

**Attachment 1**  
**Bicycle Friendly Community Feedback Report**



# BICYCLE FRIENDLY COMMUNITY FEEDBACK REPORT

MONTPELIER, VT

Fall 2013



The League of American Bicyclists has designated **Montpelier** as a Bicycle Friendly Community at the **Bronze** level, because Montpelier exhibits a sustained commitment to cycling. The reviewers felt that there is still “**room to grow**”, but that **notable steps** are being made in the right direction.

Reviewers were very pleased to see the current efforts and dedication to make Montpelier a great place for cyclists.

Below, reviewers provided key recommendations to further promote bicycling in Montpelier and a menu of additional pro-cycling measures that can be implemented in the short and long term. We strongly encourage you to use this feedback to build on your momentum and improve your community for bicyclists. There may also be initiatives, programs, and facilities that are not mentioned here that would benefit your bicycling culture, so please continue to try new things to increase your ridership, safety, and awareness!

To learn more about what federal funds are available for bicycle projects, use **Advocacy Advance’s interactive [Find it, Fund it tool](#)** to search for eligible **funding** programs by bike/ped project type or review the same information as a PDF [here](#).

## The key measures Montpelier should take to improve cycling:

- Increase the amount of [high quality bicycle parking](#) at popular destinations throughout the community, particularly downtown. Residents of multi-family dwellings and public housing should have access to high quality bike parking as well. Regulations that require bike parking, e.g. for new developments, can secure private funding. See the bicycle parking ordinances of [Madison, Wisconsin](#) and [Santa Cruz, California](#). Also consider adding some [artistic bike racks](#) to enhance the sense of place of your community.
- Ensure that the standards for bike parking conform to [APBP guidelines](#).
- Continue to expand the bike network and to increase network connectivity through the use of different types of [bike lanes](#), [cycle tracks](#) and [shared lane markings](#). Since arterial and collector roads are the backbone of every transportation network, it is essential to provide designated bicycle facilities along these roads and calm traffic speeds to allow bicyclists of all skill levels to reach their destinations quickly and safely. On-street improvements coupled with the expansion of the off-street system [will encourage more people to cycle](#) and will improve safety. Ensure smooth transitions for bicyclists between the trail network and the street network. These improvements will also increase the

# Benefits of Further Improving Montpelier for Cycling

effectiveness of encouragement efforts by providing a broader range of facility choices for users of various abilities and comfort levels.

- Ensure that all existing and planned bicycle facilities conform to current best practices and guidelines – such as the [NACTO Urban Bikeway Design Guide](#), 2012 [AASHTO Guide for the Development of Bicycle Facilities](#) and your DOT's own guidelines.
- Work with Berlin to continue the paved shared-use path to the train station to better connect Montpelier residents to transit. Add adequate lighting to increase safety.
- Appoint a current staff member Bicycle & Pedestrian Coordinator to create a designated contact person for the cycling community and an internal champion for bicycle issues. A Bicycle & Pedestrian Coordinator works with advocates, state and local elected officials, business leaders, media, law enforcement, public health officials, transit providers and the general public to build partnerships providing leadership and vision so these groups may embrace and implement facilities and programs that increase the number of residents that are safely bicycling and walking. This staff person should also work closely with the Bicycle Advisory Committee, review development proposals to ensure that local bicycle/pedestrian requirements are incorporated and to assess bicycling and walking impacts, develop and implement educational and promotional programs,

Further increasing bicycle use can **improve the environment** by reducing the impact on residents of pollution and noise, limiting greenhouse gases, and improving the quality of public spaces; **Reduce congestion** by shifting short trips (the majority of trips) out of cars. This will also make communities more accessible for public transport, walking, essential car travel, emergency services, and deliveries; **Save lives** by creating safer conditions for bicyclists and as a direct consequence improve the safety of all other road users. **Research** shows that increasing the number of bicyclists on the street improves bicycle safety; **Increase opportunities** for residents of all ages to participate socially and economically in the community, regardless of income or ability.

Greater choice of travel modes also increases independence, especially among **seniors** and **children**; **Boost the economy** by creating a community that is an attractive destination for new residents, tourists and businesses; **Enhance recreational opportunities**, especially for children, and further contribute to the quality of life in the community; **Save public funds** by increasing the efficient use of public space, reducing the need for costly new road infrastructure, preventing crashes, improving the health of the community, and increasing the use of public transport; **Enhance public safety and security** by increasing the number of “eyes on the street” and providing more options for movement in the event of emergencies, natural disasters, and major public events; **Improve the health and well being** of the population by promoting routine physical activity.

write grant proposals, serve as the public contact for bicycling/walking inquiries and complaints, educate other staff about state and federal facilities standards and guidelines, and coordinate with neighboring cities, transit agencies and other departments to implement policies and projects. See [this report](#) on the importance of Bicycle & Pedestrian program staff.

- Host, sponsor and/or encourage a variety of social and family-friendly bicycle-themed community events year-round, such as a bike movie festival, a 4<sup>th</sup> of July bike parade, an “increase-your-appetite” Thanksgiving community ride, a dress-like-Santa community ride before Christmas, a bicycle fashion show (stylish alternatives to spandex), a Halloween bike decoration competition, a bike to the arts event, etc. Work closely with local bicycle groups, bike shops and schools. Provide appropriate safety measures such as road closures or police escorts.

- Encourage local public agencies such as the State government, businesses and organizations to promote cycling to the workplace and to seek recognition through the free [Bicycle Friendly Business program](#). Businesses will profit from a [healthier, happier and more productive workforce](#) while the community would profit from less congestion, better air quality, public bike parking in prime locations provided by businesses, new and powerful partners in advocating for bike infrastructure and programs on the local, state and federal level, and business-sponsored public bike events

or classes. **Your community’s government should be the** model employer for the rest of the community. See what the Colorado-based New Belgium Brewing Company is doing [here](#).

- Ensure that police officers report cyclist crash data and potential hazards to the public works department, traffic engineers and transportation planners to timely identify sites in need of safety improvements for cyclists.

### **Menu of additional recommendations to further promote bicycling:**

#### **Engineering**

Low hanging fruit and fast results

- Adopt a local [Complete Streets](#) policy and offer implementation guidance.
- Develop and implement streetscape design guidelines that foster a pleasant and comfortable environment for pedestrians and cyclists. Beautiful streetscaping has also shown to increase community livability and pride, reduce crime and increase property values.
- Offer [ongoing training](#) opportunities on accommodating bicyclists for engineering and planning staff.

- Consider passing an ordinance or policy that would require larger employers to provide shower facilities and other end-of-trip amenities.
- Allow access to suitable public lands for off-road bicyclists. If you lack challenging topography, singletracks in flat or slightly hilly areas are great for beginners and children, and ramps can be built for more experienced users. Ensure to connect any off-road trails and facilities to your bicycle network.
- Implement [road diets](#) in appropriate locations to make streets more efficient and safe. Use the newly created space for bicycle and pedestrian facilities.
- Adequately maintain your on and off road bicycle infrastructure to ensure usability and safety. Increase the frequency of sweepings.
- Implement more transportation policies and programs that encourage alternative transportation choices, such as maximum/no minimum car parking standards or shared-parking allowances to complement your **community's infrastructure investments and programs.**
- Consider [a raised crossing](#) or a high-visibility treatment where a shared use path crosses a road. Ensure that both path and road users are clearly informed about who has the right-of-way.

## Long Term Goals

- Consider a form-based code to allow for flexible land uses and to provide a comfortable and convenient built environment for pedestrians and cyclists.
- Develop a system of bicycle boulevards, utilizing quiet neighborhood streets, that creates an attractive, convenient, and comfortable cycling environment welcoming to cyclists of all ages and skill levels. Learn how to do it at <http://www.ibpi.usp.pdx.edu/guidebook.php>. Use the [Bicycle Boulevards section](#) of the NACTO Urban Bikeway Design Guide for design guidelines.
- Make intersections safer and more comfortable for cyclists. Include elements such as color, signage, medians, signal detection, and pavement markings. The level of treatment required for bicyclists at an intersection will depend on the bicycle facility type used, whether bicycle facilities are intersecting, the adjacent street function and land use. See the [NACTO design guidelines](#) and the 2012 [AASHTO Guide for the Development of Bicycle Facilities](#) for recommended intersection treatments.

## Education

Low hanging fruit and fast results

- Consider creating a volunteer-based Bicycle Ambassador program. Have Ambassadors attend community and private events year-round to talk to residents and visitors of all ages about bicycling and to give bicycle safety demonstrations. They can also offer bike commuting presentations for area businesses.
- Offer a full-length Traffic Skills 101 class at least annually or encourage a local bicycle advocacy group or shop to do so. Ideally, the instruction should incorporate a classroom portion as well as on-road training. The classroom portion of Traffic Skills 101 is now available [online](https://www.bikeleague.org/programs/education/) as well. For more information visit: [www.bikeleague.org/programs/education/](https://www.bikeleague.org/programs/education/)

Long Term Goals

- Start a bicyclist and motorist ticket diversion program. Road users given a citation are offered an opportunity to waive fees for violations by attending a bicycling education course. This course should include a classroom and on-road component.
- Start a Share the Road motorist education program for professional drivers.

## Encouragement

Low hanging fruit and fast results

- Consider offering a **'Summer Streets' type event, closing** off a major corridor to auto traffic and offering the space to cyclists, pedestrians and group exercise events.
- Set up and promote a bicycle-themed community celebration or social ride each time a new bicycle related project is completed. This is a great way to show off the **community's good efforts and introduces new users to** the improvement.
- Encourage the Community College of Vermont to promote cycling and to seek recognition through the [Bicycle Friendly University program](#). Many colleges and universities have embraced the growing enthusiasm for more bicycle-friendly campuses by incorporating bike share programs, bike co-ops, bicycling education classes and policies to promote bicycling as a preferred means of transportation.
- Design and publish a local paper bike map addressing diverse needs and skill levels (commuter, recreational cyclist, sport cyclist, mountain biker etc). The map should outline the existing on and off-road bicycle network by infrastructure type and skill level (if applicable). In addition, the map could identify the locations of landmarks, greenways, low-traffic streets, public restrooms, water fountains, bike routes,

designated scenic routes, bike stations, bike repair stations, bike parking and transit stations. Take a look at **Pittsburgh's award-winning [bike map](#)**.

- Develop a short (2-5 mi.) (themed) loop route around the community and provide appropriate way-finding signage. Integrate this route into the local bike map.

### **Enforcement**

Low hanging fruit and fast results

- Have police officers distribute helmets, bike lights and bike locks (or coupons to the local bike shop for each item) to encourage all types of cyclists to ride more safely, discourage bike theft and remove the barriers to attaining these essential bike accessories.
- Increase the number of officers that patrol streets on bikes, as it gives officers a better understanding of the conditions for cyclists. Also ensure that secluded off road paths are regularly patrolled to improve personal safety and encourage more people to take advantage of this amenity.
- Pass more laws that protect cyclists, e.g. implement specific penalties for motorists for failing to yield to a cyclist when turning, make it illegal to park or drive in a bike lane (intersections excepted), implement penalties **for motor vehicle users that 'door' cyclists**, and ban cell phone use while driving.

### **Evaluation/Planning**

Low hanging fruit and fast results

- Routinely conduct pre/post evaluations of bicycle-related projects in order to study the change in use, car speed and crash numbers. This data will be valuable to build public and political support for future bicycle-related projects.
- Consider measuring the Bicycle Level of Service (BLOS) on community roads and at intersections, to be able to identify the most appropriate routes for inclusion in the community bicycle network, determine weak links and hazards, prioritize sites needing improvement, and evaluate alternate treatments for improving bike-friendliness of a roadway or intersection: <http://www.bikelib.org/bike-planning/bicycle-level-of-service/> (roads) and <http://www.bicyclinginfo.org/library/details.cfm?id=4425> (intersections).
- Implement a community-wide trip reduction program or ordinance. See good examples [here](#).
- Consider conducting an economic impact study on bicycling in your community. [Read about](#) what Portland, OR has done.

## Long Term Goals

- Ensure that there is dedicated funding for the implementation of the bicycle plan.

- Work with your mountain bike community to develop a plan for off-road access to increase opportunities for [singletrack](#) riding within the community.

**For more ideas and best practices please visit the [Bicycle Friendly Community Resource Page](#).**

**Attachment 2**  
**Walk Friendly Communities Application**





# Walk Friendly Communities

Last updated 05/22/2014

Print This Page

## Community Profile

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This section is intended to provide applicants with a chance to describe their communities. Having an understanding of the geographic, demographic, and economic make up of the community can help explain the challenges and opportunities that the community faces when planning for walking.

### Contact Information

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Name of Community:	<input type="text" value="Montpelier"/>
Mayor or Top Official:	<input type="text" value="John Hollar, Mayor"/>
Mayor's Phone:	<input type="text"/>
Community Contact Name:	<input type="text" value="Michael Miller"/>
Position/Employer:	<input type="text" value="Director of Planning and Commi"/>
Contact Address:	<input type="text" value="39 Main Street"/>
Address (line 2):	<input type="text"/>
City:	<input type="text" value="Montpelier"/>
State:	<input type="text" value="Vermont"/>
Zip code:	<input type="text" value="05602"/>
Phone/Fax:	<input type="text" value="802-262-6269"/>
Email:	<input type="text" value="mmiller@montpelier-vt.org"/>
Web site:	<input type="text" value="http://www.montpelier-vt.org/department/57"/>

## Pedestrian Coordinator & Government Staff

List your official pedestrian coordinator or pedestrian issues contact person on government staff, and identify his/her department.

Contact Person:

Contact Person Dept:

How many hours are spent per year in this capacity?

Is this person also the bicycle coordinator?

Yes  No

List all other government staff or contractors whose primary duties are devoted to walkability and pedestrian safety issues:

Do you have a Pedestrian Advisory Committee, Ped/Bike Council or other venue for citizen input?

Yes  No

If yes, please provide the name of the Chair and their contact information:

Do you have an independent pedestrian advocacy organization?

Yes  No

If yes, please provide the name and contact information:

Has your mayor signed the International Charter for Walking or a similar pledge to improve the conditions for walking in your community?

Yes  No

If yes, please provide details:

## Community Profile

Population: Area of municipality: Population Density: Park Land: Age Distribution: under 20: age 20–64: age 65–84: Over 85: 

Last updated 05/22/2014

## Status of Walking

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This assessment tool seeks to learn how much people are walking and how safe they are when they are doing so. Therefore, the outcomes that are most significant for the purposes of this tool are the numbers of walkers and the number of pedestrian crashes. Walk Friendly Communities is looking for communities that have created environments in which many people walk and pedestrian crash rates are low, or those communities that are making significant progress towards those ends. These two questions focus on these specific outcomes, while other questions in this survey address what measures are used by communities to facilitate walking and improve safety.

### Question 1

According to the 2000 Census, what percentage of residents used the following modes for their commute to work?

Walking: Bicycling:

Public transit:

Single-occupant vehicles:

Carpool:

Please also provide the latest walking percentage of commuting to work from the 3-year estimates of the American Community Survey:

Walking 2006-2008:

Walking 2008-2010:

Public transit 2006-2008:

Public transit 2008-2010:

If your community conducts its own travel counts, please include a link, attachment or description of those count results:

Web Link:

File Upload:

 No file chosen

Count Results Description:

### Question 2

How many pedestrian/motor vehicle crashes were reported in each of the last five years; and how many of these crashes resulted in injuries and fatalities?

Number of Pedestrian Motor Vehicle Crashes — 2013:

Number of Pedestrian Motor Vehicle Crashes — 2012:

Number of Pedestrian Motor Vehicle Crashes — 2011:

Number of Pedestrian Motor Vehicle Crashes — 2010:

Number of Pedestrian Motor Vehicle Crashes — 2009:

Number of Pedestrian Injuries — 2013:

Number of Pedestrian Injuries — 2012:

Number of Pedestrian Injuries — 2011:

Number of Pedestrian Injuries — 2010:

Number of Pedestrian Injuries — 2009:

Number of Pedestrian Fatalities — 2013:

Number of Pedestrian Fatalities — 2012:

Number of Pedestrian Fatalities — 2011:

Number of Pedestrian Fatalities — 2010:

Number of Pedestrian Fatalities — 2009:

### Question 3

What long-term trends in walking volumes and pedestrian/motor vehicle crashes has your community observed?

In the last ten years, Montpelier has seen an increase in both walking volumes and transit use. Fortunately, this increase in pedestrians has been accompanied by a decrease in pedestrian and motor vehicle crashes and resulting pedestrian injuries.

Last updated 05/22/2014

## Planning

Pedestrian issues are addressed at many different levels of planning, ranging from neighborhood plans to city, county, state, and federal policies and plans. A comprehensive pedestrian plan should address all five Es (education, encouragement, enforcement, engineering and evaluation) along with public involvement. With thorough planning, a community can become proactive rather than reactive in addressing issues of pedestrian accessibility, safety, and aesthetics. Planning involves soliciting public input, collecting information about current and future conditions, and considering what policies, plans, programs and resources a municipality will require to meet your community's needs.

### Question 1

Has your community adopted a pedestrian plan or pedestrian safety action plan?

Yes

How are pedestrian issues captured in other plans (e.g. the comprehensive plan, Transportation Improvement Program, etc.)?

The 2010 Master Plan incorporates pedestrian issues in several of its transportation goals: "By 2040, the number of Montpelier residents who commute by walking or bicycling increases by 40 percent." (p137) "Montpelier maintains safe, quality roadways, sidewalks, and bike paths." (p141)

To achieve these goals, the Master Plan highlights strategies that include prioritizing sidewalks and ADA compliance for snow removal and maintenance, sidewalk extensions, traffic calming tactics, and adoption of a Complete Streets policy.

Pedestrian issues are framed as interwoven with other alternative transportation goals and a necessary step towards providing equitable access to community services and improved quality of life for all Montpelier residents.

The 2010 Master Plan can be accessed online at:

<http://www.montpelier-vt.org/upload/pages/406/files/complete-master-plan-2010-09-08-adopted.pdf>

### Question 2

Has your community adopted an ADA Transition Plan for the public right of way?

Yes

If so, please provide a link or attachment of the plan.

Link to action plan:

Not available

Action plan file upload:

Choose File No file chosen

If yes, what year was it adopted?

1992

Has the ADA Transition Plan been updated?

Yes  No

If yes, what year?

Does the ADA Transition Plan address curb ramps and sidewalks?

Yes  No

Explain:

The 1992 Transition Plan and all work on an update thus far has addressed curb ramps and sidewalks, including issues of location and slope. Routine maintenance by the Department of Public Works also addresses curb ramps and sidewalks.

Does the ADA Transition Plan address street crossings and signals?

Yes  No

Explain:

Location and length of street crossing and signals were included in the original 1992 Transition Plan and all work towards an update since then, including routine construction work of the Department of Public Works.

Who is responsible for the implementation of the ADA Transition Plan?

Department of Public Works

Is your transition plan being implemented?

Yes  No

Explain:

Over the past 14 years, the ADA Committee has held monthly meetings towards an ADA Transition Plan update. However, due to limited internal resources, this process has been delayed and staff has recommended seeking a consultant to organize the completion of the work.

In 2010, the city issued a "Proclamation of Recommitment to Full Implementation of the ADA" (available online at: <http://www.montpelier-vt.org/upload/pages/424/files/proclamations-of-recommitment.pdf>). Since then, a full sidewalk inventory has been completed. The next steps include an analysis of data, developing modification and repair strategies with cost estimates, prioritization, and a schedule for budgeting and planning purposes.

How is the ADA Transition Plan work funded?

In the past, the ADA Transition Plan work has been funded by the Capital Improvement Program budget.

There are state roads in most communities. Has your state DOT adopted an ADA Transition Plan?

Yes

Is the state DOT transition plan being implemented?

Yes  No

Explain:

The Vermont Agency of Transportation (VTrans) is in the process of updating their 1995 Transition Plan (available at <http://www.aot.state.vt.us/CivilRights/Documents/ADATransitionPlanMay1995.pdf>).

An update of the progress (available at <http://www.aot.state.vt.us/civilrights/Documents/2012TransitionPlanUpdateDRAFT1.pdf>) describes the history of the plan and progress since its adoption. Briefly, these include the development and adoption of a Pedestrian and Bicycle Facility

Planning and Design Manual in 2002, the addition of Accessible Pedestrian Signals to the agency's required Standard Specifications for Construction in 2006, and a 2009 project to identify and evaluate all state-owned curb ramps and schedule necessary maintenance.

### Question 3

Has your community adopted a Complete Streets policy or ordinance?

Yes

If yes, please provide a link or attachment of the document.

Link to document:

<http://www.leg.state.vt.us/docs/2012/Acts/A>

Document upload:

Choose File No file chosen

Who is responsible for the implementation of the Complete Streets Ordinance?

Department of Public Works

How is Complete Streets work funded? (i.e., is it routinely funded as part of the project, funded with other set-aside funds, etc.?)

Complete Streets work are routinely funded as part of the project. Depending on the project, work is funded with annual Public Works road maintenance funds, Capital Improvement Project funds, or other grants received (such as VTrans grants). Work is implemented either as maintenance is needed or as development projects are pursued.

What challenges and barriers does your community face in implementing the Complete Streets policy?

While Montpelier certainly benefits from its small pre-automobile downtown core, size constraints are a major barrier to implementing Complete Streets projects. This places a barrier on the designs available in making Montpelier streets Complete Streets, especially in the shorter-term.

Identify three recent examples of how your Complete Streets policy was implemented (particularly at roadway widening projects):

Project 1:

State Street - This main thoroughfare (on which the Vermont State House and other government buildings are located) will be repaved in 2015. The State is interested in pursuing reverse angle parking, a safer alternative to traditional angle parking. The Bicycle Advisory Committee is also interested in introducing a bike lane in this project. While designs are not finalized yet, the inclusion of more modes on one of Montpelier's core streets makes it an important Complete Streets project in the near future.

Project 2:

Berlin Street - This recent repaving project added a bike lane to a high traffic road that previously had no bicycle accommodations. This project also included fixed signs marking the presence of the lane. Berlin Street is an important

route in commuting in and out of Montpelier, especially connecting to the nearby towns of Berlin and Barre.

### Project 3:

Because compliance with the Complete Streets statute is require throughout Vermont, many other smaller Complete Streets projects happen with routine maintenance that the Department of Public Works completes throughout the year.

### Question 4

Please briefly describe how public input is used in the municipality's planning process. Mention the role that citizen participation, advisory board review, and/or the municipality's pedestrian/bicycle advisory council play in the process. How do you assure that individuals with disabilities are included in the public input process?

The 2010 Master Plan enVision Montpelier process was centered around public input. It was an opportunity for Montpelier's residents to 'enVision' a future for their city. The plan is divided into categories by topic, and regular public input meetings were held for each section during an 'information gathering' phase. This is in addition to monthly stakeholder meetings. Several meetings were also held during a 'prioritization' phase, and individuals could also share their priorities through an online survey. In total, over 400 community members participated in the writing of the Master Plan.

This level of public participation was a natural choice for Montpelier. Residents are forward-thinking, passionate about the city matters, and frequently attend city meetings.

Provide any relevant links or attachments that indicate the formal and informal public participation and advocacy efforts in your community (i.e., a link to the pedestrian and bicycle advisory board website, if it exists, or documented guidelines for public participation in the planning process).

Website link:

<http://www.montpelier-vt.org/group/409/Pec>

Please briefly describe the role that citizen participation, advisory board review, and/or the municipality's pedestrian/bicycle advisory council play in the process of reviewing ongoing projects and development.

Both Montpelier's Pedestrian and Bicycle Advisory Committees provide input on municipal projects in conjunction with the Department of Public Works. Input is solicited in the initial conception of projects and the review of design details by City Council. From these meetings, the committees may also form their official recommendations to City Council for consideration. All city meetings are open to the public for comment.

Please briefly describe how you assure that specific populations (like individuals with disabilities or low incomes) are included in the public input process.

Montpelier Pedestrian Advisory Committee meetings are held regularly at a set time and location. The location is a wheelchair accessible building right in the center of town. These meetings are always open to the public, and time is given for public comment.

Please briefly describe how your community works with coalitions, advocates, and other departments and agencies to ensure that pedestrians are considered in all projects and documents.

A big player in pedestrian advocacy is Montpelier Alive, a non-profit devoted to the vibrancy of public life in Montpelier. Over the past several years, Montpelier Alive has given input and obtained funding for benches, flower planters, and trash receptacles to serve pedestrians downtown. It is currently working on experiments with temporary parklets (mini-parks, often over parking spaces) that would create more seating and gathering places adjacent to sidewalks.

Participation file upload:

No file chosen

### Question 5

Does the city have a policy requiring sidewalks on both sides of arterial streets?

Yes  No

On both sides of collector streets?

Yes  No

Sidewalk policy link:

Specifically 703.B; <http://www.montpelier-vt.gov>

Sidewalk funding and installation: (if applicable, please provide a link or attachment of the relevant ordinance or policy)

Sidewalk funds link:

N/A

Sidewalk funds file upload:

No file chosen

Does the city require sidewalks to be constructed or upgraded with all (or the vast majority of) new private development?

Yes  No

Explain:

Sidewalks are required to accompany all streets, and all new developments must provide for pedestrian circulation. This includes providing "circulation within a development between buildings and parking areas, to common areas within a development, to adjacent properties, and to schools, parks, shopping areas, transportation and other community facilities."  
"

### Question 6

Has your community established a connectivity policy, pedestrian-friendly block length standards and connectivity standards for new developments, or convenient pedestrian access requirements?

Yes

If yes, please provide a link or attachment of the policy or ordinance.

Link to document:

<http://www.montpelier-vt.org/upload/groups>

Document upload:

Choose File No file chosen

If yes, please provide information on the coverage area of this policy (e.g. downtown, certain districts, entire city):

Pedestrian access is required throughout Montpelier 'wherever necessary'. Such facilities must be provide for in lot layouts, site designs, and site elements. Pedestrian facilities must be located to provide circulation within a development between buildings and parking areas, to common areas within a development, to adjacent properties, and to schools, parks, shopping areas, transportation and other community facilities.

(Relevant article: 703.A.)

If applicable, please discribe an example of a project that restored or improved the street grid.

N/A

### Question 7

Do you have a trails plan?

Yes  No

How many miles of trails (paved/hard surface/natural) currently exist in your community?

16

How many miles of trails are included in your current planning documents?

16

Please describe destinations (schools, shopping, offices, etc.) that are accessible by trail in your community:

Montpelier's trails are accessible at the Vermont State House and surrounding tourist destinations. The Vermont State House complex is very close to downtown restaurants, shopping, movie theaters, churches, and many workplaces.

Trails continue through Hubbard Park, which includes over 190 acres, 10 miles of cross country skiing and hiking trails, a soccer and ball field, a small pond, a sledding hill, and an observation tower. These trails connect to the Recreation Fields and North Branch Nature Center, which include tennis courts and green space. Montpelier's trails continue onward to East Montpelier's extensive trail system to the north.

Please provide a link or attachment of relevant plan, if available.

Link to document:

The Natural Environment section of the 201

Trail plan document upload:

Choose File No file chosen

Is it routine policy to build trails and paths with all new and major re-developments?

Yes  No

Is it required through zoning regulations?

Yes  No

Are incentives provided to encourage trail construction?

Yes  No

If so please provide a link or attachment of the policy or ordinance.

Link to trail incentive:

<http://www.montpelier-vt.org/upload/groups>

Incentive file upload:

Choose File No file chosen

### Question 8

Is your community served by public transportation?

Yes

If yes, please list the agencies and whether they are city, regional, or both.

GMTA - regional

The GMTA system in Central Vermont currently serves all of Washington County plus three towns in Orange County – Orange, Washington, and Williamstown - including Montpelier. A range of GMTA services work to meet the diverse needs of the traveling public. These include year-round local routes that serve trips for all purposes, commuter routes that operate primarily during peak periods, seasonal routes that mainly serve skiers in the Mad River Valley and in Stowe, shuttle routes and other demand response services oriented toward seniors, people with disabilities and others who have limited transportation alternatives, and lastly a network of volunteer drivers.

Rural Community Transportation - regional

Rural Community Transportation is a non-profit transportation brokerage that especially serves the 'North East Kingdom'. The Montpelier to St. Johnsbury line is a crucial link to rural Vermont. All bus stops are wheel-chair accessible.

Amtrak - regional

Amtrak provides trains to destinations such as Burlington, Montreal, Boston, and New Haven.

Greyhound - regional

Greyhound bus service has routes and stops all over the northeast. Regular buses connect Montpelier to a number of

destinations including Burlington (downtown and Airport), Boston, and Montreal.

Please provide the following performance indicators and details to indicate how well your community is served by public transportation.

Percent of population living within a quarter mile of a bus stop or 1/2 mile of a rail station:

Greater than 60'

Hours of operation for transit service:

Weekday: 6 AM - 6 PM

Saturday: 8 AM - 6 AM

Sunday: none

Average off-peak headway on bus routes: 60

Average peak period bus headway 30

Average off-peak headway on train routes: 10 AM, 730 PM

Average peak period headway on train routes: 10 AM, 730 PM

Percent of bus stops that are wheelchair accessible:

100

What route planning and trip information is provided for transit passengers (e.g. real-time arrival information, online trip planning, etc.)?

GMTA trip information is published and available in a free brochure around town. Trip information, including locations, times, and maps, are also available on the GMTA website. The website is synced with Google Transit for online trip planning.

Rural Community Transportation, Amtrak, and Greyhound schedules are available online.

Please describe your transit stop improvement process including information on bus stop location guidance and the use of safety and accessibility audits, crash data, and boarding/alighting data.

Because of Montpelier's small size, there hasn't been a need for major bus stop improvement in past years. The only recent improvement on bus stops was at the Shaw's Supermarket GMTA stop on Main Street where solar lighting was added as part of the City's street light improvement process.

The flexibility of lines helps to meet the needs of Montpelier users. The Montpelier Circulator is a free GMTA bus line that will deviate from its route if a user calls in advance. This allows greater safety and accessibility to the line on those instances when the established stops do not meet the needs of its users.

### Question 9

Which of the following approaches does your community use when planning for parking? Please provide a link or attachment of relevant ordinance or policy and describe when and where these strategies are used. (check all that apply)

- Maximum parking standards or absence of minimum parking standard
- Parking location requirements (i.e., parking below, beside, or behind a building; allowing on-street parking to meet minimum parking requirements)

Link to location requirements:

<http://www.montpelier-vt.org/upload/groups>

File upload:

Choose File No file chosen

Description of requirements (including when and where these are used):

Whenever possible, the Development Review Board is required to encourage parking and loading areas to be located in side and rear yards. In the Central Business and Residential Districts, no part of the front yard setback can be used for parking or loading space. In cases where side yards are non-conforming, this still applies. For cases where a non-residential district abuts a residential district, the parking and loading spaces must be no closer than 15 feet to abutting residential district. These spaces must also be screened and landscaped.

(Relevant articles: 707.B. ; 707.C. )

- Surface lot size and design requirements, including pedestrian and vehicle separation, locating lots to the side or behind businesses, alternative use of parking lot, landscaping, etc.

Link to size/design requirements:

<http://www.montpelier-vt.org/upload/groups>

File upload:

Choose File No file chosen

Description of requirements (including when and where these are used):

Landscaping requirements for parking lots containing ten or more spaces includes planting at least one tree per eight spaces.

Parking areas (as well as loading docks, service entrances, dumpsters, propane tanks, open storage areas, exposed machinery and waste disposal areas) must be screened from adjacent land use and public streets. The screening must be at least five feet wide and can consist of densely planted landscaping, fencing, and land forms.

(Relevant article: 708.D.)

Shared parking allowances

Definition: Shared parking lots can reduce the total number of parking spaces needed in a particular area by coordinating peak parking demand times between different buildings and different uses. For instance, an office building might be able to share a parking lot with a restaurant that operates only in the evenings, as the former would use the lot during the day and the latter would use it at night.

Link to allowances:

<http://www.montpelier-vt.org/upload/groups>

File upload:

Choose File No file chosen

Description of allowances (including when and where these are used):

In calculating the number of parking spaces needed to satisfy the parking requirements where multiple separate uses occupy one property, spaces may be counted toward satisfying the parking requirement for more than one use if it can be shown that the spaces will be used at different times and will still meet expected peak parking demand for project.

(Relevant article: 705.I.)

 Priced public parking Parking cashout incentives

Definition: Parking cashout is a financial incentive in which employees who do not drive and park at work receive a subsidy that approximates the cost employers bear to provide free parking to employees.

 Remote parking and/or park and ride

Link to remote parking:

N/A

File upload:

Choose File No file chosen

Description of remote parking (including when and where these are used):

Several remote parking lots are located on the way from I-89 into Montpelier. These include a lot on Memorial Drive next to the Department of Labor and a lot at the National Life building which houses National Life and other State agencies. These lots provide parking for Montpelier's two biggest employers.

Remote parking is also available on Stone Cutters' Way. This provides parking for downtown access that is not directly in the downtown district.

 Other (please describe)

## Question 10

Approximately what percentage of development in the last five years has been infill?

Planning does n

How many LEED-ND projects have been developed (or are pre-qualified) in your community (just LEED for Neighborhood Development not all LEED designations)?

0

What measures does your community use to encourage dense, mixed-use development? (check all that apply)

- Secondary or accessory dwelling units are permitted

Definition: These units are self-contained apartments on an owner occupied single-family lots.

Link to measure:

File upload:  No file chosen

Description of measure (including where it is permitted):

Accessory units are permitted within an owner occupied single-family dwelling or within an existing accessory structure as an efficiency or one-bedroom apartment if there are facilities for sleeping, food preparations, sanitation, parking, and waste water processing capacity for both units. The total habitable floor area may not exceed 40 percent of the single-family dwelling.

(Relevant article: 605.D.)

- Retail/commercial uses are required on the ground floor of residential buildings in mixed use corridors or districts

- Density bonuses to developers are provided for providing amenities that enhance walkability and livability

Definition: Density bonuses are used by local governments to allow a developer to build at a higher density than zoning permits in exchange for providing affordable residences or walk-friendly amenities.

Link to measure:

File upload:

No file chosen

Description of measure (including where it is permitted):

If that a developer can prove that a 'cluster development' would result in a more desirable environment than would be possible through conventional subdivision and that the development will be designed in harmony with the natural environment, a density bonus may be permitted.

(Relevant article: 713.E)

Form-based or design-based codes are used

Definition: These codes are an alternative to conventional zoning that can be used to ensure a walk friendly environment by regulating the form, scale and massing of buildings rather than the use. They are typically presented with both diagrams and words.

Neighborhood school siting policies

What other incentives are provided for infill developments? (please describe):

N/A

Please describe the planning efforts in your community to preserve and strengthen your urban structure. Examples could include revitalization efforts of your downtown and other historic areas or infill and intensification efforts in centers, nodes, districts, and along corridors.

Montpelier is working to build more pedestrian friendly development. One important example is the One Taylor Street development. This project (which is still in the public input stage) would take a one acre parking lot along the Winooski River and develop a multi-modal transit center in its place. While the design process is not complete, the project represents a promise by the City to create a transportation node for the city that could accommodate more diverse (and pedestrian) modes of travel. The project also will include completing the east/west multi-use paths across town, which would connect two sections of the Cross Vermont Trail from the Recreational Center to U32 High School. Other design ideas have included better landscaping and river access, public art, and a space for an outdoor market.

### Question 11

In the following fields, please select and briefly describe any urban design features or pedestrian amenities that your community uses or requires to create a comfortable and attractive walking environment.

Lighting:

In 2012-13 most streetlights in the city were converted to LED lights. A survey by the Street Light Committee, appointed by the City Council, was conducted to optimize light levels for safety, improve energy efficiency, and reduce night-sky light pollution. Light levels at all intersections throughout the city were intentionally set to accommodate the needs of both vehicular traffic and pedestrian crossing. As a result, lighting levels were increased at all crosswalks in the downtown district to improve pedestrian visibility.

Trees and plantings:

Montpelier has a standing committee, the Tree Board, appointed by City Council that is responsible for all trees on City property, including public right of way. Trees are planted throughout the city, including downtown and residential districts. In the downtown district they are protected by iron grates and guards. Montpelier is proud to have been a Tree City USA for the past 12 years!

In recent years, Montpelier Alive has procured planters in front of the post office. Planters also exist by City Hall

and the police station.

**Street furniture:**

The City has a number of benches in the downtown district that are located around key public services, including the Kellogg Hubbard Library and the post office. The Kellogg Hubbard Library has a small plaza which includes stone street furniture.

Montpelier's centrally located City Hall includes an open semi-circular plaza. This space includes attractive pavers, two plantings, and many places to sit. Several cafes and coffee shops in the downtown district also provide outdoor seating to customers during the summer months.

Seating also exists along the Winooski River at a Peace Park. Benches, picnic tables, and a small mosaic are accessible by the multi-use trail system.

**Community identifiers (e.g. gateways, banners, public art):**

The State House complex forms a 'gateway' into the city. The sidewalk, extensive lawn, and steps up to the State House are open to the public and provide a warm weather pedestrian destination.

Numerous other examples of public art act as community identifiers. These include the Capital Stationer's mural by the Fire Station on Main Street and a series of bicycle themed statues around town. (Locations include the Court House, National Life, the Main Street roundabout, and along Stone Cutters' Way.)

The Winooski and North Branch Rivers are Montpelier's biggest natural community identifiers. These rivers create the need for bridges, for both cars and pedestrians, which serve as excellent community identifiers. Particularly, the bridges over the North Branch River make those portions of Main and Langdon Streets unique. For example, the Main Street bridge over the North Branch River is a popular place to sit with a cup of coffee and people-watch.

**Other features and amenities (e.g. facade design requirements, public restrooms, pavement design):**

The city's zoning ordinance requires new commercial and mixed-use developments in the downtown to include a facade articulation: clearly delineated upper and lower facades, display windows on street-level facade and regularly spaced windows on upper levels, a recessed entryway, and decorative trim and ornamental molding, etc.

Public restrooms are available in City Center on Main Street, Kellogg Hubbard Library, City Hall, and the State House.

Artistic banners on light posts in the downtown core are changed periodically. They occasionally advertise upcoming events, such as the Green Mountain Film Festival.

Please provide a link or attachment of the ordinance or policy that addresses these features.

Link:

File Upload:

 No file chosen

### Question 12

Please briefly describe any other planning policies related to promoting or enhancing walking in your community.

Last updated 05/22/2014

## Education & Encouragement

Education and encouragement are primary components in creating a successful walk friendly community. This section seeks information about the programs, policies and strategies your community uses to inform, inspire, motivate or reward walkers and other users of the public right of way. It also asks the question "Do your efforts result in a safe walking environment?" Effective pedestrian safety education begins at an early age, is age-specific, and continues through the years across all modes (i.e., motorists educated about pedestrian safety contribute to a safer, more pleasant walking environment for pedestrians; this environment enables and encourages more people to walk).

Encouragement programs can be fun and inclusive in seeking to establish good habits or change unhealthy or unsafe habits. The education and encouragement strategies listed below are common to many walkable communities. If your community uses other strategies to educate the public and encourage walking, please describe them as well.

### Question 1

Please describe any Safe Routes to School (SRTS) programming being implemented in your community in the space provided below.

Check any of the following activities that are part of your SRTS programs and include information about the nature, scope, and results of these activities (as well as any others not listed below) in your description.

Walk to School Day/Week

*Definition: Walk to School Day is an international event that takes place annually in October. Schools from all over the country plan special activities to encourage students to walk to school. This special event can be a great way to start a Safe Routes to School program.*

Description:

Walking Wednesdays or other walking events

Definition: Some schools and communities promote walking to school by having regular Walking Wednesday events in which parents, teachers, and students may meet up near the school campus and walk to school together.

## Description:

Walking Wednesdays are held through the winter at Union Elementary. Full school participation is encouraged through friendly competition for the "Golden Sneaker" trophy. Dedication to promoting walking is school-wide, and principal often leads walking group.

Montpelier schools also observe two other annual events centered around walking and alternative transportation:

Walk & Roll Day (part of Walk & Roll Month) is a day in May where students are encouraged to walk or ride their bicycle to school. The event is advertised in a series of promos and announced by a mayoral proclamation. Students are met with a greeting table, incentive items, and local 'celebrities'. Vermont's Governor has joined the activities in 2003 and 2009. Union Elementary School participates every year.

Way to Go Week occurs in May of each year. All of Montpelier schools support this statewide initiative in alternative transportation encouragement, promoting walking and cycling for CO2 reduction. Union Elementary School, Main Street Middle School, and Montpelier High School participate in Way to Go Week through friendly competition between the schools.

 Walkability audits or SRTS maps

Definition: By auditing and assessing walking routes and creating maps indicating the safest routes to school, communities can help educate students and families about the best routes to take.

## Description:

An audit of walking routes to Montpelier Schools was conducted in 2008. It assessed routes to Union Elementary and Main Street Middle school and identified barriers to the safest routes. From this information, the Vermont Safe Routes to School Resource Center created maps to illustrate the safest routes which are used in SRTS activities and planning

 Walking School Bus

Definition: From [saferoutesinfo.org](http://saferoutesinfo.org) : A group of children that walk or bicycle to school together accompanied by one or more adults.

## Description:

Walking school bus routes to and from various neighborhoods have been used since 2007, depending on volunteer availability.

 Student safety patrol

Definition: From [saferoutesinfo.org](http://saferoutesinfo.org): Student safety patrols enhance enforcement of drop-off and pick-up procedures at school by increasing safety for students and traffic flow efficiency for parents. Such efforts allow students to participate in promoting traffic safety where they learn skills they can use in their everyday lives.

 Tracking system to count the number of children walking to school

## Description:

Classroom counts occur twice during the year when promotional activities are taking place and twice when they are not. (The same is done for bicycling.)

The Safe Routes to School program has tracked the modes students use to get to school frequently for Union Elementary. Results show that just under 30% of students walk in the morning and close to 50% walk home in the afternoon.

Other (please describe)

Description:

Walksmart curriculum, which focuses on pedestrian education, has been taught to all kindergarten and 1st graders annually since 2008. Physical Education teachers are now trained in this curriculum. This includes using an 'activity log' for students where they record their walking and other physical activity. Union Elementary has a "walk at school" track that can be used by all students, especially those who cannot walk to school. In the winter, PE classes continue walking promotion through activities like snowshoeing.

Montpelier schools were among the first in Vermont to start Safe Routes to Schools programming. In 2013, Montpelier received the Vermont SRTS most innovative programming award. Montpelier programs have been recognized by the national SRTS center and written up in their e-news as an example of successful programming.

Please estimate the number of schools in your communities that participate in the following:

Ongoing SRTS program:

Special walk to school events only:

No walk to school or SRTS activities:

Total number of elementary and middle schools in your community:

Please provide the following information for the Safe Routes to School contact person in your community:

Contact Person and Title:

Chris Henessey, Principal  
Marie Jennings, PE teacher

Contact Person Department:

Union Elementary School

How many hours are spent per year in this capacity?

Please describe your most recent Safe Routes to School grants:

Unfortunately, there are no remaining Safe Routes to School grants in VT. We are sustaining effort through volunteers

and dedication of principal and PE teachers.

### Question 2

Please describe any education and training programs related to pedestrian education, safety, or design for staff in your municipality. Please include in this description the nature, frequency, scope, number of attendees, and results of these programs.

Engineering:

Engineering staff regularly have access to training on pedestrian safety and design. At least one member of the Department of Public Works attends training on designing pedestrian facilities each year. In 2014, this number has increased to three staff members, who attended a one-day training on Complete Streets requirements and design opportunities.

Planning:

Planning staff have access to various voluntary training opportunities that include pedestrian issues. Recently, the Assistant Zoning administrator attended a day-long workshop held by the Central Vermont Regional Planning Commission which included the requirements of Complete Streets as a topic.

Law enforcement:

The Vermont Bicycle and Pedestrian Coalition provides annual training for law enforcement in Washington County regarding pedestrian and bicycle related laws and education. They provide the same training to each Police Academy in Vermont.

School staff:

School staff, particularly Physical Education teachers, receive a one-day training with the Walksmart curriculum. This includes information on the benefits of walking and how to encourage physical activity in the classroom.

Public officials:

None

Other:

### Question 3

Please check and briefly describe any education or encouragement campaigns that are implemented in your community regarding the following topics. Include information about the target audience, techniques used (e.g., posters, workshops, etc.), frequency, scope, and results of the programs. Please mention what measures your community has taken to make sure that education and encouragement campaigns are inclusive of all populations. Also mention your community partnerships (such as Public Health & Planning partnerships) that collaborate on these efforts. Provide any relevant links and attachments to help illustrate these descriptions, if available.

Public service announcements

Public health campaigns related to walking

Link to relevant material:

<http://healthvermont.gov/fitandhealthy.aspx>

Description:

Fit and Healthy Vermont:

The Vermont Department of Health runs a state-wide public health initiative related to walking called Fit and Healthy Vermonters. Part of that is Vermont Ventures, where participants can earn 'points' for each outdoor place and activity they do. With it's central location and access to nearby state parks, Montpelier residents have ample opportunity to participate.

Walk and Roll Month:

Walk and Roll Month is a month-long event held in May by the Bicycle and Pedestrian Advisory Committees, who usually receives help from Montpelier Alive. The campaign includes events that encourage people of all abilities and interests to get out on their bikes and the city's sidewalks - commuters, recreational walkers, family bicyclists. Events have included: Walk and Bike at Lunch, Family Bike Safety Clinic and Ride, a Bike to Brunch series, a Tree Walk, and a Walking Scavenger Hunt.

Walk to work events

Link to relevant material:

<http://waytogovt.org/>

Description:

Residents of Montpelier participate in Way to Go! week, a state-wide initiative to save fossil fuels in your daily commute. Individuals or organizations pledge their participation to win prizes. Montpelier's schools have participated in the past. It is the second week of May, and is usually incorporated into Montpelier's Walk and Roll Month events.

Other (please describe):

Link to relevant material:

Description:

Thanks to a vibrant city life Montpelier is host to many festivals and events. Many of these events encourage walking, whether to support a cause or simply by improving pedestrian life. Some are oriented around fitness, others encourage walking through celebrating local talent in the streets. Repeating events include:

Art Walk, annual (<http://montpelieralive.org/artwalk>)

Poem City, annual (<http://www.montpelieralive.org/poemcity>)

Corporate Cup Challenge, annual (<https://www.vcccsar.org/>)

Multiple Sclerosis Walk, annual ([http://walkmam.nationalmssociety.org/site/TR?fr\\_id=23546&pg=entry](http://walkmam.nationalmssociety.org/site/TR?fr_id=23546&pg=entry))

March for Babies/March of Dimes Walk, annual ([http://www.marchofdimes.com/vermont/events/10220\\_3134383436.html](http://www.marchofdimes.com/vermont/events/10220_3134383436.html))

Walk for Animals, annual (<http://cvhumane.com/uncategorized/walk-for-animals/>)  
 Capitol City Stampede (can be walked), annual (<http://www.cvrunters.org/stampede/>)  
 Paul Mailman 10 Miler (can be walked), annual (<http://cvrunners.org/tenmiler/index.html>)  
 American Cancer Society Relay for Life, annual ([http://main.acsevents.org/site/TR?pg=entry&fr\\_id=59785](http://main.acsevents.org/site/TR?pg=entry&fr_id=59785))  
 July 3 festival (1 mile run or walk) , annual (<http://www.onionriver.com/9th-annual-montpelier-mile/>)  
 Walk to End Child Abuse, annual (<http://www.pcavt.org/index.php?id=384>)  
 CROP Hunger Walk, annual ([http://hunger.cwsglobal.org/site/TR/2013FallCROPHungerWalk/TR-Fall2013?pg=entry&fr\\_id=17990](http://hunger.cwsglobal.org/site/TR/2013FallCROPHungerWalk/TR-Fall2013?pg=entry&fr_id=17990))  
 New Years Eve run, annual (<http://cvrunners.org/newyeareve/index.html>)  
 Onion River Sports road races (<http://www.cvrunters.org/racesrs.html>)  
 Fashion Week, annual (<https://www.facebook.com/pages/Montpelier-Fashion-Show/311415943660>)  
 All Species Day Parade, annual (<http://www.alltogethernowvt.org/seasonal-celebrations/all-species-day>)

#### Question 4

Please check and briefly describe any walking tours, guides, or maps that are available (on-line or printed) in your community. If available, please provide a link, attachment, or pictures of wayfinding devices and/or plans, maps, or brochures for these walking tours.

- Walking maps (e.g., neighborhood maps, school route maps, city-wide maps, trails and greenways, etc.)

Link to relevant material:

[http://www.montpelieralive.org/Maps\\_Walki](http://www.montpelieralive.org/Maps_Walki)

Description:

Information is available on Central Vermont Chamber of Commerce website for several self-guided historical walking tours. These include the State Street Tour, the Main Street Tour, and the College Street Tour.

Interactive maps and self guided walking tours are also available on the Montpelier Alive website. Map topics include Downtown Businesses and Attractions, Historic Montpelier, Hubbard Park and North Branch Park, and Google Pedometer which lets viewers map distances of possible walking routes.

Walking tours through VT Archaeology Month have taken place in the past.

Pedestrian Advisory Committee member Harris Webster hosts "Walks with Harris", weekly gentle walking tours from the Senior Activity Center.

North Branch Nature Center hosts a number of educational walks. Topics have included Botany Walks, Bird Walks, Weed Walks, Nature Walks, Wildflower Walks, and Butterfly Walks. These happen seasonally and depend on expertise and interest of NBNC staff and volunteers.

- Wayfinding and route signs for pedestrians

Link to relevant material:

[http://www.crossvermont.org/our\\_trail/inde](http://www.crossvermont.org/our_trail/inde)

Description:

Wayfinding signs for the Cross Vermont Trail are located near the segment of the route that goes through Montpelier.

### Question 5

Please briefly describe any ciclovía/Sunday Parkways/open streets or similar events in your community. Include information about the target audience, nature, frequency, scope, and results of these events. Provide any relevant links and attachments, if available.

Montpelier hosts a number of open streets events:

The Capital City Farmers' Market occurs from 9-1 on each Saturday, May through October. A parking lot on State Street is used for the market space. Besides many local produce vendors, the market includes prepared food vendors, art vendors, and live music. It is a popular place to take your family and dog to get lunch on Saturday. Between October and May, the market is held indoors at the Vermont College of Fine Arts, a short walk from downtown.

Montpelier Fashion Week is an annual event that celebrates local fashion - both from local stores and of residents. In the family friendly event, a downtown street is closed to traffic to set up a stage and seating.

This year, Montpelier will be starting a new seasonal event, Park in the Street. Each season, a portion of State Street will be closed to vehicles and local vendors and artists will take place in an open market. This will also be an opportunity for local student and professional designers to build experimental parklets.

### Question 6

Please briefly describe any other education or encouragement programs affecting walking in your community.

N/A

Last updated 05/22/2014

## Engineering

Designing, engineering, operating, and maintaining quality roadways and pedestrian facilities is a critical element in producing a Walk Friendly Community. Designers and engineers have a diverse array of design elements and ever-developing technologies at their disposal that provide a safer, inviting, and more accessible street for pedestrians. These benefits aren't limited to pedestrians. By accommodating pedestrians in all roadway designs, roads become safer for all users. Therefore, it should be essential that pedestrian engineering and design tools are used throughout your community, including sidewalk accommodations and standards, crossings and intersections, traffic calming, trail design, and newer, innovative treatments.

### Question 1

Which of the following standards, if any, are included in your municipality's sidewalk design specifications? Please provide a link or attachment of the municipality's sidewalk design standard specifications.

- Sidewalks at least 5' wide in residential areas, 10' – 30' in commercial zones
- Required buffer zone between sidewalk and street
- Level and continuous sidewalks at driveways so that driveways do not look like

roadways

Sidewalk design link:

Sidewalk design file upload:

 No file chosen

### Question 2

Estimate the percent of arterial and non-arterial streets that have sidewalks on both sides of the road, one side of the road, or have paved shoulders (minimum of 4 ft) in your community.

Sidewalks on both sides — Arterials: Sidewalks on both sides — Non-Arterials: Sidewalks on one side - Arterials: Sidewalks on one side - Non-Arterials: Paved shoulders  $\geq$  4' — Arterials: Paved shoulders  $\geq$  4' — Non-Arterials: 

Please enter the following information about your road network:

What is the mileage of your total road network?

How many miles of sidewalks are in your pedestrian master plan?

How many miles of new sidewalk did you construct last year?

How many miles of new sidewalk did you construct in the last three years?

How many miles of new sidewalk do you plan to construct in the next three years?

### Question 3

Describe the following inventories and update processes for your community.

Sidewalk inventory:

The Engineering department has a GPS inventory of all City sidewalks. These inventories are used to evaluate the City's ADA compliance.

Curb ramp inventory:

Curb ramp locations are included in the GPS sidewalk inventory and are currently being reevaluated for ADA compliance.

Please describe your community's sidewalk retrofit policy to fill gaps, repair sidewalks, and provide new sidewalks as needed.

Montpelier has a Capital Improvement Plan with an annual budget of \$1.7 million, \$300,000 of which went to sidewalk reconstruction in 2013. This is in addition to the annual sidewalk maintenance budget of \$20,000. The City also recently received a grant from the state Agency of Transportation to build 1/2 mile of new sidewalks to address pedestrian demands on 3 arterial roads.

What is the annual line item for sidewalk maintenance in your community's budget?

20,000

Estimate the percent of intersections that have ADA accessible ramps on all four corners.

95

Estimate the percent of sidewalks that need to be repaired or replaced.

20

Does your community have a program to install curb ramps?

Yes

How many ramps are installed per year? 5 - 10

How many ramp installations are planned for next year? 20

Does your community have a program to repair and replace broken sidewalks?

Yes

How many locations (or linear feet) were fixed last year? 3500'

How many repairs are planned for next year? 300-400'

Is there a method for residents to report missing or broken sidewalks and curb ramps?

Yes

Please explain the report process (e.g., on-line complaint form):

Residents can report broken sidewalks and a need for maintenance by contacting the Director of Public Works directly by email or in person. Contact information is readily available on the City's website.

Additionally, the Pedestrian Advisory Committee is always open to input about maintenance needs. Contact information for

committee members is posted on the City's website and the Committee's monthly meetings are open to the public.

#### Question 4

Please indicate the number of bridges or overpasses in your community and how many of those provide for pedestrians through shoulders, sidewalks, or multiuse paths.

Number of Bridges (excluding freeways):

Number of Bridges with pedestrian provisions on at least one side:

Number of Pedestrian overpasses (or bridges):

Number of Pedestrian underpasses:

Identify the last three bridges built (or major reconstruction) in your community, and do the bridges provide pedestrian provisions on at least one side?

Bridge Number 1

Taylor Street Bridge - sidewalk on one side

Bridge Number 2

Langdon Street Bridge - sidewalk on both sides

Bridge Number 3

Pioneer Street Bridge - sidewalk on both sides

Identify bridges currently under design. Do the bridges provide pedestrian provisions on at least one side?

Cummings Street Bridge - No provisions, but a separate pedestrian bridge exists to connect this route

#### Question 5

Does your community maintain a pedestrian signalling system?

Yes

Please briefly describe initiatives your community has taken to ensure or improve pedestrian access, safety and convenience at signalized intersections. Provide a link or attachment of the relevant policy or ordinance, if available.

Description:

All but two of our signalized intersections use exclusive pedestrian phasing. Three high pedestrian intersections prohibit right turn during the pedestrian phase. These intersections use blank out or fixed 'No Turn on Red' signs.

Link to policy or ordinance:

Upload policy or ordinance:

 No file chosen

Do you provide pedestrian recall (pedestrians receiving a walk signal during every phase without using a push button) in high pedestrian corridors?

Yes  No

If yes, when and where?

Two signals use concurrent pedestrian phase (not actuated) in high pedestrian areas. The five other walk signals have lower levels of pedestrians and require the user to push a button.

Please describe any passive pedestrian detection (e.g. video, microwave) in your community.

None

Approximately what percentage of intersections have accessible pedestrians signals with audible walk indications?

57

Approximately what percentage of intersections have pushbutton-integrated accessible pedestrians signals with audible and vibrotactile indications?

57

What is the average walk speed used to determine signal timing?

3.5

Do you use right-turn-on-red restrictions? If yes, when and where?

Yes, right-turn-on-red is restricted during exclusive pedestrian phases with either fixed signs or electronic blank out. This is at 3 of 7 intersections.

Do you use Leading Pedestrian Intervals? If yes, when and where?

No

What is your maximum cycle length in your downtown?

145 seconds

What is your maximum cycle length in your community?

145 seconds

What speed is traffic progress for in downtown?

25 mph

What is the longest pedestrian crossing that you have?

Berlin St at 80 ft (4 lanes) and 26 seconds

What is the policy on displaying Walk signals (e.g. > 12 seconds or 25% of cycle length)?

Per MUTCD guidance, Montpelier walk signals are least 7 second walk interval followed by pedestrian clearance time.

What percentage of intersections have countdown signals?

43

### Question 6

Please briefly describe initiatives your community has taken to ensure or improve pedestrian access, safety and convenience at crosswalks. In your description please address the following questions. Provide a link or attachment of the relevant policy or ordinance, if available.

Description:

The City's Traffic Committee includes the Police Chief, the Fire Chief, the Director and Assistant Director of Public Works. The committee's work includes providing for a safe and accessible walking environment.

The City is also undertaking the creation of a Bicycle and Pedestrian Master Plan. This document will include a comprehensive inventory and highlight projects, among other things.

Link to policy or ordinance:

Upload policy or ordinance:

Choose File No file chosen

How are marked crosswalk locations selected?

Crosswalk are placed in locations with significant foot traffic, such as those near a 'pedestrian draw'. To ensure safety, crosswalk locations are also reviewed for the sight distances for stopping.

What is your standard crosswalk marking type (e.g., parallel lines, ladder style, high visibility, etc.)?

Mostly parallel lines, some ladder style

Please describe your crosswalk inventory and update process:

The City's 130 crosswalks are repainted annually as needed. Public Works is in the process of transitioning from paint to more durable markings.

Are crosswalk markings regularly maintained?

Yes  No

Describe:

Most of the crosswalk maintenance is done by the Department of Public Works, with the exception of arterial roads which

are contracted out to get quicker service.

Are in-road stop/yield signs used?

Are advance stop/yield lines placed at multilane uncontrolled marked crosswalks in order to reduce multiple threat crashes?

Yes  No

Describe:

Are there other pedestrian safety practices being used at crosswalks?

As Public Works incorporates the advisory committees into the development of pedestrian facilities, more potential solutions are being considered (pedestrian push signals, using flags or visibility, etc.).

Are pedestrian hybrid beacons and rectangular rapid flash beacons used? Please describe when and where (e.g. in close proximity to schools, bus stops, trail crossings, etc.):

Not currently, but they are being considered for high-profile, high-conflict areas.

### Question 7

Does your community design and build its own roadways?

Yes

What geometric features are being used to ensure or improve pedestrian access, safety and convenience? In your description please address the following questions. Provide a link or attachment of the relevant policy or ordinance, if available.

Are median crossing/refuge islands used? Is there a standard or typical roadway that these are used on? How many have been installed in the last three years (on new roadways or retrofits)? Are any more planned?

Link to island policy:

Description:

We only use crossing refuge islands or medians at our two signalized roundabouts.

Do you routinely install curb extensions? How many have been installed in the last three years? Are any more planned?

Link to curb extension policy:

<http://vtransengineering.vermont.gov/sites/c>

Description:

Yes, but none have been installed in the last three years. Four curb extensions are planned for next year along

State Street.

All crosswalks have curb ramps and high pedestrian areas (downtown and high density residential areas) are ADA compliant. We also began installing crosswalk bulb-outs in the 1990s at uncontrolled downtown intersections (where on-street parking is permitted) and at the middle school as part of a Safe Routes to Schools project in 2012.

What is the standard curb radius (10', 15', 20', 25', 30', 35') for local, collector, and arterial streets?

Link to curb radius policy:

<http://www.montpeliervt.org/upload/groups/>

Description:

A 30' minimum curb radius is used except in high pedestrian/low truck locations where smaller radii are used. The DPW verifies the appropriate use of radii by utilizing appropriate design templates.

What other geometric design features are implemented for pedestrian safety?

Link to other design features:

<http://healthvermont.gov/family/fit/documen>

Description:

The Department of Public Works incorporates all aspects of Complete Streets into road construction work. This includes design features in the Vermont Complete Streets guide.

Has your community taken initiatives to increase safety for people crossing the street at bus stops that are not located at signalized intersections?

Link to bus stop policy:

Description:

N/A

Bus stops are located near crosswalks intentionally.

Please describe your community's use of multi-modal level of service in the 2010 Highway Capacity Manual. Please include information on standards, goals, and the hierarchy of pedestrian/transit/bicycle/vehicular LOS used to evaluate and design streets and intersections in your community.

Montpelier does not use the 2010 Highway Capacity Manual or LOS tools to evaluate intersections as of yet.

### Question 8

Please briefly describe your community's traffic calming practices and/or policies and cite any relevant examples. Traffic calming practices may include road diets, lane diets (reduction in lane width) or streets with a pedestrian focus. Provide any relevant links or attachments, if available.

Description of practices:

Montpelier uses curb bulb-outs at crosswalks, as well as tables and bumps in low-speed residential neighborhoods.

Link to calming practices document:

Please describe any recent road diets:

The future repaving of State Street will include bike sharrows or lane, a switch to angled parking, and no change on sidewalk width.

Please describe your traffic calming methods including typical treatments and site selection and prioritization:

Traffic calming methods include use of bulb-outs (which reduce the distance for pedestrians to cross and increase visibility). Sites are selected for traffic calming in Montpelier by proximity to schools and high residential areas.

What is the maximum speed limit at traffic signals in your community?

The maximum speed limit at traffic signals in Montpelier is 35 mph.

Do you have school zones and reduced speed limits? Please describe:

School zones are marked by signs and have reduced speed limits to 25 mph.

What is the posted speed of the majority of the arterial roads in your community?

Speed limits on Montpelier's roads are approximately 60% 35 mph and 40% 25 mph.

### Question 9

Please briefly describe any other engineering projects or policies affecting walking in your community.

N/A

Last updated 05/22/2014

## Enforcement

In many communities, enforcement is often neglected as a technique for making communities safer for walking. Communities that have created comfortable walking environments through engineering improvements or urban design features may still have safety concerns if traffic laws are not properly understood or adequately enforced. Enforcement activities work best when implemented in conjunction with education and awareness activities. Therefore, well-implemented enforcement campaigns will include public education campaigns, law enforcement officer training, and strategic law enforcement and ticketing strategies. A successful enforcement program will usually require the involvement of community members, law

enforcement officials, city council members, and the media.

### Question 1

Does your community have a traffic safety division/unit within the Police Department?

- Yes  No

Does your community have police patrols on foot or bike? If so, please describe (include the number of officers that are bike patrol certified).

The Montpelier Police Department uses regular foot patrols in downtown area during the day and night, as well as regular bicycle patrols in downtown area during the day and night in Spring, Summer and Fall. There is one full time certified bike patrol officer and three part time certified bike patrol officers.

Please estimate the number of patrol officers and amount of time that is devoted to responsibilities concerning pedestrian laws and safety:

Between 1 and 4 officers conduct motor vehicle enforcement daily and include pedestrian concerns, such as crosswalk violations and pedestrians walking in the roadway. These officers also address parking issues such as obstructed crosswalks, vehicles parked on sidewalks and too close to intersections. We have a full time, non sworn parking division that also enforces these violations during business hours on weekdays. Over 1700 motor vehicle stops were conducted in 2013 by Montpelier police officers.

### Question 2

Does your community use targeted enforcement programs to ensure the safety and security of pedestrians in crosswalks and on city streets, trails, and walkways? Indicate which of these elements, if any, are part of the enforcement program.

- Yes

Indicate which of these elements, if any, are part of the enforcement program.

- Targeted pedestrian crossing operations (e.g., use of plain-clothed "decoy pedestrian" officers to enforce motorist yielding laws):

Definition: From walkinginfo.org: These are well-prepared and coordinated operations designed to warn motorists that the yield-to-pedestrian laws will be enforced at target locations. Officers prepare a site by establishing the safe stopping distance to a crosswalk, with a 10 mi/h over the speed limit leeway. Cones are set out in that location. An officer in plain clothes steps into the crosswalk just before a vehicle passes the cone. If the motorist doesn't yield, either a warning or a citation is given, based on the severity of the incident.

- Media campaigns regarding enforcement

Please media activities and frequency:

Pamphlets on bicycle and pedestrian safety and laws are available at the Police Department. The Montpelier Police Department Facebook page also regularly posts on these topics.

- Speed feedback signs

Please describe the frequency of use (include how sites are selected):

There are two permanent electronic signs around Main Street Middle School on busy roadway near school grounds. There is also a mobile radar trailer placed in high violation areas, in response to citizen complaints or officer observations

- DUI Checkpoint operations

Please describe the extent and frequency of operations (include how sites are selected):

The Montpelier Police Department has a DUI grant allowing officers to participate in DUI checkpoints several times a year and conduct DUI patrols monthly.

- Targeted speed enforcement

Please describe the extent and frequency of operations (include how sites are selected):

The Montpelier Police Department conducts regular enforcement of speed in high violation areas, including congested high traffic residential areas and school crossings.

- Progressive ticketing

Definition: From walkinginfo.org: Progressive ticketing is a method for introducing ticketing through a three-staged process: educating, warning, and ticketing.

Please describe when and why progressive ticketing processes are deployed:

Officers focus on education versus penalization and belittlement by explaining logic of importance in obeying traffic laws. Officers typically focus on visibility in high violation areas, large numbers of car stops with written warnings issued to promote education and visibility with tickets written for egregious offenses and repeat offenders.

- Emergency call boxes

- Other

### Question 3

Please list the number of citations given for the following infractions:

Failure to yield to pedestrians:

30

Parking on sidewalks or too close to intersections or crosswalk:

54

- Does your community use photo enforcement technology that targets speeding and/or red light running?

### Question 4

Please briefly describe your community's policies and practices regarding the use of adult crossing guards at elementary and middle schools. Include any information about the criteria for placement of adult crossing guards, training programs, crossing procedures, crossing guard signs and equipment, and law enforcement strategies at crossing guard locations.

Our crossing guard policies and practices consist of providing a crossing guard at five major intersections around Montpelier. All these intersections have a heavy amount of walking traffic in the morning and afternoons that consists of elementary and middle-school age children. These five locations are at Liberty and Main Street (in front of the middle school), Park Ave. and Loomis Street (in front of the elementary school), School Street and Main Street, Elm Street and

Spring Street and East State Street and Hubbard Street.

We tend to place the crossing guards who exhibit certain strengths, such as perseverance and comfort with possible confrontation, at the intersections with the most car traffic. Our crossing procedures include training the guards to wait for a group of children to gather, go out into the intersection with the stop sign, wait for cars to stop on both sides of the crosswalk and then signal the kids to cross. We provide cones for crossing guards who work the most difficult intersections and have bi-monthly meetings to discuss any issues that may arise. There have been times when we've needed to discuss continuing traffic problems with the police and they have occasionally made their presence know at the problematic areas around town.

As far as safety equipment is concerned, we provide each of our guards with a reflective vest, reflective winter jacket, bright winter hat, stop sign and reflective traffic cones if needed.

Provide a link or attachment of any relevant policies, if available.

Link:

N/A

File upload:

Choose File No file chosen

### Question 5

Do police work regularly with traffic engineers and planners to review sites in need of safety improvement for motorists and pedestrians?

Yes

Describe:

An officer is a member of both pedestrian and bicycle advisory committees that meet regularly with city planning and engineering staff.

Does your community use crash and/or fatality data to identify problem areas and potential solutions?

Yes  No

Describe:

All crash information is submitted to the Vermont Dept. of Motor Vehicles who applies this to planning and funding to prevent crashes in problem areas.

Does your community use a Data-Driven Approach to Crime and Traffic Safety (DDACTS) to understand the overlap between hi-crime and traffic safety concerns?

Yes  No

If so, describe any DDACTS training you have undertaken and/or the process you use to prioritize traffic safety in relation to other police interests:

### Question 6

Please describe any other ways that your community's police department addresses the pedestrian concerns in your community.

N/A

Last updated 05/22/2014

## Evaluation

By incorporating planning, education, encouragement, engineering, and enforcement countermeasures, a community can have a direct impact on pedestrian safety and walkability. Evaluation of the pedestrian environment and behavior plays a crucial role in problem identification and countermeasure selection. In order to truly understand local pedestrian needs and safety issues, a community should utilize effective evaluation strategies.

### Question 1

Does your community have an ongoing pedestrian counting and/or survey program that allows for long-term trend analysis of walking trips?

Yes

Please describe (including first year of program, frequency, number of sites, etc.):

The Vermont Agency of Transportation (VTrans) has installed two pedestrian counters on Main and State Streets. Data from these counters is used by VTrans, and the Central Vermont Regional Planning Commission has access to this information as well.

The Vermont Agency of Transportation has been working on developing a more comprehensive long-term pedestrian and bicycle trip and facility counting program. Currently, VTrans uses data from the 2009 National Household Traffic Survey for their trend analysis of walking trips.

### Question 2

Has your community used any of the following tools to evaluate major pedestrian areas (town centers, major activity areas, routes to school, etc.) in order to identify problem areas and potential solutions?

Walkability Checklists (please describe when and where):

Montpelier uses the ADA review criteria as a walkability checklist. These include many of the physical accessibility aspects of walkability.

Pedestrian Intersection Safety Index (please describe when and where):

- Pedestrian Level of Service (LOS) (please describe when and where):

---

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- Pedestrian Road Safety Audit Guidelines and Prompt Lists (please describe when and where):

---

- Health Impact Assessment (please describe when and where):

---

- Smart Growth Scorecards (please describe when and where):

---

- Web-based or smartphone applications for resident feedback and input( please describe):

---

- Other Evaluation Tools:

Please describe:

---

### Question 3

Does your community routinely conduct pre/post evaluations of road projects and traffic calming with respect to pedestrian crashes, volumes and motor vehicle speeds?

- Yes  No

If yes, please explain when this is typically done and provide a recent example:

The Central Vermont Regional Planning Commission completes studies for the Regional Transportation Plan every five years which analyze long term trends in transportation safety.

However, because of Montpelier's size, the city does not pursue many major road projects each year. Furthermore, with a low-speed downtown core and low levels of pedestrian crashes, not many pre/post evaluations are conducted of individual projects.

### Question 4

Using [Walk Score](#), please type in the address for your City Hall and provide the following information:

City Hall Walk Score:

City Hall Transit Score:

Top 10% Walk Score for your community:

(located at the bottom of the Walk Score web page)

Average Walk Score for your community:

(located at the bottom of the Walk Score web page)

Please provide the [Overall Sprawl Score](#) for your community's metropolitan region:

### Question 5

Please describe any other ways that your community evaluates pedestrian accommodation, walking rates, and pedestrian safety.

Last updated 05/22/2014

## Additional Questions

### Question 1

What are the three primary reasons your city deserves to be designated as a Walk Friendly Community?

Montpelier is a city that walks! We're always amazed at how many people can be seen walking around town all year long, at all times of the day, for many different reasons. As Vermont's capital, Montpelier draws a much bigger daytime population than it houses. (The daytime population is almost triple the residential population!) The city also serves as a cultural hub for the surrounding area, notably expanding the pedestrian population enjoying the numerous events hosted here. We feel that a Walk Friendly Designation will be an acknowledgement of Montpelier as a proven pedestrian draw.

Second, the residents of Montpelier recognize that improvements are needed and are willing to work and promote

implementation of them. A designation as a Walk Friendly Community would be a great tool to this end especially when combined with the spirit of public input that exists in Montpelier.

Finally, we are committed to making the city more livable and recognize that walking is essential to who we are; we want to take advantage of the pedestrian-friendly atmosphere that exists in our downtown by promoting the people-size scale of our city and sharing our love of community.

### Question 2

What are the three aspects of your community most in need of improvement in order to accommodate pedestrians?

In Vermont, winter maintenance is crucial to accommodating pedestrians. Montpelier could improve the level of service in clearing of sidewalks in the winter.

In a similar vein, Vermont winter is hard on the roads. Improving the post-winter maintenance of sidewalks and crosswalk markings would greatly improve the City's accommodation of pedestrians.

Along with maintaining infrastructure, the quality of pedestrian life could benefit from the development of a comprehensive plan to enhance and encourage the pedestrian experience throughout the city.

### Question 3

How can your community leverage its designation as a Walk Friendly Community to increase the number of people walking and make walking safer?

Montpelier plans on using a Walk Friendly designation to draw attention to pedestrian issues in the City and to initiate discussion about those issues. Ideally, this will lead to more planning projects that improve conditions for walking. By drawing attention to pedestrian issues both inside and outside of City Hall, a Walk Friendly Communities designation could help the City, businesses, and residents make substantial choices around pedestrian issues.

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Walk Friendly Communities is sponsored by FedEx and the U.S. Department of Transportation Federal Highway Administration. The program is maintained by the UNC Highway Safety Research Center's Pedestrian and Bicycle Information Center, with support from a variety of national partners.

Pedestrian and Bicycle Information Center  
Contact Information  
[www.walkinginfo.org](http://www.walkinginfo.org)  
[www.bicyclinginfo.org](http://www.bicyclinginfo.org)  
[www.pedbikeinfo.org](http://www.pedbikeinfo.org)

**Attachment 3**  
**2010 City of Montpelier Master Plan**  
**Transportation**



### **Eastern Entrance and Gateway**

The eastern entrance corridor and gateway extends along Berlin and River Street from the Berlin line. The entrance corridor is composed of a variety of conditions including strip commercial development, housing, and natural areas. Portions of the Washington County Railroad closely follow this route. The eastern gateway to the urban core appears approximately at the intersection of the Berlin and River Streets with views from both streets through the Granite Street bridge and beyond to the City Hall towers and State House.

The Memorial Drive/River Street Gateway has evolved in an unplanned fashion over time and does not act as a monumental entrance that the Capital City deserves.

### **Other Entrances**

The main artery to the City from the South is Route 12. Other streets have evolved as entrances over time and some carry significant amounts of traffic through neighborhoods. Berlin Street, once a narrow residential street has evolved to carry significant amounts of traffic to and from Berlin's commercial area on the hill, changing the residential character of the neighborhood. Terrace, North, Towne Hill, Elm, and College Streets are seeing increasing amounts of traffic as surrounding communities grow and funnel traffic into Montpelier. Traffic from other communities may have a significant effect on the quality of life in Montpelier neighborhoods.

## **4.2 Transportation and Circulation**

Montpelier is a community that has been built at a human scale, and its transportation facilities have evolved to meet the requirements of the various modes of travel and transport, including walking, rail, cars, trucks, buses and bicycles (Figure 19). 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.

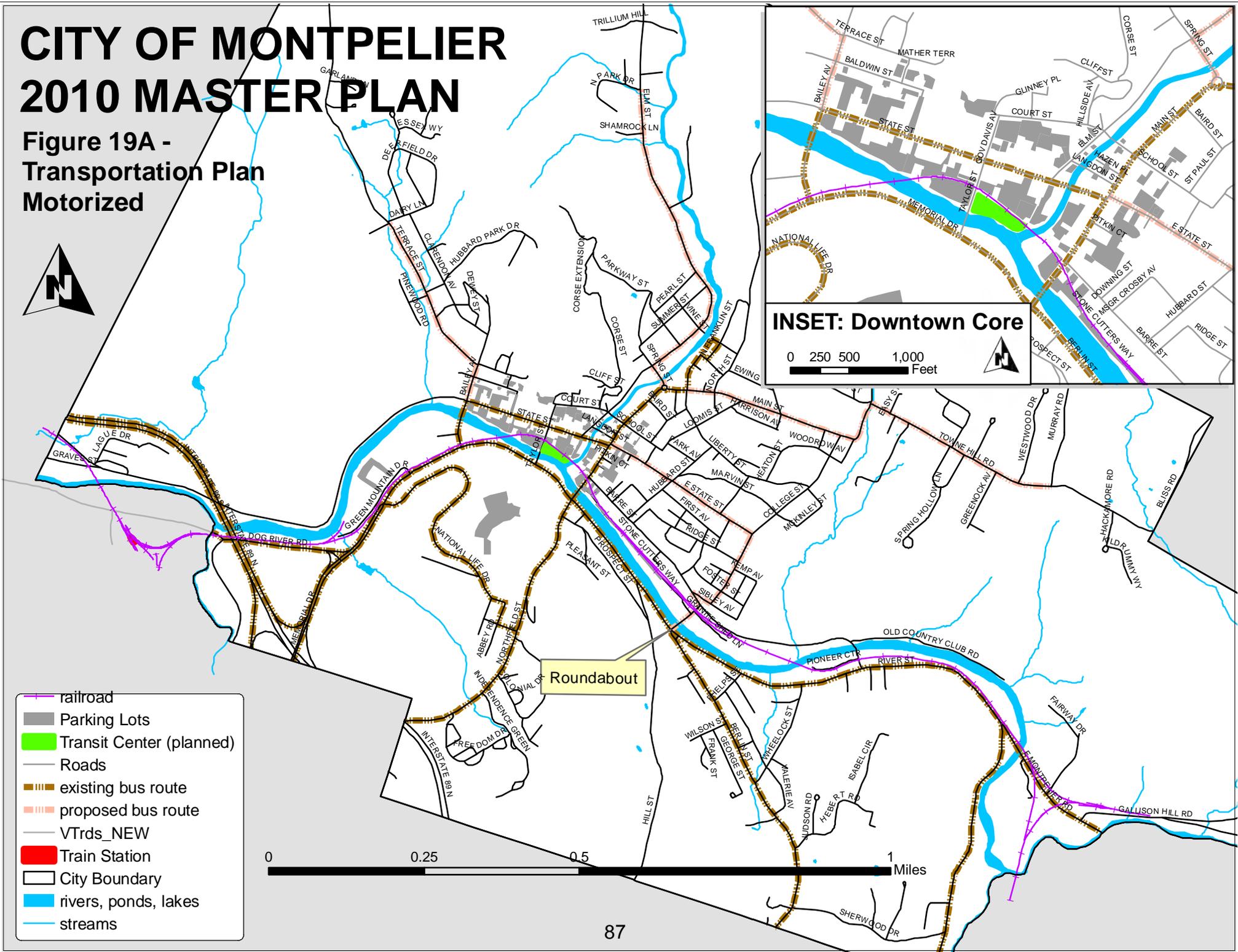
A comprehensive view of Montpelier's mobility needs must include several types of transportation in and through the city:

- 1) Residents or visitors of any age who walk and bicycle to and around town for work, recreation, school, and/or shopping.
- 2) Residents, employees, or visitors of any age with disabilities.
- 3) Residents and visitors who use busses or trains for local, inter-city, and long distance travel.
- 4) Residents and regular commuters who start or end their automobile trips in the city and are familiar with its roadways, parking, public transportation and traffic signals.
- 5) Through-traffic, including regular commuters and freight vehicles especially US 2 and VT 12.

- 6) 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.
- 7) The movement of goods into, out of, and through the city, whether by tractor trailer, bus, truck, or train.

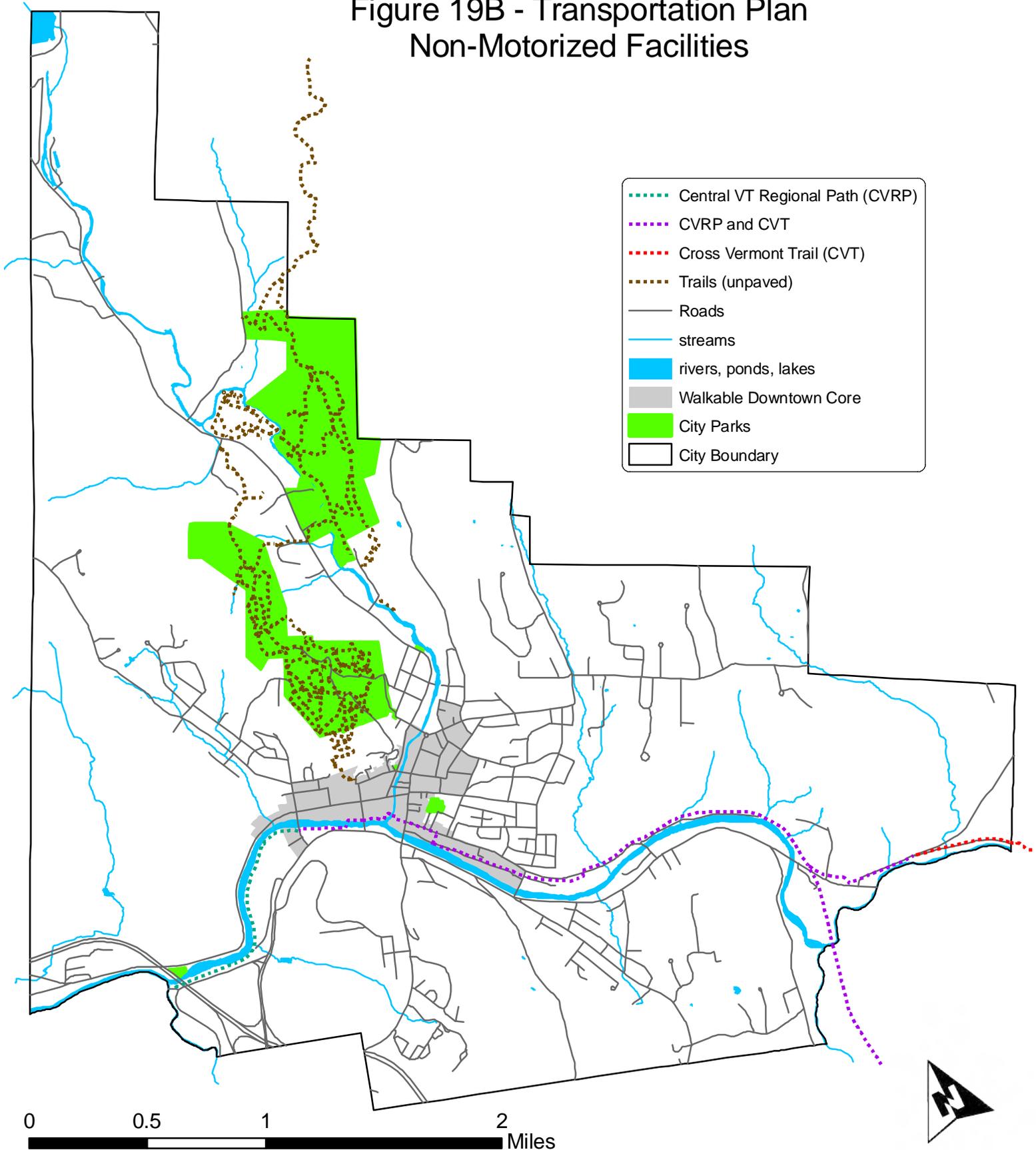
# CITY OF MONTPELIER 2010 MASTER PLAN

Figure 19A -  
Transportation Plan  
Motorized



# CITY OF MONTPELIER 2010 MASTER PLAN

## Figure 19B - Transportation Plan Non-Motorized Facilities



## ***Pedestrian Network***

The City of Montpelier has 25.3 miles of sidewalks, 1.75 miles of bike paths, and 55.76 miles of streets (which includes 4.13 miles of interstate). There are therefore many areas where it is safer and easier to travel in a car than it is on foot. It is important to recognize that many factors that contribute to a safe and attractive pedestrian environment inherently can also restrict automobile traffic. In the last 50 years, transportation engineering for street design has focused on the needs of automobiles. This has been to the detriment of other modes of transportation, most notably the pedestrian.

More specifically, narrower streets, tighter curb radii that minimize expanses of pavement and require cars to make slower turns, direct and efficient pedestrian connections (small block sizes, mid-block crossings), on-street parking in commercial districts, parking areas tucked behind buildings, limitations on curb cuts and driveways across sidewalks, are all physical design features that serve the pedestrian well, but may inconvenience the motorist. In the “walking core” of Montpelier, precedence should be given to the pedestrian when considering street improvements. The walking core is loosely defined as the area running from the intersection of State Street and Bailey Avenue to the intersection of Barre and Hubbard Streets, and from the intersection of 302 and Main Street to the Main Street roundabout.

Safe and convenient pedestrian (and bicycle) access to schools is of particular importance. Montpelier’s schools are located within the City fabric and connected within the street system. Improvements to the pedestrian access routes to the schools should receive a high priority. A “Safe Routes to School” grant for building bulb-outs and a radar feedback sign at the middle school was awarded in 2008. The grant will also improve crosswalk signage at the elementary school and in adjacent neighborhoods.

As seniors, people with disabilities, and people of low-income use sidewalk proportionately more than the average person, it is of particular importance that safe and convenient pedestrian access to/from shopping and public services is provided for areas with greater proportions of senior and/or affordable housing units.

There is an existing bicycle and pedestrian path from the southwestern corner of the City to the downtown, and another path from the downtown to Granite Street on the southeastern side of the City. Currently, there are plans to connect the paths, and an



*An Element of Montpelier’s riverside bicycle and pedestrian network: The Central Vermont Regional Path along Stonecutters Way.*

extension to the southeast is under design.

Montpelier’s natural setting within a river valley ensconced by steep hillsides presents challenges to pedestrian accessibility. Where new development is proposed in hillside areas, streets must often be curvilinear to meet grade requirements and to be passable in slippery conditions. In these areas, more direct pedestrian paths or stairways should be included in proposed designs, as well as sidewalks on streets.

Montpelier’s walkable network of streets and paths is highly valued by residents and downtown businesses. Over the last ten years, the City has invested in key improvements to the network, including improvements to Stonecutters Way, streetscape improvements along State Street, and ADA improvements throughout the downtown. In addition, the Central Vermont Regional Bike Path along the Winooski River allows for pedestrian traffic and will, when completed, provide linkage from downtown to Gallison Hill and the East Montpelier Road as well as be part of a cross state trail system — the Cross Vermont Trail.

Areas within the ‘walking core’ of the city where the sidewalks are discontinuous, in need of repair or improvements should be identified and upgraded. In the downtown, the City has employed curb extensions – bulb-outs – that calm traffic and make it safer for pedestrians. Crosswalks are painted annually and crossing guards provide access for students of the elementary and middle school.

**Sidewalk Tanka Haiku #3**

Sidewalks when maintained and used  
improve neighborhoods, downtowns  
cholesterol counts  
parking space, air quality  
And our pure pleasure/joy quotient)

- Harris Webster, 2010  
*Montpelier resident*

**Bicycle Network**

The City created a plan in 2002 for a new bike path connecting two shared use paths that enter the downtown area from the east and west along the Winooski River. The path from the east ended about 700 feet east of Main Street, while the path from the west ended at Taylor Street, about 1000 feet west and on the other side of the North Branch from Main Street. The question of how to bridge the North Branch of the Winooski River and to cross Main Street is an issue that remains to be solved.

With the completion of the Central Vermont Bike Path from Montpelier Junction to the hamlet of Graniteville in Barre Town, Montpelier will be at the center of an attractive bicycling network with both commuting and recreational value. Montpelier has also identified the North Branch Trail to connect Cummings Street to the Elm Street Recreation Area and the North Branch Nature Center just south of Gould Hill Road. The North Branch Trail is intended to be a Class 1 path along the North Branch of the Winooski River, and then transition to bike lanes or a marked bike route along Elm Street.

Like pedestrians, many of the issues surrounding the achievement of a more bike friendly transportation network revolve around calming traffic and reclaiming street space for bicycles. The next step in developing Montpelier’s bicycle network is to establish bicycle connections

between the Central Vermont Bike Path and significant destinations in the City. Presently, the State Capitol, downtown, and most schools, parks and neighborhoods are without clearly defined bike facilities.

Creating a network of identified paths, lanes and shared route ‘bicycle streets’ or ‘bicycle boulevards’ which are designated and designed to enhance bicycle safety and convenience should be implemented in Montpelier. However, recognizing that Montpelier’s street system is largely developed and existing rights of way are constrained, building an effective bicycle network will require a creative and thoughtful process. The essence of the task is to identify the bike routes and determine how to reallocate street space that is currently used for automobile lanes and parking to make space for bikes. In many cases, this is a matter of restriping the road to make appropriately narrower travel lanes of 10’ and giving the space over to appropriate width bike lanes of 4-5’. Another option is a wider “share-the road” lane for both bikes and cars. Developing a truly successful bicycle transportation system will require a concerted effort that includes input by bicyclists to identify a logical network for recreational and commuter use, and careful consideration of how to best accommodate bicycles.

The City has been and continues to be committed to improving its non-motorized transportation network. Montpelier applied for and received a Safe Route to School Grant to increase safety for school children at crosswalks. Montpelier’s current 6-year Capital Improvement Plan allocates the following to pedestrian, multi-purpose paths, intersection safety improvements, and bridge work:

- Sidewalk extension - \$379,000
- Sidewalk reconstruction - \$496,000
- Bridge rehabilitation - \$2.6 million
- Central Vermont Bike Path - \$2.1 million
- Intersection safety improvements - \$173,000

**Sidewalk Tanka Haiku #4**

Sidewalks when poorly maintained  
Like fallen angels  
Don't help but harm us.  
Tripping more than our bodies  
They foil our good intentions.

- Harris Webster, 2010  
*Montpelier resident*

**Sidewalk Tanka Haiku #5**

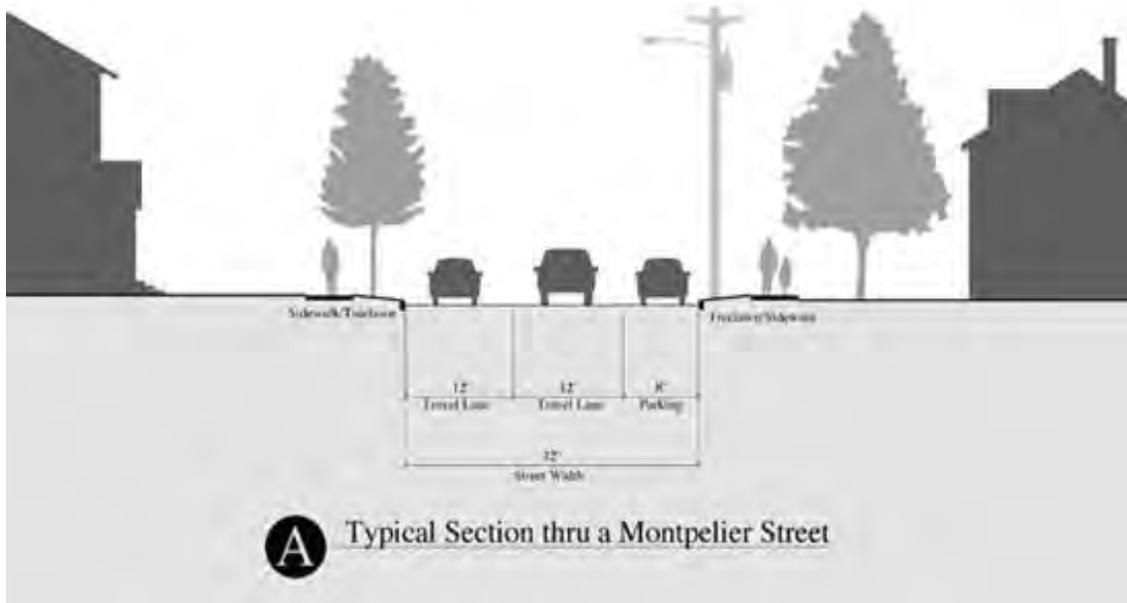
Sidewalks are made of minerals  
These non living chemicals  
Make city/urban life livable.  
Though not beautiful  
They are still jewels

- Harris Webster, 2010  
*Montpelier resident*

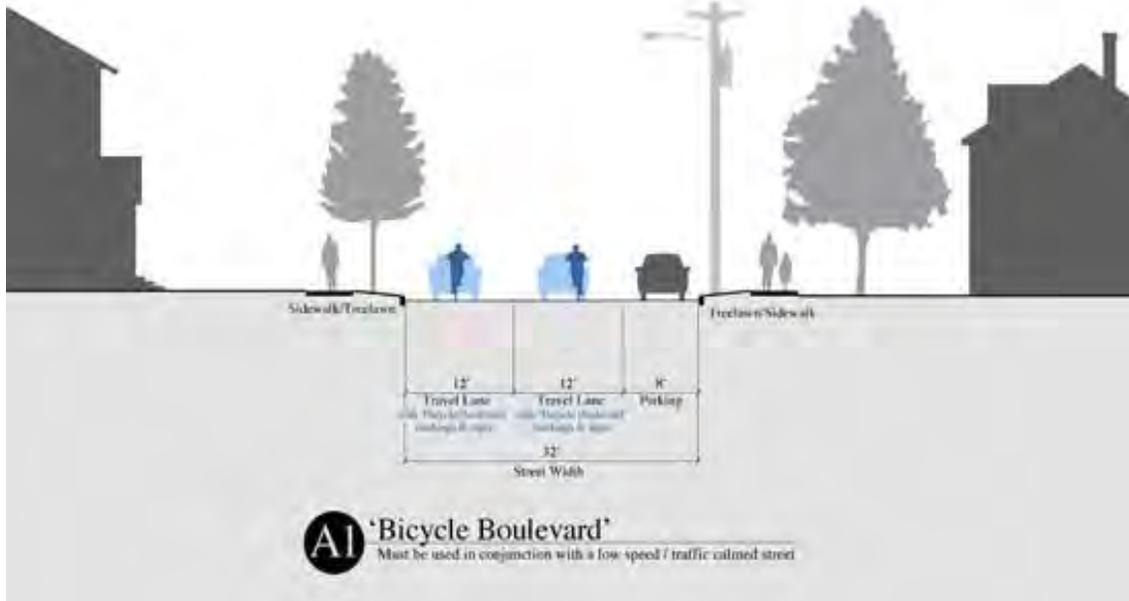
## Accommodating Bicycles in the Street System

The street sections shown here illustrate different approaches to accommodate bicycles in the street network. The approach taken requires an analysis of street dimensions, traffic speeds and traffic volumes. The first section (Figure 20A below) illustrates a typical 32 foot street right of way with parking on one side. The first alternative (Figure 20 A1) shows a shared route 'bicycle boulevard' which is signed and marked to indicate bicycles have equal status with cars on these routes. This approach is best on slow speed and/or traffic calmed streets.

**Figure 20 A –Section through a 32'-wide Montpelier Street**

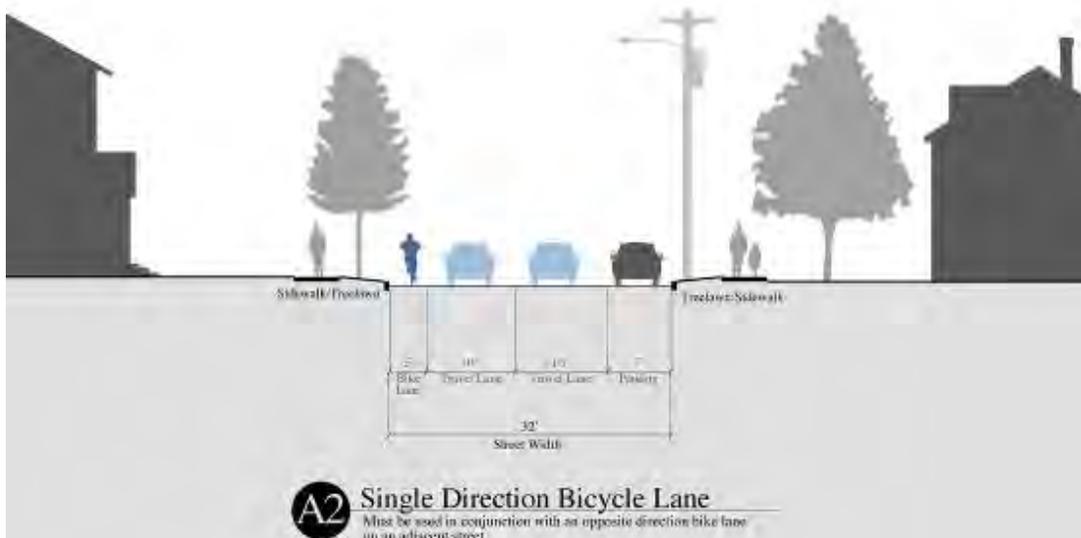


**Figure 20 A1 – Bicycle Boulevard**

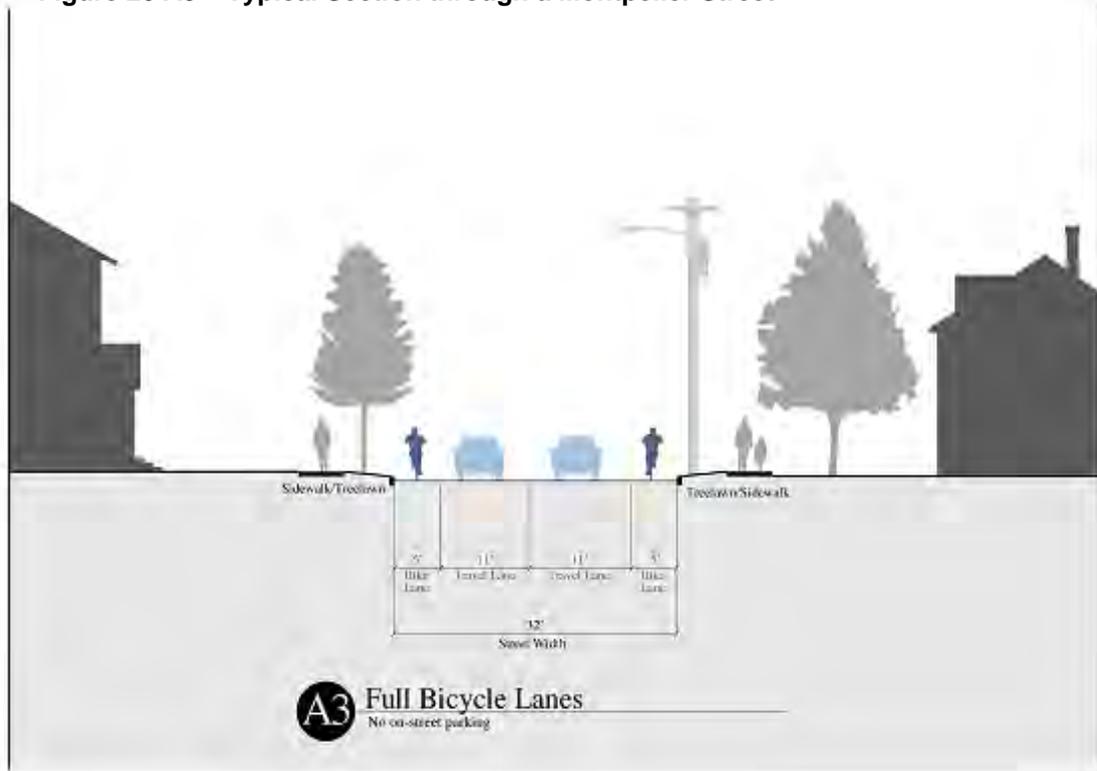


The second and third diagrams (Figures 20 A2 and 20 A3 below) illustrate roadways reconfigured to accommodate one or two bicycle lanes. One bike lane on the street with reconfigured lanes can retain parking, and must be part of a ‘couplet’ system on two generally parallel streets. Two bike lanes (one in either direction) accommodated on the street would require removal of parking.

**Figure 20 A2 –Section through a 32’-wide Montpelier Street**



**Figure 20 A3 – Typical Section through a Montpelier Street**



## Montpelier’s Bridges

The combination of Montpelier’s location at the confluence of two branches of the Winooski River and its dense network of streets and activity result in a large number of bridges in the City. Many of these bridges are aging, and may require costly rehabilitation or replacement in the coming years. The table on the following page lists the bridges in Montpelier that are the responsibility of the City.



Sufficiency ratings, which rank the structural and functional condition of the bridge on a scale of 0 to 100 (worst to best), are also provided for the recently rated bridges. These ratings are based on a breakdown of 50 points for the bridge’s structural condition, 25 points for its traffic safety (i.e. the width of the bridge, whether or not there are sharp curves on its approaches), and finally 25 points for the bridge’s importance in terms of the local transportation network, which considers nearest crossing or detour distance if the bridge was to be closed. Sufficiency ratings are not conducted for short bridges of less than 20 feet in length, nor for pedestrian bridges.

**Table 4-1: Inventory of Montpelier's City Owned Bridges**

Data from Montpelier Department of Public Works and VTrans

#	Location	Year Built	Type	Length in Ft +/-	Crosses	Rating	Status	Historic Status
1	Rialto Bridge, State Street	1915	concrete encased steel beam	70	North Branch	76.0	ND	
2	Main Street	1976	steel beam, concrete	147	Winooski	73.2	ND	
4	Montpelier Junction Road	2002	steel beam, concrete	90	Dog River			
5	Taylor Street	1929	Parker through-truss	165	Winooski	42.2	RP	On Nat'l Reg
6	Pioneer Street	2002	steel beam, concrete	167	Winooski	100.0	ND	
10	School Street	1991	steel beam, concrete, rehab truss	77	North Branch	80.3	ND	Possibly Eligible
11	Langdon Street	2007	Warren pony truss	68	North Branch	new	ND	On Nat'l Reg
12	Vine Street Foot Bridge	1974	steel beam, wood deck	70	North Branch			
13	Cummings Street	1928	steel beam, concrete	64	North Branch	48.5	RP	
14	Gould Hill Road	1983	steel beam, concrete	105	North Branch	90.1	ND	
15	Grout Road	1977	concrete, wood deck	69	North Branch	55.3	ND	
16	Haggett Road	1984	concrete, wood deck	87	North Branch	68.3	FD	
17	Granite Street	1902	Baltimore through-truss, wood deck	205	Winooski	53.2	FD	Eligible
60	Bailey Avenue	1994	steel beam, concrete	255	Winooski	87.5	ND	
62	East Mont. Road near Route 302	1971	steel beam, concrete	236	Winooski	85.5	ND	
64	East Mont. Road at City Line	1962	steel beam, concrete	106	Winooski	67.7	FD	
73	Spring Street	1972	steel beam, concrete	83	North Branch	91.2	ND	
74	Elm Street (City Dump Road)	1983	concrete box	12	Dump Brook			
*	Poolside Drive Rec Field Foot Bridge	1975	Steel prefabricated, wood deck	80	North Branch			
*	Winooski West Bike Path Bridge	1998	Steadfast prefabricated, wood deck	178	Winooski			
*	North Branch Foot Bridge	2001	Pratt prefabricated half through-truss	120	North Branch			

Notes: ND= No Deficiency; FD= Functionally Deficient; SD= Structurally Deficient; RP=Restoration in Progress

Bridge sufficiency ratings (“Rating” column in the above table) are used as a starting point in identifying bridge replacement and rehabilitation priorities by VTrans. Table 4-1 above also indicates “deficiency status” (“Status” column in the above table), depending on whether the bridge’s structural rating is low, or its combined service/safety rating is low. Several years ago, VTrans developed a preservation plan for all the historic steel truss bridges in the state, in order

to get an overview of which bridges should remain in place for limited use, and which should be replaced. This study concluded that the Taylor and Granite Street bridges should be preserved for limited vehicular use, and that the School and Langdon Street bridges should be modified for either limited or unlimited vehicular use. The old Pioneer Street bridge trusses are in storage for adaptive re-use on the Central Vermont Bike Path.

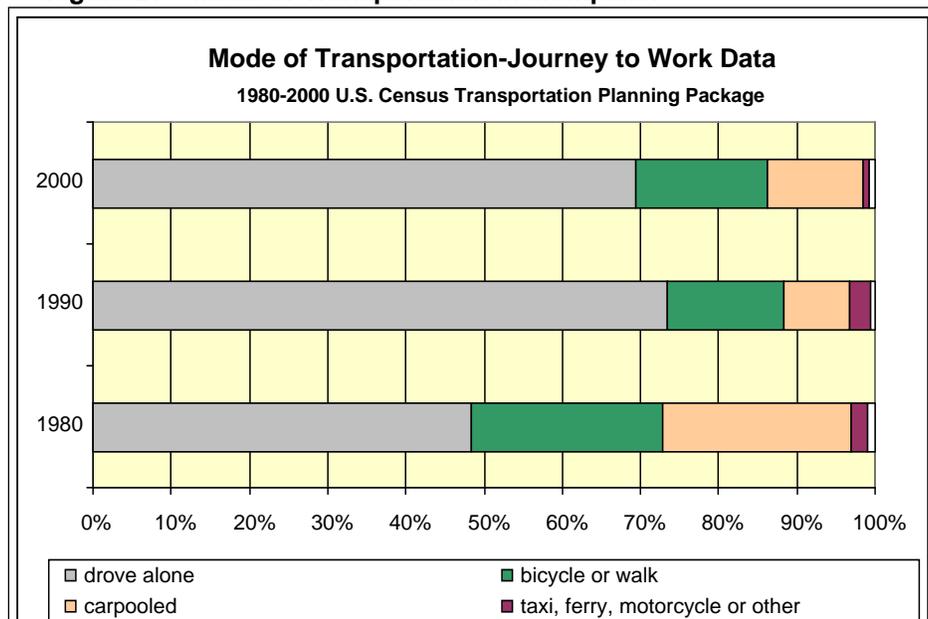
Given the number of bridges in Montpelier, and their age, condition, and importance to City’s transportation network, a plan for the cost effective, preventative maintenance should be developed and carried out by the City.

### Journey to Work Data

The 2000 U.S. Census Journey to Work Data provides a picture of the current commuting patterns in Montpelier, and how they have changed in the past few decades. The US Census collects data on their long form on residents’ work commuting trip, including mode and average length of trip.

Figure 21 and Table 4-2 below compare the mode shares (% using each major mode of transportation) for residents of Montpelier’s trips to work for 1980, 1990 and 2000.

**Figure 21 – Mode of Transportation in Montpelier**



**Table 4-2: Mode of Transportation in Montpelier - Journey to Work Data**

Mode of Transportation	1980	1990	2000
drove alone	1,737	2,916	2,865
bicycle or walk	877	591	695
carpooled	863	335	505
taxi, ferry, motorcycle or other	78	110	30
public transportation (not taxi, ferry, motorcycle)	33	22	30

Between 1980 and 1990, a pronounced growth in “drive alone” trips to work, and decreases of commuters using other modes occurred in much of Vermont and across the country. However, from 1990 to 2000, this trend was reversed among Montpelier residents, with a decline in “drive alone” and growth in carpooling and walking. This trend of reduced driving alone appears to be unique to Montpelier among Vermont communities. Very few other Vermont towns or cities have seen declines in “drive alone” trips.

## **Public Transit Services and Facilities**

Providing effective public transit is a challenge in virtually any small community in the US, due to the prevalence, relatively low cost and greater convenience of automobile use. Public transit is highly vulnerable to virtuous/vicious cycles of use, support, funding, and success. This cycle goes as follows: high quality, frequent, convenient public transit is available, and attracts use. Increased transit ridership leads to increases in funding and support, allowing for further improvements to services, such as more frequent buses or extended routes. These improvements attract even more riders, allowing the system to continuously grow and improve. Unfortunately, these same dynamics can work against transit, as funding cuts result in lower service, which in turn leads to lower ridership, etc.

A number of intra-regional, deviated fixed-route and commuter-route bus services are currently operated by the Green Mountain Transit Agency in the Capital District portion of the Central Vermont Region. The following is a summary of the current services:

The **City Commuter and the City Route Mid-Day** serve the downtowns of Montpelier, Barre City, and commercial and residential areas along Route 302 in Berlin. The services operate Monday through Saturday.

- The City Commuter route operates during the morning and evening peak periods with two buses, with a frequency of every half hour.
- The City Route Mid-day operates during the midday period with one bus, with a frequency of every 75 minutes. The route will deviate upon request.

The **Capital Shuttle** is a seasonal service that operates in downtown Montpelier during the State Legislative Session (Jan – May). The shuttle provides a convenient connection between the State House and State offices at the National Life complex, and encourages workers from National Life and the State offices to patronize the downtown retail area during the midday. The shuttle operates using two loops, one traveling in the clockwise direction and the other in the counter-clockwise direction (Loop A and Loop B, respectively), and will deviate upon request. One bus operates on each loop from 7:30 a.m. to 6:30 p.m., on a frequency of every 23 minutes. Service is provided Tuesday through Friday from January through mid-April, and Monday through Friday from mid-April through mid-May. The shuttle does not operate on holidays or during Town Meeting Week. One of the primary purposes of the shuttle is to encourage the use of remote parking by long-term parkers to free up some short-term spaces in the downtown retail area. The route is free and open to the public.

The **Montpelier Hospital Hill** route provides deviated fixed-route service from Montpelier to the Central Vermont Medical Center, the Berlin Mall, and other medical and professional offices. The schedule allows time during each run for previously-scheduled door-to-door pick-ups or drop-offs. The service operates Monday through Saturday with one cutaway bus on an hourly frequency.

The **US 2 Commuter** provides deviated fixed-route service between Montpelier and St. Johnsbury weekdays, with available connections to other regional routes. Stops include National Life, the Department of Labor, State Street, the Vermont College Green, Goddard College, Plainfield Park & Ride, Twinfield School, Danville Park & Ride, St. Johnsbury Park & Ride, and the St. Johnsbury Welcome Center.

The **Waterbury Commuter** route provides commuter-route service between Waterbury and Montpelier operating Monday through Friday in the morning and evening peak periods. The service is provided by one cutaway van on an hourly frequency. There is room in the schedule for some additional stops in Waterbury Village after stopping at the State Office Complex in Waterbury (such as Green Mountain Coffee Roasters), and the route will serve the National Life building in Montpelier on request.

The **Montpelier LINK Express** is jointly operated by GMTA and CCTA and provides commuter-route service between downtown Montpelier and downtown Burlington operating Monday through Friday in the morning and evening peak periods. The service is provided by three buses on a 45-55 minute frequency.

The **Snow Cap Commuter** route provides commuter-route service between Montpelier, Middlesex, Mad River Glen and Sugarbush on weekends and holiday weeks during the ski season. Two round trips per day are provided by one bus.

Other Capital District GMTA routes include:

- **Barre Hospital Hill**, providing service in Barre, with stops at the Central Vermont Medical Center and Berlin Mall.
- **Hannaford Shopping Special**, with stops at Hannaford in South Barre and several apartment complexes.
- **Route 100 Commuter**, with stops in Morrisville, Stowe, and Waterbury; transfers available for the LINK Express and Waterbury Commuter.
- **Route 103 Shopping Shuttle**, with stops at shopping areas in Stowe and Morrisville.
- **Northfield Community Shuttle**, operating on Wednesdays with stops throughout the community.

**Greyhound Lines, Inc.** provides intercity bus service scheduling for round-trips between Montreal and Boston with stops in Burlington, White River Junction, and Randolph.

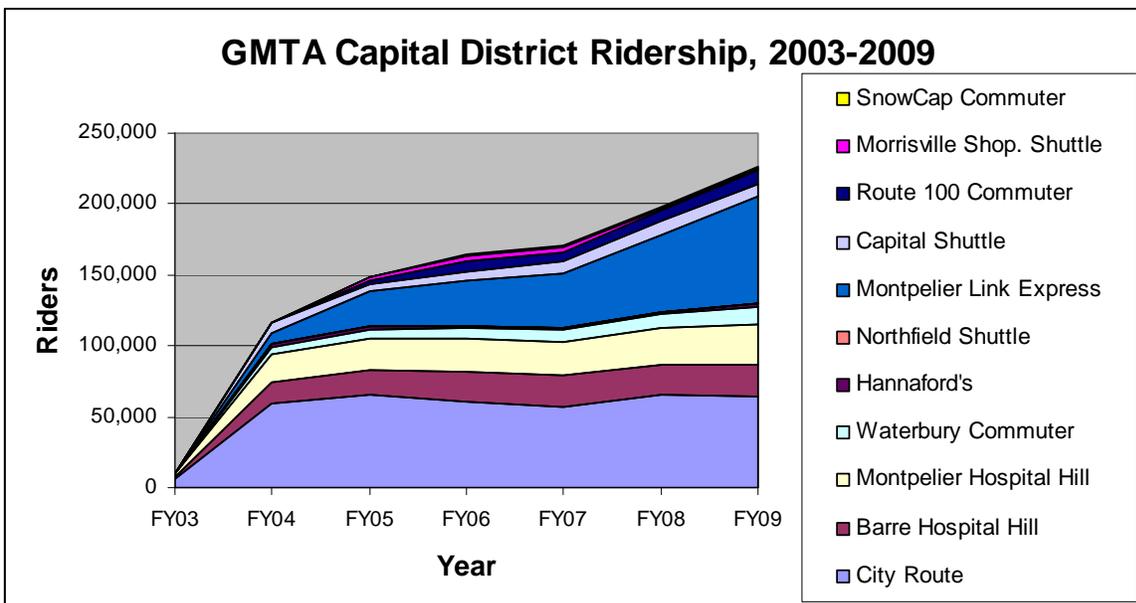
The data in Table 4-3 shows the ridership of the GMTA Capital District routes. Noteworthy from this historic data is that ridership has increased nearly every year on most routes.

**Table 4-3: GMTA Capital District Ridership, 2003-2009**

Route #	Route Name	FY03	FY04	FY05	FY06	FY07	FY08	FY09
80/89	City Mid-Day/City Commuter	6,515	59,714	65,864	60,776	57,344	65,572	64,525
81	Barre Hospital Hill	1,435	14,235	17,313	20,770	22,417	20,781	22,604
82	Montpelier Hospital Hill	1,723	20,384	22,293	23,256	22,791	25,782	28,495
83	Waterbury Commuter	411	5,088	6,465	7,301	8,480	10,522	12,233
85	Hannaford's	192	2,312	2,069	2,182	1,881	1,717	1,600
86	Montpelier LINK Express	0	7,664	24,288	31,873	37,512	54,211	75,244
88	Capital Shuttle	0	6,913	5,067	6,126	9,620	9,516	9,194
100	Route 100 Commuter	0	0	3,000	7,166	6,151	6,996	9,191
103	Morrisville Shop. Shuttle	0	0	1,822	3,519	2,862	2,225	2,307
90/126	SnowCap Commuter	0	347	542	1,128	1,194	1,004	856
	Northfield Community Shuttle	0	0	0	0	0	0	380
<b>TOTAL</b>		<b>10,276</b>	<b>116,657</b>	<b>148,723</b>	<b>164,097</b>	<b>170,252</b>	<b>198,326</b>	<b>226,629</b>

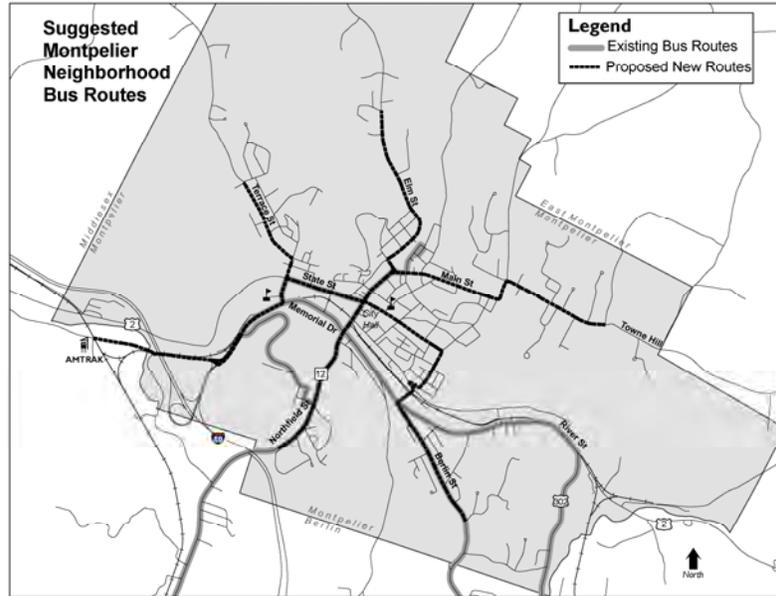
Note: "0" indicates that the route was not yet in service.

Figure 22 below depicts the data presented in Table 4-3. As the chart indicates, ridership has gone up as the as the number of routes has increased. Routes getting the most use include the City Route (Mid-Day and Commuter), the LINK Express, and Montpelier Hospital Hill.



**Figure 22 – GMTA Capital District Ridership, 2003-2009**

There are some unique opportunities in Montpelier to develop combined high school/middle school transportation with a local public transit service, oriented to connect residential areas outside the walking core with the schools and city center. This would serve to greatly alleviate peak congestion at the schools, provide more mobility to both students and other residents without automobiles, and perhaps even alleviate the parking shortages in town. Figure 23 to the right shows possible routes for a neighborhood connector service, based on input from a public forum held in 2004.



**Figure 23 – Suggested Montpelier Neighborhood Bus Routes**

The City of Montpelier continues to plan the development of a Multi-Modal Transit and Visitors Center in downtown Montpelier. This facility would provide a destination to integrate the Greyhound, GMATA, bicycle path users, a Welcome Center for tourists

and tour buses, and potential retail and commercial tenants. The center would be the major transfer hub for regional coach buses, inter-regional commuter transit, and satellite parking lot shuttles for downtown employees and visitors as part of the larger parking policy.

### Passenger Rail and Freight

Amtrak's *Vermont* Service operates a daily south and north bound train from St. Albans to Washington D.C. with service from Montpelier Junction. Other stops include Randolph, VT, Springfield, MA, and New York, NY.

The passenger boarding and departing data for the Montpelier Junction AMTRAK station, in addition to overall ridership data from 2009 to 2010, is below:

**Table 4-4: Passenger Data for the *Vermont* AMTRAK Line**

<i>The Vermonter</i>	March 2009	March 2010	Ridership Increase 2009-2010 (%)
Montpelier Junction (Boarding & Departing)	430	461	7.2
Total <i>Vermont</i> Ridership	--	--	10

Source: VTrans Rail Program

While the use of rail has always been central to transportation access to Montpelier, the active presence of a rail economy and public transportation mode is virtually invisible. Part of the result is directly related to reductions in rail use nationally. However, it is promising to see that the ridership on the AMTRAK *Vermont* line increased by 10% in March 2010, compared to the total ridership in March 2009.

Currently, in early 2010, the city is coping with the imminent increase in rail traffic on the Washington County line that runs through the downtown. The increased traffic is due to granite tailing shipments out of State. This might involve bridge upgrades, new track across Sabin's Pasture, new track upgrades, and the cancellation of long-held leases along the rail line. It is not clear what all the impacts will be at this point. The Washington County line does not meet the standards for passenger rail, although it remains to be seen if the upgrades that are planned will improve it to this standard.

## **Montpelier's Street Network**

### **Street Network Planning and Design**

Historically, cities laid out street networks in patterns where most streets had several connections to the network as a whole, and therefore most of the streets could serve a 'through traffic' function as well as providing access to land. However, in the past 50 years, this practice has changed considerably. Most new streets are planned strictly for providing access to land, with dead-end driveways or cul-de-sacs being common. These types of streets are useful only for providing access to land, and do not offer a "transportation function" to the community. New transportation facilities are generally built by governments, and often at a higher scale and design speed than our older streets were designed for.

Streets however, can play a greater role in community life beyond simply serving as thoroughfares for motor vehicles. With their lively interchange of activities, downtown streets are often the outdoor "living room" of the community—a place where people congregate and socialize, as well as shop, dine, work and recreate. Some are quiet residential streets where children play and neighbors can gather and converse. Still others are scenic country lanes that offer exhilarating bicycle rides. There are also major commuter arteries that carry us to places we need to go. These streets are open to all modes of transportation, but the relative balance and degree of service should vary with the context and function of the street.

Montpelier's street network also offers a lesson in the history of transportation and land use planning. The older portions of the city display a connected grid-like pattern of small scale streets. Each street provides access to land, but also provides a route to or through the city. The pattern promotes connectivity and accessibility, although in a few cases the steep hillsides restrict some directions. By contrast, portions of the city that have been developed more recently typically have driveways on major routes, or dead-end access roads, which serve a single purpose of access to land.

Many communities have seen the scale and feel of their streets sacrificed for the goal of more "efficient" traffic movement. This has really not happened to any significant degree in

Montpelier, and the small scale, slow speed streets are clearly treasured assets, despite their potential inefficiencies for vehicular traffic. While the need for efficient traffic flow is certainly present on some streets, there are many possible approaches to achieve this, and many considerations that should be made as changes are contemplated.

The figure below presents a potential scheme for classifying Montpelier's streets into broad categories based on both function and context. Each type of street, and considerations and performance goals, is described on the following page.



Figure 24: Streets, Connectors, and Commuter Routes

## **Streets that are Public Spaces**

Main Street as a corridor has the most congested conditions, but is also the primary center of commerce and forms an important public space of Montpelier. State Street is a landmark corridor of historic and aesthetic significance. Each corridor forms a unique public space. Historic buildings, on-street parking, amenable sidewalks, street tree plantings, a vital day and night business environment, access for vehicles and pedestrians, street furniture, and slow moving traffic are all components that contribute to the vitality of these unique corridors.

## **Commuter Routes**

High volumes of commuter traffic use these streets every day, from within and outside of Montpelier. There are bicycle/pedestrian paths parallel to Memorial Drive, US 2 and US 302, so minimal facilities for pedestrian and bicycle access along these routes may be appropriate. Efficient movement of traffic has relatively higher priority than on other streets. However, it is important to define “efficiency”. Typically, these “mobility” corridors have been designed to provide higher speed travel. However, it may be more appropriate to design them for higher capacity, rather than higher speeds.

## **Historic Bridges**

Montpelier’s street network is constrained by rivers, and bridges are often choke points in the traffic network. At the same time, many of these are historic structures, which are valued for their design, function, and connection to the past. Maintaining these bridges as part of the street network will likely include the acceptance of



less-than-ideal traffic conditions. Additional bridge crossings, such as that proposed with the Barre Street Extension, can have a significant role in enhancing the street network, as well as relieving the traffic burden from some of the existing historic bridges.

## **Neighborhood Connectors**

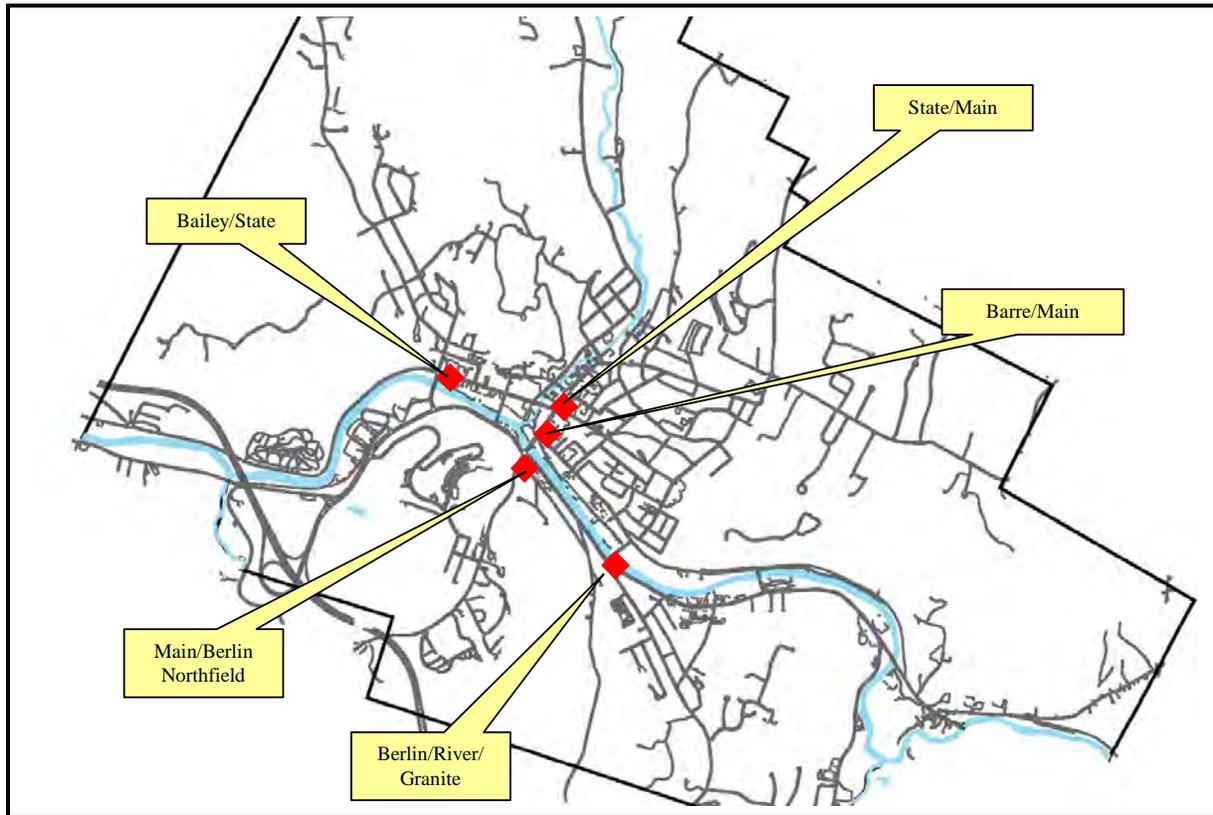
Several major routes connect outlying neighborhoods, as well as adjacent communities, into Montpelier’s center. These routes serve higher volumes of commuter traffic than ever designed for, and can be uncomfortable for pedestrians or bicyclists due to the combination of narrow road or shoulder widths, steep grades, and high speed traffic. These routes should become more multimodal. Given that most trips on these roads are relatively short, efforts to slow down traffic speeds could help significantly with this goal.

## **Local Streets**

The character of Montpelier’s local streets varies tremendously with the context, but most are somewhat more oriented to providing access to residential, commercial, or industrial land uses. In areas where bicycle traffic is desired, mixed traffic on traffic calmed streets may be the best way to achieve the desired balance. Pedestrian facilities may range from sidewalks to walking in the street or on the shoulder, with traffic calming as a tool to maintain safe speeds.

## Intersections

In any road or street network, the critical points are the intersections, where the capacity must be shared between the two traffic flows. Montpelier's street network has its primary bottlenecks at several key intersections, which limit the overall street network capacity. Figure 25 below shows the most congested intersections in the city.



**Figure 25 – Five Most Congested Intersections in Montpelier**

Tools that Montpelier can consider for improving intersection efficiency include the following:

- Roundabouts can provide more efficient operations than traffic signals in many cases. They require more space immediately at the intersection corner, but significantly less space along the length of the approaches to the intersection. A roundabout has now been completed for the intersection of US 2/US 302.
- Turning lanes-Addition of turning lanes to intersections can improve operations, but consideration should be given to the relative benefits compared to possible effects in pedestrian safety. The traffic improvements are often only needed during the relatively brief period of peak hour traffic, yet their implementation may create less safe pedestrian conditions for the entire day.
- Left Turn Prohibitions during peak hour-while this creates inconvenience for those desiring to turn left at an intersection, left turning traffic does have a strong impact on an intersection's capacity. Prohibiting left turns during peak hours can benefit the vast majority of users of a bottleneck intersection. Alternate locations to turn left and reconnect to their

desired route must of course be available. For example, if the Barre Street Extension project is completed, it may be possible to establish left turn prohibition at Main/Berlin/Northfield/Memorial, encouraging left turns onto Taylor Street instead.

Transportation Systems Management (TSM)-Intersections should be frequently reviewed for simple changes in signal timing and lane striping, as shifting traffic patterns may result in changes in signal operation.

Tables 4-5 and 4-6 below indicate the level-of-service (LOS) of Montpelier’s intersections. Level-of-service is determined by the average vehicle delay at signalized and un-signalized intersections. The LOS system rates intersections with letters A through F, with A being best and F being worst.

**Table 4-5: Signalized Intersection Performance Measures  
Existing (2003) Weekday P.M. Design Hour**

Study Intersection	LOS	Delay (in seconds)	Volume/Capacity
Memorial Drive/ National Life Drive	C	21	66%
Memorial Drive/Bailey Avenue	B	17	66%
Memorial Drive/Taylor Street	C	23	64%
Memorial Drive/Main Street/ Northfield Street	F	82	74%
Main Street/State Street/E. State Street	F	90	126%
State Street/Bailey Avenue	D	55	100%
River Street/Granite Street/Berlin Street	D	36	85%
River Street/Pioneer Street	A	8	62%

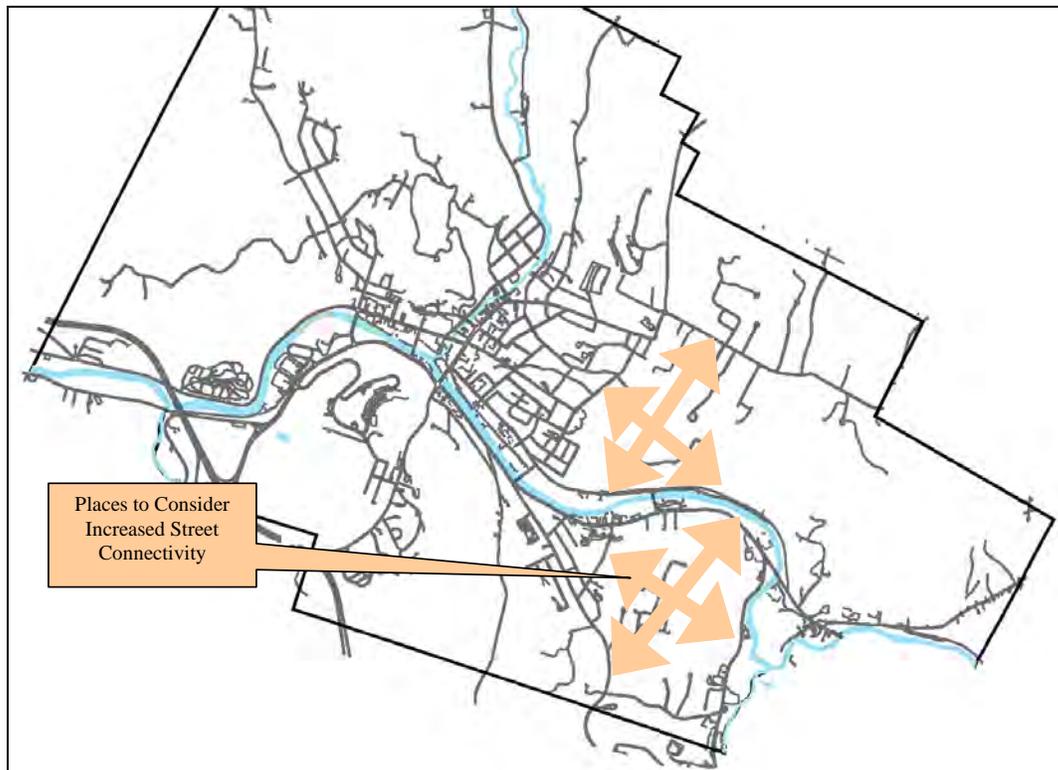
**Table 4-6: Un-signalized Intersection Performance Measures  
Existing (2003) Weekday P.M. Design Hour**

Study Intersection	LOS	Delay (seconds per vehicle)
Bailey Avenue/Bladwin Street	C	18
State Street/Governance Aiken Avenue	F	72
State Street/Governor Davis Avenue/Taylor Street	F	1020
State Street/Elm Street	D	28
Elm Street/Langdon Street	B	12
Elm Street/School Street	B	11
Elm Street/Spring Street	F	289
Main Street/Spring Street roundabout	A	4
Main Street/School Street	F	55
Main Street/Pitkin Court/Jacobs Drive	F	77
Main Street/Blanchard Court	F	64
Main Street/Barre Street	F	265
Main Street/Stone Cutters Way	F	76
Main Street/Towne Street/Town Hill Road	D	32
Main Street/Emmons Street	C	21
Woodrow Avenue/College Street	A	8
Barre Street/Sibley Avenue	D	32
College Street/Sibley Avenue	A	9
Barre Street/Granite Street	D	30
Granite Street/Stone Cutters Way	B	12

## Street Connectivity

The connectivity and ‘density’ of a street network is an important factor in its overall capacity to handle peak flows of traffic. Expanded intersections and widened roads represent one possible approach to providing high capacity for peak hour traffic. Another approach is to provide numerous possible routes of various scales and travel speeds through an urbanized area. A highly connected street grid, with redundant, parallel routes and frequent intersections, is actually among the most efficient ways to move traffic with less pavement. Large roads and intersections

**Figure 26 – Areas to Consider Increased Street Connectivity**



tend to move traffic at higher speeds, but don't necessarily move more traffic. Street networks can be measured for their “connectivity” in terms such as intersection density, or average “link length” (sections of streets between two intersections). Street networks that are highly connected have many positive transportation and community characteristics, including greater capacity, ability to use more efficient, direct routes; calmer traffic (as vehicles will frequently have to slow down at intersections), and smaller intersections (safer for pedestrians).

Few alternate routes available for traffic to circumvent Main Street traffic congestion during the afternoon peak hours. By establishing a more “robust” street network with other route options during peak hours, some of the peak hour congestion will be alleviated. This is most achievable at the time that development is planned, and new streets are laid out. Figure 26 above shows two areas of town that should be considered for improved connectivity, that will result in shorter, more direct trips, and reduced peak hour volumes through the City's worst bottleneck intersections.

## Parking

Montpelier’s parking shortage should be viewed as a sign of a successful city center, in addition to a challenge and constraint. In cities that have been built in the pre-automobile era, and have a vibrant, diverse economy, parking shortages are virtually a certainty, and a downtown without a parking shortage is typically not a vibrant place. One of Montpelier’s goals should be to keep the downtown healthy and attractive enough to attract businesses, customers, and visitors despite the sometimes challenging parking situation. However, there is also a need for a comprehensive parking strategy that considers the numerous implications, impacts and benefits of the various types of parking that can be provided.

The following table summarizes some general considerations for different ways to provide additional parking.

**Table 4-7: Considerations for Additional Parking**

<i><b>Parking Facility Type</b></i>	<i><b>Advantages</b></i>	<i><b>Disadvantages</b></i>
Satellite Parking in Remote Lots	Relatively inexpensive to construct; allows parking to be present on less valuable real estate	High cost of shuttle if frequent service is desired. Less convenient for casual visitors.
Parking garages within the central business district or State House area	Provides convenient, close in parking with much less land consumption; allows for pricing/incentive opportunities	Costly to construct and to use. Brings traffic into city center.
Surface parking near downtown of the State House	Less expensive to construct and operate than garages, although land cost may be prohibitive to expand parking	Consumptive of land that may have higher value for infill development or open space

In considering parking developed for employees, it should also be recognized that parking which is plentiful and inexpensive provides little incentive for commuters to utilize alternative modes of transportation. In addition, providing free parking to employees in a downtown area amounts to a significant subsidy for automobile use, after considering the costs associated with land, physical improvements, and loss of space for other uses (i.e., open space, retail or housing). In looking to the future, the City should encourage employers, particularly in areas served by transit, to provide incentives for their employees to leave their car behind as discussed below in the Travel Demand Management section.

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.

Parking spaces are expensive. A typical surface parking space takes up land worth \$5,000 and

<b>Location</b>	<b>Number of Spaces</b>
Blanchard Lot	93
Capital Plaza Lot	62
North Branch	62
Pitkin Lot	42
60 State Street Lot	63
City Hall Lot	107
Jacobs Lot	74
VLCT Lot	11
City Center Garage	108
Stonecutter's Way	79
<b>Total</b>	<b>701</b>

*Source: Montpelier Police Department December, 2006.*

the annual economic cost of that space is about \$55 per 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 per 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.

### **Travel Demand Management**

A multi-faceted approach to reduce the rate of traffic growth will allow Montpelier to maintain its attractive scale while still providing for the transportation needs of its residents and workers. In addition to the themes of a balanced transportation design, and innovative approaches to addressing traffic congestion, an important component includes consideration of the travel behavior of employees commuting into the city. Many cities and regions, including those of similar size to Montpelier, have developed travel demand management programs that provide incentives to reduce single-occupant commuting. Commuter fringe benefits are one of the most successful tools, which provide direct cash to employees who chose to carpool, use public transit, or walk to work. Establishing Transportation Management Association, or TMA, that includes major employers, municipal and regional officials, can provide a forum to coordinate efforts to manage commuting traffic.

As transit, pedestrian, and bicycle transportation is improved throughout the city, there will be benefits for households that may be able to lower their automobile ownership rates. Innovative practices such as location efficient mortgages can help families realize the benefits of living in a walkable area, served by transit, with increased mortgage loan limits.

### **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.

## Land Use and Transportation

The choices that individuals make regarding travel are influenced by surrounding land use patterns that make up the community and the region. Dimensions of the built environment, including mixed land uses, greater development density, availability of parking, and urban design factors all influence, to a degree, the choice an individual makes to walk, bicycle, drive or take transit.

The traditional, compact structure of Montpelier's downtown district naturally lends itself to pedestrian travel, with a mixture of homes, shops, offices, schools, parks and cultural attractions all located within a reasonable walking distance. Outside the downtown, residential neighborhoods organized around a church, parks, or even a neighborhood store can help to reduce automobile trips.

A variety of alternative approaches to mitigating growing traffic volumes, including developing more walkable communities, have gained considerable interest in recent years, as communities across the country have come to the realization that it is not possible to build their way out of traffic congestion by expanding roads, as well as a growing desire to walk more and drive less.

In looking to the future in Montpelier, there are opportunities to reinforce and expand the City's traditional pattern of development, incorporating a mix of land uses, higher density housing, and an interconnected system of streets that can promote walking, bicycling and riding transit.

The design and arrangement of land uses, and connectivity of streets linking them, is also critical in determining traffic and travel characteristics. The drawings below illustrate these two types of land use and street network patterns, and their implications for traffic.



Figure 27a– Land Use Patterns



Figure 27b– Street Network Patterns

The left drawing (**Figure 27a**) represents two land use patterns and street arrangements; the top half is a typical newer suburban area with disconnected streets and land uses, while the lower half shows a traditional downtown with mixed uses in closer proximity and a highly connected street system.

The drawing on the right (**Figure 27b**) demonstrates the representative trip generation for the land use patterns.

In the modern suburban location, every vehicular trip must enter the arterial road. In the traditional town or city, all trips can be made relying on the local streets.

The result is that the arterial road (center) must serve both the existing through traffic and the local access traffic in the suburban setting, while its capacity is reserved for through trips in the traditional urban setting.

## Communications

In today's society, efficient information exchange is critical to staying current and connecting with one's community. An increasing amount of the Montpelier community has begun using the internet as a primary communication tool. Many local businesses offer free, wireless internet (wi-fi) to their customers. Additionally, the Kellogg-Hubbard Library has several computers that are available to the public and are quite popular with those who do not have internet access in their homes.

The City, along with 21 other Vermont municipalities (see <http://www.ecfiber.net>), is participating in a project to build a municipally-owned communications network over a state of the art fiber optic network. This network will provide internet, phone, and television to every home in each town, including many places that currently only have dial-up internet options. In Montpelier this network will compete with Fairpoint, Comcast, and the satellite television providers, by offering a local option at competitive rates.

The fiber optic network will be owned and governed by the cities and towns involved in the project, which have created a unifying entity – ECFiber, ILC – through an Inter-Local Contract entered into in 2008. The network will be financed either with government loans or through a private bond sale, depending on market conditions and financing terms. Subscription revenues will be used to make the lease payments, and excess revenues will be returned to the cities and towns. Organizers for the network are currently working on securing funding for the project and aim to begin connecting subscribers within one year from the time that funding is secured.

This past year the City's web-site was overhauled and made more user-friendly. Residents can find minutes, agendas, and podcasts of all the City Board and

**Earth Charter Principle IV.14(c):** *Enhance the role of the mass media in raising awareness of ecological and social challenges.*

Commission meetings on the site. The Onion River Community Access (ORCA) television channel also broadcasts many of the City's Board and Commission meetings. Additionally, ORCA supports the Kellogg-Hubbard Library and the Wood Art Gallery with media production. With their programming focus on social and economic issues, ORCA provides a world perspective to the Montpelier community.

The Montpelier community supports a number of other communications media. The *Times Argus*, a daily morning newspaper, serves over 8,000 people in the capital region of Vermont. The *Times Argus* also operates an online version of their paper. *The Bridge* is Montpelier's free community paper, published twice monthly with local interest stories and a calendar of

community events. Local radio stations, including WDEV-FM 96.1 and WGDR-FM 91.1, also play an important role in keeping Montpelier residents informed about local issues.

### 4.3 Population and Housing

Like many urban areas in Vermont, Montpelier’s population declined between 1960 and 2000. From its historical high of 8,782 people (1960), it steadily dropped to an estimated total of 8,035 in 2000. Meanwhile, housing unit numbers climbed slowly, but steadily. This narrative will attempt to suggest what the next 20+ year period may hold for the City with respect to population and housing.

**Table 4-9: Montpelier Population, Housing Units 1940---2000 (US Census)**

Year	1940	1950	1960	1970	1980	1990	2000
Population	8006	8599	8782	8604	8241	8247	8035
Housing Units	2249	2648	2958	2974	3437	3769	3899

In 2003, the Central Vermont Regional Planning Commission (CVRPC) contracted with Economic Policy Resources (EPR) to do town-level projections out to 2020 for communities within its jurisdiction. These are the only “official” projections for the region to date, and as such are an appropriate starting point for an exploration of this topic.

**Table 4-10: CVRPC/EPR Population Projections for Montpelier**

Year	2000 (Census)	2010	2015	2020	Net change
Population	8035	7982	7899	7,780	-255

**Table 4-11: CVRPC/EPR Housing Projections for Montpelier**

	2000	2010	2015	2020	Net Change
Housing Units	3739*	3904	3979	4153	+414
Average Household Size	2.15 <sup>1</sup>	2.02	1.97	1.87	-.28

These projections appear to make the case that Montpelier’s downward population trend, and low level housing unit growth (due primarily to decreasing household sizes) will continue into the future. Our research indicates that this is not the case, however. New facts, emerging trends, as well as State, Regional and Local planning goals and initiatives make a clear case that Montpelier will reclaim its role as a regional housing, employment, and cultural center, in cooperation with neighboring communities.

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\* Census data.

### Goal D: Transportation

Montpelier is built at a human scale with a transportation system that serves the access and mobility needs of all people through a choice of convenient, comfortable, affordable, and efficient transportation modes. The transportation system connects people and goods locally, regionally, and globally. Transportation needs are met safely in a manner supportive of human and ecosystem health.

<b>1</b>		<b>By 2015, increase the number of Montpelier residents who commute by walking or bicycling increasing by 40 percent by 2040.</b>	<b>Responsible Party</b>
<i>Recommended Strategies</i>	<b>1a</b>	<b>Develop and extend a wagon-wheel network of trails throughout downtown Montpelier and to other neighboring communities.</b>	<b>Parks Department</b>
	<b>1b</b>	<b>Construct a paved bike path link between Taylor Street and Stonecutter’s Way, and extend the path so that it is tied into larger, regional transportation path plans. Seek alternatives to current plans that utilize the railroad rights of way.</b>	<b>DPW</b>
	<b>1c</b>	<b>Develop and implement a wide range of material that promotes walking and bicycling as healthy forms of exercise and transportation.</b>	<b>Stakeholders</b>
	<b>1d</b>	<b>Increase awareness about bike and pedestrian organizations, such as Free Ride Montpelier, and the services offered (bike maintenance, classes, etc.).</b>	<b>Stakeholders</b>
	<b>1e</b>	<b>Provide secure bicycle storage areas and racks throughout the city.</b>	<b>DPW</b>
	<b>1f</b>	<b>Prioritize the sidewalk network for maintenance, ADA compliance, and snow removal.</b>	<b>DPW</b>
	<b>1g</b>	<b>Extend sidewalks along major arteries, including, but not limited to Terrace Street, Berlin Street, Northfield Street, Barre Street, Elm Street, Towne Hill Road, and Route 2.</b>	<b>DPW</b>
	<b>1h</b>	<b>Introduce traffic calming tactics as needed in areas such as Barre Street and Main Street Middle School.</b>	<b>DPW</b>
	<b>1i</b>	<b>Ensure that crosswalks are readily identifiable and safe.</b>	<b>DPW</b>

## Goal D: Transportation

	1j	Adopt a complete streets ordinance and implement bicycle parking requirements for new and reconstructed developments.	City Council
	1k	<p>Create a Complete Street Committee, consisting of the Director of Public Works; Director of Planning and Community Development; the Chief of Police; a member of the City Council; and a member of the City’s Safe Routes to School committee, Montpelier Bikes committee, or general member of the public.</p> <ul style="list-style-type: none"> <li>This committee would solicit public input and develop a comprehensive bicycle and pedestrian plan for Montpelier to include shared use paths and on-road bicycle facilities.</li> <li>A member of the Complete Streets Committee should serve on the Capital Improvement Budget Committee and have a voice in the budgeting process.</li> </ul>	City Council
	1l	The City Council and the Department of Public Works should pursue funding sources to improve bicycle infrastructure and facilities in the city.	City Council, DPW
	1m	The City uses standard design guidelines, such as the Manual on Uniform Traffic Control Devices or the American Association of State Highway Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities manual,* for the design of bicycle facilities.	City Council, DPW
	1n	The City embraces the idea of uphill bike lanes/downhill shared lane markings (a concept recommended in AASHTO Guide for the Development of Bicycle Facilities), on appropriate streets throughout the city.	City Council
2009 Montpelier Citizens’ Survey		<ul style="list-style-type: none"> <li>✓ 73 percent of Montpelier residents report that the <b>availability of paths and walking trails</b> is “good” or “excellent.”</li> <li>✓ 83 percent of Montpelier residents report that the <b>ease of walking</b> in Montpelier is “good” or “excellent.”</li> <li>✓ 53 percent of Montpelier residents report that the <b>ease of bicycle travel</b> in Montpelier is “good” or “excellent.”</li> </ul>	

\* The manual provides information on the development of new facilities to enhance and encourage safe bicycle travel. Planning considerations, design and construction guidelines, and operation and maintenance recommendations are also included.

## Goal D: Transportation

2	By 2015, Montpelier residents commuting by public transit increases by 15 percent.	Responsible Party	
Recommended Strategies	2a	Ensure that buses are accessible and user-friendly for all riders.	Local, regional, and interstate transit, City Council
	2b	Expand public transportation services between and within the cities of Montpelier and Barre.	Local, regional and interstate transit, City Council
	2c	Expand public transportation services to public green spaces, including Hubbard Park.	Local, regional, and interstate transit, City Council
	2d	Implement a new-year round, public intercity transit system that connects Montpelier neighborhoods to the downtown area and potential remote parking facilities.	Local, regional, and interstate transit, City Council
	2e	Secure a location for an intercity, multi-modal transit station. This facility provides a destination to integrate local, regional and interstate transit, rail, bicycle path users, a Welcome Center for tourists and tour buses, and potential retail and commercial tenants.	City Council
	2f	Increase park-and-ride options that are connected to intracity public transit. A park-and-ride station is situated in Montpelier's Commercial/LDR zones.	City Council
	2g	Provide incentives to businesses that promote employee reward programs supporting the use of public transportation, car pooling, walking, and biking.	Stakeholders
	2h	The City of Montpelier investigates the potential of establishing a Smart Jitney system (use of cell phones and GPS technology to compile and disperse information about individual vehicles, their destinations, and their riders so vehicles can be shared) through the City's website.	Planning Department
2009 Montpelier Citizens' Survey	<ul style="list-style-type: none"> <li>✓ 52 percent of Montpelier residents report that <b>bus or transit services</b> are "good" or "excellent."</li> <li>✓ 33 percent of Montpelier residents report that <b>ease of bus travel</b> is "good" or "excellent."</li> <li>✓ 3 percent of Montpelier residents report that they have <b>ridden a local bus</b> within Montpelier 13 to 26 times in the past year.</li> </ul>		

## Goal D: Transportation

3		By 2020, the number of Montpelier residents commuting to work with others in a motorized vehicle increases by 20 percent.	Responsible Party
Recommended Strategies	3a	The City and local non-profit groups better promote Vermont's ride-share program. ( <a href="http://www.connectingcommuters.org">www.connectingcommuters.org</a> ). Links to state and national ride-share websites are available on the City's website.	City Web Site
	3b	The City of Montpelier cooperates 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.	Stakeholders
	3c	Volunteers utilize the Senior Center vans to do loops throughout the City during community events.	Senior Center
	3d	Establish Zip-cars or other car-share opportunities.	Stakeholders
	3e	Increase co-ownership of vehicles among neighbors.	Stakeholders
2009 Montpelier Citizens' Survey	✓ Citizens report that 10 percent of the time during a typical week, they <b>travel in a motorized vehicle with other children or adults.</b>		

### Sidewalk Tanka Haiku #6

These paved paths expose us to  
people and culture  
on our way somewhere,  
plus keep us healthy.

Much more useful than duct tape

- Harris Webster, 2010  
*Montpelier resident*

### Sidewalk Tanka Haiku #7

Taken-for-granted sidewalks  
especially help out  
the poor, disabled,  
young and elderly.

Infra-structure saints.

- Harris Webster, 2010  
*Montpelier resident*

## Goal D: Transportation

<b>4</b>		<b>By 2015, Montpelier maintains safe, quality roadways, sidewalks, and bike paths.</b>	<b>Responsible Party</b>
<b>Recommended Strategies</b>	<b>4a</b>	<b>Identify problem areas of roadways, sidewalks, and bike paths and provide maintenance when needed. Utilize reports, such as the Growth Center Designation, which identify problem roadways and provide suggestions for improvements.</b>	<b>Stakeholders, DPW</b>
	<b>4b</b>	<b>Effectively address the perception and the reality of problematic mobility by creating an effective transit management system which would be empowered to:</b> <ul style="list-style-type: none"> <li>• Better utilize existing parking;</li> <li>• Create a ZIP car, ride-share, and/or Smart Jitney* system;</li> <li>• Manage existing municipally-controlled parking systems;</li> <li>• Be accountable.</li> </ul>	<b>Stakeholders</b>
	<b>4c</b>	<b>Montpelier adopts a “Complete Streets” policy to insure that all new transportation infrastructure prioritizes pedestrian, bicycle, and transit uses.</b>	<b>City Council</b>
<b>2009 Montpelier Citizens’ Survey</b>		<ul style="list-style-type: none"> <li>✓ 31 percent of residents report that <b>street repair</b> is “good” or “excellent.”</li> <li>✓ 44 percent of Montpelier residents report that <b>sidewalk maintenance</b> is “good” or “excellent.”</li> </ul>	

\* The Smart Jitney is a system of efficient and convenient ride sharing that utilizes the existing infrastructure of private automobiles and roads. The goal of the system is to insure that each private car always carries more than one person per car trip, optimally 4-6. The Smart Jitney system uses GPS technology, cell phones and the Internet for ride reservations and coordination. (<http://www.communitysolution.org/transport.html>)

## **Attachment 4 Winter Maintenance Plan**



**CITY OF MONTPELIER**  
**DEPARTMENT OF PUBLIC WORKS**  
**WINTER OPERATIONS PLAN**



**2011-2012**

**Todd C Law, PE, Director**

### General Information:

The City of Montpelier has approximately 54 miles of roads to maintain as well as 26 miles of sidewalks that it performs winter operations on.

City parking lots are maintained by the Green Mount Cemetery staff and outside contractors under a seasonal bid contract.

The Street Division has 12 full time personnel and 1 seasonal employee who provide most of the winter operations for the City. The water/ sewer and equipment divisions provide assistance and replacements to complete the necessary employees to provide the level of service currently desired.

The City receives weather condition updates on a contractual basis from Weathering Heights, Roger Hill, who provides up to date weather and forecasts to assist the Department with winter operations decisions. Other information is gathered via the internet at [www.weather.gov](http://www.weather.gov), [www.accuweather.com](http://www.accuweather.com), [www.intellicast.com](http://www.intellicast.com) and other web based weather forecasting agencies.

The Police Department provides assistance by inspecting the streets during off duty hours and calling out the Public Works Department when road conditions warrant. During the months where adverse weather conditions maybe present, there is a Public Works employee designated “on-call” 24 hours a day, 7 days a week.

Call out guidance is provided to the Police Department to minimize the response time and assist the call out person in making a decision prior to coming in. The officer or shift supervisor should provide all pertinent information as follows:

- Is the problem City wide or confined to a specific area or areas?
- What is the specific nature of the problem? Snow covered (# of inches of snowfall), icing – City wide or runoff related
- Debris- What is the condition? Is the road passable? What equipment is necessary to clean up the debris (loader, chain saw, etc?) Is there an officer on site?

Any information that the officer/ supervisor can give is extremely valuable in assisting the on-call personnel in making a decision on who, what, etc.

### Operations:

The Department has established an overall plan to provide for clearing of roads and the plow is generally followed. There are 6 plow routes that are cleared by a combination of large dump trucks and smaller dump trucks to improve efficiency. There are also 3 sidewalk plow routes that cover the entire area of the City.

## Equipment

- 6 large dump trucks
- 5 small dump trucks
- Motor grader
- 1- 1 ton pick up trucks
- 2 loader mounted snowblowers
- 3 bucket loaders
- 3 sidewalk plows with a snowblowers and/ or reversible or v plows
- 1 skidsteer loader with plow and snowblower

## Materials:

- Capabilities- Salt storage- 500 cubic yards
- Sand storage- 1,200 cubic yards

The City typically uses an average of 3,600 cubic yards during the winter operations. Current prices are \$62.27/ ton compared to 61.57/ ton last season. The City contracts with 2 primary suppliers of salt, American Rock Salt (Trucked by Dubois Construction) and Cargill Salt (Trucked by Barretts) to provide salt when supplies are depleted. Sand costs approximately \$12/ cubic yard and is used to provide traction during icing conditions and for gravel road maintenance.

## Snowplowing and Salting/ Sanding:

Plow and salt routes have been established to provide general areas of coverage for routine operations. Typically, 1 large dump truck and 1 small dump truck are assigned to each area so that the route can be completed as efficiently and affectively as possible. Each plow route takes approximately 4-4 ½ hours to complete during a normal storm. There are 6 plow routes with 10 trucks available for the routes varying from large to small dump trucks.

Plow route priorities are hills, major routes (Class 1 and 2 highways) and intersections. These areas are the greatest concern because of the probability of accidents and the volume of traffic. Some of the flat residential streets are deemed lower priority as they are lower volume streets and have a lower probability of accidents.

Additionally, there are 3 sidewalk plow routes to maintain the sidewalk by plowing, blowing and salting/ sanding. Sidewalk plows are very slow moving and prone to breakdown due to their specialized design and makeup and are costly to purchase and maintain. In the event of a breakdown, it is highly unlikely that a replacement sidewalk plow could be obtained as there are limited resources available.

Sidewalk priorities are the areas around the schools and the downtown, then branching out into the neighborhoods. Sidewalk routes for plowing take approximately 4 ½ hours to complete, which increase significantly to approximately 8 or more hours when the

sidewalks need to be blown in heavier storms and when snow has accumulated. Typically, the downtown is the only sidewalks that are maintained during the weekend and the remaining sidewalks are completed on Monday mornings to open the sidewalks around the school.

We will begin to reduce salt usage in low volume, flat areas to conserve supplies while attempting to maintain safe roadways. We will also continue to emphasize to our operators the importance of plowing the streets to remove the snow and utilizing the right amount of salt to keep the roads safe and not add to waste.

During evening hours between 10 pm and 3 am, staffing will be reduced to a minimum or no staffing will be available unless continuous heavy snowfall or ice storms hit and road conditions become hazardous.

#### Use of salt/ sand from Public Works Garage:

The primary material use for winter operations is rock salt. Rock salt is very expensive and therefore, the City prohibits the taking of road salt by residents and businesses.

Residences and businesses are expected to keep their own driveways, parking lots and walkways clear. The City does not have the equipment, labor or time to remove snow that is plowed onto driveways and walkways.

The City purchases sand for the use on City sidewalks and streets to improve traction in ice storms, etc. Sand is provided to residents at the Public Works Garage at a rate of 2- 5 gallon buckets per 24 hour period. Residents are required to check in with the Stock Records Clerk to verify residency prior to obtaining sand. Salt and melting agents are not available for the public use. Area merchants (hardware, grocery and general merchandise stores) should have supplies available for purchase.

#### Downtown Snow Removal:

There is little to no snow storage capabilities in the downtown, resulting in the need for snow removal operations after large storms. Snow removal operations occur during nighttime hours due to parking issues, hauling issues and for the safety of the employees and the traveling public. It is necessary to ensure roads, sidewalks and parking areas are open for travel/ use.

The City utilizes a snow removal plan which denotes 4 nights of operations following substantial snowstorms where accumulation causes issues for the downtown. It is critical that all vehicles are removed from the streets prior to 12:30 am so that the snow removal operations can be continued without significant hold ups. Vehicles on the streets after 1 am will be towed and the owner responsible for all costs incurred as a result of.

The snow removal operation consists of the City grader, loader mounted snowblower and City trucks to move the snow. Annually the City obtains hourly trucking costs from local contractors to haul snow to the numerous snow dumps

throughout the City. Contracting the hauling keeps repairs costs on our equipment down and allows our personnel to rest in case we receive additional storms requiring attention.

#### Continued Operations:

At times, it is essential to “wing back” snow banks from roadways, intersections, driveways to improve safety and visibility in those areas. This also allows for additional snow storage area for future storms and is a necessary part of winter operations.

Fire Hydrants are checked frequently for water and filled with antifreeze to avoid freezing and damaging the hydrants. Flags are placed on hydrants to show their location when snow banks become too high to protect them and make them visible. Following snow events, staff will remove the snow from the hydrant making them accessible if needed for firefighting capabilities.

At times in the case of frequent storms or to provide needed rest to the street division, the water/ sewer division will be called upon to conduct winter operations. This overlap of employees allows the Department to maintain safe roads without additional personnel.

#### Damages:

Title 19, Section 1111 prohibits encroachment of the right of way without consent of the municipality. Because of the number of damage complaints resulting from items placed within the right of way, the following have been established:

Objects in the right of way are placed there at the owners risk and the City assumes no responsibility for damage incurred as a result of winter operations including winging back snow banks. Common items are flower pots, recycling and trash containers, basketball hoops and fences, as well as some vehicles.

The City allows mailboxes to be placed within the highway right of way to enable rural delivery. The City maintains the right to control the height and location of mailboxes within the right of way and may require homeowners to move the box to a more suitable location. The post office has a typical detail of the height of a mailbox to ensure that mail can be delivered; it should also be adequately adjusted so that the wing of the plow truck can go under the mailbox without damaging it. Mailboxes that tip towards the road are prime candidates for being struck by a plow truck. Please ensure that mailboxes are properly installed to ensure that City trucks can do their jobs and residents can receive their mail.

The City will pay a maximum of \$25 for the repair or replacement of a mailbox physically hit by the snow plow. Determination shall be made by cut marks on the box or from paint found from the plow blade. Snow coming off the plow blade can also damage or knock over mailboxes as well as private contractors and homeowners. The City is not responsible for repairing or replacing mailboxes damaged because of these situations.

Safety and protection:

To assist the City in its endeavors in winter operations and for the protection and safety of all, the following is essential:

- Snow shall not be plowed, blown or shoveled onto the City sidewalk or street.
- The parking ban must be respected and obeyed to allow City staff to perform their jobs effectively, efficiently and safely as possible. 1 vehicle left in the roadway during winter operations causes substantial issues in providing adequate and timely service.
- Placement of trash and recycling containers present a common and troublesome issue for sidewalk plows and snow plows. Please work with your trash hauler to ensure that the trash can be removed as well as the snow. Also remember, just because it isn't snowing, there maybe a need to maintain sidewalks due to icing in some locations.
- Children should be prevented from being allowed to build snow forts, castles, tunnels, etc in roadside snow banks. If a child is caught in a collapse or "winging back" of the banks occurs, the consequences could be dire.
- Snow plows and equipment must be respected. Given the height, width and visibility limitations of the vehicles and the unpredictability of winter operations, it is best to allow additional room to enable the operator to perform their duties safely and effectively.

Contact information:

Public Works Garage, normal hours of operation 7 am to 3:30 pm, Monday – Friday.  
223-9510

Police Department – for problems noticed after normal work hours-  
223-3445

Public Works Director- normal hours, 8 am until 4:30 pm, Monday – Friday  
223-9508

**Attachment 5**  
**State & Main Streets Safety Report**



**Attachment 6**  
**Bike Rack Report Form**



# Montpelier Bikes - Bike Rack Inventory

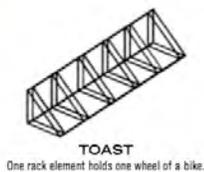
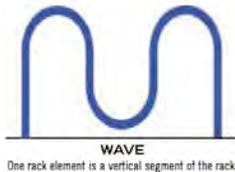
Your Name: \_\_\_\_\_ Email or Phone #: \_\_\_\_\_

**PLEASE FILL IN ONE FORM FOR EACH RACK – Yes, EVEN if there are two racks next to each other!**

## Bike Rack Location – fill in all that apply

- Street Address \_\_\_\_\_
- Building Name \_\_\_\_\_

## Type of Rack – please CIRCLE the appropriate rack



**OTHER (Please draw!)**

## Number of Bicycles (based on rack's intended design): # \_\_\_\_\_

Note: Count a "slot" style rack as one bike per slot. Count an "inverted U" rack as a bike on each side.

## Location Detail (Please check all that apply)

- Front of Building
- Side of Building
- Rear of Building
- Interior of building
- On the Sidewalk
- On a Cement pad adjacent to the sidewalk
- On the Grass
- Covered
- Lit at night

## Security

- Rack bolted down
- Rack locked with a cable
- Rack inside a locked door

## Location Notes - Is the rack visible? In the bushes? Too close to a wall so that you can't use it?

\_\_\_\_\_

## Rack Condition (check all that apply)

- New
  - Good
  - Fair
  - Poor
- If Fair or Poor, indicate why:  Bent  Rusty  Broken

**Ownership** – please take a minute to ask nearby businesses about rack ownership. Introduce yourself as a volunteer collecting data for the Montpelier Bikes Project. Please don't insult anyone's bike rack, but you may want to offer any easy tips on locating the rack better. 😊

**Owner:** \_\_\_\_\_ **Age** (approximate OK): \_\_\_\_\_ years

## Seasonal Availability (if known)

- Year-round
- Available in the winter but not plowed
- Removed in winter

**Photo:** Please take a digital photo, and keep track of which photo is of which rack. Thanks!

**Please return to:** Montpelier Bikes, c/o Going Green, 14 Winter St., Montpelier, VT 05602

**Questions?** Ask Becka @ Going Green [becka@goinggreenvt.com](mailto:becka@goinggreenvt.com) or 279-4037