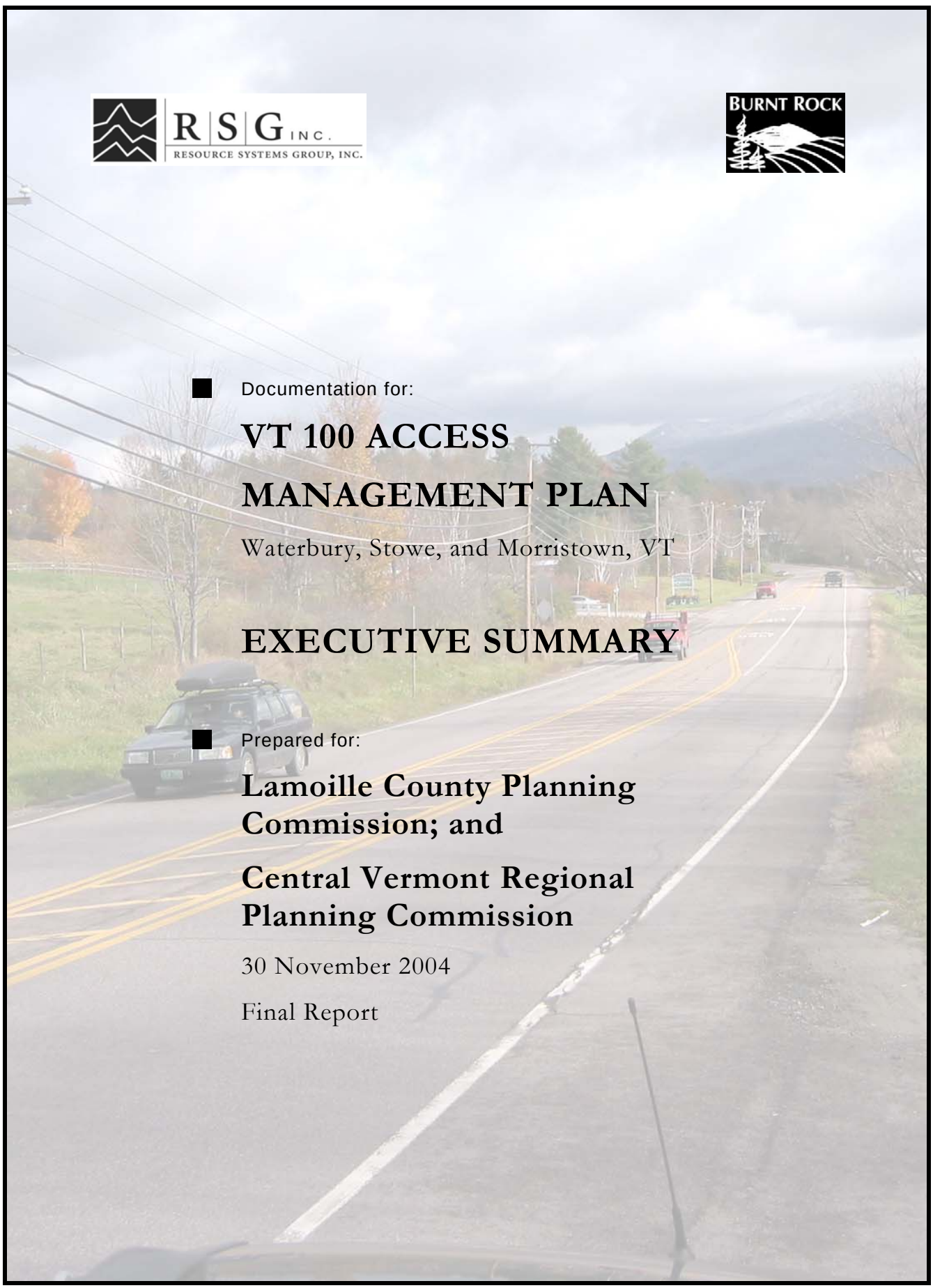

RSG INC.
RESOURCE SYSTEMS GROUP, INC.

BURNT ROCK

Documentation for:

VT 100 ACCESS MANAGEMENT PLAN

Waterbury, Stowe, and Morristown, VT

EXECUTIVE SUMMARY

Prepared for:

Lamoille County Planning Commission; and

Central Vermont Regional Planning Commission

30 November 2004

Final Report

100 Dorset Street, Suite 20 ▪ South Burlington, Vermont 05403

RSG INC.
RESOURCE SYSTEMS GROUP, INC.

MEMORANDUM

To: David Pelletier, Lamoille County Planning Commission
Steve Gladczuk, Central Vermont Regional Planning Commission
From: Joseph Segale, P.E.
Subject: VT 100 Access Management Plan – Executive Summary
Date: 30 November 2004

Resource Systems Group, in partnership with Burnt Rock Associates in Community Planning, is pleased to present the attached executive summary of the final report for the VT 100 Access Management Plan. The study area extends along VT 100 from US 2 in Waterbury, through Stowe, to VT 15 in Morristown.

The attached plan:

- Evaluates existing land use and transportation system issues and includes sketch plans to address existing access management deficiencies;
- Estimates build-out and twenty-year development scenarios for parcels adjacent to VT 100 and identifies land use, traffic, and access management issues for the year 2025;
- Develops and analyzes highway system alternatives and makes recommendations to address 2025 issues; and
- Recommends administrative tools to help implement effective access management techniques through municipal land use plans and regulations, and coordination between the three towns and the Vermont Agency of Transportation.

This plan updates the work completed in the 1993 *VT Route 100 Corridor Study,* which identified access management and land use planning as two areas that should be investigated further to help preserve mobility along VT 100 without additional travel lanes.

The recommendations can be used by the LCPC, CVRPC, and VTrans as they work together to identify and implement different transportation projects along VT 100. The land use recommendations should be reviewed by the different municipalities in the study area and incorporated into land use plans and regulatory documents as they are developed and updated.

Thank you for the opportunity to assist the LCPC, CVRPC, and members of the Project Advisory Committee with developing this plan.

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VT 100 ACCESS MANAGEMENT PLAN PROJECT ADVISORY COMMITTEE

This plan would not have been possible without the local knowledge, expertise, support, and time offered by the members of the Project Advisory Committee.

Jane C. Brown – Waterbury Resident

Paul Brown – Cold Hollow Cider Mill, Central VT Chamber, Waterbury Tourism Council

Ernie Englehardt – VTrans

Heather Furman – Stowe Land Trust

Steve Gladczuk – Central Vermont Regional Planning Commission

Tom Jackman – Town of Stowe Planning Director

Mark Leonard – Morristown Zoning Administrator

Steve Lotspeich – Town and Village of Waterbury Community Planner

Kimberly Murray – VTrans Planning Coordinator

Aimee Neveau – VTrans Planning Coordinator

Dave Pelletier – Lamoille County Planning Commission

Barbara Pfitzenmayer – Stowe Planning Commission Member

Steve Rae – Morristown Conservation Commission

INTRODUCTION

The purpose of the VT Route 100 Access Management Plan is to improve the efficiency and safety of VT 100 from US 2 in Waterbury, through Stowe, to VT 15 in Morristown using access management techniques, highway system improvements, and land use planning and regulations. Access management is the systematic control of the location, spacing, design, and operation of driveways, median openings, interchanges, and street connections to a roadway. Effective access management is built upon the following principles:

- Provide a specialized roadway system based upon mobility for through traffic and access to adjacent land;
- Provide appropriate intersection design, control, and spacing to provide efficient transitions from one roadway classification to another;
- Limit direct access between adjacent land uses and higher speed roads while promoting access between land use and minor, low speed roads;
- Limit or separate the number of conflict points between traffic entering and exiting driveways and streets; and
- Remove turning traffic from through traffic lanes.

This plan:

- Evaluates existing land use and transportation system issues and includes sketch plans to address existing access management deficiencies;
- Estimates build-out and twenty-year development scenarios for parcels adjacent to VT 100 and identifies land use, traffic, and access management issues for the year 2025;
- Develops and analyzes highway system alternatives and makes recommendations to address 2025 issues;
- Presents and recommends different administrative tools to help implement effective access management techniques through municipal plans and regulations, and coordination between the three towns and the Vermont Agency of Transportation; and
- Evaluates whether or not the recommendations made in the 1993 *VT Route 100 Corridor Study* are still reasonable based on current conditions and projected traffic volumes in 2025.

This plan was a joint effort between the Lamoille County Planning Commission (LCPC) and the Central Vermont Regional Planning Commission (CVRPC) using funds provided through the VTrans Transportation Planning Initiative program. A Project Advisory Committee with representatives from all three towns assisted with technical and policy questions, local knowledge, and public outreach efforts. The plan was completed by Resource Systems Group, Inc. (RSG) and Burnt Rock Inc., Associates in Community Planning (BRI).

EXISTING TRANSPORTATION SYSTEM FINDINGS

- Traffic volumes on VT 100 grew significantly faster than the statewide average over the last twenty years. The majority of this traffic begins and/or ends somewhere in Waterbury, Stowe, or Morristown. A smaller percentage of trips pass completely through the corridor. This finding underscores VT 100's function as a minor arterial which must:
    1. Serve travel within the corridor for and between the local residents and businesses;
    2. Provide access to adjacent land and the local road system; and
    3. Link the corridor to the statewide highway system which ultimately makes the people and businesses accessible to the rest of the world.
- The ability of VT 100 to serve all of these functions is beginning to deteriorate. It is becoming more difficult to enter VT 100 from the major local roads during the peak hours. Excessive delays have been documented in this study at the intersections of VT 100 with Stagecoach Road, VT 108, and Moscow Road in Stowe; and Guptil Road, Laurel Lane, and Stowe Street in Waterbury. Inefficient transitions currently exist to the statewide arterial and interstate system at the VT 100 intersections with the I-89 on and off ramps and US 2 in Waterbury.
- As a minor arterial, VT 100 should provide a reasonable level of mobility. VTrans policy suggests that LOS C is appropriate along rural facilities. Many of the VT 100 rural road sections in the study area are currently operating at LOS D.
- Poor access management can cause further deterioration in mobility and safety. Existing locations where driveways do not meet access management design guidelines are concentrated in the seven areas listed below. Deficiencies include inadequate spacing between driveways and intersections, inadequate spacing between driveways, lack of well defined edges, and multiple access points for individual parcels. Many opportunities exist to improve access at these areas by consolidating driveways, providing cross connections between adjacent parcels, and relocating access from VT 100 to side streets for corner parcels.
    1. Blush Hill Road/Stowe Street to north of Colbyville in Waterbury;
    2. In the vicinity of the Cabot Creamery Annex and Shops, East Wind Drive, and McNeil Dr. in Waterbury;
    3. Waterbury Center;
    4. Lower Stowe Village;
    5. Stowe Village from School Street to West Hill Road;
    6. North of Stagecoach Road in Stowe; and
    7. Brooklyn Street – Bridge Street to VT 15 in Morrisville.

LAND USE INVENTORY, PLANNING, AND REGULATORY FINDINGS

- Single-family dwellings are the dominant land use within the entire corridor, although to a lesser extent in village and transitional areas. The conversion of residential dwellings to commercial uses has occurred throughout the corridor, however, and the continued conversion has the potential to significantly change land use and associated traffic patterns.
- Commercial uses are generally concentrated in village/hamlet areas, and to a lesser, but still significant, in transitional areas on the edges of villages. Mixed use development is common in established village centers and single or mixed use commercial development is prevalent in transitional and rural areas.
- The open, rural character of much of the corridor is largely attributable to a relatively small number of large parcels, including existing farms and some forested parcels. Consequently, the subdivision and/or development of a few properties could have a significant impact on the character of the corridor and traffic patterns on Route 100.
- Overall land use patterns are similar in each of the three municipalities along the length of the corridor. Generally, the historic pattern of village centers and hamlets connected by a rural highway corridor is still present. However, strip development – a linear, automobile-oriented development pattern dominated by commercial uses – has emerged along several sections of Route 100, especially adjacent to existing village centers and, to a lesser extent, along once rural highway segments that are not contiguous to historic villages.
- Waterbury, Stowe, and Morristown include policies in their municipal plans that support managing access along VT 100 and have each adopted land use regulations that include administrative processes through which highway access may be regulated in accordance with locally adopted standards. However, access management provisions included in zoning, subdivision, and local road ordinances vary in their application and level of detail.
- VTrans owns and maintains most of VT 100 in the study area and manages access in accordance with its Access Management Program Guidelines. The guidelines provide the basis for access permitting on state highways and are used in the planning and development of VTrans roadway construction projects. As a condition of any access permit issued by VTrans, State statutes require compliance with all local ordinances and regulations relating to highways and land use. To ensure that access management requirements are fairly, effectively and consistently applied, there is a need to improve the coordination between VTrans and the local officials responsible for adopting and administering local road ordinances and land use regulations.

FUTURE CONDITONS

- Under the twenty-year (2025) development scenario, most of the traffic growth in the study area will be driven by development beyond parcels that front VT 100. This additional traffic will access VT 100 through its intersections with national, state, and local highways. As a result, high levels of congestion are projected at almost every stop-controlled side street approach to Route 100, and at the two existing signalized intersections at Blush Hill/Stowe Street in Waterbury and VT 15 in Morristown. Providing efficient and safe transitions between local, collector, and arterial highways is a key access management principle. Therefore, the poor intersection performance is identified as the primary access management issue documented in the study area. In addition to the need for intersection improvements, this finding suggests that access management techniques should be applied not just along VT100, but also on the municipal highway network that is under local jurisdiction.
- Findings based on a build-out analysis of the parcels directly adjacent to VT 100 suggest that, under existing municipal land use regulations, there is significant development potential along the corridor. Under a full build-out scenario, the number of dwelling units conceivably could quadruple over its entire length, and the amount of commercial space within Waterbury's Route 100 District alone could increase twenty-fold. In addition to generating more traffic, the need for access to future development could result in the installation of more than 650 new driveways.
- The greatest potential for residential development – in terms of both frontage lots and dwelling units – is between Randolph Road and Morristown Corners Road in Morristown. The greatest potential for commercial development is within the Route 100 District in Waterbury. There are few natural constraints to development along the corridor; therefore local land use regulations and other types of development restrictions will likely have a much greater influence on future corridor development.

TRANSPORTATION SYSTEM FINDINGS AND RECOMMENDATIONS

Transportation system recommendations are described below and presented in Figures E-1, E-2, and E-3 for Waterbury, Stowe, and Morristown respectively.

- The sketch plans shown in Figures E-4 through E-16 have been developed for each access management focus area and suggest potential solutions to the identified problems. These sketch plans provide concepts that may be implemented as opportunities arise – such as a VTrans reconstruction project or redevelopment of an existing development.
- The potential need for a four lane cross section along VT 100 between I-89 to south of Colbyville is a significant change from the *1993 VT 100 Corridor Study*. For the southern most section of VT 100, it does not appear possible in 2025 to maintain a tolerable level of congestion without adding more through lanes. A two lane cross-section will provide adequate levels of mobility through the rest of the study area.

- Construct the New Town Road between Stowe Street and Guptil Road in Waterbury. A conceptual alignment is shown in Figure E-1. The New Town Road improves access management from a system-wide perspective by expanding upon the specialized street system that serves local travel. It will provide local residents with an alternate route to VT 100 connecting Waterbury Center, Colbyville, and the Village. It can include provisions for pedestrians and could provide a safe alternative bike route to VT 100. The New Town Road has the potential to reduce traffic significantly on VT 100 and should be designed and constructed before adding new through lanes to VT 100.
- Construct the Route 100 Alternate Truck Route in Morrisville (See Figure E-3). The Route 100 Alternate Truck Route will improve access management from a system-wide perspective by (1) providing a specialized highway facility designed to accommodate through traffic, (2) removing through traffic on VT 100 through the center of Morrisville thereby allowing the local street system to better serve local circulation and access to adjacent land, and (3) by improving the connection between VT 15 and VT 100.
- The functional areas of the intersections of VT 100 near the proposed Alternate Truck Route should be protected by designating sections of the state highways as limited access. Direct access from adjacent land to the state highway in these areas would not be permitted. The LCPC TAC should work with VTrans to evaluate the potential impacts to property, identify other access options to affected property, and consider purchasing access rights if necessary.
- A critical issue that was identified in the public outreach efforts was the importance of bicycle travel for residents and tourists along VT 100. Any roadway design changes should incorporate the recommendations of the "Vermont Pedestrian and Bicycle Facility Panning and Design Manual" published in April, 2003. This manual was developed with support and input from VTrans, the Federal Highway Administration, the state's 12 regional planning commissions, the general public, as well as other parties.
- To provide efficient connections between the local road system and VT 100, and VT 100 and the state and national highway routes, the mix of turn lanes at unsignalized intersections, traffic signals, and roundabouts presented in Figures E-1, E-2, and E-3 is recommended to address the projected congestion and existing safety problems identified in the corridor through 2025. The final design for a specific location should be selected and refined through the VTrans Project Development Process which includes a detailed assessment of natural and cultural resource impacts, costs, right-of-way requirements and other critical aspects in the context of a public process.

ADMINISTRATIVE RECOMMENDATIONS

Improving access design and location over the long term can be accomplished through municipal plans, regulations, and the development review processes in each of the three towns. In addition, to ensure that access management requirements are fairly, effectively, and consistently applied, there is a need to improve the coordination between VTrans and the local officials responsible for adopting and administering local road ordinances and land use regulations.

This plan identifies the following list of regulatory and non-regulatory administrative tools that can be referenced as local plans and regulations are updated. Also included is a list of strategies that can help improve coordination between VTrans, Waterbury, Stowe, and Morristown.

Municipal Plans

Existing municipal plans already provide the statutory basis for both non-regulatory programs and regulatory changes that could promote better access management along the VT 100 corridor. In future plan updates, the following should be considered:

1. Incorporation, by reference or attachment as appropriate, recommendations included in this plan – including updated access management strategies, road and intersection improvements.

2. A review, under the land use element, of proposed land use districts along the corridor and in the vicinity of connecting roads, to include a review of allowed uses and densities of development – particularly in relation to projected traffic conditions, available road frontage, the potential for new accesses or interconnecting roads, and intersection function.

3. Incorporating a section under the transportation element that specifically addresses access management, to include the assignment of road functional and access management classifications (as shown on the transportation map), references to existing or proposed state access management guidelines, the identification of needed access management improvements, and a list of recommended regulatory and non-regulatory access management tools or techniques for local application.

Non-regulatory Access Management

Several of the plans and bylaws reviewed include references to capital budgets and programs, official maps, and other non-regulatory tools described here that, if adopted, could enhance local access management programs, particularly with regard to identifying, reserving land for, and funding needed infrastructure improvements. These types of programs, however, may require some additional administrative capacity. The following should be considered as appropriate for each municipality:

1. The adoption of this plan as the municipal access management plan for the VT 100 corridor, to support local access management review, municipal and regional project development, and coordinated access management with the other municipalities along the corridor and the Agency of Transportation.
2. The adoption of a local capital budget and program that schedules recommended access, road and intersection improvements in relation to regional and state transportation improvement programs, and identifies proposed sources of local financing, which could include road impact fees.

3. The adoption of an official map that at minimum shows the location of land reserved for recommended public infrastructure improvements, including new or expanded road rights-of-way and associated access, intersection, sidewalk and recreation path locations (e. g, the ATR and the New Town Road).
4. The adoption of a road impact fee ordinance that allocates the costs of infrastructure improvements resulting from additional growth to new development along the corridor. A municipal plan and capital improvement program also are required for impact fee ordinance development and adoption.
5. The continued acquisition of land or interests in land, through negotiated dedication or purchase, to further access management goals in association with broader land conservation and open space protection objectives, particularly along less developed rural and scenic segments of the VT 100 corridor. Sources of potential assistance and funding include VTrans' Enhancement Grant Program, the Vermont Housing Conservation Board, the Vermont Land Trust, the Stowe Land Trust, and the Municipal Planning Grant program.

Regulations

All three municipalities have adopted some access management provisions in their regulations that apply largely to nonresidential development or subdivisions along VT 100. These generally include zoning district, use, site plan, conditional use, and/or subdivision standards – though they vary markedly by municipality in their extent and application. All three municipalities also have local road policies or ordinances in effect.

The following are also recommended for consideration to better manage access along VT 100:

1. Redefine zoning districts along Route 100 as recommended in municipal plans (e.g., the Route 100 District), with consideration given to allowed uses (potential trip generation rates); district density, lot size and frontage requirements; and available or planned connecting roads that would serve development in the district.
2. Adopt an "Access Management Overlay District" along one or more segments of the Route 100 corridor – for example, within the seven areas where existing access deficiencies are concentrated – to require recommended improvements to individual parcels as they come under review. Another option is to incorporate access management standards specific to VT 100 as district standards within the zoning districts bordering the corridor (e.g., as Stowe and Waterbury have done to a limited extent).
3. Adopt basic access management (curb cut and driveway) standards that apply to all development within general regulations under local zoning. This could include simply adopting state and local guidelines by reference. Currently most access management standards under land use regulations do not apply to single or two-family dwelling units on existing lots along the corridor.

4. Update site plan, conditional use and/or subdivision review standards as appropriate – to include a review of existing access management, intersection, parking and road standards for consistency with local road policies and ordinances, and for state highways, with the state's management guidelines. In addition:
    - Waterbury should consider, as feasible, the adoption of subdivision regulations to more effectively regulate the creation of lots, access to multiple properties, associated road and access infrastructure improvements, and requirements for master planned and phased development.
    - Stowe should review access management standards under site plan, conditional use and subdivision review for consistency and, with the existence a development review board, consider consolidating access management requirements as applied to the development or redevelopment or existing lots under one review process (e.g., by incorporating all site plan review criteria under conditional use review).
    - Morristown and Morrisville should consider strengthening access management review criteria under both site plan and conditional use review.
5. Specifically incorporate state access management program guidelines, local road policies, and related access management standards in local land use regulations as appropriate for consideration in local development review.
6. Define in local land use regulations the timing and sequence of review for obtaining state or local highway access approval in relation to local zoning permits and approval. This should include application referral and/or consultation requirements as appropriate.

Coordination

Ongoing cooperation between Waterbury, Stowe, Morristown and Morrisville, the Lamoille County and Central Vermont Regional Planning Commissions, the Agency of Transportation, and local property owners, is necessary to effectively address development, traffic and associated access management issues along the VT 100 corridor. Opportunities and methods for coordination identified include:

1. The establishment of the Route 100 project advisory committee as a permanent subcommittee of each regional commission's transportation advisory committee, to be coordinated through regional commission and municipal staff.
2. The adoption of consistent access management review guidelines and standards that apply specifically to the VT 100 corridor.
3. The adoption of an "Intergovernmental Access Management Agreement" between the three municipalities, the Agency of Transportation, and potentially the two regional planning commissions, to coordinate access and development review for projects requiring access to VT 100.

4. Continued participation in joint corridor planning and project development efforts through the two regional planning commissions, particularly with regard to the development of regional plans and transportation improvement programs, to incorporate priority VT 100 road, intersection, and access management improvements as recommended in this plan.
5. Collective participation in the development and legislative approval of the state transportation improvement program, to include the scheduling of priority projects along the VT 100 corridor for state and federal financing.
6. Collective and individual participation in state Act 250 proceedings for development proposed on VT 100, to ensure that related traffic, access and infrastructure impacts – particularly as they cross municipal boundaries – are adequately addressed in the permitting process.

Growth Management

Access management and land use policies within the Route 100 corridor can have a significant impact on traffic safety and highway capacity. With 87% of projected traffic increases to result from development beyond parcels that directly abut VT 100 in the study area, however, town-wide land use planning and growth management policies are required to influence future traffic conditions. A comprehensive planning program that addresses area-wide growth should include the following:

- Growth management policies that ensure that the rate of development is coordinated with the provision of facilities needed to support that development. Related programs include capital budgets and programs to identify anticipate facility deficiencies and coordinate capital expenditures; impact fees to fund capital facilities, including highway improvements, attributable to new development; and development phasing programs to manage the rate of growth.
- Land use policies that discourage scattered development and reinforce existing and new growth centers. Related programs in "rural' portions of the communities include land conservation and open space protection; and development regulations that maintain low overall development densities. In addition, promoting concentrated development in new and existing village centers can enhance opportunities for transit and pedestrians and reduce traffic.
- Transportation policies that promote transit and the development of an interconnected road network that reduces reliance on Route 100, especially for short trips within the communities. Related programs include designation compact, transit-friendly growth centers; supporting opportunities for alternative transportation modes (e.g., bike paths); and limiting long dead-end cul-de-sacs in favor of planning development that results in an interconnected road network through subdivision standards and/or the adoption of an official map depicting future road connections.

Figure E 1: Waterbury Highway System Recommendations

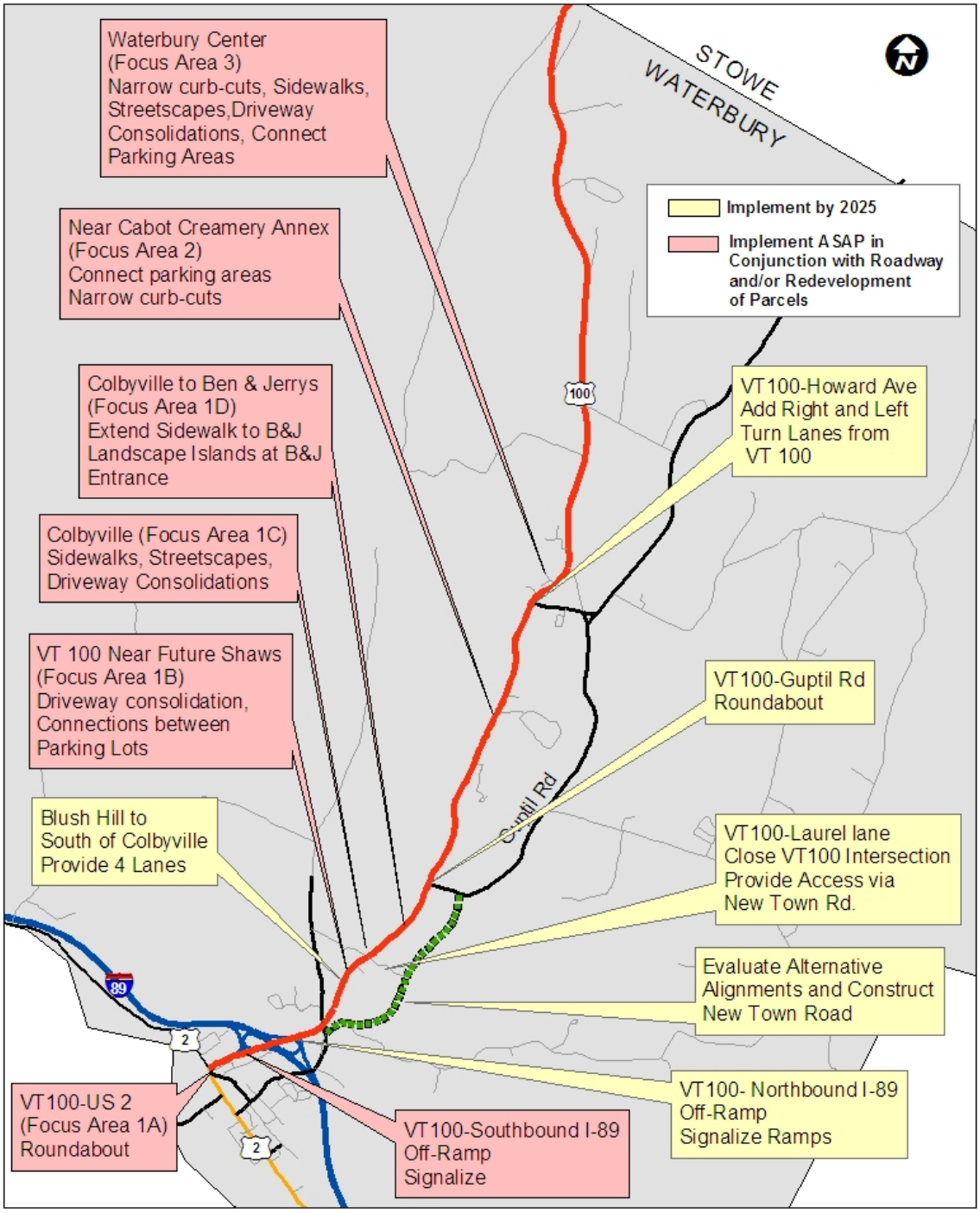

Figure E 2: Stowe Highway System Recommendations

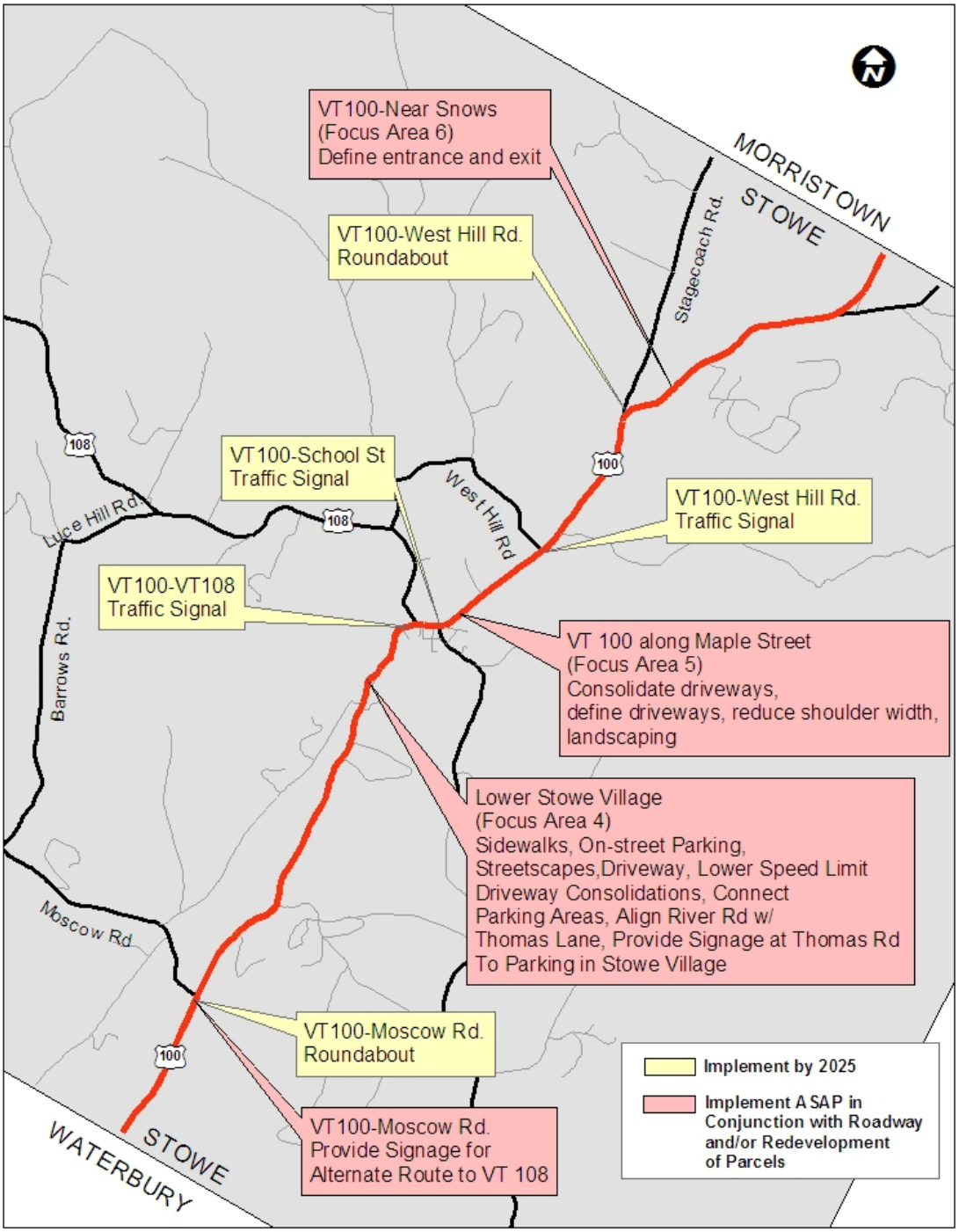

Figure E 3: Morristown Highway System Recommendations

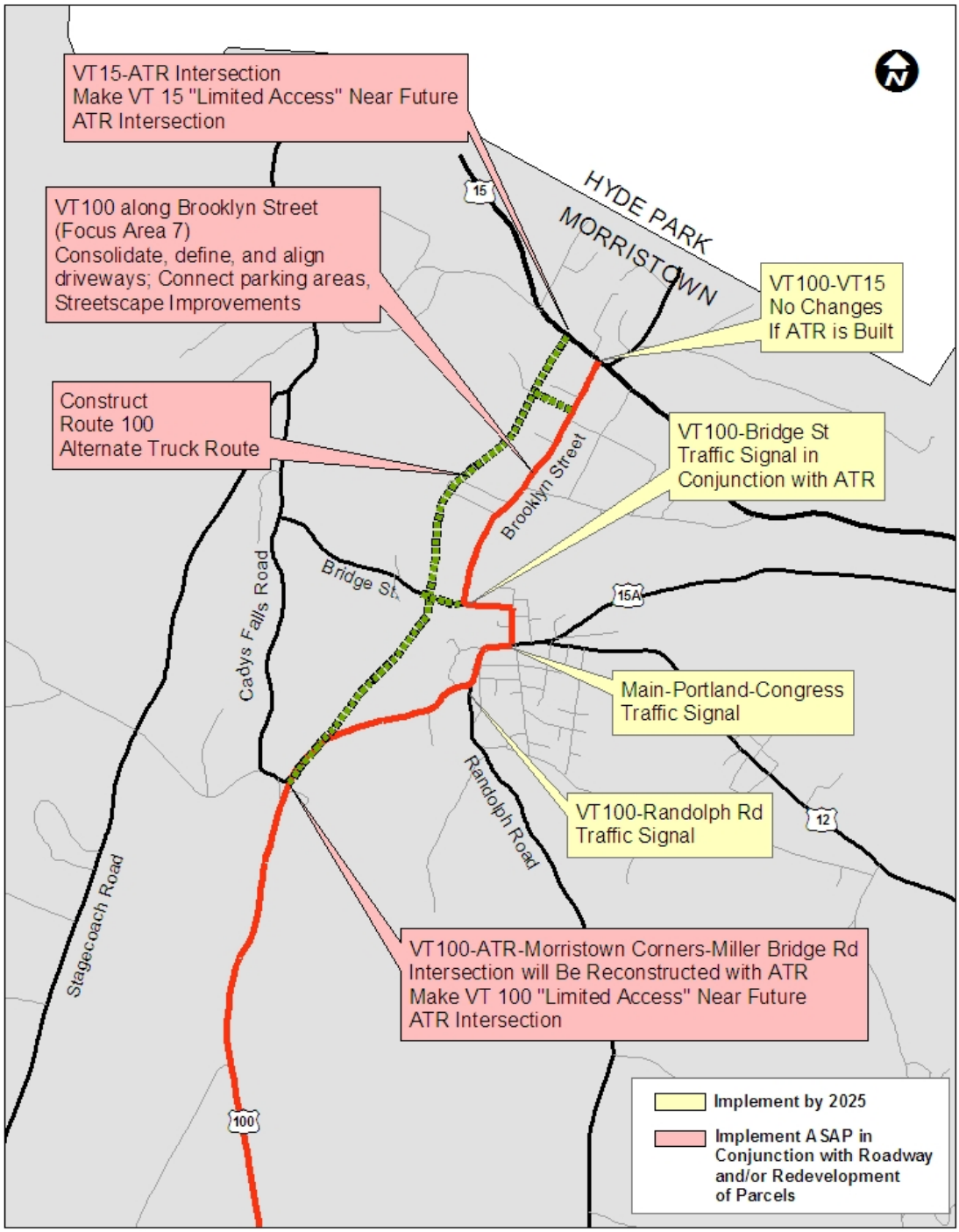

Figure E 4: Focus Area 1A - US 2-VT 100 Intersection

Figure E 5: Focus Area 1B - Blush Hill to Colbyville

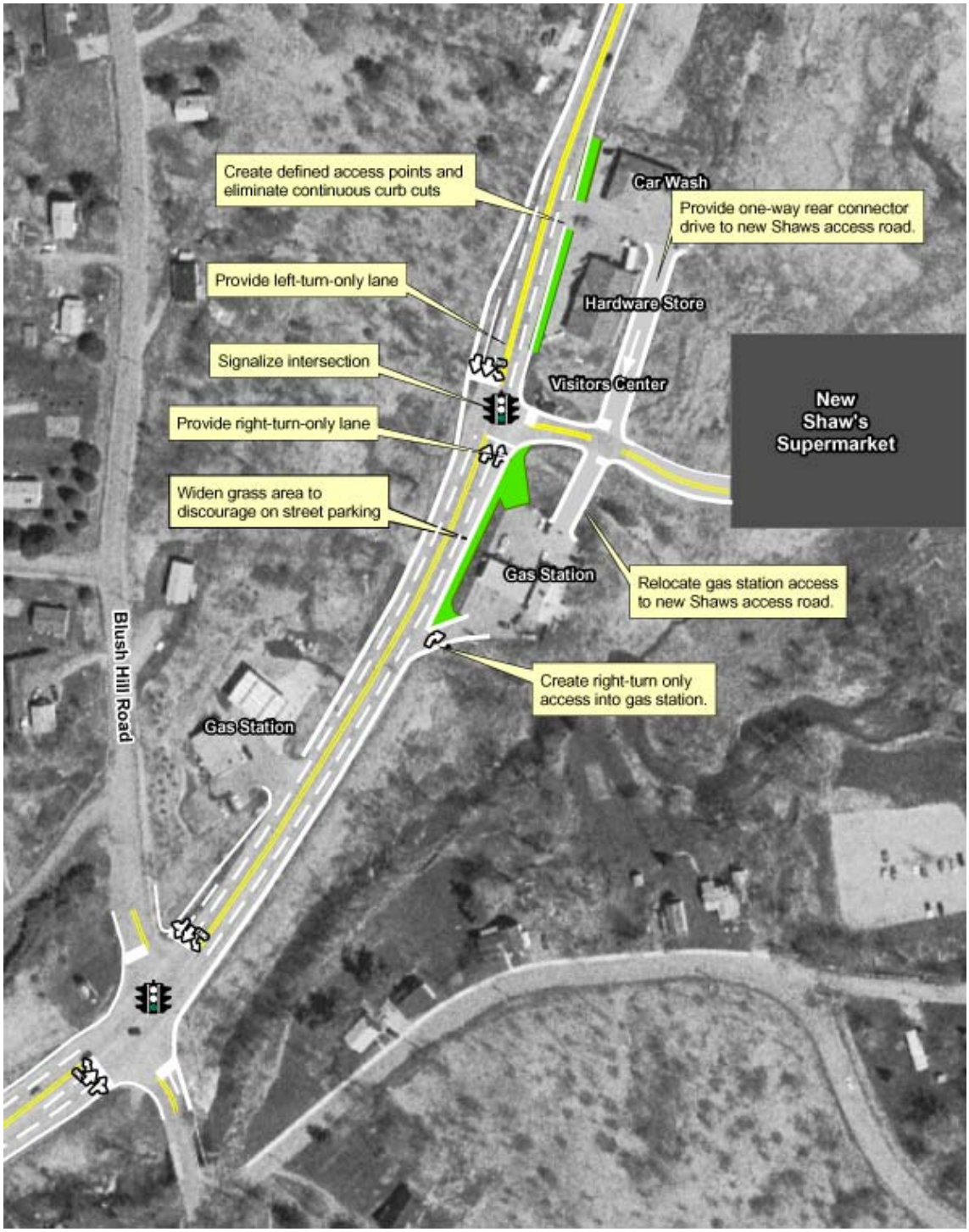

Figure E 6: Focus Area 1C – Colbyville

Figure E 7: Focus Area 1D - North of Colbyville

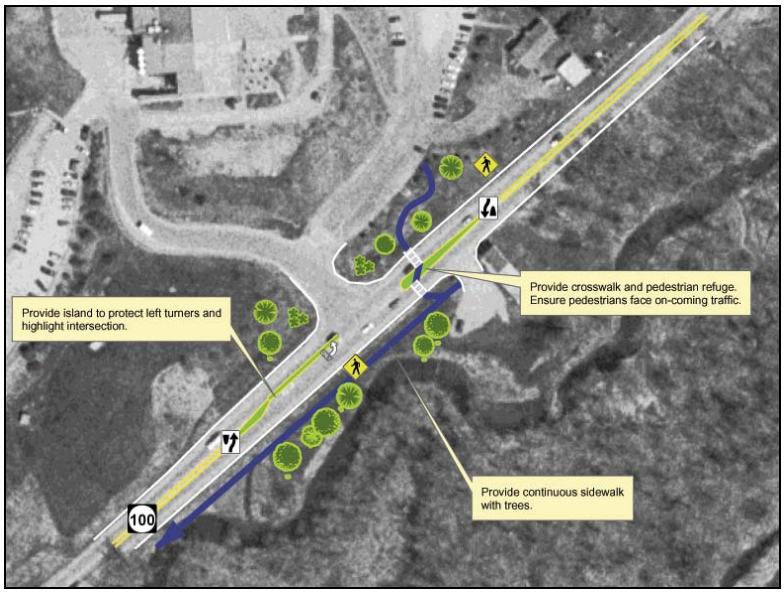

Figure E 8: Focus Area 2 - Cabot Creamery Annex

Figure E 9: Focus Area 3 - Waterbury Center

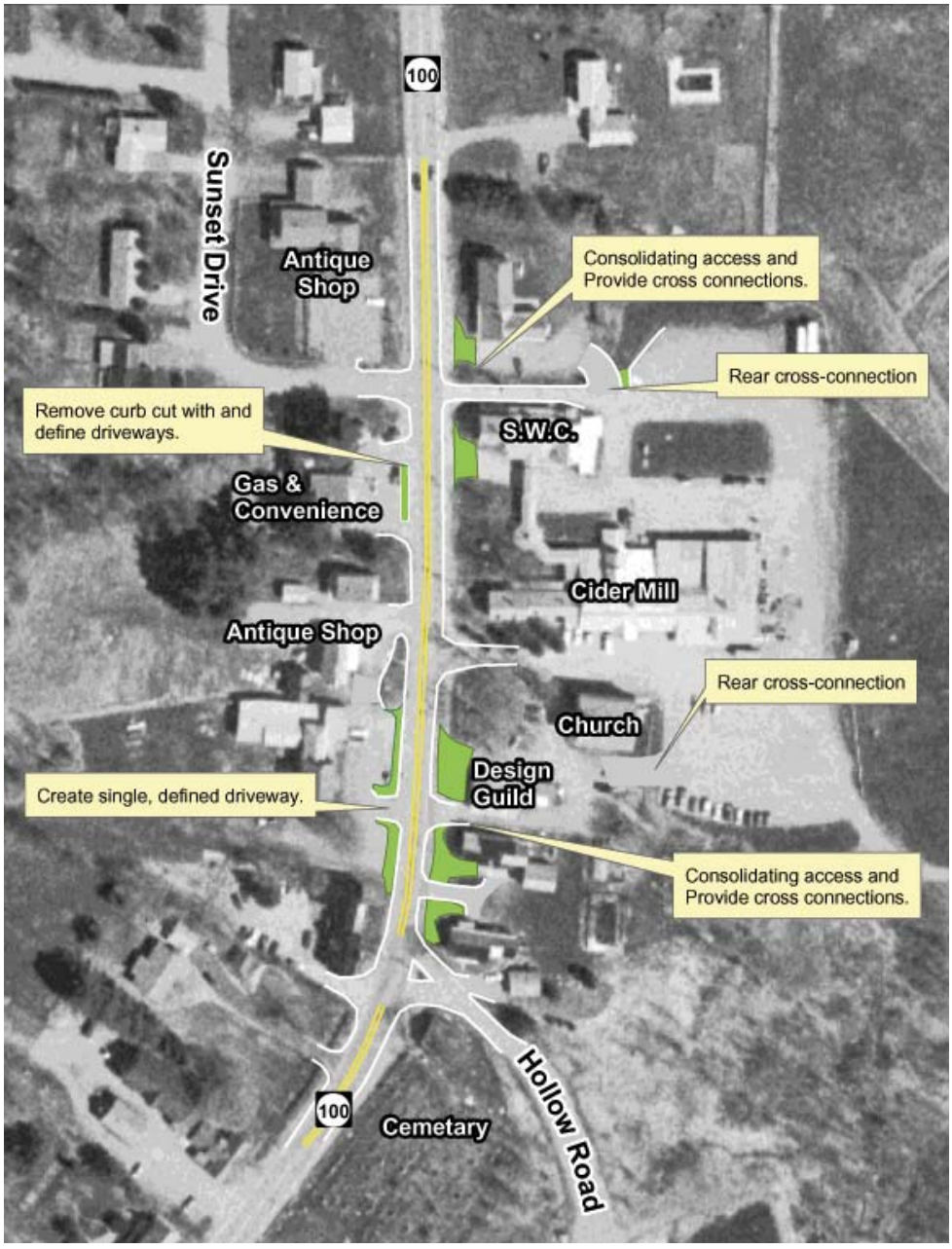

Figure E 10: Focus Area 4A - Lower Stowe Village

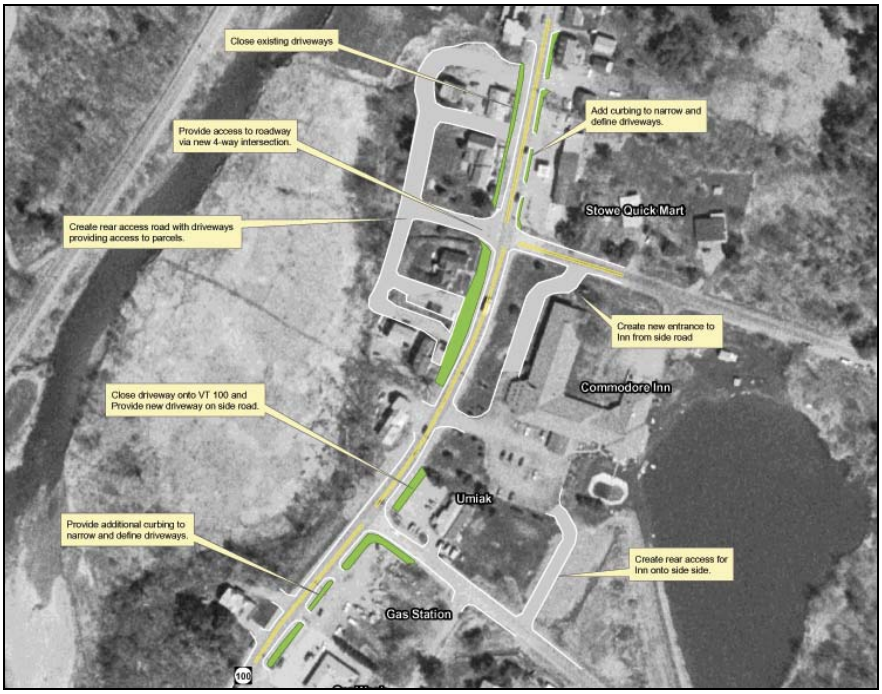

Figure E 11: Focus Area 4B - Lower Stowe Village near River Road

Figure E 12: Focus Area 5 - Maple Street in Stowe

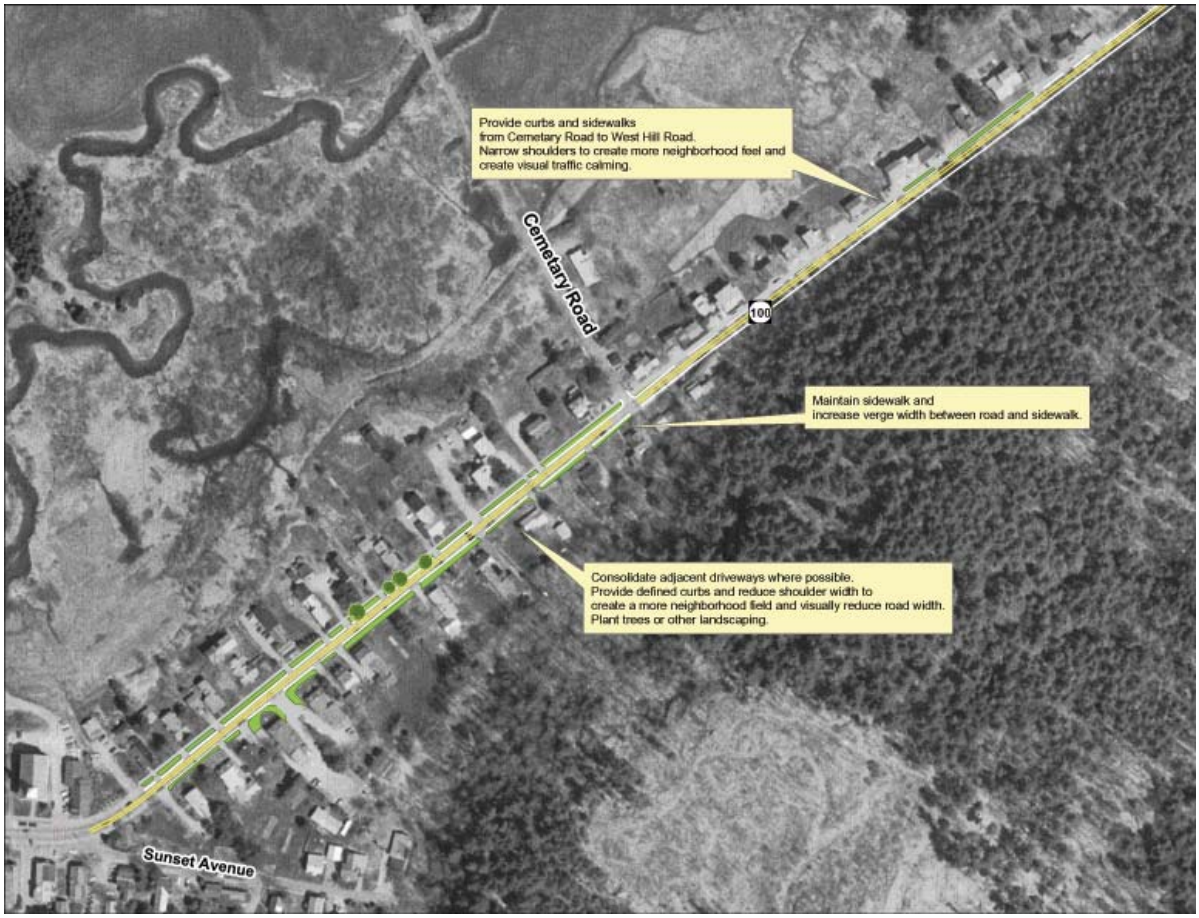

Figure E 13: Focus Area 6A - South of Stage Coach Road in Stowe

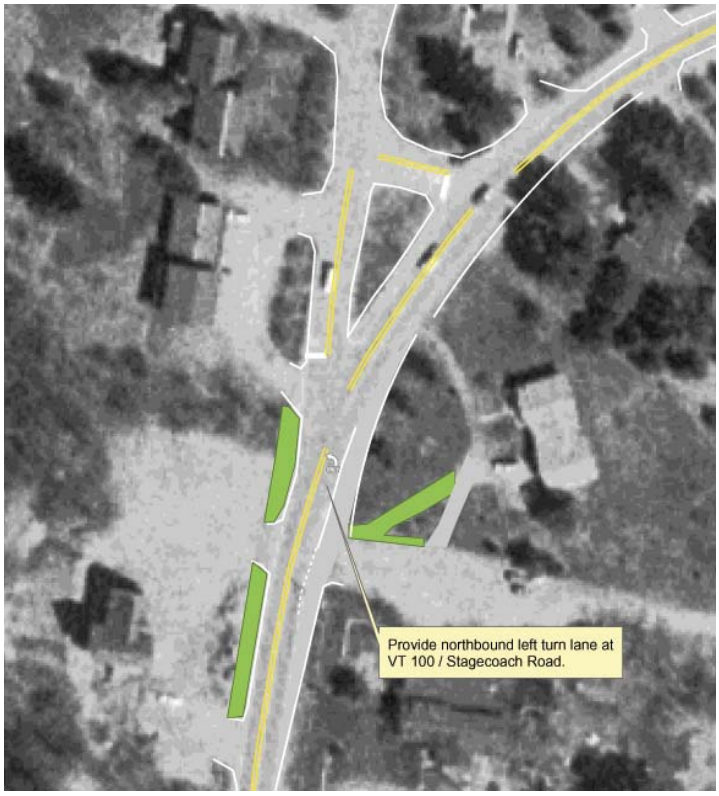

Figure E 14: Focus Area 6B - Near Snows in Stowe

Figure E 15: Focus Area 7A - South end of Brooklyn Street in Morristown

Figure E 16: Focus Area 7B - North end of Brooklyn Street in Morristown