

**SYKES MOUNTAIN AVENUE STUDY**

**TOWN OF HARTFORD, VT.**

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Prepared by the Upper Valley Lake Sunapee  
Regional Planning Commission  
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Submitted on March 16, 2000

# SYKES MOUNTAIN AVENUE STUDY

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## SYKES MOUNTAIN AVENUE STUDY

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### I. INTRODUCTION

The Sykes Mountain Avenue area of White River Junction, Vermont is located immediately southeast of the intersection of Interstate Highways 89 and 91. This area has many of the features which make it prime for development including Industrial/Commercial zoning, public utilities with capacity to serve the area, good road access and relatively flat topography . These factors combined have attracted considerable growth over the past few years. With the build-out of other areas zoned and developing for industrial/commercial uses in the White River Junction and Upper Valley area, the pressure to develop and redevelop the Sykes Mountain Avenue area will only increase in the future.

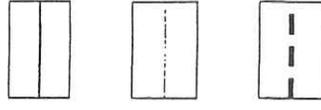
To date, about 43% of the Industrial/Commercial zoned area has been developed within the Sykes Mountain Avenue study area shown on Map 1: Study Area Base Map. Up to this point, much of this development has occurred in a haphazard, incremental manner resulting in uncoordinated, unplanned land use, transportation and utility systems typical of strip developments. The purpose of this study is to combat the strip commercial development pattern by taking a comprehensive approach to the area and creating more coordinated plans for land use as well as transportation and utility systems to serve that development. More specifically, this study is intended to:

- Evaluate land use and traffic circulation patterns for the area;
- Evaluate zoning and specific uses in the area in relation to Town goals for economic development and the desires of property owners;
- Evaluate transitional zoning in the area and the effectiveness of buffers;
- Integrate multiple properties into cohesive land use and transportation design;
- Create a more attractive, pedestrian friendly environment;
- Improve access management;
- Ensure that the infrastructure is in place to support anticipated growth; and
- Avoid strip commercial development.

MAP 1

Sykes Mountain Ave  
Sector Plan

Study Area Base Map



Parcel Boundary

20 Foot Contour

Zoning Districts

Industrial Commercial (I-C)

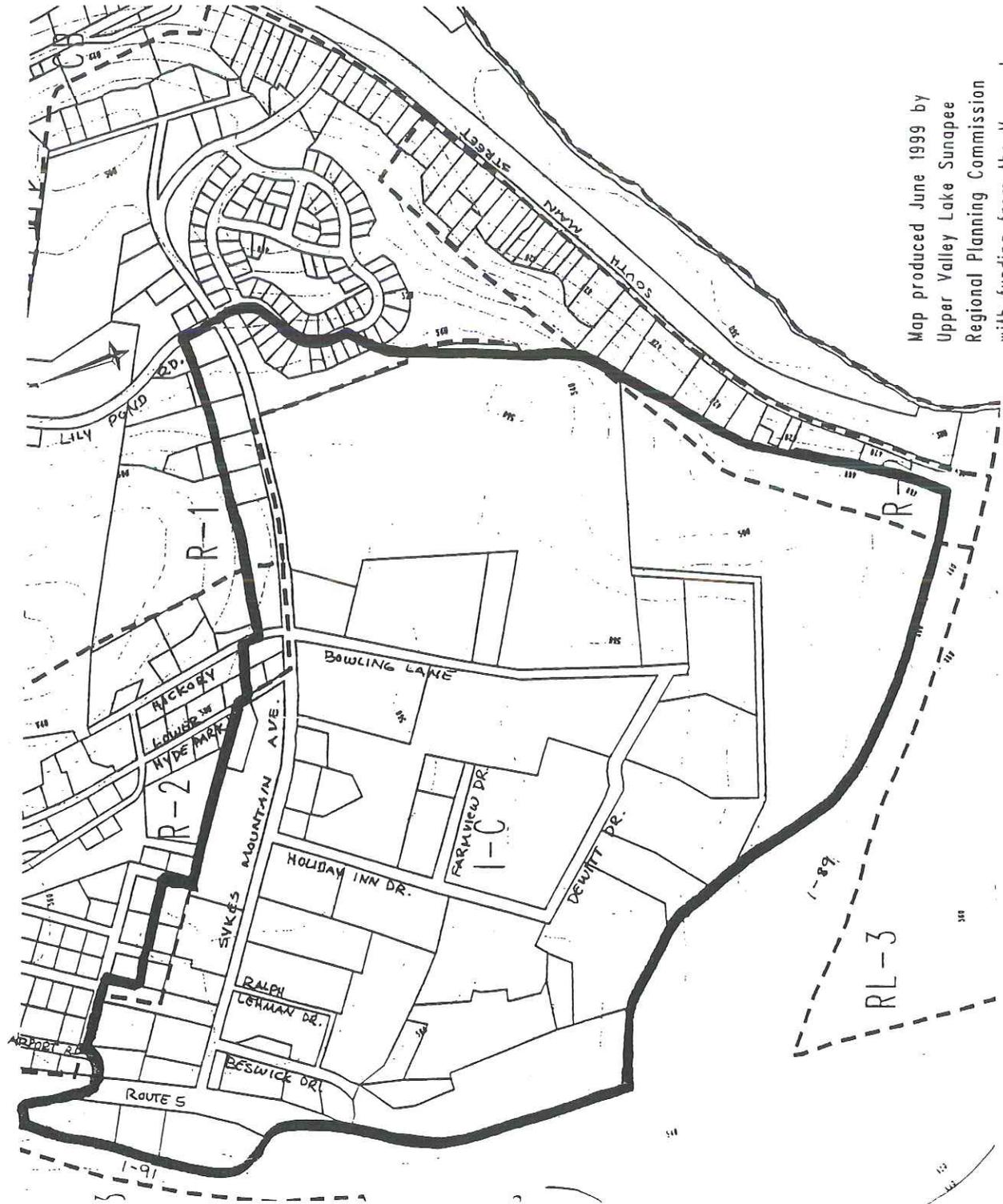
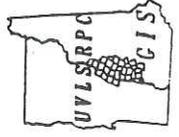
Central Business (CB)

Residential 1 (R-1)

Residential 2 (R-2)

Residential 3 (R-3)

Rural Lands 3 (RL-3)



Map produced June 1999 by  
Upper Valley Lake Sunapee  
Regional Planning Commission  
with funding from the Vermont  
Municipal Planning Grant Program;  
revised November 1999.

scale = 1:5400 1 inch = 450 feet

## II. EXISTING CONDITIONS

### A. **LOCATION, TOPOGRAPHY, ZONING & LAND OWNERSHIP:**

The key feature affecting the future development of this area is its location immediately adjacent to the interstate highway system. This close and convenient accessibility to both I-89 and I-91 makes this area prime for development. The study area, as shown on the Study Area Base Map, is generally bounded by I-89 on the south, I-91 on the west, Beech Street on the north and the Industrial/Commercial Zoning boundary on the east. The Base Map shows the existing road network, topography, property parcels and zoning within the study area. Most of the study area is a terrace above the Connecticut River to the east which provides relatively flat to gently sloping topography. The terrain south and east of Dewitt Drive becomes steeper falling off to the south and east.

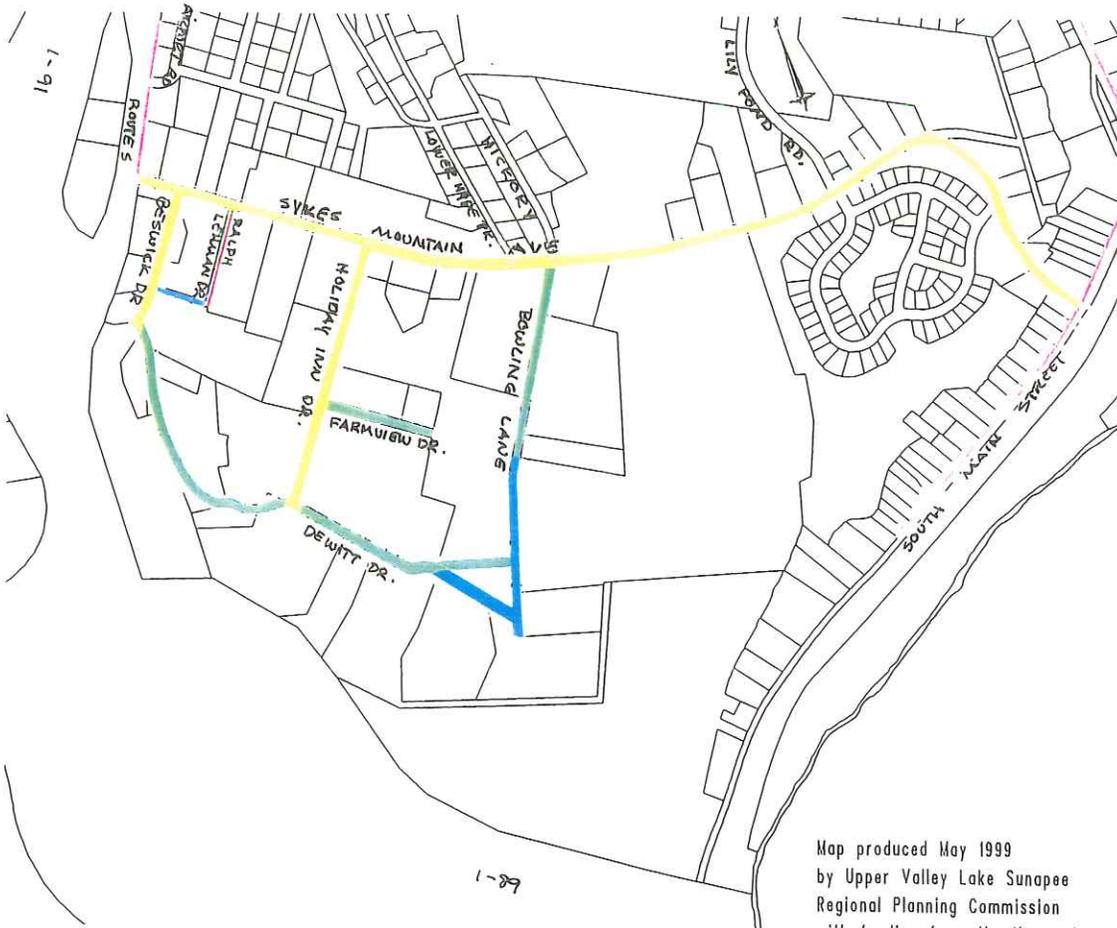
All of the study area is zoned Industrial/Commercial except the area north of Sykes Mountain Avenue lying between Lower Hyde Park and the Masonic Lodge, which is zoned R-1 and R-2.

The land ownership pattern is unusual in that most of the remaining undeveloped land is held in large parcels by one individual owner.

### B. **TRANSPORTATION:** Transportation features inventoried included the road circulation system, road traffic counts, intersection traffic counts, pedestrian circulation system, transit service and park & ride/car pooling lots.

1. **ROAD CIRCULATION SYSTEM:** The road circulation system is shown on Map 2: Existing Transportation Features. As reflected on this map, the existing road network is a hodgepodge of public, private and unbuilt, paper streets. The location of the private road right-of-way connection between Beswick Drive and Holiday Drive in particular is poorly defined. The private road connecting Holiday Drive with Bowling Lane does not follow the right-of-way for the east half of that road section.
2. **TRAFFIC COUNTS ON SYKES MOUNTAIN AVENUE:** The traffic counts for average daily traffic flow on Sykes Mountain Avenue are depicted on Exhibit 1 to follow. This information shows there is a tenfold increase in daily traffic volumes on Sykes Avenue between South Main Street and Route 5. Starting just west of the intersection with South Main Street, the average daily traffic flow on Sykes Mountain Avenue rises from 1,200 vehicles per day to 12,800 vehicles per day at the Route 5 intersection.

MAP 2  
 Sykes Mountain Ave  
 Sector Plan  
 Existing  
 Transportation Feature



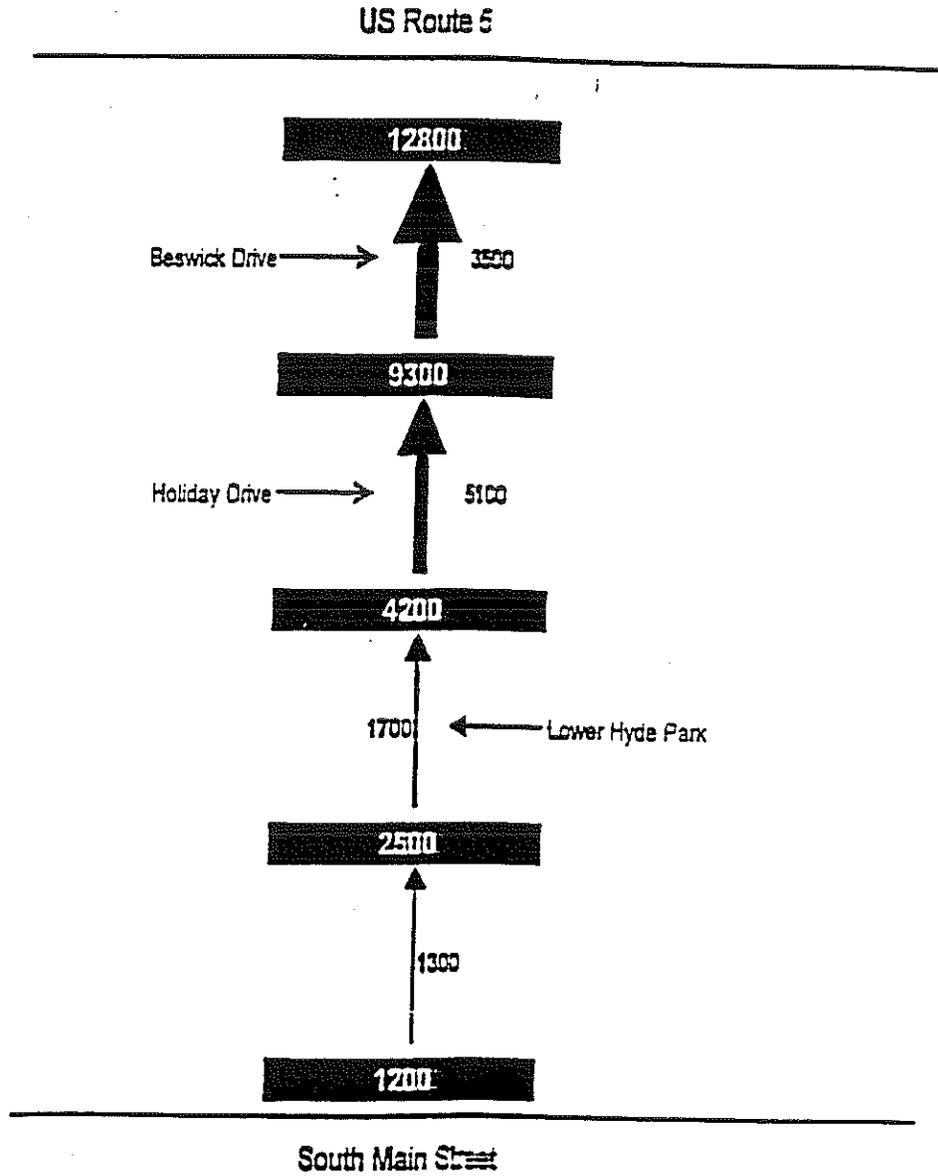
- Study Area Roads
- Public Roads
  - Private Roads
  - Paper Streets (Unt
- Sidewalks
- 
- Location of Traffic Counts
- Intersection Counts
  - Tube Counts

scale 1:5400 1 inch = 450 feet

Map produced May 1999  
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 Regional Planning Commission  
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 Municipal Planning Grant Program;  
 revised November 1999.



**EXHIBIT 1:**  
**SYKES MOUNTAIN AVENUE**  
**AVERAGE DAILY TRAFFIC FLOW**



**Legend:**

- XXXXX** = Average Daily Traffic Volume
- xxxx** = Additional traffic from surrounding businesses and street

3. **INTERSECTION COUNTS & LEVEL OF SERVICE:** Traffic counts were done at the afternoon (P.M.) peak hour for the following intersections:

- Sykes Mountain Avenue/Route 5
- Sykes Mountain Avenue/Beswick Drive
- Sykes Mountain Avenue/Holiday Drive
- Sykes Mountain Avenue/Lower Hyde Park
- Sykes Mountain Avenue/Bowling Lane
- Sykes Mountain Avenue/South Main Street
- Route 5/Airport Road

The traffic turning data collected from these intersection counts are included in the appendix to this study.

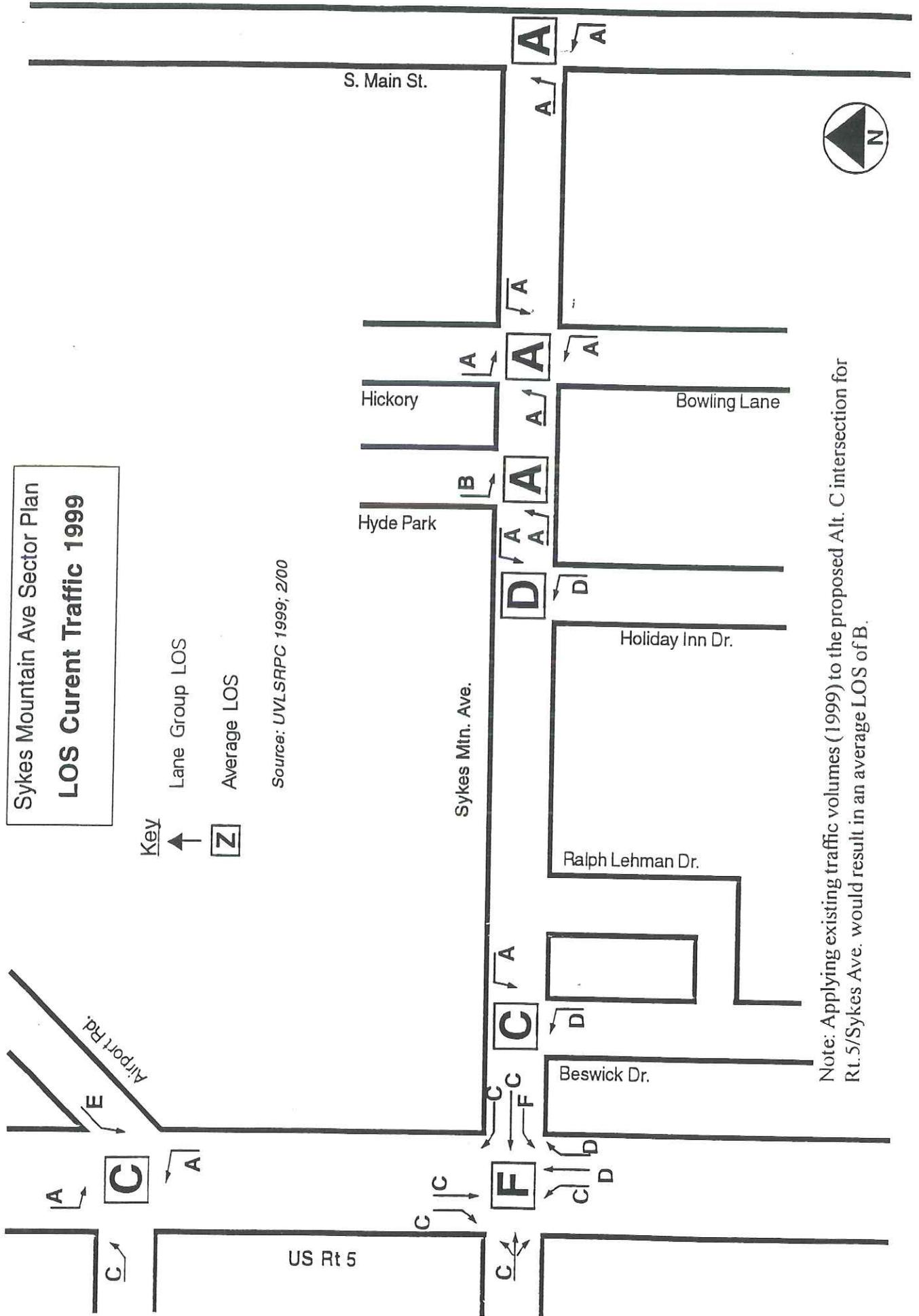
The level of service (LOS) of an intersection is a measurement of the delay experienced by motorists waiting to proceed through an intersection. The criteria for the different levels of service are outlined in the table to follow:

LEVEL OF SERVICE CRITERIA	
LEVEL OF SERVICE	CONDITIONS
A	Free Flow
B	Slight Congestion
C	Average Congestion
D	Above Average Congestion
E	High Congestion
F	Extreme Congestion

The existing level of service (LOS) experienced at the intersections within the study area is depicted on Exhibit 2 and outlined below:

<u>Intersection</u>	<u>Level of Service</u>
• Sykes Mountain Avenue/Route 5	F
• Sykes Mountain Avenue/Beswick Drive	C
• Sykes Mountain Avenue/Holiday Drive	D
• Sykes Mountain Avenue/Lower Hyde Park	A
• Sykes Mountain Avenue/Bowling Lane	A
• Sykes Mountain Avenue/South Main Street	A

Exhibit 2: Existing Level of Service (LOS)



Note: Applying existing traffic volumes (1999) to the proposed Alt. C intersection for Rt. 5/Sykes Ave. would result in an average LOS of B.

4. **ACCESS MANAGEMENT:** Many of the earliest properties developed around the Sykes Avenue/Route 5 intersection exhibit the classic characteristics of strip commercial development. Many of these properties which have virtually uncontrolled access across their frontage on Sykes Avenue and which have been developed with multiple access points are examples of developments with poor access management. Poor access management can adversely affect both the carrying capacity of the road and the safety of those persons accessing the road.  
Access management for other more recently developed or redeveloped properties in the study area is better with a limited number of clearly defined access points.
5. **PEDESTRIAN CIRCULATION:** Sidewalk improvements are practically non-existent within the study area. The existing sidewalk improvements are shown on the Transportation Features Map. A sidewalk exists along the east side of Ralph Lehman Drive, another exists along the east side of Route 5 north of the Sykes Mountain Avenue intersection, and a sidewalk exists along the west side of South Main Street north and south of the Sykes Mountain Avenue intersection. No sidewalk exists along Sykes Mountain Avenue or the other roads within the Industrial/Commercial zone connecting to Sykes Mountain Avenue.
6. **TRANSIT SERVICE:** Advance Transit Bus Service serves this area as part of its regular red loop route which runs approximately once per hour daily. This loop route connects West Lebanon through downtown White River Junction, goes along South Main Street, proceeds up Sykes Mountain Avenue, goes down Holiday Drive to the Gillman Office Center, then to the V.A. Hospital on Route 5, across the river to Hartford Village and back to West Lebanon. This route has existing bus stops along the north side of Sykes Mountain Avenue at the following intersections in addition to stopping in the middle of the Gillman Office Center:
  - Beswick Drive
  - Holiday Drive
  - Hickory Ridge
  - Walsh Avenue

Advance Transit is considering route changes to be effective in January, 2000.

Although there are no existing bus shelters located within the study area, the Executive Director of Advance Transit indicated they have received a capital grant to construct bus shelters and would be working with the community to identify preferred locations.

Stagecoach Bus Service from Randolph also serves this area as part of their river route with stops at the Gillman Office Center and the Astro Bowl Complex.

7. **PARK & RIDE/CAR POOLING LOT:** A formally designated park & ride/car pooling lot does not exist within the study area, but feedback from traffic counters indicates this practice is taking place informally to some extent. The Vermont Department of Transportation is investigating establishing a Park & Ride Lot somewhere in the vicinity of the interstate interchange.
  
8. **STREETSCAPES:** Streetscape components include the road travel surface, drainage facilities, landscaping and pedestrian elements. Drainage facilities for open drainage systems include shoulders and open ditches. Closed drainage systems include vertical curbing or open ditches leading to catch basins and then underground through closed drainage lines. The presence or absence of landscaping and pedestrian elements in the streetscape design can influence the appeal and marketability of an area.
  - a. **Route 5:** Route 5 through Hartford is a designated Scenic Byway. The Route 5 streetscape immediately north and south of its intersection with Sykes Mountain Avenue has minimal existing trees and shrubs. Vertical curbing is present north and south of the intersection with Sykes Mountain Avenue. The only existing sidewalk is along the east side of Route 5 north of Sykes Mountain Avenue. The dominating visual aspects are the clutter of buildings and signs competing for the motorists attention and the lack of open space and landscaping.
  
  - b. **Sykes Mountain Avenue:** Sidewalks do not exist on either side along the entire length of Sykes Mountain Avenue.

The drainage system along Sykes Mountain Avenue consists of open ditches feeding several catch basins along the north side of the road. This closed drainage line turns north and outlets north of Gateway Motors into an open drainage channel leading north to the White River. A second closed drainage line starts near Hickory Ridge and proceeds eastward along Sykes Mountain Avenue to Butternut Lane to Acorn Street and discharging into the excavation area which drains eastward to the Connecticut River.

The landscaping component of the streetscape is lacking in most of the frontage along Sykes Mountain Avenue. The maturing tree line

along the frontage of the U.S. Post Office site is the best example of integrating landscaping into the streetscape design. The more recent plantings along the Comfort Inn frontage and the Toyota Dealership frontage are other examples. Otherwise the frontage along Sykes Mountain Avenue is void of landscaping. The overhead utility lines and the underground drainage line running along the north side of Sykes Mountain Avenue impose design constraints on landscaping. Design constraints are also imposed by minimal water infiltration area for root systems, salt from roads and snow removal.

As part of this study, sketches were prepared illustrating the existing and possible landscaping along some of the Sykes Mountain Avenue frontage. By way of example, Exhibit 4 to follow compares the existing landscaping with one possible scheme for adding landscaping for a small section of the Sykes Mountain Avenue frontage.

- c. **Holiday Drive:** This road is a good example of including landscaping into the streetscape design with maturing trees lining both sides of the road. No sidewalks exist on either side of the road. Open drainage exists along the road.
- d. **Farmview Drive:** This road is another good example of including landscaping into the streetscape design with maturing trees lining both sides of the road. No sidewalks exist on either side of the road. Open drainage exists along the road.
- e. **Ralph Lehman Drive:** This street has been constructed with vertical curbing lining both sides of the street. A sidewalk exists along the east side of the road. A row of ornamental trees line the east side of Ralph Lehman Drive. No trees or shrubs exist along the west side of this road.
- f. **Bowling Lane, DeWitt Drive and Beswick Drive:** These roads all share common streetscape characteristics. There is no landscaping integrated into the streetscapes of these roads, they have open drainage systems and there are no sidewalks.

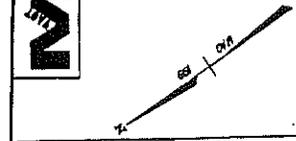
9. **PLANNED IMPROVEMENTS AT THE ROUTE 5/SYKES MOUNTAIN AVENUE INTERSECTION:** In 1997, the Town of Hartford worked with representatives of the Vermont Agency of Transportation (Now VTRANS) and landowners in this area evaluating

alternative options for improving the Route 5/Sykes Mountain Avenue intersection. The chosen alternative was made after much discussion and public input. These improvements are scheduled in 2004 in the Vermont 10 Year Highway Improvement Plan and include the following components as shown on Map 3:

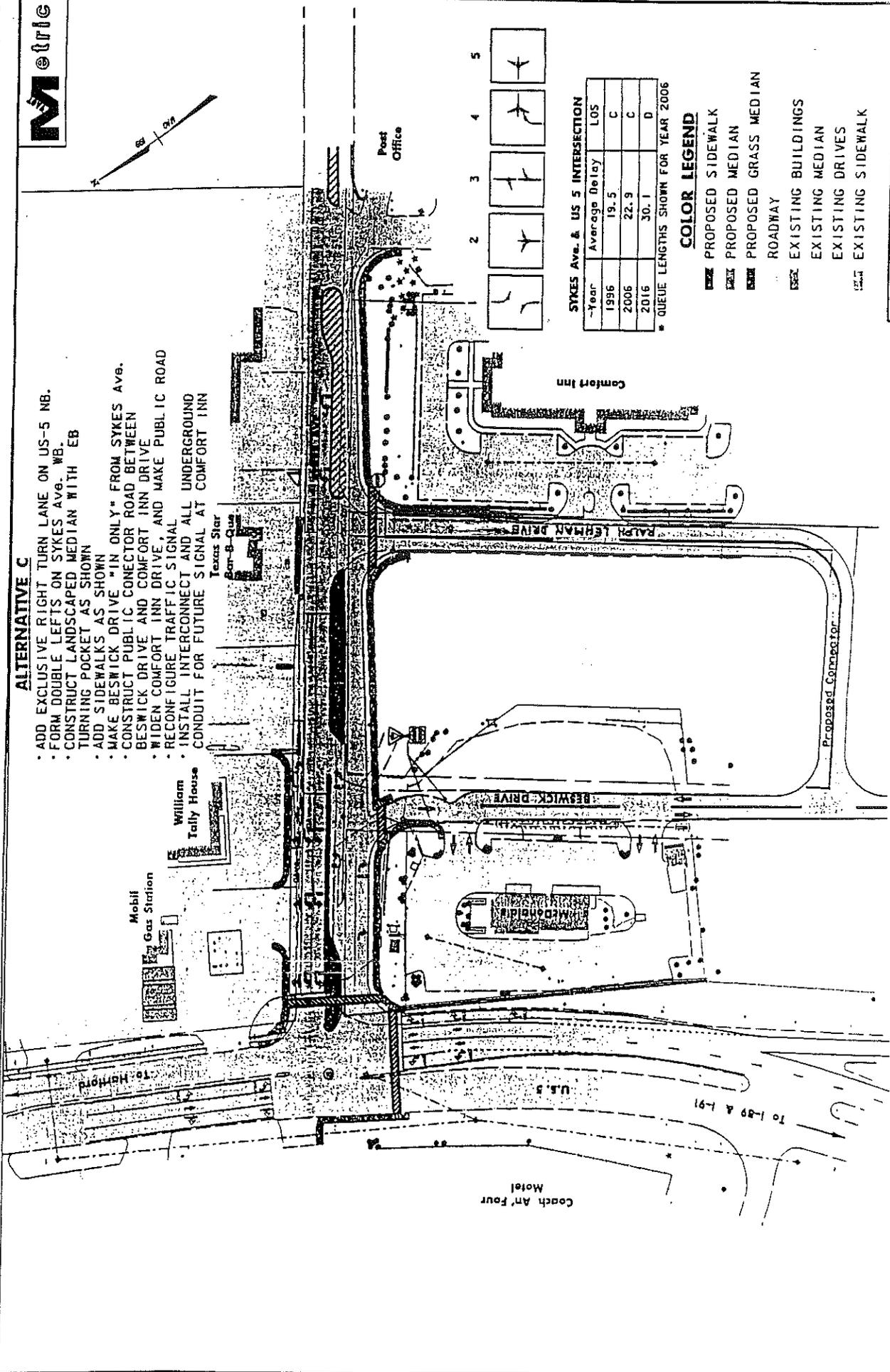
- a. Construct a new exclusive right turn lane on US 5 northbound onto Sykes Mountain Avenue.
- b. Construct an additional exclusive left-turn lane on Sykes Mountain Avenue westbound onto US Route 5. This creates a three lane approach comprised of two exclusive left-turn lanes and one through\right lane.
- c. Construct a 5 meter wide (16 ft.) raised landscaped median on Sykes Mountain Avenue from US Route 5 approximately 130 meters to the east. An exclusive eastbound left turn "pocket" will be included in the median to allow access to the bus terminal and business that would otherwise be obstructed by the median. U-turns would be allowed from the left turn lane, but large trucks would not be able or permitted to make U-turns at this location.
- d. Sykes Mountain Avenue eastbound from US 5 would be two lanes wide up to Beswick Drive to allow the right lane to enter Beswick Drive, while the left lane would service through traffic. This would address the concern that traffic entering Sykes Mountain Avenue often is slowed by turning vehicles at Beswick Drive.
- e. A connector road between Beswick Drive and the Ralph Lehman Drive would be required to provide full access to those businesses and residents on Beswick Drive that would be affected by the new median. The connector road would provide access between Beswick Drive and the Ralph Lehman Drive which has better access onto Sykes Mountain Avenue because of its distance from the US 5 intersection. This connector road would cross land that is currently privately owned, and would require acquisition of a 50 foot wide right-of-way which would be turned over to the Town.
- f. Construct geometric improvements to the Ralph Lehman Drive at Sykes Mountain Avenue which would include improved curb radii and the addition of a left turn lane, creating a two lane

approach on this leg.

- g. Make provisions for the eventual installation of a traffic signal at the Ralph Lehman Drive intersection. These provisions would include the installation of all underground signal conduit and appurtenances including an underground connection to the signal at US 5 and Sykes Mountain Avenue. The intent of this is to make it easy and affordable for the Town to add a traffic signal at this location in the future when it would be warranted due to the predicted increases in traffic volumes. The addition of the signal at Ralph Lehman Drive is recommended under those circumstances to improve overall operations and access.
- h. Provide an exclusive left turn lane into the Ralph Lehman Drive from Sykes Mountain Avenue westbound.
- I. Provide sidewalks, crosswalks, and a pedestrian actuated crossing phase to the signal.



- ALTERNATIVE C**
- ADD EXCLUSIVE RIGHT TURN LANE ON US-5 NB.
  - FORM DOUBLE LEFTS ON SYKES AVE. WB.
  - CONSTRUCT LANDSCAPED MEDIAN WITH EB TURNING POCKET AS SHOWN
  - ADD SIDEWALKS AS SHOWN
  - MAKE BESWICK DRIVE "IN ONLY" FROM SYKES AVE.
  - CONSTRUCT PUBLIC CONNECTOR ROAD DRIVE BESWICK DRIVE AND COMFORT INN DRIVE
  - WIDEN COMFORT INN DRIVE, AND MAKE PUBLIC ROAD
  - RECONFIGURE TRAFFIC SIGNAL
  - INSTALL INTERCONNECT AND ALL UNDERGROUND CONDUIT FOR FUTURE SIGNAL AT COMFORT INN

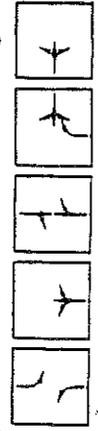


**SYKES AVE. & US 5 INTERSECTION**

Year	Average Delay	LOS
1996	19.5	C
2006	22.9	C
2016	30.1	D

\* QUEUE LENGTHS SHOWN FOR YEAR 2006

- COLOR LEGEND**
- PROPOSED SIDEWALK
  - PROPOSED MEDIAN
  - PROPOSED GRASS MEDIAN ROADWAY
  - EXISTING BUILDINGS
  - EXISTING MEDIAN
  - EXISTING DRIVES
  - EXISTING SIDEWALK



SCALE IN METERS

PROJECT: US 5 AT SYKES AVE. SIPC 15030203  
 DESIGN FILE NAME: SIPC 15030203  
 PAPER FILE NAME: SIPC 15030203  
 SURVEYED BY: SURVEY DATE: 11/17/06  
 SOLID LEADER: DES 24003 DES 24004

DATE: 11/17/06  
 DRAWN BY: J. HARRIS  
 CHECKED BY: J. HARRIS

C. **UTILITIES:** The following is information on existing utility systems serving the study area, including sewer, water, fire protection and storm drainage.

1. **SEWER:** The Town of Hartford Public Works Department has indicated there is adequate capacity in the sewer treatment plant to accommodate the existing and anticipated growth within the study area.

The sewer collection system (sewer lines and pump stations) within the study area is shown on Map 4: Existing Sewer and Closed Drainage System to follow. Like the road system, this is a mix of public and private systems.

2. **STORM DRAINAGE:** Currently two underground drainage lines serve to gather and carry away storm drainage generated by development in the study area. These storm drainage lines are shown on Map 4: Existing Sewer and Closed Drainage System to follow. One storm drain line runs from the front of the Crossroads Cafe easterly to the Gateway Dealership, and then extends north to the natural drainage running towards the White River. The second storm drain line starts across the street from the easterly line of the AJ'S Restaurant lot and runs downhill along Sykes Mountain Avenue to Butternut Road to Acorn Street and then outlets into the existing gravel pit. The Public Works Department indicated the storm drainage flowing to the southeast and down over the hill under South Main Street and the railroad line has been a problem in the past and has almost washed out the railroad line at one point.

3. **WATER:** The Town of Hartford Public Works Department has indicated there is adequate water supply to serve the existing and projected development within this area.

The water distribution system within the study area is shown on Map 5: Existing Water System and Fire Protection to follow. This system, like the sewer system, is a combination of public and private lines. The existing system features several dead-end water lines. These dead-end lines could pose problems in maintaining adequate fire flows. Also, in the event of a break in the dead-end water line, water service would be disrupted to users dependent on the system who are located beyond the break until the line is repaired and service restored. If the system were looped, then service would not be disrupted.

4. **FIRE PROTECTION:** Fire protection is provided to the study area from fire hydrants spaced along the water distribution system as depicted on Map 5: Existing Water System and Fire Protection to follow. Representatives of the Fire Department and the Public Works Department have indicated the fire flows are adequate, but could be improved through looping of the water mains.

MAP 4

# Sykes Mountain Ave Sector Plan

## Existing Sewer and Closed Drainage System



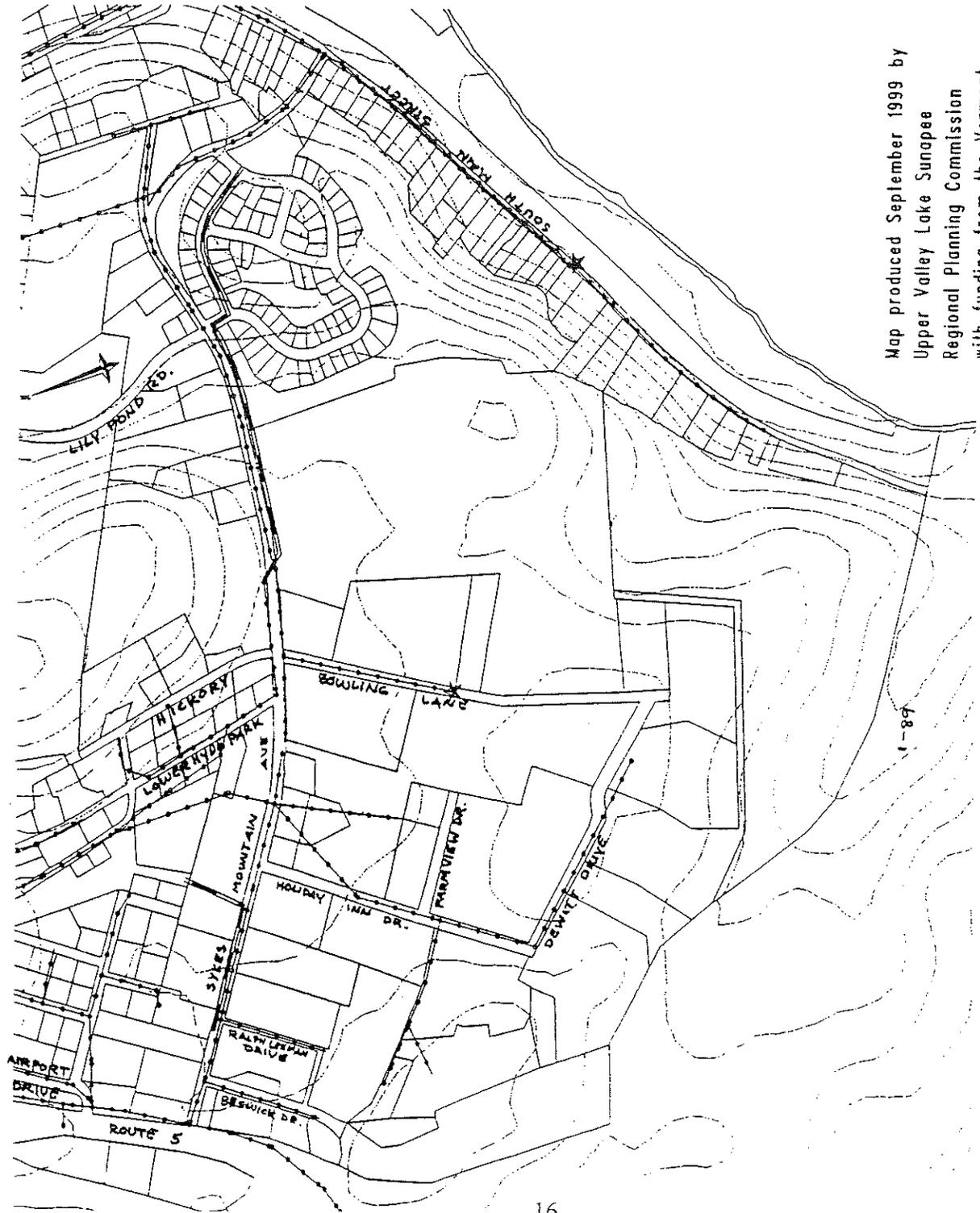
Existing Sewer Lines



Existing Pump Stations



Existing Closed  
Drainage Lines



Note: All Locations Approximate



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scale 1:5400 1 inch = 450 feet

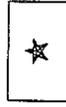
MAP 5

# Sykes Mountain Ave Sector Plan

## Existing Water System and Fire Protection



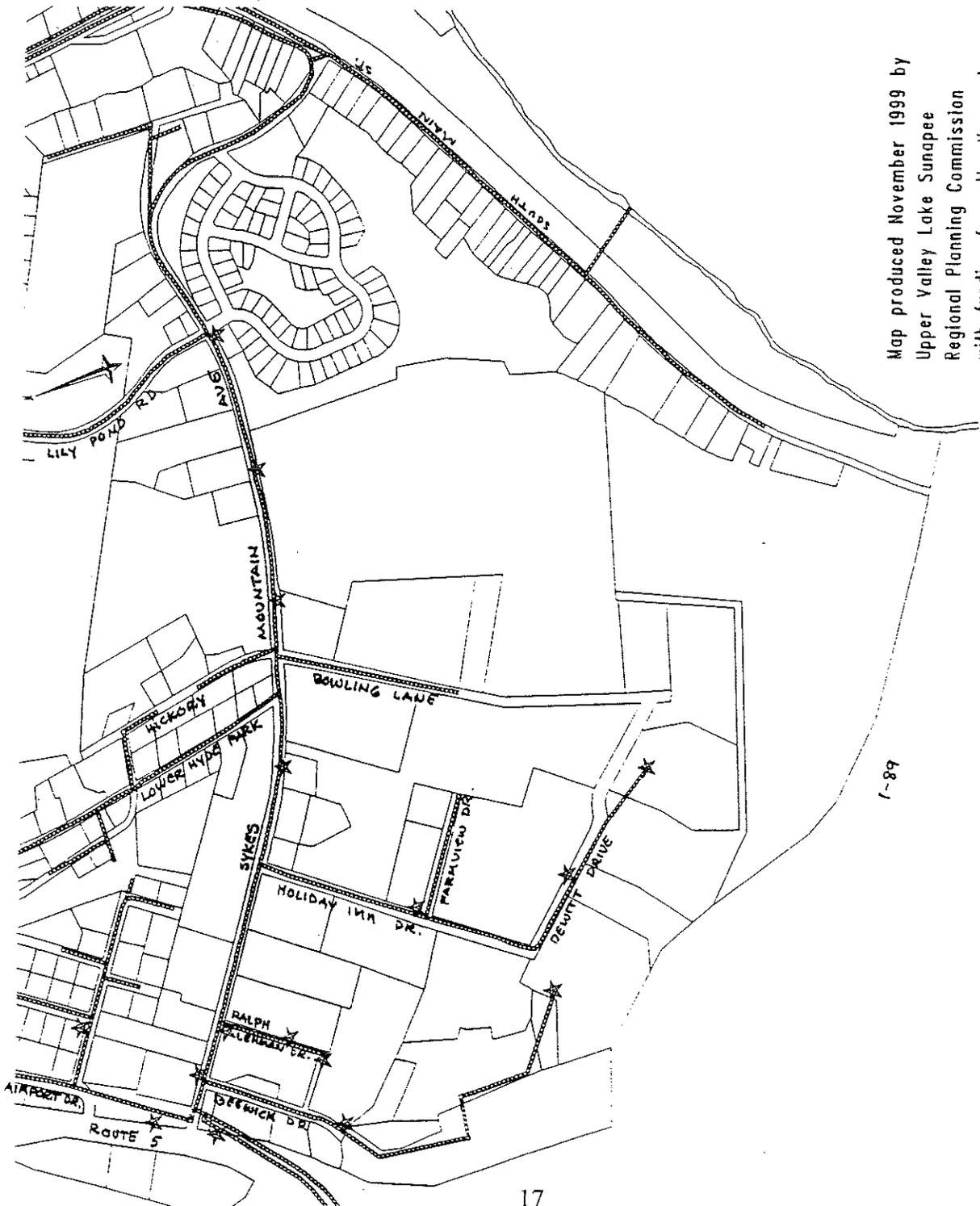
Existing Water Lines



Existing Hydrants

Within Study Area

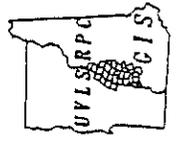
Note: All Locations Approximate



1-89

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scale 1:5400 1 inch = 450 feet



## D. LAND USE:

1. **CURRENT LAND USE/LAND COVER:** A wide variety of land uses exist within the study area as reflected in the summary table and on Map 7: Current Land Use/Land Cover to follow. An Orthophoto (scale of 1"=150 ft.) which clearly depicts existing development within the study area through 1994 is available in the Hartford Planning Department. The summary table below outlines the current major land use categories within the study area by type and area. As reflected in the data, 42.7% or 81.6 acres of the study area is developed, leaving 57.3% or 109.8 acres undeveloped. The major existing developed land uses include: commercial retail (10.8% of land area), services (9.3% of land area), government (8.3% of land area), and lodging (5.2% of land area) land uses. Forest (29.7% of land area), agriculture (19% of land area) and vacant (8.6% of land area) land uses combined account for the undeveloped land area, totaling 57.3% of the study area.

Some conclusions about existing land use patterns can be gleaned from this data.

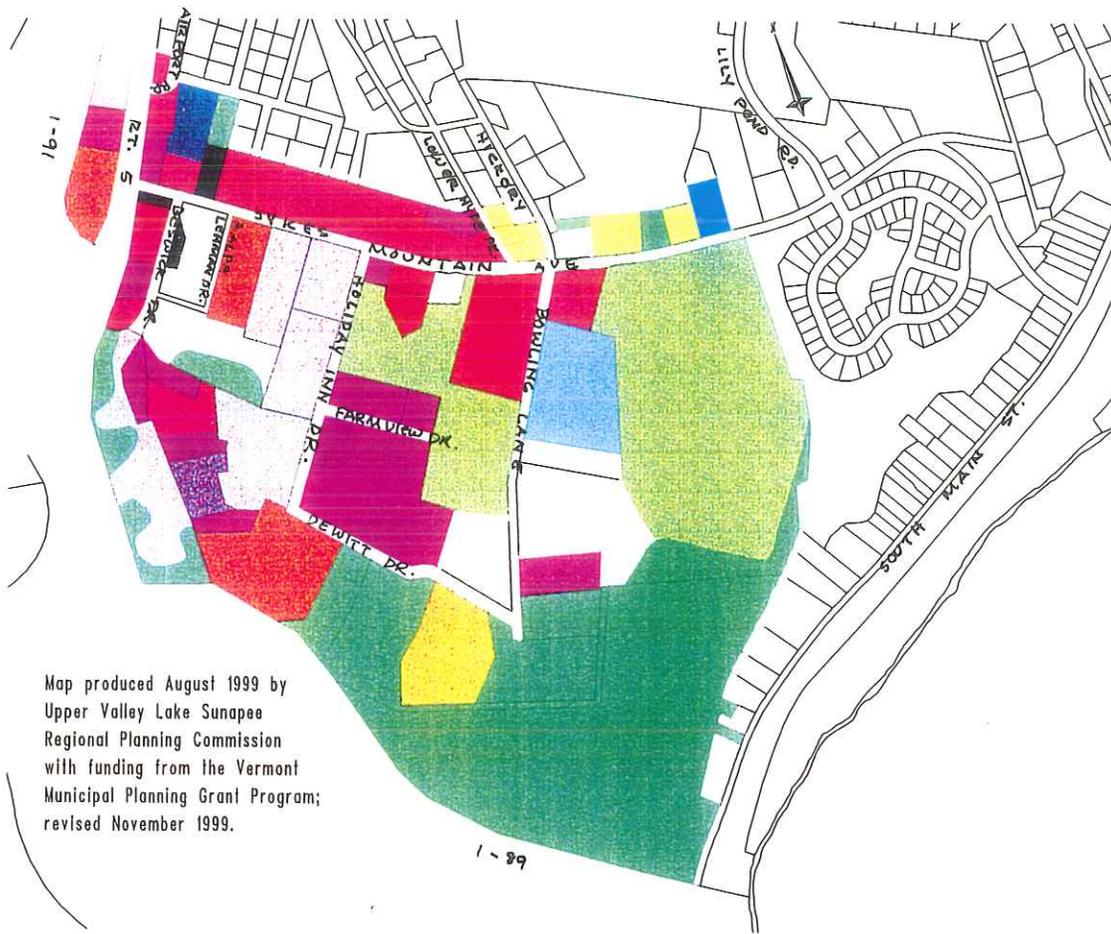
- a. Tourist-related services dominate the visible properties at the Sykes Mountain Avenue/Route 5 intersection. These uses include gasoline/convenience store sales, motels/ hotels, and both sit-down and fast-food restaurants.
- b. Automotive/truck sales and repair facilities dominate the land uses fronting Sykes Mountain Avenue between Ralph Lehman Drive and Bowling Lane.
- c. Professional office and services are the major land uses located in the area south of and not fronting on Sykes Mountain Avenue.
- d. Sykes Mountain Avenue, from Route 5 to Bowling Lane, exhibits the classic strip commercial development pattern. Strip commercial development is typically characterized by the following attributes:
  - e. street frontage parking lots serving individual or strips of stores,
  - f. no provisions for pedestrian access between sites on the strip,
  - g. uses are only one store deep,
  - h. the buildings are arranged linearly rather than clustered,
  - i. there is no design integration among individual uses,
  - j. multiple access points and poor access management,
  - k. poor visual image due to large and visually displeasing signage and minimal or no landscaping or open space, and
  - l. high percentage of lot coverage with impervious surfaces including buildings, driveways and parking areas which generate relatively high volumes and increased rates of storm water runoff.

Table 1: Summary of Existing Land Use/Land Cover  
within the Sykes Mountain Avenue Study Area

Land	Land Area in Acres	Percentage of Land Area
<b>Developed</b>		
Commercial	20.6 acres	10.8%
Services	17.6 acres	9.3%
Government	15.9 acres	8.3%
Lodging	9.9 acres	5.2%
Amusement	5.4 acres	2.8%
Multi-Family	4.5 acres	2.3%
Single Family	2.8 acres	1.5%
Bus Terminal	1.5 acres	0.8%
Industrial	1.4 acres	0.7%
Institutional	0.9 acres	0.5%
Parking	1.1 acres	0.5%
<b>Total</b>	<b>81.6 acres</b>	<b>42.7%</b>
<b>Undeveloped</b>		
Forest	56.9 acres	29.7%
Agricultural	36.5 acres	19%
Vacant	16.4 acres	8.6%
<b>Total</b>	<b>109.8 acres</b>	<b>57.3%</b>
<b>TOTAL</b>	<b>191.4 acres</b>	<b>100%</b>

MAP 6

Sykes Mountain Ave  
Sector Plan  
Current  
Land Use/Land Cover



Land Use/ Land Cover Categories

- Commercial Retail
- Services
- Lodging
- Amusement
- Industrial
- Institutional
- Government
- Bus Terminal
- Parking
- Gravel Extraction
- Multi-family Residential
- Single Family/ Duplex
- Agricultural
- Forest
- Vacant

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scale 1:5400 1 inch = 450 feet

Retail Office Mix



2. **NATURAL RESOURCES:** Natural resources which should be considered in any land use planning study, and must be considered in any ACT 250 land use review, include the presence of prime agricultural soils and wetlands. These natural resources are depicted on Map 6: Prime Agricultural Soils and Wetlands to follow.

- a. **Prime Agricultural Soils:** Much of the remaining undeveloped land within the study area currently is being farmed (corn) and the bulk of this is categorized as prime agricultural soils.

As noted in the “Vermont Act 250 Handbook - A guide to State and Regional Land Use Regulation”, the best alternative to address the concern of developing these prime agricultural soils may lie in off-site mitigation. The loss of prime agricultural soils on-site may be mitigated by preserving land elsewhere or paying to preserve other agricultural land.

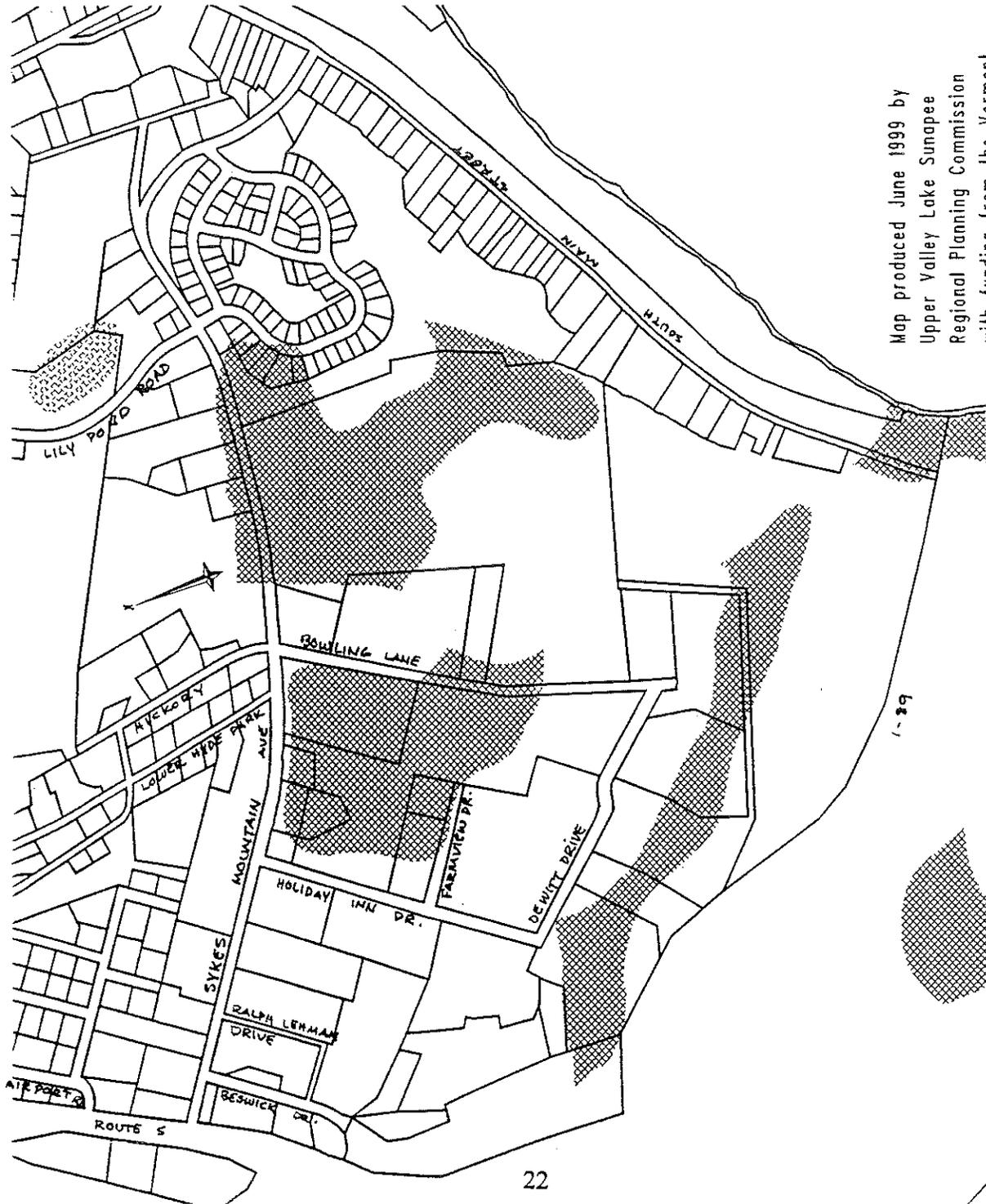
- b. **Wetlands:** No wetlands are located within the study area. Lilly Pond, which is identified as a wetland, is located just outside the study area to the northeast of Sykes Mountain Avenue and Lilly Pond Road.

MAP 7

# Sykes Mountain Ave Sector Plan Prime Agricultural Soils and Wetlands

NWI Wetland

Prime  
Agricultural  
Soils



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Upper Valley Lake Sunapee  
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Municipal Planning Grant Program.

scale 1:5400 1 inch = 450 feet

3. **TRANSITIONS/BUFFERS WITH NEIGHBORING USES:** One of the important objectives of this study was to evaluate the compatibility of the existing and potential uses which could develop within the Industrial/Commercial zoned portion of the study area, with the surrounding land uses. Towards that end, the existing neighboring uses and transitions/buffers were inventoried by sub-area as follows starting at the Route 5/Airport Road intersection and proceeding clockwise around the I/C Zoning District:

- a. **Residential Neighborhood to North:** The building and site layout of the retail store (Cloverleaf Jewelry) located at the corner of Route 5 and Airport Road makes for a good transition to the residential neighborhood to the north. In this instance the building separates and screens the parking and traffic impacts on the south side of the lot from the residences to the north.

The Vermont Transit bus maintenance facility located immediately south of Beech Street and Airport Road appears to be the most problematic land use with neighborhood residents. They have complained about noise and fumes generated by this facility which is operated twenty-four hours per day. The only existing buffer between this use and the residential area to the north across Beech Street is a chain-link fence and a poorly maintained hedge on the north side of the Vermont Transit property along Beech Street.

A vacant lot overgrown with scrub trees is located east of the bus maintenance facility. The western half of this lot is zoned I/C and the eastern half is zoned R-2.

The boundary separating the I/C Zoning District from the R-2 Zoning District, from this point to Lower Hyde Park, share the following features:

- auto sales/repair facilities are the developed uses in the I/C Zoning District;
- single family residential and a church are the current uses in the R-2 Zoning District located to the north; and
- the existing transition/buffer consists of a wood privacy fence about six feet in height and a mature line of pines along the boundary between the commercial and residential uses. The fence is in need of repair in some sections. The effectiveness of the mature row of pines as a buffer separating the two land uses is now limited since their lower limbs are so high above the ground (estimated to be

about twenty feet).

- b. Residential Area East of Lower Hyde Park long the north side of Sykes Mountain Avenue:** The I/C Zoning District boundary intersects Lower Hyde Park behind the Wilder Auto building, runs south along Lower Hyde Park to Sykes Mountain Avenue, then east along Sykes Mountain Avenue. The area between Lower Hyde Park to a line opposite the east boundary of AJ's property line is zoned R-1 (Residential). The frontage along the (Residential).

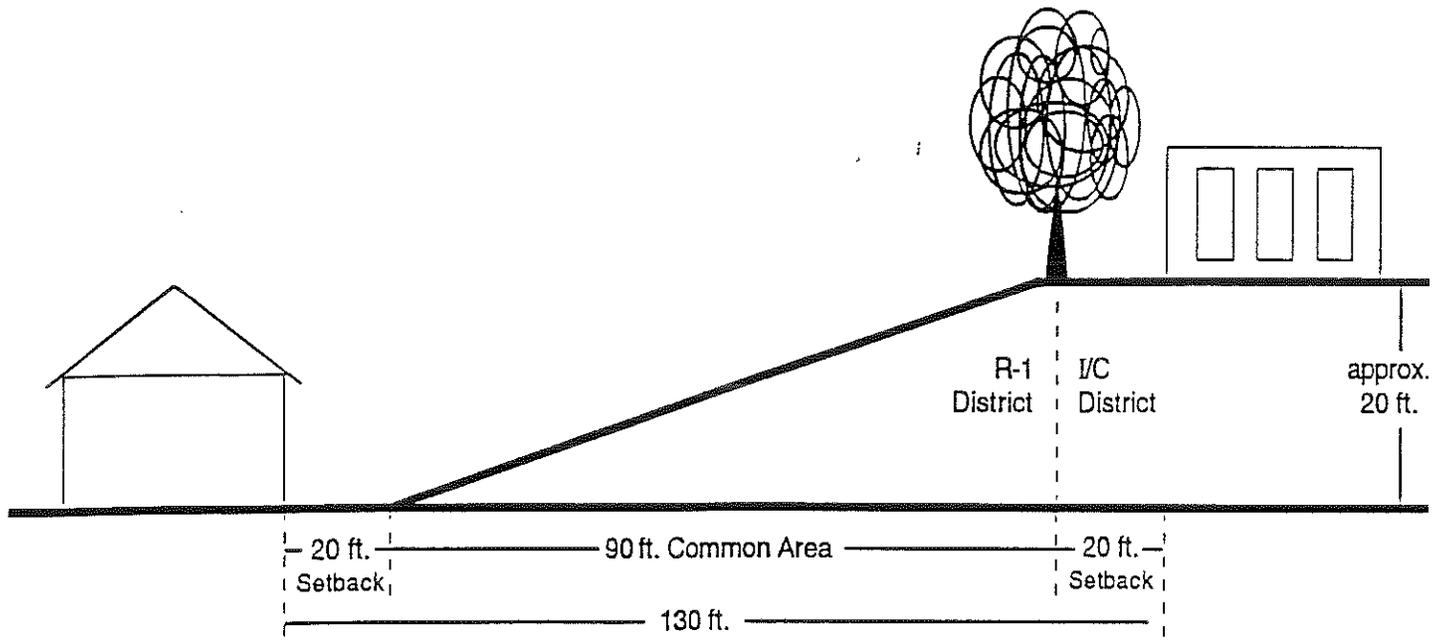
The area is developed primarily with single-family residences. Several home businesses are evident between Lower Hyde Park and Hickory Street from Sykes Mountain Avenue to Fairview Terrace. There is no existing transition or buffer for the single-family homes neighboring the auto repair businesses fronting Lower Hyde Park. Traffic, noise and visual impacts generated by the commercial businesses have substantial impacts on these residences. Maintenance and investment in these properties is lacking.

Those residential properties fronting on Sykes Mountain Avenue experience considerable impacts from the traffic estimated to be about 2,500 vehicles per day currently. These adverse traffic impacts will only amplify with the projected development of the I/C zoned area south of Sykes Mountain Avenue .

- c. Residential Neighborhood to East:** The I/C Zoning District boundary splits off Sykes Mountain Avenue east of the Masonic lodge and follows the crest of the ridge to the south towards I-91. This zone boundary, which follows the natural break in the topography, was well chosen since it provides a natural buffer or transition to the residential community under development east of the study area. The cross-section, shown on Exhibit 3, depicts how the natural topography and separations provide a buffer along this common boundary.

The I/C Zoning District boundary line extending south to I-91 also generally follows the ridgeline south to the I-91 right-of-way. The residential area to the east is developed with homes along South Main Street. This residential area is situated well below and downhill of the I/C zoned area to the west.

### EXHIBIT 3: Cross-Section to East of the I/C District

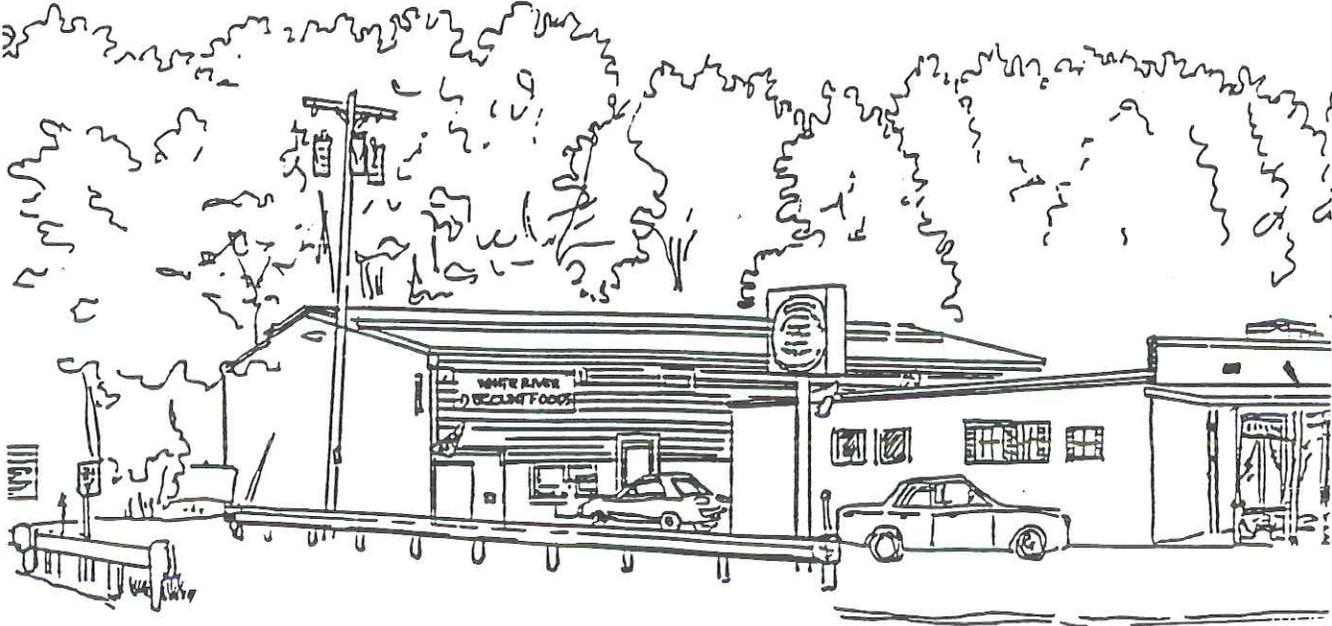


- d. **I-89 to the I-91 Exit Ramp for White River Junction:** The dominant characteristic of this boundary line of the I/C Zoning District is the presence of mature vegetation, principally softwoods, separating the interstate highways from the I/C Zoned area. This mature vegetation effectively screens the I/C area from the noise and visual impacts generated by the interstate highways. This mature vegetation also provides a buffer along the interstate highways from the visual impact of development within the I/C Zoning District. The siting of future development in the I/C Zoning District and the tree clearing to accommodate that development will reduce the effectiveness of existing vegetative buffers.

- e. **I-91 Exit Ramp for White River Junction along Route 5 to Airport Road:** This area is characterized by existing commercial uses bordering the I/C Zoning District boundary which follows the interstate highways to Airport Road. Commercial uses are compatible land uses bordering an interstate highway. No transition or buffers are needed in this area.
4. **SITE DEVELOPMENT:** The presence or absence of landscaping and open space, building design and layout, and signage in combination create an image or visual impression of a site. Within the Sykes Mountain Avenue Area, there are examples of good and poor site development with some of the newer developments being the better examples. The relatively new Naval Reserve Center site is an example of good site development where there is ample landscaped open space surrounding a well sited brick building with a low key sign. The older developed sites between Airport Road and Sykes Mountain Avenue exhibit relatively poor site development with landscaping being an afterthought on sites with asphalt or buildings covering virtually the entire site. Instead of complementing the sites, signage in this area shouts to compete for and grab the motorists attention.

**Exhibit 4: Landscaping Comparison of A Section Along Sykes Mountain Avenue**

Before:



After:



### **III. PUBLIC MEETING INPUT**

Two public meetings were conducted as the last step in the inventory phase of the study. Public workshops to obtain information on landowner, business and resident needs and concerns with the Sykes Mountain Avenue Area Study were held on June 14 and June 21, 1999. A summary of the public comments received at each of these two public meetings follows.

#### **A. JUNE 14, 1999 PUBLIC COMMENTS**

##### **1. ROAD IMPROVEMENTS**

- a. Buy Flanagan Property and widen Sykes Mountain Avenue.
- b. Work on VTRANS to push up construction date of Sykes Mountain Avenue improvements.
- c. Provide stoplight at Route 5 and Airport Road.
- d. Require escrow funds from businesses for street improvements.

##### **2. AESTHETICS**

- a. Retain growth tastefully.
- b. Need streetscape improvements.
- c. Need improvements for aesthetics.
- d. Sidewalks, trees, good lighting can attract development.
- e. Consider using impact fees for urban forest improvements.

##### **3. BUFFER**

- a. Commercial to provide a suitable buffer area between businesses and residences.
- b. Provide adequate buffer areas.
- c. Business owners want their sites to be compatible with adjacent residential areas.

##### **4. TYPES OF BUSINESSES**

- a. No more fast food establishments; however, if you can address the impact, it would make a difference.
- b. Avoid noisy or smelly businesses.
- c. Demand for office space in the 1,000 to 1,500 square foot range.
- d. Prevent buses and trucks from running all night.

##### **5. PEDESTRIAN ACCOMMODATION**

- a. Presently unsafe conditions.
- b. Need sidewalks.
- c. Need places to walk.
- d. Need crosswalks.
- e. Provide crosswalk at Airport Road and Route 5.

##### **6. BARRIERS TO BUSINESS**

- a. Existing zoning and site development plan standards are working.
- b. The main barriers to attracting business is at the State government

level.

- c. The lack of employees will limit economic development. Need more housing.

**7. GENERAL COMMENTS**

- a. Make small improvements now while we are waiting for larger projects.
- b. Don't look at Sykes Mountain Avenue in isolation. What about Route 5 South?
- c. Can we require fiscal impact studies?

**B. JUNE 21, 1999 PUBLIC COMMENTS**

**1. ROAD IMPROVEMENTS/TRAFFIC IMPACTS**

- a. Concerned about truck traffic to the proposed landfill.
- b. Sykes Mountain Avenue east of Lily Pond Road is in very poor condition.
- c. Motorists drive well above the posted speed limit.
- d. Work on VTRANS to push up construction date of Sykes Mountain Avenue improvements.
- e. Provide actuated signal light at Sykes Mountain Avenue and Holiday Drive.
- f. Need to closely monitor the impact of new development on traffic.
- g. The corner of Walsh Street and Sykes Mountain Avenue is overgrown with vegetation, thereby reducing site distance.
- h. For safety reasons, a guard-rail should be installed along Sykes Mountain Avenue above Acorn Street.
- i. Avoid parking lots like K-Mart.
- j. Continue Route 5/Sykes Avenue intersection improvements beyond Ralph Lehman Drive on Sykes Mountain Avenue. The Town should coordinate this with the State.

**2. AESTHETICS**

- a. Need to soften the massive paving affect through landscaping.
- b. Plant more trees, like Hanover.
- c. Concerned about building design fitting in. Prefer brick building like the naval reserve building to metal commercial buildings.
- d. Developers are looking for visibility from the interstate highways, but trees along interstates should be protected.
- e. Use landscaping in Sykes Mountain Avenue median in a similar manner to other Garden Club projects.

**3. OPEN SPACE/PARKS**

- a. Maintain open space, possibly a park.
- b. Establish a park west of the Lily Pond.
- c. Need to promote Town recreational facilities.
- d. Look at linear corridor possibilities to connect areas of Town.

4. **BUFFER**
  - a. Establish a transition zone between Lower Hyde Park Drive and Hickory Ridge Drive.
  - b. Concerned about noise impacts in general, trash pick-ups at 4:30 am specifically.
  - c. Concerned about the visual impacts of well-lighted parking lots.
  - d. Protect the senior housing complex from the impacts of commercial development.
5. **TYPES OF BUSINESSES**
  - a. Don't allow junkyards in the area. <sup>i</sup>
  - b. Don't allow anymore transportation centers.
  - c. Provide less manufacturing in the area.
  - d. No warehouses due to the impact of truck traffic.
6. **PEDESTRIAN ACCOMMODATION**
  - a. Sykes/Mountain Avenue needs sidewalks due to the amount of pedestrian traffic. Presently existing conditions are very dangerous on both sides of the street.
  - b. There once was a nice network of trails throughout the neighborhood. Consider reestablishing.
  - c. Pedestrians are walking as a form of transportation in addition to walking for recreation.
  - d. Sidewalks should be lighted for safety reasons. With more pedestrians, the area will be safer.
  - e. Sidewalks and bike paths will reduce reliance on automobiles.
  - f. Sidewalks provide interest to visitors to learn about a community.
  - g. There are barriers to walking and bicycling from Sykes Mountain Avenue south on Route 5 and the Howard Johnson's/VA Hospital area.
7. **GENERAL COMMENTS:**
  - a. Concerned about residential resale value with more commercial development.
  - b. Need more things for kids to do.
  - c. Development of Route 5 south will have less impact on residences.
  - d. The information booth should be located on Sykes Mountain Avenue.
  - e. Some areas needed better lighting.

#### **IV. BUILD-OUT AND VISION FOR FUTURE DEVELOPMENT**

##### **A. DEVELOPEMNT/REDEVELOPMENT POTENTIAL OF STUDY AREA:**

What is the future land use development potential of the study area? What types of uses are reasonable to expect to develop or redevelop within the study area? The answer to these questions are determined in large part by the assets and limitations within the study area. The comments on the assets and limitations of the study area and the potential future land uses were compiled from discussions with officials of the Town of Hartford and particularly the Department of Planning and Development Services, discussions with officials of the Green Mountain Economic Development Corporation and public input.

The first step in understanding the development and redevelopment potential of the study area is to put it into a regional perspective. Simply stated, other areas developing in the Upper Valley for industrial and/or commercial uses are building-out quickly. Over the past ten to fifteen years, significant commercial and industrial development has occurred on both sides of the Connecticut River in the core towns of Upper Valley where zoning, topography and utility services support that intensity of development. Over that time period, substantial commercial and industrial developments have occurred along Route 12A in West Lebanon, at the Lebanon Airport Industrial Park, along Route 120 in Lebanon and Hanover including the Centerra Business Park, and at the Olcott Industrial Park and the Billings Industrial Park in Hartford. As the supply of these other sites dwindles, the pressure to develop the study area will only increase.

The most significant limitation to development of much of the study area is the fact that it is owned by an individual landowner who prefers to lease land and not sell it. This approach to land development has discouraged most prospective developers since most of them want to own the land they develop.

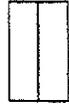
In order to discuss the future development and redevelopment potential within the study area, it is important to look at sub-areas because not all of the 200 acres in the study area share the same assets and limitations. The assets and limitations of these sub-areas, which are shown on Map 8 to follow, are discussed below.

- 1. SUB- AREA "A": ROUTE 5 FRONTAGE AND SYKES MOUNTAIN AVENUE FRONTAGE FROM ROUTE 5 TO BOWLING LANE:** This sub-area with frontage along Route 5 and Sykes Mountain Avenue is the focus of commercial development within the study area. This area offers excellent highway accessibility and visibility for commercial businesses off I-89, I-91 and Route 5. Most of this area is currently developed with commercial retail, commercial services and

MAP 8

# Sykes Mountain Ave Sector Plan

## SUB-AREAS OF STUDY AREA



Parcel Boundary



20 Foot Contour



Zoning Districts

Industrial Commercial (I-C)

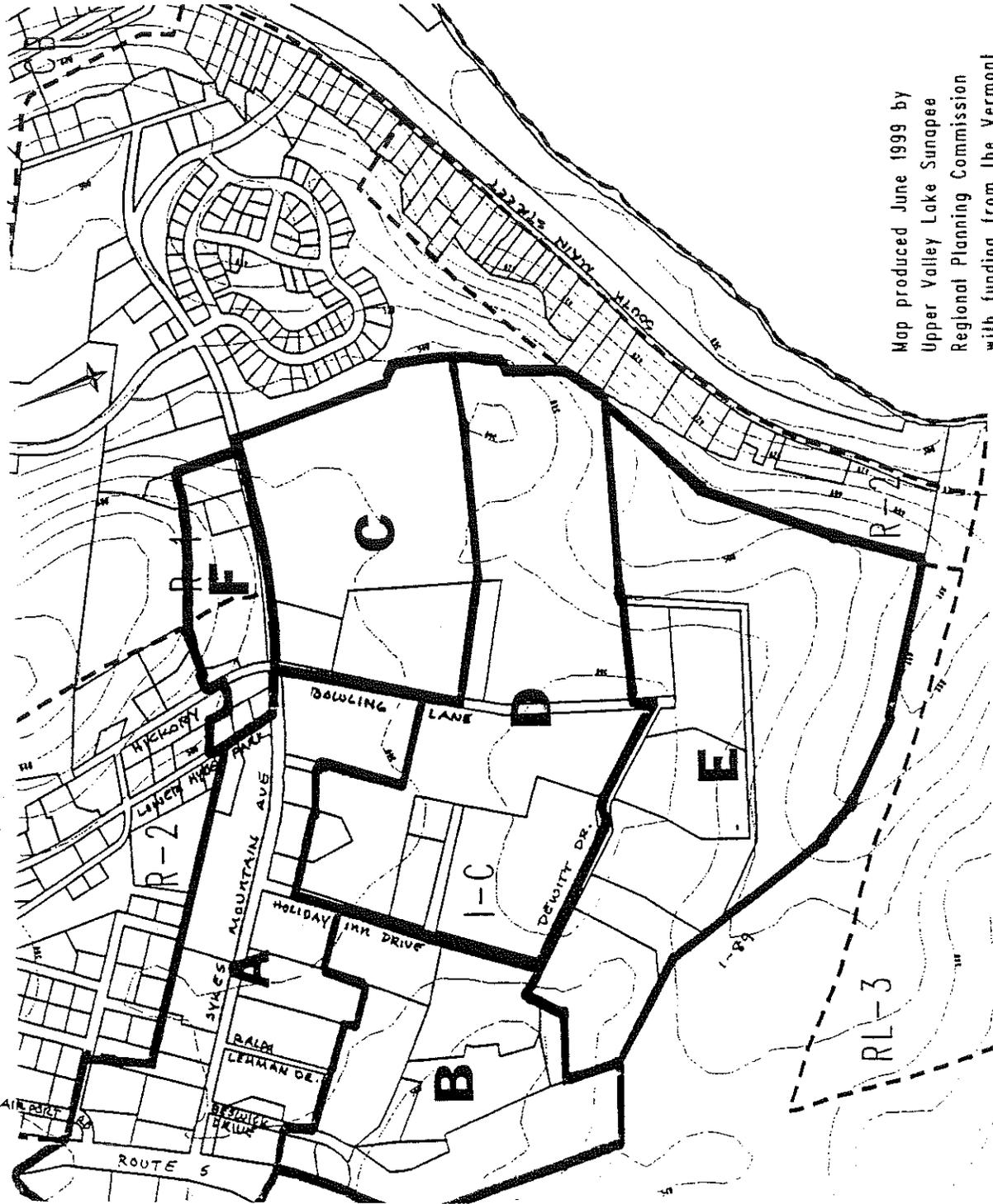
Central Business (CB)

Residential 1 (R-1)

Residential 2 (R-2)

Residential 3 (R-3)

Rural Lands 3 (RL-3)



Map produced June 1999 by  
 Upper Valley Lake Sunapee  
 Regional Planning Commission  
 with funding from the Vermont  
 Municipal Planning Grant Program;  
 revised November 1999.

scale = 1:5400 1 Inch = 450 feet

commercial lodging land uses. As noted earlier, this was the first part of the Sykes Mountain Avenue area to develop. There are several developed or underdeveloped land uses within this area that are potential commercial redevelopment opportunities. These include sites such as the Coach and Four Motel site and the Crossroads Cafe and Discount Food Store site.

2. **SUB-AREA "B": SOUTHEAST OF ROUTE 5 AND SYKES MOUNTAIN AVENUE:** This sub-area located southeast of Route 5 and Sykes Mountain Avenue currently accesses Sykes Mountain Avenue via Beswick Drive and Ralph Lehman Drive. This area has relatively good visibility from the adjoining highway system and relatively close access to that transportation system. As noted previously, much of this area has developed in an uncoordinated fashion with no apparent overall plan. Many of these properties offer redevelopment opportunities on sites that are currently underdeveloped. These include the car rental site, the satellite dish site, the furniture store, the automotive repair business, the car wash, the metal fabrication business and the State Highway maintenance yard.
3. **SUB-AREA "C": SYKES MOUNTAIN AVENUE FRONTAGE EAST FROM BOWLING LANE TO THE I/C ZONING DISTRICT BOUNDARY :** The development potential of this sub-area is affected by the decreased visibility of this area from the Route 5/Sykes Mountain Avenue intersection due to a drop in elevation and the distance from the intersection. Along Sykes Mountain Avenue, the break in topography occurs at the eastern edge of AJ's Restaurant site with the elevation dropping towards the I/C Zoning District boundary to the east.

Several potential uses could develop within this sub-area. One option is this area could develop as a retail shopping center with a major anchor or "Big Box" that could overcome the limitations noted above because of their strong drawing power. Smaller individual businesses without the drawing power of a major anchor may not get the exposure they need to be successful from this location.

Another potential use for this sub-area is for the development of an expanded post office facility to replace their existing facility on Sykes Mountain Avenue. The post office has identified the need for expansion in the next five years.

Entertainment facilities such as a restaurant and movie theater complex may be other land uses which could be successful in drawing customers to this location.

4. **SUB-AREA "D": AREA BETWEEN HOLIDAY DRIVE AND THE I/C ZONING DISTRICT BOUNDARY NOT FRONTING ON SYKES MOUNTAIN AVENUE AND NORTH OF DEWITT DRIVE:** Without the exposure offered by fronting on Sykes Mountain Avenue, this sub-area loses appeal for commercial retail type uses. This area would appeal to a mix of uses which could include professional offices, entertainment uses, warehousing, printing/publishing, light industrial/manufacturing, automobile repair services, and contractors yards.
5. **SUB-AREA "E": AREA SOUTH OF DEWITT DRIVE FROM THE RAMADA INN EAST TO THE I/C ZONING DISTRICT BOUNDARY:** This sub-area is the least attractive for any commercial or industrial development within the study area. The visibility and exposure offered by high traffic volumes at the Route 5/Sykes Mountain Avenue intersection and along Sykes Mountain Avenue are non-existent in this far corner of the study area. Additionally, the steeper topography encountered in a good portion of this sub-area does not lend itself to construction of the typical size of commercial and industrial buildings. This sub-area may be best suited for a mix of residential types and densities along with some office uses. This sub-area could be attractive for residential development due to its relatively quiet environs, convenient location near employment and shopping opportunities within the study area and convenient access to the interstate highway system. Residential uses could include apartments, townhouses and/or other senior housing projects like the existing Greystone Village.
6. **SUB-AREA "F": AREA FRONTING THE NORTH SIDE OF SYKES MOUNTAIN AVENUE BETWEEN LOWER HYDE PARK AND THE MASONIC LODGE:** This area presently is developed primarily for residential uses. Many of these properties are now or will in the future experience adverse impacts from traffic along Sykes Mountain Avenue and abutting I/C uses. The existing small lot sizes for the parcels located between Lower Hyde Park and Hickory Ridge provide for limited areas to accommodate off-street parking unless they are aggregated and redeveloped. The Sykes Mountain Avenue frontage provides exposure to an ever-increasing number of motorists which could make it attractive for commercial retail or commercial services such as a restaurant. Office uses could provide a good transitional use to the residential neighborhood to the north. Another potential use for the undeveloped northeast corner of Sykes Mountain Avenue and Hickory Ridge is a neighborhood park. This could be developed as a passive recreation area with picnic tables and trails which could be used in the daytime by employees in the area and by neighborhood residents in the evenings.

## **B. FUTURE BUILD-OUT SCENARIOS**

After evaluating the types of alternative land uses which could develop within the study area, this information was used to develop and map three alternative land use scenarios for the future development/redevelopment of the study area. These future development/redevelopment scenarios were used to evaluate the potential impacts on the road system, the utility systems and neighboring land uses and to develop recommendations on these issues.

These three alternative future land use scenarios were developed by the land use and transportation planners working on the study in consultation with the Town of Hartford Department of Planning and Development Services and the Green Mountain Economic Development Corporation.

The following outlines the key features of each of the three alternative future land use scenarios evaluated in this study. A map and table summarizing the mix of land uses devoted to each of the three future build-out scenarios are presented in the Appendix on Land Use.

### **1. FUTURE BUILD-OUT SCENARIO #1:** The key features of this alternative include:

- Continuation of current trends with no land aggregation for redevelopment or reuse;
- Retail shopping center to develop east of AJ's with an office complex south of this;
- Light Manufacturing and warehousing along Bowling Lane;
- Office uses between Holiday Drive and Bowling Lane;
- Infill vacant properties near Route 5/Sykes Mountain Avenue with Commercial Retail and Service type uses;
- Provides for no expansion for the post office;
- Residential uses in southeast corner of the study area to develop at a density of 4.4 units per acre;
- Retain the R-1 and R-2 zoning along the north side of Sykes Mountain Avenue east of Lower Hyde Park and develop part of this area for a neighborhood park.

Compared with the current mix of land uses, Alternative #1 will double the percentage of land area used for commercial retail and commercial services while the percentage of land used for multi-family residential purposes will increase ten times.

2. **FUTURE BUILD-OUT SCENARIO #2:** The important characteristics of this future build-out scenario includes:

- Development of a retail shopping center on land aggregated southeast of Route 5 and Sykes Mountain Avenue;
- Expansion of the post office on the vacant land between Holiday Drive and the Toyota Dealership;
- Development of entertainment uses such as a movie complex, nightclub and arcade;
- Light manufacturing and an office park proposed for development in the vacant cornfield east of the Astro Bowl complex; and
- Rezone the north side of Sykes Mountain Avenue between Lower Hyde Park and the Masonic Lodge to VR-C and develop for office uses.

Compared with the current mix of land uses, the percentage of land area allocated to commercial services including offices, commercial retail including shopping centers, and amusement uses have all doubled. Again, like Alternative #1, the percentage of land used for multi-family residential purposes increased tenfold between the current use and Alternative #2.

3. **FUTURE BUILD-OUT SCENARIO #3:** The major features of this future land use scenario are:

- Development of a retail shopping center on land aggregated southeast of Route 5 and Sykes Mountain Avenue;
- Relocation of the post office east of AJ's for development of an expanded facility;
- Reuse of the old post office for light manufacturing;
- Development of office and printing/publishing uses between Holiday Drive and Bowling Lane;
- Construction of automobile repair facilities, contractors yards and office uses south of the Astro Bowl complex;
- Development of residential uses at a density of 9.7 units per acre; and
- Rezone the north side of Sykes Mountain Avenue between Lower Hyde Park and the Masonic Lodge to VB and develop for offices and a restaurant.

The major changes projected in the land use mix for Alternative #3 compared with the current mix of land uses include an eight fold increase in the percentage of land area allocated for multi-family residential use, an estimated doubling in the percentage of land area used for commercial retail and commercial services and a modest increase in the governmental land use.

**C. VISION FOR FUTURE DEVELOPMENT:** The following statements express the vision for the future development of the study area.

1. Provide an area for the location of a mix of light industrial and commercial uses which develop in an aesthetically pleasing and environmentally sound manner.
2. Develop the area in a planned and coordinated manner with implementation of infrastructure needs as development occurs.
3. Avoid the strip development pattern by providing for site development features such as managing the number and location of access points, increasing pedestrian accessibility, and improving the aesthetic impact through management of landscaping, signs and open space.
4. Encourage a Future Mix of Uses to include:
  - a. Provide areas for tourist and motorist facilities and services;
  - b. Provide areas for vehicle sales and repair facilities;
  - c. Provide areas for government services and facilities;
  - d. Provide areas for employment opportunities such as offices, research facilities and light industrial uses;
  - e. Provide areas for retail sales and services including retail shopping centers;
  - f. Provide areas for a variety of residential development options; and
  - g. Provide areas for mixed use developments.
  - h. Encourage land uses with low trip generation rates and discourage land uses with high trip generation rates.

## V. FUTURE PLANS AND RECOMMENDATIONS

### A. TRANSPORTATION:

#### 1. TRAFFIC ANALYSIS METHODOLOGY:

The purpose of the Sykes Avenue traffic analysis is to understand the traffic impacts under 3 proposed land use scenarios given each alternatives 100 percent build-out. The increase in traffic is then applied to the existing transportation system to see how well the transportation system will function. In order to examine these effects, a transportation impact Study was developed.

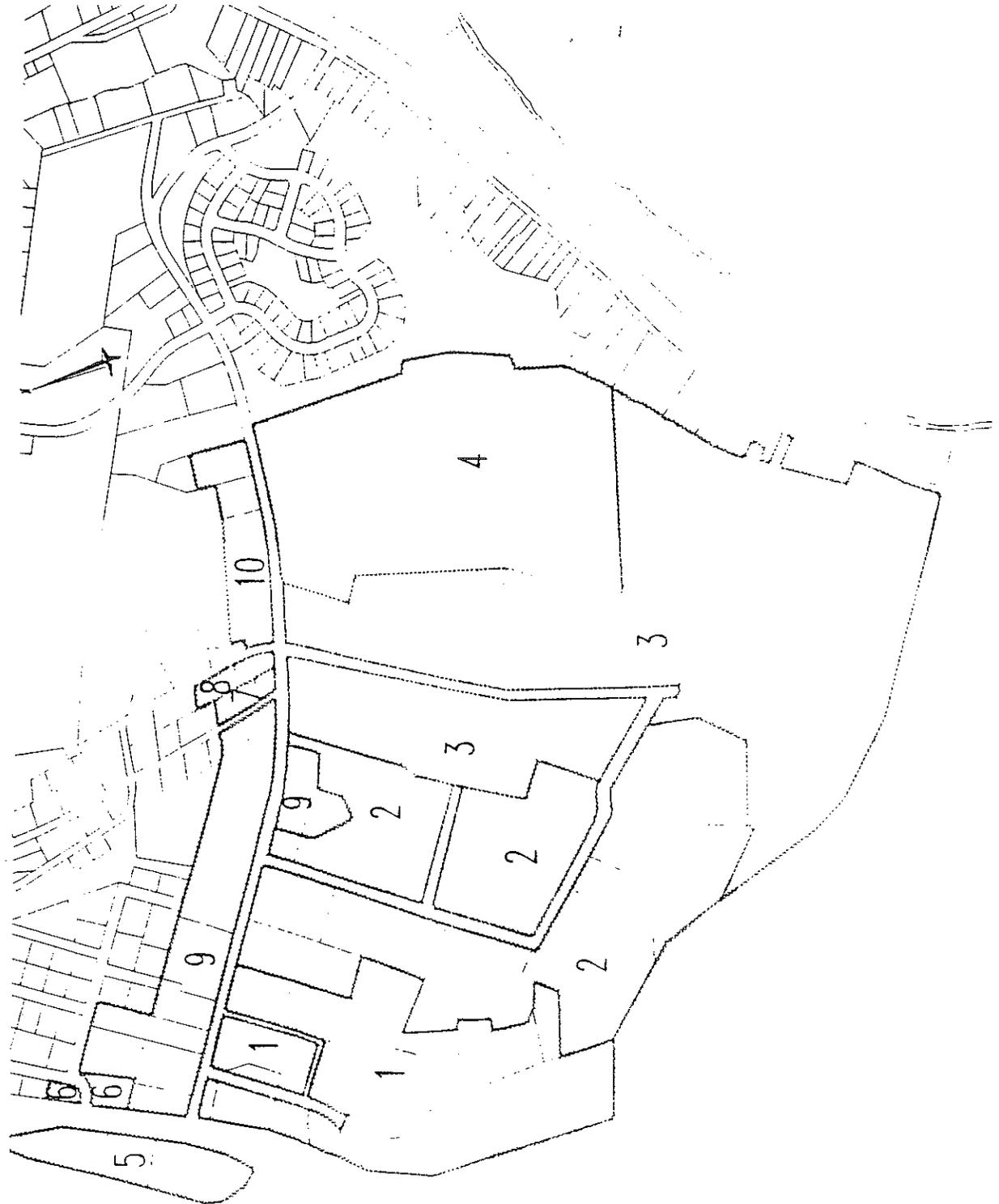
First, PM peak hour turning movement data was collected for each of the studied intersections and then converted to a design hour volume (DHV), which is taken to be the 30th highest hour of traffic for the year. This allowed a baseline Level of Service (LOS) analysis to be completed, and from which, there could be a comparison made to the LOS under each build-out scenario. Sykes Avenue was then divided into traffic sheds, as reflected on the Map 9, by delineating boundaries around parcels of land that utilize the same access points. This allows the additional vehicle trips generated by new development to be assigned to a particular access point, dependent upon the changes in land use that occur within the traffic shed. Using the Institute of Transportation Engineers (ITE) Trip Generation Handbook, the number of additional trip ends for each scenario was compiled and totaled for each traffic shed. Proportions entering and exiting were computed, then applied to the existing directional proportions (left, right or straight) to develop a future trip assignment for each build-out scenario. After adjusting the volumes for internally linked and pass-by trips, each intersection was then analyzed for its LOS under these future conditions.

Sykes Avenue and Route 5 is the only signalized intersection within the study area. Signal optimization for the intersection was completed for each scenario. There was no pedestrian phase included in any of the cycles. For more information about the parameters, please refer to the technical appendices.

**Map 9: TRAFFIC SHED MAP**

**Sykes Mountain Ave  
Sector Plan**

**Trafficsheds**



Map produced November 1999 by  
Upper Valley Lake Sunapee  
Regional Planning Commission  
with funding from the Vermont  
Municipal Planning Grant Program.



scale = 1:5400 1 inch = 450 feet

Only the Sykes Avenue and US Route 5 area was examined; no effort was made to explore the larger transportation system or split modes. Therefore, the intention of this study is to make general conclusions as to the impacts of future land uses on the transportation system and possible solutions for further consideration, not to provide data from which specific design options would be developed.

The Sykes Avenue and Route 5 intersection has been a contentious topic with the citizens of Hartford. In fact, recently there has been a joint effort by the Vermont Agency of Transportation (VTRANS), the Federal Highway Administration and the Town of Hartford to study the intersection and generate alternatives to address the signalized intersection's future needs. This analysis did not consider the full build-out of the Sykes Avenue area, rather it projected traffic volume, using growth factors, based on the growth of other Vermont Group B Highways. The study developed by VTRANS and the one completed by UVLSRPC are entirely different in methodology and therefore, the results can not be compared directly. The UVLSRPC study specifically examines the Sykes Mountain Avenue area under full build-out scenarios and projects the traffic impact that would likely result. Below are the results of this analysis.

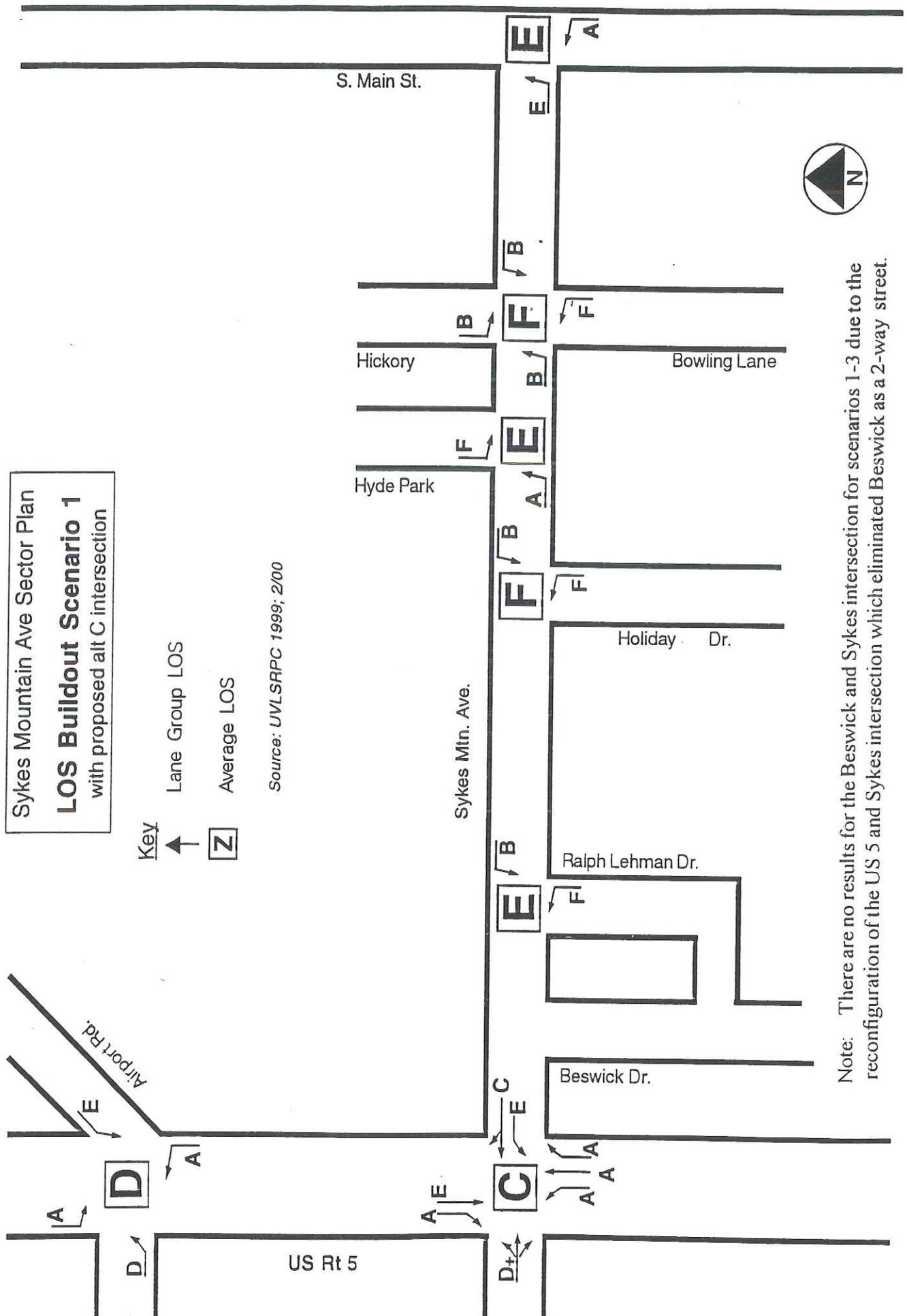
## **2. RESULTS:**

Exhibits 5-7 show each intersection and their associated average and lane group LOS under each of the three possible land use build-out scenarios. The intersections located in the western most section of the study area have the highest volumes (ADT 12,800) of traffic due to the presence of US Route 5, the abutting land uses along Sykes Avenue, and the proximity of Interstate 89 & 91. In fact, traffic at the beginning of Sykes Avenue, between Route 5 and Beswick, is ten times higher than traffic at the most easterly end of Sykes Avenue (ADT 1,200).

### **a. Sykes Avenue & US Route 5 Intersection:**

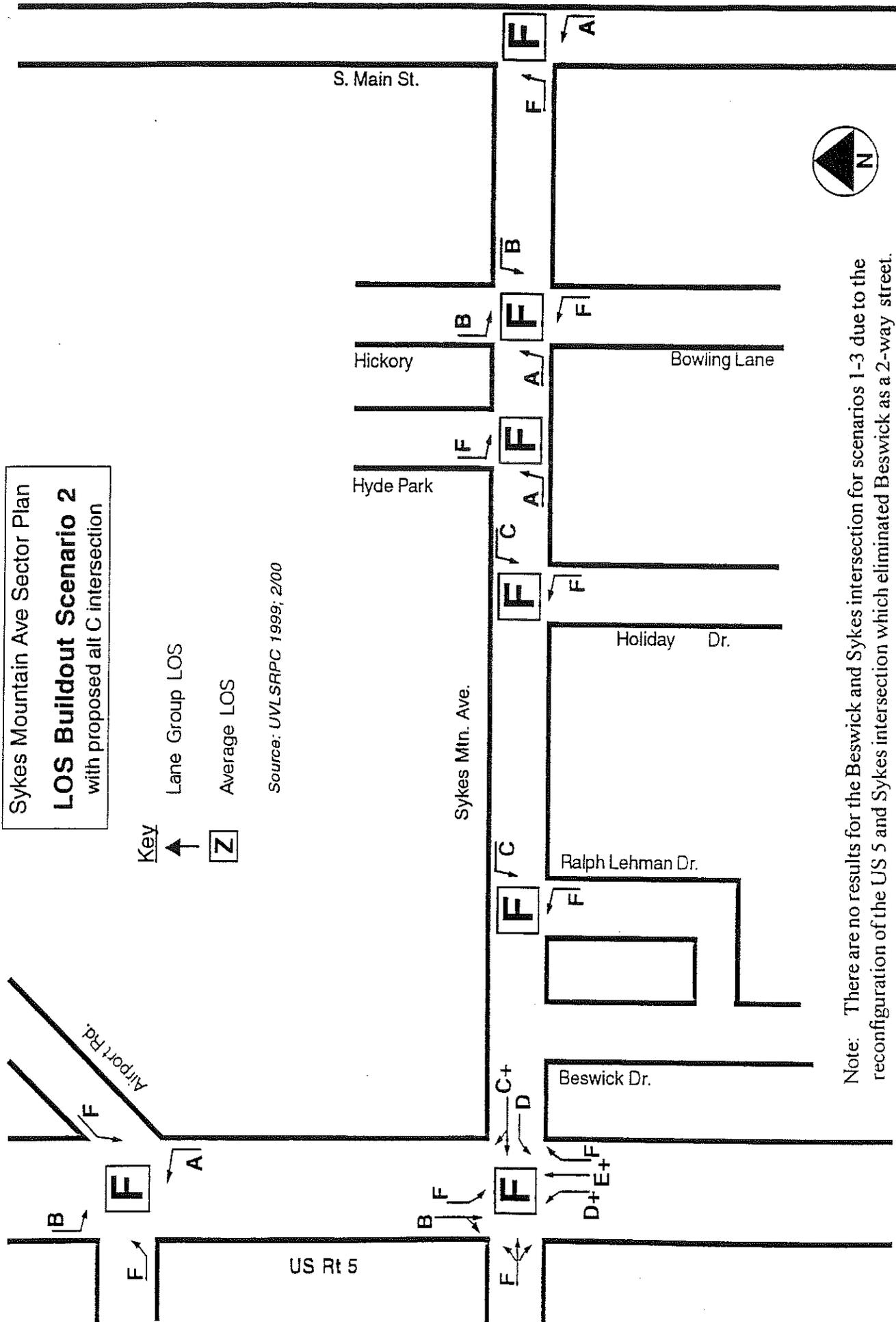
Traffic problems within the Route 5 and Sykes Avenue intersection increase significantly under the three build-out scenarios. However, the LOS is still adequate with the exception of the conditions under land use scenario 2. Altogether, the possible land use options examined increase traffic along Sykes Avenue between 2,141 and 3,617 additional trip ends during the PM peak hour. The entering and exiting traffic volumes at the Route 5 & Sykes Ave. intersection--the primary entrance to the Sykes Ave. Area--will

Exhibit 5: Level of Service (LOS) Buildout Scenario 1



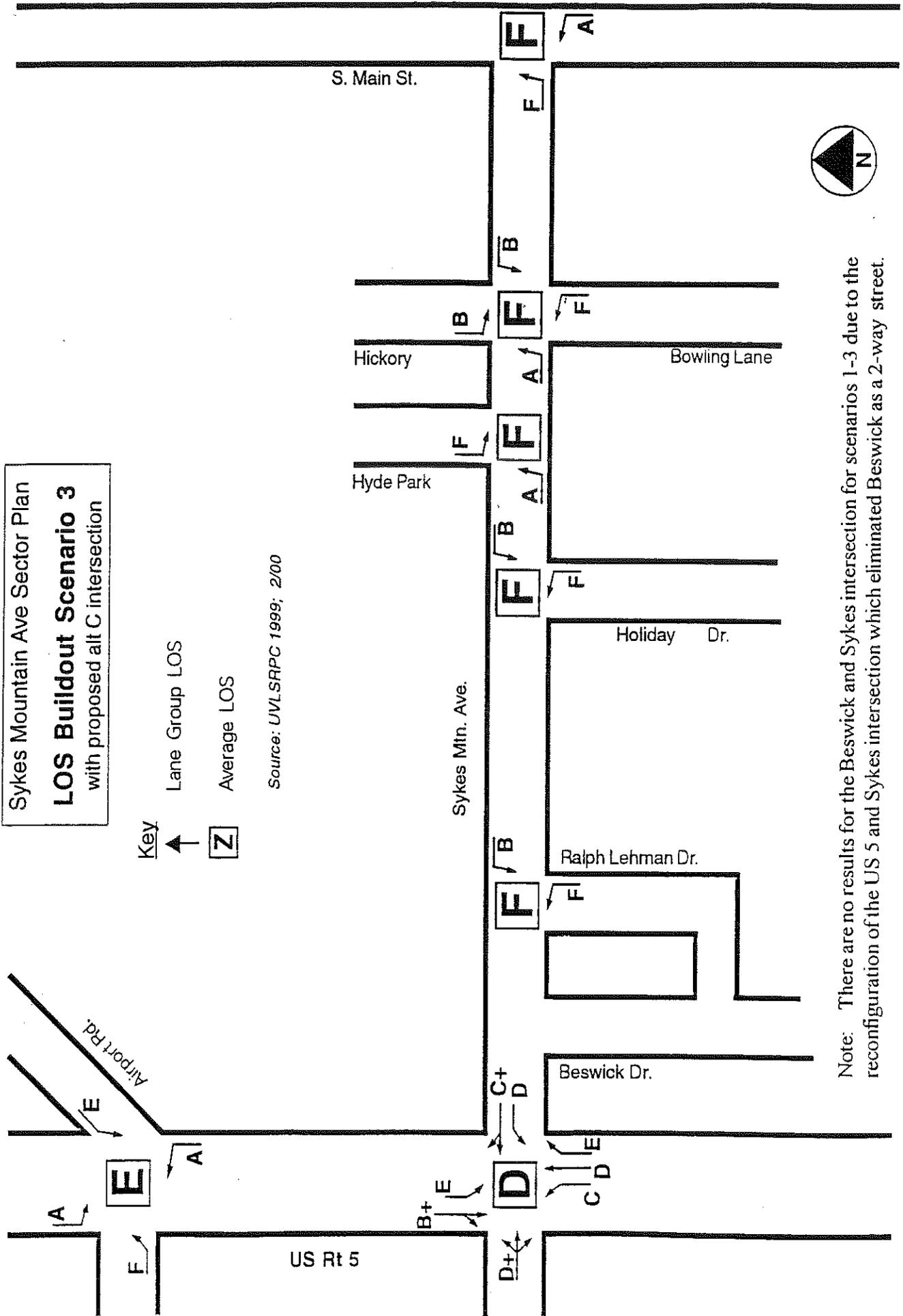
Note: There are no results for the Beswick and Sykes intersection for scenarios 1-3 due to the reconfiguration of the US 5 and Sykes intersection which eliminated Beswick as a 2-way street.

Exhibit 6: Level of Service (LOS) Buildout Scenario 2



Note: There are no results for the Beswick and Sykes intersection for scenarios 1-3 due to the reconfiguration of the US 5 and Sykes intersection which eliminated Beswick as a 2-way street.

Exhibit 7: Level of Service (LOS) Buildout Scenario 3



Note: There are no results for the Beswick and Sykes intersection for scenarios 1-3 due to the reconfiguration of the US 5 and Sykes intersection which eliminated Beswick as a 2-way street.

increase up to three times 1999 traffic volumes. In scenario 2, the highest traffic generator, many of the critical approaches in the intersection provide a poor LOS, resulting in the intersection having a failing average LOS (see Figure 2). The Sykes Avenue intersection in the other two scenarios (1&3) provide a lower level of service, but, are still acceptable.

**b. Airport Road & US Route 5 Intersection:**

Airport Road and its approach to US Route 5 also have been a concern. The eastbound approach of this intersection is currently a LOS C, and the westbound approach a LOS E. The northbound and southbound left turns are both operating at a LOS A.

It is obvious the traffic increase generated by the possible development, increases traffic volume along Route 5, and therefore further deteriorates the LOS for Airport Road's westbound and eastbound movements (see Figure 3). A traffic signal may be warranted at this intersection under current conditions to improve the LOS of these movements.

**c. Internal Intersections (Ralph. Lehman Dr., Holiday Dr., L.Hyde, Hickory [including S. Main St.]**

Currently, intersections within the Sykes Avenue study area, all operate at a satisfactory LOS. Each approach to Sykes Avenue has a LOS of an A or B with the exception of Holiday Drive, which currently operates with an LOS D.

Conditions for these internal intersections under total build-out are far from adequate. Under these conditions, each intersection experiences high levels of traffic, approximately six times current levels. As a result, all internal intersection approaches provide a poor LOS in all three of the land use scenarios. Modifications to the intersections, such as providing turning lanes or flared approaches, combined with the proposed future transportation features (i.e. connector roads) will alleviate congestion on these intersections significantly. Future signalization of intersections is also a possibility.

Conditions under build-out scenario 2, the highest traffic generator, increase the total volume of traffic along Sykes Avenue to approximately 2,954 vph. This is an especially large volume of

traffic for two travel lanes (one eastbound and one westbound) to accommodate. In order to gauge the impact that would occur due to this increase, we evaluated the LOS for Sykes Avenue as a two-lane highway. It was discovered that Sykes Ave. would have a failing LOS under these conditions, indicating that if no other improvements were developed to accommodate the traffic increase, Sykes Ave. would likely need an additional lane, both east and westbound to adequately absorb this growth. This may have future right-of-way implications for the Town of Hartford.

### **3. TRANSPORTATION RECOMMENDATIONS:**

The projected increase of traffic flow with the potential build-out capacity of the current zoning regulations will have a dramatic impact on the study area. While results from scenario 1, 2 and 3 vary slightly, the comparative difference is quite small. Therefore, in determining planning recommendations, no differentiation between alternatives will be discussed. Listed below are planning recommendations to combat negative impacts resulting from such growth. For the purpose of discussing these planning recommendations, the study area will be discussed as two distinct geographical areas. The internal Sykes Avenue corridor will represent the areas where minor streets directly intersect Sykes. The external corridor will consist of those areas outside of the internal Sykes Avenue corridor, such as U.S. Route 5, Airport Road and the lower portion of South Main Street.

#### **a. Sykes Mountain Avenue Corridor:**

To optimize traffic efficiency within the internal Sykes Avenue corridor, the following recommendations are proposed, many of which are shown on Map 10: Future Transportation Features Map to follow:

- 1) Reconfigure and widen intersections to allow for exclusive left turns from minor streets onto Sykes Avenue at Ralph Lehman Drive, Holiday Drive, Bowling Lane, Lower Hyde Park, Hickory Ridge Road, the road exiting traffic shed 4, and at the intersection of Sykes Avenue and South Main Street. Add left turning lanes on Sykes Avenue to minor streets at Ralph Lehman Drive, Holiday Drive, Bowling Lane, Lower Hyde Park, Hickory Ridge Road, the road entering traffic shed 4.
- 2) It is anticipated that at least one of the main intersections

along Sykes Mountain Avenue will meet volume warrants and need to be signalized. With its central location, the Sykes Avenue-Bowling Lane-Hickory Ridge Road intersection would be the first option to evaluate.

- 3) Divert exiting traffic from shed 4 to Bowling Lane. Traffic generated by land use changes within shed 4 could then utilize the new signalized intersection of Sykes Avenue and Bowling Lane, thereby reducing the negative impact of this new and highly congested intersection.
- 4) Create an urban grid, street pattern for more efficient traffic flow by adding connector roads to link Beswick Drive to Ralph Lehman Drive; Holiday Drive to Ralph Lehman Drive; Holiday Drive to Bowling Lane; and Bowling Lane to traffic shed 4. Please refer to the Future Transportation Features Map.
- 5) Encourage alternative transportation by providing added infrastructure improvements to include bus stops, sidewalks, bike lanes, bike rack areas, benches and better pedestrian linkages between commercial areas.
- 6) Provide an external parking lot serviced by Advance Transit to encourage use of the public transit system and, thereby, reducing the projected traffic flows.
- 7) Eliminate left-turns along Sykes Avenue (right-turn only from all exit points) diverting all eastbound traffic in one direction past Bowling Lane and Shed 4 to a roundabout. The roundabout would allow traffic to continue moving, reducing queuing, and to (1) either exit the roundabout to continue eastbound on Sykes Avenue or (2) to return westbound on Sykes Avenue.

MAP 10

# Sykes Mountain Ave Sector Plan

## Future Transportation Feature

### Study Area Roads



Public Roads



Private Roads



Paper Streets (Unbuilt)



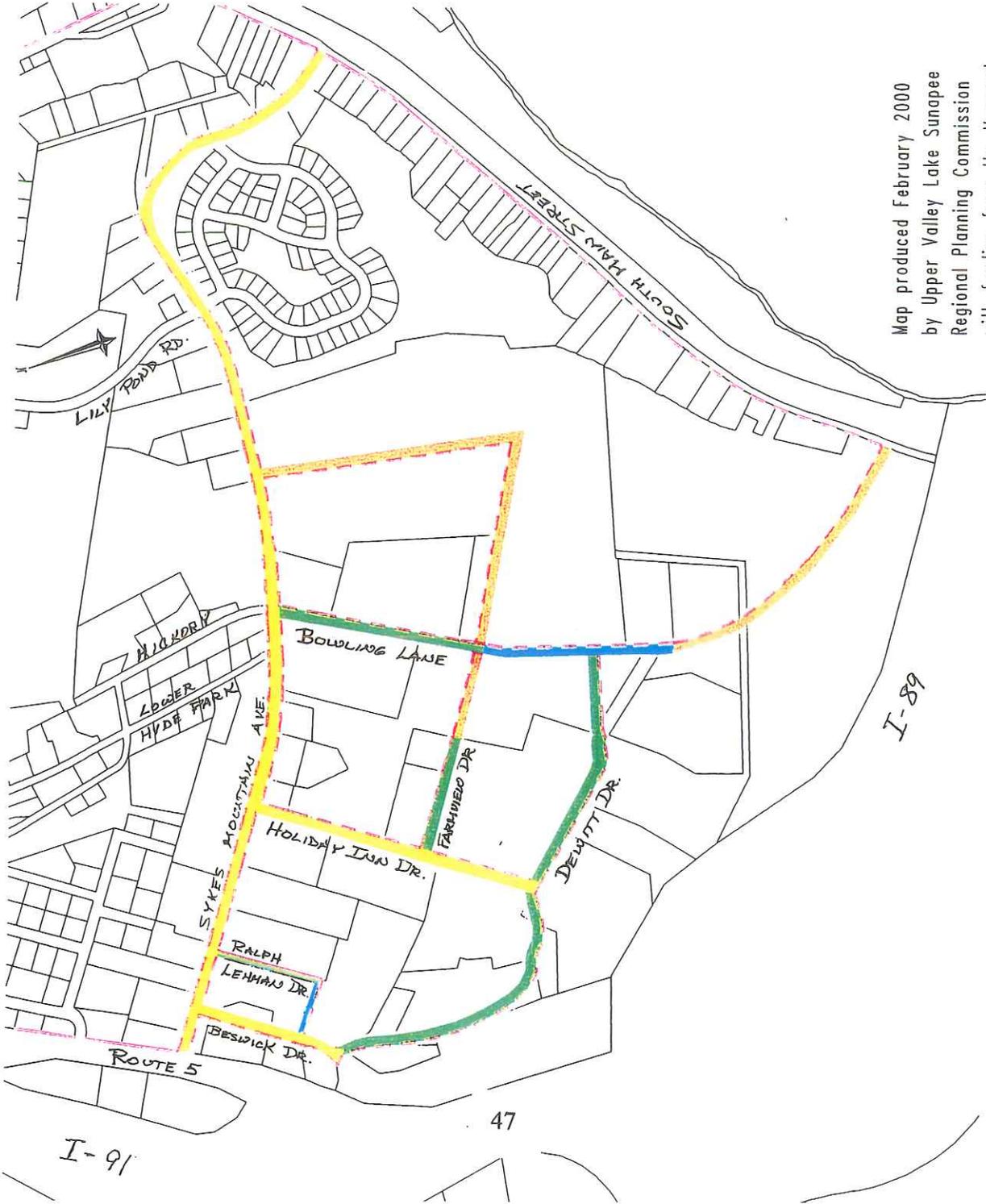
New Roads



Existing Sidewalks

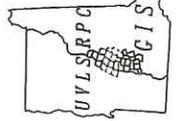


Proposed Sidewalks



Map produced February 2000  
 by Upper Valley Lake Sunapee  
 Regional Planning Commission  
 with funding from the Vermont  
 Municipal Planning Grant Program

scale 1:5400 1 inch = 450 feet



**b. Area External to Sykes Mountain Avenue Corridor:**

The following are recommendations to address concerns over the impacts of the external Sykes Avenue corridor area. This is the area that is most imperative to this study and where the most profound impacts will take place. This area also includes roads that are not included in our study area, such as I-91 and I-89. The queues created by the projected increase in traffic can have a detrimental impact on the efficiency of the Interstate system that runs through Hartford, causing severe congestion around the entrance and exit ramps on both I-91 and I-89. For instance, the distance from the northbound I-91 off ramp onto US 5 is approximately 500 feet from the Sykes Avenue intersection. The maximum queue projected for alternative 2 will be 777 feet long for northbound right turns, causing the queue to back up onto the off ramp with the potential of creating traffic problems on I-91 and even on I-89 around the interchange with 91. To minimize these impacts, the Town of Hartford and the VTRANS should consider these options:

- 1) Relocate the I-91 northbound exit and entrance ramp to create a four-way signalized intersection at Sykes Avenue and U.S. Route 5. The new location of the exit ramp would face eastbound at this intersection with Sykes, where a hotel parking lot currently stands. Vehicles entering I-91 northbound could enter at this same intersection. The relocation of these ramps would allow for a more efficient flow of traffic, which will greatly increase due to the projected impact of land use changes by the year 2016. This would also reduce the negative impact of lengthy queues at the northbound Route 5 intersection with Sykes, while solving many of the current configuration problems with the entrance and exit ramps on I-91.
- 2) Construct connector roads to link the Sykes development corridor with U.S. Route 5 and South Main Street in order to provide added routine and emergency access and to disperse the increasing traffic flows. Establish a road to connect the southern terminus of Bowling Lane to South Main Street, just north of I-89 and another road to connect Beswick Drive to U.S. Route 5 (where the I-91 northbound exit ramp is located currently). Constructing these grid connector roads should reduce the traffic volume on Sykes

Mountain Avenue and may alleviate the need for signaling one or more of the intersections along Sykes Mountain Avenue.

- 3) As an alternative to the above referenced planning recommendations, a reconsideration of the current zoning regulations may allow for commercial growth, while limiting the negative traffic impacts that are projected in scenarios 1, 2 and 3. Down-zone regulations to limit high volume generating land uses, such as fast food restaurants and shopping centers, to reduce the number of increased peak hour trips. Limit such land uses to only certain designated areas to prevent conflicting traffic flows and/or to limit such establishments by number. This would serve as a means to stop the traffic problem before it worsens and to reduce the likelihood of extensive and costly transportation infrastructure improvement projects. This might also entail shrinking the geographical size of the commercial zone along Sykes Avenue and/or including open space regulations. Open space regulations could be implemented to set aside conservation lands for recreational or for habitat protection. Both would result in the reduction of the available commercially developable land, thereby reducing the potential build-out and lessening the future traffic problems.

**c. Access Management Recommendations:**

- 1) Access side road if available rather than direct access to Sykes Mountain Avenue;
- 2) Limit the number of places where vehicles are entering and exiting Sykes Avenue to a few strategically designated areas. Provide curbing along Sykes Avenue where there are not any currently to clearly demarcate the entrance and exit areas. Limit curb cuts to where only necessary. Create singular entrances to service multiple parcels where possible.
- 3) Ensure safe sight distance at all new access points; and
- 4) As properties redevelop, reevaluate the access provided to the site to conform to current standards in terms of width of accesses, number of accesses, and sight distance at access points. Incorporate landscaping to achieve access management standards for redeveloping properties.

**d. Pedestrian Circulation Recommendations:**

- 1) Enhance pedestrian circulation by connecting the existing sidewalk on Route 5 north of the Sykes Mountain Avenue intersection with the existing sidewalks along South Main Street: provide sidewalk along both sides of Sykes Mountain Avenue from Route 5 to Lilly Pond Road. Provide a sidewalk along the north side of Sykes Mountain Avenue from Lilly Pond Road to South Main Street.
- 2) Provide a sidewalk along one side of all the internal roads.
- 3) A perimeter loop trail/sidewalk was an idea suggested at the public meetings. This idea merits further study to address concerns with safety, lighting, maintenance and easement or right-of-way acquisition.
- 4) Provide a pedestrian/bicycle facility along the south or west side of Route 5 south of the Sykes Mountain Avenue intersection to at least the Veteran's Hospital access road and eventually south to the V.A. Cut-off Road. Route 5 is designated a bicycle route in the Regional Bicycle Plan.

**e. Transit Service Recommendations:**

- 1) Extend bus service within the study area as it develops.
- 2) Town, businesses, landowners and other transit providers all coordinate with Advance Transit on the use of available capital funding for designing and constructing bus shelters within the study area.

**f. Park & Ride/Carpooling Lot Recommendations:**

- 1) Coordinate with VTRANS to locate a Park & Ride/Car Pooling Lot in the study area. One possible location is the vacant lot located immediately east of the bus maintenance facility at Beech Street and Airport Road. If this lot is utilized as a Park & Ride/Car Pooling Lot, then it needs to be heavily screened with fencing and landscaping along the north and east sides to buffer it from the neighboring residential uses. Another option would be to consider negotiating a lease with the owner of a land use with non-daytime parking use such as a bar (evening parking demand) or a church (Sunday parking demand and some evenings).

**g. Streetscape Recommendations:**

- 1) Please note that recommendations on pedestrian circulation have been addressed under the transportation section.
- 2) It is recommended that the streetscape of Sykes Mountain Avenue be improved to include a tree lined street on both sides of the road to improve the front door image of the study area. As noted previously, the landscaping component of the streetscape is lacking in most of the frontage along Sykes Mountain Avenue. Landscaping is absent along the north side of Sykes Mountain Avenue for its entire length. The overhead utility lines and the underground drainage line running along the north side of Sykes Mountain Avenue impose design constraints on landscaping. Design constraints are also imposed by minimal water infiltration area for root systems, salt from roads and snow removal.

It is recommended that a landscape architect be retained to design landscaping along this streetscape that would take into account the various design constraints existing there.

Further, it is recommended that the streetscape of Sykes Mountain Avenue include vertical curbing, closed drainage and pedestrian paths. Due to relatively high traffic volumes, pedestrian paths should be separated from the travel surface by a landscaped strip.

- 3) To promote a positive visual image, it is recommended that the other streets feeding into Sykes Mountain Avenue also be tree lined on both sides. For these internal streets, a sidewalk on one side of the street is recommended with open drainage ditches. Trees are recommended to be added along the west side of Ralph Lehman Drive when that property develops. Trees are recommended to be added along both sides of Beswick Drive, Dewitt Drive and Bowling Lane.

**B. CONCEPTUAL UTILITY PLANS & RECOMMENDATIONS:**

1. **CONCEPTUAL FUTURE SEWER SYSTEM:** An approach to providing a gravity based wastewater collection system for the study area when built-out is outlined on Map 11: Conceptual Future Sewer System and Closed Drainage Map. This conceptual layout is based on maximizing the use of gravity flow and minimizing the use of the more expensive sewer pump stations and sewer force mains. This layout eliminates one existing pump station and force main in Bowling Lane by connecting into this gravity system. These additional wastewater flows would probably necessitate upgrading the size of the gravity line along South Main Street and increasing the capacity of the existing pump station on South Main Street.
  
2. **CONCEPTUAL FUTURE CLOSED DRAINAGE SYSTEM:** The potential increase in storm water runoff from the future build-out of the study area could be significant due to the potential for a major increase in the amount or percent of land developed with impervious surfaces.

Most of the study area yet to be developed drains to the southeast basically following the pattern outlined by the gravity sewer collection system. Infiltration of the stormwater on-site should be encouraged. Dissipation, not concentration, of the stormwater should be encouraged. Nonetheless, stormwater detention may be needed either on individual sites or at one or more sites for shared use. As shown on Map 11: Conceptual Future Sewer System and Closed Drainage, a closed drainage line is suggested to be installed from the crest of the hill down to the Connecticut River.

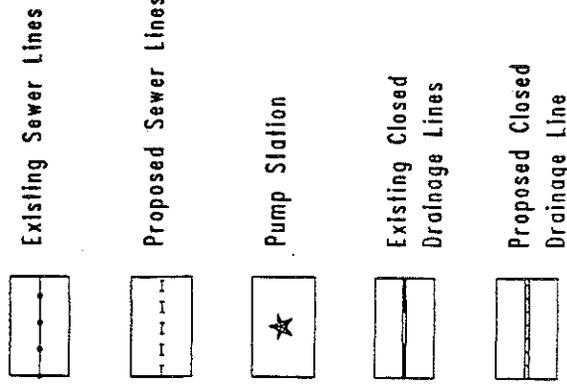
The storm drain system for some of the future development east of AJ's along Sykes Mountain Avenue can be served by the existing closed drainage line running along this section of Sykes Mountain Avenue. This line follows Butternut Road to the outlet into the excavation located at the end of Acorn Street. The adequacy of the storm drainage system from the outlet to the Connecticut River should be carefully evaluated with any development contributing significant additional stormwater flows to this system.

These conceptual plans for providing sewer and drainage utility services for the remaining portions of the study area include the need to install most of the systems with the next pieces of land to develop. This might suggest a public/private partnership approach to designing, paying for and installing these utilities.

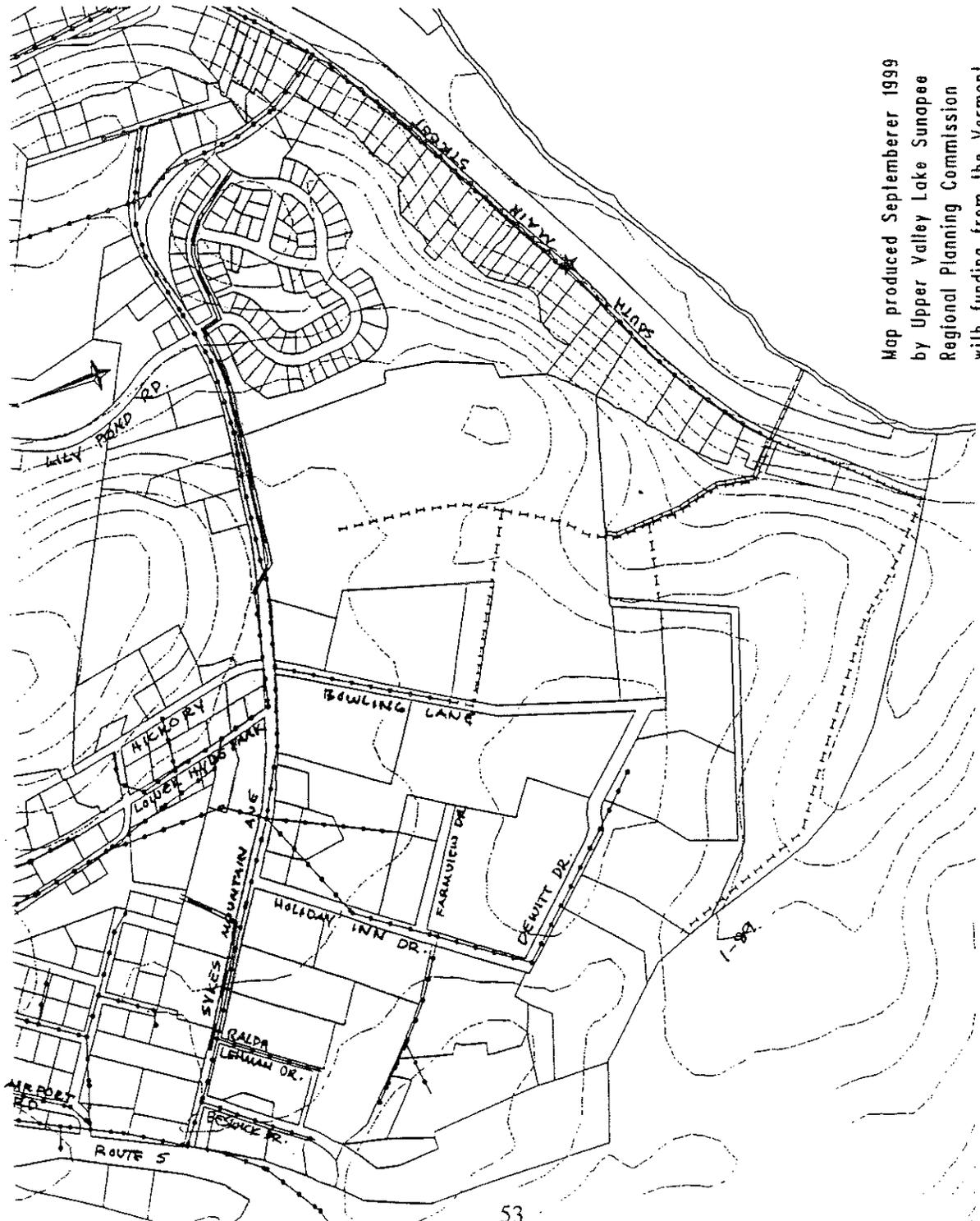
MAP 11

Sykes Mountain Ave  
Sector Plan

CONCEPTUAL  
Future Sewer System  
and Closed Drainage



Note: All Locations Approximate



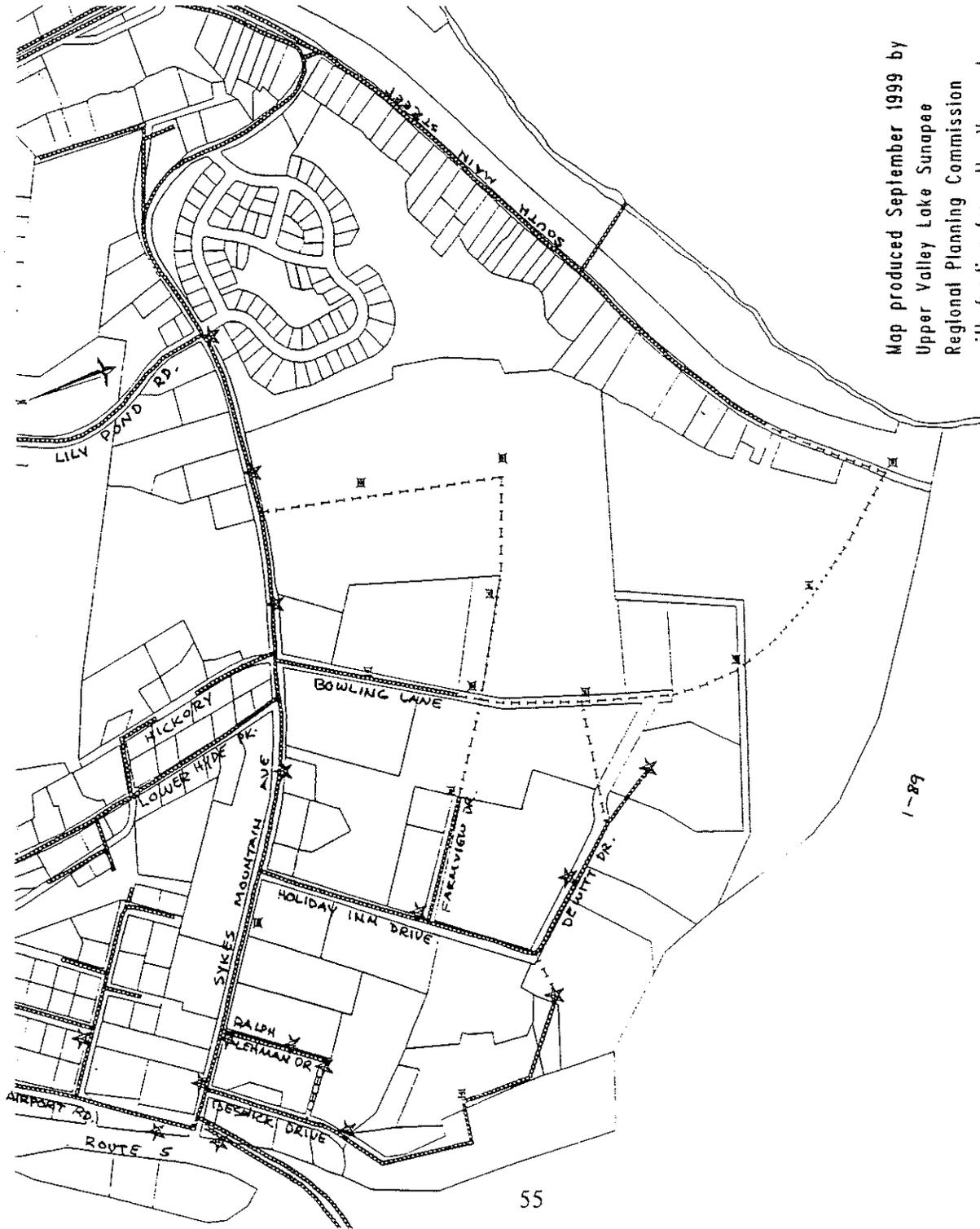
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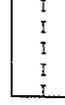
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3. **CONCEPTUAL FUTURE WATER SYSTEM:** A water distribution system which could serve the study area at build-out is shown on Map 11: Conceptual Future Water System and Fire Protection. The key component of this conceptual layout is eliminating any existing and future dead-ends by looping the water distribution system. This will maintain maximum fire flows and minimize service disruptions in case of breaks or repairs in the system. Additionally, the water distribution lines are proposed to be located within the road right-of-ways whenever feasible for ease of access.
4. **CONCEPTUAL FUTURE FIRE PROTECTION:** The suggested plan for meeting the future fire protection needs within the study area is outlined on Map 11: Conceptual Future Water System and Fire Protection. This fire protection plan is based on fire hydrant installations about every 500 feet along the water distribution system. Representatives of the Fire and Public Works Departments thought this hydrant spacing standard would provide adequate fire protection if the system is looped as suggested.

It is recommended the Town and the property owners work cooperatively to have a professional engineer design the utility systems to serve the area and to develop a mechanism for funding the improvements.

Sykes Mountain Ave  
Sector Plan  
**CONCEPTUAL**  
Future Water System  
and Fire Protection



-  Existing Water Lines
-  Proposed Water Lines
-  Existing Hydrants Within Study Area
-  Proposed Hydrants Within Study Area

Note: All Locations Approximate



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revised November 1999.

scale 1:5400 1 inch = 450 feet

**C. LAND USE:**

**1. ZONING:**

- a. Consider creating a new Light I/C District for Light Industrial/Commercial uses and rezone the entire study area to the Light Industrial/Commercial District.

Consider the following uses for the Light Industrial/Commercial District. Include the uses outlined for the existing I/C Zoning District except as follows:

- 1) Consider adding two family residential, multi-family residential, mixed use building, light industry, office park, and home industry.
  - 2) Consider deleting heavy industrial uses.
- b. Zoning of the Area along the north side of Sykes Mountain Avenue east of Lower Hyde Park:

Several alternatives were considered in this section. The first was retaining the existing residential zoning and maintaining residential uses in this area. As noted earlier in this report, traffic, noise and adverse visual impacts generated by the commercial businesses and Sykes Mountain Avenue have substantial impacts on the residences in this area.

Given the existing and anticipated impacts, retaining the existing zoning is not recommended. One alternative considered was to rezone this area to I/C. This was ruled out because there are too many intensive and potentially incompatible uses allowed in the I/C district to extend that district into the residential neighborhood without being able to buffer the neighboring residential uses.

Another commercial district considered was VB Village Business. It was discounted for the following reasons. The existing residential uses become non-conforming uses under this proposal. Multi-family residential uses, which could be a good transitional use between the I/C District and neighboring single family residential uses, are not permitted. Several of the uses allowed could generate unwanted cut-through traffic impacts on the surrounding residential streets. These uses include restaurants/bars, banks, and retail stores under 10,000 square feet in size.

The zoning district which appears to be the best fit is VR-C Village Residential-Commercial. This district allows continuation of the residential uses as permitted uses. This district also provides for a recreational facility such as a park which is one of the uses suggested for this area. This district also provides opportunities through a Conditional Use Permit to develop either multi-family residential or office uses both of which provide better transitional uses between the I/C and the single-family residential uses.

2. **NATURAL RESOURCES:**

- a. **Prime Agricultural Soils:** As reflected on the map of prime agricultural soils, a large portion of the remaining undeveloped I/C zoned land within the study area consists of prime agricultural soils. This area is prime for development with the transportation access and available water and sewer utilities. In terms of focusing development in and around the village centers, development of this area would be preferable to extending strip commercial/industrial development in the more rural areas of the community. The Town presumably weighed the trade-off of losing this prime agricultural land when the I/C zoning was established. It may be better for the community to permit these prime agricultural soils to be developed and to provide for off-site mitigation through the Act 250 process by preserving agricultural land through acquisition of an easement or land elsewhere in Town. As stated in the Vermont Act 250 Handbook, the loss of soils on-site may be mitigated by preserving land elsewhere or paying to preserve other agricultural land. The District Commissions have considered a number of things when deciding whether to allow this mitigation. As stated in the Vermont Act 250 Handbook, generally, two to three times the land area disturbed should be saved. The land should be near an agricultural operation in the same town. The mechanism for preserving the soils should be a reliable one.
  
- b. **Wetlands:** There are no wetlands identified by the National Wetlands Inventory located within the study area.

### 3. TRANSITIONS/BUFFERS WITH NEIGHBORING USES:

#### a. Residential Neighborhood to North:

- 1) As noted previously, the bus maintenance facility at the corner of Beech Street and Airport Road appears to be the most problematic land use with neighborhood residents who have complained about noise and fumes generated by this facility.

Consider two options to address this concern:

- a) Consider designing and erecting a sound wall , perhaps 12 to 14 feet in height, along the north side of the bus maintenance lot to act as a sound barrier.
- b) Consider planting a thick, tall landscaping buffer of evergreen plant materials along the north side of the bus maintenance lot. Consult with a landscape architect on the type of plant material best suited to this site and what plant materials might assist with removing or reducing the fumes.

Comparing the two options, a sound wall would be more effective in reducing the sound for the abutting neighbors. The cost for a professional engineer's design and for construction of a sound wall would be much more than a landscape architect's planting plan and installation. The sound wall would be an effective screen as soon as constructed while the landscaping would take several years to mature and thereby become effective as a screen. Landscaping may be able to reduce some of the fumes while the sound wall would not. The landscaping option may be more aesthetically pleasing, but the sound wall could be softened with landscaping consisting of shrubs, bushes and hedge materials on the Beech Street side. These are options for the Town, neighbors and the property owner to consider in resolving this ongoing issue.

- 2) The boundary separating the I/C Zoning District from the R-2 Zoning District from Beech Street to Lower Hyde Park has a transition/buffer consisting of a wood privacy fence about six feet in height and a mature line of pines along the boundary between the commercial and residential uses. The fence is in need of repair in

some sections. The effectiveness of the mature row of pines as a buffer separating the two land uses is now limited since their lower limbs are so high above the ground (estimated to be about twenty feet).

Landscaping should be added on the Industrial/Commercial properties which would effectively fill in landscaped screening below the limbs on the mature pine trees existing along this border. The fence should be repaired where needed. The Town is encouraged to work cooperatively with these commercial landowners and neighbors to obtain these modest improvements voluntarily. If needed, the Planning Commission could require these landscaping and fencing improvements during the development review process for properties redeveloping along this boundary.

**b. Residential Area East of Lower Hyde Park along the north side of Sykes Mountain Avenue:**

See Zoning recommendation #3 above.

**c. Residential Neighborhood to East:**

As noted previously in this report, the residential area to the east is separated by about 130 feet and situated 15-20 feet below the potential location of buildings in the I/C Zoning District. These features in combination provide an acceptable transition between the future uses in these two abutting zoning districts.

**d. I-89 to the I-91 Exit Ramp for White River Junction:**

The mature vegetation existing along this boundary effectively screens the I/C area from the noise and visual impacts generated by the interstate highways. This mature vegetation also provides a buffer along the interstate highways from the visual impact of development within the I/C area.

Development within this sub-area should minimize the extent of vegetative clearing to accommodate construction and maintain the existing vegetative buffers to the maximum extent feasible.

**e. I-91 Exit Ramp for White River Junction along Route 5 to Airport Road:**

The existing commercial development in this sub-area is compatible with the neighboring interstate highway system.

**4. SITE DEVELOPMENT:**

- a. Consider increasing the current requirement for 15% open space outlined in Article 3-6.1 of the Zoning Ordinance. The Planning Board should consider an open space standard in the range of 25% to 35% of the lot. Increasing the amount of open space would:
  - 1) improve aesthetics;
  - 2) decrease impervious surface coverage;
  - 3) decrease stormwater runoff; and
  - 4) provide additional landscaped areas for stormwater to infiltrate.
  
- b. Consider amending drainage requirements specified in Article 3-6.3 and Article 3-3.3.7(D) to:
  - 1) Combine all in one section under Article 3-6.3.
  - 2) Amend the standard in Article 3-3.7(D) to state: To the maximum extent feasible, stormwater management systems shall be designed to retain water on-site and infiltrate water into the ground.
  - 3) Amend Article 3-6.3.2 to indicate that stormwater drainage systems shall be designed so as not to increase the peak storm runoff flows from the site by infiltration or retention on-site.
  
- c. Consider reducing the total area of signs permitted. Article 3-4.3.3 of the Zoning Ordinance indicates that three signs of fifty square feet each are permitted on an individual property in the I/C District. Reducing the volume of signs permitted would improve the aesthetic appearance of the area.

## VI CONCLUSION:

To date, about 43% or 82 acres of the 191 acre Study Area has been developed. Much of this existing development can be characterized as strip development resulting in incremental and uncoordinated land use, transportation and utility systems. The primary focus of this Study was to evaluate the impacts of developing and/or redeveloping the entire Study Area. The Study analyzed the impact of building-out the Study Area on the transportation network, the neighboring land uses, natural resources and utility systems.

As outlined in the report, full build-out of the Study Area is projected to have substantial impacts on the transportation system serving the area. Sykes Mountain Avenue is anticipated to be the most affected with recommendations for additional travel lanes, turning lanes, intersection signalization and access control. Recommendations are made to add connector roads within the Study Area and to interconnect the Study Area with Route 5 and South Main Street to create a grid street system for more efficient traffic flows.

The most significant impact on the transportation system resulting from build-out of the Study Area is the potential impact on the I-91 exit ramp leading north to the Sykes Mountain Avenue/Route 5 intersection. At full build-out during peak hour use, the queue of traffic at this intersection could cause the traffic to back up onto the exit ramp potentially creating traffic congestion on the interstates. This concern resulted in a long-term recommendation to relocate the northbound exit and entrance ramp to create a four-way signalized intersection at Sykes Mountain Avenue and Route 5.

The Study evaluated the compatibility of the land uses allowed in the I/C Zoning District with the neighboring land uses. Recommendations were made to improve or provide transitional uses or buffers where appropriate. Potential impacts on natural resources were evaluated. While no wetlands impacts are anticipated, off-site mitigation to preserve prime agricultural soils elsewhere in Town was recommended. Conceptual utility systems for water, fire protection, sewer, and drainage were recommended to adequately serve the needs of the projected development. Recommendations on zoning were made to include creating a new Light Industrial/Commercial Zoning District for the Study Area and to rezone the north side of Sykes Mountain Avenue east of Lower Hyde Park from R-1 and R-2 to VR-C Village Residential Commercial Zoning District.

The Study analyzed the impact of building-out the Study Area and made recommendations to accommodate the projected growth. The goal of the Study was to take a comprehensive look at these issues and to provide a planning framework for future land use decisions pertaining to this area.