

Feasibility Study

West Side Road

Hinesburg, Vermont

February 2004

Prepared by Dufresne-Henry

DH Project No. 6310026.02



**Chittenden County
Metropolitan Planning
Organization**

*Communities working together
to meet Chittenden County's
transportation needs*



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1.0 Executive Summary

The Chittenden County Metropolitan Planning Organization (CCMPO) is responsible for performing long and short-range transportation systems analyses for Chittenden County. CCMPO has been working with the Town of Hinesburg to evaluate a range of transportation issues associated with Vermont Route 116 through Hinesburg.

Dufresne-Henry (DH) was retained under the CCMPO Technical Assistance Grant Program to assist the Town of Hinesburg, Vermont. The goal was to determine the feasibility of a new north/south alternative alignment west of Route 116, from Silver Street, just south of the Route 116 intersection, to Shelburne Falls Road.

Existing Conditions

The northern terminus for the Hinesburg Village West Side Road Feasibility Study is just west of the signalized four way intersection of Shelburne Falls Road, CVU Road, and Route 116. This area is known as “Ballards Corner” and includes a small commercial center, the new town library and nearby CVU High School to the east.

Continuing south, the project limits are bounded by wooded areas and the LaPlatte River on the west and Route 116 to the east. The terrain is mostly open agricultural flats.

Approaching the village from the north, the eastern limits are defined by Route 116. The area includes the developing “Hinesburg Commerce Park”, a new post office along with mixed commercial and light industrial development that has become a new village center. The entrance to this new village center is marked by the three-way intersection of Commerce Street and Route 116 opposite the fire station.

Commercial development continues south along both sides of Route 116 to the three way intersection at Mechanicsville Road. The creamery plant on the west side of Route 116, opposite the entrance to Mechanicsville Road, marks the end of the predominantly commercial development and the beginning of the “old village” section of the Hinesburg corridor.

The western limits of the project area include the LaPlatte River and beyond. South of Charlotte Road the western limits include the LaPlatte River but are closely bounded by steep hillsides as the project approaches Silver Street at its southern terminus.

The character of the old village center from Mechanicsville Road to Silver Street consists of older homes, newer senior housing, several churches, the Town Hall and a few small businesses, including Lantman’s IGA opposite Charlotte Road. Route 116 traffic peaks during the morning and afternoon commute as this area provides employment support to the Burlington area.

Goals and Objectives

The Primary goals of the alternative alignment feasibility study are described below:

1. Provide a conceptual plan for an alternative street network to be used primarily by the local community. Consequently, Route 116 would remain the primary roadway for commuter traffic.
2. Provide an opportunity for “in-fill” type mixed use development to promote dense development within the village core instead of the more common linear type development found on many of the state routes in our Vermont towns.

The specific objectives of the study include:

1. Identify potential alternative alignments
2. Determine the preferred alignment
3. Provide a list of constraints for the preferred location
4. Develop conceptual construction cost estimates for logical roadway segments
5. Identify the potential benefits of a west side road

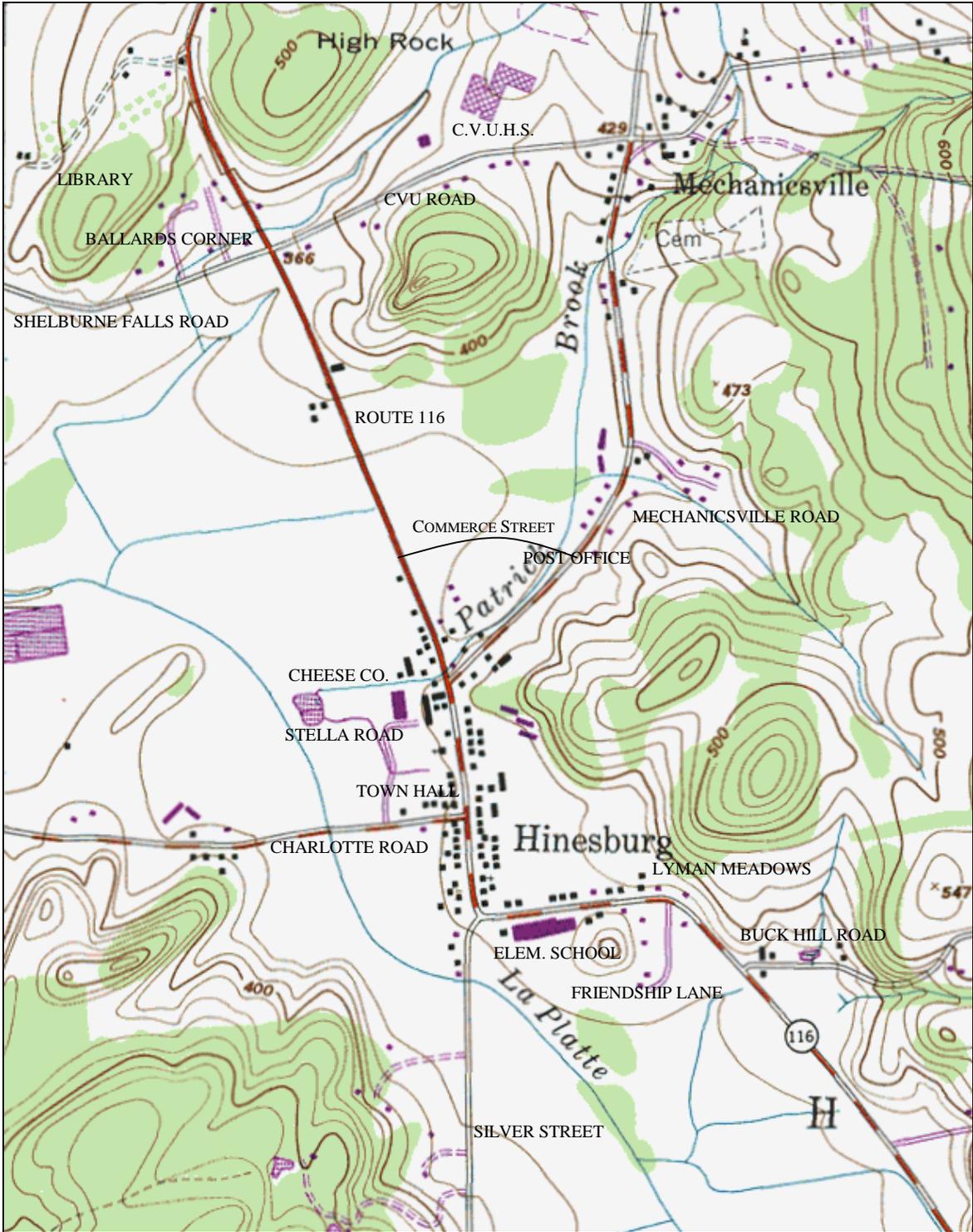


Figure 1: Project Location Map

2.0 Potential Alternatives

A site visit with the steering committee members identified two (2) general opportunities for a west side road alignment. The alignments are shown on the map provided in Appendix A.

The most appropriate beginning or southern terminus was identified as south of Charlotte Road with a connection to Silver Street. The end, or northern terminus, was identified at Shelburne Falls Road, and directly across from Pleasant View Lane.

Option 1 – Shown in green. Generally located east of the LaPlatte River.

Benefits:

1. Meets goal of road.
2. Close proximity for dense development.
3. Cost and environmental impacts are less than Option 2.

Challenges:

1. Permitting
2. ROW issues with Saputo.
3. General ROW issues.

Option 2 – Shown in red. Same northern terminus, but crosses the LaPlatte River at Commerce Street, then runs west of the river to Silver Street.

Benefits:

1. Meets goal of road.

Challenges:

1. More costly than Option 1, due to additional length of road, a bridge and more ROW acquisition.
2. More difficult permitting since it will need Army Corp. permit to cross LaPlatte River.
3. More prime agricultural land and wetland impacts
4. More ROW issues than Option 1.

Recommendation: Since Option 1 is less costly, has less environmental impact, has fewer permitting issues, requires less ROW impacts, and offers more dense development opportunities, the steering committee supports Option 1.

3.0 Preferred Alternative

As described in Section 2, the preferred alternative generally is located east of the LaPlatte River.

3.1 Alignment

The preferred alignment location is constrained at various points along the route while offering opportunities for flexibility within those fixed points. Starting from the southern terminus the following fixed points will define the proposed alignment (see map in Appendix A):

1. Southern Terminus at the Silver Street/Route 116 intersection. Ideally, the alignment should be located at this existing intersection, creating a four-way intersection; otherwise two offset tees would result. The disadvantage here is right-of-way constraints.
2. Connection with Charlotte Road is at the existing intersection of Stella Road, creating a 4-way intersection. This also avoids crossing the LaPlatte River.
3. As the road proceeds north, it needs to go west of the existing Stella Foods Facility, but east of the existing lagoons. If the treatment lagoons are relocated then this point can be shifted further west. An agreement with Stella Foods is required.
4. The intersection with the future Commerce Street Extension should be located approximately in a straight line extended from the existing Commerce Street west of Route 116. The newly created three-way intersection will complete the inner boundary of the new village center area. The western limits are generally defined by the 100 year flood plain.
5. The northern terminus should be located at the intersection of Pleasant View Lane and Shelburne Falls Road (approximately 700' from the Route 116 intersection). Lining up with Pleasant View Lane provides a four-way stop controlled intersection. The 700 feet from the signalized intersection should provide adequate separation to avoid conflicts with queuing.

Generally, the segments between each of the fixed points can be designed to optimize dense development opportunities while minimizing impacts to natural resources. The alignment should be placed east of the limits of the 100 year flood boundary determined by the preliminary report from USGS. However, the actual final location may be very different from that shown on the plans. Factors affecting the alignment include:

1. Roadway Purpose – development access or alternative local route.
2. Development goals and objectives.
3. Goals for pedestrian use.

A summary of the physical characteristics of each segment is included in Table 3.1.

Characteristics	Segments		
	A (Silver St. to Charlotte Rd.)	B (Charlotte Rd. to Commerce St.)	C (Commerce St. to Shelburne Falls Rd.)
Soils	Not free draining	Existing road	Not free draining
ROW Impacts (# of properties)	3 (residential)	1 (Saputo)	1 (Farm)
Current Land Use	Residential	Mixed Use Commercial/Village	Agricultural
Length	1,100'	1,800' plus 800' for Commerce Ext.	2,900'
Estimated Construction Cost ⁽¹⁾	\$1.0 M	\$2.3 M	\$2.6 M

Table 3.1 Physical Characteristics

(1) Assumptions: Avg. unit price of \$900/LF based on characteristics of similar projects. Planning purposes only. Does not include Engineering for ROW. Does not include signals, utilities or miscellaneous items. Includes 40' of roadway pavement width (road, shoulder, sidewalk) with base and pavement.

3.2 Permitting / Resources

Resource constraints along this alignment are primarily related to the LaPlatte River. Its floodplain, associated wetlands and the heavy farming soils will dictate development opportunities.

Floodplain – USGS has completed the draft flood study report for the Town of Hinesburg. The revised 100-year flood plain is included on the attached mapping. The small amount of proposed roadway development outside the floodway but within the 100-year flood plain will need to be analyzed to ensure that the change in water surface elevation caused by the new road does not increase by more than 1.0 feet. The minimal impacts would not likely preclude construction of the roadway as shown in Appendix A. See Appendix B for the draft report.

Wetlands issues – Since Class 1, 2, & 3 wetlands are regulated by the Army Corp of Engineers, Martha Lefebvre was contacted to discuss possible impacts and permitting requirements under ACOE jurisdiction. Since the majority of these lands are considered “Prior Converted Farmland” (PC), then ACOE does not have regulatory authority.

Class 1 & 2 wetlands are also regulated by the State of Vermont – ANR. April Moulaert (ANR) indicated that some wetlands are located within the project limits but need to be specifically delineated to determine the potential impact. With proper mitigation and avoidance it is likely that permits to construct the road could be obtained. As

development within this area is requested, the Town should ensure its mapping is updated to reflect specific wetland delineations and permitting requirements.

See Table 3.2 for likely permitting requirements needed prior to construction of each segment of the West Side Road.

Permits	Segments		
	A	B	C
ACT 250	Likely	Likely	Likely
Prime Ag. Farmland (9B)	No	Possible	Yes
ACOE 404 (wetlands class 1, 2, & 3)	No, PC	No, PC	No, PC
ANR CUD (wetlands class 1 & 2)	Class 1 or 2 are likely	Some	Some
VTrans Access	Yes, intersection with Route 116 and Silver St.	Yes, intersection of Commerce St. with Route 116	No
SHPO (Section 106)	Impact to historic house at Southern terminus	No	No
ANR Stream Alteration	No	Maybe, Patrick Brook	Maybe, Patrick Brook
Stormwater Permit	Yes	Yes	Yes
General Construction Permit	Yes	Yes	Yes

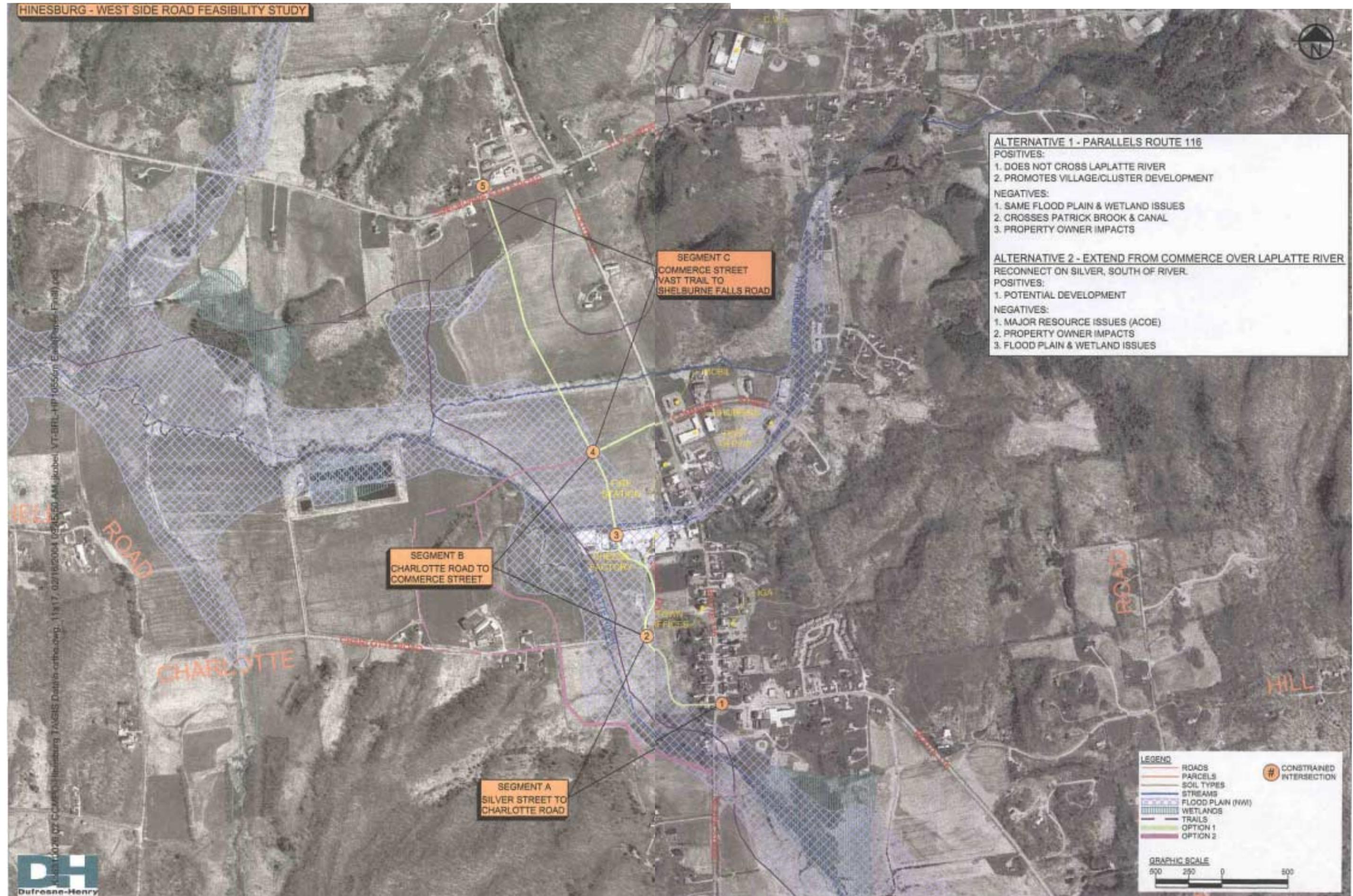
Table 3.2 Permitting Requirements

3.3 Benefits

Planning for future development offers many benefits to the Town by establishing a master plan that helps guide development for future decision makers.

The west side road alignment promotes the following smart growth concepts:

- Encourage development build-out within the Village/Town center.
- Discourages linear type development.
- Offers alternative traffic operations and volume distribution to the heavily traveled Route 116. Resulting in congestion mitigation at the Charlotte Rd./Route 116 intersection.
- Minimizes/Balances environmental impacts with economic development.
- Roadway provides a safer, more appealing corridor for alternative modes of transportation like biking and walking.



ALTERNATIVE 1 - PARALLELS ROUTE 116

- POSITIVES:**
- 1. DOES NOT CROSS LAPLATTE RIVER
 - 2. PROMOTES VILLAGE/CLUSTER DEVELOPMENT
- NEGATIVES:**
- 1. SAME FLOOD PLAIN & WETLAND ISSUES
 - 2. CROSSES PATRICK BROOK & CANAL
 - 3. PROPERTY OWNER IMPACTS

ALTERNATIVE 2 - EXTEND FROM COMMERCE OVER LAPLATTE RIVER

- RECONNECT ON SILVER, SOUTH OF RIVER.**
- POSITIVES:**
- 1. POTENTIAL DEVELOPMENT
- NEGATIVES:**
- 1. MAJOR RESOURCE ISSUES (ACOE)
 - 2. PROPERTY OWNER IMPACTS
 - 3. FLOOD PLAIN & WETLAND ISSUES

SEGMENT B
CHARLOTTE ROAD TO
COMMERCE STREET

SEGMENT C
COMMERCE STREET
VAST TRAIL TO
SHELBURNE FALLS ROAD

SEGMENT A
SILVER STREET TO
CHARLOTTE ROAD

LEGEND

	ROADS		CONSTRAINED INTERSECTION
	PARCELS		
	SOIL TYPES		
	STREAMS		
	FLOOD PLAIN (FWI)		
	WETLANDS		
	TRAILS		
	OPTION 1		
	OPTION 2		



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HINESBURG - WEST SIDE ROAD FEASIBILITY STUDY



SEGMENT C
COMMERCE ST
VAST TRAIL TO
SHELBURNE FA

SEGMENT B
CHARLOTTE ROAD TO
COMMERCE STREET

SEGMENT A
SILVER STREET TO
CHARLOTTE ROAD

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SEGMENT C
 COMMERCE STREET
 VAST TRAIL TO
 SHELburne FALLS ROAD

ALTERNATIVE 1 - PARALLELS ROUTE 116

POSITIVES:

1. DOES NOT CROSS LAPLATTE RIVER
2. PROMOTES VILLAGE/CLUSTER DEVELOPMENT

NEGATIVES:

1. SAME FLOOD PLAIN & WETLAND ISSUES
2. CROSSES PATRICK BROOK & CANAL
3. PROPERTY OWNER IMPACTS

ALTERNATIVE 2 - EXTEND FROM COMMERCE OVER LAPLATTE RIVER

RECONNECT ON SILVER, SOUTH OF RIVER,

POSITIVES:

1. POTENTIAL DEVELOPMENT

NEGATIVES:

1. MAJOR RESOURCE ISSUES (ACOE)
2. PROPERTY OWNER IMPACTS
3. FLOOD PLAIN & WETLAND ISSUES



LEGEND

- ROADS
- PARCELS
- SOIL TYPES
- STREAMS
- FLOOD PLAN (NW)
- WETLANDS
- TRAILS
- OPTION 1
- OPTION 2
- CONSTRAINED INTERSECTION

GRAPHIC SCALE



