

5. Transportation and Circulation

5.1 Background

Montpelier is a community that has been built at a human scale, and its transportation facilities have evolved to meet the requirements of various modes of travel and transport, including walking, rail, cars, trucks, buses and bicycles. The city's location in a river valley both defines and limits the transportation routes available. Meanwhile, real or perceived issues concerning traffic congestion and lack of parking threaten Montpelier's economy and quality of life.

In addressing Montpelier's transportation needs, it is important to recognize that there are three categories of vehicular traffic in Montpelier:

- 1) Residents and regular commuters who start or end their trips in the city and are familiar with its roadways, parking, public transportation and traffic signals;
- 2) Through-traffic, including regular commuters and freight vehicles especially on US 2 and VT 12. These travelers may or may not choose to stop on their way through the city.
- 3) Visitors to Montpelier and the region who wish to take advantage of the city's historic, cultural, shopping and hospitality facilities and may be unfamiliar with the city's roadways, parking, public transportation and traffic signals.

At the same time, non-vehicular traffic must be recognized, including:

- 1) Residents or visitors of any age without a vehicle in need of products or services in Montpelier;
- 2) Residents, employees, or visitors of any age with disabilities; and
- 3) People on bicycles or skateboards traveling to, from, or between home, school, play, or work.

Although mentioned as through-traffic, the movement of goods into, out of, and through, the city, whether by tractor trailer, bus, or train, must be considered when considering Montpelier's transportation needs.

Since the 1990/1995 Master Plan, there have been a number of transportation-related developments and initiatives affecting the city. These include:

- A seasonal downtown bus shuttle operates during the legislative session.
- Development of bicycle and pedestrian paths along the riverfront.
- The City built a roundabout, at Spring and Main Streets, to improve traffic circulation and safety.
- Main Street, State Street, Memorial Drive, and the Route 2 and 302 corridor were re-paved. Access to I-89 was widened to two lanes. Protected left turn lanes were constructed at the Route 12 and 2 intersection and a left turn lane added at Main Street for Stone Cutters Way.
- The Central Vermont Regional Planning Commission updated the regional transportation plan for consideration by the State Agency of Transportation.
- The City Council adopted a series of parking policies to ensure effective and efficient use of public short- and long-term spaces.
- The Vermont Transit bus station was relocated from State Street to Taylor Street allowing for the construction of the new Chittenden Bank. This facility was retained in the city following local intervention and continued efforts to keep Vermont Transit in downtown.
- Parking and access through the City Hall lot was reconfigured to enable new construction and improve traffic flow.

Development of Stone Cutters Way consisting of a new access road, bicycle path, sidewalks, on-street parking, and other infrastructure improvements.

Sidewalk improvements to facilitate pedestrian crossing and improve accessibility along Main Street (bulb outs) and State Street (re-marking).

Traffic calming initiatives are being reviewed along College Street and city-wide.

Route 2 and Route 302 Corridor Study focus has been narrowed to analysis of Route 2 and Route 302 for reconstruction. The Central Vermont Regional Planning Commission's Transportation Advisory Committee will be conducting a study of this intersection in 1999. The 1995 Legislature created the City-State Commission, with State and City officials cooperatively seeking a common plan and policies for land use in the Capitol Complex and nearby areas, including traffic circulation and parking needs.

5.2 Current Conditions

Roadways

Rapid growth in average daily roadway traffic continues to increase based on automated counting by the Vermont Agency of Transportation and the Central Vermont Regional Planning Commission. East/west traffic volume ranged from approximately twice to four times greater than north/south traffic volume.

The following is an analysis of road segment traffic count calculated by the Vermont Agency of Transportation:

TABLE 5-1

Average Annual Daily Traffic (AADT), 1992-1996				
<i>Route & Street</i>	<i>1992 AADT</i>	<i>1994 AADT</i>	<i>1996 AADT</i>	<i>1992 - 1996 % change</i>
US 2 Lower State St. @ Middlesex Town Line	1,990	2,485	2,600	+31
US 2 Lower State St. from Graves St. to Bailey Ave.	3,875	4,190	4,300	+11
US 2 Lower State St. from Bailey Ave. to State House	8,620	9,195	9,500	+10
US 2 Lower State St. from Taylor St. to Bailey Ave.	7,780	8,680	8,400	+8
Memorial Dr. from Green Mtn. Power Dr. to Bailey Ave.	11,740	13,610	13,800	+17
Memorial Dr. from Bailey Ave. to Taylor St.	10,515	11,215	11,600	+10
US 2 Berlin St. from Northfield / Main St. to Granite St.	15,080	15,550	17,200	+14
US 2 River St. from Granite St. to Pioneer St.	13,780	* 11,840	13,000	-6
US 2 East Mplr. Rd. from US 302 intersection to Country Club Rd.	8,865	7,615	8,900	0
US 2 East Mplr. Rd. from Country Club Rd. to Gallison Hill Rd.	9,480	8,140	9,500	0
US 2 East Mplr. Rd. @ Berlin Town Line	6,720	7,090	7,600	+13
VT 12 Northfield St. @ Berlin	3,620	3,290	3,600	0
VT 12 Elm St. @ Middlesex	3,535	3,765	4,000	+13

*NOTE: Pioneer St. Bridge Posted

Roadway Classification

Traditionally, roadways have been classified according to the functions served by them. A road can serve either of two distinct functions or a combination thereof. The major function of expressways and arterials is mobility and providing for through traffic or to provide access to adjacent land, which is the major function of local or residential streets. Collectors serve both purposes, providing for through traffic on a more local basis and acting as connections between arterials and residential or local streets.

Unless traffic volumes are very low, a roadway cannot simultaneously fulfill both the functions of mobility and access. An arterial that also has to satisfy the function of access to adjacent properties with numerous driveways and minor intersections cannot operate in an efficient and safe manner. A residential street, with numerous driveways, cannot provide for efficient or safe through traffic, which will negatively affect the atmosphere and character of such a street.

While traditional classification starts from the function of the roadway itself, it is also important to consider the character of the neighborhood or land through which the roadway passes when evaluating the future function of the roadway. A more detailed or comprehensive roadway classification may be appropriate for Montpelier to allow for consideration of the nature and extent of development along existing roadways. Given the incompatibility of mobility and access, design of new streets and improvement of existing ones should focus on one or the other function. Reconstruction projects should address function conflicts to the extent possible (see annual Capital Projects Maintenance Budget). Development of a more comprehensive street classification system that can guide future city, state, and private development projects is desirable.

Bridges

Montpelier is a city of rivers and bridges. As we increasingly turn our attention to highlighting our riverfront, we must also focus on our bridges for both their functional and aesthetic value. Functionally, bridges must move traffic safely and efficiently across the city's rivers. The city's historic bridges are recognized treasures of state and national importance that, for some, serve as symbols of the city. The City maintains seventeen bridges within city limits; there are several other rail, foot, and highway bridges in Montpelier. Railroad bridges are maintained by the State.

The proposed replacement of various historic bridges has been one of Montpelier's most contentious issues, it has fostered passionate debate and citizen referendums on the issue. This includes the Langdon and Pioneer Street bridges, which are slated for replacement, and will soon include Taylor Street, which is in need of maintenance. The City's challenge is to develop a framework for addressing bridge improvements that balances historic preservation with functional considerations.

Pedestrians

Montpelier's size and the compact nature of its downtown makes it very attractive to pedestrian travel. According to the 1990 census, almost one in five workers (over 700 residents) walks to work or works at home (Table 5-2). The Montpelier Downtown Community Association (MDCA) noted, however, that pedestrian activity should and could be improved by building new or better pedestrian linkages within the downtown, improving streetscape elements, and promoting pedestrian scale through building and landscape design. In addition to the installation of new iron benches and trash receptacles on Stone Cutters Way, MDCA's initiative led to the installation of approximately 20 wooden and wrought iron benches on downtown sidewalks in 1999.

The City has upgraded 70% of its sidewalks and curbs in the downtown area including the CB-I, CB-II, GB, and HDR Zoning Districts and has attempted to meet guidelines established by the Americans with Disabilities Act. Upgrades are typically accomplished during paving and reconstruction projects.

Pedestrian linkages elsewhere in Montpelier like the North Branch Riverwalk should also be developed and maintained in good repair to allow for pedestrian travel throughout the city. The Winooski East segment of the Central Vermont Transportation Path, when completed, will provide a safe and scenic pedestrian route from the downtown to Gallison Hill and the East Montpelier Road. Pedestrian access to the businesses along River Street and Barre-Montpelier Road remains needs to be improved.

Bicycles

Bicycling for mobility and recreation is increasingly popular in Montpelier and throughout Vermont, and is actively encouraged as an alternative to vehicular transportation. The Central Ver-

mont Regional Bike Path will run from Montpelier Junction to Graniteville, and the Cross-Vermont Trail will run from Burlington to Wells River. Montpelier has defined a network of short and long-distance bike paths that will link with these paths. They include:

- The North Branch Bike Path connecting Cummings Street to the Elm Street Recreation Area and the VINS Nature Center just south of Gould Hill Road. This network also connects with the East Montpelier and Hubbard Park trail systems;
- The Central Vermont Regional Bike Path, which includes Winooski West (ultimately from Main Street past Montpelier High School) and Winooski East (from Main Street to Rte. 302/2 in East Montpelier/Berlin); and
- the Cross Vermont Trail, which is expected to link to the Central Vermont Path at Gallison Hill Road, then cross the Winooski River at the Green Mountain Power dam located off Gallison Hill Road across from the Civic Center, and extend all the way to the Connecticut River Valley at Wells River following abandoned rail and utility corridors.

Bus/Shuttles

Montpelier has subsidized a bus shuttle operated by Wheels Transportation Services, Inc. in an effort to address the city's parking and traffic circulation needs. Continued funding was rejected by voters. The Downtown Wheels shuttle connects remote parking at the Department of Employment and Training with the retail area and offices at National Life and the Capitol Complex (Table 5-3). Although usage of the service has grown, public acceptance and use of shuttle services has taken far longer than originally anticipated.

Hospital Hill Wheels is a combined fixed route and door-to-door service that connects Montpelier to Central Vermont Hospital and other area medical services. This service operates Monday through Friday from 7:35 am to 4:30 PM every 45 minutes. Airport Wheels, a van shuttle service to and from Burlington International Airport, averaged 60 passengers per month as a recreation type service.

TABLE 5-2
Means of Transportation Home to Work -- Montpelier
for Workers Aged 16 and Over

Transportation Means	1980		1990	
	Number	%	Number	%
Car Alone	1,734	47.2	2,915	70.2
Rideshare	863	23.5	336	8.1
Public Transport	33	0.1	58	1.4
Walked Only	877	23.9	752	18.1
Worked at Home	49	1.3	Included above	
Other	78	2.1	91	2.2
Total	3,674		4,152	

Source: US Census, 1990

City Wheels is a fixed-route service connecting the downtown areas of Montpelier and Barre. On selected runs, the service is extended to the Pioneer Apartments and the Lane Shops in Montpelier. This service operates Monday through Friday hourly from 6 am to 6:10 PM with a limited schedule on Saturday. Ridership on City Wheels has increased significantly in recent years.

Vermont Transit (Greyhound Lines) provides inter-city bus service from its temporary station on Taylor Street. The basic corridor service operates four round trips per day to Burlington and White River Junction, with seasonal adjustments. Located in a trailer on

leased land, its current facilities are inadequate and provide few passenger amenities. Vermont Transit officials have proposed moving its station to Berlin, but Montpelier citizens urged them to continue to provide service from downtown Montpelier while efforts continue to develop a multi-modal transit station in which they would be an important component.

Railroads

Passenger rail service is provided by Amtrak at the Montpelier Junction station in Berlin. The daily "Vermont" runs from Washington DC to St. Albans with bus connections to Montreal. Amtrak also runs a southbound Vermont. The Vermont is subsidized by the State of Vermont and it may, despite significant ridership increases, be discontinued. Ridership at the Montpelier Junction station was in excess of 10,000 passengers in 1993.

The Washington County Railroad, which runs through downtown Montpelier along the Winooski River is a freight rail line owned by the State of Vermont. It runs from Montpelier Junction to the Rock of Ages granite quarry in Barre and provides an important rail connection to Bombardier, Ltd. Use of this line for tourist excursions or passenger rail service would require substantial track upgrades. Plans for passenger facilities for this rail line, however, have been included in the City-State Commission's Capital District Master Plan as part of the proposed transit center.

Demand-Oriented Transport

Montpelier currently has one taxi service. Taxis are important since they support residents who do not use cars and tourists who arrive late at the bus and train stations.

Special service demand-oriented transportation is also provided by human service providers in the region. These agencies include the Central Vermont Council on Aging, Project Independence, Vocational Rehabilitation, Washington County Mental Health, Central Vermont Community Action, and the Retired Senior Volunteer Program. Many of these agencies contract with Wheels Transportation to provide this transportation.

Air Service

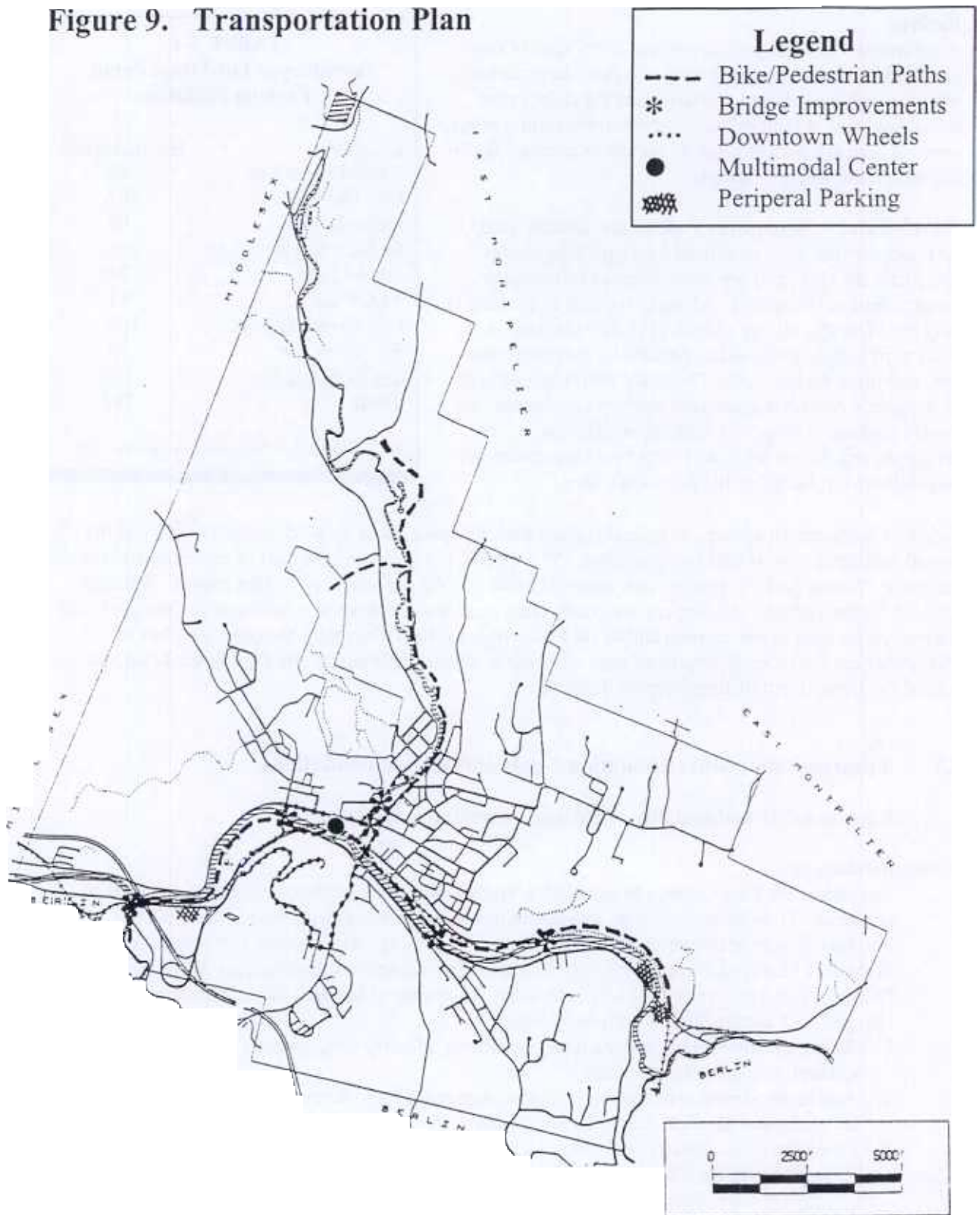
Montpelier's closest airports are the E.F. Knapp State Airport in Berlin and the Burlington International Airport. Knapp Airport provides service to private and corporate aircraft. There is currently no scheduled service. Burlington Airport, 35 miles to the west, is the state's largest airport with a number of scheduled commercial carriers.

TABLE 5-3
Ridership for Downtown Wheels

Year	Total Passengers	# Months Operating	Avg # Passengers Per Month
1993	26,229	9	2,914
1994	52,093	12	4,341
1995	61,988	12	5,166
1996	48,062	9	5,340
1997	15,789	6	3,509
1998	8,612	5	1,914
1999	13,046	5	2,899

Source: *Wheels Transportation, Services, Inc. 12/1999*

Figure 9. Transportation Plan



Source: Montpelier Planning and Development Dept., 1999

Parking

A comprehensive study of downtown and Capitol Complex parking found adequate long and short-term parking, with a possible need for long-term parking if the entire downtown area is built out under the current zoning provisions. There is a plan in place to pursue intermodal facilities within the Capitol Complex.

The 1993 study, "Montpelier Parking and Shuttle Study," by Ecosometrics, Inc., identified 3,088 parking spaces. The State, the City, and private concerns each manage about a third of the spaces. About two thirds of parking is long term (mostly all day employees) and one third is short term spaces, designed to be used by shoppers, visitors, and those on business. The study found that 40% of Montpelier's two-hour spaces are used by employees for all-day parking. Long-term parking is adequate, except during the legislative session. Private parking spaces are generally underutilized in the downtown area.

TABLE 5-4
Inventory of Off-Street Public
Parking Facilities

<u>Location</u>	<u>No. of Spaces</u>
Capital Plaza Lot	89
City Hall Lot	107
Pitkin Lot	68
60 State Street	61
Jacobs Lot	74
VLCT Lot	11
City Center Garage	108
Sarducci's Lot	79
<u>Taylor Street Lot</u>	<u>120</u>
Total	707

Source: Montpelier Police Department May, 1999.

Parking spaces are expensive. A typical surface parking space takes up land worth \$5,000, and the annual economic cost of that space is about \$55 a month, not including the cost of metering and policing the space. A new parking garage costs about \$12,000-15,000 per space, or \$110 a month. A cheaper solution for the City, for developers, the State, taxpayers, and employees is to encourage people to use alternative transportation, carpool and/or park at peripheral lots. Currently the only facilities in Montpelier are the recently improved park-and-ride lots near the Interstate on Dog River Road and behind the Department of Employment Training.

5.3 Transportation and Circulation Goals and Recommendations

1. Expand safety and mobility of citizens, commuters, and tourists.

Recommendations:

- a. Encourage the City Council to establish a Transportation Planning committee composed of residents of neighborhoods with increasing traffic concerns, downtown business people, and designated representative(s) of the City Council, Planning Commission, City-State Commission, Winooski East Redevelopment Council, Montpelier Downtown Community Association, and the Police or Fire Department. With professional assistance as needed, the committee would be charged with overseeing the following tasks:
 1. Assess existing transportation data and reports, identify missing gaps and suggest ways to obtain the missing information;
 2. Assess performance of the city's major intersections and determine the desirable level of service given physical, financial and aesthetic constraints; and
 3. Using the data collected, develop an overall transportation plan that includes the following:
 - i. a proposal for a Street Classification system that can be used to guide projects developed by the City, State, and private developers;
 - ii. Recommendations for improving circulation and safety which may include neighborhood and downtown traffic calming improvements, and intersection improvements through such devices as roundabouts, concurrent crossing, and enforcement of pedestrian laws;

- iii. Recommendations for changes in city ordinances or plans that pertain to transportation including incorporating the new and the Future Transportation Plan Map; and
- iv. Bicycle routes on city streets.

- b. New roads and streets in the city should:
 - 1. Tie into existing street grids wherever possible. Encourage two means of egress for any road servicing twenty or more units.
 - 2. Aim for speeds suggested for similar kinds of neighborhoods.
 - 3. Include neighbors in design process.
- c. Revise the Zoning Regulations pertaining to street and roadway geometrics to reflect the new Vermont State Standards for the design of transportation construction, reconstruction, and rehabilitation on roads and streets.

2. Develop a framework for addressing bridge improvements that balances historic preservation with functional considerations.

- a. Initiate a process to identify the aesthetic and historic value of bridges in Montpelier and to preserve them as appropriate including reuse for a different purpose.
- b. Encourage quality design for new bridges.

3. Preserve and protect our heritage and the aesthetic appeal of Montpelier to visitors.

Recommendations:

- a. Provide benches, bike racks, planters, adequate lighting, trash barrels, and other attractive street furniture and sufficient resources to maintain them.

4. Reinforce the pedestrian oriented quality of the city.

Recommendations:

- a. Sidewalks should be concrete, brick, slate or some other durable material, and curbs should be granite wherever possible.
- b. Accommodate pedestrians on roads and bridges by providing pedestrian/bike paths and safe crossing routes.
- c. Enforce pedestrian right-of-way and protection laws.

5. Encourage alternative means of mobility and public transportation services that reinforce and strengthen our community. This includes addressing the transportation needs of residents who do not drive and/or own a car.

Recommendations:

- a. Take into account planned bike path routes in future developments, both public and private (for example, the proposed changes to Pioneer Street bridge).
- b. Provide for bicycle storage areas and bicycle racks throughout the city.

Encourage contiguous bike paths.

- d. Explore the feasibility of public transportation including bus, commuter rail and car pools between Montpelier, other cities and neighboring villages such as Northfield and Waterbury.

Secure a downtown location for an intercity transit station.

- f. Encourage development of demand-oriented transportation programs.

- g. Encourage measures that improve the effectiveness of the Downtown Shuttle.

- 6. **Improve availability and access to parking for long and short-term users in the downtown and Capitol complex and reduce the amount of downtown surface land dedicated to parking.**

Recommendations:

- a. Pursue the possibility of a peripheral lot at the intersection of Route 2 and Route 302.

- b. Encourage efficient use of the existing parking stock.

Cooperate with the City of Barre and other municipalities in joint parking conservation programs, including programs to encourage commuters to car pool, van pool, walk and use public transit.

- d. Integrate public transportation into strategies to improve peripheral parking arrangements.

Inventory parking space availability in the city during the legislative session and at other times of the year.

- f. Review all parking studies conducted and prepare a long-term parking plan for Montpelier.

- g. Construct the three bike paths already planned: North Branch, Winooski West, and Winooski East. These should be tied into larger regional transportation path plans.