"/> Other:
--

LOCAL ATTITUDES: Positive <input checked="" type="checkbox"/> Negative <input type="checkbox"/> Mixed <input type="checkbox"/> Other:

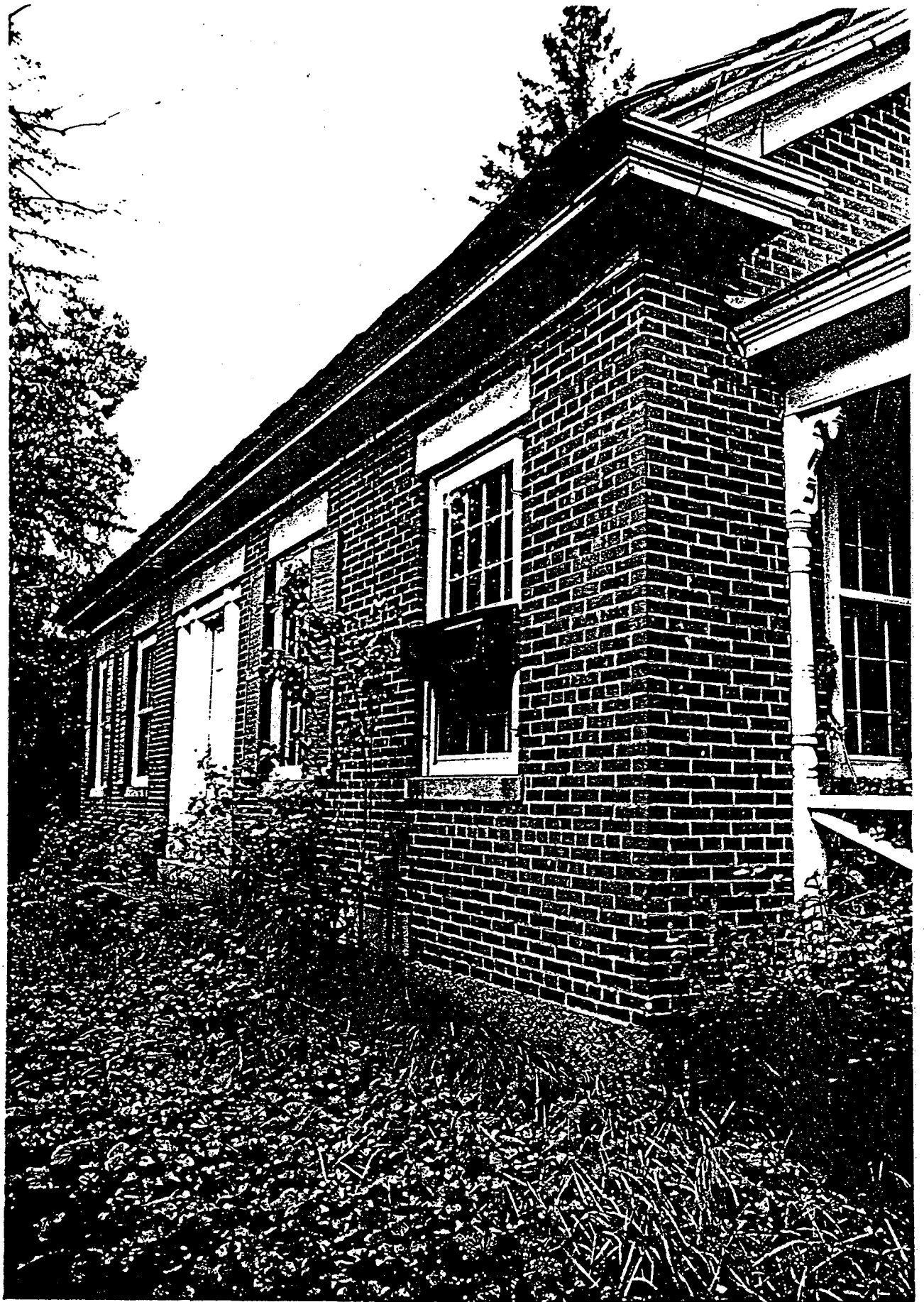
Survey Number: 1214-1

Negative File Number: 78-A-334, 79-A-10

STATEMENT OF SIGNIFICANCE:

with five rams' head water spouts in the stair well location and then to the upper walled garden (B on map), the Garden House (a formal step-gabled Tudor Revival miniature of unusually fine detail and craftsmanship) and a brick greenhouse.

Goddard College bought the complex in 1938, after Willard Martin's death and moved their operations here from Barre. They removed the dormers from the barn roofs, but left most of the complex substantially intact.



1214-2

Liz Pritchett Associates

HISTORIC PRESERVATION • ARCHITECTURAL CONSERVATION

June 5, 1995

Curtis Johnson, Survey Manager
Vermont Division for Historic Preservation
135 State St., Drawer 133
Montpelier, VT 05633-1201

Re: Letter Report - Historic Resources Review
VAOT Plainfield Pedestrian Path, Plainfield, Vermont

Dear Curtis,

Attached is the Letter Report that outlines my findings, lists anticipated issues, and makes recommendations for future historic resources investigations, in regard to review of the above-referenced VAOT project.

As this project is for a pedestrian walkway, five feet in width, it appears that the proposed alignment is feasible, although its proximity to various historic resources and the existence of historic concrete bridges along the proposed route, may create preservation issues of adverse effect. I have recommended that further review occur when a project design is drafted.

I look forward to your comments. Feel free to call me if you have questions.

Sincerely,



Liz Pritchett
Architectural Historian

cc. Douglas Weber, Pinkham Engineering

AGENCY OF DEVELOPMENT
and
COMMUNITY AFFAIRS



DIVISION FOR HISTORIC PRESERVATION
*Preserving Vermont's historic, architectural,
and archeological resources*

AUG 3 1995

STATE OF VERMONT

August 1, 1995

Douglas Weber
Pinkham Engineering Associates
431 Pine Street
Burlington, VT 05401

Re: Plainfield Village Pathway, AOT.

Dear Mr. Weber:

The Division has reviewed Liz Pritchett's letter report regarding the above-referenced project and concurs with her findings and recommendations regarding the proposed project's potential to impact historic structures.

The Division is providing you and the Federal Highway Administration (FHWA) with the following information in its effort to assist the FHWA to meet its obligation to comply with 36 CFR 800, regulations established by the Advisory Council on Historic Preservation to implement Section 106 of the National Historic Preservation Act. Please consider these comments preliminary.

Under the Act, "historic properties" include historic buildings, structures, historic districts, historic landscapes and settings, and recorded or potential archeological resources that may be eligible for inclusion in the National Register of Historic Places.

The proposed project involves construction of a transportation path in Plainfield Village. Portions of the proposed pathway follow along existing sidewalks. The project will also include construction of new stretches of path, parking areas and two new stream crossings.

The views of the State Historic Preservation Officer on further actions that FHWA must take to identify historic properties that may be affected by the above undertaking in accordance with 36 CFR 800.4a(ii) are as follows.

D. Weber
Page 2
August 1, 1995

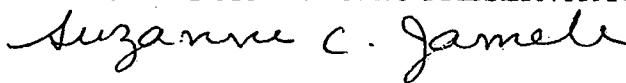
The proposed corridor of the transportation path will need to be inventoried for the presence of archeological resources. It is therefore necessary for the FHWA to assess or cause to have assessed the impact of this project on any prehistoric or historic archeological resources that may be identified.

A 36CFR-61 qualified consulting archeologist should conduct a Phase IA archeological study to determine the potential existence of archeological properties in the project area. All archeological studies must meet the *Secretary of the Interior's Standards for Archeological documentation* [48 FR 44716]. (As an aid to successfully meeting the Standards, the Division has amplified and clarified them in its *Guidelines for Conducting Archeological Studies*, available upon request.)

Federal regulations require that federal agencies, or their agents, provide the SHPO with the above information regarding historic resources within the project area and the project's potential to impact those resources. It is the SHPO's responsibility to review the submitted information, confirm that it is complete and accurate, and either concur or not concur with the conclusions and recommendations contained therein regarding the impact of the proposed project on Vermont's historic and archeological resources.

By regulation, the Division is encouraged to assist the FHWA in meeting its obligation to comply with the National Historic Preservation Act. Please call if you have any questions.

Sincerely,
DIVISION FOR HISTORIC PRESERVATION



 Eric Gilbertson
Director/Deputy State Historic Preservation Officer

cc: Kate Quinn, FHWA
Duncan Wilkie, AOT
Robin Pratt, RAPT
Plainfield Planning Commission
Central Vermont Regional Planning Commission

Miscellaneous Information on Historical Nature of Project Area

United States Department of the Interior
National Park Service
**National Register of Historic Places
Inventory—Nomination Form**



Continuation sheet 3 Item number 7 Page 4

8. von Shummer House, Greek Revival/Gothic Revival style, c.1838.

One-and-one-half story, five-bay facade, rough-cut granite block foundation above grade, wood frame, brick (running bond) veneer, gable roof with center-bay gable wall dormer. Trabeated brick lintels consisting of a single header course; lintels have been painted to appear splayed. Boxed eave with deep, plain fascia. Floor-to-ceiling, double-hung windows in gable wall dormer above front entrance (one window), and on the first and second floors of the east gable elevation (two windows per floor). One-bay entrance porch and two-bay east side porch share similar detail: one story, flat roof, posts which in cross-section have the plan of a Greek cross, decorative wrought iron cresting with fleur-de-lis and pointed arch motifs, and wrought iron brackets.

Wood frame, clapboarded, gable roof wing on west end of main block. Two-story shed roof addition on rear (north) elevation of main block

Probably built by Harrison Ketchum, who lived here in 1858 and was first selectman of Plainfield in 1859 and 1860.

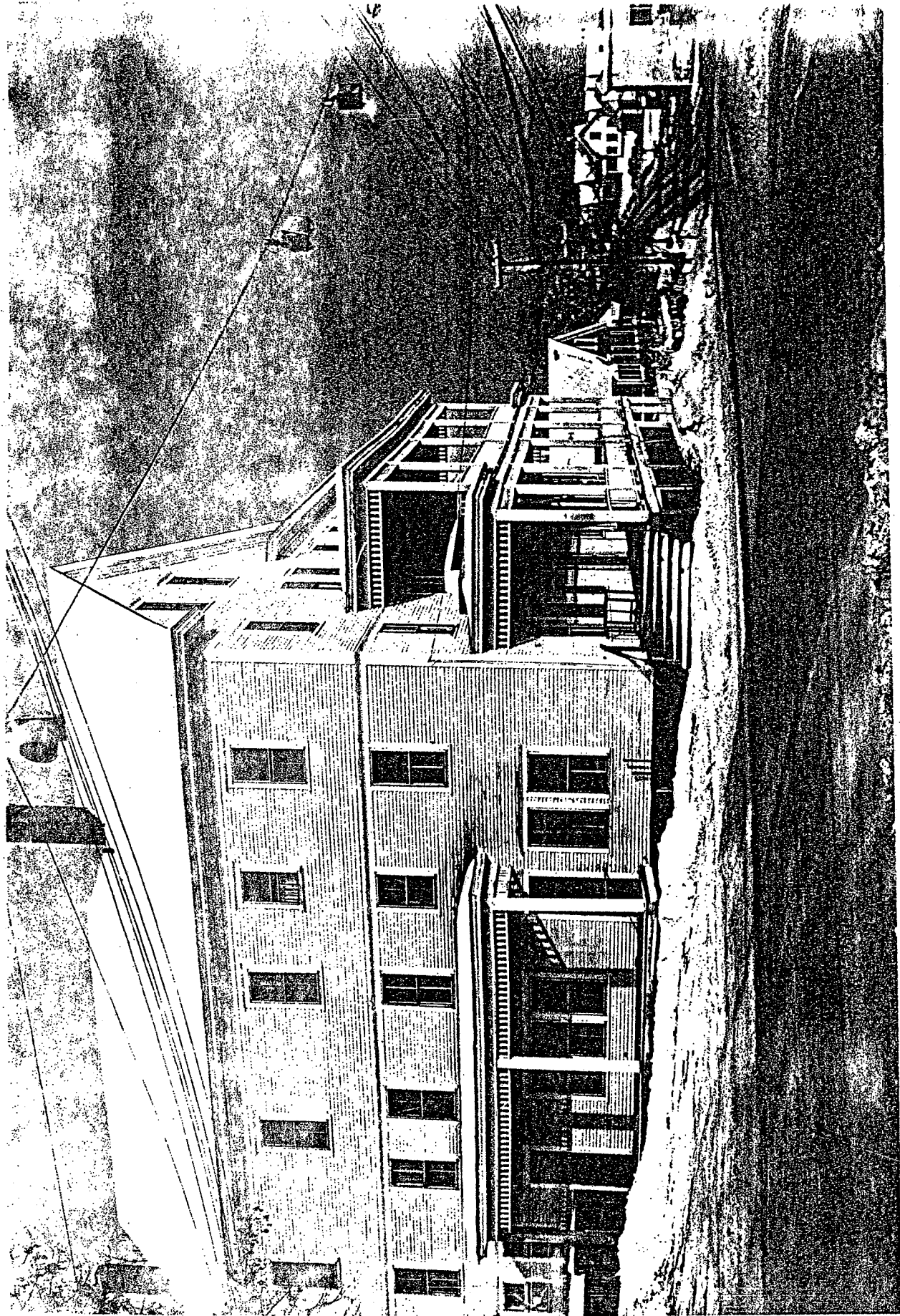
- 8A. Two-and-one-half story, wood frame, clapboarded, gable roof barn with gable-front orientation and irregular fenestration; c.1860.

9. Town Hall, Greek Revival style, 1841 (originally, Universalist Church; converted to Plainfield Town Hall and Plainfield Opera House in 1911).

One-and-one-half story with full basement story exposed on front facade, rough-cut granite block foundation above grade on other facades. Wood frame, clapboard siding, gable roof with pedimented front gable elevation. Doric corner pilasters and intermediate wall pilasters on sides support full entablature which returns across facade to form gable pediment; triangular louvered fan in pediment. Paired, tall rectangular windows with transom framed by architrave molding and corner blocks. In the 1911 remodeling, the original entrances on the facade (one on each side of existing center window) were removed and the basement story exposed and basement entrance and windows installed. The bell tower was also removed at that time.

10. Inn (former Plainfield Inn), retarditaire vernacular Greek Revival style, 1914 (original, Federal style, wood frame, clapboarded, brick gable end, gable roof inn built in 1833-37, burned in 1914.)

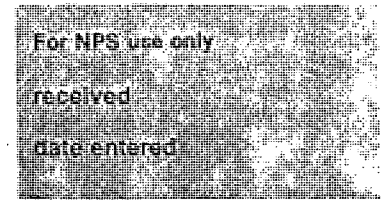
Three-and-one-half story, L-shaped plan, wood frame, clapboard siding, intersecting gable roof with gable end on facade. Full entablature with gable end returns; continuous molded belt course at height of second floor window lintels; entrance with sidelights; irregular fenestration; 2/2 sash. Six-bay, two-story porch on School Street facade, stepped in one bay on each end on second story, with balustered railing and spindle valance; one-story porch on west elevation with spindle valance.



#10

United States Department of the Interior
National Park Service

National Register of Historic Places
Inventory—Nomination Form



Continuation sheet 7

Item number 7

Page 8

28. Wild House, vernacular Queen Anne style, c.1895.

One-and-one-half story, wood frame, asbestos shingle siding, gable roof with front gable elevation. Wood frame, clapboarded, gable roof wing with attached porch supported by turned posts with scroll brackets.

28A. Two-bay, gable-roofed garage with textured wood siding, c.1965. Non-contributing.

28B. One-bay, gable-roofed garage with shingle siding, dry laid stone foundation, c.1900.

29. Harmon House, Italianate Revival style, c.1880.

Two-story, wood frame, clapboard siding, flat roof. Bracketed cornice; molded window lintels. Paired and tripled windows on front.

30. Office, c.1925. One-and-one-half story, wood frame, wood shingle siding, gambrel roof. Entrance with paired doors beneath gable wall dormer.

31. Plainfield Hardware and Supply, Italianate Revival/vernacular Queen Anne style, 1919.

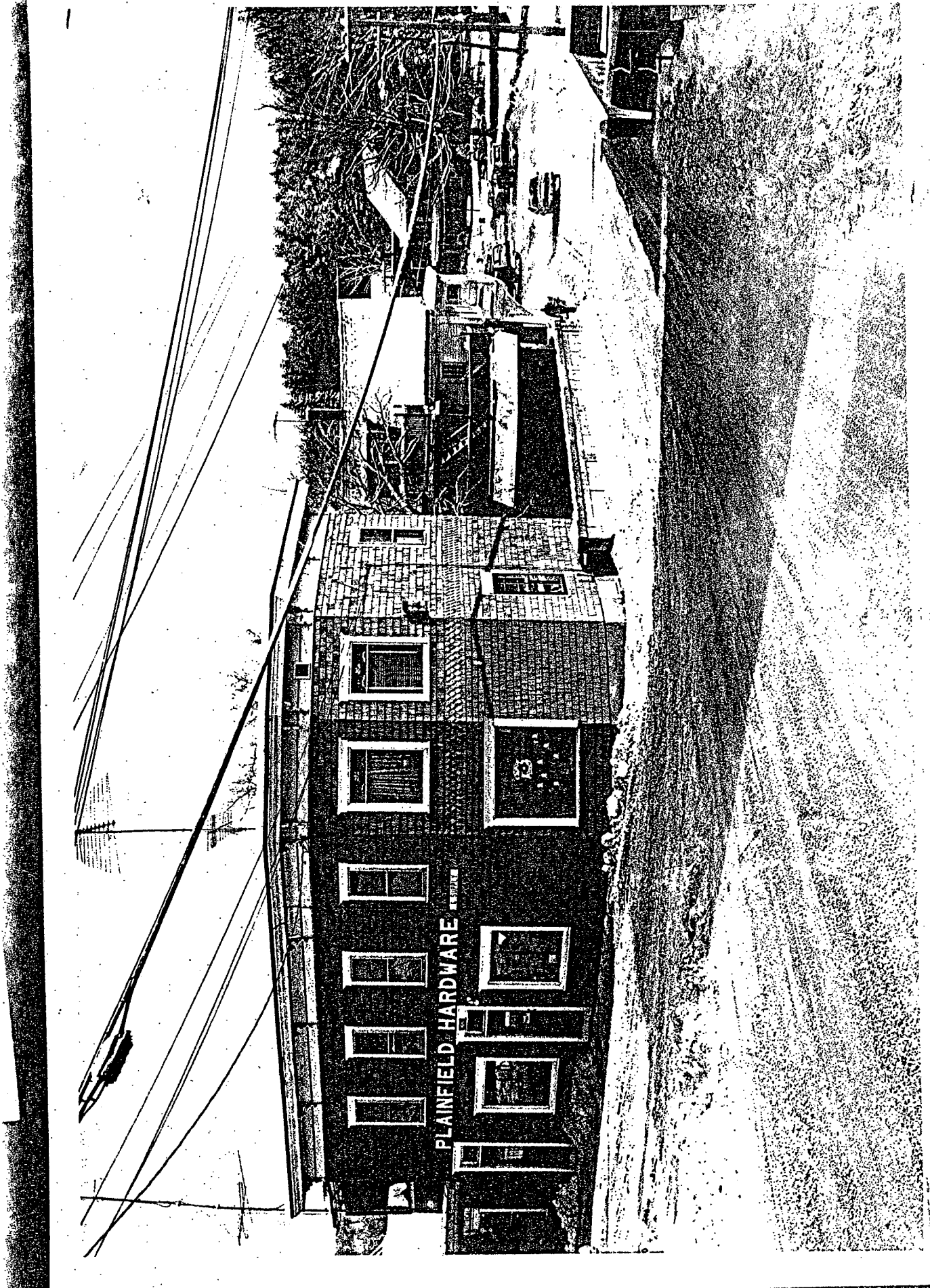
Two-story, wood frame, wood shingle siding, flat roof. Principal polygonal front corner with stained glass transomed second floor "picture" windows; molded window and door lintels; decorative belt course with sawtooth motif between first and second floor windows; bracketed cornice. Storefront composed of separate transomed entrances and flanking, plate glass display windows, with one window located on "rounded" corner. One-story, wood frame, wood shingled, flat and gable roof wing and sheds; overhead garage door in wing.

32. The Riverhouse, Greek Revival style, c.1858.

Two-and-one-half story, wood frame, clapboard siding, gable roof with front gable elevation. Partial entablature with gable end returns. Flat-roofed, overhanging, second floor porch across facade with balustered railing and chamfered posts supported by large-scale brackets. Storefront composed of entrance in each outside bay and two double-hung windows in center bay between overhanging porch brackets. New exterior wood fire escape on west elevation; existing entrances replaced, new fire escape entrances and exits added.

33. Lickety Split Restaurant (formerly Juanita's Cafe), Greek Revival style, c.1850.

One-and-one-half story, three-bay facade, wood frame, clapboard siding, gable roof with front gable elevation. Cornice returns. Shed roof canopy across facade supported by large-scale brackets; porch across east elevation. Storefront composed of separate center entrance and flanking, six-pane display windows.



PLAINFIELD HARDWARE

#31

MEMO



VTrans Policy & Planning

To: Scott Newman, Deputy SHPO
From: Aimee Neveau
Regional Planning Coordinator
Date: October 5, 2004
Subject: Plainfield US 2 & Main Street

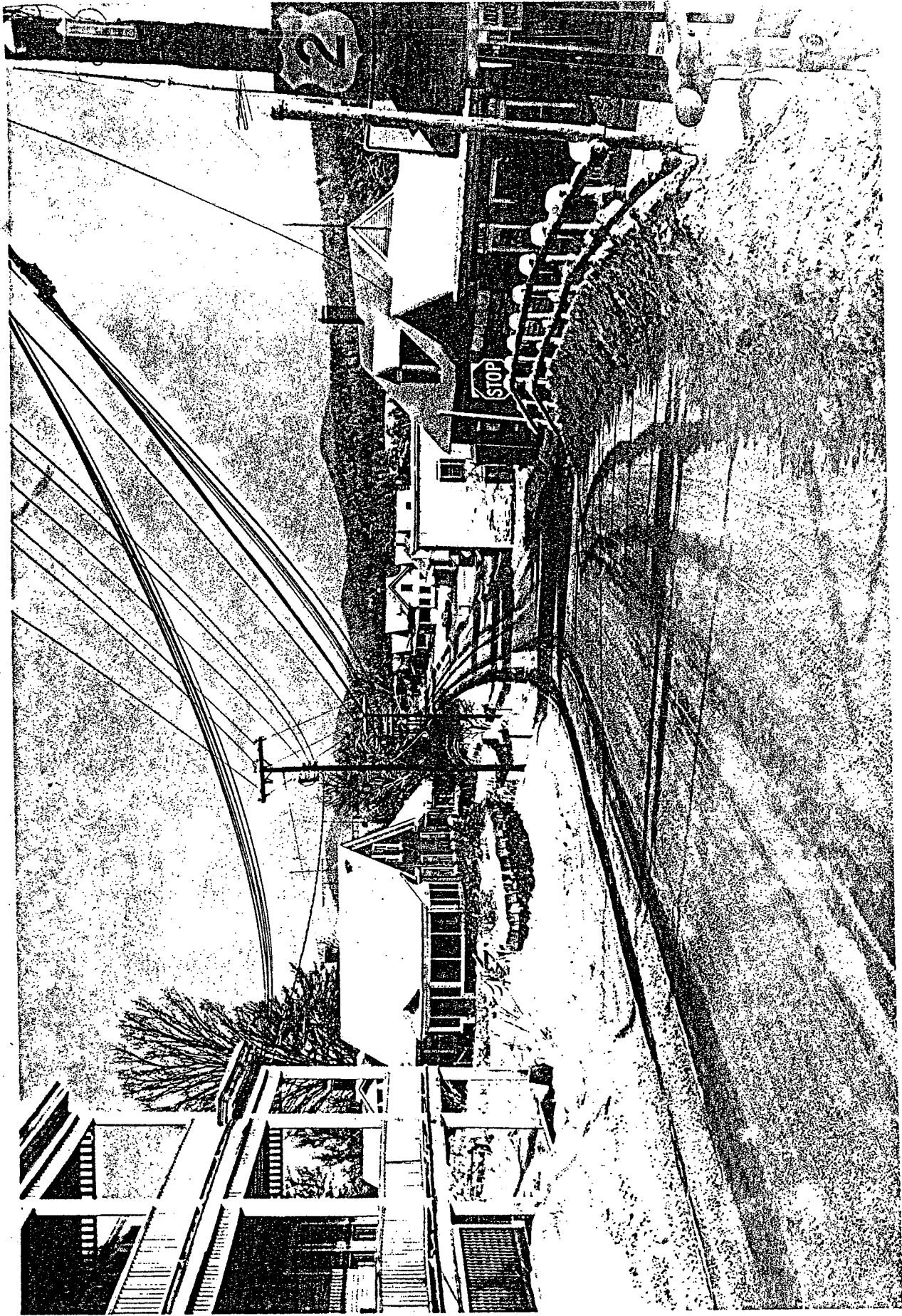
Please find attached a plan view of the existing conditions at the intersection of US 2 and Main Street in Plainfield, Vermont. At a meeting with Dubois & King, Steve Gladczuk, Central Vermont Regional Planning Commission, and the Traffic Operations Section of VTrans, there were discussions regarding the sight distance (as you may note with the pictures on the plan view) and significant grades of this intersection as it relates to safety.

Many changes to the intersection to improve this intersection that were discussed revolved around the porch of the Plainfield Furniture Store. The concern is that in order for pedestrians to safely cross the intersection, changing the grade, signal location, the porch to the building appears to be problematic for any of these alternatives.

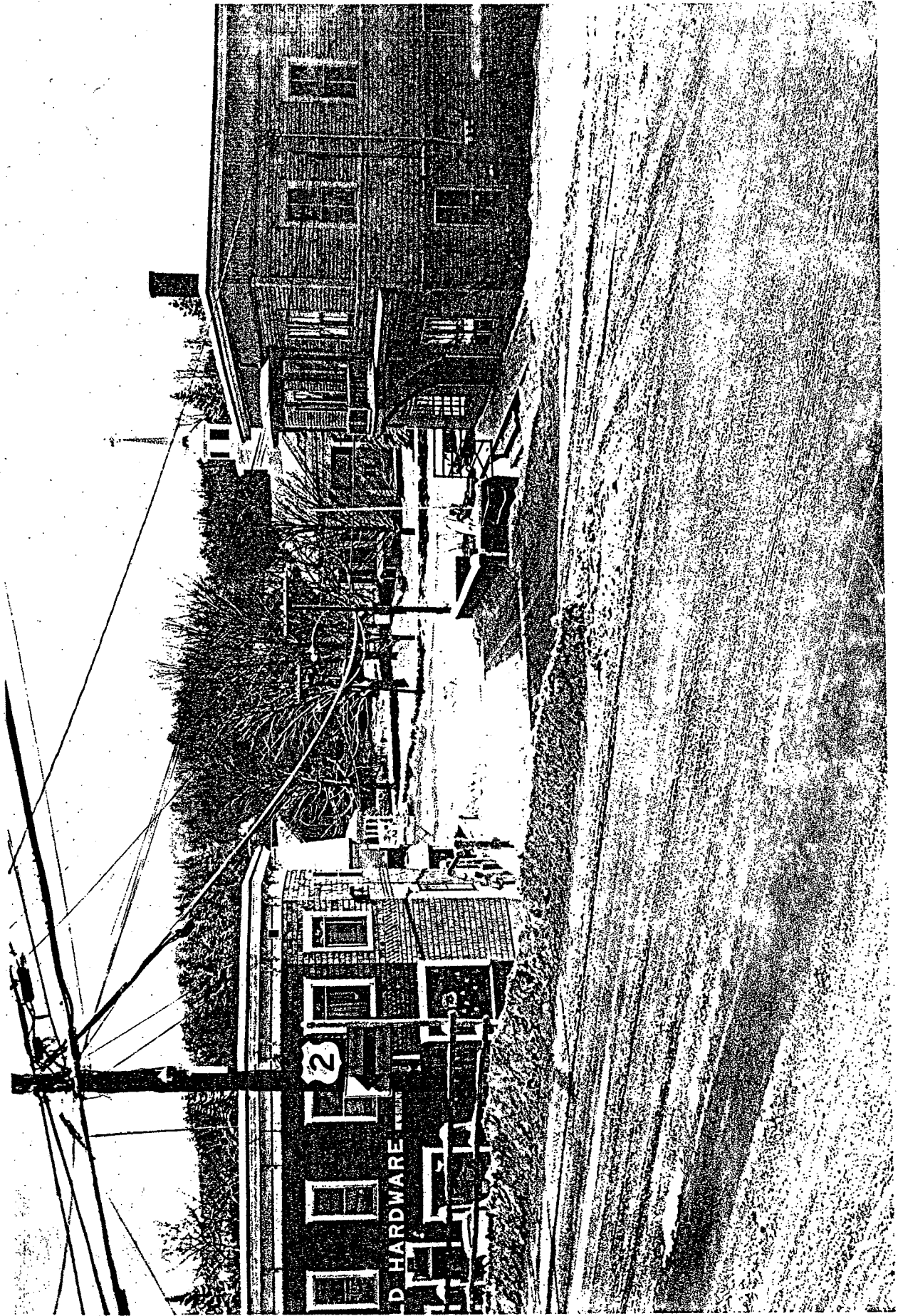
Pedestrians' sight distance is limited by the curve in the road, the grade and the porch. If we use a signal to control pedestrian crossing, the signals only realistic location is the location of the porch steps. Lowering the grade of US 2 to help the Main Street 14% grade also would require impact to the porch.

With this said, I would like your comment on the reasonableness of removing the porch of the Plainfield Furniture store. What types of mitigation factors would be needed based on the historical significance of the structure.

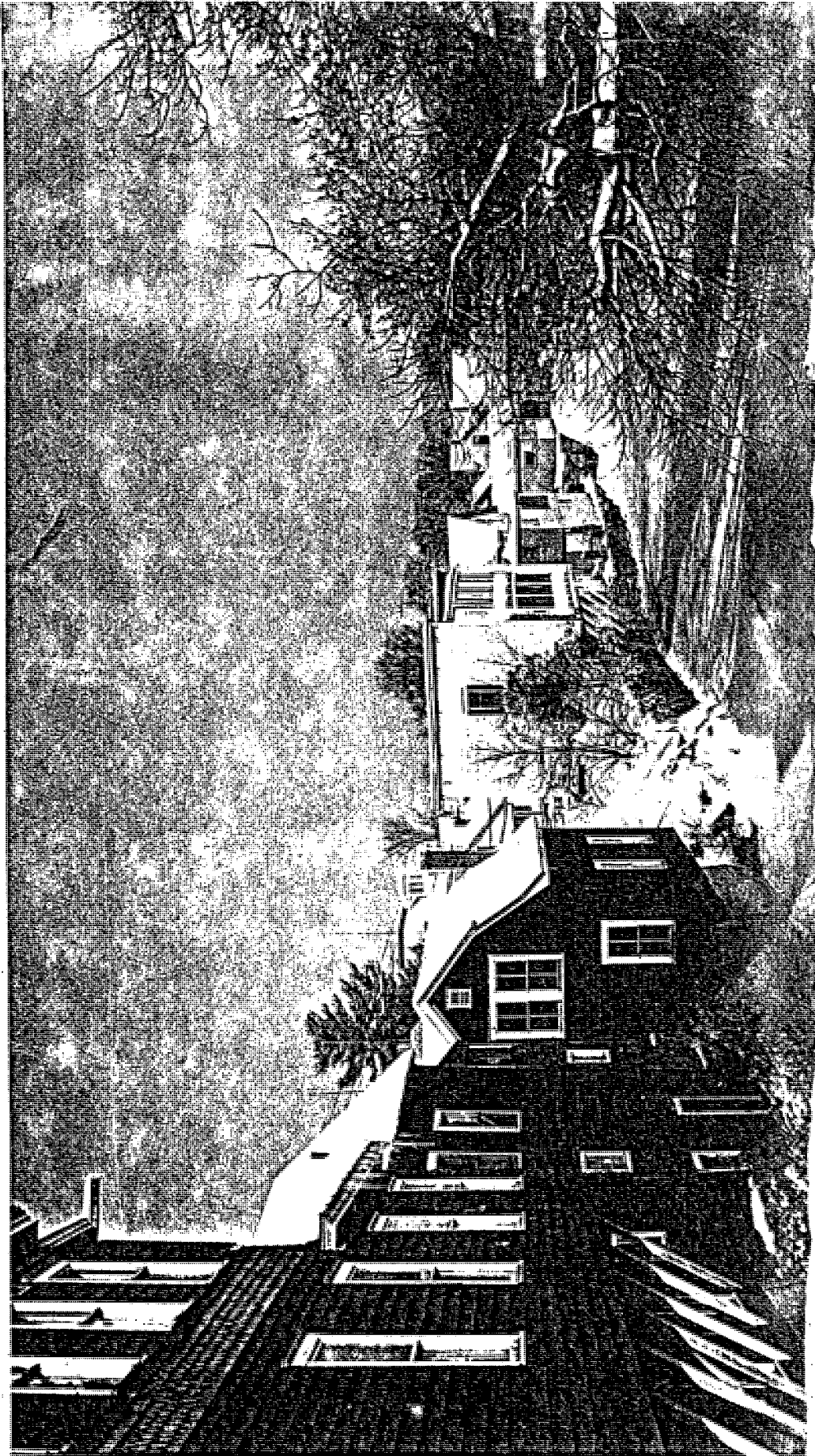
Attachment
Cc: CVRPC file



#5 10, 11, 12, 22, 23, 24, 25, 29, 31



#5 31, 32, 54, 58, 65

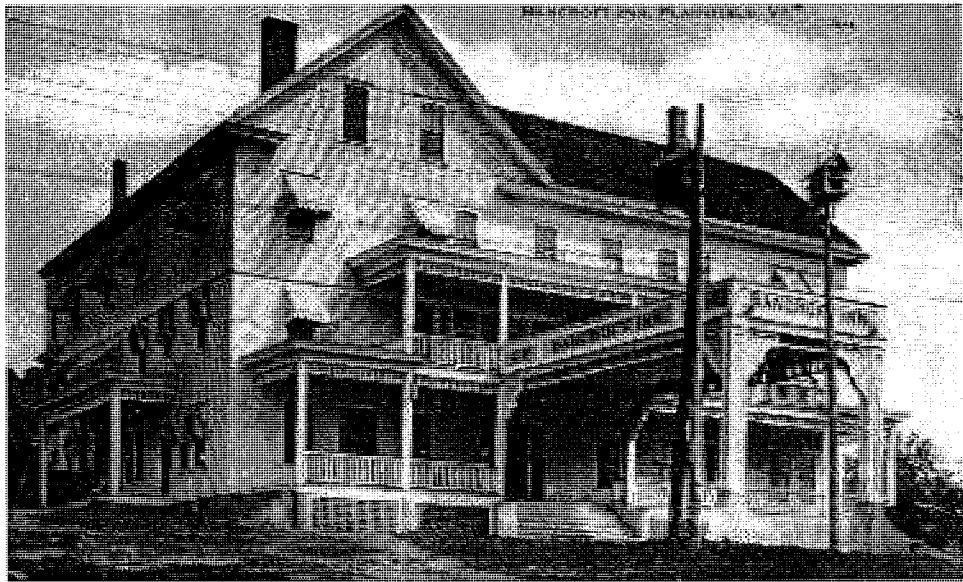


#S 31, 30, 29, 28, 27, 26,
25, 15

Historic picture of Plainfield Inn

Bancroft Inn, Historic View, 1917-06-13

Source: http://www.uvm.edu/perkins/landscape/LS_ArchiveSearchResults.php



Appendix F

Cost Estimates



- Randolph, VT 05060 (802) 728-3376
- Nashua, NH 03063 (603) 883-0463
- Rutland, VT 05495 (802) 773-7016
- Williston, VT 05495 (802) 878-7661

Engineering • Planning • Development • Management

JOB 618723L1

SHEET NO. _____ OF _____

CALCULATED BY: JDA DATE: Feb 05

CHECKED BY: _____ DATE: _____

SCALE: _____

US 2 and Main Street Intersection Summary of Cost Estimates

Alternative	Cost
1. No Build	\$0
2. Lower Speed limit to 25 mph	\$240
3. Add Mirrors	\$2,000
4. Rotary Intersection	>> \$1,000,000
5. "T" intersection only	\$366,000
6. Traffic Signal & "T" Intersection	\$406,000
7. Minor Lowering of US 2	\$468,000
8. Minor Lowering of US 2 & Relocate Furniture Store	\$906,000
9. Lower US 2 significantly, regrade Harvey Hill Road	\$564,000
10. Lower US 2 significantly, relocate Harvey Hill Road	>> \$1,000,000
11. Traffic Signal, "T" Intersection & Minor Lowering of U.S. 2	\$508,000
12. Signalization without reconstruction	\$80,000
13. All way stop intersection	\$2,000

Date Plotted =

10-Feb-05



- Randolph, VT 05060 (802) 728-3376
- Nashua, NH 03063 (603) 883-0463
- Rutland, VT 05495 (802) 773-7016
- Williston, VT 05495 (802) 878-7661

Engineering • Planning • Development • Management

JOB 618723L1

SHEET NO. _____ OF _____

CALCULATED BY: JDA DATE: Dec 04

CHECKED BY: _____ DATE: _____

SCALE: _____

Alternative 1: No Build

No Associated Costs - Cost = \$0

Alternative 2: Lowering Speed Limit to 25 mph

Draft Conceptual Cost Estimate for Lowering Speed Limit to 25 mph

Item 675.20 - Traffic Signs, Type A

Assume 2 "speed limit 25mph" signs will be needed:

Assume standard sign sizes of 24" (.6m) by 30" (.75m) will be used.

2 signs X .6m X 0.75m =	0.90	SM
Subtotal =	0.90	SM
Rounding =	0.10	SM
<hr/>		
Total =	1	SM
Unit Cost =	200	/ SM
Subtotal, Cost =	\$ 200	
20% Contingency =	\$40.00	
<hr/>		
Total Construction Cost=	\$ 240	

Alternative 3: Add Mirrors

Draft Conceptual Cost Estimate to Add Mirrors for the intersection.

Assume a mirror at the following locations:

- Bottom of Harvey Hill Road
- One for eastbound US 2
- One for westbound US 2
- One for Main Street

Total number of mirrors =	4.00
Unit Price per mirror =	\$ 500 (estimate)
<hr/>	
Total Cost =	\$2,000

Date Plotted = 12-Jan-05



- Randolph, VT 05060 (802) 728-3376
- Nashua, NH 03063 (603) 883-0463
- Rutland, VT 05495 (802) 773-7016
- Williston, VT 05495 (802) 878-7661

Engineering • Planning • Development • Management

JOB 618723L1

SHEET NO. _____ OF _____

CALCULATED BY: JDA DATE: Dec 04

CHECKED BY: _____ DATE: _____

SCALE: _____

Alternative 4: Rotary Intersection

Draft Conceptual Cost Estimate for Rotary intersection:

Assume 1 Lump Sum of >> \$1,000,000

Date Plotted =

12-Jan-05



- Randolph, VT 05060 (802) 728-3376
- Nashua, NH 03063 (603) 883-0463
- Rutland, VT 05495 (802) 773-7016
- Williston, VT 05495 (802) 878-7661

Engineering • Planning • Development • Management

JOB 618723L1

SHEET NO. _____ OF _____

CALCULATED BY: JDA DATE: Dec 04

CHECKED BY: _____ DATE: _____

SCALE: _____

Alternative 5: "T" Intersection Only

US 2 Improvements

Cost for this alternative is similar to Alternative 7, with the following modifications:

Cost for Lowering Intersection ~ 0.5 m, Subtotal =	\$	306,470.00
Minus Cost for Common Excavation (Alternative 7) =	- \$	36,000.00
Minus Cost for Retaining Wall (Alternative 7) =	- \$	9,000.00
Minus Cost for Mobilization (Alternative 7) =	- \$	20,000.00
Plus Cost for Common Excavation (Alternative 5) =	+ \$	28,000.00
(1400 CM at \$ 20)		
<hr/>		
Subtotal for Alternative 5 =	\$	269,470.00
Mobilization =	\$	19,000.00

SUB-TOTAL = \$ 288,470.00
ADD 20% CONTINGENCY = \$ 57,694.00

SUB-TOTAL = \$ 346,164.00
COST FOR DETOUR = \$ 20,000.00

TOTAL COST = \$ 366,164.00

ROUNDED COST TO USE \$ 366,000.00

Alternative 6: Traffic Signal & "T" Intersection

Cost for "T" intersection =	\$	366,000.00
Cost for Traffic Signal =	\$	40,000.00
Total Cost =	\$	406,000.00

Date Plotted =

12-Jan-05

Alternative 7: Minor Lowering of US 2

Prepared By: Jenny D. Austin

Date Prepared: 15-Nov-04

Date Printed: 12-Jan-05

Dec 04

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
201.10	Clearing and grubbing	LS	1	\$5,000	\$5,000
203.15	Common excavation	CM	1800	\$20	\$36,000
203.16	Solid rock excavation	CM	40	\$250	\$10,000
203.30	Earth borrow	CM	5	\$15	\$75
203.31	Sand borrow	CM	420	\$30	\$12,600
301.26	Subbase of crushed gravel (fine graded)	CM	750	\$50	\$37,500
404.65	Emulsified asphalt	KG	200	\$5	\$1,000
406.25	Bituminous concrete pavement	Ton	350	\$80	\$28,000
526.50	Retaining Wall	M	30	\$300	\$9,000
604.418	Rehabing DI, CB or MH, Class III	EA	4	\$800	\$3,200
608.25	All purpose excavator rental, type I (est.)	HR	80	\$75	\$6,000
608.31	Power broom rental, type II	HR	80	\$50	\$4,000
608.37	Truck rental (est.)	HR	80	\$50	\$4,000
609.10	Dust control with water	MGAL	10	\$10	\$100
616.21	Vertical Granite Curb	M	270	\$125	\$33,750
618.10	Portland cement concrete sidewalk, 125 mm	SM	260	\$100	\$26,000
618.15	Bituminous concrete sidewalk (Mod - textured)	SM	50	\$475	\$23,750
631.17	Testing equipment - bituminous	LS	1	\$750	\$750
635.10	Mobilization	LS	1	\$20,000	\$20,000
641.10	Traffic control	LS	1	\$2,000	\$2,000
646.40	Durable 100mm white line	M	310	\$2.00	\$620
646.41	Durable 100mm yellow line	M	160	\$2.00	\$320
646.46	Durable 600mm stop bar	M	20	\$10.00	\$200
646.60	Temporary 100mm white line	M	310	\$1.00	\$310
646.61	Temporary 100mm yellow line	M	160	\$1.00	\$160
651.15	Seed	KG	3	\$25	\$75
651.18	Fertilizer	KG	20	\$15	\$300
651.20	Agricultural limestone	TON	1	\$500	\$500
651.25	Hay mulch	TON	1	\$300	\$300
651.35	Topsoil	CM	10	\$75	\$750
652.10	Erosion & sediment control plan	LS	1	\$2,000	\$2,000
652.20	Monitoring erosions & sediment control plan	HR	40	\$80	\$3,200
652.30	Field maintenance of erosion & sediment control plan	LU	1	\$3,000	\$3,000
656.30	Deciduous trees	EA	15	\$400	\$6,000
675.20	Traffic signs, type A	SM	2	\$200	\$400
675.21	Traffic signs, type B	SM	2	\$2,000	\$4,000
675.301	Flanged channel sign post	M	8	\$30	\$240
675.34	Square tube steel sign posts and anchor	M	4	\$30	\$120
679.21	Light pole base (Mod)	EA	5	\$750	\$3,750
679.45	Light pole	EA	5	\$2,000	\$10,000
679.50	Luminaire	EA	5	\$1,500	\$7,500

Alternative 7: Minor Lowering of US 2

JDA per 04

SUB-TOTAL	=	\$306,470
ADD 20% CONTINGENCY	=	\$61,294
TOTAL CONSTRUCTION COST	=	\$367,764
In addition,		
DETOUR COST	=	\$ 100,000.00
TOTAL COST	=	\$467,764
ROUNDED COST TO USE	=	\$468,000



- Randolph, VT 05060 (802) 728-3376
- Nashua, NH 03063 (603) 883-0463
- Rutland, VT 05495 (802) 773-7016
- Williston, VT 05495 (802) 878-7661

Engineering • Planning • Development • Management

JOB 618723L1

SHEET NO. _____ OF _____

CALCULATED BY: JDA DATE: Dec 04

CHECKED BY: _____ DATE: _____

SCALE: _____

Alternative 8: Minor Lowering US 2 and Main Street Intersection and Relocate Furniture Store

Based on cost estimate for lowering intersection approximately 0.5 meters, with the following modifications:

<u>Cost for Minor Lowering of Intersection, Subtotal =</u>	\$	306,470.00
Minus Retaining wall item =	- \$	9,000.00
Minus Mobilization	- \$	20,000.00
<hr/>		
Subtotal for Minor Lowering of Intersection =	\$	277,470.00

<u>Cost for Relocation of Furniture Store</u>		
Relocation of Building =	\$	200,000.00
Site and Foundation work items =	\$	100,000.00
Property acquisition =	\$	50,000.00
<hr/>		
Subtotal for Relocation of Furniture Store =	\$	350,000.00

Subtotal for Alternative 8 =	\$	627,470.00
Mobilization =	\$	44,000.00
<hr/>		

SUB-TOTAL =	\$	671,470.00
ADD 20% CONTINGENCY =	\$	134,294.00
<hr/>		
TOTAL CONSTRUCTION COST =	\$	805,764.00

In addition,
DETOUR COST = \$ 100,000.00

TOTAL COST = \$905,764

ROUNDED COST TO USE = \$906,000

Date Plotted = 12-Jan-05



- Randolph, VT 05060 (802) 728-3376
- Nashua, NH 03063 (603) 883-0463
- Rutland, VT 05495 (802) 773-7016
- Williston, VT 05495 (802) 878-7661

Engineering • Planning • Development • Management

JOB 618723L1

SHEET NO. _____ OF _____

CALCULATED BY: JDA DATE: Dec 04

CHECKED BY: _____ DATE: _____

SCALE: _____

Alternative 9: Lower US 2 Significantly, Regrade Harvey Hill Road

US 2 Improvements

Cost for lowering intersection approximately 1.0 meters is similar to Alternative 7, with the following modifications:

Cost for Lowering Intersection ~ 0.5 m, Subtotal =	\$	306,470.00
Minus Cost for Common Excavation (Alternative 7) =	- \$	36,000.00
Minus Cost for Retaining Wall (Alternative 7) =	- \$	9,000.00
Minus Cost for Mobilization (Alternative 7) =	- \$	2,000.00
Plus Cost for Common Excavation (Alternative 9) =	+ \$	50,000.00
(2500 CM at \$ 20)		
Plus Cost for Retain. wall (2ce height of Alternative 7) =	+ \$	18,000.00
<u>Subtotal for US 2 improvements =</u>	<u>\$</u>	<u>327,470.00</u>

Harvey Hill Road Improvements

Estimate for regrading Harvey Hill Road (See Sketch) =	\$	33,000.00
 Subtotal for Alternative 9 =	 \$	 360,470.00
<u>Mobilization =</u>	<u>\$</u>	<u>26,000.00</u>

SUB-TOTAL =	\$	386,470.00
ADD 20% CONTINGENCY =	\$	77,294.00
 TOTAL CONSTRUCTION COST =	 \$	 463,764.00

In addition,

DETOUR COST =	\$	100,000.00
 TOTAL COST =	 \$	 563,764
 ROUNDED COST TO USE =	 \$	 564,000

Date Plotted = 12-Jan-05



- Randolph, VT 05060 (802) 728-3376
- Nashua, NH 03063 (603) 883-0463
- Rutland, VT 05495 (802) 773-7016
- Williston, VT 05495 (802) 878-7661

Engineering • Planning • Development • Management

JOB 618723L1

SHEET NO. _____ OF _____

CALCULATED BY: JDA DATE: Dec 04

CHECKED BY: _____ DATE: _____

SCALE: _____

Alternative 10: Significant lowering of US 2 and Main Street Intersection and Relocate Harvey Hill Road

Draft Conceptual Cost Estimate:

Assume 1 Lump Sum of > \$1,000,000

Date Plotted =

12-Jan-05



- Randolph, VT 05060 (802) 728-3376
- Nashua, NH 03063 (603) 883-0463
- Rutland, VT 05495 (802) 773-7016
- Williston, VT 05495 (802) 878-7661

Engineering • Planning • Development • Management

JOB 618723L1

SHEET NO. _____ OF _____

CALCULATED BY: _____ DATE: _____

CHECKED BY: _____ DATE: _____

SCALE: _____

Alternative 11: Traffic Signal, "T" Intersection & Minor Lowering of U.S. 2

Construction Cost for Alternative 7: Minor Lowering of US 2 = \$ 367,764.00
 Cost for Detour = \$ 100,000.00
 Cost for Traffic Signal = \$ 40,000.00
 Total = \$ 507,764.00
 Rounded total to use = \$ 508,000.00

Alternative 12: Signalization without Reconstruction

Cost for Traffic Signal and lane modifications = \$ 80,000.00

Alternative 13: All way stop intersection

Item 675.20 - Traffic Signs, Type A
 Assume the following signs will be needed:

Description	No.	Size, m	Area, ea sm	Area, subtotal sm
Stop	5	0.9 x 0.9	0.81 *	4.05
All Way	5	0.45 x 0.15	0.07	0.34
Stop Ahead	3	0.9 x 0.9	0.81	2.43

* Sign not square. This is actual area.

Subtotal = 6.82
 Rounding = 1.18
 Total = 8 sm

Unit Cost = \$ 200 / sm
 Subtotal Cost = \$ 1,600
 20% Contingency = \$ 320
 Total Cost = \$ 1,920

Rounded total to use = \$ 2,000

Date Plotted = 10-Feb-05

Appendix G
Local Concerns Meeting



Route 66 Professional Center
Randolph, VT 05060
(802) 728-3376 x265
Fax (802) 728-4930
edetrick@dubois-king.com

ENGINEERING · PLANNING
PROGRAM MANAGEMENT

Evan P. Detrick, P.E.
Project Engineer

MEMORANDUM
(618723)

TO: Steve Gladczuk, CVRPC
Amy Neveau, Vermont Agency of Transportation

cc: Robert Wernecke, DuBois & King, Inc.
Jeffrey Tucker, DuBois & King, Inc.
Jenny Austin, DuBois & King, Inc.
File

RE: Plainfield Village Scoping Study
Local Concerns Meeting, August 23, 2004

DATE: August 25, 2004

A Local Concerns Meeting was held at 6:00pm on Monday, August 23, 2004 for the Plainfield Village US 2/Main Street Scoping Study Project. Project team members in attendance were as follows:

Steve Gladczuk, Central Vermont Regional Planning Commission (CVRPC)
Jeffrey Tucker, DuBois & King, Inc.
Evan Detrick, DuBois & King, Inc.

Selectboard members present included Lori Barg, Karl Bissex and Liz Perreault.

INTRODUCTION AND BACKGROUND

Jeff Tucker introduced the project. He discussed the project, highlighted as follows:

Background

- The purpose of the Study is to determine what improvements should be made to the intersection of US 2 and Main Street to address safety concerns at the intersection.

Study Tasks

- Collecting and reviewing existing information
- Investigate Local Concerns
- Develop a Purpose & Need Statement
- Analyze alternatives
- Present alternatives and concur on preferred alternative
- Complete Final Report

Handouts

- Ortho photo of project area
- Meeting Agenda
- Draft Purpose and Need Statement

Also Available at Meeting

- Sign-in Sheets
- Additional Comments Form

After Jeff completed his opening remarks, he then solicited input from the audience regarding their concerns. The following comments were offered for consideration (italicized denotes D&K or CVRPC responses):

- David Ferland – What happens after the study is completed? *The recommendations are considered for programming on the TIP.*
- Charles Johnson – Is the Main Street Bridge part of the study? *We expect that no changes to the bridge will be recommended as part of the study.*
- Anne Johnson – How will the project impact parking for the Plainfield Hardware Store? *No recommendations have been formulated yet, so that hasn't been determined at this point. Parking at the store will be considered in the study.*

- Leon Cooksen - Will any buildings be relocated or removed? *We're not ruling out any options at this point in time.*
- Leon Cooksen – How will the project affect access and parking? *We don't know yet, but access and parking are important issues that must be considered for any alternative.*
- Mary Sharess – The Harvey Hill Road intersection is perhaps even more dangerous than the Main Street intersection, but appears to be safer because it is recognized as so dangerous that people are more cautious at that location. She asked that a “mid-range” solution not be implemented that could make that intersection worse.
- Anne Johnson – Noted that a traffic signal was installed at a similar intersection in Barre, and maybe that should be considered at this location.
- Thomas Harnden – He would like to see the speed limit reduced to 25 mph and had a petition for circulation for anyone who would like to sign it.
- Karen Noble – Stated her concerns that a traffic light would cause traffic back-ups. This would have the adverse effects of noise and air pollution from starting, stopping and idling vehicles, and it would make it difficult for people to get in and out of their driveways if vehicles were stopped in traffic in front of homes.
- Chris Keys – Stated that a lack of enforcement of the speed limit is part of the problem. Also offered that perhaps a traffic light that was only activated when traffic was queued on the Main Street “hill” would work.
- There was a general discussion about speed limits. Selectboard member Karl Bissex said the Town tried to get VTrans to lower the speed limit a number of years ago, but the request was denied. Selectboard member Lori Barg asked Steve Gladczuk to check with VTrans to see if the requirements for lowering speed limits had changed and let the Board know a.s.a.p. if there was an opportunity to lower the speed limit. The members also stated they have a contract with the County Sheriff for speed enforcement, but so does everyone else so the Sheriff is only available occasionally. They also stated they are getting the Constable certified to write citations, which is in the works. The radar gun is shared with two other municipalities, so it's only available 2 out of every 6 weeks.
- Anne Johnson – Believes that overweight trucks have a running start and zoom down the hill, and asked if that could be stopped.

- Charles Johnson – Warned if the project makes it easier for trucks to round the corner, or if the road is widened, it may encourage speeding.
- Doug Weinrich – Stated that the current sidewalk project shouldn't be looked at separately from the US 2/Main Street project, and that the projects should be coordinated.
- A citizen observed that trucks use J brake techniques to slow themselves and asked shouldn't they use their brakes instead. Karl Bissex stated the Town is pursuing the installation of signage that would prohibit the practice of J-braking.
- Stacy Sharp – Observed the general impression of the audience seems to be that construction of a US 2/Main Street project could be soon, but in reality it would likely be several years before a project could be programmed, designed, and then constructed.
- Leon Cooksen – Asked if a rotary or roundabout was something being considered. *We have not ruled out any options at this point in time.*
- Chris Keys – Asked about utility impacts and effect on residents, including interruption of service. *Most projects of this magnitude have some sort of utility impact; however, the public should not be affected by utility impacts if there are any.*
- Christine Farren – Doesn't the State have a say in what is done at this intersection? *Yes, they are participating in the development of the study, and must ultimately approve any recommendations. Their representative is not present tonight due to vacation scheduling.*
- A citizen noted that US 2 is a Federal Highway, and added that the entire corridor should be improved all the way to Maine.
- David Ferland – Lives on Harvey Hill Road and feels lucky whenever he pulls out onto Main Street successfully. It seems safe if Main Street traffic is adhering to the speed limit, but not so safe if traffic is speeding.
- Karen Noble – Stated that she has to rush across the road because there are no crosswalks, and not enough sight distance. Added that there should be crosswalks.
- Thomas Harnden – Adding crosswalks seems like a simple matter, couldn't they be added tomorrow to make the intersection safer? The Selectboard replied that VTrans wouldn't allow them to install crosswalks because there is not enough pedestrian traffic to warrant them (must be approximately 25 crossings per hour).

- Christine Farren – Also lives on Harvey Hill Road. Observed that some towns get a reputation as a town that doesn't tolerate speeding, and suggested that Plainfield work towards getting that same reputation.
- Selectboard member Lori Barg stated that a car struck a blind woman in the Village several years ago.
- Rich Christiansen – Owns the hardware store is concerned about his parking. He quipped that 15 spaces would be nice.
- David Ferland – Stated that while the Town does a good job of plowing Harvey Hill Road, they can't always keep it clear and free of snow and ice. When there are bad conditions, Harvey Hill Road is even more dangerous than normal.
- Charles Johnson – Suggested that a mirror could be beneficial for Harvey Hill Road to see around the corner.
- Christine Farren – Asked who is responsible for coordinating the sidewalk and US 2/Main Street projects. It seems they should be done at the same time. *The Town is ultimately responsible for coordinating the project scheduling.*
- The Selectboard asked Evan Detrick to read back the notes of the meeting to make sure everyone's concerns were noted.
- After the notes were read, Lori Barg stated that the general concern with the project is traffic calming.
- Stacy Sharp – Suggested that with the energy being put into improving the Village area with sidewalk and intersection improvements, it would be nice to incorporate some greenspace or decorative lighting into the designs.

CLOSING

Evan wrapped up the discussion and referred to the sign-in sheet as well as the comment forms at the end of the agenda handout, noting additional forms can be obtained at the Town Hall.

Appendix H
Alternatives Presentation Meeting



28 North Main Street
Randolph, VT 05060
(802) 728-3376 x1458
Fax (802) 728-4930
jaustin@dubois-king.com

ENGINEERING · PLANNING
PROGRAM MANAGEMENT

Jenny D. Austin, P.E.

MEMORANDUM
(618723L1)

TO: Steve Gladczuk, CVRPC
Aimee Neveau, Vermont Agency of Transportation
Stacey Sharp, Plainfield Representative to the TAC

cc: Evan Detrick, DuBois & King, Inc.
Jeffrey Tucker, DuBois & King, Inc.
Bill Preis, Vermont Agency of Transportation
Liz Perreault, Plainfield Selectboard
File

RE: Plainfield Village Scoping Study
Alternatives Presentation Meeting Minutes, November 30, 2004

DATE: January 17, 2005

An Alternatives Presentation Meeting was held at 7:00pm on Tuesday, November 30, 2004 for the Plainfield Village US 2/Main Street Scoping Study Project. Project team members in attendance were as follows:

Steve Gladczuk, Central Vermont Regional Planning Commission (CVRPC)
Aimee Neveau, Vermont Agency of Transportation (VTrans)
Evan Detrick, DuBois & King, Inc.
Jenny Austin, DuBois & King, Inc.

The following summarizes items discussed at this meeting, as presented by Evan Detrick. Items with a "*" indicate questions or comments from attendees.

Review Background and Progress Since Last Meeting

Background

- The purpose of the Study is to determine what improvements should be made to the intersection of US 2 and Main Street to address safety concerns at the intersection.

Progress since last meeting

- Finalize Purpose and Need Statement
- Define and evaluate alternatives
- DuBois & King meetings with TAC, VTrans traffic operations division, and historic preservation officer
- Alternatives evaluation and comparison (including evaluation matrix)
- Timeline implementation plan

Purpose and Need Statement

- The Purpose and Need Statement was displayed.
- * Question was asked regarding the definition of banking. Evan described the definition of banking (i.e. a change in the cross slope of the roadway such that it differs from normal crown when the roadway is on a horizontal curve).

Alternatives Discussion

The eleven alternatives were identified and discussed. The following discussion pertained to the alternatives:

- Traffic Signal: In order to determine whether a traffic signal would be permitted and acceptable to VTrans, signal warrants were evaluated. This intersection meets two warrants, and therefore a signal would be acceptable at this intersection.
- Lowering the speed limit to 25mph within the project area was not favorable to VTrans. They did not think this would solve the problem or would decrease vehicle speeds in this area.
- Crosswalks require adequate sight lines and a minimum number of pedestrian volumes per hour, which this location does not meet. A crosswalk could be installed if a signal is installed.
- * Select person Lori Barg stated that Amy Gamble came to look at the intersection as a result of a pedestrian being struck at this intersection. She stated that Ms. Gamble thought the sight lines were adequate. It was not concluded that the sight lines were taken at the same location that crosswalks could be located.
- * Parking at the Hardware Store was a concern, especially to the owner of the Store.
- VTrans was not supportive of the alternative to add mirrors as it is not a permanent solution.
- One attendee asked whose idea this project was. Stacey Sharp stated that approximately seven to ten years ago (i.e. early 1990's) there was a study done

regarding concepts for this intersection. This study did not incorporate feasibility from an engineering or constructability viewpoint. This study takes the previous study one step further by introducing grades, standards and other factors.

- One individual asked about the sidewalk project in the area. That project is separate from this project.
- One resident suggested traffic calming and traffic signal for short term. Bill Preis explained that installing a traffic signal is more involved than it seems. In addition, funding must be available for improvements.
- The option of a three-way stop was mentioned but was not seen to be favorable.
- The option for a larger blinking light was mentioned.
- The meeting with the Historic Preservation Officer concluded that moving the Furniture Store is possible, but there would need to be a compelling reason. This should be a last resort if no other alternative is feasible.
- * One resident pointed out there is no flat approach on Main Street for vehicles. Project team members pointed out that the alternatives are not ideal, but they are better than existing conditions.
- Resulting signal queues if the intersection were signalized were briefly discussed. For the design year the resulting levels of service were in the B+ range and the queues are expected to range from 10-12 vehicles along US2.
- * One resident did not see any advantages to the alternatives besides losing the retaining wall. Evan responded that other advantages include crosswalks, improvements to grade on the Main Street approach and improve Harvey Hill by creating gaps for vehicles to enter US 2.
- * One resident did not think the grade on Main Street was a concern and thought a traffic signal with existing geometrics should be considered. Evan stated the need to accommodate WB-40 vehicles, which requires the turning radius shown in the exhibits. If the slip ramp were widened for two lanes to still allow WB-40 vehicles, there would be no parking at the Hardware Store.
- * One resident suggested a "Do Not Enter" sign so that westbound traffic does not use the slip ramp. The same response from the previous comment applies to this comment. In order for this vehicle traveling westbound to make a left turn, the minimum radius needed is shown on the "T" intersection exhibit.
- **Traffic Calming**
 - Evan described a number of traffic calming measures that are typically used. Many of these are not acceptable at this location for various reasons. For example, VTrans was not supportive of speed tables due to the large truck traffic and the roadway classification being a principal arterial. Lane width restrictions (i.e. neckdowns) are not feasible here due to geometrics.
 - Traffic calming acceptable to VTrans and feasible for this location include streetscaping, lighting, patterned/colored asphalt crosswalks, and gateway markers. Greenery has the affect of closeness, which promotes vehicles to slow down. Similarly, lighting has the effect of giving vehicles the impression that they are now in a village area and should slow down.

- * Lori Barg did not think enough information was included on traffic calming measures. More information will be provided in the Scoping Report.
 - * One resident stated there is a textured island for pedestrians in the Burlington area and wondered whether this is possible here. This is a good idea for traffic calming but not feasible for this location due to the close proximity of the homes.
 - * It was mentioned that the Conservation Committee has monies set aside for trees. The Town can coordinate with this Committee if they would like to utilize these funds.
- "T" Intersection exhibits
 - The grades of the "T" intersection alternatives were briefly discussed. Evan explained the exhibits shown lowers the intersection approximately 1.5-feet. When the project undergoes the design phase, this amount can be adjusted. Steve Gladczuk pointed out that lowering the intersection more would impact the Furniture Store and Harvey Hill Road. In addition, as Evan pointed out, additional lowering would cause the need for a wall on the north side of the intersection and would thus restrict sight lines along US 2.
 - * A question was raised regarding how vehicles at Harvey Hill Road would turn left onto US 2. Harvey Hill will not have its own light. They will turn onto US 2 when there are gaps in the US 2 traffic.
 - * There was a question regarding a profile at the parking spaces shown in front of the Hardware Store on the "T" intersection exhibit. Two cross sections were displayed. The slope of the parking spaces and streetscaping varies within these sections. The landowner would likely have some input as to the final design in this area.
 - * The question was asked whether push buttons could be placed at the crosswalks. Push buttons would be located at the crosswalks. The exact location would be finalized during the design phase.
 - * One resident asked whether the white line could be moved for northbound right turning vehicles to provide additional parking space at the Hardware Store. This radius needs to be provided for WB-40 vehicles to make this maneuver.
 - * Bill Preis asked if the alternative shown uses mountable curb. Currently the exhibit shows vertical curb. This detail can be finalized during the design phase.
 - * It was asked whether the Hardware Store and sidewalk are ADA accessible. The center parking space is not ADA accessible, but the end parking spaces are at the same grade as the sidewalk.
 - At this point there is no defined survey, which would be needed during the design phase.

- Parking
 - * The owner of the Hardware Store does not support the "T" intersection, which shows three parking spaces in front of the Store. He states that currently six or seven vehicles can park in this area.
 - * The question was asked whether diagonal parking could be used or if the parking spaces could be shorter. Evan explained that diagonal parking was investigated but is not feasible at this location. The spaces cannot be shorter because they need to meet VTrans standards.
 - * One individual thought an additional parking space could be located adjacent to the three shown. This would need to be worked through in the design phase. It is our (D&K) understanding that there are delivery trucks which use this area that could not be accessed if vehicles were parked here.

PREFERRED ALTERNATIVE

- The preferred alternative being presented is a "T" intersection with a traffic signal and minor lowering of US 2.
- * The Hardware Store owner is not in favor of this alternative.
- Bill Preis stated that the preferred alternative can be altered/finalized during the design phase. This study is solely to present alternatives and a feasible preferred alternative.
- The question was raised how long it will take for this project to be implemented through construction. This varies on a number of factors including, but not limited to, placing the project on the VTrans program and availability of funds for design and construction. There are a lot of similar projects throughout the state that are vying for State and federal funds. The Town was urged to push this project with the State if it is interested in seeing it implemented.
- If people are not concerned with the grades at this intersection, the amount that the intersection is lowered can vary during the design phase. Bill Preis mentioned that if no lowering is done, but a "T" intersection is constructed, there would need to be a wall at the Hardware Store.
- * It was asked whether modifications can be made to the preferred alternative if the project moves forward. The preferred alternative can be amended as it moves through the design process.

MISCELLANEOUS

- A question was asked whether the town can appeal to the state regarding the lowering of the speed limit to 25mph. The town can ask the state for a study to be done here. As with any study, this option takes time to implement. In addition to lowering the speed limit, enforcement is important. Steve stated the previous speed study done did not occur right at this intersection therefore it is possible that vehicles are driving slower at this intersection.
- Evan suggested the Town look at streetscaping outside of this project as well as within this project. This could include gateways at both ends of town and

medians or other traffic calming measures where feasible. Since this project entails only a small portion of Town, it may have limited effectiveness.

- * There are plans within VTrans for upgrades to the existing bridge on Main Street, which is outside of the scope for this project. The possibility of rerouting Main Street to another location along US 2 was mentioned.

ACTIONS FOLLOWING THE MEETING

- Following the meeting, Aimee Neveau contacted VTrans' Amy Gamble (Traffic Unit) regarding her prior meeting and discussion with the Town of Plainfield regarding the crosswalk issue. In an e-mail dated December 1, 2004 (which will be included in the Scoping Study) Amy Gamble wrote "there is inadequate sight distance for a marked crosswalk at the "stairs", but we (VTrans) did upgrade the unmarked crossing signs to fluorescent yellow green." Therefore, there does not appear to be adequate sight distance at the intersection for a crosswalk, without the benefit of a traffic signal.
- Following the meeting, Aimee Neveau spoke to VTrans' Scott Newman (Historic Preservation) regarding parking at the Hardware Store. She stated that the Division of Historic Preservation supports informal parking at contributing resources, such as the Store. Putting up signs at the municipal lot stating parking only for the Hardware Store or other options could be explored.

NEXT STEPS

- The next step for this project is for DuBois & King to complete and submit the Scoping Report to the CVRPC.
- It was suggested that this project be included as part of discussion at the Town Meeting in March.

sbridges@sover.net

ATTENDANCE LIST

Central Vermont Regional Planning Commission
Plainfield Village
US Route 2/Main Street Improvements Scoping Study

Alternatives Presentation Meeting

November 30, 2004
7:00 pm

PLEASE SIGN IN

Rich Christensen	
LEE CATTANEO	
KATHY SWIGON	
Bill PREIS STATE/VT	
Steve Gudezuck	
Stacy Sharp	
Aimee Neenan Vitars	
Rebecca Hamm	
Paula Emery	
Betsy Ziegler	
Joey Klein	
Laura Ziegler	
Christine Fourn	

Evan P. Detrick

From: "Steve Gladczuk" <gladczuk@cvregion.com>
To: "Evan P. Detrick" <edetrick@dubois-king.com>, <jtucker@dubois-king.com>
Subject: FW: Intersection of Main St. and Route 2
Date sent: Fri, 3 Dec 2004 10:58:37 -0500

See message below

Steve Gladczuk
Transportation Planner
Central Vermont Regional Planning Commission
29 Main St., Suite 4
Montpelier, VT 05602

Phone - 802-229-0389
Fax - 802-223-1977
Email - Gladczuk@CVRegion.com

-----Original Message-----

From: by way of Lori Barg <loribarg@together.net>
[mailto:Plainfieldtc@aol.com]
Sent: Thursday, December 02, 2004 3:25 PM
To: gladczuk@cvregion.com
Subject: Fwd: Intersection of Main St. and Route 2

I am forwarding to you for tonights meeting

Have a nice day
Linda

Please disseminate this to the Select Board members and any other interested parties -- thanks

To: Plainfield Select Board
From: Laura Ziegler
Re: Intersection of Main Street and Route 2

I will be unable to attend the meeting on Tuesday night but would like to give to give written input concerning the intersection.

I have lived on Main Street in Plainfield for over ten years. I have been visually impaired since birth. One of my eyes is blind in the middle, the other is highly myopic, and I have no depth perception. I have never had a driver's license; my perspective on the intersection is purely pedestrian.

Early in the morning of September 7, 2000, I was hurrying to the red store in the hope of reaching it in time to catch the Route 2 commuter van. Ordinarily I avoided the intersection and crossed further west, where the visibility is better, but I had automatically walked up to where the light is and did not want to risk missing the van by retracing my steps. When I saw what looked like an opening in the traffic I started across. As I was crossing it seemed that I had miscalculated and that the westbound lane would not be safe to cross. My hesitation made this a reality re: the eastbound lane, and I was struck by a car. Fortunately for me, it was only going 25 miles an hour.

I spent the next several weeks healing from a fractured pelvis, using a walker to get around. It was an education in mobility impairment. For years I had thought the intersection hazardous because of visibility issues, but had not considered the logistics of that crossing for a person using a walker or wheelchair or otherwise slowed down. It did not feel safe crossing Route 2 anywhere in the village at the speed I was reduced to. When walking to the post office I derived no benefit from the sidewalk on the northern side of the road since to do so it would have been necessary to cross to that side and then cross back again. It didn't seem worth the risk.

In considering how to best upgrade the intersection I urge that thought be taken for people with mobility or visual impairments, and that any remedial action take their safety into account. I am not offering any specific suggestions because I don't feel qualified, but I do feel impelled to offer these comments. Thank you for giving them your consideration.

Yours truly,

Laura Ziegler

P.O. Box 164
Plainfield, VT. 05667

Evan P. Detrick

From: "Steve Gladczuk" <gladczuk@cvregion.com>
To: "Evan P. Detrick" <edetrick@dubois-king.com>
Subject: FW: Plainfield
Date sent: Wed, 1 Dec 2004 11:47:45 -0500

See message below

Steve Gladczuk
Transportation Planner
Central Vermont Regional Planning Commission
29 Main St., Suite 4
Montpelier, VT 05602

Phone - 802-229-0389
Fax - 802-223-1977
Email - Gladczuk@CVRegion.com

From: Neveau, Aimee [mailto:Aimee.Neveau@state.vt.us]
Sent: Wednesday, December 01, 2004 10:31 AM
To: Steve Gladczuk (gladczuk@cvregion.com)
Subject: FW: Plainfield

Steve,

Here is Amy Gamble's response. She states that a crosswalk at the stairs has INADEQUATE sight distance... didn't Lori say Amy stated it did have site distance?

The traffic calming money was a one year thing. Now any traffic calming goes through enhancements, meaning you have to apply like everyone else. I believe that Kimberly Murray was working with Windham RPC on some experimental stripping that was traffic calming related which she was working with John Perkins. So I guess maybe if Plainfield came up with something that was somewhat experimental and the DTA's and Traffic Ops were o.k. with it there could be some money somewhere. But based on the findings of the study D&K did, I don't know if there is any proof that they need much more than what was recommended. You could also give the Traffic Calming Study on Policy and Planning's website to Lori to show her how the Consultant came to the conclusions for Traffic Calming.

Do you want to forward this information to D&K or do you want me to?

Let me know if you need any more information from VTrans and I'll do my research...

Aimee

-----Original Message-----

From: Gamble, Amy
Sent: Wednesday, December 01, 2004 10:05 AM
To: Neveau, Aimee
Subject: RE: Plainfield

That was a while ago...I found my notes from our June 17, 2003 site visit (are you impressed?!) It was a meeting at her request, in specific reference to crosswalks within the village. Dan Newhall and I met with Lori.

We have already taken all of the actions we intended to take. We determined that there is inadequate sight distance for a marked crosswalk at the "stairs", but we did upgrade the unmarked crossing signs to fluorescent yellow green. We determined that there is inadequate pedestrian volumes and ped facilities for a crosswalk in front of the old folks home, the old high school. (There is another crosswalk/former crosswalk down by the post office which in looking at Visidata it appears we did nothing about - it has no stencil, and has the old style signs which I would have thought we'd either remove altogether or upgrade. I doubt it would meet our volume guidelines for a marked crosswalk...we were the only peds out on that

fine June morning.)

We also established 40 mph transition zones at the outskirts of the village to improve compliance with the 30 mph in the village - the jury's out on whether that is actually an effective treatment or not, but it's what we're doing in a lot of places. I do recall having discussed speed carts with her, and beefed up enforcement, though in my notes I said we didn't see any cars conspicuously exceeding the speed limit in the village but we didn't have our radar unit with us.

We discussed upgrading the overhead beacons at the Main St. intersection, but after some research found that one or more of the poles would have to be replaced in order to hang additional heads and there was no available funding for that effort. I have no record of ever discussing flashing lights on the signs.

-----Original Message-----

From: Neveau, Aimee

Sent: Wednesday, December 01, 2004 9:09 AM

To: Gamble, Amy

Subject: Plainfield

Hi Amy,

I was at a public meeting last night because Dubois and King (who is working for Central Vermont Regional Planning Commission) presented some alternatives for the US 2 and Main Street intersection. During the meeting Laurie Barg (I think her name is) mentioned that she had met with you and some of your crew. I didn't get a chance to talk to her about specifics, so I'm wondering if you could update me a bit. If you could tell me how the meeting was initiated and what was discussed and recommended at the meeting. Also, could you let me know what actions are going to take place? I think she mentioned that your group told her that there was enough site distance for a cross walk, and that some larger flashing lights on the ped sign may help with slowing traffic down. If you could confirm those comments that would be great as well.

Thanks for the information!

Aimee R. Neveau

Transportation Planning Coordinator

Policy and Planning Division

National Life Building - Drawer 33

Montpelier, VT 05633-5001

Tele: 802-828-3976

Fax: 802-828-3983

aimee.neveau@state.vt.us

Evan P. Detrick

From: "Neveau, Aimee" <Aimee.Neveau@state.vt.us>
To: "Evan P. Detrick" <edetrick@dubois-king.com>
Subject: FW: Plainfield - a few more thoughts to consider
Date sent: Fri, 10 Dec 2004 14:14:19 -0500

Hi Evan,

I've been meaning to send this message along to you, but just had a few moments to write it all down. Let me know if you need further details.

Aimee

I spoke with Scott Newman about the outcome of the Plainfield meeting. We talked about the removal of parking at contributing historic resources. The Division of Historic Preservation (DHP) supports informal parking at contributing resources like the Hardware store. The thought behind this is that if the business goes under due to lack of parking the structure may deteriorate due to lack of use/upkeep. So, Scott Newman said that his role in the project would be to support this owner in his attempt to at least have the same amount of parking available for the store. Putting signs up at the municipal lot stating only for the Hardware store and other options would be explored.

-----Original Message-----

From: Steve Gladczuk [mailto:gladczuk@cvregion.com]
Sent: Wednesday, December 01, 2004 12:19 PM
To: Neveau, Aimee
Subject: RE: plainfield

I think that would be a good idea. Let's see what D&K think.

Steve Gladczuk
Transportation Planner
Central Vermont Regional Planning Commission
29 Main St., Suite 4
Montpelier, VT 05602

Phone - 802-229-0389
Fax - 802-223-1977
Email - Gladczuk@CVRegion.com

From: Neveau, Aimee [mailto:Aimee.Neveau@state.vt.us]
Sent: Wednesday, December 01, 2004 11:44 AM
To: Steve Gladczuk (gladczuk@cvregion.com)
Subject: plainfield

Hi Steve,

I had a thought last night I wanted to talk to you about regarding the impact the Ayer Street project had on the

Appendix I
Post Alternatives Presentation
Correspondence

CENTRAL VERMONT REGIONAL PLANNING COMMISSION



DUBOIS & KING, INC.

FILE # _____

SUBJ _____

MAY 25 2005

5/20/05

Karl Bissex
Select Board Chair
PO Box 217
Plainfield, VT 05667

REFD TO: _____

NOTED: _____

Re: Plainfield US 2 and Main St. Intersection Transportation Study

Dear Karl,

Attached is DuBois & King's response to the Select Board Letter dated 3/5/05. The following are my findings to questions raised at the Public Meeting on 3/28/05.

My results are based on a site visit with Jon Kaplan, VTrans Bicycle and Pedestrian Program Engineer; and discussions with Mark Woolover, VTrans Pavement Engineer; Dan Newhall and Amy Gamble, Traffic Operations Engineers.

- Would VTrans allow the existing crosswalk at the Post Office to be colored and textured with a brick pattern, and/or have imbedded reflectors?

The Pavement Engineer likes the brick pattern treatment. Traffic Operations felt a white thermoplastic block crosswalk with reflective beads, would be just as effective and cheaper. VTrans also indicated that they wouldn't commit to maintain the brick pattern treatment.

- Would Vtrans allow a pedestrian activated signal at the US 2/Main St. Intersection?

This type of installation would be flashing yellow most of the time. Because it would only turn red occasionally, this creates an unexpected stop situation for vehicles. This would cost about \$40,000. Traffic Operations indicated it would have to meet pedestrian signal warrants, which the DuBois and King evaluation showed they didn't.

- Can Plainfield restrict the use of Truck Engine "Jake" Brakes?

There are no Vermont Laws that would allow the Town to enforce this. The signage described in Bristol is only advisory, and on a Class 1 Town owned road.

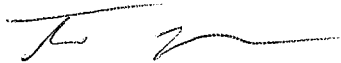
- Can the railings, signs, and utility poles be removed at the stairs to improve sight distance?

If the railing were removed, some other type of guardrail would be necessary. VTrans is in the process of upgrading some signs in this area. They are adding more advance warning signs indication the direction of Route 2, and there will be higher intensity chevrons at the stairs. They feel all the signage is necessary. The Town could request the utility company to relocated their pole. They would have to work with VTrans to determine if there is another suitable location.

DuBois & King is making final edits, and adding all comments and responses to the Study. They will be providing three copies to the Town, and two copies to VTrans. I will hold on to the originals, if we need more. The Study will also available on a CD.

Please contact me if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Steve Gladczuk", with a horizontal line extending to the right.

Steve Gladczuk
Transportation Planner



28 North Main Street
Randolph, VT 05060
(802) 728-3376
Fax (802) 728-4930

ENGINEERING · PLANNING
PROGRAM MANAGEMENT

April 4, 2005

Mr. Steve Gladczuk
Central Vermont Regional Planning Commission
29 Main Street, Suite 4
Montpelier, VT 05602

Re: Town of Plainfield
US Route 2 and Main Street Intersection
Transportation Study
Response to Selectboard comments

Dear Mr. Gladczuk:

This letter is written in response to the *Comments on DuBois-King Initial Scoping Report*, dated March 5, 2005 prepared by the Town of Plainfield Selectboard. We offer the following for your consideration.

1. The Selectboard letter opens by stating that the three primary concerns of the Selectboard for the intersection are:
 - Maintaining the viability of businesses located at the intersection
 - Increasing traffic safety
 - Pedestrian safety

The Scoping Study was developed to address the issues identified in the Purpose and Need Statement, a document that the Selectboard participated in developing. The final Purpose and Need Statement makes no mention of maintaining the viability of businesses at the intersection. Although it is a concern, it was not envisioned as a goal of the project.

2. The Selectboard requests that D-K include the possibility of a signalized pedestrian crossing. As discussed at the Selectboard meeting on March 28, 2005, the CVRPC will talk to VTrans about this option.

3. In their letter, the Selectboard states the Scoping Study recommendations regarding traffic calming are very general, and do not include specific recommendations on pricing, location, etc. We recommend that colored, patterned crosswalks and on-street parking be installed as indicated on our conceptual plans, and that lighting and landscaping be incorporated into the final design as well. Details of each of these items would need to be worked out in the final design of the project, in concert with any other planned initiatives in the Town. The costs would be nominal in the overall context of the project.
4. In their letter, the Selectboard states that the Study states that the current US Route 2 and Main Street intersection meets the sight distance requirements established by VTrans. As shown in Table 1 on page 6 of the Study, we do not believe the intersection meets the minimum sight distance requirements in all directions.
5. In their letter, the Selectboard states that D-K developed the traffic data for the intersection using traffic data from Danville, not from Plainfield. DuBois & King only used peak hour factors from a Danville study. Traffic counts used in the Study were from VTrans and were taken at the US Route 2 and Main Street intersection, not from US Route 2 in Danville.
6. In their letter, the Selectboard asks if information on air quality changes resulting from the installation of a traffic signal will be included in the Final Study. The scope of the study has been to identify geometric alternatives to resolving safety issues at the intersection. Details regarding changes in air quality go beyond the focus of the study, and will therefore not be included in the Final Study.
7. The cost of Alternative #12 has been estimated at \$80,000. This cost is for construction only, and does not include design, right-of-way, or utility relocations.

We trust that the foregoing provides clarification on the issues raised in the Selectboard's letter. If you have any questions, please feel free to contact me.

Very truly yours,

DuBOIS & KING, INC.



Evan P. Detrick, P.E.
Project Manager

C: file



28 North Main Street
Randolph, VT 05060
(802) 728-3376 x1456
Fax (802) 728-4930
edetrick@dubois-king.com

ENGINEERING · PLANNING
PROGRAM MANAGEMENT

Evan P. Detrick, P.E.

MEMORANDUM
(618723L1)

**TO: Steve Gladczuk, CVRPC
Aimee Neveau, Vermont Agency of Transportation
Stacey Sharp, Plainfield Representative to the TAC**

**cc: Evan Detrick, DuBois & King, Inc.
Jeffrey Tucker, DuBois & King, Inc.
Bill Preis, Vermont Agency of Transportation
Liz Perreault, Plainfield Selectboard
File**

**RE: Plainfield Village Scoping Study
Alternatives Discussion Meeting Minutes, March 28, 2005**

DATE: March 29, 2005

A Selectboard meeting was held at 7:00pm on Monday, March 28th, in part to discuss the recommended alternative presented in the Initial Scoping Report for the Plainfield Village US 2/Main Street Scoping Study Project. In addition to the Selectboard and a group of citizens, project team members in attendance were as follows:

Steve Gladczuk, Central Vermont Regional Planning Commission (CVRPC)
Evan Detrick, DuBois & King, Inc.

Evan briefly presented details of the preferred alternative, as indicated in the Report. The meeting was then opened up for public comment. The following summarizes the comments that were made at this meeting:

Property owners adjacent to the intersection feel a traffic signal will lower their home value, and that the queued vehicles will create extra noise and air pollution.

A citizen commented that there doesn't seem to be enough pedestrians to warrant a

traffic signal.

A citizen asked if an air pollution study would be done. Evan stated the Study was done to identify alternatives to improve safety of the intersection, and that the Study wouldn't include that level of detail or analysis.

A citizen commented that the intersection has been like that for 200 years, and there's no need to fix it.

A Harvey Hill resident stated that she didn't feel a traffic signal would help.

A lower village resident felt that there are real sight distance, grade, and pedestrian issues, and although the preferred alternative may not be ideal, it is better than no action.

A Fire Department representative stated that he goes to 10 times the accidents at the Post Office than at the Main Street intersection.

It was noted that better speed control enforcement is needed at the Post Office.

A citizen stated that the Town should keep the historic character, and not give in to modern desires to get out of Main Street easier and provide a safer pedestrian crossing.

The Selectboard asked if a pedestrian-only signal could be installed, rather than a signal that controls vehicular traffic.

A citizen noted that it's more difficult to get out of Tim's Convenience Store than it is to get out of Main Street.

A citizen suggested the solution should be a new bridge across the Winooski River in a different part of the village, where one once existed.

Someone questioned if Federal funds could be used to make improvements at the intersection if the steps (not ADA compliant) were left in place.

It was noted that the Sheriff's presence encourages lower speeds.

The Selectboard asked about traffic calming measures, such as reducing lane widths, imbedding reflectors in road (snow plowable pavement markers), and raised crosswalks.

Someone suggested that the Town buy mobile speed notice signs and put them at both ends of town.

The Selectboard has included \$2000 in this year's budget to install low cost traffic

calming improvements such as banners/planters

The Selectboard noted that the old railing on the retaining wall has signs, making it more difficult to see. A utility pole also interferes with sight distance. They questioned if the railing and signs could just be removed.

It was noted that the steps are in bad shape, but the Town is not responsible to maintain them.

Steve and Evan stated that VTrans is against Alternatives 12 and 13 due to inefficient signal phasing, insufficient turning radii, and the need to maintain two-way traffic at the hardware store. An all way stop would result in more congestion all the time.

The use of Jake Brake's was discussed. Can VTrans or Town regulate to limit area and time used. The Town of Bristol has a sign.

It was noted that the speed cart that the Town sometimes uses has the ability to record data on speeds and traffic volumes for 60 days.

NEXT STEPS

Steve agreed to take some questions to VTrans, including:

- traffic calming measures of lane narrowing and imbedding reflectors in road
- can a pedestrian-only signal be installed

Please send
to CURPE

MAR 17 2005

**COMMENTS ON DUBOIS-KING INITIAL SCOPING REPORT
PLAINFIELD US2 AND MAIN STREET INTERSECTION TRANSPORTATION
STUDY, FEBRUARY 10, 2005**

March 5, 2005

The three primary concerns of the Selectboard for this intersection in the Town of Plainfield are: maintaining the viability of businesses located at this intersection including handicapped accessibility to businesses; increasing traffic safety, both on Route 2 and at the intersections with Harvey Hill and Main Street, and pedestrian safety. Each of these concerns is of equal importance.

Dubois-King (D-K) selected Alternative 11, the creation of a T intersection with a traffic signal as their preferred choice. This is the alternative that they most thoroughly investigated, and presented in detail to the Town at a public meeting. This design will meet two of the three primary concerns of the Town, it will however negatively impact the hardware store. This is unacceptable.

An alternative selected by D-K as unfeasible, Alternative 12, could be acceptable with some modification. We request D-K to include the possibility of a signalized pedestrian crossing. This option would meet the three primary goals of the Town of Plainfield. This alternative is acceptable to the Town of Plainfield. D-K lists the benefits of this alternative as:

- Minimal expenses
- No construction required, no permits or environmental clearances
- Accommodation of pedestrians
- Adding a traffic signal provides improved safety for vehicles by reducing the number of conflicting movements
- Traffic signal will improve safety of Harvey Hill Road movements by creating gaps on US2

The negative impacts listed under this alternative relate to the intersection remaining in the current configuration: i.e., it does not improve sight distance on US 2 (D-K states that as currently configured, site distance is adequate for posted speed), and it does not improve grade, cross-section width, or stairs. We recognize that the stairs that exist are not handicapped accessible. The D-K report states that there are relatively few accidents at this location, while there have been some notable accidents at this intersection (a semi driving into the hardware store). People know that it is a dangerous intersection and slow down. Widening the intersection could encourage faster speeds, contributing to increased accidents. The cross-sectional width at either side of the intersection is restricted, widening the intersection could contribute to increased problems. We are also concerned about D-K's traffic analysis. We believe that auto traffic may be heavier than the study indicates. Typically, there are long traffic back-ups at the intersection of Route 2 and 14 in East Montpelier. We are concerned that a signal may cause traffic to back-up at this intersection during peak hours. This would degrade the quality of the air, and cause additional problems in Town from idling, starting and stopping.

We had initially asked that the RFP include specific recommendations on traffic calming. The recommendations on traffic calming are very general, and do not include specific

recommendations on pricing, location etc. Some of the ideas we expected would include using the white side lines to visually narrow the roadway, using raised or brightly marked crosswalks, using center markings to get driver attention and possible "gateways" at each end of the village. These would be rather low cost but would need to be shown to be effective.

We recognize that signalization without reconstruction does not correct the structural deficiencies. However, D-K states that the current intersection meets the sight and distance requirements established by VTrans. For minimal expense we can meet three important goals of the Town.

TOWN OF PLAINFIELD GOAL: PEDESTRIAN SAFETY

Pedestrians routinely have to cross at this area. The Town Hall is used for Planning Commission, Zoning Board of Adjustment, Selectboard, Conservation and all other meetings of Town Commissions. The Town Hall is also routinely used for public meetings, and rented out for theatre, dances and parties. All of these activities require pedestrian crossing of Route 2. While there have been no pedestrian fatalities, there have been pedestrian/car accidents at this intersection. The intersection is routinely crossed by a blind woman, who has been injured at this intersection (Appendix H). The installation of a signal will increase pedestrian safety. We are concerned that the issue of not enough pedestrians to justify a crosswalk might be due to the fear of crossing causing people to not cross at all. If there were a safer way to cross, we might get more foot traffic.

D-K developed the traffic data using traffic data from Danville, not from Plainfield. Danville has a long-standing reputation as a town NOT-to speed in. Drivers routinely slow down when they drive through Danville. This unfortunately is not the case in Plainfield. While we are trying to establish that reputation, we do not currently have it. AOT personnel estimated that 5 – 15% of the drivers routinely speed through Plainfield. At 300 – 665 cars per hour, this means that 30 – 200 cars per hour routinely speed through town. This does not make a safe pedestrian crossing. Is the data from Danville assuming that we have the same traffic? There is a lot of our traffic that originates in Marshfield, Cabot and Calais. The issue here is that the speeding is the reason we are concerned. A pedestrian light should make it safer for those crossing.

TOWN OF PLAINFIELD GOAL: TRAFFIC SAFETY

We were pleased to see that this intersection, as currently configured, meets the needs for a traffic signal. The D-K report states on Page 9 that this intersection meets Warrant 1 for "eight hour vehicular volume, and Warrant 2 for four hour vehicular volume. Because one or more Warrant is met, installation of a traffic signal would be acceptable to VTrans. According to VTrans, Warrant 1 is a typical Warrant that is met for installation of a traffic signal. [Please note that the details applicable to Warrant 2 are not included in the report.]

Since the analysis shows two Warrants are met for 2004, and traffic volumes increase over time, these two Warrants would likely be met for future years as well"

While installing a signal does not correct the structural deficiencies, the current intersection does meet the sight and distance requirements established by VTrans, and a signal could be installed in this location. For minimal expense we can meet three important goals of the Town. Amy

Gamble of AOT noted in an e-mail on March 3 noted that *"We measured 250 feet of sight distance looking westerly from the stairs, which is the absolute minimum allowable for 35 mph. [note: speed limit is 30 mph, not 35] The absolute minimum isn't a desirable situation, as it leaves little margin for less than ideal circumstances... The sight distance we measured in the easterly direction was 440 feet..."*

Installing a signal will improve the safety of pedestrians and drivers. Handicap parking at the Town Hall must exit on Harvey Hill. This is a blind intersection with limited site distance. The installation of a signal will increase the safety for handicapped persons using the Town Hall, and other residents leaving Harvey Hill.

At the public meeting, citizens expressed that a traffic light, that operated during the busy times, and was a blinking light during low-traffic times, was an option to be considered. Concerns were expressed about noise and air pollution from starting, stopping and idling vehicles. This issue needs to be addressed in detail. Currently traffic mostly backs-up to head west on Route 2 in front of the hardware store. D-K said they would present information on air pollution, but there is none in the final report.

At the public meeting we requested air quality information from the installation of a signal, will this information be included in the final report?

PARKING/VIABILITY OF MUNICIPAL AND COMMERCIAL OPERATIONS

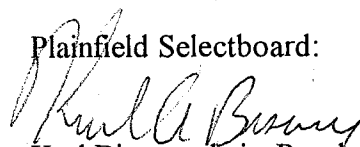
Plainfield has relatively few commercial properties. Two of these, the hardware store and furniture store, as well as the Town Hall are located at this intersection. Parking for the commercial properties is critically important. The preferred alternative selected by D-K reduces parking at the hardware store. The Town of Plainfield has an interest in making all businesses handicapped accessible. The change in configuration presented in Figure 5 will make development of handicapped accessibility difficult at this store. The two choices presented either create 8 steps down to the hardware store, or a 17.4% slope on which to parallel park. The current shallower slope is much more conducive to parallel parking. Trucks are routinely unloaded for the hardware store at this location as presented in Figure 5. A parking area with a 17% slope will create problems when opening car doors, when positioning the vehicles in bad weather, create difficulty for handicapped drivers, and create problems for delivery vehicles.

Alternative 11 is proposed to cost \$508,000. Implementation of Plainfield's preferred alternative #12 is proposed to cost \$80,000 (Appendix F). Does this include design as well as installation?

Thank you for considering our comments. We appreciate the work that the CVRPC and D-K did on this study. We hope that installation of a traffic signal will be approved.

Sincerely,

Plainfield Selectboard:


Karl Bissex, chair, Road commissioner

Steve Gladczuk

From: Lori Barg [loribarg@together.net]
Sent: Thursday, December 02, 2004 3:16 PM
To: Steve Gladczuk; Liz Perreault; frozninvt@aol.com; Karl Bissex-Mary Trerice; jtucker@dubois-king.com; Evan P. Detrick; Linda Wells
Subject: Re: Plainfield Study Meeting

Hi all,

Thanks for the presentation last night. It was a lot of information, and a bit hard for me to follow without handouts (till the end). I took a minute and looked at the map when I got home (and could actually make out the lines) and I have a couple of questions. I'd really appreciate it if they could be addressed. I'm a bit confused too, because the map and photo show different things. Is the photo from that 1991 study that you mentioned?

I noticed that Steve had a big thick report, so I know that we have not seen all the work that has been done to date, so I am operating in a bit of a vacuum here. Are there drawings that overlay the current configuration with the proposed configuration? And if so, could we get a copy? It would make it easier to locate myself in space.

I was pleased to see that we meet the requirements for a signal. But, please explain all the abbreviations in that part of the handout. Someone mentioned their concern about air quality from idling engines at the signal. Is there info in the report on this?

I looked at cross-section A-A. The current slope of the bad hill is 16%, and under the new plan, you said it would be lowered to 10%. X-S AA shows a 17.4% slope down to the hardware store from Route 2. I'd have a pretty hard time parking on a sidehill that steep (and getting out of my car without the door slamming shut on me, or opening the door without it scraping the pavement). That cross-section looks like it goes from the end of the porch, so it cuts through the tip of the current median (I think).

Could you please: A) show more cross-sections; b) address this grade issue

I imagine that the Hardware store is a historic building. Currently water runs mostly down Route 2 and Main Street. This plan looks like it will be directing a lot of water down into the hardware store. This could a) hurt the foundation of that building; b) cause freezing/icing problems in that parking area. How will these be addressed?

As I remember, our current sidewalk plans call for a mountable curb. Is there a way to address the drainage issues, and maintain the mountable curb? The sidewalk on the cross-section looks like it tilts slightly towards the hardware store.

And.....the west bound lane on Main Street is as wide as Route 2 near the T intersection. Up near the mouth of the T it looks like a 4 lane road. Is there a way to narrow that down? I did a quick drawing on my copy of the map, and it looked like you could move that curved white line out about 2.5 m., and possibly move the new sidewalk to the south to the Northeast near the intersection. In the photo there is a triangular median (I assume that is the old landscape architect design?)

Finally.....traffic calming. I guess when I proposed adding that to the RFP, I was anticipating some specific design/conceptual suggestions. I have seen the laundry list of possibilities from Sam Lewis a couple of years ago. I was hoping that by adding it to the RFP that we could get an engineer to make some specific suggestions that looked at Route 2 in the village.

Steve, thanks in the end for suggesting to me that for \$1,200 Plainfield could install a textured colored cross-walk by the Post Office. Is this a cost to the Town, or being on a State highway, is this covered by AOT? These are the kind of affordable, specific, short-term traffic calming suggestions I hoped we would get as part of this study.

2/28/2005

Steve Gladczuk

From: Neveau, Aimee [Aimee.Neveau@state.vt.us]
Sent: Thursday, March 17, 2005 8:41 AM
To: Steve Gladczuk (gladczuk@cvregion.com)
Subject: FW: Plainfield Study
Follow Up Flag: Follow up
Flag Status: Red

All way stop - won't
 put in unless warrants
 met. Main St. doesn't
 have volumes meet warrants

Signal w/o reconstruct
 too difficult from traffic
 operation

-----Original Message-----

From: Perkins, John
Sent: Wednesday, March 16, 2005 4:24 PM
To: Neveau, Aimee
Subject: RE: Plainfield Study

I would go with Alt 11A with landscaping in front of store. You need to come up with the number of legal parking spaces near hardware store. Feds do not replace illegal parking spaces.

-----Original Message-----

From: Neveau, Aimee
Sent: Wednesday, March 16, 2005 1:35 PM
To: Perkins, John
Subject: Plainfield Study

Hi John,

Have you had a chance to take a look at the Plainfield Study? It appears that at the Town Meeting a few weeks ago there was some opposition on the Alternative 11 (signal with reconstruction). Do you have any thoughts? Do you have an opinion on Alternative 12 and 13? Alt 12 and 13 seem to be more favorable by the residents.

Thanks!

Aimee R. Neveau

Transportation Planning Coordinator

Policy and Planning Division

National Life Building - Drawer 33

Montpelier, VT 05633-5001

Tele: 802-828-3976

Fax: 802-828-3983

aimee.neveau@state.vt.us

MAR 9 - 2005

March 8, 2005

Mr. Steve Gladczuk:
Transportation Planner
Central VT Regional
Planning Commission
29 Main St. Montpelier VT 05602

Dear Mr. Gladczuk,

We live in Plainfield, across from the hardware store and just East of the furniture store. We have a wonderful historic house on which we have spent a great deal of time and money in the five years we have lived here.

We wish to express our strong opposition to the proposed traffic lights at the intersection of Main St. and Route 2. They will have a very negative effect on both our property value and our quality of life, as well as that of our neighbors to the east.

As it is, in the summer or at commuting times, we sometimes have to wait 5-10 minutes to reach our driveway, with traffic moving along.

But, with traffic backed up at a light, exiting, or entering our driveway from the west would be impossible, as would crossing the street on foot.

The enormous increase in noise from cars gearing up or braking, the use of "jake brakes" by trucks, and the "peeling out" of some cars, the pollution from the fumes & smoke from trucks, busses & R.V.'s idling in front of our house would make it impossible to enjoy our yard and garden & even be comfortable in our home.

We were also horrified to learn recently that one of the plans shows two parking spaces directly in front of our stone wall. That wall is part of the aesthetics of our property, & we strongly object to having cars parked there. First of all who would these spaces be for? It would be too risky for hardware store patrons to dodge traffic & we would certainly hope not for the furniture store tenants they have a parking lot. Also, what

about snow being plowed against our wall, or someone hitting it? If it was damaged & collapsed who would be responsible? Most likely, we would! Our line of sight exiting our driveway either on foot or in the car would be dangerously reduced by cars parked there, and we would not be able to walk to, for instance, the Red Store, without walking in the street! We are also concerned about strangers parked close to our driveway "wandering" into our yard.

These are some of the many reasons this proposal is unacceptable to us, and we hope you will take our concerns as seriously as we do.

Concerns aside, we also feel that there is no compelling reason to put a traffic light at that intersection. The blinking light serves as a warning and does the job very well with —

out backing up traffic

Sincerely,

Karen & Bill Wozel

P.O. Box 483

45 School St.

Plainfield VT 05667

802-454-8518

Email - Hannahspops @ web

tv.net

cc. Plainfield Selectboard

Janet Ansel

Bill Doyle

PAGE 1
of 3

Central Vermont Regional Planning Commission
Plainfield Village
US Route 2/Main Street Improvements Scoping Study

Initial Scoping Report
Comments Form

The Report and Figures are available online at:
<http://www.centralvtplanning.com/Publications.html>

Report Date: February 10, 2005

Name: Christine Farren Affiliation: Harvey Hill Resident

Remarks: NO Thank you to the "PREFERRED"
(D) INTERSECTION WITH A TRAFFIC SIGNAL
& GRADE ADJUSTMENT.

Farren Noble stated it well "that a
traffic light, would cause traffic backups.
This would have the adverse effects of NOISE
& AIR POLLUTION FROM STARTING, STOPPING AND
TOLING VEHICLES.

Plainfield is too small and in a
hollow to be able to deal with SMOG AND
heavy exhaust fumes.

IN good old Vermont WINGO
"DON'T FIX IT IF IT AIN'T BROKE."

SEE FURTHER COMMENTS

Please send any additional comments by **March 4, 2005** to:

page (2)

Steve Gladczuk, Transportation Planner
Central Vermont Regional Planning Commission
29 Main Street, Suite 4
Montpelier, VT 05602

Email: gladczuk@cvregion.com
Phone: (802) 229-0389
Fax: (802) 223-1977

The Town Select Board will hold a public meeting on March 28, 2005, at 7 pm, in the Town Hall, to receive additional comments and finalize the report.

COMMENTS FROM
Harvey Hill Resident Christine Torren

US RTE 2 / MAIN STREET
IMPROVEMENTS SCOPING STUDY

A traffic light would NOT be an improvement. Congestion and air pollution for a small village - for what GAIN?

I enter & exit Harvey Hill ^(by car) several times daily all year round.

I am careful & deliberate ^(we Harvey Hill) with the preferred plan ~~we will~~ end up with an ^{entrance} exit strategy of "GAPS" in traffic. This is not any better than what exists for Harvey Hill already.

I ^{ALSO} walk often back and forth ^{FROM Harvey Hill etc 2} in 5 years I've had no problems.

The only person I know of who was "hit by a car" stated that she "miscalculated".

With care, caution and time to get a line of sight a pedestrian can be reasonably safe to transverse this spot. I am appreciative of the work that has been conducted to look into this situation.

COMMENTS OF Harvey Hill Resident page 3 of 3
Christine Fahren

US RTE 2/MAIN STREET
IMPROVEMENTS SCOPING STUDY

Also, the PLAINFIELD Hardware is an asset to the village.

Any impact in the negative to the number or accessibility of parking spaces for the Hardware would jeopardize it as a ^{VIA BLE TOWN} business.

We're all dealing with the situation at this intersection. Let us continue dealing.

No - It certainly isn't a great situation. ^{But} My vote would be Keep it simple to implement TRAFFIC CALMING DEVICES GOING INTO ^{FROM BOTH DIRECTIONS} AND OUT OF THE VILLAGE. Let the Traffic CONTINUE TO FLOW. DO NOT (please) STOP IT! GIVE this situation another few years and REVISIT IT AGAIN. Good work - keep the notes - Please let the village continue to thrive ^{not choke!} Thank You

Central Vermont Regional Planning Commission
Plainfield Village
US Route 2/Main Street Improvements Scoping Study

Initial Scoping Report
Comments Form

The Report and Figures are available online at:
<http://www.centralvtplanning.com/Publications.html>

Report Date: February 10, 2005

Name: RICH CHRISTIANSE Affiliation: PLAINFIELD HARDWARE STORE OWNER

Remarks: THERE IS NO WAY WE CAN GIVE UP ANY
PARKING. MOST ALTERNATIVES LISTED ARE TAKING PARKING
AND/OR HAVING COMPANIES HAVE TO CLIMB STEEPS TO GET
TO THEIR CARS AFTER SHOPPING.
THIS INTERSECTION IS WORKING (NOT GREAT BUT WORKING)
BEFORE IT GOT WORSE BY SO CALLED IMPROVEMENTS
LEAVE IT AS IS.
THE LAST 5 1/2 YEARS WE HAVE TRIED TO BUILD A
RIS TO SAVE US ^{AND} KEEP THE PEOPLE OF THIS
TOWN. IF WE HAVE PARKING TAKEN AWAY I SEE
THE END IN SIGHT OF OUR STORE

Rich W. Christianse

3-4-05

Please send any additional comments by March 4, 2005 to:

Steve Gladczuk, Transportation Planner
Central Vermont Regional Planning Commission
29 Main Street, Suite 4
Montpelier, VT 05602

Email: gladczuk@cvregion.com
Phone: (802) 229-0389
Fax: (802) 223-1977

The Town Select Board will hold a public meeting on March 28, 2005, at 7 pm, in the Town Hall, to receive additional comments and finalize the report.

The Town of Plainfield is concerned about pedestrian safety, traffic safety and business viability. While we are not sure that any of the proposals by Dubois-King for the Route 2 and Main Street intersection is the right one, the best proposal is signalization without reconstruction, Alternative 12. A signal with a pedestrian operated traffic button is a priority of the Town. Dubois-King's suggested proposals involve reconstruction and re-grading of the intersection to a T intersection with a signal. This will have a negative impact on the character of the village and parking for the hardware store. The other option that would help is lowering the speed limit to 25. This in combination with a pedestrian signal will improve pedestrian and traffic safety and not adversely impact businesses.

MAP 17 1989

Printed Name	Signature	Address
Sara A. Hafer	<i>Sara A. Hafer</i>	2980 Middle Rd. <small>mailing address in Berlin</small>
PAULA EMERY	<i>Paula Emery</i>	76 Main Street
David Montanari	<i>David Montanari</i>	127 Main
OWEN BRADLEY	<i>Owen Bradley</i>	64 MUL ST
DAVID HACO	<i>David Haco</i>	152 Beak Rd.
Amy Lester	<i>Amy Lester</i>	120 Main
Thomas Lester	<i>Thomas Lester</i>	120 Main St #2
ELISABETH BELT	<i>Elisabeth Belt</i>	175 Conyean Rd.
Lorraine Capetta	<i>Lorraine Capetta</i>	2469 Middle Rd.
SUSAN ECKHART	<i>Susan Eckhart</i>	188 Picey's Place
Melinda Vieux	<i>Melinda Vieux</i>	191 Main St.
Elizabeth Ziegler	<i>Elizabeth Ziegler</i>	641 Rec. Rd
Abraham Klein	<i>Abraham Klein</i>	641 Rec. Rd
Jodi Quallotte	<i>Jodi Quallotte</i>	34 High St. #2
Rhea Wilson	<i>Rhea Wilson</i>	164 Greentown Dr.
A. Elizabeth	<i>A. Elizabeth</i>	2098 Lower Rd
CYNTHIA ROSS	<i>Cynthia Ross</i>	149 New Hamburg Rd
DIANE TETRAULT	<i>Diane Tetrault</i>	1191 FOWLER ROAD
Brian E. Hurlbert	<i>Brian E. Hurlbert</i>	51 Martin Meadow Rd.
Jodi V. Jardi	<i>Jodi V. Jardi</i>	78 Main St.
Anna Pettersen	<i>Anna Pettersen</i>	322 Bartlett Rd
Pat Boice	<i>Pat Boice</i>	247 Mastin Hoader Rd
LEDA SCHUBERT	<i>Leda Schubert</i>	154 Woodcock Rd
Sarah C. Brier	<i>Sarah C. Brier</i>	1777 Middle Rd
Caresse Monteith	<i>Caresse Monteith</i>	P.O. Box 218 69 High St.
Debra Stierow	<i>Debra Stierow</i>	15 New Hamburg Rd.
E. Elaine Dyker	<i>E. Elaine Dyker</i>	1989 Middle Road
Joey Osman	<i>Joey Osman</i>	3132 Lower Rd

Central Vermont Regional Planning Commission
Plainfield Village
US Route 2/Main Street Improvements Scoping Study

MAR 10 2005

Initial Scoping Report
Comments Form

The Report and Figures are available online at:
<http://www.centralvtplanning.com/Publications.html>

Report Date: February 10, 2005

Name: Paula Emery 454-7376 Affiliation: Village Resident

Remarks: I collected these signatures at Town Meeting. The general idea being conveyed is that while we recognize that something has to happen about speeding cars and pedestrians crossing, the ^{more} drastic revisions proposed by DuBois King are not in the best interest of the town.

regarding, making buildings moving roads etc.

Please send any additional comments by **March 4, 2005** to:

Steve Gladczuk, Transportation Planner
Central Vermont Regional Planning Commission
29 Main Street, Suite 4
Montpelier, VT 05602

Email: gladczuk@cvregion.com
Phone: (802) 229-0389
Fax: (802) 223-1977

The Town Select Board will hold a public meeting on March 28, 2005, at 7 pm, in the Town Hall, to receive additional comments and finalize the report.